

Chirurgia curiosa: or, the newest and most curious observations and operations in the whole art of chirurgery, regularly methodized ... and rendered intelligible ... / Written originally in High-Dutch, by ... Matthaeus Gothofredus Purmannus ... Illustrated with large chirurgical figures, of patients as well as instruments, invented by Dr. Solingen ... To which is added Natura morborum medicatrix: or, Nature cures diseases ... By Conrade Joachim Sprengell [the translator].

Contributors

Purmann, Matthias Gottfried, 1649-1711.

Solingen, Dr.

Sprengell, Conrad Joachim, -1740.

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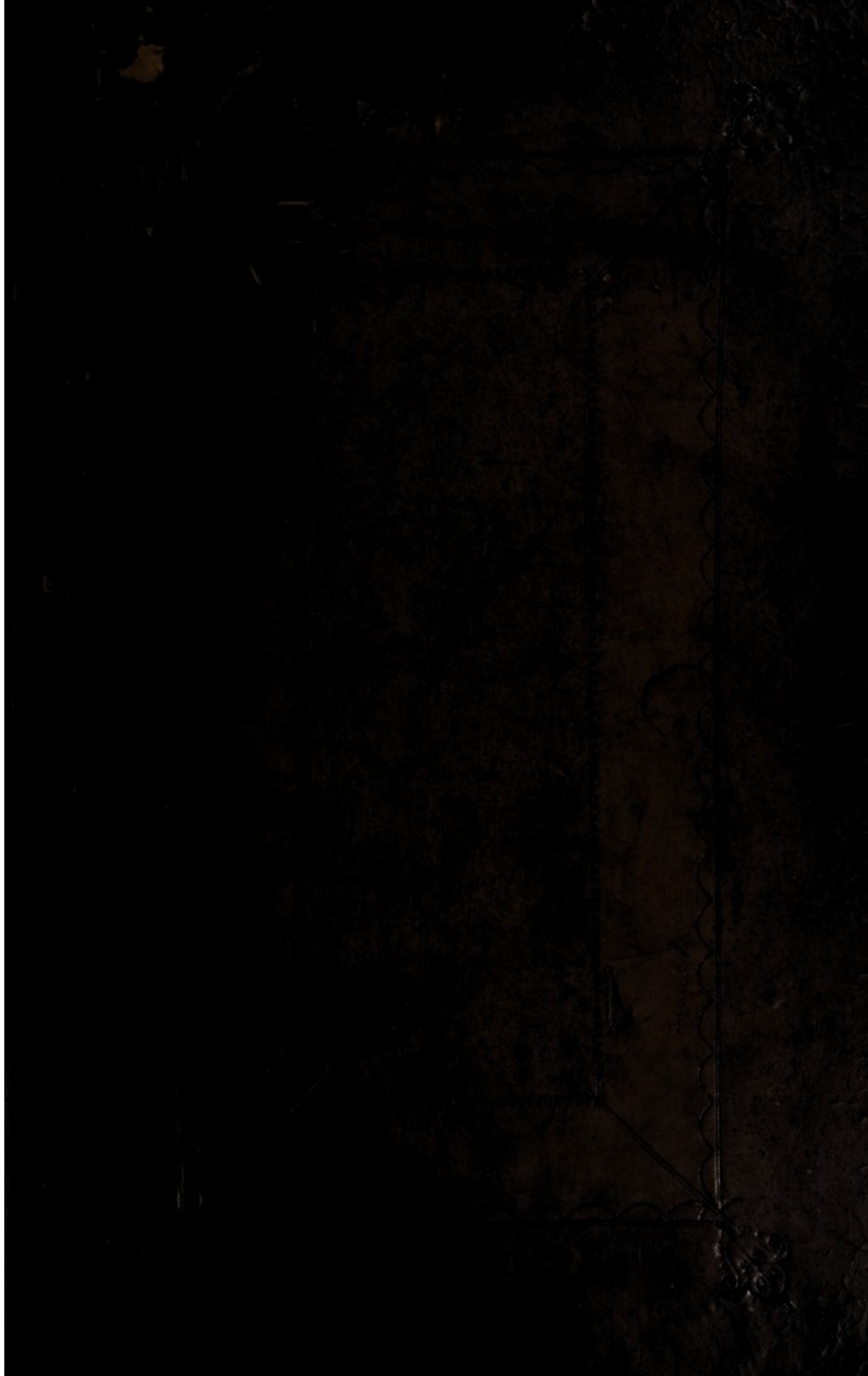
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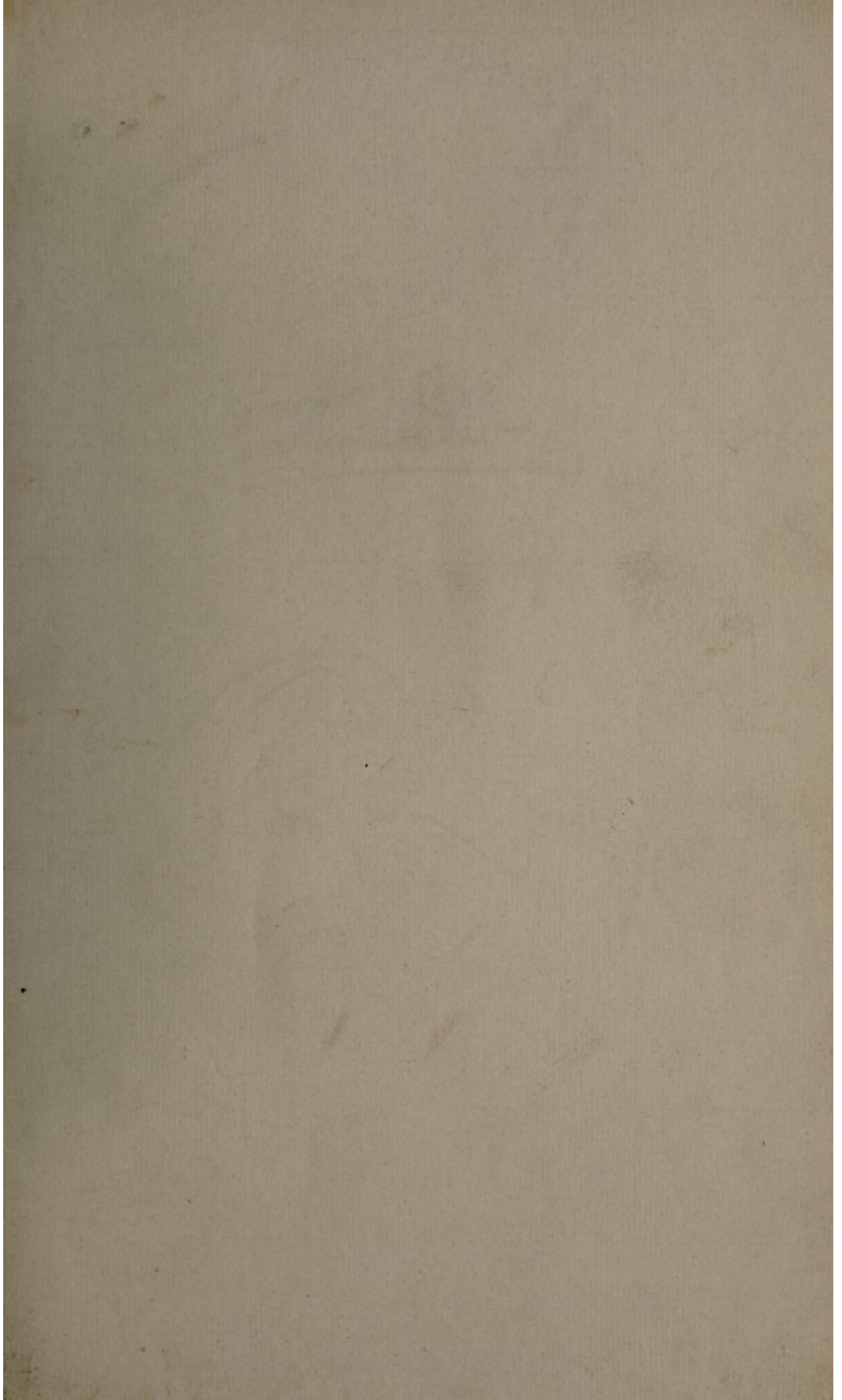
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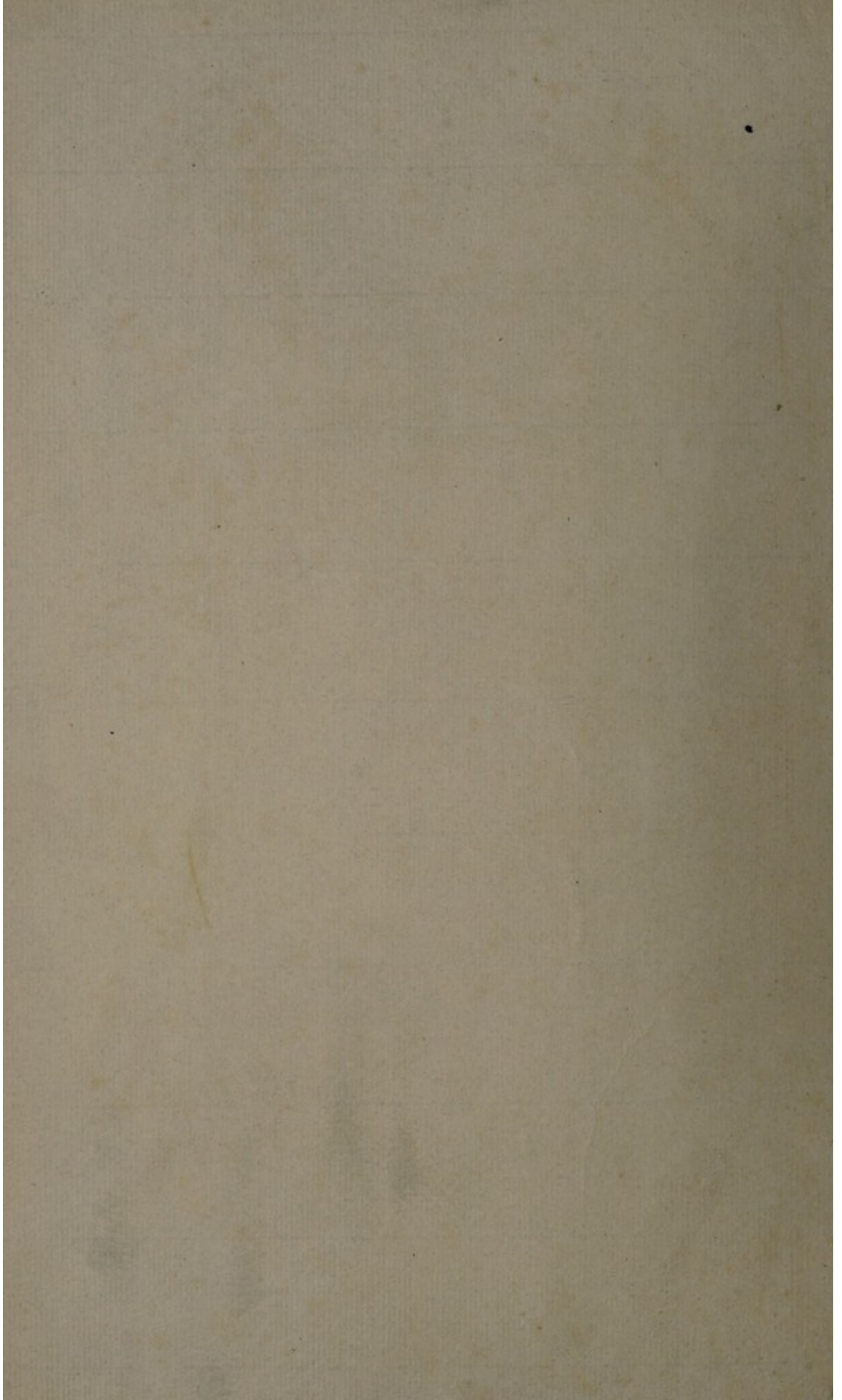


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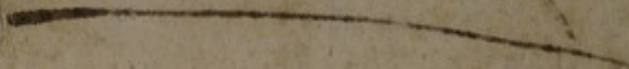


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Observations on the

Art

OBSERVATIONS

AND

OPERATIONS

THE Art of Surgery is not yet so
 Complete, but that Improvements
 of it may, for any thing we know, be
 made. The Observations are the first means of
 advancing it, and Figures in matters of Opera-
 tion are very instructive; upon which Score,
 This Work is recommendable, and ought to be
 kindly receiv'd by all that will well to the
 Art, as it is by one who has no other End
 herein than the Advancement of real Know-
 ledge and Skill.

William Comber

Nov. 18.

1728.

Printed by

W. Johnston

at the

Printers

in

St. Dunstons

Church

Street

London

Natura Morborum Medicatrix

NATURE CURATIVE

OR THE NATURE OF MORBIDS, AND THE MANNER OF THEIR CURE, AS THEY ARE RESTORED BY THE NATURE OF THE BODY.

By JOHN HENRY COMBER, M.D. F.R.S. &c.

LONDON, Printed by W. Johnston, at the Printers in St. Dunstons Church Street, 1728.

TH E Art of Surgery is not yet so
Compleat, but that Improvements
of it may, for any thing we know, be
unlimitable.

Faithful Observations are the surest means of
advancing it, and Figures in matters of Opera-
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Art, as it is by one who has no other End
herein than the Advancement of real Know-
ledge and Skill.

Nov. 1st.
1705.

William Comper.

Chirurgia Curiosa :
OR,
The NEWEST and most CURIOUS
O B S E R V A T I O N S
AND
O P E R A T I O N S
In the Whole A R T of
C H I R U R G E R Y

Regularly Methodized, Explained and Rendred Intelligible and Easie to every *Practitioner*: whether relating to *Manual Operations*, or the Choice and Application of *Proper Remedies*. Not to be found in other Authors.

Written Originally in *High-Dutch*, by the Learned
MATTHÆUS GOTHOFREDUS PURMANNUS,
Chief Chirurgion of the City of *Breslaw* in *Germany*, and
of the Hospitals of *St. Job* and *All-Saints*.

ILLUSTRATED
With Large Chirurgical Figures,
Of Patients as well as Instruments,
Invented by Dr. SOLINGEN.
Curiously Engraven on COPPER PLATES.

To which is Added
Natura Morborum Medicatrix :
OR,
NATURE Cures Diseases.
WHEREIN
The *Energy* of Nature is demonstrated, her Operations explained,
and her various Steps rendred Intelligible.
By *Conrade Joachim Sprengell*, M. Physiodidactus.

L O N D O N :
Printed for *D. Browne* at the *Black Swan*, *R. Smith* at the *Angel* and *Bible*,
and *T. Browne* at the *Green Dragon*, without *Temple-Bar*. 1706.



CHIRURGERY
 in the Whole ART of
 OPERATIONS
 AND
 OBSERVATIONS
 The New and most Curious
 Observations

Regularly Methodized, Explained and Reduc'd In
 Artistic and Easy to every Practitioner: whether
 relating to Anatomical Operations or the Choice and
 Application of Proper Remedies. Not to be
 found in other Authors.

Written Originally in High Dutch, by the Learned
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 of the Hospitals of St. Job and St. Anne.

ILLUSTRATED
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LONDON.
 Printed for D. Browne at the Black Swan, R. Smith at the Angel and Bible
 and T. Browne at the Green Dragon, without Temple-Bar. 1706.

To His Royal Highness

G E O R G E,

Hereditary Prince of Denmark and Norway, and of the Goths and Vandals; Duke of Schleswick, Holstein, Stormar, Dithmarch, and Cumberland; Earl of Oldenberg, Dolmenhorst and Kendal; Baron of Ockingham; Lord High Admiral of England and Ireland; Generalissimo of all Her Majesties Forces by Sea and Land; Lord Warden of the Cinque Ports; Constable of Dover Castle; Knight of the Most Noble Order of the Garter; and one of the Lords of Her Majesties most Honourable Privy Council.

Most Illustrious Prince,

THAT Your Royal Highness is Graciously pleas'd to do this Kingdom the Honour to concern your self in the Administration of Publick Affairs, and to fill the Offices of Greatest Importance in these Kingdoms, with

The DEDICATION.

your Personal Care and Admirable Sagacity, in a time when a Just and Glorious *War* requires the Assistance of the Wisest Heads and most Couragious Hearts and Hands ; is an ample Confirmation of the Constant Zeal, your *Royal Highness* has shew'd upon all Occasions, to *Preserve* and *Advance* the true Interest and Welfare of this Happy Constitution ; in Opposing the *Secret* or *Open* Attempts of a Haughty, Ambitious *Monarch*, who has long designed the utter Destruction of its Religion, Government and Nation.

For this Reason, the whole Kingdom regards Her Majesties Choice of your *Royal Highness* to Discharge such Weighty Trusts, as an Effect of the Justice and Extraordinary Prudence of that *August* and *Incomparable Princess* ; who has Wisely judg'd, that, all things consider'd, Her Majesty could not commit Affairs of the *Highest Concern* into any other Hands more Safely, than in those of your *Royal Highness* ; whom Heaven has enrich'd with a Magnanimous Soul, equally Brave, Solid, and Judicious ; Who, by Inclination and Affection, as well as Interest, studies the Publick Good of all Her Majesties Subjects ; and is so Happy in it, as to have the Good Word and Wishees of all Men, and the Ill Will of None.

But it's neither my Business, in this Humble Address, nor within the reach of my Capacity, to attempt your *Royal Highness's* *Illustrious* Character ; I only Beg your Gracious Acceptance of this *Treatise* ; which I have the greater reason to hope for, from a Prince of your Excellent

The DEDICATION.

lent Qualifications, by reason of its great *Usefulness* in Restoring to, and *Preserving* all Mankind in Health and Vigour; more especially those *Brave Soldiers* and *Sailors* under your Royal Highness's Command, who suffer by the Common Accidents of *War*, or the Cruelties of *Barbarous* and *Inhuman Enemies*: For, as all those *Unfortunate Men* are the Objects of your Care and Compassion; so a Book, that Learnedly and Experimentally prescribes proper *Remedies* against such growing *Mischiefs*, can never be Unacceptable to a Prince, whose Goodness is as Extensive as the Universe.

The Original was writ in *High-Dutch*, by a Learned, Skilful and long Experienced Chirurgeon in *Germany*; containing the *Curious Observations Operations* and *Methods of Cure*, in all the difficult parts of the whole *Art of Chirurgery*; and being Well recommended to the World, by many of the most Approved Physicians and Chirurgeons in that Country; I could not, in Common Gratitude to Her Majesties Government, under which I reside, but communicate it to the *English Artists* in their own Language; at a time when, without Disparagement to their own great Judgments, they have so much occasion to serve themselves, of such *Curious Observations* and *Experiments, the Life of Practice*, as they will here be plentifully Accommodated with, to their entire Satisfaction in the greatest Doubts and Difficulties.

It is sincerely wished, may it please your *Royal Highness*, that *Practitioners* in this Noble Science, would Publish nothing but what they

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The DEDICATION.

have Maturely Observed and Experienced ; and then *Physick* and *Chirurgery*, which has too long Dwindled in *Doubts* and *Uncertainties*, would be establish'd upon a *Sure* Foundation, which at last we have some reason to expect, since so many *Industrious*, *Ingenious* and *Learned Men* are endeavouring it.

To this Volume I have joined a small Treatise of *Nature*, agreeable to the Sentiments of the Best Physicians and Philosophers, which is the *Basis* on which they ground their Practice, and from whose Assistance they can only expect Success. In which I have shewed what *Nature* is ; her various *Motions* and *Operations* ; how she contributes to the *Cure* of *Diseases* ; and how she may be *Relieved* by *Art*, when under any *Disorder* or *Oppression*. Things of absolute necessity to be known and consider'd by every *Practitioner*, in order to the Prolongation of Human Life. All which I beg your *Royal Highness* to Accept, as an *Homage* render'd to your *Admirable Virtues*, and that you would graciously permit me to avow, that I am with an *Ardent Zeal*, a *Profound Respect* and an *Inviolable Fidelity*,

Great Sir,

Your Royal Highness's

Very Humble and most Obedient Servant,

Conrade Joachim Sprengell.

THE
Translator's P R E F A C E
TO THE
R E A D E R.

SENDING, not long since, into Germany, my Native Country, for some Books, that I could not provide my self of in England, a particular Friend and an Eminent Physician in that Country, among several others, sent me this *Chirurgia Curiosa*, and recommended it as a Work much Admired, Approved and Applauded, by the most Ingenious Practitioners in Physick and Chirurgery, and had been lately Printed both at Leipfig and Franckfort. This Character of the Book from so great a Judge, put me upon Reading and considering it; wherein, to my great satisfaction, I not only discovered the Honesty, Plain-dealing, Care, Prudence, and Sincerity of the Author; but through the whole Book all Accidents occurring in the whole Art of Chirurgery, Nicely and Judiciously considered; his Opinion and Practice confirmed by remarkable Instances and curious Observations; and, to enlighten the Reader's Understanding in Manual Operations, he has inserted several Chirurgical Figures, and establish'd the Causes, Progress and Effects of every Accident upon its proper Basis; rendering the whole Discourse as Acceptable, as his Medicines are Admirable.

The Author is not only esteemed one of the most Experienced and Judicious Chirurgeons in Germany; but

The Translator's P R E F A C E.

as a Person highly Honoured and Beloved; as may be seen in the several Encomiums in High-Dutch made by divers Learned Physicians and Chirurgeons, to congratulate him upon the Publication of this Treatise. He was many years a Chirurgeon in the Camp before he settled at Breslau, where he was made Chief Chirurgeon of two Hospitals, viz. that of St. Job and the Hospital of All Saints; during which time he writ Five Books under the following Titles: Strange and Wonderful Cures of Wounds made by Gun-shot. His great piece of Chirurgery in Quarto, called the Lorber Crantz or Laurel Crown. A Treatise of Diseases in the Eyes; another of Salivation; and, as the Sum and Substance of the whole Art of Chirurgery, this Chirurgia Curiosa, which is not only such in Words but in Fact, as is legible to all that have but a competent Understanding in the Matter; for in truth, never was Chirurgery brought to greater Perfection; nor accompanied with more Exact and Orderly Operations, Remarks and Examples, than what are contained in this Volume; nor more effectual Methods and Medicines propounded, to obtain a Speedy, Safe and Easy Cure. These were the Sentiments first resulting from my own Contemplations on this Admirable Work; and communicating it to many others that were able to Judge, and finding them all agree in a good Opinion of the Author and his Work; it gave me a great Inclination to communicate it to the English in their own Language; which I the rather thought myself capable of performing to their Satisfaction; because I have spent much time in Chirurgical Studies; being of opinion that the Knowledge of External Maladies, was a necessary step towards the Cognizance of Inward Diseases; nor indeed can
any

any Man be a good Physician without it. But too many Physicians understand little or nothing in Chirurgery; may they think it an undervaluing to them, and therefore despise it; which methinks is a very unaccountable and ill-grounded Fancy, to imagine it less honourable to Cure External than Internal Diseases. Dr. Muys, in his Preface to his *Tertia Decas*, tells such Physicians, that they acted absurdly, in esteeming it an Honour to foul their Fine Fingers with Nasty black Coals in Chymical Processes, and yet think it a disparagement to their Dignities, to lay their Hands on a Wounded Human Limb. Chymistry is a Noble Study; but to Help the Lame, to restore the Blind to Sight, or Cure the Wounded, is a much more Generous and Christian-like Employment. What an irretrievable Loss had Posterity suffered, if the Ancients had taken up with the contrary Opinion; or how could our Great Master Hippocrates, have obliged the World with his Excellent Aphorisms, Prognosticks, &c. if he had not been thoroughly conversant in all parts of the Healing Faculty? To these Noble purposes I recommend the ensuing Treatise, in order to make every Practitioner in Chirurgery capable of his business; and then the World will not be plagued with so many Ignorant Pretenders: Simple Fractures, Wounds, Tumours, Inflammations, &c. would not so commonly run into Incurable Ulcers, Fistula's, Cancers and Gangrenes; nor so many Patients be Ruined, which might have been preserved and rendered Serviceable to their Relations and their Country, if the Methods and Medicines so Judiciously Prescribed by our Author, and perhaps not to be found in any other Work, had been diligently observed and prudently and timely Applied.

The Translator's P R E F A C E.

To render this Work a Compleat System of all the Curious parts in Chirurgery; (the Author having Omitted the Insertion of Chirurgical Instruments;) I have, by Mr. Cowper's Advice, supplied that Defect from Dr. Solingen, whose Instruments either of his own Invention, or such of the Ancients as have been altered by him for the better, and are extraordinarily Commended for their great Usefulness in Chirurgery, the Reader will find discoursed in the Second Chapter, and their Cuts or Figures Engraved on Copper Plates, and the Tables distributed into their proper Places; but it being impossible to describe Instruments for all Unforeseen Accidents, there the Artists must be left to exercise his own Ingenuity, in Fashioning them for his purpose.

As for the Style employed in the Translation, I cannot think my self under any obligation to Apologize; for tho' I am a Foreigner and not yet arrived at the genuine Politeness and Elegancy of the English Tongue, yet the Reader will find it perspicuous and intelligible; and as such I hope will favourably Accept it, with the best Wishes.

Of His Friend,

A N D,

Wounds, Tumours, Inflammations, &c. would not be servicable to their Relations and their Country, if the Methods and Medicines so judiciously Prescribed by our Author, and perhaps not to be found in any other Work, had been diligently observed and applied.

Humble Servant,
Conradus.

To His Sacred Imperial Majesty,

LEOPOLD,

By the Grace of God Elected Roman Emperor, always August, King of Germany, Hungary, Bohemia, Dalmatia, Croatia, Slavonia, &c. Arch-Duke of Austria; Duke of Burgundy, Brabant, Stiria, Carintha, Carniola, Luxemburg, Wirtenburg, and Tecka, of the Upper and Lower Silesia; Prince of Suabia; Marquis of the Sacred Roman Empire, of Burgau, Moravia, the upper and Lower Lusatia, Prince and Count of Habsburg, Tyrol, Pfird, Kyburg and Goritz; Landgrave of Alsatia; Lord of the Mark of Slavonia, Portnaon, Salines, &c.

Most Illustrious Sir,

I Humbly implore your Imperial Majesties most Gracious Pardon, that a Person of no greater Figure in your vast Dominions than my self, tho one of your most Dutiful and Loyal Subjects, should presume to prostrate my
self

The DEDICATION.

self at the Feet of your Imperial Majesty, and humbly present this Book to your Royal Hands. but since all lesser things seek the Protection of Greater; that Rivulets run with that design to the Ocean, and small Fires ascending the Superior Regions, direct their Heat and Flame towards the Sun: Why should I fear, in this little Offering, to displease the greatest of Monarchs, the Sun of our State Meridian; whose Magnifick and Generous Soul never despises the more minute Endeavours of his meanest Subjects, for the Publick Good: under which Encouragement, I humbly beg your Imperial Majesties Gracious Acceptance of this Work, which with great Labour and Industry I have compiled for the Common Benefit of the Universe, and I shall esteem that signal Condescension in your Imperial Majesty, as the greatest Honour that could be conferred upon

Your Imperial Majesty's

Most Entirely Devoted, Humble,

Faithful Subject and Servant,

M. G. Purmannus.

THE
Author's P R E F A C E
TO THE
R E A D E R.

AT length, Candid and Ingenious Readers, I present you with the long promised, and no less expected, *Chirurgia Curiosa*. A Title that no body I know of has employed, except Antonius Novarinus; but those that are acquainted with that Book which he calls *Anatomia Chirurgia Curiosa*, cannot be unsensible that it merits no such honourable Epithet; tho', to do it Justice, there are some things in it not to be despis'd, but rather deserve Commendations. But of this Treatise, I hope it may be modestly affirmed, that it bears a proper Title, since it contains nothing that is Insignificant or Vulgar, but all the choice and curious Operations in the whole Art of Chirurgery; with such plain and necessary Directions, Explications, repeated Cautions, and well adapted Prescriptions, as will render it intelligible and advantagious to the great end desired; if the Reader will be but so kind to himself, as to peruse it diligently, and observe its Rules with equal Care and Ingenuity. Other things that relate to the common Practice of Chirurgery, have been already sufficiently treated of in my *Chirurgical Lawrel Crown*, in my *True Camp Chirurgeon*, and my *Treatise of Wounds made by Gun-shot, &c.* to which I refer the Inquisitive.

The Discourse now in your Hands, has been longer in appearing abroad, than agreed with my first Purposes and Promises, occasion'd sometimes by my great Hurry in Business; and other whiles, by the too frequent Attacks of violent and tedious Sickneses; but I hope my Care in Compiling, will atone for the involuntary Fault in Delaying it.

This Book, like my other Discourses in Chirurgery, is divided into three Parts; the Head, the Body, and the Members; in which I have industriously avoided Prolixities, and unnecessary Digressions, and yet have omitted nothing that might be serviceable to

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the Reader. Where I found the Causes, Diagnosticks and Differences in Distempers, Erroneously defined in other Authors, or taken upon trust by a Series of unwary Custom, I have establish'd them upon a genuine Hypothesis, agreeably to the best and latest Discoveries, and also inserted the Opinions of divers Learned Men upon every Head, that the Reader might judge for himself, and make his Election accordingly. The Medicines and Methods of Cure, are only such as I have experienced in my own Practice for many Years, and that nothing might be wanting to confirm the Truth and Certainty of my Allegations; at the Conclusion of every Chapter is inserted Two or Three remarkable Historical Observations, and Examples, of Persons cured by the Methods I have proposed; and sometimes the Ill Consequences that attend contrary Practices; that the Reader might have all the Light 'twas possible to give him, in the great variety of Accidents and the Work be truly called *Chirurgia Curiosa*.

Here I think my self obliged to acknowledge, that I sometimes resolv'd not to communicate such a Choice and Elaborate Piece of Work to the Publick, that I might not give my Enemies an opportunity of shewing their Malice, in Snarling and Carping at what they do not understand, and are too great Opiniatres to be instructed in. But the Earnest Importunities of my Friends, and especially Strangers: the reiterated Requests of divers Eminent Physicians and Chirurgeons; and, which is more than all, the Benefit that might redound to Mankind, has subdued that Resolution, and at last prevailed upon me, not to conceal those Secrets, that God Almighty has blessed me with the Knowledge of; but to impart them as freely as Preceived them. I am now upon quitting the Stage of this World, and on a Journey to my Long Home; for which Reason I presume, none that know me, will think this Publication is with a Design to obtain more Wealth or Honour, or out of any secular Interest whatsoever, but meerly to Benefit Posterity; and accordingly I desire the Candid Reader's Acceptance of it, agreeably to the Truth, Honesty, and Sincerity of my Intentions.

But, I know it generally fares with Books, as with Viands at a sumptuous Feast, which, tho' never so Palatably and Accurately Dress'd, the Cook, the Meat, the Sawce or Dressing, will certainly fall under the Censure of some of the Guests, according to their Fancies, Humours, or Delicacy of their Appetites. So a Pert Generation that set up for Criticks, think they shew abundance of Wit in damning other Mens Works, which none but themselves ever
thought

The Author's P R E F A C E.

thought them competent Judges of. However, they will spend their Mouths, and censure some Mens Labours as too Elegant ; others, as too Flat and Dull. Some Books they represent as so Prolix, that they obscure the Author's Meaning in a cloud of Words ; and others they say are so Concise, that they are scarce Intelligible. In short, they spy some Faults in every Author, when the great Defect is only their want of Modesty or Capacity to understand what they read. Now, if this Book should fall into the Hands of such conceited Sciologists or Sceptical Cavillers ; tho' I must expect no fairer Quarter than they are pleased to allow to others, I shall be wholly unconcerned at what they say ; for in all probability, the less it pleases them, the better it will please wiser Men ; which I have all the Reason in the World to believe, from the favourable Opinion and kind Reception my former Writings have met with among the Learned ; which weighs so much with me, that I slight and despise all the Trifling Efforts of the Ignorant and Malicious. To conclude, I heartily recommend this Flower of my Practice and Experience, to the Perusal of the Ingenious, and sincerely wish that every Practitioner in Chirurgery may be attended with Success, in the just and careful Discharge of his Duty ; and that he would favourably accept what is freely communicated to him by his

Humble Servant,

M. G. Purmannus.

CHI-

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M. G. PARSONS.

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THE
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- Chap. 2. Dr. Solingen's New Invented Instruments, added by the Translator, upon the Advice of Mr. Cowper Anatomist.
- Chap. 3. Observations on very dangerous Wounds and Contusions of the Head, wherein something happened that was extraordinary.
- Chap. 4. *Arteriotomia*, or the Opening of the Temporal, or any other Artery, and what is to be observed in the Operation.
- Chap. 5. *Trepaning*, why practised, how and when it ought to be applied; with necessary Cautions in performing it.
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- Chap. 13. *Ganglia*, Or Glandulous Tumours, their various Kinds and Cure.
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- Chap. 15. *Tinea*, Or Scald-Head, its Cause and Cure.
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- Chap. 17. *Nævi*, Or Natural Marks of Children on the Face, or any other Part of the Body, how they may be taken away.

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- Chap. 19. *Parotides*, Or Ulceration and Tumours in the Ears, what they are, and how to cure them.
- Chap. 20. *Herpes* and *Porrigo*, commonly called *Ring-Worms*, their several Kinds, and how to cure them.
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The Contents.

BOOK. III.

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- Chap. 4. *Oedemata*, Or cold phlegmatick Tumours; their different Kinds and Cure.
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- Chap. 6. *Panaritium*, Or *Paronychia*, vulgarly called the Worm, its Causes and Cure.
- Chap. 7. *Atrophia*, Or wasting of the Limbs, Causes, and perfect Cure.
- Chap. 8. *Aneurisma*, what it is, how many Sorts of it, and how cured.
- Chap. 9. A Spongy Excrecence of the Joints, chiefly in the Knee, what it is, with its Signs and Cure.
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- Chap. 11. *Sphacelus* & *Gangræna*, what they are, their Causes and Cures.
- Chap. 12. *Amputation*, how performed, and what is to be observed in the remaining part of the Cure.
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- Chap. 15. *Annotations* and Remarks upon Cures by *Sympathy* & *per transplantationem*.
- Chap. 16. *De Chirurgia Infusoria* & *Transfusoria*, and why they are in no greater Esteem.
- Chap. 17. *Fontanels* or *Issues*, how and where they are to be made, in what Cases they are beneficial, and what Accidents may happen by continuing the Use of them.
- Chap. 18. Several Remarks concerning *Burning* and *Cauterizing*, in what Cases *Cauteries* may be used, and how the *Moxa* is to be rightly applied.
- Chap. 19. What is to be observed in the pairing of *Nails*, cutting of *Corns*, and the hard and callous Skins of the Feet, especially in Ancient People, that no ill Accident or Mortification may follow, and what is to be done if any such ill Accident should happen.
- III Twenty Historical Observations.

CHIRURGIA CURIOSA,

Or, the Newest and most Curious

OBSERVATIONS and OPERATIONS

In the whole ART of

CHIRURGERY.

BOOK I.

CHAP. I.

Of Instruments in General necessary for a Chirurgeon, with a Discourse of Cauteries and Incisions.

TO detain the Reader in the Introduction to this Treatise, with a Discourse of the necessary Qualifications requisite in a Chirurgeon, would render me guilty of mispending time to little purpose; since I have already done it in my other Works, and that almost all other Books on this Subject have treated it sufficiently, particularly the Honourable *Silesian* Nobleman *John of *Gersdorp*, in his *Chirurgical Treatise* printed at *Strasburg*, where he was Chief Chirurgeon twenty Years, has in few Words comprehended all that was requisite on that Head. 'A Chirurgeon, saies he, ought to be a Man of a solid Reason, a quick Apprehension, and a profound Understanding, neither too Rash nor Timorous, with a light but steady Hand in all his Operations, that his Patient may suffer no Prejudice, or himself dishonour, by rough, fearful or unskilful Handling. He must also be a well-spoken Man, that can treat his Patient discreetly, in a Dialect proper to the Occasion.

With these Qualifications it's necessary that a Chirurgeon, who aims at being an *Artist* in his Profession, should also be furnished with good and proper *Instruments*, to be employed on all Emergencies, which are so absolutely necessary where *Medicines* are ineffectual, that little or nothing can be done without them. Not to mention others, as in the *Stone*, *Cancers*, *Ruptures* and *Tumours*; *Couching Cataracts*, *Cutting Hair-Lips*, the *Partus Casareus*, Opening the Belly in a *Dropisie*, *Trepaning the Cranium*, Opening the *Trachæa Arteria* in an *Angina* or *Squinaney*, and the Breast in an *Empyema*, &c. In all which Distempers nothing can be done for the Relief of the Patient without proper Instruments, which in a skilful Hand will conquer all Difficulties, and effect wonderful Cures.

The famous Dr. *Solingen* in his newly published *Chirurgia*, with great Reputation to himself, has contributed very much to the Assistance of every

* Tract. 2. fol. 17 & 18.

Qualifications of a Chirurgeon.

History of the Chirurgeon's Instruments.

ry ingenious Artift, by Instruments of his own Invention, accurately described and engraved in their proper Figures, to which *Fabricius ab Aqua pendente*, *Scultetus*, *Schmide*, *Pareus*, and many other excellent Authors led the way. The Learned and diligent Dr. *Blanckard* in his *New Artificial Chirurgical Chamber*, has performed his Part on this Head with so great Ingenuity * and Exactness, that scarce better Helps could be wished for. Dr. *Bontekoe* and Dr. *Overkamp* in their new incomparable *Chirurgical Building*, Dr. *Jungk* in his *Chirurgical Operations*, Dr. *Monck* in his Learned *Praxis Chirurgiæ*, Dr. *Muraltus* in his *Laudabile Collegium Chirurgiæ*, and several others which I have omitted for fear of being too tedious, have all done their Parts extremely well on this Subject, being very sensible how useful and advantageous a good Instrument is in the Hand of a skilful Operator; which should oblige every Practitioner in *Chirurgery*, to furnish himself with all sorts of proper well-made Instruments, which will not only conduce to his own Reputation, but to the Ease and Benefit of the Patient, in preventing unnecessary Pains and Tortures in any Operation.

* A pagina 1.
nfy; ad paginam 38.

Actual Cauterics.

Moxa, its Use and Excellency.

But where Instruments will not answer the Intentions, as it often happens in malignant and contumacious Distempers, there *Actual Cauterics*, burning with a *hot Iron* or *Corrosives* must take place; among which burning with *Moxa* must be reckoned as one of the best Applications in this kind, because it not only makes but one *Spot* or *Blister*, and draws away what is malignant, superfluous, and keeps the Part from healing, but consumes the latent peccant Humour with greater Ease and Benefit to the Patient, than any other *Actual* or *Potential Caution*. How these *Cauteries* are to be made and applied, shall be shewed in the following Chapter, as also in what Form they must be used, agreeably to the Accident or Hurt; and the Chirurgeon's Opinion in applying them, whether *Oval*, *Round*, *Triangular*, *Quadrangular*, *Smooth*, *Branchy*, *Great*, *Small*, *Long*, *Short*, with or without a *Pipe*, which are commonly practised where there are rotten Bones, corroded Parts, Excrescencies, *Fistula's*, malignant Ulcers, wounded Veins or Arteries, with design to stop their violent Bleedings, and generally have their Effect: In which Cases, especially that famous *Frenchman Monsieur Guillemeau* in his *Chirurgia*, has treated incomparably.

History of a famous Cure by an Actual Caution.

A Lawyer's Daughter at *Magdeburg* came to me while I resided at *Halbarstadt*, in *December 1679*. to ask my Advice about a malignant and corroding Ulcer in her Face; and I being inform'd that she had already been under the Hands of several famous Chirurgeons, especially Mr. *Kauffman* in *Custrin*, where she had been for some Years, but without receiving any Benefit: I immediately proposed the Application of an *Actual Caution* fitted to the Ulcer, but she, out of great Fear and Diffidence, utterly rejected it, and went from me to *Brumswick*, where she continued above half a year under the Hands of able Chirurgeons, but without any Effect. Whithor she went afterwards, I know not; because at that time the Plague from *Eisleben* and *Magdeburg* coming to *Halberstat*, where I continued about two Years at the Command of his Electoral Highness of *Brandenburg*, as Chief Chirurgeon for the Cure of the *Pestilence*, I had no time to undertake any other Cure. But after the Plague ceased, in *January 1682*. she came to me again, and in a miserable Condition; for the Ulcer had not only taken hold of the Part between the *Mouth* and the *Nose*, but also the left side of the *Nose* and the upper Lip

Lip was wholly infected, ulcerated, and become quite *callous* and knotty, in a manner totally *cancerous*, and full of filthy *Carrion* like Matter. I once more proposed an *Actual Cautey*, and shewing her the Danger in delaying it, she at length, with much difficulty, was perswaded to have it done one Morning, which was repeated three times together with a *hot Iron*, with all the Care and Circumspection imaginable. For this purpose I provided such a convenient *Cautey* as the Part would admit of, and between the *Lips* and the *Gums* I put a thin Plate of Silver as high as I could, to preserve the Parts that were near it, that the *cauterizing* might be performed more perfectly.

By this Process I obtained by Degrees a new *Foundation*, the *Malignancy* was consumed by the *Cautey*, the *callous* and knotty Places were dispersed, and at length with great Care and Diligence, and the Use of proper Medicines she was perfectly cured in a few Weeks time, and that (contrary to my own Thoughts) without any *Flux* or *Salivation*. Of what those Medicines were compounded, you will find at large in the following 8, 9, 19, 20, and 31 Chapters. This History being placed here for no other Purpose, but to shew the great Benefit of *Cauteries* in Chirurgery, when well timed and carefully applied; for nothing is more certain than what upon very good Grounds was long since delivered by *Hypocrates*, That *where Medicines and Incisions were ineffectual, Recourse ought to be had to Cauteries.*

CHAP. II.

THE excellently Learned Dr. *Solingen*, Practitioner in Physick and Chirurgery at the *Hague*, whom our Author so often quotes, and with great Reason commends, having newly *invented* and *described* several incomparable *Instruments*, absolutely necessary in *Chirurgery*, which are not to be found in any other Author, but only in his Book, entituled, *Manual Operations in Chirurgery*; and that Book being writ in *Dutch*, and consequently not understood in *England*; upon the Advice of that Learned Anatomist Mr. *Cowper*, I have inserted them, and are as follows.

Tabula Prima.

Fig. 1. describes a *Cutting Pipe* very useful in making a *Fontanel* on the *Sutura Coronalis*, through the first Table of the Skull. The Instrument is made of Case-hardened Steel, turned out of one Piece, big enough in the lower part for a large white Pea to be lodged in it, and about the breadth of three Fingers long, and sharp at the bottom. When you design to set an Issue upon the Head, you must set the Instrument fast upon the *Sutura Coronalis*, and holding it with your Left Hand, strike upon it with your Right with such a force, that it may enter into the *Cranium*: Which being done, take the sharp-pointed Instrument described *Fig. 2.* and with it thrust forcibly through the Pipe into the Skull, then turn it round, Pipe and all, till you have cut through the *Pericranium*; then take it out, which was put in for no other End, but that the *Pericranium* might be cut through, without moving it to and fro, and not be cut into pieces
more

more than is necessary; but the *Cutting Pipe* you must push round from one side to the other, till the *Flesh* and *Pericranium* is sufficiently loosened. Then take out the Pipe and the fleshy Substance with it, with the help of that *Spoon-like Incision-knife* described *Fig. 3.* This being done, put the Pipe in again, and the *Iron Instrument* described *Fig. 4.* being first fitted to the Pipe, and made Red hot, with a small Hole in the top, and something longer than the Pipe, that the Screw-pin may go through the Hole (and be fastened to the Handle which is made of Brass, and described *Fig. 5.*) which must be thrust into the Pipe upon the *Cranium*, and held there till it has burnt through the first Table, and then your Work is done; only the Wound must be dress'd with *Unguentum Populeum*, with a *Pea* put into it, and managed like other Issues.

Fig. 6. is the Description of a *Cucurbitulum*, design'd to raise a Skull up again, that by some ill Accident had been depress'd. It ought to be made of *Pewter*, and proportion'd to the Dimensions of the Wound. It has a great Belly, and about the Neck is sewed a piece of Leather, from which is drawn through the two Ears another Leather which stands upward, to take hold of, and raise the *Cucurbitulum*, after it has been placed upon the depressed Skull with a considerable Flame, which by this means may be pulled up again, as *Dr. Solingen* testifies by his own Experience.

In *Fig. 7.* is described a *Myrtiform Incision-knife*, one End whereof is to cut through the fleshy Part of the Head, and the other to separate it from the *Pericranium*.

Fig. the 8th. is the Invention of an *Elevatorium Biploideum*, very useful in raising up a depressed Skull, when a small place has been made ready for it by the *Exfoliative Trepan*: Then this Instrument is put upon the Head over the depressed Skull, but the Feet of the Levatory must be placed at a little distance from the depressed Part, which may be done by screwing the Feet as wide from one another as the Place requires; then with the *Perforator* of this *Levatory*, gradually pierce the Center of the depressed Skull, and when it's entred far enough in, lift it up, and so you may restore the Bone to its natural Position.

In *Fig. 9.* is described a *Levatory* resembling the shape of a Foot, which is to be screwed tithely to the *Elevatorium Biploideum*, and put into the Orifice of the Trepanned *Cranium*, to raise the depressed Skull into its place again.

Fig. 10. shews an *Elevatorium Trepidale*, which pierces into the middle of the depressed Skull, and so raises it up again. It has three *Perforators*, that if one should not be strong enough, the other may be used.

In *Fig. 11.* is a Thwart-tooth'd *Radula* on each side, called a *Levigator*, which may be made bigger or lesser as occasion requires.

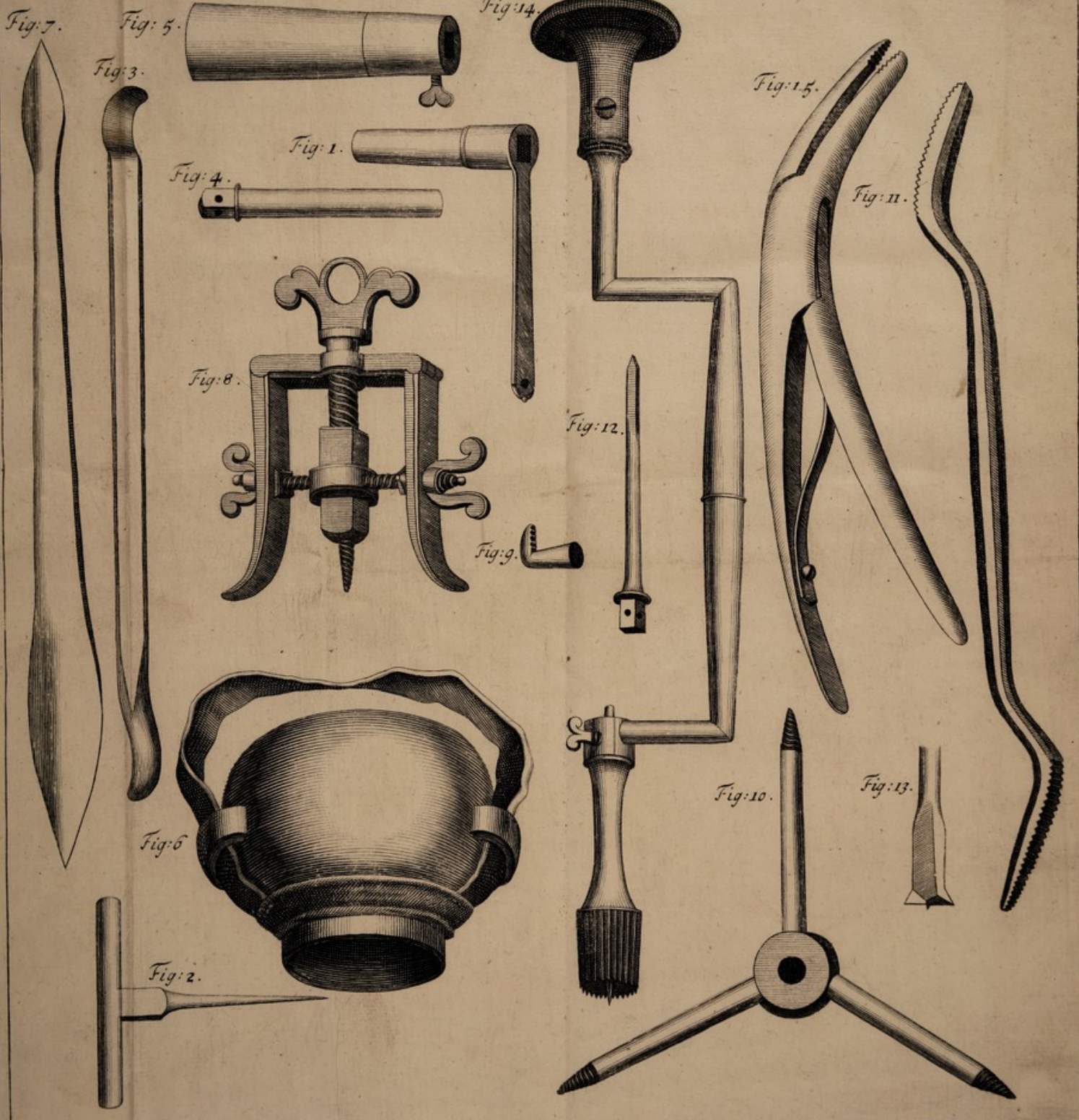
Fig. the 12th is the Contrivance of an *Exfoliative Trepan*, which is to be screwed fast into the Handle of the Trepan.

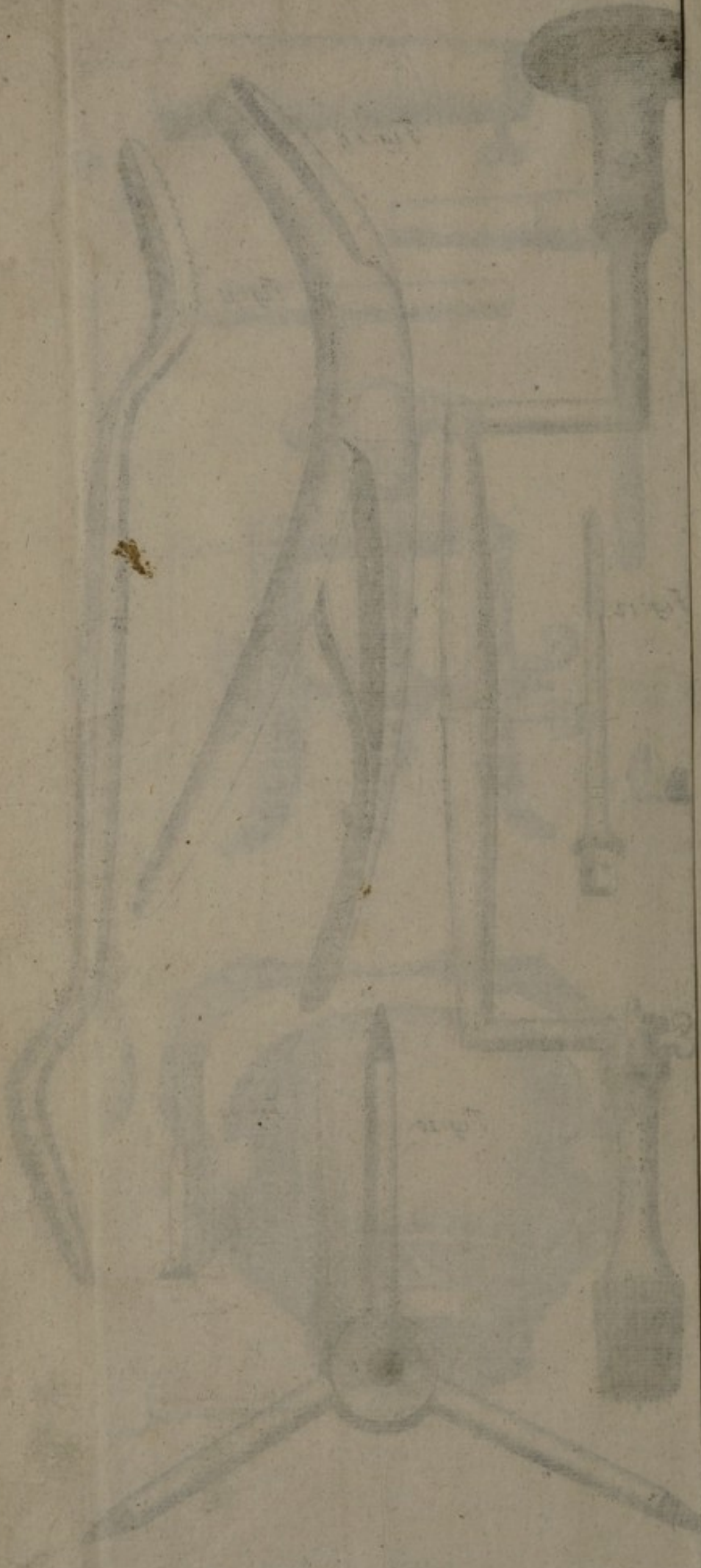
Fig. 13. is another *Exfoliative* or *Desquamatory Trepan*, like the former, and both very necessary in *Scaling* the Skull when it has been fractur'd and shivered. It is made of Case-hardened Steel, having a small Point in the middle to keep it in one place, and on the sides two small hallow cutting Leaves or Processes, by which One may go very near and close to the Skull, and take away more at one Turning, than with any other Instrument at several times.

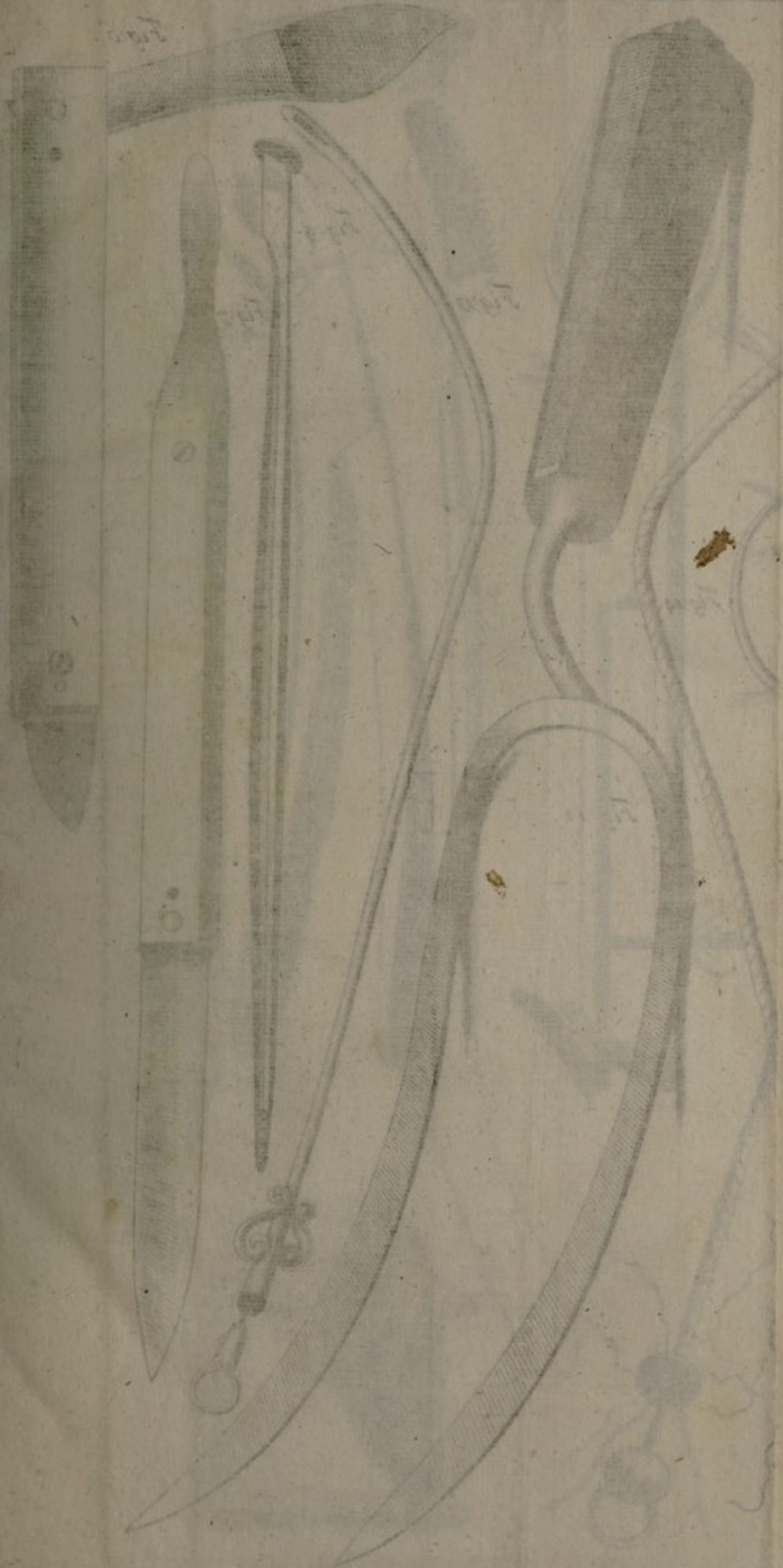
Fig. 14. is a *Trepan* compleatly fitted up, as it ought to be.

Fig. 15. is a Description of a *Forceps* to draw out the broken and shattered Pieces of the Skull, and is very useful in several other Cases.

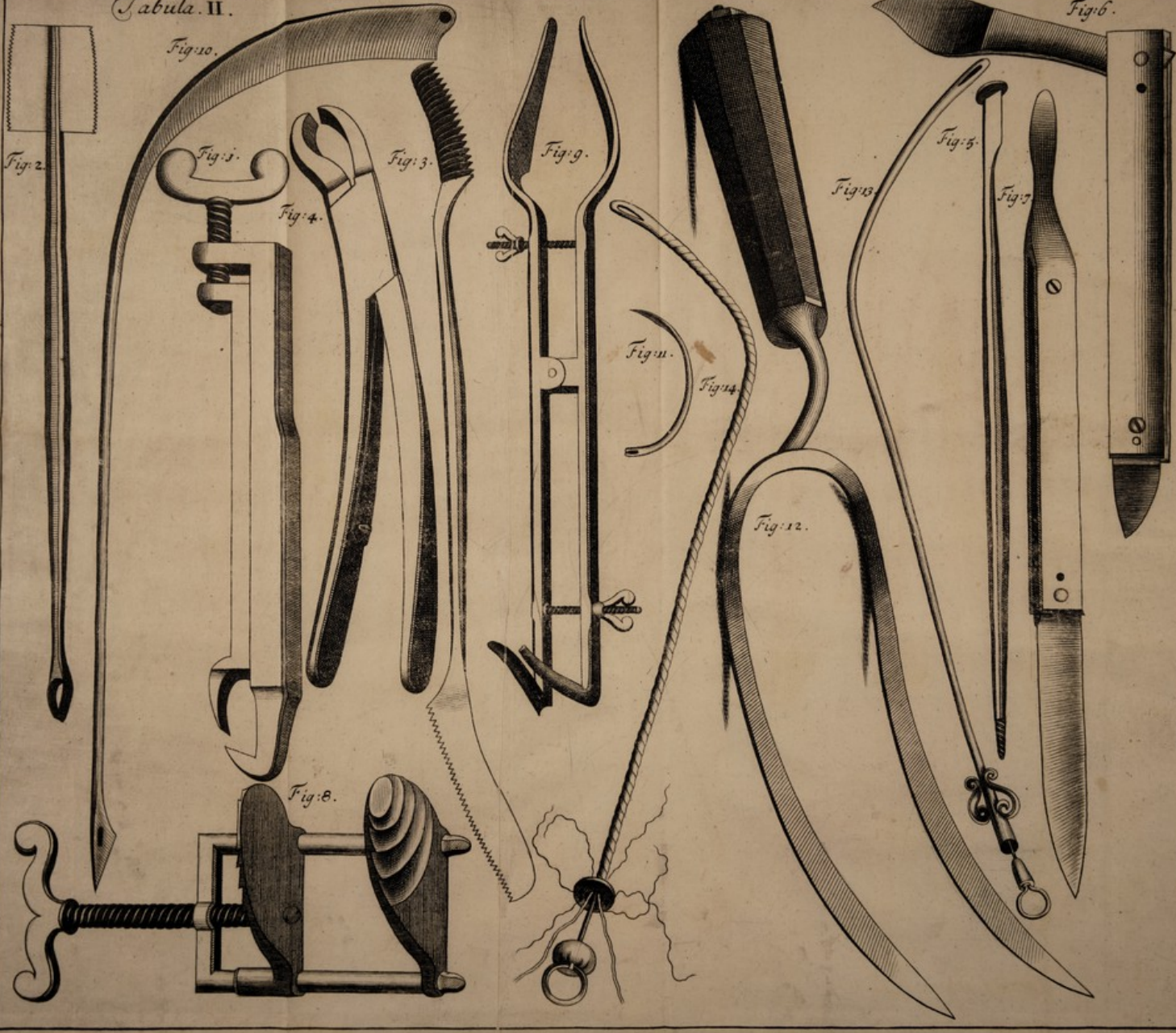
Tabula 1.







Tabula II.



Tabula Secunda.

In *Fig. 1.* is described a Cutting *Mullet*, the lowermost turned *Bill* whereof, is to be put under the *Cranium*, and the other End being very sharp, is screwed downwards, to cut off such a piece of the *Skull* as is necessary to be separated from the rest.

Fig. 2. is a small *Saw*, on each End whereof one is stronger than the other: They make a great deal of room with very little Pains.

Fig. 3. is another small *Saw*, very useful to saw off Pieces of Bones.

Fig. 4. is a Cutting *Forceps* necessary to punch off small Pieces or Points of Bones, it's about a Span long, made of good Steel, and very strong and sharp, with a *Spring*, that it may always stand open, and cut with greater Force.

Fig. 5. describes a Cutting *Lentile*, of a new Contrivance. One End is to cut off small Splinters of the *Skull*, caused by *Trepanning*; and the other to screw into a Piece of the *Skull* that is loosened by the *Trepan*, that it may be the more gently pulled out; but you must observe to screw it into the same Hole made by the Pin of the *Trepan*.

Fig. 6. is an *Incision*, with each End whereof I use to perform most of my Operations.

Fig. 7. shews another *Incision-knife*, with a *Separatorium* at the End of it, being very useful in cutting out Tumours, &c.

Fig. 8. represents a *Speculum Oris*, or Mouth-screw, of the newest and best Invention, consisting of two Leaves or Plates, the uppermost whereof is fastened on each side, and cannot be moved; and the other Leaf or Plate may be moved upward or downward by the Screw which is fastened in the middle of it. The whole is made of Steel, and every Plate is filed into four Half-moon-fashion'd Catches, to keep it the better between the Teeth; and as the Mouth opens wider, to push it further in.

Fig. 9. describes a *Dilatatorium* for the Nose and Ears.

Fig. 10. is a *Syringotomus*, an Instrument very useful in *Fistula's*, where other cutting Instruments can have no effect. It's made of unhardened Steel, round and easie to bend; not thick, indifferent long, with a hallow kind of a Cut very sharp, and has an Eye or Hole to put a Probe into, that it may be the better governed by the Fingers. There is also a Hole in the Point of it, through which must be drawn a small Hair-string, which being tied both Ends together, serves to draw out the *Syringotomus*, that it may not fall upon the Sides. The Point is four-square, and about the breadth of half a Straw, on which is fastened a small Pill made of hard boiled Turpentine Pitch, which represents the Head of a Probe, and may be easily push'd through, so that what ought to be cut asunder, is by this means speedily performed.

Fig. 11. represents a crooked *Needle* well polished, with a four-square Point, which may be employed in several Cases, and made great or small, as occasion requires.

Fig. 12. shews us a *Fork* very commodious to hold up Womens Breasts, Cancers and large Tumours when they are to be cut off, and is used instead of great *Needles*, and a quicker way behalf. The *Tines* are flat, sharp-pointed, strong and steady; the Neck before the Handle is crooked, to give way to the other Hand, that it may govern the Knife without being hindered, or hurting the Operator's Knuckles.

Fig. 13. is a *Catheter* frequently, used in eminent Services.

Fig. 14. deciphers an excellent Invention of a *flexible Catheter*, so pliable, that it will bend agreeably to the Passage to which it is applied; very convenient to cause the Evacuation of *Urine* out of the Bladder, in such Cases, where it's continuing there might be very injurious to the Body. This Instrument may be kept in the Passage of the *Bladder*, without prejudice, or any considerable Molestation to the Patient. It's made of thin, flat Silver-Wire artificially foldered together, and may be tied fast with a String going round the Body to prevent its falling out.

Tabula Tertia.

Fig. 1. is a *Dismembring-knife*, of a very good size for the *Amputation* of any Member; it ought to have a good thick Back, and to be very sharp.

Fig. 2. is a *Saw*, the Bow whereof is something broad in the middle, but broader and stronger on the Sides downward, to give it the greater force and an equal Balance in sawing. On each Side below, it has a four-square, Hole for the *Receivers* to pass through, which are also four-square and fitted to the Holes in the Bow, having each of them a Screw at the End, which are turned with a particular Key, *Fig. 3.* by which the Blade of the Saw is extended or loosened at pleasure. The *Receivers* are flat before, and something broad towards the Bow, having a Joint where the Blade of the Saw is fastened at both Ends, through which are put small Screw-pins to fasten the Saw, whose Blade is thinner on the Back than below where the Teeth are. The Teeth ought to be filed pretty smooth, a little leaning, pointed, equal and standing even, that the Saw may cut the sooner through, and take but little of the Bone away. The Key has at one end a Process, which screws the Screw-pins on and off.

Fig. 4. is a *Chissel* with a Leaden-handle; its Use is to cut off Fingers, Toes, &c.

Fig. 5. is a *Cutting Mallet* to dismember a Mortified Part.

Fig. 6. shews how the *Back* of the *Chissel* must be grinded, that one side may be round, and the other quite flat.

Fig. 7. is a Pair of *Scissors* like those that Goldsmiths use, which are ground hollow, and are very serviceable in cutting Flesh, Sinews, &c. and performs it better than any other *Scissors* whatsoever.

Fig. 8. shews a Pair of *Pincers* to extract Bullets that are lodged in the Body.

CHAP. III.

Remarks upon very dangerous Wounds in the Head, in which happened something extraordinary, with Observations upon the whole.

Dangerous
Wounds in the
Head.

IN this *Chirurgia Curiosa* I have said nothing of common Wounds in the Head, because I have already treated sufficiently of them in my *Chirurgical Lawrel Crown*, in my *True Camp Chirurgeon*, and in my *Fifty Cures of Wounds made by Gun-shot*; yet because for Orders-sake, it's necessary

Fig. 2.



Fig. 4.



Fig. 6.



Fig. 1.

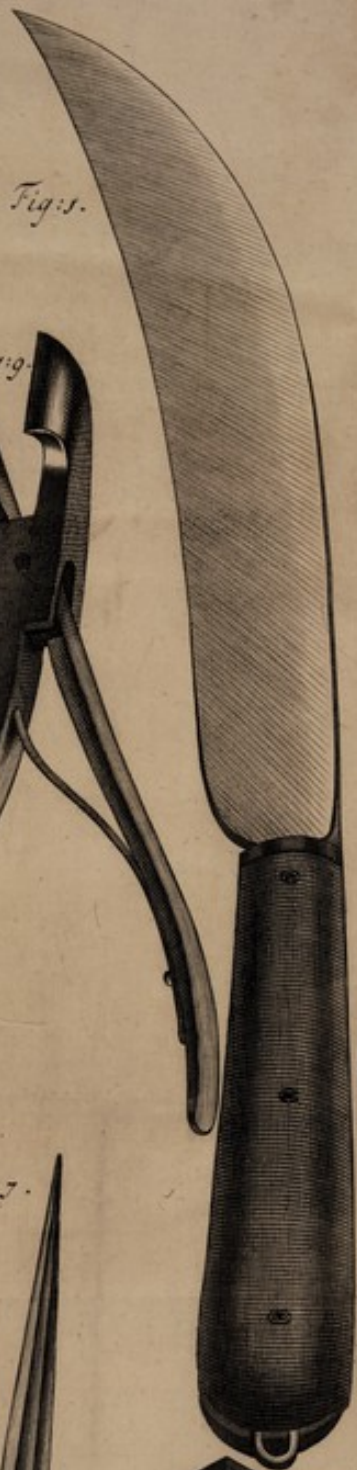


Fig. 9.



Fig. 7.



Fig. 3.



Fig. 8.

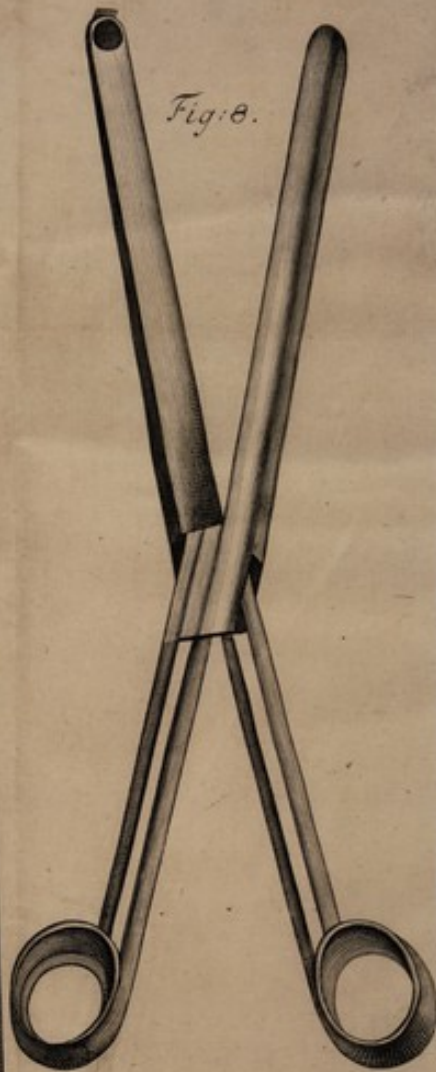
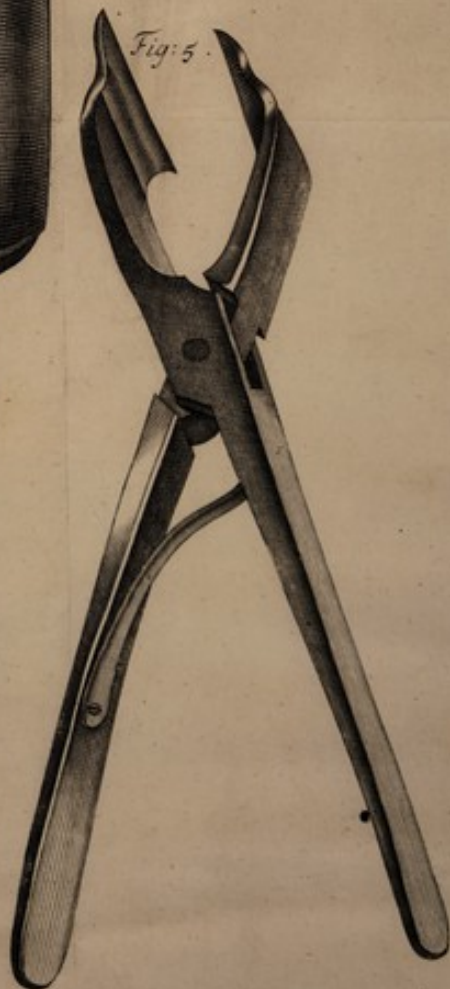


Fig. 5.





fary that every Book of Chirurgery should begin with the principal Part; I will accommodate my Reader in this second Chapter with some curious *Historical* Observations of dangerous Wounds in the *Head*: But before I enter upon that Subject, it will be very convenient to lay down some Rules, how a Chirurgeon ought to demean himself when a Patient so wounded is committed to his Care. His first *Intention*, after having removed the *Filth*, taken away the *Hair*, and all other Hinderances to his *Sight* and *Handling*, is, That he accurately and diligently *probe* and search the Wounds or Hurts, upwards, downwards, before, behind, and on every Side, especially in Wounds on the *Temples*, because the difference of the place, makes a great Alteration in the Methods of proceeding to a Cure; for Wounds in the *Temples*, or the *Hinder* part of the Head towards the *Neck*, tho' they seem at first to be but slight, and of no great consequence, oftentimes prove very dangerous, being subjected to very ill Accidents, which insensibly terminate in Death, for want of knowing the Bottom, and tracing the Wound in every *Branch* of it; for in those Parts are many of the principal *Vessels* and *Muscles*, *Veins*, *Arteries* and *Nerves*, especially the *Musculi Temporales* and *Arteria Carotides*, which alone being Hurt, will require the greatest Care and Skill of the Chirurgeon to heal them.

Advice to the
Chirurgeons

If the Wounds pierce deeper, and cause a Fracture in the *Cranium* or Skull, and, as sometimes it happens, hurts the *Dura Mater*, *Pia Mater*, and the *Brain* it self, then all imaginable Prudence and Caution must be exercised; for tho' the Patients commonly *die* in such Cases, yet the Chirurgeon must by no means omit the doing his Duty, and essay by all rational Methods the Recovery of his Patient; for we often find by *Experience*, that such Patients as have been given up for dead Men, under such ill-boding Circumstances, have sometimes, and more especially if of a good Constitution, been perfectly recovered, as will be shewed by *Historical* Examples of my own Experience, and from others of unquestionable Authority, at the Conclusion of this Chapter. For this Reason I would have none attempt a Cure Rashly or Timorously, but do all that is possible to be done by the Rules of *Art*, even in the most desperate Cases imaginable; because there scarce ever was a Case in the World so general, but admitted of particular Exceptions. I will therefore particularly consider all the above-mentioned *Wounds* and *Hurts*, that the Ingenious Reader may with more Ease enter into my Opinion, and understand the *Principles* I ground upon, in proposing a *New Method* of Cure, which being once truly known, will be better approved; and the oftner and longer it is practised, will be more effectually recommended to all Men, tho' it differ as much from the old Way as Day does from Night.

Now the first sort of Wounds in the *Head*, relate only to the external Parts, which sometimes cause a *Depression*, and sometimes a *Fissure* or Cleft in the Skull, which in one place is much more dangerous than in another, by reason of the Inequality of the *Cranium*, which in some places is *musculous*, as in the *Temples*, and the hinder part of the *Neck*, where the *Muscles* for the moving of the Head are placed.

If the *Cranium* by a great *Fall* or *Blow* is so broken or split, that *Shivers* are separated from the Skull, the Case is very dangerous; for those *Shivers* or Minute Pieces of the Skull, pressing the *Membrane* that lies under the *Cranium*, if they be not soon taken out, will certainly cause very unhappy Accidents, and at length Death it self; of which we shall say more anon.

Wounds in the
Skull, and
Fractures

If the Wounds go further and deeper, and the *Meninges* or *Membranes* under the Skull, tho' but in the uppermost part, as the *Dura Mater*, are wounded, there is so much Danger, that such Accidents are generally esteemed *Deadly*, unless some extraordinary Application prevents it.

But if besides the *Meninges*, the *Brain* it self is hurt or wounded in its Substance, or but shaken from its proper *Scituation*, it is yet more dangerous and deadly, as may easily be perceived from the dismal Accidents that follow, to which we ought to have special Regard.

Trepanning.

Sometimes it happens that an External Hurt on the *Cranium* seems at first of small consequence, because the Fracture of the Skull is not found out by the *Probe*; therefore if any ill Symptoms appear, the *Fissure* must be searched for by the help of a *Scraper*; and if the Symptoms are so violent, that they will not allow time for a leisurely Process, the *Trepan* must immediately be used; for those dangerous *Prognosticks* are a manifest Declaration, that either the *Meninges* or the *Brain* it self does suffer; or else, that some *Blood* or *Humour*, which soon putrifies, is settled under the *Skull* upon the *Meninges*.

If a Fracture happens on the outward Part of the first Table of the *Cranium*, and is large enough to be seen, and does not pierce quite through, or but a little, and has but a small *Fissure* at the bottom, there is no great Danger; but if it goes through, tho' it be very small, we dare not always trust to it, tho' in two or three days time no ill Symptoms appear in the Patient; because they often follow Unexpected; and when this happens, it's absolutely necessary to make the *Fracture* larger, or use the *Trepan*; for without doubt there is some *Blood*, *Matter* or *Corruption* under the Skull, or the *Dura Mater* is injured, which may be remedied by *Trepanning*: But if any *Shivers* of the Skull press upon, or prick the *Dura Mater*, there is certainly very great Danger, and the Chirurgeon ought to try all manner of Ways to get them out, as well to facilitate the Cure, as to prevent ill Consequences.

Depression of the Skull.

When a *Fracture* is also accompanied with a great *Depression* of the Skull, which not only presses upon the *Meninges*, but also obstructs their Motion and Operation, the Chirurgeon must then endeavour to bring the Skull up again into its proper place, by the help of an *Elevator*, or other Instrument contrived for that purpose, which being artificially put under the Skull, may raise it up again; but if these Methods prove fruitless, then it's requisite to *Trepan* in a convenient Place, and apply the *Elevator*; for a Chirurgeon must leave no means untried, in which there is any probability of helping his Patient.

A Counter-Fissure.

There is another kind of *Fracture* of the *Cranium* which remains to be considered, and that is a *Contra-fissura*, or Counter-fissure, where it sometimes happens in Winter, and to young Persons, that the *Fracture* is not in the same place where they received the Blow, or on which they fell, but opposite to it, or a good Distance from it, *per resonitum vel repulsam*, which may be perceived either by the violent and continued Pain opposite to the Place in which the Patient received the Hurt, or by a Swelling that the first day appears in the place where the Fracture is, which ought to be opened by Incision.

Thus much I thought fit to say upon dangerous *Fractures* of the Skull, which if the Chirurgeon keeps in his Mind, and observes in his Practice, no Patient will be neglected, nor any Fault be committed in the Cure. What remains, especially concerning the Advantages which arise from a

new

New Sort of *Medicines*, in opposition to the Old ones, shall be shewn in the two following Historical Collections which I have purposely borrow'd from other Authors, because they contain almost every thing agreeable to my *Principles*, and then will follow my own Observations, and the *Medicines* I used, for the intire Satisfaction of the Reader.

Monfieur *Blegni*, Chirurgion in Ordinary to the *French King in Paris*, has in his Excellent Observations * a very rare Example of a *dangerous Fracture* in the Head, which yet was cured by him; and the Famous *Mr. Regnier* has left it for the Improvement of Posterity, worded after this manner. This *Fracture* of the *Head* was attended by a *Contused* and *Lacerated Perioftium*, the Skull was broken through and through, the *Dura* and *Pia Mater* or *Meninges* were divided afunder, and the very Substance of the *Brain* was hurt, which was a very dangerous Case indeed: The Patient was deprived of his Speech and Understanding, seized with excessive *Vomiting* and *Bleeding* at the *Nose*; a great Expulſion of Blood iſſued from a Branch of the *Arteria Carotides*, and conſequently was very dangerous, becauſe the Mouth of the *Artery* was quite hid under the *Cranium*, ſo that neither *Medicines* nor *Inſtruments* could reach it. Now tho' the exceſſive and violent *Bleeding* of the *Arteries* is no wonder in ſuch a Caſe, yet here, contrary to the Opinion of the *Ancients*, it is very remarkable, that no *Convulſions* or *Extorſions* accompanied the other Symptoms; which gives us reaſon to conclude, according to the *new Method*, that the *Dura Mater*, the *Pia Mater*, and the *Brain* it ſelf, may be wounded and divided, and yet no *convulſive* Motions muſt neceſſarily follow. But how the Blood could be ſtanch'd which came from the *Artery*, when there was no way to come at it, is ſomething wonderful; yet this is reſolved in the Courſe of the *History*, where our Author makes it appear at large, how Nothing comparatively, is able to effect Any thing. The Venerable *Mr. Regnier*, who could as well diſcern the Patient's Danger as another, eaſily concluded with the reſt, that the Wound was mortal, and yet would not give up all for loſt, becauſe he knew, that Nature often effected wonderful things in curing *Difeaſes*; and why may not Art contrive and find out Means to reſtore what Nature cannot perform without its *Aſſiſtance*, Since we have abundance of Examples to confirm that Principle, and therefore ought not to leave any Patient as *Incurable*, tho' there be no hopes at all of a Cure, but try every thing that has any Appearance of Reaſon in it: Nay, *Hypocrates* ſaies, That we ſhould rather try dubious and uncertain *Medicines* and *Methods*, than leave the Patient in *Deſpair*. Doubtleſs *Mr. Regnier* was of this Opinion, and therefore took a new Piece of *Sponge* or *Fungus*, and having fitted it to the Wound, ſo that the Blood and Matter might have liberty to work out of it, he put the *Sponge* into the Wound, which only means perfectly ſtopt the bleeding; and taking it out twenty four Hours after, ſaw the Wound in a good Condition to be healed, which by degrees, and in a few Weeks, was ſo perfectly cured, to the *Admiration* of all Men, that the Patient lived many Years after, without any Sickneſs or Diſtemper, that could rationally be attributed to the Wound as the *Cauſe* of it.

The ſecond *Historical* Obſervation is taken out of *Dr. Blanckard's Holland's Annual Register* * which was communicated to him by *Monſieur Triboulean*, a famous Chirurgion in *Paris*, in theſe Words: The *Valet de Chambre* of the *Marquiſ de la Popliniere*, was ſhot with a *Muſket Bullet*, which wounded him to ſuch a degree, that the *Os Occipitis*; or Bone

A *History* of a *Fracture* in the *Skull*.

* *Part 3. pag. 146.*

Another *History* of a *Fracture* in the *Skull*.

Another *History* of a *Fracture* in the *Skull*.

Another *History*.

* *Part 1. Obſer. 27. page 56. & ſeqd.*

of the hinder Part of the Head on the upper Part of the right Side, was so broken and bruised, that the third day after being *Trepanned*, it might have been taken out. Now one would imagine, that where there was two such Orifices to give the Wound *vent*, the ill Accidents would have abated, and the Blood which lay under the *Skull* would have issued out; but on the contrary, no such Benefit happened to this Patient; the same ill Symptoms continued till the 35th Day, and then were accompanied by a *Fever* and *Loathing* all manner of Sustenance. The *Dura Mater* also swell'd very high, and caus'd, through length of time, a spongy *Flesh* to grow upon it; whereupon the Chirurgeon Mr. *Triboulean* concluded, and in truth should have done it much sooner, that there was some *Putrified Matter* and corrupted *Blood* under and betwixt the *Meninges*; therefore four Days after, which made 39 Days after he was wounded, the Symptoms increased more violently, as might easily have been conjectur'd. Whereupon he opened the swell'd *Dura Mater* length-wise, and made an Orifice proportionable, out of which by degrees issued a great Quantity of *Green, Black, and stinking Matter*; and then the dangerous Symptoms abated, the *Dura Mater* ceased to swell, came to it self again, and the Patient was perfectly recovered in a little time.

Observations
on both the
Histories.

Much more might be observed from this *History*, and Dr. *Blanckard* in another place has writ very sharply against the Chirurgeons delaying, or not discerning the Cause of the ill Symptoms sooner. However, I made choice of this *History* for two special Reasons; first, to convince the Reader, that a great Quantity of *Matter, Blood* and *Sanies* may lie and gather so long a time between the *Meninges*, without corrupting them of the *Brain*. And secondly, That contrary to the express Prohibition of the *Ancients*, grounded upon a false Opinion; the *Dura Mater*, if necessity require it, may be *Opened* and *cut through* without Danger; and that after so long a time as 39 Days after the Patient was wounded. Which Opinion is confirmed by every Day's Practice, and the Experience of Dr. *Blanckard*, * Dr. *Munnick* and Dr. *Jungken*, by whom this Subject is handled more at large.

*Chirurgia 1.3.
cap. 5.
* L. 3. c. 15.
p. 422.
* Sect. 2. oper.
2. c. 1 & 2.
p. 216. usque
ad p. 253.
A History of
another rare
Cure.

In the Month of *March* 1689, about Eleven a Clock at Night, *Christopher N.* the Son of a Servant of our *Hospital*, now a Soldier in the *Red Company*, about 24 Years of Age, was cut with a sharp *Scimeter* by his *Master* (who, in respect of his great Family, I forbear to mention) to such a degree on the right side of the Head, over the *Temporal Muscle*, near the *Sutura Coronalis*, oblique towards the Ear, that it not only cut through the *Skull*, but also cut the *Dura Mater* asunder about a Thumb's breadth. About Twelve a Clock this Man was brought to me without *Sense*, and *Speechless*, with a continual Vomiting, Bleeding at the Nose, full of *Convulsive Motions*, and also very great bleeding from an *Ascending Branch* of the *Temporal Artery*, which really was a miserable Condition. I presently caused the *Hair* to be taken out of the way, and as soon as I had informed my self of the Wound and its Danger, I applied my self to stanch the Blood, because he had lost a vast Quantity of it, which I performed in this manner: With a crooked Needle and Silk I sewed up the Artery with three or four Stitches, and knit it fast together, which immediately stopp'd the Bleeding. On the violent *Pulsive Meninges* I put the following Water, in which was dipt a fine and thin piece of a *Silk Rag*, and squeezed out again; which being done every four Hours, the Wound

Wound by degrees became sensibly mended. The Water I made use of was thus compounded :

℞ *Mucilag. sem. Cydonior.* & *Rad. Altheæ cum Aqua Plantagin.* ʒii. *Pulv. Sarcocol.* ʒi. *Sacchar. Saturn.* ʒi. *Myrrh. Tutie ppt. ana* gr. iij. *misce serv. ad usum dictum.*

On the top of this small Rag I always laid a little Lint very loosely, that it might not hinder the *Sanies* or Matter from coming out ; and over the Wound I laid the following Plaister twice a day, and then a small Bag filled with *Herbs* and *Flowers*, made warm in Wine, and pressed out again, was laid on the Plaister, which was made as followeth :

℞ *Emplastr. de Beton.* *Zwelferi* ʒss. *Emplastr. Diachyl. simpl. Stict.* *Paracelsi ana* ʒiiij. *Manus Dei* ʒij. *Melilot.* ʒss. *Ol. Roris mar. major an. Lavendul. ana* ʒi. *m. f. Emplastrum.*

In the first ten Days every thing seemed very forward towards a safe and sudden Cure ; the *Pulsation* of the *Dura Mater* was very regular, and the Wound there quite closed ; all the ill Symptoms, except the *Head-ach*, vanished, and yet on the Eleventh Day the violent *Pulsation* return'd, and the Patient again became *Senseless* and *Speechless* ; upon which I concluded there was some *Matter* gathering under the *Membrane*, which caused this Relapse. Whereupon I made a new *Incision* with good Success, for it let out abundance of *Corruption*, and in less than an hour's time all the ill Symptoms vanished again, and the Patient in Eight Weeks time was restored to his former Health. To consolidate the *Dura Mater*, I used nothing but the above-mentioned Water. This Patient is now alive, full of Health, and performs his Service very well.

CHAP. IV.

Arteriotomia, the opening the Temporal, or any other Artery, and what is to be observed in the Operation, in order to perform it artificially and safely.

AMong all the Writers that so highly commend the *Arteriotomia*, Opening an Artery. that they propose it almost in every Distemper ; *Marcus Aurelius Severinus* and *Gullemeau* are the chiefest, and especially the first, who without Distinction advises it to be done almost in all Parts of the Body, and in all Cases whatsoever ; but I must take leave to dissent from that Opinion, because I cannot think it so universally beneficial as is pretended. Besides, there is so much Care and Caution to be used in performing this Operation, that if there be the least Miscarriage in it, especially in the *Temporal Artery*, it does more harm than good. This *Artery* is generally opened for the Cure of violent Pains in the Head, and I have often observed, tho' it may abate that Pain for a time, yet it commonly returns again.

The old way
dangerous.

The *Ancients* ignorantly used to cut the *Artery* quite through the middle, and for that end tied a Garter or Girdle above the *Forehead* round the Head, always keeping the left Thumb upon the *Artery*, that they might more easily cut it asunder with the right Hand; nor was this a very indiscreet Method, if they had done it with the first Lancing only: But that *intolerable* way which is practised by some, in tying a Ligature about the Neck and under the Arms, signifies nothing, but to trouble and molest the Patient, and contributes nothing to the coming out of the Blood, as Experience sufficiently demonstrates; for which Reason it's better to follow the new Method, which is more convenient and safer. Dr. *Blanckard*, Dr. *Blegni* and Dr. *Burdelean* reject the old Way for the Reasons I have already given, and call it a Rash, Inconsiderate and Hazardous Operation; for by cutting the *Artery* asunder, the *Musculus Temporalis* is injured.

The new way
better.

Now tho' the *Arteriotomia*, according to the *new Method*, is not so dangerous as the other, as you may see in my Observation and Experiment at the end of this Chapter. Now tho' I am not very fond of using it, I know this Practice is as common in *Egypt*, as breathing a *Vein* is in this part of *Europe*; yet still I am of the same Opinion, and cannot advise it to be done without Distinction; because Experience teaches, that it seldom answers the End for which it is employed. What if *Fr. Wartzen*, *Pareus*, *Tulpius*, *Job Van Meckeren*, *Romhausen*, *Prosper Alpinus*, and many others, have, as they imagine, often found Benefit by it; and that it is rational enough in it self, yet you cannot always rely upon it. Besides, the Old and Erroneous Opinions in *Physick* and *Chirurgery* are now exploded, and the Principles of those Sciences are built more and more upon surer Foundations; nay, in the very thing we are now discoursing of, there are great Alterations; for *Plebotomy*, and chiefly *Arteriotomy*, are almost quite laid aside, except in a very few Cases where it is yet allowable; for in the most violent *Head-aches* the *Moxa* applied in the same place, is much more prevalent and beneficial; of which see Mr. *Buschoff's* curious Tracts.

Vertues of
Moxa.

But that the Patient who desires it may be pleased, and that the Chirurgion in purchasing this Treatise, may have no Reason to complain for want of Instructions in all kind of Operations; as soon as I have touched a little upon the *Greek* and *East-India* Earth called *Tangi*, which being thought an excellent Medicine for the Head, is fit to be inserted here. I will give Directions, largely describe the *Arteriotomy*, and give you the Opinions of some *Learned* Physicians and Chirurgions concerning it.

The Grecian
and East India
Earth *Tangi*.

This yet almost unknown *Earth*, called *Tangi*, was first brought to *Breslaw* by a *Grecian* in the Year 1694. and presented to our President, a very ingenious Nobleman of *Haunold*, who did me the Honour to present me with a piece of it for a *Trial*. It is of a high *Yellow* Colour, almost resembling an *Orange*, of a piercing strong *Aromatical* Scent, and is used in violent *Head-aches*, and in great *Desfluxions* of Rheum into the Head, on this manner.

Scrape a little Quantity of this *Earth* into a Glass, then pour a Spoonful of Fountain or distilled Water upon it, and after it is well mix'd, rub your Temples and Forehead with it about the breadth of a Crown-piece twice a day, and it will take away the Pain, and give Ease immediately; Which being esteemed a great Curiosity, I would not conceal it from the Reader.

Blanckardus in his *Artificial Chirurgery-Chamber* *, tho' he seems to have *L. 2. c. 2. P. 45. no great Opinion of the *Arteriotomia*, yet he saies, that the *Arteries* were opened in several other Parts of the Body, besides the Temples; as in the *Forehead*, in the *binder* part of the Head, behind the *Ears*, and in the Hands and Feet.

Jessenius in his *Chirurgia* *, adviseth in great Pains of the Head, to open *C. 2. p. 48. that *Arterial Branch* which lies between the *Thumb* and the *Forefinger*; but I think he will have much ado to find it, without injuring the adjoining Parts.

Seligen, in his *Chirurgia* *, saies, That in *Head-aches* and *Rheumatick* *Part 4. c. 30. P. 394. Pains, we should open the *Artery* in the great *Toe*, and seems to be much in the right; for that Branch lies pretty high, is large, and there can be no Danger in doing it, because it may be well guarded and secured with *Bandages*. A Famous *Pater Præmonstratensis Ordinis*, by Name *Brandel*, brought this into Use among us about three Years since, and with great Benefit in the fore-mentioned Pains, which I often performed in his presence upon several Persons.

Fabricius ab Aqua pendente in his *Chirurgia* *, adds over and above to *Par. 2. c. 3. P. 19. the former places, the opening of the *Artery* on the *Nose*, to prevent ill Humours from falling into the Head. He that will believe it, may; perhaps he means the point of the *Nose*, which formerly used to be opened in the *Yellow Jaundice*.

The Famous *Taliacotius* in his Book *de Curtorum Chirurgia* *, saies, We *L. 1. c. 20. P. 211. should open the extreme *Arterial Branch* behind the *Ears*, as a proper Remedy for all Distempers in the *Eyes*, a Phrenzy or Perturbation of the Animal Faculties, Giddiness, Deafness, &c. And to be certain in the Method of opening it, he has caused a Draught to be engraved, and put it into his Book.

Junckius in his *Chirurgical Manual* *, does not much esteem this Operation, as may be seen in the beginning of that Chapter; yet saies it may *Sec. 2. oper. 2. c. 19. p. 343; & sequ. be done in the *Temples*, in the *Forehead*, and behind the *Ears*, because the *Arteries* may be easily come at, and *Bandages* better fastned. But the new, safe and right way of performing that Operation is after this manner:

Place the Patient with that side towards the Light, where you intend to open the *Artery*: First shave off the Hair if it be in your way; then tie a *Ligature* or *Band* twice round the Head above and below the *Artery*, and about the Neck, as streight as the Patient can suffer it. He may hold the undermost *Ligature* with his own Hand, and pull it as hard as he can endure it; then let the Patient shut his Mouth, and blow as strongly as he can, and you will soon perceive the Place where the *Artery* must be opened, which by feeling and holding your *Thumb* upon it, will cause the *Artery* to rise: Then mark the place with a little *Ink*, and let your *Servant*, standing behind the Patient, hold his Head firm to his Breast: Then put your left *Thumb* about a Finger's breadth below the place which was marked; pull the *Skin* hard a little downwards, and having a *Lancet* in your *Right Hand*, which is indifferent broad, very sharp, but not too pointy, push it into the Mark somewhat slanting through the *Skin* into the *Artery*; you may quickly perceive when it's deep enough, by the *Blood* flying upon you; but if it does not gush out, you must push the *Lancet* deeper in, and repeat the *Incision* till it does: Take away as much *Blood* as you think convenient, but don't remove the *Ligatures* till

The best and safest way of opening an Artery.

you bind it up. This being done, take the *White* of an Egg well mixed with *Allum*, in which wet your Left Thumb three or four times, and with it press the Hole and Lips of the Incision together, and then put the *Fungus Pulverulentus* or *Fuz-ball* upon it, about the bigness of a Nutmeg, strewing my Blood-stopping Powder over it, and upon that lay a Plaister of Mastick spread very thick upon Leather, as large as you think convenient: Which must be done with all imaginable Neatness and Celerity. On this Plaister first put a small round Linen Bolster, and over that two or three more, one still broader than the other, first just wetted in Vinegar in which *Tragacantha* had been dissolved; for these will not only fill up the hollow places of the *Temple*, but keep the Blood-stopping Powder closer upon the Artery, which will forward its healing, and prevent its swelling, and breaking out again, the only thing to be feared in this Operation. This being done, take an indifferent long Roller about two Inches broad, which wind round the Front and Head; after that turn your Roller over on the other side by the end, which end give your Man to hold, and pull the long end under the Chin near the Neck, then over the Head, and turn it always over that end which your Man holds, when you come to it, and so continue winding it about, till the Place is well covered, because this binding contributes much to its healing.

The second
Dressing.

This Bandage ought to continue three or four Days without meddling with it, and you should exhort the Patient to keep very still and quiet, and eat nothing but what is of easie Digestion. After three or four Days undo your Ligature, wet the Bolster again in the Mixture above-mentioned, apply it as before, and tie the Roller round it, but not so hard as at first. Then let it continue so bound up four days more, and by that time you will have no Cause to fear its breaking out or bleeding any more; for you may see it healed up. This is the way I have always practised, and with very good Success. In the Camp I have often made use of a thick piece of Money, half a Musket-Bullet, or the half Shell of a Walnut, and laid that upon the *Fuz-ball*, and over that the Plaister, and sometimes the Plaister first, and the Walnut-shell, Bullet, or Piece of Money upon that, according as they fitted best. All which is done to prevent the bleeding, and to press and close the opened Artery together, to promote its healing.

A History.

In *February* 1686. I opened the Temporal Artery on the left side, of a Noble Man of great Quality, whom I have no Permission to name, who lives on the other side of the *Olaw*; he was extremely troubled with a continual Head-ach above a Quarter of a Year together. This Operation was exactly performed in the presence of Dr. *Tielish* and Dr. *Burys*, who advised it, and the Nobleman had ease for about a Fortnight's time; but then the Distemper returned again, so that the Operation signified nothing at all; and the same Pain continued as formerly, till *Leeches* were applied, and afterward the *Moxa*, which freed him from that Infirmity for about half a Year, but then it returned again. This Example I thought fit to recite in this Chapter, to shew, *That this Operation is not always to be relied upon*, tho' some Men are pleased to extol it in the highest Degree, especially if there be any Malignity in the Case; for tho' the Operation is as well performed as the Chirurgion or Patient can desire, yet it does not always answer Expectation; which I affirm from Experience and well-grounded Truth.

CHAP. V.

Trepanning, what it is, why used, and how, and when to be performed rightly.

T*repanning* is certainly a very useful and curious Operation in Chirurgery, if performed according to Art, and at a proper time, before the Patient has lost his Strength, and is over-power'd by the Symptoms. Of this artificial Operation I shall briefly, but with great exactness and perspicuity discourse in this Chapter. There are, it's true, many Persons who fondly imagine, that boring a Hole in the Skull is a very easie thing, and to be done at any time; whereas on the contrary it requires mature Consideration, a very Able Head, a sound Judgment, and a skilful Hand to undertake it; and he who knows how to perform it as he ought, without hurting the *Membranes* that lie under the Skull, or committing any other Error or Absurdity, will be of my Opinion, that it requires the utmost Art of the most ingenious and careful Chirurgeon. Trepanning.

Now the *Trepan* is made use of for two principal Reasons; first, it often happens, that in a Fracture of the Skull, small Shivers or minute Splinters of it lie hid under the *Cranium*, which prick and pierce the *Meninges*, and can be taken away by no other means but by *Trepanning* and opening the Skull, and if they remain there, are the certain Procurers of intolerable Pains, and at length, of Death it self. Secondly, it is employed when by a Fracture, Bruise, or great Depression of the Skull, Blood, putrify'd Matter, or any other Humour falls upon the *Meninges*, which cannot be otherwise evacuated, but by *Trepanning*, which gives it vent, and makes way for the ill Humours to issue out, which they cannot do while the Skull is closed; and also prevents many other dangerous Accidents which cannot be foreseen or remedied but by this Operation. Why used.

However, the *Trepan* is not to be applied in all Parts of the *Cranium*, particularly, not too near the Sutures, nor to the Temples, or to the lower Part behind the Head, because in that place the Brain lies very near, and it would be dangerous to attempt it; nor to that part of the Forehead which is seated a little above the Eye-brows, because it would be a very difficult Undertaking to heal it up again, which ought to be considered before-hand, lest the Hopes of a Cure proves as dangerous as the Disease. Nor must the *Trepan* be used on very aged Persons, or where the Fracture is attended with such certain deadly Symptoms, as inevitably threaten the Patient with Death; or if it be above Eight Days after the Patient was wounded, and the proper time neglected; for then it will do more Hurt than Good, and scandalize the Chirurgeon, by the Patient dying under his Hands. Nor must it be used where the Patient is very Young, and the Bones soft and tender, for there it will be of little use; because the *Trepan* will tear it too much, pass through the Skull, and, it may be, wound the Brain before the Chirurgeon is aware of such an Accident; for the *Cranium* being thicker in one part than another, such a Misfortune might happen in the Operation, which would throw the Patient into irrecoverable Convulsions, and Epilectick Fits. When and where it must not be applied.

There

Other Dangers
in this Opera-
tion.

There are other Dangers which occur in this Operation, that required great Care and Caution in performing it; the greatest of which are, that the Artift does not prefs too hard upon the *Trepan*, when he finds it almost through the Skull, nor turn the *Trepan* too quick about; for if he does, the *Trepan* will soon fall into the *Crassa Meninx*, and tear and wound it; because it often adheres so close to the Skull, that without abundance of Care, it would be almost impossible to avoid that Danger. The Chirurgurgeon must also be very careful, if the *Skull* be thicker in one place of his Operation than in another, as has been hinted at already, that he places the *Trepan* at first accordingly, that the Instrument may cut deeper or shallower, as the Thickness or Slenderness of the Part requires, and then turn it two or three times about lightly, till it is in a due position to answer his Intention, which will much contribute to the Exactness of the Operation, and prevent the Danger which otherwise would arise, if it be press'd too hard, or turn'd unequally. The like Dangers would occur, if the Chirurgurgeon should place the *Trepan* too near the *Sutures*, the *Temples*, the *Forehead*, the *Nose*, or towards the *Neck*, as I have said already, because the Death of the Patient would certainly follow.

The right way
of avoiding
Danger in
Trepanning.

To avoid all these Dangers, when the Chirurgurgeon has chosen a right place, and in the Operation finds the *Trepan* is almost through the Skull, let him take it out himself and cleanse it, and order his Man with the help of a *Tubulus*, or *Pipe*, of which I shall speak more hereafter, to blow the Shavings continually out of his way, and that he presses the Instrument a little harder on that side where the Skull is thickest, and gages the *Trepan* with a Ring, or an Arrest, or rather with the newest Invention with a Copper or Brazen Bullet, and then he cannot easily commit an Error in the Operation. Blowing with a Pipe is also very serviceable in this Case; for it not only drives away what hinders the Circular Motion of the *Trepan*, but keeps the *Shavings* from falling upon the *Meninges*, when the Instrument has pierced through the Skull, which otherwise would unavoidably injure them. The Blowing must be done constantly, but very softly, and the *Tubulus* ought to be a little bended, that it may not hinder the Operator. This necessary piece of Art I thought good to communicate, and if the Chirurgurgeon is pleas'd to observe it, he will find his own Account in it, being altogether new, and utterly unknown till published in this Treatise.

In what Place.

To make a right Election of the Place where the *Trepan* is to be applied, is also of great Consequence, and worth the spending a little time in discouraging of it; as also whether the *Orifice* is to be made a large or a little one, or whether one or many *Orifices* best contribute to the Cure. I am of Opinion, and not without good Reasons in Art, that the best Places to apply the *Trepan* is about an Inch or Thumb's breadth from the *Sutures*; and, if it be possible, where the Skull is hurt, if the Fracture will allow it; but if that cannot be done with Safety, and necessity requires it, then the Place is to be chosen where the Physician shall advise. Some Chirurgurgeons are of Opinion, That more than one *Orifice* ought to be made, and those indifferent large ones; but I cannot consent to it, and therefore have always taken the middle Way, neither large nor little; because a large *Orifice*, or many of them, are always dangerous, and one too small signifies nothing: Large ones generally produce a Weakness in the Head, and a miserable Cure, if any at all. In large ones the Air has too great an Influence on the *Meninges*, and the Extravasated Blood and *Sanies* cannot get out of little ones.

At

At what time this Operation is to be performed, is much controverted among Artists; but I am of Opinion, that the Chirurgeon that designs the Benefit of his Patient, ought not to defer it above three Days; for after that time it will have but little or no Effect. But since this Operation is of great Concern to the Patient and the Chirurgeon, I shall give you the Opinions of some of the best Ancient and Modern Authors concerning it.

The famous Dr. *Muraltus* saies *, That Trepaning in a proper time, where the Skull is broke, is of great use to make a Passage for the Blood and *Sanies* to issue out, which lie under the *Cranium*. *Hypocrates* † and *Paulus Egineta* say *, That we ought not to stay above three Days before it is performed. *Albucassus* saies, but in my Opinion very indiscreetly, That *Trepaning* should not be used till after Seven days in Summer, and Fourteen days in Winter; but he that governs himself by this Rule, will do very little Good; for peradventure the Patient would be in his Grave in less than half that time. *Th. Fienus*, after a long Disputation about it, saies *, That the Chirurgeon who thinks there is a necessity to use the *Trepan*, and finds no just Cause to hinder the Operation, he ought to perform it in time, and the sooner the better, for Delays in this Case are often very dangerous. Dr. *L. Jungkius* tells us †, That we should not delay the time at all, especially if any dangerous Symptoms occur; and that it is not to be attempted after the third day, or the fourth at farthest. The Excellent Dr. *Overkamp* in his *New Chirurgica Treatise* ‡ advises also to *Trepan*, if there be occasion, as soon as possible, that the Blood and putrified Matter might be evacuated, and the inward Medicines might operate the better upon the Patient, and resist Putrefaction. The Diligent and Judicious Dr. *Blanckard* † does not mention any precise time for the doing it, but he that reads him may easily perceive he is against deferring it. And of the same Opinion is Dr. *Selinger*, who saies †, We ought not always to stay for apparent Symptoms, since the Blood and *Sanies* may lie lurking a while on the Sides, before they make a more manifest Discovery, which in Summer would soon putrefie. Dr. *Munick*, *Petrus de Marchettis*, *Job van Meckeren*, *Tulpius*, *Paraeus*, *Scultetus* *Frabricius* *Hildanus*, and several others are of the same Opinion.

Trepaning, according to the best and newest Method, ought to be performed in this manner: Set your Patient in a clear and convenient Light, on a Chair which you may go round about, and where he may be held fast and upright; and having all things ready, and within your Reach, begin the Operation. If the Wound is large enough, there is no need to make a *Cross Cut*, but only a small Incision. If the Wound is long, then only make a *Thwart Cut*, and extend it as you think convenient; and if you must make an Incision, do it upon the Skull, that the Arteries may not be injured, if it be possible to avoid it. Then take some small fine Linen Rags, dip them in warm White Wine, squeeze them out again, and lay them round the Lips of the Wound, to preserve it from being further hurted; and let the Rags be made fast, that they may not hinder the Operation. Put Cushions under the Patient's Chin, about his Head, and stop his Ears with Cotton-Wool, that he may not hear the Noise of the *Trepan* or other Instrument. When you have chose a place for the *Trepan*, mark it and its Centre with a Pyramidal Instrument; and when it's a little perforated and made fit to *Trepan*, then set the *Trepan* fast and even upon the *Cranium*; with the Left Hand take hold of the uppermost Handle or the Ball; with

At what time.

* Lect. 9. p. 164.

† L. 1. c. 3. de Vulneribus Capitis.

* Tract. 1. c. 8. p. 43.

* Chirurg. S. 2. p. 226.

‡ Chirurg. 1. 3. c. 5. p. 611.

† Chirurg. l. 2. c. 30.

‡ L. 2. c. 38.

‡ Chirurg. p. 1. c. 6. p. 40.

How Trepaning is to be performed.

the Right Hand take hold of the middlemost Handle, and turn the *Trepan* two or three times gently round, that the *Trepan* may get true hold of the *Cranium*; then go on a little faster, but firm and evenly, without wagling. Let your Assistant in the mean time, with a *Tubulus*, or Pipe of about half a Yard long, and something bending, blow the Shavings out of your Way, without hindering you, that you may the better see how you proceed. You may also take out the *Trepan* sometimes, to cleanse it, and let it cool a little: Then proceed on your Work again, and continue it till you are almost through the *Cranium*; for then your whole Care and Art must be exerted, lest you injure the *Membranes* that lie under it, and that the piece of the Skull which is bored, may be handsomely taken out. The *Tubulus*, as I have said before, will be here of great Use, not only in taking the Shavings out of your Way, but by blowing, the *Dura* and *Pia Mater* will dislodge themselves a little from the Skull, and not be so easily hurted. If the Bone should chance to hang in one particular place, it may soon be separated with a proper Instrument. When all this is done according to your Desire, take out all the Splinters and broken pieces of the Skull; let your Patient rest a while and hold his Breath, which will much contribute to the throwing the Blood and *Sanies* out at the Orifice which was made by the *Trepan*, and the oftner this Course is repeated the better. If any Matter yet remains behind, you ought to dry it up with a soft Sponge; but remember that in the Cavity between the Skull and the *Meninges*, you put a fine Silk or Linen Rag, but not too big, that has been moistened and warmed, that Nature may have room enough for the Extrusion of the putrified Matter.

A History. *Simon Fridrick* a Dyer at *Hervoden*, 45 Years of Age, was struck upon the Forehead with a Pewter Pot by another Burgher, as they were drinking together in the Year 1676. which caused a great Fracture in the Skull: I being then quartered there with the Elector of *Brandenburg's* Regiment of Foot, commanded by General *Gorziok*, was called to him, and found him bleeding extremely, deprived of his Understanding, and vomiting continually. First, I caused the Hair to be taken off, searched the Wound, stopt the Bleeding, and over that part of the Head applied *Emplastrum de Betonica*, and over that laid good Bolsters warmed in Wine. The next day I brought Dr. *Schmidt* the Camp Physician along with me; and having further informed our selves, and let the Patient Blood, we perceived the Symptoms encreased, and the Patient still remaining senseless and speechless; we made Preparation to *Trepan* him, which was performed that very Afternoon about three a Clock, in the presence of the Doctor and Mr. *George Paulebsky*, a Chirurgion. After having made room enough by a thwart Cut, I applied the *Trepan* very successfully; for it was no sooner done, but abundance of Blood and *Sanies* came forth, which lay in great Quantity under the Skull upon the *Dura Mater*; then cleansing it very well, and laying the Patient again in a fitting Posture, about a Quarter of an Hour after he appeared like a Man awaked out of a long Sleep, and by degrees came to himself again; his Speech and Understanding returned, and certainly it will have the same Effect, where *Trepaning* is timely used. In short, the Patient quickly mended, and in Nine Weeks time was perfectly recovered.

Not long after I had another Patient at *Soyt*, by Name *Peter Jacobsen* a Soldier, who was violently beaten with a great Rule or Staff by a Bricklayer upon the *Musculus Temporalis*, insomuch that the *Os Temporum* was

was utterly broke. In December following the same Year, a Corporal who was dangerously wounded with a Scimeter upon the *Sutura Cornalis*, which cut quite through the Skull, in the Action at *Turkshausen*, came also under my Care; both which I *Trepanned* two days after they were wounded, and both were perfectly recovered.

CHAP. VI.

Of Hare-Lips, how they are to be cut, stitch'd and cured.

THIS Operation also, requires a Diligent and Experienced Chirurgion to perform it as it ought to be. Dr. *Seligen* in his Book of *Chirurgical Operations* *, has treated this Subject very ingeniously, distinguishing it into Six several Kinds. Some, saies he, are larger, and worse than others; some want Flesh, and others have too much; some are Callos, and others are not; in some the Jaw-bone, Gums and Teeth are well, and as they ought to be, and in others they are wholly defective, which in truth is the worst of all; and each of these several Kinds have their particular Way of Cure.

In order to which great End, the Chirurgion should deliberately consider the Age and Constitution of the Patient; for if it is a Child very young and weak, and the Hare-Lip large, it will be better to forbear the Operation a longer time, because the Child would not be able to suck, but languish away for want of Nourishment. He should also enquire whether the Child is very *Peevish*, given to violent *Crying*, subject to *Fits*, or other ill Accidents, and manage himself and the Cure accordingly, as will be shewed hereafter; for if the Hare-Lip is very large, and part of the Jaw-bone, Gums and Teeth are wanting: If it gapes wide, continues open to the *Nose*, has Corners, and is knotty, it's much better, under such Circumstances, to let the Patient grow stronger, and stay till it has done sucking, and is accustomed to other Food.

