THE OPERATOR
For the TEETH.

The Proem.

Knowing, that it is the duty of every man, and especially of such as live under a civil Government, (where the general Interest always includes the particular) to contribute as much as he can (in his own station) to the publick Good: and also of what importance it is to all men to be informed of those benefits which by my Art they may enjoy; I am resolved to set down here, what I think most convenient for everyone to understand concerning the preservation, and melioration of his own Teeth; a thing indeed of little esteem among most people, but in truth of inestimable value for its many and important consequences. However, in so doing I shall acquit myself of my duty towards God, and Man; and provided my endeavours prove but beneficial to others (as certainly they will, if put in practice) it is all I desire, caring very little what opinion the Critics may have of me.

Of what utility this undertaking of mine may be to every body, will appear by the sequel of this Discourse: whereas the scope is to prevent the loss of Teeth, the use of which is so necessary in the preparing of food, that the want of such a help (if not supplied by strong dissolvants) hinders a true concoction of the Aliments in the Stomach: whence do proceed indigestions, and abundance of crudities very noxious to the body of man: as being the seed of most of those innumerable diseases, and infirmities whereby life is not only made troublesome to us, but also considerably shorter than it would otherwise be: which
which is so consonant to truth, that vulgar observation itself has turned it into a common proverb: For they use to say of one whose Teeth are naturally thin, that he is short liv'd, whereas the reason is that such persons do not chew their meat well: moreover the loss of Teeth renders the pronunciation both troublesome to one's self, and unintelligible to others: in a word the corruption and want of them is as great a deformity, and of as much prejudice to one, as any thing whatsoever can be.

SECTION I.

Of the Nature of the Teeth.

What men are wont to call Science, or the Cognition of any being, is by them commonly divided into two several parts: one whereof is termed Theoretical, and the other Practical. The first includes the reasons and causes of things, with the order and manner of their progress in coming to be what they are. The second regards only their properties, and effects, and what they are actually in themselves, without enquiring how they come to be so made, or thus qualify'd. As for example of those two branches of humane Learning, (in respect to Physical matters) when Philosophers go about to inspect the nature of the Loadstone: they search into its Origine, tracing out the several causes of its formation, even to their source or spring head: from whence they draw arguments for the solution of all the Phenomena thereof: whereas Mariners consider it only as a certain Stone that draws Iron to itself: having the power of communicating its properties to the said Iron: and which if not hindered (by its own gravity or any other impediment) will always turn one of its sides towards the North, and another diametrally opposite to the first towards the South, Which sufficeth them for the use they make on't
on't, in directing their courses through the Sea, without caring what may be the cause of so admirable virtues in the Magnet. Either of which constituent parts of knowledge, being separated from the other, cannot afford a full and satisfactory account of a thing: And therefore being about to treat of my Art, I should by consequence begin with its Theory; and discourse of the Elements, Principles, and first Rudiments of the Teeth: which make the Subject thereof unfolding the reasons of their constitution, and frame; and how they come to have several Roots, and to grow above the Gums; with whatever else may be the cause of their specific being: and thence pass to the Practice. But some Considerations obliging me to defer treating of the former Part, or Theorick, till a better opportunity, I design only to lay down in this Paper some of the most principal Points relating to the other: namely the Practical part of my Profession. In doing which, although it would be enough for us to speak of things, as in the State wherein we find them: yet for the satisfaction of the Reader, and out of a real desire to serve him; we shall not destitute our Discourse of such Reasons, as are necessary for the well understanding of what we shall say. So that although this Tractate will be imperfect as wanting many things, yet what it shall contain will be as useful and advantageous as if it were accompanied with all the rest. However, according to the method we have prescribed our selves here, we are to proceed next to the consideration of the Structure, and constitution or nature of the Tooth.

