

Specification of Louis Encausse : vapour baths.

Contributors

Encausse, L

Publication/Creation

London : Great Seal Patent Office, 1868 (London : George E. Eyre and William Spottiswoode)

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A.D. 1868, 19th MARCH. N^o 942.

S P E C I F I C A T I O N

OF

LOUIS ENCAUSSE.

—
VAPOUR BATHS.
—

LONDON:

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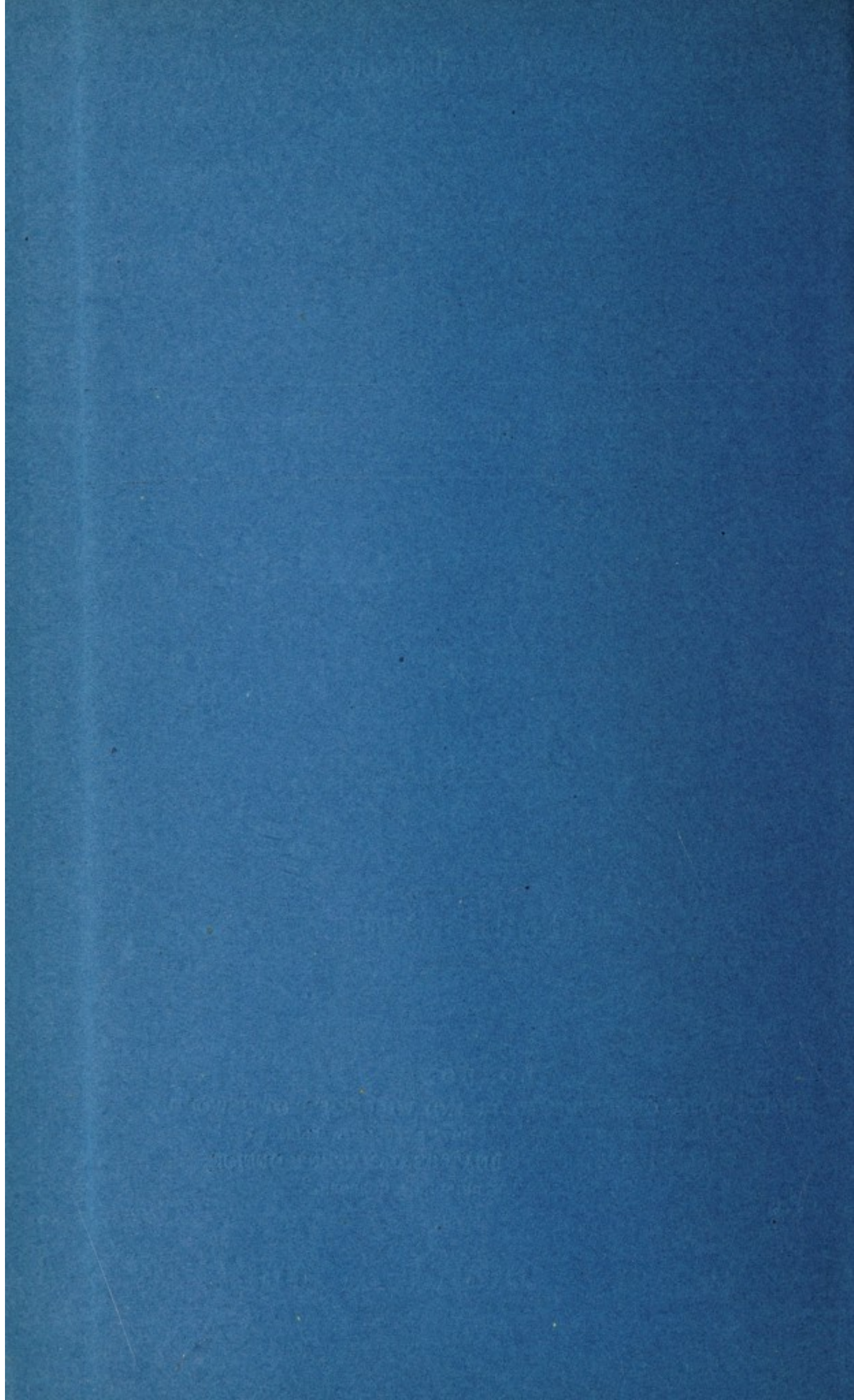
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Price 10d.

