

Specification of William Estor and Charles Thomas Pearce : disinfecting or deodorizing.

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A.D. 1868, 7th OCTOBER. N° 3067.

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

OF

WILLIAM ESTOR
AND
CHARLES THOMAS PEARCE.

DISINFECTING OR DEODORIZING.

LONDON:
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A.D. 1868, 7th OCTOBER. N° 3067.

Disinfecting or Deodorizing.

LETTERS PATENT to William Estor, of Hampstead, Analytical Chemist, and Charles Thomas Pearce, of Maddox Street, Regent Street, both in the County of Middlesex, for the Invention of "IMPROVEMENTS IN THE MEANS OF DISINFECTING OR DEODORIZING ROOMS, BUILDINGS, AND SHIPS, APPLICABLE ALSO TO OTHER SUCH LIKE PURPOSES."

Sealed the 1st April 1869, and dated the 7th October 1868.

PROVISIONAL SPECIFICATION left by the said William Estor and Charles Thomas Pearce at the Office of the Commissioners of Patents, with their Petition, on the 7th October 1868.

We, WILLIAM ESTOR, of Hampstead, Analytical Chemist, and CHARLES THOMAS PEARCE, of Maddox Street, Regent Street, both in the County of Middlesex, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN THE MEANS OF DISINFECTING OR DEODORIZING ROOMS, BUILDINGS, AND SHIPS, APPLICABLE ALSO TO OTHER SUCH LIKE PURPOSES," to be as follows:—

10 This Invention relates to certain improvements in the means of disinfecting or deodorizing localities, whether rooms, buildings, ships, or otherwise, affording a perfect antiseptic in cases of sickness, or the prevalence of disease; and purifying the air as well as clothing, bedding,

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and other such like purposes. We propose to employ the two gases known as sulphurous acid gas and chlorine in combination, and they may be generated in any convenient manner. One method is to use a small receptacle of pottery ware coated externally with a composition containing sulphur, and provided internally with chemicals capable of 5 generating chlorine; the receptacle being then placed on a stand of metal or pottery is touched with a lighted match, and the sulphurous acid is produced, and ultimately the chlorine, and the two gases will become mixed with the atmospheric air, and be found to possess the necessary properties of a perfect disinfectant, deodorizer, or antiseptic, 10 and may be also used to fumigate clothing, bedding, and for other such like purposes.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said William Estor and Charles Thomas Pearce in the Great Seal Patent Office on the 7th April 1869. 15

TO ALL TO WHOM THESE PRESENTS SHALL COME, we, WILLIAM ESTOR, of Hampstead, Analytical Chemist, and CHARLES THOMAS PEARCE, of Maddox Street, Regent Street, both in the County of Middlesex, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her 20 Letters Patent, bearing date the Seventh day of October, in the year of our Lord One thousand eight hundred and sixty-eight, in the thirty-second year of Her reign, did, for Herself, Her heirs and successors, give and grant unto us, the said William Estor and Charles Thomas Pearce, Her special licence that we, the said William Estor and Charles 25 Thomas Pearce, our executors, administrators, and assigns, or such others as we, the said William Estor and Charles Thomas Pearce, our executors, administrators, and 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, 30 and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "**IMPROVEMENTS IN THE MEANS OF DISINFECTING OR DEODORIZING ROOMS, BUILDINGS, AND SHIPS, APPLICABLE ALSO TO OTHER SUCH LIKE PURPOSES,**" upon the condition (amongst others) that we, the said William Estor and Charles Thomas Pearce, our 35

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executors or administrators, by an instrument in writing under our, 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
5 Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that we, the said William Estor and Charles Thomas Pearce, do hereby declare the nature of our said Invention, and in what manner the same is to be performed, to be particularly described
10 and ascertained in and by the following statement and the Drawings therein referred to (that is to say) :—

Our Invention has for its object a convenient and effectual method of disinfecting the air (of sick rooms, hospitals, churches, chapels, lecture rooms, theatres, ships, cabs, carriages, or omnibuses) which has become
15 vitiated or infected by fever, sewer gas, mephitic or other noxious exhalations, as also purifying or deodorizing clothing or similar articles from contagious effluvia by the evolution of gases generated by heat in a simple, ready, and inexpensive manner, and consists of a cup or vase of any convenient size, externally coated with finely divided
20 charcoal (mixed with adhesive substances, such as gum, starch, or gelatine) and powdered or liquid sulphur, which is dried in a hot room; the interior of the cup is partly filled with chloride of lime, from which sulphurous acid gas and chlorine are liberated, filling the apartment and thereby destroying all infection, animalculæ, vegetable and animal
25 spores, and leaving the atmosphere pure.