In Analyzing the Tooth, its Substance is not found to be uniform everywhere, but manifestly distinguishable into two different sorts of make: one of them being harder, whiter, and of a finer texture, and the other softer, more obscure, and of a coarser composition. The first makes up the head of the Tooth, or that part of it that stands out naked above the Gums; and the other its stump, or that part on't which is hidden within the said Gums. The exposed part of
of the Tooth, consists also of two different Parts: To wit, its stony Cover or Case, and its inward Substance; the first is as it were a hard Periosteum, that invests the head of the Tooth on all sides; lying on it much after the same manner that Enamel does upon Gold, or any other thing: This natural Enamel which I call the gloss of the Tooth, is of a far harder, whiter, more dense and lucid nature than the inward Substance lying under it: which for its several uses may properly be compared to the Cuticula, or Scarf-Skin, for like unto this it is bloodless, and altogether destitute of sense, serving to cover and defend the extremities of the Vessels contained within the inward Substance, from external injuries: And to render the Tooth more beautiful and strong. It has pores for the perspiration of the Excrements of the Tooth, which pores are not alwayes of the same Figure, or magnitude, but vary almost in every body. The said Gloss or stony Substance is likewise very various in point of thickness: from which differences, do arise the diversity of its colour in several men.

The inward part of the head of the Tooth; tho' inferior to its cover or gloss in brightness and solidity: yet its Substance is nevertheless much more compact, and clearer than that of the stump: and contains two several sorts of Pores, or small Channels both of a conical figure, having their Bases in the Concave Superficies of the Tooth, and their Apexes in the Convex Superficies of the inward Substance, immediatly under its glasy integument. Through some of which Channels, the blood is carried by many and very small Arterial Sprigs, from the middle of the Tooth to its extremity: and through the others the same blood is sent back again from the said extremity, towards its middle; by some capillary Veins as shall be said hereafter.

As to the Root or Stump of the Tooth; it is the darkest, most soft, and porous portion of its whole Substance: and yet is closer and harder than any other bone of the body, having also two sorts of
of Channels, but of different Situation from one another: for some of them have their Bases (like those above described) towards the cavity of the Tooth, and contain the branches of the Artery, that carry the blood quite through the Substance of the Tooth, to the Gums, as shall be explained in its place; but the others contrary to any of those already mentioned, have their Bases towards the external Superficies of the Tooth; the use of which last conduits, is to transmit to the Gums the blood that is returned to the Heart from the Membrane that invests the cavity of the Tooth. This rooty part of the Tooth, consists in the small Teeth of a single body: and in the big ones, is divided into two, three or four Branches, called Roots or Fangs: along the middle of each of these fangs, there is a little Channel that goes up to the head of the Tooth; where they are united together, and make but a single Cavity, whereinto are carried the Vessels of the Tooth: passing first through the hollowness of the Stumps. Every Tooth has its particular Cell or Socket within the Mandible: distinct from all the rest (by a thin production of the Jaw-bone, passing between the Teeth, from one side of the said bone to the other) wherein most of its stump is comprehended, the rest being encompassed about with the Gums.

SEC. II.

Of the Alteration of the Teeth, with their Remedies.

From the Consideration of the nature of the Teeth; let us now pass to that of the first step of their degenerating or mutation: for the better understanding of which, we shall take notice, that as our body is so made by nature, that it wastes continually by the dissipation of some Particles, separating themselves from its Mass, without intermission: (transpiring for the most part through the Pores of the Skin) and that if these Particles (which being divided from the whole become Excrementitious) are kept too long within
within the body, (by reason of the Opilation of the said Pores) it
causes Feavers, and great disorders in our blood, and vital as well
as animal Functions: So likewise from the substance of the Teeth,
are emitted certain Effluviums through their Pores, the transpira-
tion of which being hindered: (by the obstruction of those invisible
Passages) the Teeth become liable to all those Infirmities hereafter
to be mentioned.

The substance of the Tooth being rigid and inflexible, it cannot
be Opilated by contraction, or affription: as the Skin usually is but
only by the intrusion of some extraneous matter into its Pores, or
the incrustation of some slimy stuff upon its Supercicies: which is
done when we eat any thing of a glutinous nature, for then some
of its most viscous parts do stick, and cleave about the Teeth; and
by the mixture of some Tartarious Particles, coming from the
Lungs, the heat of the mouth, and a certain perrishick juice distil-
ling into the mouth, out of the Salival Ducts, is turned into a Stone
like substance, commonly called the Scales or Scurf of the Teeth:
These Scales grow thicker and thicker continually, and if let alone
will cover the Teeth all over, except just at the top where they
grind one against another.

