

The history of the small pox / By James Moore.

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Moore, James Carrick, 1763-1834.
London School of Hygiene and Tropical Medicine

Publication/Creation

London : Printed for Longman, Hurst, Rees, Orme, and Brown, 1815.

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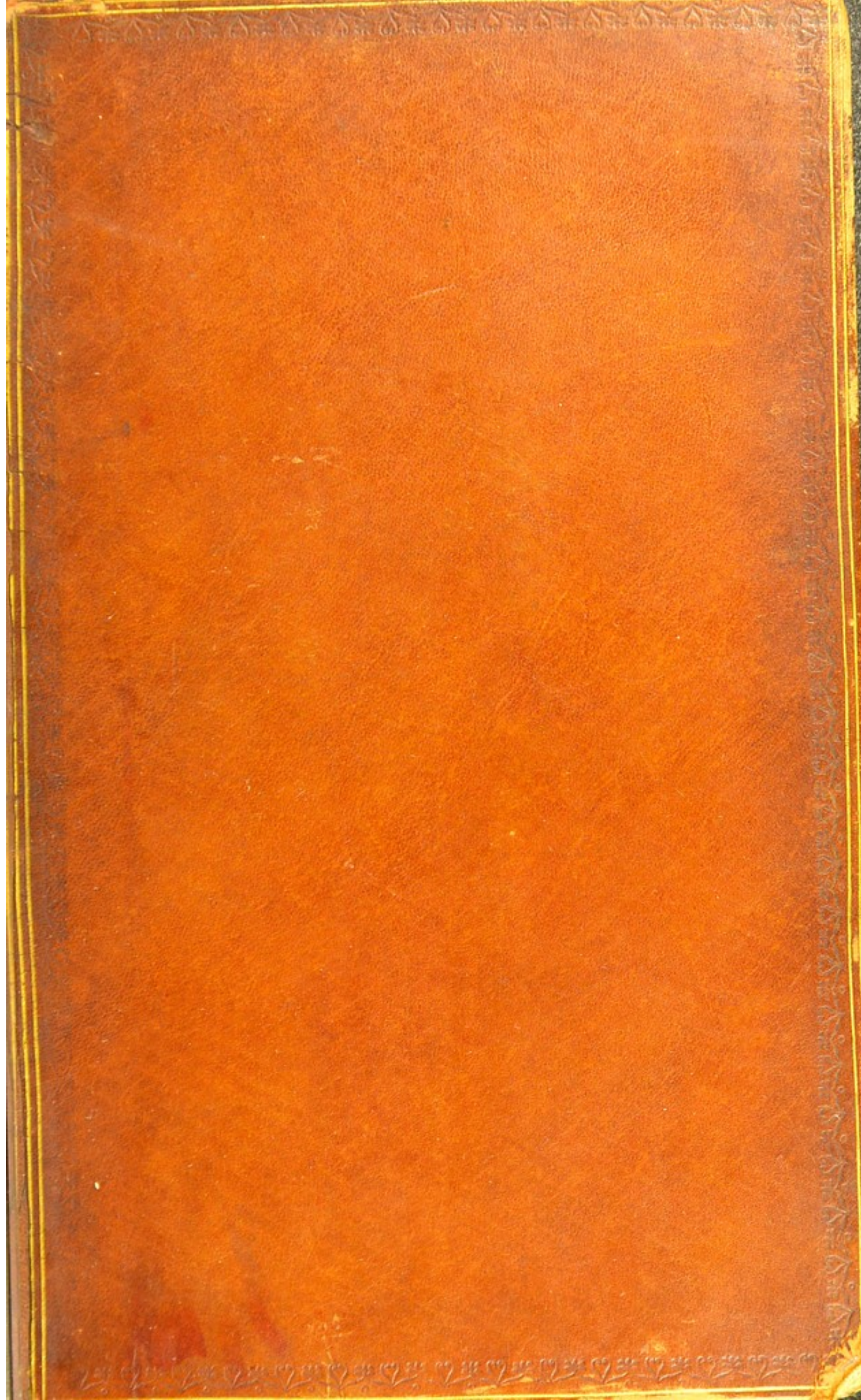
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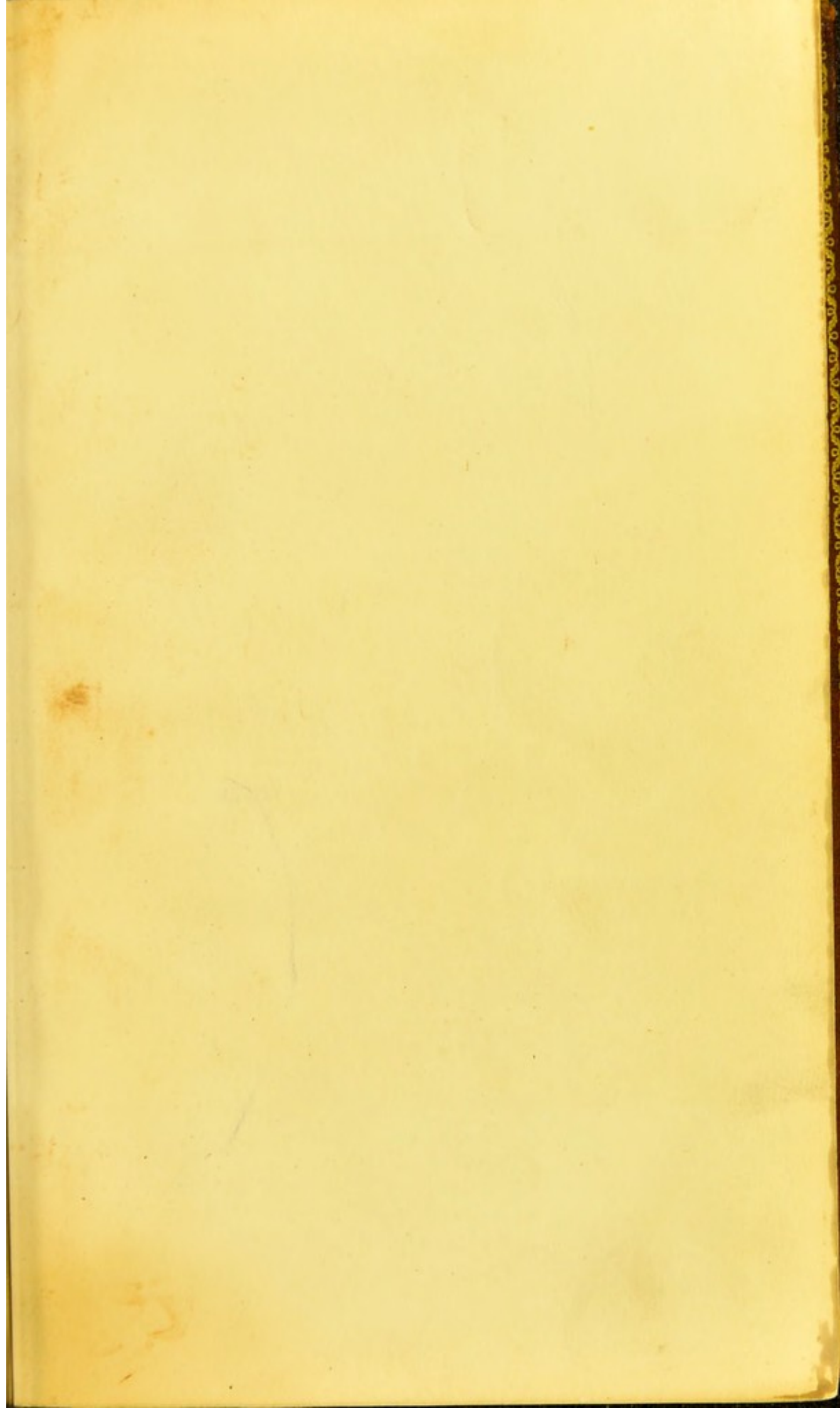
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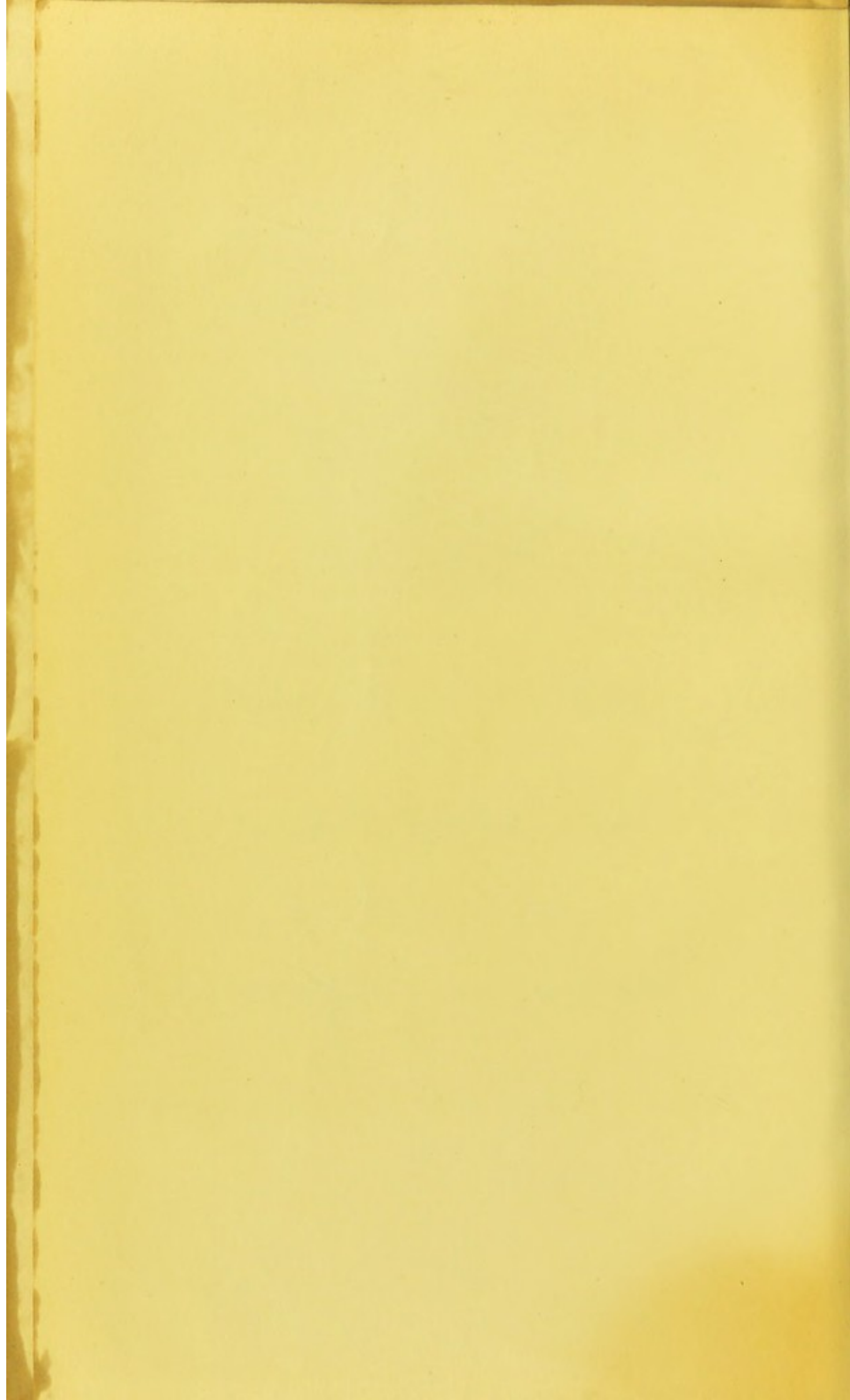
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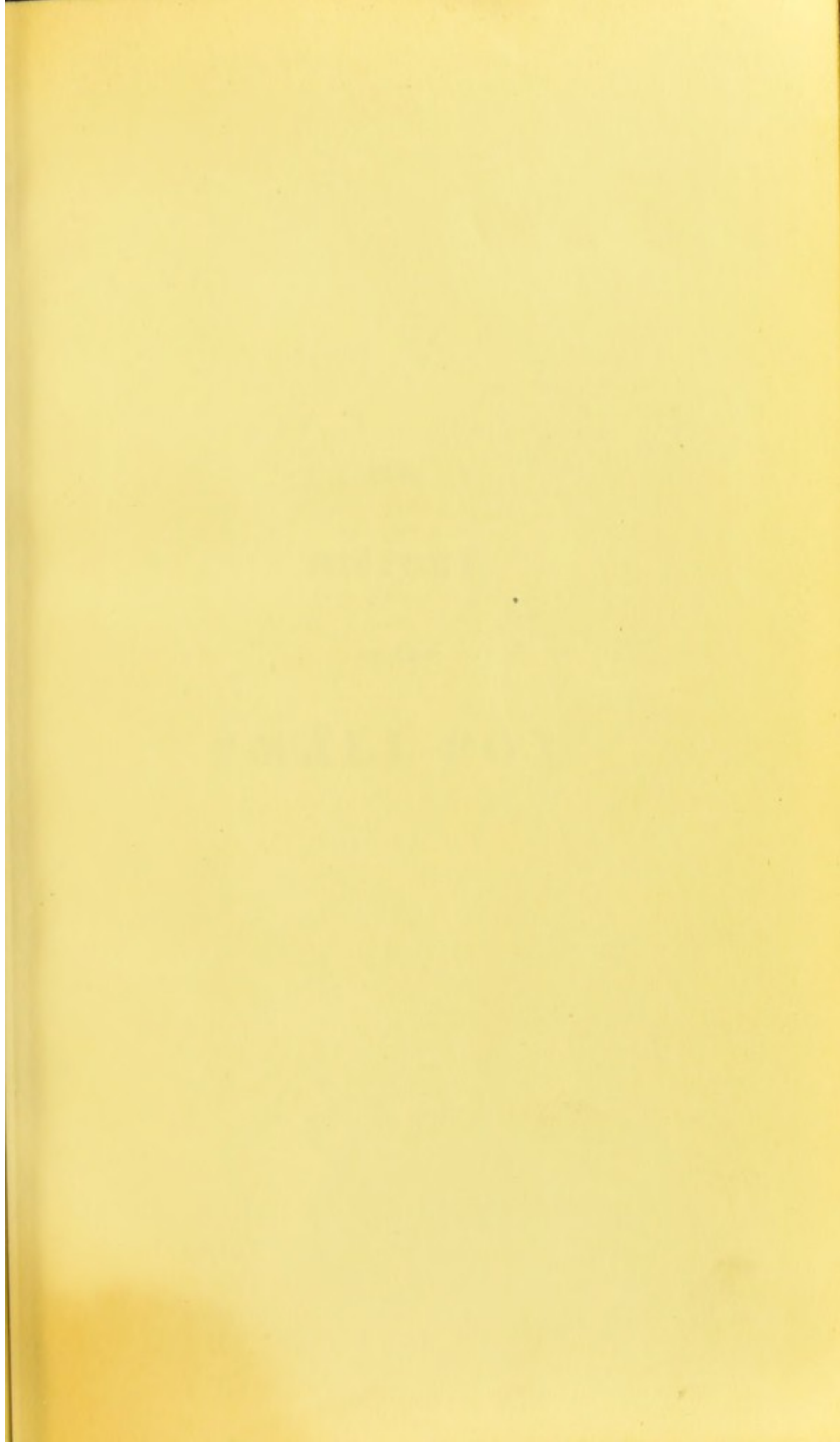
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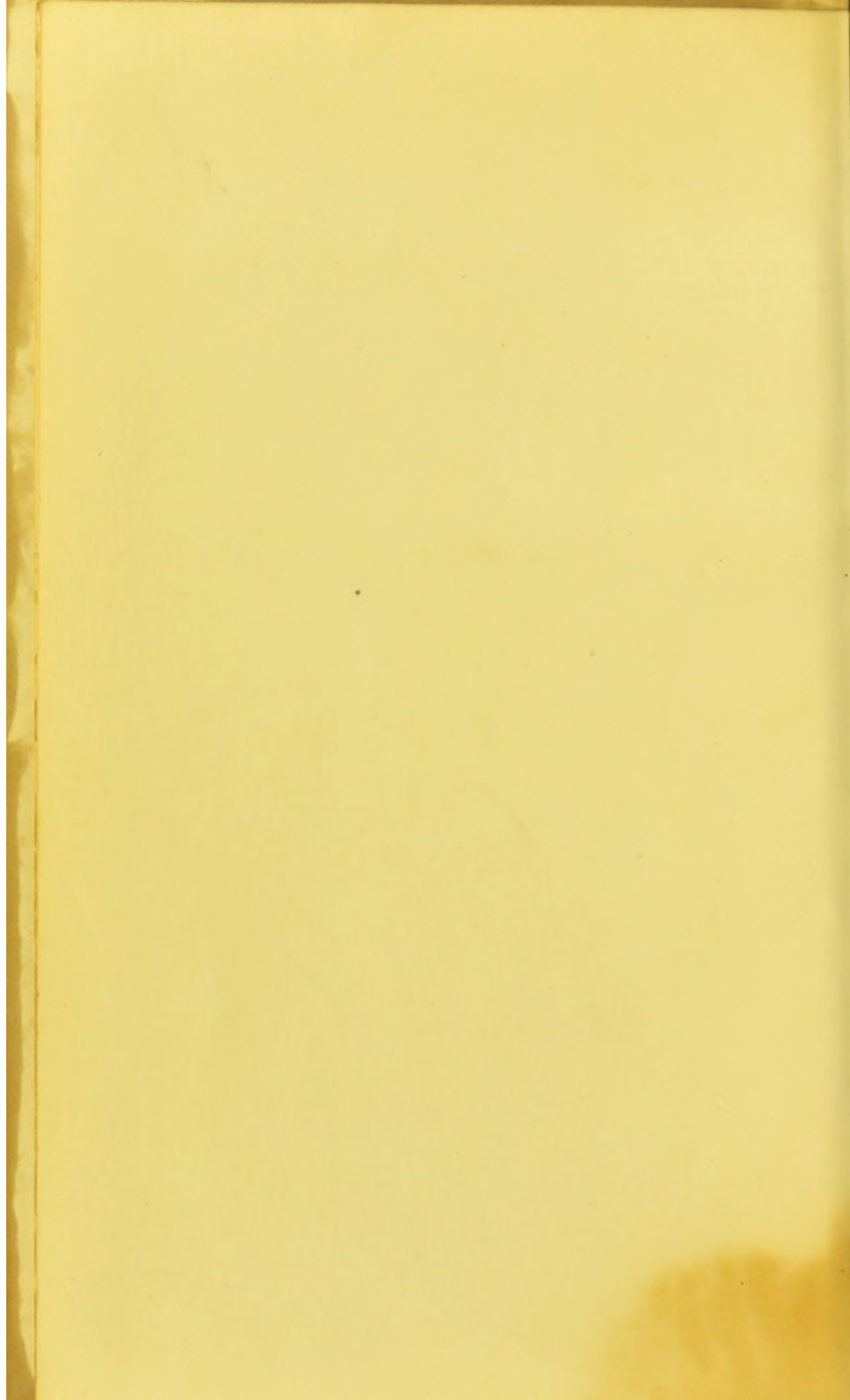
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THE
HISTORY
OF THE
SMALL POX.

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OF THE
SMALL POX.

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New-Street-Square, London.



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A Dramatic representation of the power of the Hindoo Goddess of the Small Pox.
from an original Oriental Drawing.

THE
HISTORY
OF THE
SMALL POX,

BY JAMES MOORE,

MEMBER OF THE ROYAL COLLEGE OF SURGEONS OF LONDON,
SURGEON OF THE SECOND REGIMENT OF LIFE GUARDS,
AND DIRECTOR OF THE NATIONAL VACCINE ESTABLISHMENT.

unde repente
Mortiferam possit cladem conflare coorta
Morbida vis hominum generi,
Expeditam.

LUCRET.

LONDON:
PRINTED FOR LONGMAN, HURST, REES, ORME, AND BROWN,
PATERNOSTER-ROW.
1815.

write the Histories of the Small Pox and of the Vaccine, that by displaying to the Public the baneful effects of the one, and the benign consequences of the other, the value of your surpassing discovery might be justly estimated.

Accept then of this work, with all its imperfections, as a proof, at least, of my zeal for your fame; and of my ardour for the success of an invention calculated to rescue from misery and death, not only a large proportion of those human beings who now exist, but also of those who shall see the light in succession, down to the most remote periods of time.

Whilst I breathe, I shall remain,

with the highest esteem,

your Faithful Friend,

JAMES MOORE.

CONDUIT-STREET, LONDON,

MAY, 1815.

CONTENTS.

CHAPTER I.

	Page
Various Opinions on the Origin of the Small Pox	1

CHAPTER II.

The earliest Accounts and Progress of the Small Pox in Asia and Africa	21
--	----

CHAPTER III.

The Small Pox appears in Arabia, and follows the Track of the Saracens	46
--	----

CHAPTER IV.

The Diffusion of Small Pox through Europe and America	76
---	----

CHAPTER V.

The various Theories and Treatment of the Small Pox, from its Appearance in Arabia to the Fifteenth Century	112
---	-----

CHAPTER VI.

From the Fifteenth to the middle of the Seventeenth Century. Fire Philosophy, and the Alexipharmic Treatment	- - -	Page 164
--	-------	----------

CHAPTER VII.

The Cold Treatment. Sydenham.—Boerhaave	201
---	-----

CHAPTER VIII.

The Discovery of Inoculation, and the Opposition it encountered	- - -	218
---	-------	-----

CHAPTER IX.

Inoculation opposed, and advances slowly. Alterations in the Treatment of Small Pox	- - -	237
---	-------	-----

CHAPTER X.

Inoculation improved, and widely extended. The Suttons.—Baron Dimsdale	- - -	267
--	-------	-----

CHAPTER XI.

Cullen.—The final Treatment of Small Pox, and the Result	- - -	289
--	-------	-----

THE
HISTORY
OF
THE SMALL POX.

CHAP. I.

VARIOUS OPINIONS ON THE ORIGIN OF THE SMALL POX.

INFECTIONOUS diseases spring up in obscurity, and extend indefinitely : but if opposed with judgment, they might, like empires, be controlled ; and would decline and fall.

The Small Pox has past through the first stages, and is now sinking into the last. Yet some lovers of paradoxes have maintained, that this malady, and the Measles, with which it was at first confounded, were coeval with the human race ; and were described under different names by Hippocrates, Celsus, Galen, Ætius, and other antient medical writers. The last assertion was urged briefly, but positively

by Salmasius * : and after him, Johannes Hahn†, a laborious Dutchman accumulated many passages from the classics to prove it: he has not only quoted the medical writers, but he suspected that he saw in the comedies of Aristophanes, in the satires of Horace, and in the Institutions of Quintillian, allusions to persons pitted with the Small Pox. Every ugly visage appeared to him seamed with the scars of that distemper.

Though this work was most satisfactorily refuted by Dr. Werlhoff‡ Physician to the Elector of Hanover, yet the opinion continues to be occasionally broached by certain scholars, who, in fact, are the libellers of the Greek and Roman authors; whose works are distinguished for perspicuity, the first quality in didactic compositions. Their descriptions of diseases, are so clear and correct, that they have always been recommended by men of taste as models for imitation. Would they have merited these commendations, if they had described a disease of such importance as the Small Pox, in language so obscure and equivocal, that only a few minute critics can find out what disease is meant?

* Cl. Salmasii, de Annis Climacteric. Lug. 1648.

† Variol. Antiq. Autor. Johan. Hahn.

‡ Werlhoff. Disquis. Med. de Variol. et Anthrae. 1733.

If such had been their style, those remaining emanations of ancient wisdom would be as little worth preserving, as the heavy lucubrations of Johannes Hahn.

The learned Friend * ridiculed agreeably, this scholastic prating, which acquires all its plausibility from the difficulty of giving correct ideas of appearances by words, and from those employed not being accurately defined. It is only a few years since Dr. Willan, observing these defects, endeavoured to supply them, in his excellent Treatise on Cutaneous Diseases, by annexing coloured prints of each malady; and by discriminating every name by a definition. The want of this method is felt in studying the works of the antients, in which the eruptions are merely described: and as some of them have a considerable resemblance to the Small Pox, there must likewise be a similitude in the descriptions †. Indeed, in some particular cases, the resemblance is so great as to deceive the experienced. But an author, even of moderate capacity, when he treats of the Small Pox, always gives those striking characteristics,

* "*Variolæ Græcis fuerint incognitæ, quicquid nonnulli
e recentioribus contra garriant.*" *Histor. Medicin. I. Friend,*
M. D.

† *Ætiii Tetrabili Secundæ Serm. i. cap. 129.*

which make it impossible to mistake the malady of which he is discoursing. Let any of the early writers on the Small Pox, Isaac or Rhases for example, be examined: it will be found that they describe the breaking out of the eruption, its advancement to maturity, the different kinds of pustules, which spread over the whole body, mouth and throat: their occasioning scars upon the skin, and sometimes opacities in the eyes. They also recommended a number of remedies, though quite inadequate, to smooth the skin, and to clear the eyes of opaque spots: an account like this cannot be misunderstood; but it is fruitless to examine the Grecian authors for any that is at all similar. Erysipelas, erythema, lepra, herpes, and scrophula, are fully described by them: pimples, vesicles, and pustules are also spoken of; but there is no account of a distemper clearly characterised like the Small Pox by the Arabians, though they were far inferior writers to Celsus, Galen, or Aretæus. There is also another disease, which, it is pretended, that these accomplished physicians had seen, and described; though the hints are so obscure as to be comprehended only by a few, and to be of use to nobody. But these immortal authors require no defence. Their most useful and perspicuous works completely refute all such accusations.

It was next imagined with as little reason, by Prosper Alpinus *, that not only the plague and the leprosy, but also the Small Pox, were concocted by the putrid waters of the Nile: although the Nile had inundated and fertilized Egypt for thousands of years previously to the Small Pox having been observed in that country. Notwithstanding this fatal objection, Dr. Paulet, a French physician, who wrote † a history of the small pox, adheres to the Nile as the cause of this disease: and to explain its appearing so late, he supposed that the neglect of the magnificent canals constructed by the Ptolemies, occasioned an augmentation of the pestiferous quality of the mud. But there was certainly abundance of filth and stagnant water in Egypt, and in other countries, before the reign of the Ptolemies.

This author also strenuously maintains that both Small Pox and measles existed in Europe in the sixth century; which notion has acquired additional importance, from having been adopted by the writer of that useful work, intitled *L'Art de verifier les Dates*. ‡

The principal reason for this opinion, is the

* De Medicina Ægyptiorum. Prosp. Alpin. cap. 13.

† Histoire de la Petite Verole. Tom. i. Art. 3.

‡ Tom. i. p. 238.

following passage in an antiquated Chronicle, attributed to Marius Bishop of Vaux, in Switzerland; "In the year 570, a violent malady, with a relaxation of the bowels, and the Variola, (supposed to mean Small Pox,) afflicted Italy and France." *

As this is the first time in which the word *variola* was ever employed, and as no definition is given, its intended signification must be doubtful. Especially, as this word is not to be found in any other author, till between three and four hundred years afterwards.

The Chronicle above mentioned was brought to light by De Chene the Jesuit, and was simply inscribed *Mario Episcopo*. From which inscription, and from internal evidence, it is ascribed to Marius Aventicensis, a Bishop of Lausanne in the 6th century. The manuscript bore the marks of great antiquity, from which it may be presumed, not to have been very legible. And the term, *variola*, may possibly have been an interpolation of a modern transcriber to supply a word which he could not decypher. But if that word was really used by

* "Hoc anno (570) morbus validus cum profluvio ventris, "et variola Italiam Galliamque afflixit." Recueil des Historiens des Gaules &c. par Mart. Bouquet. Tom. ii. Marii Episc. Chronicon.

this old chronologist, it is clear from the subsequent passage, that he did not mean by it the Small Pox. For in narrating the continuation of the mortality during the next year, he describes the distemper in the following terms : —

“In this year (571) the dreadful malady, with a * glandular swelling, named a Pustule, destroyed an innumerable multitude of people in the countries already mentioned.” This was evidently the true Plague, which by the early writers was commonly called the Inguinal or Glandular Plague.

But should the slightest doubt remain upon this subject, the evidence of Gregory, Bishop of Tours, must remove it. This Saint was an eye-witness of the disease, and, with the exception of a simile, he has described it with considerable precision, in these words † ; “ When

* “Hoc anno (571) infanda infirmitas, atque glandula, cujus nomen est Pustula, in supra scriptis regionibus, innumerablem populum devastavit.” *Chronic. Marii Aventic.* dans les *Recueil des Histor. des Gaules, &c.* Tom. ii. p. 18.

† Jam vero adveniente ipsa clade, tanta strages de populo illo facta est per totam regionem illam, ut nec numerari possit quantæ ceciderunt legiones. Nam cum jam sarcofagi aut tabulæ defecissent, decem, aut eo amplius in una humi fossa sepeliebantur. Numerata sunt autem quadam dominica in una beati Petri basilica trecenta defunctorum corpora : erat enim et ipsa mors subita. Nam nascente in inguine aut asello

the calamity arose, it occasioned such a depopulation of the whole country, that the numbers who were destroyed could not be calculated; for when tombs and coffins failed, ten or more bodies were buried in the same grave. And on one Sunday, three hundred corpses were numbered in the church of St. Peter alone. Their death was sudden: for a sore appeared upon the groin, or arm-pit, by which the sufferers, as by the bite of a serpent, were so infected with venom, that they died on the second or third day."

This malady was evidently not the Small Pox, but the Plague, in its most malignant form. Dr. Paulet also supposed, that the disease which in the year 580, destroyed Queen Austrigild, and also Dagobert and Clodobert, the sons of Chilperic, and of the dreadful Fredegonde, was the Small Pox. But Gregory of Tours, describes that malady as follows *; "While the Kings were

vulnere in modum serpentis, ita inficiebantur homines illi a veneno, ut die altera aut tertia spiritum exhalarent. Historia St. Gregor. Turon. lib. iv. chap. 31.

* "Nam discordantibus regibus, et iterum bellum civile parantibus, dysentericus morbus pene Gallias totas præoccupavit. Erat enim his qui patiebantur, valida cum vomitu febris, renumque nimius dolor, caput grave vel cervix. Ea vero quæ ex ore projiciebantur, colore croceo, aut certe viridia erant: à multis autem adscribatur venenum occultum esse.

quarrelling, and again making preparations for a civil war, a dysentery spread over almost all France. Those who suffered, were seized with violent fever, vomiting, great pain in the loins, and a heaviness of the head and neck. What was vomited, was of a yellow or green colour; and many asserted it was occasioned by a secret poison, called by the peasants *Coral Pustules*; because, when cupping glasses were applied to the shoulders and legs, blisters then arose, and broke, and by their discharge preserved many. Others also derived advantage from those herbs which are the antidotes of poisons. This distemper arose in the month of

Rusticiores vero Corales hoc pustulas nominabant : quod non est incredibile, quia missæ in scapulis, sive cruribus ventosæ, procedentibus erumpentibusque vesicis decursa sanie multi liberabantur; sed et herbæ quæ venenis medentur, potui sumptæ, plerisque præsidia contulerunt. Primum hæc infirmitas à mense Augusto initiata parvulos adolescentes adripuit, letoque subegit. Perdidimus dulces et caros nobis infantulos quos aut gremiis fovimus, aut ulnis bajulavimus, aut proprio manu ministratis cibis ipsos studio sagacioris nutrivimus."

There are various other readings upon this passage, with the following unsatisfactory note.

"Colb. coriales hoc pustulas. Bad. corales, hoc est, pustulas, (Dub. corales hoc pustulas) Erant ni fallor, pustulæ in corde ortæ et ideo Corales dictæ; vel quod sputæ essent purpurei coloris coralio similis." St. Gregor. Epist. Turon. Ex. Histor. Gallor. Francor. &c. Bouquet, tom. ii. p. 252.

Dr. Paulet translates the words, *corales pustulas*, *pustules du cuir*; as a natural expression for peasants to employ; derived from *corroi*, or *coriace*. Vid. tom. i. p. 81.

August, and carried off many young people. We also lost some sweet infants who were dear to us ; whom we cherished in our bosom, dandled in our arms, and fed most carefully with our own hands."

This account, in which the symptoms observed by the Bishop are mingled with a notion entertained by the peasants, does not certainly convey a very clear idea of the nature of the disease. Yet it is sufficient to evince that it was not the Small Pox ; though M. Paulet gives the quotation to prove that it was. The interest which St. Gregory felt, and the attention he bestowed upon the children, whose fate he deplores, give every reason for believing that he would omit no striking symptom. But if these children had contracted the confluent Small Pox, their whole skin, and the inside of their mouths and throats would have been spotted with pustules, ; while with closed eyes, and features hideously swollen, their bodies would have exhaled a most offensive smell. These concomitants of the confluent and fatal Small Pox, would have struck St. Gregory with horror, and could not have been overlooked in his narrative.

The Herman Chronicle * asserts plainly,

* Tres filii Hilperici Dysentaria periere. — Ex. Chronic. Herman. cont. Recueil des Histoires des Gaules, &c. Bouquet, tom. iii. p. 323.

“That the three sons of Chilperic died of the Dysentery:” and the grand Chronicle of France, preserved in the archives of the church of St. Denis, explicitly confirms this: for, after recording the death of the young Princes, it is then stated, that “a disease *, called by the physicians the Dysentery, was spread (in the year 580) over the whole of the kingdom of France. And this distemper attacked Austrigild, the wife of Guntram (King of Burgundy), who accused her physicians of having neglected to cure her. It was by their fault, she said, that the disease had been suffered to form, and to increase to that degree that she could not escape. Although there was no other proof of the negligence of the two physicians (Nicholas and Donat), than their failing to cure the Queen, yet the King commanded that both of them should be put to the torture, and executed.” It is doing great injus-

* “Une maladie que phisicien apelent disintere, pourprist anques tout le Roiaume de France. En cette enfirmité chaï Austrigilde la fame le Roi Goutrans: a son Seigneur se clama des Phisiciens, de ce que il avoient esté negligent de la garir, si comme elle disoit, et que par leur défaut l’avoit la maladie si forment seurmontée qui james eschaper n’en pavoit. Comment que la negligence fut des Phisiciens elle dit voir: car elle morut de cette maladie; pour ce commanda li Rois que li Phisiciens fussent occiz et avant tourmentez de divers paines.” *Chroniques de Saint Denis dans les Recueils des Historiens de la France, &c. Bouquet, tom. iii. p. 227.*

tice to the ecclesiastical historians of that age, who were by no means ignorant men, to suspect that they could mistake the Small Pox for the Dysentery, maladies totally unlike each other; but to accuse the physicians also of so gross an error, is to treat their posthumous reputation as cruelly as they were treated when alive, by those barbarous Sovereigns.

Aimon *, a monk of Fleury, also avers, that the Epidemic which afflicted Austrigild, was the Dysentery, and because the physicians failed in curing her, they were tortured and executed by the order of Guntram, at the instigation of the Queen; who after this atrocity was perpetrated, breathed her last.

In another very ancient compilation, entitled "The Historical Mirror," it is narrated, that when Chilperic and his two sons were seized with sickness, Fredegonde was so affected as to propose, in expiation of her sins, to burn the registers of a heap of iniquitous exactions, which had not yet been extorted from their subjects. This was acquiesced in by the sick King, who

* " Et Dysenteriae morbus totas propè occupavit Gallias. Qua peste Austrigilis Regina Guntranno, Regi nupta laborans, querelam marito adversus Medicos detulit, quasi illorum negligentia erga se ægritudo convaluisset. Jussu Guntranni diversis pænis Medici interierunt; ipsa que post deficiens mortua est. Aimoni Monachi Floriacensis." *Recueil des Histor. des Franks et Gaules. Bouquet, tom. iii. p. 83.*

afterwards recovered ; but notwithstanding the sacrifice, the two innocent Princes died. And not the slightest hint is given of their malady having been the Small Pox, though the details of what passed in that Court are minutely related. Had Shakespeare read the following story of Fredegonde, with the addition of visions, or supernatural agency, he could have converted it into a drama, equal to that of Lady Macbeth.

“Fredegonde* was beautiful, artful, and amor-

* Erat autem Fredegundis Regina pulcra et ingeniosa nimis atque adultera. Landricus etiam erat tunc in aula Regis Hilpici, vir efficax atque strenuus quam memorata Regia diligebat multum, quia luxuriabatur cum ea. Quadam itaque die cum maturius Rex ad venacionem exercendam de villa calense in Pisiacum dirigiret reversus est in cameram palatii de scappl'o equitū. Illa faciem suam abluens aqua in ipsa camera, et Rex retro veniens, eam in nates suas fuste percussit. At illa cogitans quod Landricus esset, ait, Quare sic facis Landrice? Respiciciensque vidit quod Rex esset, et expavit vehementer. Rex non nimium tristis effectus, in venacionem perexit. Fredegundis itaque vocavit ad se Landricum, et narravit omnia quæ fecerat, dicens, Cogita quid agere debeamus, quia crastina die ad tormenta valida exhibebimur. Et ait Landricus contritu spiritu, et commotus lachrimis, dicens. Tam mala hora te viderunt oculi mei. Ignoro etiam quid agere debeamus quia opprimunt me undique angustie. At illa dixit ei, Noli timere, audi consilium meum, et faciamus hanc rem et non moriamur. Cum Rex de venacione summo vespere obtenebrante advenerit, mitamus qui cum interficiat; et precones clament, quod insidie sint Hildeberti. Illo quoque mortuo, nos cum filio meo Lothario regnabimus. Factum est autem in initio noctis

ous; she loved passionately, and was beloved by Landric, an ardent and vigorous young courtier.

One morning the King went a hunting towards a villa in the vicinity of Paris; but quickly returned to change his saddle, and entered a gallery in the Palace where the Queen accidentally was bathing her face in water. The King came behind, and, unseen, gave her a tap with his stick; on which the Queen, who was expecting her paramour, said, "How dare you, Landric?" Then looking back she perceived the King, and fell a trembling. Chilperic betrayed no violent displeasure, and proceeded to the chace.

Fredegonde, without delay, sent for Landric; she informed him of their intelligence being inadvertently disclosed, and desired him to con-

revertente Hilperico Rege de venacione, quidam pueri adulatorum inebriati vino a Fredegunde missi, dum de equo descenderet pergentibus reliquis personis ad metata sua: ipsi gladiatores percusserunt regem in alvum scransaxis. At ille vociferans, emisit spiritum. Succlamaveruntque Adultores quos Regina fraudulenter miserat dicentes, Insidie, Insidie fecerunt hoc Hildeberti Regis Austrasiorum super dominum nostrum! Tunc exercitus hoc illucque discurrens, cum nihil invenissent, reversi sunt ad propria sua." *Speculum Historiale* Fratris Vincenti ordinis prædicatorum; impressum per Johannum Metellin. A. D. 1473. lib. xxii. c. 130. In the library of the Duke of Devonshire.

sider what was to be done ; lest on the morrow they should both be exposed to the most dreadful tortures. Landric was thrown into despair, and weeping bitterly, exclaimed, " Alas ! in a miserable hour did I first behold you ! I can think of nothing for horror !" The intrepid Fredegonde interrupted him, " Fear nothing, attend to my counsel. We shall go through with this business, and shall not die. When the King comes home at dark, I will plant fit persons to make away with him ; and heralds shall proclaim, that the plot was laid by Hildebert : and when he also shall be put to death, then we shall reign in the name of my infant son Lothario."

Accordingly, when Chilperic returned from hunting, in the dusk, some of the royal attendants, made drunk by Fredegonde, hurried out to meet him, while the rest were busy in their various duties : and as he was dismounting, hired murderers stabbed the King, who gave a loud shriek, and in a moment expired. On which, the creatures of the Queen immediately vociferated, " Treachery ! treachery ! Hildebert of Austrasia has contrived this murder !" These exclamations, and the tumult which arose, soon brought to the spot a body of troops ; but, as the assassins had already disappeared, the troops soon dispersed.

History shews, that royal criminals, even Usurpers, are rarely subjected to legal, or to poetical justice. Fredegonde by the above, and by similar deeds, acquired the Regency of Soissons, and Landric was appointed Mayor of the Palace.*

The French historians certainly give no support to the supposition of M. Paulet; and it would be tedious to refute one or two additional quotations, from which he endeavours to convert Eruptions into Small Pox. In truth, he had examined the subject slightly.

Independently of the original historians and Chronicles, the Lives of the Saints form a massive portion of the records of the dark ages. Bishop Surius, Bollanus the Jesuit, his successors, and other Catholic priests, have compiled a most oppressive number of ponderous folios; in which the miracles, the sufferings, and martyrdoms of an host of Saints, are circumstantially detailed. Some historical facts, something of

* Itaque Fredegundis viro suo Hilperico ingeniose perempto, ipsa cum Lothario Rege parvulo suo et Landrico, quem Majorem domus palatii eligerunt in regno resedit. Franci quoque predictum Lotharium Regem super se in regno statuit." Specul. Historiale, lib. xxiii. c. 2.

Other authors relate the events in a different manner, and vindicate Fredegonde. For there are always zealous defenders of handsome queens, even when they murder their husbands.

possibly be gleaned out of these works. But although they were once pored over with wonder ; the disgust which they now excite, renders any minute examination of them impracticable. A perusal of a small part is all that the most patient can submit to. For most of the stories related there, are not only at variance with the sentiments and characters of men, but even contradict the laws of nature. Apparitions are common sights, prodigies are daily occurrences ; and torture, fire, and death, instead of being objects of terrour, are solicited by the heroes and heroines of these books with earnestness, and enjoyed with rapture. The innumerable miracles are equally astonishing ; for limbs distorted or fractured are instantaneously cured by being sprinkled with water ; foul and ulcerated lepers are cleansed by an old man's spittle ; eyes scooped out, are so dexterously replaced in their sockets, that vision is improved : and even the decapitated have their heads so nicely refitted, that they pray afterwards more fervently than before.

These facts are sufficiently surprising, and no medical cases were ever so well attested. For they are authenticated by mortified monks, reverend abbots, holy bishops, infallible popes, and consecrated saints. Notwithstanding which, sensible Catholics give no more credit to them,

than the most reformed Protestants. And the learned view them, as the largest accumulation of impious frauds and irreligious falsehoods, that were ever invented for the delusion of mankind.

Yet in the midst of these shameful fabrications, some lurking truths may be detected: even narrations of spurious cures of diseases are presumptive proofs that such diseases existed: and as the most shocking and hopeless maladies are those which were most frequently miraculously cured, the Small Pox would unquestionably have been among the number, had it been known.

This argument will have the more weight, when it is considered that there is perhaps no infirmity pretended to have been so often cured as blindness. In a life of St. Martin, ascribed to St. Gregory, there are accounts of near fifty blind people restored to sight by the influence of the Saint's shrine. And in many of the instances, the cause of the blindness is related; but Small Pox is never mentioned, nor any malady which can be suspected to have been Small Pox. Whereas, in later times in Europe, at least one-third of the blind were deprived of their sight by the Small Pox.

Few can now read through many of these lives of the early Saints; yet they may be consulted on

particular points by moderate labour, in consequence of the drudgery of the pious monks. For those books being considered by them as admirable productions, and essential to the salvation of future ages, they have composed ample indexes of every article, and even of every Latin word. This was an immense saving of labour to the writers of dictionaries; and Du Cange, who was well acquainted with these books, in his Glossary of modern and barbarous Latin, gives no earlier authority for the word, *variola*, than Constantinus Africanus, who wrote in the eleventh century; and it sometimes occurs in the Lives of the Saints, in the thirteenth and fourteenth centuries, when some persons rendered blind by the Small Pox were miraculously restored to sight, as shall be noticed in the proper place.

In opposition to those authors who contend, on fallacious grounds, that the Small Pox existed in the ages of antiquity, or prevailed in Europe in the sixth century; there are others who are of opinion, that it was not introduced into Europe until the end of the eleventh or the beginning of the twelfth centuries, by the returning Crusaders. This is the most prevalent notion, and has been adopted by Mead, Dimsdale, and many others. The martial deeds achieved to obtain possession of the Holy Land,

improved chivalry to perfection, inspired many amusing romances, and much delightful poetry. These were the compensations for the millions who perished in Asia, and for the leprosy which the survivors brought back. But the introduction of the Small Pox into Europe, ought not to be charged on these frantic expeditions, for it will be now shown, that this had previously been effected.

CHAP. II.

THE EARLIEST ACCOUNTS AND PROGRESS OF THE
SMALL POX IN ASIA, AND AFRICA.

IN searching for the first accounts of the Small Pox, it was proper to examine if any early traces of this disease were to be found in China, which is believed by many to have been one of the earliest inhabited countries in the world.

The primitive historical records of China are very justly discredited, in consequence of one of their Emperors having had the folly to order all their books to be burnt, with the exception, however, of those on agriculture, law, and physic. This occurred about 246 * years before the Christian æra. But the exception that was made in favour of medical books, leaves a motive for trusting in some degree, to those facts which were handed down relating to medicine.

* Histoire Generale de la Chine par Jos. A. M. de Mailla, Tom. i. Paris 1785.

The missionaries who were sent into that country by the Church of Rome, from their address and insinuation, gained access to their historical records; and they have transmitted detailed accounts of the history of the Chinese, and of their knowledge in various branches of science. According to these authorities, medicine appears to have been cultivated, and the Small Pox to have existed in China, from a very remote period.

