

Observations on the external and internal use of hemlock : and on the outward application of other remedies, for the cure of inward disorders / in a letter from Dr. Hoffmann ; translated from the German original, by J.O. Justamond. With an explanatory preface, by the translator.

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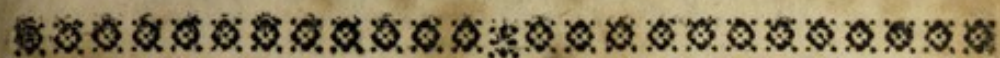
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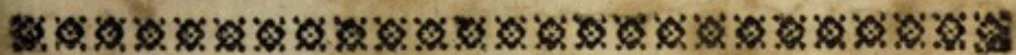
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OBSERVATIONS
ON THE
EXTERNAL and INTERNAL USE
OF
HEMLOCK, &c.



[Price One Shilling.]

OBSERVATIONS

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Printed for

1793

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O B S E R V A T I O N S

On the EXTERNAL

And INTERNAL USE

O F

H E M L O C K,

And on the outward Application of other
R E M E D I E S,

For the CURE of inward DISORDERS.

In a L E T T E R,

From DR. HOFFMAN,

Profeffor of Phyfic at the Univerfity of
Steinfort, to his Friend at Munfter, in
Germany.

Translated from the GERMAN ORIGINAL,

By J. O. JUSTAMOND,

Surgeon to the fecond Regiment of Dragoon Guards.

With an Explanatory PREFACE, by the Translator.

L O N D O N :

Printed for J. MARKS, in *St. Martin's*
Lane. 1763.

OBSERVATIONS

On the EXTENSIVE

AND INTERNAL USE

OF THE REMEDY

And on the outward Application of other

Remedies

For the Cure of various Disorders

By J. M. T. E. M.

From DR. H. G. M. A. N.

Professor of Logic in the University of
Oxford, &c. &c. &c.
LONDON

LONDON

Printed by J. M. T. E. M.

1780

P R E F A C E,

To Mr. HENRY WATSON,
Reader of Anatomy, and Surgeon
to the Westminster Hospital.

S I R,

I imagine it cannot be disagreeable to you, who interest yourself so much in every Improvement, which any Branch of the Profession may receive, to desire your Acceptance of this Translation. Inconsiderable as it is, I thought it incumbent upon me, to offer it to you, from whom I received my first and principal Instructions.

In

In the Month of January last, just before the British Troops had left Germany, I happen'd to meet with this small Discourse on Hemlock : Perceiving upon a Perusal of it, that it contained several new and ingenious Observations, and many useful Hints, with Regard to Practice ; I resolv'd, on my Return to England, to translate and publish it. The Letter is wrote from the learned Doctor Hoffman, Professor of Physic, in the University of Steinfort, to his Friend Mr. Bolten, an Apothecary in Munster, who has prefixed an Account of a melancholy Accident, which happen'd there last Year ; the Substance of which, it may not be improper to relate.

“ On the 23d. of March in the Year 1762,
 “ five Hanoverian Soldiers, boiled some Hem-
 “ lock by mistake, instead of Pot-Herbs. At
 “ the Time of their eating, they were seized
 “ with Fits of immoderate Laughter ; and
 “ and one of them, complained of Dimness
 “ of Sight, as soon as their Meal was finish-
 “ ed :

" ed: In less than a Quarter of an Hour
 " they were deprived of their Understand-
 " ing; talked very inconsistently, and
 " broke out into the most astonishing and
 " ridiculous Jest: This deplorable Scene,
 " did not last half an Hour: They then fell
 " down; the Muscles of voluntary Motion
 " ceased entirely to act; and they at last
 " became lethargic: This Symptom lasted;
 " 'till they expired with a Shivering. Three
 " of the Soldiers died in three Quarters of
 " an Hour, reckoned from the Time they had
 " began to eat; and the other two, half an
 " Hour after them.

" The Bodies were not open'd till the next
 " Day; and the Appearances were as fol-
 " low: Externally, the Testicles were blue;
 " and some Spots of this Color were percei-
 " vable on the Body, chiefly on the Parietes
 " of the Abdomen, underneath the inferior
 " false Ribs. The Cavity of the Abdomen
 " being then open'd, the Intestines first shewed
 " themselves, void of Excrement, distended
 " with

“ with Air, and diaphonous : The Stomach
 “ was black, and entirely lined with Hem-
 “ lock Leaves ; but none of the Root was to
 “ be found in it. Nothing particular was
 “ discoverable in the Thorax ; but, on taking
 “ off the Cranium, the minuter Vessels of the
 “ Brain, appeared fill'd with Blood ; and
 “ some Drops of Blood were observable,
 “ which had been forced out of the ruptured
 “ Vessels.”

Mr. Bolten further observes, “ that this
 “ Species of Hemlock was different from
 “ that, which is now generally used against
 “ Cancers ; the latter being extremely fetid ;
 “ but the former, (as was evident, by some
 “ of it which had been left, after the Sol-
 “ diers had done eating,) was agreeable to
 “ the Palate, and inoffensive to the Smell :
 “ He seems also to think, that the fetid sort
 “ is not so poisonous in it's Nature as the
 “ other ; and that they are best distinguished
 “ from each other by the Smell, being much
 “ alike in other Circumstances.” These are
 the

principal Things worthy of Notice, in Mr. Bolten's Narrative.

The ingenious Author of the Letter, (whose Learning and Industry are most deservedly commended, in that Part of the World where he lives,) seems to have formed a Design of reviving the almost obsolete Practice of external Applications, in the Cure of internal Disorders. He has laid the foundation of this Design, in a very extraordinary Instance; having tried the Use of Baths, prepared with the Decoction of Hemlock-Leaves, in some cancerous Cases, where the Extract previously given, had failed. This Method of using the Plant is entirely new, and illustrated with three Cases, wherein it has been attended with very good Success. Two of the Cases, were Cancers of the most inveterate Nature; the third, an Asthma and a Dropsy proceeding from a Fit of the Gout driven in; the Veracity of which Cases, considering the Author's Character, may, I believe,

believe, be depended upon. His Method of Ordering the Baths will be seen in the Dissertation itself.

