

Specification of William Pilling and Benjamin Harlow : stench traps, &c.;

Contributors

Pilling, William.
Harlow, Benjamin.

Publication/Creation

London : Great Seal Patent Office, 1873 (London : George E. Eyre and William Spottiswoode)

Persistent URL

<https://wellcomecollection.org/works/dvrwyt7a>

License and attribution

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>



A.D. 1873, 10th FEBRUARY. N° 480.

SPECIFICATION

OF

WILLIAM PILLING
AND
BENJAMIN HARLOW.

STENCH TRAPS, &c.

LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY:

PUBLISHED AT THE GREAT SEAL PATENT OFFICE,

25, SOUTHAMPTON BUILDINGS, HOLBORN.

1873.





A.D. 1873, 10th FEBRUARY. N^o 480.

Stench Traps, &c.

LETTERS PATENT to William Pilling, of Salford, in the County of Lancaster, Proprietor of Lowe's Patent Stench Trap, and Benjamin Harlow, of Macclesfield, in the County of Chester, Engineer, for the Invention of "IMPROVEMENTS IN THE CONSTRUCTION OF STENCH TRAPS AND GRIDS FOR STREET AND OTHER SEWERS OR DRAINS."

Sealed the 1st August 1873, and dated the 10th February 1873.

PROVISIONAL SPECIFICATION left by the said William Pilling and Benjamin Harlow at the Office of the Commissioners of Patents, with their Petition, on the 10th February 1873.

We, WILLIAM PILLING, of Salford, in the County of Lancaster,
5 Proprietor of Lowe's Patent Stench Trap, and BENJAMIN HARLOW, of Macclesfield, in the County of Chester, Engineer, do hereby declare the nature of the said Invention of "IMPROVEMENTS IN THE CONSTRUCTION OF STENCH TRAPS AND GRIDS FOR STREET AND OTHER SEWERS OR DRAINS," to be as follows:—

10 This Invention relates to improvements upon that construction of stench trap, well known as Lowe's Patent, No. 12,798, 12 October, 1840,

Pilling & Harlow's Impts. in the Construction of Stench Traps, &c.

which has hitherto been open to objection on account of the grid only extending partially across the upper surface of the framework or casing, and as such grid has been inadequately supported upon pivots or hinges, it has been liable to breakage.

Now this Invention consists in forming the cover or upper part of the water lute at a lower level than the grid, which covering in the form of a suitably curved or shaped plate is either cast separately or is formed of wrought or galvanized iron, and is placed in the mould so that when the molten metal is poured in it will form a part of the main casting, and ensure a smooth surface both on the upper and lower sides of such covering, which smoothness is desirable, and could not be obtained in the case of a casting when cores or green sand are employed in the formation of the water lute; by this means the whole of the upper surface of the framework is available for being covered with a grid which is supported upon a ledge running completely round the inside of the casing or framework, and this Invention further consists in constructing the mouth or outlet of the water lute, with a cylindrical or other suitable shaped socket, so as to facilitate its connection to a drain pipe, and thereby make a more perfect joint.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said William Pilling and Benjamin Harlow in the Great Seal Patent Office on the 9th August 1873.

TO ALL TO WHOM THESE PRESENTS SHALL COME, we, **WILLIAM PILLING**, of Salford, in the County of Lancaster, Proprietor of Lowes' Patent Stench Trap, and **BENJAMIN HARLOW**, of Macclesfield, in the County of Chester, Engineer, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Tenth day of February, in the year of our Lord One thousand eight hundred and seventy-three, in the thirty-sixth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto us, the said William Pilling and Benjamin Harlow, Her special licence that we, the said William Pilling and Benjamin Harlow, our executors, administrators, and assigns, or such others as we, the said William Pilling and Benjamin Harlow,

Pilling & Harlow's Impts. in the Construction of Stench Traps, &c.

