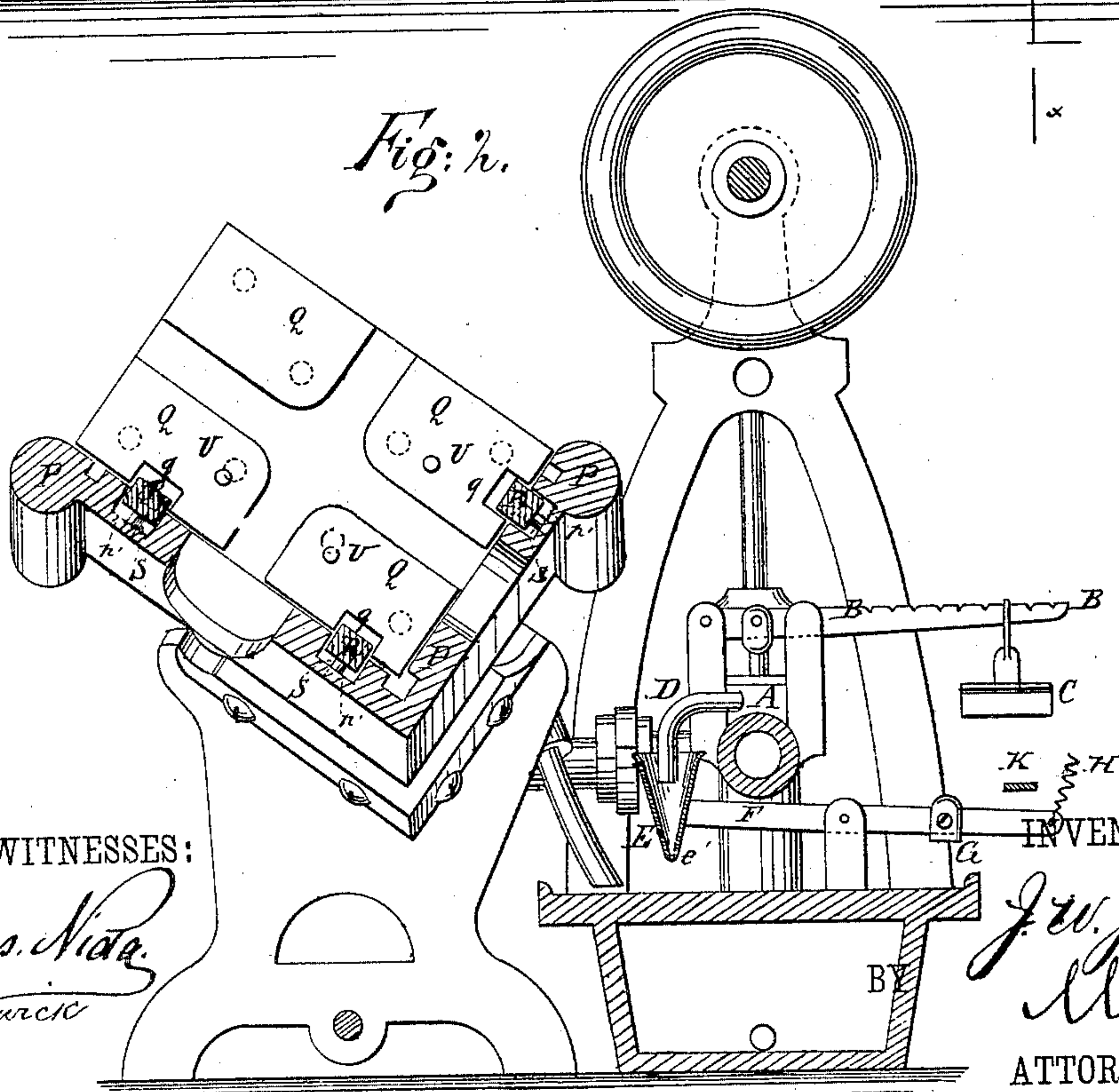
