

**A letter concerning some observations lately made at Bathe / Written to ...
Sir E[dward] G[reaves]. By Thomas Guidott, M.B.**

Contributors

Guidott, Thomas, active 1698.
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Wellcome Collection
183 Euston Road
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T +44 (0)20 7611 8722
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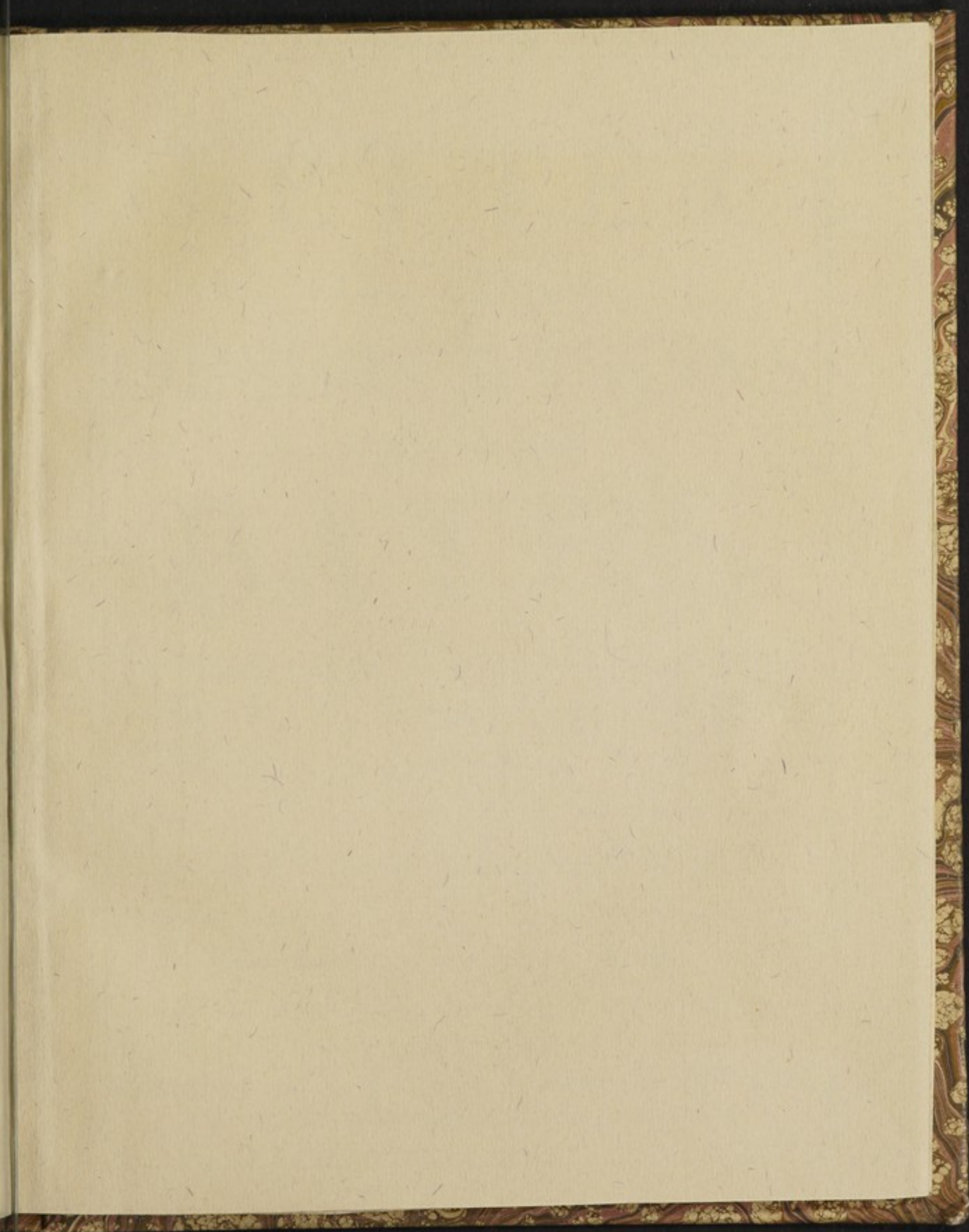
GUIDOTT — LETTER CONCERNING BATHE — 1674







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A
LETTER
Concerning some
OBSERVATIONS
Lately made at
BATHE.

