

New experiments and useful observations concerning sea-water made fresh : according to the patentees [i.e. Robert Fitzgerald's, etc.] invention ... / By a Fellow of the Colledge of Physicians [i.e. N. Grew].

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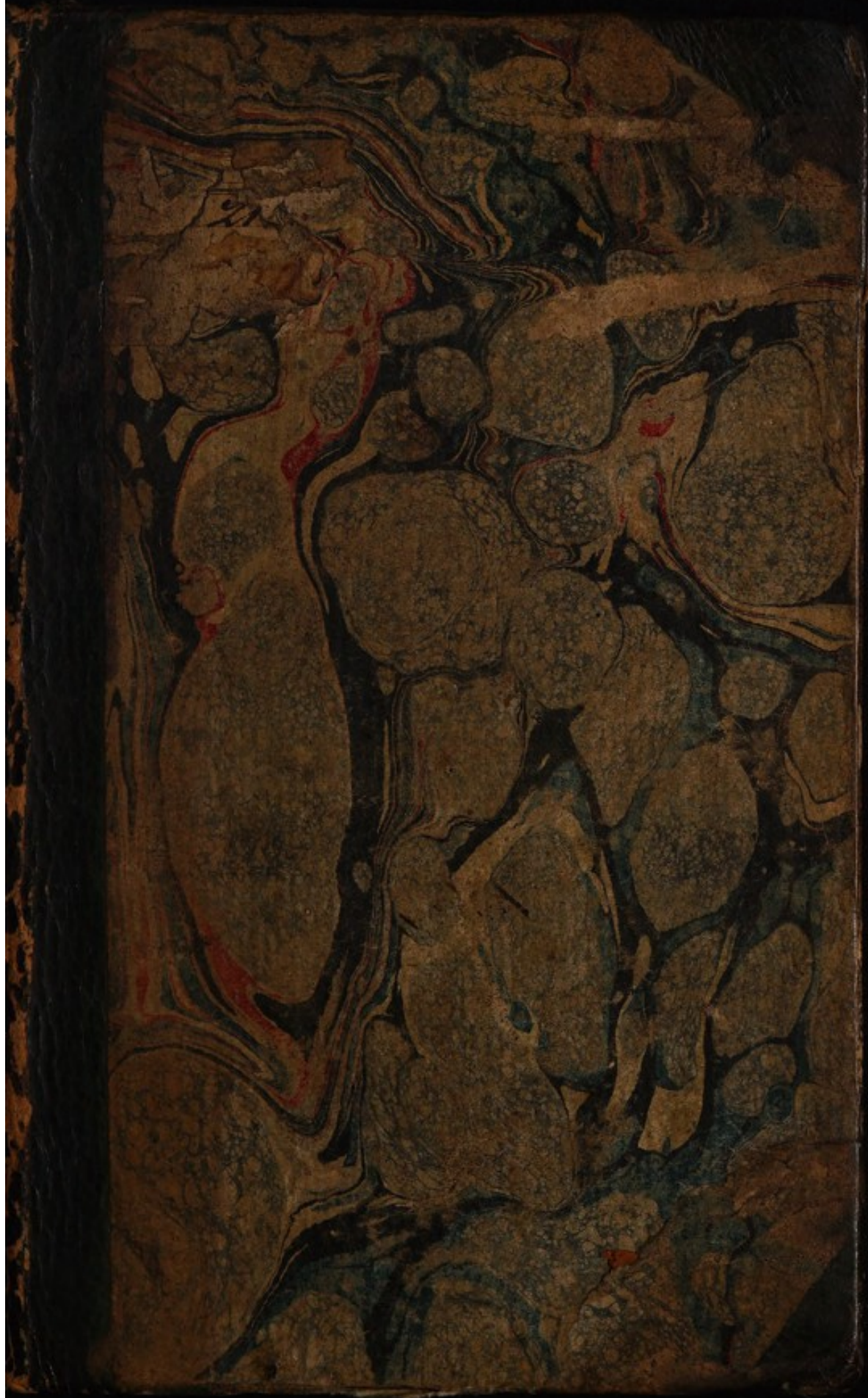
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SE. WATERS. D. S. F. R. E. S. H.







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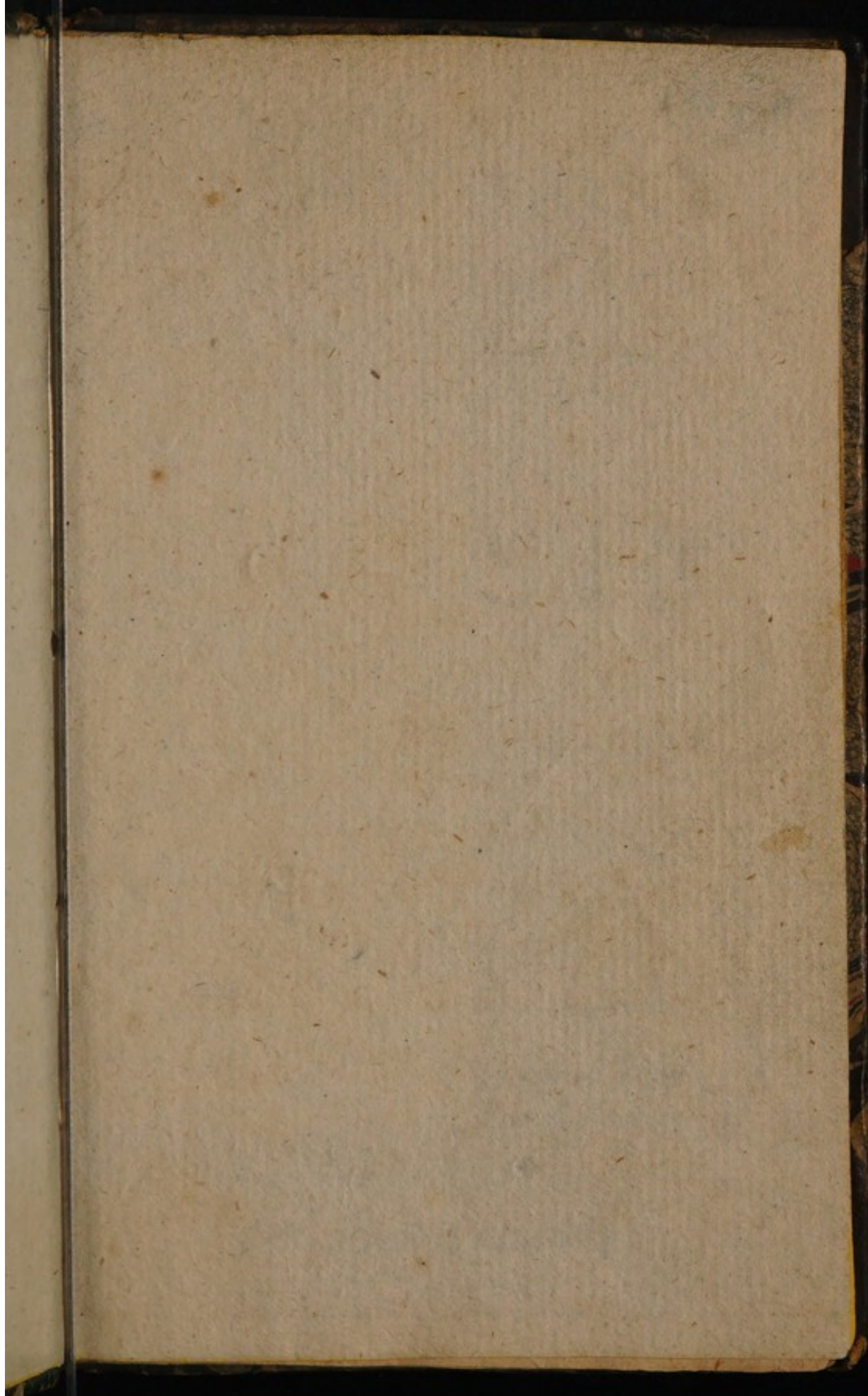
→ This Tract on an Invention
is related to others by
Fitzgerald.