There is a memoir upon this disease in the collection, written by the missionaries* at Pekin; the substance of which is extracted from Chinese medical books, and especially from a work published by the Imperial College of Medicine, for the instruction of the physicians of the Empire. This book is entitled, Teou-tchin-fa†, or *a Treatise from the heart on the Small Pox*: which states, that this disease was unknown in the very early ages, and did not appear till the dynasty of Tcheou, which was about 1122 years before Christ. The Chinese name for the malady is a singular one, Tai-tou, or *Venom from the Mother's breast*; and a description is given of the fever, the eruption of pustules, their increase, suppuration, flattening and crusting.

* Memoires concernant L'Histoire, les Sciences, &c. des Chinoises par les Missionnaires de Pekin. Tom. iv. p. 392.

† Traité du Coeur sur la Petite Verole.

In the same Chinese book, there is also an account of a species of inoculation discovered seven centuries previously; but according to a tradition, it had been invented in the Dynasty Song, that is about 590 years after Christ. This is a large work, completely authentic, and contains every thing that was known relative to Small Pox in that country. *

Father D'Entrecolles the Jesuit, mixes in his correspondence from China, some information respecting the Small Pox, which confirms the material parts of the above information. For he notices having read some Chinese books which mention the Small Pox as a disease of the earliest ages. He also describes a method of communicating the disease, which was occasionally used, and is called *sowing the Small Pox*; this was generally performed by planting some of the crusts up the nose. An operation which was approved of by some, but disapproved of by most authors.

He also gives an example of his own practice, in which his medical knowledge is made subservient to the great work of conversion.

A young girl had been attacked with the

* Lettres Edifiant. et Curieuses. par des Missionnaires de la Compagnie de Jesus. Paris 1781. Tom. xviii. p. 351. Tom. xxi. p. 11.

Small Pox; and the disease was so virulent, as to have baffled the skill of the Chinese physicians. When she was reduced to the last extremity, her father recollected that two children of a friend, who had become a Christian, had been cured of the Small Pox by a powder which he got from a missionary. He immediately applied to this friend, who informed Father D'Entrecolles of the melancholy case of the girl, and of her father's request to have one of his powders.

The Jesuit readily consented to give the medicine to the girl; but insisted also upon baptising her without her parents' knowledge. And he likewise extracted from both the parents, a promise, that if he cured their daughter, he should be permitted to instruct her in the tenets of the Catholic church.

The grief of these poor people made them yield to this condition; but the Jesuit owns, that his remedy was administered too late. This however he considered as of little moment; and exults in saying, that "he baptized the girl at noon, and in the evening she entered into possession of the inheritance of the children of God." Thus the dying idolater was mercifully, though surreptitiously, snatched from the grasp of Satan, by the superior cunning of the Jesuit.

Several missionaries* also inform us, that the Chinese worship a goddess, who has a superintending power over the Small Pox: This is a strong confirmation of the antiquity of that malady in China, which the learned believe to have prevailed there for at least 3000 years.

The vicinity of China to Japan, and their early mutual intercourse rendered it impossible that the Small Pox should exist in the former empire, without being soon communicated to the latter. Dr. Engelbert Kempfer, was physician of a Dutch embassy to Japan in the year 1690, and found the Small Pox and Measles diffused through the country.

He has given the history of Japan from the remotest antiquity, in which all the very early transactions, like those of other nations, are fabulous; but previously to the Christian æra, the Japanese annals assume an authentic form, and are preserved as genuine registers in the archives of the empire.

In a translation which is given of one of

* History of China. Pere de Halde, vol. iv. *Histoire Generale de la Chine* par Père Jos. Anna M. de Meyriac de Mailla, Jesuite. Tom. xiii. p. 778. "L'inoculation étoit pratiquée à la Chine long temps avant qu'elle fut connue en Europe."

"Ils n'en font remonter l'origine (de la petite verole) qu'à environ trois mille ans."

these original Chronicles, it is stated in recording the reign of a King called Siomu, that "in the thirteenth year of his reign* (which corresponds with the 737th of the Christian æra) the Small Pox was very mortal in all parts of the Empire." The date of this epidemic is modern, when compared to the Chinese records; but the disease is noticed as an earthquake, or a hurricane, or any other well known incident.

In Hindostan, according to the traditions of the Bramins, the Small Pox is of immense antiquity. It has several names in the ancient Sanscrit language, and its very early existence in that country is proved by their sacred books, and by the mythology of the Hindus. There are discordant accounts in different parts of India, of the genealogy, of the history, and even of the name of the goddess who presided over the Small Pox; there are similar varieties in the Grecian mythology, for nothing is so mutable as a heathen deity. The relation of M. Sonnerat, a man of letters, who was sent by Louis XV. to India and China to collect literary information, is as follows:

* The History of Japan by Engelbert Kempfer, translated by I. G. Scheutzer, F.R.S. London, 1727.

Mariatale * was the wife of Chamadaguini, and the mother of Parapourama, who was no less a being than the great Vichenou in his eighth incarnation. Mariatale commanded the elements, which power she was to retain as long as her heart remained pure. She was one day collecting water from a pool, and forming it into a globe, according to her usual custom; when she saw reflected from the surface of the pool, the images of a group of beautiful winged sylphs, who were hovering over her head. Their delicate forms, and graceful movements, when fluttering in the air, drew too much attention; desire entered her heart, on which the water instantly lost its spherical form, dissolved in her hand, and flowed into the pool. From that moment she could never carry water without the assistance of an urn. Chamadaguini discovered by this loss of power the mental impurity of his wife; and was so violently enraged that he commanded his son instantly to smite off her head.

The mandate was obeyed, but Parapourama became so deeply afflicted with the death of his mother, that the father relenting, desired

* Voyages aux Indes Orientales et a la Chine par ordre du Roi depuis 1774. jusqu'an 1781. par. M. Sonnerat, &c. &c. &c. Paris 1781. Tom. i. p. 244.

him to rejoin the decollated head to the body, and whisper a prayer in the ear, by which she would be reanimated. The son was transported with joy; but from eager precipitation, united to the body of his mother the head of a Parichi, who had been executed for infamous deeds.

The virtues of a goddess, and the vices of a demon, were thus mingled in Mariatale, who, therefore was expelled from her home; and wherever she passed, she committed abominable cruelties. At length to pacify her, and to put a stop to her ravages, the deities, named Deverkels, assigned her the power of curing the Small Pox, and promised that she should be invoked in that distemper. But Mariatale fearing, that in consequence of her degradation, she would no longer be adored by her son, besought the Deverkels to grant her another child. They gave her Catavaragen: and the mother and son share between them the adoration of the Parias, one of the lowest casts in India. This son is the only deity to whom offerings are made of dressed meat and salt fish, which is owing to his being considered as the son of a Parias.

The goddess is the great deity of this cast, and many temples have been built to her. There is also an occasional festival in honor of her which is celebrated on no fixed day, but whenever an alarm is taken. There are persons who have

been kindly treated by Mariatale, or who are desirous of her protection, that sometimes make a vow from gratitude, or to gain her favor, to suspend themselves in the air. This is performed by a rope fixed to a high projecting beam, with two hooks which are stuck through the flesh of the votary's loins; who is then raised up twenty feet from the ground, and whirled round and round in the air. During this horrid ceremony, he is expected to preserve a cheerful countenance. For if he sheds one tear, he is expelled from his cast, and dishonoured for life.

This ceremony is disapproved, and even despised by the Bramins.

Baldæus *, a Dutch clergyman, passed some years in Hindostan and Ceylon. From the information which he collected from those Bramins whom he had opportunities of meeting; and from their sacred books, he gives a very different account of the Small Pox Goddess.

He calls her Patragali, and gives a print of her tremendous form: she had eight faces and sixteen arms, and was the daughter of a god

* A true and exact description of the East India coast by Philip Baldæus, about the year 1664. Collection of Voyages. Churchill, vol. iii.

named Ixora, whose figure was equally extraordinary.

It happened that Ixora was oppressed by a very terrible monster, whom he durst not encounter; but Patragali assaulted and destroyed this enemy. Then exulting in her victory, she went to communicate the tidings to her father, who being accidentally naked, escaped from modesty into a cistern. When Ixora had heard his daughter's narrative, he bestowed as a reward, some morsels of flesh, and a copious draught of blood. But perceiving that she was dissatisfied, he cut off one of his fingers, and by the wound, filled a large bason with his own blood, which he presented to Patragali. The maw of this ravenous Deity, though thus glutted with her father's blood, was not satiated: and in her fury, she took off some golden beads from a chain she wore round her neck, and dashed them at his face. Ixora exclaimed, "Basuri! " Oh you revengeful woman!"

There immediately broke out on his face a great number of small pimples: on which, to pacify her, he created two beings to attend and serve her: desiring that she would henceforth reside among mortals, and require from them vows and sacrifices.

Some less important actions of Patragali are related; and it is stated that whenever the

Small Pox occurs, it is believed to be sent by her; and all those attacked are immediately abandoned by their friends, and left to the care of a fraternity of Bramins belonging to the pagoda of Patragali.

No authority but a consistory of Bramins can pretend to decide, which of these, or what other is the true name, genealogy, and deeds of the Small Pox deity. But all accord in her extreme antiquity. Holwell* an English surgeon, who resided many years at Bengal, mentions that there are forms of worship, with poojahs or offerings instituted for this female goddess in the Attharva Veda; one of the most sacred and ancient books of the Hentoos; which according to the Bramin calculation, was promulgated three thousand three hundred years ago†. The

* An account of the manner of inoculating for the Small Pox in the East Indies, by I. Z. Holwell, F. R. S. 1767.

A professor eminently skilled in the oriental languages has enabled me to correct Holwell's orthography: who wrote Aughtorrah Bhade, instead of Attharva Veda; and Gootée ka Tagooran, instead of Gutī ka Takurani: the last words are likewise erroneously translated Goddess of Spots: whereas the correct translation is Goddess of the Small Pox. This mistake has completely misled Dr. Woodville in his reasoning and conclusions respecting the Small Pox in Hindostan. Vide History of Inoculation, Introduction.

† A deduction of 1000 years is made by some modern orientalists, on this calculation.

same author also mentions, that inoculation was practised in India, from the remotest antiquity. It is in the hands of a particular tribe of Bramins; and delegates were appointed annually from the different colleges of Bindooband, Eleabas, Benaras, &c. These travel through the different provinces, and inoculate in the spring; and recite during the performance of the operation, the prayers appointed in the Attharva Veda, for propitiating the female divinity.

Many singular superstitions invented in remote ages, are still practised in these countries.

A physician in the service of the East India Company informed me, that when he was at Benares, a great alarm was one night raised by the appearance of a multitude of lights, moving to and fro, and waving about at a distance, in a manner which seemed almost supernatural. This physician, being determined to find out the cause, ran out of the town with one of his friends towards the place where these nocturnal lights appeared, but before he reached it, the phantoms had thrown away their fires and vanished; and the field was strewed with small wisps of half-burned straw. On making enquiry he learnt, that this was a mystic rite, performed by the women of the village to disperse the contagion of the Small Pox, and to appease the wrath of the superintending deity.

There are many monstrous idols of this malignant power throughout India: and among a fine collection of original Hindoo drawings brought to this country, which illustrate the mythology and manners of the East; there is one whose subject is, a religious dramatic representation of the actions of the Small Pox Goddess*. This evil spirit stands with two uplifted crooked daggers, threatening to strike on the right and left. Before her are a band of the executors of her vengeance. Two of them wear red grinning masks, carry black shields, and brandish naked scimitars. White lines, like rays, issue from the bodies of the others, to indicate infection. On the right, there is a group of men with spotted bodies, inflicted with the malady: bells are hung at their cinctures, and a few of them wave in their hands, black feathers. They are preceded by musicians with drums, who are supplicating the pity of the furious deity.

Behind the Goddess on the right, there advances a bevy of smiling young women, who are carrying gracefully on their heads, baskets with thanksgiving-offerings, in gratitude for their lives and their beauty having been spared.

* This valuable and interesting collection of Chinese, Hindoo, and Persian drawings is in the library of Mrs. Bliss of Kensington. Vide frontispiece.

There is, besides, a little boy with a bell at his girdle, who seems to be conveying something from the right arm of the Goddess. This action may possibly be emblematic of inoculation.

In a country, where every thought, word, and deed, are mere repetitions of those of their progenitors, a composition, like this, bears the stamp of great antiquity: nothing similar has been struck out from a very remote period. One example of the apathy which has long entranced the East, shall be given.

It was in the fifteenth century, that the Portuguese navigators doubled the Cape of Good Hope, and reached the coast of Malabar. The chief motive assigned for sailing to these distant regions, was to bestow upon the idolatrous natives, the blessings of Christianity; for which benevolent and religious cause, their proceedings were sanctioned by a papal bull. But the stirring up of sanguinary wars, and the introduction of a new and loathsome disease into Asia, were the first effects of European intrusion. This disease spread widely, and produced inexpressible misery. But as it broke out in an age comparatively modern; no symbolic rites, such as were anciently instituted for the Small Pox, have been established for this venom; and no image, adorned with appropriate types, has been erected in any

Chinese or Hindoo temple : for invention has long abandoned these his primitive abodes.

In fine, the mythology, the religious institutions, the sacred and historical records, the medical works, and uniform tradition in China and Hindostan all accord in the Small Pox having existed in these countries from a very early period. It becomes then requisite to examine how it happened, that this infection did not extend into Persia, and thence into Greece, long before the age of Hippocrates.

The terror which the Small Pox inspired, appears to have early excited strong measures to escape from the infection, and to impede its progress. The religious rites which were established, are decisive proofs of the dread in which it was held : for where human power is found inadequate to encounter a calamity, resort is had to Heaven.

Travellers have been struck with the dreadful alarm which the Small Pox creates in the countries bordering upon China and India, even in modern times ; when it might have been expected that these nations should have become familiarized with the disease.

Father D'Entrecolles * writes, that the Small

* Lettres Edif. et Curieuses. tom. xxi. à Peking, 11 Mai, 1726.

Pox is considered in Tartary, as a plague ; and whoever is attacked with it, is immediately abandoned by all the world.

Captain Turner, ambassador to the Tishoo Lama*, has declared, that in Thibet all who contract the Small Pox, are not only left to chance, but that every avenue to the place where infection exists is barred, both against the admission of strangers, and the flight of those within. And when the Small Pox broke out in the capital, a still more vigorous measure was had recourse to. The Tishoo Lama left the city, which was abandoned and remained without inhabitants for three years ; when it was supposed to be cleared of infection.

Mr. Saunders†, surgeon to that embassy, scrutinised the subject with medical accuracy. For he remarked, that the natives were struck with so much consternation by the Small Pox, that instead of paying any attention to the sick, they only thought how they were to avoid contagion themselves. All communication with the diseased was strictly prohibited, even at the risk of their being starved ; and the house or village in which they dwelt was afterwards razed. In consequence of this complete interruption

* An account of an embassy to Thibet, by Captain S. Turner. London, 1800. p. 219.

† P. 415.

of intercourse, he observed, "that the Small Pox
 " was seldom to be met with, and when it oc-
 " curred, its progress was always checked by
 " the vigilance and terror of the natives."

Since Mr. Saunders noticed, that this dis-
 ease was rare in the present times, it probably
 had been much rarer in the early ages of the
 world. For the mutual intercourse and aggre-
 gation of mankind augment as they recede from
 barbarism; and infectious diseases would na-
 turally be less frequently epidemic, and less de-
 structive among hunters and shepherds, than
 among men in a more advanced state of
 society.

The Small Pox was in fact so rare in the
 16th and 17th centuries, on the western coast
 of Hindostan, and in the islands of Ceylon and
 Java, that some of the Portuguese navigators
 believed that no such disease had ever existed
 there; and the Dutch navigators were igno-
 rantly accused of having transported this disease
 to countries *, in which prayers and offer-
 ings had been instituted, to deprecate its fury,

* *Navigatio ac Itinerarium I. Hugon. cap. 34. Hagæ;*
 1599. *Ephemerid. de l'Acad. des Curieux. Dec. 1. an. 9. 10.*
 1678 and 1679. *Histoire de la Mission Dannoise, dans les*
Indes Orientales, tom. i. p. 42. Traité des Maladies des Femmes,
tom. iv. p. 177.

at a period when Holland was an uninhabited marsh.

The dread of the Small Pox, and the strong measures adopted in the East to controul it, may be considered as causes which contributed to prevent this infection from extending westward. But, undoubtedly, the principal cause was the peculiar situation of the regions through which this infection was diffused, separated from the rest of the world by deserts, and by the ocean. Yet neither these barriers formed by nature, nor any defences fabricated by man, have preserved any country from foreign hostile intrusion. Whether the expeditions of Bacchus and Sesostris into India be true or fabulous, are themes for antiquarians, but the invasions of India by Darius the son of Hystaspes, and by Alexander, are certified by history : and the Small Pox does not appear to have been carried back into Persia by either. This was a calamity more likely to have been effected by an irruption, than by an invasion : but the industrious Chinese, and the unambitious East Indians never thought of quitting their homes, to break into the territories of their neighbours.

The rapacious invaders who went from Persia, would of course be attacked by the diseases which prevailed in the countries they laid waste : but the numbers which perished, the time which was spent in so distant a warfare, and the ex-

tent of the deserts which were re-crossed, appear to have secured their native country from being contaminated by the few survivors of those expeditions.

Scylax, who commanded the army of Darius is said by Herodotus, to have spent two years and a half in his progress down the Indus to the Arabian gulf. The handful of men who escaped back to Persia, would probably be cleared by that time, of all contagion from Small Pox, even if that malady had ever infected their camp.

Alexander the Great, after crossing the Indus proceeded eastward to the banks of the Hyphasis, the modern Bryah. He was there stopt by a mutiny of the army, and forced reluctantly to return to the Hydaspes.

There a fleet was equipped with which he resolved to proceed down the Indus to the ocean. Such a leader, with thoroughly experienced officers, would certainly take every precaution in their power, to preserve the health of the troops, and to hinder infectious maladies from spreading through the army; and nine months were exhausted before they reached, with diminished forces, the mouth of the river. The army was then divided; one portion proceeded by sea under the conduct of Nearchus; and Alexander marched to the west with the re-

mainder, through a desert and almost uninhabited country.

Arian * mentions, that the sufferings of the army were dreadful, that the beasts of burden perished, and the sick were necessarily abandoned. Plutarch declares †, that from bad diet, excessive heat, and violent diseases, three fourths of the army perished. Quintus Curtius asserts, that when the army were encamped near the mouth of the Indus, “a scab ‡
“ attacked the bodies of the soldiers, and spread
“ by contagion.” He dwells with eloquence on the miseries which the army endured from famine, diseases, and pestilences, in a march of sixty days, through a horrid country, part of which resembled a wilderness. As no food was to be found even for the beasts of burden, they all perished; the sick, unable to proceed, in spite of their entreaties, were left to starve; while the remaining troops hurried forward to reach a cultivated country. Certainly there is little likelihood that those afflicted with the Small Pox could survive such hardships.

* Arian. Hist. Ind. cap. 25.

† Plutarch. The Life of Alexander.

‡ Quint. Curt. cap. 10. “Quippe scabies corpora invasit, et contagium morbi etiam in alios vulgatum est.” It is possible that this was the Small Pox ill described.

Nearchus the admiral, who conducted the maritime expedition, was too experienced an officer to suffer any persons to embark, who were known to be contaminated with an infectious disease. But if from inadvertence this should have happened, as the coasting voyage lasted seven months, there was ample time to get rid of the contagion.

When all the circumstances of that frantic enterprise are considered, it will not excite wonder, that the wreck of the Macedonian army did not consummate their misfortunes, by bringing the Small Pox into Persia.

But as the valuable productions, and the curious manufactures of China and India were early coveted and transported to the more western nations, it is more surprising that the infection was not communicated by commercial intercourse. This certainly would have occurred very early if those countries had not been separated in so remarkable a manner from the rest of the habitable world.

Commerce with those nations by land, was only practicable by means of the camel, whose powers of enduring heat and thirst, without drinking for ten days, enabled the merchants to convey their goods across the sandy deserts. But we may safely conjecture, that no person

known to be infected with Small Pox, would be suffered to join a caravan. And if from accident, that ever occurred, there can be little doubt, that the infected would be abandoned to their destiny.

The horror entertained of the Small Pox would also excite attention not to admit the infected into ships, which in the early ages were small in size, requiring but few mariners to navigate them; while the tediousness of the coasting voyage gave ample time for the extinction of infection.

The ships of King Solomon were three years in accomplishing their voyage to Tarshish and Ophir, which some have believed to have been ports on the coast of Hindostan; though it appears to be established by late authors*, that these towns were situated on the southern coast of Africa.

The Egyptians after the destruction of Tyre, carried on commerce with India through the Red Sea. And as navigation was then in its infancy, and the mariners' compass unknown,

* An Historical Disquisition concerning Ancient India, sect. i. by Wm. Robertson, D.D. Travels to discover the Source of the Nile, vol. i. cap. 4. by J. Bruce, F.R.S.

the merchants “sailed * in vessels of small burden, which crept timidly along the coast;” so tedious a route would clear the crews of Small Pox.

In the middle of the first century, this voyage was somewhat shortened; and, according to Pliny †, India was brought nearer to Europe by gain. For a mariner named Hyppalus, ventured without a compass, trusting to the western monsoon, to stretch from the mouth of the Arabian Gulph, in a straight line eastward, through the Erithrean sea to Musiris, a port on the Malabar coast of India. The voyage even by this shorter route required a year; which was sufficient for the extinction of variolous contagion.

If the Persians had engaged early in maritime commerce, from their vicinity to India, they would probably have soon brought into their country the Small Pox. But the ancient historians declare, that the Persians entertained an insuperable superstitious aversion to the sea; and Robertson asserts, that “no commercial ‡

* Historical Disquisition by Dr. Robertson.

† Plin. Nat. Hist. lib. vi. cap. 23. “Lucroque India admodum est.”

‡ Historical Disquisition, &c. by Dr. Robertson, vide Sect. i. and note x.

“intercourse seems ever to have been carried
“on by sea between Persia and India.”

The spirit of commerce, when once excited, is however active and persevering, and the European demand for the muslins, the silks, the spices, the pearls, and the diamonds of the east, perpetually augmented. To facilitate their transportation, a busy coasting trade spread on both sides of the Peninsula of Hindostan, to the islands eastward *, to the kingdom of Siam, and even to China. The luxurious productions of these distant countries, were thus brought to the most convenient harbours to be conveyed to Alexandria, and diffused through the Roman Empire.

This lucrative trade was so tempting, that towards the beginning of the sixth century, the Persians began to surmount their aversion to maritime affairs, and their harbours were filled with trading vessels. They soon monopolized the silk trade ; for their vicinity to India gave them great advantages over the Egyptian merchants, but it also augmented the danger of transporting the variolous contagion. Indeed, whatever attention might have been paid by the commanders of these merchant vessels, it was impossible that

* Historical Disquisition, &c. by Dr. Robertson.

this calamity should have been avoided much longer ; and as ships coming from India, both in their passage to the Persian Gulph, and to the Red Sea, frequently touched at the Arabian ports, that country was peculiarly exposed, and there accordingly it was first observed.

CHAP. III.

THE SMALL POX APPEARS IN ARABIA, AND FOLLOWS THE
TRACK OF THE SARACENS.

THE war of the Elephant was a religious war of great celebrity in Arabia: but the truth was so obscured by Oriental fictions, as not to have been developed even by the penetration of Gibbon; and as the incidents were intimately connected with the history of the Small Pox, it is necessary briefly to relate them.

Abrahah *, an Abyssinian prince and a Christian was Viceroy of Yaman. He built a magnificent church at Sanaa, with the pious design of attracting the Arabian pilgrims from the idolatrous worship at Caaba, and of inducing them to pay their devotions to the true God; and so convert them to Christianity.

In the year 568, the inhabitants of Mecca

* Bibliot. Orient. D'Herbelot. Art. Abrahah. La Vie de Mahomet par Gagneir. The Life of Mahomet, by H. Prideaux. Ancient Universal History, vol. ix. The History of the Decline and Fall of the Roman Empire, by Edw. Gibbon, and a crowd of Arabian authors, who relate the War of the Elephant with slight variations.

were alarmed by finding their ancient temple neglected; and some of them secretly entered the church of Sanaa at night, and defiled the walls, and the altar, by smearing them with filth. Abrahah was so incensed at the profanation, that he swore he would raze the Caaba to the ground; and having soon assembled a large army, he marched directly to Mecca, mounted upon a huge elephant. Abdol Motalleb the grandfather of Mahomet presided in Mecca, and according to the Arabian historians, was aided by Heaven. For when Abrahah attempted to enter the city, his elephant knelt down, then turned round, and could not be forced to advance; while he was disconcerted by this incident, a large flock of supernatural birds, named Abahil, came flying from the sea. The plumage of some of those birds was black, and their bills were white; others had green feathers with yellow bills. All of them were armed, each carrying a small stone the size of a pea in its bill, and two in its talons. These stones were inscribed with the name of the person they were intended to strike, and were thrown down at once upon the army. The stones pierced through the helmets and bodies of the Abyssinian soldiers: none escaped, except Abrahah, who fled to Ethiopia. He there related the catastrophe of the army to Pagjaschi, Emperor of Abys-

sinia, and was desired by him to describe the form and appearance of these unknown birds. On which he pointed up to one, which had pursued him during his flight, and which still hovered over his head; at that instant the bird launched a stone at him, and laid him dead at the Emperor's feet.

According to some Arabian writers, Abrahah died of a shocking pestilence, by which his limbs putrified and rotted off.

Gibbon * calls Sale, the translator of the Koran, half a Mussulman, because he remarked that something of a very extraordinary nature must have occurred at the Siege of Mecca. Yet although my religious principles should also be suspected, I cannot help agreeing with him; for the miracle was proclaimed soon after by Mahomet himself, during the life-time of persons who might have been present, and to whom an appeal is made in the following lofty chapter of the Koran.

THE ELEPHANT REVEALED AT MECCA.†

“In the name of the most merciful God.”

“Hast thou not seen how thy Lord dealt with

* Decline and Fall of the Roman Empire, vol. ix. note on page 254.

† The Koran by Sale.

“ the riders of the elephants ? Did he not make
“ their treacherous design an occasion of
“ drawing them into error ; and send against
“ them flocks of birds, which cast down upon
“ them stones of baked clay, and destroyed them
“ like corn trodden down by beasts ? ”

The events of this war were considered so marvellous, that a new epoch was founded ; and the era of the War of the Elephant was employed by the Arabians, until the Caliph Omar changed it for the Hegyra.

It can hardly be supposed, that these incidents, recorded by a number of early Arabian writers, corroborated by so remarkable a consequence, and introduced by their prophet into his sacred book, should have been altogether a baseless fabrick. Historical fables have usually some foundation in truth, which is manifested on this occasion by two Arabian authors.

Doctor John James Reiske, of Leyden, was well versed in Arabian antiquities, and the translator of the Moslem Annals of Abulpheda. He also wrote a Latin dissertation, containing miscellaneous medical observations, extracted from Arabian relicks. There is a passage there respecting the origin of Small Pox and Measles, which shall be translated.

“ Dr. Friend has conjectured * well in his His-
 “ tory of Medicine, that the Small Pox was first
 “ brought into Egypt during the Caliphat of
 “ Omar about the year of Christ 640, by the
 “ Arabians, who had been infected by some
 “ Eastern or remote nation, and the disease was
 “ thence propagated through Europe. But I
 “ have accidentally discovered in a book, which
 “ in other respects is of no value, both who first
 “ carried the Small Pox into Arabia, and the
 “ time when that occurred. For, in turning over
 “ the Arabian manuscript which is inscribed
 “ No. 53, in the Leyden library, I found, by
 “ chance, the following words. ‘ In this year

* Extractum ex dissertatione inaugurali exhibente Miscel-
 laneas aliquot Observationes Medicas ex Arabum monumentis.
 Auctore Joanne Jacobo Reiske. Lugd. Batavor. 1746. p. 9.
 “ Observatio I. Recte conjecit Jo. Friend in Historia Medicinæ,
 “ ubi agit de Variolis, p. 305. Ed. Leid. Arabes, ut variolas in-
 “ tulerunt primum in Ægyptum sub Omaro, id est circa An.
 “ Chr. 640, unde porro per Europam propagatæ sunt, sic ipsos
 “ antea ab Orientalibus aut remotioribus aliis populis infectos
 “ fuisse. Qui autem variolas primi et quando invexerint in Ara-
 “ biam, inveni in libro cætera vili, ubi minime quæsiveram. Vo-
 “ lutans aliquando codicem MS. Arabicam.

“ No. 53, Bibliotheca Leidense, incido casu in hæc verba.

اول ما رايت الحصبة والنوا صل والكالب في
 ارض العرب في نزلن العام وتدل كان بعض نالمن
 في بني اسرائيل ولم تدخل ارض العرب الا
 حينئذ واول ما ظهر من مبر الشجر كالخرمل
 والكنطل وما اشبهها في نزلن العام *

“ at length, the Small Pox, the Measles, the
 “ diseases named Nawasal and Kynanthropia,
 “ or Ol Kalab first appeared in the land of
 “ Arabia. Some of those distempers had occur-
 “ red before to the Israelites, but never had at-
 “ tacked Arabia till then. In this year also
 “ there first appeared certain trees, as the
 “ Sylvan rue and the Colocynth.’

“ The Ethiopians therefore, at this time, carried
 “ the Small Pox into Arabia, who in the days of
 “ Hippocrates carried the Plague into Europe.
 “ The year meant is that in which the Abys-
 “ sinians, having ejected the royal family of the
 “ Homerites, and got possession of their king-
 “ dom, invaded Mecca: they were desirous of
 “ subduing the remaining part of Arabia, and of
 “ establishing the Christian faith, which they
 “ professed, even into Hagar: with this inten-
 “ tion they endeavoured to overturn the great

“ ‘ Hoc demum anno comparuerunt primum in terris Arabum
 “ Variolæ et Morbilli, et on Nawassel et Kynanthropia (seu ol
 “ Kalab;) quorum quidam aliqua fuerant jam antea inter
 “ Isrælitas, non tamen Arabum terras invaserunt nisi tum demum.
 “ Primum arbores Sylvestres, ut recta Sylvestris (ol Harmal) et
 “ Colocynthis (ol Hanthal).’ Ergo Æthiopes qui olim Hip-
 “ pocratis tempore gravem Græciæ pestem intulerunt, hoc anno
 “ Arabiæ variolas intulerunt. Annus autem quem notat est ille,
 “ quo Habassini regno Homeritico potiti ejecta regum Homeri-
 “ tarum prosapia, reliquam quoque subigere tentantes Arabiam,
 “ et Christianam fidem quam ipsi profitebantur etiam in Hagar
 “ stabilire invaserunt. Mekkam, ea mente ut Caabam, magnum

“ temple of Caaba, the seat of Arabian Paganism:
 “ but they were repulsed and grievously afflicted
 “ by those divine and prodigious birds which are
 “ mentioned in Surata; the Koran, c. v. and in
 “ the Commentaries upon it.

“ illud templum sedemque paganismi Arabici everterunt : sed a
 “ divinis illis prodigiosis avibus, de quibus vide Surata. Corani,
 “ c. v. et ibi commentatores, debellati et gravissime afflicti
 “ fuerunt.

“ Is idem annus nascentem vidit Mohammedem. Ex quo
 “ efficitur eum annum fuisse annum post Christum natum 572.

“ Verba isthæc pauca sunt, sed notatæ digna. Postero-
 “ rum eorum partem expendant Botanici. Quid sint *النواضل*
 “ on Nawasel, non invenio notatum in Lexico Gotic. Sed ex
 “ vi verbi Nasali concludo exanthematum genus esse, forte
 “ apthas, forte etiam et id potius febrem scarlatinam purpuram
 “ aut rubeolos. (Germani . . . appellant.)

“ Ol Kalab est rabies canina, non illa Europea, sed ista Ara-
 “ bica qua in canes vertuntur qui sic insaniunt: stato quodam
 “ anno tempore ululant latrantque canum instar, deinde sua
 “ sponte ad se rediunt, de quo morbo latius aliquando in libello,
 “ si edere licet de Arabum medicina. Simile quid nostri quoque
 “ scriptores Græci atque Latini perhibent in Lycanthropis.

“ Specificum variolarum antidotum hactenus non reperi apud
 “ medicos Arabicos, ut quos non legi, blandior tamen mihi esse
 “ illa fore ut inde aliquando aut ipse ego eruam, aut alius aliquis.

“ Liber autem unde hanc descripsi observationem est compen-
 “ dium libri Massudi qui *مروج الذهب* seu *penta aurea* inscribitur
 “ ab aliquo Schatibense confectum id est deinde e Xativa, urbi
 “ Hispana, non ut male in Catalogo appellatur, Schuteibio.
 “ Ille autem Massudi auctor etiam nostris hominibus non incog-
 “ nitus ut habeatur pro Livio Arabico, et fama maxima
 “ polleat : re tamen ipsa deprehendi quod Berosus potius aliquis
 “ Arabicus sit appellandus, et inter maximos impostores eosque
 “ primos atque ineptissimos collocandus.”

“ In that same year Mahomet was born : and consequently it was according to the Christian era, the year 572.” *

Part of the quotation from Massudi, is for the consideration of Botanists ; but Dr. Reiske gives an explanation of the words Nawasal and Kynanthropia. He also remarks, that though this Author is held in great repute, yet, that in fact, he was an Arabian Fabulist, and a weak impostor.

Notwithstanding this unfavorable character, Dr. Reiske seems to have credited his testimony as to the rise of Small Pox and Measles, and it is strongly supported by another evidence.

When Mr. Bruce of Kinnaird was at Massuah in the Red Sea, he had the opportunity of seeing the Abyssinian Annals and other historical works of that country. He quotes a manuscript of the siege of Mecca, by El Hameesy, and this author accords with the Arabian writers in the more remarkable incidents of the war of the Elephant ; and particularly in the destruction of the Arabian army by miraculous birds ; which he suspected was a miracle raised by the devil ; and his conclusion is † “ *That it was at this*

* But according to Gibbon whose chronology is here followed, A. D. 569.

† Travels to discover the Source of the Nile, by J. Bruce of Kinnaird, vol. i. p. 514.

“time that the Small Pox and Measles broke out in Arabia, and almost totally destroyed the army of Abrahah.” Here is a second direct and independent evidence of this fact, added to many circumstantial proofs. For a crowd of historians agree in the invasion by Abrahah, and of the destruction of his army before Mecca, though there were only a handful of frightened citizens to oppose them.

But a contagious malady has frustrated many a military expedition, and no disease was more likely to have this effect, than those mentioned by Massudi and El Hameesy. For the Small Pox and Measles would make frightful havoc among troops who were all susceptible of the contagion.

The two species of mystical black and green birds, with white and yellow bills, who dropt down stones, the size of peas, that destroyed an army; and of the pestilential disease which rotted the limbs of Abrahah, therefore admit of an easy explanation. The whole may be considered either as an Eastern allegory of the origin of the Small Pox and Measles in Arabia: or, as I rather suspect, a parable invented by Mahomet, to excite veneration for the city in which he was born, and to augment that which had been long paid to the Caaba. The dark typical phrases used in the Koran secured him

against a charge of falsehood from those who knew the facts : yet intimated that the city and temple had been preserved from Christian pollution by a miracle. This event occurred two months before the birth of the prophet, who in assuming, and maintaining his divine mission, employed a multitude of artifices : yet he did not venture expressly to attribute this miracle to his embryo agency with heaven. But the Mahometan commentators and historians, from respect to the Koran have dwelt upon the prodigy, and suppressed all mention of the diseases, until the truth was buried in the types.

And even in the present times, some persons may deem it mysterious, that two distempers should have arisen and destroyed an army of Christians, who were striving to pull down a Pagan temple, yet have spared the Impostor.

It was undoubtedly a singular triple coincidence, that the Small Pox, the Measles, and Mahomet, should all spring up in the same year in Arabia, for the disturbance of the world. But the army of Abrahah, the victims of these contagions, were avenged, though without tasting vengeance, by contaminating their enemies. And it may easily be imagined from the subtle and deadly nature of these infections, what destruction they must have occasioned, and how rapidly they would extend.

This new cohort of fevers was soon observed by physicians : for Rhases* informs us, that a treatise was written on the Small Pox by Ahron of Alexandria ; and he has even handed down some fragments of the work. This Ahron, according to Abulpharagius,† flourished at Alexandria during the life of Mahomet, and near the period of his assuming the character of an apostle.

Alexandria is near a thousand miles distant from Mecca, but the history of the times accounts for the infections being carried there in so short a period.

At the beginning of the seventh century Chosroes, a Persian tyrant, invaded the Roman Empire, ‡ with an immense host. He stormed the city of Jerusalem, massacred ninety thousand Christians, and sent into Persia the true

* Lib. xviii. cap. i. Continent. Rhasis. Imp. Brix. 1484.

† “ Fertur obiisse Harathum sub initium Islamismi, “ (A. D. 609) ne certo constare illam religionem amplexam “ esse.

“ Hoc tempore inclaruit Ahron Sacerdos Alexandrinus : “ Syntagma ipsius in arte medica apud nos Syriacè reperitur, “ triginta constans tractatibus, quibus duos alios additur “ Sergius.”

Dynast. Abulphar. Pocock. Dyn. viii. p. 99.

‡ The Decline and Fall of the Roman Empire, by Ed. Gibbon, vol. viii. c. 46.

Cross. He next overran the whole of Egypt, attended by a swarm of Jews and Arabs: and certainly, if the Small Pox and Measles had not been conveyed to Alexandria, that emporium of trade, previously by means of commerce, it must have been done by this terrible expedition.

Chosroes, who had so impiously insulted the Christian faith, shewed likewise the utmost contempt for a proposal made to him by Mahomet, to embrace his religion. The Impostor being incensed at the indignity with which he was treated, prophesied the ruin of the monarch. This was accomplished, not many years afterwards, by the arms of Heraclius, and the treachery of his subjects. And the haughty Chosroes, after having been elevated by victories to the summit of power, and enjoying all that Oriental magnificence could lavish, was doomed to endure the last extreme of human misery. He was insulted, tortured, and murdered by his son.

The Small Pox and Measles certainly burst forth among the Arabs, at a period most fatally favourable for their dissemination. For in the year 622, Mahomet began to collect the wandering tribes, whom he led forth inflamed with fanatic fury, and contaminated with disease, against the surrounding nations. The numbers

killed by the Arabian scimitars are usually exaggerated, to adorn their victories ; but the greater multitudes who silently perished by diseases, are rarely noticed.

After the death of Mahomet, the enthusiasm which he had kindled continued to burn, and his successors, in a few years, conquered Persia and Syria, and spread the Small Pox and Measles through these extensive countries. In the year 638 Amrou, the lieutenant of the Caliph Omar, invaded Egypt, quickly overran the southern provinces, and in two years captured Alexandria.

Although this school of philosophy had long been on the decline, yet, in the retrograde state of literature, its occupation by the Saracens was a mournful event. But the calamity has been heightened by a passage in the dynasties of Abulpharagius. This author mentions, * that after Alexandria was captured, John, surnamed the

* Historia Compend. Dynast. Gregor. Abul-pharag. Latine vers. ab Edward Pocockio.

“ Quod ad libros quorum mentionem fecisti, si in illis contineatur quod cum libro Dei conveniat, in libro Dei est quod sufficiat absque illo : quod si in illis fuerit quod libro Dei repugnet, neutiquam est eo opus ; Jube igitur e medio tolli. Jussit ergo Amrus Ebo’las dispergi eos per balneas Alexandriæ, atque illis califaciendis comburi : ita spatio semestri consumpti sunt. Audi quid factum fuerit et mirare.”

Grammarians, taking advantage of the attention paid to him by Amrou, solicited the possession of the famous library, conceiving it was held in no estimation by the Arabians. The consent of the Caliph Omar was asked, who sent an order, “that if the contents of the library accorded with the Koran, that book of God was sufficient; but if they are repugnant to the book of God, we have still less occasion for them; or order them therefore to be destroyed. Amrou accordingly directed that the volumes should be distributed to heat the baths of Alexandria, and in the space of six months they were all destroyed. Hear what was done and wonder!”

This conflagration of the library has occasioned among scholars much superfluous lamentation; and abundance of undeserved execrations have been poured upon the Caliph Omar. But the discerning Gibbon * considers the whole as an idle tale; for there are two † respectable Egyptian annalists of an earlier date, who were Christians, and many Mahometan writers, all of whom are silent on the above transaction. Indeed the fact is contradictory to the conduct

* Vide Decline and Fall of the Roman Empire, by Ed. Gibbon, vol. ix. page 441.

† Eutychius and Elmacin; Abulfeda, Murtadi, &c. quoted by Gibbon.

of the founder of this new faith. For Mahomet was an admirer of the science of medicine, and thought himself skilled in it. There is in the Koran a sort of essay on the medical qualities of milk; which he believed to be not only a wholesome beverage, but also a powerful remedy in many diseases. He is also said * to have written medical maxims, one of which shall be given. “There is no disease for which there is not a remedy, except the greatest of all, death.” This is a style of instruction suitable to a great prophet, but for practical purposes the medical profession usually prefer the aphorisms of Kaaw Boerhaave. However, to destroy books was certainly no part of the Mahometan creed, and the orthodox † of that religion were so far from entertaining an antipathy to literature, that their casuists have declared, “that the books of the Jews and the Christians should never be committed to the flames; and that the works of profane science, as historians, poets, physicians, and philosophers, may be lawfully applied to the use of the faithful.” They accordingly made good use of them, and the Mussulmen authors are very numerous. Even John the

* *La Vie de Mahomet par Gagnier.* tom. ii. p. 408.

† *The Decline and Fall of the Roman Empire,* by Ed. Gibbon, vol. ix. p. 440.

Grammarian was a voluminous writer: he was admired and patronised by Amrou, the person who is said to have executed the order of Omar.

At all events there is no reason to believe that the transactions at Alexandria were particularly injurious to the science of medicine. The works of Ahron were undoubtedly preserved: but it appears from Abulpharagius, that Paul * of Ægina practised medicine there at this period; and this author, in the preface to his *Enchiridion*, asserts, that “he † has left out no disease as far as was possible,” yet he never mentions the Small Pox or Measles. This omission is rather surprising, and at first sight seems contradictory to the account already given of Ahron having published an essay on Small Pox, in the same city, during the life of Mahomet. Attention to the following particulars may, however, explain naturally this difficulty.

Paul was not like Ahron, a native of Alexandria, but a Greek from the island of Ægina:

* “E medicis autem qui hoc tempore floruerunt, fuit Paulus Egineta, medicus suo tempore celebris, &c.” *Dynast. Gregori Abul-pharag.* Pocockio, page 114.

† “Nam post Galenum et Juniores etiam Galeno fuerunt præcipua ex omnibus delegi morbo nullo, quantum id fieri potuit prætergresso.” *Medic. totius Enchiridion Pauli Æginet. Præf.*

he was a great traveller ; and may have published his *Enchiridion* before the works of Ahron had appeared. This is strongly confirmed by the decisive testimony of Hali Abbas* ; who, in his enumeration of distinguished medical writers, ranks Paul as the last of the ancients, and Ahron as the first of the moderns. These expressions being applied to cotemporaries were not understood, even by the learned Dr. Friend†, from not adverting to the religion of Hali ; who being a Mahometan, made the epoch of the Hegyra the boundary between the ancients and moderns.

The *Enchiridion*, having therefore been written before the Hegyra, or 622 of the Christian æra, may have been published at Rome, or Constantinople, or at least previous to the time when Paul established himself at Alexandria : for it is not until after the capture of that city by Amrou, in the year 638, that he is mentioned by the author of the *Dynasties*.

It might even be judged from internal evidence, that the *Enchiridion* was not the produc-

* *Liber Regalis Hali Abbas ex Arab. in Latin. reduct. Stephan.*

† “ Qui (Ahron) ideo inter recentes credo ab eo (Hali) ponitur, quod Syriacè scripserit.” *Hist. Medicin. Joan Friend, vol. i.*

tion of a veteran in physic : for it is a mere compendium from the Greek and Latin authors, and chiefly extracted from Galen and Oribasius: and as not a syllable is mentioned of any Arabian author, it may be concluded that at the time he wrote, he was unacquainted both with them and with the Small Pox.*

To follow the progress of the Small Pox is to proceed with the history of the Arabs, who in the space of thirty years subdued Syria, Egypt, and Persia. And as these conquerors, in their military expeditions, moved in great bodies, and established themselves, with their plural wives, children, and slaves, in the subjected countries ; they disseminated the Small Pox and Measles wherever they went. But the love of conquest augments with enjoyment. The Saracens, unsatiated with ravaging the most charming provinces of Asia, were inflamed with the desire of possessing Europe also.

* Dr. Friend justly concludes from the omission of the Small Pox by * Paul, that this disease was unknown at that time in Greece : but Woodville † extends this to an assertion that it was also unknown at Alexandria, after the capture of the city by Amrou, and after an Essay had been written upon the disease by Ahron. Woodville seems to have been unacquainted with Hali Abbas, and many of the Arabian medical writers.

* *Johannis Friend de Purgantibus.*

† *Introduction to History of Inoculation, p. 21. by W. Woodville.*

Constantinople guarded the northern barrier, whose inhabitants retained the name of Romans, though they durst not encamp without their walls. But by surpassing the Arabians in art, they burnt their fleet with Greek fire, and compelled them to raise the siege. Thus the Mahometan Empire was bounded by the Hellespont, and that entrance for the Small Pox into Europe was barred up. And this was done so effectually, that it appears by Nonus,* a physician who lived at Constantinople in the middle of the 10th Century, that the Small Pox and Measles were unknown, even then.