Having thus taken notice of the production of those Scales, let us
now consider of what ill consequences they may be to the Teeth.
The first whereof is the Opilation of their Pores; from whence
proceed all the rest, for by that the exit of those Excrementitious
Particles before mentioned being hindered, it causes them to flag-
hate within the body of the Tooth; and there corrupting, do corro-
dode it by degrees: beginning first by the alteration of its colour
from white, to yellow; and from yellow, to black; and then fol-
lows the real decay of its substance &c.

The said humour is not only destructive to the Teeth: but ex-
tends also its malignity to the Gums; some of its Particles being
subtil enough (after a due Fermentation) to pass through the
Scales
Scales, and thence sliding between the Gums, and the Teeth, they eat clear away the Ligaments that tie them together; dividing them one from another, to the very Jaw-bone: which is sufficiently proved by the Excoration and rawness of the Gums, and their being so tender and loose from the Teeth where ever such Scales are found; especially if they be grown to a considerable thickness.

It happens sometimes that the usual Passages of this corrupted humour being stop't by the Scales; (when they are hard and close enough) is thereby repercuss'd and made to take its course towards the middle of the Tooth: Discharging it self therein between the concave Superficies of the Tooth, and the Tunicle investing the same; where it occasions very great pains, and at last by its fretting, and corrosive quality; gnaws and consumes quite away the said Membrane, as also the Vessels of the Tooth: and then passing out of the said Tooth, it diffuses it self through the Alveolus or Socket; where exerting its dangerous faculty, it destroys utterly whatever causes any connexion between the Teeth, the Jaw-bone and the Gums as the Periosteum, &c. after which the Teeth do consequently fall out for the most part found, and unaltered; except only in their colour, (which becomes yellowish) by reason that the aforesaid Excrementitious Humour being at first diverted another way, did not stay long enough under the Scales to occasion in them a greater detriment: All which incommodities to obviate; keep only your Teeth clean from Scurf or any foulness, and if they be already clean, you have but to preserve them as they are; but if not get them to be made so by some Artist in that Function, for otherwise if you imploy any body that is unskilful in it, you may chance to find the Remedy worse then the Disease: by reason that not knowing the dangers attending such an Operation, he may commit a great many and pernicious Errors; as the breaking
of the Film that unites the Gums to the Teeth, the taking away of the Gloss of the Teeth, &c. Soon after which the Tooth will lose its natural Lustre, and become yellowish, subject to take; and at last wholly perish away, the Gums being loose and broken, will likewise decay and fall away from the Teeth, &c.

Your Teeth being once clean, you may preserve them with this Composition: Take Magistry of Pearls, Powder of Coral, and Dragons-Blood, of each equal quantity, and as much Red-Rose-water as will incorporate them together; and make the Compound of a mean consistence, between hard and soft. I have to that effect a very excellent Dentifrice, which being used only once a Week will keep the Teeth clean and white: and by the constant using of it, fetch up their colour if lost: (tho' in a considerable measure) this is the same that in my Bills (to keep my Masters term, tho' improper as he well knows himself,) I call an Opist.

SECTION III.

Of the Corruption of the Teeth, with their Remedies.

Having in the former Section considered the Teeth, as at the beginning of their decay, in such a Condition as tho' they suffer some light change in their Accidents, yet their substance, form, and proportion, remaining still the same is only called alteration: that is in a state wherein indeed they are in environed, and assaulted by their greatest enemies; but yet in a capacity of being rescued, and preserved from their harms: but now we shall consider them as overcome by all those threatening evils, and really corrupted, in which case all that can be done is to prevent their total ruin.

