

J. H. CLAPP.
Screw-Press.

No. 164,637.

Patented June 22, 1875.

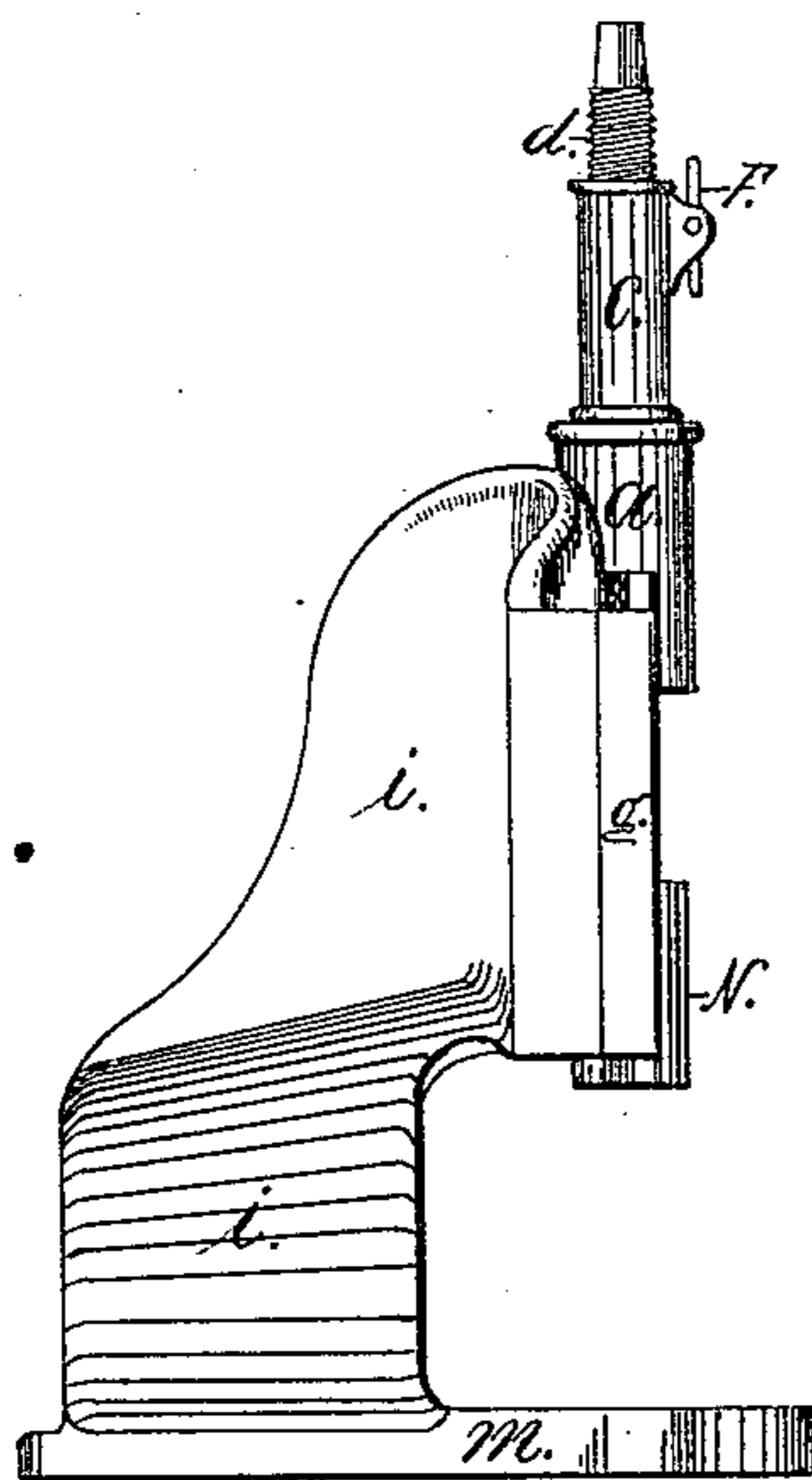


FIG. II.

