

E. I. MANENT.
FORM LOCKING AND ADJUSTING DEVICE.
APPLICATION FILED NOV. 24, 1906.

935,212.

Patented Sept. 28, 1909

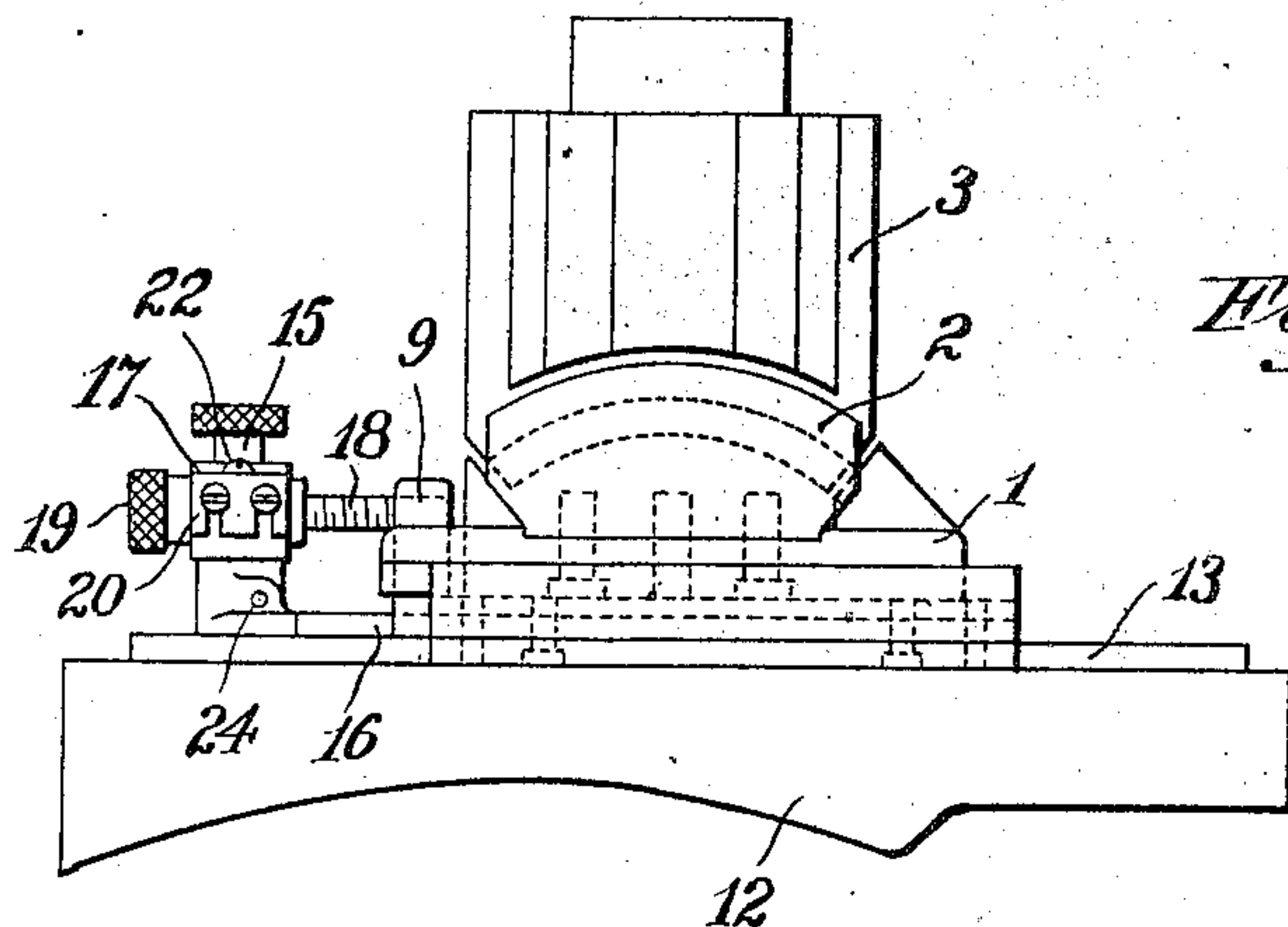


Fig. 1.