In spite of this check, the Arabians carried their arms eastward; the Small Pox accompanied the Koran, and attacked some of the Saracen monarchs. For three† of the early

* Noni Med. Clar. &c. per Hierum Mart. Argent. 1568.

† (Caliph Jesid) "Fuit fuscus, valde formosus, vertice magno, in facie sua habens varorum vestigia."

He died in the year 683. Historia Saracen. Elmacin. Erpin. p. 54.

(Caliph Walid) "Erat autem valde procerus, fuscus, pulcherrimus, et in facie varorum habens vestigia."

He died A. D. 714. Elmacin. p. 73.

Caliph Mutamidus Alalla "in fronte varorum habens vestigia."
Died in 892. Elmacin. p. 175.

Caliph Mahad "in oculo suo dextro habens albuginem."
Died in 785. Elmacin.

caliphs were pitted with Small Pox, *two had a white spot on each of their eyes*, probably from the same cause, and one* fell a victim to this disease.

It also will afterwards be shewn that many Arabian medical authors in the periods subsequent to the Hegyra, wrote at length upon the Small Pox and Measles, and that the utmost attention was paid to these destructive maladies.

Medical learning indeed had been cultivated in Persia, long before the Arabian conquest: for about the year 272.† Sapor, King of Persia, the conqueror of the emperor Valerian, obtained in marriage a daughter of Aurelian. When this Princess proceeded from Rome to Persia, her father appointed some Greek physicians to attend her, who diffused the principles of Hippocrates through the East. Nisabar, the capital of Chorassan, was built by this queen: it became her favourite residence, and many celebrated physicians afterwards arose in that country. In later times when Persia was overrun by the

Caliph Watic "in oculo dextro maculam habens albam."
Died 845. Elmacin. p. 146.

* "Porro anno 136. Dul Hajia mortuus est variolis Al
"Saffahus." Abul-pharag. Dyn. Pocock. p. 139 A. D. 750.

† Abul-pharag. Dynast. Pocock. p. 8. Histor. Medic.
J. Friend. vol. i. p. 198. Gibbon, vol. i.

Saracens, medicine seems not to have suffered : for the doctrine of predestination did not induce the Mahometans to neglect those arts which profess to heal wounds, cure diseases, and prolong life. They on the contrary, fostered them, and Pharmacy and Chemistry were especially improved, in the Arabian schools ; and some of their doctors were so zealous and credulous, as to search with perseverance for the elixir of immortality.

It was not however till the reign of the caliph Almoctaderus, about the year 941, that government appears to have adopted any regulations for the controul of medical practitioners. When information * having been given, that a man was killed at Bagdad, by an ignorant person who had assumed the character of a physician ; the caliph gave to his own physician, Sinan Ben Thabet, the honorable and important commission of examining all others, and of granting to those whom he judged to be competent, licences to practise medicine. The number who were licensed after examination, amounted to eight hundred and sixty ; and there were besides some royal physicians, and others of distinguished knowledge, who were not called in

* Biblioth. Arab. Hispan. tom. i. p. 438.

question. There are some anecdotes related of these Arabian physicians, which shew that they were not ignorant of human nature. An example of their knowledge of each sex shall be given.

Messue*, whose works on Small Pox are quoted by Hali and Rhases, was chief physician to the Caliph Harun al Rashid. He was himself a Christian, and was one day consulted by a corpulent priest of the same persuasion for a disorder in his stomach, a malady not unfrequent with this order of men at Bagdad. The physician, after hearing patiently all his oppressive symptoms, would have prescribed a warm confection, named alehusi : but the priest assured him, that it was too weak for his constitution, as he had already tried it without effect. Messue very candidly admitted that it was a preparation which did not succeed in all cases : and he therefore recommended him a course of dyacimin; but as it was a powerful stomachic he must commence with a moderate dose. “ Why,” said this perplexing patient, “ I have already swallowed several pounds of it, “ without perceiving the slightest effect.” The physician seemed unembarrassed, and declared,

* Abul-pharag. Pocock. p. 153. He is stiled “ Johannes “ filius Masawaihi (Messue) Christianus, Syrus,” &c.

that no other organ of the body was so various in its dispositions and functions, as the stomach; and that as his was so peculiarly untractable, recourse must be had to the corroborating tonic named albendadikin. "Alas!" cried the despairing patient, "before I consulted you, I drank above a gallon of it!" Messue being now piqued, asked him, if he had also taken ambrosia in the same abundance, "Yes," said the priest, "with the ambrosia of your shops I am thoroughly surfeited." The doctor then collected his thoughts, and pronounced with gravity, "that one remedy alone remained; but which, even in the most obstinate cases of indigestion was infallible, you must turn Mahometan."

The essential parts of this prescription may be used without apostatizing, even by the dignitaries of the English church; for they consist in a total abstinence from wine, with a plenary indulgence in preaching, washing, and fasting.

Another * physician of those times displayed equal skill in one of those female cases which defy all medical theories.

A beautiful and favorite slave of the caliph Harun al Rashid was one morning alone, and

* Abul-pharag. Dynast. Pocock. p. 153.

happening to yawn, one of her arms suddenly stiffened. The whole Seraglio was thrown into consternation, and while the court physicians were alternately embrocating her arm with relaxing liniments, and fumigating it with fragrant antispasmodic gums; the dismal tidings were cautiously intimated to the enamoured caliph. He instantly gave orders that no remedy should be left untried. Abundance were accordingly made use of, but nothing availed; the physicians were confounded, the eunuchs uttered dismal groans, the women shed floods of tears, and the caliph retired from the scene, absorbed in grief. In the midst of this deep distress, Al Jaafer, the Grand Visier, who had been cured of a secret indisposition by Gabriel Bachtishua, ventured to extol him to the caliph for his wonderful skill; and to advise that he should be consulted. In a moment the captain of the guard was dispatched; Gabriel was brought, and the melancholy and extraordinary case was described. After a few minutes spent in silent reflection, the physician said, "Commander of the faithful, I have found out a remedy." "What is it cried the caliph?" Gabriel replied, "Let the young lady be brought here; and I request a promise that you will not be offended, while, before all this presence, I do what I judge requisite for her cure." The caliph

assented; and the afflicted girl was introduced, having only a fine piece of flowered muslin, negligently thrown around her. She was rendered more interesting by her raised arm, having involuntarily fixed itself in a graceful attitude. As soon as she entered, Gabriel boldly ran up to her, stooped down and grasped the fringe of her train, as if he was resolved to lift it up. The Lady confused and crimsoned, brought down her arm instinctively, to preserve the propriety of her dress, and to hinder the threatened indignity. On which Gabriel exultingly exclaimed, "Oh! Commander of the faithful, she is cured!"

All present were amazed; and the Caliph was so transported, that he ordered five hundred thousand pieces of money to be paid him instantly, and thenceforward admitted him into his friendship.

In reading this agreeable catastrophe, some licentious, nay some licensed physician, may feel an itching in his palm to touch such a fee and such a fringe: but he shall now learn that medical intercourse with these despotic sovereigns was not always to be coveted.

Honain*, a Christian physician, and scholar to Messue, who surpassed his master in learn-

* Abul-pharag. Dyn. Pocock. p. 172, about A. D. 878.

ing, and has rarely been equalled in virtue, had a severe trial. After prosecuting his studies at Bagdad and Balsora, he travelled to Constantinople to cultivate Grecian literature; and made such proficiency, that he and his disciples translated most of the classical medical authors into the Syriac and Arabian languages.

The Caliph Motavekkel perceived that a man possessed of such rare talents might be a valuable acquisition; but his soul was tinctured with the gloomy suspicions common to Eastern Monarchs. He had conceived a doubt that Honain might be seduced by his successor, or by his enemy the Byzantine Emperor, to poison him. Being determined to prove his fidelity, he sent for Honain, and condescended to dissemble. The physician was received with unusual ceremony, and was invested with a magnificent robe: when introduced into the imperial presence, a diploma was put into his hands, which conferred upon him a revenue of fifty thousand pieces of money. The Caliph then addressed him most graciously, and after many flattering expressions, desired him to prepare a drug, by which he might dispatch one of his enemies without its being known. Honain answered, "I have hitherto only searched for salutary remedies, and I never imagined that the Commander of the Faithful would have

“ required of me others. Yet since it pleases him
“ to demand medicines of an opposite quality,
“ I shall seek for them; but it will require some
“ considerable time.” The Caliph suspected that
this was a mere pretext to escape beyond his
reach; and therefore urged him repeatedly and
vehemently, with tempting promises and alarm-
ing threats, to obey his injunctions; while
Honain mildly maintained his total ignorance
of poisons. At length the Caliph, exasper-
ated to fury, commanded that he should be
thrown into a dungeon: and he was instantly
hurried from the palace, and plunged into a
noisome cell, kept for the worst criminals;
where he was watched by an officer, who re-
ported daily all his words and actions to the
Caliph.

Honain occupied his mind, as much as he
was able, in study; and, after a year's impri-
sonment, was dragged before the Caliph,
throned in Oriental state. Splendid dresses,
rich embroidered stuffs, were spread out, and
heaps of gold and other precious effects were
piled up, on one side. On the other were ar-
ranged instruments of torture, and a naked
scimitar lay upon a skin stained with blood.

The aspect of the Caliph was grim, and his
voice terrible, “ there shall now be a termina-
“ tion to this business; my will shall be no longer

“thwarted by yours. Yield instant obedience to
“my demand, and you shall be gifted with all
“that wealth, nay more than double shall be
“given you. But if you again equivocate, you
“are doomed to torture and death.” Honain
replied with composure, “I can only repeat,
“Commander of the Faithful, what I said for-
“merly; that all my knowledge is confined to
“salutary medicines.” Immediately the Caliph’s
countenance mitigated, and he said smiling,
“compose your spirits, this was only a trial
“of your fidelity, for I suspected the secret prac-
“tices of Kings; but now I am convinced that
“your art is innocent.” Honain kissed the
ground and thanked the Despot; who then
asked him, what had enabled him to resist his
commands. Honain answered, “my profes-
“sion and my religion. By the first I am enjoined
“to be useful to mankind, and bound by an oath
“never to exhibit a noxious drug; and my reli-
“gion inculcates this moral duty, to do good even
“to my enemies.” The astonished Caliph ex-
claimed, “these are incomparable precepts!”
and he ordered that the physician should be ar-
rayed in a royal habit.

In the magnificence and power of the first Caliphs there was an air of sublimity; while their cruelty and treachery often excited horror. And in the character of the Saracens, ferocity

and fanaticism were conjoined with surpassing generosity, and chivalrous gallantry. Religious toleration, and the controulment of their passions, were doctrines neither preached nor practiced by the sensual Prophet. Yet for several ages, that people surpassed the Europeans in civilization; and when literature was extinct at Rome, the Greek and Latin classics were read with delight at Bagdad.

The Small Pox and Measles were soon so universally spread through the Mahometan empire, that the theories of the Arabian physicians were founded upon the belief that these diseases were natural changes, incident to the humors of all human beings.

These contagions, in consequence of their subtilty, accompanied the Saracens wherever they carried their arms.

And in the year 647, * Abdalla, the boldest and most dexterous horseman in Arabia, marched with forty thousand Moslems, and a long train of camels, across the desart of Barca to Tripoli, which he took by storm. Other expeditions, under other leaders, followed; and, in less than fifty years, the Greeks and Goths were massa-

* The Decline and Fall of the Roman Empire, by Ed. Gibbon, v. ix. p. 448.

cred, or driven from the African coast of the Mediterranean. The Moors, when subjected, and infected with the Small Pox and Measles, embraced the Koran, assimilated themselves with their conquerors, conferred upon them their name, and, from congenial habits, became indistinguishable.

CHAP. IV.

THE DIFFUSION OF SMALL POX THROUGH EUROPE
AND AMERICA.

AS at the beginning of the eighth century, the whole eastern and southern coasts of the Mediterranean were subdued by the Arabians; and as their ships swarmed in that sea, Europe could not possibly escape much longer, from the Small Pox and Measles. But the introduction of these diseases, together with the downfall of the Gothic monarchy in Spain, appear to have been owing to a rape committed by a King, and to the vengeance of a beautiful woman.

In the year 710, Cava, daughter of Count Julian, was an attendant of the Queen of Spain. By accident one day too much of her fine person was momentarily uncovered, and the instantaneous glance inflamed Roderick. But the noble virgin declined his presents with modesty, and repelled his importunities with scorn. All his artifices being frustrated, the tyrant employed violence.

Cava disclosed the secret outrage to her father, who was driven by the desire of revenging the honor of his family, and of punishing the ravisher, to betray his country to the Miramolin of Africa. An army of Moors, conducted by Julian, landed at Gibraltar; the Goths were routed, Roderick perished, and the Mahometans were established in Spain. Julian profited nothing by this success; his own fate and that of his daughter are unknown; but his two sons were afterwards murdered by the Moors, on suspicion. By this invasion the Small Pox must have been brought into Spain, and the victorious Saracens soon reached the Pyrenees.

In the year 731 Abderame crossed these mountains, and inundated the southern provinces of France with an host of Saracens. They were opposed, under the walls of Tours, by Charles Martel, where Christians and Mahometans fought six days, indecisively, for victory, and for the pre-eminence of their creeds. But in a closer combat on the seventh day, the impetuous yet slender Africans and Asiatics were crushed by the superior strength of the Germanic warriors. The Saracens and the Koran were repelled into Spain, but the Small Pox and Measles remained in France. No warlike efforts could drive off these infections, and the opportunities of diffusing them had at that time

become innumerable. The Saracen fleets were triumphant in the Mediterranean; Sicily and Italy were frequently invaded; many cities of the coast were repeatedly captured, and Rome itself was menaced. It cannot be doubted that so much intercourse with Africa and Asia brought over these maladies, though no direct proof can be adduced. But the circumstantial evidence is sufficiently conclusive.

To investigate this point, it became requisite to peruse the European historians of the dark ages. But the sterile chronicles of the old monkish writers, give scanty intelligence of the internal state of nations, and rarely mention those civil and domestic occurrences, on which so much of the comfort or misery of the people depend. Instead of these more interesting details, they dwell chiefly upon the feats of their Gothic kings and barons; who were alternately sacking cities and founding monasteries; or upon the conduct of their haughty queens and noble dames, whose passions and piety sometimes hurried them into furious and ridiculous excesses. Foul murders and adultery were committed by some, while many became nuns, and a few remained virgins, even in the marriage state. But the chief heroes of those gloomy times were monks, eremites, and Saints; who are drily described in the extremes of power and misery;

trampling on Kings, performing miracles, perishing in want, or consuming in fire.

Amidst scenes like these, little attention was paid to solve medical questions: almost the only disease which the writers of chronicles deign to mention, is the plague. That word had however a much more extensive signification, than it has since; and was applied then to every dangerous epidemic.

On some occasions an epithet, or brief description was added, by which the real disease may be recognized: but on others the accounts are so much exaggerated or disfigured, that the truth cannot be ascertained. The true plague was usually denominated the * inguinal, glandular, or pustular Plague: the Erysipelas was sometimes named the Plague of fire, or the holy fire: all malignant fevers, even † malignant sore throats and ‡ dysenteries were termed plagues.

* *Pestis inguinaria, pustula, glandula; pestis, aut pestilentia ignis, sacer ignis, Lues.* All these names were common in the old chronicles.

† A. D. 589. "Ce secont deluge eusivi une pestilence, qu'on apele Equinancie." *Chroniq. de St. Denis*, lib. ix.

Recueil Histor. Franc. par Bouquet. tom. iii. p. 253.

‡ "Et Dysenteriz morbus totas prope occupavit Gallias." *Aimon. Monarch. Flor. Recueil des Hist. Franc. par Bouq. tom. iii. p. 83.*

It is recorded that in the year 827 * there was in France a pestilential fever, attended with a cough: and “in 877† that the Italian “fever, a cough, pain in the eyes, and the “plague, destroyed great numbers.”

Frodoard mentions a disease of a similar character, which took place in 927‡. He asserts, that “in the month of March, upon a Sunday, “there appeared at Rheims armies of fire in the “heavens. This sign was immediately followed “by a plague, consisting of a fever and cough, “which raged through all Germany and France, “and caused a great mortality.”

The description given of these last plagues is too ambiguous to determine with certainty, whether the Catarrhal Influenza, or the Measles were meant. But it is quite certain that the Small Pox was in those days included among the

* A. D. 827. “Pestis quasi febris et tussis, &c.” Ex. Chronic. Verdun. Recueil par Bouq. tom. viii. p. 289.

† A. D. 877. “Febris Italica, tussis et dolor oculorum, et “pestilentia multos graviter vexavit et extinxit.” Ex Chronic. Herman. Recueil par Bouq. tom. viii. p. 289.

‡ A. D. 927 “Acies ignea, remis in cœlo vis quadam Do-
“minica die in Martio mense, cui signo Pestis vestigio suc-
“cessit, quasi febris et tussis, qua prosequente quoque mortalite
“per cunctas Germaniæ Galliæque gentes desœvit.” Ex. His-
tor. Frod. Recueil par Bouq. tom. viii. p. 164.

pestilences. For in the first translations of the works of Rhases, the Small Pox is termed *Pestis*; and Constantinus Africanus, as well as many of the early medical writers, class it with pestilential fevers. A nicer discrimination was not to be expected among the historians. Therefore Polydore Virgil states* that the plague occurred in England during the reign of Edward the Third, in the year 1366: and Ralph Hollinshed, in describing the same disease, uses this phrase†, “Also manie died of the “Small Pocks, both men, women, and children.”

The Small Pox being included in the term Pestilence, explains satisfactorily why it is not named by the older writers; and also accounts for the very frequent occurrence of the Plague in early times. In the old Chronicles the Plague is recorded to have visited France eleven times in the ninth, and six or seven times in the tenth centuries. Some of these visitations were unquestionably the Small Pox and Measles.

* “Per hunc modum quietis aliquantisper a bello rebus, ut
“ne otium domi jucundum esset, pestilentia orta est, qua multi
“mortales periere. Incidit hæc lues in annum salutis 1366.”
Polyd. Virgil. Urbin. Aug. Histor. lib. xix. p. 398.

† Chronicles by Ralph Hollinshed. Vid. the reign of Edward III. This is the first time Small Pox is mentioned by an English Historian.

The pestilence of Fire, of which horrible descriptions are given, may have been, in some instances, the Small Pox.

Genulf says *, that when this disease prevailed in France in 923, "it was shocking to hear the
"groans of the sufferers, to see parts of their
"bodies, as if burnt, dissolving away; and to
"smell the intolerable fœtor of the putrid flesh."
And in 994, it is stated, that "the pestilence
"of Fire burnt in Limosin, where innumerable
"bodies of men and women were consumed by
"invisible fire: and forty thousand people were
"killed by it in Aquitain." Another Chronicle mentions, that in the eleventh century "the
"people died miserably from their limbs being
"burnt black by a *sacred fire*." These and simi-

* A. D. 923. "Erat enim non solum audire stridores eorum
"pre dolore vel exustas a corporibus effluere partes videre
"miseria; verum etiam ex putræ carnis fœtore res intoleranda,"
&c. Ex Histor. F. S. Genulf. Bouquet, tom. x. p. 361.

"His temporibus Pestilentia ignis super Lemovicinos
"exarsit: corpora enim virorum et mulierum supra numerum
"invisible igne depascebantur." Ex Chron. Ad. Cab. Bouquet,
tom. x. p. 147.

"Hujus (Josfredi i.), principatu Plaga ignis super cor-
"pora Aquitanorum desævit, et mortui sunt plus 40 millia ho-
"minum ab eadem pestilentia." Ex Commem. Abbat. Lemov.
S. Martiales, &c. Bouq. tom. x. p. 318.

A. D. 1085. "Alii sacro igne membris exesis instar car-
"bonum nigrescentibus, miserabiliter moriebantur." Ex
Chronic. Tur. Bouquet, tom. xii. p. 465.

lar uncouth expressions, may be understood to apply to the gangrenous Erysipelas. But it seems very improbable that this distemper alone should have spread so widely, destroyed such multitudes, and recurred so often. No such epidemic Erysipelas is now known in Europe. It therefore seems reasonable to conjecture, that the Small Pox and Measles were not discriminated from Erysipelas, and that all were included in these frequent accounts of the plague of Fire.

From the preceding history, it could not have been expected that the earliest accounts of the Small Pox having reached Europe, should be found in Ireland. Yet Doctor O'Connor *, a most industrious Antiquarian, who has long been engaged in elucidating the history of that island, by the contents of an immense heap of Irish manuscripts in the Bodleian, and in the library of the Marquis of Buckingham, has found traces of that disease there. These manuscripts are written in ancient characters,

A. D. 1094. "Iterata Lues subcutanei ignis plebem
"Aquitanicam atrocissime torrebat." Ex Chron. Gaufred.
Vor. Bouquet, tom. ii. p. 427.

* This learned Ecclesiastic has lately published, *Rerum Hibernicarum Scriptores Veteres*, tom. i. &c. &c. Auctore Carolo O'Connor, S.T.D. Buckinghamiz, 1814.

partly in Latin, but principally in the Irish language; and consequently are intelligible to very few persons. In one of these works, denominated the Annals of Ulster, it is stated, "that there was in the year 679 *, a grievous Leprosy, which in Ireland is called Bolgach:" and that the same distemper recurred in 742. In Brian's Irish Dictionary, the word Bolgach, is translated the Small Pox; and the plural Bolgaidhe, Blisters. Notwithstanding this, it seems extremely improbable, that the Small Pox should have reached Ireland so early as the first period, which was thirty years before the invasion of Spain by the Moors. That the disease should have been conveyed there towards the middle of the eighth century, is not impossible; for the intercourse between Ireland and the Continent was not inconsiderable even in the sixth; as may be gathered from Bede †, Marian Scot, and the Irish Historians.

* " A. D. 679. Lepa gravissima in Hibernia quæ vocatur " Bolgach."

" A. D. 742. In Bolgach. Domhnal mac Murcha regnare incipit." Annales Ultonienses — primum in luce editi, curante Rev. D. Carolo O'Connor.

† Bedæ Venerab. tom. iii. Sancti Columbani Vita. Also his account of Furseus, &c.

Dissertations on the History of Ireland, by C. O'Connor, Esq. Dublin, 1766. Rerum Hibernicarum Veteres Auctores, Carolo O'Connor, 1814.

In those ages, when the continent of Europe was ravaged by swarms of northern Barbarians, the Irish Scots were distinguished for literature and sanctity. There were then several celebrated schools and academies in Ireland, crowded with foreign and native scholars : and many Saints and other religious missionaries, emigrated from that comparatively learned island, to instruct and edify the Continent. Independent of commerce, this literary and religious intercourse might account for a very early importation of the Small Pox into Ireland; yet the above quotations appear insufficient to establish that fact. For the word *Bolgach* might have been originally the name of a species of leprosy, and only applied to the Small Pox in later times. It is, perhaps, some confirmation of this conjecture, that in the fourteenth century, when the Small Pox was generally diffused, it is then mentioned in these Irish chronicles by the term *Galra breac*, literally the speckled disease ; the name which it has retained in Ireland to the present day.

The passage, when translated into English, runs thus :

“ Fergal the son of Dermot, Chief of Moy-
 “ lurg, lion of the nobility, and the most dex-
 “ terous in arms of all his sept : and Tomaltach
 “ the son of the said Fergal son of Dermot,

“ Tonast of Moylurg, died of the Galra breac
 “ (Small Pox) in 1368.”
 “ William the Saxon, son of Redmond (Sir
 “ Edmund) Burke, heir of the Mac Williams,
 “ died of the Galra breac (Small Pox) in the
 “ island Cua,” in 1368 also. *

Dr. Short, in the Preface to his History of the Air, and of its Effects on Animal and Vegetable Bodies†, mentions, that he had spent sixteen years in that compilation, which is confirmed by the mass of information it contains. He states, that in the year “ 907, “ Princess Elfreda was sick of the Small Pox, “ and recovered.” It is to be regretted that the Doctor has not quoted his authority, and I have searched for it in vain; but his learning and accuracy prevent any doubt of the fact being entertained. It seems probable, from a subsequent fact, that the Princess alluded to was a daughter of Alfred the Great, who was married in the year 899 ‡, to Baldwin the Bald, Earl of Flanders. This Princess died in the year 917.

* Extracted and translated by the Reverend Doctor O’Conner, from the Annals of the IV Masters, an ancient Irish manuscript, in the library of the Marquis of Buckingham, at Stow.

† A general Chronological History of the Air, Weather, Seasons, Meteors, &c. v. ii. p. 208.

‡ Anno Domini 899. “ Tunc Rex Francorum Carolus et “ Comes Flandriæ Baldwinus Calvus duas filias Regis Anglorum “ habuerunt uxores. Rex scilicet Odgivam filiam Edwardi, de

The next case recorded of Small Pox was the grandson of the same Elfreda, whose name also was Baldwin. The event is noticed in the Bertinian Chronicle, as follows. "About
 " Christmas, 961*, Baldwin, the son of Arnolph,
 " Earl of Flanders, was attacked with a disease,
 " which physicians call Variola, or the Pock,
 " and died on the day of our Lord's circum-
 " cision following."

In a genealogy of the Earls of Flanders, preserved in a Cistertian monastery, and published in Bouquet's compilation, the same fact is related thus, "The Iron Baldwin† begot Baldwin the
 " Bald, who married Elstrude (Elfreda), daugh-
 " ter of Alfred, King of England. Baldwin the

"qua Ludovicum suum in regno successorem genuit: Comes
 " Flandriæ Baldwinus Elstrudem (Elfredam) filiam Alfredi,
 " sororem Edwardi, de qua genuit Arnulphum et Adolphum."
 Ex Chronic. Sithiens. J. J. Sithiens. Abbat. Recueil des
 Historiens des Francs et des Gauls. Bouq. tom. ix. p. 74.

* A. D. 961. "Circa natale Domini Baldwinus filius
 " Arnulfi Flandriæ Comitis morbo, quem medici variolas, sive
 " poccas nominant, corripitur; et in die Circumcisionis Domini
 " immediate sequente cursum sequentis finivit vitæ." Ex Chro-
 nic. Sithien. St. Bertini. Bouq. tom. ix. p. 79.

† "Baldwinus Ferreus genuit Baldwinum Calvum, qui
 " duxit Heldradam (Elstrudem) filiam Otgeri (Alfredi) Regis
 " Anglorum. Baldwinus Calvus genuit Arnulphum Magnum,
 " restauratorem Blandinensis Cænobii, qui duxit Adelam filiam
 " Herberti Comitum Virimandorum. Hic Arnulphus acquisit
 " Atrebatum anno ab Incarnatione Domini 932.

“ Bald begot Arnolph the Great, the restorer of
 “ the Convent of Blandigny, who married Ade-
 “ laide, daughter of Herbert, Earl of Verman-
 “ dois. This Arnolph acquired Artois in the year
 “ 932. Arnolph the Great begot Baldwin, who
 “ died of the variolous disease before the death
 “ of his father, and was buried at Saint Bertin.”

These are perhaps the first authentic passages in which the two words *Variola* and *Pocca* are to be found; for the quotation formerly noticed from Marius Aventicensis * cannot be depended upon. And as etymology gives aid to history, it ought not to be neglected.

The Small Pox and Measles not having existed in the classical ages, there could be no term for it in the Greek or Latin languages. The Arabians invented words of their own. But when these maladies appeared in Europe, the Latin language was universally in use among the learned. *Pestis*, *Pestilentia*, and *Lues* were

“ Arnulphus Magnus genuit Balduinum, qui morbo variolæ
 “ ante obitum patris obiit, et apud S. Bertinum sepultus est.”
 Brevis Flandriæ Comitum Genealogia. Ex. MSS. Cod.
 Cistern. Bouquet, tom. xiii. p. 417.

“ Il (le Conte de Boudouyn) morut apres avoir gouverné
 “ trois ans, en l’an neuf centz soixantesept, des petites veroles,
 “ en sa ville de Berghes Saint VVinoch, et gist a Saint
 “ Bertin, &c.” Les Chroniques et Annales de Flandres, &c.
 par Oudegherst, &c. Anvers. 1571.

* Vide page 7.

applied to these, in common with other epidemics; *pestilentia ignis*, the fire plague, was probably applied to erysipelas, and all dangerous eruptive diseases. But as a word was wanted to designate the new disease, *Variola* was coined, evidently derived from the Latin word *Varius*, which signifies spotted, or from *varus**, a pimple. Thence the Spaniards formed their name, *Viruelas*, which the Italians liquified into *Il Vignolo*, and the French framed their *Verole*: for the diminutive *petite* was not added till about the fifteenth century. The French had a word of their own, also, for Small Pox, *Piquote*, which is used by Rabelais and the old French writers. It appears that when the malady extended to the North of Europe, that the Saxons, instead of adopting the Latin word *Variola*, invented the vernacular name *Poccadl*†, derived from *Pocca* or *Pochcha*, a bag or pouch. The Anglo-Saxons also adopted this word, which was vari-

* Celsus and Pliny take notice of *Vari*; and the latter author, for the benefit of the Roman ladies who were afflicted with pimples on their faces, gives the following receipt for a very delicate cosmetic, "Hen fat well beat up and mixed with onions cures pimples."

"Varos adeps Gallinaceus cum cæpa tritus et subactus (sanat)." C. Plin. Hist. Nat. lib. xxx. c. 4.

† "Poc. pocc. *A pock*. Pustula, papula, tuber. Poc-adl. Morbilli, pustulæ, variolæ. Pocca. pochcha. poha. *A pou ch*. Pera." Diction. Gothico-Latin. Ed. Lye.

ously spelt by different writers, and became at length Pock and Pox.

The epithet Small in England and *petite* in France, were subsequent additions.

It is rather odd, that the earliest cases of Small Pox in Europe, should be those of a British Princess and a Flemish Prince; as before that disease had reached Flanders, it must have traversed all the intermediate countries from the Mediterranean, and it must have existed some time in the North, before it acquired a Saxon name. A perusal of the annals of the celebrated convent of St. Gall has furnished me with another case of Small Pox, about the same period, and with some medical anecdotes not undeserving of notice.

Saint Gall was a venerable monk,* who having been fully enlightened in the learned academies of Ireland, and having observed that his devout and civilized countrymen could dispense with his pastoral care, set out on a pilgrimage to reform the wilder Swiss. Wherever he sojourned, his sanctified deportment commanded pious respect; and having reached Switzerland, he there founded a convent to which he gave his name.

In these consecrated walls, his last days were

* Rerum Alamannicarum Scriptores aliquot Vetusti, &c. Ex. Biblioth. Melchior. Haim. Gold. Ekkard, junior, &c. Liber de Casib Monast. Sti. Galli, &c. Franc. 1661, p. 52.

spent, and his sacred bones were deposited; which in after ages were regarded as inestimable relicks.

The annals of this convent were written by a succession of monks; one of whom was Ekkehard the younger, who died either in the year 966 or 967; which point being debated, is respectable to the reverend author's memory.

Notwithstanding the veneration that such abodes were once held in, moderns are prone to believe, that even the convent of St. Gall was a useless and dull institution; and it must be owned, that these respectable annals do not enable us, in a convincing manner, to refute this heavy accusation. For although father Ekkehard may have unravelled the intrigues of those ambitious monks who aspired to the dignity of abbot, most faithfully; yet, in the present times, they can only be read short. He has however described one of his friends with more success.

Notkerus was both a monk and a physician, who, besides knowing something of theology and medicine, was a rare scholar, an interesting painter, and a delightful poet. So various were his talents, that he relieved the sick monks when languishing in their cells, with physic and prayers; he adorned the walls of the monastery with his pencil, he composed Latin hymns, and chanted them in the chapel, and

made the roof of the refectory ring with his wit. His pictures and poems have been suffered to perish, and the few remaining specimens of his jests are obscured by Gothic Latin; but two examples of his medical abilities have been preserved.

Henry the second, Duke of Bavaria, a person of some humour, consulted Notkerus upon his health; he gave a feigned account of his complaints, and shewed him a bottle, according to the usage of these times; but it contained a deceptious liquid. The monastic doctor alternately examined the bottle and the patient, scientifically and shrewdly; at length, bursting with inspiration, he exclaimed, "Behold a miracle! an unparalleled miracle! a man, nay this mighty duke, hath conceived, and in thirty days he shall bring forth a son, and suckle him at his breasts!" The detected Duke confessed his stratagem to the priest of God; and the prediction was mysteriously fulfilled, nearly at the time foretold, by a fair maid of honour. Some temporary disgrace was incurred; but, through the earnest intercession of Notkerus, the duke was appeased, and the lady, when recovered, was restored to favour at Court.

Soon after this pretended consultation, he was sent for in good earnest by Kaminaldus,

the bishop of the diocese, who had been suddenly taken ill. The physician, well aware of the prelate's plethoric regimen, instantly bled him most copiously. And, after viewing the rich inflamed blood, prognosticated, as was believed, from the smell, that in three days the Small Pox would break out. The bishop, though fully prepared, was not the less alarmed; and besought the physician to stop that dangerous eruption. Notkerus replied, "that I could easily do, but if I obeyed, my regrets and misery would be insupportable; for to check the eruption would be equivalent to delivering up your reverence to death." This answer was convincing, and stopt all argument, after conviction. The prelate did not persist. The Small Pox was allowed to proceed regularly, and the bishop was cured without being even pitted.*

The sagacity of this physician, in predicting the Small Pox, and his success in the treatment, are clear proofs that the Faculty in Switzerland were in that age quite familiar with the disease; and we may deduce, from the geographical posi-

* "Odorato cruore variolarum morbum die ei (Notkerus) prædixit futurum. Sed pustulas illa die dicta sibi erumpentes cum eum restringere (Kaminaldus) peteret. Enim ait medicus facere potero, sed nolo, quia necis tuæ reus karrinas tot ferre non potero: quia si restrinxero morti te trado: pustulasque tandem eruptas ita in brevi sanaverat, ut nec saltem de una fuerit signabilis." Loco citat. Ekkehard.

tion of Italy and France, that the malady must have been known in these countries still earlier.

After the contagion had overspread the continent of Europe, Great Britain could not long escape; which was invaded, in quick succession, by Saxons, Danes, and Normans.

In the Harleian collection, in the British Museum, there is a very antient Anglo-Saxon manuscript, which, from internal evidence, is judged to have been written in the tenth century. It contains many pious exhortations, exorcisms and prayers, in the Saxon and Latin languages; and among others there is a supplication in Latin, which may be rendered thus. *

“ An exorcism against the Small Pox.

“ In the name of the Father, of the Son,
 “ and of the Holy Ghost, amen. *Nº* May our
 “ Saviour help us. *Nº* O Lord of Heaven!
 “ hear the prayers of thy man servants, and of
 “ thy maid servants; O Lord Jesus Christ. I be-

* “ Exorcismus contra Variolas.

“ In nomine Patris, et Filii, et Spiritus Sancti, amen. *Nº* *
 “ in adiutorium sit Salvator noster *Nº* dominus celi audi
 “ preces famulorum famularumque tuarum Domine Jhesu
 “ Chrispte adque peto Angelorum milia aut (ut) me *Nº*
 “ salvent ac defendant doloris igniculo et potestate Variola, ac
 “ protegat mortis a periculo; tuas Jhesu Chrispte aures tuas no-
 “ bis inclina.” &c. Bib. Harleian, lib. MSS. num. 585, p. 202.

* The mark *Nº* denotes where the exorcist made the sign of the cross.

“ seech thousands of angels that they may save
“ and defend me from the fire and power of the
“ Small Pox; N^o and protect me from the dan-
“ ger of death; O Christ Jesus! incline your ears
“ to us, &c.”

This affecting prayer, shews strongly the terror which the Small Pox had inspired.

In the Cottonean Library there is a similar monastic manuscript, containing extracts from the writings of Cassiodorus, and other primitive fathers of the church.

In this collection there is a prayer to St. Nicaise, which seems to have been intended for the consecration of Amulets made by Nuns, and inscribed with his name, to be worn as a protection against the Small Pox. It should be allowed in charity to our forefathers, that such an ecclesiastical composition was of a very ancient date. This copy was probably written in the tenth century; as it is followed by a calendar of the paschal terms, beginning with the year 988, and continued by successive hands to the year 1268. It is in barbarous Latin, with a chorus of unmeaning syllables for chanting, as was the practice of the monks, and may be rendered into English, as follows *.

“ In the name of our Lord Jesus Christ, may

* In nomine domini nostri Jhesu Chrsipti. tera tara. mandeis.
moab. lib. libes.

“ the Lord protect these persons, and may the
 “ work of these virgins ward off the Small Pox.
 “ Saint Nicaise had the Small Pox, and he
 “ asked the Lord (to preserve) whoever carried
 “ his name inscribed.

“ O, Saint Nicaise ! thou illustrious Bishop
 “ and Martyr, pray for me a sinner, and de-
 “ fend me by thy intercession from this disease,
 “ Amen.”

As it is asserted in this prayer, that Saint Nicaise, who had been Bishop of Rheims in the fifth century, had the Small Pox, it was important to investigate the fact. In the Lives of the Saints by Surius *, there are two of Saint Nicaise. One is very ancient, but anonymous : the other is the most copious, and is extracted from the works of Flodoard, who was born at Rheims, and wrote a full History of the Church of that city.

He relates, that when an army of Vandals had entered Rheims by storm, and were massacring the inhabitants ; the benevolent Bishop,

Dominus, Dominus adjutor sit illi, illis earum filiarum artifex.
 p. id. poccas.

Sanctus Nicasi habuit minutam variolam, et rogavit dominum ut quicumque nomen suum secum portare scriptum.

“ Sancti Nicasi presul et martir egregie ora pro me peccatore, et ab hoc morbo tua intercessione me defende, Amen.”
 Biblioth. Cotton. Caligula A. xv. No. 30. p. 125. Vide Hist. Inocul. Woodville.

* *Vite Sanctorum Surio, tom. vi. p. 266.*

arrayed in his ecclesiastic robes, and accompanied by Eutropia, his virgin sister, devoted themselves to stop the fury of these Infidels, and to save the lives of the citizens. But the ruffians were neither overawed by the venerable Bishop, nor melted by the beauty of the maid : for while he was exhorting them to spare the people, they transfixed him with their spears, and laid him dead at his sister's feet.

At this spectacle, Eutropia raised her imploring eyes to heaven, sunk on her knee, exposed her naked neck to the swords of the Vandals, supplicating that they would only kill her. She obtained some mercy, for one of the least inhuman of these Barbarians, struck off her head, in sport.

These murders were in the language of that age termed martyrdoms, and the Bishop and his sister were canonized. Saint Nicaise was deservedly regarded as the glory of the church and city of Rheims, and Flodoard has collected every particular of his life that was known : but not a syllable is mentioned of his having had the Small Pox. That assertion in the Anglo-Saxon prayer can therefore only be considered as one of those pious frauds which were so frequent in the dark ages. A saint was wanted to superintend this new disease, and Saint Nicaise was accidentally pitched upon by the

ignorant Monks; who, to justify their choice, asserted that he had a disease which did not appear in Europe till about three centuries after his death.

In the eleventh century, Constantinus Africanus in Italy, and Avenzoar in Spain, published their works, in which are included discourses on Small Pox, as an ordinary malady. Notwithstanding which Dr. Mead, Baron Dimsdale, and many others, have maintained that the Small Pox was brought into Europe by the crusaders, who did not set out on their frantic expedition until the year 1096.

This opinion had no foundation, either in reasoning or in history. For although the contagion of Small Pox might be very readily carried by an invasion, to the most remote countries; yet it is not likely to retrograde upon the country of the invaders, by means of the returning survivors: because the contagion acquired abroad would be dispersed before they could reach their homes, as was formerly noticed. The Small Pox in fact reached Europe more than two centuries before the Crusades; and the historians of the holy wars take no notice of the Christian armies having suffered from that malady. In searching them, only a single trace of it was detected in the following description by Bernard, of the

person of the Count Joscelin* grandson of Atho, the founder of the illustrious family of Courtney.

“ This Count was small in stature, his limbs
 “ were finely formed, his hair was brown, and
 “ his countenance pleasing, *though pitted with*
 “ *marks of the Small Pox* ; his eyes were large,
 “ and his nose aquiline. He was gallant and
 “ fierce in battle, but loved the pleasures of the
 “ table, and was too luxurious.” These Small
 Pox marks might have been acquired in early
 life in France, or the historian probably would
 have omitted that defect in describing so fa-
 vourite a knight.

His death occurred in 1132, and was so me-
 morable as to justify a digression.

“ When Fulco reigned at Jerusalem, Joscelin,
 “ Count of Riez was occupied in the siege of a
 “ Turkish town; and having undermined the wall,
 “ it suddenly fell down and involved him in the
 “ ruins. The soldiers seeing the Count in danger,
 “ ran to his assistance, removed the stones and
 “ earth with which he was oppressed, and car-
 “ ried him to his tent on his shield.

* “ Fuit enim statura pusillus, sed in membris valdè formosus,
 “ capillo brunus, facie lætus, *variolarum tamen signis impressis*,
 “ oculos magnos, et nasum oblongum habuit. Dapsilis et acer
 “ in armis fuit, sed comessationibus et luxuriæ nimium deditus.”
 Bernard. Thesaur. Liber de Acquisitione Terræ Sanctæ ab
 Anno 1095, ad Annum circiter 1230.

“ But the physicians soon perceived that the
“ vital parts were irrecoverably injured : and
“ while he lay declining and languid, accounts
“ were brought that the soldan of Cumania had
“ dared to lay siege to Cherson, a town under
“ the Count’s jurisdiction. Indignant at this in-
“ sult, yet incapable of taking the field, he sent
“ for his son ; commanded him to assemble the
“ army, and to march instantly to the relief of
“ Cherson. His son remonstrated against the
“ measure ; and urged, that their forces were
“ too few to encounter so numerous an host of
“ Turks. The father was deeply mortified to
“ find that a youth begotten by him, and the
“ heir of his Earldom, should possess a pusillani-
“ mous soul. Then rousing himself, he gave
“ orders to collect the troops ; and as soon
“ as they were drawn up in array, he was lifted
“ into a car, and proceeded at their head
“ against the enemy.

“ Before he came in sight of Cherson, some re-
“ turning scouts brought intelligence, that the
“ soldan, having heard of his advance, had sud-
“ denly raised the siege and retired. Upon this
“ the Count halted the army, and all his remain-
“ ing powers which he had so strenuously exerted
“ now failing him, he raised his trembling hands
“ to heaven, and prayed thus : “ O ! most clement
“ Father, I thank thee for having exalted me to
“ high honors, and especially for this last ; that

“ even when thus changed and sinking into the
 “ grave, my enemies have fled at my approach,
 “ and have abandoned my Province. I know
 “ and acknowledge, O most gracious God! that
 “ these are thy works alone!” Having pronounced these words, he sunk down in his car in the presence of the army, and died.

This was a Paladin.

It was formerly noticed, that there is no trace of Small Pox to be found in the lives of the early Saints, because that malady had not then reached Europe. But even after it had spread through this quarter of the globe, the Saints appear to have been peculiarly negligent of Small Pox patients. However, in the year 1218, there lived in France a distinguished Female, who was entitled Saint Franca, and who wrought abundance of miracles. Among the rest *, she restored sight to a person who had been rendered blind by the Small Pox. And Saint Ivo †, also, about the year 1303, miraculously cleared off a spot from the eye of a young girl, which had been caused by a variolous pustule.

* “ Cæcitas occasione Vayrorum exorta,” &c. Bolland, tom. iii. Aprilis, p. 384. Act. Stæ. Franc.

† “ Macula nata fuit in oculo puellæ post assumptam in-
 “ firmitatem quæ vocatur Veyrola”. Bolland. tom. iv. Maii,
 p. 572. Miracul. Sti. Ivonis.

It is likewise recorded, that Pope Urban V.* cured a patient affected with the fever of Small Pox, about the year 1364.

This being considered a miracle, is a proof of the fatality of the disease at that time. Though in the fifteenth century miracles were declining fast, yet there was a woman in France†, who had lost the sight of both her eyes from the Small Pox, that had the good fortune to stumble upon Saint Jacob Philip, who restored her vision to perfection: and another‡ who had been blind for three years from the same cause was cured by Saint Cunera. The Lives of the Saints, compiled by Bishop Surius, and the Bollandini, which contain those facts, are now held in little reverence. But independently of medical authorities to be noticed afterwards, these scattered passages are

* "Patiens febrem cum Picota vel Vayrola debilitans," Du Cangii Glossar. Picota. Miracul. MS. Urbani v. Pp. in Tabul. S. Victor. Mass.

There is great variety of spelling employed by Monastic authors.

† Joanna ob variolum, lumen amiserat oculorum, &c. Bolland. tom. vi. Maii, p. 171. Miracula B. Jacob Phillipi.

‡ "Alteri per poccas per triennium oculi extincti fuerunt." Mirac. S. Cuneræ, tom. ii. Junii, p. 565. Bolland.

the only very early allusions to Small Pox, which, after a strict search, have been found out; for no formal information upon this subject has been given by cotemporary historians.

In the fifteenth century a greater attention began to be paid to the discrimination of diseases: for Mezeray states, in 1414, the commencement of a malady of far less importance than the Small Pox. His words are, "That
 " a strange kind of Rheum *, named the Hoop-
 " ing-cough, tormented all sorts of people dur-
 " ing the months of February and March, and
 " rendered their voices so hoarse, that the Bar,
 " the Pulpits, and the Colleges were mute.
 " All the old men who were seized with it
 " died."