No Person should attempt this Operation, till he has seen it exactly performed two or three times, by an Able and Experienced Chirurgion, and has his Blood-stoppers, Plasters and Needles in readiness, to stitch and join the Lips together, and because the whole Cure depends upon that part of the Operation; he must oblige all his Patients to be Ruled, and remain Still and Quiet; for if it should rip or break out again by reason of the softness and tenderness of the Flesh in young Children, it will be very difficult to make them Unite again afterwards. You must further observe, That if the *Hare-Lips* are large, and much Flesh wanting, there is a Necessity to apply an *Emollient Cataplasim* to the Lips, three or four days before you begin the Operation, that the Flesh may be more pliable and stretch the better, when you are about to unite them, or else it will be apt to rip and break out again. But if the *Hare-Lip* is not large, there is little Difficulty in the Cure: As it happened lately in a *Clothier's* Child in *Tashen-street*, who was brought to me to be cured. I pared away the Skin on both sides with an Incision-knife, then stitching it together with Needles and Silk and applying good Bandages, it quickly healed. In other Cases, where every thing was not likely to succeed so happily, I commonly used to make the Flesh where it is joined to the Gums more Raw, and

Hare-Lips
their different
Kinds.
* Part 1. c.
35. p. 67, &c.

Cautions.

How to cure
Hare-Lips.

History

strewed

strewed some fine Powder of *Radix Consolidæ* and *Sarcocolla* upon them, and giving a deeper sitch under the Lip, left the Needle in the Flesh, tied the Silk several times about the Needle, and took off the Point with a Pair of Pincers, which keeps it so firm, that it cannot break out again. To the other part near the *Nose*, I usually applied *F. Wurtzen's* Fracture-plaster, with the Addition of *Boli Armenæ* ℥ij. *Tragacanthæ* ℥i. and never failed of Success. Between the Gums I always put twice a day a small fine Rag dipped in *Mel Rosarum*, which not only conduced to its healing, but hindered its growing to the Gums, as I have known it sometimes happen, for want of Care in preventing it. Some mix the White of an Egg with the Honey of *Roses*, that it may stick the faster, which is not amiss.

If a *Hare-Lip* is extraordinary large, much Flesh wanting, and the Cartilage hard, knotty, angular and joined to the Flesh of the Lip; great Care must be used, especially in stitching upon the Incision, that you may see how to separate the Cartilage or Gristle, lest it too much disfigure the Lip. In such a Case you ought to proceed after this manner: Lay your Patient upon Cushions on a Table in a convenient Room, tie him Hand and Foot with Towels, that you may not be hindered in the Operation; let your Assistant hold the upper Part of the Patient's Head very firm: Then first, with an Incision-knife cut the outward Skin on each side with Scissors, or what you can best come at the Places with. Cut the Lips as large as is requisite, all along the Gristle, and the skin of the Lip from the *Cartilago*. When this is done, wipe every thing clean with a Sponge, strew the following Powder upon the Wound, and unite the Lips as close as possibly you can: Then put three small long Plaisters upon the Lips, and with them force the Hare-Lips together, but leave as much space between every Plaster, as is sufficient to set the Stitches in. Then proceed in the middle and below the Stitches, as I have taught before; apply the same Medicines, and observe the same way of Cure. Over all these things in the beginning of the Cure, lay a good *Defensive Plaster* mixed with the *Emollient Plaster*, that the Flesh may be kept soft, and no ill Accident occur. In the inside on the Gums, always put a moist piece of a fine Rag, as is said before, and at last conclude the Cure with a good *Emplastrum Opodeldoch*. Here I must also acquaint you, That there are several Sorts of *Sutures* used in this Operation, according to the different Fancies and Opinions of Artists, and as many Kind of *Stitches*; some imitating *Furriers, Glovers, Taylors, Shoemakers*; but my own way having never yet failed me, I have no Reason to try others.

History.

In *October* 1686. a little Boy was brought to me out of the Country, from a Place called *Langenwiese*, about three Years of Age, who had a very ugly and mighty large *Hare-Lip*, which none could behold without Astonishment, as may be seen in the following Figure. Besides, there was more than two Fingers broad of the Upper-Jaw, Teeth and all, wanting, which, with a very Unhandsome *Nose*, made the Boy look very frightfully. However, I cured him in about Ten Weeks time, as well as it was possible to be done. The Ligature, and how the Needle should be used, is also described in the same Figure. This Patient without doubt had been sooner well, if he had not been troubled with *Fits*, with which they never acquainted me, till I saw him in one under the Operation, which much retarded the Cure; and Eight days after *St. Anthony's Fire* broke out in his Face, which was another Impediment.

The

The Plaister and Powder before-mentioned, was of great Use in this Cure, therefore I have given you their Prescription, being of Opinion there can be nothing better in this and many other Cases.

Rx Emplastrum Diachylon. Simpl. ℥ss. Stictic. Crollii ℥ij. Tragacanth. Gum. Arab. ana ℥vj. Rad. Consolid. major ℥j. Sarcocoll. Aristoloch. long. ana ℥v. Resin. ℥iiij. Ol. Myrtin. ℥ij. m. f. ad formam Emplastri.

The Powder mentioned in this Chapter, must be made very fine in this manner :

The Bloods
stopping
Powder.

Rx Pulv. Sanguin. Draconis ℥ss. Tragacanth. ℥j. Rad. Consolid. maj. Sarcocoll. Gum. Arab. ana ℥j. Cuti Fabril. ℥ij. Misce, servatur ad usum.

These two Prescriptions I recommend for the Cure of *Hare-Lips*, but chiefly the Powder, which is also an Excellent Remedy for stanching Blood in all manner of Wounds in any Part of the Body, as I have often experienced with great Conveniency to my self, and Benefit to my Patients; for it stops Bleeding, and joins opened Veins and Arteries in a Moment, and yet has no Sharpness or Corrosive Quality in it.

CHAP. VII.

Fontanels or Issues on the Crown of the Head, and Seatons in the Neck: How they are to be made, and what is to be observed concerning them.

THIS kind of Fontanels few Persons know how to make, that they may be beneficial to the Patient. A while since I made one in the Head of a Man of great Quality, for a Distemper in his Eyes, which no Chirurgion in that Place, though a considerable Town, knew how to make, or scarce ever heard of one made in that Part before; for in such Distempers they commonly made them in the Arms, or in the Neck, which now are almost grown out of use, in Comparison of what they were formerly. The Fontanels of which I here design to treat, are much better known among the *French* and *Italians*; for they are not so humorsom or squeamish as the *Germans*, but having more regard to their Health, don't think them any kind of Trouble. They use them with good Success in all Distempers of the Eyes, and the Falling-sickness, Apoplexies, Palsies and other Infirmities of the Head, where they perform many great Things, and as soon as the Patient is recovered, they dry them up again, and consider nothing further in the Matter.

Of Issues.

The only Difficulty in making an Issue in the Head, is in making choice of a proper Place, for otherwise it will signifie very little. In order whereunto observe this Method: First, take off the Hair about the breadth of a Crown-piece, from the Crown of the Head to the place where the *Satura*

The Place to
make them at.

Coronalis and *Sutura Sagittalis* meet; and having found it by feeling about with your Finger, make your Issue there; but if you cannot find it by this Method, and the proper place being all in all; then take a strong Thread, draw it from the Tip of the Nose to the hinder part of the Neck; then take another Thread and draw it over the Head in a strait Line, from the middle of one Ear to the other; mark the place where the Threads cross one another, and you have found the Place where you ought to make the Fontanel. Others find the Place after this manner: Let the Patient lay the Joint of his Hand upon the hollow part betwixt the Nose and the Forehead, and extending it to his Head, where the end of the middle Finger touches, is the proper Place to set the Issue.

How they are made.

There are several Ways of making these Fontanels; in *Italy* and *France* they commonly use *Actual Cauteries*, which are Irons made with a small round Head in Form of an Acorn, which being made very hot, and the Skin touched with it, where you design to make the Fontanel, it will raise a Blister, which being cut, and a Pea put into it, with a thin Piece of Silver upon the Pea, and Bolsters and a Bandage over the Silver Plate, to make the Pea work its way downward; let it continue so for two or three days, and at the next opening you will find the Issue made. In other Countries, as also here in *Germany*, instead of *Actual* they use *Potential Cauteries* or *Corrosives*, because they are not so frightful to the Patient as burning with a hot Iron. Some only use a small Pair of Pincers, not unlike those which are used in the *Polypus* of the Nose, with which they pinch a Hole in the Skin, big enough to put a Pea in. This is quickly done, and I have perform'd it very often with great Satisfaction. However, Care must be taken not to pinch too deep into the Flesh. In burning with a hot Iron, remember not to press the Instrument too deep, for fear it should burn too far into the Flesh, and perhaps touch the *Pericranium*, which would give you a great deal of unnecessary Trouble and Vexation. In the Use of *Corrosives* you are to observe, that those which are made of *Silver* and *Aqua Fortis*, are the best that can be used in this Place. Others made of *Ol. Antimonii*, *Spir. Nitri*, *Butyr. Antimonii*, *Aqua Fortis*, and the like, are not to be used in making Issues on the Head, because they are less certain than the other. Dr. *Solingen* in his *Chirurgia* *, has indeed described a large, and Engraved a New Instrument, with which Issues are first to be cut, and afterwards cauterized with a burning Iron, through the first Table of the Skull; but leaving him to his own Opinion, I think there is no necessity for such an Operation; for it will not only put the Patient to intolerable Pain, but usher in very dangerous Accidents. If the Orifice is at first made through the *Musculous Skin*, it is far enough; for it will work it self deeper, as common Experience sufficiently testifies.

* Part 1. c. 11.

How to be dressed.

Instead of a *Pea*, some at first put a *White Pepper-Corn* into the Orifice, under a Supposition that it will make an Issue deeper, and sooner than a *Pea*, and the Thought is not much amiss; but it will fret the Part, and be more painful than the *Pea*. In dressing the Issue, you must observe, after you have laid a Plaister over the Orifice, to lay a pretty thick Bolster upon the Plaister, and in such a manner that it may be thicker downward than it is upward, that it may be tied faster, and the Issue be kept in its right place without moving.

A Seton how made, and for what end.

Setaceum or a *Seton* is much of the same Nature with a *Fontanel*, only it has two Orifices which are made with a Needle and a Skean of Silk, drawn through the fleshy Pannicle of the Neck, and is kept open by the Skean

Skean of Silk being drawn once or twice a day from one side to the other. It is a very terrible and troublesome thing to be tormented with it, especially to tender Persons; but since it is no longer continued than there is urgent Necessity for it, and that in many Cases it's highly beneficial, several Persons are contented to endure it, in hopes that a Cure will recompence the Molestation. It is commonly used against inveterate Defluxions of Rheum into the Eyes, and Pains in the Head; for by this means the peccant Humours are drawn away and evacuated.

Dr. Blankard in his *Chirurgia**, seems not to approve this nauseous Operation, for he calls it an unnecessary Exulceration, and a self-created Disease without any Benefit. On the contrary Dr. L. Jungkius in his *Chirurgia**, commends it in several Distempers. Dr. Muis in *Observationibus suis*, does also recommend it in Cataracts of the Eyes, if timely used. Spigelius, Beverwick and Barbette apply it in the Hip and Calves of the Legs in a *Sciatica*. Riverius and Helmont used it in all Distempers of the Head, and particularly in Deafness. Scultetus and Hildanus use it in all Pains of the Neck and Limbs; and Paræus also in the Falling-Sickness. In brief, he that would take the Pains to transcribe all that has been writ upon this Subject, especially by the Ancients, he would want more than a Quire of Paper to do it in, without mentioning the Variety of Instruments adapted to this Operation, which gave a great Trouble and Charge to the Chirurgion, and intolerable Punishment to the Patient, especially when a Red-hot Needle was used with it.

But at present Chirurgions don't give themselves so much Trouble about it; for having marked the place with the Fore-finger and Thumb of the Left-hand, they squeeze the Skin together, and pluck it up as high as is necessary to sever the Skin from the Muscles: Then they thrust a great three-square Needle with a sharp Point and a little bended, through the fleshy Pannicle, and draw the half Skean of Silk through the Skin, and there leave it; which being afterwards moistened with a Digestive or Oyl of Roses, which must always be done at every Dressing; twice or thrice a day they draw the Silk from one side to the other, and the Business is done. Afterwards they dress it with Plaisters and Bolsters, as they do an Issue, as long as they desire to continue the *Seton*.

In the Month of *March* 1689. I made a *Seton* in a Lady's Neck a little higher than usually, who was troubled with a constant Pain in her Ears, Deafness, and the continual running of a thin stinking Matter out of the Ears; and the *Seton* having been kept running about a Month, all the Symptoms ceased, and the Lady found her self very well, though she had formerly used many Medicines to no purpose. About a Quarter of a Year after, she came to me, desiring the Silk might be taken out, and the Wound healed up again, which was done accordingly; but in less than a Month's time she came to me again, complaining that the Symptoms were returned, and she in as bad a Condition as ever, and therefore would not go away till the *Seton* was made in her Neck again, but a little lower than formerly; which being done, in a very short time all her Grievances utterly vanished.

In the Spring of the Year, 1690. I made a Fontanel in the Crown of the Head of a Merchant's Wife in the *New-Town*, for whom a Chirurgion had made one very unhappily before, which produced a miserable Effect. The Patient was continually troubled with an excessive Pain both in her Head and Teeth, which sometimes deprived her of the Use of her Senses;

Authors Opinions of it.

*L. 2. c. 14.

p. 102.

* Sect. 2. c. 22. oper. 2. p. 357.

How to make and dress it, after the manner now in use.

History:

Observation.

but

but the Issue I made, was so beneficial to her, that in a short time the Pain of her Head, and at length that of her Teeth went off as well as could be desired. Dr. *Regius* who was her Physician, was long before he would consent to it; but she knowing, that not long before I had cured an Old *Commissary's* Inflamed Eyes by the same Means, she would not be satisfied without one; which when performed, had its Effect. Which Histories I don't mention as if this Course was always to be observed, but to shew that these Remedies ought not to be utterly despised and rejected.

C H A P. VIII.

Of all Sorts of Tumours in the Face.

Tumours in the Face.

THERE are so many several Kinds of *Tumours* incident to Human Bodies, that the Reader must not expect I shall treat of any here, but what happen on the Face, and either Hurt or Disfigure it; which often are of such a Matter and Colour, that it's hard to define of what Sort they are. No Part of the Body is so much troubled as the Face with all Kinds of *Tumours*, as *Swellings*, *Spots*, *Freckles*, *Pimples*, *Warts*, *Ganglions*, and other *Exulcerations*, without mentioning the several Disasters and Maladies happening to the *Eyes*, *Ears*, *Nose*, *Mouth*, &c. Of all which I shall treat in their several Places as fully as is necessary.

From whence they proceed.

A *Tumour* on the Face, if we trace it according to the new and safest Principles, is generally a high and preternatural Swelling included in its own Cist or Bag, and by degrees growing bigger, till it's both offensive and painful. It commonly proceeds from the Obstruction of the *Glandules*, and the extended Vessels of the *Chyle*, which, according to Dr. *Overkamp* in his *Chirurgia* *, being nothing but large Channels, appointed by Nature for the Passage of the *Succus Nutritus*, is obstructed in its Motion by this Cist or Bag, which contains the Matter of the *Tumour*; it sometimes happens also to the *Veins*, *Arteries*, and *Lymphatick Vessels*. When it happens on the *Arteries*, it soon encreases, is very dangerous, and called *Aneurisma*: If on the *Veins*, where it seldom comes, it's called *Varix*, and in the *Lymphatick Vessels*, *Hydatides*. Here it's also fit to be consider'd, That the three last Kinds above-mentioned, altho' the Blood and Humours do gather in a Bag, yet it does not totally obstruct the *Circulation* as the first Kind does; where the *Chyle* is stagnated, and by degrees contributes to the increasing of the *Tumour*.

*L. 1. c. 10. p. 200.

Different Sorts of Tumours.

The different Sort of *Tumours* arise from the Matter of which they are compounded, which are various in their Kinds, Colours and Resemblance. Sometimes the Humour looks like *Honey*, *Pap*, *Tallow* or *Seame*; in others it resembles *boiled Millet*, the *Boe* of a *Fish*, and other whiles like *Hair*, *Coles*, *Cotton*, &c. of which you may read at large in Dr. *Blanckard's Chirurgia* †, and in several other Authors who have treated on this Subject. But Dr. *Munnicks*, differs from the rest about the Cause of these *Tumours*, and saies in his *Praxis Chirurgia* ‡, That the Original of such *Tumours* proceeds from a *Viscous* and *Glutinous Humour*, separated from the Blood in this or that part of the Body, more or less altered; which being inclosed in a Bladder, increases by degrees till it comes to be an *Atheroma*, *Steatoma*,

† L. 3. c. 5. p. 236 & sequ.

‡ L. 1. c. 9. p. 65.

Several Authors Opinions.

or

or a *Meliceris*, and so further. This Opinion I was unwilling to conceal, that the Reader may chuse which he thinks most agreeable to Reason; for my part, I am of the same Opinion with *Overkamp*, *Blanchard*, and *Baugrand*, in relation to true Tumours; tho' I cannot deny but there are other Sort of Tumours in the Face, as those in the Corners of the *Eyes*, in the *Glandula Lachrymalis*, on the *Eye-brows*, on the *Musculus Frontalis*, *Ganglyons*, *Polypus* in the *Nose*, and those that grow out at the *Ears*, and proceed from another Cause. These Sort of Tumours, it's true, may grow in other Parts of the Body, according to the Doctrine of *Cornelius Celsus* *, where-soever the Vessels, Glandules or *Tubuli* are subject to Extension, Obstruction, and the Circulatory Juices, to be hindred in their Regular Motions, and the Matter and Exhalations may adhere, and be Stagnated. Dr. *Jungkius* in his *Chirurgia* *, adds to this, That not only the *Tubuli* and *Vasa* we have already mentioned, but also in the very *Nerves* and *Tendons*, when their *Tubuli* by Over-straining, Falling or Beating, are Turned, Crushed or Bruised, the Circulating *Liquors* will stagnate and raise a *Tumour*. Dr. *Solingen*, who seldom omits giving his own Opinion, has said nothing on this Head, for what Reason I cannot imagine, unless it was because it was a difficult Point, and not yet agreed upon. Monsieur *Boirel* the King's Chirurgion at *Argenton*, seems to have the same Opinion, and saies in his Excellent Observations; Let the Ancient and Modern Physicians Cabal and Contend as long as they please, concerning the Matter and Original of *Tumours* included in their own Cists, Time will ere long shew who are in the right; with which I conclude, having been already longer upon this Head than I first intended.

* L. 7. c. 6.

* Sect. 2. oper. 3. & 4. c. 7. p. 418.

Now before I describe the Method of Cutting *Tumours*, I shall first, for certain Reasons, propose some Rules concerning their Cure, that the one may give Light and Instruction to the Chirurgion, how he ought to proceed in the other; for the Cure of all *Tumours* in the Body as well as in the Face, consists in the Four following Articles.

1. In tying the Root of the *Tumour* fast, if it be possible to be done.
2. In opening Excoriations, and crushing out the Matter contained in them.
3. In cutting out the whole *Tumour*, if the Swelling is large.
4. In opening such *Tumours* with a Corrosive where the Knife cannot be used, that the Corruption may be evacuated; or if there be no Matter, that the *Tumour* may be consumed by degrees, and utterly rooted out by the frequent Repetition of proper Corrosives.

Rules to be observed.

Of the first there is not much to be said; for if you find that the *Tumour* is Perpendicular, then you must tie it with a Skean of Silk or Horse-hair, first slightly, and by degrees stronger and stronger, till the whole *Tumour* is mortified; but if any thing remains behind that is not quite eradicated, as it sometimes happens, especially in the Corner of the Eye where the Chirurgion cannot come at it but with great Difficulty, then it must be consumed with *Butter of Antimony*, still remembering to Dab and wash the Part with a proper *Lixivium* to mitigate the Pain, and temper the Acidity.

Some I know will not be of my Opinion, but what I say is from a well-grounded Experience, that this Method will extirpate all *Tumours* in the Face, that are not very large, and of too long Continuance: I say it will do it, if the *Tumour* be only opened, and the Corruption crushed out; as for the bottom it may soon be cleansed with any thing that is sharp and something corroding; but especially if you make use of my Water

Small Tumours how cured.

Observation.

adapted to that purpose, which will do it at *one Application*, which I thought fit to mention here, because the *Tumour* being on the Face, you must do it neatly, for fear of spoiling its Beauty, which will unavoidably follow Excoriations and Cuttings. In this manner I lately took away two Tumours; one was upon the left Cheek, and the other on the right Eye-brow: The first from a *Baron's Lady* of *Silesia*, and the other from my Lady *Pr. of M.* and both so artificially, that you can scarce discern the Marks of them. If the *Cist* or Bladder, and the Matter contained in it, upon your touching feels tender and soft, your Work is easie; for the Putrefaction will soon be discharged; but if the *Tumour* is of long standing, the Bag thick, and the bottom rooted very deep, in such a Case it will hardly prevail; for in those kind of Tumours, the Opening must continue long, that the Matter may be continually crushing out, and the rest consumed with Corrosives; or if it can be dilated, the Bag may be exterminated with Pincers, Scissors, or other proper Instrument, as is affirmed by Mr. *Blondetos* the *French King's* Chyrurgeon at *Toulon*.

Large Tumours how cured.

Again, if the *Tumour* is very large, of long standing, and in a fleshy Part, then you may tie a String very fast about the upper Part of it, two Days before you begin the Operation; for by this Means the *Tumour* will be more pliable, and may be excoriated with the greater Ease; of which I shall say more in the following History. But if the *Tumour* happen in a dangerous Place, and you are desired to do your utmost; first try to open it, if that will not do, try to evacuate the Humour by the Application of Corrosives; but if this, nor no other Medicine will have effect, then let it alone; for it must be called a *Noli me tangere*. Not long ago such a *Tumour* happened under the right Ear of a Great Prince in *Germany*, upon the *Arteria Carotis*, in which there was so much Danger, that no Person durst attempt to meddle with it.

Of the fourth and last kind of these *Tumours*, I have little to say, because every Chirurgeon will make use of such *Corrosives* or *Cauterics* as he thinks necessary. In the fourth Rule I said, that for two several Reasons a Cure was undertaken according to this Method: First to give vent, that the Matter contained in it might be crushed out, where no other manual Operation would succeed. Secondly, If there was but little Matter, the *Tumour* small, but of a malignant, spongy, and sometimes of almost a Cancerous Kind, there *Corrosives* and *Actual Cauterics*, if prudently used, might have good Effect, if the Scituation, Kind and Largeness will permit.

History.

In the beginning of *January* 1686. a Brewer's Daughter unmarried, named *Helena*, Eighteen Years of Age, living in the *Haw-street*, was brought to me to be cured, who had a very large and prodigious *Tumour* called *Atheroma*, in her Neck, which after Exection, weighed Three Pounds and an half; that at the bottom was of the same Colour with the rest of the Skin, and interwoven throughout with a Multitude of Arteries and Veins which were grown in, and united to the Swelling, and the *Tumour* was of Ten Years continuance. Besides, it was of a strange Form, neither round nor long, but as if a great many *Tumours* were united and grown together, as you may see in the following Figure*. In the upper Part it was about the bigness of a good Apple, brown and blue, glandulous and speckled; in some places open, stinking, and almost *Cancerous*, which was the principal Reason why they came to me; for otherwise out of Fear they would yet have staid a longer time. It was so heavy, she was forced

* Vide Tab. 4. Fig. 1.

to wear it in a Bag, with a Ligature fastened over the Head to hold it up.

Before I attempted the Operation, and Dr. *Burg* had prepared her Body for it by inward Medicines, I applied to the upper Part of the Swelling where it was already open and malignant, a strong and proper *Corrosive*, to try if the Opinion of Mr. *Darles* Chirurgion of *Baucaire*, was true or not, *viz.* That in such kind of *Tumours*, on the second or third day, the Flesh would grow as much again as was taken away by the *Cauticks*, which in truth it did, to the great Admiration, as well of Dr. *Burg*, as my self, that a *Tumour* should so much increase by its own Excreescency in so short a time. Whereupon I tied the *Tumour* with a strong Ligature at the Root the same Evening, and early next Morning performed the Excortication, having first cut off the whole spongy Substance, that it might not hinder me in making the Separation. I could make no Observation of any Veins or Arteries in this Operation, because it would not only have occasioned a great loss of Time, but would have been very painful to the Patient. In the whole I proceeded with all the Diligence and Caution I could, and as the Case required. And as soon as all was performed, and the *Tumour* extricated, I joined the Lips of the Wound as close together as was possible, and applied Astringent Plaisters, and Bolsters moistened in warm Wine to the Part; all which had such good Effects, that the Patient in less than Eight Weeks time was perfectly recovered.

This puts me in mind of Dr. *Kergers*, a Celebrated Physician at *Lignitz*, who by a Fall from a *Chaise-volante*, occasion'd by the Horse's going out too soon, caught a Hurt in the middle of his Right Leg upon the *Tibula*, that rais'd a *Tumour* about the bigness of an Apple, which continually growing bigger, and full of Pain, he caus'd it to be cut off by Mr. *Lawrentz* the Chirurgion; who finding in the Operation, that the bottom of it lay close upon a *Tendon*, which he fearing to hurt, did not cut it quite out, thinking it might be taken away by Corrosive Medicines, and so retrieve the Error which his Fears occasioned, which at first gave promising Indications; but he only applying a little *Ol. Hypericenis* upon Lint, there followed by degrees such a great Quantity of Spongy and *Cancerous* Excreescencies, that it was much bigger than at first, and impossible to be taken away by Cutting. Corrosives were often applied, yet still it grew bigger, and the longer the worser. The Doctor's Pains and Torments increased, and his Strength decayed; all Remedies failed, and nothing would do any good. At last, upon his own Request, and the concurring Opinions of all the Physicians, his Leg was cut off just under the Knee, and indeed was very well performed, but he died shortly after. Which rare and remarkable Observation I thought fit to communicate to the Caution and Consideration of all Practitioners in Chirurgery.

C H A P. IX.

A Polypus in the Nose, what it is, and how to be eradicated and cured.

Difference between a Polypus and a Sarcema or Ozema.

SOME Authors are of Opinion, That a *Sarcema* or *Ozema* and a *Polypus* are the same thing, and that there is no difference between them; but I must take leave to enter my Dissent; for a *Sarcema* and an *Ozema* are malignant and filthy stinking Ulcers, and commonly appear below the Nose in the fleshy Part between the Nose and the upper Lip; and if it spreads and grows worse, reaches to the Sides of the Nose; but a *Polypus* is a true Tumour, which from its beginning has its Root, and is included in its own proper Bag, which commonly adheres to the upper end of the *Os Cribriforme* or *Induratis*, and to its *Cartilaginous Processus*; yea, sometimes it settles upon the Gums, and in time increases to such a Degree, that it fills the whole Nostril, hinders breathing, and sometimes grows so big that it hangs out of the Nostril, and may easily be seen, and drawn forward, always increasing and decreasing with the Moon. That Famous Physician and Burgermaster of *Amsterdam*, Dr. *Nicholaus Tulpius*, has noted this in his *Observations* *, and inserted a very Curious History upon it.

* Cent. 1. Obs. 26. p. 5.

What a Polypus is.

This *Glandulous* Tumour, which has its Origine from a filthy spongy Flesh, and from a small soft and tender *Radix* in the beginning, at length magnifies to such a Degree, that it quite stops up the Nostrils, hinders the Patient from Smelling, Speaking and drawing his Breath; is sometimes Red, and sometimes White and Blue, according as it borders more or less upon the Blood or Chyle Vessels; or as it has suffered Irritations by the Ignorance of Chirurgeons, who pretended to cure what they did not understand, which much contributes to the Alteration of the Colour. Sometimes it sticks so very deep in the Nose, and hangs out so far, that the Roots of it may be seen before and behind the *Uvula*. Dr. *Munnick* in his Discourse on this Head, says *, That if the *Polypus* is Soft and White, it is easily cured; but if it be Red, and runs a great way up into the Nose, it's very difficult to be reduced; and if it is Black, Yellow, Ash-colour'd and stinking, it is thought Incurable, it then inclining to a *Cancer*, and insinuating it self so far about the *Gula*, it's impossible to be eradicated.

* L. 1. c. 24. p. 289.

A *Polypus* may happen in several other Parts of the Body, yea, even in the Heart, Bowels, Spleen, and in the Arteries, and *Sinus Meningum*, as is affirmed by Dr. *Blanckard* and Dr. *Tulpius*. Dr. *Becklin* * has given us two Choice Histories of a *Polypus* in the Heart, and of a *Pseudo-Polypus* in the *Cerebrum* and *Uterus*. The Jesuit *Zeidler*, when I was curing him of an *Atheroma* on the upper Eye-Lid, presented me in the Year 1692. with a Figure or Cut of a *Polypus*, which was found at *Prague* in the Heart of a *Jesuit*, seated in the right *Ventricle* of the Heart, but its Root run through the Right *Lobus* of the Lungs, and the Left into the *Oesophagus* or Gullet. Mr. *Logan*, an Eminent Chirurgeon at *Lyffe*, sent me also a Figure of a *Polypus* in the same Year, which was found in the *Abdomen* of Secretary *Helcker*, which I intend to discourse upon more at large, and have a Cut engraven and inserted in the Second Book of *Chirurgical Curiosities*.

* Obs. Medic. 1. 1. Obs. 1. &c. 2. p. 202. usq; ad paginam 204.

A *Polypus*, as I have said already, is easily cured at first, while it is little, but if every, not without Difficulty, when it is large, and of long continuance, especially if it opens, and is in a manner grown Cancerous; for in such a Case scarce any Operation will succeed, or Medicine prevail, because it will grow more in one Night than can be taken away in two days. Therefore in order to a Cure, begin with Medicines while the *Polypus* is small, or pinch it away with *Forceps* made for that purpose; or lastly, employ an *Actual Caustery*, if there be occasion. If the *Polypus* is of a malignant Nature, the Chirurgeon will be forced to make use of all these Three Methods: And therefore in the first place I will present him with the Powder, which I have always found successful in the beginning, when the Skin is first a little taken away by a proper Corrosive.

The three several Ways of Cure.

℞ Pulv. fol. Savindæ ℥ss. Cortic. Granator. ℥ij. Mercur. Sublimat. alb. ℥ss. Tutie preparat. Ocul. Cancr. ana ℥ijss. Vitriol. alb. Alum. usti ana ℥ijss. Myrrh. ℥i. Sacch. Saturn. Aloes ana ℥ss. Misce f. ad subtilissimum pulverem.

Proper Medicines to cure a *Polypus*.

This Powder or the following, is to be applied with Lint; but if you fill up the Nose with Cotton, a little above the *Polypus*, then you may gently blow it in with a Quill, and oblige your Patient at that time, not to draw his Breath upward through his Nose, but through his Mouth.

℞ Pulv. Intestinor. Lupi ℥i. Flor. Balustian. ℥ij. Lythargir. cocti ℥iij. Mercur. precip. albi ℥i. Cort. Austr. ppt. Bol. Armin. ppt. ana ℥ijss. Aloes, Myrrh. ana ℥ijss. Misce fiat Pulvis.

If the Powders should not please your Fancy, and you think it might be better done by Liquids, then you may use that which follows, and I don't doubt but it will answer your Intentions. But first, let it stand about Eight days in a warm place, and now and then shake it very well, and when you use it, pour off only that which is clear, and let it be a little warm.

℞ Ceras. lot. Tutie ppt. ana ℥i. Alum. usti ℥ss. Merc. Sublimat. ℥ij. Camphor. Sacchar. Saturn. ana ℥i. Flor. Cinza ℥ijss. Aquar. Plantag. Rosar. ana ℥x. Misce detur in Vitro.

But here it is to be observed, That the *Camphire* must first be dissolved in a little Spirit of Wine, for otherwise it will not incorporate with the Waters. Now that the Chirurgeon may have his Choice of Medicines, and use what Form he pleases, I will also accommodate him with a *Balsam*, with which I have always had great Success, and whose Vertues I cannot praise too much.

℞ Vitriol. albi Merc. crudi ana ℥ijss. Mercur. precip. ℥ij. Aloes ℥ss. Misceantur & contundantur ad Pulv. subt.

All these are to be boiled in a sufficient Quantity of White Wine, in which has first been dissolved an Ounce of Myrrh, till all the Humidity of the Wine is quite evaporated and consumed; then add the following Species: *Mel Persicar. Rosarum ana ℥ijss.* Mix them all together upon a gentle

to the
to the
Cure

gentle Fire to the Consistence of a *Balsam*, and apply it to the *Polypus* with a little Lint. This *Balsam* may be used with good Success in all Cases where an *Acid* is requisite.

Cure by a
Mortificator.

To cure this Disease with *Forceps* or *Mortificator*, the Chirurgion ought to proceed in this manner: He must take special care to put the *Forceps* to the very Root of the *Polypus*, that he may be able to pinch it out at once, or else the Flux of Blood will hinder him from doing it afterwards; and therefore he must not crush the Instrument together, till he is sure he has hold of the *Root*, and then he will do the Work at once, and as it ought to be.

Cure by Can-
teries.

The Cure by *Cauteries*, either *Actual* or *Potential*, ought to be enterprized after this manner: Take a *Cautery* made of *Silver* and *Aqua fortis*, apply it with a sufficient Quantity of Cotton to the *Polypus*, taking care by filling up the *Nostril* with Lint or Cotton, that it does not slip from the place: Let it lie an Hour, then take it off, and apply a *Digestive* to the place where the *Cautery* lay, to separate the Crust; and if you perceive this Process will answer the End, pursue it according to Art. But if you have Reason to believe the contrary, then procure an *Actual Cautery* to be made of *Iron*, proportionable to the Size of the *Polypus*, with a long Handle, and a very thin *Silver Pipe* fit for the bigness of the *Nostril*, wrapt round with a fine Linen Rag wetted in *Aqua Plantaginis*. This *Iron* being made very hot, pull it through the *Pipe* till it reach the Root of the *Polypus*. Touch the place with the *Iron* three or four times, or till it's done enough; then proceed to Separation, and your Work is done. The *Pipe* is of very great Use in preserving the lower Part of the Nose from burning, if the *Polypus* grows very high.

Proper Medi-
cines to cure a
Polypus.

History.

In the Month of *March* 1687. a Taylor came to me, by Name *Christian Shultze*, about Twenty eight Years of Age, who had a very large *Polypus* in his right *Nostril*, which hung out of the Nose upon the upper Lip, about the bigness of a large *Muscadel Pear*; which when I pulled towards me with one Hand, and with a *Spatula* in the other held down the Tongue; I could not only see that one Root went behind the *Uvula* towards the Throat, but that the other Root went near the left Eye towards the Ear. While I was doing this, the Eye watered, was very painful, and against his Will, shut it self as often as I pulled the *Polypus*, which certainly was a very strange Accident.

I proceeded to the Cure in this manner: First I caus'd my Man to pull the *Polypus* from the Nose towards him, as hard as the Patient was able to endure it; then coming to one side, I put the *Forceps* or *Mortificator* into the Nose as high as I could reach, and at once pinch'd off the whole *Polypus*, and brought it out; but the Root which was in the Mouth, I burned with an *Actual Cautery* three times, while my Man kept down the Tongue with a large and broad *Spatula* made for that purpose. After which Operation, it separated very kindly, and the Patient in less than six Weeks time was perfectly cured; tho' I searched no further after the other Root towards the Ear, because the other answered the End.

History.

Immediately after I was called to the *Herr-Chanzeler V. H.* of this place, who had much such another *Polypus*, tho' it did not hang out of the Nose, whom I undertook to cure in the same manner; but he being put under an Arrest at the same time, we could not proceed.

CHAP. X.

Ozena, what it is, and why so hard to be Cured.

BEfore I proceed further in discoursing this malignant and rebellious Tumour called *Ozena*, I shall first rehearse the Opinion of that Famous Physician Dr. *Le Conte* of *Bordeaux*, who in the Fourth Book, Entitled, *Observationes Blegnice*, has these Words: 'We now for several Reasons begin to conclude, That since we find *Ulcerations* in the Internal *Ductus's* of the Head, and especially in the *Ventricles* of the Brain, that also the *Ulcers* of the Nose have their beginning there. And the Excellent Dr. *Blegni* having already espoused this Opinion, and published his Thoughts upon it, in his Incomparable *Observations*, Dr. *Le Conte* writ to him after this manner: 'In the Opening or Dissecting a Gentlewoman, who sometime lived in the Suburbs of *St. Suvin* in *Bordeaux*, which was performed by Mr. *Blondenet*, Sworn Chirurgeon of that City, in the presence of Dr. *Lascous* and Dr. *Rongeards*, I found she had an *Ulcer* in each Ventricle of the Right and Left Side the *Brain*, from whence proceeded the *Ozena* which she was sorely afflicted with at the same time. The same is also affirmed by Mr. *Kellerin*, a noted Chirurgeon and *Lithotomist* in *Havre de Grace*, who gives us several Instances of this kind, which are well worth our reading, especially in his Thirteenth *Observation* in the 119 Page.

An *Ozena*.

This sort of *Ulcers* do also sometimes proceed from a Hurt, occasioned by a Fall, Push, or Blow in the Inside of the Nose, which after by the Patient's continual picking of it with his Fingers, keeps it always Sore and Raw; which at last, because that Part is always *Moist*, and by consequence subject to *Ulcerations*, it produces a True *Ozena*. A *Morbus Gallicus*, not thoroughly cured, does also often cause this kind of *Ulcer*, which the *Mucosa Materia* constantly issuing from the Head and Brain, contributes much towards its Sharpness and Extension, which lying in a spongy part of the Nose, it increases, and its Malignity at length seizes the *Gristle* of the Nose and the *Bones*, and sometimes rots away the whole Part under the Nose to the Upper-Lip, and renders the Edges utterly Callous. Now the longer the Patient has been thus afflicted, and the more ignorant they have been who pretended to cure it, the more difficult and uncertain is the Cure; because the Part is incommoded by a continual Flux of New and Ill Humours to the Part, which keeps the Ulcer always *Running*. It also often happens by long continuing, that it gets the Mastership to such a degree, that neither the corrupted Matter, nor the Breath can go through the Nose, but the peccant Humour must then, either spread further towards the Lip, or force its way backward upon the *Pallate*, *Uvula* or Throat to throw off its Malignity; which in truth is a miserable State, which not only perplexes the Cure, but often renders all Means ineffectual. Dr. *Bontekoe* in his New Treatise of Chirurgery*, reckons up Three Species of *Malignant Ulcers*, which agrees very well with our Discourse in this place. The first Kind he calls *Ulcus Saniosum*, from the abundance of *Sanies* and Moistness that accompanies it, which hinders the Healing, and renders all Medicines of no effect. Secondly, *Ulcus Putridum & Sordidum*, which by long continuing grows so excessively *Malignant*, that it rarely

What an *Ozena* is, and from whence it proceeds.

* Part 3: c. 12. p. 458

Three Sorts of
Malignant
Ulcers.

* L. 6. c. 8.

† L. 3. c. 24.

Indications.

rarely admits of a Cure. Thirdly, *Ulcus Corrosum*, which is also called a *Cancer* and *Plagedæna*. The two first Kinds are almost the same with an *Ozena*, and the third commonly follows, when the *Ozena* has been of so long a standing, that it has got the Upper-hand, and rendered Medicines useles. *Celsus* * and *Agnetta* † distinguish very well in their Discourse on this Head; and Mr. *Hamel*, Chirurgion of *Lizieu*, in his *Chirurgia*, shews us how we may take our Measures, in order to know whether it is Curable or Incurable, by Five Indications, which ought to be well considered.

1. From the Place, if already gone further than the inside of the Nose.
2. From the Causes, if from the General one, or intermixed with others.
3. From the Time, whether of long or short Continuance.
4. From the Circumstances and Accidents that attend it.
5. From the several Parts that are already Infected by it.

Which whosoever thoroughly considers and understands, may easily satisfy himself, if the Disease be Curable, and also whether *Salivation* will reach it.

Salivation.

Salivation, if early used, truly directed, and the Patient discreetly managed in his *Flax*, is an excellent thing in curing this *Ozena*, especially if the Body and the Ulcer be regularly prepared before-hand for this purpose. But if the *Ozena* is of a long Continuance, and has already infected several Parts, *Salivation* will not succeed effectually, tho' perhaps it may give Relief for about half a Year, or somewhat longer.

History.

Wid. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

A good Friend of mine in this Town about Forty Years of Age, whom I pitied with all my Soul, and would have relieved, if it had been possible, was Twelve Years troubled with this *Distemper*, had been under the Hands of several Physicians and Chirurgions; was three times *Salivated* to the highest Degree, but all in vain. He lived a very Regular and Temperate Life, and strictly observed what was directed for his Health, but without any Effect at all. Sometimes it look'd very well, and was healed up in the Year 1686, but in half a Year it broke out again; so that he only applied the last above-mentioned *Unguent* till he died, which happened about Two Years since; but that which was most to be admired, was, That in all this time it had not infected the *Bones*, nor done any considerable Injury to the outward parts of the *Nose*, tho' the *Nostrils* were quite stop't up with it. I urged him several times to have it *Cauterized* with an *Iron* made for the purpose, because he knew that by this means in the Year 1691. I had cured a *Mitre-maker* in the Hospital of *All-Saints*; but I could never persuade him to it by all the Arguments I used. He eat, and drank, and slept all the time very well, and it was to be lamented, that so Good and Ingenious a Man, should endure so much Misery from an *Ulcer*, and not submit to such Means, as probably might have cured it.

The Cure.

The Cure of this *Malignant* and *Pertinacious Ulcer*, consists while it is young, in the Application of good Medicines, and if they have no Effect, you must proceed to *Salivation*; if that also fails, the *Knife* and *Actual Cauteries* must be used as far as you find convenient; and if this has no Success, all further Trials are in vain. Of all which Methods I shall treat in order, and first of *Medicines*, among which I recommend the *Aqua Phagædenica Murali*, which in the first Appearance of this Disease, is an admirable Medicine.

℞ *Lixiv.* è *Calce vivâ* ℥x. *Mercur. Sublimat. alb.* ℥ss. *Myrrhæ cum Spiritu Vini solut.* ℥ij. *M. fiat mixtura.*

If you have occasion for a good *Balsam* to mundifie an *Ulcer*, and temper the Acidity of the Matter, make use of the following.

℞ *Balsam. Vulnerar. Hanthii* ℥i. *Terebinth. Cypr.* ℥vj. *Balsam. Copivæ* ℥ss. *Balsam. vulnerar. Rulardi* ℥ij. *Ol. è Corticibus Betulæ* ℥ijss. *Ol. Fuliginis* ℥iss. *M. s. Balsamus.*

This must be always used warm, applied to the Part with Lint; and when it has sufficiently cleansed and purified the *Ulcer*, strew the following Powder into it.

℞ *Pulv. Intestinalor. Lupi* ℥i. *Fol. Quercin. Sabinæ ana* ℥ss. *Aristoloch. Longæ* ℥v. *Tutie ppt.* ℥ij. *Sacchar. Saturni Antimon. Diaphoret. ana* ℥ss. *Mercur. præcip. alb.* ℥j. *Misce fiat subtilissim. Pulvis.*

Dr. Overkamp prescribes the following, as an Excellent Powder in this Case. Dr. Overkamp's Powder.

℞ *Ocul. Cancr.* ℥ij. *Antimon. Diaphor.* ℥i. *Sanguin. Draconis* ℥ss. *Mercur. præcip. alb.* ℥i. *Myrrhæ* ℥iss. *Misce fiat Pulvis S. ad V.*

I will yet accommodate you with another Medicine, which will certainly effect a Cure, if the *Ulcer* is first very well cleansed.

℞ *Unguent. alb. Camphorat. cum Ol. Amygd. dulc. fact.* ℥ij. *Ol. Ligni Rhodi* ℥ss. *Plumbi uski, Tutie ppt. ana* ℥v. *Lithargyr. coct. croc. Metallor. Lap. Calaminar. ppt. ana* ℥ijss. *Ol. Saturni q. s. Misce ad Unguenti formam.*

You must also observe what is said in the Cure of a *Polypus*, and procure a good Physician to take care of the Patient's Constitution, that by cleansing the whole *Massa Sanguinis* the Body may be brought into good Order. But if the *Ulcer* is got to such a height, that Medicines alone cannot prevail, you must use the *Knife, Salivation, and Actual Cauteries*. It were to be wished, that the place was fit to use *Incision* and *Cauteries*; for then we might sooner, and with less Trouble effect a Cure.

In February 1686. I had a Young Man in Cure, named *George Friderick Meyer*, who came from *Frawstadt*, about Forty Years of Age, who had been Six Years troubled with a filthy *Ozena*, which in the Increase of the Moon, especially in *Autumn* and *Winter*, would throw out abundance of *Sanies* and *Matter*; and well it might, for it had already infected the whole Space between the *Nose* and the *Upper-Lip*; and in the *Wane* of the Moon, changed to such a degree, that the *Ulcer* was dry and over-grown with *Scabs*; which was wonderfully strange, and never known in any Patient before. In the *Decrease* of the Moon, it appeared in the Judgment of all Men to be healing up, but as soon as the Moon began to *Increase*, the Humours flowed toward it again, and put an end to former Hopes. However, I cured him in about a Quarter of a Year's time, by *Salivation*, and the *Actual Caution* four times applied. Historical Observation.

C H A P. XI.

Noli me tangere, *what it is, and how to cure it.*

What it is.

THIS Disease at first seems to be but an inconsiderable Trifle, only a little *Blue* and *Grey Pustula*, seated upon or near the Lips, where it remains Dry, without Pain, and makes no Discovery what a dangerous Guest it is; but if you apply any improper Medicines to it, *viz.* such as are *Unctious* or *Greasy*, it will soon shew it self in its own Nature, and convince you 'tis no ordinary *Pustula*, but quite another thing. When it is thus enraged, it soon encreases to such a degree, that if the Chirurgion has not presence of Mind to stop it presently, it will fright and vex him sufficiently.

I have said already, That a *Noli me tangere* is generally seated near the Mouth and Lips in the *Partes Glandulose*, and in the Beginning looks very simply; but when once it Opens and *Corrodes*, it ruins all the Parts about it; and if it gets the Upper-hand, grows in some Particulars worse than a *Cancer*, and cannot be cured either by *Salivation*, *Incision*, or *Actual Cauteries*: Therefore he that designs any thing to the purpose, he must begin betimes, before it grows too large, and has consumed the fleshy parts, for what is once lost by its *Corrosive* Quality, can never be restored.

From whence it proceeds.

No Author has positively determined from whence it proceeds; the general Opinion is, That it rises from an Inveterate *Scurvy*; but this gives me no Satisfaction, for I rather think it proceeds from an Induration and Obstruction of the *Glandules* (like a *Cancer* in its beginning) to which adheres a *Vitriolick* Savour, and at last Putrified Blood, and a Gnawing Quality which consumes all round about it; but how this *Pustula* can remain so long quiet without occasioning any Inconvenience, yea, and sometimes *Exsiccates*, if not disturbed by contrary Medicines, is a great Question. Dr. *Overkamp* saies*, if the *Glandules* altered from their Natural State, and their *Cavities* were narrowed by Obstructions, there would remain in the *Glandules* a sharp *Vitriolick* Liquor, intermixt with a Course *Alkali*, which in time would grow to a *Cancer*, a *Schirrus*, or a *Noli me tangere*. Dr. *Morell*, Chirurgion of the Hospital *de Dieu* in *Paris*, and Dr. *Overkamp* are both of Opinion, That this Disease proceeds from the *Scurvy*; but after all the Pains they take to find out the Cause, I still retain my own Sentiments, That a *Noli me tangere* is a *Glandulous Corroding Tumour*, which *Glandules* growing hard by degrees like a *Schirrus*, at length become Moist, break open, and in time grow so *Malignant*, that they ruin all the Parts that are near them.

* Chirurgia 1. 4. c. 9. p. 193.

Observation 1.

About a Year ago, a Great *Nobleman* from *Brig*, committed himself to my Care who had a *Noli me tangere* near the Under-Lip, which two Chirurgions of the same Place had given over as Incurable. They, it seems, could do nothing but *Cut* and *Burn*, which put him into such a Dread, that he applied himself to me, and I cured him in a Month's time, tho' he had a very high *Fever*, of which Dr. *Tralles* also cured him.

In the Manual Operation there is not much to be considered, if the Chirurgion is provided with a good Incision-knife, Prudence, Care and proper Astringents to stanch the Bleeding; for all the infected Parts must be cut away, till you gain a sound Bottom, without regarding how the Patient

tient will look afterward ; for if a Part no bigger than a *Lentil*, should be left behind in the *Flesh*, all your *Labour* has been in vain, the *Ulcer* will soon grow again as big and worse than ever. You are also to observe, That if you could not possibly come at it in every Corner, being hindered by the *Teeth* and *Jaw-bone* ; and you have Reason to fear something may be left behind, which may produce a New growing, you must without delay proceed to *Salivation* and the *Actual Caутery*, with which these Places must be gently Touched two or Three times ; and if this Method will not prevail, all you can do will terminate in an unhappy Disappointment.

In February 1690. a Nobleman from *Grunall* near *Zobtenberge* came to me, and Dr. *Grassen*, who had a filthy *Noli me tangere*, which had Rotted and Eaten away half the Under-Lip, and the left Corner of the Mouth ; in viewing it we could easily perceive that *Outward Applications* would signify little, tho' upon his earnest and repeated Requests, several Internal and External Medicines were employed Twelve Days together with all imaginable Diligence ; but seeing they had no Effect, I began to cut it away in the presence of Dr. *Tilish*, Dr. *Grass*, and Mr. *Hanss* a Chirurgion, which was well performed, but with a great deal of Pains. After this, for eight Days it looked very well, and every thing seem'd inclinable to heal ; but then I perceived in the Corner, and also in the Middle of it, a little Excrecence about the bigness of a Pin's Head, which I burnt without further delay, with an *Actual Caутery*, twice after one another, which was also three times repeated in the same Week, but all in vain ; nor did the Patient govern himself as he ought to have done. This made us fly to our last Refuge, *Salivation*, which was diligently begun and continued, but nothing would dispose it to *Healing*, and therefore might be truly called a *Noli me tangere*, which every Chirurgion may observe in such inveterate *Ulcers* ; for do what you please, it signifies nothing.

Observation 2.

CHAP. XII.

Of Malignant and Spongy Excrecences on the Gums, and their Cure.

THESE Spongy Excrecences are generally found, where inveterate *Fistula's* have rotted and spoiled the *Teeth* and *Jaw-bone* ; for being neglected, and the Filth and Nastiness not taken away ; or if the Chirurgion uses *Corrosive Medicines*, which in this Case are very improper, they cause *Excrecences*, which will increase, and grow more *Malignant*. Oftentimes they also arise from the ill Drawing of *Teeth*, in which the *Jaw-bone* is broke, and the *Flesh* about the *Teeth* is torn to pieces ; then they sprout from the wounded Parts, grow every day more *Obdurate*, and become so *Large* and *Malignant*, that they disfigure the Patient's Face, almost close up his Mouth, and by Reason of its great Moisture, will suffer no Medicines to lay hold of it, and so renders it impossible to be healed : As it happened to Mr. *Nabel* an Innkeeper in *Oblaw* in the Year 1686. and to Mr. *Johne* an Apothecary on the *Humermark* in the Year 1688. who notwithstanding the Use of all proper Medicines that could be thought on,

From whence they proceed:

if

if I cut away all the Flesh to day, in one Night's time there grew as much as was taken away the Day before.

The Cure.

Therefore he that intends to cure these *Malignant* Excrescences throughly, must begin betimes with good *Medicines*, and if they will not prevail, immediately proceed to *Incision* and the *Actual Cantery*, by which Means I have cured many; but if there is Reason to suspect that the *Maxilla* is black and *Carious*, it must be diligently searched; and if you find it so, cut away the *Fungus*, separate the *Carious* Part, by *Scraping* or *Cauterizing* it with a hot Iron; and if that will not answer the Intention, you may cease from troubling your self or your Patient any further: Of which *Monf. de Landes Baugrand**, Chirurgion at *St. Malo*, has given us an Eminent Example in one which grew so fast, that whatever he could use or invent, had no Effect.

*Obl. 113. & sequ.

Observation.

In *December 1678*, I had under Cure a *Boatswain* of a Ship at *Strahlsund*, where I was then Quartered, being Chirurgion to a *Brandenburg* Regiment: He was about 36 years of Age, named *Hanss Peterson*; he had a Spongy Excrescence on the lower Part on the Left Side, which happened by the Inartificial drawing of a *Tooth*, by which the *Maxilla* was fissured. Having diligently examined and considered the Parts, I spread the following Mass upon Linen indifferently thick, and applied it to the *Fungus*, renewing it every three Hours.

Rx *Pulv. Cinam. Caryophill. ana* ℥ss. *Coral. rubr. ppt. Rad. Pyrethr. ana* ℥jss. *Porcellan. ppt. Lap. Sillic. ppt. ana* ℥ij. *Alum. crud. Ocul. Cancr. ana* ℥j, *Sangu. Draconis* ℥j. *Misce cum s. q. mell. Rosar. ad mass. formam.*

This succeeding well in the beginning, I continued it, and also used this Water very often.

Rx *Rad. Tormentil. ℥ij. Serpentar. ℥j. Flor. Rosar. Rubr. Balaust. Lupul. Gland. ana* ℥vj. *misce.*

Boil all these together in *Aqu. Cochlear.* and *Aqu. Salviae* of each a Quart, and afterward add as much *Alum* to it as will render it indifferent Sharp: But if the Distemper is accompanied with any great Pain, then use the following Water.

An Excellent Dentrifice.

Rx *Rasur. Lign. Guiac. ℥j. Fol. Nicotiani* Mjss. *Rad. Pyrethr. ℥ij. Caryophyllor. Sem. Hyoscyam. ana* ℥j, *Coque in s. q. Aqu. commun. Colat. Adde Essent. Anodyn. ℥ij. vel Laud. liquid. Tartaris* ℥ij. *Misce & Fungo applicetur.*

This Excellent *Dentrifice* may be used in many other dolorous Infirmities of the *Teeth* and *Gums*, only applying it a little warm. It performed its part very well in this Patient, but yet it would not heal; which gave me Reason to think, that the *Jaw-bone* was *Carious*; whereupon I cut away the *Flesh*, and as soon as the *Bleeding* was stopt, it might easily be perceived; and having taken out more than three *Splinters* from the *Jaw bone*, I *Scraped* and *Cauterized* it, and the Patient in *Six Weeks* time was perfectly Cured.

C H A P. XIII.

Gangliæ, or Glandulous Tumours, their Difference, Cause, and Cure.

THESE Tumours are very troublesome, disfigure the Patient, and when they grow Large, Inveterate, and are seated about the Throat, are apt to hinder Respiration. This Place they delight in, because they can spread and enlarge themselves like the *Fungi* on Trees. Their Scituation is in the *Glandules*, which they stop up with a Thick *Viscous* and *Pituitous* Humour, and like *Oedematous* Tumours, settle so close, that it dries them up, and renders them *Schirrous*. They cause but little Pain, and very seldom come to *Suppuration*, tho' it sometimes happens when abundance of *Emollients* are applied. Dr. *Overkamp* saies *, That if the contained Matter grows *Thin*, and preserves its Motion, or some *Heterogeneous* Matter mixes with it, it may by degrees come to *Suppuration*, but this seldom happens.

The Cure of Gangliæ.

Where they are seated.

*Chirurgia c. 13. l. 2. p. 217.

The Ancients thought the Cause of these *Ganglions* was a *Pituitous* and *Viscous* Blood; but if such Blood could become so very *Crafs* and *Viscid*, yet its *Alteration* could never produce such *Obdurate* Tumours, and of the same Colour with the Skin, but on the contrary. Others think they approach nearer the Truth, when they say, the Matter contained in a *Ganglion*, is a *Degenerated Succus Nervorum*, which in time issues out like Drops from the *Sinews*, between the *Membranes* and *Glandules*, and there alters and grows into a large Tumour; but this Opinion has neither Reason nor Possibility to support it; because such small, subtil, tender *Nerves* as are found thereabouts, cannot supply so great a Quantity of Liquor: And therefore I say again, That they are *Crude*, *Viscous* and *Mucilaginous* Humours, which at first are not so very thick; but the *Humor Lymphaticus* which used to be orderly separated there, is at such a time more than ordinary *Crude*, *Acid*, and *Viscous*, that it cannot pass through its *Glands* as usually; but standing there, coagulates, and still increasing, fills up and extends the *Glandules*; for if the *Lympha* thus suffers an *Alteration*, and becomes sharp, *Acid*, and *Gelatinous*, it will grow to a hard *Gypsea* like Matter, as I have said already, which according to Dr. *Munnick's* Opinion, is daily augmented by the Blood which continually circulates that way.

Ancient Opinions refuted.

What they truly are.

In more than a hundred Patients, it seldom happens that a *Ganglion* becomes *Cancerous*, tho' we have some Examples of it, and then the Case is deplorable and dangerous; but generally Men are mistaken, 'tis not the thing it self, but something like it; as when the contained Matter is grown *Corrosive*, and afterwards by an Effervescence and painful *Exulceration*, it grows as Malignant and Vexatious as a *Cancer* in another Part; and all that can be collected from this Discourse is, that these *Tumours* are very *Obstinate*, *Tedious* in curing, require good penetrating Medicines, and as Dr. *Overkamp* * says, in whole Particles is neither *Firmentation* or *Motion*; but those wherein the *Saline*, *Volatiles* & *Oleose particule* are so suppressed, that they cannot excite a *Firmentation*: which I mention for no other reason, but that every one may see how the Principles of *Physick* are advanced in respect of what they were in former dark Ages; and that about Ten or Twelve Years ago, I was of the same Opinion, which I acknowledge with Shame, if it be a Shame for a Man to confess his Ignorance,

*c. 13. p. 223.

which I can hardly allow; tho' I acknowledge it a great Shame to those, that continue Obstinate in their ill-grounded Notions after manifest Conviction.

The Cure of
Ganglions.

The Cure of this Troublesome Malady, is often attempted, especially by Women, with abundance of Medicines which signify nothing; under pretence of not disfiguring the Patient, which in the Conclusion is mere Fancy without Foundation. There are but two ways to cure them, and those are either by *Medicines* or *manual Operations*: The last of which I would not advise, if it can possibly be done without; for considering the Danger, Trouble, and Care which must be undergone, especially in *Dissecting* and *Constringing* the several Vessels which occur, and must be put out of the way; for tho' the Tumour is not very large at first, there is no trusting it will always continue so; and if otherwise, then the Operation will be tedious and vexatious. The Learned Dr. *Solingen* in his Discourse of Manual Operations * gives us an Example of it, in a Young Man who had such a *Glandulous* Tumour, and was Cut by an eminent *French* Chirurgion *Pierre le Francois*, who compassionately acknowledged, that it was a miserable Operation, which he should always remember with Detestation of *Cutting* in such Cases; and therefore adviseth to employ *Emollient* Medicines; which in my Opinion ought not to be used in all Cases without Distinction: for I have known several unlucky Accidents have attended this Doctrine; as *Generating Fistula's*, *Incurable Ulcers*, and very often *Cancers*, which have brought the Patients to their Graves. But why Dr. *Solingen* should blame the *French* Chirurgion *Carias*, and yet says, that he himself opened such a Tumour with a particular *Cautick*, and that Monsieur *Blegni* having brought one to Suppuration opened it, and so spoiled the Part that it turn'd to a *Cancer*, I cannot imagine. Monsieur *Blegni* has also given us a wonderful Instance of such a *Tumour* *, which was accidentally burn'd with a hot *Iron*, and the great Fright it occasioned; though afterward voiding a large Quantity of *Crafs* and *Viscid* Matter, the Patient was perfectly cur'd. Dr. *Hagendorn* in his *Historia Medico Physica*, has also described a notable Cure of such a *Ganglion*, to which I refer you; that I may proceed without further Digression to the Cure of these Tumours by Medicines, Exsections, and Excoriation, of which the Chirurgion may make his own Election, with Assurance that the Medicines are approved.

*Part 1. c. 54.
P. 163.
History.

† Month. obs.
part 2. p. 59.

The first Remedy is a Water to be Drank, which cures all *Glandulous* Tumours, and is kept as a very great Secret in *Savoy*, where these Tumours are very common.

A Secret for
the Cure of
Ganglions
brought from
Savoy.

Take an indifferent large Sponge, put it into good French Brandy, and let it drink up as much as it will hold; take it out, and put it into the middle of a Roll of Tinned Copper, and put on both sides the Roll as much Garlick as will stop up the Ends of it, and shut the Roll as close together as you can. Then put it into a very hot Fire, and let the Fire burn round it, and lie till you have reason to believe all that was put into the middle of the Copper is consumed to Ashes. Put the whole together into a little Kettle with Sulphuris communi ℥ij. and Aquæ pluvialis ℔ v. mix them all together very well: Then take Twelve pretty large Flint stones taken out of a River, or such as have never been used before; put them into the Fire till they are Red hot, then put them into the Kettle one after another, and let them lie there
till

till the Water has done boiling; then take them out, and when the Water is Cold, and Filtred through a Brown Paper, that it may be clear, put it into Bottles, and cork them up very close. The Dose is, Two Spoonfuls early in the Morning Fasting when the Moon Decreases, and Two Spoonfuls more at Night going to Bed, and so continue till the Decrease of the Moon is over. And if the Tumour is not quite gone, begin again the next Decrease of the Moon in the manner above-prescribed. This Recipe was communicated to me by Monsieur Bouches of Chamberi, who had lived a long time in Savoy.

Another Medicine to be used Inwardly is recommended to us by the Ingenious Mr. Blegni in the first Book of his Observations, which he says was given him by the Abbot Gallet of St. Symphorian in Avignon, as a great Arcanum. The Abbot Gallet's Arcanum.

Take two handfuls of Sage, boil it in a Quart of River-Water to the Consumption of half, strain it and mix it with one Pound of good Honey, and boil it gently to the Consistence of a thick Syrup. Take also two or three good Sponges or Fungi, Calcine them in a Crucible till they are through Red Hot and Fiery, then remove them off the Fire, but don't let it stand till it falls quite to Ashes, for then it loses its Virtue. Put it into a Mortar, beat into Powder, and add as much of the Syrup to it as will make it into a Mass for Pills; of which give the Patient two Scruples at Bed time, and order him to keep them in his Mouth under his Tongue till they are dissolved, and so swallowed; withall give him once a Week a Gentle Purge or Laxative, which must be continued till the Tumour vanisheth.

After these Inward Medicines, I will present you with such Outward Means, as I have successfully used in my Practice; among which are the following Plaster, with which I have performed great Cures, by using it at the same time with the Inward Medicines above mentioned.

℞ Emplastr. Diaphoret Mynsic. ℥vi. Emplastr. Oxyeroc. Zwelf. Emplastr. Dia Sulphur. Rulandi, ana ℥ivss. Emplastr. de Ranis cum mercur. Vigon. ℥iss. Sal. Lapid. Spongiæ ℥iij. flor. Salis Armoniaci ℥iij m. f. ad Emp. formam.

This excellent Plaster which also takes away Nodes and Bumps in a very short time, applyed twice a Day, the Tumour being first rubbed gently with a warm Napkin, will certainly cure it. Next follows an Ointment and a Plaster which I have used many times with very good Success. Dr. Dolæus in his Praxis Chirurgia Rationali has given us the Prescription of the Ointment in the following Terms.

℞ Succ. Rutæ Sabin. ana ℥vi. Squill. ℥ss. Aqu. Vitæ ℥ij Ol. Lilior. albor. Rutæ ana ℥i. Ol. Costor. ℥ij. Coque simul ad consistentiam rectam, adde Gumm. Bdellij in Spir. vin. Sol. ℥iij Salis Armoniaci ℥iij. Sulphur. vivi Lap. Pumicis, Nucis Cypress. Aristoloch. rotund. ana ℥ss. Euphorb. ℥ss. Ceræ q. s. f. Unguentum. s. a.

The Plaster, Dr. Dolæus after Dr. Utmellerus, has described in this manner. ℞ Empl

Dr. Urmuller's
Plaster for
Ganglions.

℞ Empl. Diachyl. Simpl. cum mucilag. ℥ij. Mercur. vivi cum Saliva extinct. ℥iiss. Misce dilig. ad Empl. formam.

The Cure by *Excision* if the place is convenient, is to have your Needles and Silk, or a strong Thread in Readiness, to stitch and tie up those Vessels which are in your way in the Operation before they are cut. Or you may make an *Incision* in the middle of the *Tumour*, where it's commonly softest, about a Thumb's breadth, to let the *Viscous Water* run out. When this is done, endeavour to get out the other Matter, and if the Orifice is not big enough cut it larger, or make a New one; which Operation I very well approve of; for if it does not always answer your Intentions, yet the Patient is made something easier by it, and being almost ready to be choaked, draws his Breath with greater freedom. However, I would not have you use this Method but when there is some Danger or other to be feared, or absolute Necessity requires it; but rather make use of the Medicines before recited.

Historical Ob-
servation.

In March 1687, was brought a Countryman's Wife to me out of *Florians-Dorf* in *Schweidnitz* named *Magdalena Fabern*, 48 Years of Age, who had a very large *Glandulous Tumour* about her Throat, so that in the Night she could hardly draw her Breath, and was in continual Fear of being choaked. The first eight Days I gave her the Powder, and applied the Plaster described in my *Chirurgia* pag. 293. The Powder was taken daily half a Dram at a time in *Turpentine Water*, and the Plaster was spread upon Linen and applied warm to the *Tumour*; after which it appeared something better, especially when the Moon *decreased*, and then I could easily perceive that the *Tumour* was much more *Flaccid* than is usual; but when the Moon began to *Increase*, it grew worse again, insomuch that she could hardly endure to have any thing laid upon it. At last I made an *Incision* into it about two Fingers broad, and found, after the waterish Matter was discharg'd, that which remained was very hard and like a *Cartilage*, which was the Cause of its *Stubbornness*; and makes me of *Dr. Muraltus's* * Opinion, that an *Inveterate Glandulous Tumour* was sometimes found a very hard and noisome Matter, which could be extirpated by no other Means than *Cutting*.

* *Chirurgia*,
Oper. 2. p.
84. & Seq.

C H A P. XIV.

An Erisipilas, commonly called St. Anthony's Fire, what it is, and how to Cure it.

What it is.

* *Chirurgia*
Part 1. c. 6.
p. 397.

I Am now, according to my Promise, to treat of an *Erysipilas* in the Face, where proper Medicines are most wanting, to hinder the Disease from spoiling the Beauty of the Countenance. *Dr. Bontekoe* * is of Opinion that an *Erysipilas* can no more be said to proceed from the *Gall* than a *Phlegmone* from the Blood, and certainly is in the right, and that's the Reason our Modern Physicians dare make no such Difference and Distinction between a *Phlegmone* and an *Erysipilas*, as the *Galenists* pretend there is. It's true that an *Erysipilas* is an *Inflammation*, but it does not proceed from the *Gall*, and differs much from a *Phlegmone*; for the former comes of it self, but the latter from a *Contusion*, a *Hurt*, *Rheum*, or some other Accident

Accident, and is neither so Red and painful as an *Erisipilas*. There is also a Difference between a True *Erisipilas* and an *Erisipilas Phlegmonodes*, which from its Inflammation is called a White *Erisipilas*, and *Erisipilas Oedematodes*, which is a proper Tumour in its self, and not a Hot but a Cold one. From these Two proceed a Third, which being hard, is called *Erisipilas Schirrhodes*, of which I shall treat in its proper place. The famous Dr. *Overkamp* in his excellent *Chirurgia* comes nearest the Truth, and shews that there is only five things in which these Tumours differ one from another.

1. An *Erisipilas* is not so large a Tumour as a *Phlegmone*.
2. The Inflammation and Heat is greater in an *Erisipilas*, than in a *Phlegmone*.
3. The Pain in a *Phlegmone* is very Heavy, Pulsifick and Compressing; but in an *Erisipilas*, is more Pungent, Sensible and Biting, and yet more tolerable.
4. An *Erisipilas* is of a very high Red Colour, and if you touch it with your Finger, the Redness vanishes, but soon returns, which it does not in a *Phlegmone*; for this Tumour may be pressed down; nor is its Skin so extended as in an *Erisipilas*.
5. A *Phlegmone* continues always in one and the same place, but an *Erisipilas* is now in one place, and by and by in another.

There is also a Difference in the Matter of which they consist; for an *Erisipilas* springs from the *Lymphatick* Vessels in the Skin, and its Matter consists of *Lympha* intermixed with *Chyle*: and a *Phlegmone* is compos'd of *Flesh*, *Viscous* and *Chylous* Particles ingendred and conjoined in the Veins and Arteries; hence it not only takes hold of the Skin, but also of the *Membranes* and *Muscles* which are near it.

The Medicinal Cure must be set upon by *Tempering* and *Attenuating* the *Acidity*, which is stagnated, that it may be capable of Motion, and the *Insensible Transpiration* which was obstructed, may be restored to its pristine Operation; for which Purpose a repeated *Sudorifick* is much commended. The following Powder I use to strew upon the *Erisipilas* in the Face, and have always found it beneficial.

℞ Pulv. Levistici ꝑi. Sabin. ꝑss. Cerufs. calcinat. ꝑiij. Bol. albi ppt. ana ꝑiiss. Cretæ ppt. ꝑv. Mastich. Oliban. ana ꝑiiss. Myrrhæ ꝑi. Tutia ppt. Farin. volatil. ana ꝑiiss. Liquiritiæ. ꝑss. Camphor. ꝑi. m. f. ad Subt. Pulv.

But if this is too troublesome, or you have not time to prepare it, you may use the following.

℞ Farin. volatil. ꝑiiss. Pulv. Levistic. ꝑi. Cerufs. ꝑiij. Bol. albi ꝑiiss. Myrrh. Oliban. ana ꝑiiss. Camphor. ꝑi. misceatur ad Pulv. Subtil.

With this Powder you may proceed with the Cure, and it will answer your Desires; for certainly *Powders* are fittest to be used on the Face, since *Moist* and *Greasy* Medicines never do any good in these Cases; and the like may be said of *Fumigations* and *Plasters*, which raise *Blisters*, *Pimples*, and *nafty Spots*, without any Benefit at all. But that you may not depend upon these Medicines only, I shall accommodate you with more, and all very proper for this Disease; tho' I say again, *Powders* are the best.

Stephanus Blauckard in his Chirurgia, describes the following *Fotus*, which I have used my self after the fourth or fifth Day, if any Bimples or Blisters appeared.

℞ Myrrhæ, Oliban. ana ʒss. Ceruss. cum Spir. Vini lot. ʒi. Lithargyr. An. ʒij. Acet. Sambuc. ʒxxx. coq; Secund. art. & fiat Fotus;

Monfieur Charles's Ointment.

Monfieur Charles Chirurgion and Referendarius at Beaucaire, instead of it, uses the following Ointment; which I have also employed very often in the Camp with good Success; not only in this but in several other Cafes, where Drying and Discuffive Medicines are requisite.

℞ Liniment. de Lithargyr. C. Ol. Amygdal. dulc. Nov. fact. ʒiij. Tutia ppt. Cort. Austr. ppt. ana ʒss. Ceruss. ppt. ʒiij. Ol. lign. Rhoz. gatt. vi. m. f. ad Liniment. form.

* p. 684.

The Learned Dr. Muraltus in his *Anatom. Collegium* *, recommends a Fumigation of Cummin Seeds, and for a Wash *Lixivium e Calcis vivæ cum s. q. Sacch. Saturni*, but I have never tryed it. Dr. Munnick in his *Chirurgia lib. 1. cap. 5. pag. 44.* highly commends the following Unguent.

℞ Troch. alb. Rhafis. Tutia ppt. ana ʒij. Lithargyr. ʒij. Ceruss. ʒss. Flor. Sulphur. ʒij. Camphor. ʒi. Ol. Rosar. Nov. c. Ol. Amygd. dulc. fact. ʒiij. Cerae alb. q. s. misce f. in mortario Plumbeo ad Unguenti formam.

And withal gives this necessary Admonition, to use no *Repelling* or *Adstringing* Medicines in an *Erisipilas*, tho' *Resolvents* were mixed with them, for fear of driving the *Materia peccans* towards the Eyes, Ears, Throat, or other noble Parts of the Head.

Historical Observation.

In February 1688, I had a Gentlewoman in Cure, Magdalena XC, Fourty six years of Age, who had a violent *Erisipilas* in her Face, which having been sometime negligently treated by a Chirurgion, who only for eight Days applied *Ceruss* to it, in which time her *Eyes*, *Nose*, and *Forehead* were so exulcerated and injured, that it grieved me to see her in such a lamentable Condition, especially her *Eyes*, which were in a miserable estate, so that I, with the Assistance of Dr. Regius, who gave her Inward Medicines, had enough to do to Cure her in Ten Weeks time. By which you may see what mischief such a wretched *Repelling* Powder may do in a large *Eryspilas* on the Face; especially if besides it is negligently treated; for this Chirurgion hardly came near her in two Days time. I knew one also that in this Case seldom did any thing, but only tye up some of that Powder in a Rag and dusted it upon the Face, as *Nurses* do when their Children are Raw or Galled betwixt the Legs; but what this could effect in an *Erisipilas*, may be easily guessed.

CHAP.

With this Powder you may proceed with the Cure, and it will answer your Desires; for certainly Powders are fitted to be used on the Face, since Moist and Greasy Medicines never do any good in these Cases; and the like may be said of Warts and Wens, which cause Blisters, Pimples, &c. without any benefit at all. But that you may not depend upon these Medicines only, I shall accommodate you with more, and all very proper for this Disease; tho' I say again Powders are the best.

CHAP. XV.

Tinea, or a Scald Head, what it is, and how to cure it.

THIS troublesome filthy Disease generally happens to Children, and sometimes to Old People, if they don't keep themselves clean. At first 'tis only a Breaking out, or a dry Scab; afterward a Ficosa or filthy Scald; then a Corrosive Scald, and at last an Hereditary Scald. At first they are but Pimples, or small Ulcers in the Skin upon the Head, which are not apt to change their Colour very early, but at length grow Yellowish, moist, and throw out a sharp itching Sanious Matter, spread further, and render the Skin Rough, Uneven, and causes the Hair to fall off. At length they turn to dry Scales, under which are abundance of Holes, containing filthy Matter, something less Thick and Viscous, but is now more malignant with an Increase of Ulcers, which at last grow Dry, Yellow, Greenish, Black and Nasty.

The Cause of this Disease is an Acid and Saline Humour mixed with a Glutinous and Viscous Matter, separated from the Blood and Juices, and being drawn towards the Skin, lodgeth in its small Glandules, and raising an Effervescence, grow more Acid and Souer, and cause an Itching, which by continual scratching spread further, and grow worse.

After the Patient is sufficiently purged, and his Blood cleansed, Outward Remedies must be applied to cure it: In which Applications Care must be taken that the Pores may not be obstructed or constipated, or the offending Humour repulsed from its regular Evacuations, from which often arise very dangerous Accidents. First therefore, make use of such Medicines as are fit to Open the Pores, to temper the Acid Humours, and rarifie the Glutinous and Viscid Matter, that so they may be cleansed and healed. Begin the Cure by Outward Means, in the Decrease of the Moon with the following Lixivium, with which wash the Patient's Head, and afterward dry it up with warm Napkins. Make a good Lixivium of Wood-Ashes Eight Quarts, and in it boil the following Drugs half an Hour.

℞ Fol. Alchimill. Mj. Rad. Lapath. maj. ℥j. Heder. Arbor. Herb. Saponarie, Absinth. ana Mj. Sal. commun. ℥ij M. scind. & cont. gross. M.

After the Patient's Head is well washed with this Lixivium warm'd, anoint it with the following Unguent.

℞ Ung. de Lithargyr. cum Ol. Flor. Nymphae, fact. ℥iij. Tutia ppt. Lap. Calaminar. ppt. ana ℥iij. Ceruss. calcin. ℥ss. Vitriol. alb. Alum. ust. ana ℔j. misce fiat Liniment.

With this Medicine I have cured abundance of People; but if it does not please you, use the following in the same manner after the Lixivium.

℞ Unguent. alb. Camphor. ℥v. Tutia ppt. ℥jss. Ol. Tabaci, Aloes, ana ℥ss. M. f. Unguent.

As often as you use this Ointment, let the other be wiped off; then use it five or six Days together, and if it does not accomplish your Desires, make the following *Pitch-Plaster*, spread it upon the rougher side of *Cotton-Cloath*, apply it to the Head, where let it continue three Days, then pull it hastily off against the Hair, to tare away the Hairs which have nasty corrupted Rotten Roots.

℞ *Picis Naval.* ℥vj. *Colophon.* ℥jss. *Auripigment.* *Fuligin.* *Canin.* *Myrrha ana* ℥ij. *Tutiæ ppt.* ℥iij. *Pulv. Heder. arbor.* ℥jss. *Sulphur.* ℥j. *Ol. Ovorum* q. s. *M. fiat medicamentum ad usum.*

This must only be used in *Inveterate Scald Heads*, and when the Disease is at the highest pitch of *Malignity*; but when it is not so bad, apply the following *Cerate* in the same manner as the former.

℞ *Picis Naval.* ℥iij. *Fulig.* *Canin.* ℥j. *Rad. Aristol. long.* *Pulv. ex Ranis virid. ana* ℥ij. *m. f. l. f. q. Ol. Nucis & Tabaci ad Mass. form.*

When this *Mass* has continued on about *Twelve Days*, take it off; wash and anoint it again two Days more with the above-mentioned *Lixivium* and *Unguent*: Then lay the *Cerate* on again, and continue it till it's perfectly cured. And when it is, wash the Head with the following *Mixture* warmed, for some time together, and it will cause the Hair to grow again, and preserve the Skin from being infected by corrupt Humours.

℞ *Tutiæ ppt.* ℥ss. *Myrrhæ* ℥ss. *Sacchar. Aluminis* ℥ij. *Camphor.* ℥ss. *Spirit. Salis Armoniaci* ℥j. *Lixiv. dulc.* ℥xij. *Myrrh. autem solvitur in Pauc. Vin. & Camphor. in Spiritu Vini m. f. mixtura serv. ad usum.*

In using these Medicines, you will never have occasion to seek after others; for I have inserted nothing, but what I have used several times with effect.

In *October 1691*. I had Two Sisters in Cure in the Hospital, *Anna* and *Dorothea Grosman*, who for want of keeping clean their Heads, had both been troubled with the *Tinea* several Years, and to such a degree, that *Dorothea* had great Holes and very deep in the *Pericranium*, which in several Places were Black and *Carious*. In the other Sister *Anna* it had so far spread, that the whole *Neck* to the *Shoulders*, yea, the *Forehead* and *Nose* was infected, which is so unusual, that I never saw any thing so bad before. I began the Cure with the afore-mentioned *Lixivium*, only I put more Salt into it, and caused their Heads to be washed with it Three Days together, and anointed it with the following *Unguent*.

℞ *Unguent. Alabastrin.* ℥ijss. *Unguent. Nervin.* ℥ss. *Vitriol. alb. Sacchar. Aluminis ana* ℥j. *Fol. Tabaci pulverisat.* ℥iij. *Baccar. Laur.* ℥j. *Mercur. præcipit. alb.* ℥ijss. *m. f. cum s. q. Ol. Tabaci ad Liniment. form.*

Here I think my self obliged to acquaint you, That there is no ill Consequence to be feared from the small Quantity of *Mercury* in this Medicine; for no small Matter will have Effect in this Case, nor will it do any Injury to the Head. After having applied this constantly three times a day for some days together, I used the following *Mass*, applying it to the whole Head.

℞ *Picis*

Historical
Observation.

Mercury may
be safely used.

It is always attended with Danger, especially in Ill Habits of Body but
 & *Picis Naval.* ʒvijs. *Colophon.* ʒjss. *Folior. Tabaci pulverisat.* *Fuligin*
Cummin. ana ʒj. *Myrrh.* *Aloes ana* ʒij. *Sal. Armoniaci* ʒjss. *miscetur*
ad massam.

Having continued these *Pitch Plasters* above a Month, and cleansed
Dorothea's Skull with *Phlegma Vitrioli*, and scraped it clean that the *Flesh*
 might grow again upon the Skull, I used the forementioned Water, and
 then every thing began to heal so agreeably, that in eight Weeks time they
 were both perfectly cured.

CHAP. XVI.

Laryngotomia, or the Opening of the Aspera Arteria in an Angina
or Squinancy, or in other like Diseases, where the Patient is al-
most choaked or suffocated.

FEW of our late Authors have truly described the Method of this
 Operation, for being in some Particulars a little troublesome and dan-
 gerous, and observing that many unlucky Accidents have attended it; the
 Chirurgion cares not to attempt it, nor the Patient to suffer it; and yet
 after all, if this Operation is performed in a proper time, and with Care,
 Circumspection and Judgment, it is one of the most Noble Operations
 in Chirurgery, which often recovers the Patient to Life, when otherwise
 nothing but Death could be expected. Dr. *Muraltus* discourages it to my
 great Satisfaction * after this manner. 'Tho' saies he, the Chirurgion
 fears the Danger which attends this Operation, and the Patient the Suc-
 cess, yet it ought to be attempted, rather than leave the Patient desti-
 tute of all Relief; especially since we daily see so many great things per-
 formed by it, to the Chirurgion's Glory, and the Patient's Comfort, who
 was in Danger of being choaked in a *Squinancy*. He also produces an E-
 pistle from the Honourable *Moureau*, to the Famous Anatomist *Bartholi-*
mus Chirurgion at *Copenhagen*, very much to the purpose. He that un-
 derstands *Anatomy*, and is careful in the Operation, cannot easily commit
 a Fault, and may soon heal the Incision, because there is no necessity of
 making a large one, as I shall shew anon.

A Student in the Hospital of the *Holy Ghost*, desperately cut his own
Throat almost quite through, and yet lived Eight or Ten Days after it,
 had his Understanding, and would have recovered, if the Wound had not
 been so large, that it caused him to breath with great Difficulty, and that
 his Meat and Drink run out at the Wound. More lucky was Monsieur
de la Court, who in the Year 1674. was cut cross the *Throat* by *John Mow-*
lin at *Louven*, insomuch that the *Aspera Arteria* was cut in sunder, but
 having only a little Wound in the *Oesophagus*, was perfectly cured in Thir-
 ty Days; which is a great Confirmation of the Truth of what we are
 contending for. Dr. *Solingen* * seems to have no great Esteem for this
 Practice, and saies, It should never be undertaken but in the greatest Ex-
 tremity, and when nothing else will prevail. *Licenciate Junken* * saies,

How to per-
 form this Ope-
 ration.

* Chirurgia
 oper. 13. p. 86.

Historical
 Observation.

Authors Opi-
 nions.
 * Chirurg.
 Part 1. c. 56.
 p. 168.
 * Chir. Man.
 Sect. 2. oper.
 2. c. 8. p. 269.

It is always attended with Danger, especially in Ill Habits of Body, but not simply Mortal, because if judiciously treated, it may be healed again. *Schenkius*, *Lambſwerdus*, *Henricus Henric-ab-Heer*, *Vieuffen* and *Rusch* are of the same Opinion. *Scultetus* in his *Armentarium Chirurgicum* ſaies, the *Laryngotomia* is a preſent and perfect Remedy in great Swellings of the Throat, which otherwiſe would ſuffocate and kill the Patient, and therefore ſhews how it ought to be performed. We have already ſaid, That this Operation is only to be attempted in a violent and deadly *Angina*, where by reaſon of a great *Inflammation* and Swelling in the Throat, the *Uvula*, the *Glandulae Parotidem*, and other Neighbouring Parts, makes the Paſſage ſo Narrow, that no Drink, and at length no *Breath* can get either in or out. In this Caſe our *Laryngotomia* is a Noble Remedy, for it preſently gives Vent to the Patient that was in danger of having his *Breath* ſtopt; and as for the Danger ſo much dreaded, it may be avoided by making but a ſmall *Incifion*; which being carefully done, all the dangerous Symptoms will immediately vaniſh, and the *Inflammation* be the better remedied: No great *Bleeding* will happen in this Place, and the wounded Part will be ſoon United.

How to perform this Operation.

The Operation ought to be performed in this manner. If the Patient be able, let him riſe out of his Bed, and place him on a Low Chair that has no Elbow or Place to lean on; but if he cannot leave his Bed, bring it into the Light; lay his Head backward as much as you can, and let ſomebody hold it ſo faſt, that he cannot move it: Tie his Arms to his Body with Towels that they may not hinder your Operation. By leaning his Head backward, the Neck will be ſtretched out, that you may more eaſily ſee and come at the *Fiſtula Pulmonis*: Open it between the Third and Fourth *Cartilago Anularis*, or where elſe you think beſt, ſo it be about an Inch broad below the *Cartilago Scutiſormis*. When you have marked the place with Ink, make your *Incifion* lengthwiſe towards the *Aſpera Arteria* and the Breast, with a good *Incifion-kniſe*, but not too ſharp-pointed. Then let your Aſſiſtant draw the Lips a little aſunder, that you may better ſee the *Muſculi Hyoides*, and to ſeparate them with the Handle of your *Kniſe* from the *Aſpera Arteria*. This being done, make an overthwart *Incifion* about the bigness of a *Bean*, in the *Aſpera Arteria*; but have a care that you don't cut into the *Cartilaginis Anularis*, but only in the *Membrane*, which ties them together. Don't ſet on your *Kniſe* too hard, and hold it ſomewhat ſhort that you may govern it the better. This being done artificially, place a crooked *Pipe* in the Opening, that the *Breath* may have free Paſſage out and in, as long as it is requiſite; but be ſure it's neither too long nor too ſhort, and round at the end; for if it be over long, it will cauſe a *Cough* and Swallowing; and if too ſhort, it will drop out again. The further part of the *Pipe* muſt have a ſort of a round Brim, about which you may pull the *Skin* round, and faſten it with a good ſticking-Plafter. When the *Inflammation* and Swelling is quite gone, pull out the *Pipe*, and draw the *Skin* and *Muſcles* better together, and ſo heal it up. Having two Days before ſtrewed upon the *Aſpera Arteria Pulvis Sarcocolla*, apply *Emplaſtrum Oppodeldoch* till it is throughly healed.

History.

In this manner I opened the *Aſpera Arteria* in Mr. *Chriſtian Pfennig Manven* a Linen-draper at *Munden* near the *Weſer*, in 1672. He was about 39 Years of Age, had a violent *Inflammation* and Swelling in his Throat, and was ſometimes ready to be choaked. The Operation being as happily perform'd as could be deſired, the Patient who had loſt both his *Speech* and *Understanding*, was perfectly recovered from Death to Life. CHAP.

do the Work in an Hour or an Hour and half a time. Let the Corrosive be as large as the Mark, and be fastened on with a good sticking Plaster. These Corrosives may be used in all Places, except the Face and Neck, in those Places where they are not so dangerous.

CHAP. XVII.
Nævi, or Natural Marks in Children on the Face, or other Parts of the Body; how they may be extirpated.

EVERY Body knows, that a sudden *Surprize*, a *Fright*, *Stupefaction*, or any unexpected frightful *Accident*, or vehement *Desire* in a *Woman* great with *Child*, does commonly so work upon the *Imagination*, as to *Imprint* the same *Figure*, which was the *Cause* of that *Fright* or *Desire*, upon the *Body* of the *Fætus*, which being in its *Formation* and *Growth*, has a *Harmony* in every *Part* with the *Mother*, and hence it is that the *Mother's Imagination*, with the *Help* of the *Formative Faculty*, has a *Power* upon the *Infant*, which like *Wax*, receives any *Impression*, and there delineates those several *Nævi* in the *Shape* and *Figure* that caused them, as of *Fruits* and other things, and sometimes prodigious and unnatural *Representations*; which tho' it be wonderful to consider, yet it shews the exact *Sympathy* between the *Mother* and the *Child*; insomuch that wheresoever the *Mother* by chance lays her *Hand*, in such a *Fright*, *Surprize*, or *Desire*, the *Child* will certainly be marked in the same place, with the *Figure* of what was in her *Imagination*.

Natural Marks how they come.

These *Impressions* commonly happen, as some affirm, in the *Second* or *Third Month*, and afterward in the *Eighth* and *Ninth* from the time of *Conception*; for in those *Months* they are neither too *Strong* nor too *Weak*, but liable to such *Blemishes*, and the other *Months* the contrary; But who can make such certain *Conclusions* from such intricate *Premises*? But without troubling our selves in such *Niceties*, 'tis sufficient that we know they are, tho' we are ignorant of the *First Cause*, and when they happen. The *Cure* and *Expulsion* of these *Nævi* may be performed divers ways, according to the place of their *Scituation*, viz. either by *Incision*, *Corrosives*, *Restriction*, or the *Application* of *Medicines*. If it be only a *Spot* or a *Fiery Mark*, you must correct the *Colour* of the contained matter which causeth it, and so it will vanish; but this must be done in the first *Month*, before it has taken too deep a *Root*; if neglected in that time, it must be cured in another manner. Of all which particularly and briefly.

The Cure.

In *Cutting* there is no great *Ceremony* to be used, for the *Ingenious* *Chirurgion* being furnished with proper *Instruments* and other *Necessaries*, agreeably to the *Mark*, its *Scituation*, and *Figure*, he will soon take it away. Some only take off the *Skin* round it, and so cure the *Blemish*. In others you must go deeper, and when the *Skin* is taken off, you must also discuss the matter that lay under the *Skin* and caused the *Mark*. Others lie still deeper, and are inclosed in their proper *Cist*, which must be first *Excoriated* and then healed. These *Circumstances* must be diligently observed, and if you can't easily come at the *Mark*, besides *Excision* you must use *Corrosives* to exterminate it.

By Incision.

Corrosives are much in use in this *Case*, where *Parents* are unwilling to have it *Cut*, or *Chirurgions* are of *Opinion* that they can best cure it that way. The most proper for this use are either those made of *Silver* and *Aqua fortis*, or the *Lixivium* of *Calx Viva* & *Faces vini, ad Lapidis duritatem*.

By Corrosives.

ritatem coquantur. Either of these Two Medicines, if well prepared, will do the Work in an Hour or an Hour and half's time. Let the *Corrosive* be as large as the *Mark*, exactly applyed, and fastened on with a good sticking Plaster. These *Corrosives* may be used in all Places, except the *Eyes* and *Ears*; but in those Places *Restrictions* and *Ligatures* are fitter to be employed.

By Restriction. *Restriction*, where it's possible to be done, is certainly the Safest and Easiest way of Curing these *Nævi*, which may be performed, first with a threefold *Ligature* of Silk, afterward with a double Silk Thread, and at last with a Horse Hair; by which Means, that which nourishes the *Mark* is restrained, and the *Mark* may more easily be cut off and healed. If anything should yet remain of its Root, it may easily be taken away, by a gentle *Corrosive*.

By Medicines. The Cure by *Medicines* is sometimes effectual, but must be attempted in the first or second Month at farthest. I have cured several Children six Weeks old, or thereabouts, with the fresh Blood of an *Hele*, after the *Hele's* Head was cut off, and then only rub the Child's *Mark* with it, three or four times a day, and the *Mark* suddenly vanished. *Wolf's* Blood, if it can be had, will do the same; and as some say, the *Secundine* used in the same manner, or instead of them you may use the following Ointment.

Re Unguent. alb. Camphor. ʒij. Ol. Buxi, Ol. Pulegii, ana ʒi. Magnet. Arsenical. ʒij. Flor. Salis Armoniaci ʒij. m. f. ad Linimenti formam, quo Nævi unguantur.

Observation. In the Month of June 1691 was brought to me and Dr. Ocbmen, a Nurse's Child 26 Weeks old, who had a horrible fiery *Mark* on the under Lid of the Right *Eye*; which the longer it grew, the bigger it was, and quite disfigured the Child. This *Mark* was very difficult to come at, because it reached as far as the *Nose*, and all over the Inward Corner of the *Eye* upon the *Glandula Lachrymalis*; for which reason I applied the following Plaster always warm Morning and Evening for six Days together.

ʒi. Cerat. de Mucilagen. Sylvij. Emplast. Diaphoret. Myns. ana ʒiv. Emplast. Oxycroc. Empl. de Melilot. ana ʒij. Ol. Chamomill. q. s. M. diligenter ad Empl. form.

After the Application of this Plaster, it grew so apparently *Flaccid* and soft, that I could put a *Ligature* about it; which being done, and the whole *Nævus* ty'd (except a little in the Corner of the *Eye*) with a double *Silk*, and at last with a *Horse-Haire*, which continuing so five or six Days, it grew *Putrid*, and then was taken off. But that which was left in the Corner of the *Eye*, was not to be brought away in this manner, and therefore I took it off by degrees with a gentle *Corrosive*, and accomplished the Cure in six Weeks.

C H A P. XVIII.

Hydrocephalos, or a Watry Tumour affecting the Heads of young Children; from whence it proceeds, and how to Cure it.

THIS troublesome Cold Tumour, tho' it's commonly without Pain, is What it is. very difficult to be cured. It seizeth the Heads of Young Children, and for that Reason is called *Hydrocephalos*, or *Hydrops Capitis*, a *Dropfie* in the Head, and indeed is nothing else, but a particular *Dropfie* containing Gelatinous Water, does not possess one particular place in the Head; Where it resides. but being Extravasated and wanting its due *Circulation*, seizes upon several Parts of the Head; as *Outwardly* between the fleshy *Panicle* and the *Pericranium*; *Inwardly* between the *Cranium* and the *Dura* and *Pia Mater*, yea sometimes the *Cavities* of the Brain. If it seats its self in one particular Part or Side of the Head, it's easily perceived by the *Tumour*, and the Water may be felt under the *musculous* Skin; but if it's under the *Cranium* between the *Meninges* and *Ventricles* of the Brain, it's hard to be found out, especially in Old People, whose *Skulls* are hard, and the *Sutures* firm and closely joined together; there the *Cure* is more difficult, because it's hard to be come at.

This *Hydrocephalos* in Children, is generally a *Hereditary* Disease, proceeding from an Infirm and Sickly *Mother*, whose Blood is very Thick, Cold, and Viscous, and if these give their Children Suck themselves that are in such a Condition, their Milk is no better than the Blood; and cannot be digested by feeble Stomachs, and consequently yeilds no good *Nutrimment*; whereupon the *Lympha* grows *Thick*, *Gelatinous*, and *Viscid*; the *Circulation* slower and heavier, till at last it utterly ceases. When the *Lympha* is thus stagnated and deprived of its regular Motion, and has infaricated the yet small and tender *Lymphatick* Vessels, which are unable to resist the violent *Impetus* of the continually approaching Water, but must be torn asunder; then the *Tumour* grows bigger, the Water takes more room, and becomes thicker by being deprived of its orderly Motion. In Elder Persons it commonly rises from an Indisposition of the Blood, where its Particles are unequally mixed, and the *Acrid* and *Glutinous* predominate. The ill Disposition of the Body is also another Cause of this Disease; for the superabundant Quantity of waterish and undigested Matter, which for want of a Passage downwards, flows towards the *Head*, like Water in a Still, by degrees causes such a Tumour. These Humours are of several kinds, tho' generally *Viscous*, and like Gelly. Dr. *Munnick* * says it proceeds from an abundance of Watry Humours, not only in the *Chirurg. praxis l. 1. c. 13. p. 92. Head, but in the whole Body, which at length settle in the Head and *Chirurg. c. 12, p. 85. cause a *Hydrocephalos*. Dr. *Murattus* is of Opinion *, that this Watry Humour ariseth in the *Ventricles* of the Brain, or between the *Meninges*, *New Chir. l. 1. c. 11. p. 207. from their great Debilities and want of natural Heat. Dr. *Overkamp* * ascribes it to an ill and feeble Disposition of the Body, and the Stagnation of the *Lympha*. Licenciate *Juncken* and Dr. *Baux* Physician at *Nismes*, say it proceeds from a *Heterogeneous* Matter in the Blood grown *Acrid* and *Viscous*.

Observations.

* L. 1. obs. 25.
p. 47.
* Man. oper.
part. 1. c. 34.
p. 101.

The Cure of this *Hydrocephalus* is very difficult, especially if the Water lies under the *Cranium*, or between the *Meninges*; and you ought to be very Cautious and Careful in opening it, because the Patients seldom recover, if that Water is too suddenly exhausted. Dr. *Tulpius* * says, he had twice seen a *Hydrocephalus* opened, but the Patients both dy'd. Dr. *Solingen* does not approve it, and says on the contrary, that such Openings have generally a tragical Event. Other Learned Men are of the same Opinion, and dissuade all Men from attempting it. But if any Chirurgeon thinks himself under a Necessity to do it: Let him chuse a convenient Place, make the *Incision* as little as is possible, and not evacuate too much Water at the first opening; put a hollow Tent into the Wound, guarding it with Plasters, Bolsters, and a Ligature, that the Water may not run out but when he desires it should; therefore every time you dress it, let a Quantity of Water run out by degrees, lest your Patient grows too Weak, and languishes under the Operation. Sometimes the Chirurgeon is forced to Open several Places in the Head and Face, because the Water has possessed divers places round the Head, which makes the Case very bad indeed. Mr. *Furmier* Chirurgeon at *Paris*, in his Book of *Bandages* has a very necessary, and in this Case a very useful Ligature, which he calls *De la Capeline*, or *Bandage à deux Chefs*, which I recommend to every Chirurgeon. When the Water is evacuated, strengthen and warm the weak and frigid Parts, and heal the Wound gently up again.

In the Cure by Medicines still begin with a *Fomentation*, which I have always observed to have a good Effect; for it opens the Pores, and rarifies and resolves the thickened *Lympha* to admiration.

Dr. *Dolæus*'s
Cataplasim.

Rx Rad. *Levistici*, *Calam. aromat.* ana ʒijss. Summit, *Rorismar.* Mij. Flor. *Anethi* Miss. Herb. *beton. majoran. Salviæ*, ana Mi. Sem. *Cumini* *Feniculi* ana ʒij Bacc. *Juniper.* ʒss. Misce *Scind.* & contund. gr. m.

Boil these Species in half Beer, half Wine; strain it, and in it moisten thick Linen Bolsters, and apply them to the Place very warm. Continue this Course six or eight Days, and then apply the following Cataplasim over the *Hydrocephalus*.

Rx Summit. *Absinth.* Mij. *Scord. marubij* ana Miss. *Abrotan.* Mij. flor. *Chamomill.* *Melilot.* *Sambuc.* ana pug. ij. *Concis. coqu. ex dicocto, earundam Herbarum*, ut consistentiam *Cataplasmatidis* acquirat, adde, *Farin. Hordei, Lini* ana q. s. deinde adde *Sal. Armon. depur.* ʒss *Spir. Vini Camphor.* ʒij. m. bene f. *Cataplasim.*

Dr. *Dolæus* who is Author of this Medicine, recommends it in several Desperate Cases, and chiefly in great *Inflammations*, *Gangreens*, *Coagulations*, and *Stagnations* of the Blood and Juices. The following Ointment taken out of *Forestus*, has done me great Service in this Disease; to which I have added the *Levisticum*, *Rutæ*, & *cherefol*.

Forestus's Ointment.

Rx Pulv. *Absinth.* *Rutæ*, *Levisticæ Cherefol.* ana ʒij. Flor. *Chamomil.* *Melilot.* ana ʒijss. *Ol. Chamomil.* *Anethen.* ana ʒss. *Ceræ alb.* q. s. Misce *far Unguentum.*

Cartesius and *Dr. Mannick* do also much commend this Ointment. I have taken out half the Oil, that it might not be too Greasie, which I no way approve of in these Cases. But if according to the *Ancient Custom*, nothing will please you but a *Plaster*, take the following, or that of *Dr. Mynsichtus*, which are both very proper.

℞ *Emplastr. Diaphoret. Mynsic. Empl. Dia sulphur. Rulandi ana.* ℥i. *Resin.* ℥ij. *Ceræ* ℥vj. *Ol. Lumbricor.* q. s. *Sperm. Cæti* ℥iss. *Baccar. Lauri.* ℥j. *Sem. Cumin.* ℥iss. *Caryophil.* ℥ijss. *Gum Galban Bdellii in vino Solut.* ℥iss. *Myrrh. in Spirit. Vini Solut.* ℥j. *m. f. ad Emplastrum formam.*

This must suffice for the Cure by *Medicines*, of which I am morally certain that I have accommodated you with the best, having often experienced them my self.

In *May 1690*, I had in Cure the Son of the *Chancellor*, *Mr. Herr. N. N.* seven years of Age, who was troubled with a large *Hydrocephalos*. *Dr. Jenish* of this place was concerned with me in the Cure. First we applied several penetrating Medicines, especially the *Cataplasma* aforementioned, which promised well about eight Days, but not continuing, we were forc'd to make an *Incision* in the lower part of the *Left-Cheek*, out of which by degrees we drew a great Quantity of Water. The Patient recovered at that time, and continued indifferent Healthy above a Quarter of a Year; but in the Fall of the Leaf, the Water gathered again more than ever. The Cure was begun again in the same manner as before, and an Incision made, which succeeded for a while, but the Patient's Strength and Vigour sensibly decaying, he died three Weeks after.

Historical Observation.

CHAP. XIX.

Ulcers and Tumours about the Ears, called Parotides, what they are, and how to cure them.

THE *Ears* are also obnoxious to several Accidents and Diseases, and if of long Continuance, are very troublesome and prejudicial to the Hearing. Sometimes they are caused by outward Accidents or Hurts, sometimes by gross Humours, or the Reliques of the *Small-Pox*, a great Cold in the Head, and sometimes by the Application of improper Medicines. These *Ulcers*, which continually throw out of putrified Matter, if not prevented, will in time grow very large Tumours, inclosed in their own Bag, and spread in Length, Breadth, and Bigness, with several Processes, as may be seen in the *Historical Observation* at the Conclusion of this Chapter.

Parotides what they are.

Now tho' it's intelligible by what I have said already, from whence these *Ulcers* and *Tumours* proceed, yet we must consider them a little more particularly, because they don't always happen in the same manner, but vary according to their several Accidents. These Swellings are not reckoned of the same kind with the *Atheroma*, but of the *Steatoma*, because their Matter resembles *Tallow* or *Seam*; nor do they always cease when they come to *Suppuration*; but the Tumour often increases to such

Their Difference.

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a Bigness, especially in the *Increase* of the Moon, that you may easily perceive its Progress, and now and then the *Suppuration* returns, and serves to nourish the Tumour, as I have very often observed. Nor does the *Ulceration* with its noisome *Pus* cause any *Putrifaction* in the Tumour, but rather grows with it, tho' abundance of Corruption runs continually from it, and causes both an *Ulcer* and a *Tumour* together.

What they resemble.

But that which is to be admired, is, that such Affects, which often continue Running and Growing three or four Years together, as I could shew in several Examples, and smell worse than an *Ozena*, and yet should never injure the Drum or *Tympanum* of the *Ear*, so as to prejudice the *Hearing*. This Tumour also differs from all others in several Particulars; its Skin is more Tender and Sensible; its Flesh more Flaccid and Spungy; its Root like a *Tendon*, and tho' it has often several *Cells* and *Capita* like *Pears*, and grows so large that they hang a great way out of the Ears, yet they join in the bottom like so many Stalks tyed together, in sometimes one, and sometimes two Roots, which are all hollow, tho' very small, and sometimes their Roots go so far, that the Patient feels excessive Pain in the Depth of the Ear, and at the same time in the Corner of the *Eye*, and near the *Gullet*, if you pull the Tumour towards you; so that we may conclude, though the Root of the Tumour is to be searched for no further than the *Tympanum*; yet we may suppose it reaches as far as the *Cranium*, and towards the *Eyes*, *Throat*, *Uvula*, &c. And if such Patients lose their Hearing either before or after the Operation, you may then conclude that the *Tympanum* has suffered by it, and had some Connexion or Union with it.

The true cause of these Tumours.

The true Cause of these *Tumours* are not yet discovered by any Author, at least to my Satisfaction, for being a very tickle Subject, none have been fond of attempting its Definition. I have already hinted something concerning it in the sixth Chapter, where I treated of Tumours in general; but since it differs much from them, I will consider it more particularly.

This Tumour chiefly proceeds from a *Phlegmatick Viscous Humour*, intermixt with *Chyle* and *Blood*, which by being obstructed grows *Acrid* and *Corroding*, and gnaws and breaks the *Vessels* which contain it, putrifies and causes an *Ulceration*, by the thin *Pus* running out at the *Ear* as its nearest way, the thick Matter remaining behind in the Consistence of *Milk* coagulated with *Rennet* to make *Cheese* of, or like *Seame*, it first gathers outwardly to a *Crust*, then grows into a *Skin*, and afterwards as it waxes stronger, into a *Tumour* hanging out of the *Ear*, and if it has a sufficient Space and Nutriment, divides it self into several *Cells*, which make as many *Processes* and *Tumours*. *Licentiate Juncken* * says this sort of *Tumours* proceed from some or other *Tubuli*, when such kind of *Humours* are gathered and settled in them, and then extending the Place, form more than one *Domicilium*. *Dr. Munnick* in his *Praxis Chirurgica* * says, that these kind of *Tumours* consist of a *Glutinous*, *Viscous*, and *Mucilaginous Humour*, which being separated from the *Blood* and settled in this or other *Parts* of the *Body*, and coagulated, according as they are mixed more or less with other *Humours* to make an *Ulcer*, divides it self into *Cells* and grows larger. These Opinions, I think, come nearest the *Truth*, but I leave every Man to his own Judgment, being not without Expectation and Hopes that Time will produce a better Definition.

*Manualis Chirurg. Sec. 2. oper. 3. c. 7. p. 28.

*I. I. c. 9. p. 65.

The Cure of this *Ulcerated Tumour*, with all its Circumstances, I will discourse in the following Observation, which was attended with Variety of Accidents.

In August 1687. I had in Cure a Countrey-woman from *Weide*, a Village about a Mile from this Town, named *Rosina Grabners*, forty six years of Age, who had a large *Tumour* in her Left *Ear*, which was divided into three large, and two small Bags, and had been of three years standing. Before she perceived the *Tumour*, she was tormented above half a Year with a Violent *Head-ach*, especially in the Forenoon, and with an *Inflammation* in her left *Eye*, a Swelling in her *Throat*, and a great Inflammation on the left side of the *Glandula Parotidis*. If I pull'd the *Tumour* a little strongly towards me, it gaye her great Pain, and threw out a great Quantity of Matter which stunk abominably; the upper Lid of the Left *Eye* also shut it self up, and at the same time some Corruption came out of it. From the *Throat* near the *Amygdala* came an *Ichorus* Humour mixed with Spittle, and the Part was very painful, if any thing touched it. Now diligently enquiring into these strange Symptoms and Circumstances, obliged me to conclude, That the Root of this *Tumour* went as far as the *Eye* and the *Amygdala* in the *Throat*, which was a very unusual Spectacle. Dr. *Tielish* and Dr. *Burg* viewed it with me several times, but would not consent that I should separate it by Incision, because the Root behind the *Amygdala* was very slender, and like a *Tendon*. As soon as I had satisfied my self, and her Body was prepared for the Operation, which was three Weeks after her coming to my House, I undertook the *Restriction* with a three-fold Silk, tying it about the whole *Tumour* as far, and as high as I could; having first ordered my Servant to pull the *Tumour* (being wrapt up in a Linen Cloath) towards him from the *Ear*, as much as possibly he could; and the *Restriction* being performed, we let the *Tumour* fall back again. The same Evening I found the *Tumour* was grown very Brown, and somewhat Putrified, and on the third Day fell off without any more Trouble. After this I cleansed the *Ear* very well with Lint, and what remained I took away with the following Powder, which was put into the *Ear* three times a Day.

℞ *Tutia* ppt. *Nihil*, alb. ppt. ana ℥ss. *Cort. Ovor.* ppt. ℥ij. *Alum. usti* ℥jss. *Mosch.* ver. *Ambr.* ana gr. ij. m. f. ad subtilissim. *Pulverem.*

The next Day I separated that part of the *Tumour* which was near the *Amygdala* in the *Throat*, with an indifferent long Pair of Scissors, which the Physicians here very much admired at. The Substance I cut out, was about the breadth of a Hand, Long, Hollow and very *Nervous*, which I could blow up with a *Tubulus*. The other part of the *Root* which went towards the *Eye*, I was forced to leave as I found it, because I could not come at it. The *Woman* returned home as cured; but in Fourteen days came again, complaining of a violent Pain in her *Ears* and *Eyes*; which nevertheless I cured, by making a *Fontinel* in her *Neck*, dropping two Drops of Oil of *Origanum* into her *Ear*, and letting her Blood in the Great *Toe* of her Left Foot.

C H A P. XX.

Herpes & Porrigo, commonly called a Tetter, or a Ring-worm, the several Kinds thereof, and how they are to be cured.

What it is.

THIS Malignant and Corrosive Ulceration the Greeks call *Herpes* and *Porrigo*, not only from its spreading and diffusive Quality, but from its pernicious and destructive Effects. The *Arabians* call it *Formica Corrosiva*, and the *English*, a *Ring-worm*. There are two Kinds of this Disease; that which is young and not Malignant, is called *Herpes Miliaris*, because it only rises in little *Blisters* on the Skin like the Seeds of *Millet*: The other Kind is worse, and called *Herpes Exedens*, which making Erosions in the Skin, Flesh and Muscles, ulcerate further and deeper, and its *Edges* and *Lips* are difficult to be cured; for tho' it often seems to heal up, it will not fail to break out again.

Two Kinds of them.

These two Kinds have almost one and the same Beginning, and differ but in Degrees; and therefore the Chirurgion has nothing to do in these Diseases but to make his Medicines more or less powerful in Operation, according as the Malady is circumstantiated. The first only itches intolerably, and the other is attended with Pain and Burning from the *Acidity* and Soureness of the *Materia peccans*. The first comes of it self, but the second is accompanied with the *Scurvy*, an ill cured *Gonorrhoea* or *Morbus Gallicus*, and therefore requires a different and stronger Cure; nay, sometimes is not to be cured without *Salivation*. The first continues in the Skin without piercing much deeper, and only infects particular places; but the second seizes upon the *Throat*, the *Gums*, the *Muscles* and *Cartilages*, yea, and very often disfigures and spoils the Face.

Their Causes.

The Cause of these *Tettors* is a sharp *Saline* Humour, with a great *Acidity*, and which of them predominates, are more or less *Corroding* and Malignant. At first it proceeds from a *Stagnation* of some Liquors and Juices of the Body, which being violently moved by other Liquors, cause a Fermentation; Push the subtile Particles into the *Pores*, which settling here, coagulate and become more Sharp and Acrid, till they have produced a *Corrosive Ulcer*. The Itching begins when the Matter is got into the *Glandules* of the Skin, whereupon the *Acid* and *Saline* Particles begin to move, and falling upon the *Membranes*, cause an Irritation of them. The *Burning* is caused by a great Quantity of stagnated Matter under the Skin, which being sent thither by the *Glandules* and *Lymphaducts*, cause a Fermentation and Effervescence, upon which the *Blisters* and *Pimples* open, and emit an *Acrid* Humour which makes an Erosion in the small *Ranula Venarum*, and not only incite a greater Refluxion of Humours, but makes the Case more desperate. But let us consider the Opinions of the *Ancient* as well as *Modern* Authors. *Galen* and *Cornelius Celsus* say, It proceeds from an Impure, *Acrid* and *Bilious* Blood. *Paræus* calls it a *Tumour* caus'd by a subtile Mixture of *Choler*, *Flegm* and *Melancholy*. *Fabricius ab Aquapendente* saies, It comes from a *Cholerick* Humour which causes *Blisters* and a great Erosion in the *Flesh*. *Beverwick* saies, A *Herpes* was a kind of *Erysipelas*, proceeding from a *Cholerick* Humour which becoming Aduft; rendered it intolerable. *Johan. Andreas de Cruce*, calls it *St. Anthony's Fire*.

Opinions of Ancient and Modern Authors.