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, and vend, within the United Kingdom of Great Britain
5 and Ireland, the Channel Islands, and Isle of Man, an Invention for
“IMPROVEMENTS IN THE CONSTRUCTION OF STENCH TRAPS AND GRIDS FOR STREET
AND OTHER SEWERS OR DRAINS,” upon the condition (amongst others) that
we, the said William Pilling and Benjamin Harlow, by an instrument in
writing under our hands and seals, should particularly describe and ascer-
10 tain 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 we, the said William Pilling and Benjamin
15 Harlow, do hereby declare the nature of our said Invention, and in
what manner the same is to be performed, to be particularly described
and ascertained in and by the following statement:—

This Invention relates to improvements upon that construction of
stench trap, well known as Lowe's Patent, which has hitherto been open
20 to objection on account of the grid only extending partially across the
upper surface of the framework or casing, and as such grid has been
inadequately supported upon pivots or hinges it has been liable to
breakage.

Now this Invention consists in forming the cover or upper part of the
25 water lute at a lower level than the grid, which covering in the form of
a suitably curved or shaped plate is either cast separately or is formed of
wrought or galvanized iron, and is placed in the mould so that when
the molten metal is poured in it will form a part of the main casting,
and ensure a smooth surface both on the upper and lower side of such
30 covering, which smoothness is desirable and could not be obtained in the
case of a casting when cores or green sand are employed in the formation
of the water lute; by this means the whole of the upper surface is avail-
able for being covered with a grid which is supported upon a ledger unning
completely round the inside of the casing or framework, and this Inven-
35 tion further consists in constructing the mouth or outlet of the water
lute with a cylindrical or other suitable shaped socket, so as to facilitate
its connection to a drain pipe, and thereby make a more perfect joint.

Pilling & Harlow's Impts. in the Construction of Stench Traps, &c.

In order that this our said Invention may be the more readily seen and understood, we have hereunto annexed a Sheet of Drawings illustrative of our improvements.

Fig. 1 is a side sectional view, and Fig. 2, a plan or top view of a stench trap combining our improvements, and drawn to a scale of about 5 half size.

Fig. 3 is an end section of Figs. 1 and 2, taken through the line *a—b*.

A is the framework or body of the stench trap, which is constructed of cast iron, with a ledge B completely surrounding it near the top for 10 the purpose of adequately supporting the grid C, which is pivoted at D by means of wrought-iron pegs or pivots, which are driven into the grid when in position in the framework, and pass loosely through the holes formed in the framework, so as to permit such grid to bed itself firmly upon the ledge B. This grid covers the whole of the upper surface of 15 the framework. The water lute or trap of this improved stench trap is formed as follows:—The curved plate E which forms the cover of the water lute, and is arranged at a lower level than the grid, as illustrated, is either cast separately from the main casting, as seen in perspective in Fig. 4, or is formed of wrought or galvanised iron, and is placed in 20 position in the mould when the pattern is removed, so that when the molten metal is pored in such plate becomes attached to the main casting by the molten metal contracting upon its upper and side edges, and projecting over so as to form a lip on the upper and lower edges of the plate, as illustrated in section at the points marked F. 25

The advantage of this method of constructing the water lute is that the use of cores is dispensed with in the construction of stench traps, which are so constructed in a cheaper manner, a cleaner and smoother casting is also produced, and as the upper and lower sides of the cover of the water lute have a smooth surface, there is less liability of such 30 surface becoming coated or covered with sludge or other deposit tending to stop up the passage, and at the same time likely to give off an offensive odour.

We prefer to cast the framework with its mouth downwards, the pattern being arranged to form a suitable recess in the mould to receive 35 the plate E, which plate may be curved to any suitable shape. The outlet of the water lute is constructed with a cylindrical tail piece G to

Pilling & Harlow's Impts. in the Construction of Stench Traps, &c.

facilitate its connection with the socket H of a drain pipe, as seen in Fig. 3, and so ensure a more perfect and air-tight joint.

Having thus particularly described and ascertained the nature of this our said Invention, together with the best methods with which we are
5 acquainted for carrying the same into practical effect, we wish it to be understood that we do not confine ourselves to the precise details, relative proportions, or dimensions illustrated on the accompanying Drawing, and herein-before described, as the same may be considerably varied without departing from the Invention, but what we do claim
10 is,—

First. The general construction and arrangement of stench trap, as herein-before described and illustrated on the accompanying Drawing.

Second. The method of forming the water lute in stench traps, whereby the use of cores is dispensed with, as and for the purposes herein-before
15 described and illustrated on the accompanying Drawing.