→ a worker with Boyle

1) GREW, N.

2) MABBUT, G.

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7 April 1605. Strangers for

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New EXPERIMENTS,
And Useful
OBSERVATIONS
CONCERNING

Sea-Water

MADE
FRESH,

According to the 4
Patentees Invention :

In a Discourse Humbly Dedicat-
ed to His Majesty the KING
of Great-Britain, &c.

By a Fellow of the Colledge of Phy-
sicians, and of the Royal-Society.

Printed Anno Dom. 1683

NEW EXPERIMENTS
AND
OBSERVATIONS
CONCERNING

Small-Pox

MADE
FRERESH



According to the
Patentees
In a Discourse Humbly Dedica-
ted to His Majesty the King
of Great-Britain, &c.

By a Fellow of the College of Phy-
sicians, and of the Royal Society.


Printed Anno Domini 1683

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(1)

TO THE
KING'S Most Excellent Majesty

May it please your Majesty,

 He making *Sea-water*
Fresh, hath of late
bin much discours'd
of, and is of great
Consequence, not only with re-
spect to *Merchant-ships*, but also,
as I conceive, to your *Majesties*
Navy and *Garrisons*, and to *Sea-*
Port-Towns in all parts of the
World, where good Water is
wanting.

A 3.

All

All that is proper to be said upon the Matter, will lie in making good these three *Assertions*.

I. *That Sea-water may easily, safely, commodiously, in sufficient quantities, be made Fresh for all common Uses at Sea.*

II. *That so done, it is as wholesome to be Drunk, and us'd about Dyet, as any other Water now in use at Sea.*

III. *That being so, the advantages are such, as will much more than countervail the charge and trouble about it.*

FOR the Truth of the First, we have the Reputation of the
Gentle-

(3)

Gentlemen who have your Ma-
jesties *Patent* for it, and their
Interest also to assure Us. By
an Instrument scarce a yard
over, which may stand under
the Deck of any Ship, or very
well in the Cook-room, and
all Smoak and Fire avoided;
they can make about ninety
Gallons in twenty four hours:
Which at the largest Allowance,
of three quarts to a man, be-
ing kept at constant working,
will serve about a hundred and
Twenty men; although two
quarts a day, or three pints, in
time of scarcity, is counted a
good allowance for one man.

We are likewise assured,
that it may be done with ease

A 4

and

and ordinary attendance : For although the *Sea* be *Salter* in some places than in others, yet the *Operation* is the same ; neither is there any difference betwixt that which comes first, and last. And whatever is to be put into the *Engine* with the *Water*, may as easily be done, as *Salt* or *Oate-Meal* into *Pottage* : So that one man may serve both to make the *Drink*, and for other uses of the *Ship*.

By Mr. *Boyle* we are also assured, That *Sea Water* thus made *Fresh*, is as *Wholesome* to be *Drank*, as any *Water* about the *Town*, in its best condition. And by an *Ingenious Physician* of the *Colledge*, a proper comparison

(5)

parifon hath been made betwixt *This*, and the beft *Water*. And fo many of the Colledge, as were defired, have not doubted to give it under their Hands, *That they were fatisfied of the Wholesomnefs of this Water.*

Notwithftandiug which, to give the World a little more exprefs proof of the matter; I fhall, with your Majesties leave, undertake the fame; which I think, I may the more properly do, becaufe I have no fhare either in the Profit of it, or in the Credit of the Experiment.

Now, all the Signes, which either *Physicians*, or common
Ex-

Experience, have given of the best *Water*, are these; viz. *Clearness*, *Thinness*, *Sweetness*, *Softness*, *Lightness*, *Durableness*, and *Pureness* or *Simplicity*; with all which good qualities, if this *Water* stands in the first rank, I suppose no rational man will further dispute whether it be Good, or no.

The *Clearness* hereof, although it may be pretty well observ'd in a good *Flint-Glass*; yet I consider'd, that as there are degrees of Heat and Cold, of which our Bodies being insensible, can only be judg'd of by a *Weather-glass*: So there may be degrees of Perspicuity, which the Eye, unless assisted, will

(7)

will not easily reach; as may appear by this easie Experiment.

If a few drops of *Claret* be put into *Fresh Sea-water*, (such as is made by the *Patentees*, and with which I made This, and all the following Experiments) they will give it a kind of *Light Hiacynthine Red*. But if the same quantity of *Claret* be drop'd into as much *River-water*, and that after the *Water* hath stood in a *Cistern* to settle a considerable time, it will look Muddy; as if a drop of *Ink* had been put into it; the *Claret* discovering those *Opacous* parts, which before were not easily discern'd.