The same author also notices the Small Pox for the first time, when Charles VIII. was pro-

* " Un estrange rhûme qu'on nomme La Coquelûche tour-
 " menta toutes sortes de personnes durant les mois de Fevrier et
 " de Mars et leur rendit la voix si enrouée, que le Barreau, les
 " Chaires et les Colleges en furent muets. Il causa la mort à
 " tous les Vieillards qui en furent atteints." Abreg. Chronol.
 de l'Hist. de France par Mezeray, tom. ii. p. 651.

The vernacular words, of Coqueluche, Hooping-cough, and Kin-cough, are more expressive and correct, than the learned names, Pertussis or Tussis convulsiva. Nosology and Chemistry have been obscured by a multitude of varying scientific nomenclatures.

ceeding, in the year 1494, on his celebrated expedition for the conquest of Naples. "He
 " was taken ill at the town of Asti in Piemont,
 " confined near a month, and expected to die
 " of the Small Pox." This fact is confirmed by Corrio, Malevotti, Commynes, and even by Benedetti *, who was a physician in the Italian army at the time. Yet in contradiction to all these authorities, the elegant biographer of Leo X. writes, that "from the extreme licentious-
 " ness in which Charles had indulged himself,
 " it is not however improbable, that this com-
 " plaint was of a different nature, and that the
 " loathsome disorder, which, within the space
 " of a few months afterwards, began to spread
 " itself over Italy, and was thence communi-
 " cated to the rest of Europe, is of royal origin,
 " and may be dated from this event †."

Nothing less probable than these fanciful

* The testimony of Benedetti is quite decisive.

" Finalmente il Re di Francia dallo stretto dell'Alpi, quasi
 " cötra l'opinion d'ogniuni, giunse in Hasti a xi di Settembre
 " 1494. Dove havendo cambia to acre, fa soprapreso da un
 " ardentissima febre; et mando fuori alcuni segni, che si chia-
 " mano epinitide; i nostri le chiamano vaivole." Il Fatto
 " d'arme, &c. &c. Alessandro Benedetti, tradotto par L.
 " Domenichi.

† The Life and Pontificate of Leo the Tenth, by William Roscoe, vol. i. p. 162.

conjectures of too luxuriant an imagination. That the King's malady was the Small Pox, is established by the evidence of authentic cotemporary writers. Indeed, had the eruption which affected Charles VIII. proceeded from the foul contagion alluded to, as no specific was then known, his life and expedition must have soon terminated. Nor could he, as Roscoe writes, have entered on horseback triumphantly into Rome and Naples; and have stoutly fought his way back into France, clad in the heavy iron armour of chivalry.

We have now reached the close of the Fifteenth century; after which, from the revival of literature, better information is given of historical transactions, and the effects of Small Pox and Measles, when introduced into new countries, are fully narrated. From which we may fairly deduce the effects which were produced in those darker periods, when information was defective.

As in all human affairs good and evil are intermingled; the invention of the compass, and the discovery of Columbus, which greatly augmented the scope of human knowledge, also occasioned scenes of misery which were never surpassed: among other calamities they were the means by which the contagion of the Small

Pox and Measles were extended to another hemisphere.

But this evil is not to be charged to the great and good Columbus, whose humanity prompted him always to benefit, and never to injure the countries he discovered.

This matchless Navigator descried the New World in 1492; and in 1500, he was carried back to Spain loaded with chains. In four years afterwards, with a body broken by the hardships he had undergone, and a mind wounded by the ingratitude of the Monarch he had so amply benefited, he died with composure and magnanimity.

Hispaniola, or St. Domingo, was the first settlement founded by Columbus: after he was gone, numbers of adventurers flocked thither, whose hearts were hardened by avarice and fanaticism. The safety of the Indians never entered the thoughts of these men; and it is ascertained that the Small Pox and Measles were carried to that island in the year 1517; though the individual who committed this atrocity is unknown.

The Spaniards who landed on that coast pretended to be civilized, the standard of Christ was borne before them, and they proclaimed themselves the propagators of his benevolent

doctrines. How they practised his precepts may be judged of by the consequences of their arrival.

It is computed that Hispaniola then contained a million of Indians;* in reducing them to Christianity and slavery, immense numbers were massacred by fire arms and blood hounds: when resistance ceased, the wretched Indians having excessive tasks imposed upon them, and being forced to work in the mines, were consumed with labor and famine: and the remainder of this hapless race were totally extinguished by the Measles and Small Pox.

When Ferdinand Cortes sailed from Cuba, in the year 1518, upon his expedition to Mexico, these contagions had either not yet reached Cuba, or at least no infected person was embarked. But Velasques the Governor, having

* Robertson's History of America, vol. i. p. 260. Oct. edit. Herrera, Dec. 1. lib. x. c. 12.

“ Ad exiguum miseri accolæ (Hispaniolæ) deducti sunt
 “ numerum, opera quorum in auro legendo usi sunt. Ad-
 “ sumpti ab initio bellis acribus, fame multo plures, quo anno
 “ junceam radicem, quæ panem nobilium conficiebant, erue-
 “ runt; et a maico grano seminando pane populari abstinuer-
 “ unt; reliquos Variolæ, morbilli eis ignoti hactenus superiore
 “ anno 1518, qui tanquam morbosas pecudes contagioso halitu
 “ eos invaserunt.” Petri Martyr. de Orbe novo Decad. iv.
 c. 10.

taken offence at the conduct of Cortes, dispatched an armament, in 1520, under the command of Don Narvaez, whose orders were to seize Cortes, and to send him prisoner to Cuba.

Before the fleet sailed the Small Pox reached the island, and an infected Negro slave was embarked. Although the Spaniards were perfectly acquainted with the Small Pox, yet they suffered this slave, when covered with pustules, to be landed with the troops at Zempoalla, where the Indians were both ignorant of the contagious nature of the disease, and of any means of mitigating its violence.

They soon caught the infection, which spread through Mexico, and occasioned such desolation, that in a very short time three millions and a half of people were destroyed, in that kingdom alone; the Emperor Quetlavaca, brother and successor to Montezuma, was among the victims. *

And, it appears from a late communication, † of a respectable ecclesiastic, from the Caraccas,

* Mon. Ind. i. 642. Torquemada. P. Torribio de Benevent. B. Diaz. c. 124. History of America, W. Robertson, D.D. vol. iv. b. 8. and note 1.

† Vide Report to Parliament by the National Vaccine Establishment, 1813.

to the National Vaccine Establishment, that the waste of human lives in that continent, was not a transient occurrence: for in the new kingdom of Leon, several warlike nations of Indians had been almost extinguished by the Small Pox: and fifty years ago heaps of bones, like trophies of the disease, were to be seen in the fields, under the tufted oaks. And even now, if an Indian sees one of his companions attacked with the eruption, he leaves him his horse and his provisions, and flies to a great distance in the woods: so great is the horror of that malady in South America.

The reader need not be shocked with many more details of the effects of a contagion, diffused through all countries with which Europeans have commercial communication; and which appears to have been as destructive to the nations in the neighbourhood of the North pole, as to those under the line. For in the year 1707, an epidemic Small Pox * broke out in Iceland, and destroyed 16,000 persons; which amounted to more than a fourth part of the population of the island.

Greenland appears to have escaped the longest.

* Travels in the Island of Iceland, in 1810, by Sir George Stewart Mackenzie, Bart.

It was attacked with Small Pox for the first time in 1733,* which spread so fatally as almost to depopulate the country. These examples, together with the mortality which has occurred in the Russian Empire, are decisive proofs that this universal contagion is superior to the influence of climate.

It may be concluded, from the foregoing historical sketch, that the Small Pox and Measles had prevailed in China and Hindoostan from remote antiquity, probably upwards of three thousand years; yet had not extended to the more Western Nations until the middle of the sixth century. About this latter period the above maladies reached the southern coast of Arabia, by vessels trading with India, and broke out near Mecca, during the war of the Elephant, in the year 569, immediately before the birth of Mahomet.

During the latter part of the sixth, and the whole of the seventh centuries, they were spread, by the Arabians, over the remaining countries of Asia, and all that part of Africa which is washed by the Mediterranean Sea.

In the eighth century Europe was contaminated, in consequence of the Saracens invading Spain, Sicily, Italy, and France; and the above

* Crantz's History of Greenland, vol. i. p. 336.

diseases gradually extended to the North. They had certainly reached Saxony, Switzerland, and England in the tenth, and probably in the ninth centuries. And lastly, in the beginning of the sixteenth century, twelve years after the death of Columbus, the infections were transported by the Spaniards to Hispaniola, and soon after to Mexico, and diffused speedily over that hemisphere also.

CHAPTER V.

THE VARIOUS THEORIES AND TREATMENT OF THE
SMALL POX FROM ITS APPEARANCE IN ARABIA,
TO THE FIFTEENTH CENTURY.

ALTHOUGH from an early stage of civilization, a succession of men of talents have applied their minds to the science of medicine, yet instead of a regular advancement, there has often been a retrogression in medical knowledge. This is perhaps owing to the infinity of erroneous opinions which may be entertained on every point, while only one opinion can be true. And when an error is credited, the further it is pursued, the deviation from truth becomes the wider.

But on a more enlarged view of this subject, it might be contended, that in one sense, science continues to advance, even when wandering in a false direction : since by this procedure, the mistake becomes at length quite conspicuous ; then every step is necessarily retraced, and the original error is at last rectified. This might be exemplified in all those sciences which

are insusceptible of demonstration ; and particularly in medicine, where improvements have often been effected by this circuitous route. This will be illustrated in detailing the various doctrines which have been promulgated respecting the Small Pox.

AHRON who lived at Alexandria in the reign of Heraclius, is the first author who is known to have written on the Small Pox *; he published, as has been noticed, subsequently to the year 622, the epoch of the Hegyra. He was a voluminous writer, and although his works are lost, the numerous quotations which remain in those of Rhases are proofs how highly he was esteemed in Arabia, three hundred years after his death. The paragraphs on Small Pox and Measles from Ahron's Essay, which have been selected by Rhases, must have been considered by him as the most important, and they contain the earliest notions on their nature and treatment.

The ancient Physicians were never at a loss for the causes of diseases, the humoral doctrines of Galen furnished them in abundance. Ahron picked up out of this magazine, the

* Vide page 61.

hypothesis “ of * adust blood and bile” which, he asserted, was not only the cause of the Small Pox and Measles, but also of pestilential eruptions generally.

He states “ that the signs of the Small Pox
 “ and Measles are an inflammatory fever ac-
 “ companied with pain in the head and red-
 “ ness of the eyes ; and the eruption commonly
 “ appears on the third day, but sometimes
 “ on the first or second. If the eruption
 “ appears on the third day, when the fever
 “ abates, these events are favourable ; but the

* “ Et generantur omnes (eruptiones maligni) ex malo sanguine adusto cum cholera.”

“ Signa Variolarum et blacciarum sunt a principio febris
 “ callida soda : rubedo oculorum et ut plus apparent hec
 “ in tertio die. Et possibile est quod apparent in primo
 “ aut secundo. Et de laudabilioribus signis salutis sunt cum
 “ apparent in tertio aut in tempore quo febris est lenta, et e
 “ contrario. Cum vero moventur in primo die ex vehementia
 “ febris et profunda et forti cogitatione.”

“ Aaron de salubrioribus Variolis sunt albæ et rubiæ : et de
 “ malignioribus virides et nigræ : et post has crocæ cum
 “ manifeste apparent variolæ et morbilli et febris incipit
 “ defervescere est signum salutiferum. Et illæ quæ ap-
 “ parent in furore febris sunt mortales. Et cum incipiunt
 “ apparere variolæ cavendum est a frigidis, quibus reti-
 “ nentur in interioribus, et dandus est succus feniculi et apii
 “ ut trahantur ad exteriora. Et fiat Gargarisma cum aqua
 “ decoctionis lentium, et sumach, ut nil nocivum possit ori et
 “ gutturi evenire. Et cum sunt digestæ jaceat patiens super
 “ farina rizis et fumigetur cum foliis mirti olivarumque et
 “ desiccabuntur.” Lib. xviii. c. 8. Continent. Rhasis. Imp.
 Brix. 1486.

“ opposite occurrences are unfavourable. When
“ the eruption is thrown out on the first day,
“ it is owing to the vehemence of the fever,
“ and to profound and intense thinking :” ...

“ When the Small Pox pustules are white
“ and red, they are healthy ; when green and
“ black, malignant : and if after a time, the
“ eruption of Small Pox and Measles changes
“ to a *saffron* colour, and the fever moderates,
“ good hopes may be entertained : but if these
“ eruptions appear during a frenzy fever, they
“ are fatal.

“ As soon as Small Pox pustules begin to
“ shew themselves, it is necessary to beware of
“ refrigerants ; by which they would be retained
“ on the internal organs. The juice of fennel
“ and parsley is then to be exhibited to expel
“ them outwardly. And a gargle is to be used,
“ composed of a decoction of lentiles and su-
“ mach, to preserve the mouth and throat from
“ any mischief. When the pustules have sup-
“ purated, the patient is to lie upon flour
“ of rice, and be fumigated with myrtle and
“ olive leaves, which will dry them.”

The above quotations cannot be supposed to contain the whole, although probably they exhibit the principal notions which Ahron taught, concerning the Small Pox and Measles : and give an outline both of his theory and treatment.

When these maladies first appeared, it was impossible for physicians to divine their correctives; and in this state of ignorance, they would have acted wisely to have left the diseases to nature, to have observed them closely, and not pretended to direct remedies, until they had discovered under what circumstances the symptoms became mild, and the crisis was usually favorable. But such inactive practice would neither have been assented to by the sick, nor is it conformable to the pride of learning. The fears and sufferings of patients prompt them to urge that something may be tried; and physicians are apt to be too confident in their knowledge to remain passive observers, even in unknown diseases.

In Small Pox and Measles, experience and observation, the only real sources of knowledge were then totally wanting: yet physicians had the vanity to believe that they could discover the causes, the nature, and the method of curing these new diseases by intellectual meditation.

Accordingly, Ahron, or one of his predecessors, invented the above hypothesis of adust blood and bile, of corrupted humors, of refrigerants which could retain pustules upon internal parts, and of warm medicines which could expel them externally, and cure them. Such illusive reasoning might have been a subject for ridicule

in other sciences, but in medicine, every indulgence of the fancy is replete with danger. The advice to beware of refrigerants, which was grounded on the above hypothetical ideas continued to be inculcated, and usually with augmented earnestness in succeeding ages. It prevailed for a thousand years, and has destroyed millions.

The next author of whom there are any remains on Small Pox is GEORGE BACHTISHUA, who was physician to the magnificent caliph Almansor, towards the end of the eighth century.

He asserted, Heaven knows why! “that *
“ Measles proceeded from blood mixed with a
“ large proportion of bile: and that Small Pox
“ were formed of very gross and moist blood.”
These opinions are quoted by Rhases, with great respect, as well as the advice he gives to refrain from salt and vinegar. Then George advances beyond Ahron, and declares, “that
“ things which are very cold are mortal.”

JOHN, the Son of MESSUE lived towards the end of the eighth, and the beginning of the ninth century. He was physician to the caliph

* “Ait Georgius, blactiæ fiunt ex sanguine permixto multa
“ cholera; et Variolæ ex sanguine grasso multæ humiditatis.”
Contin. Rhas. loc. cit.

Harun al Rashid, and distinguished for his learning and abilities.

Ingenuity may be perceived in the quotation which follows, though he durst not deviate from the precepts he had been taught.

He observed, * “ when the Measles appear
 “ dark, and are spread universally over the
 “ body: and when the belly becomes inactive,
 “ greatly inflated, and sounding like a drum
 “ when struck with the hand, these are bad
 “ symptoms.” He likewise said, “ the Small
 “ Pox is accompanied with continued fever,
 “ with redness of the eyes and face, agitation
 “ of the features, and startings during sleep:
 “ the eyes ought then to be bathed with a
 “ collyrium of rose and sumach water, which
 “ may preserve them from injury.” Other receipts are also given by Messue for the preservation of the eyes, and liniments for the body generally.

He cautions particularly against exhibiting any opening medicine, after the seventh day of

* “ Filius Messue, cum vides blactias coloris fusci et sunt
 “ universaliter per totum corpus, et ample et murmurat et pig-
 “ rescit et ejus venter est inflatus qui manibus percussus sonat
 “ ad modum tympani, est malum. Et dixit (Messue) vario-
 “ larum sunt febris continua, rubedo oculorum et faciei agita-
 “ tio et repentinus motus in somno, et sunt collirizandi oculi ex
 “ aqua rosacea in qua sumach infundatur, quia preservat oeu-
 “ los a nocumento.” Cont. Rhasis. lib. xviii. c. 8.

the malady, and advises in winter a fire of tamarisk wood and vine stalks.

As the scars and pitts from Small Pox were quite a new effect of disease, and one of a most mortifying kind to Asiatic females, much exertion was made by the Arabian doctors to remove this insupportable vexation. The ointments, liniments, and washes which were invented for this purpose are innumerable: they were often composed of the most heterogeneous ingredients, and each had their partizans, though all were inefficacious; except those which by their irritating qualities augmented the deformity. Among other articles in these receipts, there were melon seeds, almonds, many vegetable juices and powders, salt, camphor, and the fat of an ass. Messue recommended a liniment, which Rhases says was an admirable one; it consisted of calcined egg-shells, burnt bones, and half a dozen other powders mixed up in barley-water. And a physician named Abdus, employed Ox dung, moistened with common water. It is painful to reflect, that many an oriental beauty, deceived with fallacious medical promises, has submitted to have her face and bosom daubed with this nauseous cosmetic.

Of all these Arabian authors, only a few fragments have escaped the ravages of the

Barbarians, and of time. But the works of ISAAC THE ISRAELITE, the father of Arabian physic, remain. No life of this venerable personage has yet been published, though probably, some account of him might be found in collections of Arabian manuscripts, especially among that immense heap which are preserved in the Escurial.

The confusion of oriental names, is often embarrassing, and Dr. Freind * has made an odd conjecture, that Isaac the Jew, is the same individual as Honain the Christian. The latter †, indeed, was sometimes stiled Honain, the son of Isaac, which Isaac was an apothecary: and Honain ‡ had also a son named Ishac or Isaac. Yet it is very clear, that these were all distinct persons from Isaac the Jew. For Honain was a declared Christian, and was born at the town of Hira, near the Euphrates; a list of his works, as well as those of his son, are enumerated in his Life, by Osaiba §: they are very numerous, and con-

* De Purgantibus Jo. Freind. tom. ii. p.60. Lug. Bat.

† “ Porro imperante Al Mota-waccelo claruit Honain Ebn Isaac Medicus Christianus Ebadiensis.”

“ Fuit autem Isaac Honaini pater pharmacopola in urbe “ Hira.” Dynas. Abul-pharag. p. 171.

‡ Biblioth. Oriental. Herbelot. Vide Honain. Aldalrahman Honain ben Ishak, ben Honain.

§ The Lives of the Arabian Physicians by Ibn Abi Osaiba in Arabic. MSS. Bodleian.

sist of translations from Hippocrates and Galen, as well as of many original compositions, yet none of the works of Isaac the Jew are among the number. Rhases*, who frequently quotes both, evidently discriminates them: he names the one Isaac, or the Jew, and the other, Onen, transmuted by his translator, from Honain. As Isaac is not noticed by Abulpharagius, he probably neither resided at Bagdad, nor at Alexandria; and though he wrote in Arabic, the language of the learned, he perhaps was a citizen of Jerusalem. The exact period in which he lived, cannot be determined, but from the order in which he is quoted by Hali Abbas, and others, he appears to have flourished in the ninth century: and Andrew Turrino, the Latin translator of his works, gives him the splendid title of Isaac the Israelite†, the adopted son of Salomon, King of Arabia.

It appears from his writings, that he was a learned man, conversant with the works of

* Continen. Rhasis. lib. iii. cap. 3. "De dolore gingivæ
 " *Onen* dixit, quod si dolor fuerit in gingiva et per tactum
 " patiens sensit dolorem in ea non est eradicundus dens aliquis:
 " dummodo fuerit in hujusmodi dispositione et dolor non fuerit
 " in augmento. *Onen* is twice quoted in this chapter, and
 Isaacus Judeus passim.

† Isaaci Israeliti Salomonis Arabiæ Regis filii adoptivi
 opera omnia Latin. reduct. Andr. Turrin. Piscien. Lugd. 1516.

Plato, Aristotle, and the Greek physicians. Besides several lesser treatises, he wrote a large system of the Theory and Practice of Medicine, which he calls Pantegnum, and an Abridgement termed Viaticum, all of which are extant.

He commences the Pantegnum, by advising every medical scholar, with much feeling, and with some eloquence, to honor and serve his master with as much reverence as his father. And he counsels the master to instruct the pupil whom he thinks deserving of being brought up to medicine, without accepting from him any emolument, or pecuniary compensation: and should he prove unworthy of the honor intended him, he is immediately to be dismissed and excluded from the profession; which Isaac considered as an ample punishment for the most flagrant misconduct. He then points out the duties of physicians, which are to labour diligently to relieve the sufferings of the sick, and to restore them, if possible, to health, without being prompted even by the expectation of a reward. They ought to tend with equal assiduity the rich and the poor, the vulgar and the noble: and when visiting the sick, they should guard their hearts against the attractions of the wives, daughters, and maids, to which they must inevitably be exposed. On every

occasion they should act with humanity and purity; and found their hopes of success on divine aid. The moral precepts of this Jew, are almost supernatural; and it may be doubted, whether they were ever practised by one Mahometan, Christian, or Jewish physician: in recompence, his medical theories were excrable, which gained him abundance of converts.

Isaac was thoroughly imbued with Galen's theory of the occasional prevalence of blood, phlegm, black and yellow bile *, and he divided the Small Pox into four kinds; each of which proceeded, as he supposed, from one of these humours. But as Galen's system did not account for the universal disposition to this malady, Isaac has written a chapter upon *the "Fever of the Small Pox, which happens to almost all persons †."* A title which shews that this malady was then extended to the utmost degree through the Mahometan empire. It is extraordinary, that the physicians of those days had no idea that the Small Pox and

* "Sed Variolæ quatuor modis sunt: aut de puro sanguine, aut phlegmatico, aut cholerico, aut melancholico."

† "De Febre Variolarum quæ fere omnibus accidit."
Liber Februm, cap. v. Isaac. Israel.

Measles were new distempers : they believed, on the contrary, that they had existed in all ages, and in all countries, and that almost every human creature must have them. In fine, that these maladies were a natural operation, like teething, or child-bearing. Having commenced with this false opinion, and being convinced of the doctrine of morbid humours ; they next sought for some cause to account for the bodies of the sweetest and healthiest children, being all contaminated with the most gross and distempered fluids. Isaac racked his imagination to discover the source of this connate evil ; and at length invented a train of additional hypotheses, which he fashioned as he pleased to explain every symptom.

There was a notion prevalent from time immemorial of there being something highly noxious in the blood periodically evacuated. Pliny the Elder* was strongly prepossessed with this

* “ Sed nihil facile reperiatur mulierum profluvio magis
 “ monstrificum. Acescunt superventu musta, sterilescent
 “ tactæ fruges, moriuntur insita, exuruntur hortorum ger-
 “ mina, et fructus arborum, quibus insedere, desidunt ; spe-
 “ culorum fulgor aspectu ipso hebitatur, acies ferri præstrin-
 “ gitur eborisque nitor : alvei apum emoriuntur : æs etiam
 “ ac ferrum rubigo protinus corripit.” &c. &c. C. Plinii, Nat.
 Hist. lib. vii. cap. 15.

opinion, and traces of its being considered as a pollution are to be found even in the *Old Testament*. Perhaps this Jew borrowed thence the original thought, and by perverting the sense framed his strange theory. He supposed that the foetus in the womb was tainted with some portion of this noxious female fluid; which, being unfit for nutrition, was thrown by nature into certain places near the skin, lest it should injure the principal organs. After the birth of the child, the morbid humour remained quiet, until it was set in commotion by some external cause, such as bad food, or corrupt air, when it was expelled to the surface of the body, in the form of Small Pox, which he considered to be a fortunate ejection.

Thus did this uninspired Jew cast the reproach of the Small Pox, like another original sin, upon women. And perhaps it was owing to the Mahometans not entertaining due respect towards the sex that these indelicate hypotheses were admitted by them. But it is astonishing, that they were also credited under various modifications, by many of the most celebrated Christian physicians, down to the 18th century.

Isaac was not led by his theory to vary in any considerable degree from the treatment recommended by Ahron. He says, "The

“ Small Pox * is to be cured by warm and
 “ moist remedies, which will evolve and expel
 “ the morbid matter. But beware of a cold
 “ medicine, which might shut up and congeal
 “ the humours.” The particular drugs which
 he notices, are nearly the same which have
 been mentioned before, with the addition of an
 Arabian confection, composed of the juice of
 figs, of tragacanth, fennel, and saffron.

Some uncertainty has also prevailed respecting the time in which SERAPION † lived; but, from his own quotations, from those of Rhases, and the authority of Osaiba, it is quite certain that it was towards the latter end of the ninth century. He wrote a medical book in the Arabian language, which was much esteemed, and has been translated into Latin.

This author is censured by Hali Abbas ‡, for not having fully discriminated the Small Pox. He first classes it among imposthumes; in

* “ Variolæ sunt medicandæ cum calidis et humidis rebus,
 “ quibus materiam exsolvant et extrinsecus expellant. Cave
 “ autem frigidam medicinam quæ humores claudat et con-
 “ gelat.” Lib. Panteg. Isaac. Israel. Practice. cap. xix.

† Serapion quotes Messue, who lived at Bagdad A.D. 795, (Abul-pharag.) and is quoted by Rhases, who lived A.D. 900.

‡ Regalis Dispositio Hali filii Abbas a Stephano Latine ex Arab. Lingua redacta. Vide Introduction.

treating of which there is a section on phlegmon*, the erysipelas of the head, the Persian fire, and the Small Pox.

He conceived that all these diseases proceeded from the same cause, and were of a similar nature; he recommends, as the "chief indication in the cure of Small Pox, first to evacuate the gross melancholic blood which had occasioned it: a complicated treatment was afterwards requisite, for although the inflammation of the skin demanded refrigerating and extinguishing remedies, yet they ought not to be used, on account of the malignant disposition of the humour, which might be checked, and injure the internal parts of the body." Serapion was evidently much em-

* De Phlegmone et Almessere †, et igne Persico, et Variolis.

"Intentio in curatione Variolarum in primis est evacuatio illius sanguinis grossi, melancholici, à quo generatur: et post illud oportet ut administretur curatio composita, quoniam inflammatio quæ accidit in membro indiget medicinis infrigentibus, extinguentibus. Et propter grossitudinem humoris et malitiam suæ dispositionis, secundum quam est, non oportet ut fiat illud, ut non infrigidetur materia, et noceat membris quæ sunt in interioribus corporis." Lib. Joan. f. Serap.

† Hali Abbas explains this word.

"Cum ergo in capite aut facie Mesera vocatur, quod est nimis rubor et manifestus cujus signa sunt in facie rubor gravis humor capitis cum omnibus qui in eo sunt dolor et percussio." Lib. octavus. Theoric. Hali. p. 96.

barrassed by this dilemma, and prudently searched for safe remedies.

It is singular that this author afterwards arranges Small Pox among fevers, * where he has a chapter on the cure of the fever occasioned by the Small Pox.

“ Nothing,” he says, “ contributes more to
“ the cure of this malady than bleeding : but if
“ infancy or timidity prevent the opening of
“ a vein, cupping should be employed. The
“ eyes are to be guarded as much as possible,
“ lest they should be attacked with pustules :
“ they are to be bathed continually with rose
“ and sumach water.” A variety of other receipts are given, copied or altered from Ahron and Messue.

Oil of violets, thickened with wax, is directed to anoint the pustules about the nose ; this was a more agreeable application than the poultice prescribed by Abdus.

* “ De cura febris causatæ a Variolis.

“ Si hæc febris fuerit propter causam Variolarum et virtus
“ et ætas consentit, tunc non est aliquid magis juvatium
“ quam phlebotomia venæ. Et si aliquid prohibet phleboto-
“ miam, tunc oportet ut administrentur ventosæ. Et custodi
“ oculos ita ut non egrediantur in eis variolæ, seu ulcera vari-
“ olarum, et distilla in eis ambobus assidue aquam rosatum et
“ aquam sumach.” Liber. Joan. filii Serapionis noviter ex
Arab. in Latin. trad. per And. Alpag. Bel. Venet. 1558.

Serapion also particularized the diet, which was to consist of decoctions of barley, prunes, tamarinds, cassia, lentiles and fruit. After the seventh day all laxatives are, however, to be omitted, and gentle astringents, if requisite, are to be given. A fire also is to be kindled in winter.

RHASES was so named from the town of Rhei, in Chorassan, in which he was born. He flourished at Bagdad in the end of the 9th, and in the beginning of the 10th centuries; uniting to the reputation of a skilful physician, a knowledge of philosophy, astronomy, and music; and gained, by his acquirements, the title of Al-mansor, or the Great.

He was undoubtedly an accomplished Arab, and had the good taste to reject the theory of Isaac, but the bad judgment to invent one of his own.

Although the Koran prohibited wine, under the penalty of the delinquent's being deprived of the posthumous recreation of black eyed Houris; yet Rhases * appears to have contemplated attentively the fermentation of grape juice. The effervescence which arises first,

* De Variolis et Morbillis. Rhases.

the sparkling liquor which next ensues, and the acid dregs which are ultimately produced, had played so powerfully upon his imagination, as to convince him, that similar processes took place in the human blood.

He supposed, that the blood of infants was like the sweet juice of new pressed grapes, which soon begins to work and fret ; that in youth it was in a state of ebullition and full of spirit ; in manhood it became strong and settled ; and in old age weak and acid. Having established these hypotheses, he next supposed that the Small Pox and Measles were the natural consequence of the vapours which arose from the effervescing blood.

By all these assumptions, Rhases explained why almost all persons had the Small Pox and Measles once, why they rarely had them oftener, and why these distempers usually took place at an early age. And whenever a difficulty arose, it was suppressed by a new hypothesis : for the blood in his hands is both so plastic and pertinacious, as to throw out the exact varieties of Small Pox and Measles which occur, and no others.

No estimate should be made of the capacities of the old physicians by their theories : those of Galen are not a whit better, than the chimeras of Ahron, Isaac, or Rhases. An improved description of the different kinds of Small Pox by

the latter, shews however an advancement in knowledge.

He first * remarked that the Small Pox may occur twice or thrice; and the havoc occasioned by the disease prompted him to try additional remedies, and to endeavour to adapt the treatment to the various stages of the distemper.

When the Small Pox or Measles are apprehended, Rhases advised a preparatory treatment, consisting of bleeding or cupping, bathing in cold water, drinking iced water, and living principally on broths, vegetables, and acid fruits. Wine, beef, mutton, honey, sweets, and high seasoned aliments, are prohibited, and a multitude of minute dietetic directions founded on the prevalent theoretic notions are added.

Several receipts for cooling the blood are also directed at this period; that which is most praised, is an oxymel compounded of vinegar, and some native vegetable acids, boiled up with sugar and other ingredients.

When the fever commences, two plans of treatment are mentioned; and it is said that a mistake in the choice may be of very danger-

* " Et possibilis est quod (Variolæ) accidunt bis vel ter,"
Contin. Rhasis, lib. xviii. cap. 8.

ous consequence ; yet the directions for avoiding a mistake are not clear.

The one plan is to exhibit opium, hemlock, or some other narcotic, which he conceived had the property of congealing the blood, and checking ebullition. But in the employment of these medicines, he thought there was a risk of their extinguishing too much the natural heat.

The other plan which he seems generally to prefer, is to bleed copiously, to persevere in cooling medicines, and to give abundance of cold water. But should these remedies not check the fever, the narcotics are then to be had recourse to.

As soon however as the eruption is expected, the treatment is to be totally changed, and nature is to be aided in expelling the humours to the skin. The patient is now to be kept in a room of a moderate temperature, his body is to be rubbed all over, well wrapped up in cloths, and all his person, except his face, is to be exposed occasionally to the vapour of hot water. A little cold water for drink is then to be given him from time to time to provoke a sweat.

There is a second embarrassment in the instructions at this period, sometimes narcotics are directed, which are called extinguishing medicines : and on other occasions the cooling re-

medies are still to be continued till about the fifth day : when such remedies are prescribed, as promote the eruption. These are stated to be warm water, warm infusions of fennel or smallage seeds, decoctions of figs and raisins, and similar drinks.

Bleeding is directed occasionally in the course of the disease, as the most important remedy : and as there is a general tendency to a looseness, aperients are usually to be avoided, especially in the Measles. But sometimes a mild laxative is requisite, though astringents are oftener necessary. Those used by Rhases were not very potent.

There is also recommended a complicated management of the pustules. The limbs are to be bathed with various decoctions ; if the pustules upon them are large, they are to be opened ; and if the feet are in pain, they are to be bathed, fomented, and anointed with oils.

Fomentations and fumigations are likewise directed for the body, and oils with salt and alum to be applied. On some occasions, the patient is to lie on a bed strewed with flour, or with rose leaves ; on other occasions, iris leaves are to be placed under him, and the body is to be sprinkled with an aromatic powder, composed of aloes, frankincense, and other gums. These and many other applications are chiefly intended to prevent pitting : but there soon follows a

number of receipts to remove the pitta, when they had not been prevented.

The anxiety to preserve the eyes, likewise prompted many injudicious measures. In addition to rose and sumach water recommended by Ahron, Rhases advises collyria made of infusions of galls, the juice of unripe grapes, and other ingredients. But as opacities in the cornea and total blindness often occurred, a most numerous list of medicines are then given, all possessed of the virtues of deterging the eye and removing specks. This illustrates the remark of Celsus *, “ that the greater an evil “ is, and the less easily remedied, the more “ things are tried, and with various effects.”

The attention paid by Rhases to every symptom, and his zeal to relieve them are conspicuous: but unfortunately every remedy was founded upon imaginary doctrines. His perseverance in recommending cold bathing at the beginning of Measles, and copious bleeding during the confluent Small Pox, are proofs of a mind prepossessed with hypotheses.

In the year 980 HALI ABBAS, of the sacred

* “ Credo autem, quo pejus id malum est, minusque facile “ discutitur, eo plura esse tentata, quæ in personis varie re- “ sponderunt.” Celsus, lib. v. c. 19.

order of the Magi, published a complete system of medicine, named the * Regal Disposition. This was long considered as a master-piece of Arabian physic, and is dedicated, with eastern pomp to the caliph, Adhad Eddoulat. There is a propriety in this royal dedication, from the peculiar encouragement given to medicine by Arabian monarchs; under whom physicians enjoyed an extraordinary degree of consideration; which they appear to have merited from surpassing almost all other subjects in literature.

The lately invented theory of the Small Pox by Rhases, is totally disregarded by Hali, who reverts to that of Isaac, and vainly strives to correct its defects. But his ingenuity could only glean from Galen, or invent a few additional suppositions, to smooth unsurmountable objections.

This Magus pronounced, † that every foetus was nourished by menstrual blood, expelled from the liver through the veins to the womb: (but Harvey has since changed this course of the blood).

Hali next declared, that the sanguineous, choleric, phlegmatic, and melancholic humours,

* Liber Regalis completus Artis Medicinæ a Stephano Philos. discip. ex Arab. lingua in Latin. red. A. D. 1492. Aut Regalis Dispositio Hali filii Abbas, &c. Named, by the Saracens Maleki.

† Lib. citat. Theor. lib. viii. c. 14.

were all jumbled together in the blood of women; but that nature nourished the infant with the best portion of the compound, leaving the rest in the membranes of the womb and in the veins. Part of this was stolen from Hippocrates, who had said long before, and had better never have said it, “that the foetus draws to itself the “sweetest part of the blood *.” Then Hali, in conformity to the notions of the Jew, imagined that the milk also was formed of the same species of blood which had before nourished the foetus: but that the sucking infant was so judicious, as to apply the best portion only for its growth and sustenance, while the dregs remained quietly in its body, until a commotion ensued, from some accidental cause: when that occurred these dregs were immediately thrown outwards, and appeared on the skin, in the form of Measles or Small Pox.

All this is an amplification, and, therefore, a deterioration of the Jew’s system; but Hali made an approach to the discovery of contagion; for he observes, that one of the accidental causes which excited the movement of the distempered humours to the skin, was the being in the same place with persons affected with Small

* — “Quod enim in sanguine dulcissimum est (Foetus) ad “sese attrahit.” Hippoc. et Galen. Oper. tom. v. p. 322.

Pox, or the breathing air contaminated with the pestilential vapour of Small Pox pustules.

Hali continued, like former authors, in the persuasion, that Small Pox and Measles were only modifications of the same malady; but he is the first that mentions a cough as one of the symptoms; to alleviate which, several demulcent mixtures are recommended. The treatment, in other respects, is almost the same which has been before detailed; and he specifies that all evacuations are to be guarded against after the seventh day, especially in the Measles. And as an open state of the bowels is dangerous, he gives receipts for many astringent mixtures, of spodium, chalk, gum arabic, alum, galls, and other drugs.

In winter he advised that there should be fires of wood, in sight of the patient; and, in order to remove* the livid marks left by pustules, it is recommended to puncture them, and to rub the punctures with an ointment containing salt.

How singular! that almost every attempt made by these learned men to do good, must have done mischief. It was ages before it became established practice to leave the pustules to themselves: for to do nothing is frequently

* De Ulcerum Variolarum macularum medela et livoris. Practice, lib. iv. c. 5. Regal. Disp. Hali Abbas.

the last improvement made by physicians ; and one which patients very rarely can be induced to acquiesce in.

The next distinguished physician was the Divine AVICENNA ; for the doctors, as well as the sovereigns of the East, acquired most flattering titles : and so great was his fame, that Spain, Egypt, Macedon, and Persia, have all claimed the honor of his birth ; while his works have been glossed and perplexed by a hundred commentators.

But according to the most authentic writers *, he was born in the year of Christ 992, at Bocchara, in Chorassan ; a country which produced many celebrated physicians. His capacity and acquirements were considered as prodigious ; indeed his application to philosophy was so intense, that he was suspected, by orthodox Mussulmen, of inclining to impiety. And it is recorded that his extraordinary medical sagacity was first shewn in the case of a nephew of Cabus, sultan of Georgia.

This young prince laboured under a dangerous and unknown disease ; when Avicenna, like Erasistratus, physician to Seleucus, discovered that his patient was in love. From the diffusion

* Herbelot Biblioth. Orientat. Article Sina. J. Freind, M. D. Hist. Medicin. states that Avicenna was born 980.

of knowledge in the present times, a reputation for medical skill is less easily acquired. For many an antient nurse, nay sometimes ladies' youthful maids, have sufficient shrewdness to detect the symptoms of this malady, even when shrouded with the thickest veils assumed by virgin modesty. Nor are they ignorant of the infallible cure prescribed by Avicenna; which was only to deliver the guilty cause into the immediate possession of the languishing prince.

This physician travelled much, and acquired a high reputation in many cities of Asia, especially in Ispahan. He was there consulted by the Sultan Magdeddulat, who was subject to fits of melancholy: and his advice and conversation were so agreeable to the Sultan, that he appointed him to be both his physician and his prime vizier. Avicenna was thus elevated to the highest office of the state; which perhaps never happened to any other physician; though many have been more deserving. But there is an aptitude in Monarchs to chuse ill, and the measures of this medical Minister were so injudicious, that he was quickly deposed. In private life, his conduct was neither regulated by philosophic temperance, nor by professional decorum: for he is accused of having been both a drunkard and a profligate; and of having contracted many maladies from these

vices. The latter years of his life were wretched: he was compelled frequently to change the place of his residence; and though his corporeal powers* were at first as remarkable as his genius; yet he wore out his constitution, and died at the age of fifty-eight.

As the canons of Medicine by Avicenna remain, the opportunity is afforded of judging whether he really merited the extraordinary reputation he once possessed. And when this book is compared with works of the same age, it will be found to sustain the comparison well. But he had imbibed the opinion of the ancients, that the secrets of nature might be penetrated by meditation; and therefore his uncommon ingenuity often carried him farther into error. His subtlety sometimes tortures the attention. For example †, his division of pulses into nine species, and their similitude to nine corresponding musical rhythms; with the definitions of the eurhythm, the pararhythm,

* “ Doctor iste omnibus corporis facultatibus pollebat, at
 “ ea quæ venerem spectat è potentiis concupiscibilibus maxime
 “ prævalebat: cui multum indulisit, adeo ut temperamento
 “ ipsius noxam inferret.” Abulpharag. *Histor. Dynast.*
 Pocock. p. 232.

† Princip. Avicennæ, lib. prim. Theor. Prim. Caput De
 Pulsa, &c.

the heterorhythm, and the ecrhythm pulses, are of unscrutable profundity. One instance of his practice shall also be given, to shew the absurdities which able men fall into, who trust to abstract speculations.

Avicenna advises, when an infant is newly born, that after it is washed, the whole body should be sprinkled with a powder composed of salt, blood-stone, zedoary, sumach, fenugreek, and origanum : and this harsh application is recommended from tenderness to the infant, to harden the delicate skin, and to prevent its being injured by rough substances. *

Upon the subject of Small Pox and Measles, he commits abundance of mistakes, from indulging his fancy ; and makes several new and useful remarks from employing observation.

The causes of these diseases, and of pestilential fevers, are enumerated in the same Chapter. He adopts both the theories of Isaac and Rhases, and adds to them a hypothetical putrefaction ; and thus multiplies the causes of Small

* Sed prius toti corpori sale modicè insperso, quò cutis infantis densior, solidiorque reddatur Efficacius tamen præsidium erit, si sali admisceatur lapis hæmatites, costus, rhus, fœnugrecum, et origanum." Princip. Avicennæ, lib. primus, sect. tert. Doct. prim. Capit. De Infantis recent. nati educat.

Pox and Measles, by accumulating whatever he conceived was productive of the worst humours: thus the theory of these Diseases, by every complication, grew continually worse.

But Avicenna greatly improved their description by several important additions. He noticed that both diseases* were highly contagious, and he described them separately.

He began the best distinction of Small Pox, by observing, that when the pustules were white, few, and large, they were favourable: but on the other hand†, when they were continued into each other, they were malignant. He noticed the occasional appearance of bloody urine, and hardly a symptom is omitted. He also accords with Rhases‡, in thinking that the same persons are sometimes attacked with Small Pox twice.

In discriminating the Measles, he guessed that they were a bilious Small Pox; but ob-

* “ Et variolæ quidem et morbillus sunt de summa ægritudinum contagiosarum.” Avicen. Liber Canon. lib. iv. Fen. i. cap. 6.

† “ Nam illæ quæ continuantur ad invicem, ita ut continentur in frusto magno carnis habentes costas aut rotundam formam sunt malæ.”

‡ “ Et multoties quidem variolatur homo duabus vicibus, quando aggregatur materia ad expulsionem duabus vicibus.”

served most justly that in them more tears flow, and that the difficulty of breathing and inflammation are much greater.

The same treatment is however directed for both maladies; and though there are many receipts, yet the general plan is nearly the same with that of Rhases. Bleeding is directed at the commencement; but, except in very plethoric habits, not after the second or third day. He had probably observed, that those who were bled towards the decline of confluent Small Pox, never recovered.

To relieve the eyes, he advises sometimes opening the nasal vein.

He cautions against cooling the body, and advises sweating to be encouraged by warm coverings, and a variety of decoctions of those plants which were considered as expellers of the morbid humours. Indeed, he specifies a number of internal medicines for every symptom, and of external applications to preserve the eyes, and to smooth the skin: most of them were inefficacious, if not injurious; for the knowledge of the real action of medicines had made little progress at that period. One instruction must not be passed over; he ordered that the pustules on the seventh day, when matured, should be opened with golden

needles *. For the most learned man of that age believed, that gold possessed a milder wounding property than steel.

As Arabian literature was diffused through all the conquered countries, it of course extended into Spain; where cotemporary with Avicenna, and outliving him, flourished AVENZOAR.

This physician was born at Seville, at that time the residence of a caliph; and he acquired by his learning and virtues, the surname of the wise and the illustrious.

He has left a work named Theizer, which contains many improvements in medicine, surgery, and pharmacy, and is a respectable specimen of the state of medical knowledge in Spain.

But with regard to Small Pox, which was then a common disease in that country, he added nothing; but has chiefly copied the theory and practice of Isaac; yet the extraordinary aversion which he expresses for honey was probably borrowed from Rhases: who

* “ Quando egrediuntur Variolæ cum complimento et per-
transit septima, et apparet in eo maturatio, tunc necesse est
ut rumpantur cum facilitate cum acubus de auro, et au-
feratur humiditas cum cotto.” Avicen. lib. iv. Fen. i.
cap. 10.

prohibited honey, and all sweets, as contributing to vinous fermentation, his supposed cause of Small Pox.

Though Avenzoar maintained a different theory, he retained this prohibition, which he founded upon experience: for he taught, as most teachers have done, that experience ought to be the guide of medical practice. The rule is just, but the application is so difficult, that bad as well as good practice is equally founded upon this deceitful guide. He states "that he caught
" the Small Pox when young; and his father being absent, some inconsiderate person advised
" him to eat honey; the consequence was, that
" the symptoms became so violent, that he only
" escaped death by a miracle. *

Might not Avenzoar have concluded with equal justness, that the honey preserved him from the fatal consequences of the disease? Erroneous practice is usually founded upon partial experience, and good practice is the result of accurate observations on general experience.