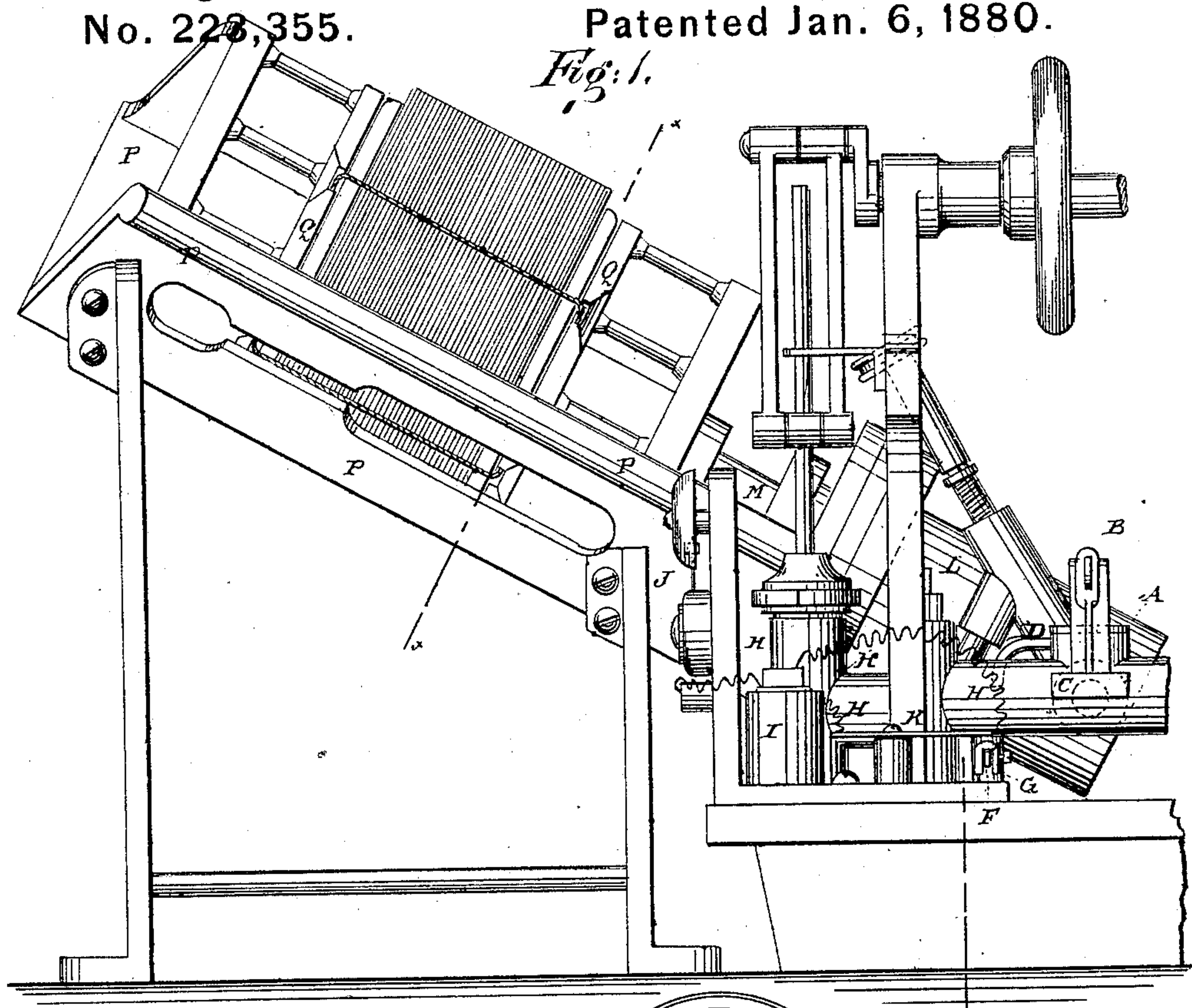


