



A.D. 1853 N^o 2308.

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

OF

GEORGE LIFFORD SMARTT.

VESSELS FOR PRESERVING LEECHES
AND FISH ALIVE.

L O N D O N :

PRINTED BY GEORGE E. BYRE AND WILLIAM SPOTTISWOODE,
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1854.



A.D. 1853 N° 2308.

Vessels for Preserving Leeches and Fish Alive.

LETTERS PATENT to George Lifford Smartt, of Enfield, in the County of Middlesex, Chemist, for the Invention of "**IMPROVEMENTS IN VESSELS FOR PRESERVING LEECHES AND FISH ALIVE.**"

Sealed the 1st February 1854, and dated the 8th October 1853.

PROVISIONAL SPECIFICATION left by the said George Lifford Smartt at the Office of the Commissioners of Patents, with his Petition, on the 8th October 1853.

I, **GEORGE LIFFORD SMARTT**, of Enfield, in the County of Middlesex, Chemist, do hereby declare the nature of the said Invention for "**IMPROVEMENTS IN VESSELS FOR PRESERVING LEECHES AND FISH ALIVE**" to be as follows:—

I make use of an earthen or other suitable vessel, and perforate the cover or top with numerous small holes. In the bottom of the vessel I introduce an air tube, which rises an inch and a half, more or less, from the bottom. The top of the air pipe may be made of any desired shape or size to suit the vessel, but I prefer it of a mushroom shape and perforated. On the bottom of the vessel I strew some pieces of charcoal and a few stones. On the top or lid of the vessel I fix a convex or other

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conveniently shaped distributor or spreader, fluted or not, and allow a small current of water to flow thereon. The top or cover of the vessel being perforated, the water passes through the perforations into the vessel. When the body of water inside of the vessel rises to the level of the air pipe it flows off through it. The upward current of air 5 through the air pipe, together with the continual supply of fresh water dropping through the perforated lid upon the leeches or fish, keeps the temperature in a cool and proper state for preserving them alive and in a healthy and vigorous condition.

SPECIFICATION in pursuance of the conditions of the Letters Patent, 10
filed by the said George Lifford Smartt in the Great Seal Patent
Office on the 8th April 1854.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I,
GEORGE LIFFORD SMARTT, of Enfield, in the County of Middlesex,
Chemist, send greeting. 15

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Eighth day of October, in the year of our Lord One thousand eight hundred and fifty-three, in the seven-teenth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said George Lifford Smartt, Her special 20 licence that I, the said George Lifford Smartt, my executors, administrators, and assigns, or such others as I, the said George Lifford Smartt, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times there- after during the term therein expressed, should and lawfully might 25 make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Inven- tion for "**IMPROVEMENTS IN VESSELS FOR PRESERVING LEECHES AND FISH ALIVE,**" upon the condition (amongst others) that I, the said George Lifford Smartt, by an instrument in writing under my hand and seal, 30 should particularly describe and ascertain the nature of the said Inven- tion, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar

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months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said George Lifford Smartt, 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 by the following statement thereof, reference being had to the Drawing hereunto annexed (that is to say):

My Invention consists of an improved construction of vessel or apparatus for preserving leeches and fish alive. In carrying my Invention into effect I make use of an earthen or other suitable vessel of convenient dimensions, and perforate the cover with numerous small holes. In the bottom of the vessel I introduce an air tube, which rises about an inch and a half, more or less, from the bottom. The top of the air pipe is furnished with a cover or rose, which may be made of any desired shape or size to suit the vessel, but I prefer it of a mushroom shape, and perforated with small holes. On the bottom of the vessel I strew some pieces of charcoal, by preference that made from hard wood, and a few stones. On the top or lid of the vessel I fix a convex or other conveniently shaped distributor or spreader, fluted or not, and I allow a small stream of water to flow thereon from any suitable source. The top or cover of the vessel being perforated, the water passes from the distributor through the perforations into the vessel. When the body of water inside the vessel rises to the level of the top of the air pipe, it flows off through the perforations in its cover and down the pipe. The upward current of air through the air pipe, together with the continual supply of fresh water dropping through the perforated lid upon the leeches or fish in the vessel, keeps the temperature of the water in a cool and proper state for preserving them alive and in a healthy and vigorous condition.