The

The same is likewise an argument of the *Thinness* of this *Water*. As is also the Preparation of it by *Fire*; for the very *Boiling* of *Water*, is one way recommended by *Hippocrates*, and commonly used for the *Attenuating* of it; that is, the *Separation* of any *Gross* and *Heterogeneous* parts, which swim therein, and upon *Boiling* use to *Subside*: And the greatest part of *Rain-water*, which is as *Thin* as any, is *Distilled* from the *Sea*.

Its *Sweetness* recommends it, both as to the *Smell* and *Taste*; for the best *Water* hath no *Scent*, neither hath this any. And so for the *Taste*; 'tis true, a little

Alka

Alkaline Salt, in the opinion of some *Water-Drinkers*, gives a kind of *Sweetness* or *Savouriness* to *Water*, as *Salt* to their *Pottage*; for which cause, I have known them to prefer *Pump-water* before any other sort. But the best *Water*, and that which is generally, both by *Water Drinkers* and others most esteem'd, is no otherwise *Sweet*, than in being very *Soft* upon the *Tongue*, and rather *Insipid*; and such is this *Water*.

Neither doth it excel in *Sweetness* or *Softness* to the *Taste* alone; but also to the *Touch*: Of which quality, *Dyers* and *Laundresses* (who are very *Critical* at their *Finger-ends*) make the

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the best Judgment in mixing
their *Water* with *Soap*. But a
different degree of *Heat*, or
proportion of *Soap*, will alter
the Case: And therefore, to
make the *Tryal* exact, let half
a Pint of *Pump-water* be War-
med to a convenient degree,
and half a *Drachm* of *Common*
Soap dissolv'd therein; in doing
of which, it will be very dif-
ficult to raise a good *Lather*;
the *Water* underneath it will
look muddy and unequal, as if
it were *Curdled*, and when the
Lather falls, it lies on the *Water*,
or any thing it is put upon,
like *Grease*, yet feels *Harsh*.

The same quantity of *Soap*
and *River-water*, and the *Water*
Heated

Heated to the same degree, make a high *Lather*, and that in a short time, and the *Water* also under it, is equal and *Clear*.

In all which respects, this *Fresh-Sea Water* doth not only equal that of the *New-River* or *Thames*, but excels it: For besides, that, it is rather *Clearer* when the *Soap* is dissolv'd; it also makes as strong a *Lather*, in a shorter time, and with less *Soap*; insomuch, that the Woman I caus'd to make the *Tryals*, and compare them, not knowing whence I had any of the *Waters*, guess'd, that above a pound and a quarter of *Soap*, would not go so far with *Thames Water*, as a pound would

would do with this *Fresh-sea-water*.

Another Circumstance is, That if the *Water* be extraordinary Good, it will make a very good *Lather* without being Heated, which this *Water* will also do.

This same *Water* is also as *Light* as any common *Water* whatsoever; as may best be prov'd by a *Water-Poise*, which the *Italians* commonly use, when they would try the *Lightness*, and therein the *Goodness* of their *Water*. For this purpose I mark'd the neck of one with several Degrees equally distant, immersed it in the
seven

seven following *Waters*; where-
in it sunk less or more, accor-
ding to the *Gravity* or *Light-
ness* thereof.

In the *Pump-water* in *Chan-
cery-lane*, (a *Heavy Water*) it
hardly dips to the first, or
lowermost Degree,

In the *Pump-water* in *Christ's-
Hospital*, just to the lower-
most.

In the *Conduit-water* in *Cheap-
side*, to the second, or near it.

In *Thames-water*, *New-River-
water*, *Water* distill'd from *Spring-
water*, and in *Fresh Sea-water*,
to the third, or there about.

So that it is as *Light*, as com-
mon *Water* distill'd,

Neither is there any *Water*
more Durable or Uncorrupt-
tible: For all Corruption in
Water, sheweth it self one of these
four ways; either by some ill
Taste or *Smell*, or by becom-
ing *Muddy* or *Turbid*, or by
gathering some *Skin*, or *Bubbles*
at the *Top*, or by letting some
Sedement fall to the *Bottom*;
none of all which happeneth
to this *Water*, though some of
it hath been kept, both in and
out of the *Sun* for nine Months;
and without all doubt, would
continue so much longer.

The

The last mention'd quality
of the best *Water*, was, its *Pu-*
rity; that is, *Simpleness*, or
Homogeneity of *Parts*.

I deny not, but rather con-
tend, That there is a certain
Aereal Nitre incorporated with
all *Water*; of a different nature
from *Nitre* commonly so call'd,
and such as by no means yet
known, can be visibly sepe-
rated from the *Water*: From
hence, chiefly it is, I conceive,
that *Water* obtains its *Cooling*
quality; and that when it
Freezes, it is not because it is
then only impregnated with
this *Nitre*; but because then
the *Air* being *Surcharg'd*,
throws off a greater quantity
B 2 into

into it: As when *Water* is Sweeten'd or Season'd with a little *Sugar*, it doth not follow that there is none in it, because not enough to make it *Candy*. So there is of this invisible *Nitre* in *Water*, always enough to Season it, though not to make it *Candy*, or turn to *Ice*.

Now allowing this *Nitre*, that *Water* which in all other respects is the most *Simple*; is also justly to be esteem'd most *Wholesom*, and always hath been so. For as the *Humours* of the *Eye*, which is the *Instrument*; and the *Air* the *Medium*, by which we discern all *Colours*, ought to be themselves perfectly *Transparent* and *Colourless*:

So

So *Water*, which is only a *Ve-*
bicle to our *Food*, should be it
 self the most Simple, and
 freest from all manner of Qua-
 lities, besides those proper to
 it as *Water*. For if it be de-
 sired at any time to be *Embued*
 with any other *Quality*; it is
 with respect to some *Medicinal*
Use, and not *Common Diet*.

Now this *Purity*, or *Homo-*
genity of *Parts*, doth eminent-
 ly belong to this *Fresh Sea-water*,
 as I shall make it appear several
 ways; and therewithall, shew
 the Reason of its other *Good*
Qualities; especially, of its
Softness, *Lightness* and *Incor-*
ruptibility.

And first, the reason of its *Softness*, is its *Purity*; or its being undefiled with any kind of *Corrosive Salt*, whether *Alkaline*, *Marine*, or *Acid*.