J. W. JONES.

Pressing-Machine for Printers, Book-Binders, &c.

No. 228,355.

Patented Jan. 6, 1880.



WITNESSES:

Chas. Viera
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Pressing-Machine for Printers, Book-Binders, &c.
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Fig: 3.

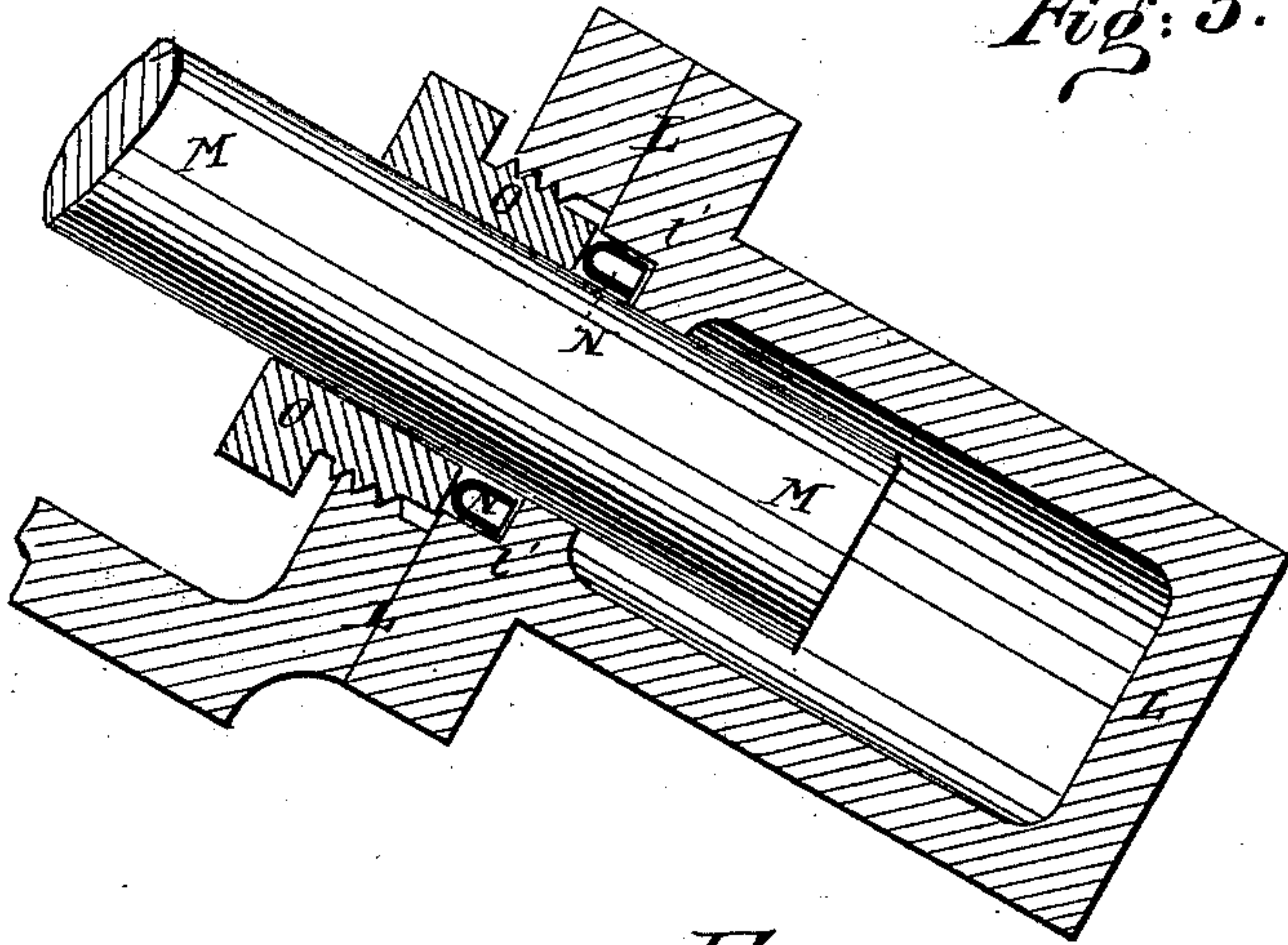


Fig: 4.

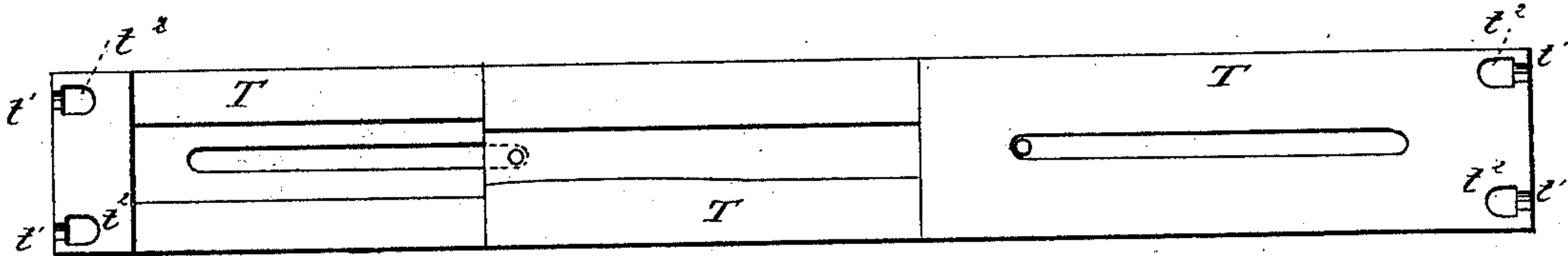


Fig: 5.

