Specification of Frederick Lipscombe : treating noxious vapours.

A.D. 1872, 16*th* AUGUST. N° 2450.

SPECIFICATION

OF

FREDERICK LIPSCOMBE.

TREATING NOXIOUS VAPOURS.

LONDON:
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A.D. 1872, 16*th August*. N° 2450.

Treating Noxious Vapours.

LETTERS PATENT to Frederick Lipscombe, of 233, Strand, in the County of Middlesex, Water Filter Manufacturer, for the Invention of "IMPROVEMENTS IN THE TREATMENT OF NOXIOUS VAPOURS, AND IN APPARATUS OR APPLIANCES IN CONNECTION THEREWITH."

Sealed the 12th November 1872, and dated the 16th August 1872.

PROVISIONAL SPECIFICATION left by the said Frederick Lipscombe at the Office of the Commissioners of Patents, with his Petition, on the 16th August 1872.

I, FREDERICK LIPSCOMBE, of 233, Strand, in the County of Middlesex, Water Filter Manufacturer, do hereby declare the nature of my said Invention for "IMPROVEMENTS IN THE TREATMENT OF NOXIOUS VAPOURS AND IN APPARATUS OR APPLIANCES IN CONNECTION THEREWITH," to be as follows:—

I compel the salt fumes which emanate from a pottery kiln during the salt glazing process to pass in the midst of a shower of water, whereby they become condensed and prevented from polluting the atmosphere.

In carrying out my Invention I connect the chimney of a pottery kiln with one or more condensing flues, through which flues when the

said chimney is wholly or partly closed smoke must pass to the outer air, and while so passing through the said flues during the salt glazing process I cause a shower of water to flow in the midst of the smoke, thereby condensing the salt fumes, the liquid falling into a receptacle below. The said shower of water may be produced in various ways, as for example, by having a cistern with a perforated bottom fitted inside the flue above the inlet of the salt smoke or fumes from the kiln, so as to allow the water to fall down the flue and through the salt smoke in the form of a shower. Or a perforated tray may be substituted for the cistern, on to which water may be allowed to flow from a pipe, or one or more jets of water connected with pipes may be situated in any part of the flue which will enable the water to be dispersed in the form of a shower into the salt smoke or fumes as they enter or pass along the flue. The condensed salt vapour may by subsequent evaporation or other treatment be utilized for commercial purposes. The said condensing flue or flues may be in connection with one or more kilns, and the salt fumes which emanate from them be condensed in the manner before mentioned as occasion may require.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Frederick Lipscombe in the Great Seal Patent Office on the 13th February 1873.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, FREDERICK LIPSCOMBE, of 233, Strand, in the County of Middlesex, Water Filter Manufacturer, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Sixteenth day of August, in the year of our Lord One thousand eight hundred and seventy-two, in the thirty-sixth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Frederick Lipscombe, Her special license that I, the said Frederick Lipscombe, my executors, administrators, and assigns, or such others as I, the said Frederick Lipscombe, 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 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 TREATMENT OF NOXIOUS VAPOURS AND IN APPARATUS OR APPLIANCES IN CONNECTION THEREWITH," upon the condition (amongst others) that I, the said Frederick Lipscombe, 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 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 Frederick Lipscombe, 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, reference being had to the accompanying Drawings, and to the letters and figures marked thereon, that is to say:—

My said Invention consists in compelling the salt fumes which emanate from a pottery kiln during the salt glazing process to pass in the midst of a shower of water, whereby they become condensed and prevented from polluting the atmosphere.

In carrying out my Invention, I connect the chimney or upper part of a pottery kiln by means of branch flues with one or more condensing flues through which latter flues, when the chimney of the kiln is wholly or partly closed, smoke must pass to the outer air, and while so passing through the said condensing flue or flues during the salt glazing process I cause a shower of water to flow in the midst of the smoke, thereby condensing the salt fumes, the liquid falling into a receptacle below. The said shower of water may be produced in various ways, as for example, by having a cistern with a perforated bottom fitted inside the condensing flue above the inlet of the salt smoke or fumes from the kiln, so as to allow the water to fall down the flue and through the salt smoke in the form of a shower. Or a perforated tray may be substituted for the cistern on to which water may be allowed to flow from a pipe, or one or more jets of water connected with pipes may be situated in any part of the condensing flue, which will enable the water to be dispersed in the form of a shower into the salt smoke or fumes as they enter or pass along the flue. The condensed salt vapour may by subsequent evaporation or other treatment be utilized for commercial purposes. The said condensing flue or flues may be in

connection with one or more kilns, and the salt fumes which emanate from them be condensed in the manner before mentioned as occasion may require.

And in order that my said Invention may be fully understood I shall now proceed more particularly to describe the same, and for that purpose shall refer to the annexed Drawing which represents in partial section and elevation the application of my Invention to two ordinary pottery kilns.

A and B are the two kilns in connection with one condensing flue C; the connection between the kiln A and the flue C is shewn closed by the damper D; the damper E on the top of that kiln is shewn open; these two dampers D and E have each an arm which is capable of moving freely in a slot in the rod F, so that when the rod is moved upwards or downwards the damper connected therewith that was previously closed then opens, and that also connected therewith that was previously open then closes, the rod being thus made to work both dampers simultaneously through pressing upon the arm of each damper. The dampers may be opened or shut separately if desired by each being provided with a sliding rod of its own, but I prefer that one rod should work both dampers at the same time.