1868.





A.D. 1868, 19th MARCH. N° 942.

Vapour Baths.

LETTERS PATENT to Louis Encausse, of Madrid, in the Kingdom of Spain, Chemist, for the Invention of "**IMPROVEMENTS IN THE APPLICATION OF REMEDIAL AGENTS TO THE HUMAN FRAME, AND IN THE APPARATUS EMPLOYED THEREIN.**"

Sealed the 28th July 1868, and dated the 19th March 1868.

PROVISIONAL SPECIFICATION left by the said Louis Encausse at the Office of the Commissioners of Patents, with his Petition, on the 19th March 1868.

I, **LOUIS ENCAUSSE**, of Madrid, in the Kingdom of Spain, Chemist, do hereby declare the nature of my said Invention for "**IMPROVEMENTS IN THE APPLICATION OF REMEDIAL AGENTS TO THE HUMAN FRAME, AND IN THE APPARATUS EMPLOYED THEREIN,**" to be as follows, that is to say:—

This Invention relates to a peculiar construction, arrangement, and combination of apparatus for the administration of mineral or medicated waters of all kinds in the form of vapour baths to the human frame, and consists in the employment in combination for that purpose of a

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steam generator of any convenient form and dimensions heated by solid or liquid fuel, and provided with the usual steam and water guages and blow-off cocks. This generator, which is further provided with a safety valve and with a water supply or feed pipe and funnel fitted with a stop-cock, communicates by pipes and stop-cocks with one, two, or 5 more receivers in which the steam is charged or impregnated with the particular mineral substance to be used or administered. In cases where more than one mineral or other substance are to be administered in combination, the steam which has become charged or impregnated in one receiver passes thence to a second one, where it becomes charged 10 with an additional mineral or other substance, and finally passes direct from the receiver into the closed chamber which constitutes the vapour bath. This chamber may be mounted on wheels for the facility of transport to the patient's bed, if intended for hospital use, or may be made to fold up or collapse (being composed of leather or other 15 suitable material) if required for use in private houses. A central opening is made in the top of the chamber or bath to afford egress for the head of the patient, and either the height of the seat on which the patient is placed or the top of the bath itself is made adjustable to suit the height of the patient. Each of the charging or impregnating 20 receivers, which by preference consist of vertical closed cylinders, contains a porcelain or earthenware dish or plate near the bottom just above the steam inlet, and above this plate there is fitted an open or perforated tray containing the mineral substance to be administered with the vapour. Immediately above this there is fitted a box closed at the top but open 25 at the bottom, containing a piece of absorbent material, as, for example, common sponge or asbestos, according to the nature of the liquid with which the absorbent material is to be saturated. Inside the cover of the sponge box there is fitted a spiral spring acted upon by a pressure screw which is turned from the outside of the receiver. The object of the 30 spring and screw is to compress more or less the absorbent material and cause a portion of the acid, alkali, alcohol, or other re-agent to drop on to the mineral or other medicinal substance on the perforated tray beneath, and thereby accomplish its dissolution or decomposition, the produce of the reaction being caught in the porcelain or earthenware 35 plate or dish at the bottom of the receiver and mingled with the steam. As the steam passes through the receiver it becomes charged with the dissolved substance therein, and either passes to a second receiver to obtain a further charge of some other substance or passes at once into

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the vapour bath. Cocks are provided for the withdrawal of the water of condensation from the receiver, and in order to afford facility for testing the nature or strength of the bath a small condenser may be fitted to the top of one or both the receivers, whereby the saturated
5 or impregnated steam may be condensed and collected in the form of liquid which may be administered as a drink to the patient.