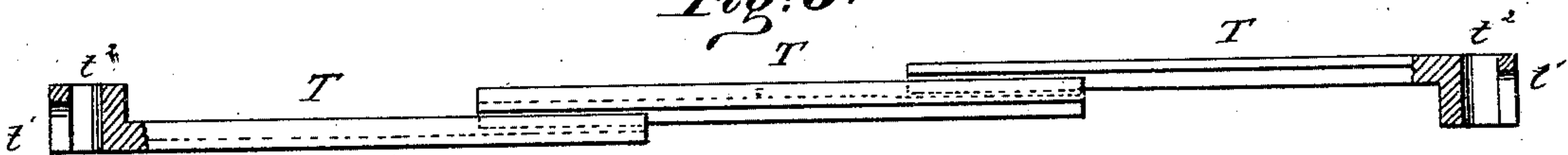


Fig: 6.

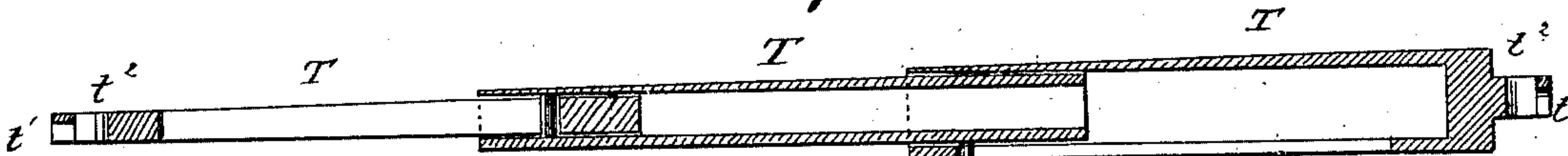


Fig: 7.