* "cum essem parvus habui variolas: et pater meus
" non erat mecum, et consilio quorundam cæpi mel, et ex illa
" angustia et labore et fortitudine ægritudinis quam habui
" mirum fuit quod evasi: sed semper in toto tempore vitæ meæ
" fui memoratus de melle." Abimeronis Abynzoahar. Liber
Theizir. lib. ii. tract 7. c. 3. Venet. 1553.

The eleventh century may be considered as the golden age of Arabian literature; for although several distinguished names occurred in subsequent times, none equalled the fame of Avicenna. And at this period the Mahometans far surpassed the Christians in learning; in fact the Europeans then, in comparison with the Asiatics, were barbarians. It is also singular, that the physician who commenced the revival of medical learning in Italy, was an African.

CONSTANTINUS lived in the latter end of the eleventh century. He was born at Carthage, but was not educated in Africa; which, from the unhappy governments that have ever oppressed this quarter of the globe, with the exception of Egypt, has added nothing to the stock of human knowledge. This physician travelled at an early period of life into Asia, and studied at Babylon and Bagdad, where he acquired a thorough knowledge of the Arabian writers, and also attained the Greek and Latin languages. He then returned to his native country; but his life being there endangered, he fled to Apulia, where he was well received. For as this African far surpassed any Italian of those days in learning, Robert Guiscard, the Norman, who had seized the government of that country, appointed him his secretary. Af-

terwards, his mind becoming warped with superstition, he entered into the monastic order of St. Benedict; but, in the intervals of devotion, he translated and composed many books on medicine. He was tempted by the ignorance of the Italians to impose upon them a translation of the Pantegnum of Isaac, as an original work of his own; for which attempt he has been stigmatized by Andreas Turrino.*

He wrote in the Latin language, and the words Variolæ and Morbilli are used by him as common terms; but it is superfluous to repeat his notions of these diseases, as they were copied from the Arabian masters. One disgusting essay was certainly an original composition, and evinces the pitiable condition of the science of medicine then in Italy. It appears from it, that many Italians were wont to complain to this monk, of a frigidity of temperament, which is not often owned here to lay doctors; and he recommends, as he says, from experience, a number of most irrational remedies. Among other receipts, to warm those who are cold to the influence of beauty, he gravely advises

* “ Liber Pantegni Isaaci Israeliti filii adoptivi Salomonis
“ regis Arabiæ quem Constantinus Africanus Monachus Mon-
“ tis Cassinensis sibi vindicavit.” Latine redact. Andrea Tur-
rino Piscien.

them, to swallow a mixture of the brains of cock sparrows, stewed in the rank fat of the loins of a he-goat.*

Yet this man was the ornament of the celebrated school of Salernum, which is usually considered as the first that was established in Europe. And it is to this gross African that Europe owes the revival of Grecian medical knowledge, and the first acquaintance with Arabian physic.

No considerable medical author arose in the twelfth century, except AVERRHYES, who was a Spanish Moor, and became chief judge in Mauritania. He was a man of considerable learning, who both translated the works of Aristotle, and commented on them: he also wrote a work on medicine, which he named *Colliget*. But, as he never practised physic, his opinions are either borrowed from his predecessors, or are mere speculations. One example shall be given. He

* “ *Dicimus quæ experti sumus*
 “ *Aliud medicamen quod accipitur ante coitum, quia mirabi-*
 “ *liter stimulat. Accipe cerebella 30 passerum masculorum, et*
 “ *solves diutissime in catino vitreo, et æqualiter accipe de sevo*
 “ *quod est circa renes hirci statim interfecti, et solvatur ad ig-*
 “ *nem: cui addantur cerebella, superaddatur etiam mel quan-*
 “ *tum sufficit, et patella commisceatur, et coquatur donec*
 “ *indurescat, et fac pilulas in modum avellanæ, et da unam*
 “ *ante coitum.*” *De Coitu liber, Constantini Africani Opera.*

imagined that the properties of substances greatly depended upon their colour. The white colour he conceived was refrigerant, and "that all* red colours were hot, from the fiery particles with which they manifestly abounded." These notions were probably suggested by a chapter of Avicenna,† in which the hot and cold qualities of medicines, with reference to their colour, are discussed with unintelligible, metaphysical subtlety. Whether these ideas were frivolous or profound, they became, in after times, the foundation of a peculiar practice in Small Pox and Measles, which is first mentioned in the Supplement to the works of JOHN MESSUE, of Damascus.

This is a compilation by several Italian physicians, written at the close of the 13th or beginning of the 14th century; it is almost wholly extracted from Galen and the Arabian writers. FRANCISCUS DE PEDEMONTIUM was one of these compliers, and he dwells at great length on the subject of Small Pox. When upon the treatment, he recommends the usual

* "Sed colores rubei omnes significant super calorem propter partes igneas quæ in eis manifestantur." De Simplic. c. 29. Averrhoes.

† "De cognitione virtutum medicinarum singularium per ratiocinationem." C. iii. tract 1, lib. 2. Avicennæ.

remedies to expel the pustules to the surface, but he also advises, "to excite* and assist nature in drawing them to the skin: which is to be done by warm air and by *red bed coverings*." And he afterwards recommends, "that the blood should be carried to the surface of the body, by looking upon red substances:" whence Avicenna said, "that the sight of red bodies moved the blood." This plan of employing red bed coverings and hangings in the Small Pox was approved of, and adopted by many celebrated physicians all over Europe; and it continues to this day in some parts of Portugal.

In the history of Medicine, the origin of errors is a principal research; and they may

* "Oportet habilitare naturam, et incitare ad excitum (Vaiolarum) et trahere ad exteriora. Fiat autem illud cum calefactione æris, cum coopertura ex indumentis et proprie *rubeis*."

"Et cum eo quod habet sanguinem movere ad exteriora, ut aspectus rerum rubearum. Unde Abuhali† ait, Movet enim sanguinem res intueri rubeas." Supplement Operib. Joan. Messue Damas. Francis. de Pedemont. De Febre Putrid. cap. 6. Venet. 1602.

† Abuhali is the usual name given to Avicenna, by the Arabians; the quotation is correct, though the application was different. "Movet enim sanguinem res intueri rubeas: quapropter prohibemus illum, ex cujus naribus sanguis fluit, res splendorum habentes rubeum aspicere." Liber Canonis Avicen. lib. i. Fen. i. Doct. 4. cap. 2.

usually be traced back to men of superior capacities. The blunders of the weak are short-lived, but a false theory, with a semblance to nature, struck in the mint of genius, often deceives the learned, and passes current through the world.

ALBUCASIS followed, or was cotemporary with Averrhoes, and wrote a work called *Al Tarif*, the surgical portion of which was excellent: but the medical part, especially that which regards Small Pox, is almost copied from his predecessors. However, as a compilation, the work has merit; and he may be considered as the last of the Arabians. For the energy which inspired Mahomet, and which he communicated to his immediate chosen successors, was now exhausted; and all mental improvement in Asia was suppressed by degrading bigotry, and slothful voluptuous tyranny. But classical and Arabian literature having been transported into Europe, fructified vigorously where the Sovereigns were controlled by an aristocracy, and where the spiritual and temporal powers were wielded by rivals. The progress of medical knowledge was however extremely slow, even after the establishment of schools and universities. This was partly owing

to the difficulty of the subject; and perhaps a general principle, that the powers of the imagination are of quicker growth, and ripen faster than the faculty of reasoning. Therefore when the sciences revived, they were embarrassed with a suite of fanciful attendants; Magic and Witchcraft alarmed Theology, and deceived Jurisprudence: Astrology was associated with Astronomy; and Alchemy with Chemistry; and all were jumbled together in the chaos of Medical Theories.

This incongruous combination was strikingly exemplified in the works of ARNAUDE DE VILLENEUVE, who was born in the latter end of the 13th century. He called himself a Milanese, yet some authors assert, that he was a Catalonian: but others, who are more generally credited, maintain that he was born at Villeneuve in Languedoc. It is certain, that after travelling for improvement over a great part of Europe, he fixed his residence chiefly at Paris, where he practised medicine. His reputed acquirements were very numerous. He is said to have been master of the Greek, Latin, Arabian, and Hebrew languages; and not only to have possessed profound knowledge in Theology, Philosophy, Astronomy, Medicine, and Che-

mistry; but also in Astrology and Alchemy. During life he certainly enjoyed surpassing fame, but his works still exist.

His skill in Astrology was displayed, by foretelling from the conjunction and opposition of certain stars, that Antichrist would infallibly appear in the year 1464. But this prophecy excited less alarm in the church of Rome, than the publication of certain theological theses, in which he ventured to impugn some orthodox doctrines respecting the papal power. This was no jesting business; the Inquisition began to stir; on which he fled from France, and took refuge in the Court of Frederick, King of Sicily, where he was very honourably received.

It may be inferred from this persecution, that his polemical talents were formidable: But, notwithstanding his heterodoxy, when the reigning Pope fell sick, he wished to consult him in his medical capacity; and applied to Frederick to send him to Rome. Arnaude set out and was drowned in the passage, about the year 1313.

This author is said to have written with amazing rapidity, and never to have made an erasure, or to have even stopped to correct numerous orthographical errors. He was therefore abundantly confident; yet what is most valuable in his medical instructions, is certainly borrowed: and although his original compositions are the

most curious ; those which excite the greatest curiosity are the least intelligible *. One essay entitled the Treasure of Treasures,† the Rosary of philosophers, discloses an easy receipt for forming the philosophers' stone. It may be so, but no one, except a profound adept, can comprehend it: the Flower of Flowers is equally mysterious ; and there is a treatise to instruct women in the art of adorning themselves, which runs into the opposite extreme ; it is much too plain. He commences with describing the method of bathing in the morning, and proceeds into the most minute and secret details of a lady's toilet ; he gives numerous receipts for correcting every personal blemish and defect ; and also teaches wonderful methods of improving their attractions. There is among the latter, a lotion to make the hair bright and yellow as gold, which was then the favourite colour. But this, like his alchemical discoveries, is asserted upon hypothetical assumptions ; for although Arnaude's faith in his own knowledge was very great, he was very ignorant of the real properties of the substances he used ; and could no more give to hair, than to lead, a golden co-

* Arnaldi Villanovani Omnia Opera, Basil. 1585.

† "Thesaurus Thesaurorum, et Rosarius Philosophorum, "Flos Florum," &c. &c.

lour. Yet he appears to have been much consulted by the sex, on some interesting particulars; and his promises to them were mighty, though his medical performances could have been nothing. But the disclosures to which he alludes, prove incontestibly, that ladies now are far more chaste, and incomparably more delicate, than in the days of chivalry.

Arnaude also treated of sorcery, as of a malady in the physician's province. He was of opinion that married men were peculiarly apt to be bewitched; neither however by love philters, nor by the charms of their wives, but by certain malignant spells, which had the power of frustrating conjugal love.

He describes several of these diabolical witcheries, and also the potent arts by which they may be overcome. One of his most powerful counter spells, which "will drive * a demon
" out of a house, and annul all his sorcery, is
" to sprinkle upon the floor the gall of a black

* " Fel canis masculi nigri domui aspersum, dæmonem
" pugnat, ne malificium damnum inferat."

" Item Lapis, qui magnes dicitur portatus, discordiam inter
" virum et mulierem, vel uxorem, sedat omnino." " Item
" si sub vestibus Dæmoniæ ponatur radix Eryngii, Dæmoni-
" acus confitebitur quis est, quod est, et unde est, et effugiet."
Libro citat. p. 1531.

“dog.” And he assures us likewise, that
“carrying a loadstone in the pocket will not
“only appease all discord between a man and a
“woman, but even between a man and his
“wife;” “And if any one will put an eringo
“root under the garments of a man possessed
“by a Demon; the Demon will immediately
“confess, who he is, what he is, from whence
“he came, and then will fly away.”

Notwithstanding all this, as Arnaude de Villeneuve was the most admired physician of his age, it was requisite to know his opinion of the Small Pox. This however was not easily discovered, for he disdained to employ the modern names Variolæ et Morbilli. But, after an accurate search, these diseases were found to be included in the chapter upon the anthrax and carbuncle. All these eruptions he conceived to be of the same pestilential nature; and the little which he writes upon them, is chiefly extracted from Rhases and Avicenna.

There is some difference of opinion among antiquarians respecting the exact period when GILBERT lived. Baleus thought that he flourished at the commencement, but Dr. Freind*,

* Histor. Medicin. Dr. Freind.

from better reasons, at the end of the thirteenth century, during the reign of Edward the First. At all events, the *Compendium of Medicine*, by Gilbert, is the earliest English medical work now extant. England was then shackled by Feudal and Papal chains; and the authors shewed little of that originality of thinking, which they have since displayed. Gilbert, indeed, hardly ventured to think, and frankly owned *, what is very apparent, that the substance of his work was extracted from his predecessors.

His account of Small Pox and Measles is borrowed from the Arabians, altering, in some degree, the treatment for the worse.

He advises “to guard the patients attentively
“ from cold, and neither to grant them cooling
“ medicines nor cooling diet.” “The pustules
“ are to be opened with a golden needle,”
“ and variolous ulcers are to be dressed with the
“ ointments employed in the leprosy.” He
concludes with this remark, obscurely Latinized,
“ that the old women in the country, added to
“ the drink of the sick, some burnt purple, (or
“ red ingredients), which, like cloth dyed in-
“ grain, had a secret virtue of curing the Small
“ Pox.†

* *Compend. Medicin. Gilbert. Anglic.*

† “*Vetulæ provinciales dant purpuram combustum in potu.*”

Nothing, certainly, flies so swift as folly. The Arabian doctrine of the medical qualities of colours, had already reached this island, and was improved by English Gossips. And their addition, as will soon appear, was speedily adopted by the rest of the faculty.

The Italian physicians, of the fourteenth century, were certainly the most learned in Europe; but they rarely aspired to any higher ambition, than to comment or elucidate the Arabians.

GENTILI, of Foligno, was a most subtle doctor. He wrote a book of doubts, upon the fourth and fifth canons of Avicenna *; in which he ventures to call in question the ancient theory of Isaac, improved by Avicenna, of the female blood being the cause of the Small Pox and Measles. This was a bold measure at that time, but did not make the impression that it ought to have done. To doubt is the first step to knowledge; and those of Gentili are decisive proofs of his possessing a superior capacity.

“ habent etiam occultam naturam curandi variolas: similiter
 “ pannus tinctus in grano.” Compend. Medic. Gilbert.
 Anglic. Lib. 7. De Variolis et Morbillis. Fol. 347.

* Fabul. Dubior. ac Capit Gentilis Fulig. super Quart. et Quint. Canon. Avicen.

HERCULANUS followed on the same tract*: but the glosses of both, on the obscurities of Avicenna, are a maze of perplexing refutations, and incomprehensible expositions; in which the tired reader wanders without a clue, and finds no end.

The French and English physicians of this age were less harassing; and humbly imitated each other in their most puerile conceits.

For the Flower of Flowers, by Arnaude, was hardly blown, when the Lilly of Medicine sprang up, in the college garden of Montpellier, and the Rose was planted in England. The French florist's name was BERNARD DE GORDONIO, a physician of distinction in the university of Montpellier; who observes in his introduction, "that there are many flowers on a
 " lilly, and in each flower there are seven white
 " leaves, and seven grains like gold; in simi-
 " litude of which, this book contains seven
 " parts.†" This conceited author recommends

* Joan Herculani Exposit in prim. Fin. Quart. Canon. Avicen.

† "In Lilio sunt multi flores, in quolibet flore sunt septem
 " folia candida, et septem grana quasi aurea. Similiter Liber
 " iste continet septem partes." *Lilium Medicin.* Ber. de Gordon.

The Physicians of that age observed nothing; Gordonius had never even counted the leaves of a Lilly.

wrapping up Small Pox patients in red cloth*, and the rest of the work is an abridgement of Avicenna.

The famous English Rose, by JOHN of GADDESSEN, notwithstanding its fragrant title, was a mere treatise on Physic; and, like the former, almost entirely extracted from the Arabians.

It is something odd that our medical, as well as our religious doctrines, should be originally derived from Asia.

This work is perspicuous and well arranged, and was long held in great admiration; yet it gives no favourable idea either of the philosophy of the times, or of the purity of old English manners. The consultations and requests, particularly of female patients, are proofs of grossness and profligacy surpassing the present age. And no man now durst prefix his name to a work containing such indecencies, as were openly published by the principal physician of Edward the Second. He appears also to have acted in capacities which modern physicians would regard as derogatory to their dignity. For he operated as a surgeon, dispensed medicines as an apothecary, sold secret remedies as

* "Deinde involvatur totum corpus in panno rubro." De Variolis, Libro citat.

an empiric, cut corns, and gave advice in physiognomy, chiromancy, and cookery: and, in fine, was not checked by false delicacy, from either acting or advising, whenever money was offered. He acknowledges, however, that in the cure of scrophula, his most powerful receipts, such as pidgeon's dung and the blood of weazles, were far inferior to the touch of the most noble and serene Kings of England. *

In his discourse on Small Pox and Measles, he has omitted few of the errors of the Arabians. He believed implicitly in the loathsome theory of the Jew; and his chief indication of cure, was to expel morbid humours. He was so close an imitator of the Arabians, as literally to adopt their receipts, and he even praises figs for their virtue of expelling Small Pox, a fruit not likely to have been then much known in England. Nor does he neglect the last improvement, that

* “ Si ista non sufficient, vadat ad Regem, ut ab eo tangatur
“ et benedicatur. ——— Valet tactus Nobilissimi et Serenissi-
“ mi Regis Anglicorum.”

“ Capiatur ergo scarletum rubrum, et qui patitur Variolas,
“ involvatur in illo totaliter, vel in alio panno rubro, sicut ego
“ feci, quando inclyti† Regis Angliæ Filius variolas patiebatur,
“ curavi ut omnia circa lectum essent rubra, et curatio illa mihi
“ optime successit: nam citra vestigia variolarum sanitate res-
“ titutus est.”

† This Renowned King was the feeble Edward the Second, and the Son was John, brother to Edward the Third, who died 1336.

of wrapping up the patients in scarlet dresses. For he states, "that when the son of the renowned king of England lay sick of the Small Pox; I took care that every thing around the bed should be of a red colour; which succeeded so completely that the prince was restored to perfect health, without a vestige of a pustule remaining." He also followed the sagacious advice of the old countrywomen, as recorded by Gilbert *, by directing his patients to suck pomegranate seeds, or gargle with wine of pomegranates, mulberries, or other red fruits, mixed with warm barley water to preserve their mouth and throat from pustules. This advice is given seriously, by one of the most learned men at that time in England. In truth there seems to have been a fascination in this remedy, which in the sixteenth century was conveyed by the Portuguese even to Japan, where it was greatly admired. For it is related by Engelbert Kæmpfer †, that when any

* — "Ad oris et gutturis custodia sugenda sunt puniceorum malorum grana, eorumque vinum est gargarisandum: similiter vinum mororum, id est, succus eorum, qui est rubeus ut vinum cum aqua hordei calida."

"Aperiantur cum acubus de auro et argento."

Joannis Anglici Praxis Medica, Rosa Anglica dicta.

† The History of Japan, by Engelbert Kæmpfer, translated by J. G. Scheuchzer, F.R.S. 1727. It may be questioned whether this practice did not originate in Japan.

of the Emperor's children are attacked with the Small Pox, not only the chamber and bed are covered with red hangings, but all persons who approach the sick prince must be clad in scarlet gowns.

John of Gaddesden also recommends that Small Pox pustules should be opened by gold or silver needles; Œconomy had probably tempted him thus to enlarge the instructions of Avicenna. And he declared, "that the Small Pox may attack the same person twice, if the matter has not been totally expelled the first time, or if he eats figs frequently, which drives the humour to the skin *."

But it ought not to be concluded from the above quotations, that the English Rose is equally irrational on other subjects: for the medical, and especially the surgical practice, in many diseases is judicious; though the obstacles surrounding the Small Pox were superior to the mental powers of that age.

* "Aliquando variolæ bis hominem invadunt: quando prima vice non totaliter expellitur materia, et cum homo frequenter comedit ficus, quia materiam ad exteriora expellunt." Ros. Anglic.

CHAP. VI.

FROM THE FIFTEENTH TO THE MIDDLE OF THE
SEVENTEENTH CENTURY. FIRE, PHILOSOPHY, AND
THE ALEXIPHARMIC TREATMENT.

IN the fifteenth century, literature continued to advance, and theological controversies proportionally augmented. For the sublime visions of Plato, and their adaptation to the benign doctrines of Christ, produced an infinite variety of religious dogmas. Each subtle point was debated by the interminable logic of Aristotle, and war raged among the guardians of the souls of men. Those who undertook the charge of their bodies, were comparatively calm; for medical fanaticism is rare. And although Physicians, like Theologians, are often tenacious of their doctrines, and desirous to gain proselytes; yet when they fail, instead of persecuting the unconverted, they only interchange mutual compassion for their opponents' understandings, and patients.

But their diffidence during the whole of this century was such, that they generally continued to adhere to the ancient theory and practice of the Small Pox.

VALESCUS DE TARENTO, however, gave a hint of an improvement which had begun, with regard to the practice of opening the pustules*. This proceeded not from the observations of learned physicians, but from the resistance of the illiterate vulgar; who often refused their consent to this operation. And

GUAINERIUS gave many cautions respecting external applications to the pustules. This author also granted an indulgence to wet-nurses, which is unusual in England, though perhaps necessary to female constitutions in Italy: and he imposed a very easy restriction to prevent this from injuring the child †.

But few innovations occurred till the beginning of the Sixteenth Century, when Astronomy having begun to unfold more knowledge of the heavenly bodies, produced an exaltation of mind favorable to the tenets of Astrology. This false science was then in great repute, and the physicians of those days consorted too much with Astrologers.

* “Hoc autem documentum est contra opinionem omnium Laicorum, qui nolunt quod (Variolæ) perforentur.” Lib. vii. cap. 17. Valesc. de Tarent. opera, Lug. 1526.

† “Etsi coitu tali nutrici absolutè prohibeatur: si tum robusta foret et coitui assueta: diuque sine ipso permansisset: sibi coitus conveniret: sed tunc lactare infantem usque post horam non debet.” Anton. Guainerii Papiens. opera. Venet. 1517.

FRACASTOR, of Verona, appears to have been guilty of this, yet was so disinterested as to practise medicine without receiving fees. He was a true son of Apollo, being both a poet and a physician; but unluckily preserved both characters in all his works. For he descended to adorn a disgusting disease with the graces of poetry; and when searching for the causes of the Small Pox, he soared to the stars. From this height he imagined he perceived that the heavenly bodies in certain positions shed a malignant influence upon earth, which occasioned all contagious diseases, and among the rest the Small Pox and Measles. Falling stars and comets he considered as undoubted signs of putrefaction taking place below. And he declares, “that when there is a conjunction
“ of many stars, under the larger fixed stars,
“ it may then be predicted that a contagion is
“ about to spread: and moreover, that the
“ aspect of the planets, to which Astronomers
“ attribute these portents, are neither to be
“ altogether neglected nor dreaded *.”

* “ Quod si conjunctio syderum illorum sit plurium quidem
“ sub majoribus earum quæ fixæ dicuntur, tum et prædicere
“ potes insignem aliquam portendi contagionem. Sunt porro
“ et aspectus quidam planetarum, quibus astronomi hæc por-
“ tenta tribuunt, qui nec omnino negligendi, nec semper
“ timendi.” De Sympathia et Antipathia, lib. un. De Con-
tagione, &c. Hieron. Fracastor.

It is odd that Fracastorius, though filled with these conceptions, neither abandoned the theory of Isaac, nor the established practice. All, though inconsistent, were made to coalesce by a presumed concatenation of causes.

Many circumstances combined to augment the credulity of this age. Those persons in the church who were held in the highest reverence, frequently attested the performance of miracles by holy men, by an host of departed saints, and even by their relicts. Thus the interruption of the regular course of nature, and the interference of Heaven in human affairs were conceived to be usual occurrences. Under this superabundance of faith Astrology and Alchemy flourished; but philosophy accords better with a portion of Scepticism. Some curious discoveries were however made at this time in Chemistry; a few substances were partially analysed, and several unexpected combinations were effected. These new facts acted so powerfully upon the imagination, that the most astonishing products were looked for. Alchemy became an ardent pursuit; and some enthusiasts spent days and nights in experiments, expecting to behold either the universal solvent, or the elixir of health and longevity distilling in their alembics; or perhaps to find the philosopher's stone calcined in their crucibles. The persons

thus employed, were stiled Fire Philosophers, and PARACELSUS was their chief.

The father of this extraordinary personage is unknown. In the heroic ages this hidden birth might have gained him a divine origin; but in these humbler times, a Prince was supposed to be a sufficiently elevated, and rather a more natural parent. He received a learned education, and gave indications of an uncommon capacity; and at length was so fully satisfied with his acquirements, as to conceive that he had reached the pinnacle of human knowledge.

In the year 1527, he was appointed Professor of Medicine at Basle, and being resolved to reform completely the whole system of Physic; at his first lecture he burnt, before the eyes of his amazed auditory, the admired works of Galen and Avicenna. Claiming a superiority over all his predecessors and contemporaries, he assumed the title of "The Monarch of Physicians", and derived his pretensions from God. In a strange style of rhetoric he proclaimed, "I profess boldly*, that the hair on the back of my head knows more than all your authors;

* "Audacter enim profiteor, quod lanugo occipitii mei
"multo plura sciat quam scriptores vestri universi. Quin et
"calceorum meorum annuli doctiores sunt ipsissimo vestro

“ the clasps of my shoes are more learned than
“ both your Galen and Avicenna; and my
“ beard possesses more experience than all
“ your academy.” This bombastic tone had
splendid success; and Paracelsus was long con-
sidered either as a man inspired, or as one who
possessed genius. The impression which it
now makes must be very different; yet it ought
to be acknowledged, that he first put a check
to that blind devotion which hitherto had been
paid to the ancient masters: for he overturned
completely the doctrine of the four famous
humours, which had so long kept possession
of the schools, and which confounded all me-
dical reasoning. But who can pretend to give
a clear account of the system he set up in its
stead? It is no easy pursuit to follow his tract
through the celestial regions, when pointing
out the various co-operations of the heavenly
bodies upon man; marking what stars are of a
hot, and what of a cold nature: which strike
with their rays the heart or brain, and
which the liver and loins *. And it is equally
difficult to descend into his laboratory, and to

“ Galeno vel Avicenna. Et barba mea experientiæ majoris
“ est quam academix vestræ universæ.” Præfat. in Lib.
Paragr. vol. i. p. 186. Paracels. opera. Genev. 1658.

* Remnants of this philosophy still disgrace every British
Almanac.

comprehend those mysterious operations, described in cabalistic phrases, by which he formed the powder of precipitation, or condensed the sun-beams into the colouring matter of gold. Nor are such investigations safe; for by soaring too high, or plunging too deep, the adept's senses were apparently bewildered.

These perilous pages being rapidly turned over, the attention was arrested by an Essay, which gave the original hint of the machinery which adorns the liveliest and most fanciful poem in the English language.

Paracelsus taught that the elements, fire, water, earth, and air, were filled with salamanders, nymphs, gnomes, and sylphs. These beings, who were afterwards rendered so interesting, are coldly noticed; and their form and habits are slightly passed over. But still their existence is positively asserted, and to convince the incredulous, the following true history is related.

“ A river nymph*, of eminent beauty,
 “ was enamoured of a German nobleman;
 “ she sat down on a road frequented by him,

* “ Jam historiam veram addemus de Nympha Stauffenbergensi, quæ formæ spectatæ in viam consedit, et quem
 “ sibi elegerit dominum præstolata est

“ and tarried there till he passed. He was
 “ fascinated with her appearance, and con-
 “ tracted such a marriage as is in use with
 “ these superior natures. At length a scruple
 “ arose in his mind, that he was cohabiting
 “ with a demon : and either to preserve his
 “ soul from perdition, or from love of an
 “ earthly beauty ; he courted and gained a wo-
 “ man’s heart. In the midst of the revels,
 “ when the nuptial feast was celebrated, the
 “ bridegroom, seated by his bride, saw one
 “ of the limbs of his deserted nymph pushed
 “ upwards through the pavement of the ban-
 “ quetting room ; it made him a sign ; on
 “ which, the perjured wretch sunk on the
 “ floor. He was conveyed to his chamber, and
 “ on the third day, was found dead.”

Paracelsus declares his conviction, that this
 catastrophe proceeded from the righteous judg-
 ment of heaven : as plighted faith ought to be
 kept equally sacred with a nymph, as with a
 woman.

“ Nympha dicta Undena fuerat et prænominato Stauffen-
 “ bergense nupserat, tamdiu ipsi cohabitans, donec uxorem
 “ aliam ille duceret, quod Nympham pro Diabolicam haberet.
 “ Qua re cum fidem Nymphæ datam violasset, ipsa per su-
 “ perius pavementum porrecto crure illi in mensa in die nup-
 “ tiarum sedenti signum dedit. Quo attonitus die tertio
 “ mortuus inventus est.” Paracels. Oper. vol. ii. p. 396.

Without any farther proof, these imaginary beings were admitted as an essential part of the Rosicrucian creed. Above a century afterwards, Joseph Borri, a Milanese enthusiast, and prophet, or rather a religious impostor, confirmed the existence of these spirits in a strange mystical Essay, called the “Key of the Cabinet *”; by which he pretended to unlock many hidden mysteries. And from this, the Abbé Villars de Montfaucon composed his romance of the Comte de Gabalis †, a fictitious Rosicrucian; who was of course acquainted with sylphs, nymphs, gnomes, and salamanders. By this intimacy he ascertained the surpassing beauty of the female spirits, who were by no means coy in their intercourse with men; and entertained an unaccountable predilection for wrinkled philosophers, and smoked

* La Chiave del Gabinetto.

Borri tried to be the chief of a religious sect, and perhaps his ambitious views extended far. But the church of Rome took alarm, and burned his works and himself in effigy, in 1660. He escaped to Holland, took the title of the Universal Physician, and pretended he had found out the Philosopher's stone. By this tempting pretence, he extracted gold from Christina of Sweden, and other eminent dupes; at length, being detected, yet still dreaded, he ended his days a prisoner in the castle of St. Angelo.

† Comte de Gabalis, ou Entretiens sur les Sciences Secrets. Paris, 1670. Wharton's Essay on Pope.

alchemists. To gain their favours one condition was indispensable, easy to any for such a reward, and peculiarly so to such lovers: for it was only required to renounce all intercourse with those inferior natures, women.

A few intrigues of the sylphs are related, which are weak imitations of the tale of Paracelsus: for neither the Italian adept, nor the vivacious French Abbé, had capacity to improve the original. But an English cabalist, of the tuneful tribe, caught a spark from the latter, and, by the fire of alchemy and poetry, purified and sublimed the spirits of the elements, and sprinkled them with the Castalian elixir of immortality.

Paracelsus is not only less amusing, but generally incomprehensible, when he treats upon philosophical or medical subjects: for example, What can be made of such a rhapsody as this?
“ The pulse * is contained in the firmament,
“ physiognomy in the stars, chiromancy in
“ minerals, spirit in the east and west winds,
“ and fevers in earthquakes.” Nor is his

* “ Pulsus continetur in firmamento: Physionomia in
“ astris: Chiromancia in mineralibus: Spiritus in euro et
“ zephyro: Febris in terræ motibus.” *De Philosophia Parac.*
Oper. p. 191. vol. i.

Archeus more intelligible, who reduces the food in the stomach into sulphur, mercury, and salt. He also maintained *, that these three principles, together with astral influence, are the chief causes of all pestilences; among which the Small Pox and Measles are included: and the great remedies for which are said to be gold, pearls, and sapphires.

Notwithstanding this fustian, Paracelsus possessed some acquaintance with chemistry, and by his experiments added to the stock of facts in that science. But his pretensions were boundless, and so imposing, that he was venerated by multitudes, and is generally considered as the founder of that wild sect the Rosicrucians.

But Daniel Sennert, a man of a fair character, who had good information †, represents Paracelsus in a most unfavorable light. He declares that his learning was superficial, and that he was even obliged to others for translating his effusions into Latin. He accuses him of employing secret nostrums, particularly opiate pills, and of boasting of their infallibility. He asserts, that his conduct in private life was disgraceful; that he was a glutton and a drunk-

* De Pestilitate. Opera Paracels. vol. i.

† D. Sennert. Urit. Opera. tom. i. De Paracelso. Lugd. 1676.

ard, who wasted his time in carousing with patients of the lowest order. This course of life cut him off at the early age of forty-seven, though he carried the universal remedy in his pocket.

In the character of this personage, enthusiasm and empiricism, appear to have been amalgamated.

FERNEL was born in the year 1485, and became physician to Henry II. of France. He was cotemporary with Paracelsus, and though a far superior man, acquired less notoriety. He wrote good Latin; and the solidity of his judgment preserved him from many of the fantastic delusions which were prevalent at that time. He was not however exempt from all, for he believed in magic; yet in no other medical author of that age is there to be found so much good sense and sound reasoning.

He was justly denominated the Restorer of the science of Medicine, which he taught at Paris, and was the first Professor who brought that medical school into celebrity. A solid reputation like this, is never gained without intense labor; and the exertions of Fernel, in the practice of physic, and in the acquisition of knowledge, were so unremitting, that his affectionate friends remonstrated with him, and

intreated that for the sake of his family, and of the world, he would grant himself some relaxation. To which he mildly answered, “ A long repose will be given by Fate *.” This most useful physician was also endowed with the keenest sensibility; for at the age of seventy-two, he was so deeply afflicted with the loss of his wife, that he died a short time afterwards.

Fernel’s work on the Hidden Causes of Things, is an extraordinary composition; in which there are many acute observations on the occult causes of all Plagues, by which he means every contagious epidemic disease.

He first sets forth, that the cause † is in the air, and then enters into an investigation of the various sources of bad air. These are chiefly pools, lakes, caves, stagnant water, dens, and the putrefaction of excrementitious and dead animal matter. But lest these should not be adequate to account for wide spreading pestilences, he supposes that the air may also be rendered baneful by a *combination* of certain stars. He sums up his doctrine in these words ‡: “ There are three kinds of general diseases in the air. The endemic, which arise from ter-

* “ Longa quiescendi tempora Fata dabunt.”

† De abditis rerum Causis, lib. ii. cap. 12.

‡ “ Tria diximus in aëre communium morborum genera, Endemium, à terrenis inferioribusque expirationibus, Epi-

“ restrial exhalations: the epidemic, which
 “ proceed from violent tempests and changes
 “ of weather; and pestilences which are pro-
 “ duced by an occult malignant disposition
 “ sent down from the heavenly bodies.” Small
 Pox and Measles are included among the
 pestilences, and are called Exanthema and
 Ecthyma.

The belief in astral influence did not proceed, in Fernel, from superstition; but from an hypothesis the usual source of medical errors. He imagined that a salutary emanation commonly flowed down from all the heavenly bodies to the atmosphere. But when an unfortunate conjunction of the stars took place, the emanation was noxious, and was the cause of the various plagues which were observed in this world.

As Fernel rejected the Arabian theories, this was gaining a great point; and he approached to the knowledge of marsh and putrid miasma, and to the contagious exhalations of the present day: on other occasions, this philosopher appears struggling amidst the prejudices of the times.

“ demum à vehementi temporum tempestatumque mutatione :
 “ Pestilentem ab occulta malignaque qualitate coelitus de-
 “ missa.” Lib. ii. cap. 12. Fernelii Opera.

He never names the Small Pox or Measles, as they are not mentioned by the Greek and Roman writers, on whom he principally relies for his practice; and being too much disposed to generalise, the treatment of these diseases seem to be comprised in that of fevers. Fernel was more sparing of phlebotomy than the Arabians; he recommends moderate evacuations, grants cool drinks, fresh air, and lighter coverings. But as the Small Pox is never mentioned by him, it may certainly be questioned whether this judicious plan was intended by him to be used in that, as well as in other fevers: especially as neither his cotemporaries, nor immediate successors, adopted it in that disease.

FORESTUS was born at Alcmäer in 1522, who composed a stupendous folio on Medicine. He brought back all the Arabian causes of Small Pox and Measles, and added to them Fernel's vitiated air. His treatment consisted in the hot alexipharmic regimen, which was then universally used in the Plague, and in all malignant fevers; among which the Small Pox and Measles were arranged. As the mischiefs resulting from acrid external applications were more obvious, than those from internal remedies, that part of practice was reformed first.

Hence Forestus observed, "that when the
 " pustules matured, and dropt off sponta-
 " neously, they were more easily cured, and
 " left fewest pits *." He did not, however,
 venture to prohibit positively all local treat-
 ment; for he commonly opened the pustules
 when fully ripened, and he mentions the ap-
 plication of oil of almonds with approbation.
 Another remark shall be quoted as it relates to
 a point which has been controverted of late.
 " Some allege that the same man may be seized
 " with the Small Pox, not only twice, but
 " repeatedly; which experience, the decider of
 " facts, testifies. And we observed this, both
 " in our own son, who though only a boy, had
 " the Small Pox twice; and in many other
 " patients †."

This also occurred to a son of Fracastor.

MERCURIALIS was born in Romagna, in the

* " Si (Pustulæ) sponte maturentur, et deciderint, quod
 " minori negotio persanentur, et minus per se vestigia re-
 " linquant." Obs. 50. lib. vi. Dom. Petri Foresti Alc.
 Opera. Franc. anno 1634.

† " Alii vero ad alias respicientes causas non semel homi-
 " nem in hunc prolabi, sed bis vel pluries asseruerunt, id quod
 " verum esse experientia rerum magistra testatur: ut et nos
 " in hoc nostro filio, qui bis variolas habuit, licet puer, et in
 " aliis multis ægris observavimus." Petri Forest. &c. Opera,
 lib. vi. Ob. 43.

year 1530, and acquired throughout Italy, the designation of the *Æsculapius* of the age. His divine skill procured him also abundance of terrestrial rewards: for he lived splendidly, was liberal to his friends when embarrassed, and of a generous and charitable disposition; yet he left at his death, 120,000 crowns of gold. As a physician's fortune is sometimes aided by female influence, it should be mentioned, that *Mercurialis* was beautiful in his figure, and endowed with an angelic disposition. He was so much adored at Forli, his birth place, that a statue was erected for him by the inhabitants.

These flattering circumstances add nothing to his posthumous fame, which rests upon his works: these are numerous; but his opinions on the Small Pox and Measles can alone be noticed here.

He refuted so ably the Arabian theories*, that it is a reproach to the profession they were ever afterwards entertained: but in the more difficult attempt of establishing another, he failed.

Mercurialis adopted that part of Fernel's theory which imputed the rise of the Small Pox and Measles to corrupted air. This he conceived was the original cause, but he sup-

* D. Hieron. *Mercurialis* Forol. &c. *De morbis Pueror.* lib. i. *Tractat. Varii.* Lugd. 1618.

posed that these diseases were perpetuated by hereditary disposition. *

Upon this point his opinions were very extraordinary: for he imagined that parents communicated to their offspring taints of all the various maladies which they had previously contracted in the course of their lives. And that all these diseases broke out in their descendants, when excited by any accidental constitutional disturbance.

Another supposition was added, that the immediate cause of Small Pox and Measles, in those who had the hereditary taint, was a morbid state of the humours, occasioned by errors in regimen.

Thus conjectures were piled upon conjectures; but he never thought of proving them by facts. Had he observed keenly, instead of speculating vaguely, he might have perceived, that the children of parents who had escaped the Small Pox and Measles, were equally sus-

* “ Initio hic morbus vitio cœli omnes tentavit aut fere
 “ omnes; qui deinceps hanc proprietatem paternam in filiis
 “ inferentes non est mirum, si longe, lateque malum propaga-
 “ rint; et hæc proprietas facta sit non solum promiscua sed
 “ etiam naturalis.” De Morbis Pueror. D. H. Mercurial.
 Tract. Varii. Lugd. 1618. — “ Cur aliqui tententur bis hoc
 “ morbo, rarissime ter, fere omnes semel tantum.” Loco
 citat.

ceptible of those diseases, as the descendants of those who had been contaminated through ten generations.

The practice of Mercurialis seems to have been less injurious than that of most physicians hitherto mentioned: for he advises * moderating a little the heat of the air, and rather lessening the number of red blankets, with which the patients were wont to be almost suffocated. He disapproves both of opening the pustules, and of external applications.

This author also is of opinion, that almost every person must have the Small Pox once; and that some few contracted it even thrice.

DANIEL SENNERT was born at Breslaw in 1572, he lived to a good old age, and was the most industrious medical compiler in Germany. But far from imitating the little bee † on the hill of Matinus, which sucked with much labour the quintessence from fragrant thyme, he resembled a greedy farmer, who sweeps into his

* Ut eligatur in primis aër temperatus, vel potius calidus: " detineantur ægri optimè tecti pannis, quemadmodum omnes " faciunt rubris: cavendus vero abusus, quoniam mulieres " interdum copia pannorum strangulant pæne ægrotantes, et " ad syncopea deducant," &c. Libro. citat. De morbis Pueror. lib. i. p. 22.

† Vide Horat. Flac. Carm. lib. iv. Od. 2.

capacious barns the entire growth of the fields, grain, chaff, and weeds: his works consequently form almost a medical library, in which the ideas of others are carefully stored, skilfully arranged and amply commented. But being dissatisfied with all former doctrines on the creation of the human soul and body, he confidently enters into a full explanation of this mystery.

Even an abridgment of his elaborate arguments would be insupportable; most readers will have enough who hear that after many inadmissible, though necessary assumptions, it is concluded, that the immaterial spirit * is first created in a glandular liquid of the male: and when it reaches its temporary dwelling place in the womb, it there organizes a corporeal covering for itself.

The same activity is assigned to the souls of brutes; but to explain clearly the distinction between their mortal, and the immortal souls of men, was a difficulty not easily surmounted.

* "Nobis vero consentaneum videtur, omne semen esse
"animatum," &c. &c.

"Sunt autem duæ in semine operationes, quæ nos ad latentis
"animæ cognitionem certissimâ viâ deducunt, seminis ac con-
"ceptus vivificatio, et postea partium omnium, quæ ad vitæ
"actiones edendas necessariæ sunt efformatio." Dan. Sen-
nert. Urit. tom. i. p. 129. Oper. Lugd. 1676.

Freetag *, a bigoted theologian of the church of Rome, took a strange advantage of this; and accused Sennert of blasphemy: which was both inconsiderate and unprecedented; for his notions were only unphilosophical.

Sennert † being an assiduous and methodical man, entertained an antipathy at the irregular wildness of Paracelsus. And being alarmed at the number of his proselytes, he wrote against him with acrimony; both to check the absurd belief in his extravagant pretensions, which was spreading rapidly; and also to encourage a more rational mode of pursuing science. Yet Sennert was no sceptic; on the contrary, his credence included astrology, alchemy, and magic. He suspected that Paracelsus had tampered in the Black Art; and seriously asserts, that magical cures can only be performed by a compact with the devil. For he owns, “ that
“ the devil ‡ has a competent knowledge of
“ physic: but as all his favors and promises
“ are deceitful and destructive to soul and

* Diction. Histor. Bayle, Article Sennert.

† D. Sennert. Urit. Opera. Lugd. 1676. tom. i. De Paracelso.

‡ “ Quanquam vero negari non possit Diabolum rerum medicarum satis esse peritum; tamen omnia ejus, quæ pollicetur, auxilia, fraudulenta sunt, et corpori et animæ in

“ body, no benefit, but much evil was to be expected from that quarter.” He then admonishes physicians rather to acquiesce with resignation in the death of their patients, than to preserve them by any impious means; because God knows best, when it is fitting that they should quit this world.

The Small Pox and Measles were not neglected by this copious author. The Arabian doctrines, the objections raised against them by Gentilis, Fernel, and Mercurialis, together with the theories of the two last, are amply expounded. And with the exception of the hereditary disposition of Mercurialis, he thought the arguments on every side so reasonable, that he agrees in some degree with all, and also with Forest. On the whole he concludes, that there are three causes of those diseases *, corrupt air, maternal blood, and vitiated aliment. He is also of opinion, that these maladies sometimes occur thrice, though rarely, to the same person: and the Measles he states to be the more dangerous malady of the two.

“ primis hominis perniciosa, et plus incommodi et damni ab iis quam utilitatis expectandum.” Lib. citat. tom. i. p. 234.

* “ A tribus tamen illam provenire statuimus; ab aëre maligno, a sanguine materno, et a vitioso alimento.” Lib. citat. Sennert. tom. vi. De Variolis et Morbillis.

With regard to the treatment, the improvement which had commenced in the management of the pustules is carried on farther.

He thinks it better to leave them untouched ; yet in conformity with the Arabians, he permits with reluctance some to be opened with a golden needle : but he totally disapproves of saline applications, and declares they should be left to nature. Should any ulcers break out, they are to be drest with mild cerates. Red bed clothes are now forgotten.

Sennert was cautious of bleeding, and adverse to the exhibition of purgatives ; and painful it is to relate that he considered the great indication was to expel the noxious humour by perspiration.

To accomplish which, he recommended decoctions of figs, and of various seeds and plants supposed to possess sudorific properties. And when these failed, other drugs and compounds, which were termed alexipharmics, were had recourse to. Among these the bezoar, the coral and pearls, though costly, were very innocent : but the mithridate and Venice treacle were efficacious medicines : yet as their real powers were little understood, it may be doubted if

“ (Morbilli) periculosiores hi quidem sua natura sunt
“ quam Variolæ.” Lib. citat. p. 487.

much advantage accrued from their exhibition. He lastly directs* “that while using the above
 “medicines, every attention is to be paid, espe-
 “cially in winter, to hinder the admission of
 “cold air. The patient is therefore to be tended
 “in a warm chamber, and carefully covered up;
 “lest by closing the pores of the skin, the efforts
 “of nature should be impeded, the humors
 “should be repelled, and the matter which
 “ought to be driven out should be retained:
 “from which anxiety, fever, and all the other
 “symptoms would be augmented, to the immi-
 “nent danger of the patient.”