The entire combined apparatus of steam generator and receivers may be constructed on a small scale and be contained in a case or box of readily portable dimensions, or if preferred it may be erected as a fixture
10 in any convenient part of the building.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Louis Encausse in the Great Seal Patent Office on the 17th September 1868.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, LOUIS
15 **ENCAUSSE**, of Madrid, in the Kingdom of Spain, Chemist, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Nineteenth day of March, in the year of our Lord One thousand eight hundred and sixty-eight, in the thirty-first year of Her reign, did, for Herself, Her heirs and successors,
20 give and grant unto me, the said Louis Encausse, Her special license that I, the said Louis Encausse, my executors, administrators, and assigns, or such others as I, the said Louis Encausse, my executors, administrators, or assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term
25 therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "**IMPROVEMENTS IN THE APPLICATION OF REMEDIAL AGENTS TO THE HUMAN FRAME, AND IN THE APPARATUS EMPLOYED THEREIN**," upon the condition (amongst others) that
30 I, the said Louis Encausse, my executors or administrators, by an instrument in writing under my hand and seal, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed

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in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said Louis Encausse, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and 5 by the following statement, reference being had to the accompanying Drawings, and to the letters and figures marked thereon, that is to say :—

My said Invention relates to a peculiar construction, arrangement, and combination of apparatus for the administration to the human 10 frame of mineral or medicated waters of all kinds in the form of vapour baths, and consists in the employment in combination for that purpose of a steam generator of any convenient form and dimensions heated by solid or liquid fuel, and provided with the usual steam and water gauges and blow-off cocks. This generator, which is further 15 provided with a safety valve and with a water supply or feed pipe and funnel fitted with a stop-cock, communicates by pipes and stop-cocks with one, two, or more receivers in which the steam is charged or impregnated with the particular medicinal substances to be used or administered. In cases where more than one mineral or other substance 20 are to be administered in combination, the steam which has become charged or impregnated in one receiver passes thence to a second one, where it becomes charged with an additional mineral or other substance, and finally passes direct from the receiver into the closed chamber which constitutes the vapour bath. This chamber may be mounted on 25 wheels for the facility of transport to the bed of the patient, if intended for hospital use, or may be made to fold up or collapse, being composed of leather or other suitable flexible material) if required for use in private houses. A central opening is made in the top of the chamber or bath to afford egress for the head of the patient, and either the height 30 of the seat on which the patient is placed or the top of the bath itself is made adjustable to suit the height of the patient. Each of the charging or impregnating receivers, which by preference consist of vertical closed cylinders, contains a porcelain or earthenware dish or plate near the bottom just above the steam inlet, and above this plate there is fitted 35 an open or perforated tray containing the mineral substance to be administered with the vapour. Immediately above this there is fitted a box closed at the top but open at the bottom, containing a piece of

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absorbent material, as, for example, common sponge or asbestos, according to the nature of the liquid with which the absorbent material is to be saturated. Inside the cover of the sponge box there is fitted a spiral spring acted upon by a pressure screw which is turned from the outside
5 of the receiver. The object of the spring and screw is to compress more or less the absorbent material and cause a portion of the acid, alkali, alcohol, or other re-agent to drop on to the mineral or other medicinal substance on the perforated tray beneath, and thereby accomplish its dissolution or decomposition, the produce of this re-
10 action being caught in the porcelain or earthenware plate or dish at the bottom of the receiver and mingled with the steam. As the steam passes through the receiver it becomes charged with the dissolved substance therein, and either passes to a second receiver to obtain a further charge of some other substance or passes at once into the vapour bath.
15 Cocks are provided for the withdrawal of the water of condensation from the receivers, and in order to afford facility for testing the nature or strength of the bath a small condenser may be fitted to the top of one or both the receivers, whereby the saturated or impregnated steam may be condensed and collected in the form of liquid which may be
20 administered as a drink to the patients.

The entire combined apparatus of steam generator and receivers may be constructed on a small scale and be contained in a case or box of readily portable dimensions, or if preferred it may be erected as a fixture in any convenient part of the building.

25 And in order that the said Invention may be fully understood, I shall now proceed more particularly to describe the same, and for that purpose shall refer to the several Figures on the annexed Sheet of Drawings, the same letters of reference indicating corresponding parts in all the Figures.

30 Figure 1 of my Drawings represents a perspective view of the steam generator and its impregnating receivers with their attachments removed from the box or case; Figure 2 is a similar view shewing the several parts enclosed in a box or case; Figure 3 is a perspective view of a vapour bath or closed chamber suitable for hospital use; and Figure 4
35 is a similar view of an expanding and contracting bath adapted for use in private houses.