Written to his much honoured Friend
Sir E. G. Knight and Baronet,
M.D. in London.

By THOMAS GUIDOTT, M. B.

Facilius ducimur, quàm trahimur. Senec.

LONDON,
Printed by A. C. for Henry. Brome at the Sign of the
Gun at the West end of Saint Pauls. 1674.

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A
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Lately made at
BATH.

Honoured Sir,



Know you (as well as other Ingenious and Inquisitive Persons) are somewhat concern'd, and desirous to understand what Success my late Enquiries have had into one of the Grand Mysteries of Nature, I mean the BATHES of this City: considering especially that You were pleas'd the last Summer to afford me the Honour of your Company and particular Acquaintance, and to express a

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more than ordinary desire of my proceeding in this Thing. Concerning which I must tell you, that as I have not been wanting, either to Pains or Pay, in my Proceedings hitherto; so I have had the good Hap (which hath been my Encouragement) to meet with many considerable Discoveries. And though the main Body of the Matter, collected touching this Affair, be not yet ripe for the Launcet, but will require a longer time to digest; yet some Observations I shall now communicate which will give a little satisfaction to an earnest desire, and make, in some measure, appear that we have been lame and defective hitherto in a rational Account and true Understanding of the Nature of these Waters.

It hath been indeed the ill fortune of these Bathes (which I may truly say are as good if not better than any Bathes in the world) to lie a long time in obscurity, and not so much as to be mentioned among the Bathes of *Europe* by any forreign Writer, till about the year 1570. when that Excellent Person Sir *Edward Carne*, sent Ambassadour by Queen *Elizabeth* to Pope *Julius* the Third, and *Paul* the Fourth, made some Relation of them to that famous Writer *Andreas Baccius*, then at *Rome*; and writing his elaborate Book *de Thermis*, into which he hath inserted them, upon his Relation, *Lib. 4. Cap. 13.* though somewhat improperly; among Sulphurous Bathes.

About the same time also one *John Jones*, an honest *Cambro-Britain*, frequenting the Bathes for Practise, composed a little Treatise of them, which he calls *Bathes Aid*, in which are some things not contemptible, though in a plain Countrey drefs, and which might satisfie and gratifie the Appetite of those times, which fed more heartily and healthily too then, upon Parsons Fare, good Beef and Bag-Pudding, than we do now upon Kickshaws and Haut-gusts; yet nothing of the true Nature is there discovered, only, as almost in all former Writers of Bathes, chiefly Catholick, a strong Stanch of Sulphur, and a great ado about a Subterranean Fire, a fit resemblance of Hell, at least of Purgatory.

Our

Our Countrey-man Doctor *William Turner* I confess was more particularly concern'd to give a better account, then I find is done in his Discourse of English, German, and Italian Bathes. But whether want of opportunity, or any other impediment was in cause, I know not; But I find that at this stay they stood till the Famous Doctor *Jorden* took Pen in Hand, about the Year 1630. To whom I thought fit to make some Additions, at my first entrance on this Place, some five Years since, and although that Learned and Candid Physitian had chiefly and more especially an intent to enlarge the Knowledge of our Bathes in *Somerset-shire*, as he declares to my Lord *Cottington*, in his Dedicatory Epistle; and hath performed more then any Man before him; yet what was first in Intention, was last in Execution, and how small a part of that Treatise is spent upon this Subject, how short he is in some Material Points, and what Objections may be framed against his Opinion, I may sometime or other, with due Respect, more largely treat off, and for the present shall here, with good *Sem* and *Japhet* cast a Garment over the Nakedness of this my Father.

