

R. LAYNG.
Pressing Lead Pipe.

No. 55,315.

Patented June 5, 1866.

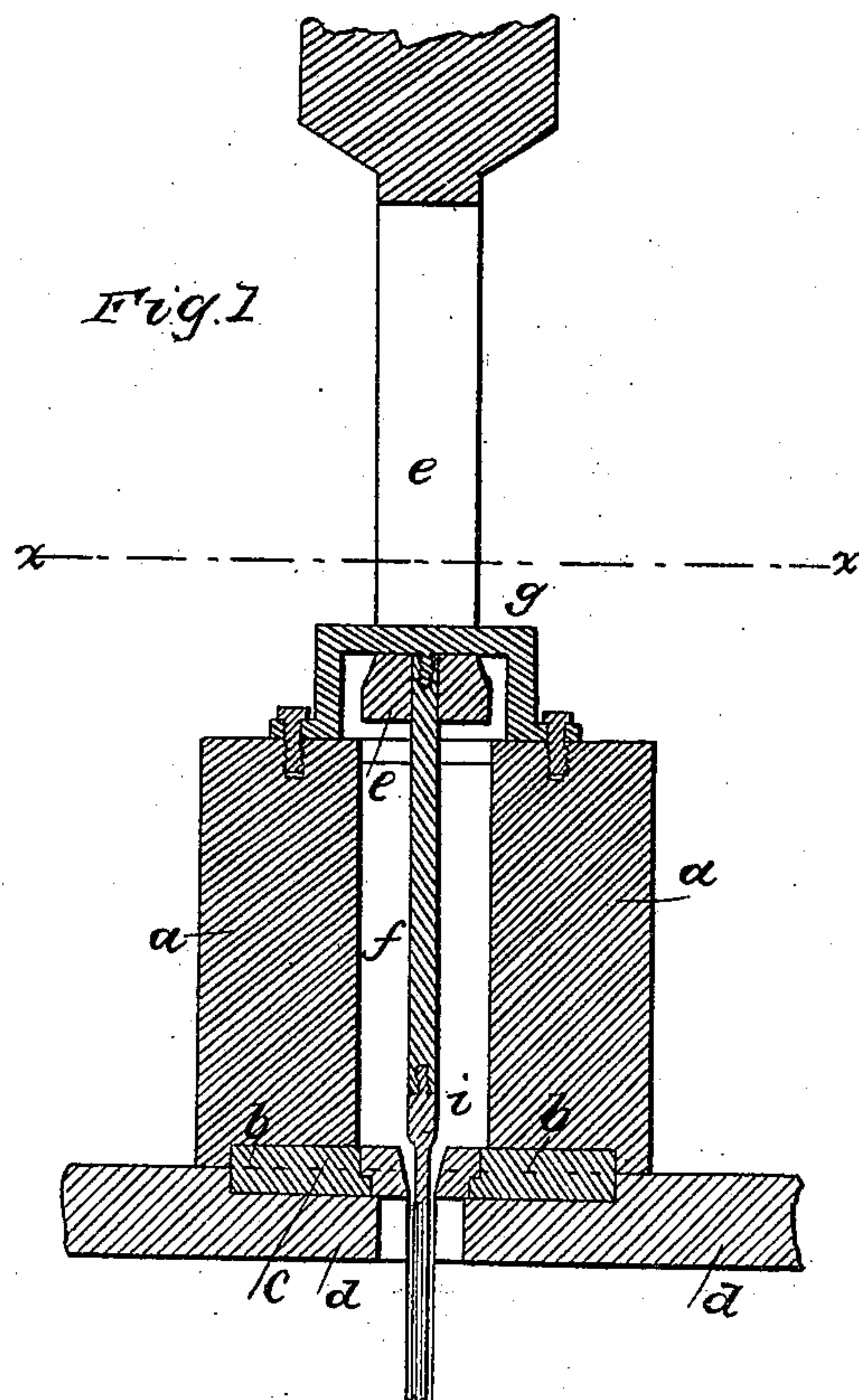
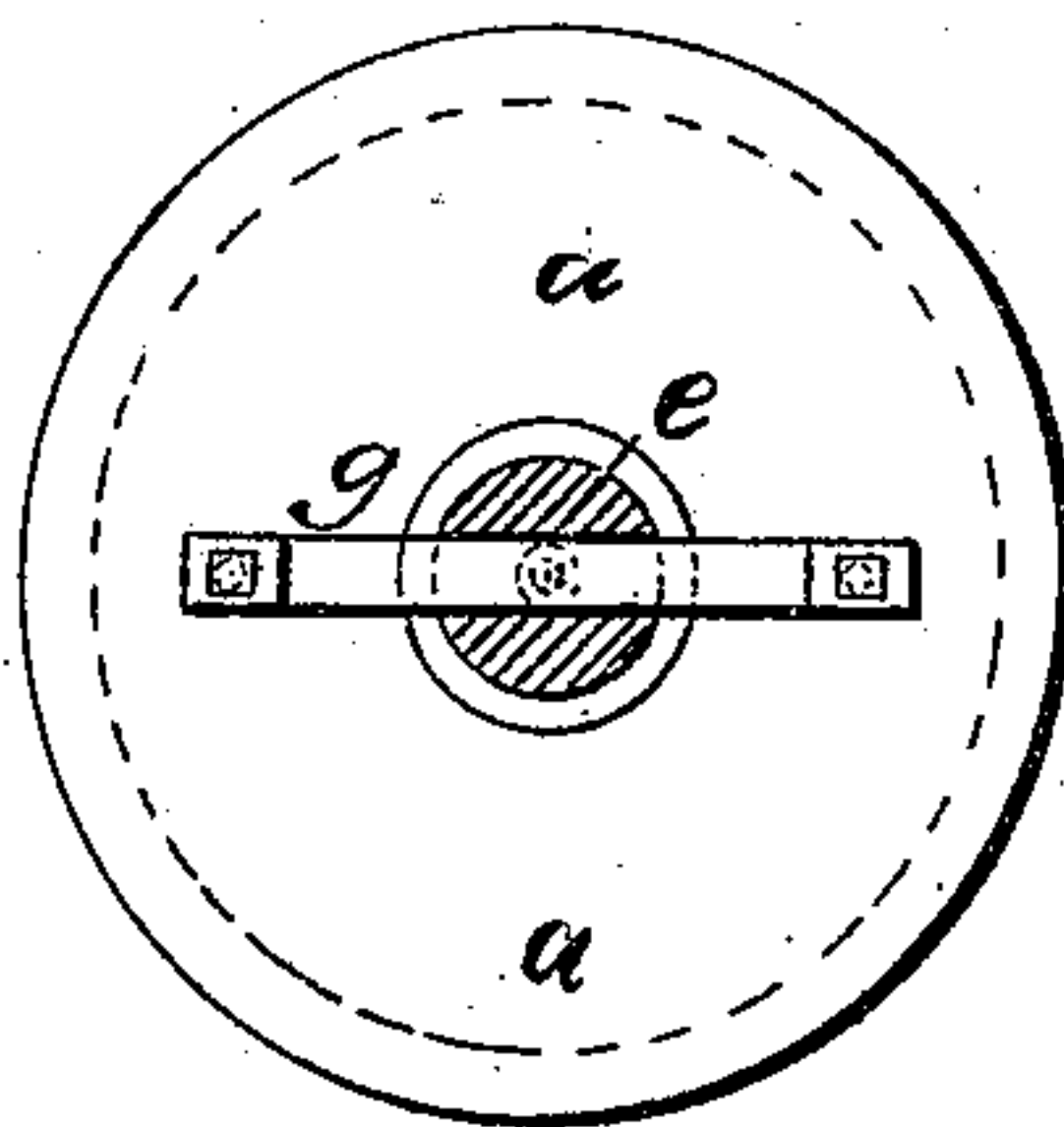


