

H. & W. SUTCLIFFE.
Molds for Stench-Traps.

No.156,958.

Patented Nov. 17, 1874.

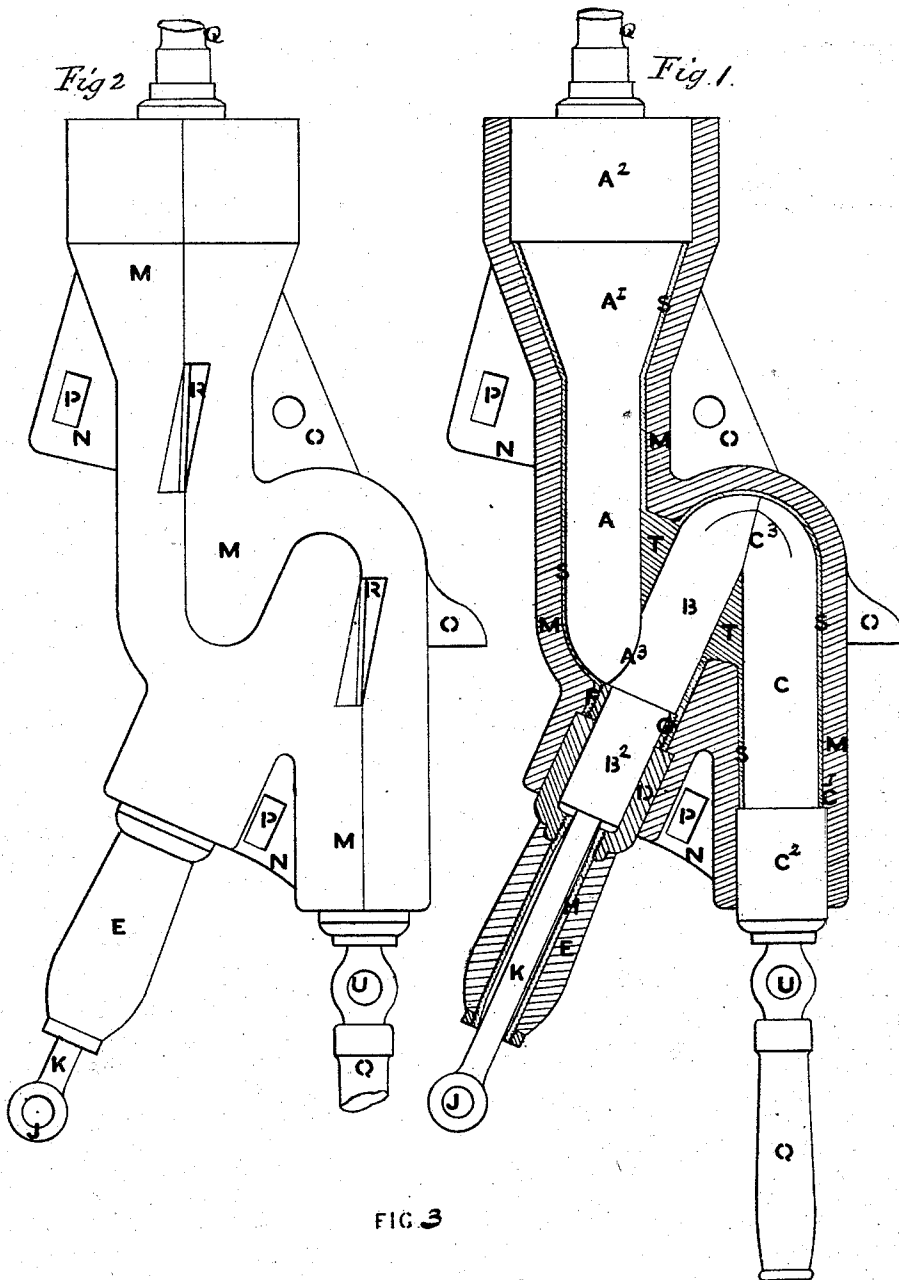


FIG. 3

WITNESSES

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INVENTORS

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UNITED STATES PATENT OFFICE.

HENRY SUTCLIFFE AND WRIGHT SUTCLIFFE, OF HALIFAX, ENGLAND.

IMPROVEMENT IN MOLDS FOR STENCH-TRAPS.

Specification forming part of Letters Patent No. **156,958**, dated November 17, 1874; application filed August 1, 1873.