And as there are some not so far gone but that they may still
still do good service; if timely helped, we are to use our utmost
endeavours to do it, which to effect, we shall in the first Place
clear their outside from all foulness: and then with a proper In-
strument, scrape off whatever is rotten within; washing them
very well afterwards with some convenient Liquid, to scour,
and smooth away what the instrument may leave behind: and
then if the Tooth is so hollow that it may be stop't, it must
be fill'd up with such ingredients as are neither corrosive, nor
ill tasted; and of a consistence firm enough to be used in the same
manner as the Teeth are; and to keep from wasting for a con-
derable time; but if the Tooth rots every way equally, so that
there is no cavity left, wherein anything can keep salt: it must
only be kept clean: taking care after every Meal, to pick out
any Meat that may get into it: and then wash it very well with
fair water; for if you neglect so to do, the Corruption of the
Rotten Tooth, will fall upon the others, and so infect all the rest.

With these Precautions, I would advise every one to keep
his Teeth as long as he can, although they were rotten to the
very Gums, provided only they do not Ake, by reason that their
Stumps filling up their Sockets, serve (like so many Wedges) to
keep the others straight and firm in their Places: but if they are
very bad, and within subject to Ake, it is better to have them
out; lest they should occasion an ill habit in the Gums, that
might be hurtful to the sound ones.

The Drawing out of Teeth is practised by a great many, but
perhaps understood but of very few; and I am sure that there
is a great deal more danger in the Drawing of a Tooth, (especia-
ly out of the lower Jaw, than most people are commonly aware
of: it is an Operation that requires to be performed with great
care, and Circumspection, and not so rashly as it is commonly
done.
When our decay'd Teeth are so far gone before we think of any Remedy for their preservation, that whatever we can do proves but fruitless: And that notwithstanding all our best endeavours they perish, and not quite away, or that some intolerable pain has made us to draw them: we are not yet to despair, and esteem our selves Toothless for all the rest of our Life; the loss indeed is great, but not irreparable; there is still some help for it; the natural want may be supplied artificially, and herein Art imitates nature so naively: that when the Successaneous Teeth (if I may so speak) are well set in, they cannot be distinguished from the Natural ones; neither in colour firmness nor proportion) but by them that know of it; being thus exactly fitted to their place, they will keep the next to them, and by consequence all the rest of that Jaw abundantly firmer and stronger then they would otherwise be.

The Advantages that may be attributed to the Artificial teeth are many; as that they keep the others fast, as we said just now, that they are of a great Ornament, and help Pronunciation extreamly, &c. But all that is with a proviso that they be well made, and according to the best Art: for otherwise they might prove quite contrary.

Besides this Artificial way of Repairing the loss of Teeth, there is another that may be called Natural: which is done by taking out the rotten Teeth or Stumps, and putting in their places some found ones, drawn immediately after out of some poor Body's head: which thing (tho' difficult) I know to be feasible enough, not only by my own Reason that tells me so, but by
by experience it self, as (to say no more at present) may be instanced in the case of a certain Lady, who thinking to have two Teeth growing one on the top of another, came one day to my Master to have one of them drawn: my Master told her that they were not two distinct Teeth, but only a double one; but the Lady being not satisfied with this, desired him to take out the Tooth, she had told him of, let it be what it would: the Tooth being drawn out, and proving as my Master had said, it was quickly set again into the Jaw; and with the use of some convenient and proper Remedies, became in few weeks to be as firm again as any of the rest.

And yet although the event of this Particular, had not proved so prosperous as it did; its ill success would not destroy in me the possibility of such a Transplanting, or Inoculation of Teeth: (if I may be permitted to use such Terms) that was not the only motive I had to believe it; and I have not inserted the Story of it here as an Argument to prove invincibly what I say; but only as a proper Example to render probable to others, what I know to be true: However I do not like that method of drawing Teeth out of some Folks heads, to put them into others, both for its being too Inhumane, and attended with too many Difficulties; and then neither could this be called the Restoration of Teeth, since the reparation of one, is the ruine of another: it is only robbing of Peter to pay Paul; But it instead of humane Teeth, there is use made of those of some Brutes, as Dogs, Sheep, &c. In such case I do not only approve of it as lawful and facile, but do also esteem it as very profitable, and advantageous: only care is to be had, that the thing be undertaken, and carried on by one that at least knows something of Anatomy: and has a right Sense of the thing to be done: being furnished with whatever is necessary in an Operation of that nature.
And that (if my Opinion may be any wise serviceable in such an attempt) I may contribute something towards the improvement of so useful an Invention; I think one is to proceed in it somewhat after this manner. First I would choose an Animal whose Teeth should come nearest to those of the Patient; as a Dog, a Sheep, a Goat, or a Baboon, &c. and having tied his legs together, I would fasten his head in some convenient place, so that he might not stir in the least, and by some proper means keep his mouth open, as long as I should have occasion: that done, I would open the Gums round about the Tooth to be taken out of his head, not only to the very Jaw-bone, but as far between the said Bone and the Tooth, as the finest Instrument could go; leaving a very little portion of the Gums about it, and then having used the same circumspection, in dividing the Patient's Tooth from the Gums, and the Jaw-bone, I would draw it forth, and put immediately in its place that of the Brute; fastening it very well and strewing between the other Teeth: and then with the use of suitable Remedies, I do not question in the least but that it would unite to the Gums and Jaw-bone, and in a little time become as fast as any of the others, which performance might properly be termed the natural Restoration, or Renovation of Humane Teeth.