What hath been done since (except in some particular pieces of other Tracts, to the Authors of which the Bathes are also indebted for their kindness and good will) is not worth the mentioning. The old saying's true, little Dogs must piss, and what is writ upon an Ale-bench claims the greater affinity to the Pipe and the Candle; especially if the best Wine at the Feast (which is usually kept till last) be but a silly story of *Tom Coriat*, and an old *Taunton* Ballad new vampt (The Creatur's parts lying that way) abusing the dead Ghosts of *Ludhudibras* and *Bladud*, with a Nonsensico-Pragmatical, Anticruzado-Orientado-Rhodomontado-Untutth-Le Grand, which we Westerly Moderns, call a grore Lye, in to the Bargain. A pretty Artifice in Rhetorick, to cry a thing up, and befinere, and shed plentifully on the Founder Ordure, both *Humaine* and *Belluine*.

N. B.

*Rode Caper, vitem, tamen hic cum stabis ad aras
In tua quod fundi cornua possit, erit.*

Goat, Barke the Vine; yet juice enough will rise
To dreanch thy Head, when made a Sacrifice.

I have Industriously omitted Doctor Johnson, Doctor Vener and some others, in regard it would be improper here to Write more Historically which I resolve to do if my leisure permit, on another occasion. I shall therefore now let you know not so much what hath been done by others, as what further discoveries have been made by my endeavours, assisted by the careful Pains of Mr. Henry Moor an expert Apothecary and Chymist of this City.

And here at first I cannot but take notice how that opinion hath so much prevailed as to be accounted Orthodox, and not only received by Tradition as certain but Printed as such, that the Body of the Waters is so Jeune and empty, as to afford little or nothing at all whereby to make a discovery of its Nature, and that what impregnates the Bathes is not Substantially, Materially or Corporally there, but potentially, virtually and formally, or to use the Authors own words, *Surdus materiam non esse* with much more canting after this manner in a small discourse in Latin written by an Itinerant Exotick; when as a slight operation will soon evince it, though white and transparent of it self, being taken immediately from the Pump, to contain a considerable quantity of a Dusky, Gritty, and Saline Matter, with many transparent Particles intermixed with it, to the proportion, (as near as I can calculate, sometimes more and sometimes less) of two drams to a gallon of the Water. And this I can ascertain, having had several ounces of it done in Earth, Iron, Bell-metle, and Glass, and have at this time three or four ounces by me, untoucht, beside what I have made use of in other experiments.

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Claromont.
de Aer.
Aq: &
Loc: T. A.
pag. 32.

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But the thing I shall more Peculiarly insist on, at this present, is, That by Gods blessing, on my Industrious Search, I suppose I have lighted on the main Constituent, of the Vertues of the Bath, in which alone resides what benefit can be expected from the use of these Waters, and lodgeth in a Saline substance, in a very small proportion to the Body of the Waters, so that as they are now, not much more then fourty grains is contained in a Gallon, in so much that this little Soul, as I may so term it, is almost lost in so Gigantick a Body, and cannot animate it with that vigour, and activity as may be rationally expected, were a greater quantity of the Salt contained in a less proportion of the Water. The Remainder, which is not Saline, being as I judg, two Parts of Three of the Bulk of the contents, is partly Whitish, Gritty, and of a Lapideous Nature, concreting of it self, into a stony consistence not easily dissolvable; partly more Light, and Dirty, resembling Clay, or Marle, and discovers it self by an apparent separation from the Saline and Gritty part mentioned before.

