

Specification of Frederick Dixon : disinfecting and deodorising sewer gas.

Contributors

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A.D. 1874, 9th JULY. N° 2409.

SPECIFICATION

OF

FREDERICK DIXON.

DISINFECTING AND DEODORISING
SEWER GAS.

LONDON:

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A.D. 1874, 9th JULY. N° 2409.

Disinfecting and Deodorising Sewer Gas.

LETTERS PATENT to Frederick Dixon, of Cliftonville, Brighton, in the County of Sussex, Surgeon, for the Invention of "**AN IMPROVED METHOD OF AND APPARATUS FOR DISINFECTING AND DEODORISING THE INJURIOUS GASES ARISING FROM SEWERS AND DRAINS.**"

Sealed the 5th January 1875, and dated the 9th July 1874.

PROVISIONAL SPECIFICATION left by the said Frederick Dixon at the Office of the Commissioners of Patents, with his Petition, on the 9th July 1874.

I, **FREDERICK DIXON**, of Cliftonville, Brighton, in the County of Sussex, Surgeon, do hereby declare the nature and object of my said Invention for "**AN IMPROVED METHOD OF AND APPARATUS FOR DISINFECTING AND DEODORISING THE INJURIOUS GASES ARISING FROM SEWERS AND DRAINS,**" to be as follows :—

The object of this Invention is to effectually disinfect and deodorise the gases given off at the ventilating shafts or other openings of sewers and drains by causing such gases to pass through flannel, cloth, sponge, or other porous material saturated with a disinfectant or deodoriser ; and in carrying out the said Invention I employ the apparatus herein-after

Dixon's Apparatus for Disinfecting and Deodorising Sewer Gas.

described:—A tank or trough is fitted at the bottom of the trap, ventilator, or other opening of the sewer or drain; in this is placed a wooden or iron frame covered with flannel or other porous material. At the top of such frame is placed another tank or cistern. The disinfectant or deodoriser is placed in both tanks; that from the lower tank 5 is drawn up by capillary attraction, and that from the upper tank is drawn down by woollen strands inserted in such upper tank or cistern, and falling over the sides thereof on to the flannel or other porous material; thus the flannel or other material is always kept saturated.

The trap or ventilator, which is made of iron, stone, wood, or brick in 10 cement, is divided into two portions, on one side communicating with the sewer or drain, on the other it is open to the outward air through a grating. The upper part of the division in the ventilator or trap is fitted with a frame to be covered with canvas, wire, or zinc gauze, or with other similar material in order to prevent the dust, sand, or dirt from 15 the outward opening accumulating on the flannel, and preventing its proper action. The road dirt and stones falling through the gratings are accumulated in a box immediately under such gratings, and these can be readily removed when necessary. Should surface or other water pass through the gratings it is carried into the sewer or drain beneath 20 the disinfecting cistern either by a trapped tube or by a spring trap.

The tray or trough in which the flannel or other porous material is placed may be made of iron, zinc, or earthenware, and it will be kept in position by projecting flanges resting on fillets, and being thus arranged for the purpose of ready renewal or cleaning. 25

The fluid disinfectant will be (when necessary) poured into the cisterns by opening the upper portion of the trap, which when closed will be impervious to dust or other injury.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Frederick Dixon in the Great Seal Patent Office on 30 the 8th January 1875.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, FREDERICK DIXON, of Cliftonville, Brighton, in the County of Sussex, Surgeon, send greeting.

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WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Ninth day of July, in the year of our Lord One thousand eight hundred and seventy-four, in the thirty-eighth year of Her reign, did, for Herself, Her heirs and successors, give and
5 grant unto me, the said Frederick Dixon, Her special licence that I, the said Frederick Dixon, my executors, administrators, and assigns, or such others as I, the said Frederick Dixon, 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,
10 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 "**AN IMPROVED METHOD OF AND APPARATUS FOR DISINSECTING AND DEODORISING THE INJURIOUS GASES ARISING FROM SEWERS AND DRAINS,**" upon the condition (amongst others) that I, the said
15 Frederick Dixon, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, 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
20 next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said Frederick Dixon, 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 in writing, and on reference being had to the
25 accompanying Sheet of Drawings, that is to say:—