Let me now be permitted to offer a few Reflections, which may, perhaps, contribute to throw some Light, on the Point in Question.

Many of the English Practitioners, seem to consider Hemlock, not, only as an useless, but even, as a pernicious Medicine: It still retains however, some Advocates. Having attentively reviewed what has lately appeared on this Subject, and likewise compared the private Opinions of my Friends; I am inclined to think, that the Use of this Medicine should not be entirely rejected, because we are as yet not sufficiently acquainted with it's Virtues. Many good Reasons have been given, why the Hemlock has not been so efficacious in England, as Mr. Storck had experienced it in Germany: For, it has been said, that the Ex-
tract

tract might not be prepared at the proper Season: that the Nature of the Plant in the different Climates, may not exactly correspond, &c. But, perhaps, another Reason may be assigned, which hitherto appears to have been overlooked. The Hemlock was often externally applied by the Antients, tho' they all agree in condemning the internal Use of it; this is confessed by Mr. Storck himself; and the learned Doctor Schwenke also, who published a Dissertation on Hemlock, in the Year 1757, observes;

*“ that it acts so fatally and suddenly upon
 “ the Stomach, before having had Time to
 “ enter the Mass of Blood; that he thinks it
 “ imprudent ever to administer it internally
 “ in any Distemper, tho' the external Appli-
 “ cation of it, may perhaps be good in schir-
 “ rous, cancerous, or such like Cases.”* *

In most of the Cases which Mr. Storck has given us an Account of, the external Application of the Hemlock, accompanied the internal Use of it; but in general, when this

* Vid. London Magazine for the Year 1757, p. 328.

Medicine has been tried in England, the Extract alone, or a Diet-Drink, prepared from the Leaves, has been internally taken. This, I think, may be fairly concluded, from my own private Observation, joined to the Review of those Cases which have been publish'd to prove the Inefficacy of the Medicine. I have further remarked, that those few Gentlemen, who have spoke to me in Favor of Hemlock, have always applied it outwardly; and on the contrary, many of those who have condemned it, have confessed, that they had only tried it internally. This Observation, at the same Time, that it accounts for the bad Success, with which the Trial of this Vegetable has been attended, in England, furnishes an Argument, in Favor of the Hemlock-Baths, or any other external Application of it.

It deserves likewise to be remarked, that the Blood is attenuated, and accelerated, by the internal Use of this Medicine: a Proof of this, may be found in Page vi, of this
Pre-

Preface, where it is observed, *that upon opening the Cranium of the Soldiers, who died, the minuter Vessels of the Brain, were found filled with Blood, and that some Drops were seen, which had been extravasated from their ruptured Extremities*: Further, to illustrate this, it may be added, that Cancers have been made to bleed upon the Use of it. It is perhaps, worth while to endeavor to account for these Effects. Attenuation may be the Consequence of Acceleration; and Acceleration may arise from the violent Shock, this Medicine causes on the nervous System; which is very evident, from the Convulsions, the Soldiers were seized with, and the immoderate Laughter, which is a Species of Convulsion.* The nervous System however, will not, perhaps, be so readily affected by Bathing, or any other outward Application of the Medicine, as by the internal Use of it; and the Reason of this may be, because, the Particles will find a more ready Passage, into the Mass of Blood, and be more speedily mixed with the circulating Fluids, by the

Vid. Page vi, of the Preface. former,

former, than by the latter Method. * A familiar Instance will make this sufficiently clear. Is not a greater Portion of Mercury absorbed into the Blood by Unction, than would be sufficient, in the same Space of Time, to produce bad Symptoms, if internally taken? I am myself acquainted with a Gentleman, whose Constitution is so unfit to bear the internal Use of Mercury, that if even half a Grain of the mildest Mercurial, (such as Calomel sex decies sublimatum) is given to him, he is directly seized with a Dysentery; whereas I am certain, a much greater Quantity than this, has been absorbed into his Blood, at one Time, from rubbing in the Mercurial Unction, without being attended with any bad Consequences. If therefore, a greater Number of the Particles of any poisonous Medicine, can be absorbed from without, and mixed with the circulating Fluids, with less danger to the Patient, than if the same Medicine was internally taken; and if, the Cure of any Di-

* Vid. Dr. Schwencke's Observ. in p. ix. of this Preface.

sease depends upon this increased Number of absorbed Particles; the superior Utility of the outward Application of such Medicines must be admitted. * The Reasons before given, seem to favor this Opinion, and it may still be corroborated by Doctor Hoffman's Observation; *that the Breath of those, who used the Hemlock-Baths, smelt strongly of the Vegetable; which Circumstance, has not been observed, when the Extract was internally given.* † It may also be added, that if we consider, the Quantity of Hemlock used in the Bath, (viz. twelve large Handfulls ‡) is it not

* A further Proof of the Efficacy of external Applications (tho' not with regard to poisonous Medicines,) may be collected, from Dr. Pye's Experiments, who has cured several Intermittents, by a Quantity of the Bark, sewed up in a proper Waist-coast, which was wore next to the Skin, by Children, who could not bear the internal Use of it. Vid. Medical Observations and Inquiries, published at London: Vol. II. Artic. 18, P. 225.

† Vid. Page 31, of the Doctor's Letter.