And in order that our said Invention may be more fully understood and readily carried into effect, we now proceed to describe the same by aid of the accompanying Drawings, reference being had to the letters and figures thereon marked (that is to say) :—

30 Fig. 1 represents a front view of the disinfecting cup in accordance with our said Invention; Fig. 2 a top or plan view thereof; Fig. 3 a transverse vertical section taken through the dotted line in Fig. 2; Fig. 4 a perspective view of the cup, showing the mode of igniting the external composition and disinfecting substances from which the disinfecting
35 gases are eliminated; and Fig. 5, outer case or wrapper inclosing the cup, having the lid or cover removed, and separately shown at Fig. 6. In each Figure the same letters of reference denote similar corresponding parts.

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A, A, the cup or vase formed of burnt pipeclay, glass, porcelain, enamelled metal, or prepared wood; B, B, pedestal upon which the vase stands; C, C, disinfecting composition, consisting of ehloride of lime (or other earths or salts holding or containing chlorine) and a solution of sulphate of iron (or other sulphates) in suitable proportions for forming 5 a stiff compost; D, D, external combustible coating composed of an inner layer of finely divided charcoal intimately mixed with gelatinous or mucilaginous substances aforesaid, upon which an outer surface of sublimed, powdered, or liquid sulphur is applied; E, E, cap of thin india-rubber, gutta percha, or other prepared substances, for hermetically 10 sealing or closing the contents of the cup; F, F, inflammable band, string, or ribbon (prepared with a solution of collodion and gumbenzoin, or other ignitable ingredients) surrounding the neck or lower portion of the vase in contact with the combustible coating, by which the same is lighted through the medium of a match or taper G, G, as shown at 15 Fig. 4; H, H, box or wrapper enclosing the cup or vase in which the same is commercially vended; I, I, lid of same.

In addition to the above a capsule of glass, membrane paper, or porcelain clay, sealed or luted down, is also employed for containing and doubly protecting the disinfecting composition enclosed within 20 the cup.

In putting the disinfecting cup into operation, the thin india-rubber cap E is first removed, the capsule is next broken, and the light applied to the combustible ribbon F, whereby the external coating of sulphur and charcoal aforesaid is ignited, and sulphurous acid gas given off in 25 conjunction with the chlorine liberated from the internal compost by means of the heat communicated thereto.

In conclusion to the foregoing description, we would here briefly note that we are aware that chlorine and sulphur have before been separately used for disinfecting purposes, but hitherto independently of any 30 systematic order or combination of ingredients as employed by us.

And we would further note that in cases where chlorine is objectionable, as in a sick room, the sulphur cup can be used independently of the internal compost.

Having now fully described and ascertained the nature of this our said 35 Invention, and the manner in which the same is to be performed and carried into effect, we would have it clearly understood that we do not intend to confine ourselves to the precise details herein-before set forth

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and described, as the same may be otherwise varied without departing from the general principle of these our said improvements, nor do we claim as new and of our said Invention the exclusive use of the several ingredients, combinations, and processes above referred to, except when
5 the same are employed in and for the purposes of our said Invention, which we hereby declare to consist in the exclusive right of obtaining and combining the above-mentioned prepared substances and mode of employing the same for disinfecting purposes, in the manner hereinbefore set forth and described.

10 In witness whereof, we, the said William Estor and Charles Thomas Pearce, have hereunto set our hands and seals, this Seventh day of April, in the year of our Lord One thousand eight hundred and sixty-nine.

WILLIAM ESTOR. (L.S.)

15 CHARLES THOMAS PEARCE. (L.S.)

Witness,

THOMAS M. CORNOCK,

Clerk to Mess. Weatherdon & Co.,

77, Chancery Lane.

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