

Plan and specification of the oeconomical, salutary, and distillatory machines, / invented by Bartholomew de Dominiceti, M.D. of Chelsea, patentee. As it is specified and inrolled in the High Court of Chancery, according to Act of Parliament.

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PLAN and SPECIFICATION

OF THE

OECONOMICAL, SALUTARY,

A N D

DISTILLATORY MACHINES,

INVENTED BY

BARTHOLOMEW de DOMINICETI, M.D.
of CHELSEA, Patentee.

As it is specified and inrolled in the High Court of Chancery, according to
Act of Parliament.

1700



(C O P Y.)

To the King's most excellent Majesty.

THE
H U M B L E P E T I T I O N
O F

BARTHOLOMEW DE DOMINICETI,
Of CHELSEA, in the County of MIDDLESEX,
PROFESSOR OF PHYSIC,

Humbly Sheweth,

THAT your Petitioner has, with great Labour, Study, and Expence, invented and made a Fire-Stove, with Boilers, Pots, &c. adapted to the same; which together form a Machine called by him, *The Oeconomist*; with other Machines to be used, united or separate, called *Salutary* and *Distillatory*; which will be of great Utility to your Majesty's Subjects in general, and particularly to Chemists, Distillers, and Persons on board of Ships, in Garrisons, Camps, Hospitals, Prisons, Public Halls, Colleges, &c. That this Machine will, with the same Water and Fire, and at the same Time, boil from one to more than twenty different Sorts of Flesh, Fish, and Garden-Stuff, each separate from the other, so as to obtain from every one its separate Juice, Liquor, or Gravy, without any one partaking in the Smell or Taste of the other: And at the same Time, and with the same Fire, make Sea-Water fresh; foul, putrid, and magotty Water, clean and sweet. That this Machine will also, if no Water can be procured, boil the same Variety of Flesh, Fish, or Garden-Stuff, and extract from each its separate Juice, Liquor, or Gravy as before. And the same Machine will also, while the said Variety of Flesh, Fish, and Garden-Stuff is boiling without Water, roast at the same Fire, four or more different Pieces of Meat upon one Spit, and any Joint of Meat, or other Thing equally large, upon another Spit; turning both Spits by the same Jack: And bake any Kind of Bread, Biscuits, Meat, or Pies, in an Oven; at the same Time that the Vapours and dry Fumes of Herbs, Flowers, Seeds, Roots, Barks, Gums, Balsams, Minerals, or other medicinal Substances, may be easily conveyed into one, two, three, or more Rooms or Beds of the House—Prisons—Hospitals, Lazarettes—or Men of War; and also applied to any Degree of Heat required, upon any Part of the Body, to cure and preserve from contagious and dangerous Diseases, &c. &c. &c. &c. &c. In Regard therefore of the great Advantages arising from the said Machine, and that your Petitioner is the first and sole Inventor thereof; he most humbly prays your Majesty to grant unto him, his Executors, Administrators, and Assigns, your Majesty's Royal Letters Patent, under the Great Seal of *Great Britain*, for the sole Use and Benefit of his Discovery or Invention, within that Part of your Majesty's Kingdom of *Great Britain*, called *England*, your Dominion of *Wales*, and Town of *Berwick upon Tweed*, also your Colonies, and Plantations abroad, for the Term of Fourteen Years, according to the Statute in that Case made and provided.

August 21, 1770.

And your Petitioner shall ever Pray, &c.

BARTHOLOMEW de DOMINICETI.

N. B. In Consequence of the above Petition, his Majesty was most graciously pleased to grant his Royal Letters Patent, unto Doctor *Bartholomew de Dominiceti*, his Executors, &c. &c. for his sole Use and Benefit of his *invented Oeconomical*, &c. &c. Machine, of which the following is the Plan and

C H A P. I.

TH E Stove of this Machine is of cast Iron, about two Inches thick, a Foot wide, and three Feet high ; a greater or smaller one can be made, and also of wrought Iron.

A A, an Opening, through which is introduced Wood, Coals, or other Fuel ; A B, the Hearth ; B A B, a Hole, through which a great Brass Cock goes through the Stove, meets another Hole in the principal Boiler, where it screws C C ; when this is placed in the Mouth of the Stove A A, the Rings cast on Purpose with the Machine to support several Ovens D D, that are joined to the said Stove, are marked by two Afterisims, * *.

Fig. I.

Two great Copper Ovens made like Kettle-Drums. These Ovens D O D O, are always properly warmed by the Heat proceeding from each Side of the Stove, to which they are closely joined. There has been made an Opening near the said Ovens, in order that the Heat of the Stove A A might penetrate the more. E E, the two great Doors or Mouths of the Ovens D O D O : this Way is introduced what is generally baked, such as Bread, Meat, Pastry, &c. F F, Gridirons. Every one of the Ovens D O D O contains generally three Rows of these Gridirons ; they take all the Circumference of the Ovens ; any Thing may be put upon them by the Means of an Iron Peel, like those R R, that serve to put the Bread in the Oven ; and when these two great Doors E E are well shut, every thing is baked in Perfection. These Gridirons are so well contrived that they may be taken out or put in at Pleasure. When they are out, there remains near the Mouths of both Ovens a Piece of Iron G, that serves to support the Spit when any Thing is to be roasted. Several Rings on the opposite Side of the Ovens D O D O, facing the Doors E E, bear the Point of the Spit. Two Spits together may easily go round in the same Ovens, and there wants but one Jack, the moving Part of which is fixed to the Mouth of the Chimney Tube, where the Smoak turns the Spit. N C K are the two Lines to move regularly the Spit. The Holes that are at the Doors E E help the Motion of the Spit, but you must take Care to have these Doors very close. G I G, the little Doors or Windows to look into the Ovens and give Air to them at Pleasure.

Fig. II.

The great Iron *Regulator* is placed between the Oven F X F and the Stove, to increase and diminish the Heat as is required.

Fig. III.

Contains four other Copper Ovens, M N M ; their Use is the same as that of the others, except in baking Bread ; they are placed in Front, and each of these Ovens at the upper Side of the Stove A A, has great and small Holes to answer the same Purpose as in the two Ovens D O D O ; only one or two Ovens made of cast or wrought Iron, Bricks or Tile, will be more convenient.

Fig. IV.

The principal Copper Boiler, when taken out of the Stove A A, is divided in four separate Pieces, and the same Pieces are grafted into one another to make but one again, whenever it is necessary to place it on the Stove, that all the Body of the Machine may act upon it.

Fig. V.

The three Pieces belonging to this Kettle are the following.

The first is the Pot X, the second is the Cover H, and the third is a little Cover N, to stop the Hole on the Top of the Cover H, which belongs to the Pot X. This principal Copper Boiler X H N, to which belongs the Pot X, Cover H, and the little Cover N, appears at first Sight as a common Pot, which is covered and placed at the Mouth of the Stove.

Whoever has a Mind to see the Form of the Boiler, may take it out at Pleasure, (as it must be the Case if you want to clean it) and replace it very easily.

We shall explain now the Mechanism of this principal Boiler. Its Breadth and Depth are measured on the Diameter of the Fire Stove, where the principal Cauldron is fixed, and meets at the Hole C C, that goes through the Stove A A and corresponds to a similar Hole C C at the Bottom of the principal Boiler X H N; into this great Hole enters the great Brass Cock, both in the Stove A A and in the great Boiler X H N.

Fig. VI.