The Drawing annexed represents an elevation and vertical section of a vessel for preserving leeches and fish alive, having my improvements applied thereto. A, A, is the vessel; and B, its cover, perforated with numerous holes, and having a slightly raised ledge *a, a*, round it, to prevent the water running over the sides. C, is the bottom of the vessel; D, the air pipe fixed therein; and E, its perforated cover or

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rose. F, represents the pieces of charcoal and small stones on the bottom of the vessel. G, is the distributor or spreader, fixed on or formed in one with the cover B; and H, the supply pipe, fitted with a tap I, through which the vessel is supplied with water, the quantity being regulated by opening the tap I, to the required extent. It will be 5 seen that the vessel always contains water up to the level of the top of the air pipe, at which point the superfluous quantity runs to waste through the air pipe.

And having now described the nature of my said Invention, and in what manner the same is to be performed, I declare that what I claim 10 as my improvements in vessels for preserving leeches and fish alive is,—

The air pipe in the bottom of the vessel for introducing fresh air and allowing the waste water to escape, and the distributor or spreader on the lid or cover of the vessel for distributing the water supplied to the vessel over the perforated lid. 15

In witness whereof, I, the said George Lifford Smartt, have hereunto set my hand and seal, this First day of April, One thousand eight hundred and fifty-four.

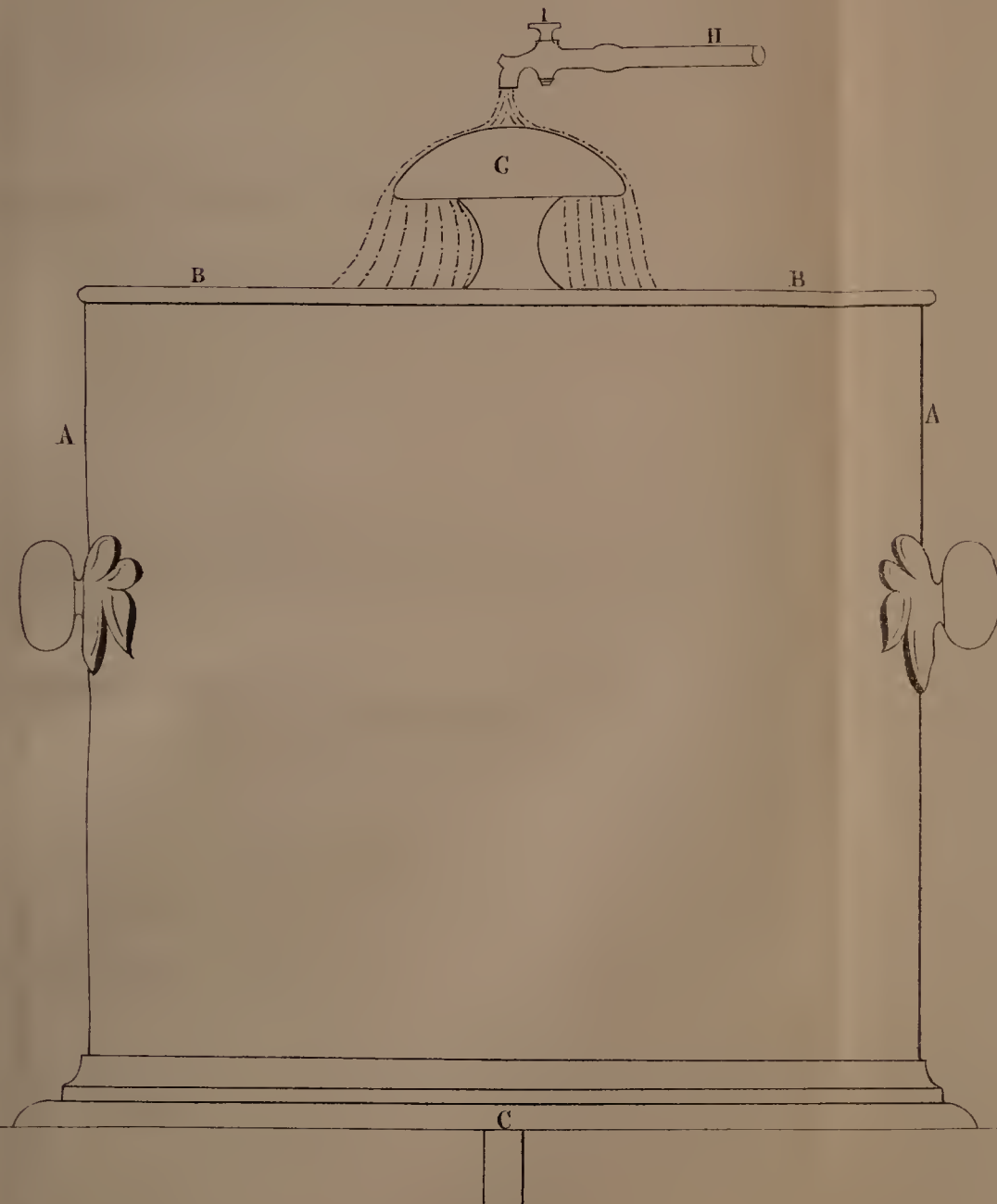
GEORGE LIFFORD SMARTT. (L.S.)