‡ Vid. Pag. 11, of the Letter.

highly

highly probable, that a much greater Dose of this Medicine is absorbed into the Blood from this Quantity, during the space of half an Hour ; than would be sufficient, if not to destroy the Patient, at least, to produce very bad Symptoms, if inwardly taken? These few theoretical Observations, may help to confirm many others, which will be found in Doctor Hoffman's Letter.

Fomentations may certainly be consider'd as partial Baths ; it gave me therefore much Satisfaction, to find that the Advantages of Hemlock-Baths, were confirmed, by a Case published in the Year 1761, where the late ingenious Dr. Watson, prescribed Fomentations prepared from a Decoction of Hemlock-Leaves, to a Patient, who seemed to be afflicted with incurable Ulcers in his Legs ; which were however, restored to a sound State, in a very short space of Time, by these Fomentations. *

* For further Particulars, the Readers are referred to this Case, as inserted, in the 31st. Vol. of the Gentleman's Magazine. Page 435.

Dr.

Dr. Hoffman likewise proposes another Method, where Baths could not be conveniently used, viz. the strewing of Patient's Beds, with Hemlock-Leaves; but this, has not yet been experienced : The Doctor however intimates a Design of trying it; should he publish any Experiments of this kind, which may appear useful, and satisfactory, they shall be communicated as soon as I receive them,

I beg leave to observe, that the Readers are only to consider this Letter, as a Collection of Hints, which they are to build upon. My sole Intention therefore, in publishing it, is, that you Sir, and others, who have more frequent Opportunities of Practice than myself, and who are willing to add to the Improvement of medical Knowledge; might be acquainted with this new Method of applying the Hemlock; and might make Experiments of
the

the like Nature, if you should chuse it,
upon this Authority.

I am, SIR,

With great Esteem

and Respect,

Yours, &c.

J. O. JUSTAMOND.



PROFESSOR HOFFMAN'S
LETTER.



THE Design of the following Pages, is to sketch out a new and better Method, for the Application of external Remedies, in the Cure of internal Diseases, than any that has yet been handed down to us. The great Utility of the Extract of Hemlock, together with the successful Experiments of Mr. Storck, have lately excited me to consider this Point more particularly. I shall therefore premise such Remarks concerning these Experiments, as may be necessary to illustrate my own Subject. My Observations,

tions, however, shall be confined to the Resolution of indurated Glands and Tumors; altho' the Hemlock has proved beneficial in other Disorders.

The Hemlock-Plaiſter ſhall firſt be the Object of my Conſideration. It is well known, that this Application has had many Advocates for a long Time paſt, in Cancers and other Indurations: Surgeons and others were well acquainted with it in this Light. It has preſerved even to the preſent Times, the Reputation it had long ſince acquired; which could not poſſibly have happen'd, had it not, ſometimes at leaſt, been obſerved to produce the deſired Effect. But as the moſt eminent Phyſicians often uſed it without Succeſs, it began then to be a matter of Doubt, whether the Extract of Hemlock, to which the Virtues of the Plaiſter ſhould be aſcribed, was in reality of that Efficacy, which it was reported to be. I ſay it began to be a matter of Doubt; for it is evident that moſt Phyſicians laying aſide this Medicine,

cine,

cine, have not only proposed in their Writings, but likewise substituted in their Practice, one entirely different, for the Cure of Cancers, and the Resolution of schirrous Tumours: since it is also certain that formerly the Hemlock-Plaister, has sometimes succeeded in these Cases; it is therefore evident, that when this has happen'd, it must have been effected in such a Proportion of Time, as was necessary for the separated Particles of the Hemlock to force a Passage into the Vessels of the Skin, and be conveyed into the Substance of the schirrous Tumors, by means of the circulating Fluids in the human Body. If none of the Hemlock-Particles had passed on into the Body, in this case, it would have been impossible for it to have dissolved any Schirrhus, situated underneath, and covered by the Skin. In fact, it could have done no more than any other common Plaister. But, when this Plaister, or Cloths wetted in Hemlock-Water, have been made use of, they were put in immediate Contact with the Part affected, and

therefore the loosen'd and separated Particles of the Hemlock, could be immediately conveyed into the Substance of these indurated Tumors. Let us then enquire what Proportion of these Particles, could be thus separated and insinuated into the Induration. This is indeed a Question not easily solved; for if the Particles have been detached, and dispersed throughout these kinds of Indurations, which every man must allow ; it seems astonishing how so small a Portion of Hemlock, has been able to produce such powerful Effects. All these Circumstances have undoubtedly been attended to by the celebrated Mr. Storck ; and he must therefore acknowledge, that the Hemlock Extract had either produced no Effect in the fore-mention'd Disorders ; or that it would have been much more efficacious, had it been conveyed into the indurated Swellings, in a greater Quantity than it could have been by the Medium of the Plaister. He must also be sensible, that the frequent Inefficacy of the Hemlock-Plaister, must entirely

tirely be attributed to the Deficiency of operating Particles. What Medicine indeed can possibly be efficacious, when prescribed in too small a Dose? Rhubarb, not given in a sufficient Quantity, falls short of its purgative Quality; Intermittents, yeild not to the Bark too sparingly administred; nor will Mercury prescribed in too small Portions cure the Venereal Disease: may it not therefore be concluded from Analogy, that neither Cancers nor other Tumors can be resolved, or any other Diseases removed by too small a Quantity of the Hemlock-Extract? What Method then can be proposed to gain a better Knowledge of the Virtues of this Plant? Some Expedient must be contrived to insinuate a greater number of the Hemlock-Particles, into the Tumors which are to be resolved. This Intention might very well be answered, if the Extract could be given internally, in such a Manner, as that the whole Mass of Blood could be saturated with it; and it would be the same thing whether it was thus mixed with the
 cir-

circulating Fluids, and conveyed into the Indurations; or whether it was absorbed by the neighbouring Vessels, when immediately applied to the Skin above the Swellings. But altho' when the Extract is given internally, more Particles of the Hemlock must certainly be conveyed into the Indurations, than can possibly be, by means of a Plaister laid on the Part affected; yet the Experiment appeared to be dangerous; because there was so strong a Prejudice against the Plant, and that it was generally thought to be of an highly poisonous Nature. Mr. Storck then made Experiments with the Plant upon his own Body. He rejected the Root as very poisonous; but discovered that the Plant and the Leaves were not so fatal in their Effects, as they had been before supposed to be. As a skilful Physician he tried it first in such a small Quantity as could not expose him to any Danger; he repeated the Experiment, increasing the Dose every Time a little: By this means his own Experience taught him, what Quantity of Hem-