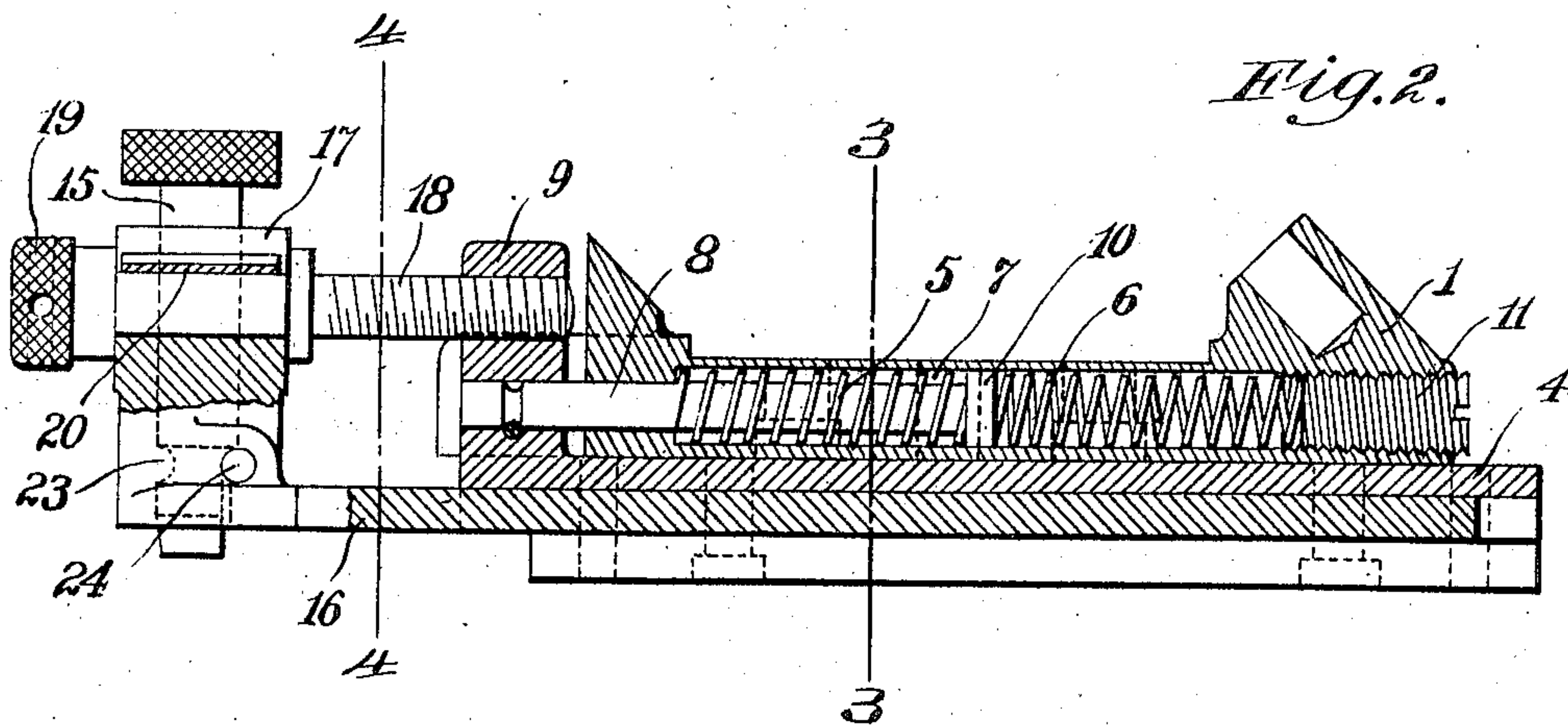


Fig. 2.