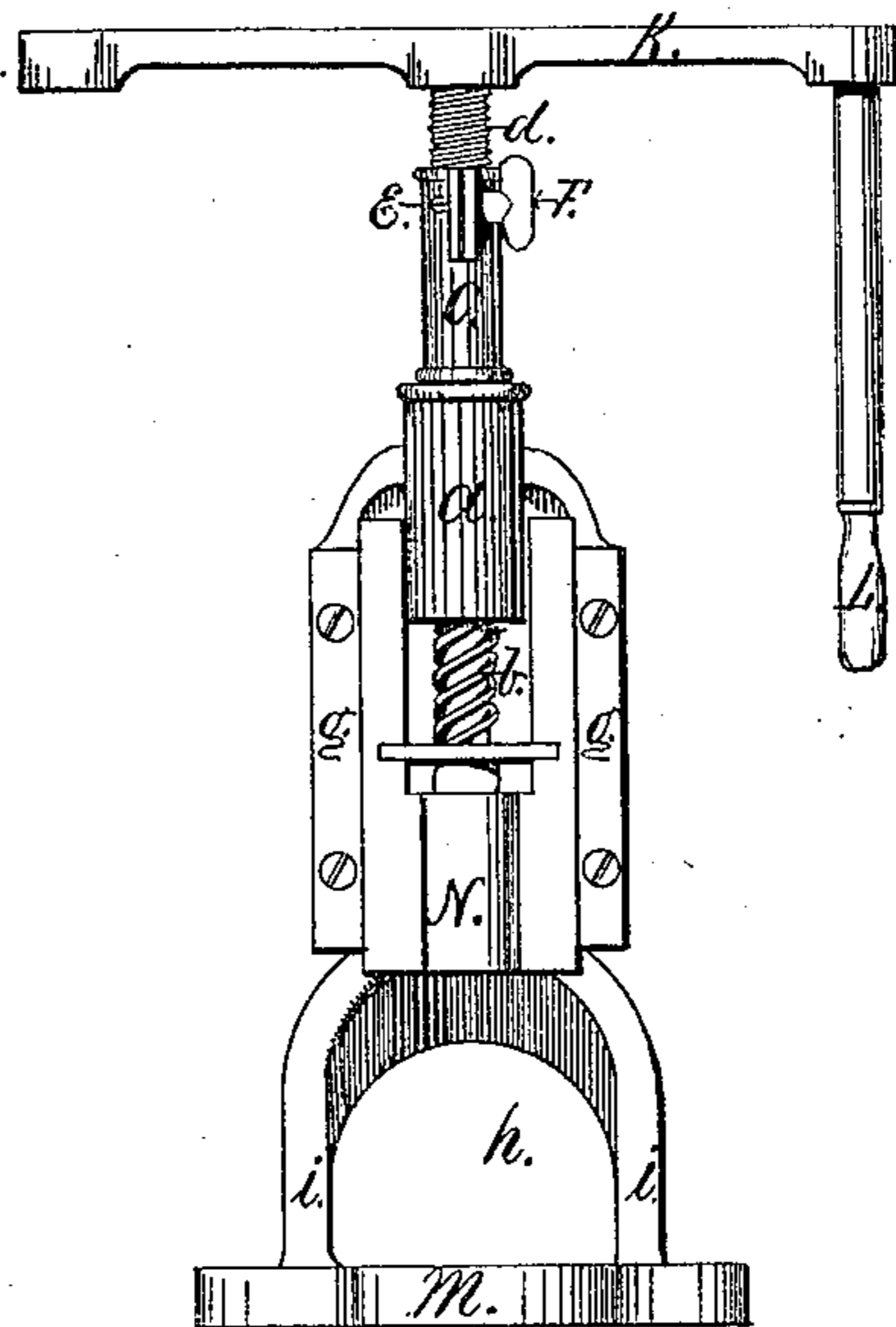


FIG. I.

