

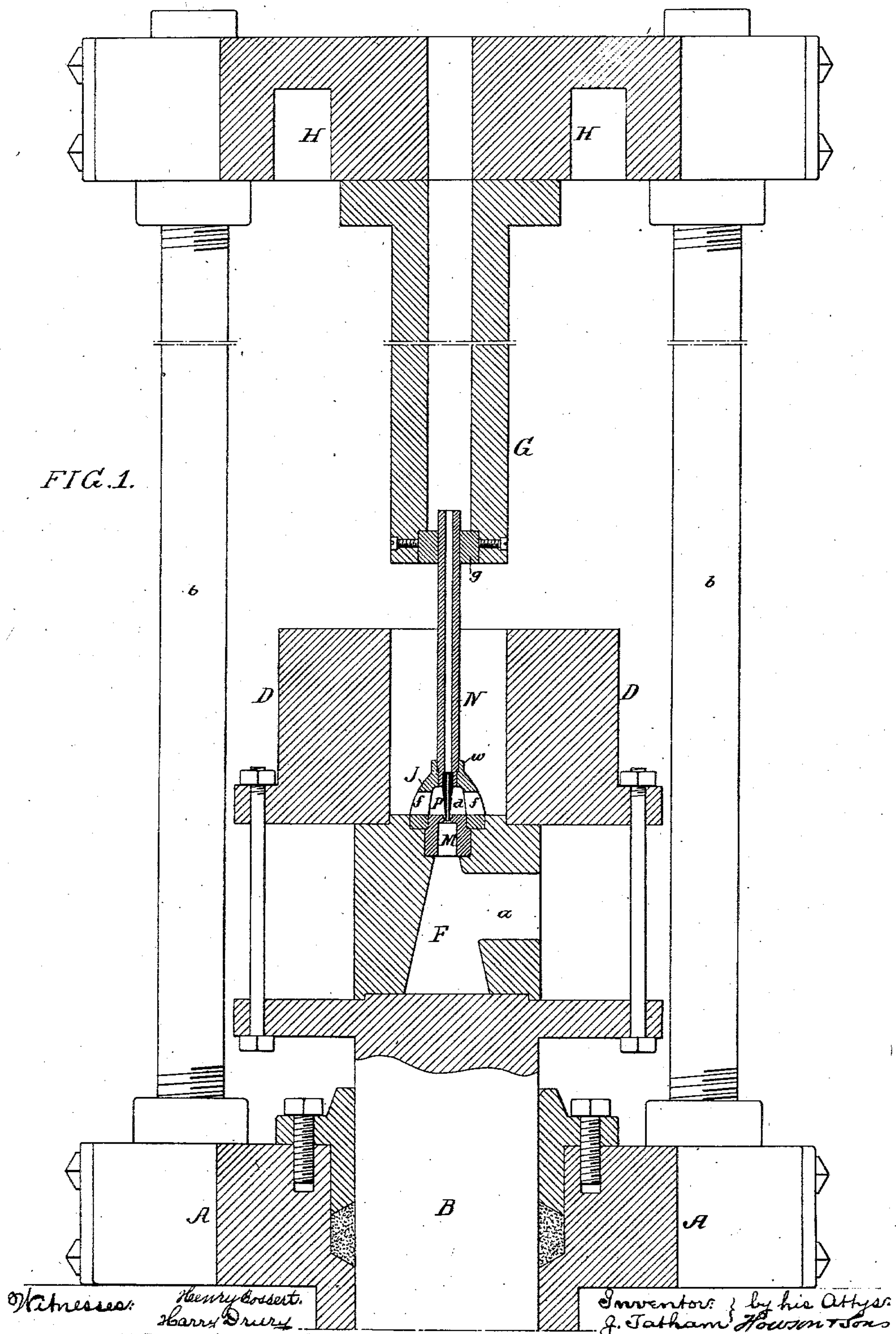
(No Model.)

2 Sheets—Sheet 1.

J. TATHAM.
ATTACHMENT FOR LEAD PIPE PRESSES.

No. 327,835.

Patented Oct. 6, 1885.



(No Model.)

2 Sheets—Sheet 2.

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FIG. 2.