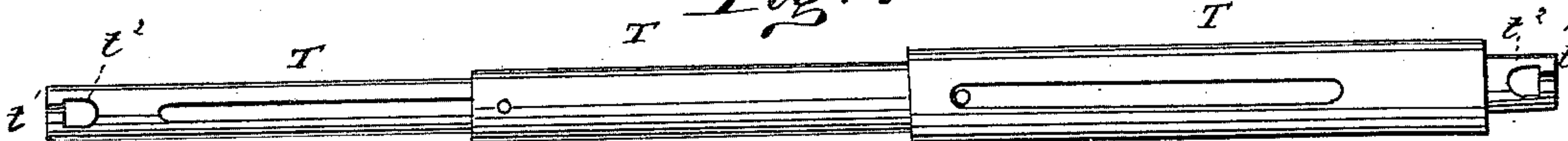
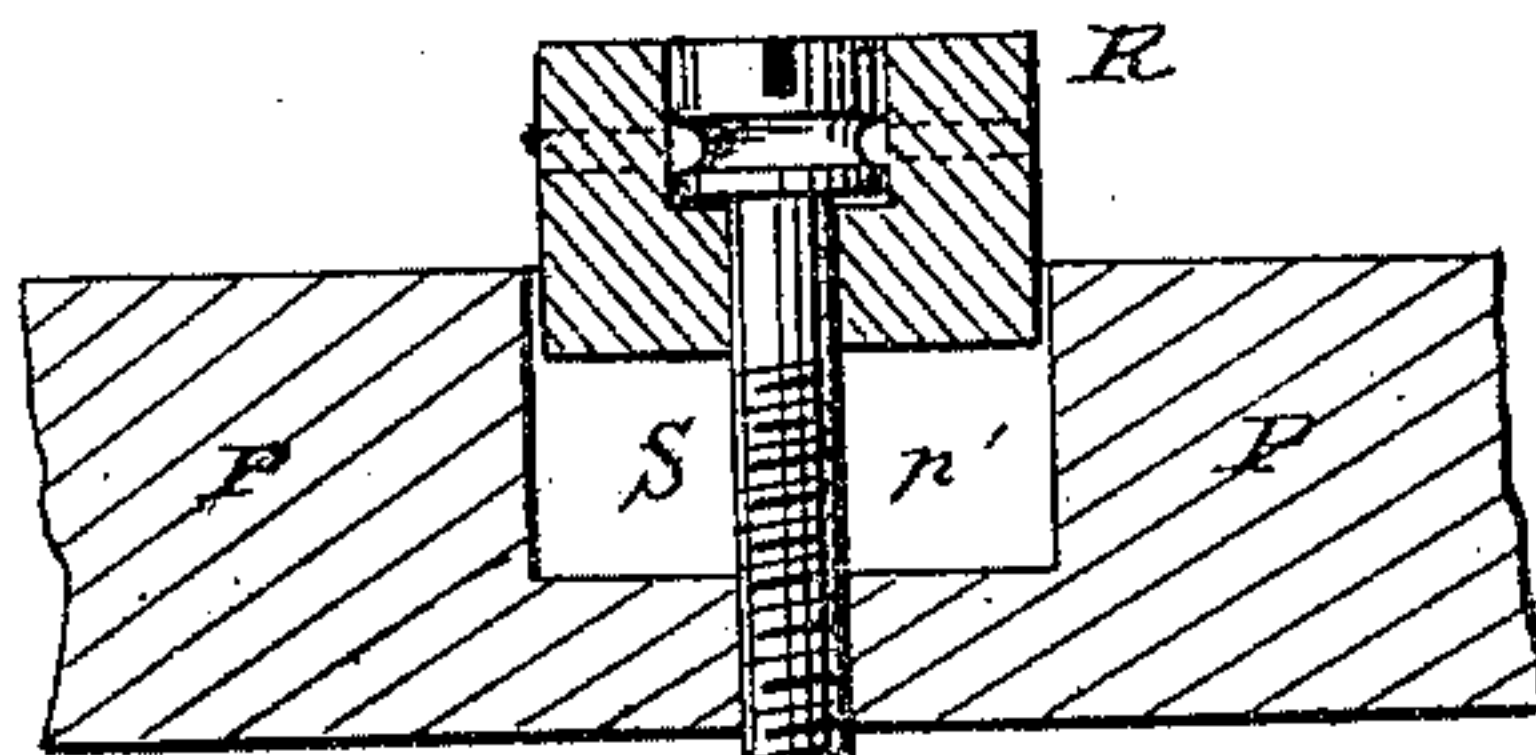


Fig: 8.



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UNITED STATES PATENT OFFICE.

JOSHUA W. JONES, OF HARRISBURG, PENNSYLVANIA.

PRESSING-MACHINE FOR PRINTERS, BOOK-BINDERS, &c.

SPECIFICATION forming part of Letters Patent No. 223,355, dated January 6, 1880.

Application filed August 12, 1879.

To all whom it may concern:

Be it known that I, JOSHUA W. JONES, of Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented a new and useful Improvement in Pressing-Machines for Printers, Book-Binders, &c., of which the following is a specification.

Figure 1, Sheet 1, is a side view of a part of my improved machine. Fig. 2, Sheet 1, is a detail section of the same, taken through the broken line *x x x*, Fig. 1. Fig. 3, Sheet 2, is a detail longitudinal section of the cylinder of the hydraulic press. Fig. 4, Sheet 2, is a side view of one of the removable extension centering-guides. Fig. 5, Sheet 2, is an edge view of the same, parts being broken away to show the construction. Fig. 6, Sheet 2, is a longitudinal section of a modification of the same. Fig. 7, Sheet 2, shows a modification of the same. Fig. 8, Sheet 2, is a detail cross-section of one of the adjustable centering-ledges.

Similar letters of reference indicate corresponding parts.

The object of this invention is to improve the construction of the machines for which Letters Patent Nos. 204,741 and 212,947 were granted to me June 11, 1878, and March 4, 1879, respectively, in such a way as to make them more convenient in use, more reliable and effective in operation, and more readily adjusted for various sizes of work.

The invention consists in the combination of the tube, the funnel, and the weighted lever with the safety-valve of a hydraulic press and the switch-lever and the circuit-wires of the battery that operates the alarm, and in the combination of the detachable extension centering-guides and the screws with the divided heads of the press, as hereinafter fully described.