Now the chief Vertue of the Bath as I conceive consisting in the Salts, which appear by undeniable Experiments, to be Nitrous, and I believe Vitrioline (Bitumen and Sulphur being not Primarily, as these Salts, but Secundarily concern'd, which consisting of Unctuous Particles, cannot be supposed capable of mixing with the Body of the Waters, and therefore no way observable in the Contents) and no small proportion of other things blended with it, the best way to make it most serviceable I conceived to be; to free it from those incumbrances and allays it hath from the other Ingredients, and prepare it as exactly as may be performed by Art, for the benefit of those especially who are willing to Drink the Waters with greater success in a lesser quantity; which they may now do, and have more of the vertue of the Waters, in a quart, three pints, or a pottle, then they formerly had in two or three Gallons, did they drink as much; which will be besides other Conveniencies, a great relief to the Stomach, which

which certainly must be relaxed, and the Tone of it injured by that vast quantity of Water which is usually taken diluting its ferment overmuch, and distending its Membranes beyond all the bounds of a reasonable Capacity.

Besides, what is separated only by an artificial Extraction will better unite again, and mix with the Waters, as much more familiar, than the extraneous Salts of *Sal Prunella*, Cream of Tartar, &c. which are usually dissolved and drunk with the Waters; so that a great part of the Operation may be ascribed to that; and the Waters being, as we say, between two Stools, that of it self, and the dissolvent in it, hath not attained to that degree of Reputation as they have deserved, and may be procured with much more advantage, if nothing but the same be spent upon the same, a way of Improvement altogether equally beneficial to Fluids and Solids, to the wet as to the dry.

Again, whereas it is a custom here as in all other places of the like Nature, when Persons are not willing, or have not conveniences to come to the Fountain Head, to send for the Waters to the places of their Residence, not thinking much material whether *Mahomet* go to the Mountain, or the Mountain come to him, whereby the Virtue of the Waters is much impaired, though stopped and sealed up with never so much care; this defect may be supplied by the addition of a Quantity of the same Ingredients, which may repair the loss that hath been sustained by Evaporation in the Carriage, or other way of damage, and restore it again, as near as may be, to its pristine Virtue, and genuine advantage. Not to mention that if need require, and the poorer sort cannot procure or pay the Freight for the Waters, they may take a shorter course, by mixing the Salt, which they may have at reasonable Rates, with Spring Water, brought to a proportionable degree of heat at home, and expect more advantage, for ought I know, than those that drink the Waters themselves

selves at so great a distance; I have therefore ordered convenient Doses of the Salt to be prepared and kept, by Mr. *William Child* Alderman, and Mr. *Henry Moore*, two Apothecaries in *Bathe*, to whom any one may resort that shall have occasion.

And because I am now fallen on this Subject I shall crave leave to remind you of what you well enough understand already, that not only *Dulcius* but *Utilius ex ipso Fonte*, &c. and Waters especially impregnated with volatile Spirits, such as most acid are, and peculiarly Vitrioline, to avoid the inconvenience and expence, not so much of Money as Virtue, in the Carriage, must be drunk on the place where they are, which in some kind resembling Children, that must live by sucking, if once removed from their Mother, or Nurse, by degrees dwindle away, and at last die.

It is observable in these VVaters, that with four Grains of Galls injected into a Pint Glass of VVater, or the VVater poured on it, it immediately turns of a purple Colour, which in short time after, as the VVater cools, abates much of its vividity, and becomes more faint: if the VVaters be suffered to cool, and be quite cold before the Galls are injected, no alteration happens upon a much greater proportion of Galls superadded, and what is more remarkable: if the VVater, which is permitted to cool, be recruited by the Fire, and the same Tryal reiterated, it offers no greater satisfaction in change of Colour, than the second Experiment. Consonant to what *Andreas Baccius*, a Veterane and experienced Souldier in this Militia, hath formerly observ'd, who in his second Book *de Thermis*, Cap. 10. Pag. 69, hath these words, *Nulla Balnei Aqua, eodem cum successu, ac laude bibitur, longe exportata, quod ad fontem proprium maxima enim pars ex ipso fonte hausta ac delata, amittunt omnem virtutem, multa non servantur per hyemem: diluta pluviiis, & quæ utcumque servantur delata a propriis fonticulis, fieri non potest, quin amittunt, cum*

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calore

calore suo Minerali, vivificos illos Spiritus, in quibus omnis Juramenti vis consistit, quæ semel amissa, nullo postea extrinseco calore restituitur. Quod est valde notandum.