In witness whereof, we the said William Pilling and Benjamin Harlow, have hereunto set our hands and seals, this Eighth day of August, in the year of our Lord 1873.

20

WILLIAM PILLING. (L.S.)
BENJAMIN HARLOW. (L.S.)

LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1873.



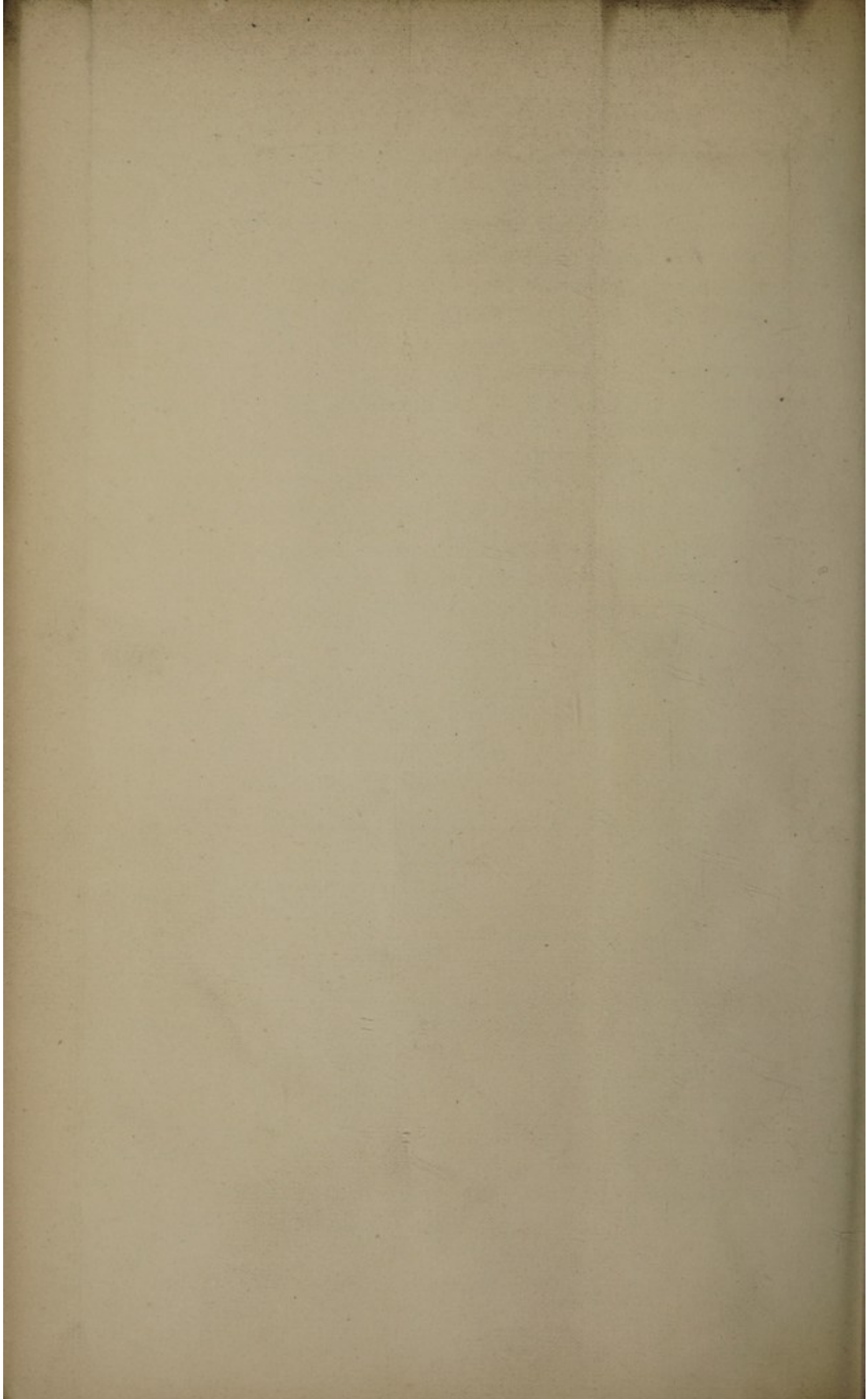


FIG. 1.