For upon *Evaporating* of any hard *Pump-water*, most *Spring-waters*, and *River-waters*, in a *Glass-Vessel*, or one very well *Glased*; it is evident, that the former contains a considerable quantity of *Salt*: A *Gallon* from the *Pump* in *Chancery lane*, which is the *Saltest-Water* in this *City*, will yield near three *Drachms*: Not of an *Alluminous Salt*, as is commonly thought, but an *Alkaline*, with the *Taste* and other properties of a *Lixiviall Salt*.

That

That *Spring-waters*, though they yield more or less of the same *Salt*; yet in a far less quantity, and that *River-waters* yield the least of all: Of which three sorts of *Waters*, the first are the *Hardest*, the last the *Softest* of any in common use; yet excelled by *Fresh Sea-water*, as appears by one of the foregoing *Experiments*.

Neither is there any *Marine-Salt* herein. For whereas half a Pint of this *Fresh Sea-water*, or of *River-water*, and half a *Drachm* of common *Soap*, will of themselves make a very good *Lather*: If but twelve or thirteen *Grains* of common *Salt* be added to the *Water* before

the *Soap* be dissolv'd therein, it will *Curdle*, and the *Lather* fall like *Grease* upon it, as if it were some *Harsh Pump-water*.

Nor yet any *Acid*: For if you put but seven or eight drops of *Oyl of Vitriol* into half a *Pint of River-water*, though you increase the former quantity of *Soap*, yet it will never make any *Lather* at all.

Or to come yet nearer; should any suspect that some kind of *Spirit of Salt* may come off with the *Water*; if but seven or eight drops of *Spirit of Salt* be put to half a *Pint of River-water*, it will, in the same manner, hinder it from making

making any *Lather*. Nay, if but two or three drops be put into it, they will have the same effect.

So the reason why *Fresh Sea-water*, as prepar'd by the *Patentees*, is so extream *Soft*, is its *Purity*, or freedom from all manner of *Salts*, save only that *Aereal Nitre*, which is common to all *Water*, and chiefly contributes to its *Cooling* quality.

Or if any one should be so *Pertinaceous*, as to say, that yet there may be one *Grain*, or part of a *Grain* of *Salt*, or one drop or part of a drop of *Spirit* of *Salt*; should thus much be granted, then in the
 same

same quantity of *Thames-water*, there is as much, or more; this being a *Softer Water*, than even *Thames-water* it self.

The *Purity* of this *Water* is also argu'd from its *Lightness*. The perfect *Dissolution* of any *Salt*, or *Earth*, in *Water*, in never so small a quantity, adding weight to it. So, for *Example*, if half a *Drachm* of common *Salt* be dissolv'd in a *Pint* of *River-water*, the *Water-Poise* will dip no lower into it, than into any *Harsh Pump-water*. So that in a *Pint* of such *Water*, there is about half a *Drachm* of *Salt* and *Limy-Earth*, more than in *River-water*: For although such *Water* be as *Clear* or *Transparent*

*Sp*arent as any *Distill'd Water*; yet in the *Evaporation*, some portion of *Earth* is always precipitated together with the *Salt*.

So likewise, if half a *Drachm* of *Oyl of Vitriol*, or *Spirit of Salt*, be put to a *Pint* of *River-water*; the *Water-Poise* will dip therein, but to the same *Degree*, as if the same quantity of *Salt* had been put into it.

Since therefore the *Gravity* or *Lightness* of *Water*, dependeth upon the *Dissolution* of more or fewer *Salt*, *Acid*, or *Earthy* parts therein: And that *Fresh Sea-water* is rather *Lighter* than *River-water*, and as *Light* as any common *Water*.

Distil'd

Distill'd, as hath before been prov'd: The one is as pure and free from all kind of *Salt, Acid,* or *Earthy* parts, as the other.

From whence, and from its being void of any *Taste* or *Smell*, 'tis also easie to conclude how it is so *Permanent* and *Incorruptible*: For in this Case, there can be no *Corruption* without *Fermentation*; nor any *Fermentation*, where there is no *Sulphur*, nor any other *Fermenting Principles* to be any way discover'd: So that as the *Simplicity* of this *Water*, is the reason of its *Duration*: So this, with the Premises, an evident proof of its *Pureness* and *Simplicity*; which still may be further
 ther

ther confirm'd by the following
Experiments.

Let

~~Take~~ about half an Ounce of
Syrup of Violets be Dissolv'd in
half a Pint of some *Harsh*
Pump-water; in a short time,
the *Water* turns the *Syrup* to a
Muddy Green Colour: This I
have known to happen to some
Apothecaries, as much to their
loss, as their *wonder*, from
whence it should proceed. But
the reason was, though they
took sufficient care in picking
their *Violets*; yet not in the
choice of their *Water*.

Put a few drops of *Oyl of*
Vitriol, or *Spirit of Salt* to the
same quantity of *River-water*,
and

and then let the same proportion of *Syrup of Violets* be dissolv'd therein, and it presently turns *Purple*.

But if the *Syrup* be dissolved in *River-water* alone; it turns neither *Green*, nor *Purple*, but holds its *Blew* Colour perfect; and so it doth the like, if it be dissolv'd in *Fresh Sea-water*.

Observing this, I proceed to make the like *Experiment* with *Claret-wine*, which I mixed with several sorts of *Water*, in some good quantity, as I did the *Syrup*: But without any discernable difference between them.

But

But considering that the Colour of *Claret* being very full and strong, might require a much greater proportion of *Water* to over-rule it: I put three Spoonfulls of *Pump-water* into a *Flint-Glass*, and drop'd into it not above seven or eight drops of *Claret*; which being well mix'd, I perceiv'd, that in a little time after, the Colour, instead of being changed, was wholly vanish'd, and the *Water* become as *Clear*, as before the *Claret* was drop'd into it. The *Alkaline* parts in this *Water*, destroying the *Acid*, and therefore with the colour of the *Claret*.

The same number of *Drops*, being mix'd with the same quantity

quantity of *Lambs-Conduit-Wa-
ter*, in a *Glass* of the like Me-
tal, Bigness and Shape; the
colour in a short time, did almost,
but not wholly vanish,

Mix'd in like manner with
River-water, it gives a few
Permanent Rays of *Red*, but
Muddy; as was before observ'd,
and is here again to the present
purpose.

But being mixed in the same
proportion, and *Glass*, with
River-water Distill'd, gives it
a *Light, Clear, and Permanent*
Hiacynthine Red.