After these dreadful directions he gives a very necessary caution† “not to torture the
 “patient with excess of heat.”

Physicians perhaps never fell into such fatal errors in the management of any other disease, which evidently proceeded from inventing hy-

* “Dum vero hæc exhibentur, unice danda opera ne æger
 “frigidam ærem admittat, presertim hieme. Itaque æger in
 “æere calidiore detineatur, diligenter tegatur, ne conatus naturæ
 “impediatur poris cutis occlusis, humoresque ad interiora
 “recedant, atque materia quæ expelli debebat, intus coërceatur:
 “unde anxietas, febris, aliaque symptomata, cum maxima vitæ
 “discrimine in ægro augiantur.” De Variolis et Morbillis
 Sennert. tom. vi.

† “Non tamen nimio astu torquendus est æger.” Loc.
 cit. Sennert.

potheses, and acting upon them, as if they were ascertained truths. May they take warning!

But although the above had become the regular practice, yet in spite of Sennert, the fascinating folly of fire philosophy had still many adherents.

VAN HELMONT, a cotemporary of Sennert, was born at Brussels in 1577. When he had attained the age of manhood his talents and doctrines began to excite wonder: he certainly became an adept, and perhaps a Rosicrucian. But the church of Rome, prone to suspect the appearance of genius, felt no charity for innovators even in science. The holy inquisitors therefore soon interrupted the alchemical experiments of the young philosopher; they accused him of magic, and cast him into a dungeon. After a horrid imprisonment, he escaped from their fangs and took refuge in the native country of Erasmus, which was then struggling against the House of Austria, to acquire political and mental liberty. There he lived in security, toiled as he pleased in his laboratory, and speculated in his study unpersecuted. But his works create a suspicion that the terrors of the inquisition had touched his intellect.

Van Helmont, confiding in himself, scorned all imitation. He paid no respect to Hippocrates, he railed at the humoral doctrines of Galen, mocked the garrulity of the Greeks, despised

the Arabians; even censured Paracelsus, and finally affirmed, that the whole art of medicine was a mere imposture.

This monstrous conclusion, as the Faculty will readily believe, was not a deduction from any species of logic. It was a judgment formed in a way unexampled among profane writers. For he declares, that after long and fruitless meditation, and many vain attempts to unravel, by his own efforts, the entangled doctrines of physic, and the system of man, "he * at length fell
" into a most memorable intellectual sleep. He
" then saw his soul, which was rather small,
" and of the human species, but without any
" sexual distinction. He gazed at this spectacle, with astonishment; not knowing what
" portion of himself remained which could discern his disunited soul; and which still pos-

* " *Saltem magna mox quies me invasit, et incidi in somnum
" intellectuale, satisque memorabile. Vidi enim animam meam
" satis exiguam, specie humana, sexus tamen discrimine liberam.
" Confestim in spectaculo admiratus hæsi, nesciens quænam in
" me esset Egoitas, quæ animam à se distinctam cerneret, intelligeretque intellectum extra se? Ac tum subiit in animam lux
" quædam, cujus comparatione, lux visibilis hujus mundi visa
" est continere fæculentes tenebras. Nec enim lux ista diversa
" erat ab ipsa anima. Ideoque non habebat aliquid simile in
" sublunaribus.*" I. B. Van Helmont Opera. p. 13.

“ sessed intelligence, though the intellect was
“ separated from it. The soul then shone with
“ a sudden light, in comparison with which the
“ visible light of this world is clouded darkness;
“ And that light was indistinguishable from the
“ soul itself, and therefore it has no similitude
“ under the moon.”

There next ensued a long dialogue between his illuminated soul and his self, profoundly abstruse and mysterious.

Van Helmont had a medical call ; and he pronounces positively, that no man can acquire the science of medicine, who is not called by Christ Jesus.

He avows that his writings are inspired by the Divinity, and they are undoubtedly composed in an obscure and almost incomprhensible style.

His grand doctrine was founded upon the Archeus, invented by Paracelsus, which was a personification of the vital principle. The Archeus is the supposed generator of health, of disease, and of every animal function. When he is composed, there is health; when he is enraged, there is disease. There are intermingled with these visionary conceptions, occasional opinions which could only be framed by a vigorous mind.

His remarks upon Small Pox merit being

quoted. "I confess *," says he, "that the
 " Small Pox flows from poison, and carries
 " along with it a venemous ferment, which
 " infects the blood, and contaminates sur-
 " rounding persons, especially the young: but
 " as the essence of the poison cannot be de-
 " monstrated *à priori*, we must measure the
 " properties by the effects, as a tree by the
 " fruit.

" In the first place, the poison of Small Pox
 " is confined to the human species.

" Secondly, nature is prone to its formation.

" Thirdly, the poison kindles around the
 " stomach, and therefore in the centre of the
 " body.

" Fourthly, the parts which are beset with
 " this poison, speedily repel it to the surface
 " of the body.

* " Fateor quidem variolas e veneno scaturire, virusque
 " secum ducere, suo fermento cruorem inficere, aliosque
 " adstantes (præcipue vero pueros) contaminare, quodque ve-
 " nenorum interna essentia non sit demonstrabilis *à priori*:
 " adeoque per effectus proprietatem veneni metiamur, prout
 " a fructibus arborem.

1. " Ergo venenum variolarum esse duntaxat humanæ speciei
 " proprium.

2. " Naturam facile pronam ad fabricandam illud.

3. " Accendi autem circa stomachum, adeoque in centro
 " corporis.

4. " Partes semel hoc veneno obsessas illud a se repellere
 " ociissime versus superficiem.

“ Fifthly, after the organs which secrete this
 “ poison have once felt its tyranny, so great an
 “ aversion and horror is conceived, that great
 “ precautions against its reproduction are taken;
 “ lest from carelessness they should fall into
 “ the same evil.”

Some of these remarks are greatly superior to the famed Arabian theories; and the supposition that the internal operations of the body depend upon intelligence and volition, is an easy and favourite mode of explaining them. Indeed, it seems natural to man to bestow his own intellectual faculties upon other objects. Children cherish and punish their play-things: and savages act in a similar manner to their clubs and bows: orators and poets personify all nature; and physicians, although philosophers, are prone to this delusion. In describing the animal functions, they were wont to employ the terms antipathies, sympathies, irritations, and dispositions, as if the vital actions were directed by mental affections. These metaphorical expressions were interpreted literally

5. “ Officinas illius veneni, postquam semel ejus tyrannidem
 “ senserunt, hostili deinde aversione et horrore edoctus; magna
 “ precautionem illius generationem vel ab ipso initio præpedire,
 “ ne uti prius, incaute in illud incidant.” J. B. Van Helmont.
 Opera, Paul. p. 690.

by the vivid imaginations of Paracelsus and Van Helmont, who both fancied that a spiritual Archeus, subject to human passions, was diffused through the microcosm, to superintend every action of the animal economy. This invention produced a striking effect, which would have been more permanent had it been brought forth during the dark ages; but the Archeus was a ghostly apparition, who, at the dawning light of the seventeenth century, vanished.

The treatment of Small Pox, the composition of the diaphoretic antimony, and the various arts by which Van Helmont appeased the furious Archeus, drove out diseases, and lengthened life, are very obscurely expounded. These remedies, like the occult processes for transmuting the baser into the nobler metals, and for composing the universal solvent, and the elixir of longevity remain, though all explained, among the arcana of the adepts.

But secrets diverge rapidly; they were soon conveyed to England, and promulgated by Dr. George Fludd and other cabalists, to the confusion of many understandings. In the year 1620, this depravation of reason was however powerfully counteracted, and a reformation in philosophy was commenced by the publication of the *Novum Organum* of the Great BACON: a

work which disclosed the most successful methods of searching for truth, and of making discoveries in every science.

In the year 1628, the immortal HARVEY published the demonstration of the circulation of the blood, which he had taught twelve years before. This discovery corrected many errors, and led to numerous improvements in physiology, pathology, and especially in the practice of surgery. England then assumed a conspicuous station in the science of Medicine; which since that period has been well maintained.

WILLIS followed, who was a distinguished scholar, a commendation due in a higher degree to Harvey, but overlooked in the man of genius. The soundness of Willis's understanding enabled him to resist the allurements of alchemy and astrology; and he derided, with success, the chimeras of Van Helmont. Few persons in that age surpassed Willis in anatomical and physiological knowledge: but in framing a system of the brain and nerves, he invented an hypothesis to explain every phenomena of the soul in men, and of instinct in brutes*. All criticism of this system should be silenced by

* De Anima Brutorum, &c. Thom. Willis. Præfat.

the affecting apology made for it; he states that it was written to alleviate his sorrows for the death of his wife.

He was a good and learned man, but followed the ancient plan of the schoolmen, instead of the wise plan pointed out by Bacon. For when considering Small Pox* and Measles, he rejects none of the Arabian causes; but adds to them contagion, bad air, and a perturbation of the blood and humors.

If this were the case who could ever be free from Small Pox?

He was acquainted with the fact of these maladies in some rare instances attacking the same person twice and even thrice.

In the beginning of the fever he recommends evacuants of every kind, emetics, purgatives and bleeding, to lessen the supposed effervescence: and afterwards he advises diaphoretics. He does not however urge warmth so strongly as Sennert, but enjoins taking care that the perspiration is not checked.

It is unnecessary to take notice of RIVERIUS, though he was an author of celebrity, and a

* Opera Thomæ Willis, tom. i. De Febris.

favorite physician of Louis XIV. because on Small pox and Measles he copies the opinions of Sennert.

DIEMERBROEK professor of anatomy at Utretch, ventured to think for himself on many points; he had the good sense to reject every theory that had yet appeared on Small Pox, and the prudence to invent none. But unfortunately he adhered to that treatment, which had been founded on the theories he refuted; and perceiving the futility of the bezoar, the magistrery of pearls, coral, crab's eyes, and scarlet coverlets; he adopted more effectual, and consequently more deleterious sudorifics. His sagacity increased the evil.

This author saw many instances of Small Pox occurring twice.

In the middle of the seventeenth century KIRCHER, a Jesuit, found out a new cause, not only of Small Pox, but of the Plague, and of all those diseases which were considered of a putrid nature. This learned monk invented no hypothesis; but endeavoured to follow the rules of Bacon. He deduced his theory from experiments, and from the evidence of his sight; and therefore believed it to be indubitable. But

in medicine fallacies can so well put on the guise of truth, that we cannot always trust even to our eyes.

The experiments* of Kircher consisted in exposing animal substances to the air until they became putrid; and as he found them then full of animalcules, he concluded that these animalcules were the cause of putrefaction.

He next examined variolous pus in patients covered with Small Pox, in which he detected multitudes of similar animalcules: and immediately inferred that the animalcules were the cause of Small Pox. He extended this conclusion to the plague, and to every disease, which from an hypothetical theory, had been termed by physicians putrescent.

Being convinced of the accuracy of this reasoning; he next stretched his mind to discover, why those animalcules should swarm and produce epidemics at particular periods, and should nearly be extinct at others.

It had been usual to look for the cause of these general effects in the state of the air, weather, and seasons: which, according to the astrologers, depended not only upon the relative positions of the sun, and moon, but also upon

* *Scrutinium Physico-Medic. contagiosæ Luis quæ Pestis dicitur. Athan. Kircher. è Soc. Jesu.*

those of the stars and planets. After a strict examination of Almanacks and Astrological tables, he imagined he discovered, that putrid diseases had always prevailed at those times when the planets Mars and Saturn were in conjunction. He therefore inferred, that those two planets emitted very deadly exhalations, which infected the air, and all terrestrial productions with a putrescent tendency : when myriads of animalcules were instantly generated ; and the Plague, the Small Pox, the Measles, or some other putrid fever became inevitable.

Kircher who was a learned ecclesiastic took great pains to demonstrate this theory, which he conceived to be a most valuable discovery ; and his work was dedicated to Alexander VII. the reigning Pope.

Many Italian physicians were convinced by the above proofs, which were also swallowed by Langius*, Hauptman and a crowd of Germans. At length Pfeiffer †, a Prussian professor, and a proselyte to this new doctrine, assured the world from the evidence of his microscope, that the variolous insects were white and pellucid ; that they had one head and six hairy legs : but reading

* Langii Christ. Patholog. Anim. et Miscel. Curios. Medic.

† Variolas ac in primis Epidem. Malig. Verminosas, &c. Sieg. Aug. Pfeiffer, M. D.

the details of their generation, numbers, and activity, makes the flesh to creep.

No one can deny the existence of these insects; which never having been found on the human body preceding the variolous fever but only in the purulent secretion at the latter stage of the disease, ought evidently to be considered as an effect, and not as the cause of the malady. But no objection or refutation of this doctrine being published, and as it was harmless, although the invention of a Jesuit, it soon died away.

In 1663, a species * of chemical theory was invented by the celebrated SYLVIVS. He conceived that Small Pox and Measles proceeded from acrimony, of which three kinds are enumerated; the saline lixivial, the acid, and the mixt. He fixed upon the acid acrimony as the cause of Small Pox; and was of opinion that the menstrual blood was the original source.

He next suspected, that this acid humor lurked in the renal glands, until it was excited by certain procatarctick causes; these were the air, aliments, and terror. But of this theory there is already a superabundance, although formerly it had numerous pastisans in Germany.

* Francis. De Le Boe, Sylvii Opera.

Besides the more noted theories, multitudes of others were invented in every medical school by the fertile fancies of youthful graduates. These were unfolded in medical essays, dissertations, and inaugural discourses ; they flourished, withered, and fell in annual succession.

CHAP. VII.

THE COLD TREATMENT.—SYDENHAM, BOERHAAVE.

NEAR eleven centuries had now elapsed since the Small Pox and Measles had reached Arabia; and in the whole of that time the medical profession had founded their treatment upon visionary speculations. As the mischief arising from the external applications was visible, physicians had learned gradually to abstain from them. But although the hot regimen and sweating medicines were followed by numerous deaths, yet the cause was hid: and the theoretic prepossessions were so strong; that in proportion as the mortality augmented, the injunctions for persevering in that fatal plan became stricter. A revolution at length approached.

In the year 1624, THOMAS SYDENHAM was born at Winford Eagle, in Dorsetshire; and was a student at Oxford at the beginning of the civil wars, when Charles the First took possession of that city.

The University adhered warmly to the royal cause; but Sydenham, being in his principles a parliamentarian, retired to London.

He was there persuaded by Dr. Cox, his intimate friend, to study medicine; and when the war terminated he returned for a short time to Oxford, but graduated at Cambridge.

In London, where he established himself, he rose to the first eminence: but neither the emoluments of his private practice, nor the turbulence of the times in which he lived, hindered his exertions for improving medicine, nor prevented his communicating to the public the useful observations he had made. There is, perhaps, not a disease known at that time, the treatment of which was not ameliorated by his sagacity. These numerous improvements evidently proceeded from the plan he adopted.

His opinion of the mass of medical books may be gathered from a whimsical advice * which, when advanced in years, he gave to Sir Richard Blackmore: who, when a student of physic, requested Sydenham to point out to him what books he should read to qualify him for practice. Sydenham replied, "read Don Quixote, it is a very good book, I read it still."

This, perhaps, marked his contempt for those medical writings which were merely speculative; but he had been struck with the wisdom of

* A Treatise upon the Small Pox, by Sir Richard Blackmore. Preface.

Hippocrates, in tracing, with detailed accuracy, the history, the symptoms, and all the concomitant phenomena of diseases : he had also studied the works of Bacon ; from whom he learned, that inferences should be deduced from facts and experiments. These two superior men are quoted by Sydenham in his preface ; and the principles by which he investigated diseases were evidently acquired from them.

He inculcated the laying aside all hypotheses, and usually practised the rules he gave, except however in admitting a few relicks of those humoral doctrines, which had been infused into Pathology by Galen.

He prudently avoided censuring others ; but quietly effaced their erroneous opinions by pointing out a new and superior practice, founded on observation.

Sydenham's description of Small Pox and Measles is such, that subsequent writers have been unable to make any material addition to it ; they have done little else than vary the arrangement and the language, according to their taste. These two diseases, which had been so long united, were now disjoined for ever : the Measles, with their ophthalmic and pneumonic symptoms, were henceforth treated separately, and shall in future be omitted here.

The Small Pox was divided by Sydenham into two species, the distinct and the confluent; which are discriminated as well as the varying shades of diseases allow; and the regular course of the symptoms, together with the deviations and anomalous occurrences, were all faithfully narrated. Among a number of new remarks he stated, that the danger of the disease was rather to be estimated from a multitude of pustules crowding the face, than from the collective number on the body; and also, that the mildness or malignity of the disease was chiefly to be prognosticated from the favourable or unfavourable appearance of the pustules on the face. And, besides the correctness of his descriptive observations, he made many important remarks upon the effects of the prevailing treatment.

He noticed how often the event disappointed the expectations. For in the distinct Small Pox, when profuse sweating had broke out from the beginning, according to the wishes of the physician; and when it was carefully continued by cardiac remedies, and a hot regimen, raising expectations that the morbid particles were duly eliminated; notwithstanding which, on the eighth day the face was apt to be found pale, flaccid, and sunk; the sweating ceased suddenly, and could not be re-excited by the

hottest cordials ; anxiety, restlessness, and phrensy ensued, and in a few hours the patient expired.

In the confluent Small Pox, when the same indications were strenuously pursued, that on the eleventh day the salivation was wont to cease, and the swelling of the face to subside ; in which case the patient necessarily perished. Others were suffocated by the saliva getting into the lungs.

He enumerated a train of deleterious symptoms, common to both the distinct and confluent Small Pox, which were conceived to proceed from a violent ebullition, or a relaxed texture of the blood ; these were phrensy, coma, purple spots similar to those of the plague, bloody urine, and hemorrhage from the lungs.

There were also another set of symptoms, of an opposite nature ; which sometimes, though very rarely occurred, when an opposite treatment had been pursued.

If the patient should have been exposed to intense cold, or blooded and purged to excess, the pustules were then wont to become depressed, and a diarrhea of the most dangerous kind to take place.

After detailing every circumstance of moment, Sydenham neither explains them by repeating the old theories, nor strains his imagina-

tion to invent a new one: but frankly * acknowledges, that from a defect both of his own judgment and of that of the rest of mankind, he is ignorant of the essence of the disease. He then unluckily adds, that the symptoms appear to indicate, that there is a peculiar inflammation of the blood and humours, during which nature digests and concocts the inflamed particles; which, when ripened, are expelled from the body in the form of little abscesses.

These notions of concoction and expulsion are unrejected remains of Galen's theory of fever; which still lurked even in the mind of Sydenham, though with trifling influence; for instead of bending his treatment to these ideas, he twisted them round to that practice which he had observed was most successful.

The fatality of Small Pox was a melancholy truth admitted by all; yet was not a ground for

* “ Qualis vero sit hujus morbi essentia, ob naturalem et
 “ communem mihi cum reliquis hominibus intellectus defectum,
 “ nescire plane me fateor; verum tamen, prædicta symptomata
 “ pensiculatim trutinata mihi videntur subindicare, inflammati-
 “ onem eam esse (a cæteris tamen inflammationibus specie
 “ diversam) tum sanguinis, tum reliquorum humorum, in qua
 “ amolienda, per dies priores duos tresve id agit Natura, ut
 “ particulas inflammatas digeret, coquatque, quas postea in
 “ corporis habitum abligatas maturat adhuc, et sub abscessulo-
 “ rum forma suis demum finibus expellit.” P. 142. Thom.
 Sydenham, M.D. Opera Ludg. Batav. 1741.

casting doubts upon the wisdom of the established treatment. But Sydenham remarked with surprise, that when the prescribed medicines and regimen produced their intended operation, and when every indication was accomplished, instead of an alleviation, an exacerbation of the symptoms followed. He likewise perceived, that the mortality of the disease was greater, in proportion as the plan for warding off death was more strenuously pursued. For the poor, who were unable to purchase the expensive sudorifics, and who, from necessity, were neglected, recovered more frequently than the rich; though the latter were abundantly drugged, and tended by careful nurses, who covered them well with blankets, and preserved their chambers close and warm.

In developing his observations, he animadverted upon the over-assiduity of the nurses and friends of the sick; and by an oblivion of the physicians, he shunned dwelling upon their guiltless errors. Yet, notwithstanding this respectful delicacy, he was calumniated by the invidious portion of the medical tribe, as an impostor and a homicide. But even the names of these miscreants have long been forgotten, and their fugitive scurrility is only known by his mild reply, included in the epistle to his friend Dr. Cole.

All the alterations proposed by Sydenham in the management of the Small Pox were not

announced at first, but were gradually disclosed in his successive publications.

Instead of confining his patients to a hot bed from the commencement of the malady; he indulged them in remaining up through the day, until the malady was so far advanced that they preferred lying quiet. He also allowed them the enjoyment of breathing fresher air, and of lighter bed coverings. When the patient * from the violence of the fever was seized with frenzy, he urged the necessity of exposing them freely even to cold air. He declared, that he had seen innumerable examples of persons rescued from death by this practice. Many, he added, saved themselves by deceiving the vigilance of their nurses, by getting out of their beds secretly in the night, and exposing their bodies to the fresh air. An extraordinary instance is related of the benefit of this practice. A young man had travelled to Bristol, and in the heat of summer was seized with the Small Pox. The disease was so violent, that after becoming delirious, he fell into a state of such complete insensibility, that he was believed to be dead. It was then judged to be expedient, on account of his corpulency, the eruption, and the heat of the weather, to remove the corpse from the bed. The body was accordingly lifted up, and placed

* *Loco citat.* p. 158.

on a table covered only with a sheet. Soon after which some indications of life re-appeared; when he was again put to bed, and recovered.

Sydenham not only prohibited hot air, and bed coverings; but also wine, meat, and all cardiac and sweating medicines. He recommended gruel, barley-water, small beer with the chill taken off by a toast, and other refreshing drinks.

The remedies chiefly recommended, were moderate bleedings, an antimonial emetic when the fever ran high, drinks acidulated with vitriolic acid, and opiates. Perspiration was always to be discouraged: but should the pustules become depressed, or should there appear a want of corporal energy, a little wine, or some cordial medicine with an opiate, was recommended. Blisters were also sometimes directed with a similar view. It had long been an established practice, not to purge till the Small Pox was nearly over, lest the humours should be drawn from the circumference of the body to the internal parts. Sydenham seems to have been long deterred by the prevailing custom, though he contemned the reason. But in his letter to Dr. Cole, one of his latest works, he observes, “that bleeding was not so effectual in limiting the symptoms of Small Pox as he had formerly believed: but he had often noticed, that repeated purging had

“ rendered the pustules, when they broke out,
 “ distinct and favorable *.”

It is requisite to mention, though it is done with regret, that in the latter stage of the confluent Small Pox when the danger was imminent, this penetrating physician recommended copious bleeding; which evinces the amazing difficulty of discerning effects in the practice of physic.

The brilliancy of Sydenham's reputation was not obscured by the labors of his immediate successors: yet ETMULLER was distinguished even in Germany for his industry. He was born at Leipsic in 1646, and died in 1683, at thirty-seven years of age: and during that short life he studied intensely, acquired the professorships of chemistry, botany, and anatomy; practised physic, and composed five Latin folios on medicine.

Reading and writing so much, left little time for making observations: yet there may be found, scattered through his compilations, some unborrowed thoughts.

He enumerates, and reprobates, the old vi-

* “ Atque hinc mihi primum innotuit, Phibotomiam non
 “ perinde, atque ego prius arbitrabar, Variolas intra justos
 “ limites coercendis conducere: Tametsi sæpenumero observa-
 “ verim, reiteratim catharsin, sanguine nondum inquinato,
 “ subsequentes Variolas laudabiles, et distinctas ut plurimum,
 “ reddidisse.” Dissertat. Epistol. Sydenhami, p. 361.

sionary causes of the Small Pox and Measles. He also mentions that these diseases were believed by some to arise from excesses in conjugal love: a notion which he thought rather improbable*, and gave the preference to the acid acrimony of Sylvius: yet he would not allow that this acid was formed from female blood; but believed it to be the product of milk drunk by the infant, both before and after birth. This milk is next supposed always to become corrupted, and to produce a viscid-acid refuse: from which, by febrile fermentation, the Small Pox and Measles arise.

Etmuller asserted, and not from inadvertency, that infants swallowed milk in the womb; but as he knew that they were sometimes born with the Small Pox upon them; it was requisite either to make that assertion, or to abandon his hypotheses. Theorists rarely

* “ Non videatur eorum sententia probabilis, qui dicunt,
 “ quod (Variolæ et Morbilli) oriantur ex repetito coitu post
 “ factam jam conceptionem, cum post conceptionem uterus
 “ firmissime claudatur, nec quicquam amplius Embryoni ab
 “ extra communicari queat. Ac proinde suspicor: fundamen-
 “ tum Variolarum et Morbillorum consistere in lacte, quod
 “ haurit fœtus nunc in utero, nunc extra uterum: ita ut lactis
 “ vitiosi inquinati, aut vitiose coagulati recrementa acida-vis-
 “ cida sint quasi radix, ut per mutuam efferrescentiam feбри-
 “ lem oriantur Variolæ et Morbilli.” Mich. Etmuller. Oper.
 tom. ii. par. i. p. 346, Franc. 1708.

demur at such a dilemma. But notwithstanding this new theory, his practice is principally drawn from Sennert; and he bestows extravagant commendations on myrrh and castor, as powerful expellers of the lacteal acid.

He also recommends a beverage very different from orangeade, lemonade, or the juice of other grateful fruits, which are now in use; and which must have been disgusting even to those who were scorched with a burning fever, perspiring at every pore, and parched with thirst.

It turns the stomach to confess that this physician advised as common drink*, an infusion of horse dung; declaring also that sheep's dung was preferable in the Small Pox, and goat's dung in the Measles.

One is tempted, on reading this nauseous advice, to wish he had been drowned in his own beverage.

DOLÆUS published in 1684 a Medical Encyclopedia, in which the most noted theories on Small Pox and Measles are detailed. He assented to the opinion of Sylvius, that the

* “ Dictis usibus nisi superfluè delicati in remediorum selectu esse velimus similiter Infusio stercoris equini potu ordinario mire conducit: Stercoris tamen ovilli usus huic adhuc præferendus est in Variolis; sicut in Morbillis caprillum eminet.” Lib. citat. tom. ii. par. ii. p. 551.

cause of these diseases, was an acid; he also approves of the addition made by Etmuller, that the acid was produced by milk: to which he superadded a conjecture of his own, that the acid was of a volatile and not of a fixt nature.*

This he seemed to think rendered the theory quite perfect: and it led him to the invention of an antivariolous liquor, by which he boasted he had cured more than a thousand persons, and that no variolous patient who used it had hitherto died.

But Dolæus was no quack, for he fairly communicated his nostrum, which † consisted of

* “Suspicio tamen Variolas esse ex acido salino volatili, acri, quod ex contagio apparet, non idem ab acido fixiori specrandum.” Dolei Opera. tom. i. p. 432. Franc. 1703.

† “℞ Aq. ‡ C. C. citr. ℥ij
Succ. Citr. ℥ss

Detur cochlearim in potu ordinar. cerev. ten.”
Loco citat. p. 438.

‡ “Aq. Cornu Cervi Citrat.

℞ Rasur. Corn. Cerv. ℥ri

Pomorum Citri cum corticibus incisorum, No IV Infunda per nycthemeron.

Aq. Rosarum

Scabiosæ

Acetosæ

Cardui benedicti

Melissæ

Scordi ana Hj

Postea distilla ad quartæ partis remanentium.

Dosis uncia una ad duas.”

Pharm. Wirtemberg. 1750.

an innocent perfumed water, mixed with lemon juice.

The two last mentioned authors neither improved the doctrines of Small Pox, nor profited by the improvements made by Sydenham.

HERMAN BOERHAAVE was born in 1668 near Leyden, and became a distinguished author in the beginning of the eighteenth century. He endeavoured to simplify the study of medicine, and to form a systematic classification of diseases, by his concise and comprehensive aphorisms. This was a work of genius; in which, among other doctrines, he considered the causes, symptoms, terminations, and treatment, of inflammation in the abstract: thus including, in one view, the general principles of a great proportion of the diseases which afflict the human body.

Boerhaave felt an admiration for Sydenham, and owned that he could add little to his correct description of Small Pox, which merited being read over ten times. Then, instead of guessing at the first cause of that malady, he proceeds to topics more fitted to the human capacity; and states that the Small Pox is an epidemical disease, arising from contagion, disseminated from the bodies of those infected with it. In addition to the symptoms detailed by Sydenham, he re-

marked, that blood drawn from a vein at the beginning of the distemper, had a natural appearance; but that which was extracted subsequently, resembled the blood of persons labouring under a pleurisy, or any other inflammatory malady. He observed, that the symptoms of the variolous fever bore so close a resemblance to those of acute inflammation, that, at the first attack, it could only be predicted from its prevailing as an epidemic, or from the patient having been exposed to the contagion. From which this practical inference was deduced, that the same indications were to be pursued in the Small Pox as in acute inflammation. The inflammatory stimulus is first to be removed; the progress of the malady is then to be stopt or impeded; and lastly, should it still proceed, the evils resulting from suppuration and gangrene are to be guarded against.

He entertained an idea that possibly the contagious poison might be overcome and the disease cured by a specific; and perhaps that some combination of antimony and mercury would prove such. But independent of this, that the inflammatory disposition, in the first stage of the Small Pox, was to be controlled by bleeding, aperients, and fomentations; by demulcent, acid, and nitrous drinks; by mild antimonial, saline, and diuretic medicines; and by a slender diet: all which constituted what he

termed the antiphlogistic regimen. Cold air was to be admitted for breathing; but the body was to be kept well covered and perspirable.

Boerhaave having perceived, that by this treatment simple inflammation was sometimes dispersed, and suppuration entirely prevented; he concluded that the progress of the Small Pox might also be interrupted with safety; and the disease might sometimes be put a stop to, without the formation of a single pustule.

In the second stage, when the symptoms became violent, and the eruption tended to confluency, then every precaution was to be used to moderate the suppuration, and to withdraw it from the head. With these designs, in addition to the former remedies, the feet were to be bathed in hot water, and fomentations and blisters to be applied to the lower extremities. At the same time cold pure air was to be admitted into the patient's chamber, and the lower part of the body to be warmly covered. Opiates also were recommended to be given at night.

When the eruption was at the height, and the pustules are bursting or discharging, there is usually an augmentation of fever, and other alarming symptoms; this he considered as the third stage. To account for which, Boerhaave fell into the ancient error, and framed a new

hypothesis, that this exacerbation was owing to an absorption of pus by the veins.

To remedy which he was of opinion, that the pus ought to be evacuated externally, and every care taken to prevent its being thrown inwards; fomentations were therefore to be applied to the skin, and the mouth and throat to be washed frequently with gargles. The antiphlogistic regimen was then to be entirely discontinued; instead of which he advised cordial, aperient, antiputrescent, and opiate medicines; and the diet to consist of broth or soup, with salt and acids; wine also was to be administered.

The whole of this plan was made to correspond with Boerhaave's general doctrine of inflammation: those instructions which were founded upon hypothetical reasoning, were necessarily erroneous, particularly the hot fomentations and coverings to the body; but the exhibition of aperients at the beginning of the disease, and the changing the antiphlogistic for a cordial regimen, towards the conclusion of the confluent Small Pox, were essential improvements of Sydenham's practice.

CHAP. VIII.

THE DISCOVERY OF INOCULATION, AND THE OPPOSITION IT ENCOUNTERED.

THE plans to mitigate the Small Pox, which have hitherto been shewn, were devised by physicians. But at the beginning of the eighteenth century, there was communicated to the Royal Society of London, a discovery to which the Faculty can lay no claim; and as it was brought to England from Constantinople, it was at first named the Byzantine operation, although certainly not invented there.

According to medical authorities in China, the custom of sowing the Small Pox, which is in some degree analogous to inoculation, had been long in use. Father D'Entrecolles * was of opinion that it was introduced about the sixteenth century; but other Missionaries † assure

* Lettres Edifiantes et Curieuses ecrites par des Missionnaires. Paris, 1781. tom. xviii. p. 353. tom. xxi.

† Memoires concernant L'Histoire, les Sciences, &c. des Chinois, par les Missionnaires de Pekin. Tom. iv. p. 392.

us, that the practice was invented in the tenth ; and there is a tradition that it began as early as the dynasty of Song, which was in the year of Christ 590.

These different dates perhaps may be accounted for, from the practice having been long kept secret ; and it appears neither to have been very general, nor much approved of in China.

No account is handed down of the origin of this custom ; but the reverence in which agriculture is held by the Chinese, may have suggested the name, and the usual manner of performing the operation. For they took a few dried Small Pox crusts, as if they were seeds, and planted them in the nose. A bit of musk was added, in order to correct the virulence of the poison, and perhaps to perfume the crusts ; and the whole was wrapt in a little cotton, to prevent its dropping out of the nostril.

The crusts employed were always taken from a healthy person, who had had the Small Pox favourably ; and, with the vain hope of mitigating their acrimony, they were sometimes kept in close jars for years, and at other times were fumigated with salutary plants. Some physicians beat the crusts into powder, and advised their patients to take a pinch of this snuff ; and when they could not prevail upon them, they mixed it with water into a paste, and applied it in that form.

These practices, however ancient, and the consequent treatment, which is not worth relating, are proofs that knowledge is not to be attained by time alone.

In Hindostan, * if tradition may be relied upon, inoculation itself has been practised from remote antiquity. This practice was in the hands of a particular tribe of Bramins, who were delegated from various religious colleges, and who travelled through the provinces for that purpose. The natives were strictly enjoined to abstain during a month, preparatory to the operation, from milk and butter; and when the Arabians and Portuguese appeared in that country, they were prohibited from taking animal food also.

Men were commonly inoculated on the arm, but the girls not liking to have their arms disfigured, chose that it should be done low on the shoulders. But whatever part was fixed upon, was well rubbed with a piece of cloth, which afterwards became a perquisite of the Bramin; he then made a few slight scratches on the skin, with a sharp instrument, and took a little bit of

* *Essai Apologetique sur la Methode de communiquer la petite verole par inoculation.* M. Chais.

An Account of the manner of Inoculating in the East Indies, by J. Z. Holwell, F.R.S. London, 1767.

cotton, which had been soaked the preceding year in variolous matter, moistened it with a drop or two of the holy water of the Ganges, and bound it upon the punctures. During the whole of this ceremony, the Bramin always preserved a solemn countenance, and recited the prayers appointed in the Attharva Veda, to propitiate the Goddess who superintends the Small Pox.

The Bramin then gave his instructions which were religiously observed. In six hours the bandage was to be taken off, and the pledget to be allowed to drop spontaneously. Early next morning cold water was to be poured upon the patient's head and shoulders, and this was to be repeated until the fever came on. The ablution was then to be omitted; but as soon as the eruption appeared, it was to be resumed, and persevered in every morning and evening, till the crusts should fall off. Whenever the pustules should begin to change their colour they were all to be opened with a fine pointed thorn.

Confinement to the house was absolutely forbidden; the inoculated were to be freely exposed to every air that blew; but when the fever was upon them, they were sometimes permitted to lie on a mat at the door.

Their regimen was to consist of the most refrigerating productions of the climate; as plan-

tains, water melons, thin gruel made of rice, or poppy seeds, cold water, and rice.

A small present was made to the Bramin, who always laid an injunction on the family to make a thanksgiving offering to the Goddess upon their recovery.

It is curious to consider how a treatment so admirable, and so superior to those which Arabian and European learning had laboriously constructed, should have been found out by these simple and superstitious Bramins.

And although it is never admissible to frame suppositions in order to explain the operations of Nature, yet, in the absence of facts, we may advance conjectures on human inventions; because one man may be capable of penetrating the motives which influenced another.

It could not long escape observation, that the Small Pox was infectious; and that in some seasons this infection was most destructive, and in others very mild. A plain man whose head was not perplexed with abstruse theories, might think that possibly a mild Small Pox could be excited by matter taken from a favorable case; and that it was advisable to anticipate the evil in a healthy season, rather than risk the being seized afterwards with a malignant species of Small Pox.

Should he determine to make the trial, it

might also occur to employ such a regimen as had been found useful in other fevers, and which was most grateful to the sick.

Cooling fruits and drinks, streams of cold water, and currents of air, are delightful in India; and experience would confirm what Nature suggested. A Bramin also would find it easy and profitable to make a superstitious people believe, that the whole benefit proceeded from their influence with any Idol they selected. But the strict regimen, and the regulated cold bathing which they enforced, render their faith in the Idol problematical.

It appears from a number of travellers*, that inoculation was long practiced in Persia, Armenia, Georgia, and Greece, without its being known where it originated. But in the opinion of many, especially of a Patriarch of Constantinople, it began in the desarts of Arabia; where neither physicians nor priests officiated; the *practice* being monopolised by old women. Nor is this inexplicable.†

If a mother whose children had been all

* Shaw's Travels into Barbary and the Levant. Scheuchzer's Account of the Success of Inoculating in Great Britain. Memoire sur Inoculation par M. De la Condamine.

† Philos. Trans. vol. lvi. p. 140. Medical Observat. and Inquir. vol. i. p. 227.

swept off by a malignant kind of Small Pox, should afterwards bear another child; with the hope of preserving it from a similar fate, she might be tempted to infect it from the child of a friend who had caught a mild disease: and a needle was a natural instrument for a woman to use. *

The operation was variously performed, and on different parts of the body, in the several countries where it was introduced: but it always consisted in scratching or puncturing the skin, and inserting into the wound variolous matter. The Circassians † to make sure work employed three needles tied together, and pricked the body in five different places, inserting matter in them all.

This operation, however performed, was in all these last named countries called *buying the*

* Dr. Terry to Sir Hans Sloane. MSS. British Museum. Ayscough's Catal. No. 4063. Woodville's History of Small Pox. De la Motraye's Travels. vol. ii. p. 75. Desar de l'Arabie, p. 75. Niebuhr.

† De la Motraye's Travels. Medic. Obser. and Inquir. vol. i. p. 227. Method of Success in New England. D. Neal Historia insitionis Variolarum in Succia. Schuttz's Account of Inoculation. Ephem. German. An. ii. A. D. 1671. Ob. 165. Philosoph. Transact. for the year 1722. Dr. Jurin's Letter to Caleb Cotesworth, giving an account of the Success of Inoculation in 1723. Histor. of Inoculat. by Woodville.

Small Pox: which proceeded from the ceremony in use of one child carrying to the other a few dates, raisins, or sugar plums, the pretended price of the matter. This was probably an artifice to amuse the children, and to reconcile them to the operation: and so popular was this custom, that in the seventeenth century the practice denominated buying the Small Pox, had obscurely spread among the common people along the coast of Africa, to Tripoli, Tunis, Algiers, and as far as Senegal.

It also had passed over into Italy, France, Germany, Sweden, and Denmark; and had even reached South Wales. For in all those countries inoculation was practised by the peasants, and universally termed buying the Small Pox, which marked its eastern origin.

In the north of Scotland, the old * Highland women frequently infected children by putting them to bed with a healthy child who had the Small Pox favourably; or on other occasions tied around the children's wrists, worsted threads soaked with variolous matter. And if there were any pimples accidentally upon their hands, which in former times was not unusual in the High-

* Inoculation in Scotland, by Dr. Monro.

lands, there would be no necessity for making a scratch with a lancet to secure infection.

It is certainly singular that all these methods of communicating the Small Pox should have been in use in so many countries, yet have remained unknown to the medical profession. The variety of modes of operating affords a presumption that the practice had not one common origin. The inventors indeed had little merit ; since no satisfactory reason has yet been discovered, for the inoculated disease being milder than the casual.

About the year 1703, the rumor of the great success of this operation at Constantinople attracted the attention of Dr. Emanuel Timoni, a Greek, who had studied and graduated at Oxford and Padua. After which he settled in Constantinople, his native city ; and being struck with this mode of preventing the dangers of Small Pox, he wrote in the year 1713 an account of the discovery to his English correspondent, Dr. Woodward ; which in the following year was published in the Philosophical Transactions.*

About the same time the Venetian Government had appointed Signor Pylarini, a physician, to be their consul at Smyrna ; who having also

* Philosophical Transactions, 1714. 1716.

learnt the Turkish practice, published * an account of it at Venice in the year 1715. This also appeared in the Philosophical Transactions: and these foreign accounts were confirmed by Mr. Kennedy, an English surgeon, who had travelled into Turkey: the operation was named by him † Engrafting the Small Pox.

Notwithstanding the warm recommendation of these three respectable medical gentlemen; who, from Turkish testimonials, greatly exaggerated the advantages of inoculation; no Englishman ever thought of trying it. But soon afterwards, it accidentally happened that Lady Mary Wortley Montague, then blooming in beauty, travelled into Turkey, with her husband, the ambassador to the Ottoman Court, in her train. His dispatches continue secret; but the lively correspondence of this embassadress, was blazoned through Europe ‡. In one of those celebrated Letters dated from Adrianople, 1717, she mentions that there were in that city a set of old women, who every autumn engrafted children with the Small Pox: that the

* Nova et tuta variolas excitandi per Transplantationem methodus. Jacob Pylarini. Venet. 1715.

† An Essay on External Remedies, &c. by P. Kennedy, Chirurg. Med. Lond. 1715.

‡ Letters of Lady M——y W——y M——c. Letter xxxi. April 1st, 1717.

children continued to play about till the fever arose; which was so slight, that they were hardly made ill by it; and there was no example of any one dying. She therefore was resolved to have her own son engrafted, and she expressed a patriotic resolution of bringing this most useful invention to England. She would even have explained it to some physician, if she had known any one of them that had virtue enough to destroy so considerable a branch of their revenue for the good of mankind. The event shewed, that though this brilliant lady under-rated the morals of physicians, she did not overrate her own influence in leading the fashion: for she actually effected a complete revolution in the practice of Small Pox all over Europe.

The engraftment of her son having succeeded; after Lady M. Wortley M. returned to London, in 1722, she sent for Mr. Maitland *, her surgeon, who had attended the boy at Constantinople; and desired him to engraft her daughter with Small Pox.

He solicited a delay, on account of the wea-

* Mr. Maitland's Account of inoculating the Small Pox, 1723. History of Inoculation, Woodville. Essay on the Small Pox, by Dr. Douglas.

ther, and entreated that two physicians should be consulted. These requests were refused, yet he obeyed her Ladyship's injunctions: but when the fever commenced, an old family apothecary and three physicians were permitted to witness the process. As the success was complete, Dr. Keith, one of the above physicians, was tempted to request Mr. Maitland to engraft his child also, which likewise succeeded; and these cases were rumoured through the town.

The profession still remained in suspense, and caution prevented the repetition of the experiment.

As, however, females are often bold in the practice of physic, Caroline Princess of Wales* was desirous of having her children inoculated: she was the more inclined, as one of her daughters, the Princess Anne, had nearly lost her life by the Small Pox. But not venturing to rely solely upon the medical skill of Lady Mary Wortley Montague, Her Royal Highness obtained from George the First, that six condemned felons should be pardoned, for the good of the public, on condition of their submitting to be inoculated.

Neither the legality nor the morality of this unprecedented act were questioned, and still

* Philosophic. Transact. vol. xlix.

less did the criminals demur ; but an unlooked-for obstacle occurred ; the surgeon refused to perform the operation. For notwithstanding his former success, he dreaded a failure ; and of being stigmatised for doing the work of the executioner.

In this dilemma, Sir Hans Sloane, the Court physician, applied to Dr. Terry, who had practised physic in Constantinople : and he wrote in reply the following letter.

“ Most worthy Sir,

“ Since my writing to you, upon reflection,
 “ I imagined I had made some memoranda of
 “ the information I had received, which, in
 “ looking for, I found to be so ; desirous of
 “ giving you an account with as much exactness
 “ as I may, believing you would not receive it
 “ amiss, I send them transcribed as I then
 “ wrote them.

“ In the year 1706 the Small Pox were very
 “ much among the inhabitants of Constantinople,
 “ Pera, and Galata *, and fatal to the greatest
 “ part, which created terrible apprehensions
 “ in such as were liable to them. A Greek
 “ woman, native of the Morea, introduced an
 “ expedient which was the preservation of

* “ Names of suburbs inhabited chiefly by Christians.”

“ many. She made a small incision under the
“ skin, in several parts of the body, fit to re-
“ ceive the dry crust of a pustule, taken from a
“ person in a state of recovery, to the number
“ of eight or so. In a short time the patient
“ would feel the symptoms of the disease, which
“ were always favourable. And in 4000 which
“ had experienced it, not one miscarried.

“ I have been informed of another manner of
“ effecting it. They * prick the skin in three
“ or four places, about the circumference of a
“ shilling, and rub it with the humour ta-
“ ken from some digested pustules. In the
“ course of the disease, these places are much
“ inflamed, ulcerate, and discharge a quantity
“ of matter, while the other parts of the body are
“ little affected.

“ From an authentic person, the Patriarch, I
“ am informed, that this custom was originally,
“ and has been long in use among the Arabs
“ of the desert. When a child is ill, and
“ the pustules begin to suppurate, they bring
“ their other children together, and prick the
“ skin with fine needles to make it bleed, the
“ space of a silver two-pence; and rub the
“ matter upon it, that it may penetrate. This

* “ This method was used with the two persons I mentioned
“ to have seen in Constantinople.”