Z R H, this is the great Cock that screws in, and serves to draw the Water out of the Boiler; it is surrounded by a Copper Edging O O through all the Circumference of the Stove A A, so that it keeps it hanging over the Mouth Z Z heated by the Stove, and at the same time shuts, and keeps it so close, that the Smoak cannot get out, and therefore concentrates itself again; gives no Trouble to those who take care of the Economical Machine, and goes at last to find its proper Passage through the Tube R K A. On each Side of this principal Boiler, whose upper Part, that has the great Edging O O, remains out of the Stove, are seen two Conduits I I; they resemble two overjet Funnels, and are supported and strengthened by two wide openings made in the Shape of an Ox's Eye on each Side of the principal Boiler, each of these Conduits is furnished with a Tube that serves to emit the Vapours exhaling or distilling from the Water contained in the great Boiler.

By the means of these Vapours, one may boil any Thing contained in the Pot X, which appears over the Mouth of the Boiler.

There are other Tubes annexed to the two Conduits I I that convey the same warm Vapours to the Tin Vessels, which shall be mentioned in a proper Place.

The Pot X is the Second Piece belonging to the principal Boiler; and any Thing may be cooked in it with or without Water. This Pot is taken, if one may say so, from the Belly of the principal Boiler, in which is confined, as it has been said, by the Means of two Rings B Z B with the same Ease as the Boiler is drawn from the Mouth of the Stove, and both may be replaced with the same Ease. In order to conceive how closely are fixed the Boiler X H N and the Pot X, it is necessary to observe, that on the Top of the principal Boiler there is a Circle two Inches wide, well supported underneath. Between this Circle and the Edging, there is a Space of some Lines that goes round all the inside Circumference: and as on the Top of the Pot X there is likewise a Circle of the same Bigness, and made exactly like that of the principal Boiler, which remains under it, when the Pot is fixed in the Belly of the Cauldron; so this Circle gets into that of the principal Boiler, which is strengthened underneath, and occupies the

the outward Circumference of the said Pot. By this Method it fixes, and in a certain manner seals up all its Surface by the Means of the Edging that covers both Circles. The well-contrived Wideness of the Edging, that covers the two Circles, gives a Diameter of two or three Inches void Space to all the outward Circumference of the Pot X and the inward one of the principal Boiler X H N, where the above-mentioned Pot remains fixed. This void Space leaves room enough for the Vapours or distilling Waters to perform the intended Decoction of Meat contained in the Pot. Besides, as there is no Place where the Vapours can exhale, so great is the Exactness of the Dimension that shuts closely the principal Boiler, it is evident that these Vapours thus confined, recoil with greater Force towards the Conduits I I, for the Heat is a great deal more violent, and consequently they act with more Briskness and Effect for boiling the Things contained in the different Tin Vessels, where the Vapours pass by the said Conduits from the principal Boiler. Nothing remains now, but to show the Distance from the Bottom of the Pot X to the Kettle X H N. This Pot thus fixed in the principal Boiler, has, between its Base and that of the Boiler, about a Foot in depth above the Water introduced into it, which may be renewed when consumed, by the Means of a large Pipe T which is stopped by the Cover V.

This third Piece belongs as well as the Pot X to the principal Boiler, is the Cover N, it embraces all the Circumference of the principal Boiler, and keeps it close together with the Pot which is fixed in its Belly. This Cover has two Handles X X X to take off and put on at Pleasure. Fig. VII

P, this last fourth Piece is the little Cover, designed to shut the Opening that is on the Top of the great Cover N. Through this Hole you may know whether the Meat is done or not. Fig. VI

D B D B, Two Copper Kettles with a round Opening, marked by W, that goes across their Centers from Top to Bottom. The Form of these two Kettles does not resemble in the least that of the principal Boiler X H N; besides that the Cut is very different, no Pots are introduced. As for their Use, it is the same as that of the principal Boiler, by the Water they are filled with, to supply a sufficient Quantity of Vapours for thirty Tin Vessels, and more, to which they correspond by four different Tubes diametrically placed at their Sides, as are the two ones joined to the Conduits I I of the principal Boiler. Each of these Kettles has a Cock, and a Hole to introduce Water when wanted. The Heat of the Chimney Tube makes the above-mentioned Kettles boil extremely fast, and emit the Vapours. When these two Kettles are thus prepared by the Heat of the Tube, as there is on the Top of them a kind of Capital W E W that covers them, the Vapours come out at the Extremity of it, and pass through the four different Tubes L L L L exactly like those of the Conduits I I. When this Capital is on, the Opening may be shut with a common Cover. Fig. IX

R C Y is a Copper Vessel with three Cocks, its Belly is somewhat larger than that of the two Kettles D B D B, it is above them in the same way of the Stoves Chimney A A, as may be seen in the Plan of the whole Œconomical Machine: At the Orifice of these Works C C C must be fixed a little Tin or Leaden Pipe, that penetrates in the perpendicular Part just within the Tube X X X X which is seen in every one of the three Kettles, so that when the Water boils in those three Kettles, it exhales and makes the Vapours fly up to the Tin Vessels M M, and in that manner Fig. X.

certainly diminishes itself; to make therefore these Vapours continue, the said Vessel R C Y must be always kept almost full of Water, like that of the Three Kettles, that by falling at the Entrance into the Tube X X X X it runs boiling in the Three Kettles, which does not retard in the least the Effect of Evaporation or Distillation, which co-operates in the Tin Vessels M M. To render perfect and sure a continual Operation with these small plain Kettles, with very little Fire of the Œconomical Machine, it will be necessary to have a Cistern or Tubb, or any other Vessel full of fresh, salt or putrid Water, fixed above the Level of the Vessel R C Y, and by the means of a proper Tube, make it fall in the Entrance of the large Opening L O R of the said Vessel R C Y, it will run very hot without stopping the Ebullition of the other, nor is its Vapours that penetrate by the Tubes L L L L into the Thirty Tin Vessels M M in which you may boil extremely well any Meat or Greens, and draw out of them their Juices and Liquors, sweetning and purifying at the same Time impure Waters. As in the Invention of the Œconomical Machine, one of the most important Views has been to render it beneficial to Mankind in general, we have endeavoured to prevent an Inconvenience, which, although very rare, may possibly happen, and that is, for want of fresh Water, as for instance at Sea, or somewhere far from Fountains or Rivers, or in case of a general Drought. This may be prevented by purifying and rendering drinkable any sort of corrupted and putrified Water, without altering or hindering the Decoction of the Meat contained in the Thirty Tin Vessels, the same may be done with salt Water, it becomes sweet and drinkable by simple Distillation, without the Use of Soap or Pot Ashes, &c. But again, if there should be no Water of any kind, Urine itself alone will serve as fresh Water. We must observe, that in all these Operations, if it should happen, that the Addition of cold, warm, or boiling Water should become useless, you have only to stop the running of the Three Cocks that are placed at the Three Sides X X X X and that of the above-mentioned Vessel or Tubb.

XI. R S K S is one of the Outside Flanks of the Border, on which the Thirty Tin Vessels are disposed, and placed in a proper Order; but this grand Apparatus is not necessary: in a Man of War, Camp, Hospital, &c. the Vessel or great Pot should always be wider than the other Pots or Vessels that are placed on the opposite Sides. The above-mentioned Border, and the whole Body of the Œconomical Machine is so well contrived, that they may be easily taken to Pieces, and this is for the sake of Convenience, to move it from Place to Place.

XII. F M B A is one of the Vessels or Pots of the Œconomical Machine, which is taken to Pieces for the sake of examining it. We shall show now the Difference between these Vessels, and the great Boiler, that is fixed in the Mouth of the Stove A A. This Vessel or Pot contains the same Number of Pieces that are in the principal Boiler X H N; that is to say four, it opens, shuts, and separates at the same Time; the Mechanism is the same; but as this Vessel, and the others like it, are never put on the Fire, the Part that grafts into the Mouth of the principal Oven, is taken away as useless. This makes it not half so deep, as you may see by One of these Vessels in this Figure. We have added a Handle M M in order to render it more convenient.