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Cardilucius numbers a *Herpes* in its beginning, among *Itches* and *Tetters*, and saies, it is more *Corrosive* and eating than others; but in the whole, sings the same Song with the *Ancients*; That it proceeds from a great *Humidity* of the Blood mixt with the Sharpness of the *Gall*. *Dr. Agricola*, who commonly has something particular in all his Sentiments, saies, This Disease was caused by an *Acrid Mercurial Salt* mixed with *Vitriol*, which corrupted the *Humours*, and so caused *Exulcerations* and *Blisters*.

Our *Modern Physicians*, especially the Learned and Ingenious *Overkamp* saies in his *Chirurgia*, That this Evil was a stagnated *Lympha*, *Juices* and *Blood*. *Dr. Munnick* saies, It proceeds from an *Acrid-salinous* Humour separated from the Blood, and leaves out the *Acidum*. *Licenceate Juncken* thinks it a Stagnation of the *Circulating Liquors*, which being hindered in their Natural Course by some *Heterogeneous* and *Alterative Mixture*. *Dr. Blanckard* calls it, An *Obstruction* in the *Glandules* of the *Skin*, caused by an *Acid Pituita*, that made small *Tumours* and *Inflammations*, which spoiled the *Skin*, and filled it with *Blisters* and little *Ulcers*. From hence you may see how far the late *Writers* well-grounded *Opinions* differ from the *Ancients*; on which read *Dolaus*, who gives you the *Opinions* of the *Galenists*, *Paracelsits*, *Helmontists*, *Willisians*, *Silvianists*, and *Cartesianists*, and at last his own *Opinion* in the *Case* before us.

The *Cure* of this Disease ought to begin with gentle *Laxatives* and *Sudorificks* prepared for that purpose, not omitting a good *Decoctum Lignorum*, and the Use of the *Balneum Laconicum*, which by a Spirit distilled from *Scorbutick Herbs* and burnt, brings the Patient into a gentle *Sweat*, cleanses the whole *Massa Sanguinis*, and being repeated, tempers the *Acrid Humours*, and hinders their *Flowing*. The Patient must also observe a good *Diet*, live temperately, and observe every thing the *Physician* or *Chirurgion* directs for his *Recovery*. The following *Ointment* spread pretty thick, I use to apply to the *Edges* and *Sides* of them, and have always found it beneficial.

℞ Unguent. de Lithargyr. cum Ol. Amygd. dulc. fact. ℥iv. Ceruss. calcinat. Tutia ppt. ana ℥iij. Croc. Metallorum ℥jss. Mercur. precipit. rubr. ℥ij. Carbon. tilia ℥ij. m. f. cum s. q. Ol. Flor. Nymphae ad Unguent. formam.

But if it is already so bad with the Patient, that there are true *Holes* and *Ulcers*, put the following *Balsam* warm into them three times a *Day*.

℞ Bals. vulnerar. Hankii ℥iij. Balsam. dia Sulphur. Rulandi ℥jss. Balsam. Peruviani de Tolu ana ℥j. Ol. Petrae, Ol. Cerae ana ℥ij. Mastich. ℥j. Aloes ℥j. m. f. super ignem ad Balsam.

Having used this *Balsam* Ten or Twelve *Days*, or when you find the *Ulcers* are clean, use the following *Water* always warm, and apply it with *Lint* to the *Ulcers*.

℞ Tutiae ppt. Cort. Austr. ppt. Ceruss. lot. ana ℥jss. Alum. ust. ℥jss. Camphor. Myrrhae, Mastich. ana ℥j. Mercur. sublimat. ℥jss. Aquarum Rosar. Plantag. mellis ana ℥vj. m. Myrrh. & Camphor. solut. in pauc. Spirit. Vini.

Put this into a Glass, set it in a warm Place, shake it now and then, and use that only which is clear, in the manner above-directed. If it should be too sharp, it may be moderated with *Lixivium Calcis vivæ*. Over these Medicines above-rehears'd, apply the following *Oppodeldoch Plaster*.

Oppodeldoch
Plaster.

℞ *Emplastr. Oppodeldoch. Fr. W. B. I. Stiç. Paracels. 3vj. Lap. Magnet. ppt. 3ij. Mumia, Succin. ppt. ana 3jls. Rad. Aristoloch. long. Croc. Veneris metallor. ana 3j. Mercur. præcip. 3ijls. m. f. c. s. q. Ol. Tartari per deliquium fact. ad Emplastri consistentiam.*

This Plaster is excellently good, and effectual in this Distemper; but if you should think it too costly, make use of the following, which I have often employed with great Benefit. It was presented to me by our Chief Physician Dr. *Tielish* lately deceased, who called it *Emplastrum nigrum Petri de Castro*.

Emplastrum
Nigrum Petri
de Castro.

℞ *Lithargyr. sol. subtilissim. pulverisat. 3vij. Ceruss. 3ij. Ol. Rosar. 3ij. Ol. Amygd. dulc. 3vij. Terebinth. puriss. 3ls. Picis nigr. 3ls. Mastich. 3ij. m. f. Emplastr. formam. S. A.*

This is one of the best Plasters in the World for Inveterate Ulcers, if it be truly prepared after this manner: First boil the *Litharge*, the *Ceruss* and the *Oil*, to a good Consistence, stirring it very well, lest it should burn; then put in the *Wax* and *Turpentine*, and when it's grown something cold, the *Mastich* very well powdered, and at last the *Pitch* (being first well melted in a particular Pan) stirring them well altogether.

Now seeing too much cannot be said in this Case and its Remedies, I will insert another Prescription of a *Balsam*, a *Water*, and an *Unguent*, which I have experienced to have admirable Vertues in curing this Disease. The *Balsam* follows.

℞ *Balsam. Peruviani 3ls. Copairv. 3j. Vulner. Rulandi 3ij. Lap. Prunell. Flor. Sulph. ana 3jls. Sacchar. Saturni, Mercur. præcip. alb. ana 3ls. m. f. Balsamus. Apply it warm with Lint. Make the Water as followeth.*

℞ *Summit. Absinthij, sol. Perficar. Alchimil. ana Mj. Rad. Aristoloch. long. 3ls. Aloes 3jls. Myrrh. in pauc. Vin. sol. 3ij.*

Boil all these *Species* together in White Wine about the Space of an Hour, strain it, and mix the following Ingredients in Twelve Ounces of it.

℞ *Aqu. Calcis viv. 3vj. Spirit. Sal. Armon. 3ij. Sacchar. Alum 3jls. Mercur. sublimat. 3ij. Camphor. 3j. m. f. Aqua s. a. digerere per dies aliquot, Colatura servetur, & loco ulcerato calide applicetur. Next is the Ointment.*

℞ *Unguent. Fusc. Zw. 3j. Unguent. de Lithargyr. cum Ol. Amygdal. dulc. fact. 3jls. Ol. Levistic. coct. q. s. bene misceantur, & postea adde Tutia ppt.*

ppt. ʒj. Flor. Sulphur. Chinæ, Myrrha ana ʒjss. Mercur. præcipit.
Croc. metallorum ana ʒj. Cort. Ovor. ppt. Div. m. f. Unguentum.

If none of these Excellent Medicines prevail, you can effect nothing without *Salivation*, and the sooner you begin, the better.

In September 1690. I had a Printer's Wife in Cure, O. N. N. Thirty eight Years of Age, who had a *Herpes Exedens*, not only over the greatest part of her *Face* and *Forehead*, but also on her *Knees* and *Elbows*. I dressed her constantly a Month together with the above-mentioned Remedies. I purged her very well; she was sweated four times a Week *cum Spir. Vini in Balneo Laconico*, and I gave her a good Diet-drink, but all to no purpose; for if it healed in one Place, it broke out in another. This forced me to make use of a *Salivation*; and tho' she was very Lean, and miserably Weak, she went happily through it, and in Six Weeks time was perfectly cured, and continues in Health to this Day. Let it be observed, that to raise a *Salivation*, I only anointed her *Toes* and *Thumbs* but Seven Times, tho' she was broke out on the *Arms* and *Legs*, and yet she presently began to *Flux*, and that very strongly; which a *Chirurgeon* ought to be very mindful of, especially in Old, Lean, and Emaciated People, for a small matter will do their Business. Some, I know, think it impossible to raise a *Salivation* without anointing all the *Junctures* in the *Legs*, *Thighs*, *Wrists*, *Arms* and *Shoulders*, and sometimes the *Neck* and *Groins*, which is a Rude, Barbarous and Unmerciful Treatment.

A Salivation
by only anoint-
ing the
Thumbs and
Toes.

CHAP. XXI.

Malignant, and almost Cancerous Tumours and Ulcers of the
Eyes, and chiefly in the *Corners* of them.

THERE is so little to be read of this Disease in Books, except in the Ingenious Dr. *Overkamp's Chirurgia* *, who treats it very briefly, *L. 2. c. 23. that I thought it very necessary to handle it more at large, with greater Exactness in all its Circumstances, and shew its Cure by Medicines and the Chirurgical Art, and how it differs from a *Cancer*, or a *Noli me tangere*. p. 410.

This Malignant and Pernicious Tumour cannot presently be said to be *Cancerous*, because it has not the same beginning, as I shall declare in the Second Book and Ninth Chapter, when I come to treat of *Cancers* in Womens Breasts; tho' it is allowed to be of the same Kind which we call *Incurable* and *Cancerous*. Nor do I say it will never turn to a *Cancer*, for Experience proves the contrary, and that it is very hard to be cured, occasioned either by the Difficulty in coming at it, the Tenderness of the *Eye*, and the Parts about it, or the continual Afflux of sharp and pernicious Humours that feed and nourish it; more especially if *Quacks* or Ignorant Pretenders have had any thing to do with it. How it differs from a Cancer.

It generally proceeds from an Indisposition of the Part it self, and is still more provoked and enraged by improper Medicines, till it grows worse and worse, and at last *Cancerous*; or that the continual Afflux of

Humours renders it Malignant: But if it proceeds from both these *Causes*, the Consequence is very deplorable.

Its first Cause.

At first it proceeds from an *Erosion* in the *Glandules*, attacked and altered by a *Glutinous* and *Acid* Humour, which causes Swellings, Inflammations, Pains, and at last settles in the Part; but afterward when the *Influxed* Matter is grown more *Acrimonious* in the *Glandules*, thick and coagulated; the small *Conceptaculæ* of the *Glandules* are obstructed by the Matter contained in them, which consisting of different Particles and Qualities, causes an *Effervescence*, takes hold of the *Vessels*, and puts the whole Member into an ugly and unnatural Figure. And indeed nothing better can be expected, since when the *Glandulæ* are Eroded, Dilacerated and Disordered, there must necessarily follow an Ulceration from the *Efflux* of that abundance of Matter they contain; which diffusing it self on the Neighbouring Parts of the *Eye*, especially on the *Glandulæ Lachrimales*, the *Eye* it self and its *Tunicles*, can produce nothing less than a Malignant and almost *Cancerous* Tumour or Ulcer.

The Cure.

In the Cure of this Disease you must first and above all things, endeavour to mitigate the Pain, and hinder the corrupted Humours from flowing to the Part affected; for which purpose the following *Balsam* and *Water* are in great Reputation.

℞ *Balsam. Vulnerar. Hankij* ℥ss. *mell. Chelidon. inspiss.* ℥ijss. *misce super ignem lentem, postea adde Essent. Myrrhæ* ℥j. *Aloes* ℥j. *Sacchar. Saturni* ℥ij. *Flor. Cinzæ* ℥j. *Tutiæ ppt. Sarcocolla ana* ℥jss. *m. f. ad Balsam. consistent.*

This *Balsam* laid upon Lint, must be put warm into the *Ulcer* three times a day; you must also remember to put a good Quantity of dry Lint at the side of the *Eye*, to preserve it from being injured by the Medicine. The *Water* is made in the following manner.

℞ *Succ. Rutæ, Solani ana* ℥jss. *Aqu. Rosarum, Plantag. ana* ℥iv. *Tutiæ ppt.* ℥ij. *Ceruss. lot. Sacchar. Saturni ana* ℥jss. *Sacchar. Alumin. gr.* vj. *Troch. Ophthalm. Mynsic.* ℥j. *Camphor.* ℥ss. *m. f. Unguent.*

If you think convenient, you may also use the following *Lavament*.

℞ *Fol. Rutæ* Mjss. *Alchimill. Theæ, Nicotianæ, Betonic. Salviæ ana* Mj. *Rad. Tormentill. Aristoloch. long. ana* ℥j.

Boil all these *Species* together for some time in half *Aqu. Rosarum* and *Aqu. Mellis*, to which you may add a Quarter of a Pint of *Spanish Wine*; then let it cool in a *Vessel* well covered, strain it, and add,

Aloes, Myrrh. ana ℥ij. *Mell. Perficar. Chelidon. ana* ℥j. *Sacchar. Cant. alb.* ℥jss. *misce coqu. s. a. f. Lavament.*

The *Aloes* and *Myrrh* must be first dissolved in *Wine*: It's also requisite to apply the following *Plaster*, but no larger than the *Tumour*, and the *Lavament* will operate the better. It's somewhat *costly* to make, but that it is not worth regarding, since you may depend upon it, that the *Benefit* will more than recompence the *Charge*.

℞ *Em-*

℞ *Emplaſtr. Antimonial. Angel. Salæ* ℥j. *Emplaſtr. è herb. Theæ Dolæi* ℥x. *Emplaſtr. Diapampholyg. Mynſic. Dia Sulphuris Ruland. ana* ℥iv. *Ol. Myrtin. Ol. Antimon. ana* ℥j. *liquefact. lento igne continuo agitando donec minirum omnia exactiſſime fuerint mixta; remove ab igne, adde Pulv. fol. Tabac. ℥j. Succin. Myrrhæ, ana* ℥jſs. *Flor. Antimon. ℥vj. Croc. metall. ℥ſs. Mumia, Aloes ana* ℥iijſs. *Mercur. præcip. alb. ℥ij. Magnet. Arſenical. ℥ſs. Camphor. ℥iijſs. miſce f. diligent. ad Emplaſtr. form.*

Dr. *Dolæus's* Plaster of *Tea* you may find in his *Chirurgia* * : The other * *L. 5. c. 7.* are well known to all that converſe in Medicines; but ſince the firſt, *de Antimonio Angeli Salæ* is known; but to few, I will give you its Preſcription, as followeth.

℞ *Regul. Antimon. cum Aqua Plantagin. in Alcobel. redacti* ℥iv. *Reſin. Pini, Gum. Elemi, ana* ℥iij. *Galb. ℥ſs. Ceræ ℥ſs. Gum. Ammoniaci depur. ℥iijſs. m. f. Emplaſtr. f. a.* Emplaſtr. Antimon. Angeli Salæ.

I have added a little more *Wax* and *Ammoniacum* to bring it to a better Conſiſtence. The following *Balsam* does mightily reſiſt Putrifaction.

℞ *Unguent. Nicotianæ* ℥j. *Ol. Tabac. ℥ſs. Antimon. crud. Arſen. Crystal. ana* ℥ij. *Opii ℥ſs. Camphor. ℥j. m. f. Balsam.*

If you think this too ſharp, prepare the following, which I have often uſed in all Malignant and Cancerous Ulcers.

℞ *Decoſt. Tabac. & Myrrh. in aqu. mellis* ℥ſs. *Vini malvat. ℥vi. Ol. è Cort. Betulæ ℥iij. coque ad conſumptionem humiditatis Vini, dein admisce, Sal. Saturni, Plumbi uſti ana* ℥ij. *Auripigment. Opii ana* ℥m. *f. L. a. Emplaſtrum.*

If all theſe Medicines are unprofitable, nothing will take place but the *Iron* and a *Reſtriction*, if it be poſſible to perform it; as may be ſeen in the following Example.

In *September 1691.* a Countryman came to me from *Weygelsdorff*, 48 Historical Obſervation. *Years of Age*, who had ſuch a *Cancerous Tumour* in the Innermoſt Corner of his *Left Eye*, of two *Years Continuance*. He ſuffered much, and had tried many *Chirurgeons* and *Physicians* to no purpoſe, for it ſtill grew worſe and worſe; when he came to me it was as big a *Man's double Fiſt* *, and yet neither the *Eye* (ſave only that it was covered with it) nor the *Noſe* had ſuffered any thing conſiderable. After the Patient had been prepared by *Dr. Regius*, I made a *Reſtriction* as deep and high as I could, upon which it preſently appeared ſomething *flaccid*, and I could every day tie a *Ligature* deeper about it, which I repeated ſix times; the *Fleſh* ſtill growing more foul and ſtinking; on the ninth day I cut it off without *Bleeding*, or any other troubleſome Accident. To what remained behind and the bottom of the *Ulcer* I applied an *Actual Cautey*, with which I thrice gently burn'd it. The *Iron* was made with a *Cover* of brown *Silver*, to prevent the burning of the *Eye* and *Noſe*, after which it appear'd to be well; but in a *Month's time* I ſaw cauſe to burn it twice more, and then conſtantly applying *Pulvis Ophthalm. Mynſichti* to it, the * Vide Tab. 4. Fig. 2. Patient

Patient in Eight Weeks time was perfectly cured, and lives in Health at this present time. By which you may see what an *Actual Cautey* can perform if carefully and rightly applied; for if this did not stop the *Lymphatick* Vessels which are corroded and eaten to pieces by *Acrimonious* Humours, and hinder their *Lympha* from flowing towards the *Glandula Lacrymalis*, to nourish and moisten that place, to such a prodigious degree, that it's the only thing which makes it so difficult to heal, certainly it could never be cured. *Mynsicht's* Powder is also of excellent use in this Case, for it dries and heals incomparably.

C H A P. XXII.

Contumacious, Malignant and formerly Ill cured Ulcers about the Throat.

What they are. **U**LCERS in the Outward part of the *Throat* are more difficult to be cured than other *Apostemata*, for if they heal in one place they break out in another, especially towards the *Ears*, near the *Jaw-bone*, and below towards the *Sternum*. Such may be truly called *Ulcus Dysepuloticum* or *Ulcus Fluxione vexatum*; because a strong *Influxion* of Humours is the Cause of it. Hence it is that they will not easily be cured; for the *Matter* is too much, and the *Flesh* in those Parts so very spongy and full of *Glandules*, that they easily hide such Humours in their Cavities, and by their continued *Eruptions* make one Hole or Ulcer after another.

From whence they proceed.

* Chirurgia Sect. 2. c. 2. pag. 114.

I have already said in the Eighteenth and Nineteenth *Chapters*, that the chief Cause of all *Ulcers* is *Stagnatio Liquorum*, which are ordained to *Circulate*, but by the Interposition of *Heterogeneous* Particles, are obstructed and deprived of their Motion, and consequently procreate Distempers in the Parts where they settle. *Licenciate Juncken* * says very aptly to this Purpose; We are now well assured, that our Blood and Juices *Circulate*, and are in continual Motion, and that the *Liquores Circulantes* consist of several and different Particles, as of a *Volatile Salt*, or an *Oily or Watry Substance*, &c. which are the whole Composition of the *Blood*; affecting the *Gall*, the *Lympha* or *Succus Nervinus vel Nervus*, &c. which are all in our Bodies in a particular manner and so wonderfully mixed, that they all make up but one *Liquor*, and that so *Subtile* and fluent, that it passes through the finest *Ramuli & Fibrae* of the Vessels, into the *Flesh*, *Muscles*, *Skin*, &c. Now when this well proportioned and equally mixed *Liquor* or *Blood*, happens by some Accident or contrary Matter to be any way molested, broken, or altered; then one way or other it becomes *Thicker* or *Thinner* than it ought to be; so that sometimes the *Volatile Salt* and *Spirits* are suppress'd, the *Blood* grows *Flat* and *Vapid*, and its vigorous *Circulation* being hindred, must necessarily *stagnate*, since it's unable to force its way through those small and tender *Ramuli* and *Tubuli* of the Body; and if once stopped, is not only a great Hindrance to that Part, but also prevents other *Liquors* from passing through, and forces some part of them to a stand. Now those *stagnated Liquors* raising a *Fermentation* by their subtile Particles, which are in continual Agitation and Motion,

Motion, they extend themselves and prepare for a Flight; but encountering some *Crafs* Particles, are driven back again. And these stagnated Liquors gathering Strength by Continuance and a Supply of more circulating Juices, at length the Matter becomes *Acrid* and *Corroding*, and wanting Room, by the Help of *Impulsive* Liquors, breaks its Vessels, and gets hold of all the Neighbouring Parts, Vessels, Flesh, Glandules, Skin, &c. which it invades by its *corroding* Quality, and Alters and stagnates all the Liquors they contain, and so prepares Matter for *malignant Ulcers*.

This *Stagnatio Liquorum*, which, as I said before, is the *Cause* of these *Ulcers*, may also be caused by a foul Contusion, or Relaxation of the *Glandules*, and if neglected, in time will grow to such malignant and pertinacious *Ulcers* as these are.

The Cure of this *Malady* ought to begin by rarifying the *Stagnated* Liquors, and correcting their *Acrimony* with gentle *Sudorificks* and *Diureticks*, and by external Applications, endeavour to abate the Inflammation and Swelling, and mitigate its Pain before it is opened. But if it be already open, the *Ulcer* must be cleansed, its *Malignity* meliorated, and large Bolsters applied round the *Ulcers* and *Tumours*, to prevent the Matter from Putrification, sinking deeper, and spreading broader, which will much retard the Cure. Monsieur *Fournier*, the *French King's* Chirurgion in *Paris*, has an excellent Bandage or Ligature, which he calls *Le Double Oeil Droit de Haut en Bas*; but it must be tyed twice about the Neck in this Case, and below towards the Shoulders and Arms, it must be tyed harder than about the Head, that the Head may be more at Liberty. We shall only treat here of the external Cure, and leave the Internal to the Physicians. The following Cataplasim is intended to abate the Inflammation and Swelling.

℞ *Fol. Malvæ, Verbas. Hyoscyam. Altheæ, ana* Mj. *Flor. Chamomil. Melilot. Sambuc. Malvæ hort. ana* pug. ij. *rad. Alb. Farin. Fabar. Farin. Orobi. Sem. Lini ana* ʒiſs. *Terr. Sigillat. ʒij. m. f. ad Subtilissim. Pulverem, & Coque cum Aqu. Flor. Sambuci vel Lactè Vaccinò ad Cataplasmatiss Consistentiam.*

Apply it warm to the *Tumour* and you will find it *molifie* the *Skin*, abate the *Pain*, and prevent ill *Accidents*; but if no ill *Symptoms* appear, and the *Tumour* is already open, you have no occasion for the *Cataplasim*, but must use a good *Plaster*, as that of *Artaphanus*, and apply the following *Balsam* warm with *Lint* a *Fortnight*.

℞ *Unguent. Rubr. mei ʒj. Balsam. Peruvian. ʒj. Copair. ʒſs. Vulner. Hankij ʒſs. Emplastr. Stict. Paracels. ʒij. Terr. Vitrioli dilig. Edulcorat. ʒijſs. Sacchar. Cant. alb. ʒiij. Mercur. præcipit. ʒj. Misce cum s. q. Terbinth. Cypr. ad Bals. form.*

This being done lay the abovemention'd *Plaster*, or that of *Crollius* upon it, and because the *Edges* and *Sides* of these *Ulcers* are commonly much *Inflamed* and *Tumified*, you ought to use the *Unguent. Lithargyr.* mix'd with *Tutty* and *Cerufs* to the *Sides* of them. And when the *Ulcers* are *Clean* and the *Balsam* has done its *Office*, use instead of it the following *Mixture*.

℞ Decoꝛt. Cort. Betulae ℥ij. Aqu. Veronic. Alchimill. ana ℥j. Lixiv. Calcis viv. cum Sal. Armon. facti. ℥iv. Sacchar. Saturn. ℥j. m. f. mixtur.

Mix the *Sugar* of *Saturn* with the *Decoction* while it's warm; then add the *Lixivium*, and strain it *per Chartam*. If you had rather have a *Powder* instead of this *Water*, use the following, which is an incomparably good one.

℞. Pulv. fol. Quercin. ℥iss. Rad. Aristoloch. long. ℥vi. Antimon. diaphoret. ℥ss. Mercur. præcip. alb. Sacchar. Alum ℥ss. m. f. Pulv. ad Us. dict.

When every thing is duly cleansed, and you have gain'd a good *Foundation*, you may use the following *Ointment* always warm, and so continue till your *Patient* is well; which you will seldom fail to do if you observe these *Directions*; but if they should fail, you must have recourse to *Salvation*, of which I have writ particularly in this *Treatise*, to shew how the *Patient* is to be govern'd under it.

History.

In *January* 1687. I had an *Advocate* in *Cure* Chr. A. 34 Years of Age, who had many such *Ulcers* about his *Neck*, which I constantly dress'd above *Six Weeks* together, with the aforementioned *Medicines*; but to very little *Purpose*; till examining him how he thought he came by it; he confessed he caught it of a *Student*, who was sometime his *Bed-fellow*; Of which I believed what I thought fit, and so ordered the *Cure*, that he was well in eight *Weeks* time.

CHAP XXIII.

Cataracts, what they are, their different Kinds, and how to Couch them dexterously.

TO know what a *Cataract* is, when it's *Ripe* for *Couching*, and to perform it *Artificially*, requires the utmost *Diligence* and *Skill* of the most *Learned* and *Experienced* *Chirurgion*, that has seen it performed by some *Curious Operator*; it being one of the nicest *Pieces of Art* in the whole *Practice of Chirurgery*; which at once, gives the *Oculist* great *Honour* and the *Patient* his *Sight*. But if an ignorant and *Clumsy Poaker* is so presumptuous to attempt this *Operation*, What can be expected but his own *Shame* and the *Ruine* of the *Patient*? Therefore take *Care* and follow my *Advice*, that the *Patient* may receive no *Injury*, nor *Chirurgery* no *Dishonour*.

The various Colours of Cataracts.

When a *Patient* comes under your *Hands*, first diligently observe in what *Degree* the *Cataract* is; of what *Colour*; how long standing, and which is chiefest of all, Whether the *Cataract* is *Ripe* enough for *Couching*? To know this certainly, chew a good *Quantity* of *Fennel* in your *Mouth*, and breath three times into the *Patient's Eye* which is affected; let him shut it close, and rub with your *Finger* very gently upon the *Eye-Lids* three or four *Minutes*, or till the *Eye* is well warmed; then let the *Patient* open his *Eye* suddenly, and if the *Cataract* is remarkably changed

changed and divided, it is not ripe enough to be Couched; but if it does not change in Colour and Consistence, then it is a *Confirmed Cataract*, and you may proceed to the Operation, if nothing else intervenes to hinder it. *Cataracts* also vary in their Colours. Some are *White*, others *Red*, *Yellow*, *Ash-Colour*, *Green*, *Blue*, and *Black*, tho' I confess, I never saw a *Green* or a *Blue*, and almost think it impossible there should be one. A *Blow*, a *Fall*, or a *Bruise* happening near the *Tunicles* of the *Eyes*, at first grow *White*, soon after *Red*, *Ash-Colour*, and at last look *Black* and *Yellow*, all which proceed from the same Cause, a *Hurt*. Now tho' the *Cataract* we are discoursing of, has a quite different Cause and Beginning, and being a *Film* or *Skin* cannot be exactly compared with the other, yet there is much Resemblance between them; as first it is a *Mucilage* gathering like *Coagulated Milk*, and therefore *White*; afterwards being mingled with *Blood*, it grows *Red*, proportionable in Colour to the Quantity of *Blood* which is imbibed. A while after it grows into a *Skin*, and appears *Ash Colour'd* and *Yellowish*, and then it's full *Ripe*; but if it grows *Older*, it turns very *Yellow*, afterwards *Dark Brown*, and at last quite *Black*, as thick as *Leather*, like a *Horn*, and so pertinacious that it cannot be *Couched* by reason of its *Hardness*. The *Cataracta Suffusio*, or *Gutta Serena*, as it's called, is a *Skin* growing inwardly on the *Pupil* of the *Eye*, which it covers by degrees, and grows all over the *Tunica Uvea*, that the Patient cannot see through it. It takes its Beginning from a *Glutinous* and *Viscous Matter*, or *Spissatio humoris Aquei*, which by degrees becomes more firm, crass, and *Glewish*, till it comes to a true *Skin* or *Tunicle*, which is the true Cause of a *Cataract*. But to elucidate the Readers Judgment, I will give you the Opinions of some Learned Men upon this Subject.

When, and when not to be couched.

Gutta Serena what it is.

Cause of a Cataract.

The Ingenious Dr. *Muraltus* * says, it's a Disease proceeding from a *Glutinous Matter* in the *Humor Aqueus*, which growing to a *Skin*, hinders the *Cornea* from receiving the Beams of *Light*, which at first is called a *White Cataract*; and that which obstructs the *Nervus Opticus* is called the *Black* and *Incurable Cataract*. *Licentiate Juncken* * saies it is a *Coagulation* and *Inspissation* of the *Aqueous Humour*, which in a manner changes into a *Skin*. Dr. *Solingen* directs how it is to be *Couched*, but says nothing of its Cause. Dr. *Blanckard* names but one kind of *Cataract*, only adds, that in the Beginning it was called *Suffusio*, and afterward * *Cataracta*; because in a *Suffusio* the *Tubuli* of the *Humor Chrystallinus* was obstructed, or at least so much injured, that the Beams of *Light* could not clearly pierce through, only the several Representations of *Motes* and *Flies* seemed to swarm before the Patients *Eyes*. But in a *Cataracta* the *Skin* was more hard, and the *Spiritus visivi* could not pass through at all, and so the Patient was deprived of his *Sight*. Dr. *Cardilucius* saies, a *Cataract* proceeds from a great *Defluxion* of *Humours* from the *Head*, and might at first be easily cured by *Salivation*. He that pleases may believe it. *Thomas Fienus* Opinion is, that a *Cataract* is a *Membrane* of a *Cold* and *Moist*, or a thick *Matter* intermixed with the *Humor Albugineus*, which by the *Warmth* of the *Head*, grows by degrees into a *Skin*. Dr. *Stortia* affirms that a *Cataract* is a thick and *Glutinous Matter* settled between the *Humor Chrystallinus* and *Rhagoides Tunica*, and there grows to a *Skin*, which when it comes to be hard and perfect, takes away the Patient's *Sight*. Dr. *Dolæus* in his *Encyclop. Chirurg. Rational.* and the *French Chirurgion* Mr. *Lemeri* in his *Academ. Parisens.* agree with Dr. *Muraltus*

* Collegio Anatomico lect. 45. p. 28.

* Chir. Man. Sect. 2. c. 3. p. 238.

* Chirurg. l. 1. c. 8. p. 72, & 73. a Authors Opinions.

Muraltus and *Licentiate Juncken*. To mention more Authors, I cannot judge worth my while, and therefore will apply my self to the Operation, which is more necessary for a Chirurgion to understand.

First, Place your Patient where he may sit firm, and let his *Eye* be held fast with the *Leaden Ring*, your Fingers or a Ligature, that the Needle may pass into the Eye without any kind of Hindrance, and the Operation be the better and surer performed.

Secondly, Take care in putting in the *Needle*, that you don't hurt the *Tunicle*, or any thing in the Eye, for if you do, all your Labour is in vain, the Humours will run out at another place, and the excessive Pain will hinder you from Couching the Cataract.

Thirdly, When your Needle is well entred, make what haste you can to press down the Cataract gently; least by often removing the Needle forcibly up and down, you cause an Inflammation and Pain, and endanger the Loss of your Patient's Eye.

Fourthly, Let your Needle be a slender one, something Bended and Broad at the Point, that you may not make too great a Hole in the *Conjunctiva*, and that in turning the Needle you may take the better and surer Hold of the Cataract to separate it.

Fifthly, Thrust not your Needle too far into the Eye, nor turn it too quick and hastily; but proceed gently, that you may prevent any ill Accident which might happen in the Operation.

Begin the Operation either in the *Spring* of the Year, or the *Fall* of the Leaf; for the Summer is too *Hot*, and the *Winter* too cold to do it in. The Room must also be *Light*, the Day clear, and the Operator and the Patient both very sober. I mean that they have drank very little; for the Stomach being empty, and the Head undisturbed, the *Oculist's* Sight will be clearer, his Hand more steady, active, and unwearied, which I thought fit to mention, by reason of a Misfortune that lately happened to two Persons at *Newstadt*, the one a *Clothier*, the other a *Watchman*, who both lost their Sight, by one that was otherwise a good *Oculist*; but being something in Tears, would always drink a Glass or two of Wine, which he thought made his Hands more steady; but he was very much mistaken, as the ill Event proved. Your Needle must also be made with a good Handle and a Button on the Top, that you may better govern it. The handle must be about four Inches long, and the Needle two and a half. Some will have their Needles made of *Gold*, *Silver*, *Steel*, or *Iron*, agreeably to their own Fancies; but I make use of one of *Steel*, not too much hardened, and if necessary, I *Gild* it about a Finger broad at the Point, and order it to be very well polished, that I may see it shine thro' the *Conjunctiva*, when I put it in, and for the better governing it afterward. The right way of setting on the Needle may be seen in the fourth Table, Figure 3.

The Patient's Body being well prepared for this Operation, by convenient Purging, and Strengthening the Head and Eyes, and all things being in Readiness, chew *Fennel* in your Mouth, breath into the Patient's Eye, and if you use the *Ligature*, order him to turn his Eye something outward; but toward the Nose; if you use only your Fingers or the *Leaden Ring*. In the mean time, the other Eye must be shut up close with a Bolster and Bandage. The Operator must seat himself upon a Chair something higher than the Patient, and opposite to him, putting his Knees and Legs between the Patients, with Cushions; tying them close together that the Pa-

tient

tient cannot move them; whilst your Man holds the Patient's Head fast to his own Breast. The Patient's Hands must also be tyed fast to the Chair with Towels, that they may not hinder the Operator. This being done; if the *Cataract* is in the Left-Eye, take the Needle in your Right-hand; and if the *Cataract* is in the Right-Eye, take the Needle into your Left-hand, and put it a small *Straws* breadth from the Outward Ring of the *Pupil*, into the *Conjunctiva*, always *Oblique*, and so far till you see the Point of the Needle comes to the middle of the *Cataract*. Afterward proceed higher upward, as far as is requisite, turning the Needle gently about, and so roll the *Suffusion* downwards with the Needle; but take care that you don't press upon the *Uvea*; but roll or depress the Skin quite downwards, and hold it down for some time, to prevent its rising up again. If the *Cataract* should be fastned at the *Top*, you must endeavour to loosen and separate it neatly, and afterwards depress it; but if there be no need to separate the small *Fibræ* of the *Cataract*, which sometimes fastens it to the *Uvea*, you are happy, and have but half the Pains to take. If it should happen otherwise, you must first loosen it, by turning the Needle, and then moving the Needle backward and forward, as in a manner cutting, separate it and then depress it. When all this is done, hold the *Cataract* down with the Needle for half a Minute or thereabouts. Then pull the Needle a little towards you, and if the *Cataract* does not rise again, pull the Needle gently quite out of the Eye; and with the other Hand, immediately press some moistened *Tragacanth* or *Sarcocolla* Powder: Or as I commonly use, a Piece of *Gold Leaf* directly upon the Orifice or Hole that was made in the *Conjunctiva*, to hinder the Running out of the *Aqueous* Humour, and to heal it up again. Dr. *Solingen* mixes a little *Saffron* with the White of an Egg, and lays it on the Hole of the Eye. Then shut up the Eye-lids, and over them the first Day, apply thick linen Bolsters dipt in the White of an Egg mixt with *Rose* and *Plantan* Water warmed, and upon that again great Bolsters over both Eyes: And for a *Defensitive*, apply the following Mixture, always warm and well shaken together.

℞ *Rutæ*, *Feniculi ana* ʒj. *Aqu. Plantagin. Solani ana* ʒiij. *Tutiæ ppt.*
Sacchar. Saturni ʒj. *Sacchar. Cant. alb.* ʒij. *misce detur in Vitro.*

Some let the Bandage lie constantly upon the Eye Four or Five, yea, Nine Days together, and keep their Patients to such strict Rules, that they must eat no *Beef*, *Mutton*, or any *Flesh-meat*, and lie continually on their Backs in a dark Room, that no Light may come to their Eyes, nor will they allow the Patient to move or stir, or hardly speak; but keep them like *Prisoners* in Chains. For my part, I allow my Patients to speak as much, and as often as they please, provided they don't make too much Noise in talking; they may also eat and drink what they have a mind to, and may lie on their Sides when they are weary of lying on their Backs. If on the Third or Fourth Day you find any *Moisture* upon the Eye-lid, you may conclude, the Hole which was made in the *Conjunctiva*, is not yet healed, and therefore must apply to it a small Piece of a *Silver* or *Gold Leaf*, or what else you think convenient, but as gently as is possible; and continue the afore-named Method for Ten Days more. Then open the Eye leisurely, view it well, and if it looks *Red*, you need not trouble your self about it, for it's nothing but a little Blood mixed

mixed with the *Aqueous Humour*, and settled upon the *Tunicle* of the Eye; and will soon vanish of its own accord. But if it should not go off, put the following Powder Three or Four times a day into the Eye, and it will soon disperse it.

Mynsicht's
Ophthalmick
Powder.

℞ *Pulv. Ophthalm. Myns.* ʒj. *Sacchar. Saturni* ʒss. *Vitriol. alb. pur. gr.* j. *Sacchar. Cant. alb. Troch. Nihil. alb. cum Opio ana* ʒss. *m. f. ad subtilif. Pulverem.*

Every time this Powder is blown into the Eye, let the Patient keep it shut till the next dressing.

Observation.

In the Year 1675. a Soldier in Captain *Bobreus's* Company in General *Gotzick's* Regiment, came to me for Help, who had a Cataract upon each Eye, whom I purged sufficiently; and having cleansed his Head, gave him a *Cordial* every Morning for some time together to strengthen it. Then I treated him in every Particular according to the Method already prescribed for *Couching Cataracts*, in which I succeeded so happily, that the Patient recovered the Sight of both his Eyes, and continues to do his Duty. Here I will only further observe, That it's necessary you provide your self of a *Round*, a *Cutting*, and a *Sharp Needle*, something *bended*, *blunt* and *pointy*, as your Operation requires; you must also be provided of a good *Incision-knife* to cut the *Conjunctiva* to make an easier Entrance for your Needle into the Eye, as is directed by those two Famous *Frenchmen*, *Gresseteau* at *Chauteaudun* and *Schmaltzfi* at *Leyden*: Besides which, all our best Authors agree, *una voce*, That the Cataract must be taken hold of at the Top, and so gently depressed by degrees. This is the safe Way, but if others have contrary Methods, I leave them to their own Liberties, and shall only add what I forgot before, *viz.* That you anoint your Needle with *Oil of Sweet Almonds*, before you put it into the Eye; tho' I confess, I use nothing but my own *Spittle*.

C H A P. XXIV.

How to separate other External Skins of the Eyes.

THOUGH I once resolved to say nothing of the Eyes in this Book, purposing to write a particular Treatise on that Subject, and call it, *The Careful Oculist*, yet at the Request of some good Friends who prevailed upon me to alter those Resolutions, I will treat of them in this and the Two following Chapters, I hope to every one's Satisfaction; and therefore having done with the Skins in the *Inward* Part of the Eyes, I will now discourse of the *Outward*.

A Web in the
Corner of the
Eye.

And first of the Web called *Pterygium*, *Ungula deponenda*, or *Unguis vel Pannus membranosus*; which is a *Nervous* White Kind of Skin, beginning in the Corner of the Eye adjoining to the Nose; but afterwards, if not timely prevented, spreads it self over the *Adnata* and *Cornea*, till it has blinded the Eye. *Cardilucius* is * of Opinion, That this *Pterygium* does firmly adhere to the *Adnata*, but I never found it so in all my Practice, but
always

* Tom. 3. c.
119. p. 658.

always loose, tho' of a long standing, and fit to be taken off: Nor did I ever see a *Black* one, which he mentions, but always *Reddish*, *Ash-colour*, and something *Yellow* as it grew older: In the two last Colours they are fit to be separated, which may easily be done by a diligent and active Hand.

Nor is there a Necessity of making any Difference in this *Pterygium*, it having but one sort of *Skin*, and almost one and the same Cause; tho' Dr. *Bartsh* makes many, and ascribes to every one a particular Cause; but he is much in the wrong: For Men of Sense and Experience only make this Difference, viz. That which is *White* and *Thin* they call *Ungula* or *Pterygium*; and that which is *Thicker* and intermix'd with *Blood*, proceeding from injured *Veins*, and looks *fleshy*, they call *Pannum*, or *Unguis membranofus*; and when all is done, these Distinctions signifie nothing to the Cure, or serve any other End but to embroil the Chirurgion: Therefore let him only mind whether the Web is *Thin*, *New*, *White*, *Red* and stretched over the whole Eye; or whether it is *Thick*, *Old*, *Fleshy*, *Ash-colour* and *Yellow*; because the first may be cured by Medicines, but the other can never be taken off but by Manual Operation.

The true Cause of this Film or Web, is chiefly a *Disordered* and *Devastated Lympha*, proceeding from a *Hurt*, or an ill Constitution of the *Lympha* it self, whose thicker Part settles in the *Glandula Lachrymalis*, where growing *Hard*, *Crafs* and *Viscid*, it forms the beginning of this Web, and is not only caused by the *Lympha* which resides in the External Part of the Eye to assist its *Motion*, but that also which is in the *Aqueous Humour*, which coagulating grows by degrees more *Glutinous* and *Viscons*, till it produces a true *Skin*, which always begins, as I have said already, in the large *Glandula* near the *Nose*, and at length covers the whole Eye.

Blanckard rehearses* several Internal and External Causes of this Disease, but especially *Inflammations*, *Soreness* of the Eyes, and a *Disordered Lympha*, which growing *Acrid* and *Sharp*, corrodes the Parts thereabouts, and by degrees causes this Excrecence. *Muraltus** thinks it proceeds from a *Faulty Periostium*, which causing an *Inflammation*, the Tears grow so sharp, that they rare the *Glandula Lachrymalis*, and then the

Succus Nutritus runs out; which *Coagulating* and growing hard, in time grows to a Web. *L. Juncken* saies*, This Web deduces its Original from a *Viscid* and ill-constituted *Lympha*, which is not only found in the *Humor Aqueus*, but also outwardly in the *Thin Glandules* of the Eye, which settling there, produces a Web. *George Bartsh**, and Dr. *Vopiscus**

Fortunatus Plompus are of Opinion, That it's caused by a *Viscous Matter* which falls from the *Head*, and settling upon the Eye, at last grows into a hard *Skin*; but what this *Viscous Matter* is, or of what it consists, he makes no mention, and without doubt *Bartsh* was ignorant of it himself; for if that should be true, how many Men would be troubled with *Webs* over their Eyes, which being neglected, would soon be blind. *Fabricius ab Aquapendente** saies, This *Pterygium* is a *Nervous* and *Glutinous Mem-*

brane which has its Increment from the small *Veins* of the *Blood*, which afterward may be easily seen in the *Web* when it grows bigger; for then the *Veins* also increase. *Parvus** saies, It proceeds from a *Defluxion* of *Humours* into the Eyes, but not a Word What, or of what Kind those *Humours* are. *Johannes Andreas de Cruce** calls it a *Coagulated Humour* distilling from the *Brain*. *Johannes Jesserius** will have it a *Crafs* and

Glutinous

The Cure by Medicines

Needless Distinctions.

The true Cause of it.

The true Cause of it.

* Chirurgia Part 1. cap. 9. p. 86.

* Colleg. Anst. Lect. 45. p. 412.

* Chir. Man. Obs. 2. p. 250.

* Chirurgia part 8. c. 1. p. 218.

* Chirurgia part 2. c. 20. p. 64.

* L. 16. c. 14. p. 532.

* L. 3. c. 6.

* Chirurgia part 3. cap. 7. p. 130.

Glutinous Matter which causes it, but saies nothing how, or from whence this Matter came, with whom I conclude; for to enumerate all the Old *Erroneous* Opinions, would make a Volume.

The Cure by Medicines.

The Cure must begin with good dissolving Medicines, or if already very Old, and the *Web* grown Thick, it must be taken off by the Chirurgion's Hand; of both which I will discourse at large. Among the rest of Celebrated Medicines, the two following have the Preheminence: The first is my own, and the other borrowed from the Famous *Frenchman Le Febure*, and is called his *Blue Eye-water*; both which are to be put into the Eye blood-warm, and with fine Linen Rags applied to the Eye Over-night.

The Author's Paper Water.

℞ *Aquæ Papiri* ℥vj. *Vitriol. Cypr.* ʒjss. *Croc. Oriental.* ʒjss.

This *Paper Water* is made by boiling Ten Sheets of good Fine *White Paper* in *Aqua Cyanorum*, till all the Paper is dissolved; then filter it through *Brown Paper* and boil it again with the two other Ingredients, till a third Part is consumed; strain it again, and add,

Amygdal. amar. no. viij. *Aloes* ʒjss. *Croc. metallorum* ʒijss. *Caryophilor.* ʒij. *Tutiæ ppt.* ʒjss. *Sacchar. Cant. alb.* ʒjss. *Camphor.* ʒiii. *Spirit. Vini* ʒiij.

The *Camphire*, *Spirit of Wine* and *Almonds* must be first very well beaten together in a *Stone-Mortar*: Then set it in a warm Place, stir it every day with a *Wooden Spatula*; and being well settled, use that which is clear, by dropping it warm into the *Eye*. If you think it too weak, you may add a little more *Vitriol* to it; and if you would have it more Gentle, add more *Sugar-Candy* to it. *Febure's Water* is made in this manner.

Le Febure's Blue Eye-Water.

℞ *Aqu. Chelidon. majoris per fermentationem ex tota herb. parat.* ℥j. *Aqu. Flor. Cyani.* ℥ss.

Pour these two well-distilled Waters upon a great Piece of *Calx viva*, three Hours after filter it through a Paper, and add to the Colature, *Pbelgmatis Urinæ cum Vitriol. alb. destill.* ʒiij. *Salis Armon. depur.* ʒss. Mix them all well together, pour it into a *Brass Basin*, and beat it with a Rod an Hour together; or pour it into a *Glass* with some Filings of *Brass*, and beat and stir it together with a Rod, as before. Then let it stand till it becomes Blue, strain it through Paper, and use it as above-directed. *Dr. Coschwitz* and *L. Juncken* have each of them a *Blue Eye-water* that much resembles this. If you think a Powder will be of more Service to you, use the following three or four times a day, by blowing it into the Eye with a Quill.

℞ *Lapidi Scissil. Pumicis ppt. Pulv. Ophthalmic. Mysic. ana* ʒjss. *Matris perlar. ppt.* ʒvj. *Sarcocol.* ʒjss. *Sacchar. Cant. alb.* ʒj. *Myrrh. Aloes ana* ʒj. *Vitriol. alb. calcin. & edulcorat.* ʒij. m. f. *Pulver. subt.*

When

When you have blown this Powder into the Eye, let the Patient keep his Eye shut a Quarter of an Hour, that it may operate the better. *L. Junken* is of Opinion, That if the Waters are too weak, the following Powder would be more effectual; and I have the same Sentiments.

℞ *Off. Sepiæ, Fabæ marin. ppt. ana ʒss. Sacchar. Cant. albi ʒj. Salis Armon. ʒj. Vitriol. albi ʒss. Pulv. Sarcocol. Tutie ppt. ana ʒjss. m. f. ad subtiliss. Pulverem.*

What I have now discoursed concerning Medicines appropriated to this Disease, I think sufficient; for if these will not succeed, it will be in vain to try others, and therefore you ought to take it away by Manual Operation, after the following manner.

Place your Patient to the Light, and in all other Preliminaries treat him as afore-directed in *Couching a Cataract*. Keep the Eye-lids open with your Fingers, the *Leaden Ring*, or *Speculum Oculi*, described by *Scultetus* *. This being done, take hold of the Web with a neat and slender *Forceps*, just in the middle of the *Pupil* of the Eye; pull the Web softly with your Left Hand from the Eye, hold it fast in that Posture, and with your Right Hand put the Crooked Needle threaded with a double Thread between the *Web* and the *Adnata*; then take hold of both ends of the Thread, and lift up the *Web* with it. When this is done, separate the Web very gently with a crooked *Incision-knife* or *Lancet*, beginning in the middle, and so going on to the *Glandula Lachrymalis*; instead of the Knife, if the Web is thin, you may do it well enough with the *Handle*; but take Care when you separate it, that you leave nothing behind, nor hurt the Eye, especially the *Glandula Lachrymalis*, for then there would certainly follow a continual *Flux* of *Tears* and *Lympha*, and oftentimes *Fistula's*. Thus separate it from one side to the other, and quite round about, till you are quite ready. If the Blood should hinder the Operation, let one be ready to wipe it gently away with a soft Sponge: And when all this is exactly and artificially done, drop a little of the following *Collyrium* into the Eye, and also wet the Lid with it.

℞ *Aqu. Fœniculi, Chelidon. ana ʒj. Sacchar. Saturni ʒj. Tutie ppt. ʒjss. Croc. metallor. ʒss. Margarit. ppt. gr. xv. misce fiat Collyrium.*

It would also be very requisite to moisten a thin Piece of Leather or Linnen in it, as large as the Eye, and apply it between the Eye and the Eye-Lids just upon the Eye, and let it lie two or three Days constantly upon it, which will both heal, strengthen the Eye, and prevent the growing of the Eye-lids to the Eye, which too often happens, especially if any Error was committed in the Operation: You must also apply some of it over the Eye-lids, and order your Patient to move them now and then. Some Practitioners, instead of this Mixture, use *Oleum Saturni*, or as *Dr. Solingen*, *Scultetus*, and *Doctor Schmaltz*, *Aqua Ranarum cum Saccharo Saturni mixta*, which is almost the same; and therefore I leave every one to his own Election. In this Method let the Operator continue till all is consolidated, and the Cure well performed.

The Cure by Manual Operation. * Armentar. Chirurg. Tabl. 31. Fig. 8. p. 92.

Their Colour and Situation

Their Cause

Open happen from the small

to the deprived Continuation of the Vessels, which as such a time is very short that, and also somewhat

Historical Ob-
servation.

In August 1689. I had a Soldier of the Red Company in Cure, who was about Thirty six Years of Age, and troubled with such a Skin on the Left Eye, *Asb-coloured*, and full of *Fibres*, which were so curiously interwoven together, that it looked like *Muslin*, and here and there appeared some small Veins very *Red*, which made it look very strange indeed, and would have led any Chirurgeon into an Error, that had not been used to such Cases, especially since it had been of Four Years standing, and several had in vain attempted to cure it. Sometimes he could see a little, but at last nothing at all, which one would hardly have believed, because the Web was then very soft. I tried to cure it by Medicines above a Fortnight together; but seeing they availed little, I took it away one clear Morning by Manual Operation, in the presence of Mr. *Tobias Jacob Hans* a Chirurgeon in this Town, exactly in the same manner as is above-directed, by which the Patient recovered his Sight in a very short time.

C H A P. XXX.

Of Spots and Specks in the Eyes, and the Chalazion or Hail-Stone on the Eye-lids.

Their Colour
and Situation.

SPOTS and Specks in the Eyes are sometimes so pernicious and hurtful, that they not only hinder the Patient's Sight, but also very much disfigure the Eye; and if they are large and inveterate, give the Chirurgeon a great deal of Trouble in curing them. They are generally White, and in the beginning look like a Piece of Coagulated Milk, and sometimes are also *Red*, if by any accident a small Vein has been broken, and caused a little Blood to settle in one part of the Eye. Some are seated just upon the *Pupilla*, others on the other sides of it; but those that possess themselves of the middle, are most difficult to be taken away; because the Chirurgeon dares not use such sharp things as are requisite in so tender a Part. These Spots, tho' they seldom stretch themselves so far as to cover the whole *Pupil*, yet they hinder the true Representation of the *Objecta visibilia*, which the Patient strives to see, because the Rays cannot fall directly into the Eye, being hindered by the Interposition of the Spots.

Their Causes.

They first settle like a Cloud upon the *Pupil* of the Eye, for that Part being rough, such kind of things more easily settle there than on the Parts that are smooth and slippery. They proceed from a corrupted *Lympha* mixed with some few Drops of *Chyle*, which extilled from the *Glandula Lachrymalis*, and by the Motion of the Eye is pushed forward towards the *Pupilla*, and its extreme *Tunicle*, which being rough, it adheres to it, and settles every Day more and more stronger.

Often happen
after the Small
Pox.

These Spots are very often found in the Eyes of Children after they have had the Small *Pox*, which cannot be attributed to the same Cause, but to the depraved Constitution of the *Lympha*, which at such a time is very keen, sharp, and also somewhat putrified, and consequently may easily

cause

cause such Spots, the Eyes being sometimes shut up whole Weeks together by a *Glutinous* Matter procreated by the Malignity of that *Nauseous* Distemper; but let that be as it will, you must first satisfy your self whether the Spots or Specks are large, and settled directly upon the *Pupilla*; for then you must take them away as soon as possibly you can, for the longer and larger they grow, so much more difficult will the Cure be, as I shall shew more largely, when I have discoursed a little about *Pimples* and *Warts* that happen on the Eye-lids, with their Difference, Cause and Cure.

The Eye-lids are incident to several Accidents and Infirmities, as *Pimples*, *Blisters*, *Warts*, *Small Tumours* containing *Pufs* or *Matter*, the *Chalazion* or *Hail-Stone*, and *Hordeolum* or the *Barley-Corn*, which at first may easily be brought to *Putrefaction*, and so opened and healed; but there are others that appear like small *Tumours*, and tho' they cause but little Pain, yet are so contumacious, that neither *Emollients*, nor the strongest *Penetrating Medicines* will have any Effect upon them; but they must at last be excised like the *Atheromata*.

The Variety of them.

Verucæ or *Warts* are also very obstinate, and root very deep into the Eye-lids, yet by a good *Touch Water*, *Restriction* or *Incision*, they may be eradicated, as I have experienced in several Operations, and shall have Occasion to speak more largely of anon.

Warts upon the Eye-lids.

To cure *Spots* or *Specks* in the Eyes, you must in the beginning treat them with the following Water, or *Mynsicht's Pulvis Ophthalmicus*, with which I have always had good Success. The Water is thus compounded.

Cure of Spots or Specks.

R̄ Decoct. Rad. Chin. in Vin. Malvat. ʒijss. Aqu. Verben. Rutæ, Euphrasia ana ʒj. Chelidon. ʒvj. Fœniculi ʒss. Aloes pur. Croc. metallorum ana gr. xxv. Succin. ppt. ʒjss. Vitriol. alb. ʒss. Camphor. gr. iv. coquantur igne lento sæpius agitando, donec omnia exactissime fuerint mixta; remove ab igne, coletur liquor per Chartam, serveturque.

The Ophthalmick *Antimonial* Water of Dr. *Muraltus* which I have very often used with great Benefit, is that which follows.

R̄ Vitr. Antimon. subtilissim. pulverisat. vel Croc. metallorum ʒij. Rad. Ireos Flor. ʒss. Caryophyll. arom. Num. iij. omnia bene pulverisentur, & postea aquis sequentibus misceantur, Aqu. Euphras. Fœnicul. Rutæ ana ʒiij. digerantur mixta omnia per decem dies, colentur fiat Collyrium.

Dr. Muraltus's Ophthalmick Water.

This Water is in very great esteem for its peculiar Vertue in curing Spots or Specks in the Eyes, if it be carefully dropped into them Three or Four Times a Day, the Water being always first made Blood-warm.

Mr. *Blegni* in his Observations gives us an excellent Prescription of a very good *Aqua Ophthalmica*, proper also in this Case, and is called the Gentleman of *Ulm's* Eye Water.

R̄ Fini

The Gentle-
man of Ulm's
Eye Water.

℞ *Vini albi generos. Aq. Rosar. opt. ana ℥ij. rutæ fœniculi euphras
Chelidon. ana ℥ij. Croc. Metallor. tutiæ ppt. ana ℥iij. Caryophill. Aloes
ana ʒj. Sacch. Cant. alb. ʒj. Camphor. ʒss. m. f. Collyrium. Detur
in Vas. claus. digeratur per aliquot dies, postea coletur.*

This must be used in the same manner as the former;

And is also an Excellent Water to heal all sorts of green Wounds, and in particular, all Wounds and Contusions in the Flesh, in a very short time. I have lessened the Quantity of the *Aloes* and *Cloves*, being in my Opinion too sharp and too hot for the Eyes; tho' in all other Cases it may be used with Profit, according to the Author's Prescription. But if all these Medicines should not procure the desired Effect, you may employ the following Powder which is much stronger. I have tried it often in this Case.

℞ *Lap. Scissil. ʒj. Vitriol. alb. ʒss. Aloes-gr. vj. Sacchar. Cant. alb.
gr. xv. Misce fiat ad Subtilissim. Pulv.*

The Cure of
Pimples and
small Tumours

If this also proves ineffectual, you must undertake the Cure with a *Blunt Knife*, Toothed like a small *Saw*; but first apply the *Leaden-Ring* to the *Eye*, to keep it open, then move this Knife from one side to the other, over the Spot or Speck, as lightly as possibly you can, till you have made the Spot something Raw and Uneven, and loosened the upper Part of its Skin; which being repeated three Hours after; it will be easily taken away afterwards with the abovementioned Powder, being blown into the *Eye* three times a Day with a *Quill*.

Small *Tumours* and *Pimples* which contain some Matter in them, may be easily cured before they grow hard and fleshy, only by being softned and brought to *Suppuration* by a good *Emollient* Plaster, and treated in the same manner as small *Putrid* Tumours ought to be; but if they are grown very old and hard, then apply the following Plaster warm every two Hours, and continue it till it's quite consumed.

℞ *Emplastr. Diaphoretic. Myns. ʒiij. Dia Sulphur. Ruland. ad Gantion
Dolai ana ʒij. Flor. Salis Armoniaci, Croc. oriental. ana ʒiiss. Suc-
cin. ppt. ʒij. Ol. tartar. setid. ʒj. m. f. dilig. ad f. Empl.*

If this Plaster will not answer your Intention, you must try to do it by *Excoriating* it, for nothing can be more penetrating than this Plaster, with which I have cured great Numbers of *Ganglions*, and other stubborn Tumours. Let the Opening be as large as is necessary, and if possible, in the Inside of the *Eye-lid*, because the *Cist* in which it is contained, lies nearer that place; but if this cannot be done, make the *Incision* on the outside of the *Eye-lid*, if you cannot use *Restriction*. *Warts* may be easily tyed with a *Horse-hair*, or with a *Silk Thread*, and afterwards cut off; or it may be touched with the following Water; or if the *Eye* be shut very close, with a little *Aqua fortis* or some other *Corrosive* without any Danger. But before you proceed to these very sharp Medicines, use the following Water three or four times a Day, and to prevent any ill Accident that might happen, you ought always to have in readiness, some of the *Aqua Spermatis Ranarum* with *Sacchar. Saturni* ready to be applied, if there should be occasion. The Water follows. ℞ *Spec.*

℞ *Spec. diatartar. Myns. Alum. ussi ana ℥j. Cerufs. Tutia ppt. ana ℥ss. Mercur. sublimat. vel Mercur. Viv. ℥j. Camphor. in vin. dissolis ℥ss. Aq; Rosar. Veron. plantagin. ana ℥vj. m. f. ad Aqu. s. v.*

If you don't approve of the *Mercur. sublimat.* you may instead of it use *Mercur. Viv.* dissolved in *Aqua fortis*, and mixed with the other Ingredients. For all *Warts* and *Tetters* Mr. Blegni * has a Precious, but something *Obfer. 8. part 1. p. 214. Stinking Unguent, which I have used many times with great Benefit. It is made as followeth.

℞ *Terebintb. Venet. ℥ij. Argent. viv. ℥j. Mix these first very well together in a Stone Mortar, and then add Ol. Oliviarum ℥ij. Ol. Laurin. ℥ss. Rasar. Chamomil. ana ℥j. Axungia taxi veteris, erynacci ana ℥ss. Resinae, Picis Naval. ana ℥ij. Pingued. Porcin. vet. ℥j. Aceti Vini fortiss. ℥vj. Sulphur. Alum. ussi ana ℥ij. virid. æris Sal. commun. Vitriol. Roman. Gallor. ana ℥i. Misce f. diligent. s. artem ad Linimenti form.* Monsieur Blegni's precious Ointment for Warts & Tetters.

This very large Composition, is enough to fright any Body from venturing on it, but it is admirable in the Operation, and you may use it not only in this, but in several other Diseases, as the *Itch, Tetters, Ring-Worms, Herpes*, and the like. *Blisters* may be easily cured with the dissolving Plaster and *Species Diatartar. myns.* mixed with a little *Plantan* or *Honey Water*.

In *January 1690.* A Lady of great Quality of the House of *Britwitz*, and another Lady shortly after of the Family of *Kettulinskin*, came to me to be cured; the first being troubled with a *Chalazion* on the Upper Lid of the Left-Eye, and the other on the Right. And finding that Medicines would not take place, I was forced to Excise it. They both acknowledged, that at first it was nothing but a *Pimple* which was a little painful; but at length gathered *Putrefaction*; yet never broke the Skin, tho' they had used *Emplastr. Diachyl. cum Gummatibus* a long time together. The Pain in time wholly ceased, and then they grew hard, Increasing and Decreasing in bigness with the *Moon*, and might be moved from one side to the other; which I only mention to let the Reader know, that these little *Swellings* at first are nothing but *Pimples*, which cause Pain, and contain Matter or *Pus*; but if they are neglected and not cured in time with *Emollients*; grow at last into another kind, and so *Contumacious*, that no Medicines can prevail; but must be taken away by *Incision*, which I was forced to have Recourse to in the Case of these two Ladies.

Observation.

In Case.

Observation.

C H A P. XXVI.

Other Infirmities and Accidents of the Eye-Lids and Eyes.

I Shall not trouble my self here, to make a long Discourse of *Eye-lids* that are grown together naturally, or by Accident, because they may easily be separated at first by a dexterous *Incision*; but if they grow to a *Tunica Cornea*, you must follow Dr. *Solingen's* Method * as I have often done in such Cases. Nor will I say much of the *Trichiasis*, or the growing of the Hair of the Eye-Lids inward into the Eyes, which may be easily pulled out with a small *Forceps*, tho' not without Pain. The *Pyosis Ophthalmos*, where Putrefaction lies behind the *Cornea*, I will also omit, because it very seldom happens, and also the fantastical Opening the Eye in the Form of a Half-Moon, near the *Circulus Iridis*, because it signifies little, nor will I touch upon the *Pladarosis*, or little *Caruncles* in the inward parts of the Eye-Lids; for when they grow big and troublesome, they may be cut away with Scissors; but I will chiefly treat of two several Accidents which often fall under the Chirurgion's Hands, and require great Care and Diligence in the Cure of them. One is called *Staphyloma*, and the other *Anchylops*. *Staphyloma* is an Affect of the Eye, rising at first like a little Bump about the Bigness of a small *Pea*, setting in the middle of the *Pupil*, resembling the Head of a Flie, and therefore called *Myocephalon*. This Pimple increases by degrees and grows into the Shape of a great Kernel, or the Seed of a Grape, and then is called *Staphyloma*. If it's not cured in time, it will still grow bigger and bigger, hard and callous, and seldom fails to deprive the Patient of his Sight, with an Impossibility of being restored; which is a sufficient Reason for beginning the Cure betimes, to prevent those ill Accidents, and preserve the Beauty and Use of the Eye.

Staphyloma,
what it is.

Its Causes.

The Causes of this Affect, is commonly a forcible Injury happening to the *Tunicle* of the *Pupilla*, by some external or internal Accidents. Internally when an *Acrimony* in the *Liquor Aqueus* or *Lympha* corrodes and eats through the *Pupilla*. Externally when too corroding Medicines have been apply'd by an unskillful Hand, which will sooner take hold of this than of the *Conjunctiva*, because the *Pupil* is more Thin and Tender, and the Corrosives will soon make it Raw, and at length a Hole, at which some of the *Liquor* will issue out, coagulate and harden into a little Prominence, which afterward encreases and becomes a *Staphyloma*.

Anchylops,
what it is.

Anchylops is something less known than the former, seldom occurs in Chirurgery, and when it does, is only an Accident in the *Glandula Lachrymalis*, which few Chirurgions observe or know what to make of it; therefore having remarked several Faults that have been committed in this Case, I will treat of it more at large, and shew how to cure it. This *Tumour* has its proper *Cist* or Bag, and ought to be taken off before it grows large and *Cancerous*; for afterwards all Attempts will make it rather worse than better; because it cannot be taken away without hurting the *Glandula Lachrymalis*, and the Moistness of the part renders Corrosives

fives insignificant; because they immediately become *Fluid*, and cannot consume what they were designed for: And yet *Corrosives* are very requisite in this Case if timely used; for otherwise they will turn to malignant *Ulcers*, *Fistula's*, and at last a *Cancer*; therefore use *Restriction* or *Incision* as soon as possibly you can, to root it out with little *Trouble*, and you have no more to do. The Ancients called this *Anchylops* a *Fistula*, but not a true one, tho' in time it may grow to one, if too long neglected.

The Cure of this Disease, as I have partly said already, must be by *Restriction*, if it can be used, tying it at the Root on the *Glandula Lachrymalis*, and when you think it is ready, cut it off; but if *Restriction* cannot be employed, take hold of it as well as you can; pull it towards you, cut it off, and immediately apply the following Powder to it, and if the Circumstances require it, mix it with some good *Eye-Water*.

℞ Sacchar. Cant. alb. ℥j. Tutia ppt. ℥ss. Sarcocollæ, Lapid. Calaminaris ppt. ana ʒiſs. Sacchar. Saturni, Matris perlar. ppt. nihil alb. ppt. Croc. Metallorum ana ʒj. Vitriol. albi, Camphor. ana gr. iv. m. ad. pulv. subtilissim.

If you have not this Powder in Readiness when you have occasion to use it, instead of it take that of *Mynsicht*, called *Pulvis Ophthalmicus*, or only *Tutia*, *Sacchar. Cant. alb.* and *Mater Perlarum*, and you will find it heal in a short time. Over this Powder you must apply no *Plasters*, as is directed in other Cases; but only proper *Fomentations* and *Eye-Waters*.

The Cure of a *Staphyloma*, tho' the Sight is seldom or never Recovered, is often attempted, in order to take away the Deformity of the Eye. Medicines howsoever discreetly prescribed, are always ineffectual in this Case; for the Affect is so stubborn that they will do more Harm than Good, and therefore proceed in this manner. Take hold of the *Staphyloma* with a small *Forceps*, pull it towards you as much as you can; then over the Head of it, as near the Eye as you can, tye a double Silk Thread very fast, and let the two Ends of it hang down, that you may draw it to you again, when three or four Days after you fully exact it. When it's quite cut off, or falls away of it self, as it sometimes happens, put *Pulv. Sarcocollæ* directly into the Hole, every Day till it's well. For a *Defensive*, apply over the Eye a good *Fomentation*, to prevent ill Accidents that might follow the *Restriction*. Dr. *Solingen* prescribes another manner of Operation, which is very troublesome and tedious; but for what Reason I cannot imagine, since in *Chirurgery* we ought to study the best and shortest way to a Cure.

In January 1686. a Servant-Maid named *Anna Krugers*, 19 Years of Age, came to me from *Weygelsdorff* to be cured of a very large and nasty *Staphyloma* in the Left-Eye, which had made the Eye very Red and Inflam'd, and the Eye-Lids to swell; she was afflicted with it above three Years, and the *Parson* of the Parish, who was also a good *Oculist*, had been trying to cure it a long time, but without Effect, tho' she was otherwise of a good Constitution, and in perfect Health. She was of Opinion that it came by a Blow which a Man gave her with a little Stick upon the Eye; for from that time it was inflamed, and at length

length grew into a *Staphyloma*. After her Body had been well prepared with Internal Medicines, by the Advice of Dr. *Burgh*, I undertook the *Restriction* of it as high and as near the *Uvæa* as possible I could; and four Days after, seeing it would not fall away, I cut it off, and applyed the following Powder often to the Wound, with which she was cured.

℞ *Tutia* ppt. ℥ss. *Sarcocoll.* ℥ij. *Sacchar. Saturni* ℥j. *Misce fiat Pulv. Subtil.*

Before I applyed the *Powder*, I always wiped the Wound very clean with *Lint*, and touched it with a little *Ol. Saturni*, which mightily strengthened the Eye, and made the *Powder* fasten and operate more powerfully. To promote the Healing of the Hole, that was made on the *Uvæa* over the whole Eye, I applyed a good Fomentation to prevent an Inflammation.

C H A P. XXVII.

Diseases and Infirmities of the Tongue, What they are, and how to Cure them?

The Tongue a Noble Member.

EVERY Chirurgeon without doubt knows what a noble and useful Member the *Tongue* is; the great Instrument that forms the *Speech*, distinguishes the *Taste*, and which Nature has especially taken Care of to preserve it from Injury; yet nevertheless, tho' it is guarded and surrounded with a Fence of *Teeth*, &c. it is subject to Variety of Accidents. Sometimes the *Teeth* themselves contribute to the hurting of it, as in dangerous *Falls*, in Fits of the *Epilepsie*, by *Gun-shot*, and other Mischances, that tear away whole Pieces of it. *Blisters*, *Holes*, and *Ulcers*, especially in *Salivating*, are very prejudicial to it, and give the Chirurgeon more than ordinary Trouble, tho' well approved Medicines are constantly applyed.

Tongue-tyed.

Untying the *Tongue* is so well known and common, that there needs no more to be said of it, than that the *String* must be cut with *Scissors*, and the Wound healed with *Mel Rosarum*. He that would know more of this, and other common Accidents of the Eye, may find them sufficiently handled in another of my Books*; and therefore I will only here discourse of *Ulcers*, *Blisters*, and some other Hurts of the *Tongue*, and direct the Chirurgeon to proper *Specificks* for the Cure of them, which I will divide into two parts, and first treat of the Cure of *Blisters* and *Ulcers* proceeding from the *Scurvy* and *Foulness* of the Mouth; and secondly, of such Accidents of the *Tongue* where *Malignity* is to be feared, or Suspicion of *Morbus Gallicus*. For the first of which I recommend the following *Gargarism*.

℞ *Cort.*

* *Chirurgia* part 1. c. 42. p. 289.

℞ Cort. Rad. Sambuc. Lign. Fraxini flava ꝑj. Tormentill. rad. Tormentill. fol. Alchimill. Vinc. per Vinc. ana Mjss. Buxi. Salviae ana Mj. Flor. Rosar. Balauft. malve hort. ana ꝑss. Syr. Diamor. Papav. errat. ana ꝑj. coquantur omnia simul in Vaso bene clauso cum Aq. Salviae, Plantaginis & Prunella qu. s. Colatur. & feruetur ad usum.

If you desire it should be something sharper, add a little *Sal Nitri* & *Sacch. Alluminis* to it, and when you have used it a while, and perceive the Patient's Mouth is sweet and clean, prepare the following *Jelly*, and after that the *Mixture*, with which frequently rub the Tongue, and all things will answer your Intentions.

℞ Mucilag. Sem. Psyllij & Cydoniorum. c. Aq. Rosarum & Salviae fact. ꝑiv. Gelatin. C. C. ꝑj. Spodij. ꝑss. Mell. Rosar. Syr. Papav. err. ana ꝑj. Misce detur in Vitr.

This *Mucilage* cleanses, cools, and prepares the *Ulcers* and *Blisters* to be sooner healed by the following *Mixture*.

℞ Decocte rad. Aristol. long. Alchimil. & Veronica cum Aq. Veron. & Vin. alb. q. s. ꝑij. Syr. Granator. moror. flor. Prunell. ana ꝑss. Rosar. ꝑij. Alum. crud. ꝑj. misce f. mixtura s. artem.

With these Medicines diligently applyed, you may make a perfect Cure, and as soon as can be expected. If a great *Ravenousness* of the Mouth should accompany it, garguling with sweet Milk between whites would be convenient; and if there is a great *Putrefaction* and *Foulness*, the *Gargarisms* must be rendred more penetrating, for which the two following *Mouth Waters* are very proper.

℞ Cortic. lign. & rad. Fraxin. rad. Mandragor. Benedicti ana ꝑj. fol. cosol. saracen. Salviae plantagin. veron. ana Mj. flor. prunell. Mj. Balauft. Mijs. cort. Granator. ꝑss. rad. Tormentill. Aristol. long. ana ꝑij. Misce Scind. & cont. gr. modo, postea coquantur cum Vin. alb. & Melle & Aquæ plantag. ana part. per hor. j. in Vaso bene clauso. Colaturæ adde Rob. Diamor. Mell. Rosar. ana ꝑss. Alum. crud. ꝑiiss. f. l. art. Gargarismus.

If you think this *Mixture* too tedious, and had rather have one sooner made, provide your self of the following, which is also a very good one.

℞ Aq. Plantag. flor. Prunell. ana ꝑij. Papav. errat. Chelidon. min. ana ꝑiiss. cort. Granator. ꝑj. Gumm. Lacce ꝑjss. Alum. Calcin. ꝑss.

Let the Waters be first made very hot; then pour them upon the *Gummi Lacce in granis* & *Alum. ustum*. After it has stood a Night, filter it through Paper, and add to it *Syr. Cydonior. Mell. Chelidon. ana ꝑj m. f. ad form. Gargarism.* With this *Gargarism* warmed, wash the Patient's Mouth

very often. The Holes must also be washed and cleaned with the following Mixture, three times a Day, for the Mucilages are here too weak, and signify little.

An excellent Mixture.

℞ *Aqu. Benedict. rubr.* ℥ij. *Tinct. Lacce* ℥iss. *Decoct. Cort. Granatorum cum. Vin.* ℥j. *Syr. Papav. errat. Mell. Rosar. ana* ℥vi. *misce fiat Gargar.*

To this precious Mixture, if you find it necessary, add a little more of the *Allum* and *Aq. Bened. rubr.* which is thus prescribed.

The famous Red Gargarism.

℞ *Rad. Aristoloch. rotund. & long. ana* ℥ss. *Tormentil.* ℥j. *Flor. Balaustior. cort. Balaust. ana* ℥ij. *Fol. Tabac.* ℥ij. *Sacch. Alum.* ℥ij. *Mercur. Sublimat. alb. Div. Tartar. crudi* ℥j. *Sal. Armon. Divis.* *Misce f. s. art. Gargarismum cum Spir. Vin. ℥iij. digestum.*

This Gargarism is of excellent Use, which you may sometimes mix with *Mel Rosarum*, as you find occasion. And this I think sufficient to be said on this Cure, which I am certain will perform it according to your Desire.

Observation.

In December 1687. I had in Cure one *Sigismund Kerner* a *Clôthier*, about 38 Years of Age, who had many large nasty Ulcers and hollow places on his *Tongue, Gums, Pallate*, and on the inside of his *Cheeks*; which a *Chirurgion* of this place had been above a Quarter of a Year in Curing, but without Success. I gave him presently several Purges to cleanse his Body and purifie his Blood, and then used the Mixture made with the *Aq. Benedict. Rubr.* upon which they began to grow very Well, and in a Month's time seemed to be perfectly Cured, and the Patient returned to the Management of his Affairs. But about a Quarter of a Year after, he came to me again; for *New ones* began to appear, from whence I concluded there must be something more than ordinary in the Case, and therefore prescribed him the Use of the *Red Gargarism*, which completed the Cure in less than three Weeks time.

CHAP.

very
X

CHAP. XXVIII.

Of Pains in the Teeth and Gums, and several other Affects of those Parts.

THE Teeth and Gums are subject to many Diseases, Pains, and other Inconveniencies, of all which I shall forbear discoursing here in particular; but confine my self to such only as are most frequent among us; such as *Ulcers, Rottenness, Pain, the Scurvy, Blackness,* and the like, which occur in every Day's Practice, and occasion great Trouble. Upon a small Distillation of Rheum and other Accidents, as Heats and Colds, may easily follow an *Alteration* which breeds *Ulcers* in the *Gums*, for they being *Glandulous* and *Spungy*, and containing abundance of *Ductus Salivales, Arteries, Veins,* and other Vessels, and are only covered with a very thin and tender Skin, but very apt to contain several sorts of Moisture, and cause *Ulcerations*, in those that are inclinable to *Rheums*, and such as are of a *sanguine* Complexion. It begins with a small Swelling, accompanied with Heat and Pain, which afterwards increases and grows into an *Ulcer*. The first *Intention* is to assuage the Pain, bring it to *Suppuration*, and then open it, which is the surest way; for when the Pain ceases, the *Ulcer* may be easily cleansed and healed; unless there be a *Carios* on the *Jaw-bone* or *Teeth*, the *Scurvy*, a fleshy *Excrescence*, or perhaps a *Fistula*, for then you must diligently enquire into the Cause, and having found it, proceed to Cleanse the *Jaw-bone* from its *Blackness*, pull out *Teeth* if there be occasion; yea, proceed to *Incision* and *Burning* if it will not be otherwise remedied; for fear it should break out again. I have already treated of *Excrescences* in the *Eleventh Chapter*, and how they often grow *cancerous* if not timely prevented; and now design to discourse of *Fistula's* in the *Jaw-bones*, and of *Ulcers*, which resist the ordinary Methods of Cure, being continually full of Moisture, and must be cured in the following Manner. First squeeze out the *Ulcerated Matter* very well, and then gargle or wash the Mouth with one of the *Gargarisms* mentioned in the foregoing Chapter, or the following, which is more particularly adapted to this purpose.

℞ *Aqu. Solani flor. Prunell. Plantagin. ana ℥iij. Decoct. rad. China ℥iv. Ungu. ægyptiac. Nitri Antimonial. ana ℥iss. Syr. flor. tunic. Papav. errat. Mel. Rosar. ana ℥iss. m. f. l. Artem Gargar.*

Having washed the Mouth very well with this, then use the following Balm, which works extraordinary Effects in these *Ulcerations*.

℞ *Decoct. Alchimill. & Veron. ana ℥iv. Mell. Persicar. ℥ij. Coque Lento igne continuo agitando & immisce Succ. fol. Tabac. ℥j. Move diligentissime donec nimirum omnia exactissime fuerint mixta, remove ab igne, adde Mell. Rosar. ℥vi. Pulv. Myrrh. ℥ij. Aloes ℥j. Sacchar. Saturni ℥iss. Spirit. Sal. Armon. ℥iss. rob. Sambuc. ℥j. misce fiat dilig. ad Balsam. form.*

If

Cause of Rot-
ten Teeth.

If the Teeth are hollow and the Gums rotten, such *Ulcers* may easily encrease, by reason some part of our *chewed* Victuals is apt to settle between the Gums, the Teeth, and the Parts thereabouts, being all moist and spongy, and if the Mouth is not washed very clean, it rots and putrifies round about; for the saltish Savour and Acrimony which is concealed in our *Viands*, in time takes hold of our *Teeth* and *Gums*, and causes a *Rottenness* and *Decay* of those Parts. Inwardly it proceeds from a *corrosive*, *saltish*, *Scorbutick* Blood, which by its corroding Quality, putrifies and decays the Teeth, especially the Gums, as is manifest to our Sight, and by the noysom Stench which attends them: Therefore if the Patient has the *Scurvy*, his Blood foul and polluted, the Chirurgeon should first procure his Body to be well cleansed by the Advice of a Learned Physician, if he is in a Place where one may be had; if not, he must do it himself; for external Applications without internal Medicines, will signifie very little, and the stronger the Disease is, the more Diligence must be used; I will therefore furnish you with a *Gargarism* and a *Balsam*, which will certainly do you great Service in all these deplorable Cases.

The Cure.

℞ Decoct. fol. *Salvia* & *Nicotianæ* c. vin. ana ℥vij. Tinctura *Laccæ* ℥iv. *Caryophyllor.* ℥j. *Myrrh.* ℥iſs. *Syr. flor. tunic.* Mell. *Rosar.* ana ℥iij. misce fiat Gargar. detur in *Vitr.*

With this you must wash the Gums very well, and then anoint them with the following Balsam.

℞ Decoct. fol. *Nicotian.* & *Aristol. long.* cum *Vino* ℥vij. rob. *Sambuci* Mell. *Rosar.* ℥iſs. *Ung. Purpur.* W. ℥vi. *Myrrh. in Spir. vin. solut* ℥ſs. Mell. *Keron.* ℥iij. misce & coque ad consumptionem humiditatis; deinde admisce *Caryophyllor.* ℥iſs. *Sarcocoll.* ℥ij. pulv. rad. *Pyrethr.* ℥iſs. *Succ. Inspissat. Hyoscyam* ℥ſs. Laud. *Opiat.* *Sacchar. Saturn.* ana ℥j. m. f. Balsam. s. a.

Tho' this Balsam is something troublesome to make, yet you will think your Pains well bestowed when you come to use it; for it's very effectual in its Operation, and you will scarce find in the whole Republick of Medicines, any thing that more powerfully resists *Furesaction*, and heals the Gums to a Miracle. However I will accommodate you with one more easie to be made and very proper, which I always made use of in the Camp.

℞ Rob. *Sambuc. inspiss.* ℥iſs. Balsam. *Peruvian.* ℥ſs. *Essent. Myrrh.* cum *Kino. parat.* ℥v. misce fiat super ignem ad formam Balsam.

This is to be used like the former.

The *Tooth-ach* is certainly a very great Torment to Mankind, and that the Remedies are so many, are not to be wondered at; among which number, let them be what they will, every one thinks his own the Best, the Safest and Surest; and let the Pain proceed from what Cause soever, they will make use of any thing. This painful Distemper does not only make the *Head* and other Parts share in its Misery, but even the

the *Soul* it self is moved with Compassion, as is testified by daily experience.

This Malady, according to the common Notion, proceeds from a great Defluxion of ill and malignant Humours (except in young Children, where the Pain is occasioned by breeding of Teeth) which pricks the *Nerves* and *Vessels* so long, till it raises a great Pain and Inflammation; besides which, I confidently affirm, That frequent *Picking the Teeth*, especially if the *Tooth-Pick* is made of Iron, Silver, or other Kind of Metal, is a great Cause of this Disease; for it takes away the Smoothness of the Teeth, makes them hollow, apt to lodge Corruption, and so spoils the *Flesh* and *Fibres*, that the *Lympha* cannot pass through its Vessels as it ought to do, but stagnates and grows sharp, sour and bitter; and by its corroding Quality pierces the small and tender *Fibres* of the *Smews* and *Membranes*, till they cause an Inflammation and intolerable Pain. There are also several other Causes, as great *Colds*, and an ill Habit of Body. The Medicines ought to be so ordered, as to temper the *Acrimony*, and meliorate the *stagnated* Humours, as the best and surest way to ease the excessive Pains. *L. Juncken* has given us the Prescription of an Excellent Water to ease Pains in the Teeth, which I have often tried with good Success, and is made as followeth:

The common Notion of the Cause of the Tooth-ach.

℞ *Rad. Pyrethri Cort. Rad. Mandragor. ana* ʒss. *Fol. Nicotian. Sabinae Persicar. ana* Mss. *Cubeb. ʒvj. Camphor. ʒj. misce scind.*
 & cont. gr. m. Boil these Ingredients in half White Wine, and half Water, but not the *Camphire*, for that must be dissolved in *Spirit of Wine*, and mixed with the Decoction when it's almost cold, and then you have done.

L. Juncken's Water for the Tooth-ach.

Some make a Tincture by infusing these *Species* in strong *Brandy*, and use it for the *Tooth-ach*. My own Water for this Distemper, which has always done me great Service, and seldom or never failed in this Case, is made as followeth:

℞ *Rasur. lign. Guaiac. Rad. Chinæ ana* ʒj. *Herb. Nicotian. Mjss. Rad. Pyrethri ʒij. Caryophill. sem. Hyosciami ana* ʒjss. c. s. q. *Aq. fontan. coq. in Colat. dissolv. Ess. Anodyn. ʒj. misce servetur ad usum.*

This Incomparable Water being taken warm into the Mouth, and held on that side the Mouth where the Pain is, takes it away in a short time; but if the Patient be in *hast*, and the Pain extraordinary, Drop Two or Three Drops of *Ol. Origani distillar.* into a little Cotton, put it into the Hollow Tooth, and the Pain will vanish immediately. If the Teeth are very hollow, it would be requisite to fill them up with the following Pills, which are the best I have seen of that Kind.

℞ *Extract. Opij & Savinae ana* ʒij *Ol. Caryophill. ʒij. Buxi, Origani ana gutt. xv. m. f. a. & form. Pastilla, vel Pill. parvæ.*

And if this does not please you, take the following.

Y

℞ Chal-

℞ *Chalcitid. Massæ Pillul. Ruff. ana ℥ij. incorporentur Spirit. Vini, & adduntur Opii correcti, Ol. Buxi ana ℥j. Tinctura Odontalgica Wedelij ℥ij. m. f. Pill.* The Famous Tincture of Dr. Wedelius is prepared *ex Ligno Sancto, Rad. Pyrethri & Caryophyllis c. s. q. s. Spirit. Vini.*

Dr. *Dolæus* in his *Encyclop. Chirurg. Rationalis, Lib. 1. Cap. 22. Pag. 540.* recommends in great and inveterate Pains in the Teeth, the following Balsam.

℞ *Rasur. Lign. Sanct. ℥iij. Sem. Staphid. Agriæ, Rad. Pyrethri, Sandal. Citrin. ana ℥ij. Zinziberis, Piper. Caryophyll. ana ℥ss. Sem. Origani ℥ij. Fol. Serpil. Salviæ, Nicotian. ana Mss. Opii pur. ℥ss. Camphor ℥ss. misceantur & c. s. q. Spirit. Vini distillentur in Cucurbit. s. a.*

This Balsam is to be applied to the Hollow Tooth and the Gums; and in the same manner may be used the following Balsam of *Dolæus*, which I have often used, and always keep it by me in readiness upon all Occasions.

Dolæus's Balsam for the Tooth-ach.

℞ *Laudan. Opiat. ℥j. Ol. Camphor. Ol. Caryophyllor. ana gutt. v. Buxti gutt. iij. misce fiat Balsamus.*

Several Learned Mens Medicines.

Now tho' in all reason I may be thought to have given Medicines enough already for the Cure of the *Tooth-ach*, yet because some help this, and others that, and that the Chirurgeon having greater Plenty, may chuse what he thinks most proper; I will accommodate him with many other Remedies Approved and Practised by divers Learned Men in several Countries.

Dr. *Herclius's* Pills for the Cure of this Disease, are compounded *ex Sem. Apij Hyosciami & Opii, cum s. q. Syr. Papav. errat. mixt;* which being put into the hollow Tooth, has given ease to abundance of People.

Dr. *Wedelius* and Dr. *Schrock* very much commend a Water prepared of good *Mosebus*, in which wet a little Cotton, and put it into the Ear on the same side where the Pain is.

Dr. *Bartholinus* makes an Unguent of the Feet of Green Frogs and Opium, of which he puts a little into the hollow Teeth, or anoints the Gums with it, and thinks he can never say enough in its Praise.

Dr. *Nuck* made use of *Hungary Water*, with some Spirit of *Vitriol*, and the *Arthritick Balsam*.

Dr. *Silvius* prescribes an Excellent Water, which he directs to be applied to the Temples. ℞ *Gum. Caran. Elemi, Tacamahac. Massich. ana ℥ijss. Laud. ℥ij. Bol. Armenæ, Opii puriss. ana ℥jss. Camphor. ℥j. cum s. q. Cera & Terebinth. m. f. Emplastr. form.*

Dr. *Blanckard* in his *Praxis* saies, That in violent Teeth-aches, he had cured several Patients almost in half a Minute's Time, only by putting into the hollow Tooth a little Cotton dipped in *Spir. Vitriol. rectificat.*

Monſieur de Fournay the French King's Chirurgion in Paris, gives a great Commendation of the following *Odontalgick Mixture*. ℞ *Acet. Vini diſtillat. Spirit. Vini ana ʒij. Camphor. Laud. Opiat. ana ʒij. Eff. Sem. Staphid. agr. ʒij. m. f. mixtura.* Some of this muſt be put into the Tooth, and applied warm to the Place affected.

Mr. Lardreau de Varenne, Chirurgion to the Duke of Orleans, ſaies, *Spirit. Sulphuris & Spirit. Terebinth. anaticas partes, miſce*: Being put into the hollow Tooth which cauſes the Pain, and a little dropt into Cotton and put into the Ear on the ſame ſide, will aſſwage the Pain immediately.

Mr. de Landes Baugraud, a Famous Chirurgion at St. Malo in France, recommends *Ol. Vitriol. reſtif. Ol. Lign. Heraclei, Spirit. Terebinth. mixt.* and applied to the Tooth with Cotton.

Dr. Nathanael Sfortia adviſes to uſe the following Pills, which take away the Tooth-ach preſently. ℞ *Opij Thebaic. gr. xv. Spec. Diamb. gr. x. Piperis gr. v. Camph. gr. iv. cum ſ. q. Ol. Caryophill. & Lign. Buxti fiat Pill. Maſſ.* of which one Pill is to be put into the hollow Tooth.

Dr. Muraltus wonderfully commends the following Pills: ℞ *Sem. Apii ʒs. Extr. Opij, Sem. Hyoſciami, ana ʒij. cum Vino Albo q. ſ. fiat Maſſa, ex qua conſciantur Pillulæ in pici formam,* which muſt be applied to the Tooth.

Dr. Muys praiſes the following Water to chafe the Gums with. ℞ *Tinctur. Gumm. Laccaæ, ʒj. Spirit. Cochlear. ʒij. Ol. Tartar. per deliquium gutt. xij.* This I have tried my ſelf, and it performed what was deſired.

Dr. Ettmuller highly commends this Plafter applied to the Temples. ℞ *Gumm. Tacamabac. Caram. ana cum ſ. q. Balsam Peruvian. malaxetur.*

Paracelſus, Horſtius, and Panſa give large Commendations of the *Decoſt. Perſicar.* made of half Water, half Wine, taken warm into the Mouth, and held on the ſide where the Pain is: But Dr. Michel, Profeſſor at Lipzig, oppoſes it; and inſtead of it, adviſeth the Uſe of *Fol. Pulegij*, moiſtened a little, and applied to the pained Part. But it's time to have done with this Diſeaſe, and its Variety of Remedies; eſpecially ſince at the time of Writing this, I have been grievouſly afflicted with the *Tooth-ach*, about Twelve Days together, in which nothing would do me any good, tho' I tried many things, till I dropped a little *Ol. Origani diſtillat.* into Cotton, and put it into the hollow Tooth, which preſently gave me Eaſe.

In the next place the Scurvy, Blackneſs, and ſtony Subſtances about the Teeth, are to be conſidered. For the Scurvy you may find Plenty of Remedies, among the Medicines appropriated to the Rottenneſs of the Teeth and Gums, and thoſe very good ones. For *Black and Foul Teeth*, and to remove the *Tartarous* or *Stony* Subſtances from the Teeth, I will preſent you with two Excellent *Powders* celebrated for their extraordinary Virtues: The firſt of which is thus compounded:

℞ *Pulv. Lap. Pumic. calcin. Off. Sepiæ, Lap. Silic. ppt. ana ʒjss. Crystal. Tartari ʒj. Corall. rubr. ppt. Bol. Armen. ppt. ana ʒij. Moſch. Zibeth. ana gr. iij. m. f. Pulv. Dentifricius.*

The

The *Stony* or *Gravelly* Matter about the Teeth, and other Noisome Things that are settled about and between them, must be first *Scaled* off with a proper Instrument, and then diligently rub the Teeth with this Powder Morning and Evening. The following Powder is much of the same Nature as the former.

℞ Rad. Ir. Flor. Lap. Silic. ppt. ana ℥j. Sangu. Draconis opt. ana ℥vj. Caryophill. Cubeb. ana ℥j. Corall. Rubr. & albi ppt. ana ℥ij. Sem. Citr. Dijs. Tartar. albiss. ℥jss. Sal Tabaci ℥ij. Mosch. gr. iv. Balsam. Apoplect. ℔s. m. f. Pulv. subtilissimus, qua Dentes confricentur.

When with the use of these Powders you have made the Teeth perfectly clean and white, to keep them so, you need only use the Powder of Burnt Bread, mixed with a little *Cremor Tartari*.

C H A P. XXIX.

Apoftemata, and all Sorts of Purulent Tumours in the Face.

Purulent Tumours on the Face.

IT will be necessary in this place to discourse of small Tumours, Ulcers, and Prominences, which containing Matter in them, not only disfigure and spoil the Face, but cause Inflammations, and prejudice the Nose, Eyes and Mouth; yea, and if they abound with Moisture, diffuse themselves over the whole Face; and tho' at their first Appearance these *Purulent Tumours* are neglected because they are small, yet Experience reaches us, That if they contain putrified Matter, and happen near the Mouth, Nose, Ears, or in the Corners of the Eyes, or Eye-lids, they will corrode and gnaw the Parts, spread further, and eat deeper into the Flesh, and at length grow *Malignant*, and cause Cavities, and Callous filthy Edges.

Their Causes.

The Cause of these *Tumours* generally proceed from a *Stagnation* of the circulating Juices, *Chyle* and *Blood*, and sometimes from an *Alteration* or *Hurt*; and happening in the Face, grow sooner *Malignant* there, than in any other Part of the Body; because that Part is very *Spongy* and *Porous*, and consequently apter to promote *Putrification*; which is Reason enough for the Chirurgeon to use his early Endeavours, to prevent those malicious Enemies to the Beauty of the Face from spreading further.

There is no great Difficulty in curing them when they first appear, if you diligently observe from whence they proceed; whether they are of the same *Colour* with the Skin; where they are seated; if they grow hard, painful, itching, and lie very deep; for if all these Accidents occur, you

you will have reason to suspect they are Malignant, and consequently will resist all ordinary Remedies, and grow worse and worse, especially if they grow upon the Nose near the Eyes or Mouth: But if on the contrary, these Purulent Tumours rise something high in the middle, are of a Red Colour, and in other Circumstances look like other ordinary Prominences and Pimples, you have less to fear, common Medicines will effect your Design.

Observe also the Nature and Quality of the Matter contained in these Tumours, whether it is Malignant, Corroding, Stinking, Thick or Thin, and of what Colour; for the Knowledge of these things will direct you in the Cure, because if the Matter does not Stink, and is Thick and White, it's a hopeful Indication; but on the contrary, if it is Thin, Stinks, and the Edges of the Ulcer are foul and corrupted, then it is malignant, to which the three following Medicines are particularly appropriated, and seldom fail of Success; but if they should, and the Diet-Drink also cannot prevail, you must raise a Salivation, which will certainly perform it.

℞ Ol. Rosar. ℥ss. Vin. Malvat. ℔j. Lytharg. Ceruss. ana ℥vj. coque ad consumptionem humiditatis Vini, dein admisce Cerae ℔ss. Gumm. Animæ, Ammon. depur. ana ℥ijss. Succin. ppt. Mastich. ana ℥ij. Rad. Aristol. long. ℥j. Spermat. Ceti, Camphor. ana ℥ss. m. f. Emplastr. f. a.

This Plaster is of admirable Vertue, if applied to the Tumours and Ulcers as large as is convenient: I commonly call it *Emplastrum Divinum*. The following Balsam may be put into the Ulcers with Cotton.

℞ Balsam. Vulnerar. virid. mei ℥ijss. Copaibæ ℥j. Sulphur. Succin. ℥ss. Pulv. Croc. ℔j. Vitell. unius Ovi, Terebinth. Cypr. q. s. f. Balsam.

If you use this Balsam a Fortnight, and your Patient receives no Benefit by it, use the following Water or Mixture instead of it.

℞ Aqu. Alum. Magistralis Fallopij ℥ij. Rosar. Plant. ana ℥ijss. Lixiv. è Calce viva ℥iv. Sacchar. Saturni, Myrrh. ana ℥jss. Mercur. præcipit. alb. ℔iv. Camphor. ℥ss. m. f. mixtur. f. art. & digeretur per 8 dies in loco calido.

That nothing may be wanting to perfect a Cure, I will further oblige you with my *Balsamus vulnerarius viridis*, which I have mentioned before, and also with the *Aqua Mercurialis Fallopii*.

℞ Succ. Alchimil. Beton. Veron. Aristoloch. long. ana ℥ijss. Hyperic. Sanicul. ana ℥ij. Ol. Amygdal. medullæ Cervi ana ℥iv. coquantur omnia simul super ignem lentum usque ad consumptionem humiditatis, postea adde Balsam. Sulphuris, Terebinth. ana ℥jss. Peruvian. ℥ss. Mastich. Myrrh. ana ℥ij. Aloes ℥jss. Flor. Aëris q. s. misce f. Balsamus f. artem.

Their Cures.

The Author's Emplast. Divinum.

The Author's Green Vulnerary Balsam.

The Famous *Aqua Mercurialis*, vel *Aluminis magistralis* of *Fallopianus*, is as followeth.

Fallopian's Mercurial Alum Water.

℞ Aqua Plantag. Rosar. ana Lxxij. Alum. Rocha. Argent. viv. sublimat. ana ℥ij. misceantur in mortario vitreo, & coquantur in Phiala capaci bene occlusa calore Balnei horas tres, servetur pro usu.

Historical Observation.

In December 1690. I had a Patient in the Hospital of *St. Job*, named *N. Otto*, about Forty five years of Age, who had several such kind of Ulcers in his Face, but chiefly on the Forehead and Nose. At first I only used my own *Aqu. Serpio*, and *Dr. Bontekoe's Balsam*; upon which they all grew quickly dry, and in Fourteen Days time were all healed, and continued above a Quarter of a Year; but then they returned more violently than before, and possessed other places in the Face: Now perceiving their Malignity, besides other Medicines, I gave him some of my *Mercurial Pills*, which put him into a Flux; after which he was well again for three Quarters of a Year; but after that they returned again; whereupon I raised a *Salivation* by anointing his Joints with a *Mercurial Unguent*, which perfectly cured him, and so he continues to this Day. I only mention this Case, that none might rely upon *Turpetbum minerale*, or any other inward Adhibition of *Mercury*; for tho' they seem to do good for a time, the Cure is seldom *Certain* or *Durable*; whereas a *Salivation* raised by *Mercurial Unctions*, effectually answers all Intents and Purposes.

The Author's English Discourse.

This Plaster is of admirable Virtue: it is commonly call'd *Empystrum Utriculatum*. The following Balsam may be put into the Ulcers with Cotton.

℞ Balsam. Valerian. viv. mei. ℥ij. Copia. ℥. Saliva. Sarc.
℞ Balsam. Turp. min. ℥ij. Turp. min. ℥. Turp. min. ℥. Turp. min. ℥.

If you use the Balsam a Fortnight, and your Patient receive no Benefit by it, use the following Water or Mixture instead of it.

℞ Aqua Magistralis Fallopij ℥ij. Rosar. ℥ij. Plantag. ℥ij. Turp. min. ℥ij. Turp. min. ℥ij. Turp. min. ℥ij. Turp. min. ℥ij.

This nothing may be wanting to perfect a Cure, I will further oblige you with my *Balsam Valerianae vivae*, which I have mentioned before, and also with the *Aqua Mercurialis Fallopij*.

The Author's English Discourse.

CHAP. I
The Author's English Discourse.

for separation: But that the Glands about the Neck grow sooner hard than in any other Parts, they adhere to the Neck being bare, else they in the Veins, &c. CHAP. XXX.

Scrophulae, or knotty hard Tumours of the Salivatory Glands, commonly called in England, *The King's Evil*, and why so difficult to be cured.

IN this Chapter I am resolv'd to treat very largely, and with the utmost Exactness, of those malignant, obdurate, and almost incurable *Scrophulae*, or Tumours of the Salivatory Glands, which happen on the Neck near the Ears; for in the whole Art of Chirurgery there is nothing more troublesome and vexatious to the Operator; insomuch that after all the Care and Pains that can possibly be employed, and the Application of the most approved Medicines, yet it's a very great Rarity if he procures any Benefit to his Patient. When they first appear, it's true, something may be done; but when they are grown *Inveterate*, and have acquired a *Corrosive* Quality, they are commonly *Incurable*, and the Chirurgeon waists his Time and Medicines to no purpose in the World; because the Matter they contain being *Grassy*, *Viscous* and *Glutinous*, and attended with an *Indurated Lympha*, it resists all Endeavours to cure it; and when Men attempt New Methods to suppress it, they are commonly disappointed; as Monsieur *Lardreau de Varenne*, tells us of another French Chirurgeon named *Frantz Bouchard*, who cut out one of these Tumours, but so unfortunately, that the Patient died four Days after.

These *Scrophulae*, as I have said already, are high and hard Tumours on the Salivatory Glands caused by the ill Constitution of the *Lympha*, which by some Accident or other is grown so thick and Glutinous that it cannot pass through the Glands, as it ought to do, but settles there, causes an Obstruction, and being stagnated grows soure, and stagnates and thickens the other Juices which take their Course that way, by whose Impulses they increase in Bigness. To which I must add, That in Patients troubled with this Disease, the *Mesentery Glands* are commonly in a Miserable and Turned Condition. Sometimes in these Patients, not only the Salivatory Glands are swelled and disordered, but it extends to the Shoulders and Arms, and takes Possession of the Glands thereabouts; as there is more or less of the thickned and stagnated *Lympha* to cause Obstructions in the Glandules. This I think a rational Account of the Cause of this Disease; however, I will give you the several Opinions of the *Galenists*, *Helmontists*, *Willisianists*, *Sylvianists*, and lastly the *Cartesianists*, about the *Scrophulae*, and leave the Ingenious to judge who comes nearest to the Truth, that he may direct his Cure accordingly.

The *Galenists* and the Multitude that follow them, say, This Disease proceeds from a Super-abundance of the *Succus Nutritivus*, caused by a plentiful feeding upon slimy Aliments in those that are of a *Rhlegmatick* Constitution, and a Weak Digestion, which causing abundance of *Viscous* and *Raw* Humours to be carried to those weak Parts by the Digestive Faculty, grow so hard, that this Cold and Viscous Matter is rendred unfit

Opinion

Kings Evil

Dr. Will.

Opinion

Opinion

What it is.

Opinion

The Opinions of divers Authors. Galen.

for

for Suppuration: But that the Glands about the Neck grow sooner hard there than in any other Parts, they ascribe to the Neck being bare, especially in the Female Sex, which makes the Cold Air more easily drive the Matter to that part and condense it there.

*Helmont's
Opinion.*

The Learned and Ingenious *Helmont*, who never fails to attribute every thing to his Fanciful *Archæus*, saies, The *Scrophulæ* proceed from an Erroneous Imagination of the *Archæus*, which out of Melancholy occasion'd by *Want*, at once spoiled the *Digestive* Faculty in the *Stomach*, brought it into Disorder, and by imprinting on it self the Image of such knotted Tumours, they really followed upon any surprizing Sadness or Melancholy.

Dr. Willis.

Dr. Willis ascribes the Cause of this Distemper to the durable Continuance of the Thick and Glutinous *Saccus Nervorum*, of the *Salivatory Glands*.

Sylvius.

Sylvius is of Opinion, That the *Scrophulæ* proceed from a Coagulated *Pituita* or *Flegm*, and the Blood it self in the Glandules of the Neck, and saies, That those *Juices* by reason of their *Acidity*, and the Obstruction they occasion in the small *Veins* and *Vessels*, could neither move backward or forward, but still growing thicker by the *Evaporation* of the more subtile Particles, rendred the Glandules so stiff and hard, that it was impossible to pass through them.

*Cartesius's
Opinion.*

The *Cartesianists* say, These Tumours spring from a Glutinous and Viscous Humour or *Lympha*, which by reason of its Hooky and Angled Particles, is so closely intangled, that it can hardly be separated, nor the thickened *Lympha* pass through its proper *Vessels*, but remaining there, increased by the small Arteries which conveyed thither out of the common Mass, more Particles fit to encrease it, and so grew continually bigger, more extended, and at last produced the Disease we call *Scrophulæ*, and in *English*, the *King's Evil*. Hence may be seen the different Opinions of the Learned in this Case; tho' they may be easily reconciled and agreed in this, That the *Scrophulæ* is nothing else but a *Crafs*, *Viscous* and very *Acid* *Lympha*, which cannot pass through its own Channels, but stopping in the Glands, by degrees Swells and Indurates.

*Dolæus's
Opinion.*

Dolæus is of Opinion, That the *Scrophulæ* which proceed from a malignant, and sometimes from a Corrosive Acidity, take their Original in *primis Vitiis*, from the *Chylus*, proceeding from an ill Fermentation, sour, cause Obstructions in the *Mesentery* Glands, and at length totally Indurates them. Hence it necessarily follows, that the *Lympha* being spoiled in its first Passages, can produce none that is good in any other place, especially in the Glands about the Neck.

Now I should proceed to the Cure of this Disease, and insert such penetrating and effective Medicines as might reduce the Tumours into good Order again; but first I will briefly shew what Method of Cure is observed and prescribed by the afore-mentioned Authors. The *Galenists* endeavour to discuss the Peccant Matter by such Medicines as rarifie the *Pituitous* Humour, and then consume the rest with *Specificks*, though without Grounds or Reason for such a Process. Externally they commonly at first apply *Emollient*, *Resolving* and *Discussing* Medicines, and if those will not succeed, then *Suppuratives*, and generally to very little Purpose. *Paracelsus* wills the Cure to begin with *Corrosives* and *Cauticks*, and after-

wards

wards applying good Consolidating Medicines; for which purpose the mightily commends the following Cerate.

℞ Emplastr. Diachyl. simpl. ℥iv. Opopanac. depur. ℥vj. Ol. Tartar. Fœtid. q. s. m. f. Cerat. form.

Paracelsus's Cerate.

Helmont also praises at an extraordinary Rate, a Specifick Powder ex Radice Gladioli & Digitalis, which, he saies, ought to be taken Inwardly, and also outwardly applied Plaster-wise, mixed with Gumm. Ammoniac. & Bdellium. Willis begins the Cure by Resolving the Coagulated and Thickened Liquors in the Glands; then Evacuates with Catharticks and Diureticks, and at last endeavours to hinder it from encreasing, and prevent it from Gathering and Coagulating; but if this Method would not succeed, he acts like the Galenists, and runs at last to Emollient Plasters and Cataplasms, to bring the Tumours, if possible, to Suppuration. Sylvius begins by resolving the Juices, which by a great Acidity are Coagulated, endeavouring to bring them again into their proper Vessels, and to carry off the rest by Stool and Urine. Outwardly he anoints the Tumour with that Unguentum Martiatum which is mixed with Oleum Philosophorum, and applies a Resolving Plaster over it; and if that has no Success, he goes to Suppuration, and proceeds with the Cure as in other Ulcers. The Cartesianists use all means to dissolve the Viscous and Glutinous Particles from the Angular, and bring them from their Repose into Motion. To this end they chafe the Tumours with warm Napkins, and use divers Sorts of Fomentations and Internal Medicines, to Attenuate and dissolve the Viscous and Glutinous Matter; and prevent their further Coagulation.

By these Methods you may perceive what is fit to be done in the Cure of a Scrophulus, which must be enterprized by Medicines that have Power to Temper and Correct the Corrosive Acid Matter, and open Obstructions occasioned by it. The Salia Volatilia are very necessary in this Case, and sometimes perform their Work to Admiration. Now I shall proceed to give you some Specificks which have been used with great Benefit, and begin with Monsieur Petit's admirable Plaster to disperse those Scrophulae, which is thus prepared.

℞ Gumm. Ammon. Opopan. Galban. ana in Vino Isolut. ℥ij. Spermat. Ceti ℥jss. Sal. volat. C. C. Cinerum Fagi ana ℥j. Magnetis Arsenicalis ℥v. Croci opt. ℥ij. Mercur. vivi c. s. q. Terebinth. extinct. ℥ijss. Ol. Terra ℥vj. Ol. Tartari fœtid. ℥ij. Ceræ ℥ij. Terebinth. q. s. m. f. Emplastr. Spread it upon Leather, and apply it to the Tumour.

Monf. Petit's Plaster.

The following Plaster is my own, which I have used very often in the Beginning of a Scrophulus with very great Benefit.

℞ Emplastr. Divin. Atraphan. ℥vj. de Hyoscycamo Diaphor. Mynf. de Ran. cum Mercur. Scrophular. Vigon. ana ℥ij. Sal. Armoniaci puriss. ℥ij. Gumm. Ammon. Opopan. ana ℥jss. Emplastra liquefacta, immisce etiam superiora Gummata; & paulo post Sal. Armon. tandem adde Calcis vivæ ℥j. Sal. Ciner. clav. ℥v. malax. c. s. q. Ol. Philosophor. & Unguent. Arthrit. f. L. a. Emplastrum.

Dr. Orewkney's Plaster.

The *Emplastr. divin. Atraphan.* abovementioned, is made in this manner.

Atraphanus's
Divine Plester.

℞ *Ol. Olivar.* ℥ij. *Vini alb. gener.* ℥ij. *coque ad consumptionem humiditatis vini dein. admisce, Lythargyr.* ℥vj. *omnibus bene mixtis & paululum refrigeratis adde agitando, Ceræ lique fact.* ℥ss. *Cerussa* ℥ij. *Gumm. Animæ* ℥iiss. *Spermat. Ceti* ℥ss. *Camphor.* ℥ij. *m. f. Emp.*

Next follows Dr. *Muraltus's* Specifick for this Disease; I never used it, but have heard it much commended by Persons of great Ingenuity.

Muraltus's
Specifick.

℞ *Gumm. Tragacanth.* ℥j. *Succ. rad. Bryon.* ℥ss. *dissolve & adde Farin. Fabar.* ℥ij. *Mercurii Subt.* ℥ij. *misce fiat Sp. ad Mass.*

Take a small Peice of this Mass and lay it right upon the middle of each *Scrophulus*, tying it fast that it cannot move, let it lie so three Days together, and if no Alteration follows, it must be repeated as long as you think convenient. Dr. *Tralles* lately communicated the following Plaster and Oil to me, which was given him by Dr. *Totzi*, the *Pope's* Physician in *Rome*. The Oil is to be applied to the *Scrophula*, after it has been well chafed with warm Napkins, and then the Plaster over that again.

Dr. Totzi, the
Popes Physi-
an's, Oil and
Plaster,

℞ *Ol. Amygdalor. dulc.* ℥j. *Philosophor.* ℥ij. *Chamomil. Anisi ana* ℥iiss. *Spirit. Salis Armon. Elix. vitæ ana* ℥j. *misce serv. prou su.*

℞ *Empl. de Hyoscyam. de Sulphur. Scrophular. Sylvii ana* ℥vj. *Ol. Cort. Betulæ* ℥iiss. *Picis Naval. Ceræ ana* ℥iv. *Sulphur. citrin. Mastich. Succin. ana* ℥iiss. *Sal. Armon. Antimon. Crud. ana* ℥j. *Malax. cum s. q. Ol. Philosophor. & Tartar. sætid. m. f. ad Empl. formam.*

If the Tumours continue after these Applications, it will be convenient to apply the following Cataplasim of *Dolæus*, which rarifies the stagnated Liquors in the Glands, and brings them into Motion. It must be applied warm, and repeated every three Hours.

Dolæus's Cata-
plasm.

℞ *Fol. Scordii, Absynth. Ruta, Cicutæ ana* Mj. *Stercor. columbinæ* ℥vj. *Sal. Tartari, Colocinth. ana* ℥vj. *Herb. Salviæ* Mj. *Sem. Hord.* ℥v. *Sem. Fœniculi* ℥iiss. *Sal. Armon.* ℥ij. *Extract. Rad. Bryon. Sem. Cumin. ana* ℥ss. *coque c. s. q. fæc. vini ad Cataplasmatis formam.*

The Glands must also be anointed with the following Unguent of Dr. *Overkamp*, which is of admirable Vertues in the Cure of a *Scrophulus*.

Dr. Overkamp's
Ointment.

℞ *Unguent. Dialtheæ* ℥j. *Ol. Succin. Juniper. ana* ℥ss. *Laurin. Philosophor. Spir. Salis Armoniac. ana* ℥iiss. *m. f. dilig. ad Unguent.*

When there is no necessity for the Cataplasim, use only the following Plaster of Dr. *Overkamp*; you may also use the forementioned Ointment, and the Plaster over it.