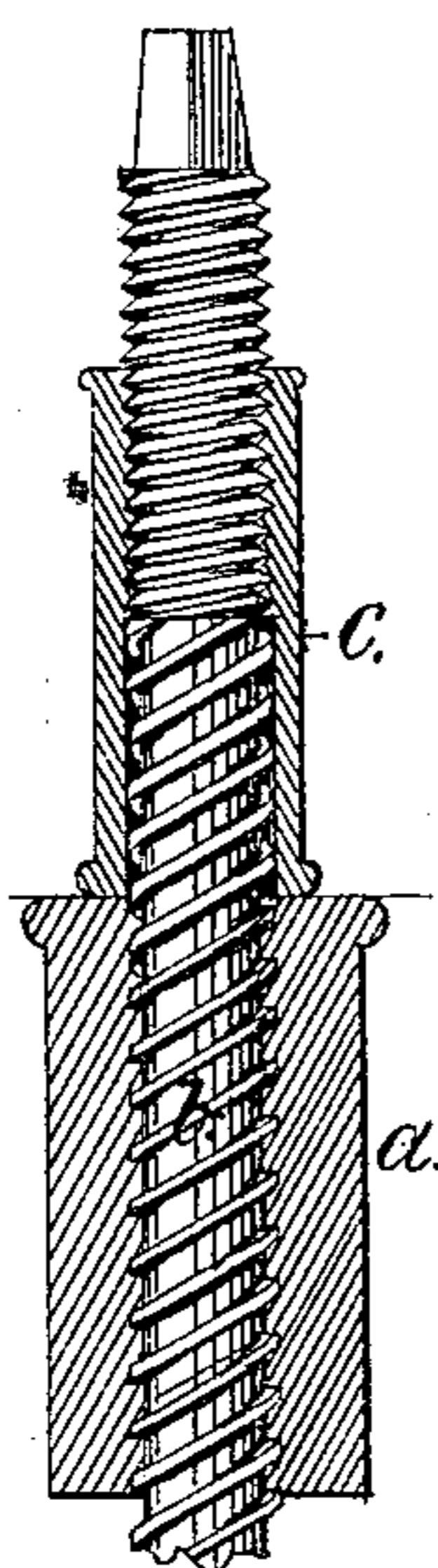


FIG. III.

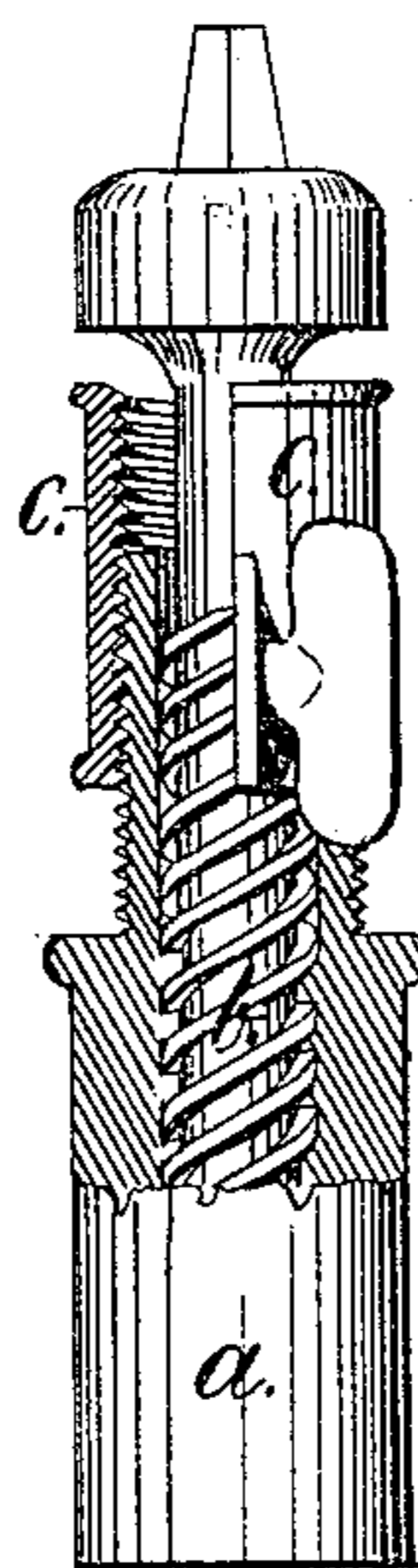


FIG. IV.

WITNESSES

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IMPROVEMENT IN SCREW-PRESSES.

Specification forming part of Letters Patent No. 164,637, dated June 23, 1875; application filed May 6, 1875.

To all whom it may concern :

Be it known that I, JAMES H. CLAPP, of the city and county of Providence, Rhode Island, have invented certain new and useful Improvements in Screw Die - Presses; and I hereby declare that the following is a full, clear, and exact description of the same, which, with the accompanying drawings forming part of this specification, will enable others skilled in the art to make and use the same.

Figure I is a front view of my improved screw die-press. Fig. II is a side view of the same. Fig. III is a sectional view of the concentric sleeve-stop. Fig. IV is a modification of the concentric sleeve-stop.

Similar letters of reference indicate corresponding parts.

The object of this invention is to provide screw die-presses, such as are used by jewelers for stamping and embossing jewelry, with an adjustable stop, which shall act directly on the screw of the press, and uniformly concentric with the screw, so that the die shall pass only to a certain point into the reverse part of the same, and shall be stopped at the desired point.