The general construction, operation, and purpose of the machine are fully described in Letters Patent Nos. 204,741 and 212,947, and I will proceed to describe the improvements made upon it.

A represents the safety-valve of the hydraulic press, which is held down by a lever, B, and weight C, in the usual way. With the safety-valve A is connected a small pipe, D, through which the water escapes from the said safety-valve A when the desired limit of pressure has been reached. As the water escapes from the

pipe D it flows into a funnel, E, attached to the inner end of a lever, F, which is balanced by an adjustable weight, G. The funnel E is provided with a small discharge-hole, *e'*, through which the water in the said funnel gradually flows out. With the outer end of the lever F is connected one end of the circuit-wire H of the battery I. The battery I is also connected with an alarm, J, and the other end of its circuit-wire is connected with the switch-lever K, which is pivoted to the frame-work of the machine or other support in such a position that its free end may be directly over the weighted end of the lever F, so that when the said lever is tilted by the weight of water in the funnel E its free or weighted end may come in contact with the switch-lever K, close the circuit, and sound the alarm, notifying the attendant that the desired pressure has been attained.

L represents the cylinder, and M the ram or plunger, of a hydraulic press, and N is the packing through which the said plunger M works. The packing N is made in ring form and in U shape in its cross-section, as shown in Fig. 3, and is placed in a recess, *l'*, in the inner surface of the upper part of the cylinder L.

As heretofore constructed the packing N, which must be greater in diameter than the inner diameter of the cylinder L, so that it may fit into the recess *l'*, had to be worked into the said cylinder, and then into the said recess, requiring a great outlay of time, labor, and patience, and being almost impossible to accomplish without getting the packing out of shape and injuring or destroying it.

To remedy this difficulty I enlarge or countersink the upper part of the bore of the cylinder L above the recess *l'* to a diameter a little greater than the diameter of the recess *l'*, cut a screw-thread upon the surface of the said enlarged part of the bore, and screw a ring screw-plug, O, into the said screw-thread until its inner end abuts against the shoulder at the inner end of the said enlargement.

The bore of the ring-plug O is made of the same diameter as the plunger M, so that it may fit snugly upon the said plunger. By this construction the inner end of the screw-plug O forms the side of the recess *l'*, and the bend or upper side of the packing N rests against it, so that when the said screw-plug O is re-

moved the said packing N may be easily and quickly put in and taken out without being injured in any respect.

P is the angular table, bed, or trough in which the sheets are placed to be pressed and tied, and in which the said sheets are operated upon by the divided heads Q, one of which is stationary and the other movable, and connected with the plunger M. In the sides of the table P are formed grooves p' , in which are placed strips or ledges R, and in the parts of the divided heads Q directly over the said grooves p' are formed notches q , into which the said ledges R may be raised to adapt them to serve as centering-guides for smaller sizes of sheets. The ledges R may be lowered so as to be flush with the surface of the table P, or raised above the said surface by screws S, swiveled to the said ledges and entering screw-holes in the said table. The ledges R may also be adjusted by adjustable wedges placed beneath them in the grooves p' . Still smaller sizes of work may be centered by detachable extension-guides T, which are made in parts, sliding upon each other.

The guides T may be connected together by T or dovetailed tongues and grooves formed upon the adjacent surfaces of the said parts, or by being made in tubular form, so as to slide upon each other in the manner of a telescope. In the latter case one side or edge of the guides may be shaved or tapered to bring them as near as possible to a straight line when wholly or partly extended.

The movement of the parts of the extension-guides upon each other is limited by stop-pins attached to one of the said parts, and which project through slots in the adjacent part.

The outer ends of the end parts of the extension-guides T have one or more longitudinal notches, t' , formed in their sides, and one or more holes, t^2 , formed through them at the inner ends of the said notches, so that they may be hooked upon the heads of screws U, attached to the divided heads Q, so that the said guides T may be extended and contracted by the movements of the movable head Q.

The screws U are designed to be made with small milled heads, so that they can be readily screwed into and out of the divided heads Q with the fingers.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of the tube D, the funnel E, and the weighted lever F with the safety-valve A of a hydraulic press and the switch-lever and circuit-wires K H of the battery I, that operates the alarm J, substantially as herein shown and described.

2. The combination of the detachable extension centering-guides T and the screws U with the divided heads Q of the press, substantially as herein shown and described.

JOSHUA W. JONES.

Witnesses:

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