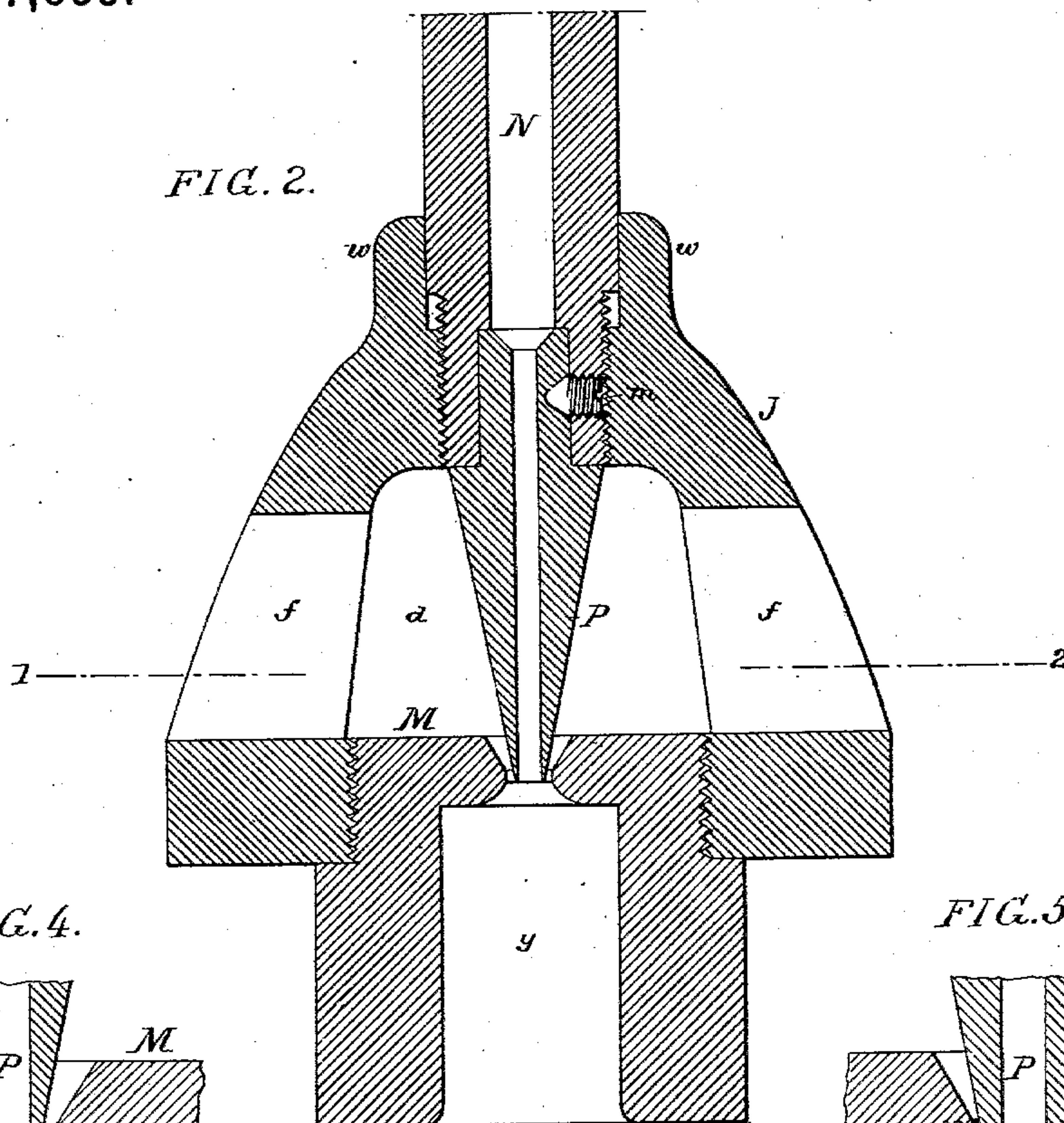


FIG. 4.