LONDON :

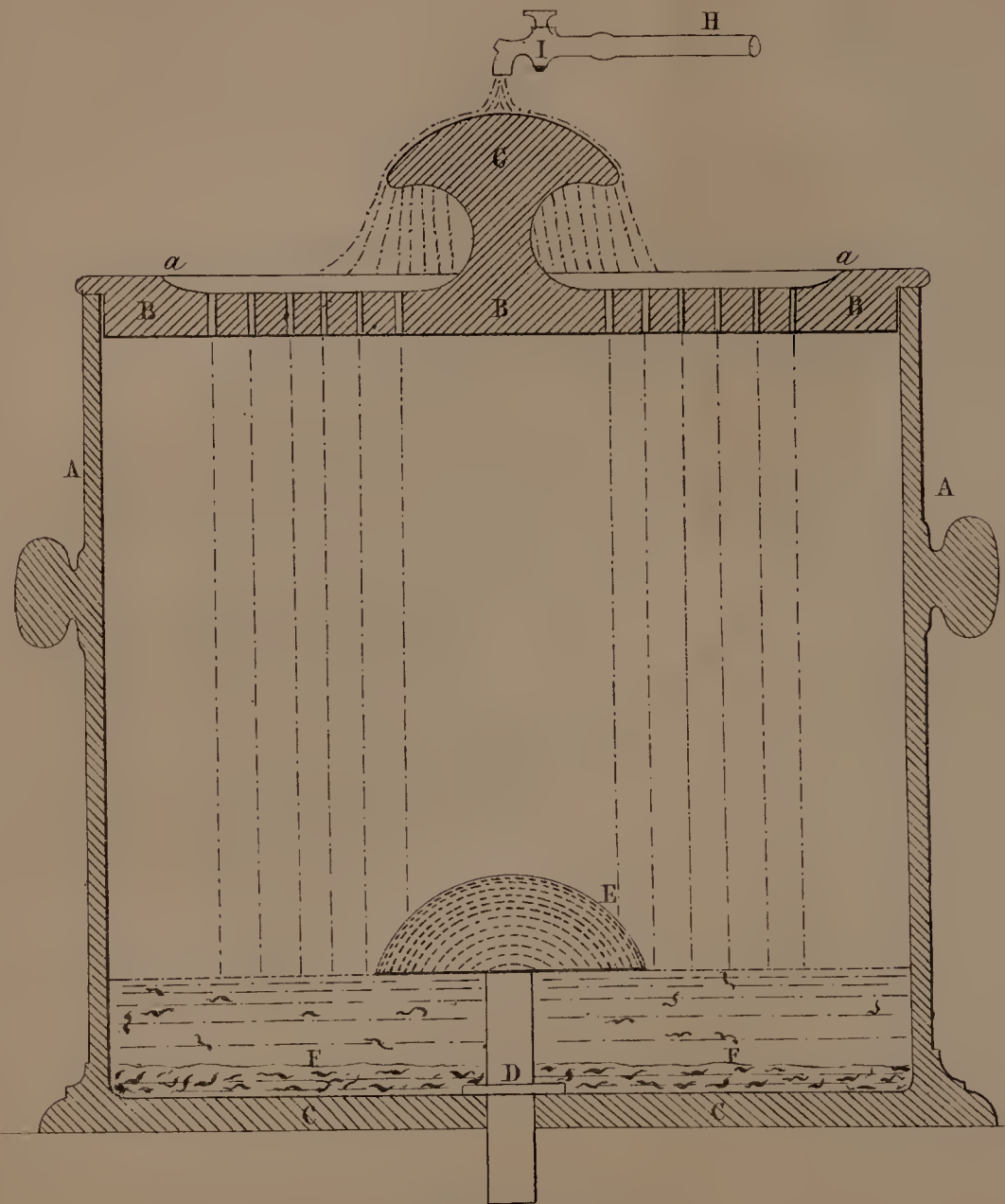
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Printers to the Queen's most Excellent Majesty. 1854.

SMARTT'S SPECIFICATION.

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Elevation



Vertical Section

The filed-drawing is colored

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