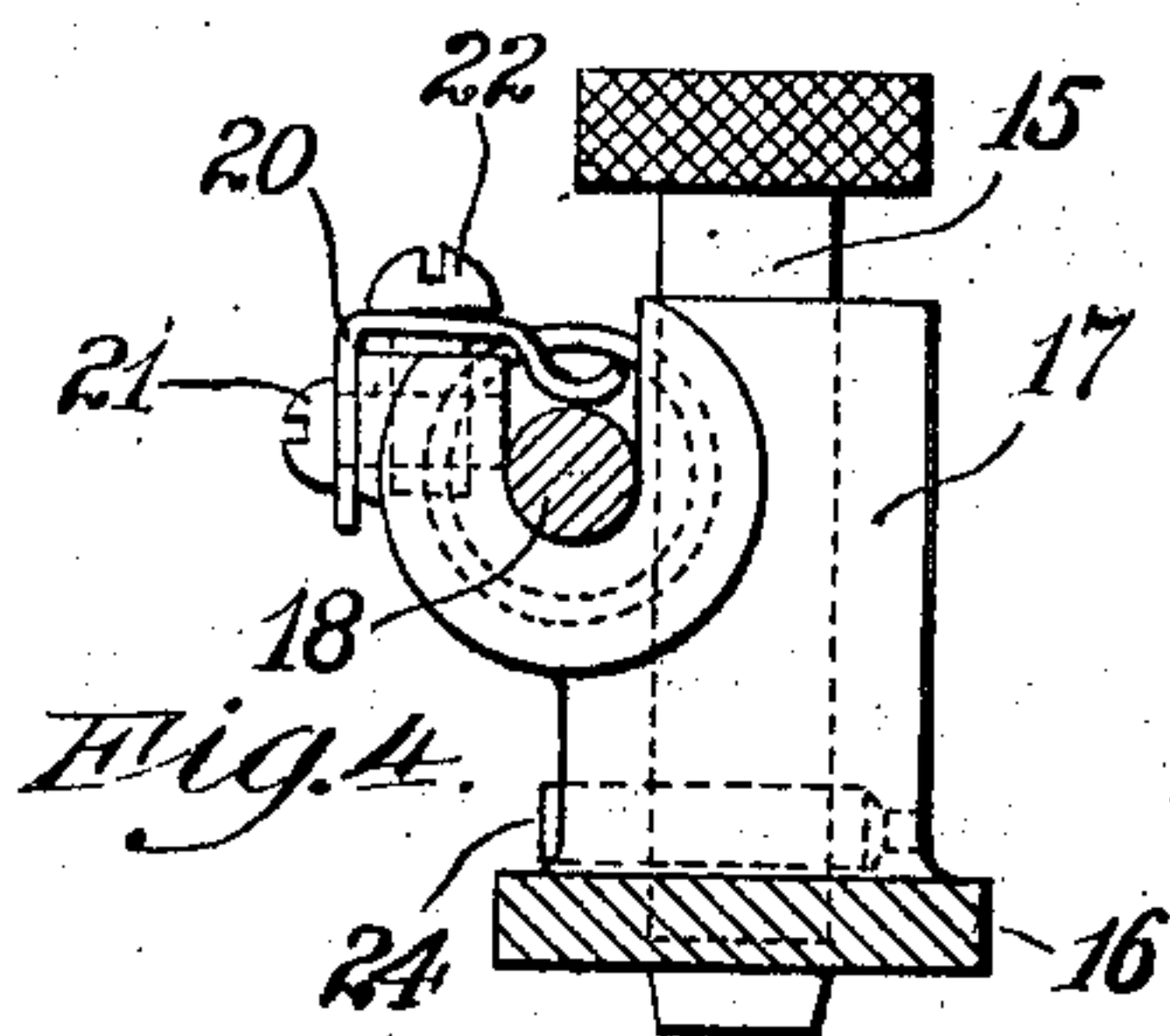


Fig. 4.