SECT. V:

Of the Tooth-Ake, Looseness of the Teeth, and decay of the Gums, with their Remedies.

The Tooth-Ake is occasioned many and very different ways, but that I may render what I have to say upon it, as perspicuous, and intelligible as I can: I think it very convenient
ent we should take a special notice of the Vessels that come into the Tooth: and of their respective Functions. The first and chieuest whereof is an Artery whose Office is to bring directly from the Heart, that hot and spirituous blood, out of which (although it is not the general Opinion) the Tooth is at first made: (as well as the rest of the whole body) and ever after preserved and repaired by the supply of nourishment, and vital Principles it affords continually: to this effect the whole Artery divides itself into an Infinity of Small Branches, which being disseminated throughout the whole Substance of the Tooth, distribute to each part as much of their blood as is necessary to make up the incessant loss they are subject to: and the rest is returned through innumerable hair-like Veins into the great ones, and thence to the Heart again, but in two different manners: for the superfluous part of that portion of the blood, that is carried by the Capillary Arteries to that part of the Tooth standing above the Gums; is sent back again through some Capillary Veins towards the middle of the Tooth: where uniting together they make but a single Channel, and this is it we commonly call the Vein of the Tooth; which we shall here take for its second Vessel. But the remainder of the blood, that goes to the relief of that part of the Tooth that is within the Gums, passing quite through the Substance of the Tooth, is carried by the Capillary Veins to the Veins of the Gums, Cheeks, and Lips; and hence it is that whatever pain is at any time occasioned in any of those parts, (either by bruise, excessive heat, or cold, &c.) comes to be soon after communicated to the Teeth.

The third and last Vessel of the Teeth is a Nerve, one of the extremities whereof is expanded through the Membrane that invests the Cavity of the Tooth, and that, that contains its Vessels: and the other is rooted in the Brain, from whence it takes its
its Origine, and where the Animal Spirits being elaborated are thence sent by the Nerves to all the parts of the body, to administer sense, and the cause of motion to them, &c. although in some (as the Teeth) the faculty of motion is not exercised.

From this Consideration of the Vessels of the Tooth, we may gather the following Reasons of its dolour; as first, that it either through the too great quantity, or ebulation of the blood, the Artery is so Dilated and swoln, that it fills up the hole at the end of the Stumps where it enters the Tooth; and consequently so compresses the Vein going out the same way, that the Circulation of the blood is thereby hindered: the continual flowing in of the blood, will extremely puff up, and distend the Membrane that contains the Vessels; and consequently cause a great pain in the Tooth, which will last, till either the preternatural state of the blood be changed, or that the Arterioles which we have said to pass quite through the Rooty part of the Tooth be so stretched, and widened, that by them the blood may be discharged into the Gums, Cheeks, and Lips: where it will then cause a swelling, greater or lesser according to the quantity of the superfluous blood.

And if at the beginning of this Disorder, when the Vein is first Impeded in its Function, the motion of the blood is so rapid, and its influx into the Tooth so impetuous, that before it can make its way through the small Arterial Twigs, into the Gums, it does extremely extend the Coats of the Artery, the Interstices between their Fibers will thereby become wide enough to give passage to some of the thinnest parts of the blood; which gathering at the end of the Root between the outside of the Artery, and the common Coat investing all the Vessels, will there putrifie, and cause a great and very lasting pain in the Tooth; during which if the Tooth be drawn, the said gathering will appear at the end of its Stump.
Stump like a little Bladder. For the cure of this sort of Tooth-ake, besides the application of other necessary remedies, the bleeding of the gums is very convenient.