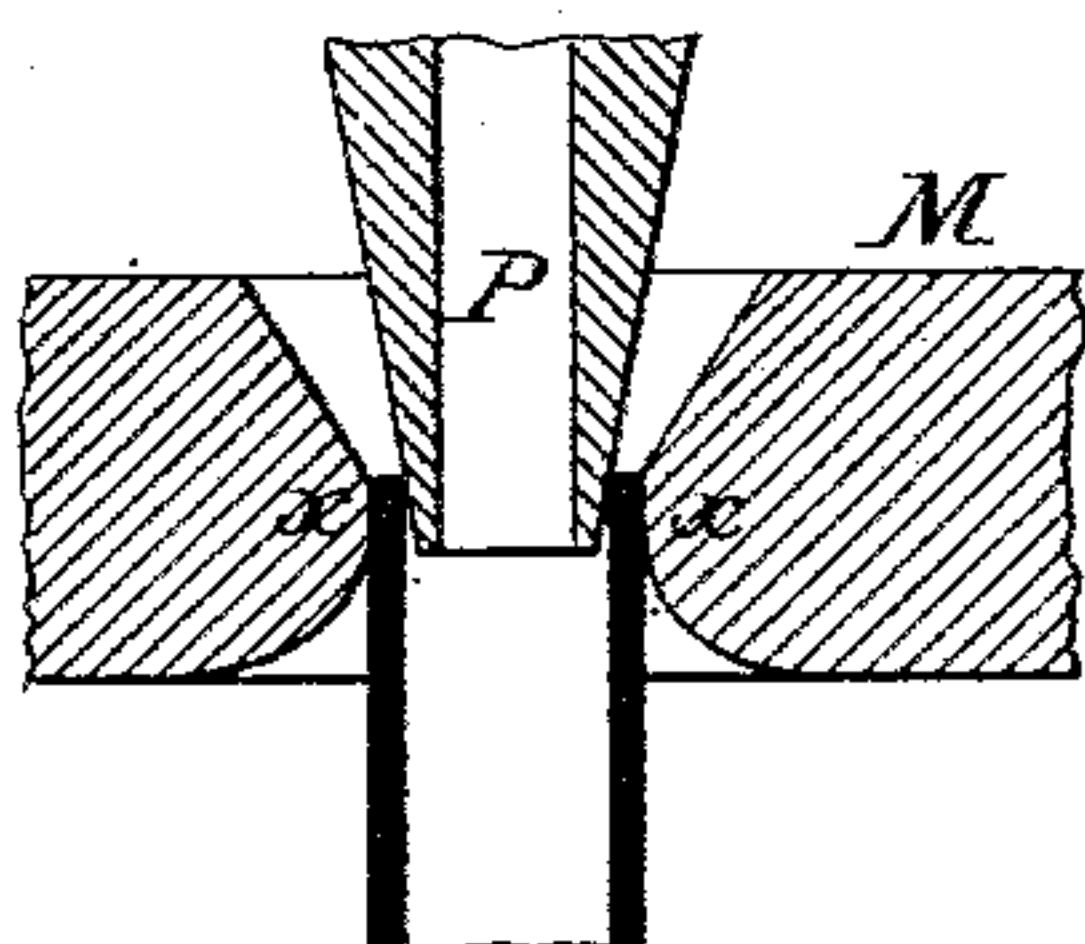


FIG. 5.