℞ *Emplastr.*

℞ *Emplastr. melilot. Diachyl. ana* ℥iij. *Gumm. Galban.* ℥ss. *Labdan.* ℥iss. *Dr. Over-*
pulv. Myrrhæ, Aloes ana ℥ss. *Macis, Caryophyl. ana* ℥ij. *Sem. Cu-* *kamp's Plaster:*
min. Rutæ, Salvæ ana ℥j. *Tinctur. Laud.* ℥ss. *Styr. liquid.* ℥ij. *Sal.*
Volat. C. C. ℥vj. *Ol. Mastich. distil.* ℥iij. *misce f. c. s. q. ad Empl.*
form.

I have added some more *Melilot* and *Diachylon. Simpl.* to this Composition, as also *Wax*, to bring it into the Consistence of a Plaster, which was too little according to *Overkamp's* and *Dolaus's* Prescription. If any thing else is wanting, you will find it in the following Observations.

In *February 1694.* I had a great Merchant in Cure, who had a *Scrophu-* *3. Historical*
lus Tumour below his Right-Ear, about the Bigness of a Wall-Nut; the *Observations*
 Gentleman was otherwise in Health, and without any Pain in the Tumour. *Dr. Tralles* and *Dr. Paulus* used several internal Medicines to correct the Disorder of the *Lympha.* I used at the same time *Artaphanus's* Plaster mixed with *Ol. Philosophor. Tartar. Fætid. Sem. Cumin.* and applied it warm to the Part affected; but it made no Alteration. At length we resolved to apply the forementioned Plaster alone without any Addition, and up- on the Centre of the Gland apply a Corrosive *ex Argento & Aqua fortis,* with which I made an Orifice about the Bigness of a Farthing, and kept it open Eight Weeks with the following Unguent, till the *materia pec-*
cans, the Tumour and its Hardness was utterly consumed.

℞ *Unguent. digestiv.* ℥iiss. *Ol. Cera* ℥iiss. *Balsam. Peruvian. Ol. Philo-*
sophor. ana ℥iss. *Gumm. Opopan. Pulv. Myrrhæ ana* ℥ij. *Sapon. Vē-*
net. q. s. m. f. Ungu.

This Ointment and the other Applications succeeded so well, that in less than Fourteen Weeks, the Tumour was quite gone, and the Patient continues ever since very well.

A great Lady, then a Widow, and living on the other side the *Oblau,* *History 2.*
 was afflicted with such a like Tumour in the Year 1696. on the Left-side of her Neck, very near the *Wind-Pipe,* whom also I was so happy as to cure perfectly in Five Weeks time, only with *Emplastrum Mynsichti,* which is thus compounded.

℞ *Cera* ℔i. *Picis Naval.* ℥iv. *Colophon.* ℥iij. *Bdellij.* ℥vj. *Gumm. Am-* *Mynsicht's Pla-*
moniac. Opopan. ana ℥iss. *Succin. Citr.* ℥iij. *Sandarac. Mastich. Oli-* *ster.*
zan. ana ℥ss. *Ol. Tart. fætid.* ℥iij. *Ol. è cort. Betulæ, Unguent. Ar-*
tbrit. ana ℥iss. *Terebinth. q. s. m. f. Emp.*

Tho' this Medicine had its desired Effect upon this Lady; yet I dare not aver that it will always perform the like. No, The following Example and our own Experience, will shew the contrary.

A Lady of Quality, about twenty Years of Age, living in *Albrechts* *Observation 3.*
 street in this Town. In the Year 1696. A Year after she was married, and when she was with Child, had a *Scrophulus* on the Right-side of her Neck, which I treated in the following manner, and with all the Diligence in the World. First I applied a Cataplasm to it fourteen Days together,

gether, upon which the Tumour grew a little softer, but continued in the same Bigness. After that I apply'd my own *Scrophulus* Plaster to it twice a Day for a Month together, but without any Benefit. Then I continued the Use of Mr. *Petit's* and Dr. *Totzi's* Plasters; and they also signified nothing. I also applied a Corrosive to the middle of the *Scrophulus* and made an *Orifice* in it, into which I put the forementioned *Unguent*, and kept the Hole open several Weeks, but it availed nothing at all. In short, neither Outward nor Inward Medicines contributed any thing to it that look'd towards a Cure, but all we did was in vain.

CHAP. XXXI.

Impetigines, or Tetter, what they are, and how to cure them.

How they begin.

THIS Loathsome, Filthy Disease, extremely injures and disfigures the Face, especially if it settles on the *Fore head*, *Ears*, and about the *Neck*, as I have often observed in my Practice. At first they appear very inconsiderable, and only *Itch* and *Fret* the Skin, but soon increase and grow worse, and are very difficult and hard to be cured.

Their Causes.

The Causes of this Distemper are Loathsome, *Acrid* and *Acid* Humours under the Skin and in its Glands, proceeding from an ill Constitution of the *Lympha* and its fixed Salt, which affecting the *Pores* of the Skin, cause a dry kind of *Itch* with little *Pimples* and *Scabs*, which breaking thro', at length and by degrees make the Skin all over rough and scabby, by which others may be infected if their Constitutions are that way inclinable, or their Juices out of Order; which is a sufficient *Dehortation* from frequenting the Conversation of Persons so diseased. Several other Causes are assigned as the Original of these *Tetter*s and *Breakings-out*, but I think them not worth mentioning; and therefore will apply my self to the *Cure*, which is more the *Chirurgeons* Business, and what he may easily perform if he is provided with good Medicines.

Their Cure.

The Cure of these *Impetigines* must begin with good Internal Medicines to correct the *Lympha*; and then wash the *Tetter*s two or three times a Day with the following Water, and as soon as that is dried in, anoint with the following *Unguent*, and you will soon see them vanish.

R. Unguent. Rosar. mis. Alabastr. ana ʒiss. Mercur. Dulc. ʒij. Sublim. gr. iv. Ol. Tart. per deliquium, Ol. Sapon. Cera ana ʒj. misce ad Unguent. The Water is thus made.

R. Lixiv. fortissim. e Ciner. vitis & Fraxini ʒij. Aceti vini ʒviij. Liubarz. ʒvj. Antimon. Crud. ʒiss. Alumin. Nitri pur. ana ʒss. coquantur continuo agitando ad consumptionem quart. partis, coletur, & Servatur ad usum. The

The following Water or Mixture I have often used, with great Benefit in such like *Petrigines* and *Tetters*; it is my own, and the particular Water which I use in these Cases.

℞ *Alum. ustri.* ℥ij. *Cerufs.* *Tutiæ ppt.* ana ℥ss. *bol. Alb.* ℥ij. *mercur. Sublimat.* ℥j. *Myrrha, Camphor, and Æiils.* *Aqu. Rosar. Plantag. ana* ℥vj. *Lixiv. Calc. viv.* ℥iv. m. f. *Aq. s. artem.* per. 10 dies, digest. & Calide applicetur.

But if they are very *contumacious*, and will not submit to the ordinary Methods of Cure, you must apply stronger Medicines, and touch them with the following Water.

℞ *Fol. Solar. Chelidon Hyssopi, Salviæ, Ruta, Scordii ana* Mj. *rad. Tormentill.* ℥j. *Cerussæ* ℥iij. coquantur c. *Aqu. Plantag.* & *Aqu. Mell. ana* ℔ij. per Sem. horam, *Colaturæ adde* *mercur. viv. in aqu. fortis dissoluta* ℥ij. *miscæ omn.* & *servetur pro usu.*

If you don't approve of this, I recommend the following instead of it, which I have used many Years with great Success; but you must remember to stir or shake it very well before you apply it, and if you warm it 'twill operate the better.

℞ *Fol. Hyssopi Plantag. Alchimill. Solani, Centaur. min. Hypericon. Scabios. ana* Mj. *Flor. Malvæ maj. Mifs. rad. Tormentill. Aristoloch. long. & Rotund. ana* ℥iij. *Incis. & contus. f. Decoctio s. a. in s. quant. Aquæ Font. exprime, colatur. adde rad. Tormentill. & rad. Aristoloch. rotund. pulv. ana* ℥ss. *postea immisce* *Mercur. viv. in Aq. fort. dissol. ℥ij. fiat s. art. Aquæ ad Impetigenes.*

When the Dislemper is Inveterate, Malignant, and Stubborn, and all other Medicines seem too Weak, I use the following Water.

℞ *Aq. Rosar. Flor. Fabar. ana* ℥vj. *Tutiæ ppt. Lap. Calaminar. ana* ℥ss. *Alum. usti* ℥iij. *Vitriol. alb. Merc. Sublimat. ana* ℥j. *Ol. Sulphuri Æiils. pulv. rad. Gentian. Æiij. miscæ diligenti. & serv. pro usu.*

Now if you please to follow my Advice, let the *Tetters* be as Inveterate and Stubborn as they will, the Medicines I have already incerted will certainly perform the Cure, if they are curable. In the following Historical Observation, you will see what Cures I have performed with those Waters, and also one of several Years standing, that could not be cured.

In February 1690. a young *Gentlewoman*, a Merchant's Wife about *Observations Historical.* Twenty Four Years of Age, was recommended to the Care of Dr. Pauli and my self, who had several Years been troubled with a nasty Breaking-out about her Ears, and had used abundance of Medicines to cure it, but to no purpose in the World. She was otherwise in good Health, complained of no great Aches, but now and then of a Disorder and Pain in

The Author's
Lac. Aureatum.

her Head. Dr. Pauli prepared her Body very well with Internal Medicines, before I used any Outward Applications. I began the Cure with my Golden Milk, because they watered very much. After Four or Five Days I used my abovementioned White-Water ad Impetigines, and towards Night the following Fomentation warm, in which were moistened double Linen Bolsters and applied.

℞ Tutia ppt. Bol. Armen. ana ℥ss. Sacchar. Saturn. ℥ij. Alam. usti ℥iss.
Myrrhæ, Oliban. ana ʒj. Camphor. Div. Aqua Plantagin. Flor. Sambuce, Rosarium ana ℥ij. Camphor. S. Myrrhæ Solv. in paucis Spir. vini m. f. s. a. foment.

These two Remedies I continued some Weeks with good Success; the Sores began to heal, only now and then would break out a little; but at length went all away by Degrees, and in Ten Weeks Time the Gentlewoman was perfectly cured.

A young Countess about Fourteen Years of Age, was also troubled with the like Distemper for several Years, about her Face and Ears, which I treated with the aforesaid Medicines, but to no purpose at all; for they continued as bad as ever. Dr. Tralles being concerned with me in the Cure, and seeing nothing would prevail, we resolved to put her into a Flux, and accordingly she was Salivated by Uncia, which succeeded so well, that she was perfectly cured of this noisome Disease.

When the Distemper is Incurable, Malignant, and Stubborn, and all other Medicines seem too Weak, I use the following Water.

℞ Myrrhæ, Oliban. ana ℥ss. Camphor. Div. Aqua Plantagin. Flor. Sambuce, Rosarium ana ℥ij. Camphor. S. Myrrhæ Solv. in paucis Spir. vini m. f. s. a. foment.

Now if you please to follow my Advice, let the Tetter be as Incurable and Stubborn as they will, the Medicines I have already directed will certainly perform the Cure, if they are curable. In the following Historical Observation, you will see what Cures I have performed with those Waters, and also one of several Years standing, that could not be cured.

Observations
Historical

CHAP. I
I have a young Gentlewoman, a Merchant's Wife, about Twenty four Years of Age, was recommended to the Care of Dr. Pauli, and my self, who had several Years been troubled with a nasty Breaking-out about her Face, and had used abundance of Medicines to cure it, but to no purpose in the World. She was otherwise in good Health, complained of no great Aches, but now and then of a Disorder and Pain in her

and stagnating in one place or other in time produces Warts. They may be easily perceived by their substance, which does not resemble flesh, but the Nerves, and they are so sensible and apt to bleed, and if indifferently treated, cause Inflammation and other ill Accidents. Cardanus says they proceed from a superabundance of

CHAP. XXXII.
Ganglia Verucæ & Tuberculæ, or Warts and Pimples on the Face, from whence they proceed, and how to take them away.

Ganglia are certain kind of Tumours commonly found upon the Joints, which by degrees grow hard, and hinder the regular Motion of the Limbs. Some are firm and immoveable, others may be push'd from one side to the other, and are not painful under the Touch. At first they may be easily cured by proper Medicines; but if they are of long Continuance, they despise the strongest sort of Medicines, and must be cured in another manner, as I shall shew anon. Some are inclosed in their proper Skin or Bag, as I have often observed; but others not, and are only meet Nervous Tumours, of the same Colour with the Skin. We find by Experience, that these Ganglions often proceed from some accidental Hurt or Bruise; sometimes by over straining, by which the Nerves are injured, and causes part of the Succus to congeal under the Skin, which makes a Tumour and Ganglion. We must also allow, that these Ganglions sometimes come without any accidental Hurt; but from an Alteration and Extravasation of the Juices and a stagnated Lympha, which affecting the weak Nerves and Tendinous Parts of the Junctures, settle near those Parts, and growing Glutinous and Viscous, cause a Ganglion, which in time, if the place permits, grows bigger, and acquires a proper Skin or Bag in which it is inclosed. Dr. Munick in his Praxis Chirurgica describes the Cause of these Ganglions to the hurt and Over-strained Tendons, which with their Fibre Motives were turned and brought into Disorder; so that their Liquors which should run through them, and their finest Poruli, settle between those Fibres, and at length by the Increase of those Liquors, which are forced upwards above the Tendons towards the Skin; it grows Viscous, and in Colour and Consistence like the White of an Egg. This gathering of Crass Particles clinging in time together, and the Volatile and subtile Particles evaporating growing In-veterate, and being inclosed in its proper Cist, is called a Ganglion.

Warts are nothing else in all Mankind than a sort of Excrecences, like those that grow about some Trees. Sometimes they happen in the Face, but oftner on the Hands and Feet; and wheresoever they come are Ble-mishes, and very unwelcome Guests to the Female Sex, because they seldom come alone, but spread further and further. Some rise higher out of the Skin, and have but a shallow Root: Others are hardly seen above the Skin, but have very deep broad Roots, and multiply in a shorter time, some are only Prominences, uneven at the top, Ash-coloured and rough, while others are smooth and round, and all differ in their Magnitude and Figure.

They proceed from the Extravasation and Extrusion of the Succus Nutritius, which generates the Nerves, and when some or other of the small Fibre Nervorum are hurt, some of the Juice contained in them runs out, and

Ganglions what they are.

The Cause of them.

* Lib. 1. c. 10. P. 74.

Warts, what they are.

Their Causes.

and stagnating in one place or other, in time produces *Warts*. This may be easily perceived by their Substance, which does not resemble *Flesh*, but the *Nerves*, and that's the reason why they are so sensible and apt to bleed, and if indiscreetly treated, cause *Inflammations* and other ill Accidents. *Cardilucius* says, they proceed from a super-abundance of Corporeal Nourishment, which by a corrupt Ferment, or other outward Accident, is forced towards the Skin, and there, by irritating the *Succus Corporis Nutritius*, cause *Warts*. Sometimes he says, they are caused by outward Accidents upon the Skin, as Washing in the same Water where a Person washed before that was troubled with *Warts*, which, he says, will infect the Skin and breed *Exercrescences*. A Drop of Blood falling from a *Wart* upon a sound place of the Body, will, he says, have the same Effect; but I don't intend to impose these things upon the Reader, but leave him to believe what he pleases concerning them. *Pimples* or small *Bumps* upon the Face, like *Millet* or *Semen Canabis*, first begin about the *Nose* and *Forehead*, and from thence increase and spread further about the Face. They are white at their first Appearance, and without Pain; some of which *Suppurate*, and at last emit a little white Matter if they are squeezed; others grow dry of themselves, and afterwards very *Red*, somewhat larger and bigger, and yet contain white Matter in them. These also cause no great Pain, unless they are squeezed very hard. At length having got the upper-hand, the white and red *Pimples* vanish and become great red *Bumps* and little *Tumours*, especially in great *Wine-Drinkers* and common *Drunkards*; and then are called *Rubra Facies*, and *Gutta Rosacea*.

Pimples what they are.

Cause of *Pimples*.

Their Cause.

Cure of *Ganglions*.

The Cause of these *Pimples* is partly a *Hot* and *Inflamed* Blood, and *Liquors* thickned by a too great *Acidity*, which by the Impulse of other *Liquors*, is driven towards the Skin, and stopping in the small *Veins*, cause small *Pimples*; but if they increase and obstruct the *Glandules* of the Skin about the *Nose*, they grow into larger and redder *Bumps*, or small *Tumours*. Sour Drink and Victuals is also said to be another Cause of this Distemper.

The *Cartesianists*, and especially Dr. *Dolæus*, say, that in the *Fat Parts* of the Body, and especially in the *Face*, where the small *Vessels* abound with *Spirits* and *Nutritional Juices*, there may easily happen an *Extravasation* of such *Juices* in the Skin, which coagulating there, produce *Pimples*, *Blisters*, *Morphew*, and *Bumps* in the *Face*, and spread all over it.

In treating of the Cure of these Distempers, I will first begin with *Ganglions*, which I have often cured, only by *Crushing* them hard with both my *Thumbs*, or by giving them a Blow with a broad piece of *Wood* or a *Book*, which dispersing the *Matter*, I applyed the following *Plaster* to them.

Emplastr. Diaphoret. Myns. Oxycrocana ʒiſs. *de Ran. c. Mercur. ana* ʒij. *Castorei* ʒſs. *Tartar.* ʒij. *de Gummat. Sylvijj* ʒiſs. *Ob. Limac. Philosophor. Tabaci ana* ʒj. *Castorei* ʒſs. *Tartar. fetid.* ʒiv. *Flor. Sal. Armon.* ʒij. *m. ad Empl.*

I have

I have often known the following Plaster dissolve and take away these Ganglions, without any other Trouble, if they have not been of a very long Continuance.

℞ Emplastr. de Ranis c. Mercur. dup. ℥vj. Cerat. de Galbarid, Gum. Ammon. Bdellij. in Spir. Vin. Succin. ana ℥ss. Sulphur. Citrin. ℥j. Calt. viv. ℥ss. Ol. laterin. q. s. misce f. Empl. s. a.

I have also used the following Plaster of Dr. Blanckard, which succeeded very well.

℞ Emplastr. Oxycroc. ℥j. Gum. Ammon Bdellij. in aqu Vit. Solut. ana Dr. Blanckard's Plaster.
℥ij. Flor. Salis Armon. ℥j. Ol. Terebinth. ℥ij. misce cum s. q. Cerae ad Empl.

There are other Remedies prescribed by Learned Authors, which I shall not omit setting down, that the Artift may have Plenty of them. Dr. Etmuller commends *Folia semper vivi majoris*, the Inward fine Coat of the Leaves being first pulled off, and the rest applyed to the Ganglion, Morning and Evening. Dr. Wedelius praises a piece of beaten Lead rubbed with Mercury, and applyed after the Part has been well washed with Spirit of Wine camphorated. Dr. Stortia prescribes *Emplastrum de Ranis cum Mercurio trip.* ℥iv. *Ol. Guaiac.* ℥iv. *misce.* Cardilucius puts some Drops of *Esula major* upon a great Leaf of *Semper viv.* and then tyes it fast upon the Ganglion; or else he takes Dead Bees and applys them upon it, and after they have lain there some time, takes them off and buries them in the Ground, under a place where the Rain drops from the Houses, and does the same with the *Fol. Semper vivi.* Vessingius advises to apply a good piece of Beaten Gold upon it, the Ganglion being first rubbed with *Ol. Tartar. fetid. vel Laterinum.* Monsieur Du Parc, Chirurgion to the French King, commends *Herba perfoliata* boiled in Wine Vinegar, and applyed warm. Monsieur de Roy, Chirurgion and Anatomist at Paris, never applied *Emplastr. Dia sulphur. Rulandi* mixed with *Oss. human. pulv.* & *semper viv.* but with good Success. Peter Burger uses the abovementioned Plaster mixed with *Gum. Ammon. & Sagapen. in Spir. vin. solut. Barbetti* his *Emplastrum Divinum.* Sylvius adviseth the Application of the following Plaster.

℞ Emplastr. Carminat. sui ℥j. Unguent. martiat. ℥ij. Ol. Philosophor. Tartar. ana ℥ij. f. L. a Empl.

Paracelsus adviseth to rub the Ganglion with the following Mixture.

℞ Ol. Myrtill. ℥j. Ol. Nuc. Moschat. ℥ij. Axung. Jument. ℥j. Petrol. ad pondus omnium.

But if the Ganglions are very old and contumacious, and the places will suffer an Incision, excoriate them, or take hold of the Ganglions between your two Fore-Fingers, and beat upon them two or three times with a wooden Mallet and they will soon disperse.

Cure of Warts

The Cure of *Warts* consists chiefly in subtracting their Nourishment, and plying them with Corrosive Medicines to bring them to *Mortification*. *Spir. Vitrioli, Nitri, Butyrum Antimon. Aqu. fortis* and *Calc. Viv.* perform that Office very well; but take care to use but very little at a time, and repeat it often, having a good Lixivium ready to wash the Warts with, to temper the violent Acidity of the other Medicines. Some only employ fantastical Remedies, as stol'n Bacon, Pork, or Leaven applyed to them, which afterwards they bury in the Earth: But why *Warts* sometimes vanish after such Applications, I don't think it worth my while to enquire, though much greater Accidents, as *Fevers, Agues, Running Sores, &c.* do often cease upon the use of such Chimerical Remedies, which proceed from nothing but the strength of Fancy and Imagination. Here I will insert the Prescriptions of Learned Men for the Cure of *Warts*.

Dr. *Overkamp* advises to apply *Calx viva* upon the *Wart*, with Cotton round about it, and cover it with a good sticking Plaster to keep it fast. *Blanckard* commends the frequent Washing the *Warts* with the Juice of *Celandine* and *Vinegar-Pickle*. *Fabricius Hildanus* prescribes a Corrosive made of the Lye of Pot-Ashes, and Ashes of the Vine mix'd with a little *Calx viva*, and applyed upon the Parts affected. *Timæus* from *Goldenklee*, mixes Oil of Vitriol with thick Honey and applies it. *Borellus* uses only Honey-Water in which *Sal Armoniac*, has been dissolved. Mr. *Hammel* uses his own *Unguent. camphorat.* mixed with *Sal Tartari, & Ol. Sapon.* *Cardilucius* prescribes as a certain Remedy, Rain-Water found on the Stump of an Oak-Tree or upon Cow-Dung, wherewith the *Warts* must be washed. Mr. *Ferrant* praises *Ol. Origani & Sesamin.* Monsieur de *Billy*, a Chirurgion in *Paris*, directs the making of an Ointment of the Ashes of the *Vine-Tree* and of a *Willow*, mixed with *Vinegar*. *Tulpius* commends the following Plaster.

Tulpius's Plaster for Warts:

℞ *Emplastr. Oxycroc. Diachyl. compos. ana ʒj. Succ. Allii, Puleg. Hypocyam. ana ʒij. Sal. Armon. ʒj. Picis Naval. q. s. fiat Emplastrum.*

Cure of Pimples.

Pimples at first being commonly like the Skin in Colour, and without Pain, the Patient seldom looks after the Cure of them; but when they grow bigger, *Redden*, spread all over the Face and disfigure the Countenance, then they begin to enquire after a Cure, and sometimes 'tis too late. But if there be any Hopes, make use of the following Water which I have used with Effect.

℞ *Aqu. Flor. Fabar. Spermat. Ranarum ana ʒiij. Solani, Rosar. ana ʒij. Pulp. Citrin. Sigill. Salomon. Lill. Alborum ʒjss. Ol. Tartar. per deliqu. ʒiij. Sacchar. Saturn. Tinct. Benzoin. ana ʒiiss. Boracis Venet. Ceruss. lot. ana ʒj. Mercur. dulcis ʒss. m. f. L. a mixtura.*

Remember to shake it very well as often as you use it, and washing the Face with it, give it time to dry in of it self. If any think the following better, they may use it.

℞ *Unguent.*

Rx Unguent. Rosat. Alabast. ana ʒj. Flor. Sulph. ʒj. Laet. Sulph. ʒiv. Dr. Michael's
 Sacc. Saturn. Ocul. Cancr. ppt. ana ʒiss. Ol. Rosar. Tart. per deliqu. great Secret.
 ana q. s. m. f. ad Liniment. formam.

This Medicine was a long time kept as a great Secret, in the Possession of Dr. Michael at Lipzick. And so much for the Cure of Gangliæ, Veruccæ and Tuberculæ, in which they will find that makes use of the Medicines, that I have revealed the best of the kind, and what they may safely rely upon.

In August 1689. I had a Countess in Cure, who was troubled with a very large Ganglion just over the Right Eye, which had continued above Four Years, tho' in all that time she left nothing unattempted in which there was hopes of a Cure, tho' all to no purpose. The first Eight Days I applied the following Plaster in order to soften it.

R Emplastr. de Hyosciamo, Scrophular. Vigonis, ana ʒij. Flor. Salis Armon. ʒij. malaxat. cum s. q. Ol. Lumbriçor. f. L. a. Emplastr.

After which the Hair on the Eye-brow being shaved off, I took hold of the Ganglion with the two foremost Fingers of my Left Hand, and pulled it gently forward to facilitate the making an Incision with my Right Hand, and with the Handle of my Knife to separate the Ganglion from the adjoining Patts, and take it quite out; which was done in less than a Minutes time with good Success. Some make more to do than is necessary in this Operation; they thrust a Needle, and draw a double Silk through the Skin; that by laying hold on the Silk they may the better pull up the Ganglion; but I never made use of this Method, knowing that my Fingers were sufficient to do it, and also very helpful in crushing the Ganglion upwards, and extending the Skin, which very much conduces to a safe and speedy Operation. Yea, I have very often, after having made a good Incision, by only squeezing it with my Fingers, taken it quite away. And thus this good Lady in Eight Days time was perfectly cured of her Distemper.

In September 1689. a Noble-man in this Town came to me to be cured of a great Wart on the lower Part of the left Side of his Neck; which was as broad as a Half-crown Piece, and the Root went quite along under the Collar-Bone, which I brought away with a Corrosive made of Silver and Aqua fortis, and it continued well about half a Year, but then returning, I was forced to make an Incision as deep as I could; and by that means so perfectly eradicated it, that it never came again.

Pricking, at least an Inflammation, and at last a Corroding Ulcer. The longer these Humours grow, the worse they are, if not timely corrected; for they not only corrupt and spoil the Glands, but also the Bone that lies under it; Yea, at length the Cartilage of the Eye-lid, and the Eye it self is in Danger. Dr. Overtun is also of Opinion, That the Cause of this Ulcer and the Fish's proceed from a Yellow Acid Matter, which in its beginning taking hold of the Glands, causes an Inflammation, and is afterwards converted into a Fish.

CHAP.

The Cure of this Disease is sometimes very difficult, and requires a diligent and able Chirurgion. At first when it is only an Ulcer, it may

Michael's great Secret

Observation V.

Observation 2.

I had Cancer

Their Cure

C H A P. XXXIII.

Egilops or Fistula Lachrymofa, and other Fistula's of the Teeth and Jaw-bones.

Fistula's of the Eyes.

IN the greater Corner of the Eye is a Gland called *Glandula Lachrymalis*, which is subject to very dangerous and ill Accidents; especially if a *Fistula* is caused by a continued Defluxion of sharp Humours, an ill cured outward *Impostume*, or an *Ulcer* called *Anchylops*: And perhaps sometime the Bone that lies under it is Rotten and Carious. I will discourse it at large in this Chapter, and in the Conclusion treat of the *Fistula's* of the *Jaw-bones*, reserving *Fistula's* in general to be handled in the Third and Last Book. And first, for the Readers better Understanding, I will spend a little time in explaining the Circumstances and Nature of these *Fistula's*, which will add a greater Light to the Cure.

Their Description.

This *Glandula Lachrymalis* is appointed by Nature, to receive a Proportion of *Lympha*, or *Moisture*, to lubricate and humect the Eye, and promote its regular Motion; which if not supplied by a sufficient Quantity of *Moisture*, would be hindred and uneasy in moving. It has also another Office, and that is to prevent the continual *Affluxion* and Running out of *Tears*. If there is plenty of this *Moisture* in the *Gland*, it sends it orderly to the *Puncta Lachrymalia*, which lie near, and from thence into the *Nasrils* to be evacuated; but if it is surcharged by a continual *Influx* of *Moisture*, then it swells, and the *Lympha* growing sharp and thick by its too long standing, it begins to *Impostumate*, and causes several ill Accidents. Sometimes there is nothing to be seen in the Upper Part of the *Gland*, and it's only swell'd at the bottom about the Roof, which may easily deceive the Chirurgion; but if he presses hard and deep with his Fingers, it will send forth a Stinking and *Viscid*, and afterward a *Serous* Matter; which if not diligently treated, and carefully cleansed and dried, not only becomes a filthy nasty *Ulcer*, but will *Corrode* the Parts about it, grow *Malignant*, and send forth abundance of *Corruption*, which forcing its Way downwards, often causes *Cavities*, and in time a *Fistula*, or hollow *Ulcer*, under the Name of *Fistula Lachrymalis*.

Their Causes.

Its Cause is a *Subtile*, *Acrid*, and *Saline* Humour, or a Degenerated *Lympha*, which stagnating in this *Glandule*, causes at first an itching and Pricking, afterward an Inflammation, and at last a *Corroding Ulcer*. The longer these Humours grow, the worser they are, if not timely corrected; for they not only corrupt and spoil the *Glandule*, but also the Bone that lies under it; yea, at length the *Cartilage* of the Eye-lid, and the Eye it self is in Danger. Dr. *Overkamp* is also of Opinion, That the Cause of this *Ulcer* and the *Fistula's* proceed from a *Viscous Acid* Matter, which in its beginning taking hold of the *Glandula*, causes an Inflammation, and afterward an *Ulcer*, which being neglected, becomes a *Fistula*.

Their Cure.

The Cure of this Disease is sometimes very difficult, and requires a diligent and able Chirurgion. At first, when it is only an *Ulcer*, it may be

be easily conquered; but if it becomes a true *Fistula Lachrymalis*, it will be a tedious Business, as well because of the continual Supply of Matter, as of the constant Motion of the Eye, where also a Ligature signifies but little, because the Corner being deep and hollow, will resist all Gentle and Easie Medicines, and Sharp ones are not to be used, lest the Eye it self should be injured. The *Fistula's* of the Eyes differ much in Quality and Circumstances from other *Fistula's*. If it be only an Old Ulcer, and its *Edges* and *Lips* are not hard or callous, Medicines must be appropriated accordingly; if it's grown to a perfect *Fistula*, and the Bone yet unhurt, the Cure must begin in another manner; but if the Bone is Rotten, the Cure is very difficult; for besides Medicines the *Actual* and *Potential Caustery* must be employed. Above all things prescribe your Patient a proper Diet, and endeavour to throw off the offending Humour, as much as possible, by *Stool* and *Urine*. Make a *Fontinel* on the same side in the Arm, and instead of *Wine* or *Beer*, order him to drink a Decoction appropriated to his Circumstance. If there should be a large Cavity and Swelling, and the Orifice of the *Fistula* but small, the Chirurgion must without Fear make the Hole bigger with a Lancet, or a new *Incision* a little lower downward, if it may be done with Safety; because the Matter must be brought away from the bottom as much as is possible; for what will it signify, if you squeeze out the Matter two or three times a day, when the continual Afflux of Humours, and gathering of *Moisture* soon fills those Cavities and Glandules up again. Not to mention the great Advantages and Ease such an Incision gives to the Glandules and the Neighbouring Parts, the Medicines which are applied to it, will effect very much, where before they could do nothing. In the Cure therefore, first make use of Exsiccating, Deterging, and Dulcifying Medicines; among which the following Powder is very proper.

℞ Pulv. Ophthalmic. Mynsic. ℥jss. Trochisc. alb. Rhafis ℥ijss. Sacchar. Saturni ℥ij. Plumb. ussi, Spodii ppt. Cort. Austr. ppt. ana ℥j. Sacch. Cant. alb. ℥ij. Myrrh. Aloes ana ℥j. misce f. ad Pulverem subtilissimum.

This Powder must be pressed or blown into the *Fistula* with a Quill, two or three Times a day, and the Eye-lid closed to keep it longer in, and you will find it temper the Acrimony, correct the Matter, and bring the *Fistula* into a better Posture. Always apply upon it double Linen Rags moistened in the following Fomentation, and that as warm as it can be suffered.

℞ Tutie ppt. Cerussæ calcinat. ana ℥jss. Sacchar. Saturni ℥ijss. Alum. ussi ℥jss. Troch. Ophthalm. Mynsic. ℥ij. Camphor. ℥j. Myrrh. Div. Pulv. Thee, Flor. Sambuc. ana ℥ij. Aqu. Flor. Cyax. Plantag. Rosar. ana ℥ix. Camphor. Myrrh. solv. in pauc. Spirit. Vini, postea in loco calido digerantur, & serv. pro usu.

Over this Bolster you may also apply the following Sweet Bag moistened in warm Wine, so large, that it may reach over the Forehead, and be tied fast.

℞ *Fol. Alchimid. Euphras. Verben. Veron. ana* ℞ss. *flor. Cyan. Rosar. Sambuc. Lilior. albor. ana* ℞j. *Sambuc. ℞ij. Sem. Fœniculi ℞ijss. Rad. Irid. florent. Fabæ, Coffee ana* ℞ij. *misce, scind. & contus. gr. modo.*

If you find that the Bone under the *Fistula* is any thing decayed or Rotten, then endeavour to reach the Bottom of it with Tents made of *Gentian* Root or *Comfrey*, or apply *Phlegma Vitrioli* close upon the Bone with Lint, and it will take away the Blackness, and cleanse it; but if this will not answer your Intentions, you must scrape it, or apply an Actual Cautery; for the Bone and Foundation must be made clean, or all your Labour is in vain. The following Medicines are also in great Request, especially *Dr Overkamp's Mixture* *, which I have made use of several times with great Benefit.

* Chirurg.
1. 2. p. 385.

℞ *Spirit. matricalis ℞ij. Salis Armoniaci ℞ij. Myrrh. Aloes ana* ℞iij. *Camphor. ℞ij. Elixir. Vitæ ℞j. Tinct. Castor. Assæ fœtida, Galban. ana* ℞ij. *Sal. Tartar. ℞ss. misce f. m. L. Art.*

If you think this Medicine is too strong, you may qualifie it with a little *Aqua Mellis*, and put it into the *Fistula* with Lint; or if it be hollow, you may ferringe it with the same Mixture.

℞ *Terebinth. ℞j. Balsam. Copaibæ ℞ss. Myrrh. Aloes ana* ℞jss. *Sacchar. Saturni ℞ij. Camphor. Croc. ana* ℞ss. *m. f. Balsam.*

This Balsam is to be applied warm after the *Fistula* has been well cleansed and wiped. I have also sometimes used the following Ointment of *Chalmætius*, with good Success.

Chalmætius's
Liniment.

℞ *Spirit. Vini, f. Vini optimi q. s. Mell. Rosacei ℞j. Pulv. Myrrhæ ℞ij. m. f. Liniment.*

You need not wonder that I prescribe no Plasters, Ointments, and such like greasie, unctious Medicines in this Case, since I find by Experience they do no good at all, but on the contrary make it Ten times worse; but if you must have a *Plaster*, as a Cover to the other Medicines, make use of what follows.

℞ *Cera albæ ℞ij. Sevi Hircini ℞jss. Ol. Amygd. dulc. ℞iv. Sperm t. Ceti ℞iij. Ceruss. ℞ij. Succin. alb. occul. Cancror. ppt. ana* ℞jss. *Cort. Austr. ppt. ℞j. Spodii ppt. ℞ss. Camphor. ℞j. m. f. Emplastrum.*

Dr. Muraltus in his *Collegium Anatomicum* gives us the Receipt of an Excellent Potion in this Case, which is prepared as followeth.

Dr. Muraltus's
Potion.

℞ *Rad. Consolid. maj. ℞ss. Sanicul. Vinc. per Vinc. Fragariæ, Alchimid. Salviæ ana* ℞j. *Flor. Tunicar. rubr. Consol. Saracen. Apii hort. ana* ℞j. *Mj. misce & lege Art. f. Decoctum. cum Vino rubro & Aqua.*

This

This is an Incomparable Medicine, and he that tries it will find it so. The Dose is Three Ounces Morning and Evening. He that desires to read more of the Cure of these *Fistula's*, may consult *Fabricius Hildanus**, who thinks he can never say enough in the Praise of *Euphorbium*. * Cent. 6. Obs. 3.
Petrus de Marchettis, Dr. *Munnick*, and especially *Dolæus*, are very copious upon this Subject; and Dr. *Blanckard* in his *Annual Register*, Part 2. Obs. 30. Pag. 50. has given us a Remarkable History of a *Fistula Labrymalis*, which was communicated to him by *A. Kypers*, and is worth our Notice, because he gives us the Virtues of the Water which is to be dropt into the *Fistula*, and of the Mixture which Exsiccates and Incarnates, and both agree very well together, and are much to the Purpose.

I have already treated at large of the *Teeth* and *Jaw-bone*, and of fleshy *Excrescences* in the Mouth; but since these *Fistula's* are very common, and few Chirurgeons truly understand the Method of curing them, and fewer Authors have handled this Subject as they ought to have done; therefore I thought it necessary in the Conclusion of this Book and Chapter to treat of it briefly, but accurately and fully, that a Chirurgeon may know how to manage himself in the Cure of them.

These *Fistula's* proceed either from Corroding, Acrid and Soure Humours gathered in hollow Rotten Teeth, which by degrees sink into the *Jaw-bone*, and wanting Vent, gnaw upon the Parts till it has work'd Holes through, and at last causes a *Fistula*; or else from some Accident in the ill drawing of *Teeth*, which has injured or broke the Bone, caused Imposthumes, and at length a *Fistula*.

The Cure of all *Fistula's*, let them be distinguish'd by what Name they will, are very hard; but the younger the *Fistula* and the Patient is, 'tis so much the better; and the older, the worse; especially if the Patient is Emaciated and Infirm, as may be seen in the following Observation. If the Outward Hole is so narrow that you cannot reach the bottom of the *Fistula* with a Probe, endeavour to make it bigger by a Root, Tent or Incision, that you may better find which way the *Fistula* takes its Course, and at what Part of the *Maxilla* and *Tooth* the bottom of it is to be found, for that is material to be known. You must also search inwardly about the Gums and Jaw, to see how all things are disposed there, and what Injury they have already suffered. The Teeth must also be drawn as soon as can be, for on that depends almost half the Cure. Then use the following Injection, which I recommend in all kind of *Fistula's*.

℞ Decoct. Alchimill. ℥ Rad. Aristoloch. long. cum Aqua Veronic. ℥vj. Aqu. Benedict. rubr. mei ℥ij. Sacchar. Saturni ℥ij. Essent. Myrrh. ℥jss. Essent. Euphorb. ℥ij. Mercur. dulc. ℥j. Opij purissim. ℥jss. m. f. Lavam.

This must be always used warm, and the following Balsam applied as well in the Inside of the Mouth, as Outwardly on the *Fistula*, which is an admirable Deterfive, and Consolidates effectually.

℞ Decoct.

℞ Decoll. Fol. Nicotian. virid. & Veron. cum Aqua mellis, Chelidon.
 Perficar. ana ʒjss. coque ad consumptionem humiditatis, adde Essent.
 Myrrh. ʒjss. Mell. Rosar. Div. Aloes ʒss. Mercur. dulc. ʒj. misce fiat
 Balsamus S. A.

If the Jaw is Black and Broken, the Pieces must be taken out, and the rest *Cauterized*, and touched with *Phlegma Vitrioli*, to take away what is Carious and Rotten. What else seems necessary to be done, or is omitted here, will be supplied in the following Observations.

Observation 1.

In March 1689. *Rosina Gebavern* a young Girl of Fourteen Years of Age, came to me from the other side the *Oblaw*, to be cured of a large *Fistula Lachrymalis* in the Left-Eye, which a *Distiller*, who thought himself an Excellent *Oculist*, had been above a Quarter of a Year in pretending to cure it; but made it worse than it was when he first undertook to cure it. After Dr. *Burgen* had prepared her with inward Medicines, and I had taken care of her about Eight Days, I made an *Incision* with a Sharp, but not a Keen-pointed Lancet, on the Lower Part of the *Cheek*, where the large *Sinus* or Cavity of the *Fistula* was, as large as was sufficient to put a Tent into it, in order both to cleanse and heal the *Fistula*. Which necessary Part of the Operation I would have all Practitioners observe, because they may afterward cleanse and serringe the *Fistula*, and prevent the Gland from being corrupted and spoiled by the Superabundance of *Matter* flowing to it, which will prove half the Cure, as it did in this Patient; for by this means I could use the Powder above upon the *Glandula*, and in the Lower Part of the *Incision* put a Tent with the Balsam, and on the Top of all the moistened Bolster, which succeeded so happily, that in a Month's time every thing began to heal. The bottom of the *Fistula* I opened with Tents made of pressed Sponge; and perceiving at the bottom towards the *Nose*, that a Part of the Bone about the bigness of a *Bean*, was Black and Rotten, I applied Lint to it dipped in *Phlegma Vitrioli*, and it began to mend: However, for the greater Certainty, I resolved to touch it with a hot Iron (the Parts near it being sufficiently guarded;) which being done, the *Carios* separated, grew White, and also the *Flesh* which was over it: So that in Eight Weeks the Patient was perfectly cured.

Observation 2.

August the Seventh 1693. a Great *Princess* with the *Prince* her Husband, came to *Breslaw* out of *Austria*, who had a *Fistula* in the Lower Part of the Right Side of her Neck, which gave her Intolerable Pain. The bottom of this *Fistula* was near the furthest Teeth, and the Orifice about half a Hand's Breadth towards the Mouth; the Cavity was so crooked, bending upwards towards the Teeth, that a Probe could reach no farther than about a Thumb's Breadth into the *Fistula*, which caused the *Matter* to continue longer there, and the *Putrifaction* to be greater. Towards the Ear it was sometime extremely Swelled and Inflamed, and gave the *Princess* a great deal of Pain, who was otherwise in very good Health, and at that time about Twenty eight Years of Age. Great Diligence had been already used to cure it, by the Advice of the most Learned Physicians and Chirurgeons sent for from several Places, who agreeing, That the *Tooth* over the *Fistula* ought to be drawn out;

out; a very expert *Tooth-Drawer* at *Ulm*, was the Operator; but it happened so unfortunately, that the Crown, or Head of the Tooth broke off, and the Stump remained behind. Upon this unhappy Accident the *Fistula* grew every Day worse and worse, so that her Highness resolved to go to *Breslaw*, where she arrived the Seventeenth of *July* in the Evening, and brought with her that Famous Chirurgeon and Butgermaster of *Prague*, Mr. *Christian Schutzbredt*, and immediately sent for me and Dr. *Tralles*; but we could do nothing that Evening, but only search the *Fistula*, and apply Dr. *Fabricius's* Plaster, which was sent her Highness from *Nuremberg*.

July the Twentieth we all met in the Princely Court *Oelffe*. Dr. *Agricola* first search'd which way the *Fistula* went: Afterwards Mr. *Schutzbredt* and my self search'd it with a Probe, but could not reach so far as the Tooth, tho' at that time there was no *Inflammation* or Swelling, and nothing came out of the Outward Orifice, but Two or Three Drops of Matter at a time. The *Pus* was also well digested, nor was there any ill Smell from the broken Tooth, and the *Gums* thereabouts were in good Order. Upon vvhich, others as vvell as Dr. *Agricola*, were of Opinion, That the *Fistula* did not reach the broken Tooth, but time taught us better; for tho' I kept it open above three Weeks with a convenient Tent, took away the Spongy Flesh, seringed it often, and blew into it the Powder prescribed in the *Fistula Lachrymalis*, insomuch that every thing seemed to heal, and that on the Twenty fifth of *August* the *Fistula* was quite closed up, and remained so till the Eleventh of *September* following.

Yet on the Twelfth, about Ten a Clock in the Morning, the *Princess* found great Pain in the Tooth again, and an Extension and Swelling towards the Ear; which Symptoms increased towards the Evening, because the *Princess* went that Day to Great *Peterwitz*, and had taken no Medicines vvhith her to apply to it. In the Night it grew so painful, that she was forced to return back in the Morning. Then I perceived a great Swelling and Inflammation towards the Ear, and in the Inside of the Mouth about the Teeth; to which I immediately applied Internal and External Remedies, and upon the *Ear* and *Cheek* a proper Cataplasm. But on the Fourteenth of *September* it again possessed all the same Places where the *Fistula* was, which I opened in the Afternoon, and let out half a Spoonful of well concocted *Quitter*, and it continued Running very fast till the Twenty first of the same Month; then the Matter decreased, the Wound was so well closed, that the smallest Tent could not enter it, and the *Fistula* healed up again the same Week, to our great Admiration. No Arguments could prevail with this *Princess* to suffer the Stump to be drawn, though her Highness was daily told she must never expect a perfect Cure till the Tooth was out. *October* the Fourteenth all the former Symptoms unexpected broke out again, and gave us opportunity to shew the *Princess* her Danger and continual Affliction, unless she would consent to have the Stump drawn; but she persisted in her Obstinacy, and said she would not consent to it whatever she suffered.

However, we sent again for Mr. *Schutzbredt*, and prevailed with her Highness to send for Two more Chirurgeons from *Vienna*, in hopes that

the concurring Opinions of so many in the same thing, might induce her Highness to comply with her own Advantage. This being done, in Twelve Days came Mr. *Bernard Norbert* of *Zeidler*, Chief Chirurgeon to the *Emperor*, and with him Mr. *Bouchard*, Chirurgeon of *Vienna*, Mr. *Schutzbredt* came the Day before; who with Dr. *Tralles* and *Agricola* all unanimously agreed, That the *Stump* of the Tooth ought to be pulled out, the Place *Cauterized* where the Bone was *Rotten*, and then we should proceed to the Cure of the *Fistula*. This Agreement was the same Evening related and proposed to her Highness, who after discovering some faint Unwillingness, courageously resolved it should be done, and accordingly was performed by Mr. *Adam Plabne* a Tooth-Drawer in *Breslaw*, who, after two violent Onsets, not without giving the Princess great Pain, brought it out. We suffered it to bleed a while, to give the Lady time to recover her self. After her Highness was a little composed, I searched the matter very diligently, and twice *Cauterized* the *Jaw-bone* with a Hot Iron made for the purpose. Three Days after the Chirurgeons all returned to their respective Homes, and in Three Weeks time I so perfectly cured the *Fistula*, that her *Highness* has never been troubled with the least Sign of it since. Hence you may see how absolutely necessary it is, that the *Teeth* should be drawn in these kind of *Fistula's*, which I would have done at first, if I had been left to my own Liberty; but in such great Persons one dares not act alone what he thinks he ought to do; which gave these Great Chirurgeons, all my Intimate Friends and Acquaintance, the Trouble of coming from *Vienna* and *Prague* to *Breslaw*. And with this History I conclude the *First Book* of my *Chirurgia Curiosa*, which I hope will be Accepted; what else is requisite to be known in the Art of Chirurgery, will be discoursed in the Two following Books.

Soli Deo Gloria.

CHIRURGIA CURIOSA.

BOOK II.

Treating of the Accidents and Diseases incident to the *Breast* and *Belly*; and what is to be observed from them.

CHAPTER I.

Whether in Curing Wounds, there is a Necessity to bring them to Suppuration, by Emplasters, Oyls, Cataplasms, &c. according to the Ancient Custom? Or, Whether they may not be Cured easier and sooner, by other Medicines without Suppuration?

THE Antients were of Opinion, that no Wounds could be cured without *Suppuration*; and directed their Medicines accordingly. This Method I follow'd very strictly in several Campaigns, and thought there was no other Way, as many others do, that follow the Antient Method to this Day; but considering better of it, and observing the Practice, and reading the Works of Dr. *Bontekoe*, *Overkamp*, *Blanckard*, *Muralt*, &c. among the *Germans*; *Rabel* among the *English*; and *de Landes*, *Baugrand*, *De Parc* and *Blegni* among the *French*, I saw Reason enough to leave off this Method, and adhere to a better, by the Invitation and Example of others; wherein I soon found it true, that Wounds might be constantly and perfectly cured without *Suppuration*, or the Application of *Plasters*, *Balsams*, *Oyls*, *Ointments*, and such like nasty greasie Medicines, which under Pretence of *Suppurating*, *Mundifying* and keeping the Wound *Open* for some time; the Lips, Edges, and the Flesh were corrupted, by imbibing those greasie Drugs, the Wound putrifies and stinks, and the Cure is longer delay'd, and made more painful, by keeping it *Open*; not to mention other ill Accidents, that too often happen while you are waiting for a *Suppuration*. I would have no body pin their Faith upon my Sleeve, but let them try and consider the Reasons that support this Practice, and you will find, that the Antients in this Case are too erroneous to be imitated; and that the latter Method is the better. Who knows not, that *Nature* abhors Wounds or Divisions in any Part of the admirable Fabrick of our tender Bodies? And therefore proposes and takes the readiest Way of conjoyning and consolidating them; Nature knows, that Wounds cannot en-

Antient Opinions erroneous.

The Chirurgion must assist Nature.

dure being exposed to the *Air*, because it irritates the *Nervous Fibres*, and so occasions *Inflammations* and *Putrefactions*, and therefore contributes to the closing them up from that Enemy; and a *Chirurgion* being but *Natures Servant*, ought to do the like, with all possible Expedition; before any *Unctuous* and *Oily Matter* gives a Check to it, I know some think that we ought not to use the Word *Nature*; and I will comply with them, when they have found another Word, which better expresses the *Excretions*, *Nutritions* and *Secretions* of humane Bodies; but not to insist upon Words; take care in all your Endeavours to assist *Nature* in all her Operations, and take the speediest Way to *Consolidation*, after you have removed every thing that may obstruct her Progress. Now, that the *Industrious Chirurgion* may never be at a Loss for Want of Medicines, to make a speedy and perfect Cure without *Suppuration*, I will present him with my own *Vulnerary Water* and *Powder*, that will stand him in great stead upon such Occasions. The *water* is to be used in those that are very deep, and the *Powder* in such as are flat or shallow.

Two excellent Medicines.

℞ *Vin. Hungar. opt. ℥ii, Aqu. Regin. Hungar. ℥vi ss. Rosar. Chelidon. ana ℥iii ss. Plantagin. ℥ii ss. Croc. Metallor. ℥i, Sarcocol. Succin. ana ℥ ss. Tutia ppt. ℥i ss. Aloes ℥ii, Sacchar. Cant. albi, ℥i. Camphor. q. v. Misce s. art. & pone in Solem per aliquot dies, s. pro usu.*

Inject this Water into the Wound, and wash the Sore very well with it; then moisten Pledgets in it, and apply them to the Wound; after you have brought and ty'd the divided Parts of the Wound as near together as you can, or as is convenient; for that will much contribute to the Healing, and to perfect the Cure. If the Wounds are very deep, you must not let the Pledgets lie too long in them, for then they will grow dry and hard, but moisten them often, which you may do without taking them out of the Wound, for they ought to lie there Two or Three Days before you put in fresh Pledgets; and continue this Method till the Wound is closed up. This Water is of admirable Vertue, for it resists *Putrefaction*, prevents ill *Accidents*, and takes away the *Inflammation* and *Pain* of the Wound. The Powder which I mentioned is the next following.

℞ *Pulv. rad. consolid. major. ℥iii. Tragacanth. Lut. Fabril. aa. ℥ii. Sarcocol. ℥vi. Myrrh. Aloes ana ℥iii. Bol. Arm. ppt. ℥i. rad. Aristoloch. long. ℥ ss. M. s. ad subtilissim. pulv.*

This Powder must be strewed into the Wound, after it has been washed with warm Wine, and it's Lips joyned as close together as you can get them; then apply over it Bolsters moisten'd in White-wine or *Hungary Water*, and let them lie Two Days without removing or changing them, only now and then moisten them with warm Wine or *Hungary Water* two or three times a Day. Then dress it a new,

a new, and continue so doing till the Wound is perfectly cured.

Dr. Overkamp's *Spiritus Matricalis*, Blankard's *Tinctura Succini*, Rabel's *Elixir*, Du Parc's Blew Eye-water, de Landes, Baugrand's *L'Eau de la Reine d'Hongr.* mix'd with some *Tragaçanth*, and Blegni's Eye-water, have all very near the same Effects in Wounds; only if you try them, I presume my own Prescription will exceed them all. If you consult Blegni's Observations, you will find Two admirable Cures that he perform'd in Wounds, with his *Eye-water*; the Receipt whereof you will find in the Twenty fourth Chapter of my first Book, *Chirurgia Curiosa*.

Other Medicines of the same kind.

A famous Physician at Lisbon, Rodericus a Fonseca, who practiced a long time at Padua in Italy, used to strew the following Powder into Wounds with great Success; after having first cleaned them with warm Wine, and then cover'd them with Pledgets moistened in the same Liquor.

℞ Myrrha, Bol. Armen. ppt. aa. ℥ss.
Sarcocol. ℥vi. Mastich. Oliban. aa. ℥iii.
Aloes, ℥ii ss. Sanguin. Dracon. ℥ii. Misce
ad subtilissim. Pulverem.

Next I will accommodate you with Dr. Bonteko's admirable Vulnery Water, which was presented me by the Ingenious Mr. Horchat Berline, and was in great Esteem.

℞ Extrac. Solan. ℥iii. flor. virid. Aëris, ℥i ss.
Lixiv. Calcis viv. ℥xii. Croc. Metallor. ℥ii.
Sacchar. Saturni, ℥i ss. Mercur. Dulc. ℥ii.
Myrrha ℥i. M. f. Vuln. s. Artem, serv. pro usu.

Now I will give you Dr. Muraltus's Water for the same Purpose, which was also communicated to me by Mr. Horch, who procur'd it out of Bern in Switzerland, by the Favour of Dr. Baverkonig; after which I will put down a rare and curious Observation on this Subject.

℞ Flor. Cinza ℥β. Amalg. Mercur. ℥ii ss.
Phlegm. Alumin. ℥ii. Lixiv. à Calcis viv. ℥vi.
Agu. Piantag. Veronic. aa. ℥iii. Glutin. Fabril.
℥ss. Tutie ppt. ℥iii. Camph.
℥ss. Misce fiat Vuln. s. a.

Here I cou'd not but observe to you, that the *Glut. Fabril.* or *Glue* that the Joyners use, is an excellent thing in the Cure of Wounds; which the Joyners know very well, and therefore when they chance to cut themselves, instead of a Plaister, they apply a *Segmentum* or Shaving spread with Glue: Tye it on, and let it lie till it has healed the Wound, and then it will drop off of it self.

What I have hitherto said on this Head, was only to convince you, that there are Medicines which will cure Wounds without *Suppuration*; and that he that has a Mind to try mine or the Water of *Ulme*; for the rest I have had no Experience of, will soon find that my self and Monsieur Blegni have deliver'd nothing but plain Truth, especially if you are sent for time enough, while the Wound is fresh; for then if

Modern Way of Cure the best.

you

you observe these Directions, you will admire at the good Effects of such Medicines, which cure sooner and safer than the nasty greasie ones of the *Antients*; as will fuller appear in the following Example.

Observation.

In *November, 1691*. One of our Women, that attended the Sick in our Hospital of *All Saints*, had desperately wounded herself in the *Pudenda*, by falling down Stairs with a Knife in her Hand, which pierced through the left Lip of the *Pudenda*, and a great way into the *Vagina*, where it went out again: It bled very much, and she complained of an intolerable Pain. I first apply'd my Restraining Powder to it to stop the Bleeding, and having washed it well with warm Wine, I applied several Pledgets to the Wound, moistened in my Vulnerary Water, and over that, and also in the *Vagina*, as much as the Place wou'd admit of, and ordered to keep her self very still and quiet on her Bed, and every Three Hours to moisten the Pledgets with the Vulnerary Water warmed; whereupon the Bleeding ceased, and the Pain went off; therefore I let every thing lie as it was till the third Day; and then taking away the Pledgets and Bandages, I found that the Wound was in a good way of Healing, without any Swelling or Inflammation. Then I made new Pledgets of Linnen, and dress'd the Wound again as before, and so continued till the third Week, and then every thing was very well and perfectly cured, both outwardly and inwardly, without Suppuration.

C H A P. II.

Wounds of the Thorax and the Epigastrium or Lower Belly, and what is to be observed both in the Wounded Parts and the Cure.

Wounds in the Breast.

Here I will also discourse of Wounds in these Parts in general, as I did in the first Book of Wounds in the Head, and consider them in their *differences, diagnosticks* and *Cures*. All which I will divide into Two Parts; *viz.* that which is above, and what is below and under the *Diaphragma*; or the Parts containing, and the Parts contained, from the *Collar Bone* to the *Os Pubis* or Share-bone. As for those Wounds which are only in the Outward Parts, without piercing through the *Thorax* or *Abdomen*; I don't think it worth the while to spend Time upon them, having already largely handled them in my *Chirurgia, part. 2. c. 2. p. 394. usque ad pag. 424.* to which I refer you; and will only treat here of Wounds and Hurts in the Inward Parts.

When you have observed the Wound in the Outward Part, Probe and search the Inward Part, to see whether the *Lungs*, the *Throat*, *Arteria Arteria*, *Mediastinum*, *Pericardium*, the *Heart*, *Arteria magna*, *Vena Cava*, *Diaphragma*, or the *Ductus Thoracicus*, or any of those Parts are damnified or wounded; which you may perceive by the several Symptoms that attend them.

How to know if the Lungs are wounded.

If the *Lungs* are wounded, whether in the Right or Left Lobe, the Chirurgion may easily discern it, not only by the External Wound which goes towards the *Lungs*, but by the *Diagnosticks* and *Symptoms* following,

viz. The Patient draws his Breath with great difficulty; Coughs almost continually; the Blood which comes out of the Mouth of the Wound is very thin and frothy; when the Lobe dilates it self to let in Breath, the Patient complains of great Stitches and Pains in the same Side; and the Breath goes so forcibly out of the Wound, that it will extinguish a Candle. Searching with a *Probe* cannot always be done, and if it cou'd, is very fallacious; because the Patient is not in the same Posture he was when he received the Wound, and the Passage of Wounds between the Ribs, is commonly too narrow for it, and therefore you may better judge by the Symptoms already mentioned, which are certain and indubitable Indigitations, than by rowing and poking into the Wounds with Instruments; for if the Wounds are not too large, and the Substance of the Lungs are only hurt, they may be cured if diligently look'd after; but if much Blood is fallen from the *Diaphragma*, and comes there to Putrefaction, the Patient is in imminent Danger, for such Accidents are generally attended with Death; because the extravasated Blood settling there, cannot be evacuated. In such a Case, you must help the Patient by making the Wound larger, and if it should appear necessary, to make an Incision somewhat lower, to give the *Sanies* a Passage out, which you must assist, by putting the Patient into such a Posture as will contribute towards it; which if done in time, the Chirurgion may be yet in hopes of a good Event.

The Cure of Wounds in the Lungs, besides Outward Applications, require good Internal Medicines. The Outward Wound may be easily kept open by a convenient Tent, as long as is necessary, which must be fastened to a Thread, that if it should fall into the Cavity of the Breast, it may be pulled out again: Over which ought to be applied a good *striptick* Plaster for a Defensitive, with proper thick Bolsters moistened in warm White-wine; but special regard must be had to assist with Internal Medicines, for on them depend the chiefest Part of the Cure. The following Potion and Powder I have always found to be very serviceable to me in such Cases.

Re *sal. Pulmonarie, Alchimil. Veron.*
Virg. Aur. aa. Mi. rad. Malvae, Consol.
maj. Aristol. long. aa. ℥vi. coque in
℥. g. Aqu. Malva ad ℥xxxvi. adde Ocul.
Cancr. Lap. Ostrocol. ppt. aa. ℥ss. M. f.
Potio dosis ℥iij.

Which the Patient must constantly drink three or four times a day; and the following Powder is to be used betwixt whiles, three times a day.

Re *Rad. Irid. florent. pulv. pectoral. Z. aa. ℥ss.*
Spermat. Casti ℥iij. flor. sulph. ℥ii. Bol. Armen.
ppt. ℥iijss. Sacchar. Cant. alb. ℥iij. Ocul. Cancr. ppt. ℥iij
Ol. Anisi distillat. q. s. vel gutt. xv.
Misce fiat ad subtilissim. pulv. dosis
℥ss. ad ℥i.

G g Now

Wounds in
the Oesopha-
gus.

Now we will consider Wounds in the *Trachea Arteria* and the *Oesophagus*, which are very dangerous, and give the Chirurgion much Trouble, because he cannot come at them, and by reason that for the most part they must be left to the Patients good Constitution to contribute to the Cure. Out of the Wound and the Mouth of the Patient, is cast out a viscous and frothy Blood; the Patient coughs perpetually, because the Blood continually runs into the *Aspera Arteria* and *Oesophagus*; which mixing with the Air, by Respiration renders it frothy, which commonly produces Convulsions and Suffocation, and makes the Wounds more dangerous, because Astringents cannot be applied to stop the Bleeding: Nor can those Two Canals be wounded without damnifying the Lungs and other Vessels. The Cure is the same with that I proposed for the Cure of Wounds in the Lungs; only the following excellent Powder may be also used.

℞ Rad. *Consolid. maj.* ℥i. *Sarcocol. Tragacanth.*
aa. ℥iiss. *Ocul. Cancr.* ℥ii. *Sacchar. Cant. albi,*
℥iiss. *Mumie* ℥i. *M. f. ad subtil. pulv. dos.* ℥i.
Ter in die.

Wounds in
the Pericardi-
um and Medi-
astinum.

The Wounds in the *Pericardium* and *Mediastinum* are also very dangerous; for the first being wounded, the Liquor contained in it, which is designed to cool the Heart and excite it's Motion, runs out, and causes dangerous Symptoms, and a great Putrefaction in the *Diaphragm*. The latter is a necessary Instrument of Respiration; and if that is wounded being membranous, there follows very great Pain and a continual Cough, which is generally accompanied with Convulsions and Death. The Cure is also very difficult, because, as I said before, nothing can be applied to the Part; the Liquor that is lost out of the *Pericardium* cannot be restored, nor the *Pericardium* healed; and though such Patients live for some time, as long as the Convulsion and flowing Liquor *Pericardii* will permit, yet they are troubled with shortness of Breath till Death.

Wounds in
the Heart.

Wounds in the Heart are generally accompanied with *Sudden Death*, because the Blood running immediately out of the *Ventricles* into the Cavity of the *Thorax*, the Circulation, Motion and Life cease altogether; though I have known some that have been wounded in that Part, have lived some Hours, yea, Days after it; which was look'd upon as a Wonder of Nature, and only happens where the Patient that is wounded puts himself into another Posture, so that the Heart and its *Muscles*, (for the Heart is composed of many *Musculi*) in a manner stops up the Wound, that the Blood cannot pass through it, so soon as otherwise it would; but this happens very seldom; and at last the Patient expires; unless the *Mucro* or *Punctum* of the Heart was only slightly wounded, for then it may be cured.

The Learned *Puffendorff*, lib. 4. pag. 234. in his History of the Actions of *Carolus Gustavus* King of *Sweden*, has a remarkable Observation, of a certain *Polander*, who on the 2d. of *April*, 1657, was found lying on his Back upon the Ground by General *Dahlberg*, near a Village called *Rabolwick*, who was shot with Two Bullets through the *Heart*, his Eyes being closed, and a bloody Foam and Froth
issuing

issuing out of his Mouth. The Troops marching by, thought it a piece of Friendship, to put such a miserable Creature out of his Pain; therefore a Trooper leaped from his Horse, and putting his Pistol to the wounded Man's Forehead, shot him with a Bullet quite through the Head, out of which came a great quantity of the Brain; upon which Wound the *Polander* immediately laid his right Hand, and stirred in the Blood and Brain with his Finger: Whereupon another shot him through the Head with Two Bullets, which drove the upper part of the *Cranium* to pieces, and shiver'd it into several Splinters; and yet the *Polander* continued to cover the Wound with both his Hands; besides which another Trooper stabb'd him Three or Four times directly through the *Heart* with a Sword, and the *Polander* upon every push twitched and drawed up his Legs, and put his Hand to his Breast. After this several other pushes was made through his Body, from his Belly to the Throat; yea, a great many came to him and shot him through the Head and Heart with several Bullets, upon which followed a great quantity of Blood; and yet the poor Man still pulled up his Legs, moved his Arms and shored as if he had been fast asleep, yea, and sometimes look'd as if he had had a Mind to speak, which almost startled those that were near him, and made them wonder, how it was possible he should have any sense of Feeling, after the Heart was so terribly wounded, and the Skull and Brain shattered into pieces; but after they had stay'd and observed him half an hour, they yet left him alive.

Wounds in the *Arteria magna* and *Vena Cava* are also accompanied with sudden Death, because the Blood immediately runs out into the Cavity of the *Thorax*, and nothing can be done to stop the Bleeding. In June 1696, a remarkable Instance happened in this place. The *Weyb-Bishop* Butler stabb'd one of his Fellow Servants into the Breast, so deep through the Chest into the left Lobe of the Lungs and *Vena Cava*, that more than Three Quarts and an half of Blood run out of the *Vena Cava* into the Cavity of the Breast on the same side, between the *Mediastinum*, yea and remained there, insomuch that on the seventh day when the Patient dyed, none of it was gone through the *Diaphragma* into the Lower Belly, which is certainly matter of great Admiration. Mr. *Neyfiez* a good Chirurgion in this Town was first called to the Patient, and treated him very discreetly in every Particular. On the third Day Dr. *Trallet* and my self was joined with him, the Patient had his Speech and Senses till the Day he died, and we having opened the Body, found it as above related. This put me in mind of a particular *Syringe*, that Mr. *Caron's* Chirurgion at *Beauvois* thought he had found out; which after Incision was made above a Thumbs breadth below the *Diaphragma*, would draw out the Blood. This was also discoursed of at the same time, but seeing no great likelihood that it cou'd succeed, and knowing by Experience that this conceited Method would little avail the Patient, but on the contrary, would torture him and hasten his Death, it was omitted. The excellent Dr. *Overkamp*, l. 3. c. 13. p. 723. takes notice of these *Syringes*; but says nothing in Commendation of them. Some Chirurgions, in Wounds of the Breast inject a particular Liquor, if the Opening is large enough and the Place convenient; also that the Patient can lie on the same Side,

Wounds in
the Arteria
magna and
Vena Cava.

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am

with

with his Feet very high, then it may sometimes be beneficial; but if this injected Liquor stays in the Chest with the Blood, then it will do more harm than good, and cause great Pain and miserable Symptoms in the *Diaphragma*; but I leave every Man to his own Reason and Understanding in this Particular, which will soon convince him, whether it be a proper Method or not: If they are perswaded it will benefit the Patient, then let them use the following *Injection* warm, three or four times a day, and diligently observe what comes out of the Wound, for if the Water you inject should not come out again, you ought to use it no more.

℞ Rad. *Consolid. maj. long. aa. ℥i. fol.*
Alchymil. Veron. Sanicul. Salvie aa.
Mj. coque in s. q. Vini & Aqua Plantaginis,
Colaturæ Ltii. adde Mell. Rosar. ℥i. Essent.
Myrrhæ ℥ii. M. F. ℥. s. art.

But if you perceive that the Blood and Matter will grow to Putrefaction, then I recommend to you the following mixture of *Dr. Overkamp* for an Injection, which I have experienced to be very good in this Case.

℞ Bac. *Lauri, Juniper. aa. ℥i. Roris marini*
℥ss. Salv. ℥i Myrrh. ℥ss. coque in s. q.
Vin. Gall. Colaturæ ℥xxv. adde Camphor.
℥iiii. Elixir Vitæ ℥i. M. f. Injectio.

Wounds in
the Diaphrag-
ma.

Wounds in the *Diaphragma*, ought carefully to be observed in what part of it they happen, for round the Body towards the Ribs it is *Fleshy*, that it might the better promote *Respiration*, and therefore Wounds are not very dangerous in that part; if no other parts near it are injured, for they will easily be cured if carefully attended. The middle part abounds with *Tendons, Nerves and Membranes*, and is perforated in three several places, to make way for the *Oesophagus, Vena Cava ascendens* and *Arteria Aorta*; so that from hence we may readily conceive, the great use and employment of the *Diaphragma*, and what Pains and dangerous Symptoms it may produce when it is wounded; for the *Intestines* will be drawn upward into the Chest, hinder the necessary Motions of the *Heart*, and inevitably disturb *Respiration*; so that the Patient may in a manner be suffocated and dye without Remedy; but it generally happens, that such Patients dye in *Convulsions*, or fall into a *Delirium*, occasioned by excessive Pains and Torments in the nervous parts of it. The Cure must begin, by administering proper *Internal Medicines* and *Vulnerary Potions*, and outwardly dressing the Wounds with dry Tents, and a good *Oppodeldöck* Plaster; applying over that again, a thick spread *Cataplasme* for Eight days together, which will do you great service in preventing *Inflammations* and other ill accidents. It is prepared as followeth.

℞. Pulv. fol. *Theæ, Alchimill. aa. ℥i ss.*
Malvæ, Verbasc. aa. ℥ii. flor. Sambuc.

ʒi. Cammomill. ʒiʒ. Rad. Althea. Hord.
 Mund. aa. ʒi. Farin. Fabar. Terr. Sigillat.
 Bol. Alb. aa. ʒvi. M. f. Catapl. ad usum dictum;
 Cum lacte Vaccino vel decocto radicis Althea.

And thus much I think sufficient, concerning Wounds in the Breast.

Now I proceed to treat of Wounds in the *Epigastrium* or the lower Belly, by which I mean, all the containing and contained Parts, that are under or below the *Diaphragma*, the Thighs and Legs excepted. These Wounds differ much from one another, according as the Parts where they happen are distinguished into more or less dangerous: As the *Liver*, *Gall*, *Bladder*, *Stomach*, *Spleen*, *Guts*, *Kidneys*, *Bladder*, *Kall*, *Ureters*, *Womb* and *Privities*, of each of which we shall discourse particularly, as largely as is requisite for the ensuing Book; tho' without mentioning any thing relating to Wounds that only hurt the *Outward* Parts; but only of such as entring into the *Cavities* of the Belly, wound some of those Principal Parts.

Wounds in the *Liver*, if they penetrate into the Substance of it, are generally mortal, because you cannot reach them with Medicines or Stipticks; but if they happen in an extreme Part of the *Liver*, and have hurt none of the considerable Branches of the *Vena Cava* or *Porta*, they may be cured, as might be confirmed in several Examples: Which you may perceive, if there runs but little Blood out of the Wound, and no dangerous Symptoms attend it. The *Diagnosicks* of great Wounds in the *Liver*, are a violent Flux of Blood, the Patient vomiting both Blood and Gall together, and voiding great Quantities of the same Matter by Stool and Urine; by which you must necessarily discern how difficult the Cure must be. But if there be any Hope, do what possibly you can, to stop the violent Bleeding, by the most restraining Medicines you can think of, and afterward endeavour to expel the coagulated and stagnated Blood out of the Belly, to hinder it from putrifying there. Which may be done with the following Decoction.

ʒ Rad. Cichor. Pimpin. Consolid.
 aa. ʒi. Rhubarb. ʒvi. fol. Epat. Veron.
 Abrotan. aa. Mj. Sanicul. Thea ag.
 Mj. ʒs. Flor. Stachad. Epatick aa. ʒss.
 Ocul. Cancr. Spermat. Ceti aa. ʒv.
 Mumia, Sangu. Hircini aa. ʒii. Essent.
 Myrrha, Aloes aa. ʒiss. f. Decoct. cum s. q.
 Aqu. Fontis.

Of this Decoction give the Patient a quarter of a Pint to drink warm, Morning and Evening. The Cure in the External Part consists in keeping the Wound open for some time, with convenient Tents moistened in *Mel Rosarum*, and a good Stiptick or *Opodeldoch* Plaister over it.

Vesica Fellea, or the *Gall Bladder*, though it's seldom wounded, yet sometimes it is, though never except the *Liver* is wounded also; but whensoever it happens, is mortal and incurable, especially if it's

wounded at the bottom; for if you could reach it, 'tis impossible to unite the Skin again. Anatomists differ among themselves about the Use of the Gall; yet all agree that it hinders the Blood from Coagulating, and keeps it in its due Consistence, which conduces much to a healthful Constitution. Others, as *Riolanus*, *Bartholinus* and *Dr. Glisson* say, the Gall warms the Liver and hinders Obstructions; preserves the Acidity in the *Ventricles* which help Digestion, from putrifying, and warms and comforts the Stomach. *Aristotle* on the contrary, says, that the Gall was nothing but a rejected Excrement, and of no Use in Mankind; but he was besides the Mark, as well as *Galen*, who in a tedious Discourse, says, the Gall was very useful to every particular Part of the Body, yea, that no one Part of the Body could live and subsist without it; but gives no Reason to confirm his Opinion.

Wounds of
the Stomach.

Wounds of the *Ventricles* or *Stomach* are dangerous, and generally mortal, especially if they happen in the *Orifice*, or pierce through the lower part or bottom of the *Stomach*; for the *Orificium Ventriculi* having a great Affinity with the *Brain* and *Diaphragma*, by reason of the *Nerves* which encompass it; Wounds in that part are incurable: Besides, the Meat and Drink, and the nutritive Juices which are in the *Stomach*, will pass away into the Cavities of the Belly, and there cause dangerous and deadly Symptoms. These Wounds may be known, if they happen in the Parts where the *Stomach* resides, and by the Symptoms which attend it; as the Hiccup, excessive Vomiting, Cold Sweats, Faintings, and as often as the Patient eats or drinks it comes up again; which will easily inform you, that these Wounds are difficult, if not impossible to be cured.

But if you have reason to apprehend there is a Possibility of doing good, then enlarge the Outward Wound; pull the *Stomach* towards you with a pair of Pincers or small Hooks, that you may strew upon the Wound my *Astringent* Powder twice a day, (which Powder you will find described in the first Chapter of the first Book.) Or if it is possible, stitch the Wound in the *Ventricle* together with a Needle and Silk; which I have done several times in the *Camp* with good Success, as many can witness. Some I know will admire at this Method, and let them enjoy their humour, it's sufficient to me that it has done very well. When you have sewed it up, let the end of the Silk hang out of the Wound, that without the help of Instruments, you may pull the *Stomach* towards you, as often as you have occasion to put the Powder into the Wound. You must also order the Patient's Food to be light and of easie Digestion, and prescribe him good *Electuaries* and *Powders* to strengthen his *Stomach*, and give him a Wine-glass of the following *Potion* warm.

A Stomachical Potion.

℞ *Fol. beton. veron. Alchymil. aa. Mifs. rad. consol. maj. aristot. long. herb. auricul. mur. aa. ℥ss. summit. Absinth. Mj. Cort. aurant. ℥ss. coqu. omnia simul in aq. Borag. & Hordei s. q. colatura Ltiiii. adde oculi caneroc. ppt. ℥vi. vin. cydonior. granatorum aa. ℥iiiss. Mell. rosarum Syr. Myrtin. aa. ℥i. ess. Myrrh. ℥iiii. M. f. s. a. D.*

When

When you find the Patient grows a little better, and the Wound in the Stomach is closed, cut off the Silk Thread, meddle no more with the Stomach, and heal the Outward Wound afterwards according to Art.

Wounds in the *Spleen*, if they happen in the Substance of it, are dangerous and deadly; but if the Wound is not very deep, you need not despair of the Cure. The Signs of these Wounds are, that at first Blood intermixed with Chyle runs out of the Wound, and afterwards is followed by a thick black Humour, which in a manner looks like Lye made of Red Wine: The Spleen swells, the *Iliac* or Flanks tumefie, and the Patient complains of a great Drought and a continual Thirst.

Wounds in
the Spleen.

About Three Years since, I had a *Lace-maker* in Cure; who lifting himself for a Soldier, and after endeavouring to escape, let himself down Two pair of Stairs high, but by chance came down almost headlong, and falling upon his left Side, it happened that a *Knife* he had in his Pocket, run through his Side into the *Spleen*, making so large a Wound, that when the Knife was pull'd out, there came forth not only a good piece of the *Spleen*, but also of the *Kall* out of the Wound, which I put in again into its proper place. The outward Applications signified very little, because it was impossible to reach the wounded Spleen. On the swelled Flank I applied a good *Cataplasm* boiled up with Milk: In the Wound I put a Tent, to keep it open for some time, and healed it up with *Emplastr. Oppodeldock*. Internally I gave him a Mundifying and Healing Decoction, by which Method he was perfectly cured in Nine Weeks time.

Wounds in the *Kidneys* are also dangerous and deadly: Dangerous if they enter into the *Fleshy* parts of them called *Parenchyma*; but Mortal, if they are wounded in the Middle of their Substance, for thereby they are incapable of performing their Offices, which are so necessary in Extracting and Separating the *Saline* and *Watry* particles of the Blood, and sending them through the *Ureters* into the Bladder. The Signs of those Wounds are the running out of a simple and pure Blood from the Wound; for then the *Parenchyma* is only wounded; but if there also comes forth a *watry* Blood and Urine, it's an indubitable sign that the Wounds pierce through the Inward Concavities thereof: In which case you must begin with the following Injection.

Wounds in
the Kidneys.

℞ Decoct. rad. *Aristoloch. long.* & *Symphil.*
cum *Aqu. Mell. q. s. Colaturæ recent.* ℥xxv.
adde *Mell. Rosar.* ℥ii. coque lento igne ad
consistent. *Balsami. postea admisce. Bals.*
Sulphur. Terebinth. Balsam. Peruvian. aa.
℥ii. ss. *Unguent. Sanct. Joh. Andreae de Cruce*
℥ii. *Misce ad form. Balsam.*

This must be injected warm into the Wound Three times a day, with a Syringe that has a pretty large and open Pipe. *Andreae de Cruce's Unguentum Sanctum* is what follows.

℞ *Terebinth. lot.* ℥xii. *Ol. Hypericon.* ℥ii. *Gum.*
Elemi ℥xviii. *Mastich.* ℥ii. *M. f. ad Balsam. form.*

I cannot

I cannot imagine why Dr. *Munick* leaves out the *Mastick*, and instead of it adds *Resin. Pini* ℥xii & *Ol. Laurini* ℥ii. which is not to be found in that Learned Old Gentleman *de Cruce*, and therefore does not merit the Commendation he gives it.

Wounds of
the Guts.

Great Difference and Distinction is to be made in Wounds of the Guts; for if the small Guts are torn and cut cross through, there is no hopes of a Cure; but if the Wound is only in the sides and length-wise, and you can pull the Gut towards you, to sew the Wound up again, and strew it over with my *Restraining Powder*; *Or if any of the greater Guts are hurt, as the *Intestinum Rectum*, there is yet hopes of recovering the Patient. Signs of the small Guts being wounded, are, that there first comes out of the Wound a mixture of *Chyle* and *Gall*; afterward Victuals and Drink; the Patient complains of grievous Pain about his *Navel*, and what he eats or drinks immediatly comes up again. If the *Great Guts* are wounded, the Excrements come presently forth at the Wound, and stink abominably, and the nearer the Wound is to the *Intestinum Rectum*, the more Crass is the Excrement: Which are such Demonstrative *Diagnosticks*, that there is no need to enquire after others. I have already hinted something for the Cure of Wounds in the Guts, and now can only say further, that the only way of Cure is sewing up the Guts that are wounded, and apply convenient Remedies to heal them. If the Outward opening should not be large enough, it must be made wider by Incision, that you may better come at the wounded Gut to stich it and put it into its place again; but if the Gut lies in the hollow part of the Body, then you must draw it towards you, that you may sew it together and put some of my *Pulv. ad Saturas* upon it. Dr. *Munick* would have the sewed Gut first washed with warm Wine, in which *Rose*, *Cammomill*, *Scordium* & *Absynthium* had been boyled; then Balsam of *Peru* or of *Sulphur* with *Turpentine* applied to it, and at last the following Powder.

* Lib. I. cap. 5.

Wounds of
the Bladder.

Rx *Aloes Mastich. Oliban. Mumie*
Sangu. Draconis aa. ℥i M. f. ad subt. pulv.

I think if some *Tragacanth* and *Rad. Consolid.* were added to it, 'twould be much more effectual. This being done Three or Four times, the outward Wound may be cured as usually. These Patients for a Year together ought to wear about their Bodies, a good Bolster or a Girdle, that no Tumor or *Hernia's* may proceed from such a Wound or Accident.

Wounds of
the Bladder.

Wounds in the Bladder, either in the middle or upper part of it are generally Mortal, because the Skin cannot be sewed together, nor can you come at it; but if the Neck of the Bladder or lower in the Fleshy part should be wounded, the Cure may be perfected with diligence and proper Medicines. Signs of the Bladder being wounded, are, if the outward Hurt is downwards towards the Privities about the Region of the Bladder? If Urine coloured with Blood runs out at the Wound, and the ordinary place of Passage is obstructed, and cannot be made useful but by a *Catheter*. The Cure much depends upon the Patient's being kept to a proper Dyet, and that

that he drinks but moderately and in small quantities: The outward Wound must be Dressed with a good *Vulnerary Balsam*, and an *Oppodeldoch* Plaister, and into the Yard must be injected warm Four times a Day, with a Syringe having a long Pipe the following Liquor.

℞ Decoct. rad. *Altheæ Alchimill. & veron.* ℥iij. *Raqu. matwes Flor. borrag. aa.* ℥iij *Sach. Saturn.* ℥ii *Laud. opiat. Di Mellis Chelidom.* ℥iij *Misce f. J. detur ad vitr.*

To promote the Cure by internal Medicines, therefore give every Morning and Evening to the Patient ℥iij of the following Potion, which I assure you will do you great Service.

℞ Fol. *Agrimon. M. ifs. herb. fragaria, auricul. mur. veron. sanicul. aa. Mi rad. rub. tint. Serpentar. aa.* ℥ss. *cort. aurant.* ℥iij *cort. Lign. fraxin. ℥iiss ocul. canc. spermat. ceti aa.* ℥ii *Misce f. Decoct. cum Aqu. fabar. & vini aa. partibus s. art.*

If the *Kall* is wounded, and any thing should be pulled out with a Sword, or any other Instrument that gave the Wound, it must be speedily put into its place again, and if any thing be *Putrefied*, which it's very subject to, it must be either *Cut* away, or if time and place will permit tye it off, and bring the sound part into its place again. The outward Wound must be treated as those before mentioned; only take care that you use no *Oily* or *Unctuous* Medicines to it.

Wounds in the Kall.

Wounds in the *Privities* and *Genital* parts are also dangerous and deadly, dangerous if the *Testicles* and *Yard* are hurt, but mortal, if the Wounds are very large, or part of the *Testicles* and *Yard* are taken off. The Signs of such Wounds being visible, it would be a folly to spend words or time about them. The Cure must begin with *Astringents* to stop the bleeding as soon as possible, and continued by using a good *Cicatrizing Plaister*, and a *Cataplasm* to prevent an *Inflammation*, which is one of the chiefest points in the whole Cure. By all means forbear the use of *Unctuous Applications*; for they will cause an *Inflammation* and *Putrefaction*; but employ all *Drying Medicines*, and in the first place use *Mell. Veronica* warm; Eight days after apply the following Water with *Lint*, and over that my *Lac Virginis*, with fine *Linnen Rags* moistened in it and laid on warm.

Wounds in the Privities and Genitals.

℞ Decoct. rad. *Aristoloch. long. cum Aqu.* ℥ss. *Veron.* ℥vi. *Lixiv. & Calcaviv.* ℥iiss. *Tulie ppt.* ℥ss. *Sacch. Saturn. Myrrh.* ℥a. ℥ii. *Camphor.* ℥ss. *Aloes. Alum. usli.* ℥a. ℥i. *M. f. Camph. & Myrrh. solut. in aliquantul. sp. Vini digeratur per aliquot dies & serv. pro usu.*

In July 1689, I had in Cure a Taylor named *Hana Muller* of *Haberstadt*, who falling into a violent *Fever* which took away his Senses and made him *Delirious*, he almost cut off his own *Yard* with a *Knife*, and tyed his *Testicles* so very hard with a *Ribbon*, that I had much ado to untye it, and prevent a *Mortification* of the part.

History.

What Pain and Torture the Patient must have endured, may easily be conjectured. The people of the House being not suddenly aware of what he had done, made him lose abundance of Blood before I came to him; so that I had trouble enough to stop the Bleeding: But when I had gained that point, I applied good Medicines to prevent an Inflammation, and into the Canal of the Yard I put a Silver Pipe for his Urine to pass through; Dr. *wolff* a Physician in that Town, took care to supply him with Inward Medicines, and I was above Twelve weeks before I could cure him, and then the Patient was well restor'd, and has often bewailed his irrecoverable Loss.

CHAP. III.

Of Cancers, chiefly in the Breast; their Cause and Cure.

Experience confirms, that *Cancers* may grow in all parts of the Body, tho' the soft, spongy and glandulous parts, as chiefly the *Lips* and *Breasts* are most afflicted with them. Of the former we have sufficiently discours'd in the first Book, and now will treat of the Latter; after I have given you the erroneous Opinions of the *Ancients*, and the more judicious Sentiments of *Modern* Physicians, concerning the Cause of *Cancers*.

Johannes Andreas de Cruce * says the Original of *Cancers*, were from preternatural Melancholy burning Humors, and were often occasioned by eating great store of *Lentils*, *Snails* and *Beef* boiled in *Copper Vessels*. *Johan. Vigo* is much of the same Opinion, and to as little purpose. *Galen* † calls a *Cancer* *Melancholia naturalis & Pex sanguinis*, a natural Melancholy and Dregs of the Blood, and also a superfluous *Atra Bilis*, which settling in any part of the Body caused a *Cancer*. *Avicenna* is very confident that it is nothing else but an *Adust* Melancholy Humour. *Sennertus* is * also of Opinion that a Melancholy Humor was the first cause of a *Cancer*, and also blames *Atra Bilis*, which by its thickness, stops up the Passage of the Vessels, that it cannot pass through the fine Channels, and there, tho' the Humor was but a little Burning caused a lurking and hidden *Cancer*; but if the Burning was very sharp, it caused an *exulcerated* *Cancer*. *Paracelsus* † to that of *Sennertus* adds a disordered Diet, that occasioned a Crass and Viscous Blood, which injuring the *Liver* and *Spleen*, produced an ill disposition for generating a *Cancer*. *Cardilucius* says, *Tom. 3. c. 25. p. 93.* that a *Cancer* was a true *Venenous* humour; generated by corrupted Blood, which settling in one part or other of the Body, became Corrosive, and spread larger, as the place was disposed to receive it. *Fabricius ab Aquapendente*, assigns several Causes, viz. an immoderate heat of the *Liver* and *Spleen*, which first caused *Atra Bilis*, and then a *Cancer*: A weak and feeble *Spleen*, which was incapable of separating and elaborating the Melancholy Humour: Obstruction of the *Hæmorrhoides* and the natural *Purgations* in *Women*, often procured a *Cancer*. *Felix Wurf, Chirurgia p. 411.* says, a *Cancer* in *Women*, came often from the ill healing

* 1. 1. c. 32.
p. 135.

† 1. 2. c. 12.

* Prax. part. 1.
l. 5. c. 20.

† lib. 7. c. 27.

healing of their *Sore Breasts*, that for want of being truly cleansed, first grew into Schirrous, and afterward to a Cancerous Tumor; as the humour which was left behind, grew more corrupt and stronger. *Agricola* says it proceeded from an *Acrid Salt*, derived from a *Menstruous* and *Hemorrhick* Blood, which degenerating and growing sharp and corroding, settled in certain places where it became a Cancer.

Let us now consider our Modern Writers, how much they have improved the Study of *Physick* and *Chirurgery*, in the lights they give us to find out the true Causes of Diseases, and their rational methods of Cure. *Mr. de Billy* ascribes the cause of a Cancer in Womens Breasts, *Part. 3. pag. 117.* to an Induration of the Glandules, wherein the Juices and Humours stagnating, grew corrupt, and by degrees produced a Cancer; and chiefly if the Chirurgion used Repelling Medicines instead of Mollifying and Resolving, and such as too much refrigerate the parts, and cause the Matter in the Glandules to be more compact, and grow into a Schirris, which causes no great pain, because the Nerves are also obstructed. *Overkamp, Chirurgia l. 1. c. 9. p. 193.* says, a Cancer is an Induration of the Glandules, caused by an Acid and Vitriolick Juice, which abounding in the Blood and Juices and being ulcerated, become more Acrid, Saline, Acid, and intermixt with a *sal Alkali*. *L. Funcken Chirurgia Manualis. Sec. 2. c. 6.* says a Cancer is an eroding Humor in the Glandules, obstructed by an ill constituted and stagnated *Lymphus*. *Bontekoe* after his usual manner of refuting other Mens Opinions, *Capite 3. Art. 4. p. 200.* says a Cancer proceeds from the depraved Juices in the Glandules. *Monfieur Clerck* the French Kings Physitian at *Paris* makes these differences in the cause of a Cancer. That without an Ulcer he says is a *sensless* Tumor, arising from an *Adust* Humor, and calls it *Cancer Primitivus*; but the *Cancer Degeneratus*, follows an obstinate and ill cured Tumor or *Apostema*, and therefore without turning to *Cancer Occultus*, grows into a *Cancer Exulceratus*. *Dr. Munnick* in his *Chirurgica Praxis, lib. 1. c. 13. pag. 226.* thinks the proper cause of a Cancer, was a gathering of Acid, Saline, Austere Humors in some parts of the Body, which as they grew more or less eroding, caused a *Cancer Occultus* or *Exulceratus*; but not long after, he says, that thistle Austere, Acid and Saline Moistures, came either from a too hasty or a too dilatory Cure of Tumors, where Matter being left behind and shut up, growing more Acrid and Acid, first grew to a *Schirrus*; after degenerated into a *Cancer*, and at length by its great *Aspeticity*, became Corrosive and Ulcerated. *Blanckard* in his *Chirurgia lib. 3. c. 24. p. 334.* calls a Cancer an eroding glandulous Tumor, or a Schirrous Induration of the Glandules which growing bigger by degrees, either by an Accident or an Acrid or Acid Humour stagnating and hardening in the Glands, turns to a Cancer.

Now since a Cancer is so difficult to be known at its first appearance, and generally this small Tumor coming without Pain, is little regarded by the Patient, who never thinks of curing such a Trifle; but when this Tumor or *Induration* of the Glandules increases, grows harder, and is accompanied with pungent and twitching Pains; then they want Advice, and the Cure may be performed with good Medicines, though

though not always; but when the Tumor becomes very large, and many of the Glands are obstructed and hardened, then no Medicines, though never so good and penetrating, will signify any thing; and only the *Knife* and sometimes a *red-hot Iron* can only perform the Cure. Of each of which methods of Cure, I will now treat particularly, and begin with Medicines, of which I shall give you the best that are known to Mankind.

Cure by Medicines.

Those Medicines I mentioned in the Cure of a *Scrophalus* and a *Noli me tangere*, are also proper in the Cure of a Cancer: However, when you are called to such a Patient, apply the following Plaister over it somewhat warm.

℞ Emplastr. de Cancr. Fabricii Hildani, Diaphoret. Mysic. aa. ℥vi. Sal. Armon. pur. Arsenic. prepar. aa. ℥iss. Gum. Opopanax Galban. Ammon. aa. ℥i. Bdellii. aa. ℥ii. Calc. Viv. ℥i. Sal. Ciner. Clav. ℥ii. Sal. Volatil. C. C. ℥ss. M. f. dilig. & Malax. cum s. q. Ungu. Nobil. Mysic. & Ungu. de Arthan. ad Empl. form.

Though this Plaister is somewhat costly and troublesome to make, don't let that affect you; the Benefit will more than recompence the Charge; for it is an excellent Medicine for the Cure of Boyles and hard Glandulous Swellings; but if you cannot be so soon provided of it as your Business requires, make use of the following, which I have always found very proper in this Disease.

℞ Emplastr. Diasulphur. Rulandide Ranis cum tripl. Mercur. Vigon. aa. ℥vi. flor. Sal. Armon. ℥i. Mastich. Myrrha. aa. ℥ii. Antimon. Diaphoret. Croc. Mart. Aperitiv. aa. ℥ss. Ol. Antimon. Arseno puriss. tartar. fetid. aa. ℥ss. Laterin. ℥ii. Cera q. s. M. f. ad Empl. s. artem.

If these Two Plaisters will not gradually dissolve it, I can assure you there is little good to be done in this Case with other Medicines; However, if the Cancer is already *Ulcerated*, and the Patient is unwilling to have it cut; then you must only employ a *Palliative Cure*, and daily put into the Ulcer *Dobens's Balsam* warmed.

℞ Cinnabar. Antimon. Di. Ocul. Cancr. Sal. Saturn. aa. ℥i. Sperm. Ceti ℥ii. Cymphor. gr. ℥ss. Balsam. Peruvian. M. f. Balsam.

If this does not please you, make use of the following in manner above laid.

℞ Terra Sigillat. Vitriol. recte edulcor. aa. ℥iss. Ceruss. lot. Plumb. usi aa. ℥iii. Sacchar. Saturn. Mercur. dulcis. aa. ℥i. Ol. Nicotian. Tartar per

deliqu.

*deliqu. Ol. Philosophor. aa. ℥ii. Bals. Peruvian.
Copaiba aa. q. s. Miscē dilig. ad Balsam. form.*

Here is also another good Balsam, which is to be put into the Ulcerated Cancer as the abovementioned, which I have commonly used with good success.

*℞ Arsenic. Chrystallin. Auripigment. aa. ℥ss.
Virid. Aeris Aristoloch. Rotund. aa. ℥iiss.
Minii ℥ss. Camphor. ℥i. Opii ℥ss. Unguent. Nutrit.
℥ii. Miscē s. artem.*

Balsam. Antimon. Basilii Valentini is also an excellent Medicine in this case, and so is that *Balsam. Saturni Tulpii*, which is described in his Observations.

Now we will proceed to the Cure of a Cancer by Manual Operation, in which divers methods are prescribed for the performance of it. *Seligen*, l. 2. c. 4. recommends the old way of thrusting Two crooked Needles and Silk through it cross-wise, and leaving the Ends hanging out of the Cancer, to pull up the Breast with them; and this manner is agreed to by *L. Junken*, *Blanckard*, *Muraltus*, *Scultetus*, *Fienus*, *Aquapendens*, *Fabricius Hildanus* and several others. For my part, I never used such a tedious method, but have had more Commiseration for my Patients, as this City of *Breslaw* can testify, where I have cut Nine Cancers out of Womens Breasts from the Foundation very successfully, and yet never used this way; for before the Needles could be thrust through the Breast, which is a prodigious Pain to the Patient, and the Ends of the Strings ty'd together, to put the Hands into, I have cut off the Breast in half the time only with my Hand, beginning where the Breast is soft, which is commonly towards the Ribs, and there if you find cause you may tye a broad string about the Breast, behind the place where the Cancer is hard, to hold it by; but if that part of the Breast which joyns to the Ribs is all over hard and knotty, then neither thrusting the Needle thro' or cutting will signifie any thing; 'tis a *Noli me tangere*, and you can proceed no farther, unless you can find a good bottom near the Ribs; as it happened to me about Eleven years ago, in the case of *Mr. Michael Milschen* an Innkeeper in *Rautenskrantzze*, who had an Ulcerated Cancer on his left Breast, of a very long standing, and but half a finger's breadth from the Ribs, which I cut off; yet finding that at the bottom some part of its Root remained behind, I presently took an Incision Knife with a small Button at the Point, and excoriated the whole with it; by which means he was perfectly cured in eight Weeks time, and continued well at the writing hereof, being never troubled with any sense of it since. Therefore I say again, that you need not trouble your self, or torment your Patient with Needles, if you follow my Example. Some there are that use Hooks instead of Needles, and others a particular kind of a Bag, in which they enclose the whole Breast, and tye it about it where the place is found, thinking they have done an extraordinary matter; but I still approving the way that has constantly succeeded in my Practice, shall proceed to direct you in it.

Cure by Manual Operation.

History.

When your Patient has been sufficiently prepar'd for this Operation, by the Advice of an able Physicain, and you have all things necessary on a Table by you; place your Patient on a Chair towards the Light, tye his Arms and Hands close and fast to his Body, about the Middle; and if you find it necessary, tye a Silk string twice round the Breast, towards the Ribs, as hard as the Patient can suffer it; to which string you may fasten Two other strings, tying them together on a knot, to draw the Breast towards by them; but this is only to be done, when you think you cannot hold the Breast firm enough with your hand. Then take a crooked Knife in your Right Hand, and cut towards the Right Arm, if you are to cut off the Right Breast; and on the contrary if it be the Left; and with all the care and caution imaginable, cut out all you find hard or knotty, and as quick as possibly you can, while your Assistant in the mean time wipes away all the Blood, that you may see the bottom, and feel any thing that is left behind, in order to excoriate it, or touch it Two or Three times with a hot Iron. This being done, draw the Wound together with Two or Three small long stripes of a good sticking Plaister, and apply to it a soft Mushroom, upon which my Astringent Powder is laid pretty thick, and over that a good large sticking Plaister, and on that double Linnen Rags moistened in warm Wine; then roll it all over very firm with a good Roller and Bandage, to keep every thing close and immoveable. On the second day towards the Evening, take all off, and new dress it again as before. If the Plaister and Mushroom will not come easily off, let it lie some days longer; but if it comes off well, apply to the Breast the following Detergsive Unguent with Lint, and over that *Emplastrum Sticticum Crollii*, washing it Ten or Twelve days longer with warm Wine, and continue the former method till it's perfectly healed.

R. Terebinth. Cypr. ℥iiii. Balsam. Vulnerar.

Hankii ℥i. Pulv. Gum Elemi, Myrrh. Oliban.

aa. ℥ii. Vitell. Ovor. no. ii. Croc. Orient. Bals.

Peruvian. aa. ℥iss. Misce fiat Liniment.

If the Wound will not easily Cicatrize, apply *Empl. Saturninum Mynsichti* to it, and that will soon answer your attention. Here I must not omit acquainting you, that sometimes after all is well performed, and the Cancer utterly rooted out, yet Two or Three years after, a new Cancer will grow, either on the same or the other side, if the Patient abounds with such Malignant, Acrid and Acid Humors, which again by obstructing the Glandules, generate a Cancer, as *Cornelius Celsus*, l. 5. c. 28. and *Fabricius Hildanus* acquaint us. I have also observed the same in one *George Klotzen* a Countryman of *Krysanewitz*, whom I twice cut of a Cancer in both his Breasts; the first time in *January 1686*, and the second in *July 1688*, and both successfully performed; nevertheless in the year 1689, a Cancer seized on his Lips, which I cut off, and also Salivated him; but he died shortly after.

In *June 1689*, I had a great Lady Baronne's in Cure, whose Name or Family I must not mention, who had an Ulcerated Cancer on her Right Breast, near the *Papilla* or Nipple; but was otherwise of a

very

very fanative Constitution, and about Thirty Six years of Age. She was troubled with it above Four years, and now and then complained of violent Pain and Stitches. Dr. *Jenisch*, Dr. *Oehm*, and Mr. *Christian Schlottnick* were joined with me. After her Ladyship's Body was prepared with Internal Medicines, I cut it out one morning, in the presence of Dr. *Tielische* and Mr. *Hans* a Chirurgion in this City, exactly in the same manner as before is directed; in which Operation the Lady lost not above Five Spoonfuls of Blood, from the beginning to the end. The Bandages being applied, and every thing done, the Lady was laid upon her Bed, without any kind of Faintness; but about Twelve a Clock, being suddenly taken with Coughing and Vomiting, the Blood gush'd out very fast, and she lost about the quantity of Two Quarts by that Accident. I presently cut all the Bandages and every thing else in pieces, and dress'd it anew with every thing fresh and clean as before, and bound it up as close and firm as I could; upon which the Bleeding ceased, and all other things were in a hopeful posture. The Vomiting which we dreaded as troublesome and dangerous, returned no more, and the Patient in less than Eight weeks time, was perfectly cured, without ever feeling any sign of it again; but Three years after died of a Dropsie.

CHAP. IV.

Fistula's in the Thorax, their Causes, Differences and Cures.

TWO Reasons have principally mov'd me to treat here of *Fistula's* in the *Breast*. First, because I am of opinion that few Authors have handled that Subject as they ought to have done. And Secondly, because in my *Chirurgia* I have omitted several things necessary to be known.

'Tis no strange thing to see *Fistula's* follow Wounds in the Breast, for some of those *Viscera* being hurt, the Blood settling on the Diaphragma in time will putrifie; and if Nature and the strength of the Patient's Constitution cannot throw it off, will corrupt the parts where it settles, and at length produce a *Fistula*. This shews the reason why such abundance of Matter is cast out, when such a *Fistula* is opened; for unless there was a great quantity of Putrefaction, it would not be able to force its way in the course it takes; and therefore the Chirurgion must take care to give it vent as soon as possible, to prevent the approach of dangerous Symptoms. These *Fistula's* also very often arise from a Pleurisie of a very long continuance, especially if it causes an *Apostema*; for then the matter being not always wholly cast out of the Lungs, but some Crass and Viscous Corruption remaining behind, it grows to a *Fistula*. They also proceed from Wounds in the Breast, that have not been, or by reason of their situation, could not be well cleansed, or scoured with such proper *Mundificantia*, as necessity and the parts required; for then the Matter lies lurking in obscurity, and in time causes an Inflammation and a Tumor; and if the *Sternum*, the *Spina Dorsi*, or the *Membrana*

The Cause of a *Fistula* in the Breast.

Pleura

Pleura is wounded, it certainly produces a *Fistula*. *Muraltus* is of opinion in *Anatomico Collegio lect. 16. p. 300*, that these *Fistula's* proceed from *Defluxions* of the *Head* and *Breast*, and I will not deny it, though I am sure it very seldom happens. The same Author in his other *Chirurgical Writings, Observ. 138. pag. 415.* gives us a remarkable Instance of a *Fistula* in the *Breast*, when he was consulted with the Famous *Dr. weiffer*, which I recommend to the perusal of the Ingenious, where they will find very curious hints relating both to the Cause and Cure of a *Fistula* in the *Thorax*.

The Cure of these *Fistula's*.

The Cure of these *Fistula's* are very difficult, yea, if I should say that of twenty scarce one is cured, I should not impose upon the Reader. Internal Medicines in these cases signifie nothing; by Outward Applications they are seldom the better, because they cannot reach the bottom of them, and Injected Liquors are hindered in their Operation, because they stay behind with the Matter, and bring nothing out. *Aquapendens* says, *Chirurg. part. 2. cap. 48.* that if they are in some measure brought to a Cure, the Patient must be forced to wear a Pipe in the *Fistula* as long as he lives, to keep it open and give vent to the Corruption: Yea, the *Chirurgion* must always be at hand, because the Pipe is often stopped, which causes great pain, shortness of Breath, and other ill Accidents. *Pigraus* not only says these *Fistula's* are incurable; but adviseth, since all the *Chirurgion's* diligence and care was to no purpose, to employ only *Palliatives*; to order the Patient a proper Diet, and to keep the outward Orifice always open, since the Patient never survived long, but always died in great pain and misery after the outward Wound was healed up. But what is then to be done in this Case? To which I answer, first, by all means make the Outward Wound larger, to give the Pus and Matter a free Passage out, and that the Injections may reach the bottom of the *Fistula*. Then inject the following Liquor warm Two or Three times a day, and put a Leaden or Silver Pipe into the Wound, that the Corruption may be constantly running out.

Rx Herd. mundat. Rad. alth. Aristol. rotund. irid. flor.
aa. ℥ss. fol. Veron. Alchymill. thea. agrimon. aa. Miss.
flor. centaur. min. prunelle. rosar. aa. Mi coq. in s. q. vin.
℞ aqu. Mellis; deinde exprim. Colatura ℥xxxv. adde mell.
Chelidon. ℥iss. rosar. ℥i. Myrrh. in spirit. vin. solut. ℥i.
M. f. Injēctio. & appl. s. a.

If this should be something too troublesome, take the following, which I always used in the Army, and found it very beneficial.

Rx Decoct. hordei mund. & rad. aristol. long. c. aq. flor.
prunell. ℥xii. balsam ad fistul. mi. ℥i. aloes, myrrhe,
sarcocollæ, aa. ℥iss. sacchar. Saturn. ℥ii. M. f. Injēct.

Inwardly the Patient may take very often *Pulv. rad. Consolid. ℥i.* and of this *Vulnerary Potion*, a good Glass full Morning and Evening.

Rx fol. veron. malva, pulmonar. aa. Miss. herb. beton.
Scabios. aa. mi. rad. irid. flor. scorzon. aa. ℥ss. Liquirit.

3v. sem. annisi ʒiii ss. Fœniculi ʒii. rhubarb. Fol. senn. aa.
 ʒvi. rad. chin. sassafr. aa. ʒss. ocul. canc. spermatis ceti aa.
 ʒiiss. coquantur in Aqu. Mellis & aqua Tussilaginis quant.
 s. per dimid. hor. postea adde colaturæ Syrup. papaver. Errat.
 ʒii. Fiat Decoctio.

The Outward Wound may be kept open as long as you please with Tents and a good Stiptick Plaister; but if you desire to heal it up, you need only apply the *Oppodeldoch* Plaister to it; but this I would not have you attempt without the advice of an able Physician, lest the Patient should grow worse by healing it up too soon.

In the next place I shall give you a curious Observation transcribed from the Ingenious *Blegni*, which was communicated to him by that Famous Chirurgion Monsieur *Boirel* of *Argentueil*, and after that another of my own.

The Son of a Great Nobleman *De la Genevrage*, was push'd into the Breast with a Sword on the right Side, between the Fourth and Fifth Rib counting downward. When I came to the Patient I soon perceived by the shortness of his Breath and clear Blood running out of the Wound, that it had penetrated his Breast; for whensoever the Lungs are wounded, difficulty of Breathing and Ratling in the Throat do always accompany it; the Blood comes foaming out of the Mouth, and that which issues out of the Wound is of a Fine Crimson Colour. In the first three days there came out two Pounds of Blood, and two days after at every Dressing about two Ounces of a very viscous Red and thick Moisture, which congealed as soon as received into the Porringer. However, this plentiful evacuation could not prevent a *Fever*, which seized him on the Sixth day, and continued with great violence till the Fourteenth, attended with a Cough which increased every day, and was a dangerous Symptom. The *Tent* came also out of the Wound very *Black*, and yet there was no sign at all of any corruption in the Cavity of the Breast. The Fifteenth day the *Cough* abated. The Seventeenth a Substance partly *Fleshy* partly *Membranous* but very rotten came out of the Wound, with above three Ounces of bloody coagulated Matter, after which the *Tent* never look'd black again as before. The Eighteenth, Nature cast out another piece of a *Fleshy* Substance, and as much matter as the day before, to the great Ease of the Patient; but this Evacuation not succeeding on the Nineteenth day, the Patient was taken with a very great cold and shivering, and after that with a *Hot fit* of a *Fever*, which abated the next day towards the Evening; but presently after such another fit seized him worse than the first; tho' the Fit was not so violent and intermixt with some gentle breathing Sweats. These *Paroxisms* tho' they are commonly the Signs of a returning *Fever*, yet all the Physicians thought they proceeded from some latent *Sanies* in the Cavity of the *Thorax*; so that at their desire, tho' contrary to my own Intentions, I was forced to make a *Paracentesis*, or opening into the Chest, upon which followed some drops of Blood with a kind of blowing and a steam; Now after they had seen this, and found the Operation was to no purpose, they desired it might be healed up again. Two days after this Operation, there came out of the old Wound a small piece of

History from
Mr. *Blegni*.

a putrified *Membrane*, and more than half a pound of stinking Matter, which continued flowing more or less every day, sometimes white and other times blackish; but this brought the Patient into a *Consumption*. Afterward the Wound turn'd to a *Fistula*, and the Patient was forced to wear a Pipe cover'd with *Emplastr. Andreae à Cruce* two years together. However, all this time the Patient kept a good Dyet, lived very temperately, and by the constant use of Womens Milk, the Wounds were healed, and the Patient so perfectly recovered, that afterwards he used all the Exercises of a *Fencing School*, which requires good Strength and Activity of Body; he Married, begot several Children, and lives in good Health, tho every one Thought him in a *Consumption* before he was wounded. This Observation I thought fit to insert in this Place, to let you understand, how such Patients may sometimes be cured, contrary to all Opinions and Expectations; to the end that the Chirurgion may not despair, but use all possible endeavours for the Recovery of his Patient.

Observation.

In the Year 1690. *Michael Werner* an Inhabitant of *Langen wiese* under the Jurisdiction of *Sandretzky*; 38 Years of Age, was brought to me, who Three Quarters of a Year before, was wounded by a Country-man with a *Hay Fork* through the *Sternum*, and so unluckily, that the Weapon went into the *Mediastinum*, and so the Water in the Cavity of the Breast fell upon the *Diaphragma*. A keeper of a *Bath* in that Place had him in Hand all that time, and had given him a *Pectoral Decoction* but without Effect. As soon as he came to me, I made a good Injection to Cleanse the Breast, and gave him a proper Dyet Drink, after which he began to mend a little, and the Wound did not stink so abominably as before; but perceiving a little swelled place like a Tumor towards the right Side, I perswaded the Patient to let me open it, and I was the more enclined to it, because he complained of a great pain in that Place; he consenting to it, I opened it on the Twelfth Day after he came to me, with such good success, that above a Pound of very filthy Corruption came out of it, which gave him great ease, and the Wound made by the *Pitch-fork*, healed up in Ten Days time. But out of the *Incision* which I made, there came out constantly abundance of Matter and of a very ill Seent, which continued so for about a Fortnight: Then the noysome Smell began to grow better; nothing but a thin clear waterish Matter run out, which in a Month after totally ceased and the Wound was healed up also. The Patient Lives at this time in good Health, and never since had any Symptom of his former Distemper. In this case I cannot but observe, that all the while the Patient was under my Care, he never complained of any Pain about the Region of the *Diaphragma*, which had been so long burdened with so great a Quantity of Putrid Stinking Matter, and in so sensible a part, which I cannot consider without Admiration, and as a thing which ought to be further enquired into; nor can I omit taking Notice that tho the *Paracentesis* was of no use in Monsieur *Blegni's* Observation, yet employed in a right Time and when Necessity requires it, 'twill certainly save a Mans Life, as it did in the case of this Countryman.

Operation, which gives immediate ease and relief to the Patient. If Matter lays long there, the Breasts grow as well as the Case will suffer Parasthesis, as they will in another in Respiration, and consequently may be more easily injured, and the longer the

Paracentesis Thoracis, or the Opening of the Breast, what it is, why and how Performed?

Since we have often had occasion to mention a *Paracentesis*, I will here Describe its Operation and Use, with all its Circumstances; as properly belonging to the more curious parts of *Chirurgery*, and of great use in the Wars.

Paracentesis, is an Incision made with a large Lancet in the hollow part of the Breast, for the Evacuation of Matter, Sanies and other Moistures contained in it when the Breast has been hurt or wounded. I say other moistures and depraved and Extravasated Juices, because a *Paracentesis* is used in several Diseases, as I shall shew Anon. The Ancients performed this Operation with a *Potential*, nay sometimes an *Actual Cautery*; but I rather advise it to be done with a good Lancet, or a convenient Incision Knife; which will do it with more ease, speed and safety; For if it be done with a Cautery, you must wait some Days before the *Eschar* can be separated to give the Corruption Vent, but by *Incision* the Patient is made easy in a Moment. Besides, several Accidents attend Cauterizing, and sometimes nothing less than the Death of the Patient.