A, represents a copper boiler capable of resisting a pressure of at least three atmospheres. This boiler is traversed longitudinally by a pipe or

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flue B (partly shewn in dotted lines) having a vertical bifurcation in order to utilise the greatest possible amount of heat from the fire placed in a suitable grate at Y; Z is a drawer or ash pan. In those apparatus' intended to remain in a fixed place the furnace is made so as to burn ordinary coal or other fuel or combustible materials, but in portable 5 apparatus the furnace is supplied with alcohol or other suitable liquid fuel. The boiler A is furnished with a safety valve at D, on which rests a weight so adjusted as not to allow the steam to escape by the valve, excepting when it has acquired the maximum of pressure required. The funnel V is for the purpose of facilitating the feeding of the boiler 10 with water, which passes into it through the cock X. 1 and 2 are gauge cocks for indicating the level of the water in the boiler; they are fixed on to the boiler at different levels and in such a way that the cock 1 always discharges steam, and the cock 2 water when the proper level is maintained. C is a cock for letting off steam when the apparatus is not 15 at work. Through the cocks E, E, and the pipes F, F, the steam passes into the receivers G and S which are both arranged alike inside as follows:—I is a grating or tray of metallic cloth or perforated metal, upon which is placed the medicinal substance which is intended to form part of the composition of the bath and with which the steam is to be 20 impregnated or charged before it enters the bath. Over this tray there is placed a metal box J provided with a cover but having no bottom; in the middle of this box there is a galvanized wire forming a cross, and on this cross is adjusted a sponge K or a piece or bundle of amianthus if it be required to absorb acids, but an ordinary sponge will do if 25 alcohol, alkaline substances or essences only are employed. The absorbent material is impregnated with the acid or other re-agent which is intended to accomplish the solution of the substance placed on the grate or tray beneath. Over the sponge and under the cover of the box J in each receiver there is placed a spiral spring acted upon by a 30 pressure screw L and R, by turning which the spring may be caused to compress the sponge, whereupon a certain quantity of the acid or other re-agent is expressed and drops upon the medicinal substance placed on the grate or open tray I beneath. This causes a decomposition or solution of such substance, and the produce of this reaction falls into a 35 small porcelain or china plate H placed at the bottom of the receiver. The steam which fills the receiver is consequently charged or impregnated with the substance thus dissolved. By turning more or less the pressure screw L the action of the re-agent is hastened or retarded at

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pleasure. At the bottom of the receivers there are fitted cocks N and T, through which the water of condensation escapes. By this arrangement of the apparatus it will be readily understood that when the receiver is brought into communication with the generator A by means of the
5 cock E and pipe F the steam is charged with the medicinal substance, the solution or decomposition of which is proceeding under the action of the re-agent suitable for the purpose and with which the sponge is saturated. It is also easy to understand that the steam will be charged with such substance.

10 In cases where the substance is insoluble, such as starch, for example, it is carried away by the steam in a state of mechanical suspension therein. On leaving the first receiver the charged or impregnated steam may be conducted either directly to the bath through the cock M, or be directed through the cock O, pipe P, P, and cock Q
15 into the second receiver S which is fitted up in the same manner as the receiver G, in order to be further charged with some other substance which is contained in the second receiver, and which combines with the substance or vapour with which the steam has been already charged in the first receiver. Thus simple vapour baths with
20 double and trebble combinations, according to the prescription of the medical attendant, can be administered with facility. On leaving the receiver S the charged steam is directed into the bath (Figure 4) through the cock U. In order to test the exact composition of the bath it is simply requisite to adapt to the pipe at O¹ the condenser 5 (Figure 2),
25 and to collect therein a portion of the water of condensation, which contains in a state of solution the substance or substances with which the steam has been charged. The medical attendant can thus easily ascertain the quantity of dissolved salt and the quality of the bath administered. The said water of condensation may also be administered
30 to the patient as a drink in cases where it may be found requisite. Moreover, by means of this apparatus the patient may be made to absorb through the pores any medicinal substances required.

35 The baths for hospitals or special establishments are provided with small wheels or castors, so as to enable them to be run easily from one bed to another; they are further provided with two doors opening one on each side, to enable the patient to enter from either side. In the interior there is a seat with an elevating screw for adjusting the same to the height of the patient, in order that his head may pass through the hole 6 in the top.