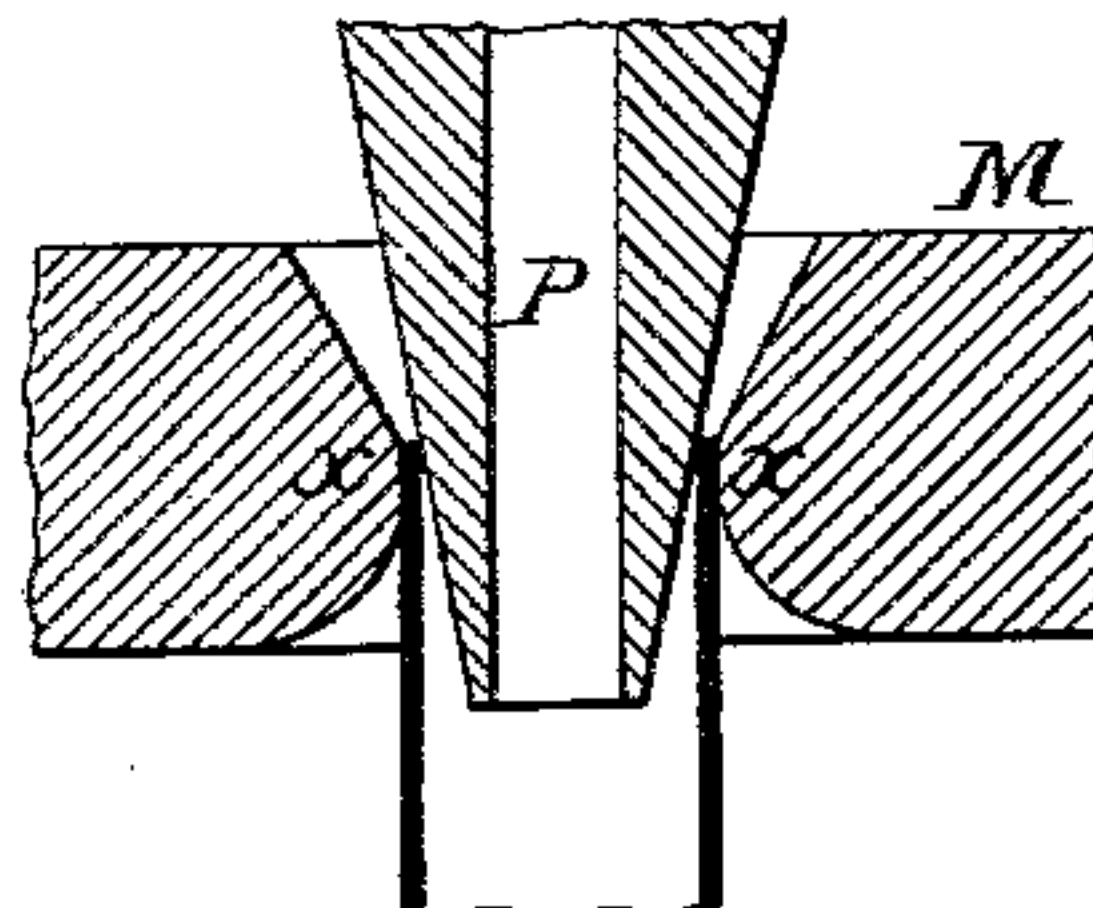
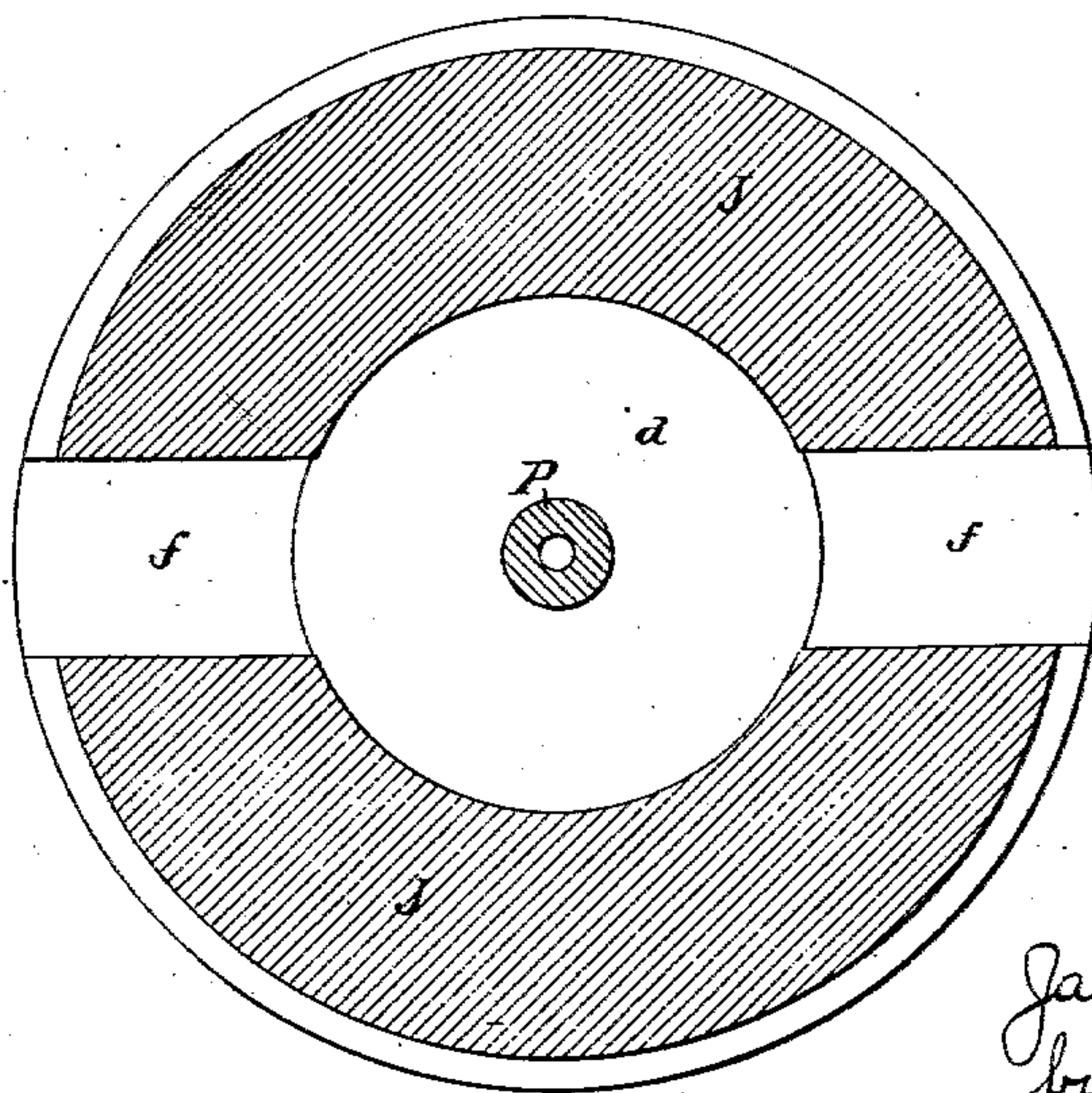