What it is:

Many as well Ancient as Modern Authors, are utterly against this Operation in any case whatsoever, and say, that it never effected any thing, but only increased the Patients Pain and Torment; for the Lungs and Heart were weakned by the Access of too much Air, and by continual Exasperations the Lungs putrified and the Heart was so enervated that neither of them could perform their necessary Functions. Among the Ancients, *Paul. Egineta*, *Hollerius*, *Celsus* and *Avicenna* were chiefest. But if they had read *Hippocrates de affectibus Internis Morb. lib. 3. Cap. 15.* they would have entertained other Opinions, for he in those Ancient times wrote incomparably of *Paracentesis Thoracis*. Among the late Writers this Operation has also had its Enemies; but I suppose it's only because they never experienced it, or don't understand the use and benefit of it. For my part I can truly say, that I have had the Tryal of it many and many times, especially in the *Camp*, and that with the greatest Success Imaginable; for in Wounds of the Breast, where the Patient is almost suffocated and ready to Yield up his Life, the Opening of the Breast, in a Minutes time will Snatch him from the brink of the Grave.

Authors Opinions concerning it.

Now the reason why this Operation is in use, is not only because after the Internal parts have been wounded, the Blood and Putrified Humors should not Fall and Settle upon the *Diaphragma*; but that other obnoxious Humors and Moistures gathered there, might be evacuated. Such are the *Dropsy* in the Breast and in an *Empyema*, *Vomica pulmonis*, and in Great Defluxions of the Head and Breast; for in all those cases, there is a Collection of Slimy and depraved Juices. In all *Impossumations* of the Breast, there is also a gathering of Blood and Matter, which settles upon the *Diaphragma*, and cannot be taken away but by this

Why this Operation is in use.

Opera-

Operation, which gives immediate ease and relief to the Patient. If Matter stays long there, the *Diaphragma* as well as the *Lung* will suffer Putrefaction, as being Assistants to one another in Respiration, and consequently may be more easily injured, and the longer the Matter stays, it grows more acrid and corrupt, and by its Acrimony makes an Erosion upon the *Diaphragma*, and brings it to Corruption, which may be prevented by this Operation.

This Operation must not be enterprized without a due consideration of the subsequent Indications; as of what Constitution the Patient is; for if he is weak and enervated, lean, pale and fallen in his Face; if he rattles in the Throat, his Breath short, and complains of oppression at the Heart, and continual Stitches in the sides of his Breast, you may give him up for a dead Man, you have overstaid your time, and if you attempt this *Section*, the Wounds are so dangerous that he will die under the Operation, and by doing it you will bring a Scandal upon the Work; for People will not cease to affirm that he died by his Breast being opened.

But if you are certain that there is much Matter in the Breast, which you will know if you cause the Patient to turn himself suddenly on the other Side; for then you may hear the noise of the Water falling from one side to the other; you must begin the Operation without delay, before other dangerous Symptoms appear. If there is an *Impostume*, the Patient will complain of pain on that side where it lies, the part will rise, grow red and be inflamed; sometimes the Patient will be cold and chilly, and other whiles feverish; he will complain of great pains in his Back, violent Coughing, and a great heaviness and oppression at the Heart. All these Symptoms you must diligently observe, and direct your Operation accordingly; I mean on that side where the Water is, where the *Impostume* shews itself, and where the Water swells and raises the Breast; for the *Mediastinum* divides the Breast into Two parts, and if the opening should be made on that side where the Wound is not, it would be a fruitless Operation; unless the Wound being very high, you find cause to make Incision in both sides of the Breast; as it happened to me in the case of Ensign *Quitsov*, at the Siege of *Stettine*, where I first made an Incision on the right side of the *Thorax*, and four days after another in the Left Side, and both with great Benefit to the Patient.

There is great differences in opinions between the Ancient and Modern Writers, about the place where a *Paracentesis* ought to be made. Some would have it made between the Third and Fourth Rib, according to *Hippocrates*, *Alex. Benedictus* and *Lusitanus*; but *Aquapendens* and *Sennertus* will have it performed between the Fifth and Sixth Rib. *Fransus*, *Riverius*, *L. Junken* and *Munnick*, say it's better done between the Fourth and Fifth Rib. With the First *Tulpius* agrees, and is certainly in the right; for the others are too low, and therefore I constantly performed it between the Third and Fourth Rib, and always with good success. Once I remember I was forced to make an Opening between the Fourth and Fifth Rib, in the case of *Christian Lorentz*, a Corporal in the Regiment of Colonel *Estrnimb*, because the situation of the *Diaphragma* was very high. The proper place without doubt is the middle of the Side, not too much back-

backward or forward: Not too near the *Sternum*, because there lies the *Mediastinum*, and too near the Back you will be in danger of hurting the *Nerves*, which will cause miserable Accidents; nor can it be so well performed in that place, because the Ribs there are broader, thicker and nearer one another than in the middle part of the Side; not to mention the *Muscles* which thereabouts are stronger than in the Side. *Hippocrates* of old, and *Monfr. Blondelet* Chirurgion at *Toulon* of later years, would not have it done at all between the Ribs; but direct that the Ribs themselves should be bored through, and then the *Membrana Pleura* might be push'd thro' with a Lancet; but I cannot agree to it; for to what purpose should we give the Patient so much trouble, when an Incision will do the work both speedily and safely; and you need but make use of your *Eyes* and *Fingers* to find the space between the Third and Fourth Rib.

To perform it after the best manner, having given your Patient something to drink, to comfort him and support his Spirits, and having all things in readiness on a Table near you: Set your Patient towards the Light, mark the place where you design to cut, let your Man hold him fast, then take hold of the Skin with the Two foremost Fingers of your Left Hand, pull it upwards from the Ribs, cut it through a Finger's breadth and let it go again; then let your Assistant pull the Lips of the Wound from one another, that you may better see the Ribs, and to cut the rest quite through. If the Patient is lean, there is no need of cutting twice. Let him hold his Breath to hinder the Expansion of the Lungs, and then, your Lancet being guarded in the middle or thereabouts with a Paster to hinder it from slipping in too far, push it through a little slanting as far as the Ribs will permit; then immediately put in the above-mentioned Pipe, and fasten it with strong sticking Pastors applied round the Body, keeping it's strings close to the Skin. Of these Pipes you ought to have several sizes at hand, to choose one that is fittest; for if it be too short, the *Membrana Pleura* will come before it and stop it, and if too long it will cause dangerous Accidents, as Coughing, Stitches in the Sides, &c. If there is much Water or Matter in the Cavity of the Breast, let it out by degrees, and not too much at once, lest your Patient faints. If it be slimy thick pus, you must rarifie it with the following Injection, and having done that a little while, let the Patient turn himself on the Side that is opened: Shut his Mouth and stop his Nose, that the *Lungs* and *Midriff* may swell and be stretched out, and the *Intercostal Muscles* and those of the *Abdomen* by being compressed, may expel the Pus or Matter contained in the Breast. The Injection is thus prepared.

℞ Decoct. hordei, rad. irid. flor. & rad. alth. c. s. q.
 aqu. alchimill. ℥vi. mell. rosarum, ℥ss. sacch. saturn. ℥iss.
 ess. myrrh. opii aa. ℞. M. f. Inject.

But if the Internal Accidents, as the Cough and shortness of Breath should yet continue, then you must give the Patient this following Potion Three times a day.

℞ Decoct. tussilag. sem. fœniculi & anisi, c. s. q. aqu.
 hyssop. ℥xii. Ol. anisi distill. ℥ss. syr. rad. pimpinel. ℥ss.
 M m papaver

papaver errat. ℥iij. *sacchar. cant. alb.* ℥v. *ocul. cancr.*
 ℥iiss. *mumia* ℥iiss. *spermat. ceti* ℥ii. *Misce f. Rotus f. a.*

When you see the Pus grows less and begins to cease, you may take out the Pipe, and only put a Tent in it strewed over with the Powder of burnt Aloes, and withal use the following Balsam to get a sound and good Foundation, and then heal it up by degrees with *Emplastrum Oppodeldoch.*

Re Ung. digestiv. ℥iij. *bals. vulnerar. Hantkii* ℥iij.
peruvian. ℥ii. *terebinth. cypr.* ℥i. *myrrh. sarcocol.*
aa. ℥i. *Jarg. dracon.* ℥iiss. *M. ad for. Balsami.*

Harzer, the Famous Spanish Chirurgion at *Valladaoillo*, has sometimes performed this Operation in an *Empyema*, between the second and third Rib, if he thought that place was fittest for his purpose, and afterward cured it successfully only with *Decoctum Sarsaparilla*, mix'd with a little Essence of Myrrh. I cannot but admire how it came into Licentiate *Juncken's* *head, to say there were but few Chirurgions in *Germany*, that had Courage enough to undertake this Operation; since he cannot but know he wrongs us in a high degree, as can be proved beyond contradiction by many and dayly Examples.

* *Chirurgia manualis absoluta*, Sect. 2. oper. 2. c. 9. p. 273.

Observation.

In September 1691, a Countrywoman from *Grasburg* near *Strechlen*, about 58 years of age, came to me for help, who laboured under a *Pleurocele* or Dropsie in the Breast, which was puffed up with Water to such a prodigious degree, that she could not see her Feet, and what was to be admired at, never complained of any shortness of Breath, nor pains and stitches in her Sides, or any other Ailment, but was more active and nimble than was possible to be believed. All that troubled her, was, that she could not lie down in her Bed, but was forced to sleep up in a Chair. I opened a place in the Right Side, between the Third and Fourth Rib, in the presence of *Dr. Schultz*, and drew out about half a Pint of Water, which was repeated again the same Evening, and so I continued Three or Four days; but afterwards lessened the quantity, and drew away but Two or Three, and sometimes but one Ounce at a time, and as the Water decreased, I used the above-mentioned Injection, infomuch that in Ten weeks time she was perfectly cured. You must take great care in dressing it, to let in as little Air into the Breast as is possible, for it will occasion very heavy Symptoms; of which you have a curious Observation in *Ephemerid. Curios. Observ. 55. Decur. 2.* It is also worth your while to consider, that such a vast quantity of Water, lying so long upon the *Diaphragma*, should not run into the Lower Belly, since it might have found its way thither through the perforations made by the *Oesophagus*, the great Artery and Vein.

CHAP.

C H A P. VI.

Of *Fistula's* under the *Diaphragma*, that enter into the *Stomach*, with *Two* very curious *Observations*.

I Am very sensible that these *Fistula's* in the *Stomach* do very seldom happen; but because they sometimes do occur, though not always as the consequence of a Thrust, Gun-shot, or other external Accidents; but have been caused by Internal Accidents and erosion of the *Stomach* it self, therefore I will treat of them here in my *Chirurgia Curiosa*, because I have had large experience of them in several Examples, especially in the cases communicated to me by Mr. *Raupbach* of *Rosstock*, Mr. *Schulfer* of *Brunswig*, and Mr. *Krause* of *Quedlinburg*, of which I shall say more anon; in the mean time it's no controversy among us, that *Fistula's* in the *Stomach* may be caused by several unthought of Accidents, as by the *Heer van Herberdt* of *Harlem*, his swallowing a *Seal*; upon *Monsieur Collichon* a Musician at *Paris*, his swallowing a *Writing Pen*, and *Madam Hiddensen* of *Leiden*, her swallowing a *Pin*; and not only the *Stomach*, but several other parts of the *Body* are subject to *Ulcers* and *Fistula's*, as the *Guts*, *Gall-Bladder*, *Bladder* and *Kidney*, how tender soever they are in *Children*, yet are liable to these *Distempers*, as I have often found in my *Practice*. At first they are small and inconsiderable things, not worth the minding; but lurking a long time in the *Body*, the *Patient* complains of an oppression and pain in the part where the *Ulcer* is, which should excite the *Chirurgions* diligent Enquiry into the first Cause, to prevent its further Progress, and provide for its Cure.

From whence they proceed.

Hence you may conclude, that the Cure is very difficult, and chiefly depends upon the Administration of proper Internal Medicines, because Externals cannot reach the Part affected, except *Cataplasms* for the mitigation of Pain; but when Nature has forced the Disease towards the *Skin*, and it rises more and more outwardly, then the following *Plaster* will draw it more forward, and bring it to Maturity; if it be applied warm Three times a day.

The Cure.

℞ *Emplastr. Diachyl. cum gumm.* ℥ss.
de Mucilag. Silvii ℥vii. pulv. sœn.
grœc. Sem. Lini, rad. Alth. aa. ℥iii.
Farin. Fabar. ℥ss. *curcum.* ℥iss.
Gumm. Galban. ℥i. *M. f. ad Emplastr.*
consistentiam.

This is an excellent Mollifying Maturing Plaster, and will perfectly answer your intentions, and when it is come to Maturity, you must cut it open to give the Matter vent. As for what else remains to be done, you will find it in the following Historical Observations.

Mr. *Raupbach* an eminent *Chirurgion* in *Rosstock*, in the year 1689, sent me a notable Observation of a Student in that place, who being fond of eating *Fribuli aquatici* or *Water Caltrops*, gathered some in

Mr. Raupbach's Historical Observation.

the

the Month of *September*, and having not the patience to stay till they were half boiled, swallowed them down so greedily, that half a shell of one of them went down with the *Kernel*, which he minded not in the least at that time; but about half a year after, he complained of a violent oppression and pain at his Stomach, and consulted a Physician and Mr. *Raupbach* to give him ease; who for some weeks gave him Internal and External Medicines, but to little purpose. At length after the application of *Emplastr. de Gummatibus Sylvii*, a Tumor appeared about the Region of the Stomach, which in a Fort-nights time came so forward, that on the Sixteenth day he opened it with a Lancet, which for Four days together threw out abundance of filthy carrion-like Matter, and the Fifth after the opening, he saw the *Caltrap shell*, right against the hole that was made by Incision, which hole being made a little wider, the *Caltrap-shell* was taken out the same day; and yet after all the pains and care Mr. *Raupbach* took to heal it, nothing would do; but it remained an Open *Fistula*, because he could not come at it. Now is not this very strange, how such a soft and large *Shell*, should continue so long there without being digested or worn away by the Stomach, and that the edges of it had power to bore through the firm and strong Coats of the Stomach, without injuring any Internal parts that lie near it; especially if we consider the great quantity of *Putrefaction* wherein it was contained, and yet that this Shell should come out in its own shape, without being rotten, is certainly very wonderful.

Mr. Schulfer's
Historical Ob-
servation.

In the year 1680, when I lived as Chief Chirurgion in the Plague at *Halberstadt*: Mr. *Schulfer*, a famous Chirurgion at *Branfswig*, sent me the following History of a Glover he had in Cure, about Twenty Nine years of age, who having a sharp Three-edged Needle in his Mouth, and seeing his Child fall off the Table, was so frightened, that the Needle suddenly and unawares slipp'd down his Throat, and without any difficulty found a way into his Stomach. At first he felt but little pain, and carefully observed if it would go away by stool, but met with nothing but a continued disappointment, for no Needle was voided. Three quarters of a year after a Tumor rose about a hand's breadth above the Navel, which in a month's time grew as big as a Wall-nut, but without pain, unless you touch'd the place where the Needle was, and then he found a pungent and pricking pain in the part. This caused him to send for Mr. *Schulfer*, who immediately applied a Cataplasim to it, and with such success, that the Fifth day the Needle might be perceived, which he drew out with a convenient *Forceps*, and was only something black, and worn away a little about the point; for he sent me the Needle that I might see it. Then the Chirurgion was forced to make the hole something larger, because the Inflammation and Pain increased, out of which in Three weeks time came abundance of stinking Pus and Corruption, which being voided, he used his utmost care and skill to heal it up, but all to no purpose, for it continued an Open *Fistula*. This Observation methinks is no less wonderful than the former, that after so long a time, the Needle should first work its way through the Stomach, and then into the Belly, and yet should not be worn away, nor injured by the *Acidum* in the Stomach, and also that the Putrefied Matter could lie so long in that place, and do no more hurt to the neighbouring parts.

Mr. *Kranse*

Mr. *Krause* a well experienced Chirurgion at *Quedlingburg*, sent me a Letter in the Years 1679, the Contents whereof was, that he had then in Cure one *Christopher Nabrigh* a Taylor in *Mannsfeld*, who as he was walking in his Masters Garden in *September*, pull'd off an *Abricot* and fell to eating it, but seeing his Mistress coming towards him, he swallowed it Stone and all; whereupon he presently felt a great Pain in his Stomach and fainted away in the Place; perhaps caused by the Stone sticking in the Orifice of the Stomach; for about an Hour after came Mr. *Krause*, and gave him something to Drink, which I believe removed the Stone, because he was soon easy after it. After some Questions asked him touching the cause of his Illness, he told the Chirurgion that he had swallowed the Stone of an *Abricot*, and he seeing the Taylor was well after it, minded it no more, in expectation that it would take its natural course of Evacuation; but Three Weeks after that, he was sent for again, and found the Patient had a great Tumor as big as an Egg towards the right Side, about a Hands breadth above the Navel; upon which for Eight Days he laid an *Emollient* Plaster, which performed its Office very well; but the Patient was all this time in great Pain and Misery. *November 18* he opened the Tumor in my Presence, and to our great Admiration, one half of the *Shell* of the *Abricot Stone* came out with the putrified Matter, and Six Days after the other half followed also! In the mean time, a small quantity of Pus came away, but nothing of what he Eat or Drank came out of the Stomach: Nor did he complain of any Pain in the lower belly; or evacuate any Pus or Corruption by Stool or Urine which was reasonable to expect he should; because such a Stone, must necessarily make a large hole and perhaps almost in the bottom of the *Ventricle*, and therefore I thought some Matter or other might easily fall down into the lower belly, and there force it's passage or cause Putrefaction. Mr. *Krause* took very great care of him, but could not prevent it's growing to a *Fistula*: Which I saw the Patient troubled with Five Years after, in the same Condition, calling upon him as I went through *Quedlingburg* to *Breslaw* in *August 1684*. and yet, which was much to be admired at, the Man was otherwise healthy, pretty Fat and Strong of Body.

Here we may see to our great Admiration, how indulgent Nature does its utmost Inwardly for the relief of Mankind, in these difficult Cases; but the Chirurgion may essay all imaginable Methods and Medicines, but can effect nothing, because he cannot reach the bottom of it, and therefore if one in Twenty Recover, he is obliged to give God Thanks for it.

In the Month of *May*, 1688. I had a great Nobleman in Cure from *Glasgow*, of the Family of *Kotwitz*, who was sadly afflicted with a *Fistula* in his Stomach, which happened by the falling of his Horse as he Rod a hunting, in which he hurt his Stomach against the Pommel of the Saddle, which he little regarded at that time; for tho' it so weakned his Stomach that all he Eat and Drank came up again, and had continual Pain in the Place that was bruised, yet it went off by Degrees without Suspicion of future Danger. However about a quarter of a Year after, he saw arise in the same place a sort of a Boil, which by Degrees growing bigger and bigger, he employed a Chirurgion at *Glasgow*, who applic'd a Cataplasim to ripen it. A while after he was pleased to put himself under my Hands at *Breslaw*, and I having confi-

Mr. *Krause's*
historical Ob-
servation.

An Observa-
tion of the Au-
thors.

An Observa-
tion of the Au-
thors.

dered the Case, applyed a *Pultis* to it likewise, and perswaded him by all means to let it be Opened, which was done next Morning in the Presence of Doctor *Tyelsche*, and followed by abundance of stinking Corruption, and above an Ounce of small Raisins which he had Eaten Eight Days before. Next Day came away more, with a little *Sallas* he had Eaten the Evening before; which obliged us to conclude without further Doubt, that the *Impostume* went into the Stomach, which I found afterward by searching it with a Probe: I injected the following Liquor into it with a Syringe, and always left a small Silver Pipe in the Orifice to give the Matter Vent, and hindered the outward Air from coming to it with a good Plaister and doubled Linnen Rags to a considerable Thickness.

Rad. Consolid. maj. Aristoloch. long.
aa. ℥i. Alchimill. veron. Sanicul.
aa. M̄ ss. flor. rosarum. M̄. incidantur,
& infundantur. in aque fontis, Mensur.
per Noctem, hinc ad dimid. part. decoquantur.
Colatura addantur Mell. Rosar, ℥i.
Essent. Myrrh. ℥ii. M. f. Inject.

This Course I continued above Three Weeks, and then the *Pus* beginning to decrease by Degrees, and no more Aliment coming forth; I kept the Wound open almost a Month longer and often dropt into it the following Balsam.

℞ Mell. Veron. Chelidon. aa. ℥i.
Succ. Momordic. inspiss. ℥ss. Myrrh.
Sarcocol. aa. ℥i. Aloes ℥ss. Sacchar.
Saturn. ℥iiii. Misce f. Balsamus.

After Eight Weeks I took out the Silver Pipe, and dress'd it only with a Tent of Lint, which as the *Pus* decreased I made Shorter and Shorter, and at length took it quite out, and perfectly healed up the Wound with *Emplastr. Oppodeldoch.* Three Years after I had the Honour of discoursing this Nobleman again, who was pleased to tell me he was never in the least troubled with it since, but continued as well as ever he was in his Life.

Another Observation of the Authors.

In July 1693. I had an Eminent Gentleman of this Town in Cure, whose Name I have no Authority to Publish, because he is yet alive. He had a *Fistula* in his Stomach of Three Years continuance, being otherwise indifferent healthy and about Thirty Years of Age. The passage of this *Fistula* was not direct but oblique, inclining towards the left side full Three Fingers broad, and then went first into the cavity of the *Belly*, and on that side into the *Stomach*. Without further hesitation I presently made an Opening in the *Belly*, and another directly over the *Fistula* in the *Stomach*, and healed up the other passage in Three Weeks Time; but the other opening no Medicine would prevail upon. Sometimes it would look very well, and in Six Weeks I had obtained a good bottom towards the Foundation, so that we were in hopes of a Cure; but all of a sudden it broke out again and a stinking *Pus* issued out. When the *Fistula* began to close up, we all observed that the Patient complained of greater Pain than usual, his Flesh

fell

fell away, and his Strength decayed. We therefore enlarged the Wound by Incision, that the Medicines might go to the bottom. Then I saw that the Ribs on the inside near the *Fistula* were quite black, which I attempted to take away with the *Phlegm* of *Vitriol*, but not succeeding in it, I scraped them, and in Three weeks time, covered them with good sound Flesh. The bottom of the *Fistula* in a Months time was closed up again by my Balsam mentioned in the foregoing Observation; but with very ill consequences; for the Patient immediately lost his Appetite, and the Pains and Torments in his Belly returned with greater violence; whereupon, by the Advice of several Physicians, the *Fistula* was ordered to be kept open, and only such Medicines to be applied, as would prevent its Inflammation and further progress. This was done in *April 1694*, and the Gentleman at the writing hereof, was in indifferent good health. The *Fistula* is still open, and now and then sends out a shiver of the Ribs, where the *Fistula* forces its way, but without any great incommodity. Here the Chirurgion and Patient may observe, that it is not always the best course, to heal up this kind of *Fistula's*, because the Patient generally grows worse after it, as in this case; where it would most certainly have killed the Patient, if the *Fistula* had been healed.

C H A P. VII.

Paracentesis Abdominis, or the Opening of the Lower Belly, how to be performed that no ill Accidents may attend it.

THis is a particular Operation, and seems something dangerous; but if undertaken, where the Patient is not too much weakened and very aged, it may be done very successfully, and in a manner save the Patient from Death, as will plainly appear in the last following Example: Therefore let none be frightened at the terrible representations of some Authors that cry it down; for I have known abundance of People, that have received great Benefit by it, to the Honour of the Operation.

Opening the lower Belly.

Dr. *Decker* of *Lejden*, * has given us a very rare Observation of a Woman of 48 years of Age, whose Belly was of a prodigious bigness, and Three yards in circumference, which was opened twice on the right Side, a hands breadth below the Navel; and that it succeeded so unhappily, must not be attributed to the Operation, but to the ill state of the *Viscera*, which may be read at large in that Treatise.

*Obfer. p. 185

To discourse about the cause of a *Dropsie*, is none of my business in this place; it must suffice, that I say, 'tis an Operation commonly practiced in that kind of *Dropsie* called *Ascites*; which is a gathering and accumulation of Water in the *Abdomen*, between the *Peritonæum* and the *Viscera* residing there, which cannot be evacuated by any Medicines, with so much ease as by this Operation. In particular *Dropsies*, some make an opening in the *Pudenda*, the *Scrotum* and

Legs;

Legs; but this seldom succeeds without a *Gangreen* attending it; of which more in the following Observations.

What place
to do it in.

Authors are at no agreement about the place where this Operation is to be performed. Some will have it cut above the Navel, others in the Navel, especially if it is very much swell'd and stands upward, as it commonly does in this case. Others will have it done under the Navel, with whom I agree, without rejecting the opening in the Navel, if all Circumstances correspond and require it; for it has often succeeded well with me, after having only opened a little hole in it with a Lancet. Yea Nature sometimes forces it thither, to such a degree, that the Navel is tumified with Water, and if not remedied in time, tears it all in pieces to make way for the Water to go out. I generally make this *Paracentesis Abdominis* about a hand's breadth under the Navel; or if the Belly is much swelled, Two fingers breadth lower, toward that side which I think most convenient for my purpose; always taking care not to hurt the *Linea alba* and the *Vasa Umbilica*: Nor do I love to make this Operation above the Navel, because the greatest part of the Water lies below in the Belly, and you would only let out the thin Water, and leave the thick at the bottom of the Belly, which in time as I have observed, will corrupt and spoil both the Bowels and Bladder. Dr. *Seligen* in his *Chirurgia*, part. 3. c. 1. p. 211. * adviseth the opening to be made Three or Four Fingers broad below the Navel towards the Side: that it should be done with a Lancet, and the hole made no bigger than a Pea, to put a small Tent of Lint into it. I agree with him in the place, but not in all the other points; for where the Belly is much extended, and hangs very low down, that place is too high. Nor do I contend about the bigness of the holes; for very large ones will let the Water out too fast, and those which are too little, will hinder the Chirurgion from letting out as much Water as is requisite: Between these Two Extrems the Medium is the best, neither too big nor too little, but such a one as is most convenient and beneficial to the Patient. But if as I have said already, the Navel is swelled very high, and you find the Water is willing to make its passage out that way: Follow Nature and open that part, the sooner the better: For if you stay too long, or wholly neglect it, there will happen a hole, or after Evacuation the Navel will putrefie, which will be but little honour to the Chirurgion, or benefit to the Patient.

* part. 3. c. 1.
p. 211.

The Opera-
tion.

† Tabul. 4.
fig. 4.

The Operation must be done with the Lancet, or an Incision-knife made for the purpose; or a Cutting Instrument cover'd with a Pipe having a broad head, that after the Cutting Instrument is taken out the Pipe remains in the Belly. † Of the ancient Method by *Cauterics* I shall take no notice, the ill consequences that attended it, having caused that Operation to be totally rejected. Begin therefore in this manner; place the Patient upon a high Chair, if that can't be done, let him lie on the Bed with his Belly rais'd high, and let your Assistant stroke up the Skin with both his hands, and hold it fast till the Operation is accomplished; to keep it in a due posture while the Water is evacuating. This being done, mark the place with Ink where you design to operate, and put in your Lancet or Incision-knife so deep, till you find the Water gush out upon you; but make the hole no bigger than that of an ordinary Goose-quill. This being done

done, and as much Water drawn out as you think convenient, put a Silver Pipe into the *Orifice*, and guard it well round about with a good sticking Plaister, and put a Cork into the Pipe to keep in the Water, that none may come out, but when you desire it should. Through the Cork may be drawn a small Packthread to pull it out by, as is usual in Clyster Pipes. Into the Pipe which is in the Belly, put another Pipe of a quarter of a yard long, that the Water may run out into a Basin, without daubing the Patient. He that desires to read more on this Head, may consult *Scultetus*, * who in his *Armentarium Chirurgicum* has inserted the new Instrument of the Learned *Sanctorius*.

*Tab. 14. fig. 22.

The quantity of Water to be drawn forth, must be proportioned to the Patient's strength or weakness; but by no means don't take away too much at first; for that will debilitate the Patient, and dissipate the vivacious Spirits all at once. The Third or Fourth part is generally thought enough, and not too little. Tye the Pipe in fast with a good Bandage round the Body, and when there is no more Water left, take out the Pipe, and heal up the Wound by degrees, with a proper Balsam and Plaister.

In *October 1679*, I had in Cure *Maria Bertrams*, a Burgher's Wife of *Groninghem*, a Mile from *Halberstadt*, Thirty Eight years of age, who was prodigiously swelled with a Dropsie, her lower Belly being Three yards and three quarters in circumference, and her Navel standing outwards as big as the Crown of a Hat, and yet was otherwise tolerably strong and lively. Dr. *Haafenbein* was joined with me, and we made no scruple of opening her the Fourth day, under the Navel towards the right Side, as may be seen in † Letter *A*, with the Instrument *B*, and Pipe *C*. This was done at one single gentle push: Then the Inward Cutting Instrument was drawn out, and the Pipe remained in the Wound. At that time we drew out about a Third part of the Water, and pressed double Linnen Rags and Bolsters upon the Navel, that no more Water might get into it to extend it. In the Pipe I afterward put a Sponge, which had been press'd very close and made fit for it. Over that a piece of soft Leather and double Clothes, and over all a large soft Bag filled with Herbs, and moistened in warm Wine, which always gave her ease in the tormenting Pains of the Belly. All these things were afterwards guarded with a strong Ligature described by *Monfr. Fourniers*, which he calls *Bandage du Tronc appellé le double Rhombus*, and may be found in his Book, *figura 106. pag. 53*. In this manner we continued drawing of Water Fourteen days together, till we had took out no less than One Hundred Twenty Eight Quarts. I kept the Orifice open Three weeks longer, and then finding the Water was totally exhausted, I healed up the Opening: And in *December 1685*, travelling through that Town to *Breslaw*, I found her in very good health, and that she had never since been troubled with any Symptom of a Dropsie. In this Patient's case methinks it was wonderful, that notwithstanding the prodigious bigness of her Belly and Navel, yet the *Pudenda* and *Labia* were in no wise tumified, and though her Legs were swelled below Knee, they were not above. The Species for the Sweet Bag were what follows.

†Tab. 4. fig. 5.

O o

Rx Fol.

℞ Fol. Veron. Malva, Ment. Crisp. Beton.
 aa. Mii. Flor. Rosar. Cammomill. Sambuc.
 aa. Miss. Summit. Absinth. Mii. Cort. Aurant.
 ꝑss. Citri ꝑss. Herb. puleg. Miss. M. scind.
 grosiè pro Saculo.

The Bag was made indifferent large, and every Four days a fresh one applied, which wonderfully strengthened the Patient. If any thing yet further remains, relating to this Disease, you will find that defect supplied in the next Chapter.

C H A P. VIII.

Of a particular Dropsie in the Pudenda, Scrotum and Left Thigh, its Original, and how cured; exemplified in Four remarkable Instances.

THAT the Dropsie does not always begin and take up its residence only in the Belly; but that several other particular places are afflicted with it, is confirm'd by daily experience. But whether it be as Dr. *Bontekoe* says, that if the *Vena Saphana* be under-
 stitched with a Needle and Thread, and tyed close together to hinder the Circulation of the Blood, a Dropsie will ensue, and upon loosening it immediately vanish, I cannot affirm, having had neither time nor opportunity to make Trial of it, though it's certain that in the Dominions of the great *Mogul* in the *Indies*, there is a Province called *Quantick*, where the Inhabitants are commonly troubled with one thick swollen Leg, sometimes the Right, and other whiles the Left, like those that are *Hydropical*. Dr. *Blankard* gives us an Account of a young Gentlewoman who had a Dropsie in *Dextra Uteri Tuba*, and of Two Children who had the same Distemper on and in the Head. *Blegni* also gives us a relation of a Dropsie in *Tubâ Uteri* of the Countess of *Newport*, which is well worth the reading. *Rusch*, *Tulpius*, *Van Twull*, *Blegni*, *Blankard* and several others, tell us that a Dropsie very often happens in the *Uterus* or *Womb*. *Job van Meckeren* acquaints us with the History of a Dropsie in the *Spleen*, and Dr. *Decker* has presented us with the figure of a very great *Thigh*, which the famous *Schmalzcius* opened, out of which came a great quantity of a saltish *Lympha*. To mention more Authors on the same Subject, would but give you an unnecessary trouble, and therefore I shall proceed to my own Observations.

Observation 1. In May 1686, Dr. *Paulus* and my self had a Patient in Cure, a Woman who keeps a *Tavern* in this Town, 32 years of Age, and had a Dropsie and a large Tumor on the *Pudenda* and its *Labia*, which exceeded in magnitude the measure of a quarter of a Peck, but otherwise healthy, and six Months gone with Child. The first Eight days I applied several things to it, but without effect, for it grew

grew harder and bigger, and therefore we agreed, since the Patient could bear it no longer, and that the passage of the *Urine* was quite stopp'd up, to scarifie both the *Labia*, which being done, in Eight hours time there came away above a Gallon of Water; at Night it ran not so fast, the next day none at all, and the Fourth day as much again as ever. Then I made something higher, Two small Incisions, through which in 48 hours all the Water ran out, the parts contracted and appeared in their natural shape and proportion. She continued Three weeks very well, but after that time the Water began to gather again, so that I was forced to make Two new Openings, through which in Two days time all the Water found a passage; encreased no more afterwards, and at her right time the Patient was brought to bed of a Daughter. By this example, notwithstanding all the impertinent talk against it, you may see the necessity of using *Scarifications* in this case, there being no reason to apprehend the danger of a *Gangreen* in this part, though there is in the *Thighs* and *Legs*; which may also be prevented by the use of my *Lac Virginis*.

In August 1693, I was sent for to a Woman, whose Husband belongs to the Post-Office, who also had a Dropsie in the *Pudenda*, which swelled to an extraordinary bigness. She was then about Thirty years of age, otherwise in good health; great with Child and in her Seventh Month. I had a long conference with other Chirurgions about it, for I had a mind to open it, but they would by no means consent to that Operation. At last, Dr. *Tielish* being sent for, and approving my opinion; after I had Two days used a Cataplasm, I opened it in the lower parts, on both sides the *Labia*, with a Lancer, out of which Openings, in Two days time came Two Gallons of Water; the Swelling went perfectly off in Six days time, and in all appearance she was perfectly cured. However, to prevent its returning, I used the following Fomentation Fourteen days together.

Observation 2

℞ Pulv. Ceruss. Bol. alb. aa. ℥i. Tutie ppt.
 ℥ss. Oliban. Myrrh. aa. ℥ii. Vitriol. alb.
 ℥i. Alum. crud. ℥ss. pulv. flor. Sambuc.
 Savina, fol. Theæ aa. ℥iii. coquantur cum
 Lixiv. fortiss. ℔ii. Aqu. flor. Sambuc. ℔v.
 continuò agitand. f. Epithema s. a. &
 Pudende regioni tepidè imponatur.

This also seemed to have effect, the part look'd well and continued so a Month, but then returned again, and the Patient was worse than ever; therefore I opened it again, and in Four Days time the Water was wholly evacuated; but contrary to all our opinions, after Twelve days it returned as before, which I again let out by Four Incisions, for now the Water was more divided, viscous and not so clear as formerly. Upon this Operation she continued free about Three weeks, and in that time was brought to bed of a Son who lived but Two days. Two years after this Woman being with Child again, and in her Eighth Month, was seized with a Dropsie in the same parts as formerly, which I let out by Two Incisions, and then she continued well, and was safely delivered of a still-born Daughter.

In April 1694. Dr. *Regius* and my self had a Patient a Clothier near

Bockoyes-

Observation 3

Bockoyes-Hoff, 28 Years of Age, who was Married but half a Year before. His *Penis* or Yard was swelled with Water to such an Extraordinary bigness, that it grew Crooked; the *Frenulum* was also swollen like a *Cordee* in a Virulent *Gonorrhoea*, and the Patient would not be perswaded but his Wife had Bewitch'd him. As first he made Water very well, but at length it was exceeding painful to him. The *Scrotum* was not swelled in the least, which seemed to me very wonderful. After more than a Fortnight, when we saw that Cataplasms and other Medicines would not prevail, I made an Incision forward in the *Præputium*, from whence the same Day came forth above a Pint of Water, and the swelling of the *Penis* was much abated; but because it ceased to run the Second Day, I scarified the *Præputium* in another Place, and on the Third Day in another, which quite emptied the part, inso-much that on the Seventh Day every thing was reduced to its natural proportion. Thus he continued three Weeks together, and as it may be guessed made use of his Young Wife as formerly; whereupon the swelling returned as before, and to add to his Affliction, he was again tormented with the apprehension that his Wife had bewitched him, and would not be perswaded to the contrary, by all the Arguments we could use against so Foolish an Opinion. *Dr. Regius* and my self being sent for again, we made as before an Incision on the side of the *præputium*, out of which came a little Water, but not the Fourth part so much as in the first Operation, for this reason we repeated the Incision 3 times on the other side, but with little benefit; for but little Water came away, and the Yard continued as much tumified as ever. In fine, we did all that was possible to be done in such a Case; but the Patient growing Lean and very Feeble, and being so much tormented with Pain that he could not Sleep, he was seized with a violent *Cramp* and *Convulsions*, and after enduring Four or Five Fits of an *Epilepsy*, he Dyed: Which was Three Weeks after we were sent for the Second Time. He Dyed in the Morning and in the Afternoon I dissected the *Penis* in the Presence of the Doctor and several other Persons, and found in it a full Quart of coagulated *Lympha* resembling Jelly, which we emptied, and putting a little of it into a Spoon and holding it over a Candle, it grew Thin and Fluxile. I have inserted this Example for no other reason, but to Convince the Operator, that in cases of Necessity the *Præputium* may be scarified without Danger, provided you do not hurt or so much as Touch the *Frenulum*.

Observation 4

In February 1691. *Anna Mullers* a Taylors Wife living in a Town called *Zobten*, 39 Years of Age, was brought to me to be cured, whose Thigh in Fourteen Weeks was Grown so Monstrous big, that a little above the Knee it was a Yard and Half in Circumference, and a little higher above Two Yards about. *Dr. Tielisch* was also consulted. She complained of no great Pain but only near the Knee and in her Groins. The Thigh was very hard, but of the same colour with the rest of the Skin: Very much swelled towards the Knee and yet what was very strange, the Knee was not swelled at all, and she could bend it as she pleased. The hardness of the Thigh and because it would not Pitt when compress'd with our Thumbs, made us of Opinion there was no Water in it, but that it was caused by a Gelatinous and Mucilaginous Matter which lay very deep under the Skin, and therefore we agreed for the First Eight Days, to apply the following Plaster to it.

℞ Emplastr. Diaphoret. Mysic. cum pic.
 ꝥvi. Nigr. Roder. a Castro, ꝥiiss. Carminat.
 Silv. ꝥii. Sulphur. citr. ꝥiiss. Mastich. Succin.
 aa. ꝥi. Tartar. puvis. ꝥii. Gum. Galban. Bdellii,
 Ammon. depur. aa. ꝥi. Geræ ꝥx. Ol. Cort. betul.
 Tartar. fetid. laterin. aa. 9. s. M. f. ad Empl. f.

This admirable resolving Plaster, tho Excellent in these Diseases; and made the Thigh Sweat, and so soft that you might have made Dents in it with your Thumb, yet it was not powerful enough to Conquer the Malady. The Doctor also gave her internal Medicines, and a Cask was made purposely for her to put her Leg in, under which was Burnt Spirit of Wine but without Effect. Hereupon it was resolved to lay a Corrosive of a Hands Breadth upon it made of Silver and Aqua Fortis, which did its Business in Two Hours Time, and Four Days after the Eschar being separated, as I was dressing it, all of a sudden, a nasty Reddish Water Gush'd out with such Violence from the opening, that its Stream reached above Two Yards from the Wound. I quickly made the Orifice wider, because it was very small, and putting a Pipe into it and a Bason under it, let out above Two Quarts of Water, and the next Morning though the Rags that lay upon it were very Wet, yet I took away above Three Quarts more of such Nasty Filthy Stuff; and sometimes Lumps of Blood and Filaments came away with the rest. All this time the Patient complained of no Pain, only she was very Faint and Weak especially at dressing time. In the Evening we continued the same Course, upon which the Thigh began to grow less especially in the upper part of it. The Third Day in the Morning we drew out Two Quarts and in the Evening one, which in the whole was Thirteen Quarts. Then I observed that the Water grew Thicker and more Viscous; bigger Clods of Blood and Filaments came away, the swelling abated every Day, and the Water diminish'd in its Quantity; for in Twelve Days I had taken out Five Gallons and a half of Water, and such like Filthy Stuff out of the Thigh, which was certainly very Strange and Wonderful to consider. This emptying the Thigh at such a Rate, rendred the Patient very Weak, insomuch that she could hardly move that Leg and Thigh at all, which now look'd like a Leather Bag, whereupon Strengthening Cordials were given her to assist Nature that she might more cheerfully undergo her Trouble. From the Thirteenth to the Nineteenth Day went off Nine Quarts, and from the Nineteenth to the Twenty Third, Three Quarts more, in all Eight Gallons and a Half. And then having been Twelve Weeks under our Hands, she was perfectly cured to the Admiration of all Men: Only for some time she Limpt a Little on that Leg, and the extended Skin being Shrunk together was a very uncomely Sight. I have inserted the Figure of this monstrous large Thigh for the Readers more entire Satisfaction. vid. Tabul. 4. Figur. 5.

C H A P. IX.

Of the Stone in the Bladder, from whence it proceeds, and how to Cut it out?

Lithotomia, or cutting a Stone out of the Bladder, is one of the Principal and most Artificial Operations in the whole practice of Chirurgery: And if the Chirurgeon has a Steady, Light and an Active Hand and fine tender Fingers, with well made Instruments, and a Solid Judgment and Experience, he will find Occasion to Employ them all in this Operation: Especially in searching, whether the Stone is Great or Small, many or but one: Whether it is Round, Angular or Oval; for without a certain Knowledge of all these Particulars, you cannot perform it so Artificially as is requisite; therefore before you attempt it, Observe the following *Diagnosticks*.

Diagnosticks
of a Stone in
the Bladder.

To know whether a Patient has the Stone or not, is attended with so much Difficulty, that it requires more than ordinary Prudence and Circumspection, because some that are afflicted with the Stone in the Bladder, yet feel no Pain, nor is there any appearance of Sand or Gravel in the Urin; the reason whereof is, that the Stone is of a very hard Substance & not of such a form as can obstruct or stop up the Neck of the Bladder. But the greatest part of Mankind that are troubled with the Stone, their Urin is Thick, Muddy, Slimy, and often intermixed with Blood and Gravel which causes great Pain by making the Neck of the Bladder, and the *Meatus Urinarius* Raw and sore by its hasty Passage. Others, have the Stone, and shew it by voiding of abundance of small Stones of all Shapes and Sizes, and yet are not much concern'd at it, because their Pain is but little and seldom happens: As it was with Bawon Van Horst Lieutenant Colonel of the Hannover Troops, who travelling through this City in the Year 1687. shewed me a great Box full of Angular, Oval and Round Stones which came from him in Six Weeks Time, the largest whereof was about the bigness of a great Pea, and yet he felt no considerable Pain in voiding them; but to do him Justice he ascribed that happiness to his taking the following Powder, which he highly commended, and I have experienc'd on several Occasions in the case before us.

℞ Nucl. Dactilor. raspat. ℥ii. Pulv. rad. Bryon.

Angelic. aa. ℥iſs. Sem. Violar. ℥i. Misce

f. Pulv. Subtilissimus. Dosis ℥ſs ad ℥ii vel ℥i.

I was unwilling to conceal the prescription of this Powder, for the Sake of those that are afflicted with this Terrible Distemper, because I know it's scarce to be equalized by any other Medicine, for its Vertues in expelling Sand or Gravel. But to return to the Matter in Hand. If your Patient early in the Morning, or after long sitting still and rising hastily, feels something heavy falling down upon the Neck of the Bladder, 'tis a certain sign he has the Stone. If the Stone grows very fast, you may know it by a great Quantity of *slime* and *sand* coming away with

with the Urin. A great many more signs there are of knowing when there is a Stone in the Bladder, which you may find in *Dr. Selengeu* * and *Franciscus Toletus* *, but since the best of them will be too apt to mislead you, proceed a Surer way in this Manner.

* part 2. c. 10
p. 251.
* c. 7. p. 38.
The right way
of searching
for a Stone.

Put the Two foremost Fingers of your Left Hand into the Patients Fundament, as far as you can reach and the Patient Suffer; then bend the Two upper Joints of your Fingers upwards towards the Rectum, and you may both feel the Stone and be able to Judge of its bigness; but if your Fingers are too short, you must take the Instrument called *Catheter Flexilis*, which is full of Joints, and put it into the Yard and so into the Bladder, where you will soon find the Stone, and know it is a Stone by the noise it makes, when you hit the Instrument against it; and this way of searching is counted the best and most certain, by all Ingenious *Lithotomists*. In Women it is otherwise, and other kind of Instruments must be employed; for which see *Mr. Tolet*, * tho the Fingers are as useful in this as the other Sex; and for the generality the most certain Inquisiters.

* Tab. 3.
Fig. 5. & 6.

In discoursing concerning the Causes of the Stone, and how it's generated in the Bladder, It shall proceed in my former Method, and first give you the Opinions of the Ancient, and then of our Modern Writers, that you may see how they differ in their Opinions, and who gives the most substantial Reasons for them. *Parvus* says * the Stone in the Bladder was first gradually by Degrees bred in the Kidneys and afterward forced through the *Ureters* into the Bladder. They proceed from Gross, Tough and Viscid Humors occasioned by immoderate Exercise after eating; which matter settling in the Kidneys; by their immoderate Heat, the thinner part is thrown off, and the Grosser and more Earthy parts Subside, and harden into a Stone as *Bricks* are hardened by the Sun and Fire. *Johann. Andreas de Cruce* † says it was produced out of a Phlegmatick crass and tough Matter, or from Pus or coagulated Blood, and that is the reason that Stones growing in the Kidneys are Red and these in the Bladder Ash-colour, *Fabricius Hildanus* is of Opinion † that the Stone in the Bladder was caused by an unnatural, Crass, Viscid and Earthy Slime, united in the bladder, and by immoderate Heat Baked into a Stone. *Cardilucius* † says the causes of Stones in the Bladder, were first an Innate Disposition and natural Inclination to breed Stones; and next by feeding excessively on hard and viscous Aliments, as *Cheese, Pork, Bacon, Beans, Peas, and Fish*, and drinking *Ale or Beer* not sufficiently boyled, or other Liquors which are not *Fine and Clear*, as *New Wines*, especially such as grew on *Limy, Chalky Ground*, all which things ingendred *Slime* which hardened into *Sand* and then into *Stones*. *Dr. Johann. Agricola* † assigns the Cause of Stones to a Tough, Crass and Earthy Slime which gathered in the Kidneys, the thinner part of which pass'd away, and the Sediment being a true *Tartarous Salt* turn'd into small *sand and Gravel*, and at length coagulated into *Stones*, and by the force of the Urin were driven into the *Bladder* through the *Ureters*; and there contracting more *Slimy terrene* Matter increased in Magnitude, this is almost the same Opinion with *Sennertus & Horstius*.

Opinions of
the Ancients

* *Chirurgia I.*
17. c. 30. p.
393.

† *Chirurgia I.*
5. c. 54. p. 927.

† C. 1. & 2.
p. 927. & seq.

† tom. 2. c.
96. p. 978.

† pag. 318.

Among our modern Authors, *Francis Toletus* * is of opinion, that Stones were ingender'd in the Kidneys as well as the Bladder, and that from a *Terrene* matter, which where ever it settled became like
Lime;

Opinions of
Modern Au-
thors.
* Cap. 4. p. 14.

Lime; being generated from Food which contained such like particles; for Slime of it self cannot indurate to such a degree as to produce a Stone, but being joined with *Limy* particles or other *Terrene* Substances, which too commonly accompany our Meat and Drink, they seldom fail to do it. *Blanckardus* affirms, that they were caused by a Viscous *Salt*, which first obstructing the Glands of the Kidneys, settled there, and cristalized into Sand, which in time converted into Stones, and passed with the Urine into the Bladder, where gathering the same kind of matter, they increased in bigness, till they could not force their way through the Yard. Omitting other Authors, I shall conclude this Head, by saying, that if but one grain or particle of *Sand* come into the Bladder, it lays a Foundation for a great Stone, by lurking in one corner or other of the Bladder, which being augmented by a Viscous and Tartarous humour, grows more compact, bigger and harder. Nor does it only effect this upon *sand* or such like matter, but as I and several others have often observed upon *Bullets*, *Needles*, *Grape-seeds*, *small pieces of Bones*, *Cherry-stones*, &c. if they chanced to come into the Bladder, for a *Tartarous* matter gathering about them, they ingendred into Stones of a vast magnitude. As for example, *Toletus* cut a large Stone out of a Soldier, which had a Thorn tyed to a string in the middle of it, which is very strange to think how it should come into the Bladder. *Fabricius Hildanus* cut out a Stone in the middle of which was a Leaden Bullet. Another in which was found a *Needle*: And one as big as a Hen-Egg, at the end of which grew the Stalk of a *Pear*. Experience also teaches that Stones are found in several other places of the Body. Monsieur *Kellerin* the famous Lithotomist at *Havre de Grace*, cut Stones out of a Man's Shoulder that were overgrown with Hair; *Dolæus* found Stones in the Eye-lids, and *Blegni* in the *Glandula Lachrymalis*. *Tolet* cut Three Stones out of the *Scrotum*, and one as big as a Wall-nut out of the Almonds behind the Tongue. *Paræus* took a Stone out of the Knee, and another out of the *Intestinum Rectum*. *Hippocrates* out of the Neck of the Womb. *Muraltus* found a Stone in the Stomach, and another in the *Gall-bladder*. *Benivenius* had a Patient who threw up abundance of Stones in Coughing. *Bontekoe* found 28 Stones in a Womans Liver, and 38 in the Spleen. *Mollerius* found a Stone in the substance of the Heart. *Munnick* found Five Stones in the Right Lobe of the Lungs, and *Beverwick* as many in the Left. *Tulpius* and *Job Van Meckeren* found Stones in the Brain, Nerves, Pancreas, and in the carnous part of the *Diaphragma*. *Bartholinus* mentioneth a Child of Seven years old, whose Sweat sticking in Drops upon the Bed-clothes, immediately became Stones. *Grasseteau* gives us a relation of a Girl whose Tears presently became stony. *Blegni* names Two several Persons whose Urine after it had stood about an hour became a hard Stone. *Sennertus* found Stones in the Navel and under the Tongue. Mr. *Gunther* a Chirurgion in this Town, in a dangerous accident in the Lower Belly near the Navel, drew from a Gentlewoman in my presence, Twenty Stones of a large size, one of which I have yet to shew. In an Impoſthume of the Navel in a Leather-seller's Wife of this Town, I lately took out Two Stones, one Triangular, the other Quadrangular. Mr. *Haghs* a Chirurgion in this Town, took out of a *Fungous* Excreſcence in a Baker's Knee, Thirteen Stones; not to mention many other examples.

Stones found in many other parts of the Body.

I now proceed to the Operation, which is attended with so many dangers, that the Chirurgion must make special use of his Eyes and Understanding to prevent them; which that he may do, and perform a Cure worthy himself and the Art, let him consult his own Reason and Judgment, with the following Admonitions. If the Stone is very large, angular, and perhaps grown to some part or other of the Bladder, and the Patient is very Young, Weak and Sickly, you cannot prognosticate a good issue. If the Stone is bigger than a *Hen-Egg*, there is great danger in getting of it out, because the Opening in the Neck of the Bladder must be made very Wide, which will be very difficult to heal, though the Patient is very healthy, so many ill accidents attend it. If your Patient has a *Ptisis*, is *Consumptive*, or any of the Principal parts of the Body are Indisposed, he seldom recovers it, tho' the Operator performs his part with all the Dexterity and Judgment imaginable. Such Patients as are *Hydropical*, or are troubled with the *Yellow Jaundice* or *Falling-sickness*, very seldom undergo this Operation without danger of Death. Many *Lithotomists* will not undertake Children, unless they are above Ten years of Age, imagining they were too weak and tender to endure it; but I am not of their opinion; for if the Child is strong and healthy, and the Stone not too large, it may succeed very well, as I have often found in my practice, and experienced in my own person; for I was cut of the Stone when I was but a year old, by the famous Lithotomist *Petzold* of the City of *Luben*: Which Stone is about the size of a great Bean.

Cautions about the danger attending the Operation

The Spring of the Year is the fittest time for this Operation; but if your Patient is in too great Torture to wait for that Season, you must comply with his necessity. The first Intention is to prepare his Body by the Advice of a Physician. Then chuse the Morning as the fittest time of the day to do it in, and having Two hours before given him a gentle Clyster; lay him unclothed upon a firm Table towards the Light, with Pillows under his Back and Loins. Tye his Arms strait down, after you have put his Heels and Legs backwards up to his Buttocks, spread a little from one another. In this Posture, tye all firm together, round the Legs, Arms and Body, that the Patient may not be able to move his Hands or Feet. Lay Cushion enough under him, and place some body to be ready to hold him if there should be occasion. But if the Patient is stout and couragious, you may only cause him to be held, and omit the other formalities, for so I have twice performed it. In Children you must employ a lusty strong Man, set him upon a high Seat, and let him take the Child in his Lap, in the same Posture as above described, and tye the Child as you think Convenient. If a Woman is to be Cut, place her in the same manner as is prescribed for Men, if you would perform it with certainty: Sometimes I know it is done in a great Chair, where the Operator must kneel to do it. *Hil-danus* says he has cut a Woman in such a Chair, only with one Section in *Vagina Vulva*, with so much Privacy, that her Nakedness was not discovered, either to himself, or any of the Women that were near her, and brought away a very large Stone. This is a rare piece of Art, indeed! And they that have Faith enough may believe it, but I cannot. Having your Instruments and all other necessaries in order before you, give your Patient draught of a good Cordial, to cheer and keep up his Spirits, and then proceed to the Operation, of which I will

First part of the Operation.

Cap. 11.

shew you Two kinds, either of which will effect the Cure, though there is a great difference in performing it. The first is the Method prescribed by the famous *Petrus Franciscus*, and is mightily commended by *Hildanus*. The other is a shorter Method, and performed with fewer Instruments, and therefore I have often used it with success.

Petrus Franciscus's method.

Put your *Itinerarium* into the Urinary Passage upon the Stone, and bend its upper end towards the Belly, that the *Perinaum* may be extended and dilated by the hollow part of the *Itinerarium*; then make an Incision with a Knife or Lancet made for the purpose in the Left Side near the Seam or *Perinaum*, as large as you think the Stone requireth. Then put the Two Forefingers of your Left hand being well oyled into the Patients Fundament, and thrust the Stone forward towards the Wound, till you have brought it into the Neck of the Bladder, and can take hold of it with the *Hamulus* or Duck's Bill, and take it out. Sometimes Mr. *Franciscus* puts only a good Tent into the Wound to bring it to Suppuration, and continued this Tenting till the Stone came to the Wound, and then he says he could take it out with ease. But if he could take hold of the Stone presently after the Operation, he took it out with the *Forceps*, and if the Stone was larger than the Opening, he dilated the Wound with a *Speculum*. But if the Stone was too large for the Wound, he broke it in pieces in the Bladder, and brought out every day a piece, till he had took out the whole. But I cannot commend this part of the Operation, because it cruelly tortures the Patient; and do think he should either make the Orifice wide enough, or take out the pieces one after another, for neither the Wound nor the Cure will permit such a tedious and tormenting method; because the Patient will faint away, and grow very feeble in being so harshly treated. The other method follows.

After the Patient is placed and tyed as above directed. Put your Two Fingers into his Fundament and force the Stone into the Neck of the Bladder; then with your Knife or Lancet make an Incision on the Left side of the *Perinaum* a Thumb's breadth, between the *Scrotum* and the Fundament through all the Flesh right upon the Stone, and having made this passage, put in your *Forceps*, and if it lies near enough draw out the Stone; if not, you must help what you can with your Fingers in the Fundament; for the Stone cannot lie far from the Wound, because its weight leads it to the Neck of the Bladder, unless it grows to the Bladder, which very seldom happens; for then it must be separated with a proper Instrument, before it can be drawn out. If there be more Stones than one, take care you leave none behind in the Bladder, but take them gently out one after another. This method is called *Apparatus minor*, because it is much easier and quicker than the former, and does not employ so many Instruments; and though some appropriate this way only to Children, yet I have used it often and with success in older Persons also, and therefore give it the Preference. For what occasion is there to employ all those *Itineraria*, *Conductores*, *Specula*, *Semi-Specula*, and so many kinds of *Forceps*, *Hamuli* and a multitude of *Catheters*; when the work may be better perform'd without them. A good Incision-knife, *Forceps* and Spoon, are Instruments enough, if the Chirurgion is expert and active, and if he is not, a great number of Instruments are insignificant.

In Women this Section is not made between the Fundament and Vul-

va, but in the *Vulva* it self. The Fingers must also be put up the Fundament, and the Stone pressed downwards as low as possible, while with your Right hand you stroke down the lower Belly to the *Pudenda*. Then take a hollow Catheter, and thrust it up into the Neck of the Bladder, and make your Incision proportionable to the bigness of the Stone, in what place you judge most convenient; Or if the Stone is not very large, you may dilate the Urinary passage with a *Dilatatorium*, and so take out the Stone; but take care you do not extend it too far; because I have known that such an Error has rendred the Wound incurable.

When the Stone is taken out and the Wound is large, some give it Two or Three stiches to draw the Lips together; but I cannot advise it, for if I saw it requisite to draw the Lips closer together, I always put the following Powder into the Wound, and applied *Felix Wurzens* Plaister, and all things succeeded well.

℞ Rad. *Consolid. major.* ℥i. *Tragacanth. pur.*
Sarcocol. aa. ℥vi. *Tutia ppt.* ℥ss. *Cort. Ovor.*
 ppt. ℥iii. *Ocul. Cancr. ppt.* ℥ii. *Terr. Sigillat.*
Bob. Armen. aa. ℥iiss. *Misce fiat ad subtil.*
pulv.

Once more I thought fit to admonish you not to use any Greasie Unctuous Medicines in this case; but only apply the *Appodeldoch* Plaister to it, and heal it up like other Wounds in the Flesh.

In May 1672, I had in Cure a Patient at *Minder* on the *Weser* named *Hans Paucksen*, 38 years of age, by Trade a Joiner, who had a very large Stone in the Bladder, and the Urinary Passage was so narrow, especially towards the end of the Yard, that it was impossible to enter it with the smallest *Catheter*. He endured a great deal of pain, and was continually on the wrack; and several Physicians and Chirurgions had given him but little hopes of a Cure by Cutting. When I first saw the Patient, I thought I should have been more lucky than others, in searching for it; but I flattered my self, for I could not enter it by any means I could use, no, not with a Wyre. Under this disappointment I made use of my Fingers, and found a very large Stone in the Bladder. The Patient heard it with abundance of Joy, and next day at his request I sent for Two Physicians and Two Chirurgions, and before them and his Relations, declared my opinion how I designed to proceed in order to take out the Stone; which being agreed to, I performed the Operation next morning, exactly according to the method prescribed in the *Apparatus Minor*. The Patient underwent it with Courage, and complained but little, when I took out a great Stone that weighed almost Ten Ounces. The Stone was very rough on the outside, and when I broke it to pieces, was so curiously streaked with Red and White inwardly, that it was wonderful to behold; besides, in some parts it was as splendid and shining, as if it had been intermixed with Sparks of Diamonds. Soon after the Operation, the Patient was freed from his excruciating Pains and Tortures, and in Six weeks time was perfectly cured.

C H A P. X.

Partus Cæsareus, what the Operation is, and how performed.

THE Greeks call this Artificial but dangerous Operation, *Hysterotomacia*; because it's performed in the Lower Belly of a Woman with Child, to save if it's possible, both the Mother and the Infant; or if the Mother is dead, to preserve the Child alive; for so Providence is sometimes pleased to order it: As it happened to my self in a Corporal's Wife at *Osterwick*, where the Woman was dead; but the Operation being performed soon after she departed, I saved the Child alive, who is now grown to Man's Estate. But I was not so happy in the Year 1690, when I opened a Gentlewoman of this place, in the presence of Dr. *Brensse*, Chirurgion *Neyssern* and Mrs. *Meyers* a Midwife, after she had been dead above Three hours, and yet I brought forth a Daughter who breathed Three or Four times, and then died also: Which was caused only by their neglect in sending no sooner for me, for had I come but one hour before, certainly by God's assistance the Child might have been preserved alive. But to proceed in an orderly method, I will treat of the *Partus Cæsareus*, where the Woman and Child are both alive, which has been successfully performed in many Instances, contrary to the Opinions of several Writers.

The Ancient Physicians and Chirurgions knew little or nothing of this Operation, and consequently thought it impracticable. Dr. *Mauriceau* was so extremely prejudiced against it, that he calls it a barbarous, inhumane and detestable Practice. * *Parvus* was also of the same opinion, saying, no skillful Chirurgion would attempt it, nor could any Woman survive it. But later Authors think it both possible and practicable, and that it may be performed to the preservation both of Mother and Child, and prevention of many dreadful and melancholy Stories, that continually violate our Ears on that deplorable Subject. *Blanchardus* commends the Operation, and says it is a great piece of Cruelty to suffer both Mother and Child to perish together for want of it. *Bauhinnus* the famous Professor at *Bazil*, has given us the History of a Woman that suffer'd this Operation, and by it was delivered of Two Children at the same time, and lived to bear Four Sons afterwards.

In order therefore to perform it discreetly and safely, before you attempt it, give your Patient a Clyster, and supply her with good Cordials to keep up her Spirits, and now and then a Glass of Generous Wine. Then having all things in readines, and a very good Light, place your Patient on a Bed where you may go round it: Tye her Legs, Thighs and Arms to the Bed, that she may not be able to hinder you in the Operation. Under her Back and Thighs put Cushion and Pillows to raise her as high as you think convenient. Then uncover the Lower Belly, and mark the place with Ink where you intend to make the Section, which must be either on the right or left side the Navel, directly upon the *Musculus rectus*, Three or Four Fingers breadth from the Navel, and not above Five fingers long. Make your beginning so exactly, that you don't go so far downwards as to hurt the *Vasa Hypogastrica*;

* Traët. de gravid. Mulier. c. 33.

nor so high upwards as to injure the *Diaphragma*; but keep directly in the middle, without fearing to hurt the *Liver* on the Right side, or the *Spleen* on the Left; for you cannot so easily come at them, as some Persons pretend, who make a great stir about them, but to no purpose. When you have drawn your Mark or Line measured by your Eye, make an Incision with your Knife as long as the Line, and then you will see the *Musculus Rectus* under the Skin, and how to proceed with the Incision to the *Peritonæum*, and through that also, where you will see the *Uterus*, which you must also cut through a little, and afterward proceed farther. In doing this, you must make use of an Incision-knife which has a small Button on the point, that you may not hurt the Child with it: And make your Incision with all the celerity imaginable, for much depends upon it. When all this is done, take out the Child and *Secundine*, and give it to the Midwife; with Sponges and warm Water make all parts very clean, and leave none of the Blood or Moisture inwardly, which ran thither in the Operation. The Wounds in the *Uterus* first moisten with a *Lavamentum*; then strew my *Pulvis ad saturas* upon them as thick as you think convenient, and do nothing else to them, for her breathing will contract them, without the help of Sutures or Stitches; but the Wounds in the Belly must be stitched together with so many Needles and the Silk turn'd round them, as you shall find it necessary; yet so as to leave a hole below for a Tent, to evacuate the Blood and Matter, if any should have staid behind. If there is lodged in the *Uterus* a great quantity of filth, it would be convenient to inject a good drying Liquor into it, or keep the Orifice in the *Matrix* open with a small Pipe, that the Corruption may have a free passage through it. As for the rest, treat them as we have already prescribed in Wounds of the Breast and Lower Belly.

CHAP. XI.

Of all sorts of Tumors happening in the Bodies of Mankind, and how they are to be distinguished and cured.

ALL Tumors differ one from another, either in the matter they contain, or in the place where they take up their residence. Those Tumors that contain a Viscous Matter like Pap are called *Atheromata*: If the Matter is thicker resembling Tallow, they are called *Steatomata*: If of the consistence of Honey, they are called *Melicerides*; and if they contain a mixture of all these several sorts of Matter, they are truly called *Fungi*, because they grow upon the Bodies of Men, like Spungy Excrecences upon Trees.

Difference of Tumors.

The Antients were of opinion, that these Tumors were caused by a superfluity of Phlegmatick and Viscous humors, generated by overloading the Stomach with Food, which gave too great a Nourishment to the Body, the Excess whereof produced Tumors. But the laborious and learned Dr. *Overkamp* says, * that a Tumor is an extended and dilated *Vas Chyli*; for the Skin in which this vicious Matter is enclosed, is nothing else but an extended Vessel or Channel, through which the

The Causes of them.

* Chirurgia l. i. c. 10. p. 201.

Succus Nutritus ought to pass, but being stagnated, caused such a Tumor: And such a Dilatation says he, you may find in the Veins, Arteries and Lymphatick Vessels, as the *Varix*, *Aneurisma* and *Hydasides*. This Extension and Dilatation he says may be caused Four ways. First it may proceed from an obstructed Gland, which being oppress'd by the swelling of the Vessels near it, hinders the passage of its Juices. Secondly, From the Skin of a Channel or Vessel being a little torn or broken, from whence the Blood or what else it contains issues out. Thirdly, from a Fall or a Blow, by which the Vessels are so bruised, that the Juices cannot have a free passage through them. Fourthly, from an Extension of the Vessels, where the Liquors fall into it as into a Bag; for tho' the thinner part may proceed farther, and circulate with the other Liquors; yet the *Chylus* or Crasser part of them stays behind, and by its further encrease produceth such a Tumor.

The Cure.

The Cure of these Tumors depends only upon Exection and Excoriation; unless it be such a one, as by its scituation might endanger some Principal Member by Incision, and then all sorts of proper Medicines are essayed. If a Tumor is small and soft, I commonly give it Three or Four good Blows with a Wooden Hammer, and the Bag being broken, the humor may easily be dispersed after ward, by the following Plaister.

R. Emplastr. de Ranis cum Mercur. Vigon.
Diaphor. c. Pice M. Scrophular. aa. ℥iij.
Sem. Cumin. ℥iijss. Lactuc. Sulphur. aa. ℥i.
Ol. Laterin. ℥i. Gum. Ammon. Baellii aa.
℥ii. Flor. Sal. Armon. ℥ss. pulv. Calc.
viv. ℥iss. stat c. s. q. Cere & cerebinth.
ad Empl. form.

This Plaister being an admirable Resolvent, has been very serviceable to me on several occasions; but if the Tumor is large and of long continuance, take hold of it between your Two Fore-fingers, make an Incision into the Skin, and excoriate the Bag and enclosed humor together; which I have often done with very little trouble, and sometimes have squeezed all the matter out of the Bag. Others have been brought to *Suppuration*, after they were cut open, and then easily cured. But if they are very large, they must be so carefully excoriated, that nothing remains; for if there should be any reliques, they will certainly grow again. Some of them grow like a *Pear* upon a stalk, which if artificially constringed, will mortifie and fall away of their own accord; but if they have great Roots, they must be wasted by Corrosives.

Observation.

To observe the

Fig. 6.

In the Month of *June* 1693, a Person was brought to me who belonged to the Retinue of Baron *von Kittlitz* in *Glogaw*, who had on his Thigh near the Breech, a very large Swelling of Fifteen years standing; insomuch that he could neither lie, go or stand: The figure and scituation of it may be seen in the Fourth * Table. The Patient was otherwise healthy; only that side of his *Podex*, Thigh and Leg was very much wasted. I began the Operation by tying a Silk string Two or Three times round the upper end of it. Then I laid the Patient over a great Chair, tying him fast to it; and ordered Two of my Servants to wrap the Swelling in Napkins, and pull it towards them from the Thigh,

Thigh. Then with my crooked Incision Knife I made Two Cuts quite round it, and set my self to Work on one side of and, Mr. Hahn on the other, and in Five Minutes time excoriated it to the Bottom. There were several Arteries and Veins in our way, but we could not regard them, for the Tumor being of such a vast bigness we were forced to cut through them all. The Substance which was wasted in cutting this Tumor weighed Eighteen Pounds and Three Quarters. The Blood was soon stanch'd by my Astringent Powder, excepting one single branch of the *Arteria Muscula*, which I was forced to Touch Twice with a Hot Iron, and then that ceased also. To conclude, the Patient was fully cured in Eight Weeks Time, and the *Atrophia* or wasting was reliev'd by the use of the following Spirit and the Balsam.

℞ *Lumbricor. comp. Nervin. Mysic. rad.*
Alth. aa ℥iii. Spirit. Milleped. flor. Samb.
Rorismar. aa ℥ss. Spirit. rad. Angelic. ℥iiii.
Spirit. c. Atroph. Schrod. ℥ii. Aqu. Atrophiat.
Dolci ℥ii. Balsam. Peruvian. ℥ss. Vulner.
Hankii ℥ss. Misc. s. art. detur in vitr.

The Patients Thigh was very well chafed with this Mixture Twice every Morning, first at Seven and the Second time at Nine a Clock, and in the Evening the following Balsam was used in the same manner.

℞ *Unguent. contr. Atrophiam mei,*
℥vi. Balsam. Nervin. Mys. Vulner.
Hankii aa ℥iiiss. Peruvian. ℥i. Ol.
Rad. Angelic. Succin. Hyperic.
Lumbricor. aa. ℥ss. Miscanturf.
Balsam.

Attend these Applications with great Diligence, and you will find the extraordinary Vertues that are hid in the Two last Remedies.

CHAP. XII.

Hernia or Ruptures, their Differences, Symptoms cause and Cure.

A Rupture at first is nothing else but a Boyl in the Groins, and commonly on the Right Side, because the right Foot is always set foremost and is oftner in Motion than the left. This Boyl or Tumor growing bigger by Degrees settles down into the *serotum* or Cods, and then is only an Extension of the *Peritoneum*, but afterwards tears it in Pieces, for the Patient neglecting to wear a Bandage or Truss upon it, the *Intestina, Uterus* and *Colon* and at last the *Omentum* or Kall fall into the Cod, and there make a perfect Rupture, and these are the Ruptures that we so frequently meet with. Besides this kind there are Watry, Windy, Nervous, Carnous, and Seminal Ruptures and also of the Navel,

Navel, Womb and Cods, of all which we will treat in order. *Hernia* are Ruptures which Women as well as Men are Subject to, especially when big with Child and in hard labour, tho they are not so often afflicted with them as Men; because the Two perforations in the *Peritonæum*, through which the Processes pass to the Testicles in the *Scrotum*, is more apt to cause a Rupture than in Women. The Intestina, Ilion and Colon don't always fall into the Scrotum by tearing or breaking the *Peritonæum*; but the Holes of that Membrane, or the Membrane it self may happen to be so dilated and extended, as to fall down into the Scrotum and incline one to think it was broken. This I confess very rarely happens, but since it does sometimes, a Chirurgion should diligently enquire into it, for if the *Peritonæum* is not broken it may be easily put up again; but if the Membrane is Torn, it requires a great deal of Pains to put it up again.

Cirsocele cannot truly be called a Rupture, but is rather a great extension of the Seminal Vessels in the *Scrotum*, which sometimes grows so big, that one would think the Patient had Three Testicles. Monsieur *Fournier* in his *Oeconomia Chirurgica* Speaks of a Turner in *Paris*, whose seminal Vessels were so interwoven and twisted together, that they were forced to Break and Tear and so fell into the *Scrotum*. If it comes in this manner, then it may be truly called *Cirsocele* or *Hernia Scroti*. These Ruptures or Extensions are generally incurable, because the Artist cannot reach them, Medicines signify nothing, and the seminal Vessels are so tender that they will not allow any kind of Manual Operations. 'Tis true, Monsieur *Blegni* did make an Opening in the *Scrotum*; afterwards Twice constricted the Seminal Vessels and then cut out the extended part; but what was all this, but a needless torturing his Patient; for above arose a great Tumor, and below a Putrefaction of the Testicles, of which at length he Dyed.

Hernia Veneris,

Hernia Veneris the Antients also called a Rupture, but is not a true one; but a Tumor, Inflammation, or Induration of the Testicles, caused either by an impure Copulation or the too hasty stopping a *Gonorrhœa* or Running of the Reins. These Patients suffer abundance of Pain and for the most part keep their Beds. *Blanckard* calls this Disease *Venus's Ball*, or a Dilatation of the Internal Vessels of the Testicles: And since they are generally thought to be curable, I will accommodate you with the Prescription of two Cataplasms, which if regularly applyed will perfectly cure the Accident; provided that no fleshy substance is settled with it; for then it can never be cured but by cutting away the whole Testicle.

℞ Pulv. herb. *Verbasc. Hyoscyam.*

Mulva parietar. aa. ℥ii. Flor. Chamom.

℥iss. *Sambuc. ℥i. Rad. Alth. Farin.*

Fabar. aa. ℥vi. Sem. Cumin. ℥iss.

Terr. Sigillat. ℥i. M. f. C. s. q.

Decoct. Rad. Althea ad Catapl. form.

This Cataplasm, if applyed Warm Three Times a Day will soon take away the Inflammation and hardness; But if you think it not strong enough, make use of the following.

℞ Pulv. herb. *Verbasc. Hyoscyam.*

R̄ Farin. Fabar. orobi. Hardei Lupinor.
Lent. aa. ℥ii. Succ. Rutæ ℥iſs. Ol. Chamom.
Rosar. aa. ℥i. Liziv. Dulc. Oxymel. Simpl.
aa. q. s. M. f. ad Catapl. consistentiam
absque igne & calide applicetur. This Cata-
plasm I have often used with wonderful Success.

Bubonocèle, Hernia Ganglionis, are also Extensions of the Nerves or *Bubonocèle.*
Inveterate Ganglions as *Selinger* calls them, and may be cured with this
Emplastrum Magneticum Arsenicale, if they are not of too long Con-
tinuance.

R̄ Gum. Sagapen. Ammon. Galban. aa ℥iſs.
Cere ℥vii Terebinth. q. s. Ol. Succin.
℥iſs. Magnet. Arsenical. ℥iiſs. Succ. capar.
℥ii. terr. Vitriol. edulc. ℥i. M. f. Emplastrum.

But if this also should not have its desired effect, then a careful Ex-
coriation is the safest and speediest Remedy.

The falling down of the Womb, the Ancients also reckoned in the *Falling down*
Number of Ruptures; tho' it's only a Laxation and swelling of the In- *of the Womb.*
ternal Membranes and Ligatures, which may be remedied by Resolving
Medicines, of which you will find great plenty in *Barbette*, Cap. 10.
Pag. 259.

In April 1686. I had a certain Gentlewoman of this Town in Cure *Observation.*
of 49 Years of Age, who was troubled with a falling down of the
Womb as they call it, whom a Midwife and a Chirurgion both had
in Cure above a Year, but all to no Purpose, for neither of them knew
what it was or what Course to take with it. Her Distemper was a hard
swelling on the left side of the *Pudenda*, which came by a Difficult and
Painful delivery in Child Birth, after which a Watry Humor settled in
that part, which might have been evacuated at that time by a small
Incision; but the Midwife and Chirurgion applying abundance of
cooling Medicines to it, made it settle faster till it grew Gelatinous,
which was the Cause of its hardness. I knew by Experience that the
best Medicines I could use, would signifie very little in this Case, and
therefore without delay, I made an Incision into it and took above
Twelve Spoonfuls of thick Viscous Matter out of it, which being put
into a Basin coagulated like a Jelly; by which Operation the Gentle-
woman was soon Cured.

CHAP. XIII.

Ruptures called Enterocèle, Epiplocèle & Entero-Epiplocèle. What
they are, how Distinguished and Cured?

IN the foregoing Chapter I confined my Discourse to false and imper-
fect Ruptures and now according to Promise will treat of true or *True Rup-*
perfect *tures.*

perfect Ruptures, such as the *Enterocoele* when the Gutts fall down into the *Scrotum*, *Epiplœcele* when the Kall does the like, and *Entero-epiplotœcele*, when both contribute to the production of a *Rupture*.

The *Peritonæum* which encloseth the Gutts and the Kall, by any violent Accident may be relaxed to that Degree, that it's forced to give way to the compressure of the Gutts and the Wind included in them, and if not timely prevented by a good Truss or Ligature, it still yields to the *Intestina* till it Rents and Tears it asunder and so becomes a perfect *Hernia Intestinalis*. First only the *Ilium* falls into the *Scrotum*, afterwards the *Intestinum Colon* and at length part of the *Omentum* also. That this oftner happens to Men than Women is because the Testicles of Women are lodged within the Body and those of Men Hang out of the Body in their *Scrotum*, and also because their Seminal Vessels go on both sides through the *Processus Peritonæi*, and being all guarded by the *Peritonæum*, it may easily happen, that by Violence, Immoderate Exercise, falling, beating, pushing, riding, leaping or slipping of ones Feet unawares, much sitting or an afflux of incongruent Humors that the *Peritonæum*, may be relaxed and at length torn in Pieces. In Children these Ruptures are more Difficult to be known than in Older People, for instead of the Gutts there often happens only Water in the *Scrotum*, which you must not suffer to deceive you, because you may easily distinguish by feeling it.

If it is a *Hernia Omentalis*, the Tumor in the *Scrotum* is not only softer and uneven, but always of the same bigness, because the *Omentum* cannot so easily be brought back again, but sometimes inseparably cleaves to the *processus Peritonæi*, as I have lately observed in the Dissection of Two Dead Bodies.

Cure of Ruptures

At first it may be cured by the use of my Plaster and Bandage, but if it's grown Old, the Cure is Difficult if not Impossible. For if the *Peritonæum* is much dilacerated and the Patient would not be perswaded to take care of himself; the best of Medicines and Trusses will avail little, and if the Patient has a Mind to be cured he must submit to cutting. In order to a Cure, the first thing to be provided is an Easy, Fit and Convenient Truss: Secondly good sticking Potions and consolidating Potions: And thirdly if the Patient is not too Old, you may undertake the Cure by Manual Operation, as a Careful Infection and Reunion of the disjointed Parts. And that none may despair of being cured tho in Years, Dr. Decker in his Observations* gives us the History of a Lady who had a Rupture of the Gutts and Kall 17 Years, insomuch that one part of them was putrified and yet was perfectly cured.

* Observ. pract. p. 449.

Trusses.

Now to Describe what sort of *Trusses* are most conducing to a Cure, is unreasonable to be expected and impossible to be performed by writing; because it's highly necessary, that you Diligently View and Examine the Part where the Rupture is, and fit it accordingly, if you hope to succeed in the Cure, and not trust to such as are to be bought ready made. Now in proportioning and fitting your Trusses, observe the following rules. First let them be Light and Easy, not thick, clumsy and heavy. Secondly let them be made of such things as will not Chafe, Hurt, Fret, or ulcerate the part. Thirdly that they be so exactly fitted to the Body, that they may constantly keep the Tumor from falling down; and fourthly if Parchment or Leather is not strong Enough, make them of thin Plates of Iron or Steel.

The

The Cure of Ruptures by Medicines only, is an insignificant attempt; for if besides you don't make use of Trusses, you can never expect a good event of your choicest Prescriptions: And therefore presuming you have first provided your Patient of a convenient Truss; I shall proceed to accommodate you with the most celebrated Medicines for this Distemper; the first of which is a Plaster, that I have often experienced with great benefit to my Patients, and tho the prescription is somewhat tedious, let not that procure your Dislike; for I am very Confident it will Recompence your Trouble, and give you entire Satisfaction in the use of it.

Cure by medicines.

℞ Emplastr. Carminativ. Sylv. ad Ruptur.
W. aa. ℥xii. Pulv. rad. Consol. maj. Gum.
Tragacanth. Arab. aa. ℥iiss. Sarcocol. ℥ii.
Mastich. Myrrha aa ℥s. Gum. Elemi, Bol.
Armen. pt. Putam. Cancror. aa. ℥vi. Lut.
Fabril. Rad. Alth. Scrophular. aa ℥i.
Cera, Terebinth. aa. q. s. M. f. sec. Artem
ad Emplastr. consistentiam.

This excellent Plaster being spread upon Leather, must be applied to the Rupture, and renewed every Two or Three Days; in the mean time the Patient must Drink every Morning and Evening, Three Ounces of the following Potion.

℞ Rad. Aristol. long. Scrophular. aa ℥iss. Sigill. Salomon.
℥ss. Sem. Nasturtii ℥vii. Sanicul. Veron. aa. Miss. Cort.
Lign. Fraxin. ℥i. Incis. & Contus. gr. modo, coqu. Aqu. Font.
deinde Colatur. ℥xvi adde Aqu. carminat. ℥ss. Spir. Salis
℥ss. Syr. Cort. Aurant. q. s. M. f. Potio. Dos. ℥iiss. vel ℥iii.

But since many Persons cannot endure a Plaster in that part, tho the Hair be taken off, because they often cause intolerable Itching, and raise abundance of small Pimples and Blisters; to such I recommend the following Cerate.

℞ Gum. Carann. Sem. Nasturtii aa ℥i.
Alb. Ovor. q. s. Misce fiat Cerat.

Which must be spread upon Leather and applied to the part affected; giving the Patient inwardly every Morning *Sem. Nasturtii ℥i.* in good *Alicant* Wine or for want of it good old *Claret*. Mr. *Bandel* a very Ingenious Man, uses the following Cataplasm with wonderful Success, but you must also apply a Truss at the same time.

℞ Terebinth. Alb. Ovor. aa ℥iss. Farin. Fulig.
Sarcocol. aa ℥ss. Gum. Arab. Rad. Aristol.
long. Consol. maj. aa. ℥v. fiat Cataplasm.
s. a. cum Lut. Fabril. q. s. applic. loc. affecto.

Dr. *Blanckard* highly Commends *Semen Persoliate* to be taken every Morning with *Aqu. Scrophular.* And Dr. *Munnick* orders the following Cataplasm.

℞

*Re rad. Osmundæ regal. consolid. maj. aa ʒi.
consolid. regal. ʒviii. Herniar. fol. Hypericon. aa ʒss.
Perforat. ʒv. M. f. Catapl. cum Vin. rubr.*

Mr. Blegni directs a piece of Parchment to be steeped Three Days in *Aqua Tragacantha* and then applyed to the Rupture. Dr. *Scultetus* of *Nurenberg* orders with Dr. *Hoffman*, Fresh Comfry Roots mixt with Hogs Grease to be spread upon Leather and applyed to it. Dr. *Volekammer* instead of Hogs Lard uses *Mucilag. Tragacanth. & Sem. Cydonior.* *Muraltus* prescribes a Quart of Red Wine and an Ounce of Spirit of Salt, and orders the Patient to Drink Two Ounces of it every Morning. Mons. *Landes Baugrand* above all things extolls *Acetum Lythargyr.* applyed Warm with Double Linnen Rags. *Franciscus Toletus* recommends *Joiners Glue* spread upon a shaving of Wood and applyed to the part. *Cardilucius* makes a Powder of the *Spongyous* Substances that grow upon *Nutt Trees*, and with unsalted May-Butter makes it into an Ointment and Anoints the Rupture with it.

Prior Cabriere's Secret,

Dr. *Emanuel King* has obliged us with the great Secret of *Prior Cabriere* for the Cure of this Disease, which is as followeth. Spirit of Salt Rectified, of which let Children from Two to Six Years of Age, take Three or Four Drops of it for 21 Days together, in Two Spoonfuls of Red Wine. Children from Six to Ten Years of Age, must take ʒiii of it in a Quarter of a Pint of Red Wine every Morning for 21 Days. Patients from Ten to Fourteen Years Old, must take ʒii. of this Spirit in Red Wine for the time above mentioned. Those from 14 to 17 must take ʒiiss. of it in something less than half a Pint of Red Wine; and from Seventeen Years Old and upwards the Patient must mix ʒv. in a Pint of Red Wine; and Drink Two Ounces of it every Morning 21 Days together, and keep his Bed all the time, with the following Plaster spread upon Leather applyed to the Rupture.

*Re Mastich. ʒss. Gum. Labdani ʒiiii. Nuc.
Cupress. N^o iii. Hypocistid. ʒi. Terr. Sigill.
ʒiss. Pic. Nigr. ʒiiii. Terebinth. Ven. ʒi.
Pulv. rad. Consolid. maj. ʒss. M. f. Emp. s. a.*

This Plaster must not be renewed, but continue on the part 21 Days; after which time the Patient may walk abroad again; but must keep his Truss on a Quarter of a Year longer. This admirable Medicine I have tryed in several Persons, where the Disease had not been of very long standing, and always found it to have extraordinary Vertue in the Cure of this Distemper. It had so great a Fame in *France*, that the *Prior* was obliged to Reveal it to the *French King*, for the Common benefit of his Subjects.

Cure by Manual Operation.

I now proceed to the Third and last Method of Cure, which is, by *Incision* or *Section*; *Reuniting* or stitching the broken part together again, and *Constringing* the *Peritonæum*. The Ancients formerly and *Quacks* at this very Day, never Cut a Rupture but they bring away the *Testicle* also which lies on the side where the Rupture is; which being a Cruel and Barbarous Operation that seldom has a good Issue, I shall say nothing further of it; but proceed to the Method practised by *Petrus Franciscus* which is performed without the loss of a *Testicle*. The

Famous

Famous and Excellent Operator at *Leyden Schmaltzius* was so expert at it, that you could scarce perceive how he performed it without a diligent circumspection; yea, I verily believe, he could have Cut Fifteen Patients in an Hours time, if he had had so many. When I was there he Cut but Six in an Hour, all which succeeded; but then he took more time than Ordinary. His Method I shall therefore Describe as the best and quickest that I ever saw, and which I Practise.

The Patient being well purged Two Days before, and a Clyster given him in the Morning Four Hours before the Operation; shave off the Hair and lay him on a Place where his Head may lie lower than his Legs; put up the Guts, and let some Body press them with both Hands that they may not fall down again into the *Scrotum*. Then with the Three foremost Fingers of your left Hand take hold of the Skin, where the Guts used to fall Outwards; pull it as high as you can and make an Incision in length, of the Breadth of two Fingers, directly upon the Place where the *Processus Peritonæi* is, and where the Guts use to fall forwards. The Incision being made put your Two Fore-Fingers into the Wound and separate the process of the *Peritonæum* from the adjoining Fibrous and Nervous Bodies, that you don't hurt the Spermatick Vessels with your Needle or Tye; which tho it be somewhat Troublesom is presently performed. Then thrust your Needle with a Gold thread, a little stronger than Ordinary through the Process of the *Peritonæum*, as near as possibly you can to the *Vasa Spermatica*, repeat the Stitch, and tye the thread twice Round the *Processus*, not too hard or too slack and then tye it on a Double Knot. The best way is to pull the Process upwards out of the Wound, and then you may see how to perform it sooner and better. If the *Peritonæum* is very much dilacerated, sew up those Lips with the Rest. There's no Necessity of tying it very hard, for it does but put the Patient to intolerable Pain; and cause Inflammations with other unhappy Accidents. As it happened in the Year 1696, to a Boy in this Town, who after the Incision, by the Chirurgion's tying it too hard, endured extraordinary Pain, which was followed by an Inflammation and Mortification of the Parts of which he Dyed: Therefore consult your Discretion where there is so much Danger; the Thread may in time be Cut off, and the Wound by Degrees healed and Cicatrized.

There are several other kinds of Operation, as a *Cantery*, the *Golden Wire* &c. but being all grown out of use, I shall not concern my self about them; but only Discourse a little of the *Punctum Aureum*, which is to be performed in this Manner. The Section being made as above-said, and the *Musculus Cremasteris* and the Spermatick Vessels being well separated, thrust the Point of the *Gold Wire* through the Process near the Spermatick Vessels, and after this Stitch has been once repeated, twist the Wire twice Round the Process; with the *Forceps* pinch the Ends close together, and so leave it to be healed like other Wounds. Care must be taken not to tye the Wire too fast that goes Round it, and to tye the Knot so even that it may hold and yet not Injure the parts that are near it.

The Operation in Women is performed in the same manner as I have shewed in the Gold thread; only take care, if the *Peritonæum* is grown to the Process, that you dont violently separate it, but let it alone; for in Women it may be well performed without that part of the Operation.

Observation. In May 1687. I had a great *senatour* in Cure from *Lipsich*, who had a prodigious Rupture of the Guts, and had been some Years at *Dantzick* in hopes of a Cure, but at last came to me and lodged in my House, that I might the better take care of him. In the first Six Weeks I treated him with the best sort of *Trusses* and other Methods, but all to no purpose, because the Rupture was too large. When he saw nothing would prevail but cutting, he consented to it, which was performed in a Fine clear Morning, and that in every point according to the Method practis'd by *Schmalzsius*. When the Section was made and the Proceſs separated, I found a great part of the *Omentum* in the *Scrotum*, sticking fast to the Spermatick Vessels, which cost me a great deal of Trouble to bring off, and put it up into its right Place again: However with care and patience I accomplish'd it, with very inconsiderable Pain to the Patient. This being done, I stitched and tyed it; Ten Days after took away the Thread and in Six Weeks time fully cured the Wound. Here you may observe, that if any part of the *Omentum* is fallen into the *Scrotum*, you must neither leave it there or Constringe it; but put it up again into its right Place, for otherwise it will Mortifie and cause deadly Symptoms. *vide. Tab. 5. Fig. 1.*

C H A P. XIV.

Hernia Ventosa, Aquosa & Carnosa, or Windy, Watry and Fleshy Ruptures, their Symptoms, Causes and Cures.

Windy Ruptures.

The Signs.

Pneumatocoele, *Hernia Ventosa* or a Windy Rupture, is a Tumor and Extension of the *Processus Peritonæi* and the *Scrotum*, and contains little else than Wind and a little Moisture. The *Diagnosticks* of these Flatulent Tumors, are much like the Watery Ruptures, for they are both perspicuous, tho these are very light and the Watry ones Heavy and Shining. If you press the *Scrotum* something hard, the Wind will go backwards with a great Noise, you cannot make Dents into it with your Fingers as in the *Aqueous* Ruptures. The Spermatick Vessels are bloted up, and such Patients complain very often of a great Oppression by the enclosure of Wind in the Guts.

The Causes.

The Causes of this Rupture may be easily guess'd at by its Description. *Blanchard* says it is a Tumor fill'd with *Air* intermixed with a small Quantity of *Humidity*. *Dr. Munnick* says, that *Wind* contained in the *Scrotum* between the *Tunica Vaginalis* and *Albuginea*, where it gathered and extended the Parts was the Cause of it. *Gulielmeau* refers it to the Coldness of the parts, weakned by Internal Infirmities, and all agree, that external Refrigerations of those Parts and Immoderate Venery, are often the Cause of these Tumors.

The Cure.

The Cure must begin with gentle *Laxatives*, good Clysters, with such Medicines as expel Wind, and hinder the great access of it to those parts. The Patient must also be kept to a strict Dyet, and forbear all kind of Meats and Drinks that are apt to breed Wind. The following Cataplasm is very proper in this Case.

℞ *Fol. Verbasci Althææ flor. Chamomil.*
Rom. aa. ℥ii. Farin. Fabar. Orob. aa. ℥i. Sem.
Dauci ℥ss. Cumin. ℥ii. Carvi ℥i. bacc. Juniper.
℥iss. Sem. Anisi, fol. Ruta, Origani, aa. ℥v.
f. ad Pulv. & Misc. cum Lixiv. & Vin. Rubr.
aa. ad Catapl. consist.

This must be spread thick upon a double Linnen Cloth, and applied warm to the Rupture, *Blanckard* says much in commendation of the following Cataplasm.

℞ *stercor. Ovil. ℥vi. Sulphur. viv. ℥ii. Aloes,*
Myrrh. aa. ℥ss. Bol. Armen. ℥ii. Mellis q. s.
Misc. fiat Catapl. Calide applicetur.

Sometimes says the Author, I mixed it with Red Wine and Spirit of Wine, as I saw occasion; and it seldom or never failed to answer my purpose. The next is an excellent Water to expel Wind, and take away the Pain if the Rupture is gently washed with it.

℞ *Aqu. Carminat. ℥vi. Spirit. Cumin. ℥ss.*
Juniper. ℥iiii. Essent. Cort. Aurant. Citri aa. ℥i.
Ess. Opii ℥i. Ol. Pulegii distill. gut. xi. Misc
serv. pro usu.

This Water is of incomparable Vertue in this and several other Diseases; as Hysterical Passions, the Colick, Wind, Gripping of the Guts, &c. When the Pain ceases, and the Swelling of the *Scrotum* by these Medicines is abated, apply your self to expel the rest of the Wind, and bring back the Tumor as far as you can, that you apply a good Truss, and prevent the further entrance of what encreases them.

Hydrocele, Hernia Aquosa or a Watry Rupture, is also a Swelling of the *Scrotum*, by the gathering of an Aqueous and Viscous humor, which by degrees increaseth to a great bigness. It cannot truly be called a Rupture, because it's nothing else than an Extension and Relaxation of the *Peritonæum*. These Tumors often happen in such as have the Dropsie, because the Water wanting room in the Belly, the *Processus Peritonæi* is thereby so much relaxed, that the Water at last must of necessity fall into the *Scrotum*, and extend it to a vast magnitude.

Diagnosticks of an Aqueous Rupture are perceptible to the Eye, for they are clear, soft, and yield to the Touch, but don't grow less by any Compression, for though the Water may at that Instant go back with a Noise, yet it presently returns again. If you hold a Candle to it, you may easily see quite through it. The Patient seldom complains of any considerable pain, unless the Water is grown sharp and Corrosive, and a Testicle is injured, which often occurs in *Aqueous Ruptures*.

The Causes of these Ruptures are several, as Internal Hurts, Accidents in the Lower Belly, Indisposition of the Body, Erosion of the Lymphatick Vessels of the Bladder and Ureters, external violent Exercises, and especially the *Hydrops Ascites*, by which the Lymphatick Vessels are many times injured.

While

While these Ruptures are young, there is little difficulty in curing them; but if inveterate, are very troublesome, and often incurable. If this Disease is accompanied with a Dropsie, opening the *Scrotum* signifies nothing, for as often as you draw out the Water, it immediately fills up again. External Medicines are of as little use in this case, for if the Rupture is inveterate, 'tis a *Noli me tangere*, because the Water is grown too thick, very sharp, and the Testicles are damnified. However, because while there is Life there is hopes, I will pleasure you with such Medicines as are employed in these circumstances, and also shew you the Chyrurgical Operation. To begin with Medicines, I have found great benefit by the following Cataplasm.

℞ Pulv. Alchimil. Verbas. aa. ℥ii. flor. Chamomil.
Sambuc. aa. ℥iss. Mastich. Sem. Cumin. Carv. aa. ℥i.
Bacc. Juniperi ℥ii. Terr. Sigillat. ℥iiss. Alum. Crudi
℥ii. Myrrha, Oliban. aa. ℥iss. M. f. Catapl. cum s. q.
Vin. Rubr. It must be applied warm to the *Scrotum*, and
the Patient must keep his Bed. The following is prescribed
by Dr. Blanckard.

℞ Stercor. Ovill. ℥vi. pulv. Alchimil. ℥iiss. Farin. fabar.
℥ii. Sem. Dauci, Cumin. Carv. aa. ℥iss. Baccar. Lauri,
℥ii. Juniper. ℥iss. Mastich. ℥i. M. f. cum s. q. Spir. Vini
& Vin. rubr. ad Catapl. formam.

When such a Rupture has been opened, or is abated to such a degree that a Truss may be applied to it, then the following Plaister is of incomparable use; for it consumes the remaining Water, strengthens the weakened parts in the *Scrotum*, and preserves them from a fresh inundation of the Water.

℞ Emplastr. Carminativ. Sylv. Diaphoret. Adysic. aa. ℥vi.
de Ran. cum Mercur. Vigon. ℥iiii. Cumin.
Aug. ℥iiss. rad. Cucum. Asinin. Bryonia
aa. ℥i. Bacc. Lauri ℥vi. Sulphur. viv. Mastich.
aa. ℥ss. Sem. Cumin. ℥iiiiiss. Myrrh. Lavendul.
aa. ℥ii. cum s. q. Cerae & Ol. Cumin. f. Empl.

If these Medicines will not prevail, nothing remains but opening it, which without more Ceremony I do on this manner. First, I make an Incision with a Lancet about an Inch from the Suture, and twice a day draw out so much Water as I think will not too much weaken the Patient, and stop up the Wound with a Tent, and a good sticking Plaister to prevent the Water from going out unknown to me. In this manner I continue till the Water is all drawn out, and then heal up the Wound with an *Oppodeldach* Plaister. Now, though I generally succeeded in this Operation, yet I find by experience, that often in one or Two years after they break out again, notwithstanding the Patient wore a Truss all the time; so that I was obliged to begin again. I had a young Man in Cure, who was opened Ten times in Thirteen years, and still it returned again. So it fared with *Hans Sigmund* a Taylor, who in the year 1679, was opened at *Brunswick* by Mr. Schulfer.

fer. In the year 1681, at *Quidlinburg* by Mr. *Crause*. In the year 1682, at *Frankfurt* by Mr. *Kauffman*, and in the year 1685, was opened by me at *Breslaw*, and perfectly Cured.

Sarcocoele, *Hernia Carnosa*, or *Fleshy Ruptures* are at first but a *Gelatinous* Matter contained in the *Scrotum*, which in time becomes a *Spongy Fleshy Tumor*; they don't grow all at once, but begin in small *Knots*, and grow bigger by degrees. Some adhere to the *Spermatick Vessels*, others to the process of the *Peritoneum*, and those may be sooner cured than the former. The Signs consist in the Sight and Feeling, for the whole *Scrotum* is knotty, swelled, very hard, and painful in being touched. The Causes of these Ruptures, besides what has been already suggested, proceed from the *Erosion* of the small and tender *Veins* in the *Scrotum* and *Testicles*, which being torn, a small quantity of extravasated moisture in time produces them; or also, as I have often observed, from an *Aqueous Rupture* of a long continuance, where the *Lympha* growing thick, at last turned into a fleshy Tumor.

Fleshy Ruptures.

The Cure depends either upon good penetrating Medicines, or a *Chirurgical Operation*; though the former seldom prevail, because the fleshy Substance will neither be dispersed nor excicated. *Dr. Scaletus* highly commends a *Drachm* of *Radices Ononides* taken every day in Powder, as an infallible Remedy, and *Matthiols* and *Munnick* are of the same opinion; but I have known them so obstinate, that this Medicine had no effect; and therefore think the *Chirurgion*, as soon as he perceives it grow to a fleshy Rupture, had better apply the following Plaster; for if it does not take it quite away, it will better prepare it for cutting.

The Cure by Medicine.

R. Emplastr. Diaphoret. Mysic. Diachyl. Gum. aa. ℥vi. Cera. ℥iiss. Gum. Ammon. Bdellii, Opopan. aa. ℥i. pulv. rad. Ononid. Sem. Sinap. Urtic. aa. ℥vi. Sulphur. ℥i. Succin. Myrrha. aa. ℥ss. Ol. Laterin. q. s. f. Empl. s. v.

To cure it by *section*, you must make an *Incision* of a good length, on the most convenient side of the *Scrotum*, and excoriate and separate all the *Carnous Substance* from the *Scrotum*, *Testicles* and *Spermatick Vessels*, so that none remains; for if any part be left behind, it will grow again. This being done, sew up the *Wound* in the *Scrotum* with *Two or Three Stitches*, and heal it like other *Wounds*. This *Operation* is generally very troublesome and vexatious, for if the *Flesh* is considerably large, and grown fast to the *Testicles* and *Spermatick Vessels*, there is so much danger in hurting them, that the greatest care sometimes cannot possibly avoid it. Sometimes it happens also that the *Testicles* are *Rotten* and *Putrified*, and then the *Operation* is wholly in vain, for the *Patient* seldom or never recovers. Some *Operators* that are unwilling to take so much pains, make short work with it, and cut away the *Testicle* at once; nor can I blame them for so doing, if the *Testicle* is touched, for sometimes the *Patient* is preserved by it; but if the *Testicle* and *Spermatick Vessels* are sound, 'tis a barbarous Practice, and the *Operator* ought to be reckon'd among the *Castrators* or *Guelders* and not among *Chirurgions*, who are obliged to save every part in any *Man* that can be saved.

The Cure by Section.

In September 1679, Christian Sturme a Butcher came to me from Osterwick, who had a large Sarcocoele several years, which arose from a watry Rupture. The Testicles and Spermatick Vessels being all sound, I cut it, made Two or Three Stitches in the Wound, and perfectly cured it in Five weeks time.

C H A P. XV.

Omphalocoele, Hernia Umbilicalis, or a Rupture of the Navel, its Signs, Causes and Cure.

THE Signs of these Ruptures may be easily seen and felt. If the *Kall* only makes this Rupture, the Tumor feels very soft, and no noise is to be heard, though it be crush'd very hard; but if the Bowels are fallen into it also, the Tumor is harder, and will resist the touch of your Fingers. Again, if it proceeds only from the *Kall*, when the Patient lies down, it will go up again of its self; but if from the *Guts*, they cannot be put up again but with great difficulty. The Causes hereof are many, and may be easily collected from what has been said of the rest. They often happen to Women after hard Labour, to Children that are much given to Crying, and to fat and gross bodied Men, leaving the Navel-string too long at the Birth of a Child, or not tying it as it should be, often causes this Rupture, because the *Peritoneum* being then very tender, may be easily extended or broken. In short, the Cause of these Ruptures is a Laxation, Extension and Swelling of the Navel, upon the Entrance of the Guts, the *Kall*, Wind or Water; a painful and continual Cough, great straining to Vomit, Obstructions, indurated Excrements, Falling, violent Exercises, or any Accident that causes a Relaxation of the Navel.

The Cure of People in years is always difficult, and sometimes impossible to be performed. In Children they are best and soonest cured; sometimes only with a good sticking Plaister, in the middle of which must be put a small piece of Wax made like a Button, to keep in the Rupture, and over that a good Roller round the Belly; but if the Rupture is large, apply over the Plaister also a piece of Lead beat indifferent thin, and over that again a good Bolster tyed pretty hard, and if that will not avail, make the Lead thicker, and wear a broad Leather Girdle round the Belly to keep it more close. The following Plaister is very proper in this Case.

℞ Emplastr. ad Rupturas Wurtz. ℥xii. Pulv. rad. consolid. maj. ℥ii. Bol. Armen. Tragacanth. aa. ℥iss; Cort. Austr. ppt. ℥i. Oliban. Mastich. Myrrhe aa. ℥ss. M. f. c. s. q. terebinth. ad Emplastr. consistentiam.

Of the following Mass I use to form a Button, and app'y it to the Navel, with the abovementioned Plaister over it.

℞ Tutia

℞ Tutia ppt. Bol. Armen. ℥iſs. Teſtarum Ovorum ppt. ℥i. Cérulle ℥ſs. Lap. Calaminar. ppt. ℥vi. Maſtich. Myrrh. aa. ℥ii. Aloes ℥i. Opii ℥ii. M. ſ. cum ſ. q. Mucilaginis tragacanthi ad Maſſam.

This Maſs may be alſo uſed in other Accidents, as in old Ulcers, Fiſtula's, and ſuch as cannot ſuffer a Plaiſter there; for it exſiccates admirably, tempers the Acid and Acrid humors, and far exceeds any Oily, Unciauous Medicines whatſoever. The two following are both of the ſame nature, and wonderfully ſtrengthen the parts, and promote their healing.

℞ Rad. Ariſtoloc. long. Terr. Sigillat. aa. ℥ii. Ocul. Cancror. Lap. Oſtiocol. ppt. aa. ℥iſs. Myrrh. Aloes, aa. ℥ii. Sang. Draconis ℥iii. præcipit. alb. ℥i. M. ſ. Maſs. c. ſ. q. Mucil. Tragacanth.

℞ Lap. Oſtiocol. ppt. Terr. Catechu. Tutia ppt. aa. ℥iſs. Lap. Silic. ppt. ℥ii. Flor. Antimon. Croc. Metallor. aa. ℥i. Lap. Hamatit. ppt. Bol. Armen. ppt. aa. ℥vi. Croc. Haer. ℥ſs. Flor. Cinzæ ℥v. Gum. Elemi. Præcipit. rubr. aa. ℥iſs. M. ſ. cum ſ. q. Aquæ de Gum. Arabic. ppt. ad Maſſam Globulorum.

If theſe Medicines ſhould want their deſired effect, and you have alſo in vain applied a broad Leather Girdle; then you muſt proceed to Manual Operation, in the manner preſcribed in the thirteenth Chapter; or with ſuch alterations as your Eyes and Underſtanding ſhall dictate, as moſt proper in the Caſe before you.

Truſſes being of abſolute neceſſity in the Cure of theſe Diſeaſes; and yet ſo few have treated that Subject, with that care and diligence that ought to be employed about it, I thought my ſelf obliged to deſcribe the particular ſorts of them in their proper Figures, that the Chirurgion may chuſe which he thinks fitteſt for his purpoſe. If the Rupture is ſmall, and in young Children or older Perſons, is only an Extenſion of the Peritonæum, there is no occaſion for a Steel Truſs, one of Leather ſtuffed, as in Tabul. 5. fig. 2. will do your buſineſs, with a proper Plaiſter firſt applied upon the Rupture. But if that ſhould not prevail, take that deſcribed in fig. 3. which has only one ſingle Plate *A*, with a Screw *B*, and the reſt only Leather. If you want a ſtronger, take that deſcribed in fig. 4. which has a Plate that not only covers the Rupture, but alſo goes round the Hip on the ſide where the Rupture is, and the other ſide is only Leather like the former. Fig. 5. is yet a ſtronger Truſs than the other, and of a new Invention. Fig. 6. and 7. are two excellent Inventions, for they always prevent the Rupture from falling down, and are ſo eaſie that the Patient may follow his Buſineſs, or uſe any Recreations while he wears them. Fig. 8. is the neweſt Invention. *A* is the Plate upon the Rupture; *B* is the Girdle that goes round the Body, made all of Steel, with two or three Joints, that it may bend, and is covered with ſoft Leather. *C* is a thick Roll of Leather.

ther. *D* is that part of the Truss which is to go between the Legs, if necessity requires it. *Fig. 9.* is a very ingenious Contrivance, and made for one that has a Rupture on both sides. So much for Trusses and Ruptures.

In *March 1691*, I had a great Nobleman in Cure from *Merffen. A. C. U. B.* who was troubled with a large Rupture of the *Guts* and *Kall*, and his Offices at Court, Travels in Publick Affairs, and being very fat, made it almost unsupportable to him. He had been under the Hands of several Chirurgions, without benefit, and had employed Trusses to no purpose; and when he came to me, had thrown them off, because they only made him sore and galled him, without keeping the Guts back. I began the Cure by keeping him Eight days in Bed, and applying warm to the Rupture the following Cataplasm.

℞ Pulv. fol. Verbasc. Malv. aa. Ziiss. flor.
Chammomill. Zi. Sambuc Zi. rad. Altha.
Parin. Fabar. aa. Ziis. Sem. Lini, Fen-græc.
aa. Zi. Terr. Sigillat. Zvi. M. f. cum s. q.
Lact. ad Catapl.

With this Plaister I had such good success in mollifying and softening the parts, that I easily put every thing into its right place again, and then applied the following Plaister, and a convenient Truss fitted to the Part, made only of Leather.

℞ Cerat. de Minio, Empl. ad Rupturas wurtzii
aa. Zvi. pulv. rad. consolid. maj. Scrophular.
Tragacanth. aa. Zi. Putamin. Cancror. Ziis.
Myrrb. Maslich. aa. Ziiss. Cera, Terebinth. aa. q. s.
M. f. Empl.

All this was done, the better to prepare him for the Manual Operation; and it's not unworthy your observation, that the *Guts* and *Kall* being long out of their places, and exposed nearer to the Air, do commonly grow very cold, and therefore ought to be put up again some days, before you attempt the Section: The parts also contract Wind by the Guts having been long down, which must also have time to pass out, before you perform the Operation; and this being done, and the Patient much at ease, I made the Section in the Presence of *Dr. Tlesch* and *Mr. Hans* a Chirurgion in this Town, exactly according to the Method prescribed in the *Thirteenth Chapter*, and that with such success, that in Five weeks after the Wound was healed up again, and he returned home in perfect health. *October 13. 1697.* As this Nobleman was going to the King of *Poland* at *Crakow*, he was pleased to make me a Visit in his way, and told me with great Joy and generous Rewards, that he never had been troubled with it since.

C H A P. XVI.

Fistula's in the Lower Belly, Fundament, Scrotum and Privities, their Difference, Cause and Cure.

IN attempting to cure these Fistula's, the Chirurgion must first diligently enquire into the state and condition of them, *viz.* Whether they are large and deep, of what Figure, what Openings and Turnings they have, how scituate, whether only in the Flesh, or into the Cavity of the Belly, or upon a Bone, or have entred the Guts; for till these Particulars are known and well considered, 'tis in vain to undertake the Cure. Signs.

Not long ago I had a Nobleman in Cure in this place, who had been under a Chirurgion's hands for the Cure of a *Gonorrhœa*, and he stopping the course of the Gleet too hastily, it turned into a *Buboe*, and that into a *Fistula*, which he endured a long time, and at last consulting me, I cut the *Fistula* to the bottom, and at length cured him, but not without a great deal of pains and trouble, and only mention it here to acquaint the Chirurgion, that unless he goes to the bottom of the *Fistula*, he labours in vain.

The general causes of *Fistula's*, are Tumors, Imposthumes, ill cured Wounds, the Pox, Buboes, *Gonorrhœa's*, Ulcers and ill managed Ruptures, and sometimes external Accidents and violent Exercises; for *Fistula's* are easily generated in these parts, because they are Glandulous, Spongy, and apt to generate Cavities, if not timely prevented. The Matter in such *Fistula's* are sometimes so sharp and malignant, that they prejudice and putrifie all the neighbouring parts, the Guts not excepted, and then the Case is dangerous. If the *Fistula* happens upon a Bone already Carious, the bottom of the Bone will be rough and uneven, and if it runs into a Gut, and you touch it with your Instrument, the Patient suffers intolerable pain, and generally there issues out an abominable Stink, and perhaps a thin kind of Excrement. Causes.

The more Cavities, crooked Turnings, Flethy and Callous Substances, Rottennels of Bones, and Fungous Excrecences accompany the *Fistula*, the more difficult it is to cure; especially if the Patient is of an ill habit of Body, is touched with the Venereal Malady or very much emaciated; but where the Patient is young and vigorous, a Cure may be more reasonably expected. Some *Fistula's* in the *Scrotum* will never be cured, as I can speak by experience in two several Patients; one a Merchant in the year 1679, who had a *Fistula* in *Ano*, which went into the *Intestinum Rectum*: The other was a certain Divine, who had a *Fistula* in the same place and manner, and all that I could do, was but to make a Palliative Cure of it. But I had better success in the case of a great *Imperial General*, who had a *Fistula* between the *Scrotum* and the Fundament, to whom I having shewed the great danger and difficulty of being cured by Medicines, he resolved to have it cut immediately; which was performed in the presence of Dr. *Tielisch*, November 18. 1692. and that so happily, Historics.

pily, that we soon found the bottom of the *Fistula*, which we Cauterized, and perfectly cured the Patient in Six weeks time.

If these *Fistula's* are accompanied by Inflammations, or if the Patient is Feverish, these accidents must be removed before the Chirurgion proceeds to the Section. While the Patient is in Cure, accustom him to the use of *Decoctum Lignorum* and instead of Beer or Wine let him Drink *Tea* or the *Vulnerary Decoction*. If there are several Orifices, without Fear cut them all into one, to bring them into the same Line; but if there is but one Orifice and that of the narrowest, endeavour to make it wider with a Tent made of the greater *Comfrey* Root, or with an Incision, that your Injections may Reach the bottom of the *Fistula*; or make an Incision to the bottom at once and then Cauterize it as you see Occasion. There are other ways of performing this Operation, but are all more Troublesome, and less Safe and Certain than the Method already prescribed. You must also employ good *Deterfivus* and *Mundifying* Medicines, of which I will present you with the Choicest, and begin with a Water which thrown into the *Fistula* with a Syringe, will exsiccate and heal to Admiration.