I have been the more particular in this, in regard it is a very useful and practical Discovery, and may procure more real advantage to mankind, than the vain and unattainable attempts of the Philosophers Stone, making Glass malleable, and the Quadrature of a Circle.

Some other Observations I shall also mention, of a less magnitude, and more contracted Circumference, as the dying of the Bath-guides Skins, the Bathers Linnen, and the Stones in the bottom of the Bath, of a yellow colour, and the eating out of the Iron Rings of the Bath, the Iron Bars of the Windows about the Bath, and any Iron infused in it; in so much as I have now by me a Gad of Iron by accident taken up among the Stones of the Kings Bath, so much eaten out, and digested by the Ostrich Stomach of these Waters, that the sweetness extracted what remains resembles very much a Honey-Comb, a deep perforation in many places being attempted, and the whole Gad it self reduced to a thing very much like a Sponge.

The first, *viz.* the Tincture I have discovered to arise from an Ochre, with which the Bath abounds, and hath afforded me a considerable quantity, so that now I have near a Pound by me, and with an infusion of that in warm water, tinge Stones as exactly of the Bathe colour, that they are not discernable one from another. It is further observable that the nearer the place of Ebullition, where the Springs arise, the deeper and finer is the Yellow colour, so that in some places, about the Cross in the Kings Bath, and at the Head of the great Spring, at the Southwest Corner thereof, it is almost made a natural Paint, being laboured together by the working of the Springs, and a continual succession of new Matter coming

ing on, free from those impurities it contracts in other places, which makes it distinguishable into two or three sorts according to its mixture with, or freedom from, more adulterating Matter. The Clouts also and Woollen Rags, which the Guides use to stop the Gouts withal, besides the Walls, Slip-doors and Posts, when the Bath is kept in a considerable time, as in the Winter season it useth to be, are all very much tinged with this yellow substance, and if at any time they chance to lye unwash'd or not thrown away, they send out so ungrateful a sent, that a Man had rather smell to a Carnation, Rose, Violet, or a Pomander, then be within the wind of so unwelcome a smell, it being the greatest policy to get the Weather-gage in this encounter. The same thing I have experienced in Vessels at home, where after it had stood some time, in a common infusion of warm water, I have the same Reverence for that as Pictures, and do aver it to be true, *E Longinquo reverentia major.*

One thing more is to be noted before I leave this particular, that although so much of this yellow Matter is continually bred, with which the Neighbouring Ground is sufficiently replenisht, as I have found by digging in some places not far distant, yet nothing of that colour is discovered in the Contents, a probable argument it either evaporates, to which I am more inclin'd, in regard I find it much more copious where the Steam of the Bath meets with any resistance, or else perhaps which is less probable, turns colour by the fire in evaporation that way; less probable, I say, because for further satisfaction, I have decocted the Ochre more then once, and find that it rather gets then loses in its colour.

The greenish colour ariseth from another cause.

The eating out of the Iron I conceive must proceed from something Corrosive, and till any one can assure me tis something else, I shall judge it to be vitriol, and that it may ap-

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 pear not to be caused by the bare steam, as Rust is bred upon Pot-hooks and Cotterels (as some imagine) besides the difficulty to conceive how the steam should operate under Water, as in the Case of the Gad before mentioned, I made a Lixivium of the contents of the Water, and in it infused Iron, but a very small time, and found it do the same as in the Bath it self, considering the time of infusion; and the very Knives, and Spatules, I put in to stir some Residence in the Bottom, were almost as soon as dry, crusted over and defended with a rusty coat.