XIII. Q O Q are Three Pillars or Iron Supports that are to be made in Three Degrees of Diminution; that is to say, at the Bottom, where they screw in their Base, they should be of an equal Thickness, and about Two Foot high from the Base; Two Feet higher, thinner, and still thinner, the more they rise, to facilitate a

Passage between the large Holes of the Three Iron Plates and the Wooden one, that are supported steady, as is represented in Figure N E N.

R S is the Base where these Three Pillars are fixed with a Screw; in the Center of the same Base, as in the other Three that form the Quadrangular Base, there is a little Groove at the Bottom of the Pillars, into which is introduced and raised at Pleasure, the Piece of Iron like a Plate, called the Fender, marked V N, which prevents Ashes and Fire from doing Mischief. Fig. XI

N E N is the above-mentioned Iron Plate, in which there are, at a proper Distance, several hollow Places, wherein are fixed the Vessels or Tin Pots, that are seen regularly placed on the said Plate, by the means of Iron Pins E A E. These Tin Vessels are so secured that a Storm at Sea cannot put them in Danger. Fig. XV

N X M are Tin Drawers with proper Locks, the other marked with X M X are, on the contrary, Wooden ones. In these Drawers are put the Utensils for the Kitchen of a Man of War, Camp, &c. to have them at Hand. Fig. XV

L Y L is another particular Oven, which is to be fixed under Figure 4 and over the Hearth-door, covering the greatest Part of the Cock in Figure 6, Z R H; its Use is to warm, melt, or prepare any Thing to eat. Fig. XV

B H N are several Tin Tubes, some of which are curve, and others perpendicular; by these are conveyed the Vapours into the Tin Vessels, at a proper Distance from the Three Kettles, and may be placed at a convenient Height. Fig. XV

The short Enumeration of all the different Utensils and Accessories that compose the Œconomical Machine is adapted to the Plan that contains their distinct Forms and Figures; we have explained, in the best Manner we could, the References and Connections they have with one another, and now we shall enter upon the great Advantages that every one of the said Implements affords to the Art of Cooking, rendering it more expeditious, and much more œconomical.

Before we conclude the Description of this excellent and well-contrived Machine, it is necessary to remark, that its Size is of Four or Five Foot in Circumference or thereabout. It is placed when in a Ship, or on a board Floor, upon a large Iron Plate fixed to it by Three Hooks, that join to the Three Wheels T V Z; so that by the help of the Wheels, the Machine may be moved any where when unhooked. As we have mentioned that this Machine may be of a larger or smaller Size, so it may exceed the Five Foot Circumference; but however, this Dimension may serve as a Model for others. As for the Place for fixing the Machine, and the Expence for making of it, entirely depend upon its Size.

It will not be amiss, now briefly to review the particular Advantages arising from this Machine, that we may clearly, and all at once conceive the Benefits that Cooking in general will receive. In the common Way, to prepare two or three Dishes, and even only one, is attended with as much Trouble and Expence in Wood or Coals as would serve for Thirty and more Dishes of different Meats, Fish,

Consequence, for with one Shilling, for instance, you obtain what you are not used to get for Thirty. Besides, whatever is done in the Machine is better relished perhaps than any other way; and at the same Time, by the means of the Oven, very ingeniously contrived, you may Bake, with the same Fire, Bread, Biscuits, Cakes, and all other Pastry; as likewise may be roasted in the Oven D O D O any Meat, Venison, &c. as another Jack may easily be added.

Conscious of the Truth of our successful Experiments in all the above-mentioned Operations, we flatter ourselves that all the World will appear satisfied with an Invention so ingenious and profitable to Mankind, and particularly to Hospitals, Ships that go long Voyages, &c. &c.; and we beg leave to repeat, that for want of fresh Water, the muddy and salt, or Urine itself may be used; as it is only the Vapours, that act upon the Whole, and consequently can have no Connection with the Meat that lies closely covered up, on account of the excellent Contrivance of the new invented Pots, Kettles, Pans, and Vessels. With the same little Fire, therefore, we shall be able, not only to Boil, Stew, Roast, and Bake, that infinite Variety of different Things, and all at the same Time; but Reason itself and Experience show us, that there will certainly be a proper Separation of the saline Sea Particles, by simple Distillation; that the corrupted and fetid Water will become drinkable; and what is still more wonderful, without hindering in the least the abovementioned Preparations, those very Vapours may be conveyed, raised, or brought down at Pleasure, to any Place or Object, by only adding a perpendicular Pipe B (as may be seen in Figure 18) at the Opening of the little Cover N, which is at the Top of the great Cover H, that embraces the Circumference of the Pot, or the great *Balneum Mariæ* X, fixed in the principal great Boiler X H N (as is explained in Figure the 5th) or in that of the Cover of the Boiler, with the three Cocks, Figure the 1st; or again, one of those curve Tin Tubes may be added, that have been described in Figure 10th, with the Letters B H N. In short, in case any Vapours should be wanting in Hospitals, Tents, Men of War, other Ships, &c. it may be conveyed with the greatest Ease in the World, even if the Machine should be fixed in a very distant Room, only by the Means of a perpendicular or curve Tube, like the preceding ones annexed to the Opening of the Vessel R C Y, Figure the 10th, which is furnished with three Cocks, as has been represented.

N. B. If the Pots, Cauldrons, or Kettles, of Copper, Iron, or any other Metal, which are commonly used in Houses, Hospitals, Camps, Men of War, &c. were made with a Cock fixed to the Bottom of the Vessel, like the Kettle in Fig. 5, and at the Top of them a Cover similar to that represented by H, in Fig. 7. or I, in the Kettle Fig. 5. or those of the other two Cauldrons, D B, D B, Fig. 9. (which might be done at a small Expence, without altering the Chimnies or Fire-places of the Houses, Hospitals, Men of War, &c.) they might easily and effectually be made to boil more than Ten common Pots or Boilers, of different Sorts of Meat, Greens, &c. According to the Number and Bigness of the Pots or Boilers, must be added, on a similar Plan, a Specification marked M M. So it plainly appears, that in the same Time, and by the same little Fire, so great a Quantity of different Meat and Garden-Stuffs are perfectly and quickly prepared; the Sea, Salt, or putrid Water will be easily and effectually purified, and made potable by simple Distillation.