The nature of the invention consists in the arrangement of a concentric stop or sleeve, adjustable on a fine-threaded screw, and acting directly on the screw-spindle, the adjustable slides, and the peculiar construction of the standard.

In the drawings, A is the nut-barrel, in which the screw-spindle turns, and which is supported by a corresponding screw-thread or nut. *b* is the screw-spindle. C is the adjustable concentric stop. E is a slit in the stop-sleeve C, and F a thumb-screw for securing the stop-sleeve C at any desired point. *d* is a fine thread cut on the upper end of the screw-spindle. *g g* are the slides secured to the standard, in which the cross-head reciprocates. *h* is an arched opening made in the standard. *i i* is the standard. K is the lever for turning the screw-spindle. L is the handle. N is the cross-head, and *m* the base, to which the standard is cast.

In screw die - presses used for pressing, punching, or embossing jewelry the die must strike the metal with considerable force, absolutely true with the reverse die, secured to the

base or anvil, and must be stopped at a given point, so that, while the stamped ware must be sharp, and a true counterpart of the die, no part must be cut, or any surface injured by the die descending farther than is absolutely required. In the latter case the work is lost, and the die injured. To prevent this, and enable the operative to accurately adjust the distance to which the die shall enter the reverse die, I cut on the upper part of the screw-spindle a fine thread, which may be cut either right or left handed, but must be of a fine pitch, so that the downward stroke of the screw-spindle can be firmly resisted. On this auxiliary screw-thread *d* I place the concentric sleeve-nut C, provided with the clamp and thumb-screw E F. When this sleeve-nut is turned up or down to its proper position, and secured by the thumb-screw F, the screw-spindle can only descend until the stop-sleeve C comes in contact with the nut-barrel A, when the descent of the spindle is arrested. As the stop-sleeve C is concentric with the spindle, the resistance when it is stopped is the same at all points around the screw-spindle, and the axis of the spindle and the die remain absolutely true; whereas, in other stops heretofore used, the spindle and die are liable to uneven strains, on account of the difficulty of adjusting such stops so as to bear at all parts around the spindle alike and at the same time.

When a stop is placed upon the ordinary thread of the screw-spindle, the strain is so great that an adjustable clamping device can hardly resist it; but when an auxiliary finer thread is used, as is shown in my invention, the stop is easily secured, adjusted with great facility, and will resist all strains.

The auxiliary fine thread may be placed on a tube extending above the nut-barrel A, on which the concentric sleeve-stop may be secured, and a shoulder or boss made on the upper end of the screw-spindle, as is shown in Fig. IV, so that the shoulder will be arrested at the proper time by the concentric stop C, and thus the same result will be obtained.

The arrangement of the adjustable slides *g* enables me to maintain at all times a more closely-fitting and accurate motion of the cross-head N, as all wear can be taken up, and they can be readily adjusted exactly parallel with

the true line of the cross-head, thus securing greater accuracy in the work with less lateral play, and without binding or increased friction.

V-shaped slides in such presses are liable to gum by the exposure of the lubricating-oil to the air and dust; but by making the same readily removable they can be easily cleaned and replaced.

The standard *i i* has an arched opening at its lower part, where it unites with the base *m*. This opening *h* is in the rear of the die-plate, and opposite the operative when he is using the press.

When a strip of metal is passed laterally over the dies it is difficult for the operative to have the die always strike the exact center of the strip, as his eyes are not in line with the center of the strip, but parallel to the same. When, however, the strip can be passed under the die in a direction from the operative, as is done in my improved press, where the strip is passed through the arched opening *h*, the operative is at once enabled to place the band in succession exactly under the die, and thus less work is lost, and the press can be more accurately and more rapidly fed with one hand, and operated with the other. Different neighboring

operatives do not interfere with one another, as is the case when long bands are embossed on presses of the old construction.

The strength of the standard is also materially increased, the distribution of the metal is more uniform, the casting can shrink and cool more evenly, and a stronger and more homogeneous metal, and correspondingly better and more durable, press is the result.

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

1. The combination of the screw-spindle *b*, having a screw-thread of the usual pitch for screw die-presses, and above the same a screw, either right or left handed, having less pitch, with the concentric sleeve-stop *C* and the clamp *E F*, as and for the purpose set forth.

2. In combination with the screw-spindle *b*, the nut-barrel *A*, the stop *C*, the fine screw-thread *d*, and cross-head *N*, the adjustable slides *g g*, substantially as described.

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Witnesses:

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