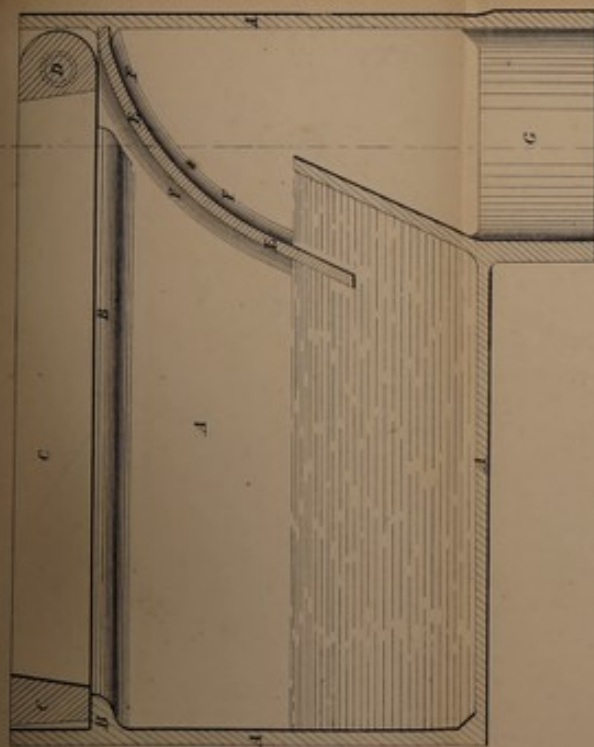


FIG. 2.

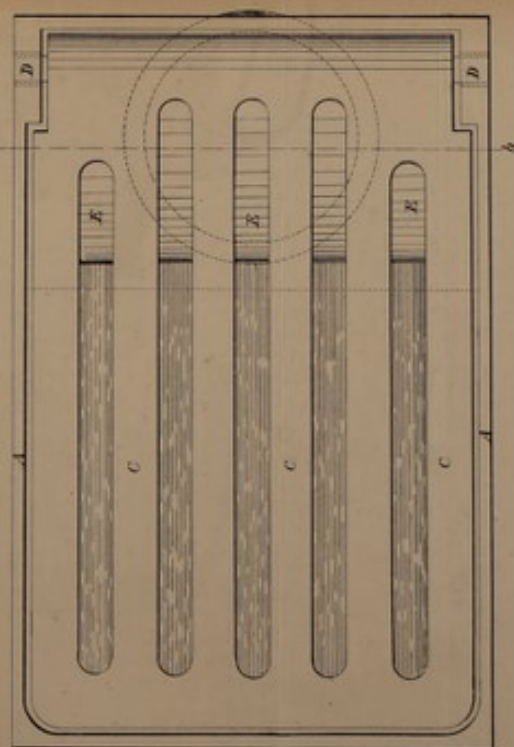


FIG. 3.

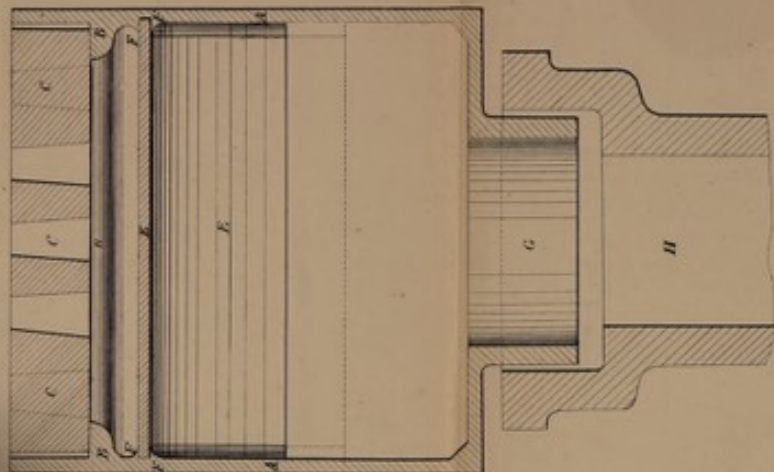


FIG. 4.



The filed drawing is not altered.

Drawn on Sheet by Mulvey & Sons

LODGE, PRINTED BY GEORGE LEWIS, FINE AND WILLIAM STATIONERS,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY 1873