And

And the same Curious and Durable Red, it likewise imparts to *Fresh Sea-water*.

From whence, and all that hath been said before, it appears, To have the *Clearness* and *Durableness* of *Spring-water*; the *Lightness* or *Softness* of *Rain* or *River-water*, the *Sweetness* and *Simplicity* of that which is *Distill'd*: And in a word, all the good *Qualities* of the best *Water*, without any bad one: Which may serve to satisfy any Reasonable man, not only to make *Tryal* of it; but also to prefer it before any other now in use at *Sea*.

Yet because men will hardly be brought to leave a known Road, though a bad one; for

a better unknown, till they see some body go before them : Therefore, to discharge all manner of scruple, I must not omit to add, that there are several Persons of Quality, and others, who have Drunk often and liberally of this *Water*; and though not much used to Drink *Water*, yet have receiv'd no prejudice thereby. And amongst them, some *Water-Drinkers*; whom I take to be the most proper Judges in the Case, and who give the Character of it, *To be very Wholesome*; and that it will quench the *Thirst*, as well as any other ordinary *Water*.

The Feazibleness of making sufficient quantities of *Sea-water* Fresh,

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Fresh, and the Wholesomness hereof, being granted : The Advantages which will arise from the use of it at *Sea*, are very obvious, with respect, both to *Profit* and *Health*.

And first, as to *Profit*, Suppose the Voyage to be made to *Surrat* ; for which, one Butt of *Water*, for *Drink* alone, is the ordinary Allowance for one man. The quantity being always laid in, not only according to the length of this or any other Voyage ; but also for a Reserve in case of a Calm ; which, if it happen not, they have commonly more than enough. So that if we suppose a hundred men to be in the

C 2

Ship

Ship, they will require so many Butts for *Drink*. Whereas, if there be no *Water* laid in, but only an *Instrument* to make it, as there is need: The *Coals* to work it a day and half, that is, to make about a Butt (126. Gallons) of *Fresh Water*, may be allowed to be something more than a *Bushell*, which will be the most; or for a hundred Butts, to be about a hundred and ten *Bushels*. So that one Butt containing fifteen *Bushels*; a hundred and five *Bushels* will lie in the room of seven Butts. By which means, about thirteen parts of fourteen now taken up for *Water*, will be gain'd for *Stowage*; saving that there must be some few

few *Cask* for receiving the *Water* as it is wrought off from the *Engine*. And the like computation, or near it, may be made with respect to any other *Fewel*, which may also be used as well as *Coal*. Besides which, the saving the Charge of the *Butts*, will be very considerable; the Price of a *Butt* being twenty Shillings, being bound with *Iron*.

Besides which, there are other particulars, relating to *Profit*, and the preventing of *Damages* both at *Sea*, and in *Sea-port Towns*; upon which the Honourable Mr. *Fitz-Gerald* in his late Book, doth very *Per-tinently* insist.

I shall therefore conclude with

the second great Advantage which will hence arise, and that is; in point of *Health*. 'Tis true, that *Thames-water*, when first laid in, hath the repute of no *Unwholsom Drink*. And generally, though not always, good care is taken in laying it in, both at the best time, which is at half Ebb: and in case of great *Tides*, above the *Bridge*, sometimes as high as *Chelsey*. And though it *Ferments* and *Stinks* in the *Voyage*, yet grows *Sweet* again: And, as they say, doth not *Stink* all at one time.

Notwithstanding which, there are very few, who would choose a *Suspicious Water*, that may have *Spring-water*, if they will, or that which is as good; or better

better, if it be true, which some
 say, That in a large Voyage, *long*
 even some *Spring-waters* will
Ferment a little. For the mix-
 ing with *Wine*, or any other use,
 it would be no small pleasure
 to the *Captain* of a Ship, to be
 sure of that which is the best.
 And it is as a Rule among the
Seamen, that good *Water* shall
 be valued, and go as far as
Brandy, when they Club toge-
 ther for a Bowl of *Punch*.

In point of *Health*; perad-
 venture, while the *Thames-*
water is in the height of its
Ferment, even the *Seamen* may
 forbear to Drink it. Yet we
 have no reason but to believe,
 when that is over, before the
Water be throughly recover'd,

it often goes down well enough with them ; who living in so Thick and Moist an *Air*, and having their *Mouths* always Fir'd with *Salt-Meats*, cannot be very Critical either in their *Taste* or *Smell*. So that though the *Scent* and *Taste* of the *Water*, with respect to the *Seamen*, is not much to be regarded, yet their constant *Drinking* of a *Fermenting Liquor*, though but for some days, may be of ill consequence, and for that time, the more encline them to *Calentures* and other *Feavors* ; especially near the *Line*, where they are more subject to them, and the *Water* to its highest *Ferment*. For the maintaining whereof, there is
a

a considerable stock of *Matter* in the *Water*, how simple soever it may seem to be. In-
 somuch, that after any long *Voyage*, it will *Burn* or give a *Flash*. Whereas *Fresh Sea-water*, being free from all manner of *Inflammatory* and *Fermenting Principles*; it can no way conduce to the production of the fore-mention'd *Diseases*, but will rather prevent them.

But supposing *Thames-water* were always *Wholsom*; yet the *Water* in many other places, where *Ships* are often forc'd to take it in, is found to be very bad, and to make the men *Sick*. An *English Ship*, the *Faulkon*, in a late *Voyage* to *Surrat*, being upon the *Coast*
 of

of *Malabar*, was there forced to take in *Water*: Of which, the men who *Drank*, were taken with *Fluxes* and *Feavers* of that ill nature, that of about eighty five in the Ship, thirteen, or near one sixth part, died in a short time, and some languish'd long under dangerous *Distempers*.

And sometimes *Ships* are brought to that want of *Water* as neither to have good nor bad; as in a long *Calm*: Which though it doth not often continue so long as to *Kill* the men; yet, besides the anguish of *Thirst*, it sometimes makes way for divers *Diseases*, as a *Surfeit*, *Dysenteries*, or *Cholick*, upon the first *Immoderate Drinking*.