“ they do in four or five parts of the body in-
“ differently, which occasions in a few days the
“ fever and eruption. I am, Sir, &c. &c.

“ E. TERRY. * ”

“ *Enfield, 2d Aug.*”

The perusal of this letter quieted Mr. Maitland's scruples, and he consented to inflict upon the convicts in the cells of Newgate the mitigated punishment of inoculation. When

Five of the felons contracted the Small Pox favourably: the sixth, who concealed having previously had the Small Pox, was not infected; but all escaped hanging. A seventh criminal was likewise pardoned, on the easy terms of having a few Small Pox crusts put up her nostrils, according to the Chinese mode, at the suggestion of Dr. Mead, and only a sore nose was the consequence.

This success encouraged Mr. Maitland to inoculate some others; by the event of which it appeared, that the inoculated Small Pox was sometimes severe; and he was amazed to find, that the artificial disease was as infectious as the casual. This was a circumstance totally unexpected, and it ought to have induced the

* Ayscough's Catalogue, British Museum, No. 4063.
Original letters to Sir Hans Sloane.

profession to pause e'er they proceeded; or at least to have prompted them never to inoculate without adequate measures being adopted to prevent the infection spreading to others. The neglect of this easy precaution, has occasioned the loss of millions of lives.

Mr. Maitland's publication was immediately followed by an account * of forty persons having been successfully inoculated by Dr. Nettleton, at Halifax, in Yorkshire. This physician, unfortunately, was imbued with the old notion of humours; and he attributed much of his success to his peculiar method of operating. Instead of small punctures, he made an incision through the skin; near an inch in length, in one arm, and in the opposite leg: bits of cotton, charged with variolous pus, were then introduced into the wounds, and confined by plasters and rollers. The Doctor boasted of procuring by those means a plentiful discharge: he in fact excited two foul ulcers, which were considered of great utility; and obviated a theoretical objection which had been made to inoculation, that the peccant matter was not sufficiently evacuated. This plan was adopted generally,

* An account of the success of inoculating the Small Pox; in a letter to Dr. Whitaker, by Dr. Nettleton. Halifax, April 3d, 1722.

and even Mr. Maitland was at last driven from the Byzantine method of making slight punctures, to this more cruel and mischievous operation.

The Princess of Wales was now eager to begin, and too impatient to wait for voluntary proofs of the safety of inoculation. Orders* were therefore given, that it should be tried on the charity children of St. James's parish. The experiment was accordingly made upon eleven of them, who all did well.

The Princess being now resolved to have her daughters inoculated, consulted Sir Hans Sloane, on the propriety of the measure; who prudently answered, that in the several essays which had been made, inoculation did seem a method of securing people from the great dangers attending Small Pox; but not being certain of the consequences that might ensue, he could not advise making trials upon persons of such importance to the public. The Princess then asked slyly, "If he would dissuade her from it?" But Sir Hans warily answered, "that he would not, as it was likely to be of advantage." "Then," rejoined the Princess, "I am resolved it shall be done."

* Philos. Transactions, vol. xlix. p. 516. Historical Register, for the year 1722.

Sir Hans was commanded to wait upon the King; but as he was determined to give no advice, he represented to His Majesty, "that it was impossible to be certain, but that
"on raising such a commotion in the blood
"there might happen dangerous accidents not
"foreseen." "Why," said the King, "these
"might happen from taking physic in any other
"distemper." Sir Hans admitted the justness of the royal argument, and was content to be refuted on a medical point by His Majesty. The physician having thus secured himself from all responsibility, the Serjeant-surgeon, Amyand, inoculated the two Princesses, Amelia and Carolina; and the Small Pox proved of a benign sort.

This example had some effect, and the practice spread; when it soon appeared, that the favourable reports from Constantinople were exaggerations: for it was found, upon trial, that the inoculated Small Pox was occasionally severe, and sometimes fatal. In the first eight years, only 845 persons were inoculated in England, seventeen of whom died, among others one of the sons of the Earl of Sunderland. This amounted to one death in fifty inoculations. But in Boston* in

* An historical Account of the Small Pox Inoculation in New England, &c. by Z. Boylston, 1726.

New England, the incipient trials were even less successful *: for one case, out of forty-five of the inoculated, proved fatal. The deaths which occurred, together with some misrepresentations which were published in that city, raised such a clamour against inoculation, that it was for some time prohibited there by the civil power.

Although these failures were partly attributed to causes independent of Small Pox, they were a great disappointment: yet as they were still much fewer than the deaths from casual Small Pox, the practice was persevered in, though not without a very furious opposition.

* *An Account of the Success of inoculating Small Pox in 1721, 1722, and 1723. 1725. and a Letter to Caleb Cottesworth, by James Jurin, M. D. Woodville's History of Inoculation.*

CHAP. IX.

INOCULATION OPPOSED, AND ADVANCES SLOWLY.
ALTERATIONS IN THE TREATMENT OF SMALL POX.

ALTHOUGH medical men often err, perhaps it is most advisable to leave medical points to be decided by them; because the wrong paths being innumerable, other persons could never hit the right one. Yet some zealous churchmen, conceiving that Inoculation was repugnant to religion, thought it their duty to interfere; on which the sparks of controversial animosity, which had before been kindled, were instantly blown up into a flame.

They wrote and preached *, that Inoculation was a daring attempt to interrupt the eternal decrees of Providence; no man having a right to inflict a disease upon himself, or to assent to this being done by another: for should he,

* The new Practice of Inoculation considered, and an humble application to Parliament for the regulation of that dangerous experiment. London, 1722.

by this means, be hurried prematurely out of the world, he would be absolutely guilty of suicide. But when this was done upon infants who could give no assent, and who knew not the danger they were exposed to, if death ensued, the perpetrators had committed infanticide, and the fathers and mothers were all involved in guilt, and consigned to remorse.

Besides these charges, a pious clergyman * denounced from the pulpit of St. Andrew's church, Holborn, that all who infused the venemous variolous ferment into the blood, were hellish sorcerers: for Inoculation was the diabolical invention of Satan, who smote with boils, from the sole of his foot to the crown of his head, the upright and patient Job. But even this was exceeded by one of the Rectors of Canterbury †, who, in a vehement sermon, denounced with pious horror, Inoculation as the offspring of Atheism!

These dreadful anathemas were opposed by

* A sermon by the Rev. Mr. Massey, against the dangerous and sinful practice of Inoculation, July 8th, 1722.

† A discourse against inoculating the Small Pox, with a parallel between the Scripture notion of Divine Resignation, and the modern practice of Inoculation, 1751.

Inoculation an indefensible practice, by the Rev. Theodore de la Faye, Rector of St. Mildred's and All Saints, Canterbury, 1753. A Vindication of a Sermon, &c. by D. la Faye.

some enlightened ecclesiastics, who were highly considered by the country.

Dr. Maddox, the Bishop of Worcester, Dr. Doddridge, and other learned and sensible clergymen, being convinced by medical calculations and arguments, that Inoculation ultimately tended to the preservation of human life; they maintained, that this operation was not only void of sin, but that it was the bounden duty of Christians to encourage it to the utmost of their power *. Their arguments being supported by scriptural citations, influenced some persons, and their authority had weight with others; but the mass of the population were unmoved; and many to this day remain in the unalterable belief, that whether Inoculation kills or saves, it is sinful. Besides, the latter class of clergymen laboured under a great disadvantage: for they exhorted the people to the performance of an act, by which they were to suffer an immediate inconvenience, expence, and danger; whereas their antagonists advised

* Sermon by Dr. Maddox, Bishop of Worcester, for the benefit of the Small Pox Hospital, 1752. See Woodville's History, p. 239. — The case of receiving the Small Pox by Inoculation, impartially considered, and especially in a religious view, written by the Rev. Mr. David, of Harborough, and published by P. Doddridge, D. D. 1750.

them simply to do nothing. The latter counsel was much the easiest to follow.

The medical opponents of Inoculation were more reasonable, than its theological enemies; though some of them were defective in candor and liberality. For * they misrepresented and falsified cases; cavilled at authentic statements; denied that the inoculated had caught the Small Pox, or that inoculation prevented the real Small Pox recurring: and asserted that it had frequently caused a variety of eruptions, bad humours and death. To contrast with these disasters, they gave most flattering accounts of their own distinguished success in treating the casual Small Pox.

These dishonest arts were repeatedly exposed, yet they still made an impression upon the public.

But there were many respectable † physicians

* Reasons against the practice of Inoculating the Small Pox, by L. Sparham, Surgeon. A Short and Plain Account of Inoculation, &c. by Isaac Massey. Historical Essay on the Rise and Progress of the Small Pox, by Dr. Clinch. Vide Woodville's History, p. 132 to 144. An Answer to a Pamphlet, entitled Reasons why the Practice of Inoculation, &c. by Mart. Warren, M. D.

† Letter shewing the Danger and Uncertainty of Inoculating the Small Pox, by Dr. Wagstaffe. Reasons against the Inoculation, &c. by Mr. Norgrave. Treatise on the Small Pox, by Sir Richard Blackmore. Remarks on Dr. Jurin's

who objected, from conviction, and considered it safer to conform to ancient precepts, and to follow that practice which had been established by the experience of ages, than rashly to plunge into this eastern innovation. As no reason had been advanced to shew, why the inoculated should be milder than the natural Small Pox, they disbelieved the fact; and recalled to the remembrance of the public, that by the first accounts from Constantinople, inoculation had been described as perfectly safe: but that on trial by the most skillful, the confluent Small Pox and death had occurred in many instances. And with regard to the calculations which were instituted to prove the superior safety of inoculation, that they had been made upon a false principle. Because the patients for inoculation had been selected confessedly on account of their being in perfect health; and it was to be expected that fewer of them would die, than of those who caught the Small Pox casually; as the last would include persons of all ages and constitutions, and many affected with other indispositions.

It was also proved by a multitude of ancient

last yearly account of the Success of Inoculation, by M. Massey. Dissertation concerning Inoculation, by Dr. W. Douglas, 1730. An Enquiry into the advantages received by the first eight years Inoculation. London, 1731. A Practical Essay on the Small Pox, by William Hillary, M. D. 1735.

authorities, and by several modern instances, that some individuals were liable to repeated attacks of the Small Pox. They then dwelt upon the extreme imprudence of rushing into an immediate and certain danger, in the precarious hope of preventing one, that was distant and contingent.

For notwithstanding the prevalence of the Small Pox, great numbers of persons escaped it altogether; and how could parents console themselves or escape from remorse, if by officiously contaminating their child, they should strike it with blindness or with death?

And lastly they represented the mischief that would result to the public from extending the contagion of the Small Pox*. Dr. Wagstaffe exemplified this by a late occurrence in the city of Hertford, where, in consequence of a few inoculations, the Small Pox had spread through the town, and occasioned a prodigious mortality.

Notwithstanding these objections, it soon appeared, that in London, the most eminent of the profession favoured inoculation. Dr. Jurin †

* An Account of the Improved Method of treating the Small Pox, by Dr. During, Nottingham, 1737. Baker's Merits of Inoculation, &c. &c. A Letter to Dr. Freind, shewing the Danger and Uncertainty of Inoculating the Small Pox, by W. Wagstaffe, M. D. Fellow of the College of Physicians, and Physician to St. Bartholomew's Hospital, 1722.

† Vide Dr. Jurin's various publications.

took the lead in replying to the opponents of this practice: and being a calm man, well skilled in calculation, his writings were composed with great good sense and good temper. He drew his arguments chiefly from an accurate examination of the London bills of mortality for forty-two years, and from accounts collected from a few large cities: and he compared the numbers who died of the Small Pox with the general mortality. From all which he concluded,

“ That of all the children that are born,
“ there will some time or other die of the
“ Small Pox, one in fourteen.” And,

“ That of persons of all ages, taken ill of
“ the natural Small Pox, there will die of that
“ distemper, one in five or six.” Whereas it appeared that only one in sixty of persons who had been inoculated had died. In a subsequent publication, after greater experience, he admitted that one in fifty of the inoculated had died.

These calculations proved that an individual who resided in London, or in any large city where the Small Pox prevailed, had a much better chance of surviving that disease by being inoculated; but they did not apply to the country, or to places where the Small Pox was infrequent. And as in the year 1723, a great

increase of the mortality by Small Pox took place in London; Dr. Jurin expressed his opinion, that this ought not to be imputed to inoculation, as the numbers who had been inoculated in town that year did not exceed sixty.

This was a very inadequate answer: a single person may bring the Plague into a town, or into a nation, and be the cause of the destruction of an innumerable multitude.

The Small pox is fully as infectious a disease as the Plague: and sixty inoculations were more than sufficient to account for the augmented mortality, and were probably the real cause of it. But neither Dr. Jurin, Dr. Scheuchzer, Mead, nor any of the distinguished advocates for inoculation paid due attention to this powerful objection.

This could not have proceeded entirely from inadvertency, as the argument was frequently urged by their opponents: but perhaps these classical controvertists imitated the crafty counsel of Cicero, who owned, when an argument was difficult and troublesome to reply to, that he some-times passed it over.*

“Ut molesto, aut difficili argumento, aut loco
“nonnumquam omnino nihil respondeam:” this

* De Oratore, lib. ii. § 72. Vide the whole of this section.

might be excuseable in an orator pleading a cause ; but not in philosophers, whose paramount duty is the investigation of truth.

More attention was however paid at that time, than has been since, to prevent contagion spreading. For it was then the practice to confine Small Pox patients to their chamber, and they were tended by persons who had already suffered the disease: and they were recommended not to mix with the public, until it was conceived, that the infection was over.

With regard to the objection that inoculation did not secure the individuals, with perfect certainty, from future attacks of the Small Pox ; this, which was a very feeble argument, was combated by an absolute fallacy. For Mead and several other eminent physicians, from zeal for inoculation, positively denied that the true Small Pox ever occurred twice. This became a prevailing opinion, although contradicted by almost all the old writers, and by numerous authentic cases occasionally published by a variety of medical authors in every country.

So rare is candor among disputants.

But in spite of the writings and recommendation of many able medical gentlemen, and the example of the Court, the practice of inocula-

tion, instead of becoming popular, declined to such a degree, that from the year 1730 to 1740*, it was almost disused in England.

Mr. Maitland went to Scotland in the year 1726 †, with the hope of establishing inoculation in that country, and operated upon ten persons. But one of those patients, a gentleman's son, having died, a complete disapprobation of all farther experiments followed: and inoculation was very little practised in Scotland until towards the year 1753.

In Ireland ‡, the commencement was even less auspicious. Sixteen persons were inoculated by a surgeon at Dublin, three of whom died in consequence.

Nor was Mr. Maitland's attempt to establish this new practice on the Continent very successful. He began by inoculating Prince Frederic at the Court of Hanover; the disease proved mild, yet there were few imitators for a long time in any part of Germany.

Thus, after much ink being shed, and a trial being given, inoculation was in a great measure

* A Practical Essay on the Small Pox, by William Hillary, M. D. 2d. ed. 1740.

† An Account of the Inoculation of Small Pox in Scotland, by Alexander Monro, M. D.

‡ Woodville's History of Inoculation.

relinquished in Europe ; and there seemed little reason to imagine that it would ever be revived.

When in this dormant state, news was brought that multitudes of Indians in South America had been inoculated with as much success by some Carmelite friars, as the Asiatics had been by the old Greek women. A physician and surgeon also began in the year 1738, to inoculate in South Carolina* ; and only lost eight persons out of eight hundred.

But a planter in St. Christopher's inoculated three hundred persons without the loss of one. For it is singular that in those days all inoculations performed by private gentlemen, monks, and old women, were uniformly successful : and empirics afterwards, were equally fortunate : none lost patients from inoculation, except the regular members of the Faculty.

The American reports were so encouraging, that about the year 1740† the practice was revived by a few surgeons in Portsmouth, Chichester, Guildford, Petersfield, and Winchester ; and gradually extended in the southern counties.

* Essay on Inoculation, by Dr. Kirkpatrick ; 1745. De Variolis et Morbillis, cap. 5. Richard Mead.

† Philosoph. Trans. vol. xlvii. p. 570.

And the two serjeant-surgeons, Hawkins and Ranby, and Mr. Middleton the surgeon-general, were active in renewing and spreading inoculation among the nobility and gentry in London. Their exertions were much assisted by the elegant pen of Mead; who, in the year 1747, published a translation from the Arabic of the work of Rhases on the Small Pox; to which he added an essay* of his own, very agreeably written. In this he denies that the Small Pox ever recurs to the inoculated, and he gives the honour of this invention to the Circassians, imputing to this practice the extraordinary beauty of their women; which so highly enhanced their price, when exposed to sale by their parents, for the Turkish seraglios. Although this assertion had little foundation, it was well calculated for effect. For it is the ambition of many English ladies to render their daughters as beautiful and desirable as the fairest Circassians.

That the physicians who recommended inoculation were actuated by pure motives, cannot be questioned; but this is not demonstrable with regard to the surgeons. For not only the operation and the management of the sore arms, which were usually long in healing, were exclusively in their hands, but the whole treatment

* De Variolis et Morbillis.

of the disease was sometimes transferred from the province of the physician to them, and became a new and fertile source of surgical emolument. Still no doubt ought to be entertained of the eminent surgeons who commenced inoculation being swayed solely by conviction.

Interest however gains proselytes more quickly than reasoning. And as the accounts which were promulgated by the surgeons, announced much greater success, than the publications of Dr. Jurin; the practice sensibly gained ground in the higher ranks of life: but the expence and confinement which were then requisite, placed it out of the reach of the lower orders.

To remedy this, the inhabitants of London, ever attentive to the sufferings of the indigent, founded, in the year 1746, an* hospital for inoculating the poor, and for the reception of persons infected with the Small Pox. This charity was originally established upon admirable principles; since, by the removal of infected persons from the mass of population, contagion was lessened. And as the inoculated were confined in an appropriate building, and not discharged until the danger of infection was

* Woodville's History. Small Pox Hospital Reports.

over, and their dress had been thoroughly fumigated, an important benefit was probably bestowed upon those admitted, and no injury could be done to others. Unhappily the wise regulations of the humane founders of this charity were afterwards entirely altered; when all who applied at the gates of the hospital were promiscuously inoculated with the Small Pox, and suffered to wander abroad, diffusing far and wide the mortal infection.

It appears that this hospital at first excited considerable alarm in the neighbourhood, and was even opposed by the parish officers. To justify the undertaking, and to promote the subscription, a medical sermon was preached by Dr. Maddox, bishop of Worcester. This was composed with considerable ability, and all objections to inoculation, upon religious grounds, were refuted to the satisfaction of those christians who listen to human reason. But on some medical points, the bishop had been strangely misled by his informants; for he asserted, that it appeared by the bills of mortality, that the deaths by the Small Pox had lessened one fifth since inoculation was practised. Whereas in the year 1752, in which this sermon was preached, the Small Pox was raging in the town, and the deaths were more numerous than they had ever been in any year previous to it: they amounted

to 3538 persons *. This fact was certainly unknown to his Lordship.

But his principal argument was framed upon the supposition, that inoculation would be universally adopted; and then he calculated how many lives were likely to be saved by it. The experience of the charity might have shewn the bishop how chimerical that assumption was. For the hospital for inoculating the poor could then only receive fifteen patients at a time, and in five years, only a hundred and thirty-one persons had been prevailed upon to submit to inoculation, which evinced, most decisively, the repugnance of the lower orders to that operation, when it was pressed upon them.

The most eminent of the medical profession, in England, however, saw clearly that inoculation tended, in a remarkable degree, to mitigate the violence of the Small Pox; they therefore persevered in the practice, and in 1754 the college of physicians of London ventured to publish a strong approbation of inoculation, in which it is declared, † “that experience had refuted the arguments which had been urged

* The General Annual Bill of Mortality is not published till the end of the year.

† “ Quoniam Collegio nunciatum fuit, falsos de variolarum insititiarum in Anglia successu et existimatione apud exteras

“ against this practice ; which was now held in
 “ greater esteem and was more extensively
 “ employed by the English than ever : and the
 “ college considered it highly beneficial to man-
 “ kind.”

There was a noble disinterestedness in this declaration ; and if care had been universally taken to prevent the inoculated from communicating with those liable to receive the contagion, the measure would have been unexceptionable.

The medical opposition in England now declined, as few physicians presumed to dissent from a decree of the college ; and the surgeons were universally eager to inoculate all who would trust them. A feeble complaint was made by an anonymous physician *, against the surgeons who pretended to prescribe for Small Pox patients. He charged them, and perhaps justly,

“ gentes nuper exiisse rumores, eidem collegio sententiam suam
 “ de rebus hisce ad hunc modum declarare placuit : videlicet,
 “ argumenta, quæ contra hanc variolas inserendi consuetudi-
 “ nem in principio afferebantur, experientiam refellisse ; eamque
 “ hoc tempore majori in honore apud Anglos haberi, magisque
 “ quam unquam antea inter eos nunc invalescere ; atque hu-
 “ mano generi valde salutarem esse se existimare.” Vide
 Taylor. Oratio Harv.

* A serious address to the public concerning the most probable means of avoiding the dangers of inoculation. London, 1758.

with destroying many by their ignorance of the principles of medicine: and was of opinion that they ought to be restricted to the performance of the operation, and to the local treatment of the arm. If a law to this effect had taken place, the numbers inoculated would have been very inconsiderable. But the complaint being replied to by a surgeon*, with great moderation, the contest proceeded no further; and the medical and chirurgical professions remained on decent terms with each other.

The press now groaned with works in favour of inoculation, and with various plans of treatment.

For although the Bramins in Hindostan, and the females in the wilds of Arabia, gave no medicines to the inoculated, yet the simplicity of this practice was not long preserved in England. Mr. Maitland, indeed, appears to have given no physic to the children of Lady Mary Wortley Montague, nor to the felons in Newgate: but Dr. Nettleton†, who published next to him, employed a preparatory treatment of emetics, purgatives, and sometimes bleeding. He like-

* Remarks on the above, by Thomas Cooper, Surgeon, 1758.

† An account of the success of inoculating, &c. by Dr. Nettleton.

wise directed that the plethoric should abstain from animal food and strong liquors. After inoculation was performed little was done, but the patients were kept moderately warm, an anodyne, and sometimes a blister were directed; and when the disease was over, they were repeatedly physicked, and sometimes blooded. Dr. Jurin, who followed him, prescribed nearly the same preparatory course; which was proportioned to the plethora of the patients. During the disease, purgatives were rarely employed, conformably to ancient doctrines; but remedies similar to those in use in the natural Small Pox were directed. And as the doctrines of Boerhaave were now in high estimation, his opinions were more followed than those of Sydenham; consequently, perspiration was encouraged, and the patients were kept warm.

Additions were gradually made to the treatment, which became more complicated daily; and the dread of purgatives in the Small Pox, which had been transmitted from the Arabians so entirely vanished, that these evacuants were soon exhibited in every stage of the disease. This alteration in practice may be dated from a memorable controversy.

Mead informs us, that in the year 1708, he had observed several patients afflicted with the malignant Small Pox, who were seized with a

looseness on the ninth or tenth day of the eruption, and recovered. *

He concluded that the looseness was the cause of these recoveries; and therefore imitated this natural occurrence by exhibiting laxatives in the decline of the disease; which he thought had been extremely beneficial.

This idea was communicated and approved of by Dr. Freind; who was soon after called into consultation with two other physicians, upon the case of a young nobleman †, who laboured under the confluent Small Pox in the most virulent degree.

It is impossible to deny the discordance of physicians; yet it is well known, that when two, three, or more retire to consult upon the most obscure or intricate malady, they invariably return unanimously recommending precisely the same remedies; and it is rarely known who suggested them. But after the above attendance, contrary to the custom of the profession, some things transpired, and insinuations were whispered, injurious to the character of Dr. Freind. He became so indignant at these reports, that he resolved to publish the whole that passed at

* De Variolis et Morbillis, Præf. Richard Mead, M. D.

† Commentarii Novem de Febr. ad Hippocratis, &c. Comment. 7. Joan Freind, M. D.

the various consultations. This resolution was communicated to his two friends, Drs. Ratcliffe and Mead; and some sheets were actually printed off, when he was prevailed upon to lay aside this design at that time. But in a few years afterwards, when publishing some Latin commentaries on two books of Hippocrates, he inserted the case of the young nobleman, with all the discussions that had taken place. As the exposure of medical consultations is very rare, and as this displays the mode of reasoning in those days, a summary shall be given.

When the patient had reached the fifteenth day of the fever, he was in the most distressful condition imaginable. He had lost the power of speech, and hardly retained that of deglutition.

The pustules over his whole body had become black, and on the face ulcerations had taken place, from which issued a liquid sanies. The fever was vehement, and accompanied with delirium and startings of the tendons.

On the two preceding days cordials and diaphoretics had been prescribed, and injections had been administered with effect. But as the disease was growing worse, Dr. Freind proposed to his brethren, that an opening medicine should be tried: and he assigned this reason; “that as
“ the purulent matter was clearly the fuel of the
“ fever, and as no hope remained that any more

“ could now be evacuated by the cuticular
“ pores, it was advisable to effect this by other
“ passages.”

His two colleagues objected positively to this proposal, alledging the danger of bringing on a looseness in the present state of the patient ; and they contended for cephalic medicines to calm the delirium and nervous tremors. These remedies Dr. Freind considered as lopping the branches, instead of pulling up the roots of the disease : but as his arguments failed of conviction, a mixture was prescribed containing the spirit of a human skull, and volatile salt of ammonia.

On the seventeenth day the sick nobleman continued to grow worse, and had sunk into a comatose state. In the consultation room, the medical dispute was renewed.

Two of the physicians were of opinion, that the alteration which had taken place was an additional motive for abstaining from all opening medicines : and Dr. Freind represented, that as the coma was brought on by the same cause which had occasioned the other symptoms, it was a new proof of the necessity of purging the patient without delay. But as his reasoning had no effect, a cephalic julep was again directed. Towards the evening the patient became so much worse, that his dissolution was expected;

and Dr. Freind persevered in urging that a dose of physic should still be given. His opponents insisted, that it was contrary to the rules of art ; but they at length yielded, as the patient must die at all events.

A full dose of salts and senna was then prescribed, which operated in three hours : upon which the fever abated, the pulse strengthened, and the coma vanished. But these flattering appearances only lasted a few hours : and next morning, the eighteenth, every bad symptom had recurred in an aggravated degree. A blister was now had recourse to ; and in the evening one of the physicians proposed flowers of sulphur, as a medicine possessed of the virtues of expelling humors, and likewise of being an aperient. Dr. Freind replied, that if it could act in the latter mode, it would please him ; for his only hope rested there.

One dram of sulphur divided into four doses were ordered, which had no sensible effect : but at midnight the fever again remitted. On the nineteenth day all the symptoms were much mitigated ; but the physicians remained inflexible in their original persuasions.

Dr. Freind was convinced that the amelioration had been effected by the evacuations produced by the physic two days before, and by the discharge of the blister during the night, and

therefore pressed strenuously for more evacuations. But the others believed, that the sulphur had extinguished the fever and delirium ; and as the patient had improved under the action of this medicine, they wished it to be repeated.

Dr. Freind then raised an objection to this repetition, that if the sulphur did not operate upon the bowels, it would excite heat and fever, as the diaphoretics had done before.

But the other physicians maintained, that sulphur was, on the contrary, a refrigerant ; which was clearly proved by the refrigerant properties of the acid which was formed by burning sulphur.

Freind on this exerted his profound learning to prove that sulphur was a califacient and diaphoretic ; and from possessing these qualities had been recommended in malignant fevers by Hippocrates : he noticed that Van Helmont had been so struck with this, which he considered to be miraculous, as to imagine that an angel had disclosed it to Hippocrates. Dr. Freind added, that in latter times sulphur, from belonging to the above class of medicines, had been employed also in the plague.

These arguments were unavailing ; and as neither would yield, both sulphur and purgatives were laid aside, and the former cephalics were resumed.

On the twentieth day, all the bad symptoms recurred, and the physicians agreed to a sort of compromise; for an injection was prescribed in which there was mixed half a dram of sulphur.

At length, on the following day, when the young nobleman was evidently perishing, the other physicians were overcome by the perseverance of Dr. Freind, and eight grains of calomel, with half an ounce of lenitive electuary, were exhibited in a draught: this was succeeded by injections. But the patient continued to sink, and died on the twenty-fourth day of the fever.*

Dr. Freind supported the opinion he had given in this unfortunate case, by narrating several other cases, where the exhibition of purgatives had been followed with complete success in the secondary fever of Small Pox: and from his great knowledge in the history of medicine, he picked out a number of authorities for that practice. These however were in fact exceptions to the general rule: for undoubtedly opening medicines were so much condemned by the most celebrated prior writers, and were so little in

* While each Physician his learn'd Colleague tires
" With learn'd impertinence, the Sick expires." GARTH.

use, that Dr. Mead considered his employing them as a medical discovery, and claimed the merit of having made it.

Dr. Freind's book had hardly appeared, when the reproaches on the treatment of the young nobleman were renewed, and several attacks were made upon the doctrines contained in the work.

Among others, there was a confused book * published by Dr. Woodward, Professor of Physic to Gresham College, in which he recommends frequent emetics and vegetable oils, as the best remedies for Small Pox.

This advice, and probably the book itself, would have been totally neglected, had it not contained some very illiberal reflections upon Dr. Freind, and those physicians who recommended purgatives in the Small Pox. These † offensive strictures called forth two impotent pamphlets, which were intended to cast ridicule upon Woodward. They were poor performances, yet ascribed to Freind and Mead,

* The State of Physic and of Diseases, by J. Woodward, M. D. 1719.

† A Letter to the Learned Dr. Woodward, by Dr. Byfield, 1719. A Letter to the fatal Triumvirate, &c. 1719.

An Appeal to Common Sense, by a Divine, &c. 1719. A Letter in the Freethinker, &c. &c.

by an anonymous pamphleteer, who stiled himself a Churchman. The physicians were here reproved for the unfair conduct they had pursued, and exhorted to a cool, argumentative discussion of the important medical question at issue.

This sermon was unavailing; for Mead, soon after, when driving along the streets, saw Woodward * walking towards Gresham College: he stopt his chariot, got out, followed, and struck him twice with his cane. Both drew their swords, and after a few passes, Woodward stumbled accidentally, and fell. Mead very unheroically threw himself upon his antagonist, wrested from him his sword and broke it. He then called upon his fallen and disarmed enemy to ask for his life; which Woodward resolutely refused, and reproached Mead for the ungenerous advantage he had taken. The mob interfered. And Woodward in a few days afterwards, published in the newspapers an insulting account of Dr. Mead's behaviour in the

* An Antidote in a Letter to The Freethinker, by Dr. Woodward, 1719.

The Flying Post, St. Jame's Evening Post, and Weekly Journal, and British Gazeteer, (Newspapers.) June 1719.

Literary Anecdotes of the 18th Century, by J. Nichols, F. S. A. vol. vi. p. 641.

assault ; in which he flatly accused him of cowardice. This charge did not however excite a renewal of the duel ; and no public notice appears to have been taken of it : which forbearance certainly did not proceed from forgiveness ; for in the preface to Dr. Mead's Essay on the Small Pox and Measles, there is a virulent invective against Dr. Woodward : but this was not published till 1747, about twenty years after the professor's death.

Commotion strange ! as both Mead and Woodward spent the greater part of their lives in acquiring, and endeavouring to diffuse knowledge ; and in striving to cure or relieve those afflicted with maladies. The former even tried to find out remedies for the plague, for hydrophobia, and for other mortal poisons ; while the latter attempted to discover the theory of the structure of the great globe itself.

Ought not such lofty pursuits to have elevated them above the weaknesses of ordinary men ? Ought not such congenial studies to have kindled in their breasts mutual respect and friendship ? Yet these medical philosophers caned and fought each other with swords in the public streets ; and the sole cause of their fury was a difference of opinion about a cathartic !

The above anecdote is given from authentic cotemporary sources, yet is purposely left out

in all the printed lives of those * physicians. Such omissions render biography fallacious and insipid.

Although Freind maintained with his pen, and Mead with his sword, the propriety of giving purgatives in the secondary fever of Small Pox, yet this doctrine is not in vogue at present.

Indeed these very learned and experienced physicians fixt upon the only period for these medicines, in which they are now considered to be detrimental.

Still the above discussion led to frequent trials, and the ancient prejudice vanished: for purgatives were gradually prescribed, not not only preparatory to inoculation, but also in the early stages of the variolous disease.

The election made by different practitioners of the medicines of this class was various. In America†, a combination of calomel and antimony became a favorite composition, and

* Life of Mead, by Dr. Maty.

The Lives of the Professors of Gresham College, by J. Ward, F. R. S. 1740. vol. ii. p. 283. &c. &c.

† A Discourse on the Preparation of the Body for the Small Pox, &c. &c. by Dr. Adam Thomson. Philadelphia, 1750.

Pennsylvania Gazette, June 26th, 1760. A Dissertation on the Inoculation of the Small Pox in America, by Dr. Benjamin Gale of Connecticut, in New England.

was thence transferred to England. And besides * purgatives ; emetics, bleeding, blisters, opiates, and nervous drugs, were all in use to combat the fever and convulsive fits, which sometimes ensued after inoculation. It was also the established practice then, to confine the patients to their beds, and to encourage perspiration. The sores from inoculation frequently required much attention : they were always painful, and as the discharge was encouraged, they usually remained open during five or six weeks, and often longer.

Inoculation had therefore become a very serious affair : for the preparatory treatment lasted commonly a month, and medical attendance was requisite for five or six weeks longer : and though occasional disasters were palliated, they could not be wholly concealed. Families, in moderate circumstances, and timid mothers, were not therefore very easily induced to incur the expence and risk of such a process. Consequently, the practice of inoculation, though widely diffused, was in a great measure confined to the opulent. In London it was more generally practised than elsewhere ; and four or five hundred poor

* An account of the preparation and management necessary to Inoculation, by James Burgess, 1754. Analysis of Inoculation, by Dr. Kirkpatrick, 1754.

people were likewise annually inoculated in the Small Pox hospital. The practice in Scotland had been resumed at Dumfries in 1733, and had gradually extended to Edinburgh, and to the most remote cities. It appeared from a calculation made by Professor Monro * in 1765, that between five and six thousand persons had been inoculated in the whole of Scotland, in thirty-one years; which, on an average, was one hundred and eight annually: and the fatal cases amounted to one in seventy-eight. Nothing therefore could be more vain than the expectations of those, who imagined that such a system could ever be universally adopted.

* An account of Inoculation in Scotland, by Alexander Monro, sen. M. D.

CHAP. X.

INOCULATION IMPROVED, AND WIDELY EXTENDED.

— THE SUTTONS. — BARON DIMSDALE.

SOME of the circumstances which attended the progress of inoculation through Great Britain, are not flattering to the philosophic character of the nation.

'Twas first rumoured, as a practice followed by some poor old Turkish and Arabian women. A lady of quality then introduced it into the Royal family, and among the higher circles in England; and now it will be shewn, that it finally acquired popularity by the artifices of an empiric. For Daniel Sutton, with his secret nostrums, propagated inoculation more in half a dozen years, than both the faculties of Medicine and Surgery, with the aid of the church, and the example of the Court, had been able to do in half a century. This man was the son of Robert Sutton, a surgeon at Debenham in Suffolk, and he and his brother assisted their father in his business. But after a time, both

the sons left their father's house *, and Daniel was content to serve as assistant to a surgeon at Oxford. In the year 1763, he rejoined his father, and proposed to him to make some alterations in his plan of inoculation. These were condemned by the father as highly dangerous: yet Daniel was so confident as to make the experiment, and he found them successful. On this the father and son quarrelled, and the latter set off for Ingatestone in Essex; where he set up as an empirical inoculator. He pretended to have discovered an infallible secret, and brought himself into public notice by the old and still successful trick of "puffing hand bills and boasting advertisements." Yet in truth, his pretensions, though extravagant, were not without foundation; and in a short time, such multitudes crowded to Ingatestone to be inoculated, that the town and neighbouring villages were filled with the patients.

In addition to the common place artifices, a hireling clergyman was procured to sound forth his wonderful talents from the pulpit †. This

* History of Inoculation, Woodville.

† A sermon preached at Ingatestone, Essex, Oct. 12, 1766, in defence of Inoculation. To which is added, an Appendix on the present state of Inoculation, by the Rev. Robert Houlton.

was an improvement on the clumsy device of a German quack, who, in strolling through country villages with Scaramouch at his back, had an urchin running before, to bawl out, "Here comes the famous Doctor Fritchius, the greatest physician in the whole world." The Doctor followed with a grave deportment, and now and then owned to the gazing spectators, "that what the little boy said was certainly true." And doubtless, it was equally true with the assertions made by the Reverend Robert Houlton, that Mr. Sutton could, by his inestimable medicine, infallibly prevent too great a burden of pustules; and that he and his assistants had inoculated 20,000 persons without fairly losing one.

An empiric never hesitates at making positive declarations, and is never at a loss for pretexts to cover failures. Should an infant at the accession of the variolous fever be carried off by convulsion, he denies, with effrontery, that the Small Pox was the cause, and invents another upon the spot. Should the confluent Small Pox and death ensue, he soon detects that his instructions were not strictly complied with, that some important error was committed in regimen; or that the patient was too much, or too little exposed to the air. In fine, the fault may be in the parents, in the nurses, or

in the inoculated ; but is never allowed to fall fairly upon the inoculator.

It is much to be regretted that Daniel Sutton should have stooped to employ such unworthy devices ; for his plan of treatment was greatly superior to that of any former practitioner : and had he followed the correct rules of open professional conduct, his name would have been recorded with honourable distinction.

It was soon acknowledged that his success, though exaggerated, was great ; and considerable scientific skill were exerted, both by physicians and chemists, to analyse his medicines, and to find out the whole of his plan. Information was even obtained from his patients *, and as he communicated his treatment to many distant practitioners, on condition of sharing their profits, the secret could not be kept. All the essential points were discovered by many, and were included by Baron Dimsdale, in his essay “ On the present method of inoculating

* An essay towards an investigation of the present successful and most general approved method of Inoculation, by B. Chandler, surgeon, Canterbury. An enquiry by Dr. George Baker ; and two Letters from Dr. Glass to Dr. Baker, on the same subject.

Manuel Secret et Analyse des Remedes de Mr. Sutton, &c. par M. De Villiers, Docteur Regent, &c. à Paris, 1774.

“ the Small Pox.” No doubt can now remain on this subject, as Daniel Sutton in his old age redeemed the pledge given by Houlton, and fairly published the Suttonian system * of inoculation. Although this was not done until no farther benefit could accrue from concealment ; still it was an act creditable to Mr. Sutton, and is almost without example among the advertisers of secret nostrums.

It appears both by the analyses and by the confession, that the Suttons in strictness invented nothing ; but judiciously combined remedies which had been found out independently by others. Sydenham had discovered the utility of exposing Small Pox patients to the cool air, and of allowing them to drink cold water ; but he did not venture to deviate so much from ordinary rules as to prescribe purgatives ; he on the contrary was profuse in exhibiting opiates.

Subsequent physicians had ascertained that great benefit arose from opening medicines, and particularly from mercurial purges : but in conformity to old theories, they at the same time confined their patients to bed, covered them

* The Inoculator, or the Suttonian system of Inoculation, &c. by D. Sutton, surgeon, &c.

warmly, and promoted perspiration. But Daniel Sutton had the sagacity to extract what was beneficial in both those plans, and to reject what was injurious; for he exposed his patients to the air, directed for them cooling drinks and diet, and prescribed purging and refrigerant medicines; by which combination the treatment was rendered consistent. This system seems not to have been the result of deep study, for Sutton was no great reader, and his plan was repugnant to the received theories. But every English medical man knew Sydenham's practice, and Lady Mary Wortley Montague had written, that the Turkish children were suffered to play about in the open air during the variolous eruption. Almost every modern essay at that time likewise recommended purgatives, and Sutton only made choice of the prescription which was most in vogue.

Calomel and tartar emetic were the efficient ingredients of the principal remedy, both in Dimsdale's treatise and in Sutton's confession. Antimony and mercury, in a variety of forms, had been lately much in use in England; this remedy was brought hither from North America, where it was extolled by several medical writers. In 1750, Dr. Adam Thompson, who had employed it with great success for a

dozen years, published that the suggestion arose to him from one of Boerhaave's aphorisms, which may be translated thus. *

“ Some success from antimony and mercury prompts us to seek a specific for the Small Pox in a combination of these minerals, reduced by art to an active, but not to an acrimonious or corrosive state.”

The powders of Sutton, and the prevailing prescriptions of different physicians, variously modified, may thus be traced back to Boerhaave; which exemplifies, that folios from common authors, produce less effect in the world, than a single sentence from a man of genius.

Some time after this†, Van Woensel, physician to the noble cadets at Petersburg, conceived the opinion that mercury simply was the real specific of the Small Pox: he imagined that a full mercurial course would absolutely pre-

* “ § 1392. In stibio, et mercurio, ad magnam penetrabilitatem arte deductis, nec tamen salina acrimonia nimium corrosivis, sed bene unitis, ut quæramus (correctionem specificam), incitat aliquis horum aliquando sueccesus.”
Aphorismi Her. Boerhaave.

† Nouvelles Experimens faites avec le mercure dans la Petite Verol. par V. Woensel.

Histoire et Memoires de la Societ  Royale de M dicine, Paris, An. 1777, 1778.

vent the variolous action, and that a moderate one would mitigate it.

In consequence of these notions, he prescribed to variolous patients small doses of calomel daily; not as a purgative, but to influence their constitutions with mercury. The observations of others have however fully ascertained that mercury is not a specific for the variolous action: but the utility of calomel in mitigating the disease, is generally admitted; though the principle on which this depends is undecided.

Sutton had the merit of bringing back the Byzantine method of operating by a slight scratch or puncture; he inserted no variolated thread, but employed a lancet dipt in variolous matter. Maitland had been compelled to change this milder method from the outcry raised against him, for instilling into the human body a vicious humour, without establishing an issue for its discharge.

The essence of Sutton's plan was included in Baron Dimsdale's work *, and it may be perceived, that the cool treatment was carried to an extravagant excess. For those affected with the variolous fever were advised to walk

* The present method of inoculating for the Small Pox, by Thomas Dimsdale, M.D. 1766.

abroad, even in the coldest weather. And if unable to make this effort, they were to be led out by two assistants.

Wisdom warns to avoid extremes: and medical experience has taught, that in all fevers quiet is an essential remedy. This was even understood by the Bramins of Indostan, who placed the sick man suffering from the variolous fever at the door, on a mat; where he reposed, shaded from the sun, and enjoying the breeze.

There is also a most important omission in Dimsdale's Treatise, and in most of the essays upon inoculation. Little is said of what is to be done upon the accession, and during the progress of the confluent Small Pox. A subject which is most uncandidly avoided; although every medical man knows, that this malignant eruption is occasionally produced by inoculation; and to escape this acknowledgment hardly any instructions are given, for the palliation or cure of almost the only species of Small Pox, which is dangerous.

Baron Dimsdale's work was however extremely applauded, and his treatment was commonly adhered to; though sometimes diversified by individuals of the profession. And inoculation became in consequence much more successful and popular than before.

But to counter-balance this, the Suttonian

plan of sending the sick abroad, by spreading and perpetuating the infection, encreased the frequency of the disease. All the rules laid down by physicians, for the safety of the public, were now disused. Even the Governors of the Small Pox Hospital broke through their original prudent regulations; whoever applied at their gates were inoculated, and suffered to wander through the city of London, covered with pustules, and exhaling infectious vapour.*

In the year 1767, Dr. Heberden wrote a more accurate account of the Chicken Pox than had before appeared, and proved that it was a distinct specific disease; though it had been often confounded with the Small Pox, by former writers. This confirmed the rash assertion, which some physicians had made, in the heat of the controversy on inoculation, that Small Pox could only occur once, which became in England a very general opinion. But unless we are so bigotted to this abstract doctrine, and also so sceptical, as to credit no testimonies, it must be abandoned.

For almost all foreign writers, as well as the old English writers, have expressed their conviction that Small Pox sometimes attacked the same

* Medical Transactions, College of Physicians, London, vol. i. art. xvii.

individuals more than once. And examples are scattered through their works, described by phrases which exclude all suspicion of Chicken Pox.

Professor Diemerbroek *, a most observing and accurate physician states, that in the year 1640, when the Small Pox was epidemic, he saw several persons, who, having had the Small Pox very thick, caught it a second time; and that the pustules broke out on the second attack in greater numbers than on the first.

De Haën, Professor at Vienna, was also an eye witness of several similar cases; and he describes, among others, the case of a young lady of distinction, whom he attended with Dr. Molinari, who contracted the confluent Small Pox twice. Such cases as these are quite decisive. But there is something extremely seducing in a general principle, and its fascination may be observed even on the solid intellects of Van Swieten †, who had entertained the notion that the real Small Pox could only take place once. His extensive reading of ancient and modern

* The Anatomy of the Human Body, &c. by J. Diemerbroek. Ratio Medendi, tom. iv. et Respons. ad Epist. Apolog. Trallis. tom. ix. De Haën, &c.

† Comment. in Herm. Boerhaave Aphorism. Gerard. Van Swieten. tom. v. art. Variolæ. (Spuriæ Variolæ). "Triplitem talem pustularum speciem observavi."

books, had shewn him multitudes of opposing declarations and cases; but he disregarded them. Some eminent physicians, who were his friends, made similar assertions; these he explained away. He had also attended in the Small Pox several individuals, who assured him that they had the disease before; these assertions he would not believe. And lastly, he had himself seen pustular eruptions, which attacked the same individuals thrice; yet still he adhered to his principle, that the genuine Small Pox never occurred twice, and that these apparent exceptions were cases of spurious Small Pox.