℞ *Decoët. rad. Aristoloch. long. & fol. Veron.*
cum Aqu. Flor. Prunell. ℥x. Lixiv. & Calc. Viv.
℥vi. Mell. Chelidon. ℥i. Sacchar. Saturn. Alum.
aa ℥ii. Mercur. Dulc. Essent. Myrrh. aa ℥i. Opii Dilu.
M. f. diligent. Injunctio.

But if you think the Disease is so contumacious as to require one something stronger, make use of the following, which will effectually take away the *Callus*.

℞ *Aqu. Calc. viv. ℥vi. Essent. Myrrh.*
℥ii. Euphorbii Essent. ℥iss. Sacchar. Saturn.
℥i. Sarcocolla ℥ss. M. f. ad Injunctio. s. art.

If by this means you find the *Fistula* very clean and fit for healing, apply the following Balsam.

℞ *Flor Veron. Aristoloch. long. Alchimil.*
aa ℥iiss. Nicotian. Mii. concis. coquant. in
s. q. Aquæ Mellis f. Decoët. Colatur. coque
ad consistentiam Mellis & huic admisce
Mell. Chelidon. Pulver. Aloes Myrrh.
Sarcocoll. Sacchar. Saturn. ℥i. f. Balsamus.

Apply it Warm with Lint to the *Fistula*; which is not only proper in this case but in all manner of Ulcers and *Fistula's*, for it cleanses and Incarnates, and yet by its Acrimonious Quality causes no extream Pain to the Patient. Licenciate *Junken* has also given us the Receipt of a very good Balsam in these Circumstances.

℞ *Succ. ex fol. virid. Nicotian. Succ. Cancror.*
recent. expr. aa. ℥iiii. Mell. Rosar. ℥i. Mercur.
dulc. ℥i. M. ad Balsam. consistentiam.

But

But since some Artifts are better opiniated of a Mixture or *water* than a *Balsam*, I shall accommodate them with some prescriptions of that kind, which will answer their Intentions, tho I am of Opinion that Balsams are better; because they Continue longer on the part affected.

℞ Fol. Ruta, Scord. Alchimill. aa. Mi. rad. Aristoloch. long. ℥i. Gentian. ℥ii. herb. Veron. Miss. f. Decoction cum Aq. Flor. Prunell. s. q.

Colatura ℥x. adde Tinct. Galban. Essent. Myrrh.

aa. ℥iii. Sacchar. Saturni, Flor. Cinza aa. ℥ii.

aq. Regin. Hungar. ℥iss. Misce & in loca calid.

Serv. pro usu; if you look into the Chapter where we treat of *Fistula Lachrymalis*, you will find more Waters of the same Nature.

In *October 1679*. I had a *Brewer of Halberstadt* in *Cure Thirty Nine* Years of Age, who was afflicted with a *Fistula* in the *Lower Belly* near the *Groines*, which had two openings, one a good Distance from the other. Another *Chirurgion* in the same *Town* had him in *Cure three* Quarters of a Year, and endeavoured by all the ways he could invent to bring both *Orifices* into one, but could not accomplish it. The next Day after I was sent for, I took him with me to see the Operation that he might know how to do it another time. I took a *Syringotomon*, and with it at once Cut both the *Orifices* into one, which he wondered at and thought it had been impossible. This being done, I ordered the Patient a good *Decoction*; applyed one of the above mentioned *Balsams* to the *Fistula*, and in *Fourteen Days* it began to Mend and gave good hopes of a perfect *Cure*; but because I saw him begin to break out in large blotches about the *Thighs*, *Breast* and *Posteriors*, I put him immediately under a gentle *Salivation* and in *Five Weeks* time he was thoroughly cured.

Observation.

In *September 1689*. I had in cure a *Burgher and Clothier* of this *Town* 46 Years of Age, who was troubled with an *Inveterate Fistula* in the *Fundament*, which several had attempted to cure, but to no purpose. The Patient was otherwise healthful and of a good *Constitution*, and the *Orifice* of the *Fistula* was not *circa Scrotum & Anum*, but on the *left Buttock*, about three *Fingers Breadth* from the *Fundament*. I often essayed to get a *Probe*, or a *Wax Candle* or a *Leaden Probe* into the *Fistula* but could make no *Entrance*, and yet could easily apprehend by the *Colour* of the *Matter*, and the *Stink* that the *Fistula* went into the *great Gut*, which we found so the next Day by the help of a *Speculum Ani*. The Patient complain'd of excessive *Pain* and could hardly *Walk*, *Sit* or *Lye Down*, for which Reason I applyed a *Cataplasm* to it *Three or Four Days*, and endeavoured to *Widen* the *Orifice* of the *Fistula* with *Tents* made of *Preis'd Sponge*, but this availed little, for I always found something hard which resisted every thing that I endeavour'd to put into it; therefore on the *Fifth Day* I made an *Incision*, enlarged the *Fistula*, and with a *Forceps* pull'd out of it a very large piece of *Comfrey Root* about a *Fingers length*, which might very well *Occasion* the *Pain* and *Uneasiness* he complain'd of. And I must Confess that in my whole *Life* I never met with such a *Rude*, *Clownish* and *Horse*

Doctor

Doctor like a Treatment as this was, nor could think that any Man could have been so Ignorant as either to make use of such prodigious large Tents, or be so unskilful as not to secure the drawing them out again. As soon as this Tent was drawn out, the Patient was more at ease, and having made one Incision more, much larger than the former, I injected good detersive and cleansing Liquors to the bottom of the Fistula, and by that means and applying the following Powder to it, the Patient was cured in the space of Six Weeks.

℞ Pulv. Gumm. Arab. ℥i. Elemi ℥ii.
rad. consolid. maj. Tragacanth. aa ℥iss.
Sarcocol. ℥ii. Mastich. Mirrh. aa ℥i.
M. f. Pulv.

This Powder was laid in with a little Lint, and over that the Balsam above mentioned. I ordered the Patient likewise a Spare and Drying Diet, and his constant Drink to be a Decoction of the Woods; if at any time he was Costive I prescribed him a Clyster, and by this Method in Nineteen Weeks time he was cured, but not without very diligent Care and Attendance.

C H A P. XVII.

Accidents of the Privities and Bladder, and first of the Carunculae in the Passage of the Urethra, next of a Gonorrhoea, Ulcers of the Urethra, Cordee's or a Contraction of the Frænulum and a Tumefaction of the Præputium: How Caused, Distinguished and Cured.

Carunculae
from whence
they proceed.
What they are

They generally proceed from a long continued and Virulent *Gonorrhoea*, vulgarly called the *Running of the Reins*, or sometimes from an Ulceration or Inflammation of the Bladder; for Matter is very apt to Stick to those Glandules, or the adjoining parts where the Sperm issues out. The Matter is Acrid, Gelatinous and sticks so close that the Urin passes over it without washing it away. This Matter at length Corrupts, Gnaws the Skin and causes several exulcerations, out of which if not timely prevented, grow little pieces of Flesh, which in time harden into Warts and are very hard to be cured. In short, *Caruncles* are small Excrecences or Warts growing near the Neck of the Bladder and the *Parastata*, and are very painful to the Patient.

The Cure.
In order to cure these Vexatious and Tormenting Excrecences, 'tis necessary in the first place to know how and where they are seated, which must be done with a Wax Candle, for the Patient will tell you when you Touch upon them, and you may also find by your hand when the Instrument or Wax Candle will go no farther. All things that Cleanse and purify the Blood and Juices and Temper the Acrimony have the first Place in curing this Distemper, among which the *Mercurialia* have the preference. The following Liquor must also be in-

injected into the Yard at least three times a Day Warm, and the Pipe of the Syringe must be long enough to reach almost to the place where the *Caruncule* are.

*℞ Decoct. Alghimil. & rad. China cum Aq.
Plantagin. ℥vi. Sacchar. Saturn. ℥iiss.
Sarcocol. ℥iiss. Essent. Myrrh. gutt iiii Laud.
Opiat. gr xii. M. f. Injeçt.*

This being done you must provide a slender Silver Pipe with a small Head, which must be long enough to pass over the *Caruncles*, and at the lower end of the Pipe which is put into the Yard there must be large holes, that when you blow with the Pipe the following Powder may fall upon the *Caruncles*.

*℞ Antimon. Diaphoret. ℥ii Ocul. cancer.
ppt. ℥iiss Sacchar. Saturn. ℥iiss Sacchar.
Alum. ℥iiss. Mercur. albi ℥i. Sarcocol.
Myrrh. aa ℥iiss. Plumb. ust. ppt. aa. ℥iiss.
M. f. ad Subtiliss. pulverem.*

Having put this Powder into the Pipe and the Pipe into the Yard, blow in the Powder two several times, and three times a Day; but first let the Patient Urin before you blow it in, that his Water may not wash away the Powder. Some rather chuse the following Powder.

*℞ Colophon. ℥iiss. Tutie ppt. ℥ss. Cort. Austr. ppt.
Lap. Ostiocol. ppt. aa ℥iiss. Mercur. precipit.
℥iiss. flor. Cinz. ℥iiss. Aloes, Mastich. aa. ℥i.
M. f. ad pulv. subtiliss.*

You may add or Diminish the Quantity of the *Precipitat*, as you find Occasion: As for the *Colophon*, you ought to make no Objections against it, for upon Tryal you will find it one of the best Medicines in the World for this Disease, because it sticks close with the other Ingredients to the *Caruncles*, which is a benefit to be coveted in this case; When you have used the Injection and the Powder for some time together; and find that the Urin passes away without Pain, it's a sign the *Caruncles* are going off, and therefore you must put the following Pastillum or Wax Candle into the Yard, and make it so long as it may reach beyond the Place where the *Caruncles* are seated.

*℞ Tutie ppt. Creta ppt. aa ℥ss. Lap. Calimmar.
ppt. ℥vi. plumb. ust. ℥i. Myrrh. ℥i. Croc. Metallic.
precipit. alb. aa ℥iiss. Misc. f. Massa cum suffi-
ciente quantitate Mucilag. Tragacanth. s. a.*

Take a Yarn, double it Three or Four times and draw it once or twice through melted Wax: Then rowl it two or three times in this *Mass* being first made Liquid, that it may stick the better to the Wax-Candle, and let it dry every time before you rowl it a Second time; then put it into the Yard, let it continue there all Night, and the

next Night, and Continue so doing till all is well. Another *Pastil* of the same Nature follows.

Rx *Emplastr. de Ranis cum Mercurio* ℥vi. *Diachil.*
Simpl. ℥v. *Ol. Amigdal. Dulc.* q. s. *Liquefac ad Ignem*
lent. donec omnia exactissime fuerint mixta, remove
ab igne, adde Test. Odor. ppt. Tutia ppt. Lap. Osiocoll ppt.
aa ℥i. *Croc. Metallor. Antimon. Crud. aa* ℥ss. *pra-*
cipit. rubr. Sacchar. Saturn. aa ℥ii. *Aluminis* ℥i.
Aloes, Myrrh. Oliban. aa ℥i. *Miste cum s. q. Ol.*
aa *Mafs. consistens.*

This *Mafs* must be Spread on both sides upon fine Linnen Cloth, and rolled up Round in the Shape of a Wax Candle, proportioning it in bigness as the part requires. To perform the Cure more effectually, especially when the *Caruncles* were unwilling to come to a *Separation*, I used the following Balsam, which has often done me great Service where nothing else could prevail, for it Purifies to Admiration. I conveyed it into the Yard with wax Candles in the manner above rehearsed.

Rx *Balsam. Vulnerar. Hantkii* ℥iii. *Peruvian.*
Coparv. aa ℥ss. *Opit purissim.* ℥iss. *Tutia ppt.*
Bol. rubr. ppt. aa ℥ii. *Præcipit. alb. In M. f.*
cum s. q. Ol. Momordica ad Balsam.

A Gonorrhæa.
 how caused.

A Gonorrhæa or as it's generally called the Running of the Reins is commonly caused by excess in Venery, which having so weakned the Spermatick Vessels and Glandules; that they cannot retain their Juices in the proper parts, they run out involuntarily and continually, but this sort of *Gonorrhæa*, proceeding only from the Weakness of the seminal parts, and not being got by Infection, never grows to a virulent Clap. But a *Gonorrhæa Virulenta* proceeds from an ill Fermentation in the Genital parts, primarily in Women, by harbouring the various kinds of Sperm of Hot and lustful Men, which destroying one another by their Discord, and dissimilary Parts, soon Grow to Putrefaction, and by this Acid Ferment the Sound parts adjoining Ferment and are Inflamed. Now this Venemous Ferment being drawn into the dilated Pores of the Extended Yard, it immediately raises the same malignant Ferment in the Glandules and Genital parts of the Unfortunate Agent, and at length causes Inflammations, Impostumations and Ulcers, especially in the *Prostata*, where the Spermatick Juices being impossible to be retained after the *Prostata* are injured, in whom the Spermatick Vessels have their period, the Sperm Issues out continually, and this we call *Gonorrhæa Virulenta*.

Cure of a Gonorrhæa.

The Cure is either Easy or Difficult according to the Duration of the Distemper and the Disposition of the Patients Blood and Juices. Some I have thoroughly cured by only giving two Doses of the following Purging Pills, and others I have had Extraordinary Trouble with.

Rx

Re Extract. Panchymagog. Crollii, Catholicon. aa ℥i.
 Mercur. dulc. gr xviii. Præcipit. alb. ritè ppt.
 gr iiii. cum s. q. Ol. Terebinth. ad Mass. ex qua
 conficiantur Pilule No. xxx. Dosis XV.

These Pills are a Gentle Laxative which correct the Acid and Venereal Ferment; they may be repeated the third Day but no oftener, lest you Throw your Patient into an Unnecessary Salivation. The Chirurgion should always begin this Cure with Purging Medicines. The Italians, Spaniards and French commonly Purge their Patients five or Six Days without Intermiſſion, but to do it by Degrees in my Opinion is much better. Some will only exhibit a gentle Purge, Sweat him once and then Administer Restringents to stop the Gleet; but this is a shameful Method of Practise, for hereby they often cause Bubbles in the Groins, great Swellings and Inflammations in the Testicles, and Miserably Pox their Patients, by stopping the Gleet before the Parts are sufficiently cleansed and the Cause Removed. Others immediately Bleed their Patients two or three times, but this is as unsafe as the former and produces very dangerous Consequences. Some will not purge at all, but pretend to cure it at once by their conceited Arcana's, by which the Credulous are often deluded to their Ruin. The safest way as I said before is to begin with Purging, which pacifies the unnatural Fermentation of the Juices and Tempers their Acrimony. When the Patient has been purged two or three times, and his Body is sufficiently cleansed, employ the following Powder to mitigate the Pain in the Urethra and Qualifie the Acid Ferment.

Re Lap. Ostiocol. ppt. Spodii ppt. Ocul. Cancor.
 aa ℥iſs. Antimon. Diaphoretic. ℥i. Lap. Pruvell.
 ℥ii. Opii gr iiii. Misce fiat pulv. Subtil. Dosis ℥i.

This Powder is to be taken three Nights together. Afterward for Four or Five Mornings let him take Balsam. Copaibe gr. xv. in the Yolk of an Egg, and abstaining from Wine or Beer, let him only Drink a good Decoctum Lignorum or Tea or Coffee as often as he pleases.

In Italy especially upon the Hills near Palermo grows an Herb which the Inhabitants call *sanatodos* of which i. or ℥ii. being taken in Powder is an Excellent Remedy in this Disease, which I have often experienced and a long time used as a great Secret communicated to me in the Year 1679, by Pater Sylvius Bucco of the Cistercian Order and the Learned Botanick Professor to the Grand Duke of Florence. This famous Herb I used to send for by the way of Milan and Mr. Jacob Pine has often brought it me from thence. Good Diureticks may be also used at any time, among which I recommend the following Pills.

Re Mass. pillul. Succin. Craten. ℥ſs. Extr. Cassia.
 Gujac. aa ℥iſs. Balsam. Copaibe ℥ii. Lap.
 Ostiocol. ppt. Ocu. Cancr. aa ℥iſs. f. c. s. q.
 Ol. Sabine ad pill. Mass. ex ℥i. num vi.

Five or Six of these must be taken every Morning, for they wonderfully

fully Temper the Acidity of the humor. The following Pills are adapted to the same purpose.

℞ *Extract. Fumarix, Sabin. Guaiac. a ʒii.*
Balsam. Peruvian. Ocul. Cancr. Lapid. Chrystal.
ppt. aa. ʒiiss. M. cum s. q. Terebinth. Venet.
ad Mass. formentur ex ʒi num. v.

Five of these Pills must also be taken in the Morning, and every Evening two Spoonfuls of *Aqu. Quercitani* which ought to be esteemed as one of the best Remedies for the Cure of this Disease. *Tinctura Cochenilla. Tinctura Corallorum rubrorum. Tinctura Cantharidum* according to *Blankards* Preparation, and also *Balsam. Succinat. & Terebinth.* are all accounted very proper in this affect. When you find every thing well disposed and clean, then proceed to stop the Running if it does not stay of its own accord; for which the following Pills are Excellent.

℞ *Extract. Sarsaparilla ʒi. Guaiac. rad. China,*
aa ʒiij. Croc. Vitriol. Mart. ʒi. Terr.
Catechu. Troch. alb. Rhas. aa ʒiiss. Mastich.
Gumm. Elemi aa ʒiss. M. f. c. s. q. Ol. Guaiac.
Pillular. Massam. Dosis No. vi vel vii. ex
ʒi. formentur. xi.

These Pills must be taken both Morning and Evening, the Patient Drinking after them a good Draught of *Aqua Plantaginis*, in which is mixed *Ocul. Cancror. ʒss.* The Patient in the Day time may also Drink good *Emulsions* appropriated to the Distemper. If you find it necessary to use *Injections* to allwage the Pain in making Water, make use of the following.

℞ *Decoct. Rad. Irid. Flor. cum. Aqu. Plantag.*
ʒiiss. Aqu. rad. Althe. ʒiss. Aqu. Mellis ʒss.
Sacchar. Saturn. ʒii Opii purissim. ʒss. M.
& Calid. appl.

A good Diet must also be observed, especially abstaining from Wine and all Salt and Sower Aliments during the whole time of Cure. Thus much of a *Gonorrhœa.*

Sianckerts vulgarly called *Shankers* are nearly related to a *Gonorrhœa*, and seldom come without many Blisters on the *Glans* and Swellings, Inflammations and Excessive Pains in the *Præputium*. These Symptoms if not timely remedied will soon procure further Mischiefs. The Blisters will terminate in Corroding Ulcers; the *Præputium* and *Franulum* will Tumify and at length grow Hard, and if the *Glans* is covered with the *Præputium*, it's Difficult to come at the Shankers any other way than by Syringing, which without the Application of other Medicines are insufficient, for the Ulcer will soon rot the part, while it's hid under the swelled *præputium*.

The Cause of these Shankers are a Filthy Venemous Venereal humor settling betwixt the *Glans* and the *Præputium* of a Mans Yard, and in Women

Women round the *Vagina* and the Neck of the *Matrix*, where they first cause Blisters, and afterwards cause painful Ulcers.

The Cure at first is not very difficult, if undertaken in time; but if the Patient neglects seeking a Cure, till it's of long continuance, the Ulcer grown large, and the swelled *Præputium* has covered the *Glans*, then sometimes a good part of the Yard rots away, and the Cure is very difficult. Begin with Purging your Patient sufficiently, and wash the Blisters and Ulcers with the following Water, and over that apply my *Lac Aureatum*, and you need not doubt of success.

The Cure.

℞ Decoct. Veron. & Alchimill. cum. Aq. Plantag.
 ℥vi. Aqu. Mercurial. Fallopii ℥ii.
 Spir. Vini Camphor. ℥ss. Mercur. Sublimat.
 ℥ss. Tutie ppt. ℥i. Myrrh. ℥i. M. f. dilig. Mixt.
 in loco calido servat. pro usu.

If this should be too sharp, and the Shankers not very contumacious, use the following Mixture.

℞ Aqu. Plantag. Mellis aa. ℥iiii. Mercurial. ℥i.
 Sacchar. Saturn. ℥ii. Tutie ppt. ℥ss. Mercur. dulc.
 ℥i. Camphor. in Spir. vin. solut. ℥ss. M. detur in Vitr

But seeing I have met with some Patients, with whom these Waters would not agree, I have therefore inserted a Liniment to be used instead of them, if such a Case should happen.

℞ Mucilag. Tragacanth. liqu. cum Aqu. Plantag.
 ℥ii. Tutie ppt. ℥ss. Flor. Cinza ℥ii. Lythargir.
 Coct. & Pulverizat. ℥iiss. Mercur. dulc. ℥i. Croc.
 Metallor. Aloes aa. ℥i. M. f. Linimentum.

This must be spread all over the Shankers, two or three times a day, and over that again my *Lac Aureatum*, and you will soon find the Cure completed. The following Unguent is inferior to none of the other Medicines, for with it I have cured several Persons, where almost every thing was employed in vain.

℞ Unguent. de Lithargyr. cum Ol. Amygd. dulc.
 fact. ℥iiii. Lapid. Tutie ppt. Cort. Austr. ppt. aa. ℥ss.
 Mercur. dulc. ℥ss. Ceruss. Calcin. ℥ii. M. f. Unguent.

The Oyster-shells must be a little calcined, to burn the Sea Salt out of them, or else they will do but little good in this Case.

Another Companion of a *Gonorrhœa*, because every thing now adays must have a *French* Name, is called a *Cordee*, perhaps derived from the Latin *Chorda*, which signifies the same thing. It's a Disease or Malady incident to the *Frænulum*, the Ligament or Bridle of the *Præputium*, which if it with the *Glans* is very much swelled, it so contracts and shortens the Yard, that it cannot be extended to it's usual length, but the *Penis* is forced to bend, as a *Horses* head to the Bridle.

A Cordee
 what it is.

Its Cure. Its Cure is performed after the same manner as the former; for a *Shanker* is seldom or never seen without an Inflammation or Swelling of the *Franulum*, which in time producing abundance of little Pimples and Blisters upon it, and round the edge of the *Præputium*, at last grow malignant, and utterly spoil the *Franulum*. In order to a Cure, hang the Yard often in warm Milk or Tea-water; dabble it very well in the following Water, and over that apply my *Lac Aureatum* warm with double Linnen Rags.

℞ *Ceruss.* ℥ss. *Alum. ussi* ℥iss. *Tutia* ppt. ℥ii.
Mercur. præcip. alb. ℥ss. *Myrrh. Camphor.* aa. ℥ii.
M. f. Aqu. s. art. cum Aquæ Plantag. & Calcis
aa. ℥viii. & serv. ad usum.

Dr. Blanckard's Liniment I have also often used in this Disease,

℞ *Bol. Armenæ* ℥ss. *Camphor.* ℥ss. *Tutia* ppt. ℥ii.
Spirit. Vini q. s. M. f. Linimentum.

C H A P. XVIII.

Several other Diseases and Accidents incident to the Privities as Warts, Testiculi Veneris, Buboës and the like, their Cause and Cure.

IT's very surprizing to consider the many Accidents and Diseases that happen to these parts; and yet generally speaking, they all proceed from one and the same cause, though they are variously distinguished one from another; so that if the Chirurgion is not well experienced in them, they will grow so malignant and corroding, that it will be difficult to put a stop to them; therefore you must neglect no time, for what is once lost can never be restored.

Warts in the Privities.

Their Causes.

The Cure.

Condolomata, Varices, or Warts under the *Præputium* in Men, and near the Fundament, and in the Privities in Women are very troublesome, for sometimes they will not admit of a *Restriction*, and in other cases it cannot be done. *Section* cannot be practiced, because of the violent bleeding it occasions, nor will they be exterminated by *Cauteries*, for being driven from one place, they will rise again in another. The Acrimony and Acidity of the Matter, which continually flows downwards in a *Gonorrhœa*, first causes a Rawness in the tender *Cuticula* of the *Vaginæ* in Women and the adjoining parts, and in the *Urethra*, and round the *Glans* in Men, after which Rawness follows an Exulceration, and then little *Excrescences*, which getting root, grow into Warts. A Gentlewoman of Note came to me and *Dr. Ortob*, in *October 1685*, who was extremely afflicted with these kind of Warts in her *Vagina* in great numbers, and some very large ones; but outwardly near the *Pudenda*, where they usually happen, had none at all. They being not to be reached or come at, gave me a great deal of trouble; but

but at length applying to them *Butyrum Antimonii*, it took them all away, without the use of any other Medicine but a *Lixivium*, to remove the Pain caused by the Corrosive quality of the other Application, which it did effectually, by often washing the parts with it, presently after they had been touched with the *Butter*. Nothing will totally eradicate them but *Corrosives*, and though I am sensible that other Chirurgions make use of different Remedies, as *Spir. Nitri*, after it has been thickened in a Tin Spoon by Evaporation, *Oleum Vitrioli*, *Ol. Antimonii*, *Aqua Fortis*, and some of *Spiritus Sulphuris per Campanum*; yet I have had such good success in these cases with *Butyrum Antimonii*, that I prefer it before all others, and accordingly recommend it. But if the Patient is more than ordinarily infected, and there are any apparent Symptoms of the Pox, then you ought to *salivate* him without delay. When the Corrosives have almost eradicated the large Warts, you must apply the following Mixture, to consume the rest, and prevent their further growing.

℞ *Lap. Calaminar.* ppt. *Tutia* ppt. aa. ℥ii. *Ceruss.*
putamin. Cancror. aa. ℥i. *Mercur. sublimat.*
 ℥ii. *Bol. Armen.* ppt. ℥iss. *M. f. Mixture. c. s. q.*
Acet. Vini.

With this Mixture wash the Warts twice a day, and they will soon grow dry and fall off. You may also sometimes make use of my *Lac Aureatum*, to prevent an Inflammation; but if they grow raw and will not heal, take *Tutia*, mix it with *Aqua Plantaginis*, and therewith daub the parts every two hours.

The Swelled and Indurated Testicles are also Companions and Attendants of a *Gonorrhœa*, but they seldom or never appear but upon a *Gonorrhœa*'s being stopp'd too soon. This Affect is called *Testiculus Veneræus*, or *Hernia Veneris*, being a true extension of the Spermatick Vessels, and much the same thing with the *Hernie* discours'd in *Chap. xii.* Cataplasms are the most proper Medicines in this Case, of which I have already given you two sorts in the twelfth Chapter, which if you make use of with the following Pills, which are to be taken twice a day in a convenient Vehicle, the Swelling will quickly vanish.

Testiculus
Veneræus.

℞ *Terebinth. Cypr.* ℥i. *Balsam. Copai.* de *Tolu* aa. ℥ss.
Extract. Sabine, Guaiac. aa. ℥iii. *Mercur. dulc.* gr. xvi.
Troch. de Spodio, Alhandal. aa. gr. vii. *f. cum s. q. Ess.*
Fumar. vel Balsam. Peruvian. ad *M. Pillularum.*
Dosis xi. v. xii. ex gran. xv. deurentur.

The following Cataplasm I have had such extraordinary success with, that I should be wanting to the Publick if I should conceal it. The Preparation is as follows.

℞ *Micar. Panis cum Lacte Vaccin.* Miscæ ad *Cataplasmatis*
consistentiam, huic admisce Vitell. Ovor. Num. ii. Fac.
Vini ℥ss. M. f. Catapl. s. art. & calidè loco affecto
applicetur.

Observation.

In *January* 1695, I had a Gentleman in Cure, who had been troubled with this Distemper above a year, insomuch that he could not ride in a Coach or on Horseback, much less use any other Exercise. He had been all this time under the hands of a conceited Chirurgion, who plyed him with abundance of Outward and Inward Medicines to no purpose, for the Swelling encreased more and more, and the Testicles were grown very hard. However, this Gentleman I perfectly cured in Eight days, without the help of any other Medicine but the Pultifs above prescribed.

Buboes where seated.

Bubones Veneris, or Buboes are now so well known, that there are few Chirurgions in City or Country, but have some experience in them. They take up their residence in the Groins and the Glands near the Privities. They begin with a stiffness in that part, proceed to a Swelling, Pain and Inflammation in the part, and at last grow to Putrefaction. Sometimes they only happen on one side, and if the Infection be stronger, on both sides; and that almost in an hour's time.

These Buboes as was said before, commonly proceed from an overhasty stopping a *Gonorrhoea*, and the Ignorance or Carelessness of the Chirurgion, who makes speed to stop the *Gleet*, without considering the ill consequences that follow their unpremeditated Rashness; for the corrupted Matter being stopp'd in its usual course, forces its way towards the Groins in *Buboes*, and to the Testicles in the former Distemper, which we call *Testiculi Venerei*; but other Chirurgions take a better course, in endeavouring as soon as they can to bring the Buboes to Suppuration, in which the following Plaister will greatly assist them.

R̄ Cerat. de Galban. ℥vii. Emplastr. Diachyl. c. Gum. ℥vi. Resin. Pin. Cera aa. ℥iiiiſs pulv. rad. Althæe, Farin. Fabar. aa. ℥i. Sem. Sinapi, Cumin. aa. ℥ii. Cepar. Assatar. Carn. Fic. aa. ℥iſs. M. f. c. s. q. Ol. Lini Emplastrum.

This Plaister must be spread thick, and repeated three times a day. But if you had rather make use of a Cataplasm, take the following.

R̄ Pulv. Malvæ ℥iſs. Farin. Fabar. ℥ii. Tritic. ℥i. Cepar. assatar. pingu. Fic. aa. ℥ii. Sem. Sinapi, Lini aa. ℥ſs. Vitell. Ovor. Num. vii. Mell. q. s. fiat Catapl. cum s. q. Decoct. rad. Althæe calide applicetur.

Licentiate *Juncken* has given us an excellent Prescription of a Cataplasm, which I have often used in this case with considerable benefit, and is made as followeth.

R̄ Cepar. sub Ciner. assat. ℥ii. Fic. num. xx. Sem. Sinap. ℥ſs. Cumin. ℥ii. Fimi Columbin. ℥vi. Croc. Camphor. aa. ℥i. Mellis q. s. ut fiat Catapl.

When the *Buboe* is come to Maturity, it must be opened with a Lancet in a convenient place; but not too soon, nor make the Orifice too little. For the first three or four days dress it only with a Tent of dry Lint;

Lint 3 but after that time, moisten the Tent with the following Balsam applied warm, and over it lay a good Vulnerary Plaister.

℞ Mell. Chelidon. ꝑss. Veron. ꝑi. Essent. Myrrh. ꝑi.
Oliban. Mastich. aa. ꝑiiii. Aloes ꝑi. M. f. diligen.
ad Balsam.

This Balsam you must use while any Corruption is remaining, and when you find all clean, employ the following to Incarnate and Cicatrize.

℞ Terebinth. Cypr. ꝑiiii. Vitell. Ovor. num. iii. Pulv.
Oliban. Mastich. aa. ꝑss. Myrrh. Sarcosoll. aa. ꝑii. Croc.
ꝑiiii. Terr. Sigillat. ꝑss. M. f. Balsamus.

But some of these Buboës are so malignant and venemous, that they will not be cleansed, and though the hole is never so small, it still grows wider, and the sides very uneven and bunchy, and will not be remedied but by cutting with Scissors, and the application of that Fistula Balsam of mine which is mixed with Oil of Tobacco: Nor need you fear to make two or three good Incisions in convenient places, as the only way to bring these Buboës to healing.

Ulcers and Blotches which often happen in the Privities of Men and Women, are cured by the application of mollifying and drawing Plaisters, to make the Scabs fall off and draw out the Corruption, if there be any in them, and afterwards washing them with the following Water.

℞ Lixiv. Calc. Viv. ꝑviii. Aq. Mercurial. Fallopii ꝑiiii.
Ceruss. Tutie aa. ꝑss. Sacchar. Alumin. ꝑii. Mercur.
Sublimat. ꝑi. Campb. in spir. vin. solut. ꝑss. M.
diger. in loco calid. & serv. ad usum.

Having continued this course for some days together, if you find every thing dry, and only some Scales remaining, apply the following Liniment to drive them all away.

℞ Unguent. Lithargyr. cum Ol. Amygd. dulc. fact. ꝑiiii.
Flor. Cinze, Tutie ppt. aa. ꝑss. Mercur. dulcis, Croc.
Metallor. aa. ꝑss. M. f. Linimentum.

CHAP. XIX.

High Hips and Shoulders, Crooked Ribs, Dislocated Vertebrae, how they may be remedied, and Hump-backs prevented.

Ribs bended outwards, by which the Blade-bone of the Shoulder is thrust up, often happens to Children when they are young and feeble. This fault is not always to be ascribed to the Spine, though if

High Shoulders, their Causes and Cure.

it be not remedied in time, the Ribs will grow still more crooked, and the *Epiphyses Costarum* being drawn by degrees from the *Spondyli*, it leaves a space in which a *Callus* settles, or else the *Vertebrae* following the Ribs bend also towards them, and though they don't wholly remove out of their Joints, yet they cause a *Cyphosis*, a hunched or crooked Back, which not without abundance of trouble can be brought into a strait Line again.

When the Chirurgion is called in time to such a Patient, he must swathe the Child with a good Roller, and apply two or three good Bolsters upon the place where the Ribs grow outward, taking care to lay the Child always in such a posture, that the Arm on that side may not lie backward, or bend the Shoulder outwards; but if this method will not prevail, you must cause a piece of Lead to be beaten indifferent thin, exactly of the same bigness and shape of the part where the Ribs are growing outward, which must be sewed to the Roller or Girdle, and bound fast upon the part affected; the whole Back being first well anointed with proper Nerve Ointments, and the following Plaister spread upon Leather, and laid upon the Bunch, which if punctually observed, will accomplish your Desires.

℞ *Ol. Olivar.* ℥i. *Lithargyr.* ℥i. *S. virid. avis* ℥i.
ad rectam consistentiam Emplastri coquantur,
Et postea admisceantur sequent. Cera ℥i. *Magnet.*
ppt. ℥i. *Aristol. long.* ℥ii. *Mastich. Myrrh. aa.* ℥ss.
Succin. ℥i. *Oliban.* ℥iii. *Sperm. Ceri* ℥i. *Gumm.*
Ammom. Bdellii aa. ℥i. *Misce s. diligenter ad Empl. consistent.*

High Hips,
 their Causes
 and Cure.

This Affect quite differs from the former, though no Luxation intervene, being only a small moving of the Hip-bone upward, especially the *Os Ilium*, which too common happens among Children, and may easily be caused by a hard, lumpy, uneven Bed, a Fall, a Blow, and a thousand other unforeseen Accidents, which the soft and tender Bones of Infants are subject to. This Accident is seldom perceived in Children till they begin to go, and then you may see them roll, and fall continually from one side to the other, and to help themselves they put their Knees one against another, and the weaker side giving way, causes a high Hip. This Accident is very hard to be remedied in Children, for Medicines will have very little Affect, and a *Glossocomium* is too much for Children to endure; but if they are at Maturity, bring them every morning to a Bench, which on one side has a Windlass or Wheel, and on the other side a Crane, which gently stretches the Limbs, while with your Hands you may put every part into its proper place, and continue the Extension as long as the Patient is able to endure it. This Method generally succeeds in all that are willing and able to suffer it; but the number of those are very few, for having been once upon it, they can seldom be persuaded to suffer it a second time, but rather chuse to retain their Deformity, than be freed from it by such an uneasy process. The forementioned Plaister may be applied over the whole Hip of such as have suffer'd it, to strengthen the part, and prepare them for the *Glossocomium*.

A Hunch
 or Hump-
 back.

A *Cyphosis* or Hunch-back, is generally a Dislocation of the *Spina Dorsis*, or a Luxation of its *Vertebrae*, and is not always presently perceived, especially

cially if the Dislocation happens gradually by a Relaxation of the *Ligamenta Vertebrarum*; but if it comes by a Fall, a Blow or the like momentaneous Accident, it's soon perceived, for the Patient cannot stand upright, and the fault is Autopsie. If this Accident is not speedily remedied in Children, they will soon be crooked back'd, the Breast will grow outward, for the *Sternum* must give way to the Ribs when they press forward, and so the Patient grows more and more deformed and miserable. It also happens very often that this Disease is hereditary, which may very well be, if an Excess of humors particularly oppresses the Sinews thereabouts, and so occasion a great weakness in the Nerves and Ligaments, which joining with the propensity of Nature for like to produce its like, may contribute to the production of a *Cyphosis* or Hump-back. Many I know deny this Affect to be hereditary, because say they it is always accidental, but I am convinced to the contrary; for I knew a great Man in *Halberstadt*, who was Hump-back'd, and having Five Children, they all took after the Father, and though nothing was unattempted to rectifie that disorder, yet all was ineffectual, except on the youngest Son *J. D.* who willingly submitting to every thing, I set him strait with the *Glossocomium* and a good pair of Stays.

You must also observe, that the *Vertebrae* do not always dislocate and move one and the same way; for sometimes they move inwardly, and then they are not only incurable, but mortal: Sometimes sideways, but that is very seldom; but it very often happens, that the *Spondyli* (or turning Joints of the Back-bone) move outwards, by reason of the Laxity of the Ligaments which tie those *Vertebrae* together, and the *Lympha* settling thereabouts in great quantities, so dilates the *Tubuli*, that the *Spondyles* separating from one another, causes such a Dislocation.

If the Chirurgion be consulted at first, before the *Callus* is firmly settled, there is a possibility of helping the Patient; but if it be of long continuance, it is better not to attempt it, than trouble your self and your Patient to no purpose, for nothing will prevail. There are two methods of Cure, where there is any hopes of it, the old and the new manner. The *Antients* prescribe the Patient to be laid on his Belly upon a Table, and Towels fastened about the Body, under the Arms, and round the Thighs and Knees, which the Assistants to the Chirurgion must pull very hard both ways, to extend the Back as much as is possible, which has some reason in it; but I never knew *Paræus's* two pieces of Wood, or *Hippocrates's* Bench give any relief to the Patient. If the Extension succeeds, and with your Hand you have reduced the dislocated *Vertebra* into their right places: Then immediately apply a proper Plaister to it, that will not raise Blisters or Pimples, and over that fine Linnen Rags; over them again apply neat wooden Splints or plates of Lead proportioned to the place, and over all Linnen Bolsters, moistened in warm Wine-vinegar. This being done, bind up all very tight, and if it be possible, let the Patient lie in this manner in his Bed, upon his Belly three or four days, except the time when he eats and drinks, at his Meals, and thus continue for Five or Six weeks, looking after all every Four, Five or Six days, as you find it necessary.

The new way is much easier and better; make a broad Ligature of strong Leather, with holes to put the Patients Arms through, and wide enough to encompass the whole Breast, under the Arms lay thick Bolsters,

vid. Tab. 5.
fig. 10.

Bolsters, that the Leather may not hurt the Patient in the Extension. About the Lower Belly and Thighs make such another, which must be fastened to the lower end of the *Glossocomium*; * and that which goes round the Arms must be fastened to the Beam; then order your Assistants at once to pull gently, to extend the Spine, which is easily performed in this manner, because the *Spondiles* are so far from one another, that they will soon be brought into their right places; which being done, loosen the Extension a little, and apply the Plaster, Plates, Bandage and Bolsters as above directed. When the *Vertebrae* are reduced, I commonly wash the Patient's whole Back with the following Spirit, to strengthen the Nerves, and prevent any ill Accident, caused by the violence of the Extension.

℞ Spirit. Lumbricor. compos. Formicar. aa. ℥iss.
Aqu. Apoplect. ℥ii. Spir. flor. Lavendul. Rosmarin.
aa. ℥i. Juniper. flor. Sambuc. aa. ℥ss. Essent. Caster.
℥ss. Opii ℥ss. M. f. Mixtura.

This being very well chafed in, I apply over it the following Plaster, and continue this course till all the danger is past.

℞ Emplastr. Nervin. Vigon. de Sperm. Ceti aa. ℥vi.
Cerae ℥iiii. Succin. ℥i. Ol. Lavendul. Nuc. Mosch. t. aa.
℥i. Mastich. Oliban. Myrrh. aa. ℥iss. Castor. ℥ss.
Ol. Succin. ℥ii. f. c. s. q. Colophon. ad Empl. formam.

Observation.

In July 1690, A certain Nobleman of Wohlaw, about Nineteen years of Age, put himself into my hands, for the Cure of such a *Dislocation*. He had been above Six months under the hands of a Hangman's Wife at *Wintzig*, who was mightily cry'd up for the Cure of this Infirmity; but this I was unacquainted with, till some time after I had him in Cure. A little below the Shoulders, Four *Spondiles* were dislocated to such a degree, that you might move them backwards and forwards, and the furthestmost process of the *Vertebra*, had by degrees pierced its way thro' the Skin, and made an Orifice as broad as a Shilling. The Patient was strangely emaciated and feeble; for the Woman had kept his Lordship to a very Spare Diet, and he lay day and night in a pair of stiff Whale-bone Stays, very tutely laced together, which had so squeezed him, being a tender young Man, that his Life was a Burden to him. As soon as he came to me, I presently threw away all the Rags and things that were about it, and gave him leave to rest and lie easie for Eight days, without doing any thing to him, that he might gather a little Strength. When I searched the part, I found what I thought very wonderful, *viz.* that there was no *Callus* settled between the Bones, and therefore I gave him Eight days time more, and order'd him the best of Victuals and Drink. Being thus refreshed, I undertook the Restoration of the *Spine* in the Presence of Dr. *Tielische*, after the new method above mentioned. The Wound was a great hindrance to me, but I was not much concern'd about that, my great Care being how to restore the *Vertebra*, which at length was done, in the method above prescribed, and in Eight weeks time the Patient was fully restored to his former health and straitness, and went from me with great satisfaction.

CHAP.

C H A P. XX.

Of the *Hæmorrhoides* and the ill Consequences that attend them,
with the Method of Preventing and Curing them.

ALL Chirurgions know that the *Hæmorrhoides* are scituated near the Fundament, that several Persons are extreamly troubled with them Spring and Fall, and suffer abundance of Pain and intolerable Heat in that part; and that if they are not timely remedied, they will produce Ulcers, Fistula's, &c. The Cause of this Disease, is generally attributed to the ill Constitution of the Blood, the thicker part whereof being unable to circulate through those Urins, it Stagnates, becomes Acrid, extends and dilates the Veins, causes Extraordinary Burning and Pain, till by breaking the Thin and Tender *Cuticula* of the *Hæmorrhoides* it finds a Passage out. Some Persons have them once a Month or Six Weeks, without any Considerable Molestation, because their Veins sooner open, than others that have them but once or twice a Year; nay some will not break at all, and are forced to be opened with Leeches or a Lancet, to Discharge the Thick and Acrid Blood contained in the Vessels and prevent Impoſthumations and other unhappy Accidents. They happen ofteneſt in such Persons as are given much to sitting, and those that are very Costive and Strain hard to expel their Excrements when they go to Stool; for by that Means the Blood is more press'd to those parts and has Time and Liberty to settle there. However if this Bleeding of the *Hæmorrhoides* does not happen too often nor flow too much at a Time but moderately, it's rather a Benefit than an Injury; but if too much, it not only Weakens the Patient, but in time will grow to Malignant Ulcers and Fistula's, and very often cause a Dropsy.

Hæmorrhoides, their Causes.

There are two kinds of *Hæmorrhoides*, those that are *Open*, which are called true ones, and *Hæmorrhoides Cæcæ* or Blind ones, which rise in great Bumps, cause great Pain and Burning, and if they are opened contain nothing but a small Quantity of a thinn Matter, and therefore are called Blind or False *Hæmorrhoides*. Sometimes they rise like Warts and little Boils, and you must take care to Distinguish one sort from the other, lest your Mistake should run you into a dangerous Error; as it happened to a *Comb-maker* in this Town, who being troubled with the Blind *Hæmorrhoides*, a Chirurgion tyed them with a double Thread, (as you do with Warts) to make them fall off, which cast the Patient into such a violent Pain and Torture attended with Convulsions, as can hardly be expressed; insomuch that when I had took away the Tyes and loosened the Thread, it cost no little Care and Pains to set him right again.

Two kinds of them.

To ease the Pain and allay the Heat in this Distemper, make use of the following Liniment, which will answer your Intentions, and yet not hinder the Ill Blood from Issuing out, if they are running at the same time. It must be spread Thick upon a Linnen Rag and applied to the part affected.

The Cure.

b b b

R Unguent.

℞ Unguent. de Lythargyr. cum Ol. Amygdal. dulc.
fact. ℥iiiss. Tutia ppt. ℥ss. Pulv. Herb. Filicis
seu Linariae ℥iii M. f. Linimentum.

The Fat of an Eel, mixed with a little Cerufs and Tutty, is also an effectual Remedy in this Disease: And so is the following Unguent recommended by Dr. Blanckard.

℞ Ol. Rosar. ℥ii. Croc. ꝑ Ceruff. ℥i. Lithargyr.
℥ss. Cera q. s. f. Unguent.

In the Camp I only used the White of an Egg mixed with Oil, and Alum and it generally had success; but if they should not prevail and the Pain still encreaseth, use the following Liniment Warm, and it will certainly accomplish your Wishes.

℞ Mucilag. Sem. Cydonior. ℥i. Ol. Amygdal. dulc.
℥iss. Vitell. Ovor. num. iii. Oliban. Sarcocoll. aa. ℥i.
Croc. Opii. pur. aa. ꝑiii. M. f. Liniment.

Ulcers and
Fistula's how
caused.

How distin-
guished.

How Cured.

Ulcers and Fistula's are also Attendants on the *Hæmorrhoides*, when they are too violently and suddenly stopped while they are running, or if too cooling Medicines have been applyed, which causes the Blood to Stagnate and Putrify; the Humors soon grow Acrid by thickning and want of Motion, and in time Eat through the space between the *Scrotum* and *Anus*, and grow into true Fistula's. These *Ulcers* must be distinguished according to their Scituation. If they have not touched the *Sphincter Muscle*, 'tis not so dangerous, but if that Muscle is already ulcerated, which you may perceive by the Matter or the help of a *Speculum Ani*, then it will be Difficult to Cure, and much worse if the *Rectum* is also pierced through; for then it is almost incurable, for the part being always Moist, Medicines can not be so efficacious as if the Malady was in another place. They are very often caused by Venereal Distempers, sometimes by outward Accidents and Violent Exercises, but generally they proceed from the *Hæmorrhoides*. The Cure is very Difficult, because outward Applications cannot perform their Offices; Plasters cannot stick where the part is Moist, and Bandages will signify little where the Part is round and always in Motion. However if you are resolved to try; begin the cure by giving the Patient a good *Decoctum Lignorum* for his common Drink, and give him every Morning and Evening Three or Four Ounces of the following Decoction very Warm.

℞ Fol. Sanicul. Alchimil. Veron. Aristoloch.
long. aa Mii. Betæ rubr. consol. Sarac. aa Mi.
rad. Serpentar. Tormentil. Consolid. maj. Aristol.
long. aa. ℥iss. Flor. Rosar ℥i. Cort. rad. Fraxin.
℥vi. Cort. lign. Sambuc. ℥ss. Incidantur contun-
dantur grosse & s. q. Aq. Pluvialis bulliantur
s. a. postea Colatura addantur Oculor. Cancr.
Spermat. Ceti aa. ℥ii. Misce.

The

The following Balsam being very cleansing and healing must be applied to the Ulcer Warm, which truly is an admirable Medicine in all Malignant filthy Ulcers, especially the *Oleum à Cortice Betulae*, which is to be wished, that it were better known and oftner used in Chirurgery, being an incomparable Remedy in these cases, yea also in a *Cancer* and a *Noli me tangere*. Dr. *Grassen* and my self have lately used it with wonderful Success.

℞ Mell. Tabaci, Chelidon. aa. ℥i. Balsam Copaiba
℥vi. Terebinth. ℥iss. Vitell. Ovor. numii. Ol. à Cort.
Betulae ℥ii. Essent. Myrrh. ℥i. M. f. dilig. ad Balsam.

Over this Balsam apply a good *Oppodeldoch* Plaister; but if the Ulcer is very deep inwardly, then before you dress it throw in the following Injection.

℞ Decoct. Alchimil. & rad. Serpentar. aa. ℥vi.
Mell. Persicar. Veron. aa. ℥iii. Sacchar. Saturn.
℥iss. Alumin. ℥ii. Aloes ℥ss. Sarcocollae ℥i.
M. f. Injēctio.

When the Ulcer is very Clean and begins to Heal, then instead of the former Balsam use the following Unguent.

℞ Terebinth. puriss. ℥v. Balsam. Peruvian.
℥ii. Mell. Veron. ℥iss. Mastich. Myrrh. aa. ℥i.
Croc. ℥iiss. M. f. Ungu. this Unguent is more
proper to Incarnate than the Balsam.

From these *Ulcers* I proceed to *Fistula's* of the *Hæmorrhoides*, about which a Chirurgeon's first Work is to make diligent enquiry, whether they proceed from a *Veneræal* cause or not? How far they reach, upon what parts; how they are seated, and whether they have one or more Openings? For without a distinct Knowledge of these particulars, the Patient can never be cured. The Cure is always difficult, and sometimes impossible; but if you have any hopes, use the Medicines prescribed in the *Sixteenth* Chapter, for better cannot be prescribed. Dr. *Muraltus* is of opinion, that neither External nor Internal Medicines can signifie any thing in these *Fistula's*, and that nothing will prevail but Cutting, Restraining or Burning; but by his pardon, I have experienced the contrary, where good Medicines alone have done the Work, as I could instance in three several Persons, two in *Halberstadt*, and one in *Magdeburg*, who were all cured; therefore when a Chirurgeon is advised with in this Disease, I think it better to try Medicines in the first place, before he proceeds to Manual Operation, but if at last he is forced to it, he will find sufficient directions how to perform it artificially in the *Sixteenth* Chapter, and if any thing else be wanting conducing to this Cure, he may see it in the following Observation.

In the year 1681, Dr. *Schwelling* and my self were sent for to *John N.* a Merchant in *Magdeburg*, who had been three years tormented with such a *Fistula*, which went into the great Gut. He was about Thirty nine years of Age, and had used a great number of Chirurgions, without

Observation.

out

out receiving any benefit by their Endeavours. Enquiring into the state of the *Fistula*, we found two Orifices outwardly, which went above three Inches deep into the great Gut. The third day I cut both the holes into one, and having Syringed it very well, I applyed the following Powder to it twice a day, to procure a good foundation towards the *Intestinum Rectum*, which succeeded very well.

℞ Pulv. *Tragacanth. Sarcocol. aa. ℥ss. Rad. Aristol. long. ℥ii. Myrrh. Sacchar. Saturn. aa. ℥iiss. M. f. ad subtiliss. pulv.*

I never fail to apply this Powder, where I find the Guts are Ulcerated or Fistulous, the following Water being first injected warm; and truly I can assure you, it has always done me great service, being an admirable *Deterfive*, and also makes the Powder stick longer and closer to the Gut.

℞ Decoēt. *Alchimil. cum Aqu. rad. Consolid. maj. ℥iiii. Essent. Myrrh. Sacchar. Saturn. aa. ℥i. Opii pur. ℥iiss. Aloes, Oliban. aa. ℥i. Spir. vini Camphorat. ℥iss. M. f. Injēctio.*

Pursuing this method, in three weeks time I laid a good foundation, every thing began to heal, the holes in the great Gut closed up wonderfully, and in Eight weeks time he was perfectly cured.

C H A P. XXI.

Several Diseases and Accidents in the Genital Parts of the Female Sex.

HAVING already in the Seventeenth and Eighteenth foregoing Chapters treated of Ulcers, *Condylomata*, and such like Accidents sometimes happening to the Private parts of Women, I will now consider the Induration, Swelling and falling down of the Womb: Also Cancers, Tumors, Inflammations, Dead Children in the Womb, *Fluor albus*, Hurts, and in the last place Blisters, Wheales and other Infirmities incident to those Secret parts.

An Indurated Uterus.

The Induration and Swelling of the *Uterus*, is at first but an Extension or a kind of Tumefaction of the part, occasioned by hard Labour in Child-bearing, or the Unskilfulness and Barbarity of the Midwife, in violently tearing away the *Secundine*, which causes an Inflammation, then a Swelling, and if not timely prevented an *Induration* and excessive Pain, which accompanies some Women to their Graves; of which *Mauriceau* and *Paræus* gives you some remarkable Instances, in Women that have been opened, who had such *Indurated* and *Schirrous* Wombs, as was to the Admiration of all that were privy to the Dissection.

Its Causes.

Francis Mauriceau is of opinion, that besides the causes already assigned,

signed, this Malady often comes by a superfluity of Humors overcharging the *Uterus*, and obstructing the Vessels through which those Liquids should pass, which first caused an *Inflammation*, and then an *Induration* of the *Uterus*. *Cosmus de Viazdel*, *Dr. Welsb* and others, ascribe it, to the Midwife's applying too cooling and restraining Medicines to the Lower Belly, after hard Labour: A disorderly Diet: Obstruction of the Monthly Purgations: Using too many *Repellents* in an Inflammation, or an excess of *Resolvents* to a Tumified Belly; for thereby the thinner part of the humor evaporates, and the more Crass remains behind, and causes this Hardening of the Womb, of which see *Riverius Cen. 1. Observ. 38.* where he relates a remarkable Instance agreeable to what we have been discoursing.

In undertaking the Cure of this Distemper, begin with a good Diet, frequent Bathing in a *Bannio*, and the application of *Emollient* Medicines. These things being premised; use every day good Injections and Fumigations, but take care they are such as are not Restraining, or have any Acrimony in them. The following Plaister I have always applied with good success, after *Emollients* had been used over the whole Lower Belly, for it mollifies and takes away the Hardness.

R^x *Emplastr. Diaphoret. Myns.* ℥i.
Gumm. Ammon. Gathan. in Spir. Vini
solut. aa. ℥i. *Bdellii* ℥ii. *pulv. rad. Brionii*
 ℥ss. *pingued. irin. gallin. aa.* q. s.
Cera ℥iiii. *M. f. Emplastrum.*

This Plaister being spread upon Leather, must be applied to the part, and continued as long as is necessary. The Fumigation is made in this manner.

R^x *Flor. Rosar. Millefol. Calendul. Cyan.*
aa. ℥ii. *Fol. Satureje, parietar. Malva,*
aa. Mss. Succin. Oliban. Mastich. aa. ℥ss.
Lapid. Pyritis ℥i. *Misce fiat pulvis gross. mod.*

This Powder must be strewed upon a Fire in a Chaffing-dish; that the Smoak may come round the whole Belly. The Injection follows.

R^x *Fol. Alchimill. Veron. Consolid. maj.*
aa. Mj. *Flor. Rosar. Malv. aa. pug. ii. rad.*
Althae, ireos flor. Lilior. albor. aa. ℥iiii.
Sem. Carvi ℥ss. *Lini* ℥ii. *rad. China,*
Sarsa parille aa. ℥iiss. *scind. & contund.*
grossè coquanturq; s. a. aqu. Communis s. a.
Colature ℥iiii. *adde Mell. Veronice* ℥ss.
Essent. Myrrh. ℥ii. M. f. Injunctio. And so
 much for this Disease.

Prolapsus Uterinus, the falling down of the Womb, sometimes called a Rupture of the *Uterus*, is a troublesome Distemper, which creates abundance of Vexation to the Patient and the Chirurgion. *Ruisch* in his curious Observations, tells us of a prodigious large *Prolapsus* of the

Falling down
of the Womb.

The Cause.

Uterus, which was grown quite *Schirrous*, and with its Orifice hung wholly out of the *Pudenda*. The Cause is generally too great a quantity of Watry Humors settling thereabouts, hard Labour, violent Exercise or the like; which weakening the Ligaments and Membranes of the *Uterus* and *Vagina*, hangs forwards out of the *Pudenda*, and sometimes they are broke and torn, and then it looks like a piece of Raw Flesh or a Man's *Scrotum*.

In *March 1685*, I had a Wax Chandlers Wife in Cure of about 49 years of Age, who was troubled with a prodigious *Prolapsus Uterinus*, which hung out of the Body, and was as big as a lusty Man's Head; yet the *Orificium Matricis* being at the bottom, it gave a passage to the Monthly Purgations. She endured abundance of Pain and Misery, kept her Bed continually, and the *Prolapsus* had so largely extended the *Pudenda* and its *Labia*, that she was scarce able to Urine. But more remarkable was the Case of *Maria N.* a Maiden Gentlewoman about 15 years of Age, whom I, Dr. *Paulus* and Mr. *Hane* had in Cure; whose *Prolapsus* was as big as a large Apple, and had so stopped up the *Pudenda*, that we could not move it; which was a very strange Accident in so young and tender a Creature as she was. A Chirurgion whose Advice was asked before us, said it was an *Aqueous* Tumor, and would have opened it; but her Relations not consenting to it, they sent for us, and we undertaking the Cure, happily performed it in a few Weeks. The like Success I had with the Chandler's Wife, whose *Uterus* was brought up again, and afterwards kept up with a proper Instrument, till the Cure was perfected.

The Cure.

The Cure of this Disease you see, consists chiefly in two things; first, that what is fallen down may be put up again into its place; and secondly, that it may be kept there without danger of falling down again; which must be by strengthening and comforting the part. To perform the first Intention, place the Woman in such a Posture as her Head and Body may lie low, her Thighs high, and her Legs asunder. Then bathe the *Prolapsus* very well with warm Milk, and when the parts are very well warmed and mollified, wipe off the Wetness, and with your Forefingers, and the help of a fine Linnen Handkerchief, crush it up gently and gradually, till you have brought it into its place again. But if it be so much swelled that it will not go up at the first Trial; give your Patient a Clyster; foment it somewhat a longer time than you did before; then make another Essay, and so continue till you have performed it. This being done, let the Patient lie with her Legs across for two or three hours, and with her Hands let her gently press her Belly and *Vagina*, to prevent its falling down again. Then endeavour to put up a *Pessary* made of Lint dipped in Wax, and proportioned in bigness to the *Vagina*; for the first Eight days, there is no necessity of making it hollow. After that time they may be made of Cork, Beaten Silver, or any light matter accommodated to the *Vagina*. They must be made hollow, in the form of a Circle, or otherwise as the Chirurgion shall think most proper to keep up the Womb, and give a passage to the Courses: Let the matter of which they are made be what it will, they ought to be covered with Wax, for then they will stick the faster, and not occasion any Soreness or Rawness. Of these *Pessaries* it will be necessary that you should always

ways have two or Three in readines, that they may be clean, when you think fit to change them.

A Cancer in the *Uterus* is one of the worst of Diseases, and requires great time and pains to understand what is to be done, when such a difficult Case comes under ones hands to be cured. At first it's only a Tumor and Inflammation, which hardens in time to a *Schirrus*, and then degenerates to a *Cancer*, which might have been prevented at first, by the method directed in the beginning of this Chapter. These Cancers are not only in the *Matrice*, but seize also upon its Orifice and *Vagina*, as may be seen by the application of the *Speculum Uterinum*. The Cure of *Cancers* by Medicines, especially if they are Ulcerated, are generally thought impracticable, because they cannot be brought exactly to the part affected, and if it could, the continual moistness of the place will not suffer them to stick long enough to produce any effect, and the Chirurgion at last must take refuge in undertying and cutting it away, if it be possible to be performed, because no other method will admit of any kind of certainty; And indeed it's much to be feared, whether this will be worth the while or no; or whether it would not be better only to make use of *Anodines*, and such other Medicines as will hinder Putrefaction and make the Patient easie; which if you are enclined to practice, that your Patient may not be destitute of any kind of help, then inject the following Balsam twice a day into the part, which will not only ease the Pain, but perhaps in time mend it beyond expectation.

Re. Ol. è Cort. Betulae, Mali Momord. aa. ℥ss.
Succ. Cancror. inspiss. ℥iii. Balsam. Peruvian.
℥iii. Pulv. Aloes, Myrrh. aa. M. f. ad Balsamum.

I have often experienced this Balsam in such cases with good effect. It must be always used warm, and intermixed with the following, proportionably to the emergency of the cause.

Re. Decoct. Veron. & Sem. Hyosc. & Coriandr. cum
Aqu. Hordei ℥xx. Sacchar. Saturn. ℥iii. Essent.
Myrrh. Opii, aa. ℥ss. Succ. Plantag. inspiss. M. f. Injectio.

Take as much of this Water as is necessary to inject at one time, and mix with it as much of the Balsam as will lie upon the point of a Knife. If there is an *Inflammation* and no other means used to prevent it, but the too cooling Medicines of an *Ignoramus*; which destroyed the few Vital Spirits that were labouring in those parts, then it turns into a *Gangrene*, and afterwards into a *Sphacelus* or *Mortification* of the part. If you think there is hopes, and are resolved to attempt the Cure of these sad Accidents, you will find plenty of Medicines in the Third Book, in the Chapter which treats of the *Gangræna* and *Sphacelus*, to which I refer you. In the mean time I will accommodate you with an *Epithema*, very proper in this affect, which may either be injected, or Linnen Rags moistened in it, and applied to the parts affected.

Re. Fol. Alchimil. Savine, Scordii, Cheresfol. aa. Mi.
rad. Aristoloch. long. ℥i. Flor. Sambuc. ℥v.

Cerniss.

Ceruss. Bol. Alb. aa. ℥i. Tutia ppt. ℥vi. Alum. usti, Vitriol. alb. aa. ℥i. Myrrh. Oliban. aa. ℥ii. coque in Aqu. Calcis ℔iiii. & Aqu. Flor. Sambuc. ℔ii. sepius agitando per hor. unam; Colatura adde Spir. Vini Camphorat. ℥iiii℥s. Misce dilig. f. ad usum.

A Mole in the Womb.

A *Mole* or Tumor growing in the *womb*, is nothing else but a piece of *Flesh* proceeding out of corrupted *Sperms*, or retention of the Monthly *Evacuations*, of which the ill *Constitution* and cold *Temperament* of the *Uterus* is often the occasion. *Cosmus de Viazel* is of opinion, that this *præternatural* Tumor, arose only from a mixture of *Female Sperm* and their *Menstruous Blood*, without the addition of any *Male Seed*: But *Franciscus Mauriceau* denies it, and says no *Woman* could ingender a *Mole*, without a mixture both of *Male* or *Female Seed*, which are as essentially necessary to the production of a *Mole*, as of a genuine *Conception*: And though such *Moles* are sometimes found in unmarried *Women*, yet if you strictly examine them, they are nothing but a *Lump* of coagulated *Blood*, condensed by the internal heat of the *Uterus*.

The Cure.

This Disease is cured with such Medicines as provoke and expel the *Terms* and *Secundine*, and tho' some pretend to cure it by *Adstringing* and *Cutting*, I know not how they can perform it.

Fluor albus.

Fluor albus or the *whites* in *Women*, is a continual *Flux* of a *Viscous* or clammy white humor proceeding from the *Matrix*, and is distinguished from the *Matter* in an *Ulcer*, because that has a noisom *Smell*, causes *Pain*, and the Patient has no inclination to *Carnal Copulation*; but in the *Whites* there is no ill *Smell* or *Pain*, and the *Female* has vehement desires of *Coition*. The Causes of this affect are generally a *Viscous* and *Glutinous Blood*, and an *Obstruction* of the *Glands* in the *Uterus* and *Vagina*. If it's not of long continuance it may be easily cured; but if the contrary, it is tedious, difficult, and sometimes incurable; and then it causes *Barrenness*, the *Dropsie*, *Ulcerates* the parts, and sinks the Patient at last into a *Consumption*. 'Tis a noisom and wretched *Distemper* in *Women*, and a plague and vexation to *Men*, who must either forbear *Coition*, or exercise it with loathsomness and abhorrence. *Lazy*, tender *Women*, who are full of gross humors and very subject to take cold, are most tormented with this filthy *Distemper*.

The Causes and Effects.

The Cure.

The Cure must commence with *Raxifying* and *Mundifying* Medicines among which the following *Infusion* is inferior to none.

Rx Fol. Meliss. Veron. Menth. aa. Mss. Summit. Artemiss. Absinth. Rorismarin. aa. Mi. Mechoac, El. Rhabarb. Ver. aa. ℥ss. Fol. Senne ℥iss. Sem. Anisi, Fenicul. aa. ℥i. rad. Jalapp. Sal. vel Chrystal. Tartar. aa. ℥v. Sal. Menth. Meliss. aa. ℥ii. Misce scind. & contund. gr. modo. Infundanturque in vini generosi Mensur. iii. per 4 aut 5 dies, serv. ad usum.

Of this *Infusion* give the Patient three; four or five *Ounces* every *Morning*, according as you find it operate downward. Let her also drink

drink a good Decoction of *Sarsaparilla*, &c. and every day take five or six of the following Pills.

℞ *Extract. Guaiac.* ℥ss. *Balsam. Copaiba* ℥ii. *Terr. Catechu.* ℥iiiss. *Ocul. Cancr.* ℥iss. *Oliban.* *Mastic.* aa. ℥i. *Mercur. dulcis* ℥ii. *M. f. pulvis*, & cum *Terebinthinâ Massa Pillularum* *dos. gr. xv.* If you want others, look into the Chapter where I treat of a *Gonorrhœa*, for what is fit for the one, is also generally proper for the other Disease.

C H A P. XXII.

Of a Lues Venerea or the French Pox, with its Diagnosticks, Causes and Cure, especially by Salivation, internally or externally raised.

THough I have discoursed of this Disease in a particular Treatise, yet I could not think this Work so compleat as it ought to be, without giving a full account of it in all its various Appearances, it being a Disease of which one cannot say too much, because such numbers of Persons are infected with it, and that it often sculks under other denominations, to the ruin of many Patients, that if it had been known might have been cured by *Salivation*. It would be but lost time to shew how and where it began, and the several Advances it has made in later times; therefore I shall proceed to acquaint the Chirurgion, with what is more necessary for him to know, *viz.* the *Causes, Diagnosticks, Differences*, and other Circumstances of this venemous and desperate Disease.

Now, though some Persons have been infected with it, only by drinking after such as have been tainted; by lying in the same Bed, or as others affirm, by the power of Imagination, yet *Whoring* is the principal Cause; to which an over hasty stopping a *Gonorrhœa* does not a little contribute; for it nurses up the Disease in the Body, instead of expelling the Contagion. The Signs of its Approach and Increase, are sometimes an *Itch*, running and spreading *Tetters* and *Blotches* in several parts; the *Scurvy*, a sore *Throat*, perhaps Ulcerated; *Ulcers* and *Nodes* upon the Head, breakings out in the Face, and intolerable Itching and Heat in the Privities, which in time break out into filthy *Ulcers*. This Disease as I have said already, proceeds from Immoderation in *Venery* and *Copulation*, with infected and unclean Persons. First, this Venom seizes on the Yard, and insinuates its Poison into the dilated *Pori*, then breaks out into a *Gonorrhœa*, attended with violent heat and pain in making water, and by degrees raises a Swelling, an Inflammation, Rawness, Blisters and Ulcers in the Privities, which if neglected, or the Patient falls into unskilful hands, the Juices are infected; the Blood, *Lympha* and *Succus Nutritivus* become Acid and Acrid, and growing thick, not only obstructs the Glands, Muscles and tender parts;

parts, but also corrupts the Nerves, Bones and Ligaments. I say this *Venom* consists of Acid and Acid particles, which first possesses the Glands of the Privities in Men and Women, and after *Coition* when the Pores are closed, intermixes with the Sanative Juices thereabouts, and in a few days, raises a Fermentation that produces a *Gonorrhœa*. But if this *Venom* is not powerful enough to put the circulating Juices to a stand, and raise a Fermentation so soon, then it spreads further into the neighbouring parts, yea, through the whole Body, causing many ill Accidents, and at length a perfect *Pox*.

Other Signs.

There are other Symptoms of this Disease, as a Pale Face, a Sallow Wan Complexion, great Pains in the Head, Aches in the Limbs, chiefly between the Shoulders, and along the Shin-bones, which are more apparent and troublesome in the Night than by Day, insomuch that the Patient is utterly deprived of his Rest, and is wearisome and uneasy in all his Labours and Exercises. Now if all these Symptoms concur with those abovementioned, as a *Sore Throat*, *Blotches* in the Face, *Ulcers* in the Privities, *Buboes* and a *Gonorrhœa*, you may certainly conclude that your Patient is *Pox'd*, and the Disease is at the height; for these Signs are manifest Declarations of what *Pond* he has been fishing in, though his own Confession is also necessary to a more speedy and solemn Cure.

The Cure by
Uction.

The Methods of Cure are various, for every one has some particular *Nostrum* that he seems to rely upon, beyond the common Practice: However, I shall accommodate you with the best Directions, either for Inward or Outward Medicines to expel this Venemous Infection; both which ways are performed by *Mercury*, particularly prepared for this Encounter, which is the only Medicine that can be depended on, in order to a successful Cure: Let some Men rail against it as long as they please, they do but discover their own Ignorance and want of Experience; for when all is done, nothing but *Mercury* is an absolute Conqueror of this Disease. I will begin with the External Cure by *Uction*, which in the Learned *Dr. Sydenham's* * Opinion also, is the best and most certain way of all that are practiced.

* p. 36.

When you have resolv'd upon Fluxing your Patient, first give him a good Purge, and next day anoint the Joints of his Hands and Feet, Morning and Evening with the following Unguent.

℞ *Mercur. viv. ℥vi. Terebinth. pur. ℥iiii.*

Strain the *Mercury* through Leather, and then incorporate it with the *Turpentine* in a Stone Mortar, till they are perfectly united, to which add the following Ingredients.

Axung. Porcin. ℥iss. Unguent. Nervin. ℥i.
Ol. Lign. Rhod. gutt. xv. Misce exactissim.
ad Unguent. s. a.

After this, I think it needless to insert other *Formula's*, because it may be depended on, I having tryed it above an hundred times in our Hospital of *St. Job*, besides what use I have made of it in other places. With this Ointment let the Patient rub himself very well near a Fire, but let him not use above an Ounce or two at a time, and remember

to cover the Joints with Paper or Linnen Rags. The second day, if the Patient is very much infected, you may anoint the Joints of his Arms and Knees again, Morning and Evening as before. The like you may do the third day, and if he does not begin to *Spit*, repeat it the fourth day, and then it will operate. In all this time you must diligently watch your Patient's Mouth, to see when the Flux begins to rise; for in some it begins on the second day in the Evening, and in others on the third day in the Morning, and as soon as it rises give over anointing him; but if he doth not flux till the fourth or fifth day, you must continue it till that time. When it's long before it begins, you may assist it, by giving your Patient *Mercurius dulcis* gr. xv. or as I use to do, 4 or 5 grains of *Turbith Minerale*, which soon procures a Flux. The Chamber where the Patient is kept, must be close and tolerably warm, that no cold or sharp Air may injure him; his Drink must be a good Decoction of *Lign. Guaiac.* &c. and his Food of easie Digestion. The Flux going on well, take care you do nothing to check it; Syringe his Mouth with a cleansing *Gargarism*, and keep the Teeth and Gums clean with a Pencil. If he is troubled with *Ulcers*, you must not plaister them up, but only wash them with the Decoction which the Patient drinks, or some proper *Vulnerary Water*, for they will go off with the Flux. If you apprehend that the Flux continues too long, give the Patient a gentle Purge; let him drink *Beer* again; use an *Astringing Gargarism*, change the Sheets of his Bed, and then it will cease. However, though the Flux has gone off very well, yet the Patient must be purged well afterwards, and sweated four or five times in *Balneum Laconicum* with Spirit of Wine, that none of the *Mercury* or the Disease may remain behind. This being done, let the Patient change his Room, his Bed, and not put on his Cloaths till they are well cleansed and aired, and if the *Ulcers* are not perfectly whole, apply a good *Oppodeldoch* Plaister upon them. But if the Bones are foul or rotten, you must scrape them well, and then cleanse them well with *Phlegm* of *Vitriol*; for before this is done they will never heal; and so much for *Unction*.

In the next place I am obliged to treat of the Cure by *Inward Medicines*, but first I must declare my Opinion, that *Unction* is much the surer and safer way, and does better cleanse the Blood and Juices, and sooner heal the *Ulcers* and other Accidents than *Inward Medicines*, not to mention the Dangers which occur, if the *Mercury* is not well prepared; besides, *Turbethum Minerale*, *Arcanum Corallinum*, *Mercurius dulcis* and *Præcipitatus albus*, though never so well prepared, and their Acid and Corrosive Quality meliorated and edulcorated, they will never raise so kindly a *Salivation* as the aforementioned *Unction*, but will rather cause violent *Purging* and *Vomiting*. However, that the *Chirurgion* may know how to treat a Patient that is prejudiced against a Cure by *Unction*, I will accommodate him with the best way of raising a *Salivation* by *Inward Medicines*.

Salivation by
Internal Me-
dicines.

℞ Extracti Hellebor. nigr. sicc. ʒi. Spec. Diarcor. ʒii.
pulverisentur & admisceantur, Turbith Mineralis ʒii.
Mucilag. Tragacanth. q. s. f. Massa Pilularum
Ex qua formentur Pilula num. 128.

Of

Of which give the Patient three or four the first time in the Morning, and the next Morning give him the following *Bolus* with Water-guel.

Rx *Mercur. dulc. gr. xii. Conserv. Rosar. q. s. f. Bolus.*

The third day give five or six Pills again, and the fourth day let him rest. If you see no appearance of a Flux the fifth day, give him seven or eight Pills more, and if yet there is no signs of it, the sixth day in the Morning give him another *Bolus*, mixed with two Grains of *Arcanum Corallinum*, and then you may be certain a Flux will rise, if it be possible to Salivate the Patient: If you find the *Turbith* will work no other way but by Vomiting and Purging, endeavour to prevent it, (though not too hastily) by giving him now and then *Nutmeg* powdered and mix'd with Sugar, and let him often smell to a piece of *Toasted Bread* steep'd in *Vinegar*, on which *Nutmeg* has been grated.

He that will use nothing but *Mercurius dulcis*, ought to mix it with a little *Cinnabar*, and give at least a Scruple the first day, for in a lesser quantity it will not work. The second and third day you must encrease the quantity. Sometimes I mix it with two Grains of *Turbith* or *Arcanum Corallinum*, and find it always works the better. During the whole Cure, great care must be taken to Syringe the Patients Mouth and Throat, if any Ulcers are broke out in those places. I know that *Mercurius Præcipitatus* is often used in this case; but I am to far from recommending it, that I advise every one to forbear the use of it, having observed many Tragical Events occasioned by it. And since this Cure so much depends upon the genuine Preparation of the Medicines, I will shew the best way of making the *Turbith Minerale* and the *Arcanum Corallinum*: And first of the *Turbith*.

Take *Mercurii Sublimati* ℥ii. dissolve it in a sufficient quantity of Spring Water, which has first been mixed with a few drops of Spirit of *Vitriol*; close it up in a Vial, and let it stand in a warm place, often shaken for ten days; then put to it drop by drop an Ounce of *Oleum Tartari per deliquium*, and at the bottom you will find a red kind of Powder precipitated thither. Take this Powder out of the Vial, and pour upon it good clear Water, thirty times or more, that it may be perfectly Edulcorated: Dry it and keep it for use. The Dose is from four or five to seven or eight Grains. There is a way of making it *Yellow*, but the Colour adds nothing to its Vertue.

Arcanum Corallinum is thus prepared. First procure a good and true *Caput Mortuum* of *Aqua Fortis*, made of a like quantity of *Sal-Nitre* and *Vitriol*; from this *Caput Mortuum* extract its Salt with Rain Water. Of it take six Ounces, rub it well with two Ounces of *Mercur. viv.* in a Stone Mortar; (the Mercury having first been strained through Leather) till none of the Mercury can be discerned: Sublimate it in the usual manner, and you'll see, first a Yellow, and after a Red Sublimate ascend; take out the last only for this purpose; Wash or cleanse it three times with Rain Water, and your Work is done. The Dose is from four or five to seven or eight Grains.

Next I will furnish you with the Receipt of the *English Blue Pill*, which

which has been formerly in very great request; though now it is not so much in fashion; nor I think scarce deserves it, for the Prescription is so ill composed, that one Ingredient spoils another.

R̄ Gum. Guaiac. ℥ss. Arabic. ℥i. Specier.
 Diatragacanth. frigid. ℥vi. Camphor. in
 Ol. Juniper. solut. ℥ii. Cremor. Tartari,
 Ocul. Cancr. aa. ℥iss. Mercur. Current.
 ℥ss. Terebinth. Venet. ℥i. Turbith. Miner.
 risè ppt. ℥i. Extract. Rudii ℥i. Pill. ex duobus
 ℥ii. Resin. Zalapp. ℥iss. Diagryd. ꝑr. troch.
 Alhand. aa. ℥i. Mithridat. ℥i. Ol. Lign.
 Guaiac. gutt. xx. cum s. q. Syr. de Spina
 Cervina ad Mass. Pillularum f. pill. ex ℥i.
 num. x.

The English
 Blue Pill.

Of these Pills ten are to be taken in a Morning, with a good *Decoct. Lignorum*, but in my opinion they will signify little, if there is not also raised a small Salivation.

It commonly happens in a Flux that the Almonds, the Tongue and Gums are much inflamed, Swelled and Ulcerated by the Acrimonious quality of the *Mercury*, when it forces its way through the *Ductus Salivales*, which cannot be totally prevented; all you can do is to temper its violence with a Gargarism, which at first must not be restraining, and therefore take only *Decoct. Veronica Plantaginis*, mixed with Syrup of Wild Poppies; or only warm Milk from the Cow. But when eight or ten days are past use the following.

Ulcers in the
 Throat.

R̄ Fol. perforat. Hyper. Veron. aa. Mi.
 Herb. Vinc. per Vinc. Plantag. aa. Miss. Flor. Rosar.
 Mii. Sambuc. Malva Mi. rad. Tormentill. ℥ss.
 Cort. Aurant. ℥ii. M. scind. & contund. coquanturq;
 s. q. Aq. Pluvial. f. Gargarisma.

This may be used in the time of the Salivation to gargle the Mouth; to which you may add if you please *Mel Rosarum* or *Mel Chelidon*, and to the Ulcers the following Mixture.

R̄ Mucilag. Sem. Cydonior. cum Aq. Mell. & Plantag.
 ℥iiss. ℥iss. Syr. Moror. flor. Tunic. aa. ℥ss. Mell. Rosar.
 ℥iii. Chelidon. ℥iss. Aq. Rubr. benedicta ℥i. Sacchar.
 Saturni Alumin. aa. ℥i. Miscè f. Mixt. ad usum.

But sometimes these Ulcers are so dangerous, that you must only take *Aqua Benedicta rubra*, mixed with a little *Mel Rosarum*. Ulcers in other parts of the Body must be often washed with *Aqua Calcis*, mixed with a little *Saccharum Saturni*, and applyed with Linnen Rags dipped in the Diet-drink; by no means use any Ointments, but if they should prove very contumacious, use the clear of the following Water.

Ulcers in the
 Body.

R̄ Fol. Solan. Chelidon. Hyssop. Salvia, Ruta, Alchimill.
 aa. Mi. rad. Aristoloch. long. Tormentill. aa. ℥i. Bulliant.
 e e e parum

parum cum Lixivio ℥iij. fit Colatura, & in hac immisceantur pulv. subtilissim. Aristol. rotund. ℥i. Lixiv. è Calc. viv. ℥vi. Mercur. dulcis ℥iss. precipit. alb. ℥ss. Essent. Myrrha ℥ii. digerantur in vase bene clauso per 8 dies saepe agitando, & calidè postea Ulceribus applicetur.

Rotten and
foul Bones.

Rotten and Carious Bones, as I said before, must be scraped till they are clean and white, or they will never heal; but if they are so rotten as to *Splinter*, take them quite away; for neither the Salivation nor any other Medicines, can restore rotten Bones, or bring them to healing. *Phlegma Vitrioli* is certainly an excellent Medicine to cleanse rotten Bones, and render them white again; but if it happens near the Eyes, a more careful course must be taken, or forbear tampering with them at all.

Tumors,
Knobs and
Bunches.

Those hard Tumors called *Nodi* and *Tophi*, which visit the Head, Neck, Joints of the Arms, and especially on the Shin-bones in an inveterate *Pox*, are very hard to cure; for often when they heal in one place, they break out in another, and no parts of the Body are exempted from their Invasions, which resisting all ways of Cure, render the Patients miserable Spectacles to all Mankind, and torment them till they die; but if you are so happy as to make them ripe and fit for opening, crush out the Matter, cleanse it with *Lixivium è Calce viva*, and apply the following Balsam warm upon the Orifice.

℞ Mell. Persicar. ℥ss. Balsam. de Nicotian. virid. Mei ℥iij. Copalb. ℥iiss. Essent. Myrrh. Sarcocoll. aa. ℥iss. Sacchar. Saturni ℥iij. M. f. Balsamus.

This Balsam is design'd to temper the Acrimony and Acidity of the Humor, and be assured it will answer your Desires, if you apply the following Plaster over it.

℞ Emplastr. Diachyl. simpl. Artaphan. aa. ℥vi. Saturnin. Myn. defensiv. alb. aa. ℥viii. de Ranis cum Mercur. ℥x. pulv. Succin. Tutia ppt. aa. ℥iss. Testar. Ostreor. ppt. lap. Ostiocol. ppt. aa. ℥ii. Croc. Metallor. ℥i. Sacchar. Saturni ℥iij. flor. Antimon. Lap. Chrystall. ppt. aa. ℥ii. cum s. q. Olei è Corticibus Betul. Malax. & f. Emplastrum.

When they are thus well cleansed, heal them with a good *Digestive*. To some that were very pertinacious, I applyed the *Mercurial Water*, described in the beginning of this Chapter, which has sometimes succeeded, and other whiles failed; for in truth it is a miserable Distemper, by which a Chirurgion has abundance of trouble and vexation, and in the opinion of those that think an able Chirurgion must necessarily cure every thing, gains but little Reputation.

Virulent Tetters.

Other Concomitants to this Disease, are virulent Tetters or Red Spots on the Forehead, and sometimes on the Breast and Privities, causing a violent Itching, and if scratched, spread further and further. Not long since I had two Noblemen in Cure, who complained of no other

other Distemper but these Red Spots in their Foreheads, and one of them on his Breast, but I knowing they had not been over chaste in their Youths, had room for a farther Suspicion, and therefore ordered them to be anointed with the *Unguentum Lythargyr*, made with *Oleum Amygdalorum* and *Tutia*; first to take away the Scabs, that two or three days after, my *Aqua Mercurialis* might better temper and take away the Acid and Acrid Humors residing there; besides, I ordered them a good Diet-drink to cleanse the Blood, by which means they were both cured in a short time. But if this Method should not succeed in some of your Patients, they must be *Salivated* as the surest Remedy.

Pains in the Joints and Limbs, which are intolerable in the Night, are other Attendants on this noisome Disease, proceeding from Sharp and Soure Humors, which by reason of their thickness cannot pass the Junctures, settle there, oppress the Nerves of that Joint, cause those tormenting Pains, and if not removed in time, seize the *Periostium*, and make the Pain intolerable. However, you must not always conclude, that these Nocturnal Aches constantly proceed from the *Pox*, for *Rheumatick* Pains, or *Arthritis Vaga Scorbutica* are also most violent in the Night, only with this difference, that if they stay two or three days in one part, they will afterward remove into another; but Pains proceeding from the *French* Disease, never shift their Quarters.

Begin the Cure with *Emplastrum de Ranis cum dupl. Mercurio*, which being applied twice a day, will much contribute towards it; especially if you sweat your Patient twice a Week, and ply him with a good Decoction of the *Indian Woods*. If this will not prevail, sweat your Patient in *Baln. Laconic. cum Spir. Vini* five or six times, and every time he comes out of it, bathe the grieved parts very well with the following Spirit.

℞ *Lumbricor. comp. Formicar. Rorismarin.*
Flor. Sambuc. aa. ℥i. Ag. Anhaltin. Spir.
Vini Camphorat. aa. ℥vi. Spir. Salis Armon. ℥ss.
Essent. Opii, Castor. aa. ℥ii. M. s. a. ad usum.

Spiritus ad
 juncturarum
 dolores.

This being done, apply the following Plaister and the Pain will cease immediately; but if the *Periostium* is injured or corrupted, it must be nicely observ'd and manag'd after another manner.

℞ *Emplastr. Arthrit. Myns. ℥vi. Vigon.*
cum duplo Mercurio ℥vii. Emplastr.
Oxyroc. Myns. Diaphoret. Myns. aa. ℥iiii.
Artaphan. ℥vii. M. Malax. cum s. q. Ol.
Laterin. ad Emplastr. form.

If you desire it should be stronger and more penetrating, you may add *Flor. Sal. Armoniac. ℥iiii.* to it. If an Inflammation should happen; yet you must by no means use any Cooling or Repelling Medicines to it, lest you make it worse, by causing a greater Stagnation of the Liquors, and rendring them more Acrid and Malignant. The other Medicines will do your work, with the Exercise of a little Patience.

CHIRURGIA CURIOSA,

Or, the Newest and most Curious

OBSERVATIONS and OPERATIONS

In the whole ART of

CHIRURGERY.

BOOK III.

*Treating of Manual Operations on the Extream Parts
of the Body, and what is to be observed from them.*

CHAP. I.

*Of Wounds in general, in the Arms and Legs, Elbows, Knees,
Fingers and Toes.*

SINCE, as I have already said, and I hope sufficiently proved, that Wounds may be cured without the use of Suppuratives, such as Plaisters, Ointments, Balsams, Digestives, &c. It ought to be the first and chiefest Care of a Chirurgeon, to take all things out of the Wound that hinders its Healing; draw the Lips of the Wound as near together as possible, and then dress it artificially, that the circulating Liquors may not go out at the lacerated and wounded *Ranuli*, and so prevent its Healing. This is the chiefest Point; and if you diligently observe it, and let the Patient rest for a days time, that it may keep together as you left it; you will infallibly arrive at your desired End speedily and safely. The Wound being drawn together as near as you can, spread the following Plaister upon Leather, and apply it over the Wound, to keep it in that posture.

Be Mumiæ subtiliss. pulverisat. ʒij. Succ. rad. Consolid. ʒjʒ. Terreb. Cinth. Cypr. ʒj. M. f. Massa ad Emplastrum.

Let one Plaister continue on five or six days, and you will have no occasion for above four or five of them, before the Wound is perfectly cured. In the year 1667, I saw a Quack or Mountebank at Glogau, cut thirteen Wounds in the upper part of his left Arm, and after the

Blood was wiped off, he apply'd to the Wounds only fine double Linen Rags moistned in a warm *Mixture* or *Liniment*, and then rolled up the Arm very Tight with a broad Roller. Next Morning coming again upon the Stage; according to his promise, he shewed the People his wounded Arm, which I assure you was as good as healed, without any Inflammation or Swelling, and as neatly joined together as one would wish; infomuch, that they appeared quite whole; tho' I believe he was forced to give them another Dressing, tho' he did it not upon the Stage. By which it appears, that this Man knew how to cure Wounds in a days time, without the tedious method of bringing them to *Suppuration*. He got a great Sum of Mony by selling this Medicine, and tho' it must be supposed he made those Wounds in the most convenient places for healing, and tying the Lips close together; no body ought to blame him for it, since he performed his Promise. At the same time a young Chirurgion lived with me, who being very desirous of the Receipt; bought it after great sollicitation, of the *Circumforaneus*, for six *Reichs Thaler*, which I here communicate to the Reader.

B O O K III

R. Pulv. rad. Consolid. maj. Sarcocoll. ana ꝑ. Bol. Alb. ꝑ. Misce fiat Mixture cum Luti Fabril. s. q. in Linteolum, illinatur & Loco Vulnerato applicetur.

This Method may be truly call'd Glewing Wounds together; which whosoever practises, will find such Benefit by it, that he will never change it for the Ancient Greasy tedious Applications. There is also a wonderful Remedy invented by Mounsieur *Bouches*, Chirurgion at *Chamberi*, and communicated to us by Mounsieur *Blegni*, in his Monthly Observations, which cures Wounds safely and speedily, without any *Suppuration*, and is prepared in this manner.

Calcine *Vitriol* after the usual manner, put two third parts thereof into an Earthen Retort well luted and closed up. Set the Retort into a Reverbetory Furnace and put a large Receiver to it. First make but a gentle Fire till the Phlegm is come over, which put away into another Phiol; lay the Receiver again to the Retort and close it well where they join. Increase your Fire by degrees, and when you see the Receiver is fill'd with clouds go on with your Fire, till the Receiver grows cold again. From that time push on the Fire to the utmost, and continue it for two whole days and nights; then let the Fire go out and the Vessels cool. Open the Receiver, take out the Spirits that are in it, and put it to common use: but the Matter you find in the Retort grind upon a Marble, and, with the like quantity of Rectified Spirit of Wine, set it into digestion, sealing up the Phiol very close. This being done, put it into another Retort well luted, and the Retort into the same Furnace, and when you have gradually warmed the Retort, give it a strong Fire, and continue it four days and nights, till you have drawn off all the Spirits and that which is called *Oleum Vitrioli*. When the Vessels are cold, separate the Spirit of Wine from the Oily Substance in *Balneo Maria*. But this Oil being yet too cortosive, put it into a Retort with half an ounce of *Lymatura Chalybis* to four ounces of the Oil and destil it over again. This Oil will stop the bleeding incomparably, and heal a Green Wound in two days time, if withal you

you give the Patient three drops of it inwardly in a glass of Wine or other proper Vehicle. Stroke the Medicine into the Wound with a Feather, so as it may reach the bottom of it; then tye or roll up the part where the Wound is, pretty tight, that the Lips of the Wound may lie close together, and you will find the Operation performed to a Miracle.

Wounds in the Elbows and Knees are much the same, for neither of them (but very rarely) can be hurt without injuring the Ligaments, Nerves and Tendons; and if the Læſion is large and upon the Joint, you must not be too hasty in curing it; for here are many Nerves and Lymphatick Vessels, which will not be so easily stopt up, as in other places, where is more Flesh, because the ends of the wounded Veins cannot be healed by the above prescribed Medicines; but if the Wounds are not very large, it will do very well, especially on the Knee, if the Chirurgion comes before it is swelled or inflamed; but if the above-said Method cannot be put in Practice, you must find out a Medicine that will not keep the Wound too long open and breed abundance of Corruption, which will corrode and putrify the Nerves, Tendons and Ligaments; for which purpose I will present you with a Balsam and a Plaister which seldom fail to cure Wounds in those tender parts.

Wounds of the
Elbows and
Knees.

℞ *Terebinth. Cypr. ʒiiijss. Mell. Veron. Alchimil. ana ʒjss. Succ. Apii. Flor. prunell. inspiss. ana ʒj. Vitell. Ovor. num. ij. Aloes Myrrh. Sarcocoll. ana ʒssij. Balsam. Copaibæ ʒij. Peruvian ʒj. Camphor. ʒiiij. M. f. Balsamus f. a.*

This Balsam will soon stop the current of the *Lympha*, and assist in healing the Wound, which you may perceive in two or three days time, and then you must draw the Lips of the Wound as near together as as you can: then lay aside the Balsam and use nothing but the following Plaister, which is out of the road of your ordinary Prescriptions, and will do more in one day, than another shall do in ten, as you will find by making tryal of it.

℞ *Ol Amygdalor. dalc. ℥iij. Lythargyr. ℥jss. Minii ℥ss.*

The Lytharge and Red Lead must first be very well powder'd and boiled on a gentle Fire, to the consistence of a Plaister; to which add *Ceræ albæ ℥jss.* and when it grows cold put in the following Powders; but not the Gums, for they must be dissolved by themselves, and put in last of all; when the rest have been mixed well together.

Flor. æris ʒj. Magnet. ppt. Aristol. long. Consolid. maj. ana ʒviiijss. Mastich. ʒij. Myrrhæ, Oliban ana ʒij. Gum. Galban. Ammon. ana ʒiiij. Opopan. Bdellii ana ʒj. Sarcocoll. ʒjss. M. f. ad Emplastrum consistentiam.

If there should happen any great Inflammation, make use of my *Lac Aureatum* to allay it.

Wounds in the Fingers and Toes, tho' often slighted, require a diligent and experienced Chirurgion; for where several Vessels, as Nerves, Arteries, Veins, Tendons and Muscles occur, and where there is so little

Wounds in the
Fingers and
Toes.

Flesh

Flesh that every Wound reacheth to the Bone, many ill Accidents must necessarily happen upon their being inartificially treated; therefore if you are called to Wounds in the Fingers, before there is any Inflammation or Swelling, make use of one of those Waters described in the first Chapter of the Second Book, or one of those lately mentioned, which apply warm with a fine Rag to the Wound, and tie it up tolerably fast with a Fillet or Roller. Some in this case use Dr. Bontokoe's Vulnerary Balsam, and others that of *Poterus*, which I shall produce in this place, *Bontekoe's* being inserted already in the second Book.

℞ *Succ. rad. Hirund.* ꝑij. *Aristol. rotund. Valerian. anna* ꝑij. *Foli. or. Consolid. Plantag. Serpentar. Sanicul. Alchimil. ana* ꝑss. *Saxifrag. rubr. Consol. aur. Succ. Juniper. summit. Hyperic. ana* ꝑj. *Ol. Chamom. Spicæ ana* ꝑss. *Lumbricor.* ꝑx. *Hypericon.* ꝑvj. *omnibus bene mixtis* & *per Retortam destillatis, adde Myrrh. ꝑss. Mastich. Oliban. Vernicis ana* ꝑij. *Terebinth. Picis Naval. ana* ℥ss. *M. f. Balsamus.* The Oils must be made with Oil of Sweet-Almonds, and not with Oil of Olives.

If there is an Inflammation and Swelling in the Fingers, bath them with a good Ointment, of which you may find variety in this Treatise, and apply a Stiptick Plaister over it, and if that Course does not reduce it, use my *Lac Aureatum*. The French have a *Cataplasm*, tho' very common is very good in this Case.

℞ *Micæ Panis Tritic.* ꝑij. *Vitell. Ovor. Num. iij. Croc. Orient.* ꝑss. *M. cum s. q. lac. Vaccin. ad Cataplasmati form. calide loco affecto applicetur.*

If the Nerves are cut asunder, they may be stitched together again in this manner.

Thrust an ordinary crooked Needle with a double silk in it, through each end of the Nerve, and so bring both ends of the Nerve near together; then tie both ends of the silk in a Knot and cut the rest of the silk off. Some are of opinion, that this is impracticable and intolerably painful; but I can aver it in the presence of God Almighty, that I have done it above twelve times and always with good success; but here let it be remembered that the Stitches must not be let too near together, lest they rend asunder.

C H A P. II.

Of Wounds made by Gun-shot, and how the Bullets may be drawn out, and the Wounds cured.

Groundless
Opinions of the
Ancients.

WOUNDS made by Gun-shot, differ much from others in their Figure and in themselves; for they are generally round and others long; besides, they are always made with a Laceration and Confusion of the Flesh, but those made with a Sword or other cutting

ting Weapons, only divide the part without Bruising or Tearing it. The Ancients were of opinion that a Bullet conveyed into the Wound both a burning Heat and a sort of Poyson, and therefore used to cure such Wounds with burning Oils, and such like Medicines, made very hot, which put their Patients to intolerable Pains and kept them so long a time under their hands, that the Cure was a greater Punishment than the Wound; but the Opinion and the Practice are equally scandalous; for the Bullet flying with a Force communicated to it by the Powder, may carry with it peices of our Cloaths, or what is nearest into the Wound, yet the Bullet cannot burn the Flesh: And as for the Notion of Poyson which they thought accompanied the Bullet, I could never find any, nor can I imagine how they should go to work to make a Bullet so Poysonous that the subtil Fire of the Gun-Powder would not spoil the Effects of it; and how many are there that carry Bullets in their Bodies several years without any danger of Poyson.

Bullets in the Body must be drawn out as soon as possibly it can be done without danger, in order to set upon the Cure of the Wound caused by it. Formerly Chirurgeons made use of a *Scrue* for that purpose, which I used to carry with me at my first going into the Camp; but to no purpose, for it is impossible with that Instrument to take hold of any Bullet that lies in the Body. *Forceps* which have a round Hollowness forward, and some few Points or Hooks in that hollow part are the most convenient Instruments that can be used for extracting Bullets out of Wounds: But if the Bullet should move and settle out of its right Line, the Instrument must be made accordingly and the Patient put into the same Posture he was in when he received the Wound.

*How to draw
Bullets out of
a Wound.*

The Cure of these Wounds must begin with Mundifying Medicines, and taking out such things as hinder their healing; for which the following Balsam put into the Wound with Tents and small Pledgets is very proper.

*Cure of Wounds
made by Gun-
shot.*

℞ *Terebinth. Cypr.* ℥vj. *Balsam. Peruvian.* ℥ss. *Vitell. Ovor. No.* ij. *Pulv. Myrrhæ Oliban. ana* ℥ij. *Sarcocol.* ℥jss. *Croc. Oriental.* ℥j. *M. f. Balf.*

This Balsam will soon bring the contused Parts to Separation, cleanse the Wound, and generate good and sound Flesh in the place of it. The Plaister to be apply'd to the Wound is to be made as followeth;

℞ *Fol. Rutæ Auricul. Muris, Scabios. Consolid. maj. Aur. Alchimil. Veronic. Sanicul. Beton. Malvæ ana* m̄j. *incisis, coquantur per hor. dimidiam cum Ol. Olivar.* ℔iiij. *colaturæ huic adde Lythargyr. Minii ana* ℔j. *Lap. Calaminar.* ℔ss. *Saponis Venet.* ℥iiij. *omnia ad rectam consistentiam Emplastri molli, coquantur hinc ab igne, remove & Agitando immisce sequent. pulveres. Pulv. Succin. rad. Aristoloch. long. ana* ℥j. *Lap. Ostiocol. ppt.* ℥vj. *Myrrh. Mastich. ana* ℥ss. *Bacc. Laur. Consol. maj. ana* ℥iiijss. *Sarcocoll. Camphor. ana* ℥jss. *M. f. Empl.*

The Tent must be made of nothing but Lint, proportioned to the Bigness of the Wound, that the Matter and Corruption, of which these Wounds breed abundance, may have Liberty to issue out; if it be a
B b b thorough

thorough Wound, and you have an Orifice on both sides, put a Tent into each opening, but not so long as to reach one another in the middle; for you must always give this sort of Wounds sufficient Vent, that they may sooner and better come to Suppuration. When the contused Flesh is separated, and the Wound clean, continue the use of my Balsam, to incarnate and cicatrize the Wound, and as it begins to mend, make your Tents lesser and lesser. If there should happen an Inflammation and Swelling, use my *Lac Aureatum*. Some Authors are of opinion that these Wounds may be cured without Suppuration; but if those Writers had known that Wounds made by Gun shot cannot be cured without a Separation of the Contused Flesh, they would not talk so wildly or prescribe Impossibilities.

Observation.

In August 1693. Captain *Brown* came to me for Cure of a Wound in his left Thigh, a hands breadth above the Knee made by a Pistol Bullet, which lodged near the *Os Femoris*. I dressed the Wound for some days in the usual manner, and finding the contused Flesh might be separated; the sixth day I drew out the Bullet with a *Forceps*; the seventh day a piece of Paper; and the ninth and tenth days, some small pieces of his Leather Breeches; and Fourteen days after he was well enough to ride on Horse-back, and pursue his Journey to his Regiment.

C H A P. III.

Venomous Bitings and Stingings, their Causes, Accidents and Cures.

THE Stingings of Bees and Wasps cause a very sharp and sensible Pain, and raise Swellings and Inflammations, by leaving their Stings behind when they have forced them into the Flesh; which Stings being full of little Hooks (as may be seen by the help of a *Microscope*) they cannot draw them out again, but there they remain to the prejudice and wounding the small *Capillary Vessels*. Biting of Dogs are not Venomous, unless in very hot weather when they are mad; and then according to *Dr. Willis's* opinion, they Poyson the part they bite, by communicating the Foam of their Mouths into the Wound which they make with their Teeth, and that acid and acrid Humour fermenting, causes a Stagnation and Coagulation, which if not suddenly remedied turns to a Mortification, and intolerable Pain will follow. That the Bitings and Stingings of *Vipers, Snakes* and *Scorpions* will envenome the part they seize on, is known to every one, and often comes under the Chirurgeons hands; but that, according to the opinion of the Ancients, *Vipers* and *Snakes* sting only with their *Tongues*, I utterly deny; for they also wound with their *Teeth* and so communicate their Venom, which lies in the *Froth* of their Mouths, in the same manner as I have said already concerning *Mad Dogs*, and but little differing from it. But *Scorpions* sting and pinch only with their Tails, which if you view in a *Microscope* you will find full of little Hooks and pointed like a Fork.

In order to cure these Envenomed Wounds, you must first wash them very well with the following Spirit, and when that is sufficiently dried in, scarify the part about the bigness of a half Crown piece, and apply

ply to it a large *Ventosa* or Cupping Glafs. The Spirit is thus prepared.

℞ *Spir. Roris marin. Theriacal. Lavendul. ana* ℥ss. *Vini Camphor.* ℥ij.
Sal. Armoniac. ℥j. *Croc.* ℥ss. *fiat mixtura s. adusum.*

Hildanus and *L. Junkers* extol the following mixture; which I have often used with good Success; but I left out the Vinegar.

℞ *Aq. Regin. Hungar.* ℥j. *Spir. vin. Camphor.* ℥ij. *Theriac. Androm.*
℥ij. Scord. ℥j. *Sal. Marin.* ℥iijss, *M. f. Mixtura.*

Some cauterize the part, especially if the Chirurgeon is not presently called, and the Wound is also very deep, which is not amiss. some apply a Vesicatory, and others the *Moxa*, which they burn to Ashes upon the part; and after two or three times cutting the Escar with a Lancet, they apply three times a day the following *Spiritus Matricialis* of *Dolæus* and *Overkamp* to it.

℞ *Oliban. Myrrh. Succin. Mastich. ana* q. l. *Spir. Vini rectificat. ut superemineant digitos iij. stent in loco calido per viij. dies, Dein abstrahc in MB. Dos.* ℥ij.

Now, tho the Escar is separated, yet you must keep the Wound open some time longer with my Wound Balsam, and take care to apply no unctuous Medicines, but always the following Plaister;

℞ *Empl. Stit. Crollii, manus Dei, Diachil. c. Gum. ana* ℥vij. *Ceræ*
℥ss. Resin. ℥ij. *Terebinth.* ℥ss. *Succin.* ℥ij. *Oliban. Myrrh. Ma-*
stich. ana ℥ss. *Sal Armoniac.* ℥iss. *pulv. Spinar. Viperar.* ℥j.
Malax. c. s. q. Ol. Scorpion. M. f. ad Emplastrum.

This Plaister is of great virtue in the case we are discoursing of; but if *Sal. Viperar.* ℥iss. and *Camph.* ℥ss. were added to it, it would be much more effectual. *Dr. Emanuel Konig* has given us the R of a Powder, which I have often used with admirable success, which is made as follows.

℞ *Pulv. sem. Card. Fullon.* ℥ij. *Corn. Cerv. Philos.* ℥ij. *Lap. Bezoard.*
gr. xv. Herb. Card. Benedict. Scord. ana Terr. Sigillat. ppt. ℥j.
rad. Tormentill. ℥j. *Ocul. Cancr. ppt.* ℥j. *Antimon. Diaphoret.*
℥ss. Lap. Percar. ℥ij. *Cort. Citr.* ℥iijss. *M. f. ad subtiliss. pulver.*
Dos. ℥ss. *vel* ℥ij.

To be a little more particular, the Stinging of Scorpions are generally cured by the application of its Oil, or the Scorpion itself after it has been squeez'd. *Theriac. Venet.* may also be given inwardly. For the Stings of Bees and Wasps there can be no better Remedy than *Robus Sambuci* mixed with Camphorated Spirit of Wine immediately applied. Some Rub the part with Fresh Earth, and lay a peice of it upon the Hurt. Others make a Cataplasim of *Rue, Bay leaves, Mallows,* and Roots of *Marsh-Mallows,* mixed with Oil of Olives and Vinegar, to the
confi-

consistence of a Pultis. Some use a Cataplasme of *Theriaca*, *Cepæ*, *Scordium*, *Caro Viperina* & *rad. Cyper.* Others apply *Stercus Bubullinum* mixed with *Thyma* & *Meliss.* And *Blanckard* only applies a Plaister made of *Lin Seeds*, *Salt* and *Vinegar.* In the 17 Chapter of the 2d Book I mention'd an *Italian* Herb called *Sanatados*, and here I cannot forbear acquainting you, that that Herb will cure the Bitings or Stingings of any Venomous Creature whatsoever, in a short time and to admiration.

In August 1696. the *Lady L.* being in her Garden was bit by a Mad Dog which made three great Wounds in her left Leg, which pierced into the *Os Tibiæ.* The second day I was sent for and saw the Wound in a miserable condition, much Inflamed and Swelled, which hindred me from Scarifying the Wound. A Country Chirurgon was with her, but had applyed nothing but *Emplastrum de Ranis.* I presently ordered the Wounds to be washed with the above mentioned Mixture; to the Inflammation I applyed my *Lac Aureatum*, and over the Wound the following Cataplasme warm;

℞ *Fol. Alchimil. Rutæ, Scordii, Malvæ, Auricul. Mur. ana* Mjss. *Farin. Hord. Fabar. Orobi ana* ʒj. *rad. Althææ, Terr. sigillat. ana* ʒvj. *Fic. No. xvj. Theriac. Androm. ʒij. Rob. Sambuc. ʒjss. f. Catapl. c. f. q. Lactis vel Lixivii dulc.*

These Applications had such good Effect, that the Inflammation and Swelling wore off, and the Wounds began to be clean, and came to Suppuration; but the mightily complaining of Heaviness and Faintness, I gave her the *Simple Mixture* three times, which put her into a Sweat, and gave her Ease: besides, she took *Dr. Conig's* Powder twice a day. Things succeeding so well, I then apply'd *Vesicatories*, afterwards my *Vulnerary Balsam*, and an ordinary Plaister over that; by which means this young Lady, under seventeen Years of Age, was perfectly cured in six Weeks time.

C H A P. IV.

Oedemata, or cold Phlegmatick Tumors of the Limbs, their Signs, Causes and Cure.

Symptoms of
this sort of
Tumors.

THis *Tumor*, commonly called *Oedema*, is cold, without pain, of the same Colour with the rest of the Skin, and if you press it with your Fingers, will leave *Dents* for a considerable time: They often happen to People in years, and sometimes to the younger sort, after a great fit of Sickness, or a *Quartan Ague*: They sometimes seize upon the Legs, and sometimes on the Arms, according as the *Lympha* stagnates. The Persons afflicted with this Dislemper, have weak Stomacks, their Bloods are thick, crude, and stuffed up with an ill digested Chile; they are very irregular in their Meats and Drinks, and devour abundance of soure things, which will not be brought to a regular Concoction; they drink very much, which hinders the Preparation of the *Lympha* and *Chylus*, and turns to no-
thing

thing but a phlegmatick and noxious Moisture, which is apt to settle in the Legs, and cause an *Oedematous* Swelling; so that the offending Humour being nothing but a tough Slime, or a thin Gelly, which causes no Fermentation or Effervescence, but only extends and fills up the Vessels, it produces no considerable Pain, unless by some Accident it turns to a Mortification.

The Cure is something difficult, especially in elder People, because they stay long before they seek a Cure, in hopes it will go off of itself, since they feel no Pain; and in the mean time the *Materia Peccans* is grown so thick and viscid, and the part so injur'd, that rarifying and dissolving Medicines can have no effect upon them; therefore the Cure must begin, first by hindering the continual gathering of the Matter near the Part; and secondly, by dispersing the Humours which are already settled there. The first may be done by observing a Regular Diet, and exhibiting such internal Medicines as strengthen the *Viscera*, attenuate and meliorate those Humours, open Obstructions, and promote the Excretions and Secretions of the whole Body; and then proceed to the outward Cure in this manner. If you find the Humours are tough and viscid, apply the following Cataplasm every three Hours, for some Days together; but use no unctuous Medicines, for they will constipate the Pores, and render it more difficult to be cured.

℞ Pulv. fol. Malvæ, Verbasci ana ℥ij. Salviæ, Rutæ ana ℥jβ. Rad. Althææ, Bryon. Cucum. Asinin. ana ℥j. flor. Chamomil. ℥jss. flor. Sambuc. ℥vj. Farin. Fabar. ℥ijss. Cineris lign. Quercin ℥ij. Stercor. Vacc. recent. ℥vj. c. s. q. Lixiv. dulc. f. Cataplasma.

This Cataplasm will attenuate and resolve the Tumor, and open the Pores; but take care that your Alhes are made of true and sound Oak, the Cow-Dung fresh, and the Lye be made strong; for with these three things only, and rolling the part very well, I have cured many Persons in this Hospital. When this Cataplasm has answered your Intention, employ the following Fomentation, with which I have done wonderful Cures in these Cases.

℞ Bol. alb. Ceruss. Calcin. ana ℥jss. Tutia ppt. ℥j. Vitriol. alb. Alum. ust. ana ℥jss. Myrrh. Oliban. ana ℥ijss. Nitr. puriss. ℥j. Fol. Theæ. m. pulv. flor. Samb. ℥ij. Savin. ℥jss. Ciner. Lign. Fraxin. Quercin. ana ℥jss. Stipit. Fabar. sarm. vitis ana unc. j. Rad. Bryon. ℥jss. contusis & mixtis, cum sequent. aquis & ebulliant semel ac iterum, aqu. Cheresol. Plantagin. ana ℥ijss. flor. Sambuc. ℥ij. fol. Salv. ℥j. Lixiv. fort. ℥iiij. fiat Fomentatio, & Linteis calide parti affecto imponitur.

With this Fomentation I have cured several Patients that were in a dangerous Condition, and but a while since the Honourable Gentleman, Mr. Fisher, whose Legs were swelled as high as his Belly, and was forced to keep his Bed, to which I added nothing but a good Roller. *Sculdetus* made great use of the following Cataplasm, the Virtues whereof I have frequently experienced.

℞ *Lixiv. e Calc. viv. ex Cineribus sarm. Vitis. ana ℥ij. Sal. comm. Nitr. puriss. ana ℥jss. Acet. vin. opt. unc. j. M. f. Epith.*

It must be apply'd with double Linen Rags three times a Day, as the former; but if you had rather have a Plaister, the following will do your Business;

℞ *Emplastr. Diaphoret. Myns. ℥xij. de Hyoscyan. Scrophul. Vigon. ana ℥vij. Gumm. Galban. Bdell. ana ℥ij. Ammon. ℥j. Oliban. Mastich. ana ℥ss. Succin. Tart. puriss. ana ℥jss. flor. Salis Armon. ℥j. Ceræ ℥ij. Terebinth. ℥j. Ol. Philosophor. tartar. Patisd. ana q. s. Misce f. Emplastrum.*

This Plaister must be apply'd over the Tumor, and renewed every twelve Hours, and the part from the Foot to the Knee must be swathed with a very good Roller. *Dolæus* has also prescribed a very good Plaister for this Purpose, in these words.

℞ *Ol. Olivar. ℥ij. Lythargyr. aur. ℥xx. ad consistentiam coquantur. Ceræ ℥xj. Colophon. Resin. Pin. ana ℥ij. Gum. Galban. Ammon. ana ℥jss. Elemi ℥j. Labdani ℥ij. Ol. Laurin. ℥ij. Axung. Porcin. ℥ij. Ceræ. ℥j. Storac. Calam. ℥ss. Rad. Irid. flor. Bryon. ana ℥ij. Sem. Cumini ℥j. Bacc. Laur. svj. flor. Chammoni. Melilot. ana ℥ij. Herb. Sabinae, Thymi ana ℥ss. M. f. Empl. s. a.*

In July 1692. I had a Person of great Quality in Cure, who was afflicted with such Oedematous Legs, mightily swelled, and besides the Patient was sixty two years of Age, when Dr. *Zielisch*, Dr. *Peruse*, and my self, were sent for. I first applied the following Plaister, and rolled the Legs very well with a Linen Bandage.