Sometimes also, it is an occasion

caſion of great danger both to
Men and *Ship*. Not long ſince,
 a *Ship* went to *Sea*, betwixt
Cheſter and *Dublin*, pretty well
 provided with *Water*. But
 meeting with a *Calm* of ſome
 days, the *Paſſengers* were forc'd
 to Row ſeveral Leagues to the
Welſh ſhore; in which time, if
 a Storm had happen'd, the
Paſſengers had been loſt in the
 Boat, and the *Ship* in all likeli-
 hood had been loſt for want of
 the Hands that were made uſe
 of in the Boat.

Nay it hath been known,
 that a whole *Ship* of men have
 Perish'd for want of *Water*.
 About five years ſince one came
 in Laden with *Tobacco* from
Virginia, in which all the *Paſſen-*
gers

gers were found dead ; having declar'd in a Writing which they had Nail'd upon the Mast, That they had Perish'd for want of Water. All which Mischiefs will be avoided by the constant supply of *Fresh Sea-water*.

And not only in point of *Drink*, but also in *Meat* ; most of which now Eaten is extream *Salt*. For which, all the care they have at *Sea*, is to Soak it before it is Boil'd ; not in *Fresh-water* but in *Salt*. For if they should use *Fresh-water*, they must lay in near double the quantity, the *Meat* being commonly shifted once in four hours, for three or four times. They say, indeed, that the Soaking of it in *Salt-Water*, fetcheth out the
Salt

Salt better than in *Fresh*.
 And for the first or second
Soaking, I believe it may; yet
 also, that a *Soak* or two in
Fresh-water afterwards, will
 do best: Which, to keep the
Meat from *Stinking*, as at that
 time it is apt to do, may be
 done so much the sooner.

But many times the *Sea-*
men are put to straits, as not
 only to *Soak* but also to *Boil*
 their *Meat* in *Salt-water*. Which
 instead of taking any *Salt* out
 of it, doth rather add to it; be-
 cause the *Boiling* of the *Sea-*
water, makes it to become *Salter*.

Now from such *Diet*, as
 this, what can be expected, but
 besides the highest *Scurveys*, a
 a Foundation also for *Dropsies*
 and

and divers other *Diseases*, of which the *Patients* either die quickly, or are hereby so far weakned, as with respect to the Publick, to be worse than dead: For a man that is dead, is but one man lost; but one that cannot work, is not only lost himself, but also spends upon the Labours of another. All which mischiefs will be very much prevented, by having of fresh Water enough for all uses at hand.

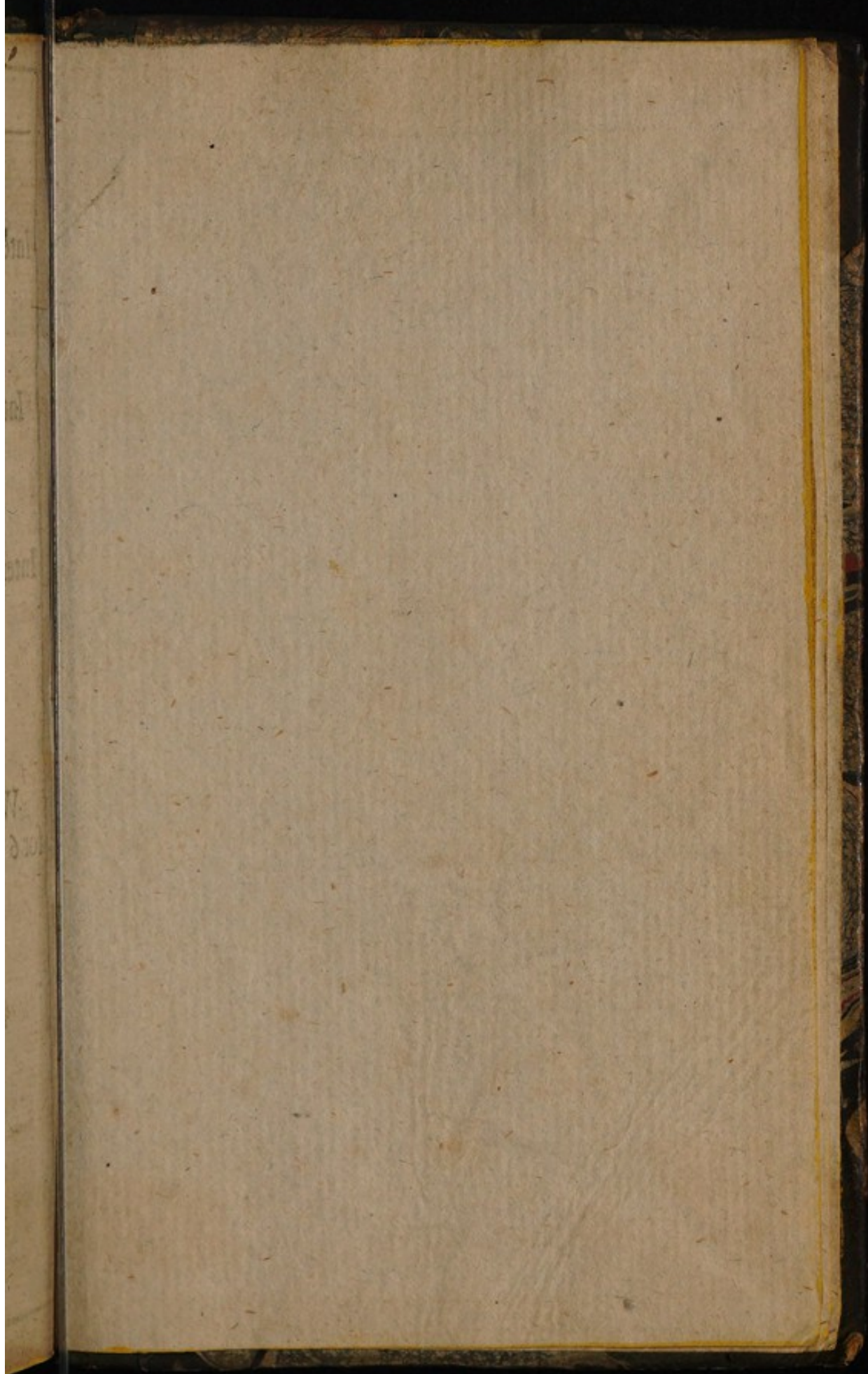
And this, not only by emendation of bad Meat, but moreover in altering the very way of Diet: For where there is fresh Water, good Victuals may be made at any time without Flesh. This, with Bisquet, Wheat, or
Rice