But Van Swieten had likewise a violent prepossession against inoculation; and when arguing vehemently against this innovation, he declares, * positively and truly, that there were many undeniable examples of persons who had been infected with the Small Pox by inoculation, who afterwards contracted the genuine Small Pox. Here one prejudice overcame another, and truth prevailed.

Besides the foreign authorities, the English

* “ Sed plura dantur exempla, quibus fides denegari non potest, rediisse veras variolas post insitionem tentatam, sive illa successu caruerit, sive variolas solito tempore excitaverit.” *Loco. cit.* p. 148.

medical journals contain several authentic examples of persons whose faces were strongly pitted with the Small Pox, and who were afterwards destroyed by a second attack of that disease. *

The mind may be relieved from so disagreeable a consideration, by relating an incident frequently repeated by the late Dr. Reynolds, Physician to His Majesty.

He was sent for by a lady unknown to him, and conducted by her maid rather mysteriously into a handsome bed-chamber; where he saw, lying in a splendid bed, a lady masked. Being a good deal surprized, the maid stifled a laugh; while her mistress in a soft toned voice apologised for concealing herself, even from a professional gentleman. This (she said) had become proper, from the peculiarity of her situation. At present she stood greatly in need of his superior medical talents, and was extremely anxious for his opinion on her case; which she understood from others, was a very rare one. The doctor being thus put upon his guard, enquired minutely into all her symptoms, and examined critically a pustular eruption which was spread over the lady's person: he then pronounced the disease to be, without all

* Memoirs, Medical Society London, vol. iv.

doubt, the Small Pox. On which, the patient unmasked, and displayed features seamed with that disorder.

Whatever scepticism might have prevailed upon that subject formerly, it is impossible that it should resist the proofs which the controversy upon vaccination have lately called forth. For some years the periodical and other medical publications teemed with cases of Small Pox occurring twice: a vast number were reported officially to the Board of the National Vaccine Establishment, who, in a Report to Parliament, expressed their conviction that this accident occurred occasionally, and the fact is now no longer questioned.

The English accounts of Inoculation were translated into foreign languages, and diffused through Europe; but this new practice was by no means received on the Continent with the same cordiality as here. In France it was not only requisite that it should be approved of by the faculty of medicine, but also be sanctioned by the church. Accordingly, the point was submitted to the Sorbonne*, who decreed, "that it was lawful to make some experiments of inoculation, with a view to public utility*."

* Lettre sur l'Inoculation, du Dr. de la Costa, à Dr. Dodard. Paris, 1723.

But notwithstanding this permission, and the eager wishes of many French physicians, others were violently averse to it: Dr. Hecquet * in particular, wrote against it with national vivacity. In his philippic, the medical arguments were combined with the subtlety and virulence of theology. At the same time a thesis was written on a question proposed in the Parisian school of medicine, "Whether it was a crime "to inoculate for the Small Pox?" in which the affirmative of this proposition was attempted to be proved with more zeal than judgment. The victory, however, remained with the enemies of inoculation; for the practice was condemned by the Faculty of Medicine at Paris, and it does not appear that any one was inoculated in France, for above thirty years afterwards. The controversy † was, however, never relinquished; and among the publications which were continually flowing from the press, perhaps a Memoir read at the Royal Academy at Paris, in favor of Inoculation, by M. de La Condamine, was the most eloquent. But even this appeared to

* *Raisons de doute contre l'Inoculation*, par Dr. Hecquet, Paris, 1723.

"*An variolas inoculare nefas?*" *Questio medica in scholis Medicorum*. 30 Dec. 1723. Woodville's History.

† *Collection Academique*, Dijon, 1755. (contenant *Ephemerid. de l'Academ. des Curieux*), tom. xii. p. 156.

have had no effect. At length, in the year 1755, the systematic Turgot, the ardent reformer of French finance, caused a child to be inoculated at Paris. But according to the Baron de Grim *, the revival of this practice was owing to no conviction of its superiority, but to a medical quarrel.

Senac was a graduate of the university of Montpellier ; and when he established himself in the capital, expected that his distinguished reputation would at once procure him admission into the Faculty of Paris, without the accustomed form of maintaining a thesis. This being refused, he became their irreconcilable enemy : and to mortify this learned body, who had condemned inoculation, he prevailed upon the Duke of Orleans to send for Tronchin, who was conversant with that practice, to inoculate the young Duke of Chartres, and Mademoiselle d'Orleans. Tronchin arrived, and the inoculations were successful. This event made a prodigious noise throughout France, and Tronchin inoculated numbers of children of the first families. As he was not only a very judicious, but an agreeable physician, he acquired a brilliant reputation ; and Senac was converted by jealousy from a warm patron to a

* *Memoires Hist. Litter. tirés de la Correspond. par Le Baron de Grimm. et Diderot. tom. i. p. 389. Londres, 1813.*

bitter foe. Being the physician and having gained the ear of Lewis the XVth, he one day told "him that in consequence of more mature deliberation, he was now convinced that Inoculation was dangerous." The Duke of Orleans owed him little thanks, for having given an important advice respecting his children, without the fullest reflection : but passion is not circumspect. While Tronchin who had then acquired the friendship of Voltaire, and who shone in the first literary circles, was not to be injured by the malignity of Senac.

After this commencement, Inoculation began to spread, not only in Paris, but also through the principal cities of France. But in the year 1763, the Small Pox proving epidemic at Paris, occasioned an unusual and dreadful devastation. The vigilance of that police was immediately roused, and the Parliament investigated the cause of this augmented mortality. From the evidence collected, that Court became convinced that it was owing to the increased infection from inoculation ; and therefore issued a decree, prohibiting the practice in Paris.

Those who wished to be inoculated, were therefore under the necessity of retiring to the country, where they might reap the advantage of this operation, without destroying their neighbours.

In Germany, owing to the opposition of De Haen and Van Swieten, Inoculation made very slow progress; it was approved of, however, by other eminent physicians, and especially by FREDERICK HOFFMAN. *

This virtuous man, and excellent author, fruitlessly attempted, like former philosophers, to build up a theory of Small Pox.

He modified the ancient notions, and supposed that the variolous humour proceeded from impure, corrupted, chylous, maternal lymph: which humour lay involved in the viscid substance of the child, until it fermented and excited a fever. He conjectured also, that the lurking place of the impure humour was some obstructed tubes of the spinal marrow; which accounted for the epileptic fits, convulsions, and other nervous affections, that are wont to occur at the commencement of the disease.

Enough has been said of such systematic attempts.

Hoffman's practice consisted partly in exhibiting the alexipharmic remedies, so much esteemed by his countrymen; and in the cool treatment recommended by the late English

* Fred. Hoffmanni Medicinæ Rationalis System. tom. iv. p. 141.

writers. He was also guided by the latter, to recommend Inoculation; but no enthusiasm was excited for this new practice in Germany.

At Berlin it was long discredited, in consequence of a number of fatal cases occurring at its commencement. But in Holland, from its vicinity to England, the practice was more favorably received, though it seldom descended to the lower orders. In Hanover, Denmark, and Sweden, the medical gentlemen in general recommended and practised inoculation as much as was in their power; and some poor houses were established for the reception of those in indigent circumstances. But no representation could render this practice acceptable to the lower orders.

The great Catherine had assumed the Sovereign power in Russia, whose decided character prompted her to the resolution of bringing into her dominions all foreign improvements. Her medical counsellors had informed her that Inoculation would be of great advantage to her subjects; on which she applied to Great Britain for an eminent practitioner to instruct the Russian physicians in that art.

Doctor Dimsdale was recommended, who inoculated the Empress and her son, in 1768; their example induced many of the nobility also to submit to inoculation. The Baron had abund-

ant practice both at Petersburg and Moscow ; he established an Inoculating hospital, instructed the Faculty in his method, and returned to England decorated with a title, and loaded with wealth.

Catherine merits praise for her intentions, and for her munificence ; but it is distressing to learn the result of spreading inoculation through the Russian Empire. No person who is so competent to judge of this as Dr. Crighton,* physician to the Emperor Alexander ; who has stated, in a letter laid before the National Vaccine Establishment, that previous to the introduction of vaccination, it had

* Extract of a letter from Alexander Crighton, M.D. Knight of the Order of St. Walmoden, Physician to the Emperor and Empress Dowager of Russia. St. Petersburg, 12th Sept. 1812.

“ The whole number of children inoculated (with the vaccine, from the year 1804 to 1812) concerning whom the government has received certain information, amounts to 1,235,597. Now supposing, according to a well founded calculation, that before the introduction of (vaccine) inoculation, every seventh child died annually of the Small Pox, vaccination has saved the lives, in this empire, of 176,514 children.”

The above letter, which contained accurate official reports of all the children vaccinated in Russia, to the year 1812, is recorded in the Minutes of the Board of the National Vaccine Establishment, Dec. 31, 1812.

been calculated, that every seventh child died annually of the Small Pox.

It was formerly mentioned that in various parts of Italy the practice of buying the Small Pox, and a rude species of inoculation, had been long obscurely practised. But notwithstanding the publication of the Byzantine practice, by Dr. Pylarini in 1715, and the love of letters so prevalent in Italy, inoculation does not appear to have been ventured upon by the medical profession until 1754. When most of the Italian physicians of note recommended it, and it was extended to all parts of Italy, except Naples. The practice was however in a great measure confined to persons of condition.

Spain, which is so much behind the rest of Europe in all mental acquirements, benefited on this occasion by their sluggishness. One surgeon * introduced the practice into the town of Jadrigue in Andalusia, where it was continued during forty-two years, without extending beyond that district. In the year 1772, Dr. Don Miguel Gorman made the exertion of coming to London, to collect some information upon the subject; when he returned to Madrid he was encouraged by the court, and practised

* *Practica Moderna de la Inoculation.* O Scanlan. *History of Inoculation*, Woodville.

upon a few of the nobility. Some inoculations also were effected in a few trading cities, which held communication with England. But these efforts were of short duration, and from the distinguished inaction of the Spaniards, inoculation was soon relinquished; and no other country in Europe has suffered so little from the Small Pox.

CHAP. XI.

CULLEN. — THE FINAL TREATMENT OF SMALL
POX, AND THE RESULT.

WHEN the striking advantages of the cool regimen in the inoculated Small Pox had been ascertained, it naturally occurred to Baron Dimsdale to employ it also in the casual disease : but he took little notice of the remedies which were suited to controul the malady, when it assumed the confluent and dangerous aspect. It is chiefly to the celebrated CULLEN,* that we are indebted for fixing the general principles of the treatment of Small Pox, and of reducing the entire management of both the inoculated and casual disease to one plan.

This Professor improved the treatment of most diseases ; and though every system of physic, and every page of every system is defective, yet that of Cullen is always perspicuous, and still

* First Lines of the Practice of Physic, by Wm. Cullen, M.D. Edinburgh, vol. ii.

unrivalled. He taught that this malady, however acquired, was to be treated according to the symptoms that arose, and the type it assumed.

In the distinct species, he asserted, that the fever was of the inflammatory kind, or a synocha, which abated on the third day, and usually vanished on the fifth. When the pustules on the face were numerous, some degree of fever re-appeared on the tenth and eleventh days, but generally disappeared after the pustules were fully ripened; or perhaps remained till the pustules on the feet had finished their course. It was seldom that in the distinct Small Pox the fever continued longer. With regard to the pustular eruption, it passed through the stages of inflammation, suppuration, and desiccation.

He stated, that in the confluent Small Pox, in which the pulse was more frequent and more contracted, the fever was far more violent, and approached to that form which was found in typhus. This species was often ushered in by epileptic fits, and accompanied with delirium and coma.

Some remission commonly occurred about the third or fifth days; but about the tenth or twelfth days the fever was renewed with violence, and termed secondary: this became of the same

nature, and was accompanied with every symptom of that fever which has been termed putrid, and its duration and event were various.

He discriminated the eruption of the confluent from that of the distinct Small Pox, as accurately as the fever. Remarking that the inflammation, particularly on the face, assumed the erysipelatous disposition: that the pimples were less eminent, more numerous, conjoined, and irregular in figure. The liquor secreted was first clear, then brown or black, and of a thin consistence; and the skin in some places disposed to gangrene; while this was the state of the eruption on the face, frequently the pustules on the body, and especially on the extremities, were distinct, and proceeded nearly as in the milder malady.

The above are the characteristics of the two species of Small Pox, but the line of separation is too obscure to be clearly traced: yet the danger of the disease is proportioned to its declination from the distinct species, and to its approximation to the confluent.

At the beginning it is uncertain which form the malady will assume. But the measures to remedy the milder species, and to mitigate the worst, are the same. When inoculation is adopted, it has this great advantage, that an opportunity is acquired of employing a preparatory course previous to the attack of the fever.

The cooling plan of Sydenham, and the antiphlogistic remedies of Boerhaave, compose the treatment of Cullen, before the accession, and during the first stage of the variolous fever; and he considered mercury to be useful, only as a purge. Should the disease prove of the distinct sort, with few pustules, no further remedies are required.

But when the malady assumed the confluent and malignant type, it required the greatest attention: and as soon as a loss of strength began, the Peruvian bark, acids, spices, aromatics, and wine, were recommended; opiates were to be given, constipation to be obviated, and blisters to be applied successively to different parts of the body.

This is the great outline; and Dr. WILSON* has lately accumulated, with industry, each individual remedy, which has been recommended by modern physicians: they coincide in a great degree with Cullen's general principles, which are the last that have been developed upon the Small Pox.

No observations would have been added here, even upon the selection of remedies made by

* A Treatise on Febrile Diseases, &c. by A. P. Wilson, M.D. vol. ii. 1800.

the superior men who have investigated this subject, had there not been considerable discordance in their selection. But fortunately where there is an agreement in the general plan, the choice of particulars is not very material. For as mankind when in health may be well nourished by various kinds of food; so when distempered they may be recovered by various remedies. And as Epicures love and loathe particular dishes; physicians are not exempt from partialities and aversions in their choice of drugs.

Perhaps in the preparatory treatment of inoculation, and in the first stage of the Small Pox, Dr. Cullen thought rather too lightly of mercury: for most of those practitioners, who for upwards of half a century have had extensive experience in the Small Pox, have employed calomel; some believing it to be the preferable purge; others conceiving it to be beneficial on other grounds. But their agreeing almost universally to prescribe it, affords a presumption, that calomel, by some action, mitigates the variolous fever. And in this malady mitigation is all that is practicable. For physicians may attempt to cure many other diseases, but in the Small Pox they only pretend to lessen the violence of the symptoms, with the expectation that the disease shall proceed more mildly to

the end of its course, without destroying life, or injuring any of the organs of the body.

Epileptic fits are a frequent and dangerous symptom in children. And though they evidently proceed either from the violence of the disease, or from the delicacy of the patient; yet as they are occasionally followed by a mild Small Pox, it has been asserted, very absurdly, that they were a favorable symptom. They are most to be apprehended on the first attack of the disease, at the breaking out of the eruption, and at the accession of the secondary fever. From their occurring at these periods, and from the appearance of the patients in the fits, they seem an accomitant of the cold paroxysm of fever: and this is an indication that the proper remedies for them, are those which experience has shewn put the speediest period to the cold fits of intermittent and continued fevers of other kinds; namely, wrapping up the body warm, exhibiting hot drinks, with the addition, if necessary, of stimulating medicines.

But some physicians have been so much impressed with the advantages of the cold treatment in the Small Pox, that they have dreaded the temporary application of heat, even at a moment when cold might strike the patient with instant death. Yet it ought to be kept in recollection, that as soon as the circulation of the blood

and warmth have been restored to the surface of the body, and the fits have ceased, the temperature of the skin should be reduced to the proper degree: for a continuation of this warm regimen would endanger the production of the confluent Small Pox.

Upon the subject of temperature, an inconsistency may be remarked in the modern treatment of the secondary fever in the confluent Small Pox. In the latter stage, when typhoid symptoms appear, the treatment recommended at the beginning of the disease is reversed with one exception; the admission of cold air to the body is still recommended. Why this exception? Is it credible, that the character of the malady should be so changed that internal tonics, cordials, and stimulants, are to be substituted instead of venesection, emetics, purgative, and neutral salts; yet still that the external refrigerating plan ought to be persevered in? This is also repugnant to what experience has dictated in erysipelas and typhus. For in these diseases, when gangrene is menaced, and strength is failing, warmth is always enjoined: and at the period, when cardiac medicines, spicy aliments, and animating wines are administered to rouse the sinking powers, care is taken not to counteract their salutary agency by an excessive abstraction of animal heat.

Blistering has been extolled in the Small Pox from the days of Sydenham down to the latest authors; and is the last point of practice which shall be questioned: and it is hoped, that this may be done without presumption, as the grounds upon which blisters have been recommended are obscure, and many cases where they have been used, are known to have terminated fatally.

It is chiefly in the confluent Small Pox, and in the latter stages of that disease, that blisters are employed; and the principal reason given is, that they are stimulants, and therefore adapted to rouse the faculties, when debilitated and exhausted by the severity and continuance of the disease.

But the quality of stimulating alone, is insufficient to prove their utility in any disease; and blisters have unfortunately been recommended in maladies of opposite kinds. Indeed emetics, purgatives, diuretics, and emmenagogues may likewise, in one sense, be all termed stimulants, which is an appellation too general for practical application.

It must be owned that the science of the action of medicines is still very little advanced; yet the operation of blisters may be investigated with such lights as we possess.

The local effects of a blister are to occasion

pungent burning pain, and to excite redness, and a discharge from the surface of the skin to which it is applied. When a blister acts, all these effects follow; the sum of which is, that a blister excites inflammation. And the subsequent consequences, as well as the influence upon the constitution, are included in the general doctrines of inflammation.

There are two distinct and remarkable forms which are assumed by inflammation.

When the body is sound, and the inflammation of moderate extent, it usually possesses the phlegmonous character, terminates in suppuration, and is accompanied with synocha or inflammatory fever.

But when the inflammation is of vast extent, or when the body is greatly enfeebled, the disease is apt to acquire the erythematous or erysipelatous disposition, and tends to gangrene; and the constitution is then affected with the low or typhoide fever.

These are admitted propositions; let them be applied to the consideration of the propriety of blistering in the Small Pox. No one has proposed blisters as a remedy in the distinct Small Pox; as in that malady there are always present phlegmonous pustules and inflammatory fever. And consequently, to excite fresh in-

flammation, would augment, instead of alleviating the symptoms.

It is in the confluent Small Pox alone, and usually in the latter stage of that disease, in which it has been advised to apply blisters, and to repeat them in succession.

As the event of this most distressing and dangerous malady is various, it is hardly possible for the keenest observer to discriminate the effects of the blisters, from those of the disease. It is therefore advisable to seek assistance from the established doctrine of inflammation.

At the height of the confluent Small Pox, the inflammation extends over a large surface; it threatens or assumes the erythematous disposition, and the fever inclines to the typhoid type. Excess of cutaneous inflammation is the great evil, and menaces by its consequences to overwhelm the patient. Can it be possible, that the symptoms in that state of body, should be alleviated by blistering, that is by exciting additional inflammation? If more frequent opportunities had occurred to physicians of seeing the phenomena of inflammation, they perhaps would never have recommended this application, under such circumstances. It falls to the lot of surgeons to treat these external affections; and on removing blistering plasters in such

cases, they have too often perceived, what might always be apprehended, that the whole surface had sphacelated. Mr. Pearson, the most learned surgeon of the age, has correctly ranked "the application of severe stimuli, to a diseased or debilitated part*," among the most potent causes which produce gangrene. From which it may be suspected, that in some doubtful cases, where the patients might have survived the wasting influence of the typhoide fever, and the thick spotted inflammation; yet when these were augmented by the baneful irritation of blisters, the remaining vital powers have been overpowered.

After having thus attempted, with temerity to trace the medical practice in the Small Pox, perhaps even beyond the present times; it is fitting to consider what was the result of the labors of twelve centuries to remedy this malady.

The confession that must be made is mortifying to a professional man: for, according to such records as we possess, it appears, that in spite of all medical exertion, the mortality of Small Pox had progressively augmented. It

* Principles of Surgery, by John Pearson, Esq. F.R.S. P.R.I. Surgeon of the Lock Hospital, and Consulting-Surgeon to the Public Dispensary, p. 108.

has been made evident by calculations * from the Bills of Mortality of the City of London, renowned for medical science, that at the beginning of the eighteenth century, about one fourteenth part of the inhabitants died of the Small Pox. And, during the last thirty years of that century, when the practice in Small Pox was highly improved, the mortality by that disease had augmented to one-tenth.

The annual loss of lives by Small Pox in Great Britain and Ireland in this latter period, was separately calculated by two † able physicians, and the result laid before a Committee of the House of Commons. The one estimated the numbers at 34,260, adding that he believed those deaths to be under the truth. The other physician made them amount to 36,000.

But this immense and encreasing consumption of human lives was not the sole evil produced

* Letter to Dr. Cotesworth, by James Jurin, M. D.

Observations on the Increase and Decrease of different Diseases, by William Heberden, 1801. p. 36. The Evidence at large, as laid before the Committee of the House of Commons, respecting Dr. Jenner's Discovery, &c. by the Rev G. C. Jenner. Vide the Evidence of Dr. Blane, and Dr. Letsom.

† Dr. now Sir Gilbert Blane, Bart. and Dr. Letsom. Vide Evidence at Large, l. c.

by this distemper : for a considerable portion of the survivors were pitted and disfigured ; some lost one of their eyes, a few became totally blind, and others had their constitution impaired, and predisposed to a variety of complaints, which were productive of future distress, and sometimes of death. These additional calamities cannot be reduced to calculation ; but as the mortality from Small Pox was continually on the increase, these concomitant evils must have been so likewise.

As the Small Pox was not so generally diffused in many other countries where inoculation was much less practised than in Great Britain, some are believed to have suffered less. Yet Condamine calculated the deaths by Small Pox in France, and Dr. Rosenstein in Sweden, to be one-tenth of the births.

The above facts, if unexplained, might lead to a false inference, that the medical treatment of Small Pox was noxious to the patients ; and that if art were totally thrown aside, more would recover by the help of Nature alone. But in truth the salutary influence of medicine was most conspicuous in this disease ; and the failure in the general result proceeded from the impossibility of prevailing upon the whole population to adopt medical counsel. For a very large proportion of that part of the community

which submitted to professional instructions, escaped all the calamities incident to the Small Pox.

An exact calculation cannot however be made of the proportion of deaths among those who were inoculated and skilfully treated: because the interest and vanity of medical men prompt them to exaggerate their success, and to conceal their failures: even the reports of hospitals cannot be relied on: for the parents of the inoculated, from discontent, from grief, or from residing at a distance, sometimes neglect to give information when their children are dangerously attacked, and when they perish.

Yet an approximation to the truth may be attained by making an allowance for these omissions.

At the commencement of inoculation in England the proportion of fatal cases * appear to have been fully one in fifty. But after the last improvement in treatment had been established, probably not more than one in two hundred were lost.

Of those who contract the casual Small Pox, and are treated with medical care, it has been admitted that generally about one in six are lost: but in countries where the medical arts

* Vide Dr. Jurin and Scheucher's Tables.

are unknown, the Small Pox is so fatal a disease, that few of those who are seized with it survive its malignity.

This may suffice as a vindication of the science of medicine, but it is an unfortunate circumstance, that the plan most conducive to the preservation of those who employed it, should prove detrimental to the remaining mass of population.

Had it been possible formerly to have persuaded every human being to have submitted to inoculation, a great saving of human lives would have ensued: but this was impracticable; and the experience of a century has shewn, that partial inoculation, by diffusing contagion, multiplied deaths.

All the benefits of inoculation, without the mischiefs, might however have then been obtained, by precluding the inoculated, while the infection was upon them, from intercourse with persons who had not already passed through the Small Pox. But instead of this salutary precaution being even now adopted, there are miscreants of the medical profession, so stimulated by avarice, and so divested of humanity, as to disseminate the contagion of Small Pox through the most populous quarters of London.

Mankind are too selfish to submit volun-

tarily, even to transient restrictions for the public good. Many tainted with the plague have often artfully concealed it, and have attempted, without scruple, to get into populous cities; though the consequence might have been, an incalculable loss of lives.

Indifference to the safety of others is indeed the chief cause of infectious diseases being propagated and perpetuated. To counteract which, the Governments of civilized nations have long ago established compulsory regulations to stop the entrance and spreading of the plague: and Great Britain has escaped that calamity for a century and a half.

The plague was a less destructive distemper than the Small Pox, yet no plan similar to the quarantine laws has been established to extinguish this infection; and * one which was lately proposed in Parliament, was discouraged, as injurious to personal freedom.

But surely every man susceptible of a dangerous contagion has a natural right to hinder persons who are contaminated with that disease, from touching or even approaching him. The exercise of this right is a species of self defence;

* A bill brought into the House of Lords in the year 1813, by Lord Borlington.

which for the public safety may assuredly be regulated by law, without infringing any reasonable notions of political liberty.

It is true that the enlightened part of the community preserve their families from all the dangers of the Small Pox, by employing vaccination. But British legislators, though exempt themselves from danger, will doubtless take into consideration the condition of the uneducated mass of the people; and will pass regulations to save those also, whose mental blindness hinders them from shunning surrounding evils. For the prejudices of the lower orders are so incorrigible, that in the last year * near a thousand persons died of the Small Pox in London; all of whom were poor people.

Their melancholy infatuation was † manifested to day, when finishing this work, in the case of a woman, who was indicted for a nuisance, and convicted before the Chief Justice and the other Judges of the court of King's Bench. The crime committed was carrying her child, after

* The deaths by the Small Pox in the year 1814 amounted to 638 in the London bills of mortality, which hardly include two-thirds of the mortality of the metropolis.

† April 27th, 1815. The Author was present and had the pleasure of hearing this important decision. The prosecutors were the Board of the National Vaccine Establishment.

inoculation, when covered with Small Pox pustules, through the alleys and streets in her neighbourhood, and by this misconduct infecting eleven persons with the Small Pox. Eight of these died in a shocking condition, and a ninth child lost one of its eyes. All these facts were completely substantiated by the parents of the sufferers.

The Court, before pronouncing judgment, animadverted upon the conduct of this woman, as clearly illegal and criminal: and positively declared, that the exposure of a person in a public place with any infectious disease which endangers the lives of others, is a criminal act, punishable by law; yet as this was the first indictment for prosecuting this offence, they were induced to mitigate her punishment by condemning her only to three months imprisonment.

Future offenders may expect a heavier sentence.

This salutary example, and the promulgation of the law, must be productive of much good: but in many instances where the Small Pox is communicated, and even where death ensues, it is difficult, and often impossible, to establish by legal evidence the source of the infection. It is therefore much to be wished, that to pre-

clude all persons infected with the Small Pox from mixing with the public, a law should be enacted to confine them strictly to their own houses, or in hospitals appropriated by the parishes for that purpose, as long as the infection is upon them.

The plan is simple, to enforce it would be easy; and the sole inconvenience would be a temporary confinement of those persons whose enlargement spreads poison through the land.

By such a measure, the infection of the Small Pox, for want of subjects to act upon, would necessarily decline, and soon become extinct; and multitudes of human creatures would be annually preserved from disease, blindness, and death.

Some opposition might be expected from those who live by spreading contagion among the community. But these are a set of men whose immoral conduct merits rather the castigation of the magistrate, than the consideration of the legislature. And few even of them would have the effrontery to raise objections to a statute for extinguishing the most fatal pestilence that ever preyed upon man; which, like the benign law for abolishing the slave trade, would reflect lustre on the mover, adorn the annals of parliament, and add grace to the so-

vereign: and would likewise form (though it may spoil the climax) the most agreeable conclusion possible to the eventful History of the Small Pox.

INDEX

OF

NAMES AND REMARKABLE CIRCUMSTANCES.

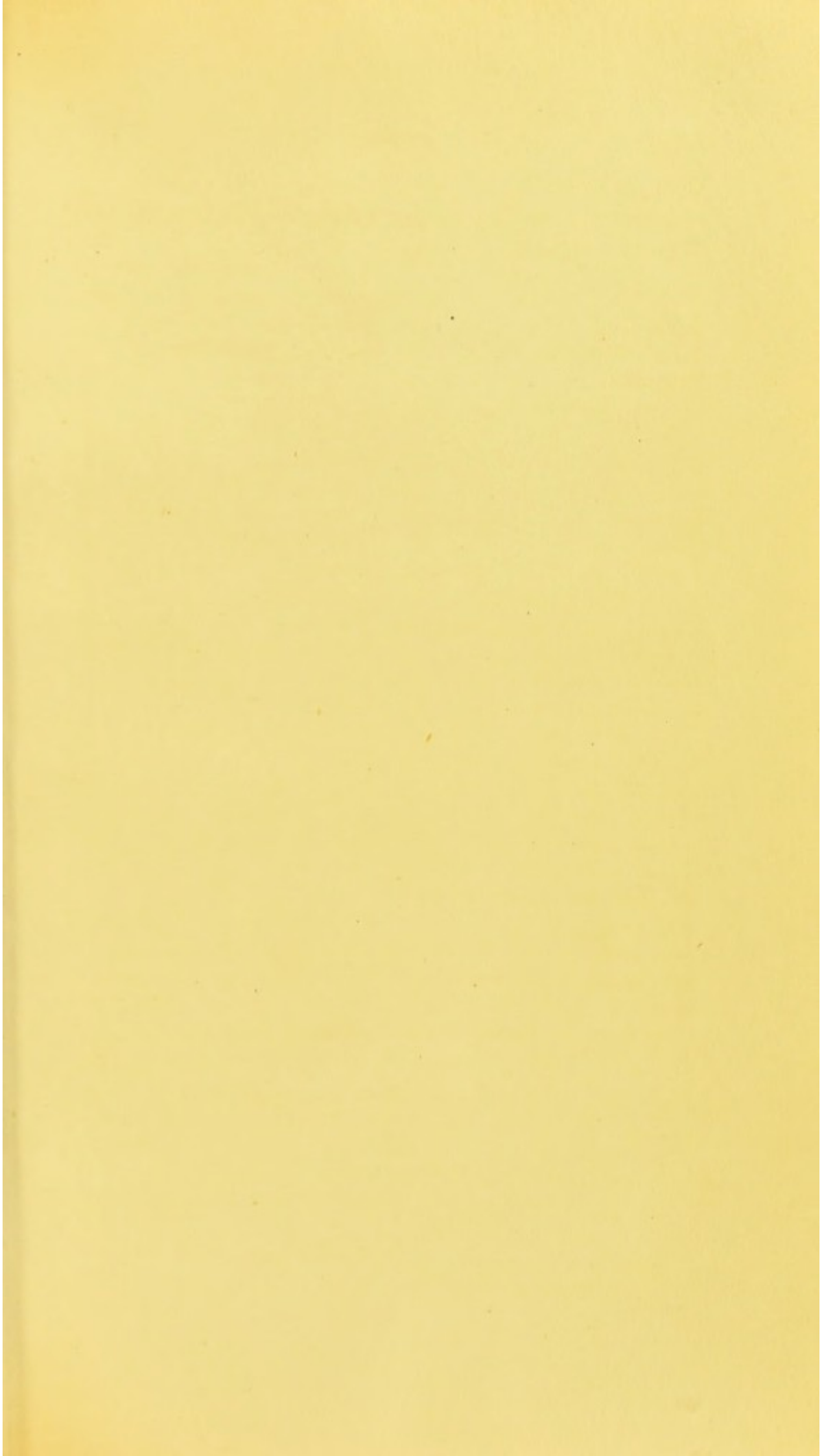
A.		Page			Page
A	BAHIL -	47.	52	Baldwin	86
	Abdalla		74	Bavaria, Henry, Duke of	92
	Abderame		77	Bernard de Gorgonio	159
	Abrahah	46.	54	Birds, supernatural . .	47
	Abul-Pharagius		56	Blisters in Small Pox	295
	Abyssinian Annals . . .		53	Boerhaave	214
	Ætius	3.		Bolanus, Bolandini	16. 101
	Ahron or Aaron	56.	113	Bolgach	84
	Aimon, Monk of Fleury		12	Boston, New England	235
	Albucasis		151	Bruce of Kinnaid . . .	53
	Alcoran		48	Buying the Small Pox	224
	Alexander		38	C.	
	Alexandria captured . .		58	Cabus	139
	Alfred		86	Caliphs affected with Small	
	America		106	Pox	64
	Amrou		58	Catherine of Russia	285
	Animalcules, a cause of			Cava of Spain	76
	Small Pox		197	Chamadaguine	27
	Arabia		49	Charles Martel	77
	Arnaude de Villeneuve		152	Charles VIIIth of France,	
	Austrigilde	8.	11		103
	Avenzoar		144	Chicken Pox	276
	Averrhoes		148	China	27
	Avicenna		138	Chilperic	8. 15
B.				Chosroes	56
	Bacchus		38	College of Physicians, their	
	Bacon		193	Declaration	251
	Baldæus		29	Columbus	105

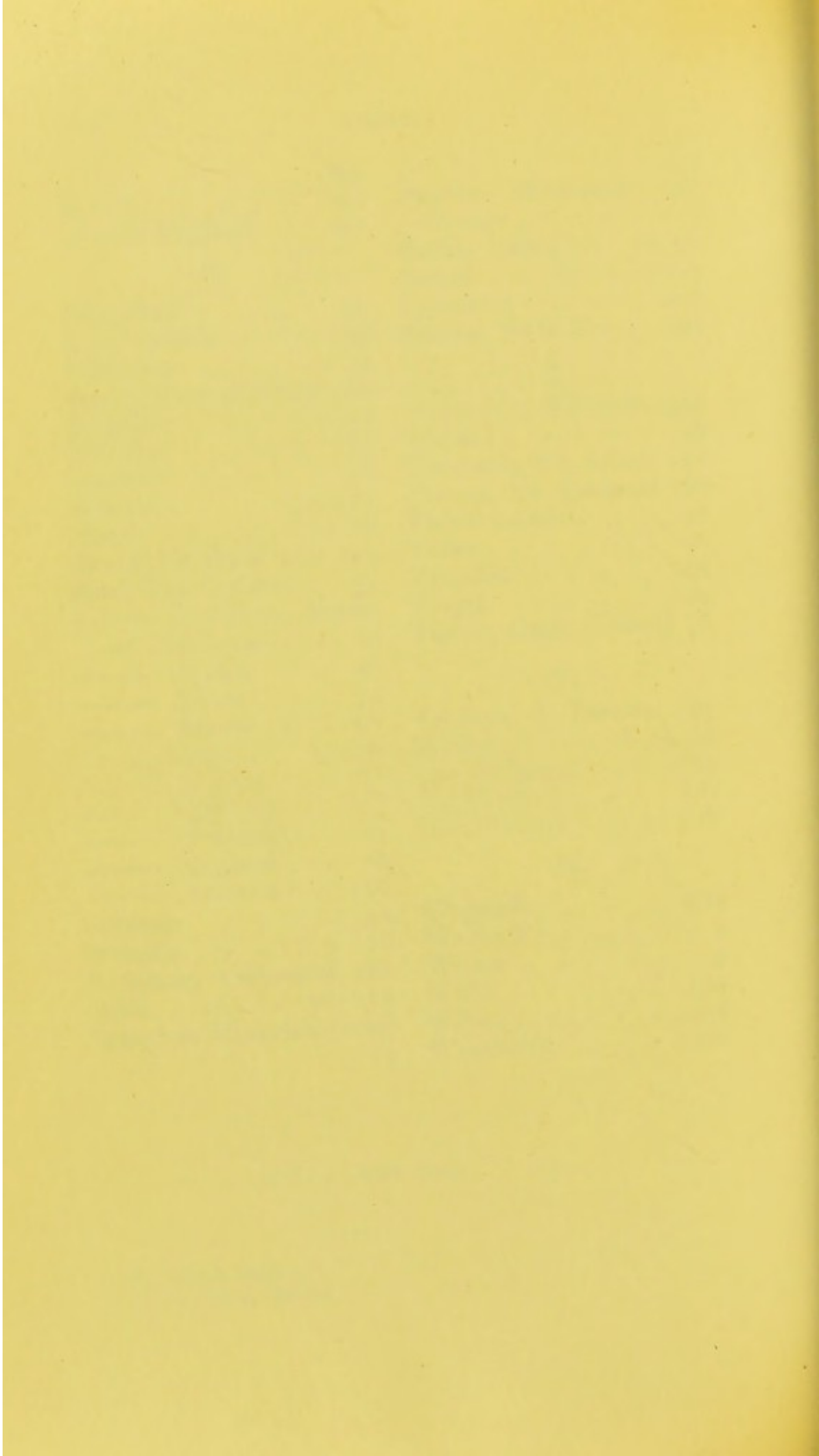
	Page		Page
Comte de Gabalis	172	Fredegonde	8. 12
Condamine, M. de la . . .	281	Freind, Dr. 3. 49. 62.	255
Constantinus Africanus . .	146		
Constantinople	64	G.	
Cortes Ferdinand	107	Gabriel Bachtishua . .	69
Cottonian MSS.	95	Galra breac	85
Crantz History of Green-		Gentili of Foligni . . .	158
land	109	George Bachtishua . . .	117
Crichton	286	Gilbertus Anglicanus . .	156
Crusades	19. 95	Gorman Don Miguel . . .	287
Cullen	289	Greenland	109
		Gregory, Bishop of Tours,	
D.			7. 18
Dagobert	8	Grim Baron de	282
Darius	38	Guainerus	165
D'Entrecollis	35		
De Haen	277	H.	
Diemberbroek	196. 277	Hahn Johannes	2
Dimsdale, Baron	270. 274	Hali Abbas	62. 134
Doleus	212	Harleian MSS.	94
		Harvey	194
E.		Harun al Raschid	67
Ekkehard	91	Heberden	276
Elephant, the war of, 46.	49	Hecquet	281
Elfreda, Princess	86	Herculanus	159
El Hameesy	53	Hindostan	26
Enchiridion	61	Hispaniola	106
Etmuller	210	Hooping-cough	103
Eutropia, Saint	97	Hoffman, Frederick	284
Exorcism against Small		Holinshed	81
Pox	94	Honain	70
		Houlton, the Rev. Robert,	
F.			268
Felons inoculated	232	I.	
Fernel	175	Japan	25
Flower of Flowers	159	Iceland	109
Flud, Dr. George	193	John of Gaddesden	160
Forestus	178	John the Grammarian, 58.	
Fracastor	166		60
Franciscus de Pedemon-		Indies, East	26
tium	149		

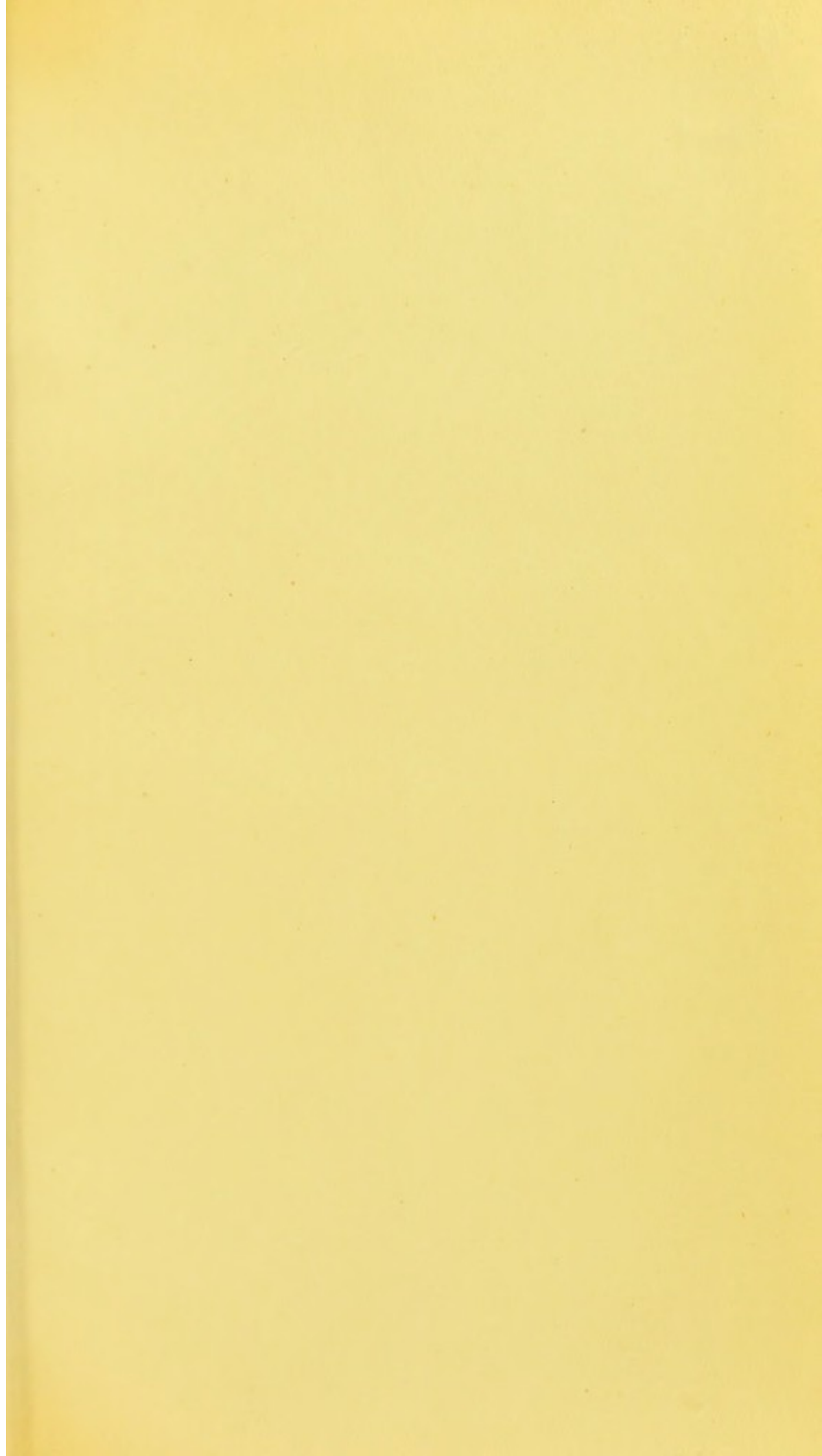
Page	Page
Inoculation, the Discovery	——— John, of Damascus
and Opposition . . . 218	149
—— opposed by some of	Mezerai 103
the Clergy 236	Montague, Lady M. W.
—— extended 267	227
Joscelin, Count 96	Matavekkel, the Caliph
Irish MSS 83	71
Isaac or Ishac, a Jew phy-	N.
sician 120	Nearchus 38. 41
Julian, Count 76	Nile 5
Jurin, Dr. 242. 254	Nisabar 65
K.	Nonus 64
Kaminaldus 92	Notkerus 91
Kæmpfer, Engelbert 25.	Nymph, a story of one
162	168
Kennedy, 227	O.
Kircher 196	O'Connor, the Rev. Dr. 83
Koran, a chapter of 48	Omar, the Caliph 49. 59
L.	P.
Landricus 14	Paracelsus 168
Leyden, a manuscript there	Patragali, Goddess of Small
50	Pox 29
Lilly of Medicine 152	Paulet 5
M.	Paulus Æginetus 61
Maddox, Dr. bishop of	Pfeiffer 198
Worcester 239. 250	Plague, various kinds 7. 79
Mahomet 47. 55. 60	Pliny 124
Maitland 246	Polydore Vergil 81
Mariatale, Goddess of	Pocca first used 88
Small Pox 27	Prosper Alpinus 5
Marius Aventicensis 6	Pylarini 226
Massey, the Rev. Mr. 238	Q.
Massudi 52	Quetlavaca 108
Mead 254	R.
Mecca 47	Reiske, John James 49
Mercurialis 179	Reynolds, 279
Messue, John the son of	Rhasis 129
67. 117	Riverius 195
	Roderick of Spain 76

	Page		Page
Roscoe	104	Stewart Mackenzie, Sir	
Rose of England . .	160	George	109
S.		Surius, bishop . .	16. 96
Saint Gall	90	Sutton	267
Saint Nicaise	95	Sydenham	201
Salmasius	2	Sylvius, De la Boe .	199
Sapor, King of Persia	65	T.	
Saunders	36	Terry, Dr. his letter	230
Serapion	126	Thibet	36
Sesostris	38	Thomson, Dr. Adam	272
Sennert	174. 182	Timoni, Dr. Emanuel	226
Short	86	Tishoo Lama	36
Sloane, Sir Hans	230. 234	Tours	77
Small Pox Goddess .	33	Tronchin	282
—— in China, Japan,		Turgot	282
and Hindostan . .	26	Turner, Capt. (Thibet)	36
—— Arabia	46	V.	
—— Africa	74	Valescus, de Tarento	165
—— France	77	Variola	6. 19. 87
—— Italy	78	Van Helmont	188
—— Ireland	83	Van Swieten	278
—— Flanders	87	Van Woensel	278
—— Switzerland . .	90	W.	
—— England	94	Wagstaffe	242
—— America	106	Werlhoff	2
Solomon	42	Willan	3
Sonnerat	26	Willis	194
Sorbonne, a decree of	280	Wilson	292
Spain	76. 287	Woodward	261
Speculum Historiale (note)	13		

THE END.







51-1

153-1

161-1.

F.610