LABORE ET INGENIO

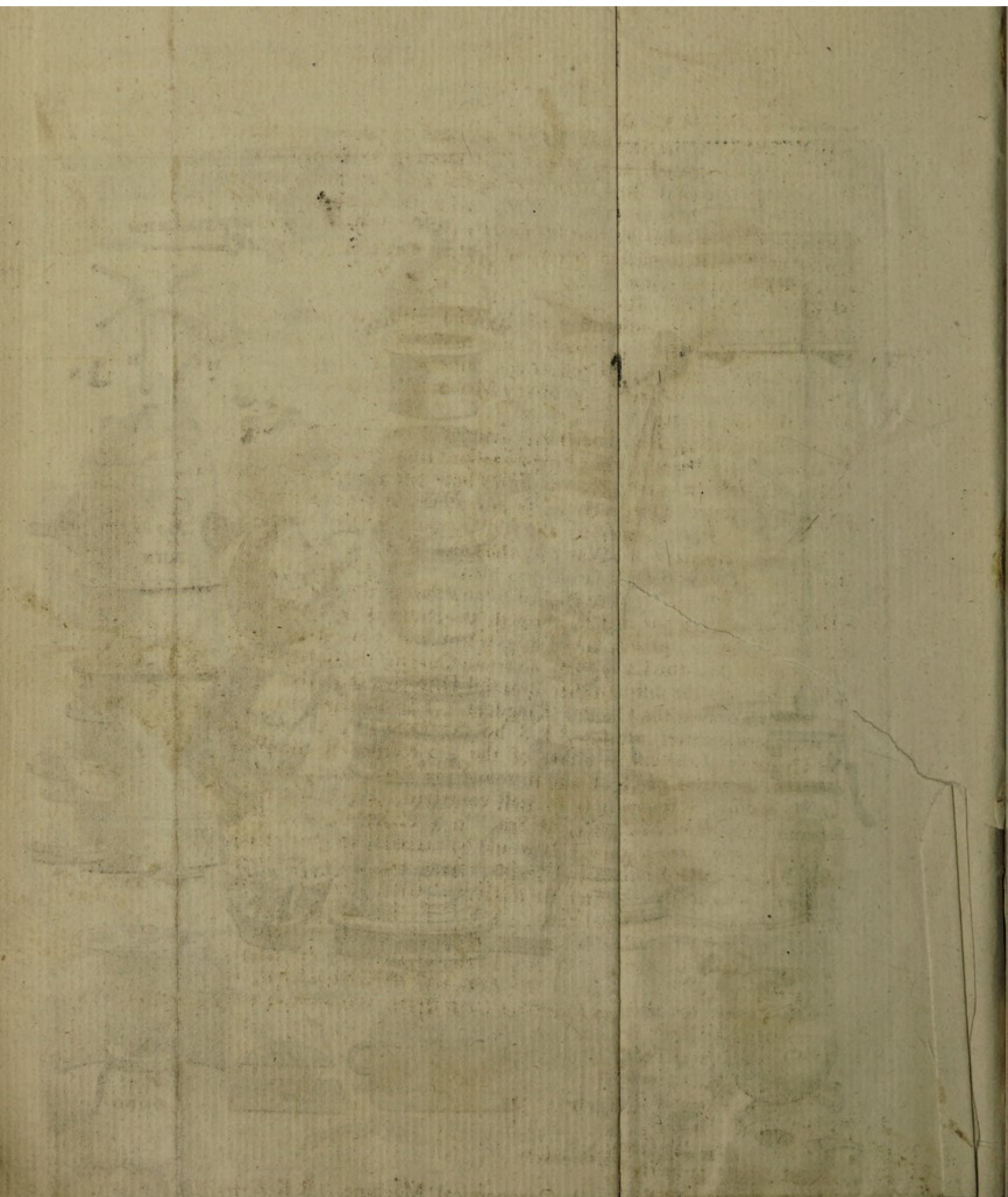


Salus Populi Suprema Lex est

*Invenit Bartholomeus de Dominicetti M.D.
et S.R.I. Nobilis*

*Nulla re Hominis propius ad Deos Accedunt
quam Salutem Hominitus dando*

W. Darling first Great Newport Street London



We have likewise invented a little Oeconomical Machine, which in itself appears like a common Tea Boiler, though very different in its Mechanism, as will appear hereafter; and it is clear to a Demonstration, that private Families, Taverns, Coffee-houses, Hospitals, Ships, or any Place of Public Entertainment, will find it the most convenient Article, and an immense Saving in the Use of them. The Top or Cover of the Boiler, having in the Inside a Plate, with a very small Hole in the Middle; there is likewise another Hole at the Top of said Cover directly opposite each other: in the upper Hole is a Screw, which serves to regulate the Vapour as occasion may require; (for instance) when you have occasion for Tea Water only, the Top Part must be unscrewed and taken off, in order to give vent for the Vapour; and when you have occasion for Tea, Coffee and Chocolate all together, which may all be prepared (from one Heater) at the same Time, then the Top must be screwed on, which causes the Vapour to return back into the two Pipes that pass in the Inside of the Boiler, which are not unlike two small Funnels, between which is a small Hole that receives the Water intended for the Tea; the large Part of these Pipes are near the Brim or Top of the Boiler, the small Parts come through the Sides near the Bottom and Pedestal of the Boiler, at each of which is fixed a Cock, which regulates the boiling of the Coffee and Chocolate Pots. In the Body of the Boiler is a large Hole in the hind Part of the Boiler opposite the large Cock, which slants downwards, for the Purpose of receiving the Heater, which is shut in with a small Door, in order to make the Boiler uniform; the Iron Heater will keep the Water boiling a Quarter of an Hour; Hot four Hours, Luke-warm eight, and Tepid twelve Hours; the Handle for the Heater is likewise one of the most convenient. On the Top of the Boiler is fixed a double Rim, and likewise in the Cover, which fixes so close, as to prevent any of the Vapour from exhaling through when the Top is on. The Mechanism of which is like that represented of the principal Boiler, and Tin Pots of the great oeconomical Apparatus. The Coffee and Chocolate Pots are likewise not unlike the common Coffee and Chocolate Pots, though both in Substance are upon a different Principle, and their Effects are equally as useful as the Tin Pots of Oeconomical Machines, being in the Mechanism similar, except the Inside of the Coffee and Chocolate Pots, which are sordered to the Brim of the Outside Pots; and for that Reason each appear only as one. The Pipes before-mentioned carry the Vapour quite round, and under the inside Cases, which causes both Coffee and Chocolate to boil, like the Meat boiling in the large Apparatus; the Inside or Case of these Pots are fixed an Inch distant from the Outside, at and near the Bottom, from thence gradually close till they come to the Top, where they are sordered to each other. A Pint of circulating Vapour is always contained in each of these Pots, which is constantly supplied from the two Cocks which are made to fix into the Pipe of the Coffee and Chocolate Pots; which, when properly fixed on the Table, represent a very noble, useful, curious Apparatus. A small Pipe is sordered about an Inch under the Brim Inside of the Coffee and Chocolate Pots, from which the Vapour exhales, and being repelled from the Covers, not only prevent their boiling over, but confine the Substance and Strength of either Coffee and Chocolate from exhaling, therefore of course they must retain their true Flavour. These Pots will hold a Pint and a Half of Water each, exclusive of the Vapour which proceeds from the great Tea Boiler that holds six Quarts, the Vapour of which will cause more than ten Gallons of cold Water to be set a boiling without any other Assistance; and will at the same Time (if required) dress several Joints of Meat; and the vaporous Effluvia of salubrious medicinal Substances may, by this little Machine, be introduced and applied to any Part or

will be more fully represented hereafter; and by only changing the Heater every two Quarters of an Hour, the Water in the Boiler may be kept boiling as long as is required. Therefore, from this Description, there is no kind of doubt but this Invention will prove likewise a Public Benefit.

C H A P. II.

A Description of the Utensils and salutary Accessories newly invented by the said Bartholomew de Dominiceti, with their different Uses in medicated Water Baths and Vaporous Baths arbitrarily heated, in moist and dry Fumigations, by the means of the Œconomical Machine, or other like Stoves or Vessels.

Fig. I. A. **T**HIS salutary Machine is a Recipient of Water, or rather a Bath, which shall be described hereafter.

Fig. II. Y M O a Tube, with a Cock of the said salutary Utensil, that conveys the Water impregnated with Vegetable or Mineral Substances into one of the four Kettles of the Œconomical Machine, or runs boiling into the salutary Vessel marked S* that is filled with the necessary Vegetable or Mineral Substances to medicate the Water according to the Nature of the Disorder. By this Tube and Cock is arbitrarily given the Degree of Heat proper to the Constitution of the Patient; from the said Tube the Water runs under the great Leaden Piece, that represents an overturned Basin, X C, situated in the Center of the salutary Utensil; from thence it spreads equally through the different Pipes that send it over all the Bath, and thus insensibly mixing, gives an equal Degree of Heat to the Water, and Ease to all the Parts of the Body, and chiefly by certain Holes that are in the Wooden Bed Y Y; by which Method, many Inconveniencies arising from common Baths are prevented.