℞ *Empl. de Ran. cum Mercur. Diaphoret. Myns. ana unc. x. Diasulphur. Ruland. unc. vj. Succin. tartar. albiss. ana unc. ij. Malax. cum s. q. Ol. Laterin. ad Emplastrum.*

Now, tho this Plaister made the Legs sweat very well, and something abated the Swelling, yet, seeing it would be a tedious piece of Work, we applied Goats Piss and Sheeps Dung to the Legs, eight Days together, which succeeded very well; but since it made the Room nasty, and the Patient was obliged to receive many Visitants, we left it off and applied the following Fomentation round the Legs, with double Linen Cloaths moistened in it.

℞ *Herb. Cochlear. Theæ. Trisol. aquat. Sabin. Cicut. ana Miss. Rad. Bryon. Ebul. ana ℥ss. Summit. Absinth. Ruta ter. ana mj Sal. Tartar. Ammon. ana ℥ij. Nitri ℥jss. cum. s. q. Spirit. Vini & Urin. Ovin. coquantur f. a. postea Cola. V which succeeded so well, that in a Month's time the Patient was perfectly cured.*

C H A P. V.

Of *Phegmonous* hot Tumors in the extreme Parts, their Differences, Signs, Causes, and Cures.

THE very Learned and Ingenious Dr. *Overkamp*, calls these Tumours the Mother of many Diseases, and with he might, for if they are not Aggressors, they generally associate themselves with all kind of Hurts and Maladies. They are very inconsiderable at their first Appearance, but soon grow Redder accompanied with a violent Heat, Burning, Tension of the part, and Intolerable Pain. Our modern Writers call it *Phegmon*, and the Ancients an Inflammation. They are in some particulars distinguished from an *Erysipelas* and other Inflammations, but in the whole are much the same, with respect to Place. If they happen in the Throat, it is called *Angina*; in the Eyes *Ophthalmia*; in the Side between the *Membrana Pleura* and the *Diaphragma*, it is called *Pleuris*; in the Lungs *Peripneumonia*; on the Fingers *Panaritium*; if in the Face, Arms, Legs, and other parts of the Body an *Erysipelas*.

The genuine Cause of a *Phegmon* has caused great Debates, and many have puzzel'd their Brains about it to very little purpose; for when all is said that can be, our late Physicians having founded the Cause upon the veritable Authorities of the *Cartesian* Philosophy, few will discover their Ignorance by assuming a Confidence to oppose it. Nothing is more plain, than that every Inflammation proceeds from Acid and Acrid Humours, which corroding and opening the Tender Vessels and *Ramuli* of the Nerves, &c. the Liquors run out, Stagnate, Cause an Effervescency, and easily occasion Heats, Swellings and other Accidents, which may arise from inward Causes; but this may also happen from an outward Hurt, whereby those Vessels and *Tubuli* being broken, the Juices and Liquors, as was said before, being extravasated, Stagnate, become Acid and Acrid, and at length produce an Inflammation or *Phegmon*.

This being the Cause, a Chirurgion will easily perceive, that his first work is to stop the Flux of these Humours; because if not timely prevented, the Tumor will soon turn to a Gangrene. If they can be resolved and discussed by Atenuating Medicines, proceed in that Method; but this must be done speedily, for if the offending Matter grows putrid and indurated, it will soon cause a Gangrene and at last a Mortification. If these Tumours have neither Wound nor Opening, they must necessarily putrify for want of Vent, and then it's the best way to open them with a Lancet, in the part where Nature shall indigitate. But take care that you use neither unctuous nor repelling Medicines; for the first will stop up the Pores, hinder Transpiration, and delay the Cure; and the second will prevent the Circulation, and so Stagnate and thicken the Juices that they perpetuate the Malady. Astringents must also be avoided, for they hinder the Discussion of the peccant Humours, and increase the Heat and Pain. My *Lac Aureatum*, so often mentioned, is an incomparable Remedy in this Case; for if the Inflammation is so desperate that you see it growing to a Gangrene, yet

How a Phegmon differs from other Tumors,

Causes,

The Cure,

you

you may assure your self that this Medicine will cure it. The Contents whereof is as followeth.

The Author's
Lac Aurea-
tum

℞ Ceruss. calcin. ℥iij. Bol. alb. ppt. Tutia ppt. Lap. Calamin. ppt. ℥j.
Myrrh. Oliban. ana ℥iij. Sal. Tartar. Armon. ana ℥ss. Sem. Cu-
min. Anisi, Levist. ana ℥v. Bacc. Lauri, Juniper. ana ℥vj. Pulv.
fol. Theæ, Savin. ana ℥j. Flor. Sambuc. ℥jss. M. f. Pulvis. Hujus
Pulveris ℥vj. Lixivii opt. ℥xvj. Aq. Plantaginis, flor. Sambuc.
ana ℥xx. Chærifol. ℥xv. coquantur leniter ad tertiæ partis hu-
miditatis consumptionem; hinc remove ab igne, & immisce
Spir. vini Camphor. ℥iij. Sperm. Ceti. ℥ss. fiat Lac. Aurea-
tum.

This incomparable Medicine must be applyed warm to the *Pblegmo-
ne*, with three or four double Linen Rags, and repeated six or seven
times a day, as you find it necessary. If the Tumor is very large,
mighty Red and Hard, apply the following *Cataplasm* for two days;
which will rarify the Matter, open the Pores, and the *Lac Aureatum*
will penetrate more powerfully, and effect more in one day, than other-
wise it could do in four.

℞ Fol. Malvæ Alchimil. ana Mjss. Scord. recent. Ruta recent. Cicul.
ana Mj. Farin. Fabar. ℥j. pulv. herb. Chæresol. Petresolin ana
℥vj. Sem. Cumin. Anisi. ana ℥ij. Summit. Absinth. Baccar. Laur.
ana ℥jss. Concisis & contusis coquantur s. q. Decocti Altbææ ad
Cataplasmatiss consistentiam, cui semper applicando aliquid se-
quent. mixti immisceatur. Camphor. in spirit. vini solut. ℥ss.
Myrrhæ in pauca vin. solus. ℥ij. f. Catapl.

A Phlegmone
in the lesser
parts.

If a *Phlegmone* should happen to the smaller parts, as Fingers, or
Toes, and should come to be a Wound; you must apply *Emplastrum
Artaphani* to it, and over that double Linen Rags moistned, in the fol-
lowing Water, which will certainly take away the Inflammation.

℞ Tutia ppt. ℥j. Camphor. ℥iij. Ceruss Calcin. ℥jss. Essent. Myrrh. ℥ij.
Alum. usti ℥jss. Sacchar. Saturn. ℥jss. Sal. tartar. Armon. ana
℥iij. Miscæ cum Lixiv. dulc. Aq. Rosar. & Plantaginis ana ℥x.
& coque ad Cataplasma. Formam.

Historical Ob-
servation.

In August. 1685 a great Princess was my Patient, living about four
German Miles from this Town, who had a violent and dangerous In-
flammation in her left Arm, caused by being let Blood by a *Bath-keeper*
about eight days before, who had push'd his Lancet through the *Medi-
ana* into the *Nerve* that lay under it; which so inflamed and swel-
led the whole Arm, that we thought every Moment it would have
Gangrened. The Phlebotomist to mend the Matter, apply'd *Emplastrum
Oxycrocium* over the whole Arm, which, as easily might be guess'd,
made it much worse. When first I saw it, I was frightned to see such
a Prodigious Tumour and Inflammation. The Princess complained
of intolerable Pain, and sometimes of Hot and Cold Fits, like those of
an *Ague*, and her Breast on the same side was grievously swelled. In
fine, it was as dangerous and deplorable a sight, as ever I saw in that
case

case in my whole Life. Upon the place where the Vein was so unluckily opened, I applyed every two hours the following *Cataplasm*, always as warm as she could suffer it.

℞ *Pulv. Fol. Malvæ* ℥iij. *Althææ*, *Scord. ana* ℥ij. *Flo. Chamomil. Sambuc. ana* ℥j. *Farin. Fabar. ℥iss. pulv. terr. Sigill. Mithidrat. ana* ℥j. *Sal. Tartar. Armoniac. ana* ℥vj. *M. f. Pulvis & s. q. Lactis ad Cataplasm. consistentiam Coquatur.*

With this, every time it was applyed, I mixed some Spirit of Wine Camphorated, and over the whole Arm and Shoulder I applyed, with double Linen Cloths, my *Lac Aureatum*, and repeating it every two Hours; I found it was at a stand for 24 Hours, and then it gave evident signs of Amendment. The fourth day I opened the place with a Lancet where the Nerve was wounded, out of which came abundance of Matter, which afterwards was let out twice a day to the great Ease of the Princess. At length her Highness in five Weeks time was perfectly cured: only it was sometime longer before she recovered the right use of her Arm, Here you may observe what Mischiefe attends an ignorant or careless Phlebotomist, and so much the worse, when he knows not how to remedy an ill Accident of his own procuring.

C H A P. VI.

Pterygio or *Panaritio*, vulgarly called a *Whitlaw*, its Cause and Cure.

THIS painful Tumour and Inflammation on the Joints and ends of the Fingers is also called *Paronychia*, and seldom happens on any other Joints. Its Pulsifick and penetrating Pain is sometimes so great that the Patient has no rest or appetite to his Victuals. It first appears like a Bump with a little Blister on the top, but is followed with an Inflammation, and, if not timely remedied, spreads over the whole Arm, with a violent Pain proceeding from the Sinews, some of which end in the Elbow, and others in the Shoulder, which hereby are very much extended, and the *Periostium* also suffering, often throws the Patient into fainting Fits and a Fever.

The principal cause is a very sharp and almost Corrosive Acid, proceeding from a Stagnation of the Juices, which prey upon the Veins, Arteries and extream Fibres of the Nerves that end in those parts, and if they continue long, not only injure the *Periostium* but spoil and corrupt the very Bones themselves. The Antients attributed this effect to a *Worm* which they thought resided in the Tumor, and by its gnawing and biting caused this violent pain. The *Hollanders* call it a *Vyt*, say it has Teeth and Eyes, and *Rombertus Dodonæus* thinks he has seen some of them; yea, he is so very idle and impertinent, as to say, one must not call this *Worm* by its Name, for if we did, it would immediately be more enraged, and bite, and torment the Patient

more than at other times. Now, that the Vulgar Fry should talk at this idle rate is pardonable, because they know no better; but that Men pretending to Learning should believe and vend such Nonsense is abominable.

The Cause.

Abundance of superstitious Cures accompany this Distemper; for the ignorant People having imbibed the opinion that it is a Worm, think themselves obliged to tie some living thing upon the part affected, which must continue there till it die to take away the Cause; and therefore apply Frogs, black Beetles, Mull Worms, Crabs, Crawfishes, small Snails, &c. to it; but Dr. *Munick* calls this Child by its right name, and says it is downright Foolishness. Licentiate *Juncken* gives us an admirable *Elixir* to be used in this case, which by resolving and attenuating the stagnated Liquors, puts them again into their orderly motion.

℞ *Rad. Angelic. Imperator. Zedoar ana* ℥ss. *Cubebæ. ʒij. Caryophill. ʒj. Croc. ʒss. Castor. ʒss. Gumm. Galban. Assæ fetid. ana* ʒj. *Benzoe. Storac. Calamit. ana* ʒj. *Myrrh. ʒiij. Mumia. ʒjss. Camphor. ʒij. Tincturæ Sulphur. ℥ij. Miscæ & Serva in vase vitreo bene clauso ad usum dictum. f. Elixir Balsamicum.*

But if the Distemper has already proceeded so far that it cannot be subdu'd by this Medicine, you must endeavour by all means to bring it speedily to Suppuration, and instead of the former apply the following Cataplasm.

℞ *Micar. Panis ʒviiij. pulv. fol. Malvæ rad. Althææ ʒj. Farin. Fabar. ana ʒj. Vitell. Ovor. num. iij. Croc. ʒjss. coque in lact. Vaccin. q. s. ad Cataplasmatiss consistentiam.*

This must always be applied warm, and repeated five times a day, to bring the Matter to Maturity and mitigate the violent Pain. If you find it ready for opening, make an Incision where you find the Matter lies nearest the Skin, large enough for the thick Corruption to go out; but in that observe a Medium, for if the Orifice be too wide, it will give the Air too free an access to the Bone, which will soon do it injury. Nor must you be too long before you open it, lest the contained Matter grow so Corrosive and Malignant, as to rot and spoil the parts adjoining, and perhaps the *Periostium* and also the Bone it self. When it is opened dress it three times a day to give vent to the Peas, and with Lint apply to the Wound the following Decoction warm; but use no unctuous Medicines, unless you design to ruine your Patient.

℞ *Fol. Alchimell. Veron. Cheladon. maj. ana* mij. *Quercin. mij. Aristol. long. mijss. Rad. Aristol. long. ʒij. Miscæ scind. & cont. Grosso modo & Coque cum s. q. Aq. Veron. & Mellis s. artem s. Decoctio.*

With this Decoction you may mix a little of the foremention'd *Elixir Balsamicum*, in such a Proportion, as you think convenient; which may also be used in other cases, as *Fistula's, Ulcers, &c.* If

the

the Hand and neighbouring parts are much swelled and inflamed, then lay over the Finger, the *Cataplasm*, and over the whole Hand, my *Lac Aureatum*, and you will sooner accomplish the Cure. When the Symptoms are abated, tye the Finger somewhat hard with a Fillet, that it may not be misshaped, or grow too big, as it commonly happens: Besides, rolling the Finger will promote the Cure, especially if you begin at the Hand, and so drive the Matter to the Fingers end, where it will issue out; unless there is more than one Orifice, for for then you must govern your self accordingly. But to be more particular in the Cure, I shall give you the Practice of others in the present Case; Dr. *Munnick* obliges his Patient to hold his Finger for some time in the following Spirit, to abate the Pain.

℞ Spirit. Vini ℥ij. Theriacal. Camph. ana ℥j. Opii ℥ss. Misce.

When they had held it there a little while, he applyed the following *Cataplasm* round it, as warm as the Patient could endure it.

℞ Herb. Rutæ, Salviæ ana mfs. Flor. Chamomil. Sambuc. Melilot. ana mj. Sem. Cumin. ℥j. Coque omnia simul in Vino & Aqua, ad remanentiam Pultis, postea adde Farin. Lini, Hordei, ana ℥j. pulv. Sabin. ℥ij. Butyr. rec. ℥j. M. f. Catapl.

As soon as *Blankardus* perceived a *Panaritium* growing upon the Finger, he presently ordered the Finger to be laid open to the Bone, and the Wound to be dressed with Lint, moistened in the following *Lavamentum*;

℞ Spirit Vin. ℥ij. Theriac. Venet. ℥ij. Mell. Chelidon. ℥j. Misce.

Over this again, he applyed a good *Cataplasm*, and so proceeded to a Cure. Dr. *Overkamp* prescribes the following, which being made warm, the Patient must hold his Finger in it three Hours together;

℞ Elixir Vitæ ℥ij. Spirit. Theriacal. Matrical. ana ℥ss. Myrrh. ℥iiij. Camphor. ℥j. Tinctur. Castor. ℥ij. Opii ℥j. M. f. Mixtura.

This being done, he applyed the following *Cataplasm* warm, and repeated it every three Hours;

℞ Herb. Rutæ mfs. Salu. pj. Roris marin. Summit. Cumin. Fænicul. ana ℥jss. Macis. Nucis Moschat. ana ℥ij. Sabin. ℥vj. Croc. opt. ℥v. Ol. Mac. ℥ss. Panis biscot. q. s. cum vino Gallico ad Cataplasm. Coquantur.

Muraltus says, he had cured many, only by holding the Finger in hot Milk, wherein Sage had been boiled, and also recommends *Ol. Saturn.* as a present Remedy; and Dr. *Bontekoe* prescribes the following *Plaster*;

℞ Empl. Diachyl. Simpl. Diapalm. ana ℥vij. Gumm. Ammon. ℥vj. Galban. Ladan. ana ℥j. Myrrh. Mastich. ana ℥vj. Croc. ℥ss. Sperma.

Ceti ℥v. *Succin.* ℥ss. *Sacchar. Saturn.* ℥iij. *Pulv. Cumin. Bardan.*
ana ℥jss. *Campbor.* ℥ijss. *Malaxatur cum* ℥. q. *Ol. Saturni* f.
Empl.

This must be spread thick upon Linen, and so applyed, after the Finger has been held a while in Warm Milk. Monsieur Rivet the French King's Chirurgion, says he has cured more than a Hundred, by applying *Moxa* to the End of the Finger. Some order the Finger to be put into a Stale Hen Egg boiled soft. Some put the Finger into the *Fundament*, others into *Vulva*, and others again Cow Dung, Hogs dung, or apply to it Dogs and Rats Dung.

In October 1686. Maria Richters, a Widow, about 48. years of age, had such Tumors and Inflammations, on every Finger of both Hands, except the left Thumb; but especially the Right Hand and Arm was swelled and violently inflamed as high as the Elbow. She attributed the cause of this Affliction, to her often washing in hot Lye; which was very likely, for thereby the Vessels were hurt, and the sharp *Lixivium* drew the Humors into the Fingers. It is impossible to express what intolerable Pains the poor Woman endured, and as she thought, found ease in Nothing but putting her Fingers into hot Vinegar, in which I found her holding them when I first came to her. I immediately ordered *Venice Treacle*, *Mithridate* and *Diascordium* to be well mixed with Vinegar, in which she put her Fingers again, and said it gave her abundance of Ease. Afterwards I laid round the Fingers some of the Mixture above described, and round the Hands and Arms, I applyed my *Lac Aureatum* as usually; so that in Ten days time there was a mighty change; for only one Finger on each hand came to be opened, all the rest growing well by virtue of the first Medicines, insomuch that in a months time she was perfectly cured. I have known several ill consequences attend the use of Vinegar in Inflammations but here it did a great deal of Good.

C H A P. VII.

Atrophia, or Wasting and Decaying of the Limbs, from whence it proceeds, and how cured.

AMong the great number of our late Authors, I don't remember any that have treated upon this Nice Distemper; possibly they forgot it, or had so little knowledge of it, that they were unwilling to expose themselves, by discoursing a Subject they were Strangers to. It is a deplorable case, and often happens upon a great *Hurt*, a *Contusion*, *Fraction* or *Dislocation* in some part or other, where the Chirurgion has Tyed the part too hard, or employed disagreeable Medicines; both which contribute to the Wasting the *Muscles*, exhausting the *Fat* and and decaying the *Flesh*; but sometimes it comes of itself, and is the Consequence of other Accidents and Diseases, insomuch that the Arms, Legs, and certain other Parts, so sensibly waste and decay, that nothing remains but Skin and Bones; like Trees whereon some Boughs

are

are dry and withered, while others look fresh and Green. In short, the Skin grows brown, hard, and tough, the Muscles flag and decay, the Fat evaporates, and the Vessels that should convey *Nutrimēt* into the weakened parts, grow small, narrow and shrink together, which dries, decays, and withers the Limb till at length it becomes wholly useless.

By which you may easily discern, that the Cause of this Emaciating Distemper, proceeds from a defect of Nourishment; for the Juices and Liquors which would sustain those parts, being obstructed in their passage and regular Circulation, the Part must needs decay into a state which we call an *Atrophia*.

In order to a Cure, you must observe that no Medicines are useful in this Distemper, but what are of very subtil and penetrating Parts, and which retain a *Balsamick* Moisture; but all Greasy Unctuous Compositions must be carefully avoided. The part affected must also be well chafed with a hot Cloth to make way for the following Fumigation to open the Pores.

℞ *Fol. Aurant. Citr. ana mss. Flor. Cartham. Rosar. Balaust. ana ʒijss. Calend. Cyan. Ktolar. Citr. ana ʒj. Sem. Nigell. ʒijss. Nuc Moschat. ʒij. Succin ʒj. Sacchar. Cant. albi ʒiij. flor. Lavendul. mʒ. Gumm. Sandar. ʒss. Mastich. Oliban. ana ʒij. Tachamahac. ʒvj. flor. Calamit. Benzoes ana ʒvij. M. f. pulvis.*

When the part affected has been well warmed with this Fumigation, rub it all over with the following Mixture, which tho' somewhat dear will recompence the charge; especially if you take Care that the *Spiritus Lumbricor.* and the Spirit of *Angelica* roots be truly prepared; for they have a Secret virtue in strengthening and restoring decayed Limbs. The *Spiritus matricalis Overcampii* and the *Elixir Balsamicus Junckenii* you will find in the foregoing Chapters.

℞ *Spirit. Lumbricor. comp. formicar. ana ʒij. rad. Althææ ʒj. Spirit. rad. Angelic. ʒiij. flor. Lavendul. Roris marin. ana ʒijss. Mastich. Benzoin. ana ʒij. Elixir. Balsamic. Junckij ʒijss. Spirit. Matric. Overkampij. Nervin. Myns. ana ʒss. Balsam. Peruvian. ʒss. Essent. Castorei ʒiij. Myrrh. ʒjss. M. pro usu servatur.*

This Mixture has such extraordinary virtue, that it cannot be exceeded, scarce equalized by any Prescription that has yet been communicated to the World; and this I say experimentally, for I never found any thing like it. Next follows the Balsam to be used in the Evening, after the Part has been well chafed with a Cloth.

℞ *Succ. Betulæ recto tempore collecti, Ol. Amygdalr. dulc. ana lbij. Suc. rad. Angelic. ʒvij. lento igne usque ad consumptionem humiditatis coquantur, postea admisce agitando Terebinth. Cypr. ʒxv. Ceræ alb. ʒv. Ol. Hyperic. cum Ol. Amygdal. fact. ʒiij. Juniper. ʒjss. Sicæ, Petræ, Mastich. ana ʒiij. Caryophill. Nuc. Moschat. expr. ana ʒjss. Sangu. Dracon. opt. ʒv. Olibon. Myrrhæ ana ʒijss. Gumm. Galban. Ammon. Elemi. Sandar. c. s. q. Spir. vin. depur. ana ʒj. Storacis Liquid. ʒiij. Misce diligenter ad Balsamum.*

The Turpentine and Wax must be melted together in another Pot and put to the former. Dissolve the Storax and other Gumms in the Oils, and then add them to the other; and last the Myrrh and Dragons Blood being powder'd, stir them all together, and you will find your desires so far answered in the cure of this Disease, that if you use these two Medicines you will have no occasion to search for others.

Dr. Muys has done great Cures in this Nature by the application of Cupping Glasses without Scarification, and after he had employed eight or nine of them for a considerable time, the affected part was rubbed and washed all over with the following Liquor, with which he continued till the Patient was well.

℞ Rad. Sarsaparill. ʒj. Cort. lign. Guaiac. ʒss. Herb. Rorismarin. Salvia ana mʒss. flor. Lavendul. mʒs. Baccar. Laur. ʒj. Salis Tartar. ʒjss. Ammon. ʒij. coque cum Spirit. vini ʒijss. in dupl. vase & Col.

He also used to Sweat them now and then with Burnt Brandy. *Tulpius* has interted a remarkable Observation for the Cure of this Disease with small sucking Horns the which I shall communicate to the Reader.

The Ancients used three sorts of Cucurbits made of Glass, Metal and of Horns, the two first sorts draw by means of Fire and Flame, and the latter only by sucking with the Mouth, which are now of little use but among the *Indians* of which I will give you an Example. A young man being troubled with the Cholick in that Country, they applyed to his Belly a Horn Cucurbite, and having by sucking at the Horn drawn forth the Wind (which gave him such Pain in his Gutts) through a little hole they made in the Skin, they stoped up the hole again and the Man was cured with little trouble. When this young Gentleman came home, he presented me with one of these Horns, which I tryed upon a wasted Arm, and it succeeded very well. I must say these Horns draw mightily, and after they have drawn up the Skin, they dilate and draw upwards the Veins and Arteries to a wonder, which through weakness were fallen and shrunk together; and so the Spirits and Blood go again into the Vessels, and put a New Life and Vigour into the Decaying parts; for which reason I recommend them as of admirable use in this Distemper, if rightly and diligently applyed.

A Young Shipper having been long troubled with an Imposthumation in his Arm, the great quantity of Matter it daily evacuated had so weakened it, that he had almost lost the use of it; for the Veins, Arteries, Nerves and Flesh were so thurnk, and the whole Arm strangely wasted that there was no appearance but of Bones. To his Arm I applyed these Horns and found that by sucking them, every day more Warmth and Nutriment was brought to that part, and in a short time his useles Arm came to its former Bigness and Strength. The Figures of these *Cucurbitulae* I have inserted for the use of all Ingenious Operators in Chirurgery. *Muys* has also inserted a remarkable Observation of these *Cucurbitulae*, Decad. 4. and *Job van Meckern* also apply'd these Horns to the left hand of a *Sempstrefs* which was almost quite wasted, and by that means only, perfectly recovered the use of her Hand.

C H A P. VIII.

Of an Aneurisma or Dilatation of an Artery, Vein or Sinew, how it happens, and whether Curable or not.

THis dangerous Accident often follows Unskilful Blood Letting, How Caused. when it happens that they cut through an Artery with the Lancet, for tho' the Outermost Coat of the Artery may in time close again, yet the Innermost Coat being thinner will not so easily submit to a Cure as the other; for seeing it's continually in danger of being further dilated by the Impulse of the Arterious Blood, which finding lesser Resistance there than in another place, it forces its way, and in time extends itself to such a degree, that it obtains the Name of *Aneurisma*. Dr. *Overkamp* with good reason says, that these Accidents may also happen to the Veins, Lymphatick Vessels and Sinews, as we find by daily experience; only with this Difference, that the three first Liquors, tho' they fall as it were into a Bag, yet they may Circulate; but in the Nerves the Chyle can move no further, but stands there and Causes a great Dilatation.

The Causes with those already mentioned are several, as an Obstruction and Induration of the Neighbouring Glandules, which hinder the passage of the Liquors. A half cut or lacerated Vessel, at which place the Chyle, Blood and Moisture runs out: A Fall, a Blow, or a Push, a Bruise or the like; by which the Vessels are so pressed together, that the Circulating Juices cannot have their free passage through them, but the Wounded Vessel is forced to give way thereabouts, and cause an *Aneurisma*. *Blanckard* says it is either caused by the Weakness of the inward Fibres of those Vessels; by an Impostumation or an external Wound in letting Blood, or a Contusion. *Juncken* says, if the Tumor does not proceed from an external cause, then it proceeds from the thickness of the Blood and such like Juices, which are push'd forwards in their Circulation with such Force, that the Artery may be easily extended near one of their *Valvula's*, and so the inward Skin tears and causes this Distemper. Dr. *Munnick* counts four Tunics in an Artery, the first and innermost he says is Nervous, the second Muscular, the third Glandulous, and the fourth Vasculous, interwoven with small kinds of Veins; so that if by any Accident, the inward Skin breaks or tears, the Blood runs into the Muscular Skin which being very tender, presently extends and causes such a Tumor or *Aneurisma*.

The method in curing these Tumors are various, according as they are of long or short standing, for the latter may be cured by Astringent Medicines; but the former seldom, without Manual Operation. Medicines to be applyed are such as follow.

℞ *Rad. consolid. maj. Aristol. long. ana* ʒss. *Gumm. Arab. Lap. Caliminar. ppt. ana.* ʒijss. *Vitr. Rom. bene calcinat.* ʒss. *Sangu. Dracon. Aloes, ana* ʒij. *Myrrh. Mastick ana* ʒj. *M. f. Pulv. Subt.*

Mix this Powder with a sufficient quantity of the Whites of Eggs; spread

spread it thick upon a peice of Linen cloth and apply it to the *Aneurisma*; upon which lay a plate of Lead; bind it tight with a good Roller and renew it every three days; but if this should not please your Fancy, make use of the following;

R Pulv. Tragacanth. Farin. Fabar. ana \mathfrak{z} ss. Boli Armen. \mathfrak{z} vj. Colaphon. \mathfrak{z} v. Mumie \mathfrak{z} ij. Mastich. Myrrh. ana \mathfrak{z} ss. Pulv. Rad. Barb. Caprin. \mathfrak{z} ijss. f. Pulv. & lut. fabril. vel album Ovorum f. q. ad Massam Misceatur.

Use this every way as the former, but if it should not answer your Intention, you must lay the upper and under side of the Artery as bare as you can and the part will allow; then with a Needle you must put a four double Silk under the Artery and with it tye the Artery very fast together, both above and below the *Aneurisma*, and between the Tyings cut the *Aneurisma* quite out, and then treat the empty Space or Wound, with Incarniating and Healing Medicines, till it is quite cured.

In the year 1680. I had in Cure a Gentlewoman at *Halberstadt* named *Anna Peters*, about thirty eight Years of Age, who had a large *Aneurisma* upon her Left Arm of three Years continuance, the Form and Bigness whereof may be seen in *Tabul. 5. Fig. 11.* This Misfortune came by a Chirurgeon of *Blankenburg's* letting her Blood, who thrust his Lancet through the *Vena Mediana* into the Artery that lay under it, which caused a Tumor of a vast Bigness. At my first handling the Pulse, I thought the Blood run out of the Artery between the Muscles; but afterwards I found the contrary, and that it was an Extension and Dilatation of the Artery; which certainly is a very great wonder to think upon, that a Vessel no bigger then a Straw, should extend itself to the Bigness of a Man's head, without breaking the Vessel. This Gentlewoman was not sensible of any great Pain; but her Arm was extremely wasted and in a manner utterly Dried up; which was very Serviceable to me, for I could sooner find the Artery; under both sides whereof I thrust a Needle and Silk, and tyed it close together, and cutting it through between the two Tyings, took it out very happily and quickly, with the Assistance of Mr. *Kraue* a Chirurgeon at *Quedlinburg*; and the Patient was cured in a Months time. Here I think my self obliged to acquaint you, that tho' this Gentlewoman had worn several Ligatures, Compressors and Leaden Plates during the first year, yet it took its course and nothing could have any effect upon it. The *Atrophia* or Wasting of the Arm, I cured with the Balsam and Mixture mentioned in the foregoing Chapter.

C H A P. IX.

Tumors and Swellings on the Elbows and Knees, what they are, how they differ, and the Method of Curing them.

I Wonder why this Tumor, that is generally counted a stubborn and Malignant Distemper, is so little taken notice of by our late Authors; but possibly it was because our Writers reckoning it among *Tumores Oedematosi*, and imagining it proceeded from the same cause, they thought it unnecessary to treat of it particularly; but I must enter my dissent against that opinion; for tho' they are of the same Colour, cause no Pain, and are hard to be brought to Suppuration, and so far agree with an *Oedema*; yet they differ in many other particulars; for they seize on no other parts but the Joints of the Knees and Elbows are a kind of Excrecences like the *Fungi* on Trees, soft and moveable; resist the Impression of the Fingers; never shine; Cause little Pain, and yet in time grow so big, that they hinder the motion of the Knee and Elbow, and make the Patient very Lame or a Cripple.

Several Accidents may occasion it, as often falling on the Knees; striking the Elbows against hard things, and such like Hurts or Bruises; The falling of Humours upon those Joints, as in a *Rheumatism*; where the Ligaments and Junctures being extended, the small Lymphatick Vessels are obstructed, which if not timely prevented will break those Vessels, and then the *Lympha* runs out, extends the Skin, and by degrees causes such a Spongy Tumor.

These Tumors may be cured at their first coming, by good Medicines; but if you let them alone till they are Old, large and Obdurate, Medicines will signify little, and you have nothing to depend upon but opening it to let out the Water; of both which Courses we shall treat particularly, and first of the Cure by Medicines, in which I recommend the following Plaister;

R. Emplastr. Diaphoretic. Mys. cum Pice ꝑij. de Gummât. Sylvij ꝑviiij. Hyosciam. Vigon. ꝑvj. liquefacta immisce Ol. Tartar. Fœtid. s. q. remove ab igne & adde Pulv. Succin. ꝑj. Tartari. albiss. ꝑij. Flor. Salis Armon. evj. Nitri ꝑiiij. Calc. viv. ꝑjss. Mastich. Myrrh. ana ꝑss. Oliban. ꝑij. Gum. Bdellij, Sandar. ana ꝑjss. Rad. Consolid. maj. Ol. Philosophor. Hyosciam. ana q. s. Misce. f. Emplastrum Lege Artis.

Sylvius's Emplastr. de Gummatis, mentioned in the foregoing Prescription, is made as followeth;

R. Gum. Scrapin. Bdellij, Opopan. Galban. ana ꝑj. Solut. in Spirit. vini, Colaturæ adde Mastich. Thur. Mascul. ana ꝑiiij. Cera alb. ad pondus omnium. M. f. Empl.

If you think the foregoing Plaister too tedious and troublesome to make, employ the following, which I have found very beneficial in this Case,

℞ *Emplastr. Diaphoretic. Myns. cum Pice, de Ranis cum Mercurio*
dubl. ana ℥xj. Diäsulphur. Rulandi. ℥vij. Ol. Tartar. per deliqui-
um q. s. Succin. ℥j. floris Salis Armon. ℥ij. M. f. Empl. f. a.

But if the Tumor is grown so Pertinacious, that these Plaisters can have no effect upon it; eight days together apply the following Cataplasm to it warm, and repeat it every three hours, that the Matter may be made thinner and the Passage easier to be worked upon by the Fomentation.

℞ *Pulv. fol. Malvæ, Althææ, Hyosciam ana ℥j. Semib. Hyosciam. ℥ss.*
rad. Aristol. rotund. ℥ss. Farin. Tritic. Sem. Linæ ana ℥jss. M.
cum s. q. Lactis f. ad Cataplasmatis consistentiam.

When this has been applied for the time prescribed, use the following Fomentation applied with double Linen Cloths, as hot as the Patient can suffer it, and repeat it three times a day.

℞ *Vitri Purifs. ℥ss. Alum. crudi, Tartar. purifs. ana ℥v. Bol. Armen.*
Cerufs. Calcin. ana ℥jss. Virid. æris. Vitriol. Roman. ana ℥jss.
Sal. Armon. ℥ij. fol. Savin. Theæ ana ℥ss. Flor. Sambuc. ℥v.
Misce f. Pulvis & s. q. Lixiv. & Aqu. flor. Sambuc. coquantur. fiat.

Peradventure you may think this somewhat too sharp; but suspend that opinion till you have tryed it; for with these two Medicines I have cured abundance of People, to the admiration of others. My *Lac Aureatum* performs the same good offices, if only some *Nitre, Tartar,* and *Sal Armoniac* is added to it. I have yet another Fomentation to present you with, which has done so many great Cures, especially on three persons in *Halberstadt*, that I was unwilling to conceal it.

℞ *Pulv. Sabin. Salviæ, Theæ ana ℥ss. Flor. Sambuc. ℥j. Aca-*
ciæ ℥ij Cort. inter. lign. Sambuc. mj. Lap. Calamin. ppt. ℥j. Ce-
rufs. ℥j. Lythargyr. ℥jss. Alumin. Tartar. alb. ana ℥j. Myrrh. ℥ij.
Cum Lixiv. & Aqu. Flor. Sambuc. ana, per dimidiam horam co-
quantur.

This you may continue in the same manner as above directed, till the Tumor vanisheth.

The Second of
 During.

The next way of curing this Tumor, is by opening it with a *Lancet*, or *Corrosive*, in the most convenient place that Nature and Art indigitates; but this must never be attempted till you despair of curing it any other way. The place generally chosen is about a Fingers breadth below the *Patella*, where the Water may be drawn out with little trouble; nor will it hinder the Patient in going; not to mention the conveniency in applying Bandages and Medicines, which will stick better in that part than on any other. Instead of a *Lancet* they generally use a *Corrosive* made of *Silver* and *Aqua Fortis*, and applied no bigger then a small Pea, that the Orifice may not be too large, and the Water run out at once, nor the Air have too Free an Access to the part; for 'tis better to stay two or three days longer and let it out by degrees, lest you injure the *Musculus Plantaris* and *Solearis*.

learis and cause other ill Accidents. When you have the first time drawn out as much Water as you think convenient, put a Tent into the Wound big enough to fill it up, that no Water may go but when you please. To the Knee apply a good *Defensive Plaster*, and over the Wound a good *Stripick*, till all the Liquor is exhausted and then heal it up again. Make use of *Fourrier's Bandages de la Main* pag. 81. *Le Lien L'Estrier de la Main* and *de la Palestre* Num. 150. In January 1681. *Anna Jacobman* a Brewer's Wife in *Halberstadt*, about 53 years of age, came to me to be cured of a large *Fungous Tumor* on her left Knee, which she had had above seven years. At first it gave her but little trouble in going, afterwards more, and in the last two years she could scarce go at all. She had used abundance of Inward and Outward means, but all to no purpose. She had been under a Chirurgeons hand at *Magdeburg* for several Weeks, who applied many things to it, and at length Fluxed her, but without effect, as might be easily guessed, for what could a *Salvation* signify to such a Tumor as this was. About a Fortnight I applied the Cataplasim above-mentioned, to prepare it for opening, which I performed in the presence of *Dr. Hasenbein*, by Laying a *Corrosive* on the place as may be seen in the Figure, which did its work in two hours time, upon which I applied a small Digestive, and over that a common Plaster. Next Morning I help'd it a little with a Lancet, and the Fourth day the Water broke out with a Force, and run above a Pint of a kind of thick *Serum*, like matter. The same Evening came out about the same quantity, and the Four following days came out in all about a Quart; Then it began to cease running, and the Swelling abated every day. For the first eight days I continued the use of the Cataplasim; afterwards I applied over the Knee *Emplastr. Manus Dei*, and proceeded with the Wound in the same manner as I taught above in the Cure by Medicines; by which I had such Success that in eight Weeks the Woman was perfectly cured. *Vid. Tabul. 5. Fig. 12.*

Observation.

C H A P. X.

Old, Malignant and almost Incurable Ulcers, especially in the Legs; their Causes and Cure.

THIS kind of *Ulcers* generally seated on the Legs, being little minded in their first Approaches, are commonly treated with *Emplastr. de Ravis*, or such common Medicine, in expectation that it will soon dry up, or that it conduces to the Patients health to keep them open; but by this Neglect or fond Opinion, they contract more Moisture and grow worse and worse, especially if they follow an ill cured *Erysipelas*. There is a great difference in these *Ulcers*, which the Chirurgeon must have a particular regard to. Some are only in the Skin and eat no deeper; others proceed from very Sharp Humors, and cause Filthy Ulcers, which corrode and eat to the very Bone. Some are much Inflamed and swell extreamly, and others not at all.

A fond Opinion.

Some

Some void a Watry kind of *Tumor*, others a kind of *Bloody Water*; others a Milky yellow Whitish Humor intermixed with bloody Matter, and others are dry like a *Fetter*. The Chirurgeon must also observe the place where they happen; for if on the Calves and Fleshy parts of the Legs, the Danger and Pain is not so considerable; but if they are seated near the Ankle or Foot, where they are many Vessels, Nerves and Ligaments, more Pains must be taken with them, and sometimes all that a Chirurgeon can do, is but to keep them from growing worse.

A thick Matter intermixed with some streaks of Blood is a hopeful Indication, and an argument that the Matter is not yet very sharp and soure; but if the Ulcers throw out great quantities of filthy stinking Moisture, you may conclude there is a great Flux of Humors, and that many Vessels are injured if not utterly spoiled.

The Causes.

The Causes are several, some proceed from the Patients themselves; in some from the Application of contrary Medicines, in others from Intemperance or bad Diet, and in some they seem to be *Hereditary*; for I have seen whole Families, where Fathers and Sons, Mothers and Daughters have all been troubled with such Virulent Ulcers in their Legs; but for the most part they proceed from Rent Torn and Eroded Vessels, out of which follow the *Lympha* and *Succus Nervorum* between the Muscles, where they Stagnate, grow sharp and soure, and so make the Ulcers from time to time more Malignant and Virulent.

If these Ulcers are of a long continuance, they are troublesome to Cure, but if the Patient is Young, Lusty and Vigorous, and the affected parts are tolerably disposed, you may hope for a good issue in attempting a Cure; on the contrary, if the Patient is Old, Unweildy or *Cachectical*, it requires a long time if ever he is cured. Where you have good Symtoms and are resolved to make an Essay, order your Patient a good Diet, abstinence from Wine and Malt Liquors, and confine him to drink the following Decoction, and sometimes purge him.

℞ Rad Gramin. Sarsaparillana ℥vj. Chinae ℥ij. Lign. Guaiac. Sassafras ana ℥iiij. Passul. Min. mij. rad Liquirit. ℥iiij. Cinamom. ℥ss. Cont. & Scind. grosso modo hujus pulv. ℥iiij. coquantur in Aqu. commun. ℔iiij. per hor. unam, in olla bene clausa.

Having thus made a good beginning, apply the following Plaister to the Ulcers, it is somewhat dear and prolix, but will honestly requite your Cost.

℞ Emplastr. Nigr. Roder. a Castro ℥x. Spermat. Ranar. ℔ij. Ol. Amygdal. dulc. i ℥iiij. liquefacta Emplastra cum illo Oleo & Subducto igne admisce. Pulv. Putamin. Canceror. Spadij. ppt. Succin. ppt. ana ℥j. Osteocoll. Tutiae ppt. ana ℥ij. Cort. Ostr. ℥jss. Flor. Antimon. Cinza. ana ℥iiij. Ocul. Cancr. ℥j. Ciner. Nicotian. ℥jss. Terr. Sigillat. Matr. Perlar. ppt. ana ℥ss. Croc. Metall. Mumie ana ℥j. Myrrhae, Aloes Oliban. ana ℥ijss. Misce f. c. s. q. Ol. Myrtin. ad form. Emplastr.

The Emplastr. Gyrse mentioned in the foregoing Prescription, is thus compounded;

℞ Empl,

℞ *Empl. Abb. coct.* ℥jss. *Ceræ* ℥j. *Resin.* ℥iiij. *Sevi Cervin.* ℥iij. *Lap. Calaminar. ppt.* *Bol. Armon. ppt.* *Cerufs. ana* ℥vj. *Tutiæ ppt.* *Lithargyr. ana* ℥iij. *terr. Vitriol. edulc.* ℥viiij. *Sangu. Draconis, Lap. Hematit. ana* ℥j. *M. f. Empl. f. a.*

This Plaister is really very useful and Necessary in all these Cases; for it exsiccates, consolidates and cleanseth the Ulcers at the Bottom, which the following Balsam will also much assist if they are very deep.

℞ *Mell. Chelidon. Nicotian. rec. ana* ℥iiijss. *Essent. Myrrh.* ℥ss. *Pblegm. Vitriol.* ℥j. *Succ. Veron. & Alchimill. inspiss.* ℥j. *M. f. Balsamus.*

When the Ulcers are sufficiently cleansed by the Balsam, instead of it use the following Vulnerary Water, which must be put into the Ulcer with Lint.

℞ *Decoct. Rad. Aristol. long. Veron. & Alchimill. cum Lixiv. & calc. viv.* ℥xij. *Aloes epatic.* ℥ss. *Mastich. Myrrh. Oliban. ana* ℥iij. *Vitriol. alb. Alum. usti. ana* ℥jss. *Mell. Rosar.* ℥j. *Mumiæ, Antimon. Diaphoret. ana* ℥j. *dissolutis Gummatibus in Spirit. Vin. simul coquantur. in Aqua Theæ f. q. & postea filtratur.*

If this does not please you, use the following, which has been very serviceable to me in these Cases.

℞ *Lixiv. & calc. viva cum pauco sal. Armon. parat.* ℥jss. *Pblegm. Vitriol. Sacchar. Alumin. ana* ℥iij. *Mercur Dulcis.* ℥iijss. *Sacchar. Saturni* ℥j. *Flor. æris* ℥ij. *Ess. Euphorb.* ℥jss. *M. f. L. a. aqua.*

Here follows another mixture, which I have often used with success in these Cases; for it Mundifies, Consolidates and Exsiccates to admiration, and may be used as an Injection in the most Inveterate Fistula's.

℞ *Tutiæ ppt.* ℥ij. *Antimon. Diaphoretic.* ℥j. *Turpeth. alb.* ℥ss. *Myrrh. Oliban. ana.* ℥jss. *Amalgam. Mercur.* ℥iijss. *Camphor.* ℥ss. *Sacchar. Saturn.* ℥ss. *Misce & coque in Aqua Mellis & Lixiv. & calce viva ana* ℥ij. *ad tertiæ partis consumptionem.*

Some Chirgeons apply the following Mass to these Ulcers, the bigness of a half Crown, or proportionable to the Wound or Ulcer, and they do very well, as I have found my self by repeated experience,

℞ *Tutiæ ppt. Cort. Austr. ppt. Cerufs. Calcin. ana* ℥jss. *Sangu. Dracon. Mumiæ ana* ℥j. *Aristol. long. rotund. ana* ℥ss. *Lap. Calaminar. ppt. Lithargyr. cum Acet. coct. ana* ℥vj. *Mastich. Myrrh. ana* ℥iij. *Sarcocol.* ℥ss. *Aloes* ℥ij. *fiat c. f. q. Aq. Tragacanth. vel Mucilag. sem. Cydonior. ad Massam pro usu servetur.*

Dr. Muys has also recommended a Mass to us, to temper and correct the Acidity and Acrimony of the Humors, which is thus compounded.

R. Rad. Tormentill. ʒij. Cupular. Gland. Nucum Gallar. ana ʒjss. Mastich. ʒss. Bol. Armen. Terræ Sigillat. ana ʒv. s. Pulv. subtilissimus, & Vitell. Ovar. ad Massam de qua formantur Tabulæ & Ulceribus applicentur. I have often used this with success in our Hospital.

And that nothing may be wanting to the Cure of these Inveterate Ulcers and Fistulas, I must put you in mind of using that Incomparable Plaster prescribed in the second Book, where I treated of *Fistulas*; and if they are accompanied with Swellings and Inflammations, to use my *Lac. Aureatum*, and to roll the Leg very tight from the Foot to the Knee, without which all your Endeavours will come to nothing: But if all these things should fail, you must salivate your Patient, and if that does not succeed, assure your self that nothing will, whatsoever *Arcana's* or precious Medicines some Men pretend to.

Observation.

In August 1687. Christopher Smiede, an Inhabitant of this Town about forty nine years of Age, had such a violent Swelling in both his Legs, from the Knee to the Foot, that you could not see his Toes, in his Right Leg were forty two Holes great and small, and look'd as if Dogs had been gnawing at them. In his left Leg were 31 Holes or Ulcers, which in the whole made up the number 55. What Pain and Torture this miserable Creature endured, is hard to be express'd, considering he had been afflicted with these Ulcers above Eleven years, and that not one Medicine, of the abundance he used in all that time did him any good; till I applyed the following Cataplasim, which gave him ease in less than an hours time and always kept the Ulcers clean; I the rather accommodate you with it, because I have used it my self in these Cases more than a hundred times with good success; and tho' it looks but very Simply, I think my self obliged to aver, that nothing better can be found for these Ulcers, in the whole Republick of Medicine.

R. Lap. Osteocoll. Ocul. Cancr. ana ʒij. Lap. Calaminar. ppt. ʒj. Chry stall. ppt. ʒjss. Fragm. Spodij, Corn. Cervi ana ʒj. Putam. Cancr. ʒvj. Misce fiat Cataplasma cum Caseo recente pro-usu.

If you please you may use the Fresh Cheese by itself, but it's better to use the other Ingredients with it. This Patient I first purged for 2 or 3 days, and then put him into a Salivation, which had good effect. Among the Holes in the Right Leg there were four that went to the Bone, which I scraped, and applyed *Phlegm of Vitriol* to make them White again, that the Ulcers had render'd Carious and Black. The Salivation healed up all the Ulcers except two in the left Leg and four in the Right; but they were very Flat, and also near the Calves of the Legs; so the Patient in less than eight Weeks time, went from me in very good health, except the six Holes in both Legs, which were so little troublesome to him, that he went cheerfully about his businels, without any Impediment; tho' it must be allow'd, that his good Constitution contributed much to his Cure.

C H A P. XI.

Gangræna and Sphacelus ; or a Gangrene and Mortification, its Signs, Causes and Cure.

A More dreadful Accident cannot happen to the Bodies of Mankind, What it is. than a *Gangrene and Mortification*, which immediately ruins a whole Limb, if not timely prevented. And which renders it more terrible, no part of the Body is exempted from this Fatal and surprising Disease, tho' it generally seizes the Legs or Arms upon some considerable Hurt, Contusion, Fracture, Wound or Dislocation. The Greeks call it *Sphacelos*, the Latines, *Gangræna*, and the English a *Gangrene* How they differ or *Mortification*, which differ only in Degrees ; for in a *Gangrene*, the whole is not corrupted, but in a *Sphacelus* all is Dead and Destroyed, not only in the softer parts, but also in the very Bones. If the Inflamed part burns extremly, Swells and very Red Streaks appear, and the Patient endures intolerable pain ; then have a care of your Patient, for these are Symptoms of an approaching *Gangrene* ; but if all these signs increase, and the Red Colour changes into dark Brown or Black, and the Pain and Burning ceases the Danger is still greater, for *Mortification* is already begun.

The Causes hereof are many, as extream Cold happening suddenly to an Inflammation, or the Application of too cooling or repelling Medicines. A decay or utter Privation of Nutriment to the affected part : Venomous Hurts by Weapons or Poisonous Animals : Pestilential Blains and Carbuncles, if situate in Nervous parts, and Wounds, Contusions, and Cutting of Vessels ; A great Inflammation in a *Cachochimical* body : Too hard binding and rolling the Limbs in Fractures, and a Scurvy when it comes to the height. Dr. *Bontekoe* says the chief cause of a *Gangrene* is an excessive sharp and acid Ferment, which becoming Corrosive, like *Aqua Fortis*, corrupts, stagnates and mortifies all the parts in toucheth. Dr. *Muys* is of the same opinion, and therefore calls it *Fermentum Acido-corrosivum*. L. *Juncken* says the chiefest cause is a Stagnation of the Circulating Liquors, which might be occasioned several ways, but at last assuming a Corroding quality, caused a *Mortification*. The Causes.

The Cure of this pernicious Effect, consists in such Medicines as have virtue to attenuate stagnated Liquors, temper the Acidity and Acrimony, and prevent Rottenness and *Mortification* ; besides you must provide your self of such things as are proper to allay the Heat and Inflammation for which purpose I recommend the following Fomentation, on which I could always depend, if a *Mortification* had not already seized the part. The Cure.

℞ Fol. Scord. mij. Absinth. Chæresol. ana mj. rad. Aristoloch. long. ʒj. Coquantur in s. q. Lixiv. fort. deinde expr. ℥ij. adde Ceryss. Bol. alb. ana ʒjss. Tutia ppt. ʒj. Sacchar. Saturni ʒij. Myrrh. in Spirit. Vin. Solut. ʒiijs. Oliban. ʒijss. Alum. usti ʒij. Vitriol. alb. ʒjss. Lixiv. & Calc. viv. ℥ij. Aqu. Flor. Sambuc. ℥ij. Plantagin. fol. Quercin. ana ʒiiij. recoque leni calore per dimid. horam fiat Fomentatio. When

When you use this Fomentation make it very warm; stir it well together that the Powder may mixt with it, and add some Spirit of Wine Camphorated to it, then moisten therein double Linen Rags, and apply them as hot to the affected part as the Patient can suffer, and repeat this process at least every 2 hours, and you will find it answer your purpose to admiration. My *Lac Aureatum* is also an excellent Remedy in these Cases, and so is the following Water, which I have often used in our Hospitals. It must be used with double Linen cloths almost every hour, if you apprehend any danger of a *Gangrene*, and as hot as the Patient can endure it.

R Fol. Scord. Quercin. ana miiij. Betul mij. Flor. Sambuc. ℥iij. Concisis, coq. Lixiv. & Calc. viv. Mens. iij. Colatura adde Cerrus. Lythargyr. ana ℥jss. Vitriol. Roman. Oliban. Myrrh. ana ℥iij. Camphor. ℥ss. Tutia, Alum. usti ana ℥ss. Misce & recoque cum Aqu. flor. Sambuc. ℥iij. f. Decoctio.

As often as you use this Decoction add a little of the *Elixir Balsamic. Junckii*, which you will find described in this Book. Some will rather use Cataplasms; to such I recommend the following as very proper.

R Pulv. Rutæ, Salviæ ana ℥j. Scordii. ℥jss. Absynth. Rorismarin. ana ℥j. Sem. Fœnicul. Anisi ana ℥ss. Theriac. Venet. ℥iij. Camphor. ℥j. Croc. opt. ℥vj. Sal. Armon. Tartar ana ℥ss. Misce f. Cataplasma Lege Arte, cum Spirit. Theriacal. & Spirit. Matrical. Overkampii.

This Cataplasm is to be used when a *Mortification* is begun and is an excellent one in such a Case. Some Chirurgeons are for Scarifying the Gangrened part, or its Fore-runners without distinction, but often proceed too rashly, when it may be prevented without so much Torture to the Patient; but if you see there is nothing else to be done, you must endeavour to Separate the Gangrened part from the sound, and prevent the Mortification from going farther; but if it grows too fast upon you, there is a necessity, in order to save your Patients Life, to proceed to *Amputation* and cut off that Limb before the *Gangrene* goes further. The following Balsam promotes the Separation to a great degree, as I have often experienced with wonderful Succets.

R Balsam. è fol. Tabac. Mell. Rosar & Myrrh. ℥vj. Mel. Persicar. Veron. Alchimil. ana ℥j. Balsam. Peruvian. Copaibæ and ℥vj. Elixir. Balsam. ℥ss. Theriacal. Venet. ℥j Succ. Scord. inspissat. ℥v. Misce f. Balsamus. Panno loco affecto calide applicetur.

Observation.

In the year 1690. *Sigmund Greger* a Clothier about 23. years of age was my Patient, and in a miserable condition; for having broke his Leg about eight Weeks before, he was not only tormented by a Bungling Chirurgeon that had not set the Fracture right, but also bound and Rolled it up so hard with clumsy Wooden Splinters that it caused a violent Swelling and an Inflammation in his Leg, accompanied with apparent symptoms of an approaching *Gangrene*: Several great streaks

or

or streams of it went over the Knee towards the Belly; the Calf of the Leg, and the place where the Fracture had been were Imposted, and the Patient endured intolerable Pain, as may easily be imagined upon such Barbarous usage. I sent immediately for the following Water having it in readiness, and left my Servant with him to apply it warm with Linen cloths every hour.

R Baccar. Laur. Juniper. ana ʒiʒs. Nuc. Gallar. ʒiʒs. Alum. crud. ʒj. Cerufs. ʒiʒs. Sal. Commun. mʒs. Armoniac ʒiʒs. Lythargyr. Aur. ʒiij. Tartar. albiss. ʒiij. sol. Quercin. Rutæ, Sabin. Absynth. Scordii, Salviæ, Flor. Sambuc. Chammomil. ana mj. Rosar. mj. Aq. flor. Sambuc. Lixiv. fortiss. ana ʒxij. Vin. Gallic. & Aq. Plantagin. q. s. Digerantur Vase Vitreo bene clauso per 8 dies, vel coquantur igne lento ut ars est.

This being apply'd every hour, for two Days and Nights together, the Gangrene was stopped and went no further. The third and fourth day it began to mend very apparently. The Fifth day I Lanced the Calf of the Leg, near the place where the Fracture was, from whence came a great quantity of Putrify'd Matter, and in fourteen days time the Inflammation and Swelling were wholly abated. Then I attempted to set the Fracture somewhat better, that the Bones might meet and join in their proper places, which having preformed, I used finer Splints, and bound it up more artificially, and in short concluded the Cure in 8 Weeks, to the Patient's great Joy, and my own entire Satisfaction.

C H A P. XII.

Amputation, how it ought to be performed, and the whole Cure completed.

THis is a more terrible and dreadful Operation, than any in the whole Art of Chirurgery, for here a whole mortified and dead Member must be cut off in the sound Flesh; all the Vessels, Arteries, Veins, Nerves, Ligaments, &c. must be first cut asunder with a Knife; then follows the tormenting Saw, to tear the Bone asunder, and sometimes Burning Irons to stop the Bleeding; insomuch, that some are pleased to call it an uncharatable, miserable and cruel Operation; but as cruel is it is thought to be, it is sometimes absolutely necessary, in order to preserve the Patients Life, which cannot be done by any other Method; for if it be delayed or neglected but a very short time, it certainly gives the Patient a Summons to his Grave. Which should admonish the Chirurgeon, when he sees no Medicines will take place, to undertake the Amputation time enough; the sooner the better, for if you stay till the *Gangrene* is come over the Knee, and above the Elbow near the Shoulder; it's then gone too far, and Amputation will do no good. The place where the *Section* ought to be performed, is three Fingers breadth below the Knee, and on the Arm a hands breadth below the Shoulder. Higher or Lower you must not go, for there the Vessels are larger and stronger, and you cannot so easily stop the Blood. I know there are several opinions in the choice of the place, but this is certainly the best, as least subject to

How and where it must be performed.

What Instru-
ments must be
used.

ill Accidents and Inconveniences. The Instruments to be used in this Operation are next to be considered. Monsieur *Pere* the French Chirurgion, has Invented a *Machine*, which by its great Weight and Sharpness, cuts at once the Skin Flesh and Bones asunder. Others, complying with the Method of *Botallus*, fasten one Knife under the Member and the other above, and then with a sudden fall of a great Weight cut the Limb asunder. The first Machine I saw used at *Wesel*, but without success; for it did not cut the Leg through at once, but stopt in the Bone, and was forced to be repeated, which made many Shivers, Splinters, and an uneven Bone. The second I saw done by Mr. *Crause* a Chirurgion at *Quedlingberg*, on a Country man's Leg; which, by reason of its greater Weight, went something better than the former; but the Knives turned, the *Os Tibiale* was cut uneven, and not quite through and therefore he was forced at last to cut it rightly off with the Knife and Saw. So that, all things considered, the Ancient way in cutting through the Flesh with a Knife, and through the Bone with a Saw, is more practicable, safe and certain, then any of the new Inventions.

The Operation.

When you resolve to set upon this Operation, having all things necessary in a readiness upon a Table near you; first give the Patient a good Cordial, and encourage him by proper words, to suffer with patience what will conduce to his future well-being. Then lay the Patient cross the Bed; scrue to the Bed-side the Instrument you see described in *Fig. 13. Tab. 5.* lay the *Ham* of that Leg into it which is to be cut off, and Tye the Leg fast behind the Knee with a string to the Instrument, that it may not trouble you in the work, by shrinking up and twitching; place one of your Men at the Foot to hold the Leg fast, behind the Patient place a lusty strong Man to hold him, and other people to hold the other Leg, that you may be no way molested in what you are about. The Patient being thus in a good posture; order your Assistant, with both his hands, to draw up the Skin two Fingers breadth above the place where you design to amputate, and bind it two or three times round the part with a Silk string, or a strong Fillet, that the Skin may not slip back again; for this will not only prevent too excessive Bleeding; but the Skin which was drawn up may be pulled over the Stump to cover it, and promote the Healing. Then with a sharp crooked Incision Knife, cut (in the place above-mentioned) through all the Flesh round the part to the Bone, without any regard to the *Periostium* or ought else in your way; then immediately with the Saw and long Stroaks, cut through the Bones; but when you are almost through, use it gently to prevent the Bone from Splintering.

Bandages.

This being done loosen your Bandages that kept up the Skin, and that which fastened it to the Scrue, that you may have liberty to apply your Bandages. Draw the Skin over the Stump and pull it together with good sticking Plaisters, or four good Stitches. If you think convenient you may Cauterize the Veins and Arteries once or twice to stop the Bleeding; or else apply the *Fuss ball*, with my Blood-stopping Powder, and they will do the Work effectually. Over those Powders apply a large sticking Plaister; over that draw an Oxes Bladder moistened in Wine, and over that the cross Ligature, made fast above with another Ligature, that goes several times round the Leg, that every thing may lye close to the Stump: And last of all lay

lay some Compressors over the whole, moistened in warm Wine, and Rolled very fast with other Rollers.

Let this dressing continue on for two days, only on the second Morning moisten the Compressors again in warm Wine, and apply them as at first. Do the same again the second day in the Evening, if you apprehend any Danger; if not, take off the Bladder and the Plaister. Let the *Fuss-ball* stick on as yet, only apply another good fresh Plaister instead of the former, and leave off the Bladder. Afterwards endeavour to pick off the *Fuss-ball* by degrees, and apply fresh Plaisters; but the long and small agglutinating Plaisters you must often renew, and draw them nearer together, that the Skin and Flesh may sooner cover the Bone. Upon the Bone always apply dry Lint, unless it should grow *blackish*, for then you must moisten the Lint with *Pblegma Vitrioli* to put it to rights again, that the Flesh may grow over it. For the rest, continue a good *Emplastrum Sticticum*, and conclude the Cure with *Emplastrum Saturninum* to Cicatrize the Wound.

After the Operation.

In October 1675. Hans Schreyer, a Soldier in Captain Babere's Company, who then Quartered at Soyß in Westphalia, came under my Cure, whose Leg was Gangrened from the Foot over the whole Calf of the Leg, and the greatest part of it already mortified; which was occasioned by the Carelessness of a Chirurgion belonging to that Regiment, who suffered a Wound made with a Bullet a little above the Ankle, for want of looking after, to run into a *Mortification*, and to such a violent degree, that nothing was to be done but *Dismembring*: To which the Patient agreeing, I performed it next Morning with the Knife and Saw successfully, and there was no occasion for an Actual Cautery, for the following Powder stopt the Bleeding very quickly, by being strewed thick upon a good peice of *Fuss-ball*.

Observation.

℞ Pulv. Luti. Vulgar. Joiners Glue ℥x. Gum. Arabic. Tragacanth, ana ℥iij. rad. Consolid. maj. ℥iiij. Pulv. Sympathei, ℥j. M. f. Pulvis.

This is an admirable Powder for stanching Blood, as you will soon experience by trying it. As I did upon the Patient, who was cured in less than eight Weeks.

C H A P. XIII.

Fractures of the Bones in general, and in particular Cases: and how to prevent ill Accidents, that commonly attend such Misfortunes.

Fractures are very common Accidents, but to treat them Artificially and to Set and Restore them gracefully, we find by experience is not every Chirurgions Talent. Some know how to do it, but their Carelessness or overmuch Indulgence to their Patients, makes them often guilty of shameful Miscarriages. Sometimes the Patients themselves are in fault, by loosening the Bandages, leaving their Beds too soon,

Errors in Management.

soon, or using their Limbs before the *Callus* is confirm'd, and strong enough to endure the Weight of the Body, and from hence comes weak, crooked, and contracted Members. Others also injure themselves by Methods utterly opposite to the other, for they give up themselves to an affected Laziness, and for want of using their Limbs, by degrees after a Fracture, and putting themselves forward, they grow stiff, numb'd, or so filled with Humours descending into the parts by a Sedentary and unactive Course, that they are scarce capable of Motion.

Patients Care-
lessness of them-
selves.

In the Year 1694. I knew a certain person, that quarrelling in the Night fell down and broke his Right Thigh Bone short in peices like a stick, about a hands breadth from the Hip. The Bone was set again by a Chirurgeon, tho with great difficulty, the Patient being a very gross Fat Man; and in twelve Weeks was so well cured, that the Bones had settled a *Callus*, and stood regularly one upon another; so that no Fault could be found with the Chirurgeon, as was testified by the President himself; but the Patient was a Lazy, Idle, unweildy Mass of a Man, and would not stir, or put his Foot to the ground, whereupon his Leg grew Numb'd and stiff for want of using; which he imputing to the Chirurgeon's want of Care or Judgment dismissed him, and put himself under the hands of a Woman, a *Hangmans* Wife, for a quarter of a year, who treating the part with hot Oils so Shrank up the Sinews, that the Leg grew shorter by two Inches than the other. He could put his Toes to the ground but not his Heel. Upon this, resolving to revenge himself upon the Chirurgeon, he sued him at Law; but could recover nothing of him, for he had Witnesses enow to clear him from any foul Practice; and every Body that understood it, were satisfied of his fair dealing; but the Patient having an excellent knack in setting off a Lye to the best advantage, it prejudiced the Chirurgeon in the opinion of the Common people; as it often happens, that Physicians and Chirurgeons are blamed for the faults of the Patients; and what else could be expected, when this Patient left an Able Chirurgeon, to put himself under the hands of an Ignorant, Nasty, Filthy Jade of a Woman.

Difference be-
tween Fract-
ures.

There is a great difference in *Fractures*, in respect of the Part where, and the Manner how they happen; both which ought to be well considered by the Chirurgeon. In the Thigh and upper part of the Arm, there is but one Bone; but in the Arm below the Elbow, and in the Legs are two. Sometimes they are but just broke, and the Bones continue one upon another; sometimes but one of them are broke and the other remains whole; some Bones have only a *Fissure* or Cleft; some are broke to that degree, that the Splinters of the Bones stick out at the Wounds; and others are broke *Sloping* with a *Fissure*. The part must also be observed, for the more Noble and nearer a Joint the *Fracture* happens, the more difficult it is to Cure; and if a Contusion, a Wound, Inflammation, or perhaps a Dislocation accompanies it, must be treated after another manner than a Simple Fracture. The last Consideration is, by what Instrument or Accident the Fracture was made.

Accidents atten-
didg Fractures.

Accidents that Commonly attend Fractures, are great Swellings, Pain, Twitchings, Cramps, Heats, Inflammations, and, if not timely prevented, a Gangrene and Mortification; often occasioned by too hard binding up the part, uneasy Lying, and the Applications of hot

hot Plaisters and other Medicines. Such Fractures wherein the Bones stand upon one another admit of an easy Cure; but when the Splinters start through the Wound and must be taken out, where the Fracture is near a Joint, accompanied with a Contusion and Swelling, or a Dislocation of the next Joint, which causes such intolerable Pain, that the Fractured Part cannot be extended, it often ushers in Cramps, Convulsions and Death.

The Cure of *Fractures* in the Arms, Thighs and Legs, chiefly consists in these particulars, *viz.* In setting the Bones strait in their proper places; in keeping them so by good Bandages; in preventing ill Accidents, and laying the part in an easy place and a regular Posture; of all which I shall treat distinctly and fully. First the broken Bones must be set, by extending the part with the help of four strong Men, two of which must take hold and stretch out the part above the Fracture, and the other two the part below the Fracture, with an equal Force on both sides, as far and strongly as is necessary; while the Chirurgion in the mean while, puts the Bones into their right places. If you cannot do this with your Hands, as in the Thigh and near the Hip, then you must use large Ligatures, and the *Glossocomia*, or the Wooden *Machine*, by which Arms and Legs are extended. When the Bones are rightly Set, which you may easily perceive by the Streightness, Form and Agreeableness of the part, and which the Chirurgion may feel with his hand, or by gently stroaking down his right Thumb in a Streight Line directly over the Fracture; for if he finds nothing uneven under his Thumb, the work is done as it ought to be.

Then extend the Part again very Moderately and Even, and apply your Plaister round the whole broken Part, not one side of the Plaister over the other, but let it want about an Inch and half of coming together. Over that apply a double Linen cloth larger than the Plaister, moistened in warm Wine Vinegar, and then wind it round with a Roller 3 Fingers broad, moisten'd also in Wine Vinegar, a hands breadth above and below the Fracture, moderately hard; but by no means exceed, lest you promote unhappy Accidents; for the Wet Cloths will shrink when they dry and make the Bandage sit closer. To prevent an Inflammation lay upon this Ligature, Splints of Past-board or such like matter; if the *Fracture* is on the Arm three or four, if on the Leg four or five, two Eingers broad, and as long as they may reach a hands breadth above and below the *Fracture*, being first softned in hot Water, and wrapt up in fine soft Linen Cloth, but leave the space of an Inch between each of them; bind them twice round gently with a Fillet an Inch broad; and lastly, lay the Dressed Member in a Case, or on a Leather Cushion made for that purpose; and if the *Fracture* is in the Arm, let the Patient hold the Thumb of that Hand always upward, and if in the Leg his great Toe of that Foot in the same posture, and it will keep the Part and the Ligatures in good Order. Above and below the Bandage apply a Defensive Plaister, to prevent a Defluxion of Humours, which may Cause an Inflammation or a Swelling. Leave it thus for three or five days together, if no ill Accident causes it to be opened sooner; but take Care to look once or twice a day, to see your Patient continues in a fitting Posture. If the *Fracture* is accompanied with a Wound, leave a space between the Rollers, that you come to dress it every day, without unbinding the whole Member. The *Fracture* Plaister which I have so often mentioned, as having done

me good Service, and which till now I have keep as a great Secret, is what follows;

℞ Resin. purifs. ℥ijss. Terebinth. ʒx. pulv. rad. Consolid. maj. ʒiiij. Barb. Caprin. ʒiiij. Bol. Armen. ppt. ʒijss. Tutia ppt. ʒjss. Lap. Osteocoll. ʒijss. Sandal. rubr. ʒiiij. Succin. Mumia ana ʒj. Terr. Sigillat. ʒx. Misce fiat Emplastr. secundum Artem.

In the Camp I always made use of the following, in all kind of Fractures whatsoever, and with incomparable Benefit, but see that your Mumia and Sanders are true, rightly prepared, and well powdered.

℞ Resin. Terebinth. ana ʒxv. Cera ʒviiij. pulv. rad. Serpent. Hirund. ana ʒj. Consol. maj. Aristol. long. ana ʒij. Gumm. Tragacanth. ʒjss. Lap. Osteocoll. ppt. Cort. Austr. ppt. ana ʒij. Putamin. Cancror. ʒj. Sandalin. rubr. ʒiiij. Mumia ʒijss. Terr. sigill. rubr. ʒj. Succin. ppt. Lap. Chrystall. ppt. ana ʒx. Sem. Apri. ʒjss. M. f. Empl. s. a.

This Plaister will neither cause Heat nor raise Blisters, and if you give it a true Preparation, it will recompence all your Cost and Labour. The Ointment of Turty I have so often mentioned, as a Sovereign Remedy against Heats, Pimples, Blisters &c. is made as followeth;

℞ Unguent. de Lythargyr. cum Ol. Amygdal. duc. fact. ʒvj. Tutia ppt. ʒij. Cerufs ʒjss. Minir. ʒij. M. f. Ungu. s. a.

But if the Patient cannot suffer a Plaister on the Part, prepare the following Powder, mix it with the Whites of Eggs or Tragacanth water to a kind of Mass, which spread thick upon Linen, and apply it to the Fractured Part.

℞ Pulv. rad. Consolid. maj. Barb. Caprin. ana ʒij. Terr. Sigill. Lap. Chrystall. ppt. ana ʒjss. Gumm. Tragacanth. ʒijss. Cerufs. ʒjss. Sangu. Dracon. ʒj. Oliban. Mastich. ana ʒij. Sandal. rubr. Mumia ana ʒjss. M. f. Pulvis.

Proceed to the rest of the Cure with the Fracture Plaister, till you are certain the Callus is confirm'd and the Bones united, and then you may suffer your Patient to rise now and then, and try to stand upon his Foot; and if you find the suffering Parts are much weakned, use good Fomentations and Balsams to strengthen them, and instead of the Fracture Plaister, use the following Emplastrum Sandalinum, which will wonderfully strengthen and comtort the Sinews.

℞ Resin. Cera ana ℥ij. Terebinth. ℥j. Ol. Lumbricor. Laterin. ana ʒij. rad. barb. Caprin. ʒjss. Consol. maj. ʒij. Aristoloch. long. ʒj. Mumia, Gumm. Arabic. an ʒjss. Sand. Rubr. ʒvj. Citrin. ʒij. Mastich. Myrrh. Oliban. ana ʒiiij. Lap. Osteocol. Succin. ana ʒjss. Terr. Sigillat. rubr. ʒj. Camphor. ʒjss. M. f. Empl. s. a.

In July, 1693, a piece of Pillar in a *Burgermasters* Yard in this *Observation.*
 Town, falling upon the right Leg of *Maria Dittrichs*, a poor
 Washerwoman, who had been washing in his House all Night; it
 broke both Bones in pieces, two hands breadth above the Ankle, and
 from thence to the Knee, those Fociles were much broken and shat-
 tered, and the Muscle of the Calf of the Leg was grievously bruised.
 The Ankle was also broke in two several places and Dislocated besides.
 The Patient had lain in a fainting Fit sometime before, and continued
 in it when I came, and when the Fit went off was seized with a Trem-
 ling and bled abundantly, for many Vessels were torn and bruised in
 pieces, especially the *Vasa Cruralia*, the end of the *Musculus Peroneus*,
 and on the right side below the *Musculus Sacrocnemius*, and upwards on
 the Calf of the Leg the *Musculus Tibialis*, were all in a Tattered and
 miserable Condition. Considering the dangerous case I did the best
 I could, and set the Bones and every thing else in as streight a Line as
 as the Circumstances would permit. The great Pains, Swelling and
 Inflammation would not suffer me to make a regular Extension, nor
 could I set the Ankle and Bones so well as they ought to have been;
 for it was the most deplorable case that ever I beheld. I could use no
Fracture Plaisters or Splints to it, for the whole was like a Quag-
 mire and sunk and shaken if it was but touched. However,
 when the Contused Flesh and some of the Splinters of the Bones
 were separated, it look'd as if Wolves had been gnawing at it.
 The poor Woman suffer'd every thing with abundance of Patience, but
 not without extraordinary Pain. The Cure lasted twenty Weeks;
 but with great Pains and Diligence, I brought the Leg into some to-
 lerable Order; the Patient, to my great Admiration, has at this time
 such good use of that bruised, broken, shattered Leg, that she can
 go well about her Business and stand whole Nights at the Wash-Tub
 as formerly. Which should admonish every Chirurgeon not to de-
 spair of a Cure, how dangerous soever the Patient's condition is, for
 Nature works Wonders, when assisted by Art and Industry, as in the
 case before us, for tho' the Part was exreamly weakned by the loss of
 so much Flesh and many Splinters, and the Bones bruised and Broken
 almost into an hundred pieces, yet the Patient came to be perfectly
 well again. By which you may perceive what the Sanative Constitu-
 tion of the Patient, and the Care and Diligence of the Chirurgeon
 is able to perform.

CHAP. XIV.

Luxations, Dislocations, and Sublocations in general; their
 Differences, Causes, Signs and Cure.

A *Dislocation* is an Accident by which the Head or round part of *What it is,*
 the Bone is violently forced out of its hollow Part or *Sinus*, and
 thereby rendered unable to perform its regular Motion. There is a
 great difference between a *Dislocation* in the Arm and in the Leg. Some
 have a large *Sinus* and Head, as the Shoulder and Hip, others are Gib-
 bous

bous and joined flat, as the Elbow, Knee, and Ankle; therefore the latter have several Bones joined to them, for their assistance, that they may not easily be put out of Joint. As for example, the Knee has a round kind of Bone call'd *Patella* or the Knee-Pan. The Elbow *Prominentiæ, vel Epiphyses externæ & internæ*; by which especially the great and crooked process of the *Os Radii* contributes much to an active and nimble Motion; and the point of the Elbow has its *Os Styloides*. The Ankle Joint has two Knuckles, on each side one, *Malleoli vel Appendices externæ & internæ*, which help to fortify and strengthen it. At the Joint of the root of the Hand are the *Os Ulnæ & Radii*, and also its *Malleoli & Epiphyses*. Near the *Radix* of the Hand and Foot are several Bones joined together, which are not easily put out of Joint, tho' it sometimes happens.

Two sorts of
Dislocations.

There are two kinds of *Dislocations*, viz. Perfect and Imperfect: the Perfect are called *Luxatio*, when the Bones are quite out of their Places, and the Imperfect *Subluxatio*, when the Bones are only moved a little out of their Places, and sit upon the Edges of the *Acetabula*, for want of Strength to force 'em quite out. It must also be considered, whether the Luxation proceeds from some external violence, or an inward Defluxion of Humours upon the Joints, and whether the Head of the Bone is moved out of its Cavity upwards or downwards, because the setting of the Bone again must be ordered accordingly.

Signs of a Dislocation.

The Signs of a *Dislocation* are apparent to one's Eyes, except it be in the *Hip*, or in very Fat and Gross bodied Persons, for then it requires a more diligent Search, tho' it may be inspected by the uneasiness of the Joint and Lameness that attends it. The Chirurgion may also perceive a height or rising in the place to which the Head of the Bone is moved; and on the opposite side a hollowness or dent, which was not there before; you may also know it by the disproportion of the Limb, if stretch'd out and compar'd in length with the other. Also from the Pain you may conclude a *Dearticulation*, for the place whither the Head of the Bone is forced, is excessively Painful, because it presses upon the tender Veins and Muscles, and the Figure of the Joint will not a little contribute to your information.

The Cure.

The Cure consists in five particulars 1. In the use of proper Instruments. 2. In a regular extending the Dislocated Part. 3. In a Reduction and Restoration of the luxated Bones. 4. In convenient Bandages to keep them firm when they are joined. 5. In preventing or removing ill Accidents, and strengthening the Part with proper Medicines: of each of these in Order.

Instruments to
be used.

Instruments used in these Cases are so many that it would be impossible to describe them all, because every one thinks he has the best and therefore slight and despiseth others; tho' upon tryal there are few that are fit for use. The new invented *Glossocomium* at *Augsburg* and *Nurremburg*, which they say a Child may govern: and the hollow and bended Instruments for the Dislocation of the *Hip*, tho' they cost a great Price; are neither of them comparable to the Instrument of *Hippocrates* and *Paræus* called *Ambi*. The *Glossocomium Tabula 13. Fig. 16.* is the best that ever I used; as well for the *Hip* as *Shoulder* if rightly used.

If the Dislocation is in the Shoulder, and there is no Swelling or Inflammation, use the Instrument called *Ambi*, Fig. 17; if the Head of the Bone is forced downward under the Arms; but it be in the Sides, use the *Glossocomium*, Fig. 16. for then the Extension must be more forcible. Restoring the Head into its right place by the *Ambi*, is performed by pressing down the *Ambi* after the Arm is made fast upon it, which will put the Head again into its Cavity, but if the Head is moved sideways out of the Shoulder, use the Instrument described in Fig. 16. apply it in the same manner; and when the Extension has been well performed, the Operator, with the help of the whole Instrument, must press it with both his hands on that side where the Head lies, and so force it into its right place again; withal let him bend the Arm downward with the Instrument, and it will be done more easily.

Extension of the
Shoulder.

If the Hip is out of Joint you must use the Instrument Fig. 18. which being put between the Legs you must fasten it, and with it extend the Thigh as much as possibly you can, in order to put the Bone into its right place again. It is a laborious undertaking, but to benefit your Patient you must not grudge the Loss of a little Sweat; tho' if the Patient is not Fat it will be done with lesser pains. But if all your Diligence is unprofitable, and the head of the Bone sticks so fast between the *Os Ischiaticum*, that it cannot be moved, or the Dislocation has been of several days continuance; excuse your self from attempting it, and the Patient must be contented; for the Luxation of the Hip is hard to be restored, and is often but the effects of mere Luck and Chance rather than Skill.

The Hip.

The Elbow may suffer a Luxation several ways; Upward, downward, Inward and Outward; but downward is the most dreadful, and that which goes forward the easiest to be restored. The Instrument Fig. 19. is very convenient for the Elbow or Knee, for you may make it fast both above and below; extend it as far as is necessary, and the Chirurgion may rely upon it, that it will do his business. *Blanckard* adviseth to put the Arm about a post or Pillar, and by that means restore the Elbow.

The Elbow.

The Knee is reduced almost in the same manner as the Elbow, only there is this difference that you may have no Bones backwards or forwards, except only the *Patella*, and for that reason may be sooner Luxated and Restored than the Elbow.

The Knee.

The *Astralagus* and the *Styliformis*, or *Bodkin-like* Process near the Wrist may be luxated in all the former ways, and happen very often. To both those Joints may also occur an Imperfect Luxation, where the Bones stand one upon another, and may be easily rectified; but if the Dislocation is compleat, its so much the worse. However those Luxations all depend upon stretching and extending the parts very well, which may be done with ones Hand only, without the help of an Instrument, and so may the Dislocations of the Fingers and Toes. For this end a Chirurgion ought to be very well skilled in *Osteology*, and have a Skeleton in his Closet, which he should view very well before he undertakes the setting of any Joint. The regular Application of Ligatures and Bandages, after the dislocated parts are restored, is also of great consequence, to keep the Bones firm in their places, under the Shoulders, and in Dislocations of the Hips, between the Legs must be placed great Bolsters: In the hollow part of the Ham and Arm thick

Astralagus and
Styliformis.

Fingers and
Toes.

and large Compressors : On the Ankle, the proceſs of the Hand, and ſometimes on the Fingers and Toes, you muſt apply hollow Splints to prevent the Bones from ſtarting out of their places again. Other parts muſt be rolled with a Ligature about three Fingers broad, and then give the Finger reſt, and uſe it not till it's firmly ſettled, but then uſe it by degrees, and anoint it with Nerve Ointment, that it may not grow ſtiff or clumsy. The Hip cannot well be tyed, but with a broad Girdle you may make the Bolſters and Compressors fit very cloſe to it.

How to Cure the Accidents that generally occur in Diſlocations, I have already ſhewed at large in the foregoing Chapters, and the Medicines preſcribed there, may be ſafely uſed in theſe caſes : only under the Shoulders in the hollow part of the Ham, about the Hip, inwardly on the Joint of the Elbow, the Ankle and Heel, ought to be anointed with the following Baſam, to ſtrengthen the Nerves and prevent the Stiſneſs.

℞ Unguent. Nervin. Ol. Lumbricor. Axung. human. ana ꝑſs. Ol. Lavendul. Roriſmarin. ana ꝑj. Spir. Sal. Armon. Elixir. Baſam. L. Funcken. ana ꝑij. M. f. Baſam.

This Baſam applied warm ſtrengthens the parts, and prevents Lameneſs. Over the whole Joint you may apply the following Plaiſter ;

℞ Succ. Chelidon. Alchimil. Plantag. Veron. Cicut. Ariſtoloſch. long. ana ꝑij. Aqu. Vitæ Dolæi, ꝑvj. Ol. Myrtill. Hyperic. ana ꝑij. coque igne lento ad conſiſtentiam Unguenti, poſtea adde Cerae alb. lbjſs. Reſin. lbſs. Maſtich. Succin. ana ꝑj. Myrrb. Oliban. ana ꝑvj. Benzoes ꝑſs. Baccar. Laur. ꝑv. Caryophyll. Nuc. Moſchat. ana ꝑiij. Styr. Calam. Galban. depur. ana ꝑj. rad. Ariſtoloſch. long. Conſol. maj. ana ꝑvj. Miſce omnia ſimul ad Emplaſtrum L. artis.

Dolæus his Aqua vitæ is thus prepared ;

℞ Vini ardentis lbx. Roſar. Meliſſæ Roriſmarin. Anthos. Cherifolior. Utriuſque Hellebori. Majoran. ana m̄j. Cinamom. ꝑij. Nuc. Moſchat. Caryophyll. Gran. paradisi, Piper. om̄ium, Cubebar. ana ꝑij. Succ. Chelidon. Succ. Tapſi, Meliſſæ ana lbſs. Ciner. Fabar. ꝑv. digere in loco calido per xij. dies, & ad uſum ſerv.

There yet remains another Plaiſter, which is very good in all Diſlocations.

℞ Emplaſtr. Oxycroc. Sandalin. ana ꝑxij. Diachyl. ſimpl. ꝑvj. Cerae lbj. Pic. nigr. ꝑiij. Ol. Laurin. ꝑiij. Gumm. Ammoniac. Galban. Bdell. in aqu. vet. ſol. ana ꝑij. pulv. Piper. Zinziber. ana ꝑij. Gran. Paradisi, Laur. Juniper. ana ꝑiij. Succin. Myrrb. ana ꝑſs. Miſce f. ſ. artem.

These Medicines I think ſufficient in any kind of Diſlocation ; and therefore

therefore will proceed to shew you, that a Fractured Collar Bone, may occasion a dislocated Shoulder, tho' it be restored; and that it will not continue in its place; but upon the least motion the Shoulder will slip out again; and tho' the Fracture may be perfectly cured, yet the Shoulder can never be restored; as will appear in the following History. *Leonhard Mader* a Carpenter of about thirty years of age, falling from a New built House upon some pieces of Old Timber, not only hurt his Hip and Forehead, but broke in peices the upper Process of the Collar Bone near the Joint, and the Shoulder was also Dislocated. The Patient was brought to me immediately, but rather Dead than Alive, and I had no little trouble for half an hour to bring him to himself again. I applied the *Glossocomium* to the Shoulder and restored it, and afterwards Set the Fractured Clavicle in good order. I dress'd and took care of the Forehead and Hip; and lest any Accident should happen, I opened a Vein, and gave him a Dose of of the *Pulvis contra Casum*, upon which it mended; but in the night time he was generally Delirious and knew not where he was; but by the use of good Medicines this went off likewise. In this time I often enjoined the Patient not to use his Arm upon any pretence whatsoever, nor to lye upon it; but notwithstanding all I could say, as soon as he went abroad again, he would no more carry his Arm in a Sling; but thinking all was well, used it at pleasure; upon which the Ligaments grew weak and relaxed, the head of the *Os humeris* slipt out of its Cavity, and the Dislocation was worse then ever. In this condition I was forced to leave it, till the Clavicle was indifferently well healed again. Then I applied Emollient Cataplasms to the Shoulder, and the *Glossocomium* again; but all to no purpose, for it could not be stretched or extended: I also applied *Hypocrates's Ambi* to it, and used several means, but with no effect, for the *Os Humeris* was not to be moved, and therefore I was forced to leave it as it was. Thus the Negligence and Obstinacy of the Patient often causes unjust Reflections on the Chirurgion, tho' the Fault is wholly their own, for if one has Ten Patients that follows his Advice, he shall have a hundred that will cross him and do what they please, and yet Scandalize the Chirurgion, for the Patient will never own himself in any fault.

C H A P. V.

Remarks upon Cures by Sympathy, and those perform'd by Transplantation.

IT's very well known to the Learned World, that upon the Invitation of *Paracelsus*, who was the first Inventer of the *Sympathetical Ointment*, *Petrus Servius*, Professor at *Rome*, and the great *English Digby*, with several Physicians and Chirurgions, set themselves on work to find out the true Preparation of it; that cured Wounds, only by applying it to the Weapon or Instrument that made it, or to some of the Blood or matter take out of the Sore; and since their Eyes were witnesses that it did perform these things, their next Enquiry was

Weapon Salve,
by whom in-
vented.

how

how this Medicine came to operate after so strange a Manner? which being a Nice Speculation, many have troubled their Brains to find out the reason of this peculiar Magnetical Quality, but to little purpose, having left it more intricate and perplexed than they found it, for among them all *Sir Kenelm Digby* has only given tolerable reason to render its Operation intelligible, to whose Learned Treatise I refer the Reader. Others have writ against it, and some think with reason enough, as *Willichius Libavius*; but who can contradict Matters of Fact and daily experience? or how could I have called this Book *Chirurgia Curiosa*, if I had said nothing of it? I shall therefore first give you the Preparation of the *Unguent*, and the *Sympathetical Powder*, and conclude with a remarkable Observation. It is prepared in this manner;

The Prescription

℞ Axung. Porcin. Sylv. ana ℥ij. per dimid. boram cum Vini Rubri. coquantur.

After it has been boiled, pour it into cold Water, and reserve that for use which Swims on the top, and throw away what sinks to the bottom. Then take Earth-worms well cleansed with Red Wine and Salt, and dried in a Pot well and close covered. Of these Worms take ℥j. *Cerebr. Porcin. Sylv. Sandal. Rubr. Mumie ana ℥ss. Magnet. ppt ℥ij. Hæmatit. ℥ss. Musc. e Cran. Human. ℥ij. Misce f. diligent. ad form. Unguent.* The Moss of a Mans Skull that was either kill'd or Hang'd, and gather'd when the Star *Venus* is predominate, or at least two or three days after a *New Moon*, if it can be had, is thought very proper to be added to the other Ingredients. This *Unguent* I had always with me in the Camp, and have often used it with good success. *Barbette*, a *French* Chirurgion, omits the *Moss*, and instead of it employs Man's Fat and Blood, and adds Oil of *Linseed* and *Roses* to it. I never made use of that, nor of several other Prescriptions which I have seen, being entirely satisfied with the Operation of that above inserted.

Barbette's addition.

The use of it.

This *Unguent* is to be used in the following manner; Take the Weapon or Instrument wherewith the Patient was wounded, while it is Bloody, or instead of it a Stick put into the Wound that it may be Bloody. Anoint it with the *Unguent* about a handsbreadth, and wrap it up in a clean Linen Rag or Paper, your hands being very clean, and then lay the Weapon or stick in a place neither too hot nor cold; two or three days after anoint it again, and so for four or five times, till the Wound is well. The Patient in the mean time must keep the Wound clean, and cover it with a Fine Linen Rag, without applying any Medicine to it; but if it should chance to bleed very much, apply a peice of *Fuss-ball* to stopt it, and then proceed as before.

Observation.

In August 1676. at the beginning of the Siege of *Stettine*, Captain *de Barke*, of the Regiment of General *Golzich*, was wounded upon the Fore part of the Head by the Fall of a *Grenado* of three pound weight, which made a Wound upon his Skull as large as a Crown piece. It Bled extremly, and the *Grenado* being made of Glass, it left Eleven pieces of Glass in the Wound. Having taken out the pieces of Glass, I stopt the Blood with my Powder. This Brave *Chevaliere*, about thirty years of Age, was sent the next day with others that were wounded to a place called *Babue*, near *Griffenhagen* upon the *Oder*, and committed

mitted to the care of one *George Neudeck*, Chirurgion of the *Donau-isch* Regiment; but the Captain having a great confidence in me, and knowing what Cures I had performed by this Ointment, desired me to treat him in the same manner, and give him directions how to manage himself. The small peices of Glafs, because but little Blood stuck upon them I put into Swines Lard, and put a small stick into the Wound make it Bloody; which I anointed every other day with the Unguent, and wrapt a Fine Linen Rag about it. Fourteen days after I saw him again, and the Wound almost healed, tho' he had applyed nothing to it but a Linen Rag, and that on the twelfth and thirteen days two other pieces of Glafs came out of the Wound. In fine he was perfectly cured in a month and in five Weeks came again to the Army. In the year 1677. the same Gentleman, in storming the *Poll-Schantze* on the *Damme* was struck upon the Head with an Iron Grenado, at the meeting of the *Sutura Sagitalis and Coronalis*, which broke his Skull into a great many pieces, so that as soon as I came to him he Dyed unmy Hands.

The *Sympathetical Powder*, to which is ascribed the same virtue with the *Unguent*; besides which, it also Stanches Bleeding; is prepared of the best *Hungarian Vitriol* and *Tragacanth*, ground to a small Powder upon a Marble, each of them by themselves, and not in a Copper or Brass Mortar, lest it should attract some of their Noxious Qualities: When they are Powdered put them by themselves into a Paper, lay them in the Sun about the thirteenth of *July* when the Sun enters the Sign *Leo*, and continue it so till the twelfth or thirteenth of *August*, when the Sun enters *Virgo*; then remove them, mix them well together, and keep them for use in a Wooden Box. Sir *Kenelm Digby* takes as much *Tragacanth* as *Vitriol*; but I find by experience that the *Tragacanth* is too much, and binds up the Virtues of the *Vitriol*; therefore a Drachm of *Tragacanth* is sufficient for an Ounce of *Vitriol*. When you design to Cure a Wound with this Powder, let some of the Blood of the Wound drop upon a clean Rag, upon which strew some of the Powder, wrap it up close and put the Rag with the Powder into your Breeches Pocket; and to the Wound apply nothing but a clean Linen Rag, which must be repeated every Morning and Evening, and so continue till the Wound is quite healed, and then throw all the Rags into a River. This Powder is also very good in Old Running *Ulcers*, cures *Stitches* and Pains in the sides, if the bigness of a Pea be given in Water of Elder Followers, without the *Tragacanth*. I could mention several Instances of the Virtues of this *Sympathetical Powder* if it were not for Fear of being to tedious and tiresome to the Reader.

The Cure *per Trasplantationem*, is only moistening a small peice of Wood in the Blood and Matter of the Wound and putting it into the a hole bored to the Sap in a Tree for that purpose, and then they make the hole up again with a wooden Peg or piece of Wax, and Fancy, as the piece of Wood unites with the Tree, so the Wound will heal again. I never tryed it, but have been credibly assured that it always succeeds. They generally make use of a young Ash Tree; a Male Ash for Men, and a Female for Women. Some Dig a hole in the Earth, and put a Rag into it that has been daubed in the Wound, and then set a young Tree upon it, and as the Tree grows they imagine the Patient will recover. I know a certain Bath-keeper that has cu-

hinc mihicid
and pincit
A gillmihicid

The Sympathe-
tical Powder.

The Cure by
Trasplantasi-
on.

red many Persons of a *Rheumatism* and *Arthritick Pains* after this Manner; for my part, I have but little Faith in these Matters, and therefore leave every one to believe as they please

C H A P. XVI.

Of *Chirurgical Infusion and Transfusion*, and why they are in no greater reputation in the World.

Infusion and Transfusion, tryed upon Dogs.

There has been a great Dispute between Dr. *John Daniel Major* Professor of Physick at *Kiehl*, and Dr. *Eltzboltz* the King of *Prussia's* Physician at *Berlin*, who was the first Inventor of this way of Cure; they wrote against one another about it in the year 1664. and continued the quarrel till 1667. But Dr. *Etmuller*, disputing on this subject at *Lipzig* in the year 1668. says that Dr. *Wren*, an English man, and Mathematicall Professor at *Oxford*, was the Inventor of it; after him it was practiced and Improved by Dr. *Clark* Physician in Ordinary to the King of *England*; and after them, it was soon taken up by Dr. *Major*; not long after by Dr. *Carolus Fraccassatus* Professor at *Pisa*, and at last by Dr. *Eltzboltz*, and Dr. *Hoffman* Professor at *Altdorff*. These Ingenious and Learned Men made their first Tryals upon Dogs, and only with Spring Water; afterwards with small Wine and Spanish Wine. Then proceeded to purging and vomiting Medicines, which being Injected into the *Vena Cruralis* or Thigh Vein, they perceived it to have these different effects. Water caused a cold Shivering or trembling. Wine made them tumultuous and tumble up and down like Drunken Men. Purging Medicines being injected they Purged, and Vomited by injecting the Infusion of *Crocus Metallorum*. Opium made them sleep, and too large a Dose took away their Lives. *Aqua Chrysulca* being injected into their Veins, the Blood presently coagulated, and they dyed like Men in an *Apoplexy*; and the like they did upon the Injection of *Spiritus Nitri vel Vitrioli*. Dr. *Etmuller* says that a quantity of Oil of *Sulphur* being injected into the *Vena Inguinalis* of a Dog, he dyed not, and it being repeated he only grew so extream Hungry that he eat all they could give him Oil; of *Tartar* being injected into another Dog, he fell a Capering and shewed a thousand Antick Gestures. A Decoction of *Arsenic* in common Water being exhibited in the same manner, they were seized with Miserable Symptoms and Dyed full of Torments.

Upon Men.

Experiments upon Dogs succeeding very well, they made Tryal of it upon Men, injecting into their Veins in a Fever *Plantan Water*, sometimes mingled with *Aqua Cardui Benedicti*, upon which the Patient was immediately well again. For pains in the Head they used *Aqua Marjoranæ*; for the Scurvy *Aq. Cochleariæ*; for the Stone *Snail Water*, and at length all things that appropriated to the Diseases they had to deal with. But sometimes Waters being too weak, they made use of more Spirituous Liquors, of which Dr. *Major* made several successful Experiments. He always added some *Resina Gialappæ*, which purging and Vomiting the Symptoms abated and the Distemper went off. Dr.

Etmuller

Etmuller says that a Maid being afflicted with a Falling Sickneſs from her Youth there was injected *Reſin. Gilappæ gr. vj.* mixed with *Spirit Lilior. Convalliorum*, which gave her but one Vomit, and yet freed her from this Diſeaſe for ſome Months. At *Halberſtadt* in the years 1679. and 80. I injected into two Patients, who had for many years been troubled with the Falling Sickneſs, *Spirit. Grani and Rad. Pæoniæ ʒj.* mixed with *Spir. Lilior. Convalliorum*, who were both perfectly cured with it. But I had another Woman Patient, whom theſe Medicines would not wholly prevail upon, for tho' the *Epilepſia* ſeemed to vaniſh for three Months, yet after that it returned again: whereupon I injected twice *Aqua Hirundinæ* mixed with *Sal. Volatil. Succin*; after which the Woman was never troubled with it again. It was alſo twice tryed upon my ſelf; the firſt time when I was grievouſly afflicted with a ſort of a Leproſie; but then it was not Artificially performed. The ſecond time was at *Anzlam*, where I was ſick of a Violent Fever, and ordered *Aqua Cardui Benediſti* to be Injected, upon which I was wholly delivered from my Fever in leſs then two days time.

The Operation is performed after this Manner. The place being choſen, which is generally the Arms or Legs, Tye them with two good Fillets, one above and the other below, as the Old Chirurgeons uſed to do, or as thoſe ſtill do that let Blood with a *Flegm*. Then open the Vein and let out ſome Ounces of Blood, to empty the Veſſel that it may the better receive the Liquor to be injected; then put the Liquor into your Syringe, and put the Syringe, which muſt have a handſom crooked Pipe, into the Orifice, and looſening the uppermoſt Ligature or Fillets inject your Liquor gently and by degree, till it is all in. When you firſt put the Pipe into the Orifice apply round it good ſtore of Cotton, to hinder the Liquor from running out again. Your Syringe muſt be big enough to hold an Ounce; and when you draw out the Pipe, Clap your left Thumb upon the Orifice, and with your right hand looſen the lowermoſt Ligature, applying firſt a ſmall and then a large Compressor made of Fine Linen, being both firſt moiſtened in Vinegar, and then bind it up as uſually. Some inſtead of a Syringe uſe a ſmall Clyſter pipe and Bladder, which may do well enough, but in my opinion a Syringe is better. If the Vein ſwells upwards; ſtroke it gently over with your Thumb, and that will diſperſe it.

That this *Chirurgia Infuſoria* is beneficial in dangerous Diſeaſes, where the Patient muſt be ſpeedily helped or all is loſt, is very reaſonable to believe; becauſe the Injected Liquors preſently mix with the Blood, are ſuddenly conveyed to the Heart, and ſo through the whole Body, without ſuffering any alteration by the Stomach or the ſeveral Fermentative Juices, but works immediately upon the Diſeaſe againſt which it is levelled: wherefore I once again admoniſh the Chirurgeon to inject the Liquor leiſurely, for otherwiſe it will not mix ſo well with the Blood as it ought to do, but continue about the Orifice and cauſe an *Apoſtema*; which miſmanagement, has not a little contributed to the decrying and diſuſe of this admirable *Chirurgia Infuſoria*.

What Liquors ought to be injected is the next particular, and in that the Chirurgeon ought to take Advice of an Able Phyſician, and alſo to prevent any accidents that may happen. Purging and Vomiting Medicines are to be avoided, becauſe they generally leave a Malignity behind them; and for the ſame reaſon, you muſt forbear the

use of *Diureticks* and *Nephriticks*; but *Alexipharmicks*, Comforting and Sweating Medicines may be used with Safety and Success. For a Sudorifick Dr. Major commends *Spirit. Salis Armoniaci* $\text{\textcircled{S}}$, because it contains a volatile Alkali in it, without any mixture of an Oleous matter. Dr. Etmuller also recommends *Cornu Cervi* & *Spirit. Sangu-
humani*, mixed with *Spirit. Vini Camphorati*, to revive the almost ex-
tinguished Natural Heat, and bring the Patient to a Sweat; but lest
those Spirits should coagulate one with another, he mixed two or three
Drachms of clear Water with them. He says further that the *Spiritus
Salis Essentificatus Cornu Cervi*, made with *Camphire*, is an excellent Re-
medy in malignant Fevers, if two or three Scruples for a Dose was
intermixed with a little Water. To comfort and Strengthen the Pa-
tient, they used *Amber*, *Cinamon* and *confectio Alkermes*, and also *Sal vo-
latile Oleosum Sylvii*, *Sal volatile Cornu Cervi*, and *Spiritus Cinamomi
cum Oleo Succini*. Opiates may be also used with great Benefit, if they
are well corrected and given in an exact and due quantity.

*Chirurgia
Transfusoria.*

How performed.

Chirurgical *Transfusion* was also for some time in great vogue and re-
putation; but since it could not be always practiced, and that Pati-
ents were unwilling to submit to it, it soon grew out of use; but I am
of Opinion if Dr. Major, Etmuller, Eltzholtz, Dr. Wren and Clark
had lived somewhat longer, it might have been further advanced in
the World; but they dying the Operation began to be neglected and
dyed soon after them. I try'd it on a Merchant's Son at *Berlin*, who
for several years was afflicted with a Leprosie; I gradually drew out
a great quantity of his Blood, and put into his Veins the Blood of a
Lamb; by which means the Patient was happily cured, to the admi-
ration of several ingenious Persons. *Transfusion* is performed in this
manner. Generally the Legs or Arms are chosen for this Purpose;
in the Arm the *Vena Mediana*, and in the Leg the *Vena Cruralis*; from
whence you must take as much Blood as the Strength of the Patient
will permit. The Arm or Leg, where the Vein is to be opened, must
be tyed fast below the opening with a strong Fillet. Then you must
have in readiness an Instrument which is a kind of a *Tube*, furrounded
with a Linen Cover, in which Cover you must put some warm Wa-
ter to hinder the Blood from coagulating or congealing, which passes
through the *Tube*. This *Tube* must have on each side a fine *Silver
Pipe*, one of which must be put into the Vein of the Man and the o-
ther into the Vein of the Beast, from whom the Blood must be
transfused, the Hair or Wool of whose Neck must be cut away and a
Fillet bound about its Neck, and the Creature tyed so fast that it can-
not move one way or other; then the Vein being opened both in the
Man and Beast, the Blood of the Beast will rise into the *Tube* and
empty it self into the Vein of the *Arm*; and so much for this Opera-
tion.

C H A P.

C H A P. A XVII.

Of Fontanels or Issues, how and where they are to be made & in what they case are beneficial, and what Accidents may happen in the constant use of them?

TO make a *Fontinel* or *Issue* is no considerable piece of Art; but to set it in a proper place is all the Skill. The Antients made them between two Muscles on the outside of the Arm, or Leg; but now they set them in the inside of the Arm or Leg, between two Muscles; finding by Reason and Experience that they run better there than on the outside. There are several ways of making an Issue; but having marked a place and then putting a Needle through the Scarfe Skin, and cutting it off under the Needle with a pair of Scissors, big enough for a Pea to be put into the Orifice thus made, first put a White Pepper corn for two days, afterwards a Pea to keep it open, and your Work is done, without any greater pain or trouble than pricking with a Pin; whereas Actual or Potential Cauterics are tedious, painful and dangerous. If the Issue runs well continue the Pea, if not, make small *Globuli* of the following Mass, and they will make it run again.

R *Emplastr. Diachyl. simpl.* ℥iiij. *Ceræ* ℥v. *Puku. Cantharid.* ℥vj.
Euphorb. Agaric. ana ʒj *Myrrh.* ʒjss. *Misce f. Massa cum f. q.*
Ol. Myrtillorum.

Issues are made in many Infirmities and Diseases; especially in great pains of the Head, in several Distempers of the Eyes and Teeth, Noise and Deafness of the Ears, the Gout, old Ulcers, Fistula's and in all manner of copious Defluxions of Humours to what part soever; for tho' they do not always free the Patient from his Distemper, yet they give some ease, by carrying off a great Mass of Acrid and Acid Humours. They are used also in Apoplexies, Falling Sickness, Dizziness of the Head, in tumified Legs, Ischiatick Pains, Lameness, and in several other Diseases, wherein if they have been of long continuance, they are very Beneficial.

If the Issue is to be made in the Arm, let it be in the Left if the Malady will allow it, for there it's less troublesome especially to Working People. Let the place be the inside of the Arm, between the *Musculus Tibialis* and *Garstemnemijs*. In some cases they are made above the Knee, but this seldom happens, and of Issues in the Neck and upon the *Sutura Coronalis*, I have already discoursed sufficiently in the first Book, Chapter the VII.

C V H A P. XVIII.

Some Remarks concerning Cauterizing, and the use of the Moxa
for that purpose.

Actual Cauteries were formerly much in use among the *Egyptians* in several cases; and so continue to this day among the *Indians*, from whom we received the *Moxa* and its use. But now they are seldom applied, unless it be to stop the violent Bleedings of Veins or Arteries, or to gain a good bottom in pertinacious *Ulcers* and *Fistulas*, and chiefly in a *Polypus*, *Fistula Lachrymalis*, a *Cancer*, *Noli me tangere*, *Ozæna*, and such like inveterate and contumacious Accidents.

Moxa from
whence it
comes.

Moxa came first to us out of *India* about thirty years since, and was then mightily cryed up for the Cure of the *Gout*, *Rheumatism*, *Pains in the Limbs*, *Head and Teeth*, the *Cramp* &c. *Bischoff* first published its Virtues and Use in a curious Treatise: afterwards *Dr. Gabema*, in another Discourse; but chiefly *Ericus Mauritius* in a very ingenious Letter to *Dr. Scheffer*, which may be seen in *Miscelan. German. Curios. Decur. 1. Ann. 6. Observ. 218.* whom *Dr. Eltzboltz* immediately followed with another curious History. It was first thought to be a Matter growing on Trees like a *Fungus*, till *Dr. Cleyer* coming out of *India*, awakened us out of that Dream; shewing that *Moxa* was a prepared Wool, from an Herb not much unlike our *Artemisia* or *Mugwort*, only it had something a Broader Leaf. For the first three or four years it was highly extoll'd, even to a Miracle, and was so very dear, that I gave twelve Crowns for half an Ounce of it, and found that in pains of the *Gout* and *Ischiatica*, that had not been of too long continuance, it took them away immediately. Then its Praise began to ring through the World, insomuch that I have sold to some Chirurgeons a small top of it for half a Crown, and that esteemed a favour also, it was so dear; but when it grew more common and Cheaper it began to be abused by the Confident and Ignorant, and seeing it would not Cure all Diseases whatsoever, they thought it good for nothing, and so the Noble *Moxa* lost its Reputation by the Silly Applications of Chirurgeons, that knew not where to place it, how to manage it, or repeat it in contumacious cases; for if one top would not do, they seldom attempted farther, but fell to railing against it, when they should have blamed their want of Consideration.

What it is.

How prepared.

The Herb *Moxa* is thus prepared; dry the fine tender Sprouts of it very well in the Shade, stamp them with a Wooden Pestle, or rub them between your hands till the Outward Rinde is separated, and nothing remains but the inward *Lanugo*; which being diligently Kembered will appear like Wool, insomuch that none would ever take it to have been an Herb.

How to be applied.

Of this Wool the *Indians*, chiefly the Inhabitants of *Japan* and *China*, form between their Fingers a *Pyramid* about the bignets of half a Nutmeg, narrow at top and broad at Bottom that it may stand fast upon the Skin; this being placed where it ought to be, they set it on fire with a Wax Candle, which quickly burns and Smoaks (but never flames) till it is consumed to Ashes, which being blown away, leaves a yellow spot

spot in the place where the *Moxa* burnt, which always continues, though you repeat the Operation several times with new *Maxa*. The Pain of this burning is very inconsiderable and continues not a quarter of a Minute, and then the pain vanisheth also. When the Burning has been regularly performed, apply to the yellow spot some bruised *Garlick* and *Diachylon*, or some other Mollifying Plaister over it, and let it continue on eight or nine hours; then take it off and cut the Blister if there is one; if not, lay the rough side of a Plantain Leaf to the burn'd place to keep the Wound open, for the smooth side I know by experience will heal it.

The Virtues and Use of this *Moxa* consists in five particulars. First, It: Virtues. It may be applied to any Joint or part but the Eyes, tho' there be a Swelling or Tumor. 2. It not only opens the Pores but takes away the Pain from under the *Periostium*, where Arthritick Pains are generally seated. 3. It corrects Malignant, Acrid, and soure Humours, and dissolves and attenuates *Oedematous* Tumors. 4. It mitigates and takes away the Malignant and Noxious Humours which are chiefly contained in the *Periostium*. 5. It not only exhales Vapours and Humours from the affected Parts, but also strengthens them to resist the further Assaults of any Humour.

The *Moxa* must always be apply'd to the place where the Patient feels most Pain, except it is in the Eyes, Nose, Ears, and Privy Parts, which must be carefully avoided least you raise a Spirit you cannot easily lay again. *Bischoff* says the *Moxa* may be apply'd to all places without distinction or danger, yea in the Parts where there are many Arteries, Veins, Sinews and *Aneurismata*; but you had better believe him than make the experiment. If the *Moxa* is to be apply'd to a Hairy Part you must shave it off; or if to a place that has been daubed with Oils, you must make it clean before you apply the *Moxa*, for otherwise it will do no good. Where applied.

In the beginning of *March* 1692. I was assaulted with a violent and continual Pain in my Left Hip, *Malum Ischiaticum*, to such a degree that even Life seemed a Burden. *Dr. Preuss* and *Dr. Paulus* used their utmost Endeavours to give me Ease, but to no purpose; for my intolerable Pains did but increase the more upon me. At length, after fourteen days torment, I proposed to the Physicians above named, the application of *Moxa*, to which they consenting, *Mr Dietrich Meyer* a Chirurgion here, apply'd it next Morning to the part affected, which was upon a Joint. As soon as the *Moxa* burnt to the Skin, I felt a burning pungent Pain, which shot like Lightning into the Joint, but afterwards was tolerable enough, till it was quite burned to Ashes, at which instant the Pain left me, and I felt none all day after; but at Night the Pain returned and seized my Ankle on the same side, to that extremity, that it cast me into Convulsions, and God knows I endured a Miserable Night; in the Morning the *Moxa* was apply'd again a little above the Ankle where the Pain was greatest, the Operation was dextrously performed; the Pain left me, I fell asleep and it never returned again. Upon the burnt Place *Garlick* und *Plantain* Leaves were apply'd; but the *Moxa* being burned just upon a *Tendon*, it confined me to my Bed more than five Weeks time, and proved a Miserable Sicknes; from which I was freed by the *Moxa*; and think my self obliged to insert it here, that its due Praises might not be stifled by Men of naughty Principles. An Instance in the Author.

C H A P. XIX.

Admonitions and Remarks about Paring Nails, Cutting Corns, and the hard and Callous Skin of the Feet; to prevent ill Accidents or a Mortification, and what is to be done if such Accidents should happen.

SOME rare Examples having occurred in my practice, concerning *Nails*, was the Motive to discourse somewhat briefly upon them, to the advantage of the Inquisitive Chirurgion. I know some will little value what can be said on this subject; but they only proclaim their own Ignorance of the Dangers which attend the ill management of those parts; two Dreadful Examples whereof we have had, in Major *Gruntz* at *Gaffron*, and the famous and Learned *Puffendorff* at *Berlin*, who were both snatch'd away by painful and miserable deaths, which happened by the paring of their *Nails*. To prevent such unhappy things for the future, we will consider the Origine, Use, and Nature of *Nails*, that every one may know the Dangers to which they are subject. *Galen*, and many other of the Ancients, were of opinion that *Nails* were generated out of *Craß* and Excrementitious *Moistures*. *Hippocrates*, *Celsus* &c. thought that *Nails* were generated out of a *Craß* kind of Excrement, but not of such *Liquors* as pass'd through the Heart by the Arteries. *Bartholinus* says that *Nails* are bred of that Excrement which was cast off by the Bones and Callous parts, and of this opinion was *Veslingus*, *Riolanus* and *Placentinus*. I wonder why that famous and Ingenious Anatomist *Bartholinus* has observed nothing concerning the inward Figure of the *Nails*; since the Knowledge thereof is of such great importance. I was long in doubt, whether it was true which *Blanckard* says, that *Nails* are inwardly hollow, and compos'd of a great many Pipes and Tubes standing near one another; till about four years ago, being called to a great *Princess* who striking her hand by chance against a Wall, her middle Finger became much swelled and Inflamed, and a few days after her Nail came off: then to my great admiration, I saw, by the help of a *Microscope*, that many and almost innumerable small *Nervi* were contained and incorporated in the small *Tubuli* of the Nail, which as soon as they drew back caus'd the Nail to fall off; for by those the Nail was fastened, nourished and fashioned; every small Tube of the Nail having its *Nerve*, going in a straight Line to the top of the Nail. From whence we may conclude, that the *Nails* must necessarily be very sensible, subject to various Accidents, and sometimes are the certain causes of Death.