Furthermore, if that portion of the blood, which is diffused through the substance of the Brain for the production of the Animal Spirits, is so depraved that all the listing it receives, though the hidden Meanders, and recesses of the Brain, cannot clear it from its impurities, and that notwithstanding all the contrivances of Nature it is deposited into the Ventrices of the Brain, (tho' under another form yet) still impregnated with its ill qualities: such sort of Animal Spirits, being compounded of Heterogeneous parts, if not timely discharged of their malignant, and offensive Corpuscles, (through the usual Emunndaries) will either by their Fermentation in the Ventrices of the Brain, cause a Head-Ake; or by the oppression of its Pores, cause a giddiness, or else passing out of the Brain into the Nerves, will by their irregular motion and preternatural extension of the Coats of the Nerves, and other Tunicles, breed a disturbance in all the parts they go to: but more particularly in the Teeth in which they always excite very great pains. For discharging the peccant humour, between the Membrane that invests the inside of the Tooth, and that that incloses its Vessels, it occasions a perpetual torment in them; till it be expelled from thence by Transpiration. This second kind of Tooth-ake, may be cured by Sternutation: and the Application of Aperitive Remedies, to open the Pores of the affected Tooth. These are the two General causes of the Tooth-ake, all the rest proceeding from them, some few excepted.

The looseness of the Teeth, comes most commonly from the decay of the Gums, which are subject to many infirmities, proceeding for the most part from those things that occasion the Tooth-ake, and putrefaction of the Teeth; for sometimes there will
will be such an Affluence of blood from the Teeth, into the Gums, that their Veins being not able to contain it, are thereupon broken; shedding the blood between the Gums and the Teeth: where gathering together it corrupts, rotting away all the flesh from about the Teeth; otherwhiles the Excrementitious humour, that exsudates out of the Teeth, falling upon the Gums, eats them away by degrees, &c. But above all other things the Scales, and foulness of the Teeth are very prejudicial to them. All which infirmities to avoid, you have but to keep your Teeth and Gums neat and clean from any foulness whatsoever; as has been already said in the foregoing Sections: preventing any preternatural collection of blood, or any other humours within the Gums. But if the mischief is already done, that is if your Teeth be really loose, and your Gums wasted, you must have recourse for their recovery to one well versed in those things: For to prescribe you here any form of Remedies, would be to no purpose, since the same thing cannot be good in all cases, and that without the perfect knowledge of the cause of the Disease, and a right method in applying suitable Medicaments, (which commonly is understood only by Practitioners in those concerns) it is impossible ever to perform the cure of any Distemper.

I might have told you at the beginning of this Section, where I spoke of the Vessels of the Teeth, that their Artery comes from the Carotids, the Vein from the Jugular, and the Sinew from the fifth pair of Nerves: but if you are skilled in Anatomy, you know it better than I; and if not, my telling of it to you would signify nothing at all, unless I should in the same time, give you an accurate Description of all those Vessels: tracing them from their Origine, even to the very last of their Divisions, and furtherst Extremities; which would be improper in this place.
Sect. VI.

Of Children's Teeth.

Having hitherto spoken of the Teeth in reference to adult persons, and such as are part of childhood: we shall employ this last section of our discourse, to explain as succinctly, and with all as clearly as we can, what is necessary to be known touching their growth, and change in children; a thing of no small consequence, since the life of infants is therein so often concerned.

The child being born remains toothless till he is about five or six months old: at which time his two foremost teeth in each jaw begin to appear; without keeping any constant order of precedence: sometimes those above coming out first, and sometimes those below. After them follow all the rest successively in both mandibles: so next to these come the four other incisors, the four canine or dog-teeth, and the first eight molares: (which are properly the double teeth) and then come the four biggest teeth of all, which may be called quadruple teeth, as being about three times bigger than the small ones: and after that the eight last teeth do follow, which in respect to the incisors may be termed treble teeth: but these treble ones usually vary very much in time of growth, for it is but rarely that they all come forth in the same year; the four last of them seldom coming out before the one or two and twentieth year of our age: for which reason such teeth are called by some teeth of wisdom; because that by that time we should have a full use of our rational faculty, tho' God knows how often it proves to be true.