Fig. III. Is the above-mentioned wooden Bed, on which the Patient rests, with his Head on a Pillow full of salutiferous Herbs, with his Feet in a kind of Descent; a very proper Attitude for Frictions and Pumping, and very easy for the Patient. Y Y Y, this is a Piece of Board that by three Points fixes in three Holes, that joins with the upper and inward Parts of this Bed, and may be settled as the Size of the Patient requires, so that it may resist to the Force of the Water, that otherwise would raise him and make him swim with great Inconvenience. Y Y Y Y, this is a long Brass Ring made like a Crucible, without any Bottom, and fixed to the Bottom of the Bath. Y Z, this is a Brass Stopper that fixes closely in the Ring, and effectually keeps the Water in the Bath, and when taken out, it runs out in less than a Minute. Z Y is the Chain that passing through the Hole in the Wooden Bed, meeting at the Hole A which remains at the Bottom of the Bath, where the Ring is fixed, and likewise through the said Hole A makes the said Stopper fall, to change the Water in the Bath with all Ease and Convenience, or diminish its Quantity and Quality at pleasure, as you may supply the Bath with cold or warm Water by a Tube and Cock, as in Figure the second, Y M O.

S, this is a plain Cloth, Fustian, or Oil Cloth Coverlet, that goes round a Brass or Wooden Rod, or fixed on a Wooden Frame: Its Use is to prevent the Effusions

Effusions of the medicinal Vapours, to preserve the Heat of the Water longer, and Decency between the Bather and Assistant.

S S is an Opening that draws in and out like a Purse: in this Manner the Patient in the Bath comes out only with his Face, which is of a great Service to his Respiration, and makes him enjoy an agreeable Atmosphere, without hindering the Vapours from penetrating and exhaling through this Opening; besides, the Breast and Head are not in the least Danger of catching cold. In the same Bed, and the before-mentioned Attitude, a Patient is seen thus lying in his Bath, at the three Letters S S S. In the Center of the same Covering S there is another Opening that is exactly like the preceding one, and of the same Use to the Patient when he cannot lie down in the Bath; and then he must be placed on a Stool or Chair, with his Head well covered. S S S S, this is a Tube and Cock, through which, and the several other distinct Pipes, are introduced the moist Vapours, that one of the four Kettles of the grand Economical Machine supplies, and which you must endeavour to have, by some other Vessel, covered in the same new Manner. These Vapours passing through the salutary Vessel S* will be medicated according to the medicinal Ingredients that are put in the said Vessel S*, which shall be mentioned hereafter; so that when the Patient has been in the medicated or plain Water Bath a proper Time, then in a Minute it may be all let out, and the Vapours, or the volatile medicinal Parts of Vegetables or Minerals will enter into the said Bath by the Pipes and Cocks S S S S; that passing through the Vessel S* make up a Bath of Salutary Vapours, very proper for lame Patients; and by adding another Pipe to that of the Vessel S* that throws the Vapours in the Bath, the same may be effectually and wonderfully directed to the most afflicted Part of the Body, and distributed with an arbitrary Degree of Heat by the means of the Cock S S S S. T Y, this salutary Utensil is a Stove, or Vapour-bath; we have given a Drawing of it all open, and one Half shut, with the Patient within it, surrounded by Fumigations, with his Head in a pleasant Atmosphere; it is a Wooden Stove lined with Oil Cloth, or any Thing else neat, or made of Oak only. T T Y, this is the Stool or common Chair on which the Patient sits in the Center of the Stove; the Hole that you see in it serves to convey the Fumigations to the *Pudenda*, and the said Chair, about the Hole, may be more conveniently surrounded with Flannel, Fustian, or something softer. T Y Y are Curtains that draw close to the Patient's Neck, when his Head is out; the volatile Effluvia of the Vegetables and balsamic Parts of Minerals, Gums, and other Drugs remain quite close, surrounding and acting over all the Body, as it appears in Figure T Y. As for the Doors and Windows that appear with their little Openings, they are of the same Use as the Chair and other salutary Utensils, Figure 5. The same must be understood about the Intention and Effect of the Pipe and Cock X to introduce in the said Stove the vaporous Fumigations, to encrease and diminish their Heat at Pleasure, as likewise in regard to the Baths by the Vapours S S S S.

Between the Bedstead I I C there is a Leaden Box Z K R, half a Foot wide: the Elasticity of the Bracings of the Bedstead, on which is placed a Matrafs or Feather Bed, causes such an Inflexion by the Weight of the Body laying upon it, that between the Bed and the Leaden Box, it leaves only a Distance of an Inch, out of three it had before the Patient laid on it. This Salutary Bed, being so near the Leaden Box, makes the Patient receive the temperate and continual Heat of the Water contained in the Box. The same Heat spreads itself equally to all the Body, Arms, Sides, &c. of the Patient, and facilitates in this Manner a general pleasant Perpiration.

pours, or dry Fumes, in the very Bed where the Patient lies, he certainly feels and enjoys the Effects of them in a more efficacious and expeditious Manner. All the necessary Water for this Leaden Box may be drawn out of the Kettle of the grand Machine, or any other Vessel appointed for that Purpose; but however, Care must be taken, that such Vessels should be placed at least an Inch higher than the Cock X H, that is joined to the upper End of the Bed I I C, and when it begins to lose its Heat after six or eight Hours, it may be drawn out by another Cock D H, and be renewed as often as you please.

Fig. IV. D, the Covering which the Patient does not touch, but is seen under the common Bed Clothes, as in a kind of Cradle over his Body; it is filled with Vapours impregnated with Vegetables, or peculiar moist and dry Gums and Minerals, that invest the whole Frame; and all the ambient Vapours being free, and the Circulation of the Blood and Lymph gently encreased with the least Violence, they form a pleasant natural Transfusion of all the bad and destructive Humours, in virtue of the balsamic and salutiferous Particles of the Mineral and Vegetable Substances; so that the most inveterate, chronic, and dangerous Disorders, very easily and conveniently are effectually cured, with the same Fire and Water that serve to dress Victuals, or for other Uses, and all this exactly in the same Time.

W is the Frame on which is packed, or tied with little Ribbons, the said Covering; it may be made of Wood or Copper, and covered with Cloth, Linen, Bays, or Oil Cloth, which is the best.

Fig. V. This Salutory Machine is like a Sedan Chair, that forms a dry Stove, together with a moveable Vaporous Bath; it is lined with Lead or Copper, very little distant from its Circumference, both at the Top and Bottom, and has at each Side a common Chair Pole; this little Box is covered on the Out-side, first with thin Wood, and then with black Leather, or any other Colour, and in the In-side lined with Cloth, Oil Cloth, or any Thing else. Water is introduced into it by the Pipe and Cock X A X, in the same Manner as in the other Leaden Box under the Bed H S. When you want to keep this Chair quite close, you may do it by shutting the Glass Door R S C; in the Center of this Door there is a little Window S O S, made on Purpose to give Air at Pleasure, and likewise to diminish or encrease the Heat proceeding from the Water contained in the Leaden Box, or from those moist or dry Fumigations that are introduced by the Pipe and Cock X, and surround all the Body with those balsamic volatile Particles, that they imbibe in passing through the Salutory Vessel S*, where they have been put suitable to the Nature of the Disorder: The same may be done with the Stove T Y.

