Specification of William Morgan-Brown : treating sewage.

A.D. 1875, 13th APRIL. N° 1335.

SPECIFICATION

OF

WILLIAM MORGAN-BROWN.

TREATING SEWAGE.

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A.D. 1875, 13*th* *April*. N° 1335.

Treating Sewage.

(*This Invention received Provisional Protection only.*)

PROVISIONAL SPECIFICATION left by William Morgan-Brown at the Office of the Commissioners of Patents, with his Petition, on the 13th April 1875.—A communication from abroad by Gustavus Palmer Harding and John Robert Johnson, of 13, Rue Gaillon, Paris, Engineers.

I, WILLIAM MORGAN-BROWN, of the Firm of Brandon and Morgan-Brown, Engineers and Patent Agents, of 38, Southampton Buildings, London, and 13, Rue Gaillon, Paris, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN THE TREATMENT OF SEWAGE WITH A VIEW OF EXTRACTING THE FERTILISING PRODUCTS THEREIN CONTAINED AND IN THE APPARATUS EMPLOYED FOR THAT PURPOSE," to be as follows:—

The object of this Invention is to separate the solid matter contained in the sewerage from the liquid. For this purpose I cause the said sewerage to flow in the shape of a wide and relatively very shallow current over a level surface, slightly inclined in one direction. I prefer that the sewerage should issue from a reservoir in a stream with a fall of about fifty centimetres from the said reservoir to the upper extremity of the inclined plane, and with such a speed as can be regulated according to the requirements or the nature of the material to be treated by means of sluices, cocks, or other appropriate appliances.

The angle of the inclined plane is such that the liquid portions of the matter flow freely to the bottom of the incline, from which they are conducted off or collected as may be required, whilst the solid matter is gradually accumulated on its surface to a thickness which may amount to fifty centimetres. When the deposit of such solid matter has reached the thickness of fifty centimetres (or less as may be required) the flow of sewerage is cut off and directed towards a second similar inclined plane, whilst the deposit thus formed is allowed to drain and to dry.

In order to accelerate this drying process, if preferred, I cause a rapid current of air engendered by any appropriate machines to pass over the said accumulation of solid matter, or the said matter may be removed from the incline or inclines whilst still in a damp state, and there mixed with gypsum, cement, peat, charcoal, or any other antiputrescent substance having a marked affinity for water.

I propose superposing a series of such inclined planes at a distance of about sixty centimetres one from the other; the upper one being protected from the rain in any convenient manner. Or instead of superposing the inclines and of the above described method of operating on the sewerage, I arrange them all on the same plane with a substructure of impermeable material covered with a layer of sand or other porous material; I surround this impermable bed with enclosing walls so as to serve as a basin or vessel. At its upper end the cross wall would be from thirty to forty-five centimetres high; the two side walls run from thence to the lower cross wall, which stands at a somewhat lower level and is provided with a sluice opening below the level of the sand or other filtering medium.

After closing the sluice I first thoroughly saturate the gravel bed with clean water and then allow the sewerage to flow into the apparatus in the form of a thin stream, until the solid matter has precipitated on the gravel to a sufficient thickness, the flow of sewerage liquor is then cut and the sluice opened, so that the liquid portion runs off through the sand, leaving the solid matter thereon comparatively dry. This solid matter is then collected and the sluice being reclosed the operation is recommenced.

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