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The baths intended for use in private houses are made to fold up and expand somewhat similar to a bellows (see Figure 4); the top part slides along four iron rods and is fixed at any desired elevation by pinching screws which press against the rods.

The entire apparatus comprising the boiler, the furnace, and the two 5 receivers is enclosed in a box or case furnished with a moveable lid and front, and provided with handles for lifting and carrying the same.

3 and 4 (Figure 2) represent partitions or compartments made inside the main box for the reception of the respective receivers G and S. Thermometers 7, 7, are fitted to the baths for the purpose of testing the 10 temperature of the steam.

Having now described and particularly ascertained the nature of my said Invention, and the manner in which the same is or may be used or carried into effect, I would observe in conclusion, that what I consider to be novel and original, and therefore claim as the Invention secured 15 to me by the herein-before in part recited Letters Patent is,—

First. The general construction, arrangement, and combination of apparatus for the application of remedial agents to the human frame in the form of vapour baths, as herein-before described and illustrated by my Drawings. 20

Second. The combination with a steam generator of one or more receivers for charging or impregnating the steam with any required remedial agent or combination of remedial agents before such steam is allowed to enter the bath, substantially as herein-before described.

Third. The application and use of a condenser in combination with 25 one of the said receivers, substantially as and for the purpose herein-before described.

Fourth. The combination of sponge, asbestos, or other suitable absorbent material or substance with a box containing a compressing spring and pressing screw, substantially as and for the purpose herein- 30 before described and illustrated by my Drawings.

Fifth. The system or mode of charging or impregnating steam to be used in vapour baths with medicinal or remedial agents, in the manner herein-before described and illustrated by my Drawings.

Sixth. The peculiar construction of expanding and contracting vapour 35

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bath, as herein-before described and illustrated by Figure 4 of my Drawings.

5 In witness whereof, I, the said Louis Encausse, have to this my Specification set my hand and seal, the Fourteenth day of September, One thousand eight hundred and sixty-eight.

L. ENCAUSSE. (L.S.)

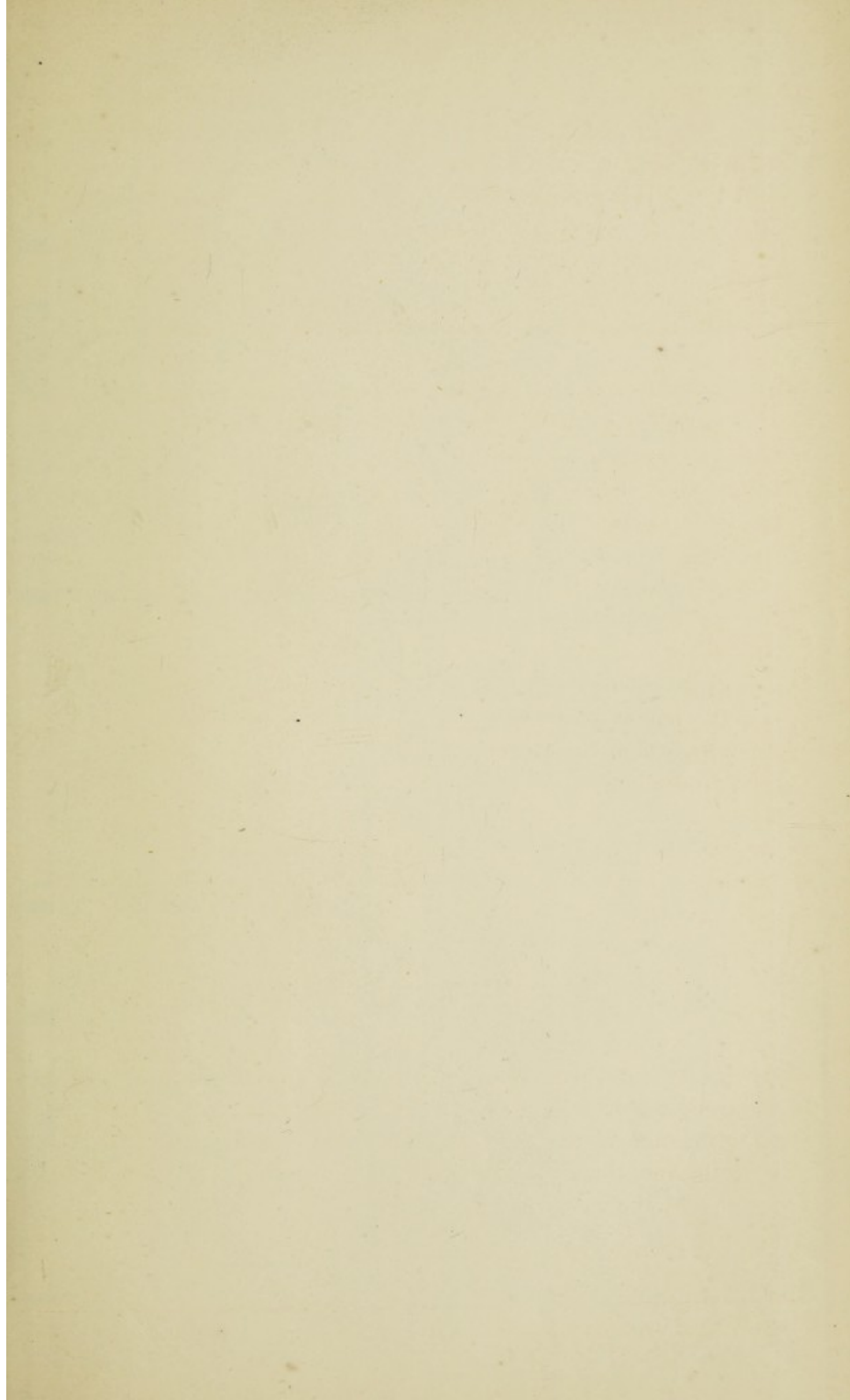
LONDON :