Hemlock his Body was able to bear, without endangering his Health. If Mr. Storck's meaning has not been literally explained, I flatter myself that I shall not therefore deserve Censure; Accuracy in this Point not being material. It is sufficient for my Purpose, that he has declared, that having first experienced the Power of the Hemlock-Extract on himself, he then began to try it on others, and with it not only cured confirmed Cancers and schirrous Tumors, but also various other obstinate Diseases. He is certainly to be looked upon as the Inventor of this Method; for tho' the Leaves of Hemlock, may have been internally prescribed by others; and tho' the French in their Journal de Medecine of last Year, declare; that before this, the Hemlock-Extract had been given internally at Montpellier against schirrous Tumors, with surprizing success; yet the real Efficacy of this Plant was, till the present time, extremely dubious. Mr. Storck has removed these Doubts, cleared this Obscurity, and open'd a new Field of Obser-

Observation to Physicians. How much then are we indebted to him on this Account ! This is all I thought necessary to premise concerning Mr. Storck's successful Experiments.

I shall now give the History of a Case, which will lay the Foundation of what I shall have the Honor to represent to you. A Woman aged thirty-Years, who had taken nothing internally, and had besides a particular Antipathy to all Medicines, was afflicted with a schirrous Tumor on the left Breast : all outward Methods were used ; even the Plaister, and Compresses dipt in the Decoction of Hemlock-Leaves were diligently applied. Two Months thus passed, not only without any visible Alteration for the better ; but even the disease grew worse : an apparent Cancer, and the most wretched kind of Death, were painted to her Imagination in the strongest Colours ; and these alarming Representations wrought on her in such a manner, that

that she consented to take whatever should be prescribed. Two Pills of the Extract, of two Grains each, were given her: her Stomach rejected them; the Experiment was renewed at different Times, with no better Success: four Grains were then given her in an Ounce of Cinnamon-Water; and she vomited again: a Month passed away in this manner, and every Method was in vain tried, to dispose her to receive the Extract; during which Interval, the Breast became more painful, and the Disease more inveterate. Mr. Storck observes, that some People of a singular Constitution cannot bear the internal use of the Extract. Either this, or the particular Aversion which this Woman had to Medicines in general, may be the Reason why so small a Dose of the Hemlock Extract, threw her into Vomitings; and this Consideration made me lose all Hopes, that it could be given to her in a sufficient Quantity, to produce any salutary Effects. What was to be done in this Case? It was distressful to think that this Patient should be de-

B prived

prived of perhaps, the only Medicine which might possibly be of Service to her, and yet all apparent Circumstances seemed to promise nothing more favorable. I happened fortunately to recollect, that Persons who remain for any space of Time in tepid Baths, become heavier; and that the Abstract of their Weight, before, and after Bathing, determines nearly the Quantity of the Water, which has been absorbed into the Body, and mixed with the circulating Fluids. I consider'd further, that the Patient might lose somewhat of his Weight by increased Perspiration in the Bath; and therefore, there must be a greater Quantity absorbed into the Body, than the above-mentioned Problem determines: I knew that in the space of half an Hour, some Pounds of Water had often been introduced into the Body by this Method; and therefore resolved to place my Patient in a Hemlock-Bath, prepared from this Vegetable by Decoction with warm Water; and my Intention was, in this manner to introduce the

Par-

Particles of Hemlock into the Blood with the Water. I imagined it would answer the same End, whether this Plant was mixed with the Blood by giving it internally, or, by means of the Bath. Twelve large Handfulls of the Leaves were employed for this Purpose, and as I knew by Experience how prejudicial too warm Baths had often proved ; even when of common Water, the Warmth of the Water was therefore accordingly moderated : the Patient was put into it : the Bathing Tub was, however nicely closed with a doubled Cloth ; and as the same Cloth was fasten'd round the Neck, the offensive Smell of the Hemlock, which usually ascends from these kinds of Baths, was prevented. A Handkerchief with a knot tied in it, and well impregnated with strong Vinegar, was also put into her Hand, to smell to at Pleasure ; in order to prevent the Accidents which the Smell of the Hemlock might occasion : she remained in the Bath half an Hour, and bore it extremely well ; after which, she was put into Bed, and

taken Care of, as usual after Bathing: she bathed in this Manner daily, excepting now and then a Day of Intermiffion, and at the End of fix Weeks was entirely cured.

From this Instance it is incontestable, that a Cafe may present itself, which neither the Plaifter, nor the external Application of Clothes soaked in Hemlock-Water, nor even the Extract itself, can have any Effect upon; which however may be cured by the Bath. Let these Cafes happen ever fo feldom, yet the Knowledge of this Method certainly extends the Virtues of the Plant.