A B X, this is the Figure of an under Passage, through which the Patient goes to sit on that Chair or Stove. We shall mention by and by a little Fire Machine, that Works by the Means of the little Oeconomical Machine; its Use is to convey to that Chair, the Fumigations necessary to recover or preserve Health. S O S, are two Windows, through which you send the Patient's Clothes, that he may dress himself without stirring from his Chair; by opening them a little he has the Advantage of the Air, and may receive some Liquor, Medicines, Towels for Frictions, or any Thing else used for the Relief of Patients; the same may be practised through the Windows S O S, in the Stove T Y. Q N Q, are four Wheels, by which the Chair or Stove, properly fixed, is moved at Pleasure. This new Method of administering of arbitrarily medicated Baths with moist and dry Vapours directed to all the human Frame, or any

Oeconomical Machine, Bed, Chair, Leaden Boxes, Stoves, &c. &c. being supported by innumerable Experiments and indisputable Authorities, proves to be one of the most innocent, easy, pleasant, rational, safe, efficacious, and sure Remedies, that have been discovered hitherto in the Practice of Physic, to relieve the afflicted in general.

This is a long Tin Pipe without Cover, and joins to the Vessel S*, which contains a certain Quantity of Vegetable and Mineral Substances. This long Pipe is placed under the Covering in the Form of a Cradle, Figure the 4th D, and thereby are conveyed any Vapours or Fumigations, without wetting the Bed or Bed Clothes, which would certainly happen, if the watry Substance did not fall to the Bottom of the Box. Fig. VI.

F H F. Into the Extremity of the Pipe, opposite the Box, is introduced the Tin Tube S*, and from thence into another Tube, opposite the End of the Pipe, belonging to the Salutory Machine R S S. S* S, this is a little Iron Box that receives a little square red-hot Iron S* T, from whence it is drawn by a Pair of Pincers on Purpose, see the Figure; on this Piece of Iron are laid some Gums, Balsams, Minerals, and other Drugs, made up in the Form of a Cake, which produce the dry Fumes; these amalgamating with the volatile Parts of the Effluvia, become the best medicinal Power that can be invented to open the Pores of the Skin, dissolve Obstructions, Tumours, and Callosities, even Cancers and Ulcers; sweeten the Blood and Lymph, and in short, bring to, and keep in, a regular Motion the Circulation of the Fluids. Fig. VII.

T K V, this is the entire Body of the little Oeconomical Machine, which is a Diminutive of the great one; it is filled with Water instead of Meat, and boils as effectually as a *Balneum Mariæ*: the Vapours exhaling from it enter the Mouth of the large Pipe B, of the Machine A S S. To the two Conduits II, from whence come out the Vapours of the great Boiler, may be added one, two, and even more than six Tin Vessels, as has been mentioned in Figure the 12th, F M B A, and in these may be cooked, and, by adding Ovens, baked, any Thing as in the great Machine, and all Sorts of Waters will be rendered sweet and drinkable by the simple Distillation.

T Y K, these again are two other Machines, still smaller than the preceding one, for the Convenience of the Poor; they take but a little Room, and may be kept in a Chamber, in a Fire-place, or in the Kitchen, and may be used for secret Operations in both Sexes, as shall be mentioned hereafter. It is necessary to take Notice that the Salutory Utensil S R S is different in its Structure from that of Figure R S S, joined to the first little Machine T K V, and that the widest End of it is closely fixed in the upper Opening of the small double Kettle, drawn under the abovementioned Utensil S R S. Its Cock S C O preserves the full Power of the Vapours and dry Fumes, and serves to diminish, when necessary, the Quality and Quantity of the same. The least End of it communicates with the Cock of a Chair, made in the Shape of a little Horse, marked B X B, by several Pipes that are lengthened in proportion to the Distance from one to the other Machine, in case they should be in two different Rooms; suppose the Oeconomist in the Kitchen, and the Salutory one in the first Floor or at the Top of the House.

When the *Pudenda* and Parts adjacent are affected by some Disorders, then recourse must be had to the little Horse or Chair B X B lined with Lead: The Patient bestrides it, and has a good Support to his Back. In its Bason are contained the necessary moist and dry Vapours, which the Patient guides himself, encreasing and diminishing the Heat at Pleasure, by turning the Cock at the Back of the Chair O O O. There is another Cock I Y I that lets out the Water produced by the Vapours, and then it may be cleaned.

1, 2, 3, These are three Machines that form a common Glyster Pipe, which you may use yourself; it serves likewise to make Injections in the *Anus*, *Urethra*, Bladder, *Vagina*, &c. &c.

4, This is a Pewter or China Bason that serves as a Pan, and is placed in the abovementioned Chair.

5, This is a Ring that is put on the Chair, properly covered with Cloth, filled with Cotton to prevent Excoriation; this Ring keeps the Vapours from exhaling.

After this distinct Enumeration, it is very easy to conceive that every Patient may use these Machines and Chairs with the Help of a Servant alone, who has no other Trouble than to take out and replace in the Iron Box, the red-hot Piece S * T. The Patient in all other respects may do every Thing by himself, and if even obliged to keep his Bed, this Machine will not trouble him in the least.

The following are necessary Implements to be used in the many and too common Disorders incident to the human Body. When the Head is affected, must be applied the Salutory Utenfil.

No. 1. If it should be in any Part of the Face, or all over it.

No. 2. The kind of Trumpet Y Y Y Y that is within it moves at Pleasure, and so causes an easy Respiration, and hinders not the Patient from speaking. You may change, as often as you please, the Cover of it, which is lined with Silk, Velvet, Linen, or any other Stuff. There are Glasses for Light. If ever the Disorder should be in the Mouth, around it, or affect only the Sight, then

No. 3. must be taken; if the Neck,

No. 4. If the Parts below the Abdomen, the *Scrotum*, the *Vagina*, &c. are the Subject of Complaint,

No. 5. will answer the Purpose; if the *Perineum* or *Anus*,

No. 6. For the Shoulders,

No. 7. For the Arms, Elbows, and Hands, or only one of them,

No. 8. For the Thighs,

No. 9. For the Knees,

No. 10. Which is drawn, shut and open, from whence it appears that you may introduce moist and dry Fumigations on each Side, and under, as likewise the Hand through the little Hole to perform the usual Frictions. For the Legs at last and Feet,

No. 11.

All these Salutary Utenfils, and others of the same Kind for the Benefit of Health, are made of Tin, Whale-bone, Wood, or Iron, and therefore must be covered with something soft, in order not to hurt the affected Parts they are applied to, which will prevent at the same Time the Fumes from evaporating.

D X O. This is a flexible, hollow, sounding Catheter, of Copper or Silver, Fig. VIII. for both Sexes, made in the following Manner.

First of all you must flatten with a Hammer, a Silver or Copper Wire, as to render it a pliable and fine *Lamina*, or with what is generally used in making Plate Button Holes. This *Lamina* is represented by K B. When this is so prepared, take a round well polished and oil'd Piece of Wire of the Size of the Catheter you intend to make for the different Uses, and cover with this Wire by the Help of the Finger, Vice, Mill, or any other Means, all the Circumference in Length, as you would do a Straw Tooth-pick-case. The Wire afterwards is drawn out, and remains a hollow, pliable Pipe; but when Injections or Fumigations are to be conveyed to the Bladder, only half the Copper or Silver Wire shall be flattened, and the rest will more easily move about and slide into it. V I, this is a little Silver Pipe with Holes round it. H L marks another larger Silver Pipe, fastened to the Extremity of the Catheter. The Body of the said Catheter is covered with one or more very small Guts of a Lamb or Birds; which is certainly the most effectual Way in Point of Catheters. This necessary Instrument will introduce in a surprizing Manner, without the least Difficulty, into the *Urethra*, *Anus*, *Vagina*, *Matrix*, Bladder, or any other Parts, all Medicinal Injections, and the most volatile and balsamic Particles of Mineral and Vegetable Substances, as the Nature of a thousand Disorders requires, which for want of a safe and easy Method are given out as incurable. S P, this is the Instrument or Stillet that goes into the Catheter, to give it more Consistence and to keep it clean. Before the sounding Instrument is joined to the common Pipe of a Syringe, or the Salutary Utenfils for Fumigations E Q N X, or to that marked R S S, it must be introduced into the *Urethra*, *Anus*, &c. then immediately the Pipe of the Syringe or of the Salutary Utenfil S C Z or R S S may be fixed into the upper Tube of the Catheter.