To all whom it may concern:

Be it known that we, HENRY SUTCLIFFE and WRIGHT SUTCLIFFE, of Halifax, in the county of York, England, have invented certain Improvements in Molding or Constructing Stench-Traps or Siphon-Pipes, of which the following is a specification:

The said invention relates to the molding or the construction, whole or in a single piece, without seam or joint, of stench-traps or siphon-pipes, designed for use in preventing the upward escape of noxious gases or vapors from sewers or water-closets.

Usually such traps are made of **S** shape, and out of two half-tubes of lead beaten or blocked to the form of one-half the pipe longitudinally, and then united together to form a whole tube; or, if attempted to be cast whole, there was difficulty in holding in proper position and in removing the cores, because of parts being semicircular, and the pipes, therefore, have been faulty and too heavy, and too difficult to produce.

Now, our invention consists in a special construction of a mold and its cores for casting whole a stench-trap or siphon-pipe of **S** shape, or in three right lines, and their two meeting angles, whereby we are enabled to cast them whole by the use of three straight cores, so fitted together as practically to form one, and to assist in holding each other to place when placed in position, yet adapted to be drawn out in three parts, and in three right lines, from the casting, and, at the same time, to cast webs or locks at both the angles.

By these improvements we produce, completely, efficient stench-traps or siphon-pipes with facility, ready for fixing without any fitting up, and, therefore, at a cheap rate.

In the drawings, Figure 1 is a sectional view of my molding apparatus; Fig. 2, a side view, and Fig. 3 a plan, of the same.

Similar letters of reference are used in all the figures to represent similar parts of the required mold and trap, and the inside of the said trap is formed by cores as follows:

M is the mold, made of **S** form, as seen, and of an internal shape of the form of the outer surface of the required trap. **A** is a metal top core, round in the body, and having the end curved to suit the bend of the pipe, and also

hollowed out at the end **A**³ to fit the body of the central core **B**. This core **A** is made with a tapered oval funnel core-piece, **A**¹, and also with a bearing-piece, **A**², overlapping the mold **M**, preventing the escape of the lead or metal, and serving as a steadying-part, keeping the core **A** in its proper position. The tapered oval funnel part is afterward made round by means of a taper plug. **B** is a central core, round and curved at the end, joining the bottom core **C** at **C**³, and forming the curve of the pipe; **C**², a bearing-piece, overlapping the mold at **C**¹, also keeping the core in its proper position, and preventing the escape of the metal or lead, as hereinbefore described. The central core **B** is made with a round end, **B**², which is smaller in diameter than the core **B**, for the purpose of receiving the socket **D**, forming the screw-tap. This socket is loose on the core **B**, to allow of turning the screw-tap when the trap is molded, such turning being effected by means of the wooden handle **E**, fitted on the square hollow spindle **H**. **G** is a screw-tap formed on the socket **D**, and sliding on the end **B**, forming a threaded hole or female screw, **F**, commonly called a button-hole, for the purpose of cleansing the trap. This threaded or screwed hole receives a screwed plug or stopper made of lead, part lead or metal, the jointing of which is secured by means of an india-rubber washer.

By these means we cast or mold the threaded hole or button-hole with the trap—that is to say, it is made of lead only—doing away with the plan of brass or metal ferrules cast or placed in the traps, and at a less cost.

K is a rod fitted in the central core-piece **B**², for drawing out the core. This rod is made longer than the handle **E**, allowing space between the end of the handle and the eye **J** for taking out or unscrewing the threaded piece **G** and socket **D**. **M** is the molding apparatus, having brackets **N** and **O** cast on it. The brackets **N** have slot-holes **P**, for the purpose of wrenching open or drawing apart the molds by means of levers fixed in them. The brackets **O** have bolts or pins to secure the top mold to the bed-plate or even surface. **Q**, wooden handles for placing or removing the cores **A** and **C**; **U**, eye to place in a lever for removing the cores; **R**, runners or pouring-in

holes, made with bevel edges, to allow of opening or closing the molds; S, lead pipes forming the trap; T, angle webs or locks for strengthening the pipes at the bent or curved portion. These webs or locks are molded or cast by means of openings left in the mold between the two pipes, equal in thickness to the strength required for the web or lock.

We can also use our molding apparatus for making earthenware traps and pipes.

Having now described our improvements, what we claim is—

In combination with the mold M, shaped as shown and described, the solid straight cores

A B C, shaped and applied as described, the core B having a reduced portion, B², and a screw-threaded socket, D, the arrangement of these parts being substantially as shown and set forth.

In testimony whereof we have hereto set our hands and affixed our seals this twenty-first day of June, one thousand eight hundred and seventy-three.

HENRY SUTCLIFFE. [L. S.]

WRIGHT SUTCLIFFE. [L. S.]

Witnesses:

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