FIG. 3.



Witnesses:
Henry Bossert.
Harry Drury

Inventor:
James Tatham
by his Attorneys
Hiram & Son

UNITED STATES PATENT OFFICE.

JAMES TATHAM, OF PHILADELPHIA, PENNSYLVANIA.

ATTACHMENT FOR LEAD-PIPE PRESSES.

SPECIFICATION forming part of Letters Patent No. 327,835, dated October 6, 1885.

Application filed February 9, 1885. Serial No. 155,397. (No model.)

To all whom it may concern:

Be it known that I, JAMES TATHAM, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Attachments for Lead-Pipe Presses, of which the following is a specification.

The object of my invention is to provide a simple device for use in connection with an ordinary lead-pipe press, whereby the latter, at slight expense, is rendered available for the manufacture of lead-covered electrical conductors.

In the accompanying drawings, Figure 1 is a vertical section, partly in elevation, of sufficient of a lead-pipe press to illustrate my invention; Fig. 2, an enlarged section of part of the device forming the subject of my invention; Fig. 3, a sectional plan on the line 1-2, Fig. 2; and Figs. 4 and 5 diagrams illustrating one of the features of the invention.

In Fig. 1, A represents part of the hydraulic cylinder of a lead-pipe press, B part of the plunger of the same, D the lead-reservoir carried thereby, F the interposed hollow column with lateral passage *a*, and G the upper fixed ram bolted to the cap H, which is secured to the cylinder A by means of posts or pillars *b*.

Upon the hollow column F is supported a block, J, having a central chamber, *d*, and opposite lateral passages *f f*, and into a threaded opening in the bottom of the block is screwed the die M, the projecting portion of the latter being contained in a recess in the column F. There is also a threaded opening in the top of the block J, and into this opening is screwed a hollow core, N, the upper end of which fits snugly to a block, *g*, in the lower end of the hollow ram G.

The core N has a detachable lower end, P, held in place by a set-screw, *m*, this detachable end being tapered externally and projecting into that portion *x* of the die which determines the external diameter of the pipe. The block J forms a holder for supporting the hollow core N above the die.