Fig. 2



witnesses
Chas. H. Smith
Geo. D. Watson.

Inventor
Robert Layng

UNITED STATES PATENT OFFICE.

ROBERT LAYNG, OF NEW YORK, N. Y.

IMPROVED MACHINE FOR PRESSING LEAD PIPES.

Specification forming part of Letters Patent No. 55,315, dated June 5, 1866.

To all whom it may concern:

Be it known that I, ROBERT LAYNG, of the city and State of New York, have invented and made a certain new and useful Improvement in Presses for Lead and other Pipes; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a vertical section longitudinally of the lead-cylinder and ram, and Fig. 2 is a section at the line *xx* of Fig. 1.

Similar marks of reference denote the same parts.

Lead pipe has heretofore been manufactured by being pressed out of a cylinder by a ram acted upon by hydraulic pressure, and the core forming the interior of the pipe has either been a long slender rod corresponding throughout with the caliber of the pipe, or else it has been a short movable core at the end of a long stiff core passing through the cylinder and ram and attached to a cross-head or head-block. This construction is expensive, occupies considerable space, and it is difficult to properly adjust and retain the core in position.

The nature of my said invention consists in a slotted ram, in combination with a bridge attached to the lead-cylinder and carrying at the center a stationary core-holder passing into the cylinder, so that the said core-holder can be adjusted with facility and accuracy to the lead-cylinder and the ram slide over the same in forming the pipe by pressing the lead out of the cylinder through a stationary die.

In the drawings, *a* is the lead-cylinder, of ordinary size and construction. *b* is the die-holder, *c* the die, and *d* the follower or head-block, of the pipe-press, of any usual construction.

e is the ram fitting the lead-cylinder, and this ram is either to be acted upon directly by the ram in the hydraulic cylinder or connected to the head-block of the press in cases where the ram acts below the follower *d*.

These modes of arranging the hydraulic presses for making soft metal-tubes, being well known, do not require further description.

The core-holder *f*, carrying the changeable core *i* at one end, is attached at the other end to the bridge *g*, which bridge is bolted or otherwise attached to the end of the cylinder, and can be constructed or adjusted with such accuracy that the core-holder and core are central within the lead-cylinder.

The ram *e* is slotted or formed with a transverse and longitudinal opening, through which the bridge *g* passes, and the said ram has a hole passing centrally from its end into the said opening, said hole being of the size of the core-holder *f*, so that said core-holder may pass through that hole and be attached and held by the bridge *g*.

It will now be understood that the core-holder remains stationary and in position relatively to the cylinder while the lead or soft metal contained in the cylinder is forced out of the die by the action of the ram. The ram may be fitted so that its lower end can come above the upper end of the cylinder to give opportunity for pouring the melted metal into the cylinder. This position is illustrated in Fig. 1.

The bridge *g* might be attached to columns or other supports, so as to move with the lead cylinder; but I have found, practically, that the attachment is best directly to the cylinder.

What I claim, and desire to secure by Letters Patent, is—

The bridge *g*, attached to the end of the lead-cylinder and sustaining the core-holder *f*, in combination with the ram *e*, formed with an opening or mortise, through which said bridge passes, substantially as and for the purposes specified.

In witness whereof I have hereunto set my signature this 12th day of April, 1866.

ROBERT LAYNG.

Witnesses:

CHAS. H. SMITH,
GEO. D. WALKER.