Q E N O, this is the Salutary Utenfil E Q N X; a triangular Tin Pipe Q E N Fig. IX. is joined to the Body of the Utenfil E Q N X, which, by being covered with an Oil Cloth, hides its Structure. We shall endeavour to give a Description of it in the best Manner we can. Under this Oil Cloth there is a Wire Spring, in the Form like that of a little Powder Puff, and is not unlike it, except in Length and Breadth; thicker at the Beginning, and diminishing as it lengthens; a very proper Form to contain, attract, and convey the Vapours it receives: At the Mouth X of the triangular Pipe Q E N there is tied a little Cotton or Wool Pillow, to which hangs a Wire that forms the Puff, and so the Tin Pipe, when hot, cannot communicate the Heat to the Wire, the Vapours or dry Fumes therefore

therefore enter into the Body of the Utensil EQN +, and comes out by the little Pipe SCZ, tied likewise to the Wire, which Pipe meeting the large Tube of the Catheter HL, prevents the Vapours from heating the sounding Instrument applied to the abovementioned afflicted Parts. SCZ, this is the aforesaid Silver Pipe, of about two or three Inches long, that fits exactly either of the Catheters DXO, which for their great Use in both Sexes, will be an everlasting Honour to Surgery.

N. B. In order to be sure of the Quantity of dry and vaporous Fumes sent to the Bladder, that it may not stretch or distend it, you must take out the Squirt of the Syringe, and after having put in as much as you think proper, shut it, and begin the fumigating Injection, as an Injection of any Medicinal Liquor.

Fig. X.

TCH, this is a Pewter Vessel, that somewhat resembles a half Boot; it is all surrounded by two Plates, about two or four Fingers distant from one another, is filled with warm Water by the Pipe NEN, and forms only one Recipient, from one of the Kettles of the Oeconomical Machine, or any other; it keeps warm for about eight Hours, and may be replenished by the said Conduit NEN, which is shut by a Screw, having let out the old Water by the Cock AA, to which may be added another Pipe, to make it run as far as you please. The Center of this Salutory Utensil, as well as of those that are applied to any Part of the Body, is all lined with Flannel, tied at the Opening **, through the Rings + + + + +; the Knees and Legs may be covered with any Thing warm, and it has been found of immediate Relief and excellent Remedy, nay, a certain Cure for the Gout, Nervous Contractions, exquisite Pains, and other dreadful Disorders that seize, too often, the extreme Parts of the Body in this Kingdom. The Vapours may be taken from either of these Salutory Utensils SRS by the Tube O; OS + of the Oeconomic little Machines, or from either of the 4th Kettles of the great One, whose Vapours enter into the Boot and surround the Legs, Feet, or any other Parts of the Body. This Machine is so well contrived, that Use may be made of it without the least Inconvenience, at Sea, in a Coach, or in a Post Chaise, in Bed, in a Study, or in a Closet. It would be necessary to give a more precise Description of the other Salutory Utensils, made much in the same Manner; but it will suffice to say, that they are made of Pewter, Copper, Lead, or any other Metals suitable to the afflicted Parts. RYCT, for Instance, serves for the Stomach. TCYR, for Parts below the *Abdomen*, and is of infinite Service to the Disorders of those Regions. YRCI suits wonderfully the Knee; and ERYC embraces all the Hand, part of the Arm, and the Elbow itself, so so that we may confidently assert, that no Machines upon Earth were ever so well contrived for the Benefit of Mankind.

CHAP. III.

Of Distillation.

A, is the same Stove of the grand Oeconomical Machine. RKA +, this is likewise the same Chimney, to which are annexed the two abovementioned Vessels DBDB, see Figure the 9th, in the first Chapter, and over these the great Cauldron RCY, with the three Cocks CCC; and in the Body of the said Stove AA, there is fixed the great Boiler DBDB, but however

without the Pot H X; the Bottom is different, and instead of the same Cover, there is another in the Shape of a Chemical Cucurbit + D D B D. In these four Vessels, thus prepared, any Thing may be distilled, and it appears beyond all Doubt, that instead of three different Distillations, generally used in three Times, by this Invention it is performed in one, and it saves ten Parts out of twelve in Coals, Wood, or other Fuel, besides the infinite Advantage of a continual Distillation, with small Vessels, little Fire, and less Trouble. When the first and second Distillations only are wanting, it will be sufficient to take away one of the Kettles D B D B, Figure the 9th; if the first Distillation alone, both Kettles may be removed, for with the great Cauldron alone in the Stove, and the upper one R C Y, a perpetual Distillation is equally obtained at little Expence; besides, if you have a mind to add to the Side of the Stove A A the abovementioned Ovens, and put in any of the three Kettles, instead of Liquors to be distilled, Meat, Water, or any Thing else, then you will have again the same Operations as mentioned at the Beginning of this Treatise, *viz.* Boiling, Stewing, purifying Waters, Baking, and likewise Roasting, by the Addition of one of the Vessels M M, Figure the 11th, fixt to the Neck of the Chemical Cucurbit, that have nothing to do with Distillation.

In order to make a proper, cheap, and expeditious Distillation, it will be necessary to follow these Rules.

First of all you put the Quantity that is to be distilled into any Vessel, and at a proper Distance, provided the Bottom of the Vat, or other Recipient, be an Inch higher than the Cauldron R C Y; to this Bottom is fixed a Tube, through which may run the distillable Liquor, and fall into the small Conduit X, that lies under the Cover at the Opening L O R of the Kettle R C Y; this Tube, near the Place where it enters into the Opening, must have a Cock to encrease and diminish the Quantity of the distillable Matter that is to enter the Cauldron; and by falling cold into the little Conduit X, then running into the Cauldron at the Opening L O R, almost boiling, it mixes with the boiling distillable Matter that has been put there before. The same Matter must likewise be put at first in the great Cauldron, situated in the Stove; in the first Kettle, Figure the 9th, D B D B, there must be some Liquor once distilled; and in the second (see the same Figure) some twice distilled, which is to be distilled another Time. L P H, this is the Stone or Brick Work, on which the Stove is properly fixed. Q C O, this is the great Cock like that with the Mark Z R M, that penetrates into the Body of the Stove, and screws into the Alembic or Copper Kettle D B D B.

CCC, are the three Cocks, placed at a proper Distance round the abovementioned Cauldron R C Y; but at the Cock CCC* there hangs a separate Tube, whose opposite End meets the Tube XXXX of the great Cauldron, as said before, and conveys the distillable Matter; the second Cock CCC keeps in the Liquor, as well as the other, and serves to draw out the Sediments caused by Distillation. L O R, is the Conduit of the great Opening K, by which one sees and directs the distillable Matter that falls in the Inside of the Pipe X, which is afterwards properly shut with the Cover N, to prevent the least Exhalation. R K A, is the great Iron Funnel, cast together with the Stove A A, to which is joined an Iron Tube of equal or less Diameter, marked R K A*.