The lead-reservoir being filled, and an insulated wire drawn through the cap H, ram G, and hollow core and out through the lateral opening *a* of the column F, the plunger B is elevated so as to cause the reservoir D to

rise and the ram G to press upon the lead in said reservoir and force the same through the die M, around the end P of the hollow core, and onto the insulated wire, the latter being drawn through the core by the pipe as the same is formed and discharged through the hollow column.

In order to regulate the internal diameter of the pipe, and the consequent thickness of the metal forming the same, I make the core N adjustable in the holder J, so that the tapered end P of the core may be caused to project more or less into the die, the internal diameter of the pipe being increased as the core is projected and decreased as it is withdrawn. This enables me to confine the wire or wires closely by the lead covering, or to increase the internal diameter of the pipe so as to permit the wire or wires to lie loosely therein, as will be readily understood.

In order to effect the adjustment desired, the core N is screwed into or unscrewed from the holder J to the desired extent, and in order to prevent the access of lead to the threads of the core and holder the latter has a tubular projection, *w*, fitting snugly to the core N, above the threaded portion of the same, as shown in Fig. 2.

Owing to the use of the hollow-core holder J the bulk of the metal in proximity to the end P of the core N is comparatively limited, so that the said core does not become heated to such an extent as to injuriously affect the insulating-covering of the wire, and as soon as the pipe is formed around the wire it passes into the enlarged chamber *y* of the die, and is chilled by contact with the air. The core-holder, however, is surrounded by the hot lead, so that it is maintained at a practically uniform temperature, and thus prevents chilling of the lead in the reservoir and the formation of bad joints in the pipe which is being made.

The core-holder is of tapering or conical form, so as to provide the desired broad supporting-base and yet permit the maintenance of a mass of metal around the core-holder.

The ram G is chambered for the reception of the core N, and so as to form a reservoir for oil or other liquid, which coats the insulated wire as the same is drawn through the ram

and aids in preventing injury to the insulation; or the ram may contain insulating material for application to a wire drawn through the ram.

It will be observed that the hollow-core holder J, die M, and core N form a self-contained structure of simple and inexpensive construction, which can be applied to an ordinary pipe-press without disturbing any part of the latter, the press being thus rendered available at small expense for use in making lead-covered wires.

Owing to the use of the hollow-core holder the projecting end P of the core N is so short that it is not likely to be deflected to one side or the other so as to make uneven pipe, and as the metal enters the hollow bridge-block from opposite points the flow of metal has no tendency to deflect the end of the tube.

Three or more openings arranged equidistantly may be used with the same effect.

The end P of the core N need not be detachable in all cases, although it is preferred to so construct it in order that it can be renewed or one of a different size substituted without changing the entire core.

I am aware that a hollow core, core-holder, and die have been heretofore combined with the hollow column, lead-reservoir, and hollow ram of a lead-pipe press, and therefore do not claim this combination, broadly considered, my improvements relating to features of construction whereby the detaching of the core and core-holder can be readily effected without disturbing the press and the ready adjustment of the core permitted for the purpose of making different sizes of pipe.

I claim as my invention—

1. The combination of the lead-reservoir, hollow ram, and hollow column of a lead-pipe press with the hollow core, core-holder, and die, said core-holder resting upon the top of the hollow column and being contained within the lead-chamber of the reservoir but unconfined vertically by said reservoir, as set forth.

2. The combination of the lead-reservoir, hollow ram, and hollow column of a lead-pipe press with a structure comprising the hollow core, core-holder, and die, said core-holder being contained in the lower portion of the lead-reservoir, and being of tapered or conical form, as set forth.

3. The combination of the lead-reservoir, hollow ram, and hollow column of a lead-pipe press with the die, a core-holder resting upon the hollow column and supporting the core close to the delivery end of the same, and a hollow core, N, projecting above the lead-reservoir, adjustable in the core-holder, and having a tapering end projecting into the die, as set forth.

4. The combination of the die, the threaded core N, having a tapering end, P, and the core-holder J, having a threaded opening for the core N, and a tubular projection bearing on said core above the thread, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES TATHAM.

Witnesses:

HENRY BOSSERT,
HARRY SMITH.