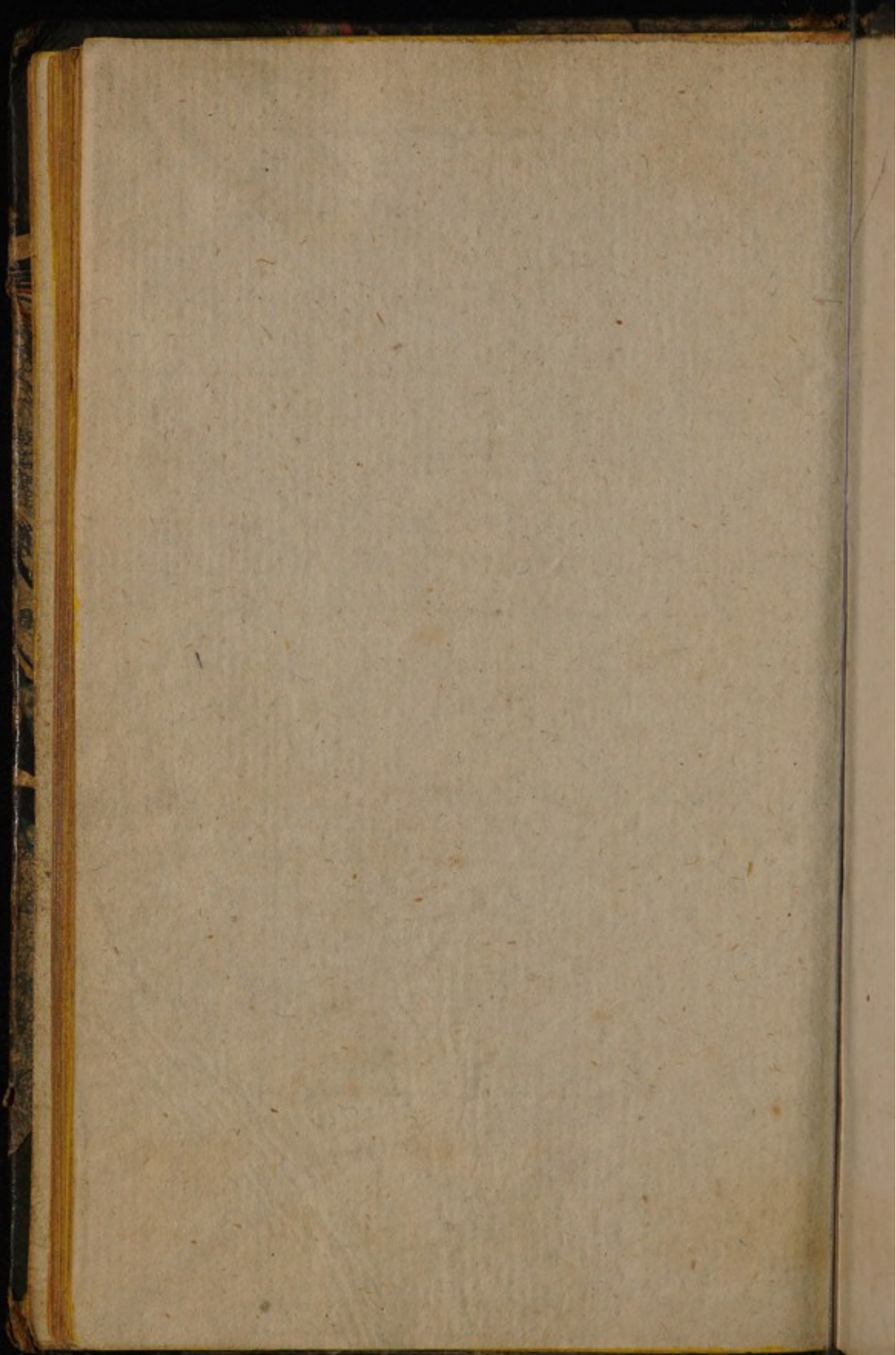
Rice, and a little Sugar, or Butter, will make very good Food.

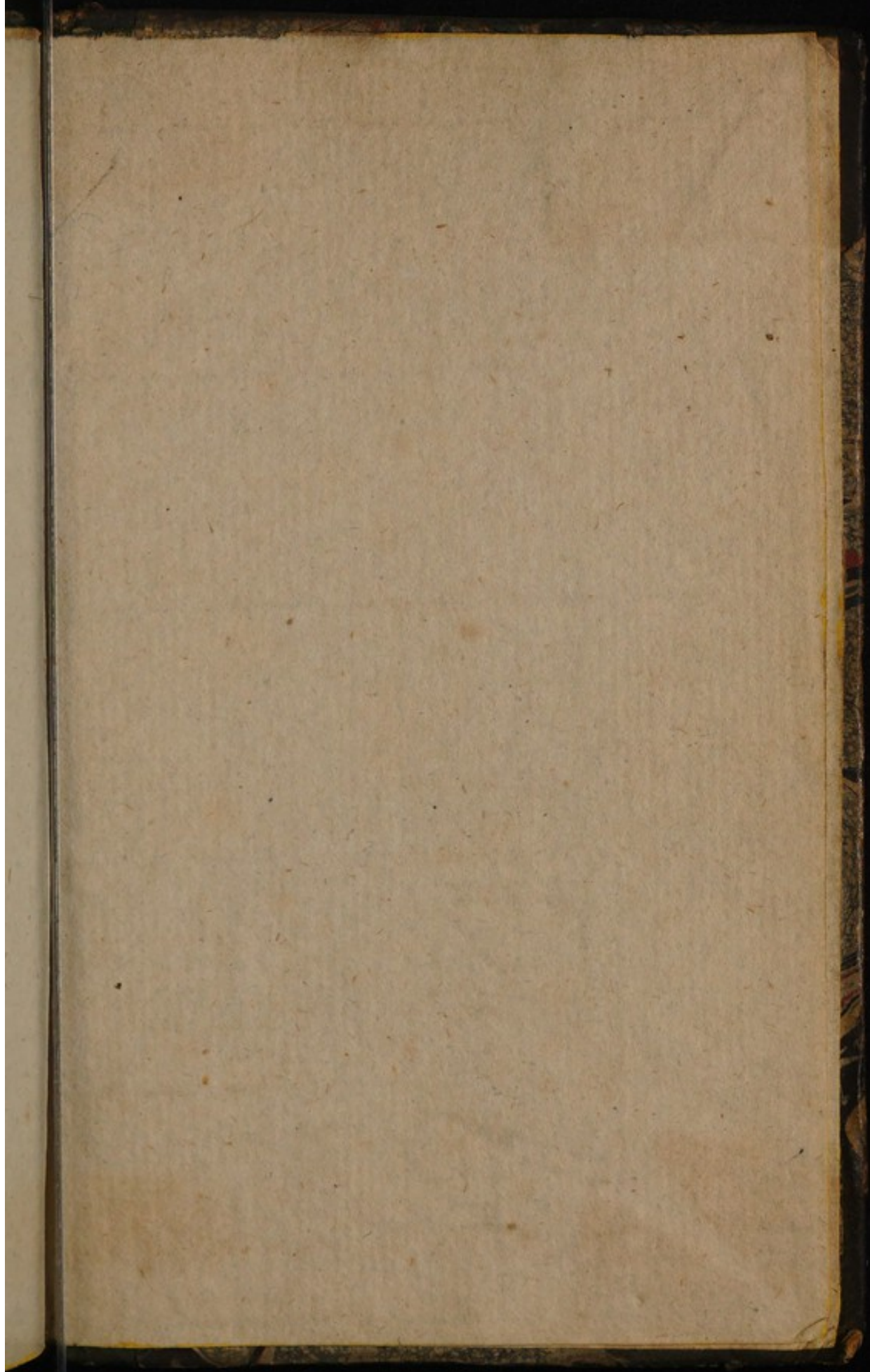
I have thus comprized all that is necessary to be said upon this matter, in as few words as I could, that I might not seem to mispend those precious minutes whereof your Majesty hath so few to spare: nor should I have presumed to have intrench'd on them at all, had not your Majesty already judg'd this subject worthy your Royal consideration, for the great Usefulness it may be of to Your *Forts on Land*, and Your moving *Castles in the Sea*; where also You are *Soveraign*, and the Advantage it must certainly bring to *Navigation*

