

Specification of Emile Guenin : disinfecting fecal matters.

Contributors

Guenin, Emile.

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A.D. 1867, 27th APRIL. N° 1229.

SPECIFICATION

OF

EMILE GUENIN.

DISINFECTING FECAL MATTERS.

LONDON:

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A.D. 1867, 27th APRIL. N° 1229.

Disinfecting Fecal Matters.

(This Invention received Provisional Protection only.)

PROVISIONAL SPECIFICATION left by Emile Guenin at the Office of the Commissioners of Patents, with his Petition, on the 27th April 1867,—A communication from abroad by Louis Verstraet, of Paris, in the Empire of France, Chemist.

5 I, EMILE GUENIN, of Henrietta Street, in the County of Middlesex, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN THE DISINFECTION AND TREATMENT OF FECAL AND OTHER MATTERS FOR THE MANUFACTURE OF MANURE," to be as follows :—

10 This Invention relates to the employment of chloride of manganese forming the residue of the manufacture of chlorine for the disinfection of fecal matters. This salt is produced daily in immense quantities in chemical works and is at present of but little value and only utilized to a small extent

15 In order to render it suitable for the purposes of this Invention, I commence by neutralizing the considerable excess of acid it contains by the aid of dolomite (double carbonate of lime and magnesia) or any other calcareous magnesian substance, or it may be by the aid of lime, simply adding to the saturated solution for the purpose of obtaining the desired results a certain quantity of chloride of magnesium, or it may if necessary be saturated with iron or zinc cuttings or oxidized ores of the same. The effects of the chloride
20 of manganese thus neutralized are instantaneous, by the absorbing action of the three salts it contains it decomposes, absorbs, or fixes all the deleterious gases of the nightsoil, mineralizes and concentrates in a small compass the greater part of the fertilizing matters which are now wasted in the waste waters of dye and other works after distillation, and carried away in the streams.

Guenin's Improvements in Disinfecting Fecal Matters.

The hydrosulphuric and carbonic gases, urates, sulphates, and carbonates, phosphates and biphosphates of potash, soda, ammonia, and lime are decomposed and give up their acid principles to the oxides of manganese, magnesia, and lime, while the phosphoric acid contained in the solid matters and urine being precipitated in the form of double ammoniaco-magnesian phosphate, or 5 of ammoniaco-manganous phosphate, carries with it a proportionate quantity of ammonia permanently fixed in the nightsoil, and this quantity is considerable, as 71 parts of phosphoric acid, by combining with the magnesia and ammonia carry with them 17 parts of the latter base or nearly 24 per cent., lastly, the carbonates of magnesia and lime as well as the sulphate of lime by 10 reason of their minute atomic subdivision serve to retain when precipitated the organic azoted matters held in suspension in the liquids in such manner that in less than a week the waste waters will be completely deprived of all solid substances, and contain only one essentially fixed salt consisting of hydrochlorate 15 of ammonia which is indecomposable by fermentation or atmospheric influence. 15 The advantages possessed by chloride of manganese saturated with lime and combined with chloride of magnesium may be summed up by stating that by its means fecal matters may be instantaneously and permanently disinfected, and their fertilizing products concentrated in a small space. The value of the product obtained by this improved process of disinfection is almost double 20 that produced by the ordinary processes. The quantity of azote retained is doubled, while as before-mentioned the whole of the phosphoric acid contained in the evacuations is extracted in the form of double ammoniaco-magnesian and ammoniaco-manganous phosphates, and consequently almost the whole 25 of its fertilizing substances, to which may be added with advantage the sulphate of lime or carbonates of lime and magnesia which are produced by the double decomposition operated in the disinfected matters. As regards mixing the disinfectant with the matters, this may be effected at different intervals or at the time of emptying the cesspools, in which latter case it is effected by the aid of the pump serving to extract the matters. The 30 disinfectant is first drawn out of the containing vessels by the pump and then forced into the cesspool, thereby in this manner a perfect mixing is at once effected, and in order to quicken the precipitation of all the solid matters in suspension in the liquids I may add two or three per cent. of raw salts of alumina resulting from the washing of aluminous schists, or a 35 certain quantity of the schists themselves in a natural state.

The Invention thus consists, 1st, in the employment for the disinfection of fecal matters of chloride of manganese saturated as before-mentioned with iron, zinc, or ores of these metals or preferably with lime or magnesia or

Guenin's Improvements in Disinfecting Fecal Matters.

other agent possessing similar properties; 2ndly, in the employment of any other metallic chloride capable of producing the same results; 3rdly, in the employment of aluminous schists or of raw salts of alumina for quickening the precipitation of the solid matters in the receptacles; and 4thly, in the mode of
5 mixing the disinfectant with the matters.

LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1867.

Green's Improvements in Dyeing and Printing Textiles.

other agent possessing similar properties; 2ndly, in the employment of any other metallic chloride capable of producing the same results; 3rdly, in the employment of aluminum sesquioxide or of raw salts of aluminum for producing the precipitation of the solid matters in the receptacles; and 4thly, in the mode of mixing the dyestuff with the matters.

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