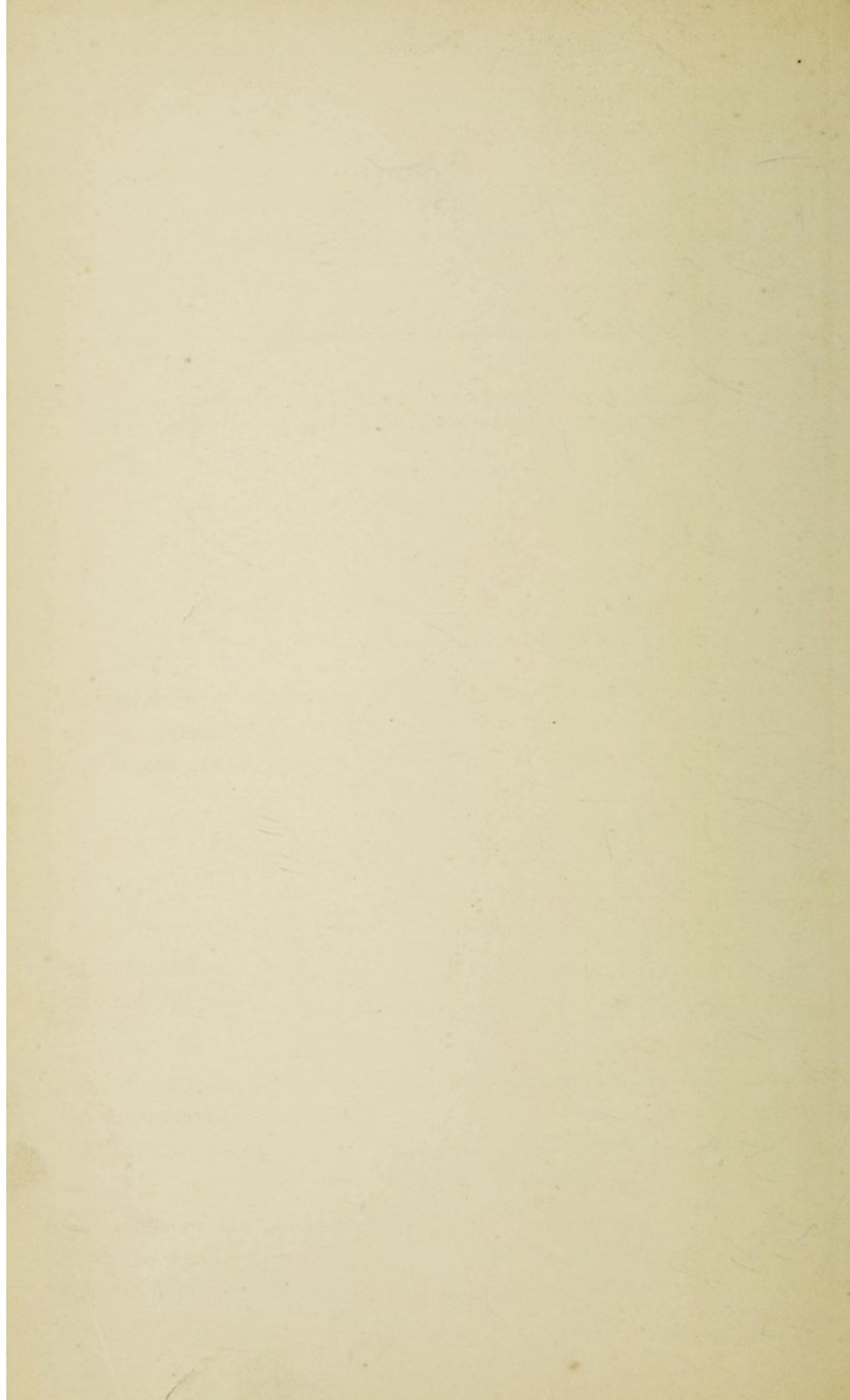
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Printers to the Queen's most Excellent Majesty. 1868.