The eight incisors, and the four dog-teeth come the first year: the eight double teeth the second year, and the four quadruples, with the four first treble ones the third: during the time of their eruption, and especially when the four quadruple ones break
break forth out of their Sockets, Children are subject to Feavers, and great alterations, which weakens them extremity; and often puts an end to their days, which comes to pass most commonly, for want of help to facilitate their Issue out of the Gums.

And as I look upon the knowledge of Childrens Teeth, as a subject properly belonging to my profession; so I think my self oblig'd to amend, amplify, and render it as conducive to the preservation of the life, and health of Children, and to the preventing of all those Infirmitie where with they are afflicted, (upon the account of the first coming, and shedding of their Teeth) as my weak endeavours can make it: And therefore I will to that end deliver here in few words, what reason and experience have taught me concerning the same; Proceeding thus,

In the first place I would advise such as may be concerned in this affair, to take a special care in observing when the Childs Teeth begin to trouble him: which (besides his frowardness, and excessive crying) may be known by his Salivation or Drivelling (as Nurses are wont to stile it,) and the Inflammation, and swelling of his Gums; and as soon as you perceive it to be so, you are to wash his mouth now and then with the following mixture: Take seven or eight as new Figs as you can get, and boil them in a pint or more of Whey, till they grow very soft, and then squeeze the Whey and as much of the substance of the Figs as you can through a Cloath; of which liquor take half a pint, of Hony of Roses, and Sirrop of Violets of each half an ounce, and three or four Spoonfuls of Plantain-water: mix all together and keep it close in a Bottle. The best way to use it, is with a stick of Liquorish beaten at one end into small threads like a Comb brush, or little Broom, with which being dip'd in some of the said Liquor, you shall wash and rub the Childs Gums; (especially where they are Tumified,) at least five or six times a day, continuing so to do, till you perceive the Gums to grow white above the Tooth: (which
is a sign of great pain in that part, and that the young Tooth will in a little time break through the Gums) and then take a Lancet, or a very sharp Pen-knife, and divide the white place, cutting it down to the head of the subjacent Tooth, with two Incisions crossing one another, at the center of the white spot; continuing to use the mixture as is abovesaid, till the Tooth appears above the Gums: observing to use the same method at the coming out of every Tooth, which you may know by the foregoing tokens.

Now the Teeth being all come out, (except only such as remain latent within the Jaw, till about the two and twentieth year of one's age) they keep firm and strong till the Child is a matter of six or seven years old: and then most of them grow loose, and a while after are cast clear out: the treble Teeth never change the Quadruples very rarely, but the Incisores, the Dog Teeth, and the double ones always do; sometimes whole, (and then the second Teeth, or those that are to succeed them are a long time before they grow up again;) but most commonly their head only comes off, the other part remaining still for the making up of the next Tooth; like unto the first production of a Vegetable Seed, or tender Sprig of a young Plant; for as the upper part of this being withered in the Winter following, by the rigorous cold of that Season, drops off in the next Spring: (by reason that its texture being yet loose, and less firm, the Pores or Sap carrying Vessels are over much dilated, by the great afluence of the Nutritive juice: and so give admittance to some indigesteds, and grosser Particles than is convenient for the nourishment of the Vegetable: which Particles being irregular, and inactive their motion is soon stop'd; whenas a great cold intervening compresses a little the young Plant round about, so that they are conceal'd, and become fixt in their Ducts, or leading Pipes, whereby that part being deprived of its due nourishment fades away, and dries up,) and is succeeded by a new Sprout shooting out of the Stump of
or remaining Part: So likewise the young Teeth coming into the cold Air, when they are yet tender, and left solid: Tho' of them that are more susceptible of Alteration, and more exposed to the inclemency of the Weather; (as must be those before, which by reason of their smallness and situation cannot but be more subject to Adventitious Accidents,) are thereby chill'd and repressed, and their Parts thrust nearer one another; and driven back towards their center, from whence the substance of the Tooth becoming closer, and the intervals between its parts narrower, and interrupted in several places, by the irregular motion of some of the minutest of those Parts, (which by reason of their unsteadiness, and fluxibility being disposed to advance and obey the action of external Agents more than the others: do move disorderly and spoil the structure of the rest,) the small Veins and Arteries therein dispersed, will become so extremally compressed, that the blood they contain (which in Children is most commonly gross and impure, as is apparent by their stupidity, and filthy Scabs; as well as by that Feaverish Disposition, they are always inclined to; which Argues a great disparity between the parts of their blood,) is thereby stop't in its course: and detained in them where the grosseness of its parts, and their incumbering Figures will soon dispose them to rest, and remain intangled and coagulated together.