The object of this Invention is to effectually disinfect and deodorise the gases given off or emitted at the ventilating shafts or other openings of sewers and drains by causing such gases to pass through flannel, cloth, sponge, or other similar absorbent and porous material saturated with a
30 disinfectant or deodorizer; and in carrying out the said Invention I employ the following apparatus:—At the bottom of the trap, ventilator, or other opening 1 of the sewer or drain I fit a tank or trough 2, in which I place a wooden or iron frame 3, covered with flannel, cloth, sponge, or other similar porous material 4, and carrying at its top a
35 second tank or cistern 5. Both tanks 2 and 5 contain the liquid disinfectant or deodoriser; that from the tank 2 is drawn upwards by capillary attraction, and that from the tank 5 is drawn downwards by woollen

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strands 6 placed in and falling over its sides on to the flannel or other porous material 4, which is thus always kept saturated.

The tank 2 may be made of iron, zinc, or earthenware (as may also the tank 5), and it is kept in position by projecting flanges 12 resting on fillets 13 of the frame 1; the tanks are thus arranged for ready removal 5 or cleaning.

The trap or ventilator 1 may be made of iron, stone, wood, or brick in cement; it is divided by a partition 7 into two portions 8, 9, one of which 8 communicates directly with the sewer or drain, and the other of which 9 opens to the air through a grating 10, which is hinged to the 10 frame 1 in the usual manner. The upper part of the division 7 is fitted with a frame 11, covered with canvas, wire, or zinc gauze, or with any other material suitable for preventing dust or dirt entering by the grating 10 having access to the flannel 4, and checking its proper action. The road dirt, stones, and surface water which fall through the 15 grating 10 accumulate in the compartment 9, which is immediately thereunder, and can be readily removed therefrom when necessary. Or the surface water may be carried from the compartment 9 into the sewer or drain beneath the tank 2 either by an ordinary trapped tube or spring tap. If required a narrow gutter may also be run round inside of the 20 upper edge of the compartment 8, and leading into the compartment 9 so as to carry away therein any surface water which may possibly obtain access to the compartment 8, and prevent its diluting the liquid therein.

The liquid disinfectant or deodorizer is poured into the tanks 2 and 5 25 after lifting the grating 10, the solid portion 14 of which when closed covers both tanks, and prevents any dust or other extraneous matter obtaining access thereto.

On the accompanying Sheet of Drawings Figure 1 represents a plan of the grating 10 and cover 4; Figure 2, a plan shewing the tank 5; 30 Figure 3, a plan shewing the tank 2; Figure 4, a cross section; Figure 5, a longitudinal section; and Figure 6, a section of the compartment 9.

Having now particularly described and ascertained the nature and object of my said Invention, together with the manner in which the same is to be or may be performed or carried into practical effect, I 35 would remark in conclusion that I claim as my Invention, the disinfecting and deodorizing of the gases emitted at the ventilating shafts or

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other openings of sewers and drains by causing the gases or other impurities to pass through flannel or other absorbent and porous material saturated with a liquid disinfectant or deodorizer, substantially as in the manner above specified, and as illustrated on the accompanying Sheet of
5 Drawings.

In witness whereof, I, the said Frederick Dixon, have hereunto set my hand and seal, this First day of January, in the year of our Lord One thousand eight hundred and seventy-five.

FREDERICK DIXON. (L.S.)

LONDON :

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Printers to the Queen's most Excellent Majesty. 1875.

Witness's deposition for identifying and describing the same.

other openings of sewers and drains by means of the pipes or other impurities to pass through flannels or other absorbent and porous material saturated with a liquid disinfectant or deodorant, substantially as in the manner above specified, and as illustrated on the accompanying sheet of drawings.

In witness whereof, I, the said Frederick Dixon, have hereunto set my hand and seal, this First day of January, in the year of our Lord One thousand eight hundred and seventy-five.

FREDERICK DIXON. (s.)

LONDON.