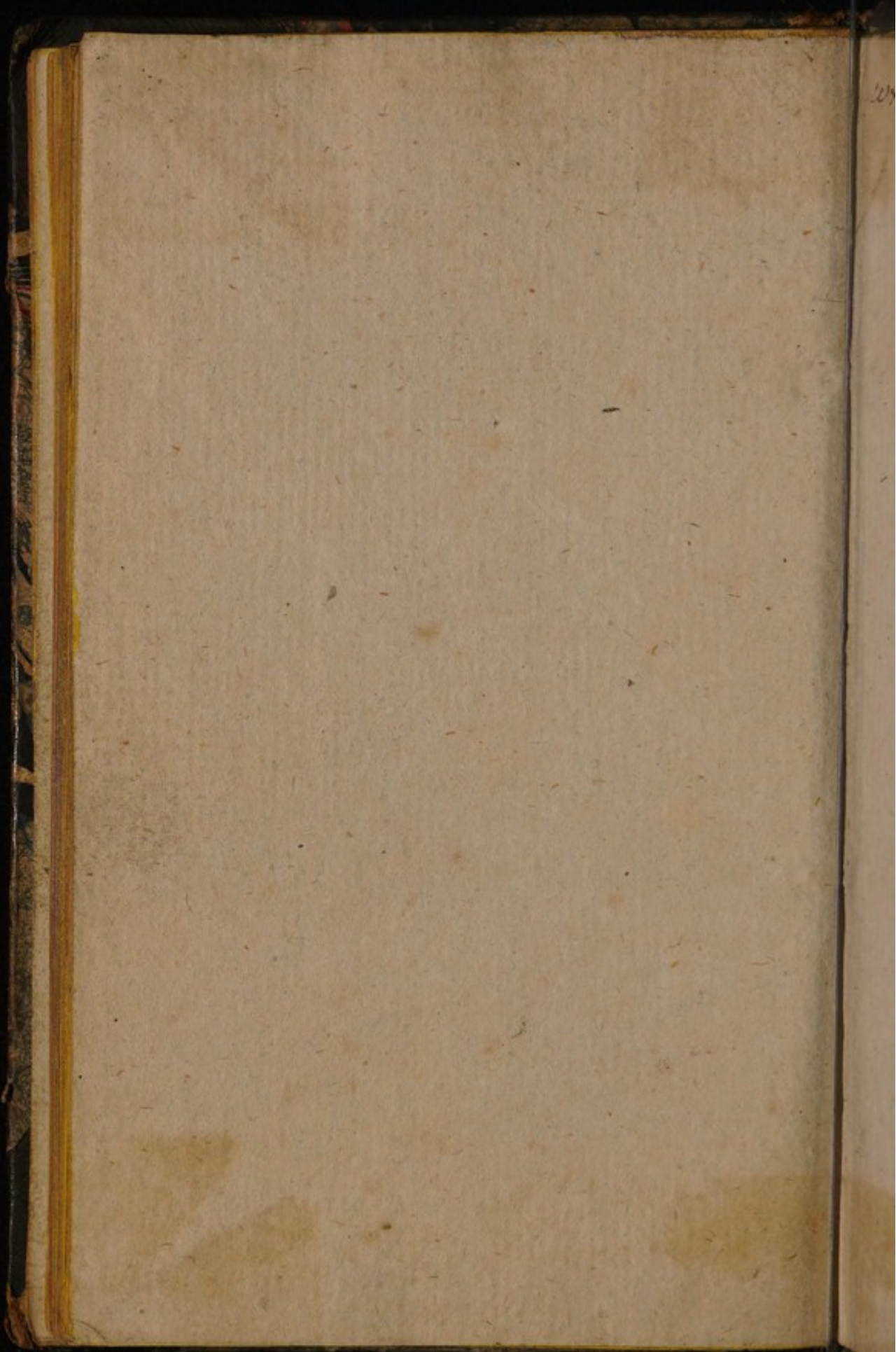
gation, that great *Medium* that Unites the far distant Parts of your Empire, and makes the whole World in a manner pay Tribute to the Throne of *Great Britain*. Those that see the Wonders of God in the *Deep*, when they find Relief in a Necessity, by which they must have perish'd without this Art; will praise your Majesties Goodness and Care, not only of your own People, but of all Mankind; and will justly account it a Miracle that you have raised a never failing *Spring* of *Fresh-Waters* in the midst of the *Ocean*.

F I N I S.









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