If you chance to reflect upon what I say, when I ascribe the great agitation of children's blood, and its being quiet and fix't in their Teeth; to the same cause, viz. Its foulness, and the in-congruity of its Parts, you will perhaps be as angry with me, as the Satyr was against the Traveller of the Fables, for his blowing hot and cold with the same breath: But if you consider it a little more attentively, you shall find that this, as well as the said Apologue may easily be reconciled with Reason.

Furthermore, the blood coming from the live part of the Tooth, to enter the other; and being hindered thereof by the nar-
narrowness of the Passages, and the resistance of the condensed
blood: is upon that necessarily determined to imploy the force
of its motion round about, against the parts lying immediately be-
tween the dead portion of the Tooth, and that which is alive; the
which it consequently loosens by degrees, and at last breaks them
all asunder; separating thus the live body of the Tooth, quite
from its dead head: and the space left between them permitting
the Trunk to grow, it shoots a new head; which rising above the
Gums, thrusts out the old one, becoming a perfect Tooth in its room.

But if in the mean while, through the too great adherence of
the dead part to the Gums, the other is depressed, or retarded
from growing; and by consequence is detained under the former
too long; some of the broken Particles remaining between them,
will corrode, and eat holes in the new head of the Tooth; and
so it comes out already perished: which to prevent, the first Teeth
must be drawn out as soon as they appear any thing loose.

Moreover, it happens sometimes, that the new head of the
the Tooth is nourished, and increases so fast, that being obstructed
by the too great connexion of the old one, to the adjacent parts,
from advancing in its right course; it turns aside, and makes its
way through either the inside or outside of the Gums; and so it
grows Bifling, and out of Rank. This defect is remedied by draw-
ing out the superfluous Tooth, and the use of some convenient
means to bring the new Tooth into its place: which is very ease

to do if undertaken at first, but otherwise a great deal more diffi-
cult; and especially if the two next Teeth are approached so near
one another, that it cannot be contained between them, without
being lessened, or the others put further off from each other.

Note, That in drawing out the old, or sucking Tooth, a great
care is to be taken not to hurt the new one, lying under it.

Note further, That every thing is not capable of the same per-
fecition, and that as there is no rule without some exception, so
when
when I have asserted such and such things to be improvable to such a degree, it is to be understood for the most part and in general, not denying but that it may happen otherwise in some particular cases: but I shall always deal candidly with everybody; never undertaking but what I can do according to agreement. And if anyone will be pleased to come to my Chamber, he may have my Advice (concerning any thing that belongs to my profession) gratis at any time.

Advertisement to the Readers.

Gentlemen,

Although I have offered nothing in this Paper, but what is according to my own experience, and the best of my knowledge: yet I will not say but that I have been deficient in many things, and have committed a great many Errors in the management of my Subject; but if you consider that I am the first (as far as I know) that ever wrote any thing of this nature; and withal, what is to be expected from one in my Circumstances: I hope you will be more ready to excuse my faults: however, if what I have done is acceptable to you, I intend in a second Impression of this (indeed) small Treatise, to Correct, Illustrate, and Augment it, to its full proportion. In the mean while I would advise you, to make use of what is here presented you, by your very humble Servant,

Charles Allen.

FINIS.

The Price is Six-pence.