Having once experienced the Power of the Bath; and knowing by the Accounts received from Vienna, how efficacious the Extract had been found in the Extirpation of Arthritical Knots; this gave me an Opportunity of trying another Experiment. The worthy Doctor Wenneber at Rheda, Physician in ordinary to his Grace of Bentheim, Teck-

Tecklenbrough, had unsuccessfully prescribed every proper Medicine, for a Patient who was afflicted with an Asthma and a Dropsy, proceeding from a Fit of the Gout, which had been driven in, and there appeared still to be no hopes of Cure. Happening to take a Journey that Way, at his Request, I called to see the Patient: I desired my Friend the Doctor, to continue the same Medicines without any Alteration, except the Addition of the Hemlock-Bath: after the Patient had bathed four Times, he begged to speak with his Physician, that he might convince him, by ocular Demonstration of the sudden and unexpected Relief he had experienced: in the space of six Days, his Asthma was really cured, and his Dropsy disappeared. This was certainly more than could have been expected from four Bathings; and I doubt, whether this Efficacy should be ascribed to them alone. The Use of the former Medicines, appears to me, to have prepared the Body; and to have contributed not a little to this sudden
Change.

Change. It is proper to observe ; that this Man from the Day he began to bathe, declared, he had constantly had the Taste of Hemlock in his Mouth ; and his Wife further assured us ; that altho' he had eaten and drank in the Evening, yet his Breath smelt very strong and disagreeably of Hemlock, the whole Night. This last Circumstance is mentioned, as an undoubted Proof, that by means of the Bath, not only the meer Water, but in reality several Particles of the Plant enter the Mass of Blood, and are mixed with the circulating Fluids. The Bath was in every particular order'd as in the preceeding Case : two Days after, when his Physician went to see him, his Gout was returned.

The third Instance is supplied me by a Woman in Rittberg, about five and forty Years old, who had a Cancer on the left Breast, which not only increased and was excessively indurated in every Part, but also extremely painful : on the right side
it

it appeared as if it would break out; and here a Wort uncovered with Skin was conspicuous about the bigness of an old Dutch Gulden *, which discovered a number of Fissures, and discharged continually. During the space of two Months, and somewhat longer, the Extract had been already properly prescribed to her, by the learned Doctor Pfellitzaus. No Alteration was visible except in some Places, where a small Change appeared of the brown Color, into red. I desired the Doctor to add Bathing to the Extract, and in the space of three Weeks, during which she had bathed nine times, the Alteration was very extraordinary. The Color of the Breast, except where the Wort shewed itself, was natural, and one could perceive it to be lessened in every part the thickness of a Thumb; the Hardness was now chiefly confined to the Center, except close to the Wort of the Cancer, which still discharged, and appeared

* The Size of this Coin answers pretty nearly to that of the English Half-Crown.

to me; as if it would soon be detached from the sound Part. During six Days stay at Rittberg, it gave me infinite Satisfaction to observe the quick Amendment of this cancerous Breast. I write this, the third of July, and have as yet made no more than these three Experiments. It is not longer than three Months, since I first order'd the Hemlock-Bath, for the Benefit of these Patients. Time may perhaps open to us further Discoveries.

From these three Instances, and the speedy Effects of these Baths, it appears that they are more powerful than the Extract. I say it appears so; for according to the strict Rules of Logic, this Conclusion cannot be infallibly drawn from thence. Thus much however may be inferred, that the Hemlock - Baths are certainly not less Efficacious. I will shortly relate, what further Reasons, besides the given Instances, have contributed to confirm me in this Opinion.

First,

First, the Intelligences from Vienna inform us, how much Strefs should be laid upon this Point; that, in the Preparation of the Extract, the volatile Particles should be carefully retained. I am however inclined to think, that a greater Number of these Particles fly off by the Preparation of this Medicine, and the Exsiccation of the Juice, than by means of the Bath: secondly, we know that many Herbs, Roots and Plants which we eat, are considerably changed by Digestion, and the Circulation of our Blood. No remarkable Difference is observed, if the Body is nourished with Rice, Bread, Meat, Fish, Milk, or with any kind of Vegetable whatever; let the Particles of these be ever so different, yet, such is the Constitution of the human Body, that one and the same kind of Chyle and Blood, are separated from them. How greatly also are many Herbs, Roots and Seeds changed by Digestion alone. Admitting the certainty of these Facts, it cannot likewise be denied, but that many Plants are much more alter'd by

Digestion, and the Circulation of our Fluids, than others. The colouring Root dyes the Bones of young Animals especially, who eat it among their Forrage, red. Neither the Power of Digestion, nor the Circulation of our Fluids, causes this Change of Color; and I don't know that any similar Instance can be given of the Solids being coloured by any other Plant: and further, the Herbs, Flowers, Roots and Barks which resist Putrefaction, such as, the Jesuit's Bark, Camomile Flowers and Wormwood, may serve to illustrate the Remarks: if these three alone are considered, the Experiments, which have been tried with them, on the Blood, the Urine, the Lungs and the Liver out of the human Body, shew us, that Wormwood and the Camomile Flowers, have a stronger antiputrescent Quality than the Bark. But, if the Effect of the same Medicines, is consider'd in the living Body, the contrary will appear. For, the antiputrescent Power of the Bark in the Cure of intermittent Fevers, and other Diseases arising

fing from Putrefaction, not only furpaffes
 the Wormwood and Camomile Flowers, but
 alfo every known Vegetable of the antipu-
 trefcent kind. I believe that this Effect
 may be accounted for, if we fuppofe, that
 the antiputrefcent Property of the Bark is
 not fo much altered by Digestion and the
 Circulation of our Fluids, as that of the Ca-
 momile Flowers, Wormwood and others.
 This Obfervation may ferve to folve that
 Queftion, which fo much puzzles Phyfi-
 cians, viz. Why the Bark poffeffes a pecu-
 liar Virtue of curing many Diforders ari-
 fing from Putrefaction, and that this Vir-
 tue is not to be found in other Vegetables
 of the fame Clafs.