We are wide round Openings that form the Center of the two Kettles or Alembics, and that of the upper Cauldron, and fix themselves in the great Conduit or Funnel R K A and in the Iron Tube R K A*. D B D B, these may be called the Alembic in the Center of the Chimney, in which is distilled again the Liquor of the first Alembic + B D after the first Distillation; and in the other Alembic D B D B under the Center Vessel, where Liquors are distilled the second Time, is performed the third Distillation that falls afterwards into the Reservoir O F C. P R, is the Neck of the Capital + D B D B of the first Alembic D B D B that goes across the Liquor that distills, and passes by its Conduit into the cooling one T C M, and runs cold to the small Entrance X X X X, over the warm Copper, from whence falling very soon, it begins to warm, and by Degrees almost boiling, mixes with the boiling one, and in this Manner no Interposition suspends the Operation of the second Distillation. E L, is the Neck of the second Alembic, through which the Liquor passing, as the preceding one, into the second cooling Vessel X C E, distills cold as far as the Entrance of the Recipient X X X X of the third Alembic, where, warming itself by Degrees, grows boiling hot, fit for the third Distillation. L E, at last, is the Neck of the third Alembic D B D B, Figure the 9th, where Liquors are distilled the third Time, after having passed through the last cooling Vessel M A D, and from thence into the last Recipient A M E, which is found under a Cock of this third Alembic. O F C, is the grand Reservoir with its Cock R L, to draw the Liquor from it into any other Vessel. B O S, is the opened Front of the Hole in the Box, of the three cooling abovementioned Vessels, that by acting so very frequently (*viz.* about twenty Times) afford a great deal of Time for the Liquor to cool. G E R, is a common Pump that forces the Water from a Cistern or Well, into a Leaden or Wooden Basen D O R, from whence the Water, by a Descent, runs into three different Leaden Conduits R R R, to renew continually the cold Water in the cooling Vessels, and from thence, the same Water running through the respective Pipes A Q R, returns into the Cistern or Well from whence it came.

These few short Hints about Distillation will be sufficient, we hope, to show to the curious in the Art of Distilling, and to the Distiller himself, the many Advantages arising from this new invented Method.

All this Apparatus of the Oeconomical, Salutary, and Distilling Machine, of medicated Baths heated at Pleasure, of Stoves for the Application of moist and dry Vapours, fumigating Tubes, and various other Contrivances for any Part of the Body, has been the Effect of many Years Labour and Study, always supported by the Evidence of Facts, and now published for the first Time, under the Auspices of the best of Kings, who has been graciously pleased to grant to the said *Bartholomew de Dominiceti*, his Royal Letters Patent, for the Benefit of Mankind in general, and the *English* Nation in particular, from whom the Inventor has received many honourable Marks of Approbation and Encouragement, during his Residence of Eighteen Years in this Kingdom.

(COPY, faithfully translated from the French.)

LETTERS PATENT, granting a sole Privilege for Ten Years to BARTHOLOMEW de DOMINICETI.

LEWIS, by the Grace of God, King of *France* and *Navarre*. To all to whom these present Letters shall come to Sight, greeting. Whereas *Bartholomew de Dominiceti* of *Venice*, Professor of Physick, living mostly in the City of *London*, has by his Petition represented to Us, that he has occupied himself this great while about Chemistry, and every Thing concerning that Science; that by his Application and assiduous Labour, he has composed a Machine, which he calls Oeconomical, Chemical, and Physical Chimney, which may be adapted to Men of War and Merchant Men, be set up in Castles, Fortresses, in Camps, in Hospitals, in Manufactories, and in private Houses: That this Machine has in its Principle a very great Usefulness, is safe against Fires, and sparing of Fuel: That by its Means a great deal of Wood and Charcoal will be saved, especially in Ships which are obliged to deprive themselves of a Part of their Lading, as well as a considerable Quantity of their Provisions, particularly in long Voyages; at the same Time, that by its Means a Facility is got to keep several Sorts of Waters and Liquors in any Degree of Heat; that with the same Fire and the same Water, more than twelve different Sorts of Meats, Fishes, or Greens, may be boiled, taken away separately without hurting one another, nor giving the least Taste to one another. Also, that different Kinds of Meat and Game may be roasted on the Spit, and broiled; that all Sorts of Bread and Pastry Work may be baked, Sea Water made fresh, and Waters of the worst Quality purified and rendered wholesome; and that all Sorts of Ragouts of Meat, Fishes, and Greens, may be dressed, by adding to this Machine other salubrious Machines of *Bartholomew Dominiceti's* Invention. The vaporous or dry Fumigations, composed of Aromatics, or other Drugs prescribed by Physicians, may be evaporated and introduced into ten different Rooms, in Beds, in a Lazaretto, in an Hospital, in a Man of War or Merchantman, or upon the Body of one Man alone. In the same Manner that this Machine will serve every where for the Purification of the Air, and by this Means keep one's-self safe on Land and Sea from any Infection. Likewise, that he has invented Machines, by whose Means a sick Person can, without the Assistance of any Body, procure himself all the Help which may be expected from the vaporous or dry Fumigation; he may carry the Heat to any Degree, and receive it on any Part of his Body. He represents also, that the Heat of his Machine will be a great Saving in Silk Manufactories and others where a regular Heat is required; that the Heat of his Machine may be carried to such a Degree, as to melt Metals the least susceptible of Fusion. That Our Academy of Sciences, who are impartial Judges of all new Discoveries, could not refuse him their Approbation, having given the most flattering Testimony of this new Machine. That the Petitioner is warmly solicited to make many of them, but that he has no Hopes of recovering the Fruit of his Labour, and the considerable Expences he has been at to bring this Machine to the Degree of Perfection it is now, unless We would be pleased to grant him a sole Privilege, to secure him from Counterfaction,

Us, to grant him Our Letters Patent, requisite for that Purpose. Wherefore, We, being willing to use favourably the said Petitioner, by the Advice of Our Council, together with the Testimony of the Academy of Sciences on the Usefulness the Public may enjoy by this Machine, of Our special Grace, full Power, and Royal Authority, We have by these Presents signed with Our Hand granted. We permit and grant to the said Petitioner, and his Deputies, to build and establish, in all Cities, Boroughs, and Villages in Our Kingdom, Men of War or Merchantmen, Manufactories, Corporations, Hospitals, and all other Places where he think fit, and where he shall be called, his Machines denominated Œconomical, Chemical, Physical Chimnies, and all other Machines of his Composition, which may be adapted to them, whether in Point of saving in Cookery or in Fumigations, the Draughts of which are fixed under the Counter Seal of the present Patent; and by this sole Privilege, for the Term of Ten Years following, to begin from the Date of recording the said Patent. We forbid to every Person or Persons, of whatever Quality or Degree they be, to counterfeit or establish throughout the Extent of our Kingdom, Machines like these, during the said Ten Years, on pain against the Offender, of Three Thousand Livres Penalty, a Third applicable to Us, the second Third to be distributed to the Poor of the nearest Hospital to the Place where the Offence shall have been committed, and the other Third to be disposed to the Profit of the Petitioner; and moreover, the Forfeiture of the said Machines, and of any Thing which shall have any Conformity to them. Yet We do not mean that the said sole Privilege be hurtful to other Machines of an older Invention, or which might be invented hereafter of a different Construction than that of the Petitioner, and which might have a chief and sensible Difference in their Make and Effect. Thus We give this Mandate to Our Well-beloved and Trusty Counsellors, the Judges, holding Our Court of Parliament at Paris, and to all others Our Officers and Justices, whom it may concern; that they cause the present Patent to be registered, and to make enjoy the Petitioner fully and quietly the Contents thereof, during the said Terms of Ten Years, discontinuing and making discontinue all Trouble and Opposition, notwithstanding Letters contrary to these. FOR SUCH IS OUR GOOD PLEASURE. In Testimony whereof, We have commanded Our Seal to be affixed to these Presents. Given at Versailles the Fifth Day of December, in the Year of Our Lord One Thousand Seven Hundred Seventy One, and the Fifty Seventh Year of Our Reign.

(Signed)

PHILIPPEAU.

For a Copy like the Original,

De F O U E H Y.

*NB: see the sequel of
his Plan of Baths Stoves &c in the
next Tract but one in this vol. wh.
was misplaced by the Binder. A.F.*