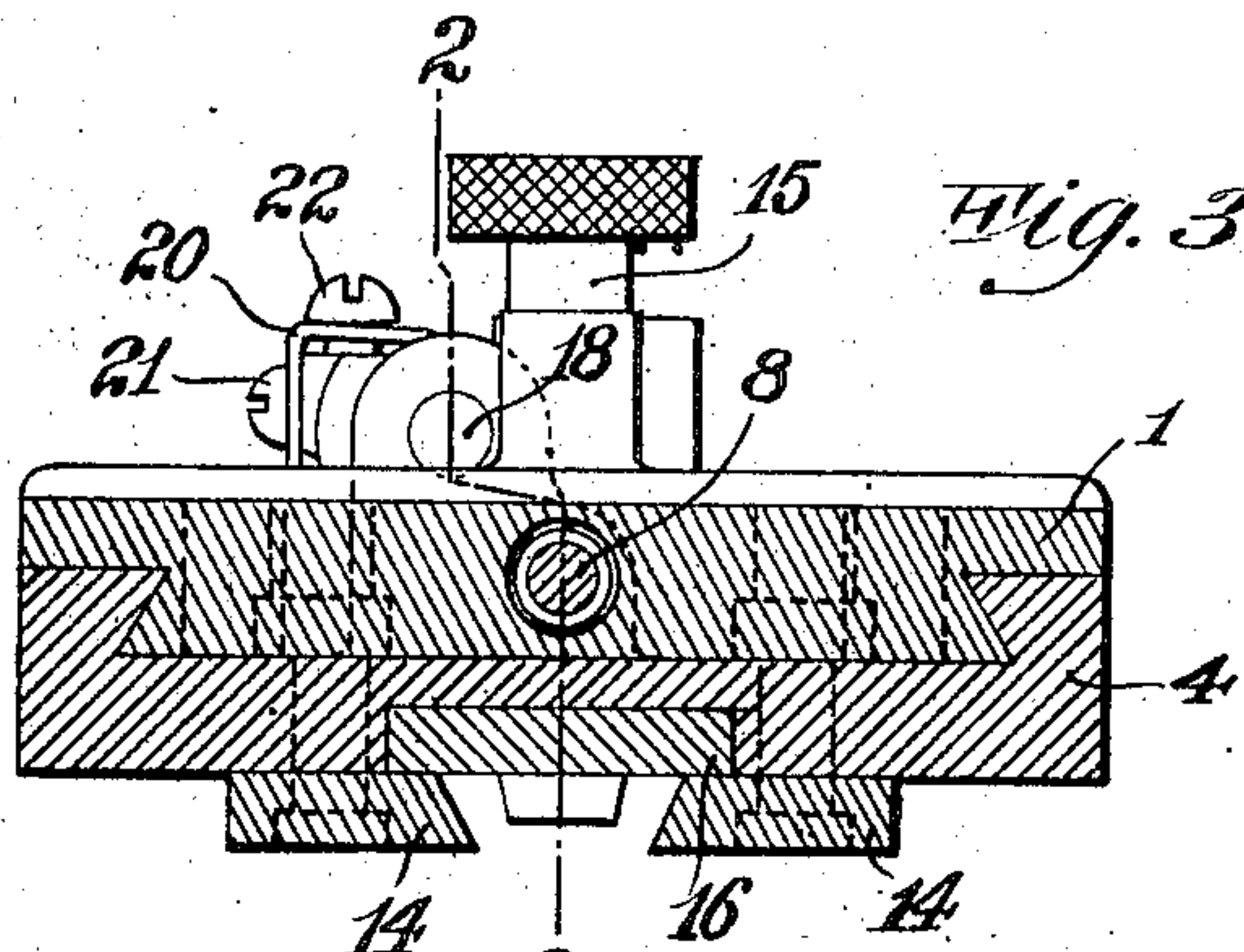


Fig. 3.

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UNITED STATES PATENT OFFICE.

ELMER IRVING MANENT, OF LYNN, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

FORM LOCKING AND ADJUSTING DEVICE.

935,212.

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To all whom it may concern:

Be it known that I, ELMER IRVING MANENT, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Form Locking and Adjusting Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to form locking and adjusting devices for sole pressing machines such as sole laying, sole leveling and sole molding machines.

A form adjusting and locking device has heretofore been devised which comprises a locking pin mounted upon the form carrier of the machine and a plate, adapted to have a sliding engagement with the form carrier, adjustably secured to the form carrier, and provided with an opening to receive the locking pin. In the use of this device the form is adjusted with relation to the form carrier by adjusting the plate on the form. This necessitates removing the form from the form carrier and consequently more or less difficulty is had in getting the form adjusted to precisely the desired position. In sole pressing machines the forms are frequently removed and replaced and when the plate is adjustably mounted upon the form it is liable to become displaced by striking against the form carrier when replaced on the carrier.

The object of the present invention is to provide a form locking and adjusting device by means of which the form can be adjusted while on the carrier and in the use of which there is no liability of any of the parts of the form or form carrier being displaced when the form is removed from or replaced on the carrier.

With the above object in view the present invention contemplates the provision, in a sole pressing machine, of a locking device mounted upon the form carrier, adapted to engage and lock the form in position on the carrier, and means whereby the locking device can be adjusted on the carrier. In its broader aspects the invention contemplates any suitable form of locking device adjustably mounted on the form carrier. In the preferred form of the invention, however,

the locking device consists of a pin similar to the locking pin of the prior construction above referred to, which pin is adapted to enter a hole in a strap or plate on the form.

The present invention also consists in the devices, combinations and arrangements of parts hereinafter described and defined in the claims, the advantages of which will be obvious to those skilled in the art from the following description.

The several features of the present invention will be clearly understood from an inspection of the accompanying drawing in which—

Figure 1 is a view in side elevation of a form carrier and form provided with a form locking and adjusting device embodying the present invention in its preferred form, together with the cross head or plunger of a well known form of sole leveling machine upon which the form carrier is mounted. Fig. 2 is a longitudinal sectional view of the form carrier and form adjusting and locking device taken on the line 2—2 of Fig. 3. Fig. 3 is a transverse sectional view of the parts illustrated in Fig. 2 taken on the line 3—3 of said figure, and Fig. 4 is a detail cross sectional view taken on the line 4—4 of Fig. 2.

With the exception of the form locking and adjusting devices the parts illustrated in the drawing are similar to those which have heretofore been used in sole leveling machines and will therefore be only briefly described.