Since it is an eftablifhed Truth, that
 moft Vegetables are confiderably alter'd by
 Digestion; fo may the Extract of Hemlock
 taken internally, undergo fome Changes by
 the fame means; perhaps however, it may
 fuffer none. But none of the Particles of
 this Plant can be loft by Digestion, when

introduced into the Body by Bathing ; and from this Consideration it may perhaps, be concluded, that Hemlock-Baths are more efficacious than the Extract.

I observed by the Accounts sent from Vienna, that some Persons afflicted with Cancers and indurated Knots, have not receiv'd any Benefit from the Extract ; notwithstanding they had taken it without Aversion, and without bringing it up again. Before the Use of Hemlock had been discarded, it might in these Cases have been tried, whether the Diseases would not have yielded to the Bath. For the Constitutions of these Patients being different, it may naturally be imagined, that some of these Constitutions may sometimes produce so considerable a Change on the Hemlock internally taken, that its curative Virtue will only be partially, or, perhaps, not at all exerted. In these Baths however, the Hemlock does not go thro' the Process of Digestion, but the Patient generally tastes it in its
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its full Force, and his Breath is constantly impregnated with the Smell of it.

Altho' the Cure of Cancers and other Disorders, may be effected by these kinds of Baths, yet it is easily conceived, that many Cases may happen, where the Cure of this and other similar Diseases, is not to be accomplish'd by Bathing, but by the Extract: for I doubt not, but that the Stench of the Hemlock, which arises from these Baths, would be intolerable to some Persons, notwithstanding all possible Care and Attention to prevent its disagreeable Effects. So much however, may with certainty be inferred from the preceding Observations, that the Advantages of Hemlock are extended, and made more universal; which was the very End I had in View; and, if this Point is gained, my Expectations are answer'd.

In these sorts of Baths many Difficulties arise concerning the Apparatus, the Method

thod of their Application, and the Attention to the proper Degree of Warmth, &c. for an infinite deal depends upon this Circumstance, that they should be no more than just lukewarm, and that they should be kept up to that Degree. These Precautions will readily and naturally be attended to without specifying Particulars. Are they therefore to be rejected as needless? So unreasonable a Conclusion cannot surely be drawn. How often might these Baths be tried together with the Extract, with particular Advantages, and the Cure by this means be more speedily effected?

The Baths which I have hitherto prescribed have been made with the fresh Herb of this Summer. Is it possible, that those which might be prepared from the dried Plant, would be equally powerful? Probably they would not, because the Extract which is made from the dried; is not so efficacious as that from the green Vegetable. As it is therefore

fore confirmed by Experience, that the Baths, which in Summer time were prepared with the green Herb, proved more powerful than the Extract; so it is very evident to me, that the Extract in Winter, would have a stronger Effect, than the Baths prepared from the dried Plant.

Having observed that Ordering the Hemlock-Bath, especially among the poorer People, was attended with very great difficulties; and considering how very efficacious it had been found; I therefore thought of another Expedient, which I shall now take occasion to mention, and which removes a great Part of these Inconveniences. Nothing is more certain than that Exhalations from Baths are extremely subtle and penetrating: That very hard Substance Hartshorn, when put into the Retort, is better, and more quickly softened by this means, than if it was boiled. People who lay in a good Bed, are in a right Disposition

tion for receiving such Exhalations. It occurred to me therefore, in lieu of the Hemlock-Bath, to order the Bed to be strewed internally with the Leaves of this Vegetable, and to suffer the Patient to sleep upon them: But lest Ease and the night's Rest, should be too much disturbed by the hard Stalks, it would be proper, that all these should be carefully picked from the Plant, and the bare Leaves alone used in the Beds. That the Particles of Hemlock, would in this manner be insinuated into the Body, is not to be doubted. How advantageous is it not to ricketty Children, to sleep in Beds and Linnen impregnated with aromatic Spices? How easily are not all kinds of offensive Matter from Diseases, communicated to others by the Medium of Beds? How much Care is taken for this Reason, when we are on a Journey, not to sleep in such as are unclean? Is then the Matter of putrid Diseases, absorbed from Beds, and received into the Bodies of those who sleep in them? Why should not a similar

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lar Effect happen to those who sleep in Hemlock?

It is very apparent, that by this Method so many Particles of the Hemlock, will not be mixt with our Juices in the same Proportion of Time, as by means of the Bath. But then, it must be consider'd, that the Time employed in these two Methods is very unequal: for, Patients sit in the Bathing-Tub only about half an Hour; whereas, they commonly remain in Bed, at least seven Hours; consequently, the space of Time, in which the Particles of Hemlock may be absorbed from the Bed into the Body, is fourteen Times greater than in the other Instance. I therefore think that in this Space of Time, a sufficient Quantity of Hemlock Particles, may be introduced into the Body to produce a remarkable Change. To this it may be added, that the sanative Power of the Hemlock, is to be attributed to its volatile Particles; insomuch that Mr. Storck desires, the Extract should

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never be prepared from the withered Herb: and I cannot conceive how these subtle Particles can more readily insinuate themselves into the Body, than by this means; for, they will not be previously diffipated by passing thro' any warm Medium; as must, in some Measure, be the Case in the Preparation of the Bath and the Extract; but the Body of the Patient itself, will warm the Plant, at a Time, when its volatile Particles will have had no Opportunity of flying off. Some Physicians, have furnish'd me with Occasions, of putting this Design into Execution; and I will not fail of giving a proper Account of the Success. I further intend to supply those who cannot well bear the offensive Smell of the Hemlock, with a Cloth dipt in Vinegar to smell to occasionally, and gradually to proceed, from a small to a greater Quantity of the Plant. For I imagine that the disagreeable Smell will thus become entirely imperceptible. This Opinion seems confirmed by the Examples of those Men, who without any
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inconvenience are accustomed to breathe an extremely offensive Air; so highly offensive, that it might prove fatal to many Persons, who had not been previously used to it.