path, as hereinbefore described and illustrated by Figure 4 of my
Drawings.
In witness whereof, I the said James Buchanan, have to this my
Specification set my hand and seal the thirtieth day of May
1858. One thousand eight hundred and sixty-eight.

J. BUCHANAN (Esq.)

LONDON:
Printed by James Buchanan and William Brown,
Printers to the Queen's most Excellent Majesty, 1858.





A.D. 1868, MAR. 19, N° 942.
ENCAUSSE'S SPECIFICATION.

[1 SHEET]

FIG. 3.

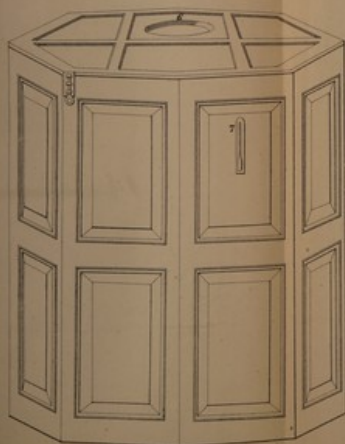


FIG. 1.

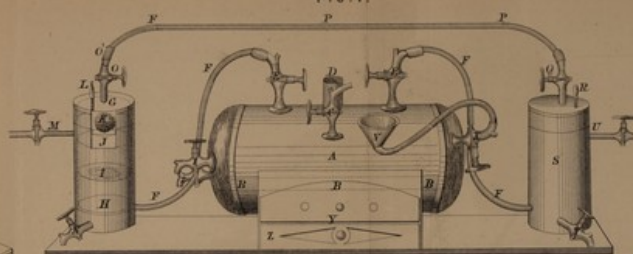


FIG. 2.

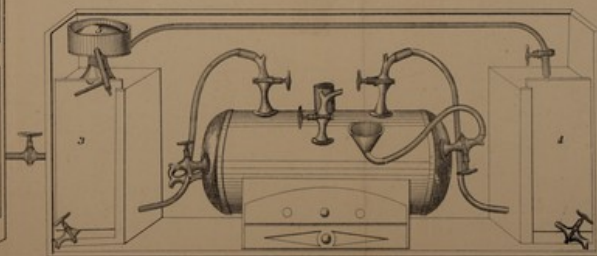
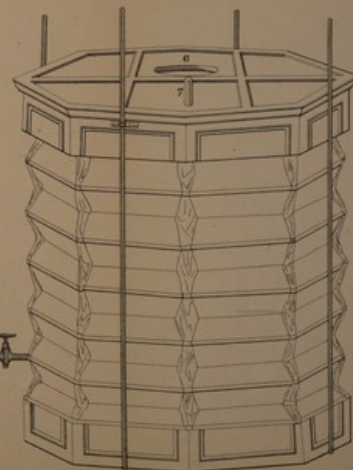


FIG. 4.



The filed drawing is partly colored.

Drawn on Stone by Maitly & Sons

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