

J. MC Closkey

Seamless Pipe Mach.

77,862.

Patented Mar. 16, 1869.

Fig. 1.

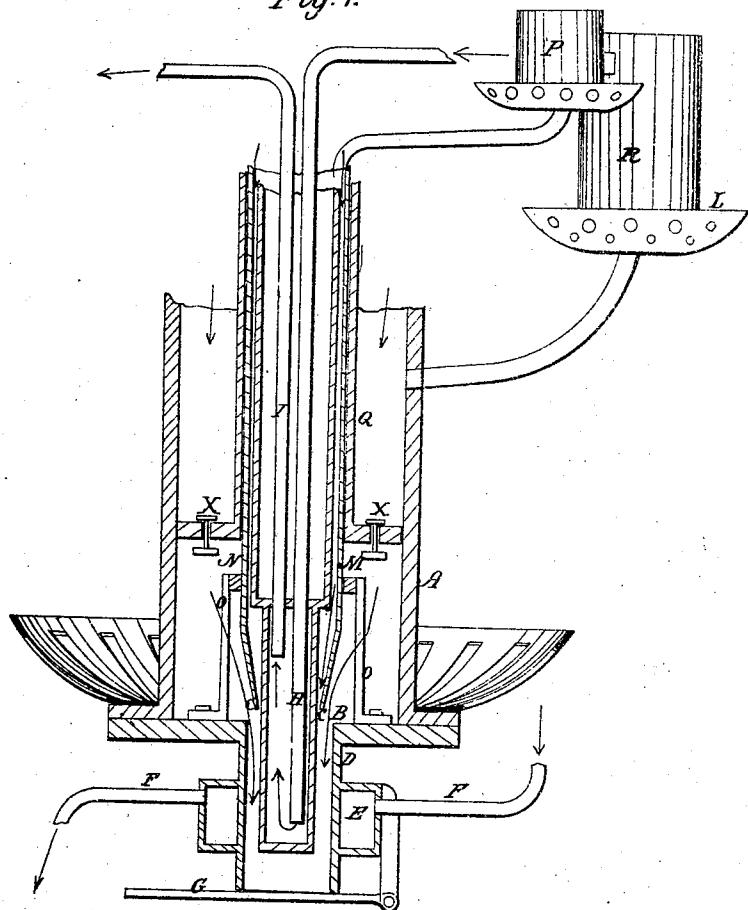
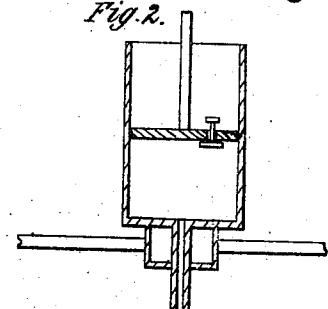


Fig. 2.



Witnesses,

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JOHN McCLOSKEY, OF NEW YORK, N. Y.

Letters Patent No. 87,862, dated March 16, 1869.

IMPROVED MACHINE FOR MAKING SEAMLESS TUBING.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN McCLOSKEY, of the city, county, and State of New York, have invented a new and improved Machine for Making Seamless Tubing; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to improvements in apparatus for making seamless tubing from molten metal, of copper, brass, lead, or other soft substance that will fuse at a low heat, but is more especially intended for making lead pipe, either tin-lined or not.

Figure 1 represents a sectional elevation of my improved apparatus.

Figure 2 represents a modified form of die, adapted to the formation of sheets.

Similar letters of reference indicate corresponding parts.

A represents a cylinder, having a die, B, at the bottom, and a mandrel, C, similar to other machines.

I arrange, around the extension-tube D, a water-chamber, E, and connect therewith water-pipes F, for supply and exhaust, suitably provided with cocks for regulating the flow; and, in order to regulate the flow of the molten metal at the commencement of the drawing-operation, I provide, at the bottom of the tube D, a gate, G, to arrest the flow, until the metal has cooled around the mandrel C, after which the movement of the formed pipe may be regulated by drawing-rollers, or any other means; and I propose to apply suitable means for bending the pipe, when being delivered from the machine, into any desired form, especially to form traps for sinks, water-closets, &c., which may be readily accomplished while the lead is in the warm and soft state in which it is delivered from the machine.

I make the core C hollow, and connect therewith a supply-pipe, H, leading to the bottom, and an exhaust-pipe, I, to receive the water, to be drawn off above the point, when it is required to cool the mandrel.

The heated lead may be supplied to the cylinder, from a furnace, K, surrounded with a grate, L, at the bottom, to support a fire for melting; and the cylinder may also be provided with a similar grate, to keep the metal in a molten condition, or it may be melted therein.

When it is designed to make tin-lined pipe, I propose to employ a secondary cylinder, M, which I propose to arrange in a manner to be readily applied to or removed from the cylinder A, and the die to be supported, at its upper end, in any preferred manner, and at the lower end, by a ring, N, supported by a yoke, O, secured to the bottom of the cylinder, or by any other similar means, care being taken to present the lower, tapered end of the said tin-cylinder at the right position, relatively to the mandrel and the die, to deliver the tin to the interior of the lead as it is formed by the die and mandrel.

The melted tin may be delivered to the said cylinder from a furnace, P.

It may sometimes be desirable to employ a follower to act upon the lead; and, to enable a follower to be used, it may be provided with a hollow stem, Q, working over the cylinder M; but, in practice, I design to dispense with the use of a follower, and depend on the weight of the mass of metal above the die for condensing it.

X represents valves arranged in the follower, to open when it rises, to allow any lead which may leak around the follower, and flow over the top of it, to flow back again when it rises.

The pipes leading from the furnaces to the cylinders should be provided with cocks, to regulate the flow, or stop it when required.

My improved cooling-apparatus E may be adapted to dies of other form, for making sheets, as represented in fig. 1.

I claim as new, and desire to secure by Letters Patent—

1. The construction and arrangement, with reference to each other, of the cylinder A, mould B, cooling-device E, and gate G, as and for the purpose specified.

2. With the above, the arrangement of the valve-plunger Q and removable cylinder N, as shown and described.

3. The improved apparatus, herein described, its constituent parts being constructed and arranged together in the manner set forth.

JOHN McCLOSKEY.

Witnesses:

FRANK BLOCKLEY,
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