It would undoubtedly be a mistaken Notion, to suppose, that no other Remedy except Hemlock, had ever been known, for the Cure of that terrible Disease, a Cancer. As there is a great Variety in the Constitutions of human Bodies, and that one and the same Method tried on different Persons, will not always be attended with similar Effects, it might therefore be proper, in such Cases where the Hemlock had fail'd, to substitute another Medicine which I shall now mention; giving, at the same Time, the History of the Case in which it was used. A few Years ago, before we were acquainted with the Virtues of the Extract, the Daughter of a Surgeon who lives at Steinfort, was attacked with a Cancer on the under Lip. It was remarkable

that tho' the Disease, was extremely corrosive in itself, yet the Patient suffer'd very little Pain from it. Every possible Method tried, nor did the Surgeon neglect any thing, from which he imagined the Child might receive any Benefit; tho' without any apparent Success. Not only the whole under Lip, but the Chin, as far as the Throat, were entirely corroded: The whole Face, and great Part of the Neck, were quite one Induration. It was imagined the Child could not bear up much longer against the Disease; nor do I remember, ever to have seen a more shocking and deplorable Object. An Alteration in the Method of Cure was thought necessary; the internal Use of the Decoction of Guaiacum only, being continued. I order'd four Parts of Rye-Meal, and one of powdered Gentian to be mixed together; such a Quantity of common Tar was added, as reduced the whole to the Consistence of an Ointment: This being spread upon Lint, was applied to the Part affected. It gave
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me much Pleasure to observe what a great Change appear'd, in the space of eight and forty Hours. The offensive Smell was quite gone off, and the Marks of a good Suppuration began to shew themselves: The Violence of the Distemper visibly decreased every Day, and in the space of three Months, the Cure was completed. The under-Lip is totally destroyed, and the anterior Teeth of the Jaw remain uncovered. This Girl is at present much grown, is able to attend her Business, and appears constantly in Public, only using the Precaution of covering her Mouth, to hide the Teeth, which have been laid bare by the Disorder. This particular Circumstance made her well known to Numbers in Steinfort, who have seen her since her Cure; and tho' she is deprived of her under Lip, yet the Wound is perfectly healed. The Success of this Ointment, has not always been so fortunate, as in the above Instance; for, in some Cases, where I know it has been tried, it has failed, in others, produced the desired Effect,

fect, according to the Difference of Constitutions.

It is very remarkable in the Cure of this Girl, that the Indurations of the Face and Throat were totally resolved; tho' they did not come into Contact with the Ointment. This Event must therefore be ascribed to the Particles which had been absorbed from the Ointment into the Body: for, besides this, nothing was employed but the Decoction of Guaiacum; which tho' still continued, yet, the Resolution of the Tumors, cannot be attributed to this Medicine; because, during the Use of it, before the Application of the Ointment, the Swelling and the Hardness daily increased.

From hence, we may be led to enquire, what Effects would arise from Baths and Semicupiums of Tar-Water? Would they be as beneficial, as the internal Use of this Medicine? This Consequence indeed, cannot be so directly inferred, with respect to Tar-Water,

Water, as it can from the Observations we have made, concerning the like Advantages of Hemlock-Baths.

Some Remarks shall now be offered, which are closely connected with the present Subject.

It has before been remarked, that the Breath of those who have used the Hemlock-Bath, generally smells of the Plant, even after they have eaten and drank.--- When the Use of it is continued, its Particles are so little alter'd in passing thro' the Lungs, that they afterwards retain their own proper Smell. Neither of these Effects is perceived from the taking of the Extract. Who can therefore determine, whether Patients might not receive greater Benefit in Indurations and other Disorders of the Lungs, from Hemlock-Baths, or even by sleeping in Beds strewed with the Herb, than by the internal Use of the Extract? Who can determine, whether other Plants, whose Efficacy

cacy and Virtue, being conveyed into the Body from without, and carried thro' the Lungs, either by Bathing, or by strewing the Beds of the Patients with them, might not prove more Efficacious than the Hemlock; and much more so, than if any of these Plants were internally prescribed? Perhaps, many Ulcerations, and Diseases of the Lungs, which have hitherto been deemed incurable, might thus be restored to a sound State: for, it is well known, that many Vegetables undergo a considerable Change by Digestion.

If it should be proposed, to make Experiments with these kinds of Baths in different Disorders of the Lungs, one Circumstance must however, be particularly attended to, that they should only be just lukewarm; lest, they might prove more pernicious on one Account, than beneficial on the other. In strewing the Bed with the Herb, Cautions of this kind are unnecessary.

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Permit me also to propose another Question. What shall we think of the Effects of Amulets? I would not be understood to speak of those, from which no Particles are separated, and which are the Children of Superstition: the Folly of these deserves only to be laughed at. My Enquiry, relates properly to those, from which Particles may be separated, and introduced into the Blood. If an exceeding small Number of Particles, detached from the Hemlock-Plaster, have been mixed with the circulating Fluids, and sometimes proved very beneficial; why should we not expect similar Effects from many of these exhaling Applications? One Instance however, shall be mentioned, which may tend to throw some Light on this Subject. Doctor De-Haen, to whom, we are much indebted for the Improvements he has made in the Science of Physic; has found the Amulet of Vervain, to have had an exceeding quick and remarkable Effect, having tried

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it, by the Advice of others, who had before made the Experiment, in an uncommonly obstinate Head-Ach, which had foiled many of the most skilful Physicians, and which he himself for a long Time, had in vain endeavoured to cure. He did not indeed apply it in a small Bag, a Method too commonly practised in these Cases, but wrapped up the Patient's Throat entirely in it. This Vegetable externally applied, exerted a particular Power, which we are not certain it would have done, if internally given in any Disorders of this kind. The Person who recommended it, advised only the outward Application of it, as above-mentioned. In these Species of Amulets we may observe, that the Particles which pass on into the Body, are not Subject to the Power of Digestion; and since many Plants are much altered by this Process, I should, for this Reason, be inclined to think, that the Particles of a Plant, which are introduced into the Body
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from without, may possibly remove a Disease, when the very same Plant internally administred, might be useles.