The use of them.

The use of the *Nails* are within the reach of every Eye. They strengthen the extrem parts of the Fingers and Toes, are an Ornament to the Hand; shew the Constitution, Health, or crazy temper of the Body; and are of such an admirable contrivance, that *Veslingus* says, their Texture is so wonderful and surprizing, that these alone are sufficient to transport Men into Extasies of Praises, in honour of our Wise and Omnipotent Creator.

I only mention the Curiosity of their Texture, to shew that cutting

of Nails, if not prudently and Cautiously done, the small *Fibræ* and Vessels are so tender, that if they are never so little hurt, they often cause violent Inflammations, Gangrenes and Death, which more commonly happen to the Aged than to younger sort of people. Once a Quarter I cut the Nails of a great Man and Magistrate of this Town, that are so extream hard and thick, tho' set in warm Water an hour together, a Knife will hardly touch them. As far as his Feet are set in Water they swell, by the Blood and Juices running to them; when they are out of the Water, and kept in the cold till the Nails are cut, they swell worse, grow as hard as a Stone, and cannot be set to rights again in less than eight days time, to the great Molestation of the Patient now all this came to pass by the Circulating Juices flowing to the Warmth in the Legs while in the Water; but cooling again the Juices stagnated and settled in the parts and caused the Induration and Swelling. Now should one happen to cut any of the small Nerves or Vessels, the Stagnation would increase and dangerous Symtoms would appear. All which considerations, as I said before, should arm the Chirurgion with all the care and Caution imaginable; for if a seeming slight hurt should happen and but upon one Toe, you will scarce be able to prevent it from infecting all the rest, to the peril of the whole Foot and Leg also.

From the Nails I proceed to *Corns* on the Feet and Toes, which are small Callous Bumps seizing the Joint; have a pointed root with sometimes grow very deep, and if the upper Skin be cut away shew a little hole in the Middle. In substance and Matter they appear to be the same with *Warts*, only *Corns* are more hard and compact, which proceeds from being continually crush'd by Shoe in Walking; which otherwise without all doubt would have been nothing else than *Warts*. Now this hard Substance we call *Corns*, pressing upon the tender Nerves and Vessels which lie under the Skin is the cause of that violent pain which so many persons endure, that are tormented with them.

Corns on the Toes.

If any ill Accident happen in Cutting *Corns*, you must endeavour to prevent them from going further, and to bring the Stagnated Liquors to their regular Circulation; if you find the Accidents and Inflammations are yet in a tolerable condition, apply the following Balsam thick upon Lint to the greived part.

To prevent ill Accidents.

℞ *Liniment. de Lythargyr. Cum Ol. Amygdal. fact. ℥iij. Lap. Tut. ppt. ℥ss. Balsam. Peruvian. ℥iss. Opii puriss. Myrrh. ana ℥ij. m. f. balsam. cum s. q. Ol. Hypericon.*

This being done, apply with double Linen Rags, the following Water very warm, over the Lint and Balsam, and the whole Foot.

℞ *Bol. alb. Ceruss. Tutia ppt. ana ℥jss. Sacchar. Saturn ʒv. Camphor. Myrrh. ana ℥ij. Sal. Armon. Alum. ussi ana ʒj. Oliban. ʒijss. Myrrh. & Camphor. in pauc. Spirit. vini solut. coque in Lixiv. è calc. viv. ʒxij. Aqa. Plantag. flor. Sambuc. anu. ʒvj. & Cheresol. ʒv. por quartam partem horæ & per linteum Cola.*

If the ill Accidents have not prevailed too far, you may be well assured, that these two Medicines will perfectly reduce them into good order again; but if they are grown contumacious and dangerous, you must have recourse to stronger Medicines; and apply the following Balsam instead of the former.

R Balsam. Diasulphur. Rulandi ℥iij. Peruvian. ℥j. Copaihae ℥vj. Essent. Myrrhae ℥jss. Emplastri. Oppodeldock. ℥iij. Misce cum s. q. Olei. Sarcocoll. ad Balsamum.

This Noble Balsam must be applyed warm to the grieved part, and over that the following Fomentation over the whole parr, as warm as the Patient can suffer it.

R Fol. Theae, Scordii, Cherefol. Savin. Quercin. ana. Mjss. Rad. Aristol. long. ℥jss. Pulv. flor. Sambuci, Origan. ana ℥vj. Tutia ppt. Ceruss. bol. alb. ana ℥j. Alum. usti, Vitriol. alb. ana ℥j. Myrrhae; Oliban. ana ℥iij. Lixiv. Calce viva ℥iiss. Aq. flor. Sambuc. Hyoscyam. Cherefol. fol. Salicis ana ℥vj. coquantur omnia Simul. per dimid. horam, & Colatura Servetur ad usum. Mix it now and then with a little Spirit of Wine Camphorated.

The Cure.

In the next place I will accommodate you with some choice Medicines to take away Corns, without too frequent Cutting, or the use of dangerous sharp and strong Spirits, which often produce very ill consequences. I will begin with the following Plaister, which I have used many years with good success.

R Emplastr. de Rani cum duplici Mercurio ℥ij. Cerae rubr. ℥iijss. capit. Allij, cum pauc. Acet. vini in mortar. cont. No. iij. pulv. folior. Heder. terrestr. ℥ss. Misce. fiat cum s. q. Ol. Heder. terrestr. ad Emplastrum.

When the thick uppermost Skin of the Corn is cut off, chase it well with the following Balsam, and then apply the above-mentioned Plaister, over it as large as is necessary.

R Zibeth. Optim. ℥ss. Praecipitat. rubr. gr. xv. cum s. q. Ol. Heder terrestr. ad Balsam. f.

Dr. Blanckard says that Sope applyed every Night to the Corn, after the hard Skin has been cut off, is an Infallible Remedy. The like L. Juncken says *Emplastr de Rani cum dupl. Mercurio.* And Dr. Doleus recommends the use Oil of Linseed only applyed with Lint to the Corns. Here follows a Plaister and a Balsam for which purpose there can be nothing better.

R Cerat. de Galban Cerae. virid. ana ℥ij. Sal. Armoniac. ℥iijss. Picis. ℥iiss. Mercur. dulc. ℥ij. Succ. Tithymali. q. s. m. f. Empltr. Lege. artis.

The Balsam is compounded as followeth, and must be applyed as the former, and the Plaister renewed every day.

℞ *Ol. Heder. terestr. ℥iij. Succ. Allij. ℥ijss. Zibeth. Mosch. ana gr. ʒvj. pulv. Subtiliss. Cantharid. ʒij. Coquantur ad Balsamum igne lento.*

Perhaps you may think that *Zibeth* and *Musk* are only added for the smell sake; but that's a mistake, for they have great virtue in curing Corns as you will find by experience, if you use them.

In February 1679. *Siegmund Konig* a Brewer in *Halberstadt* 58. Historical Observation. years of age was accustomed to have his Nails and the hard Skin on his Foot cut by a Chirurgeon in this Town, who was well rewarded for his pains; but this time, cutting the hard Skin under the Ball of the great Toe, the Knife went a little too near the Quick and made it bleed, which neither Patient nor Chirurgeon regarded at that time; but the Patient soon feeling pain afterward, a little Lint was applyed to it, and and over that a common Plaister, was continued to the third day, and then the Patient finding more pain in the great Toe, accompanied with a Swelling and Inflammation, the Chirurgeon applyed *Felix Wurtzen's* Brown Ointment to it. The fifth day, the Symtoms increasing, and the Patient looking on the hurt himself, found it quite Black the bigness of a shilling, at which he was amazed, and shewing it to the Chirurgeon, he said it was only coloured by the Brown Ointment. On the eighth day, the Patient to his great astonishment, saw his great Toe and part of the Nail was grown Black; upon which he sent for *Dr. Hasenben*, who searching it, found it to be a Mortification and not coloured Brown Unguent; which the Chirurgeon might have prevented, if he had considered the Leanness of the Leg and the several Ulcers that had been in it some years before; for then he would have taken more care. This Mortification put them into a great consternation, and instead of the former Applications, they now began to employ an *Emollient* Cataplasim, which made the matter worse, by relaxing the part, which assisted the Mortification. At length *Dr. Mauritius* was also sent for, who advised the great Toe to be cut off, which was done and signified nothing, for the Distemper was gone too far, and the Mortification run from one Toe to another. The Patient seeing no help any way, sent for me also; and I immediately employed the following Powder strewing it upon the pieces of Toes, and the perishing Flesh.

℞ *Rad. Aristoloch. long. ʒss. Ocul. Cancr. ʒvj. Antimon. Diaphoretic. ʒij. Præcipit. alb. ʒijss. Myrrh. ʒij. Mastich. Oliban. ana ʒiss. aloes ʒj. Sang. Dracon. Lap. Ostiocol. ppt. ana ʒss. M. f. Pulvis. Subtilissimus.*

Instead of their Cataplasim, I applyed every two hours the above prescribed Fomentation, and continuing this course, the Mortification went no farther, tho' it was eight days before it could be brought to a Separation. I applyed the Balsam above mentioned for the Cure of Accidents happening to the Nails; upon which it appeared much better; but the Patient being never free from the violent assaults

assaults of a *Fever*, his Strength decayed and he dyed about a Fortnight after. Thus you see how dangerous it is, either by Negligence, improper Applications or otherwise, to suffer an Inflammation to run into a Mortification, because it very seldom submits to a Cure, when it has made too far a progress in the affected part; which should admonish every Chirurgeon, to be very careful in preventing that danger betimes, lest at once he looses his Patient, his Employment and Reputation.

The Conclusion.

Now to conclude my *Chirurgia Curiosa*, I think my self obliged to acquaint the Reader, that I am not so vain as to think the Publication hereof will please every one, that sets up for a Judge of other Mens Labours; tho' I am not without to beleive (prejudice apart) that the most curious and nicest Understanding, upon a serious perusal will find many things in this Treatise, utterly unknown to other Authors that will recompence his Cost, gratify his Curiosity and redound to his future Honour and Advantage; for this I can aver with the greatest Reality and Integrity, that I have inserted nothing in all this great Variety of Medicines, but what I have had repeated experience of in my own Practice; having no other design in this Udertaking, but the Glory of God, the Advancement of Art, and the Benefit of Mankind.

FINIS.

instead of their Cataplasms. I applied every two hours the above prescribed Ointment, and containing this course the Mortification went no farther, tho' it was eight days before it could be brought to a Separation. I applied the Balsam above mentioned for the Cure of Accidents happening to the Nails; upon which it appeared much better; but the Patient being never free from the violent

Tabula.IV.

Fig: 1.



Fig: 2.



Fig: 3.

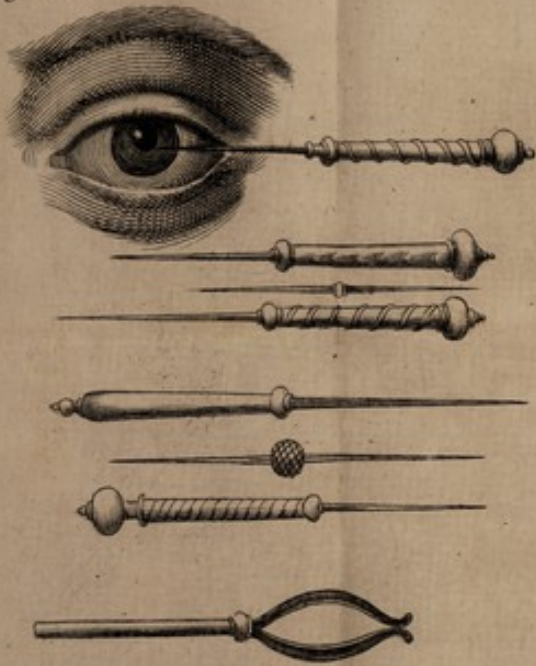


Fig: 4.



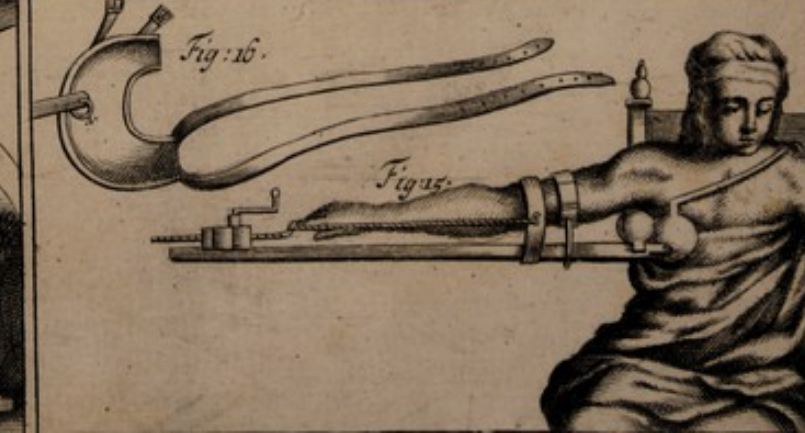
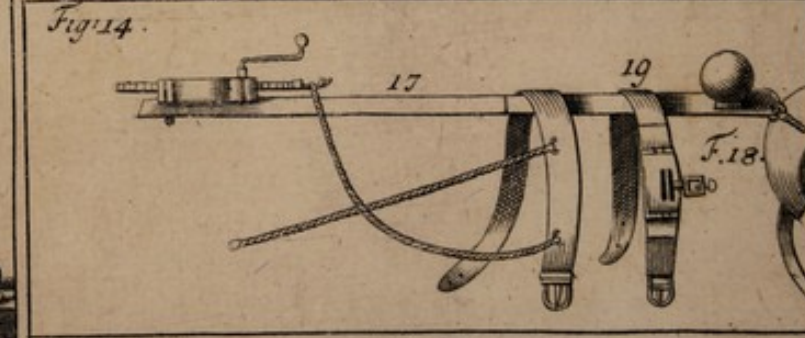
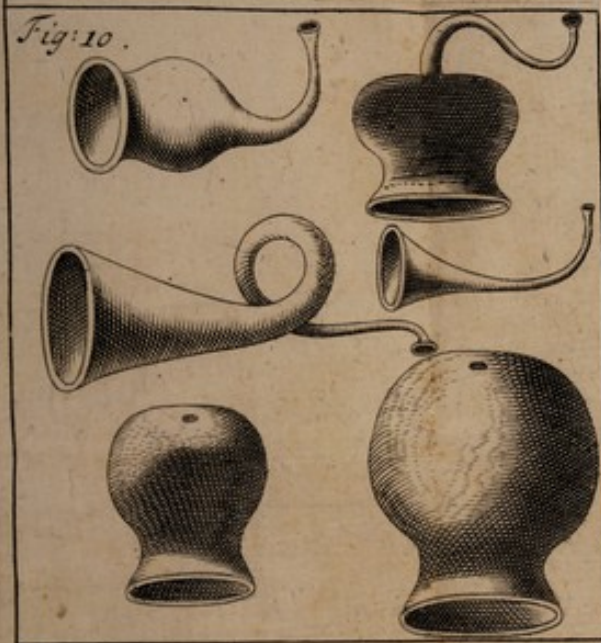
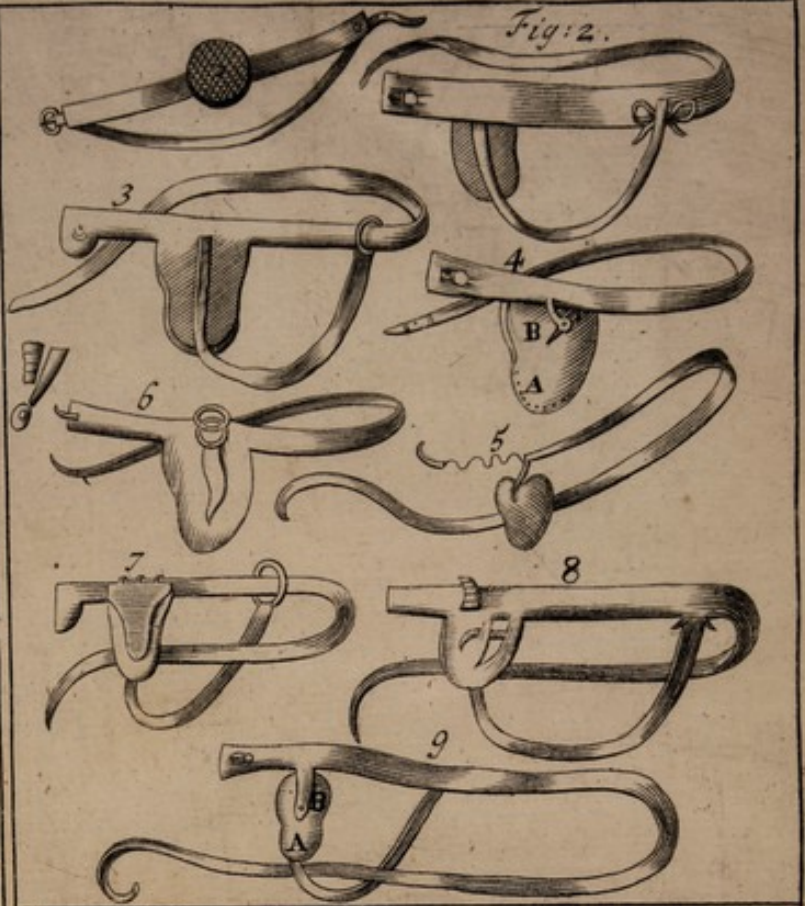
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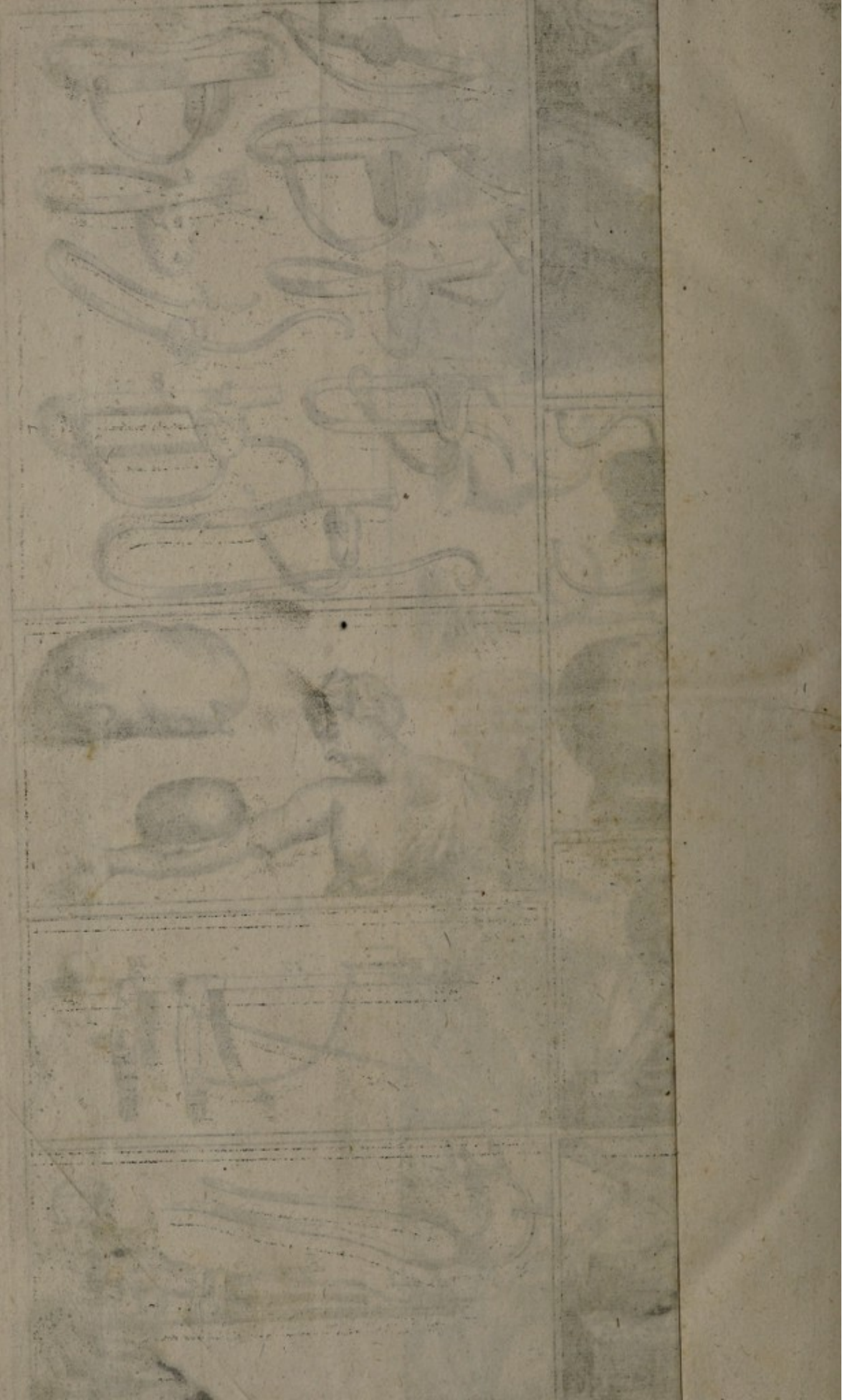


Fig: 6.









Natura Morborum Medicatrix:

O R,

Nature Cures Diseases.

W H E R E I N

The Energy of *Nature* is Demonstrated;

Her Operations Explain'd,

A N D H E R

Various Steps are render'd Intelligible :

In Order to

The Excussion of NOXIOUS HUMOURS, and the
Preservation of HUMAN LIFE.

By *Conrade Joachim Sprengell*, M.P. Physiodidascalus.



L O N D O N :

Printed for *Dan. Browne*, and *Rich. Smith*, without
Temple-bar, 1705.

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TO THE READER.

MAN is so generally addicted to delight in Novelties, Projects and Disputes, that he puts himself into a continual Uneasiness and Discontent. His Head blunders upon a thousand Notions, Conceits and Fancies, which some erroneously embracing, they are too often published for Truths. This has been, and still is a great Cause of our Ignorance, and of the many different and ridiculous Opinions and Controversies that reign among us; while Truth is incarcerated under innumerable Errors and Perplexities; and is like to continue so, while we pursue our own vagrant Thoughts and Suggestions, without thoroughly examining them by a Confirmed and Unerrable Experience; which, if we could once persuade our selves to, considering how highly necessary it is in the Healing Faculty; we should not be so egregiously Mis-led and Imposed upon, for want of a true Theory, and a certain Method in Curing Diseases, since there is no Art or Profession, where the first Faults are so irretrievable as in this. How many, that might have been serviceable to their Families, are suddenly snatch'd out of the World, or made so defective, as to spend their days in Misery, occasioned by the Ignorance and Misunderstanding in Practice. The daily unlucky Examples also sufficiently demonstrate the Rash and inconsiderate Practice, made upon the Artificial Human Structure, by Ignorant and Disingenuous Pretenders. If Men would consider how inclinable they are to Corruption; of what tender Filiments they are composed, and how they are perpetually surrounded with innumerable Diseases which threaten their Dissolution, they would certainly admire what mighty Power it is that preserves them; and take the more care of themselves in venturing their Lives, to undergo so many ill grounded Trials as are daily practis'd.

No sooner is a Man deliver'd from his close Confinement, to breath the open Air, but hundreds of Internal Diseases conspire against him. He scarce receives an Entrance into Life, but is amidst a thousand Preparations for Diseases and Death. Homo morbum gerit, morbum quærit! How many Diseases are contracted

by his Ungovernable Passions, and how many Infirmities does he carry about him, both in Body and Mind; and yet he is continually seeking for more; not only in Eating, Drinking, Standing, Walking, Sleeping, Watching, Thinking and Imagining; but his Eyes invite what is his Ruine; his Ears hearken after Mischiefe; his Tongue affects what is pernicious; his Nose delights in things that are noxious, and his Desires are always hurrying him to Destruction.

Hence the Mind languishes in Commanding, the Body is benumb'd and unactive in Executing, and the Supporters debilitated in sustaining. *Tota Civitas tota Calamitas!* Here the Bones, which are the Foundation of the Edifice, grow feeble; the Members or Streets are everted, and the Fleshy Panicle or Walls are assaulted. There the Head, with its Watchmen the Eyes, and its Scouts the Ears, is insulted. On this side the Enemy rushes into the Gates, the Mouth and Nose; on the other side he falls upon the Inhabitants, the Viscera; and so the Royal Palace is invaded, and its Sacred and Orderly Regiment is destroy'd.

What Part or Place in this Microcosm, but has its proper Infirmities? *O Hominem Microcosmum Miseria!* where the Seat of Life, and the splendid Palace of the Soul itself is not exempted from Destruction. How easily is the *Aolick Fistula* stop't up, the small Gate of its Entry occluded, the Common Kitchen filled with Nastiness. *Virile decus fit malorum Specus!* The *Ubera's* of the tender Female Breasts, are indurated and ruined by pernicious *Tubera's*; the *Intrails* become the Residence of Worms, and the Guts, the Gutters of Corruption. *Oprima fercula pessima Stercora.* This is our miserable Condition, and yet how secure and unconcerned we live.

Which if Men, I say, would consider, it would be impossible that they should so obstinately precipitate themselves into Diseases, by debauched and irregular Lives, when they are already menaced with such a multiplicity of Diseases, as constantly attending to their Destruction, if not miraculously preserved by Heaven, and the vigilant Operations of Nature; of which I have sufficiently discoursed in the following Treatise, by shewing First, That by Nature is to be understood an Immanent Principle, or the Soul vitally acting for the Conservation of our Corporeal Machines, and how those Actions are performed? Secondly, That this Internal Agent, Nature, is still endeavouring to free the Body from what is prejudicial to it; and that she performs these Actions by Secretion, Excretion, and Nutrition. That by this means, many Diseases are cured without

the use of Medicines, and their Causes sometimes expelled, before they can produce their Effects. Thirdly, That Nature exterminates Diseases by her various Operations, both in Acute and Chronical Diseases; and that Arthritick, Rheumatick and Gouty Pains, are nothing but the Hemorrhagic Endeavours of Nature to expel the peccant Humour, and that for want of such Customary Evacuations, those Diseases are procreated. Fourthly, That the Body is preserved by a Mechanico-Physical Operation, or continual Local Motion. How Secretion, Excretion and Nutrition are performed. From whence the Rectements in the Body proceed. The Regular and Irregular Motions of Nature are considered; and that the Motion of Humours, and not a phantastick Variety of a particular Acrimony, is the Cause of most dangerous Diseases, &c. Fifthly, That great Benefit will arise from a particular Application of the forementioned Doctrines. That a Theory disagreeable to Practice, is a Scandal to the Profession of Physick and Chirurgery. What kind of Medicines are to be used or avoided in many Cases; with Reflection upon Empeticks, and their blud way of Administring Physick.

The Motives that induced me to discourse upon this Subject, was, that I thought it would necessarily bring us back to the Ancient way of Observation, as the right way of Practice. In which the Learned Sydenham has shew'd us so Noble an Example, and to which the Ingenious Bagglivius has so earnestly exhorted us; for then we should be able to discover the true Pathology of Diseases; and not take those for Primary Symptoms of Diseases, which are but the usual Endeavours, and Excretory Motions of Nature, well known to the Ancient Practitioners, under the Appellation Facultas Expultrix, and Molimina Critica. Hereby we might also attain to a True, Expedition and certain Therapia, which is so passionately wished for.

The Method I have proposed, and would gladly perswade all Practitioners to follow, being nothing but what has been used some Ages before us, I am very confident would render Men more fit for their Business in one Year, than otherwise they can attain to in many; for this Discourse on Nature has no Design to expose or render the Noble Art of Healing useless, as some perhaps may conjecture from the Title of the Treatise. No; but rather to make it appear in its proper Lustre, to convince all Men of its Certainty, and the incomparable Benefit that redounds to Mankind, by the use of it. For this Reason, I beg all Ingenious Practitioners, to improve this Notion with all imagina-

ble Industry, and to correct what they find contrary to their own Observations, that it may the sooner arrive at Perfection.

I have annexed this Discourse, as a Supplement to the Incomparable Chirurgia Curiosa, that Chirurgeons, as well as Physicians, might read and comprehend the Operations of Nature, because it will give them a great Light and Knowledge of External Maladies, how they may assist Nature in all her Motions, and no way cross her Purposes, especially in Inflammations, which she always designs for the better and more speedy Extirpation of the Morbifick Matter. Excellent Hints are also given in this Tract, how Nature may be obliged to a more vigorous Action, in Inpeterate Tumours, Ulcers, &c. when she seems to slacken her accustomed Vigour: and that Structures inconveniently raised, might be demolished by her proper Motions. And since a Chirurgeon, in times of War, is sometimes obliged to act the part of a Physician, as well as his own; he will herein find repeated Cautions and Admonitions, how to demean himself under those Circumstances, to his Patients Benefit, and his own Reputation.

F I N I S.

The Method I have proposed, and would gladly persuade all Practitioners to follow, being nothing but what has been used some Ages before us, I am very confident would render Men more fit for their Business in one Year than otherwise they can attain to in many; for this Discipline on Nature has no Design to expose or render the Noble Art of Practising in it, as some pervert it, and connect it with the Title of the Treatise. Now, I desire to make it appear in its proper Light, to convince all Men of its Certainty, and the incomparable Benefit that attends to Mankind, by the use of it. For this Reason, I beg all the Ingenious Practitioners, to improve this Tract with all imagin-

Natura Morborum Medicatrix

OR, **NATURE** Cures Diseases.

CHAP. XVI.

That by the word *Nature*, we are to understand an *Intrinsic Agent*, by which the *Vital Motions*, necessary to the *Preservation of our Corporeal Machines*, are performed.

THAT there is something in Human Bodies, by which all the *Vital Functions* are Ordered and Directed, and by which *Secretion, Excretion, Nutrition, Respiration and Reparation* are duly managed, in respect of Proportion, Time, Manner, Design and End; no Person, endued but with a tolerable Share of Reason can deny; especially if he considers how all these Actions effectually associate, and all manner of ways combine for the Conservation Relief and Restoration of the Body, when by any Accident it has been Impaired.

Hence the Ancients, called that Agent of all these *Vital Functions*, *Nature*; not intending hereby to denote any particular Agent, in contradistinction to the *Soul and Spirits*; but under this Notion, comprehend the *Soul* itself especially, in as much as she contributes to the *Vital Operations*; for as *Nature* is nothing but the *Soul* acting *Vitally*; so *Ratio in concreto*, is nothing but the *Soul* itself.

Many in former Ages and also in this, have taken abundance of pains to discover what this *Internal Agent* is. The Ancients were positively of Opinion it was the *Soul* itself, to which they appropriated several *Faculties*, which the *Soul* put in Action, as often as Necessity required: the chief of these *Faculties* were the *Natural, Vital, Animal, and Rational*, and the *Pulsifick and Respiratory* *Faculties* were only subservient to them.

Others, with which *Galen* agrees, have advanced a threefold *Soul*, all differing in kind and Operation, and that are wholly unconcerned in any Office but its own, with disregard of the other; and these they called *Vegetative, Animal, or Sensitive* and *Rational* *Souls*. Others again have introduced a *Calidum innatum*, contradistinct to the *Soul*, of which see *Hoffman de Calido innato*.

Those that were of opinion there was but one *Soul*, assign'd *Spirits* for its *Organs*, on this manner; the Intention what to act, the Manner how, the Time when, and how long to act, the Determination of the *Corporeal Organ* wherewith to act, and the End to which that Proportion of an Action was to be directed; all absolutely existed in the *Soul* and

Another Opinion

The Opinion of the Ancients

Nature why so called by the Ancients.

Nature what.

The Ancients Opinion.

The Galenick Opinion.

Another Opinion.

and the *Spirits* were only Instruments to convey and induce *Sense* and *Motion*.

Another Opinion.

Again, such Persons as imagine there are many Souls, attribute to every one a proper and peculiar Knowledge and Power to act, which were perpetually employed in reconciling the abstracted Notions above-mentioned. Some of late years, retain it as the Ancients left it, and only change its Name. Others have started something they apprehend to be new; but if thoroughly examined, it is nothing else but the Opinion of the Ancients. The first of these acknowledge a kind of *Spirit* or *Archæus*, which differs only in Name from the *Anima Vegetativa* of the Ancients, for the Definition is the same, viz. a Free Agent, thoroughly instructed in the Knowledge of acting, without any Dependence upon the *Anima Rationalis*, but wisely, and of its own accord, performs the *Vital* or *Vegetative* Actions.

The Opinions of late Authors.

The latter are not agreed among themselves what to advance, but hover in Doubts and Uncertainties; however if we enquire into their Sentiments, we may collect, that there is a stupendous artificial Structure, so neatly compacted together, that from the most minute Impulses, the whole subsists in a perpetual Circle. Secondly, notwithstanding all this, they say the *Machine* is moved by a *Spirit* or some kind of very subtil Matter, which with the *Æther*, as they call it, or finest part of the *Air*, serves for a continual and reciprocal Motion; which being variously impuls'd by the *Æther*, communicates its Effects also variously to the Body. It would be vain and fruitless Attempt to apply this *Hypothesis* to the daily *Phænomena's* we encounter; and therefore those that are a little more circumspect, suppose that in these *Spirits* is an *Innate* Endeavour or determinated Tendency of Motion, which they exercise agreeably to their Original Impression. With this Opinion they flatter themselves to have untyed the Gordian Knot, and removed all the Difficulties which might arise, in Resolving, that those *Spirits* acted from a Principle of Knowledge, with advice, under an Intention and determinated Proportion of acting.

The Absurdity of the late Opinion.

The Absurdity of the late Opinion.

This whole Supposition will appear very strange, if we either object against them, the Effects of their false Reasoning; and, on the other side, if we consider the remarkable Agreeableness of the *Vital* Actions with the *Rational*, and how Perfectly they agree in their abstractive Circumstances, and proneness to operate with Exactitude in their Beginning, Uniformity and Constancy in continuing, and in their Equality and just Proportion in their Administration of proper *Mediums*, their Supposition will yet appear more absurd; but I shall not run into any Controversy about these matters in this brief Discourse, but leave it to those that are more inclined to trouble their Brains about it.

The Absurdity of the late Opinion.

The Absurdity of the late Opinion.

It's sufficient that I observe, that the Followers of this Opinion, agreeably to their first imbibed Principles, assert, That all such Actions which are exercised by the *Spirits*, are wholly determinated from their first Impulses to the Conservation of the Body, and continually serve that great End, unless they are interrupted or disabled, by the Interposition of some unhappy Accident, which obstructs and confounds the Regularity of their Operations.

Nor will I mention here the Impossibility of proving this Opinion *a priori*, or urge against the Authors of it the Arguments pre-alleged; but

but propose and support that Opinion in which we all agree, viz. that *The uniting of all these Opinions.* the Actions vulgarly called *Vital*, do incline and conspire the Conservation of the Corporeal Machine.

All these Actions are resolved into one single general Act, viz. *Motion*; for whether they act upon *Solids* or *Fluids*, they are particularly perfected and accomplished by *Motion*, whether they refer to the Tenuity of *Fluids*: the Nutrition and Reparation of the *solid* Parts: the continual *Secretion* of *Heterogeneous* Substances, as well out of the *Fluid* as *solid* Parts, or a full and final *Excretion* of this separated *Heterogeneity* from the whole Body, by the several *Emunctories*. All this I say is performed by a *Motion* of the *solid* Parts, which is twofold. 1. From the *internal* to the *external* Parts, and that equally and universally, by the *Pulsation* of the Heart, and in some measure by the *Respiratory* Motion. 2. From the *external* to the *internal* Parts every where, but partially and unequally by a *Tonic-Motion* of the Parts, which in some places are vrey often relaxed, that more *Humours* may penetrate them by the *Pulsation* of the *Appulsors*; and are also strained, that the quantity which is usually forced into them, may be expelled from thence, and driven back again into the *Vessels*. *Concerning the Vital Actions.*

Now while these *Motions* are regularly performed, the Body flourishes, continues in Health and Vigour, and will remain in the same State, if the *Agent* is not oppressed by *moral* Perturbations, nor the *Organs* or *Humours* injured; and if it should happen that the *Humours* and *Parts* should be prejudiced, and yet at the same time the Energy and constant Vigour of the *internal* *Agent* should not be enervated, but rather by *Art* or otherwise exulciated and stimulated; then we may daily observe with Admiration, how this *Agent* will rouse it self, and with a redoubled Force encounter the *offending* Object; till by its *separatory* and *excretory* Motion, it has accomplished the *Excussion* of all that was *Noxious*, and *Injurious* to the Body. *Observe.*

All that consult their own Reasons, and are not byas'd by *Fancy* and *Affectation* of *Novelty*, will soon find themselves obliged to acknowledge the spontaneous and *intrinsic* Power of this *Agent* in conquering *Diseases* and curing *Corporeal Hurts*, as may be easily observed in the *Reparation* or *Restoration* of any of the *solid* Parts, in *re-purging* and preserving the *Fluids*, which daily falls under the remarks of *Clinick* Practitioners, and truly it were to be wished, that they would continue, with the greatest *Sagacity* and *Industry*, to consider it thoroughly, as the best and surest *Methodus Medendi*, in curing the many and almost innumerable *Diseases* and *Infirmities* of our mortal Bodies. *Note.*

Of this *Spontaneous* *Excussion* and *Restitution*, and how many dangerous *Accidents* are Cured, meerly by the *Intrinsic* Motion, without the assistance of any *Extrinsic* *Art* or *Operation*, I shall treat more at large in the following Chapter.

Now this *Intrinsic* *Agent*, by which all these *Vital* *Motions*, so absolutely necessary and beneficial to the *Preservation* and *Restoration* of human Bodies, are directed and managed, is that which I call *Natura Animalium* or *Nature*. Others may call it *Archæus*, *Calidum Innatum*, *Anima Animalis*, *Anima Vegetabilis*, *Spiritus Vitalis* & *Animalis*, *Principium Vitale*, *ψυχη*, or what else they please; the Notion only differs in *Names* and conceited *Terms*, without any *Foundation*, and

yet have been the unhappy causes of divers Controversies, to no purpose, but wasting Time, Money and Paper, only to serve a Fantastical Humour, or to erect a fine Scheme that may be turned and applied to every ones Fancy; thinking it a lessening of their Dignities, to adhere to that admirable Axiom of the great *Hypocrates* ἡ ἰατρικὴ κατὰ φύσιν ἐστὶ, that Art should follow the directions of Nature, and not cross her Endeavours by a rash adhibition of Medicines; but diligently observe all her Motions and Efforts; gradually and in due time, give her Assistance in her own way and Method of Working a Cure. But instead hereof, too many run on blindly, and grope in the dark for what they are never like to find, without following the wise and safe Indigitations of Nature. There are few but boast of their own Arcana's and infallible Specificks, which when they come to be experimented, have little or nothing in them, and yet these must be adhibited; let Nature work which way she will, and this without any consideration of Time, Place, Persons, or any other circumstances whatsoever, or the hopeful Symptoms that Nature produces in opposition to the Practitioners Fancies. Others again, make needless remarks and distinctions, and would lay the whole Foundation of Physick upon every fantastical and finely worded Notion, and in the mean time, drop the true Theory of Diseases, and consequently the knowledge of proper Medicines. Hence it is, that those who have no great insight into this Affair, perceiving the different Opinions of Physicians in one particular Disease, are tempted to think, that this noble Science of Physick is all a Jest; but these are to be pity'd; for had they read and considered *Hypocrates's Aphorisms and Prentations*, and diligently observed them in their Practice, they could never talk so very awkwardly. But instead of exposing those that effectually ridicule themselves, let us look a little further into the effectual Operations and Efforts of Nature, that we may follow her steps with greater Ease and Delight, and reap the more Benefit from her Precepts and Examples, to the Glory of God, the Health of our Patients, and our own Credit and Satisfaction.

Such as despise
the noble Art
of Physick.

C H A P. II.

Demonstrates to us, That this Internal Agent or Nature, tends directly to free the Body from all Diseases, and other ill Accidents, that may happen to it, as well with regard to the Causes as Effects; and that Nature commonly performs these Actions by Secretion, Excretion and Nutrition, without any considerable Assistance from the Concourse of Medicinal Arts or Applications.

The foundation
of the Ancient
Practitioners.

This is sufficiently apparent, from the repeated Experiences of Ancient Practical Physicians, who always laid the Foundation of their Hopes of Success in their Practice, on the Efficacy of Nature in Conquering Diseases, and curing Lesions; which made *Hypocrates* often say, 6. *Epidem.* 5. *Naturas esse Morborum Medicatrices*, Nature is

the Curer of Diseases. Galen, in his Comment upon the same Text, also affirms, *Omnia facere salutis hominum causa.* Again *l. 1. de Natur. Facult.* he says, *Naturam suis viribus usam, quæ Noxia sint expellere, quæ Utilia usui servare;* to which all Ingenious Artists willingly subscribe, among whom *Valleriæ Obs. p. 36. and lib. 2. 136.* deserves to be mentioned, who has done very Learnedly on this Subject. *Paræus Lib. 8. Cap. 14.* also speaks to the same purpose; *It's most worthy of Observation and Admiration (says he) that Nature, but a little assisted by Art, Cures Diseases that were thought Incurable.*

But 'tis my business here to demonstrate, *How Nature frees the Body from Hurts and Diseases, when its Health has been assaulted by such Accidents.* The Act of *Restitution* I think is so Evident, that it would be superfluous to detain the Reader longer upon that Subject; for who can ascribe the *Reunion* and *Consolidation* of Wounds, or the Restoration of *Eroded* parts, without any considerable alteration of the proper Figure, to any thing else than this *Intrinsic Energy*; where an Adhesion of Nutriment cannot be supposed to happen by meer chance, but that it's the Act of *Nature* to form and preserve both the outward and inward Texture of the part in its proper figure.

The Act of restitution.

As supposing a large *Muscle* was cut asunder, if the same *Fibres* which were United before, were not afterwards directly and exquisitely joined together again, with their ends to one another; it's certain, such a *Muscle* must unavoidably lose its Motion, or if it has any, it must necessarily be very indirect and confused for ever after, which our late Ingenious *Anatomists* have sufficiently and apparently demonstrated. Now it is not (we know) in the Power of the best *Artist* in the World, to complet such a *Restitution*, and actually join such small and tender *Fibres* exactly together again, and as they ought to be, without making some or other unhappy *Confusion* among them: and yet we see this *Wonder* is every day easily accomplished in great Perfection, by our *Intrinsic Agent*, Indulgent and Skillful *Nature*, if not interrupted by a Rude Invasion of such *Extrinsicals*, as dissolve and Ruin the Animal Mixture.

An Example.

That *Nature* is always solicitous for the Health of the Body, is demonstrable from things that are taken inwardly, as *Meat, Drink or Medicine*, which don't presently or entirely disturb the *Animal Mixture*, but cannot be long retained, without being Noxious to the Body: such are most kind of *Salts*, especially *Acrimonious*, and some *Sulphureous, Salinous* and *Aromatick* particles; *Spice, Wine* and *Spiritous Liquors* &c. These and the like if not timely expunged, and separated from the *Humors* and thrown out of the whole Body, will not only disorder and confound the *Consistency* of the *Humors*, but also the *Connexion* of the *Solid parts*. Now, to prevent this Disorder, the *Secretory* and *Excretory* Motions are always at hand to *Separate* the *Noxious Portions* and *Particles*, from the *Beneficial Mass*, and when they are collected, to *Eject* them through the *Emunctories*.

Nature is always solicitous for the Health of the Body.

In extruding such things as are noxious to the Body.

I know there are some, who imagine these *Secretions*, as well as *Excretions*, are not performed by a Directing and Moderating Principle; but that they wholly depend upon a meer *Conformation* of the *Organs*, where the *Pores* are so ordered, that these *Particles* can slide and pass through them without any *Concurrent Directions*; but this is Disagreeable with *Practice*, for it is evident, *First* that these *Secretions* and *Excretions*

The false Opinion of some.

for

Imagination. for the most part depend upon the concurrent *Fancy* and *Imagination*:
An Example. As for Instance, A person is drinking in a great company, and is in
 pain to think where he shall Urine; now it's certain, that upon such a
 Conceit the *Urine* gathers together in greater plenty, and urges the
 person much sooner to the Act than is usual; for tho' the *Fancy* contributes
 nothing to the *quantity* of the Urine, or the *quality* of the Passage; yet
 it contributes very much to change the *Tonick* Motion of those Passages,
i. e. to cause a Relaxation of the parts, that a greater abundance of
 Urine may flow through them, and so concurs with that trembling
 fluctuation. *Secondly*, this Aptitude of the said *Seccession*, differs remark-
 ably *per individua*, that in the example, where one is drinking some-
 what more than ordinary, especially if of *Salino-acrimonious* Liquors
 there are found such remarkable varieties, that can never be reconcil-
 ed with that supposed universal *Mechanick* Disposition of the Body, un-
 less we would take refuge in the most troublesome and individual Varia-
 tions; and suppose that there were a Variation peculiarly and Individu-
 ally, in every single Individual of this and the like *Mechanic* Stru-
 ctures.

A further con-
 tradiction of
 that Opinion.

Thirdly, Experience contradicts this Opinion, under the conside-
 ration, that the same Person as above-mentioned, will be forced to
 Urine very often for some hours following, after he has been forced
 to this Act by the concurrence of his *Fancy*; which is commonly heard
 from *Stout Topers* by their own Observation, that if in their
 Comutations they once begin to rise to evacuate their Urine, they
 are afterwards obliged to rise very often; because the *Congestion* of the
 Urine is so swift and sudden that it compells them to the frequent re-
 petition of the Action. But if in the first they can but something re-
 sist this Action, then the less Urine they will make afterwards and not
 be so often forced to the said Act. *Fourthly*, and above all, the
 Circumstances in their time, the *Impetus* and Constancy of Acting,
&c. sufficiently overthrows the further Doubtfulness: as for instance,
 a Person has been eating, and perhaps very good Food; neither too
 much nor too little, and at no improper season; yet if there arises an
Aversion or *Loathing* in the Person, then it is much longer retained in
 the Stomach than usually, or else is precipitately disgorged, upon no
 other reason, than because it was imagined to be unsavory. So it
 often happens in several Persons, who out of a meer fanciful Perswasion
 do often *Purge* and *Vomit*, after the taking some kind of Medicines,
 which are indued with no such qualities. In some also a gentle *Cathartick*
 will become a strong *Emetick*, especially if very Nauseous to
 'em. Therefore the Learned *Boyle de usu exper. philos. par. 2. Sec. 1. cap. 13. p. 15.*
reported thus of himself. Sola de Potu impuro cogitatio in me horrorem excitat, cum aliquot corporis mei partium commotione Sensibili conjunctam: Spectatim Stomachum motu quadam constructivo movet.
 On this Subject you may also read *Galen Lib. 3. de locis affect. cap. 7.*

But that we may not be too prolix upon this Subject, let us consider,
 that either those Effects depend upon a *Mechanick* Necessity, or that
 they are administered by some *Directing* Principle, which is always
 present, and skilful in Successes and Events. Indeed both these Ar-
 guments favour our *Hypothesis*; namely, that those Actions are so
 managed by an *Intrinsic* Cause, inherent and immanent in the Body,
 that they directly tend to the *Conservation* of it.

Inherent and
 immanent
 Principle.

As for the latter, there is no great occasion to concern our selves, whether the *Conservation* of the Body is perpetually attended by this *Immanent Agent*, and is to be consider'd as the Scope of all its Actions, which we are now treating of? or whether the most *Benign* Creator instituted it to that End from the Beginning, and so disposed and conformed the whole *Machine*, that for the future by a *Mechanic* necessity, the *Successes* and *Events* might unavoidably follow? which opinion I have no intention to dispute at present.

It remains therefore, that I should explain the *Circumstances* mentioned in this Chapter, namely, that the *Causes* of an injured or diseased Body, as well as the *Hurts* and *Diseases* themselves, are thrown off, and the Body freed by the kind *Operations* of *Nature*, but to make a full particular and demonstrative *Explication* of things of this Nature, neither *Time* nor *Place* will permit; but in general we may assure our selves, that there is no actual *Disease* or *Hurt* in the Body, but *Nature* is always provided to resist them; insomuch that sometimes their *Causes* are expelled before they can produce their *Effects*, or fix any where to the *Detriment* of the Body.

Nor is there any necessity that I should mention the *Vomiting* of any *Meat* up again, that will not be brought to an easy *Digestion*, tho' in *Persons* of a strong *Constitution*, its frequently done to their great *Benefit*; when on the contrary it being retained in the *Stomach*, it lays the *Foundation* of several *Diseases*, especially *Cardialgia's* and *Vertigo's*, accompanied with great *Loathings*, *Queaziness* of the *Stomach*, violent *Belchings*, breaking of *Wind* &c. Besides it furnisheth *Matter* for all kind of *Agues* and *Fevers*; but not to insist on these particulars, an *Inflammation* is the best *Example* to demonstrate the *Truth* and *Energy* of *Nature*, in rescuing the Body from the *Assaults* of *Morbifick* *Matter*.

If any extraordinary quantity of *Blood* happens to *Stagnate* in a *Porous* part of the Body, it soon *Coagulates* and runs into *Putrefaction*, which is a *Dissolution* of the *Animal Mixture*, an irreparable *Injury* to the Body, and from the beginning is so very *Horrid* and *Cruel*, that all the corporeal *Actions*, and sometimes the principal ones are confused and destroyed; but to prevent the sad *Efforts* of this dreadful *Enemy* *Putrefaction*, the *Vital Acts* immediately concur to fall on with a stronger and more powerful *Motion*, in forcing a greater quantity of *Blood* to the assaulted *Part*, the *Tension* of the *Fibres* grow more rigid there, and hence the transient *Blood* grows more fierce and fervent, *tenuates*, *mollifies* and *discusses* the *Stagnated Matter*; but if the *Stagnated Matter* is so strong, that the *Discussive Motion* cannot overpower it, then the most *Subtile* and *Acrimonious* *Parts*, which from time to time are produced under this *Corruption*, are carried off and evaporated; that if they should gather they would certainly run into a kind of *putrid Fermentation*, and by that means diffuse the *Putrefaction* through the whole Body; but when the most *Acrimonious*, *Sulphurous* and *subtile* *Parts* are gradually evaporated, that which remains is thicker and unfit for *Motion*, like a *Caseous* *Substance*, as being a *Crafs* portion of the *Chyle*, which generates a *Pus* or *Matter* unapt for a *subtile* and *active* *Putrefaction*, but very prone to a slow *Saline* and *Mucid* *Corruption*, which can produce no sudden *Injury*. Therefore as often as an *Inflammation* is produced, the *Discussive* faculty

Observe.

Indigestibles if vomited up a gain, good.

If retained becomes noxious.

The danger that might arise from a stagnated portion of Blood

The vital actions become beneficial.

strengthens it self to drive out what is hurtful, which commonly is performed by rarifying the Stagnated Blood again, before it turns to Corruption, and in abducing its most subtile and active Parts to prevent the harm that might be done by their injurious residence.

An Inflammation very necessary.

But that this Action truly designs the *Conservation* of the Body, and that an *Inflammation* is very necessary, where the *Incarcerated* Blood is sinking into Corruption, may hence be plainly understood; for if an *Inflammation* did not timely happen, then an absolute *Putrefaction*, *Mortification* and *Death* would unavoidably follow, especially in that Part which is corrupted by the *Stagnated* Matter. Now this being wholly contrary to *Life*, *Conservation*, and the *Mixture* and *Structure* of our Bodies, we may justly conclude, that what opposes such a *Mortification*, must be instituted for the safety and Convalescence of the Body. But above all, this appears with greater Evidence in *Fevers*, than in any other Sickness; in which, if the actual *Effect* of its *Cause* should be expected, then would the Patient be surpris'd with a *Sphacelus* or *Mortification* of the Entrails, in *Malignant* Fevers; *Imposthumes*, in *Acute*; and pertinacious *Schirrous* Obstructions, in *Intermittent* Fevers. But to prevent these dangerous Consequences, an Intention of the ordinary Motion of the Blood is immediately advanced, that the more active such a corrupted Matter in the Blood is, it might the sooner and more effectually be circumpelled to the *Colatoria's* and *Emunctoria's*; yea those that are more copiously collected or insinuate themselves into the Body like Vapours, must be expelled again in the same Form and Manner they enter'd, as by superficial *Evacuations*, proportionable *Sweatings*, *Measels*, &c. but the *Crasser* Parts are carried off by *Vomit*, *Stool* and *Urine*, which kind of *Excretions* are frequently observed, especially in *Intermittent* Fevers, if left to themselves. *Fevers* themselves are daily Indignations, which demonstrate the *Motions* and spontaneous Endeavours of *Nature*, and by the usual *Vital Motions* to throw off what would be prejudicial to the *Vital* Parts, that it may do no injury by residing in the Body, and so is continually separated from the sound Parts, and at last by degrees or altogether cast out of the Body.

Fevers.

Demonstrate the Endeavours of Nature.

The explanation of the usual Actions which Nature employs.

There yet rests to be explained what I mean by the *usual Actions*, *Secretion*, *Excretion*, and *Nutrition*, which are the means that *Nature* employs to obtain her End.

In order hereunto, I presume it is taken for granted, by all Men of any Competent Understanding, that first the Conversation or *Life* of the whole Body, is freed from the Assault and Injury of Corrupted Matter, by the perpetual Motion of the *Blood* to and through the *Porous* Parts. Secondly, That by means of this *Motion*, partly the Blood and other Liquors are kept in a due Consistence, in respect of *Tenuity* and *Fluxility*, by compelling the too subtil and active Fermentative *Salino-Sulphurous* and *Acrimonious* parts to the several *Colatories* and *Emunctories* there to be discharged.

The ordinary recrements of our Body.

Thirdly, That these *Recrements* which either arise from a long *Alteration* out of the Blood, or are brought into the Body by what we are assuming, are partly of a *Tenuious*, *Acrid*, *Salino-Sulphureous* quality, B. Partly very subtil, *Aquoso-vaporous*, *Halituous* and *Spumid*, C. Others again are of a *Mucido-Viscid* and *Tenacious* Consistence. 4. That the first kind are separated by the *Kidneys* and sent into the *Bladder*; by the

the

the *Liver* into the *Gall Bladder*, by the *Pores* to the *Skin*, and there evacuated. The second kind commonly pass through the *Skin* by *Breathing Sweats* in the form of *Exhalation* or *Vapours*. The third are evacuated through the *Guts* by *Stool*; through the *Nose*, the *Mouth*, and sometimes through the *Throat* and *Lungs* by *Coughing*, &c.

These *Motions* which indulgent *Nature* generally employs in time of *Health*, she always make use of in time of *Sickness*, to cast out what is offensive and hurtful, and that only by increasing the *Degrees* of *Motion*, frequency and continuance as the *Disease* or *Hurt* requires. Accordingly, in sudden and dangerous Cases, *Nature* acts with greater *Celerity*, *Strength* and *Constancy*; but in Instances that are less menacing, she acts more leisurely and gently with intermixed *Rest*, recollected *Strength* and repeated *Assaults*.

Note.

Here it must also be observed, that the greater *Agreement* there is between the *Noxious Matter* and the ordinary *Recrements* of the *Body* in their general consistence, the less trouble there is in separating and expelling it; and the less they correspond in that particular, the more dubious, laborious and anxious is the *Administration* of those *Motions*, especially if the *Matter* should exist of a stupendious *Subtility*, *Agility* and *Activity*, as in *Sphacelo-putredinous* and *contagious Ferments*, or violent *Gnawing*, *Burning* and *Bilious Inflammations*; or lastly, some impacted and immoveable *Humours*, of which more hereafter.

Observe well

But the most auspicious and beneficial of all these actions is *Nutrition*, by which the *Solid* wounded parts are reunited and restored in due *Measure* and *Figure ab intra*, and the diminished *Fluid Parts* are repaired and brought to a laudable *Consistence*. But since none doubt the truth hereof, it would be losing *Time* and *Labour* to insist longer upon it.

Kaufmann,

Nutritian.

C H A P. III.

That innumerable instances confirm us in the Opinion, that our internal Agent, *Nature*, does effectually operate in the total *Excursion* of all *Diseases*, whether *Acute* or *Chronical*.

Hence arose those common Sayings; *I hope my Disease will go off again*, or, *let Nature accomplish its own work in her own Method* and if it happens to succeed according to their Wishes, they further add: *I would take no Physick, because I relyed upon the Goodness of my Constitution*.

The common sayings.

Nothing is more frequently observed, than that the *Poorer* sort of *People* in *Fevers* have recover'd their *Health* again without taking any kind of *Medicinal Prescriptions*; but only from meer *Rest*, *Temperance*, and *Abstinence* from indiscreet and rash *Refrigerations*, in which they have been more happy than others, who at the same time and under the same *Disease*, have been cloy'd with a superabundance of *costly Medicines* to little purpose.

Note.

I have already said, that *Nature* conquers *Diseases* by *Secretions* and *Excretions*

In which Lesions Nature exerts her self most.

Where Nature can have no effect.

The assistance and help of Nature cannot be denied in what Affect soever.

Several instances thereof.

Amulets.

Note.

Of Chronical Diseases.

Now the Affects in which Nature frequently and dextrously exerts her self, are chiefly, whenever the *Lesion* disturbs the Humours themselves, or where by means of their *Appulsion*, the Hurt may be cleansed and carried off; but the affair is otherwise, where the Damage of the *Solid Parts* are the Foundation of the *Affect*, and especially where a considerable share of this Solid Part is detrenched; for there the wounded Vessels and Passages, dedicated to the ordinary and large *Appulsatio* of the Humours are prevented from making *Solids*; because the continual use and Transflux of such Humours never rest, but are in continual Motion towards such a part; where any Matter is settled, which cannot be dissolved, purified, or washed away; or where any Solid Excrecences are formed by the intrinsic Intrusion or Violence of such a Body; for in such cases Nature is unable to perform any thing by its ordinary Motions and Humours, therefore we must expect nothing from her of this kind. As for example, in *Deafness*, where the *Organs* are *Eroded* or *Obstructed* by too large a quantity of Matter; or in *Blindness*, where any thing is grown over the *Pupil* of the Eye, or a *Cataract* engendred under the *Pupilla*: nor in large hollow *Fistulous* and *Cancerous Ulcers*, and *Stratomatous Tumors*: in a *Sarcoma*, *Sarcocoele*, *Bubonocoele*, or in luxurious and fungious Excrecences. Nevertheless the efficacy and assistance of Nature cannot wholly be denied in any of these Cases, how stubborn and impossible soever they may seem to be.

Nor is that the only Example extant, which is given by *Bartholinus* of a *Sphacelus*, which had been remarkably restrained in its progress, the corrupted Part separated from the Sound, and all by the sole Power and vigour of Nature; for we have plenty of such instances, tho' peradventure, all things considered, among an hundred thousand, a Man shall rarely meet with such another Patient. Nor will this seem strange, when we consider that the *Nævi Materni* or natural Moles and Marks, inordinate Formations, *Sarcomata's*, Excrecences &c. tho' of never so solid a Consistence, are yet very often destroyed, or gently dissolved and dissipated by a simple outward *Amusement*, or the touch of a *dead Mans Hand*; by which means, in such as are *Timorous* and *Credulous*, the *Imagination* is irritated to exuscitate and force our vital Actions to a more Vigorous and durable Motion upon, or to such an affected and disfigured Part, that she might demolish such Structures as were inconveniently raised before.

To this Head appertain also, the *Effects* which are frequently obtained only by *Amulets*; not that they make any great alterations upon any *Matter* in the Body, but that the *Agent* in our Bodies, is thereby, as it were, excited to enterprise or omit divers Motions. Hence the effects of *Amulets* exert themselves in such Affects as should be cured by Motions; but much more accomplish their ends on such Persons as are subject to suffer strong *Impressions* upon their minds and resign themselves to the Conduct of *Fancy* and *Imagination*; but seldom prevail upon the obstinate, and such as are of a turbulent, violent Temper.

As touching the forementioned Affects, which solemnly constitute that *Subjectum* of our Natures, they are as well *Chronic* as *Acute* Diseases and tho' in Chronic Distempers, the *Spontaneous* Excursions of Nature do not so solemnly and frequently occur; yet in them is cleared the difference

rence for which the Actions of our Natures are excited to oppugn the Enemy, since such only as would infest us with a *Present* Mischief, are assaulted with a *Vivacious* and vigilant Resistance; but such as design Mischief to the Body, and yet are Sluggish, and consist of no very obnoxious Particles, are negligently and leisurely thrown off, or at least restrained from doing Injury.

Of this we have plenty of Examples, in the Works of several Learned *Physicians* and *Chirurgeons*, especially in the foregoing *Chirurgia Curiosa*; how several Persons have endured *Ulcers*, not only in the *Stomach*, *Midriff*, *Guts*, *Liver*, &c. but in the *Heart* and *Brain*, and being a long time generating, wherein the Patients suffer'd intolerable Pains, and at last a *Cessation* of all Actions gradually followed. It's also to be observed, that the more *Genuine* Inflammations of the noble parts of the Body always hasten to a *Pus* or Corruption, and are either expelled in a few days with the sharpest Conflicts and universal *Febrile* Motions; or else there happens a general *Pause* and Omission of all Motions, where there is no more hopes of a *Victory* and an Abhorrence of all kind of *Resistance*, which we call *Dying*.

Examples of all these kinds may be found in the Works of the following Authors; *Hildanus* cap. 1. *obs.* 13. gives us the history of a Patient where whole parts of the *Brain* were taken out, and yet the Patient recovered. *Dodonius* l. 2. *obs.* 3. of a *Sphacelus* in the *Brain*. *Scultetus* *obs.* 8. of a deadly *Contusion* of the *Brain* and yet the Patient lived nine Weeks. *Bartholinus* c. 6. *hist.* 21. of an *Exulceration* of the *Stomach*. *Valeriola* L. 2. *obs.* 8. of Inflammations of the *Diaphragma*. *Zacutus Lusitanus*, the chief of all the *Medic. Histor. of Tumors* of the *Diaphragma*, whereof some have been sooner or later extremely pernicious. *Riolanus* of an *Abscess* in the *Diaphragma* arising upon a *Tertian* Ague. *Amatus Lusitanus* of an *Ulcer* in the *Intestinum Ileum*, which was perfectly cured. *Becker* of great *Erosions* in the *Guts*. pag. 128. It would be too tedious to recite all the Authors that have written upon *Inflammations*, *Schirrous Tumors*, and *Ulcers* in the *Liver* and other Affects incident to human Bodies, especially such as are called *Acute* and threaten a more present and sudden Danger (of which more anon); and yet there is never wanting a *proportionable* Resistance and Repulsion in *Chronical* Diseases, if not a full and vigorous Expugnation and Depulsion. Hence in *Chronic* Diseases there are rather Endeavours and Attempts, than any perfect and powerful Operations to eradicate the whole Effects. Such are the *Spasmodic* incomplete Motions, whereby the abounding and more fervent Blood is brought towards the several *Emunctories*, but not wholly expressed and promoted there.

Hence the *Arthritis* in young people, the *Sciatica* in Middle aged, *Gonagra* and *Podagra* in the Eldest, where the Arthritic Pains are much the same with the *Cephalalgia* and *Hemicrania*, and indeed are but the returns of the same Diseases, which endeavouring and attempting *bleeding* at the *Nose*, or former customary *Scarifications*, *Plebotomies*, *Sweatings*, &c. which ought to have been constantly repeated after grown into a Custom, which is certainly a Miserable Life; I say for want of those customary *Evacuations*, the Humours condense and settle in other parts, and in all probability cause *Arthritic* Pains; but the *Arthritis* that frequents and molests the *Shoulders* and adjoining parts, with violent, pungent and gnawing Pains, commonly

ly seize upon such as were Subject to *Hæmoptysic Eruptions* in their younger years. Such as are troubled with the *Sciatica* and pains of the *Loins* and *Back*, the Disease proceeds from the obstruction of *Cruent* Bloody pissing, *Hæmorrhoids*, &c. which have ceased to flow as formerly; or from the *Stone* in the *Kidneys*. Such as are *Gouty* must attribute their pains mostly to the Obstructions of the *Hæmorrhoidal Excretions*, as the *Varicosi* in them evidently testify, where the Veins of their Legs are generally Tumified with condensed and Ponderous Blood.

Pardon my presumption in mentioning the Abstruse *Pathology* of some of the most *Unintelligible Affects*, so little considered by many pretended Physicians, tho' diligently observed by the more circumspect and *Antient Practitioners*; which might admit of a *Severe Reflection* upon a Person of my tender years, unless that piece of Justice is done me, as to consider, that indefatigable *Industry* and a diligent *Inquisition* into other *Ingenious Men's Practices*, and a discreet Application of the *Theory*, will instruct one better in a Year, than others can attain to in several; especially if, like *Diogenes* in his *Tub*, they lurk continually in one *University*, without seeing the *Sun* shine in other *Regions*,

However I will venture my Sentiments into the World, in expectation of the *Approbation* or *Refutation* of the *Learned*.

The Causes of
Arthritic
Pains.

I am of Opinion, that almost all *Arthritick Pains* derive their Original from one of these three *Causes*. First, they either proceed from an *Hereditary Disposition*; or secondly, follow upon some *Insufficient* and *Febrile Discussions* and *Excussions*, or *Unseasonable Expulsions* of such Matter to the *Joints*. (On which Head I am of Opinion, that no Person has exceeded, if equalled, the *Learned Sydenham de Rheumatismo*.) Or thirdly, that they generally happen to those of a *Sanguineo-Cholerick* Temperament, either upon great *Evacuations* of Blood, or at such an *Age* as they should, or in such Persons as were accustomed to such *Evacuations*.

Observe.

In confirmation of this latter opinion, which I shall chiefly insist upon, tho' without neglecting any that is material in the other particulars; it's worth our while to observe, that all *Arthritic Pains* generally happen in such *Places* to such *Persons*, and at such respective *Times*, in which the *Hæmorrhagias* were formerly wont to visit the *Patient*. *Hippocrates* has observed *l. 3. Aph. 27.* of the *Hæmorrhagia Nasum* in *Youth*, that if they do not readily succeed, the want of them causes the *Head-ach*, *Burnings*, *Redness of the Face*, *Inflammations of the Eyes*, the *Tooth-ach*, *Anguina's* &c. And in another place asserts *lib. 3. Aph. 29.* that the *Hæmoptyses* happening to young people, between 18 and 35 years of age, if they did not constantly observe their course, and break out kindly, and that a *Consumption* or *Phthisick* did not intervene, then the *Arthritis Scapularis* and *Humeralis*, the *Pleurisy*, frequent *Coughings*, *Squinancies* and the like, would certain follow.

In *Middle aged People*, *Hippocrates* also observes, *l. 3. Aph. 30.* and testifies upon his own experience, that if the *Hæmorrhoidal Excretions* were not duly performed; then *Asthmata convulsiva*, *Hypochondriaca*, *Colicæ Hæmorrhoidales* and *Nephriticæ*, *Nephritico-Ischiadicæ*, *Arthritides*, and at last the *Gout* both in *Hands* and *Feet*, the *Cramp*, &c. would unavoidably succeed.

The same does our great Master observe in Ancient People *Lib. 3. Aph. 31.* that the *Hæmorrhoids* and making of *Bloody Urine*, are reckoned very dangerous; and yet if they cease too soon *Nephritic Pains* ensue, the *Varices*, or the *Gout*. These Indications are collected from Experience, and explain the whole Matter, *viz.* that such *Arthritick* Affects, are nothing else but *Hæmorrhagick Endeavours* familiar to *Plethorick* and *Sanguineo-Cholerick* Bodies which are generally irritated and provoked by turbulent Commotions of the Mind.

Now that *Nature*, in such cases, does not absolutely obtain her design and end, yet she attempts and endeavours it by her *Tonick* and *Spasmodic* Motions, to bring the *Tonical* Congestions of the Blood to the several *Emanctories*; which if vigorously exerted might obtain a beneficial Exoneration. Observet

Hence those actual *Hæmorrhagick* Disburthenings which happen to *Plethorick* Bodies; otherwise in good health, are esteemed so much the more advantageous if spontaneously performed, and certainly prevent many dangerous Accidents in almost all ages.

This is well known even to the *Vulgar*, that *Bleeding at Nose*, does take away or at least eases the *Head-ach*, and that young People who are accustomed to it, are seldom or never troubled with the *Pleurisy*, *Squinancy* &c. for which reason all Men of sense esteem such *Hæmorrhagias* a great benefit of Nature. To which I may also add an Observation, as well known to the *Common People* as to the most able *Practitioners*; *viz.* that such aged Folks as are seized with the *Gout*, attain to a greater Number of years than others; and the reason is plain, because the *Noxious Humours*, which were apt to cause dangerous Diseases, are leisurely repulsed, consumed and congregated in the more ignoble parts: when, on the contrary, young people are fallen upon with greater *Fury* and *Impatience* of Nature, by those *Excussory* Motions, tho' they find a more sudden distribution and retrocurring of Matter than in those of greater years; but if in the beginning of such an *Arthritick* and *Hæmorrhagick* Congestion, the Patient has lived too irregularly, or Repelled it by contrary Medicines, then it would be followed by *Internal Inflammatory* Affects, which incline to a *Hectick* or *Paralytico-Apoplectick* Omissions of the *Tonic* Motions. Note.

But these *Arthritico-Hæmorrhagick* attempts, are not only Examples of *Nature*, agreeable to what we are discoursing; for Nature exerts herself in several other Methods in *Excussing Chronical Diseases*, and tho' it does not so frequently occur, that they come to a perfect Cure; yet we find some such examples every day. *Forestus l. 19. obs. 31.* mentions a *Hydrops Anasarca* cured by a spontaneous Purgings. *Smetius Miscel p. 564.* tells us of a *Dropsy* which was excus'd by Vomiting up the Water. *Schenkius l. 3. obs. 30.* gives us several such Instances, one of a *Dropsy* cured by meer Natural Sweats, another by continual Motion, without the use of any Medicines. *Hildanus c. 1. obs. 50.* relates that a *Dropsy* was perfectly cured by a *Hæmorrhagia Narium*. *Passeriolark. 1. obs. 50.* rehearses a remarkable Instance of a Man that had been *Bed-ridden* several years of a *Palsie*, and was cured by a sudden *Fright*. The House being on Fire and seizing his Bedstead, he recollecting all his Strength, excited by the Terror of his Mind, sprung out of his Bed, went out of the House, and had the use of his Limbs always after. *Paullinus obs. ad act. Nat. Cur. Dec. 11. Ann. vi.* and *Camerarius Syllog. Memorial c. 5. part 30.* gives us the like relations.

In the year 1700. I being then at *Paris* in *France*, a Gentlewoman of about 40 years of Age, of a *Melancholy* Constitution, who dwelt near my Lodgings [*dans la Rue de Fourc au Fauxbourg St. Germain, aupres l' Hostel Imperiale*] had been several years afflicted with two running Sores in her left Leg, which at the Increase of the Moon discharged great quantities of waterish Matter. It happened one day in *August* she went to Church, and as she was telling o're her Beads, and sitting her left Side near the Wall, under an *old Picture* of some *Saint* or other, which suddenly falling down and hitting her sore Leg (but without doing it any Injury) put this poor Gentlewoman into a very great *Fright*, as she told us when she came home, and as I could easily perceive by her being something *Feverish*, which went off next Morning. Four days after she desired me to see her Leg, which to my Admiration appeared very forward towards a Healing, for I had seen it about three Weeks before in a very ill Condition, when she had a *Chirurgion* to dress it; but he and others having done her no good, she now resolved to make no further use of their *Medicines*, and only applied some *Plantan* Leaves to the Sores, and in a Months time the *Ulcers*, which in truth were before very large and deep were both perfectly healed up; and this Gentlewoman sincerely believed, that her Sores were cured by some peculiar *Virtue* in the *Saints Picture* that struck her Leg; nor could I ever persuade her to the contrary, by all the Arguments I could use against that fond Opinion.

Cold Bath.

But we not travel out of *England* for an Instance, if we consider the *Cold Bath*, a thing so very useful in exciting the *Vital* Actions to a more vigorous Motion, in order to open *Obstructions*, and force the Liquors through their usual Passages; or that the *Noxious* parts of the Blood might by that means be the sooner excused. Not that there is more virtue in that *Water* than in others, to penetrate into the inward Parts, and correct the Juices; No, but directly contrary, for *Cold* makes it unactive; nor is it only the Extremity of *Cold* that does the Business; but the sudden *Immersion* of such infirm Bodies, that strikes a Dread, Terror, and Affrightment into the Mind, and excites Nature to a more Vivacious Motion, in resisting that, which by it's extraordinary *frigidity* and sudden Surprise, might produce some corporal Detriment; and for this Reason it is, that *Timorous* and over nicely sensible People receive the greatest Benefit by it, especially in *Rashes* and *Lameness*.

Concerning the Methods of curing amongst the Indians.

The *Indians* in *North America*, have much such another Method of curing *Fevers*, and as soon as any of them fall sick of that Disease, they put the Patient into a *Sweat*, which they dexterously perform only with hot Stones, and as soon as the Patient is in a good *Sweat*, they all of a sudden, and at once, pour upon him from Head to Foot, a great quantity of *Cold Water*, and if he is of a strong Constitution, they add a second Pail full as before; which puts the Patient into a terrible Fit of Shivering and Quaking; but by this means they immediately prevent the further progress of the *Fever*, and save many a ones Life; but this must be done in the very beginning, nor the Cure will be as dangerous as the Disease: if it happens that they can sweat the Patient near a River, they make him run at once out of the *Sweat*, into the Water over Head and Ears. This is their general way of Cure, and the Method they chiefly rely upon; and not with

out great Reason; for what must cure us is always in us, if we knew but how to manage or excite it to Action. A Fire Stone does not make the Fire in the Steel, it is there already, and the Stone does only excite or provoke it. Cordials, Chymical Preparations and great Doses of Decoctions, Powders &c. are not things to be absolutely depended on; but if we have a right Apprehension of the Indigitations of Nature, and assist her accordingly, very small Matters will relieve her; but let us trace and consider her Preservative Motions a little further.

To many Persons there happen Spontaneous Loosnesses, sometimes occasioned by the change of Seasons of the year, as at Spring and Fall, and other whiles by committing Errors in their Diet, eating Fat and Greasy Provisions, and drinking after them New, Muddy, Thick, Nasty Beer or Ale. Now if Nature is once accustomed to relieve her self by Diarrhæas, and they afterwards should not proceed as usual, many grievous Passions will follow; which by the Stasis, Impaction or Corruption of the Crudities are procreated; but if such Excussions orderly and timely happen, then the Body is thereby preserved from Injury and further Detriment,

Natural Sweatings at certain Seasons of the year, and sometimes upon change of Weather, tho' they make the Patient Dull and weak, yet they prevent several approaching Diseases; and on the Contrary, when they Omit their usual Visits, the Rheumatism, Pain and Wearyness in the Limbs, the Erisipelas, Impostumes, Coughs Asthma's, Fevers, &c. are the consequence of such Omissions.

To this Head we may also refer Epilepsia's, and the several Diseases of Virgins, which are cured by Matrimony, Child-bearing, &c. The Circumstances of young Children when they are Breeding Teeth. The Abortions and Mola's in Women, the many Troubles they encounter when such a Fœtus is Dead: the several Confectaries of the Irregularity, Coagulation and Corruption of the Milk: the Hypochondriack Affects which arise from obstructed Terms and Hemorrhoids; to which the the Longings of Gravidated Women, and the Green Sickness in Maids are near of kin to some that are visited with Fevers. But this Head is so copious, that I shall leave it to another time. And so much for Chronical Diseases,

In Acute Distempers the Trophies of our Internal Agent are more frequent and conspicuous, and discover a more Vegete and powerful Resistance.

As in Fevers, where the Concourse of the Vital Actions are so evident, that if they should neglect their continual good Offices, irreparable Damages would ensue. Hence it is that a Contagious Disease is then accounted Malignant and Deleterious, when it insinuates itself into the Body unresisted by any Febrile Agitations of the Humours, but freely acts in the Body concessa morâ & spatio nocendi, under desperate Terrors, Loss of Strength, Lypothymies, Obnubelations of the Mind, and this without any Help or Resistance; for then not only sudden Death, but a more speedy Corruption of the Cadaver does follow.

On the contrary, where there is an assiduous Febrile Commotion, Secretion and Excretion does luckily succeed; there the most grievous Fevers, yea those which they are called Pestilential are subdued, to the great benefit of the Patient; and this leads me to repeat what I

How would

The Preservative Motions of Nature farther considered.

Note.

Several Affects are proposed wherein we may observe the wonderful exact Orders of Nature.

Of Acute Diseases.

Of Fevers.

Note.

have said before, viz. That a greater number of People are recovered out of Acute Fevers, yea and out of Contagious and Malignant Fevers also, without the use of Medicines, than are restored by Bleeding, the use of Opium, Vomits, Purges, Sudorificks, and other Common Methods, so much in Vogue among such as know no better.

Observe well.

So that by what is already alleged, it is certain, that a Physician cannot oppugn such *Pathemata's* in Fevers, which a Vulgar Error has denominated dangerous Effects of that Disease, without Manifest Injury to the Patient. As for instance; to cool the Heat of an Inflammation by holding the part in cold water, will certainly cause a *Sphacelus* in such a part; nor can I allow the indiscreet adhibition of *Opiats* to make Restless Patients sleep, unless the Physician has a Mind to cause an irregularity in these Motions, and if it increased and continued, to throw his Patient into a greivous and dangerous *Delirium*. Nor can a Physician hinder Seasonable *Sweatings*, or extimulate unseasonable ones, without detriment to the universal Decursion; nor must we attempt to obstruct or suppress the Critical Endeavours, especially the Actual *Exercises*, tho' they cause never so great a Commotion before they break through.

A Physician should rightly inform himself of the Designs and Intentions of *Paroxifms*, the Opportunities of Evacuations, and as well their preparatory Furnitures as the Value of their *Excretoria's*, that he may know how to succour them, at least with a proper Regiment or agreeable Medicaments; and then he may happily overcome Fevers by an Easy and Secure Method, as *Casalpinus* affirms.

*Carpe Cibos faciles, placidamque admitte quietem;
Curabis varias hac ratione Febres.*

But if he perceives the Motions disorderly, and no *Indicia* of Preparation or Concoction, nor that Artificial Medicines or orderly Regiments will avail, in order to provoke them; then he has a sure Foundation to prognosticate, which will shew the Certainty of the *Medical Science*, and the Excellency of the Medicinal Art; also if the Physician finds an inordinate and turbulent Concourse of the *Vital Motions*, and that the most proper Medicines have had no effect, there he may infallibly predict, that there is no further hopes of Life. Therefore a Physician should have care at such a time not to promise any good event out of a meer Inconsiderate Hope, or brag more than he is able to perform, as a great many do, to disparage others who were concerned with the Patient before, and thus only commend their Ignorance by their lying Presages.

Observe.

In Acute Diseases, Fevers are the chief, wherein our *Internal Medicatrix* discovers her Inclinations, for she either suddenly and wholly forbears her beneficial Operations, as in *Apoplexies*, *Catalepsies*, *Palsies*, *Syncopes* and *Death*; or with an augmented and invigorated Force, beyond the accustomed and ordinary Degrees of Acting, equals the Proportions of her *Motions* to the habit of the *Læfion*, the Cause already present, or the Disease which is but beginning. But let no Man imagine, from what has been said at any time in this Discourse, as if *Nature* always acted with such a *Mechanical* and *Mathematical* proportion of Motion, that she never fails to encounter or subdue the

Ob-

Object, with which she contends ; with an exact counterforce, according to the proportion of the offending Matter : no, she sometimes grows *Outragious*, and not only acts by an *Erroneous Invasion* ; sometimes too Timorously, and other whiles too Rashly ; but she also *Errs* now and then in selecting *improper Organs*, and attempting her *Secretions* and *Excretions* through incongruent ways and Passages.

Which Constancy and Staggering of *Nature*, exquisitely agrees, *First* with the *Rational Motions* of the Patients Minds, and hence it is that those Actions in *Slothful* People are *Sluggish* ; in the *Rash* and *Passionate Violent*, and in *Easy* constant Minds very *Calm* and peaceable. *Secondly*, they agree with the other *Perspirabilities* and Liberty of the Passages in the Body. *Thirdly* with the remaining *Power to Act*, also with the *Age* and remaining *Vigor* of the Patient, according as he is more or less enervated, and rendered incapable of Action, or whether the *Sickness* proceeds from an ill way of Living, sudden *Terrors*, *Cares*, *Distractions* &c. *Fourthly*, above all it's most certain, that those who are frequently dedicated to the *Rational Act*, labour more heavily under *Sickness*, than simple and negligent persons ; infomuch that the untimely *Speculations*, *Consultations* and *Anxious Thoughts*, add real and present *Injuries* to all such *Diseases*, in which *Nature* used to exert her self too vigilantly. Now all this being certainly true, and exemplified by daily experience, I will proceed to the next *Chapter*, and explain the way and manner of *Nature's Working*.

The notable Agreeableness of Nature with the motions of the Mind.

C H A P. IV.

A further Declaration of what is said ; That, of all *Mixtures* in the *Universe*, our *Animal Mixture* is most subject to *Corruption*, and yet is preserved many years, and that amongst the *Organs of Corruption*, *Humours*, *Heat* and *Air*, which all induce and excite a speedy *Putrefaction*, to which our *Animal Mixture* is always so *Inclinable*.

THE *Conservation* of any thing *Corruptible* to so high a degree, must be performed by some *Inward* and *Immanent Principle*, without any *Material Concourse*, and that is properly what we call *Life*. Now this *Conservation* is not performed by an abstruse and imperceptible *Occult Quality*, or unintelligible *Spiritual Efficacy* ; nor by an inward kind of a *Material Conditura*, as some use by way of similitude, and call it *Balsamus Vitalis*.

Life what.

But it is perfected by a *Mechanico-Physical Operation*, viz. a continual *Local Motion* or *Circumagitation* of the *Humours* to, and through the *Solid Parts* ; and yet such a *Progressive Motion* of the *Humours*, cannot defend them or the *Parts* through which they flow, from *Corruption*, but that they will all successively run into a *Dissolution*, or into a corruptive *Transposition* of its *Mixture*, which they must necessarily suffer, tho' they are in *Action*, and even under the *Protection* of the *Vital Conservation* ; therefore the principal *Actions* in this *Conservatory Mechanism*, must fundamentally consist in the continual *Secretions* and *Excretions* of *Corruptibles*, or such parts of them

How the Body is preserved.

them as are actually suffering Corruption; which is done with all possible dispatch, lest their longer Continuance should cause a sudden fermentative Diffusion of the Corruption over the whole Body.

Secretions how performed.

A. elidit vlt
p. thundery
dine sicuti
p. unitor vlt
huid vlt

Now this *Secretion* is either performed, *First* by means of a *Perpetual Motion*; or *Secondly*, by a Particular Structure of various *Colatory Organs*, by whose perpetual Motions the Humours are brought in a continual Transcourse to the several *Colatoria's*, through which the more Active and over *Tenuous* corruptive Particles slide in their Passage, and so the remaining quantity of Humours are repurged from such corruptible Portions; insomuch that by this Transition the Humours wash away, and carry with them from the Solid Parts, such Portions as are beginning to corrupt; for a great Corruption in the Solid Parts, will infest them with stinking Matter, which may easily be scoured away, by the Transflux of Humours.

Observe.

This Hability in transmitting and separating the *Tenuous* and over Active corruptive Portions, consists in the Structure and proportionate Stricture of the porous Parts. The chief point of this is Motion, by which the Humours are perpetually carried to and through these *Porous Parts*, which Parts are kept in a due and proportionate Stricture, that they be not too far distended by the forcible Appulses of the Liquids; for otherwise the *Crafs* as well as the *Tenuous* would promiscuously break through the Laxated *Pores*, and then the *Secretion* of the *Tenuous* from the thicker, would never succeed.

Pulsation.

The first and fundamental Motion of Life, is the *Pulse*, which never omits the Circumagitation of Humours, unless impeded by the intervention of some remarkable Error or Obstruction. Its Motion is Adequate and Forcible, by which the Humours are driven to the several *Colatories*. The *Tone* of these Parts and the proportionable Streightness of them, do in some measure resist and stop the Current of the *Transflux*; so that when the thinner Parts, by means of the pulsifick Force, and the Resistance of the Parts through which it is to pass, after some Compression, being forced to *slide* through the narrow *Porous Colatoria's*; it leaves the thicker and more substantial Parts behind. These kind of *Recrementitious*, very *Tenuous* and *Active* Humours, are partly *Spumido-balituons*, and partly *Salino-Sulphureous*; the latter are *Crasser*, but more durable than the *Acrimonious*, *Eroding* and *Burning* Humours. The first kind are generally expelled through the most dense parts of the Skin, and they either successively exhale in manner of a *Vapour*, or upon some great Commotion, are thrown out with a small quantity of *Aqueous* Matter wherewith they are intermixed; and then it's called a *Sweat*. The latter kind are commonly *Transcolated* through the *Kidneys* and constitute the *Urine*; but if they abound in Quantity, part of them will go forth by Sweating, if not forced by the contrary Evacuation. The more *Crafs*, *Mucido-Viscaginous* and *Salino-coagulatory* quantities are thrown to and through the *Guts*, with other Excrements.

Excretion.

This is the usual Method, by which the *Excrementitious Apospasmata's*, which are under a perpetual Appulse of Humours to those *Secretory Organs*, into which they are forced; and being driven through them by *Transpulsation*, are there separated, to prevent their Infecting the rest of the Humours.

But let us also observe from whence such *Recrements* in the Body do arise; in order whereunto, we are obliged to consider the *Human* or *Animal* Body in a two-fold respect; first in its *Proper State*, wherein it's able for some time to subsist without Food: Secondly, the Necessity of its being *Relieved* in that condition by receiving Nourishment, which may be called its purely *Natural State*; to which we may add a third, *viz.* *Proness* or Inclination to Corruption.

From whence
the Recrements
arise in the Bo-
dy.

First, we may observe, that such *Recrements* in the *Human* Body, are engendred out of a proper Dissolution of the *Animal Mixture*, and by the Avulsion of a continual *Attritory Motion* the Humours which are of a thicker substance, are either continually rubbed off against the solid Walls of the *Porus* parts, or are successively separated and wasted by the *Intestine Motions* of Heat and Fluidity. By this means it comes to pass, that the Blood by degrees is dissolved and converted into an *Excrementitious Serum*, the most *Tenuous* and *Mucid* parts of the Blood are extenuated into an active Saltness, the *Axunguous*, *Sulphurous* parts becoming too Agile, by their being perpetually enraged and extenuated, they take their flight and leave the *Craffer Mixture* behind, which join with the *Salinous* Parts in a *New Acrid Mixture*. The rest being more *Mucose*, as having lost their Agile Faculty, conglutinate by degrees into a tougher Matter; for having an *Oily* Substance in them they cannot mix with what is *Aqueous*, and so swim, and are dispersed here and there, till they find a place fit for their reception.

How engendred.

Of the second there is no necessity of saying much, because it's obvious to every one, that several such like *Heterogenea's*, both actively *Saline*, *Salino-Sulphureous* and *Acrimonious*, are conveighed into the Body by such things as we daily eat and drink, and much more into the *Human* than any other *Animal* Body whatsoever.

Of the third it's chiefly to be observed, that the whole Mass of Humours and the Universal Mixture of the Solid parts, cannot be transformed into any thing but these three *Corruptibles*, *viz.* either coacervated *Salsa Acrimonia's*, or *Salso Sulphurea's* which much resemble Natural *Biliofa's*, or lastly into a true *Putredinous* Corruption, all which do gradually invade the *Animal Mixture*.

Intemperate Salts are produced, either from some ill Quality in *Aliments*, or from an Imminution of regular *Secretions* and *Excretions*; which Imminutions equally depend upon some impediment or other in the *Colatories*, or sometimes on it's *Saline* quality, which if it is severe and subastringent, it will more powerfully provoke a Constriction of its own Passages, and consequently their Imminution.

This also happens in Generating, Intemperate, and *Salso-Sulphureous* Matters, which generally proceed from the too frequent use of *Spice*, *Wine*, *Brandy*, &c; but this is so well known, that it would be needless to detain the Reader longer about it. And as to the Imminution of a *Regular* Excretion, it is to be observed, that the Coacervation of such *Recrements*, and chiefly the Imminution or Diminution of such *Excretions*, as ought to carry off the most *Tenuous*, *Spumid* and *Halituons* Humours, as the *Diapnoes*, or Insensible Transpiration, draws after it imminent and present Dangers.

Such *Putredinous* Humours, as are properly called Corruption, are engendred either by an inward *Stagnation* of the Blood, in or near a *Solid* part, where it turns to Corruption, and like all other *Putrid* Ferments,

Corruption.

Ferments, diffuses and communicates itself to the Neighbouring parts : or by means of some intrinsic Contagions or *Miasmata's*, the most violent whereof is that *Contagium Pestis* whose putredinous Efficacy sufficiently demonstrates ; First, the Permaning *Flaccidity* of such Bodies as die of the Plague, and their sudden turning to Stench and Corruption. Secondly, the Nature of *Anthraxes* or *Carbuncles*, which as they are nothing else but *Pustula's* formed into *Pestilential Miasmata's*, extruded to and concentrated in the more Ignoble Parts ; this Extrusion being to such Parts as immediately suffer the continual Afflux of Blood, there follows a sudden *Sphacelatio*, which in few hours not only produces a Filthiness, but also a *Diffluent*, Corrupted Matter, or an absolute Putrefaction.

This *Corruptela* itself also agrees with the *Natural*, or as some call them *Non-Natural* Excrements ; for the Contagion itself, and the most subtil Portions of the corruptive parts, are of a *Spumido-Vaporous* and *Halituous* Consistence, and therefore ought to be referred to such parts as are most proper to such kind of Secretions, viz. the *Periphery* of the Body, where it either flourishes with *Patechia's*, or if possible is ejected by Transpiration or Sweating. Of which see the Learned *Sydenham*, *De Sudoribus*, in the beginning of his Discourse on *Pestilential Fevers*, where he takes especial notice of the *Natural Excretion* of such kind of Sweatings, and that they ought to be assisted by an easy external Regiment, and chiefly by Moderate Rest ; but that all Hot *Diaphoreticks* and *Anxious Sultry Regimina's* are to be avoided as Noxious and Dangerous in those Distempers.

But if this *Excretion* is less in proportion than it ought to be, then *Nature* wonderfully collects it, and so throws it off either by heaping it together in a *Carbuncle*, *Bubo*, &c. as good Symptoms of Recovery ; where as well that part of the Blood as the *Humor Mucidus lentus* being less Fatty, are therefore indisposed to a true Putrefaction.

The *Crasser* Parts resulting from a *Putredinous* Corruption, are *Salino-Sulphureous*, very Acrid, *Salso-terrestrous* and of a Dry Consistence ; and how *Nature* Institutes such an *Ablation* I have shewed already. By all which it's apparent, that the more and nearer such a *Heterogeneous* matter, resembles the *Crases* of *Natural Excrements*, so much the less is the present Danger by being farther from an *Entire* Putrefaction ; and with the greater Facility, *Nature* performs the *Excussio* of the Putrid Matter, by *Secretion* and *Excretion* : But the more it differs from this similitude in substance, in being either too subtil or in a singular quantity ; yet highly active or attended with a very particular *Fermentativo-Putredinous* Specie of Corruption, the more dubious, uncertain and tumultuous are the *Secretions*.

From hence follow *Anxieties*, *Deliriums*, *trepid Deserctions* of the *Vital Motions* or *Lipothymies* ; as also *Furious* and *rapid Intensions* of the *Vital Tone*, with an *Extinction* of the *Senses* or *Convulsions* ; and at last an utter *Cessation* of *Motion*, to give place to *Death*.

In the next place it seems necessary to observe, what excessive Perturbations happen, when *Nature* either *Erreth* or *Neglects* the regular Courses of *Secretion* and *Excretion* ; for then nothing can be expected, but that the Patient must undergo the fatal Consequences of being deprived of all the beneficial Motions of *Nature*, seized with a *Lipothymia*, loss of Strength, and at last to be assailed by *Death* ; or if he escapes that

that terrible stroke, he is liable to to very turbulent Intensions of all his Vigour, as in *Convulsions*, or by a confused Alternation of either of them: because that which ought to be extruded, is kept back and retained by Nature's erring in the regular kinds of *Excretions*, which cause irreparable Injuries by such noxious Excrements, especially remitting the more *Tenuous* and active ones, to the tender and infirm Organs of *Secretion*, in which they settle; and by the Endeavours of Nature are forcibly driven in, and so gradually infer a Destruction. And here I think fit to repeat what I have said before, viz. *That the general Endeavours of Separating and Expunging, is both useful and necessary*; but particular Errors suppress all, that otherwise would have had a beneficial Effect.

And since I am speaking of the Faults, that happen to the *Crafts* of Humours and their Qualities, I hope none will imagine that I incline to that Absurdity, wherein the Modern *Schools of Physick* so wonderfully please themselves that they have Invented several Hundreds of *Sapores* or *Tastes*, and several thousand *Mutations, Mixtions* and *Transpositions* thereof, out of which (as they say) proceed many particular Irritations of the Spirits, Obstructions of the Passages, Vellications, Punctions, Incisions, &c. of those particular parts; which is nothing but *obnubulating* the most occult Qualities, only with general *phantastick* Adumbrations.

Concerning the
different Tastes.

However, I am certainly assured, that in many, yea, in most grievous and dangerous Diseases, a *Phantastick* Variety of a particular Acrimony, is not the *Cause*, but the *Motion* of Humours; nor is the Motion of Humours, *passively* obstructed or hindered, as some do imagine; but *Actively*, a *Congestory* and *Eluctatory* Motion, in prospect of the *Excretion* and *Secretion*, of which I have sufficiently discoursed already, in *Arthritick* Endeavours.

The Cause of
Diseases.

But here I shall shew, as much as is necessary for the Present; that the Blood may *Coacervate* more than is necessary; which is not only well known to Intelligent *Physicians*, but so demonstrative, that none can contradict it. The Consumption of super-abounding Blood, is evidently the Augmentation of the Body; first in all the Parts, afterwards and more especially in the most solid and *Osseous* Parts of it: *Non-natural* (as it's called) is its *Eliquation* by proportionate Motions of the Body: Extraordinary in the sincere *Excretion* by *Hæmorrhagias*, which break out inwardly, and cause a Congestion in the same Part where the Eruption should happen.

The Abundant
Blood.

This partial *Congestion* made by the *Tonic* Motions, as may be observed in Women, when their *Milk* begins to come into their Breasts; which *Tonic* Motions proceed either speedily or slowly; if hastily then an *Eruclation*, or at least an actual *Excretion* will follow: if timorously and slowly, then those Motions remain in a continual and tedious Endeavour, which I call *Eluclation*.

It's partial
Congestion.

From this Explanation, one that has but a competent share of Sense may easily comprehend the Various *Arthritic, Hemicranic, Hypochondriac, Sciatic, Varicodic, Erysipelatodic, and Podagric* Motions; at least he may learn out of the Practic part; first, the Veracity of the various *Hæmorrhagick* places according to the Age; which is confirm'd by *Hypocrates* in his third Book of *Aphorisms*. Secondly, the Truth of the *Eluclatory* Endeavours and Straining in every age, and how they agree with the *Eruclatories*. Thirdly, the Force of *Hereditary* Impressions

and

and Customary Usages. Fourthly, the Power and Strength of the Affections of the Mind, where the Motions generally resort, and how they accelerate or disturb the vital Motions. So that in the whole it may be easily discerned, how Nature exerts her self for the Benefit and Ease of the Body, in preventing the slow and injurious Motions of Heterogeneous Matters, from being noxious to the Body; which she performs directly, spontaneously, and with very little Tumult or Confusion, only by the fore-mentioned Motions; tho' where Nature is slack and does not employ her utmost Efforts, as in Chronical Diseases; there we should not be wanting to provoke her to more vigorous Endeavours.

C H AP. V.

The Application of all that has been discoursed concerning Nature.

We ought to rely upon the practical part of Physick.

A Theory of the Human Body, disagreeable to Practice, Prognosticks and Cure, is nothing but a meer History and groundless Trifling, a Reproach and Scandal to the Profession; the Cause of several unnecessary Controversies, and verifies the Ancient Adage, *Optimos Theoreticos, esse miserrimos Practicos*. He therefore that studies to be an expert Physician, should have a special regard to the Practical part, and duly observe Nature in all her various Motions, that he may know how and when to assist her; and, by comprehending what we have been discovering, may attain the Knowledge of the three following inestimable Particulars.

First From the various Natural Endeavours and Excussions, he may learn the true Causes of many Diseases, which have been ignorantly and absurdly defined by such as wanted Learning and Experience; and therefore have Invented several ridiculous Speculations, and ascribed them sometimes to Ferments, other whiles to Savage Spirits, and actual Worms.

The Benefit arising from hence if we observe the various Motions of Nature.

Secondly, By these Contemplations, he will better understand Nature's Motions, Organs, and Times of her regular Excretions and Secretions, as well in general as particular. Thirdly, He may hereby be enabled to perform a Safe and certain Cure in most Diseases; by a due Observation of these Concurrent Natural Motions; by timely Assisting them if too Slow or Unactive, and by Appeasing and Restraining them if too Violent; and if they are totally Deficient, then, without calling his Judgment into question, he may confidently prognosticate the Death of such a Patient.

Chirurgeons as well as Physicians, may collect from this Discourse, that the Moderate Excussions of Nature, ought by no means to be obstructed, which I have often hinted throughout this Brief Discourse; and may be perceived in External or Internal Inflammations, where, if they proceed moderately, they will come to Suppuration without Danger; but if they should be ignorantly treated, with actually Cooling, Astringing, Coagulating, or Stupifying Medicines, then they'll run in-

to an absolute *Putrefaction* or Mortification, or else turn to *Schirrous*, *Stuborn* or *Malignant* Ulcerations.

Now if we consider the wonderful Attempts and various Endeavours of Nature, in *Excussing* the Putredinous Ferment, of that notorious Distemper called the *French Pox*, it must certainly seem very strange to those that are Ignorant of the internal *Conservative* Motions, that at its first Entrance, *Nature* is ready to Extrude it presently, the same way it came; and in order to that end, an *Inflammation* is immediately raised, then an *Eruption* in the *Vesicæ seminales*, from whence it's forced forwards with its *Spermatick* vehicle. Now, let those that pretend to a safe and speedy Cure of Claps, resolve me, whether it would not be the safer and more expeditious Method, to help and assist Nature in her *Excussions*, and especially in the same way she has prudently chosen, than to restrain and oppose her? And yet the Generality of Practitioners, are still employing their *Swinging* Doses of purging Medicines, to keep the Body cool and Feeble, and so cross the designs of Nature in throwing off the *Putredinous Venereal* Matter; till at length it is forced to Stop of itself, and then it gradually infects the whole Body; which is certainly a Strange way of *Curing*, and never like to have a tolerable issue, when *Nature* works one way and the *Physician* another; but on the contrary, it generally happens, that Patients are notoriously *Pox'd*, by those that pretended to Cure them of a *Clap*. I will not oppose their *Purging* if the Inflammation is very violent; but to think to Cure the Patients *meerly* by *Purging* without *Poxing* them is absolutely impossible. Others more *Indiscreet* and unreasonable than the former, perhaps that they might receive their Money sooner, or because they know no better, purge their Patients once or twice, and then send them to the *Wells* to drink *cold Water*, or give them presently *Astringent* Pills, and thus violently stop the Running, which by gentle Dureticks, Nitrous Medicines and especially such as resist *Putrefaction*, should have been moderately carried off; but the Patient thinks himself Cured if his *Gonorrhæa* or running is but stop'd, when in truth a little time discovers that he is *Poxed* with a Vengeance. Now, how well these Practitioners understand *Nature*, is sufficiently understood without a further Explication. But let us look a little further, and see how Nature operates in Excussing this Matter; if it is untimely stopped, then this *Putredinous* venereal Matter, is successively forced and congested in the *Groins* as the nearer *Emunctories*, where an *Inflammation* is raised again, to digest the Putredinous Matter, that if it may be thrown off again in a *Pus-like* Substance and the Flethy part becomes more and more putrid to give way to the *Congested* Matter, and then is called a *Bubo*, and an admirable *Excussion* it is, if but rightly managed; but if repelled by the Application of contrary Medicines, as *Mercurials*, or great *Coolers*, and *Astringents*, or is Scarified or Opened before it comes to *Maturity*, then nothing can be expected but a confirmed *Pox*, because the *Venereal* matter is driven back again. Then Nature perhaps makes another attempt, and causes a *Bubo* in the other side, and tries, if impossible, to excuss it that way, for since one side fails the other may succeed. But the rash and Inconsiderate *Coxcombs*, that resist her in one

The French Pox

Note.

Attempt, will do it in another, till the *Putredinous* Matter has gradually infected the whole Mass of Humours, and is become so violent, that it, Ascends and Disorders the more Noble Parts of the Body.

Nature being thus unhappily disappointed by her Ignorant Servant, she attempts another Method, that is to throw it off by *Blotches, Spots, Beules, Tumors* and *Inflammations*. This she attempts in the *Head* by *Tumours*, in the *Nose, Throat* and *Ears* by *Inflammations* and *running Sores*: In the *Shoulders* and *Breast* by *Imposthumes, Ulcers, Coughing, &c.* in the *Back* and *Belly* by *Ulcerations, Impostumations, Fistula's, &c.* And in the *Legs* by *Nodes, Tumors* and *Ulcers*. Thus is the Body Putrified alive, and to such a degree, that at last Nature or Art can contribute nothing to its Relief; for tho' Nature strives with all her Might, yet the *Noxious* Matter has so far infected all the Humours, that nothing sound is left for her Assistance. However, it is not asserted that a *Pox* does always gradually proceed from a *Clap*; No! for sometimes the *Venomous* matter is so subtil and agile, that it insinuates itself into the Blood, without causing a *Clap*; but in time may be *Extimulated* by some great Commotion, and then shews its putredinous quality; which, as I have often observed, happens most in *Heavy, Dull, Melancholy* Constitutions, where the Natural Vigour is slowly put into Motion; but such as are of a *Sanguine* Complexion, *Brisk, Airy*, and of an active Body, they will soon after such an *Impure Venereal rencounter*, soon find themselves diverted by a *Gonorrhæa*.

So that the best way for a Physician or Chirurgion in such cases is to proceed *Moderately*, and not attempt any thing rashly and indiscreetly, lest he should hinder Nature in so useful an Act as an *Inflammation* is. There are also several Dangers that attend the Opening of *Inflammations*, before they come to Maturity, but being all well known to every ingenious Practitioner, and sufficiently demonstrated in our *Chirurgia Curiosa*, I shall not rehearse them.

Several dangers arising from usual Evacuations, if Obstructed.

If the Natural, Spontaneous, *Hæmorrhagiack* Depletions of the bounding turgid Blood do regularly succeed, they are little or no Disturbance; but if obstructed in its Progress, Congestions will arise in the Neighbouring Parts, and from thence it comes to pass, that such young People as have been accustomed to Bleeding at the *Nose*, will be troubled with the *Head* and *Toothach*, pains in the *Ears*, *Inflammations* of the *Eyes*, *Squinances*, and *Erysipelata's* in the *Face*: and those that have been accustomed to *Hæmoptisick* Evacuations of the Blood, if they are hindred; *Dry Coughs*, *Convulsive Asthma's*, Pains of the *Shoulders* and *Scapula's*, bloody *Vomitings*, the *Phtisick* and *Hectic* Fevers will follow.

For this Reason we are obliged to observe the consentaneous Method of Nature, and the great necessity of persuading People to use *Moderation* in their Diet and Exercise, that they may be able to consume the Super-abundance of Blood; but since Arguments to this purpose, will have little effect in this Luxurious Age, at least to perswade them to suffer those gentle *Eruptions* of Blood which Nature Excusses, although of not so good consequence in the Future, than if such Blood had been Naturally consumed either by Diet, Exercise or Medicines;

and

and this ought also to be considered by those *Leeches*, that are so apt to Bleed their Patients upon any trifling Suggestion; for if once accustomed to it, 'tis the same with *Spontaneous Exsuffions*, which cannot be omitted without Danger; whereas, on the contrary, if proper and gentle *Diuretica*, especially *Nitrosa* and *Cinnabarina*, with a small *Diet Drink* were prescribed, the abounding Blood might be easily consumed, many unhappy Accidents and future tormenting *Lingring Diseases* might be prevented; of which *Gouty*, *Rheumatick*, *Nephritick*, and *Phtisical* Patients are deplorable Spectacles.

In *Fevers*, which was the last Subject on which I treated, I would advise every Physician to attend his Patients with all imaginable Diligence, and carefully observe the Operations of *Nature*, with her *Symptoms* and *Ecctrick Endeavours*, in all such Persons as *Recover* meerly by her Assistance; for by that means he would soon understand what a *Paroxysm* is, and find it by Experience to be the most certain way of Cure, to assist *Nature* in her febrile *Paroxysms*, in order to expel the *Morbifick Matter*, and instead of adminstring *Vomits*, *Purges*, *Sweats* and using unseasonable *Phlebotomies*, to employ *Corrigentia*, *Absorbentia*, *Temperantia*, and moderately promote *Natural* breathing *Sweats*, or or otherwise as the beneficial Indigitations of our *Internal Medicatrix* shall premonstrate.

Thus an Ingenious Physician or Surgeon, by accommodating himself to the various Operations of *Nature*, and by serving her when she wants Assistance, will be able to discover the *Specie* and *Motion* of the peccant Matter by her Endeavours, and trace her so exactly, that she shall scarce be capable of *Extruding* them by an other way, than what he knows already; and then if he is Master of any more commodious and expeditious Artificial Corrections, and Specifick Medicines than are commonly known. He may employ them successfully, to his Patient's Advantage and his own Honour; Whereas Insolent Ignorant *Quacks*, and Blind *Empiricks*, whose utmost Art consists in *Bleeding*, *Purging*, *Vomiting* and *Sweating*, is only obliged to Blind Chance if any of his Attempts succeed, because he is as perfect a Stranger to the Operations of *Nature*, as he is to the *Liberal Arts*, or the Laws of *Modesty*. No Science, in the Republick of Learning, is more beneficial to Mankind, than the Noble *Healing Faculty*, and yet none is so horribly and shamelessly Invaded by Ignorant Pretenders, and therefore I will thus conclude;

Olim erat in pretio Divina Scientia, Culta
 Regibus, à Summis Nobilitata Viris;
 Nunc dejecta jacet variisque erroribus acta
 Hactenus, Heu! vulgo præda petita manet,
 Quæque Dei donum dicta est, Cacodæmonis ausu
 Sordet, & in questu pro Meretrice sedet.
 Dum sese Medicum fingit Myropola superbus,
 Clamosus Stentor, Rasor, Agyrta fori;
 Dumque etiam è ludo quivis Bacularius, & qui
 Grammaticus Pueris virgea Sceptra vibrat,
 Quin Mysta ipse Sacer, mandato Munere fungi
 Oblitus, Medicum sulcat avarus agrum;

Pellere carminibus Circes aut murmure morbos,
Dum studet & quævis pharmaca miscet Anus,
Qualia jam sacris Hecates anus invida furnis
Pharmaca decoxit, Sesquisenexque Charon ;
Dum quoque defertor, nuper quam exercuit, artis
Omnis fit Medicus, nomen & inde crepat
Sordidus hoc Sutor, fætus hoc Pellio, Pistor
Hircosus, Sartor hoc Scabiosus agit.
Et mihi (si centum linguæ essent oraque centum)
Quos omnes nunquam dinumerare queo.

F I N I S.

Olim erant in patria Divina Scientia, Calla
Regibus, & summis Nobilibus Viris ;
Itaque hactenus factis variisque erroribus ab
Hæreticis, Hæu ! vulgo prædica pœtia manet.
Quæque hæc hominum dicitur, Cæcæ rationis arca
Sordet, & in quædam præ Metæsticæ fœda
Domus hæc hæbetur, hæc Mystopola hæbetur.

Dumque vixit hæc prædica hæc hæc hæc
Committens Puro vixit hæc hæc hæc
Quæ hæc hæc hæc hæc hæc hæc hæc hæc
Obiit, hæc hæc hæc hæc hæc hæc hæc hæc

ERRATA.

BOOK I.

PAG. 2. lin. 26 & 27. for the following Chapter, read *The Third Chapter*. p. 5. l. 17. f. *Incision*, r. *Incision Knife*. p. 7. l. 18. r. *Arteria*. p. 9. l. 16. r. *Carotis*. p. 11. l. 31. r. *Guillemcau*. p. 13. l. 10. & *sequent*, f. *Selingen*, r. *Solingen*. p. 18. l. 25. r. *Hervorden*. p. 18. l. 59. r. *Soyst*. p. 20. l. 42. dele *as may be seen in the following Figure*. p. 21. l. 11. f. *Cuti*, r. *Luti*. p. 24. l. 26. & *seq.* f. *Nutritus*, r. *Nutritius*. p. 27. l. 24. r. *Fibula*. *ibid.* l. 31. r. *Hypericonis*. p. 28. l. 4. r. *Sarcoma*. *ibid.* l. 12. r. *Huand's*. p. 29. l. 21. r. *Balaustior*. p. 30. l. 22. f. *pull*, r. *push*. p. 32. r. *Phagadana*. p. 33. l. 6. r. *Rulandi*. p. 40. l. 35. & *sequent*. r. *Erysipelas*. p. 45. l. 28. dele *Chirurgion*. p. 46. l. 10. r. *Parotidum*. *ibid.* l. 27. r. *Annularis*. *ibid.* l. 35. r. *Cartilago Annularis*. p. 50. l. 36. r. *Decoctio*. *ibid.* l. 46. r. *Anethin*. p. 51. l. 13. dele *Mr.* p. 54. l. 37. r. *Ramuli*. p. 59. l. 23. r. *grj.* p. 63. l. 12. r. *Mucilago*. p. 64. l. 10. r. *the Humours will run one in another*. p. 65. l. 11. & *sequ.* f. *Uvea*, r. *Uvea*, p. 66. l. 19. f. *and*, r. *or.* *ibid.* l. 22. r. *Schmaltrius*. p. 72. r. *Ganglion*. p. 73. l. 2. r. *dissoluta*. p. 74. l. 6. r. *the Tumia*. p. 82. l. 19. r. *Buxi*. p. 83. l. 19. r. *pifi*. p. 86. l. 9. r. *Aqua Serpiginis*. p. 88. l. 36. r. *viii*. p. 89. l. 26. & *seq.* f. *Scrophulus*, r. *Scrophula*, vel *Scrophula*. p. 91. l. 10 and 11. r. *Scrophulous Tumour*. p. 93. l. 14. r. *dissoluti*. *ibid.* l. 28. r. *Sulphuris*. p. 95. r. *Ganglia*. *ibid.* l. 23. r. *Motricea*. p. 99. l. 5. r. *Ganglia*. p. 101. l. 41. r. *Cyan*.

BOOK II.

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BOOK III.

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Page 320. l. 46. f. *Impulses*, r. *Impulsor*. p. 329. l. 19. f. *Intention*, r. *Intenseness*. *ibid.* l. 39. r. *Conservation*. p. 332. l. 17. f. *Exercise*, r. *Ecristes*. p. 333. l. 19. f. *too*, r. *so*.