In the Drawing the kiln B is shewn in communication with the condensing flue C; during the salting process the damper G is shewn open, while the damper H at the top of the kiln is shewn closed, both dampers have each an arm which are worked by means of a sliding rod I in the manner before described. I do not confine myself to this mode of working the dampers, as it is obviously capable of several modifications, but I find this method answers the purpose intended.

The salt smoke or fumes are represented in the Drawing as carried by the draught out of the kiln B during the salting processes into the flue C into the midst of a shower of water, which is supposed to have fallen from a cistern or tray K fitted into the flue and having its bottom perforated, and which has been supplied with water previous to or at the time of or shortly after the commencement of the salting process by turning a tap opening a valve or other contrivance in the supply pipe J, or otherwise opening a communication between the said perforated cistern or tray, and another cistern containing water or with a force pump; the effect of the shower of water upon the salt smoke or fumes being to condense them into a liquid which falls with the water to the

lower part of the flue C, whence it is withdrawn in any convenient manner; the uncondensed coal smoke and uncondensed salt smoke or fumes, if any, pass out of the flue C by a lateral passage in the direction of the arrows into the open air. When the salting process is completed the rod I may be drawn down, thereby closing the damper G and opening the damper H, thus restoring the direct draught out of the top of kiln chimney, as shewn in the kiln A.

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 to me by the herein-before in part recited Letters Patent is,—

First. The condensation of the salt smoke or fumes from pottery kilns by means of a shower of water substantially as herein-before described.

Second. The combination of one or more pottery kilns with a condensing flue through which a shower of water is caused to fall substantially as and for the purpose herein-before described.

In witness whereof, I, the said Frederick Lipscombe, have to this my Specification set my hand and seal, this Eleventh day of February, One thousand eight hundred and seventy-three.

FREDERICK LIPSCOMBE. (L.S.)

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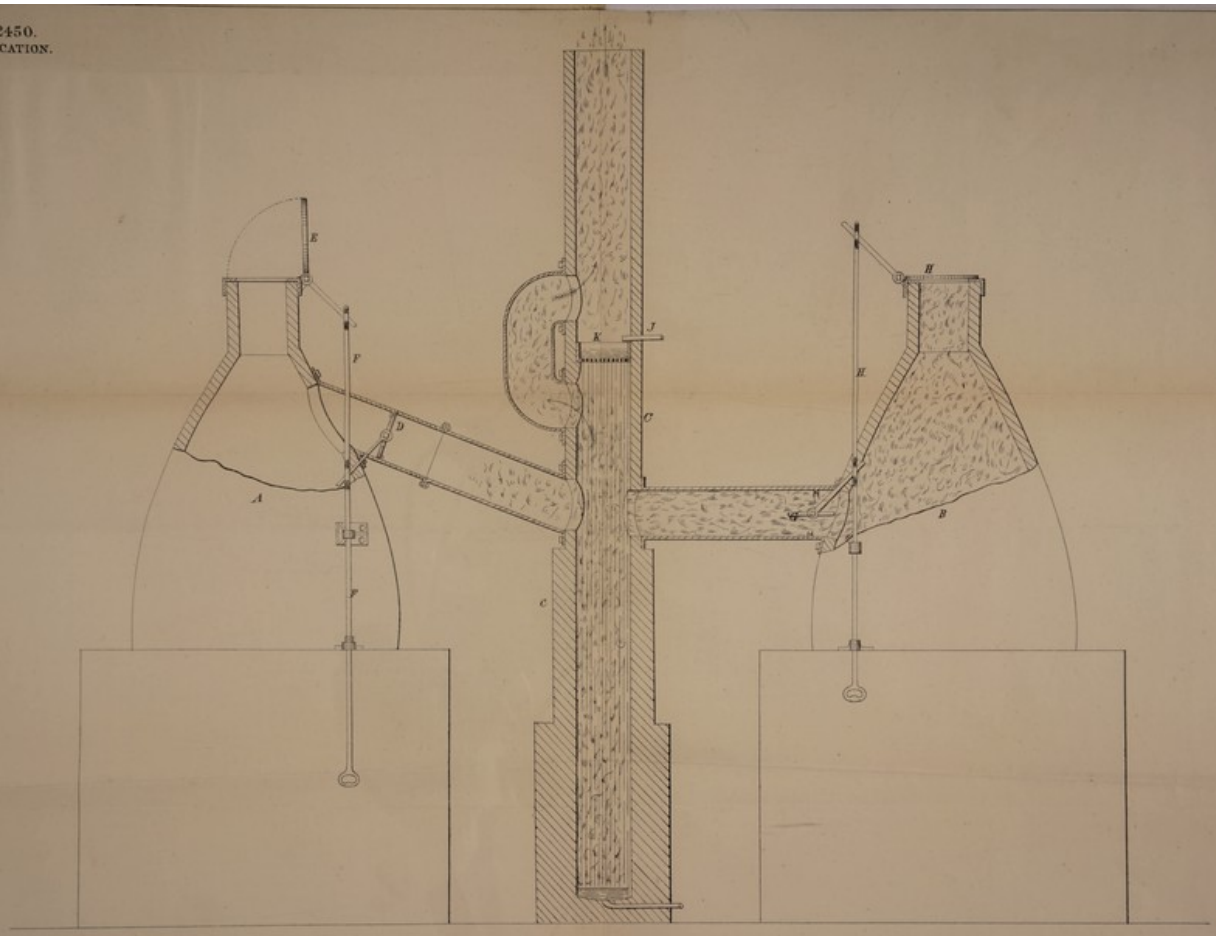
LIPSCOMBE'S Specification.

(1 SHEET)



The filed drawing is not colored.

Drawn on Stone by Malby & Sons.

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