But, would it not be more adviseable in such Cases, to insinuate the operating Particles of these Plants into the Body, by Bathing, or by strewing the Beds of Patients, with them? For from an Amulet, especially a small one, a very small Number of Particles only, can enter into the Body, but a very great Number, by either of the other Methods.

Will not the Efficacy of many Amulets be extremely uncertain, because their Particles cannot be admitted into the Body in a sufficient Quantity? As this has been shewn to be the Case, with regard to the Hemlock-Plaiſter, why may it not with equal Propriety, be supposed with regard to Amulets?

Upon the whole, I think it might be very useful, to search more accurately into these Things : They might possibly, in Time, be brought to such Perfection, that many Diseases, especially such, as at present give us infinite Trouble, might be cured in an easy and agreeable Manner, either by filling the Bed with efficacious Particles, or by means of artificial Baths. These Circumstances, in my Opinion, might indeed be so improved, by the constant Efforts and Attention of Physicians ; that artificial Baths, might, perhaps, be brought to excell the Mineral and Natural ones ; for the Benefit of which, such long and expensive Journeys are undertaken. Should it be objected that Nature herself has produced these mineral Baths, and for this Reason, they ought always to be preferred to artificial ones ; I would be glad to know, whether the same beneficent Being, who has endowed these Baths with their sanative Virtues, has not also caused Herbs, and

and Roots, to grow for the Benefit and Advantage of Mankind.

Having hitherto consider'd the Utility of artificial Baths, and of filling the Beds of Patients with various Ingredients; I would not therefore be supposed to reject *Pediluviums*, *Semicupiums*, and Ointments for the like Intention. *Pediluviums* made with Hellebore Root, were in great Esteem among the Antients to keep the Body open; the Moderns, often employ, the * *Arthantens* Ointment, for the same Purpose, with which they anoint the Soles of the Feet; and the Mercurial Unction is daily applied by many Persons for the Cure of the Venereal Disease: why should not this Practice be imitated, with regard to the external Use of other Medicines?

* Being unacquainted with this Ointment, I suppose it is the Product of some of the German Dispensatories.

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If it should be discover'd, that the outward Application of any Remedy, has proved efficacious against any particular Distemper, it might afterwards be tried, whether it would answer the same Intentions, when taken internally. What has been observed above, concerning the Effect of the Hemlock-Plaster, and the internal Use of the Extract, may afford us one Instance of this Nature.

But, whoever intends to make Experiments with Plants, Roots and other powerful Medicines, by Baths, *Pediluviums*, the strewing of Beds, or with Ointments, I should think it proper for him, to make himself first acquainted, with all the Medicines, which have been celebrated, in different Times or Places, as Amulets against certain Diseases, or which have been experienced in certain Plaisters for the like Intent. For, perhaps, some of these

these external Applications, which have been held in great Repute, for the Cure of any Distemper, only exert their Force at particular Times; (just as the Hemlock Plaister sometimes only, cures and resolves indurated Tumors) for which Reason their curative Virtues have been very uncertain; because, a sufficient Quantity of the Particles of any such Medicine, has not been mixed with the Blood.

It has been no uncommon Thing, for Persons, desirous of making Improvements to fail in their Attempt, for want of proper Directions to guide them at first setting out. At present however, a Man of Industry and Diligence, can scarcely want Matter to exercise his Abilities: Few Books will now be necessary for him; since if he only takes the Trouble, to examine those which have appeared within these hundred Years; he will find so many outward Applications proposed, for the Cure
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of internal Disorders, as would afford him sufficient Employment for his whole Life. The best and principal Advantage, that would result from such an Examination, is, that none of the Experiments would be vain or fruitless: For, the Event, would lead us to the Knowledge, of what is beneficial, or what hurtful; or perhaps detect the Inefficacy of some famous Specific. Whoever finds out what is salutary, ought certainly to be consider'd, as an useful Man; whoever discovers what is pernicious, ought likewise to be considered in the same Light, insomuch, as he guards us against what is injurious in Practice; and whoever points out the Inefficacy of any celebrated Medicine, contributes not a little to the Advancement of Medical Knowledge: since the Discovery of these several Particulars, spares us much Time and Pains; which might perhaps be employed in useless Experiments, if we were unacquainted with such Instructions.

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Had our Forefathers left us these Informations, how much would they have contributed to facilitate our Labor, nor should we see ourselves obliged to learn a second Time by Experience, what Experience had already taught them.

At present therefore, we must endeavour, to be as exact and circumstantial as possible, in our Observations, that Posterity may judge whether we have proceeded, and concluded right, or not. How useful might it prove, if Physicians would agree to assist each other in this Work; and that every one would make Experiments with one certain Medicine, in the Cases which should come under his Care. By this Method, we might become thoroughly acquainted in a few Years, with the Operations of many hundred Medicines, of which we are now ignorant. The Accomplishment of this Wish, however vain it may appear, would be extremely useful to Posterity.

As you live in Münster, you will have frequent Opportunities, (the Number of Patients being much increased in the present Times of War,) of contributing towards the Improvement of Medical Knowledge. Distribute this Letter to all such Persons, as are likely to make any Use of it; desire Physicians and Surgeons in my Name, to make Experiments according to the Methods here proposed. Communicate their Success to me hereafter, and be assured, I shall ever entertain, a grateful Sense, of the Trouble you give yourself on this Occasion.

I am, &c.

C. L. HOFFMAN