The form carrier illustrated in the drawings comprises a base portion 1, a block 2, to which the base portion is secured and which is mounted so as to have a slight rocking movement upon the plunger or cross head 3 of the machine, and a form supporting plate 4 mounted to slide longitudinally in either direction on the base 1. The plate 4 is yieldingly held in position on the base 1 by means of opposed springs 5 and 6 located in a longitudinal bore 7 of the base. A rod 8 is secured to an upward projection 9 of the plate 4 and extends into the bore 7 of the base. At its inner end the rod 8 is provided with a head 10 which is acted upon by the opposed springs 5 and 6, the spring 5 being coiled about the rod and interposed between the head 10 and the end of the bore 7 and the spring 6 being interposed between the head 10 and a screw plug 11 closing the end

of the bore 7. By means of this construction the plate 4 and the form carried thereby is allowed to yield longitudinally in either direction during the sole pressing operation.

5 The form is indicated at 12 and is provided with the usual strap or plate 13 upon its upper surface, which is received in a dove-tailed guideway formed on the lower surface of the form carrying plate 4 by means of
10 guide plates 14, as best shown in Fig. 3.

The form of locking device illustrated in the drawing consists of a vertically movable pin 15 which is adapted to engage a hole in the strap or plate 13 of the form. The locking pin is mounted in the form carrier, and when in engagement with the hole in the strap or plate 13, securely locks the form from moving longitudinally in either direction with relation to the plate 4. In accordance with the present invention the locking pin 15 is mounted so as to be adjustable longitudinally of the form carrier, and to this end a slide 16 is mounted in the plate 4 and is provided at one end with an upwardly
25 extending portion in the form of a block 17 through which is drilled a vertical hole to receive the pin 15. To enable the slide 16 to be adjusted longitudinally of the form carrier and to be held securely in adjusted position, an adjusting screw 18 is journaled in a slot in the block 17 and has a screw-threaded engagement with the upward projection 9 of the plate 4. At its outer end the screw 18 is provided with a knurled head 19
35 by means of which it can be turned by the operator. A leaf spring 20 secured to the block 17 by screws 21 and acted upon by an adjusting screw 22 bears against that portion of the screw 18 which is journaled in the block, and serves to securely hold the screw in adjusted position. The locking pin 15 is provided with a circumferential groove 23, as indicated in Fig. 2, which, when the pin 15 is in its lowest position, is engaged by
45 a cross pin 24, so that the pin is securely held in engagement with the plate 13 of the form. Below the cross pin 24 the pin 15 is flattened on one side, so that by turning the pin the flat portion can be brought into a position
50 beneath the cross pins 24 to allow the locking pin to be raised from engagement with the plate 13. It will be evident that an adjustment of the locking pin 15 on the form carrier will adjust the form with relation to the carrier and that the plate 13 of the form
55 can be rigidly secured in fixed position on the form or if desired be made integral therewith.

The nature and scope of the present invention having been indicated and a preferred form of the invention having been specifically described, what is claimed is:—

1. A sole pressing machine, having, in combination, a form, a form carrier, and a locking device arranged to engage and lock
65 the form in position, mounted upon the form carrier and adjustable thereon to change the position of the form with relation to the carrier.

2. A sole pressing machine, having, in combination, a form carrier, a form having a sliding engagement with the carrier so as to be capable of moving longitudinally thereon, and a locking device arranged to engage and lock the form in position, mounted
75 on the carrier and adjustable thereon to change the longitudinal position of the form on the carrier.

3. A sole pressing machine, having, in combination, a form carrier, a form having a sliding engagement with the form carrier so as to be capable of moving longitudinally thereon, a locking pin mounted in the carrier arranged to engage and lock the form in position, and means whereby the locking
85 pin can be adjusted to change the longitudinal position of the form on the carrier.

4. A sole pressing machine, having, in combination, a form carrier, a form having a sliding engagement with the carrier so as to be capable of moving longitudinally thereon, a slide mounted in the form carrier so as to be capable of moving longitudinally thereof, a locking device mounted in the slide and arranged to engage and lock the
95 form in position, and means whereby the slide can be adjusted to change the longitudinal position of the form on the carrier.

5. A sole pressing machine, having, in combination, a form carrier, a form having a sliding engagement therewith so as to be capable of moving longitudinally thereon, a slide mounted in the form carrier so as to be capable of moving longitudinally thereof, a locking device mounted in the slide and
105 arranged to engage and lock the form in position, and an adjusting screw connecting the slide and form carrier for adjusting the slide to change the longitudinal position of the form on the carrier.
110

In testimony whereof I affix my signature, in presence of two witnesses.

ELMER IRVING MANENT.

Witnesses:

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