I have other Arguments I suppose will contribute something more to the confirmation of this opinion; as that with the help of the Sand of the Bath with Water, and Galls, I make good writing Ink, which in a short time comes to be very legible; but the infusion of the Contents in common water, or the Lexivium thereof, with an addition of an inconsiderable proportion of the decoction of Galls makes it tolerably legible, on the first commixture, only the first *viz.* that made with Sand, casting an eye of decayed red from a mixture of Ochre contained in the same. Neither is it altogether to be slighted, that the Water it self hath been heretofore used by the best writing Masters for the making of Ink, who observing by their experience, that Ink made with Bath water, and the other usual Ingredients had a better Colour, and was more lasting then any other, preferred this water before any other for this use, as I have been informed by some credible persons. Also having not long since occasion to pour warm water on the Contents of the Bath, in order to the making a Lixivium, some of the water happened by an accident, to fall on a Bazil skin I sometimes use, and immediately turned the Red into Black more then the breadth of an ordinary hand, with as much facility as any Curriers Liquor, Allum I know will do the like, but I find no necessity to assert, that, which had it any thing to do here, must make the Water much rougher, whiter and sourer, then I find
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it to be. To which I may add that many judicious persons, my Patients, and some intelligent and eminent Physicians also have assured me that they have perfectly discerned by the Taste a mixture of Vitriol, and that I need not doubt, but that was one principal Ingredient. 'Tis also not very inconsiderable, that the Bath water alone will coagulate Milk, though not after the usual way of making a Posset; for after the Milk and Water are put together, it must boil pretty smartly, else the Curd will not rise. I may likewise subjoyn as a further probability, that on the relenting of the Salt extracted into an Oyl *per deliquium*, there is a very sharp Stiptick and Vitrioline taste perceived in the gross *deliquium*, as also in the cleer Oyl, and the Salt it self; not to mention its shooting into glebes, of which I have some small assurances by some tryals I have made, not yet sufficiently satisfactory, and therefore I dismiss this part for the present, with the greatest probability, till a further inquiry shall make me positive.

But as to Nitre, there can be no question made about that I suppose; for besides the quick acrimonious cooling, and nauseous taste, most apparently discoverable both in the infused contents, the Salt and the Oil (the latter of which, *viz.* the nauseous Taste, I take more particular notice of, in regard it is most predominant, and assigned by *Fallopium* to Nitre, and the Waters impregnated with it, which, he says, sometimes do *subvertere stomachum, & facere nauseam, de Therm. Aq. & Met. cap. 9.* besides, I say, these probable conjectures) what will see it beyond all contradiction is that it hath the true Characteristick of Nitre, and shoots in Needles, as long and firm, to the quantity I have, as any I have seen in the Shops, of which I have now lately shot above twenty *Stiria*, some near an inch in length, which I keep in a Glass ready by me to give any one satisfaction that desires to see it, besides what I have parted with to some friends abroad.

I the rather mention this, in regard it hath been my good hap to bring this thing to perfection and autoptical Demonstration.

stration which hath been in vain attempted by some industrious persons ; not that I am, in the least, willing to arrogate to my self, or derogate from them, more than what is fitting, but to confirm this Truth, that there are some *Mollia tempora fandi* ; some opportunities, when Nature will give willing audience, without much ceremony or ado, confessing more by fair persuasions, than racks and torments, and greater importunity. And that we ought to be very cautious how we affirm a thing not to be upon the failure of a single or some repeated Experiments.

In fine, lest I should too much exceed the bounds of a Letter, what concerns the cause of the Heat of the Waters, I say little of here, only tell you that when I shall come to discourse of that Subject, of which I intend, God willing, a large Disquisition in another Language, I believe I shall find my self obliged not so much to depend on a subterrean Fire, as to expect greater satisfaction from another Hypothesis.

Many more Experiments I have made upon the Sand, Scum and Mud of the Bath, with some Observations drawn from the *Natura Loci*, or Ground hereabouts ; but, I fear, I have been too tedious already, and therefore, without further ceremony, shall release you out of this Purgatory, with the Subscription of,

SIR,

*Your most Faithful and
much Obliged Servant*

THO. GUIDOTT.

FINIS.

