

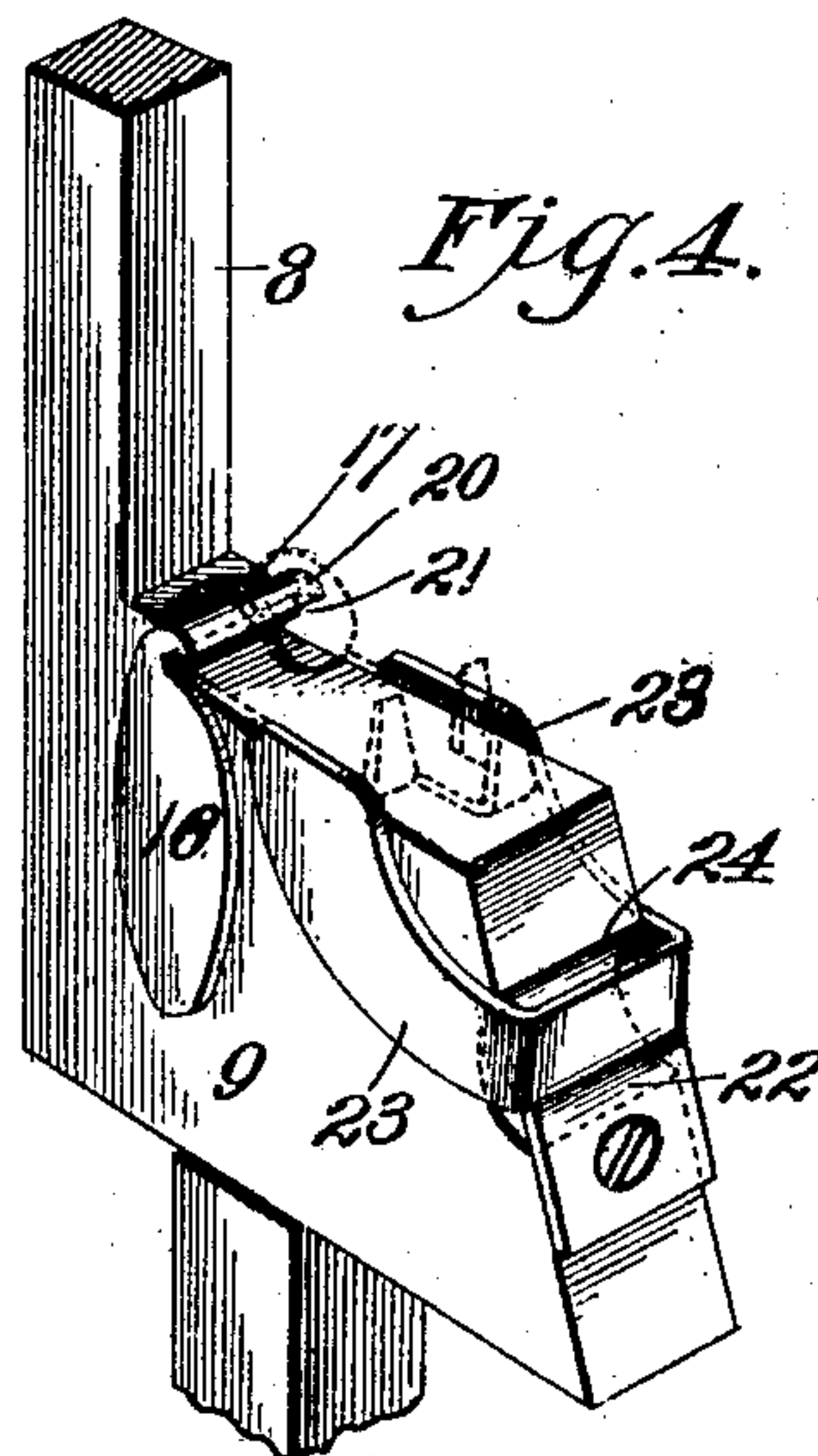
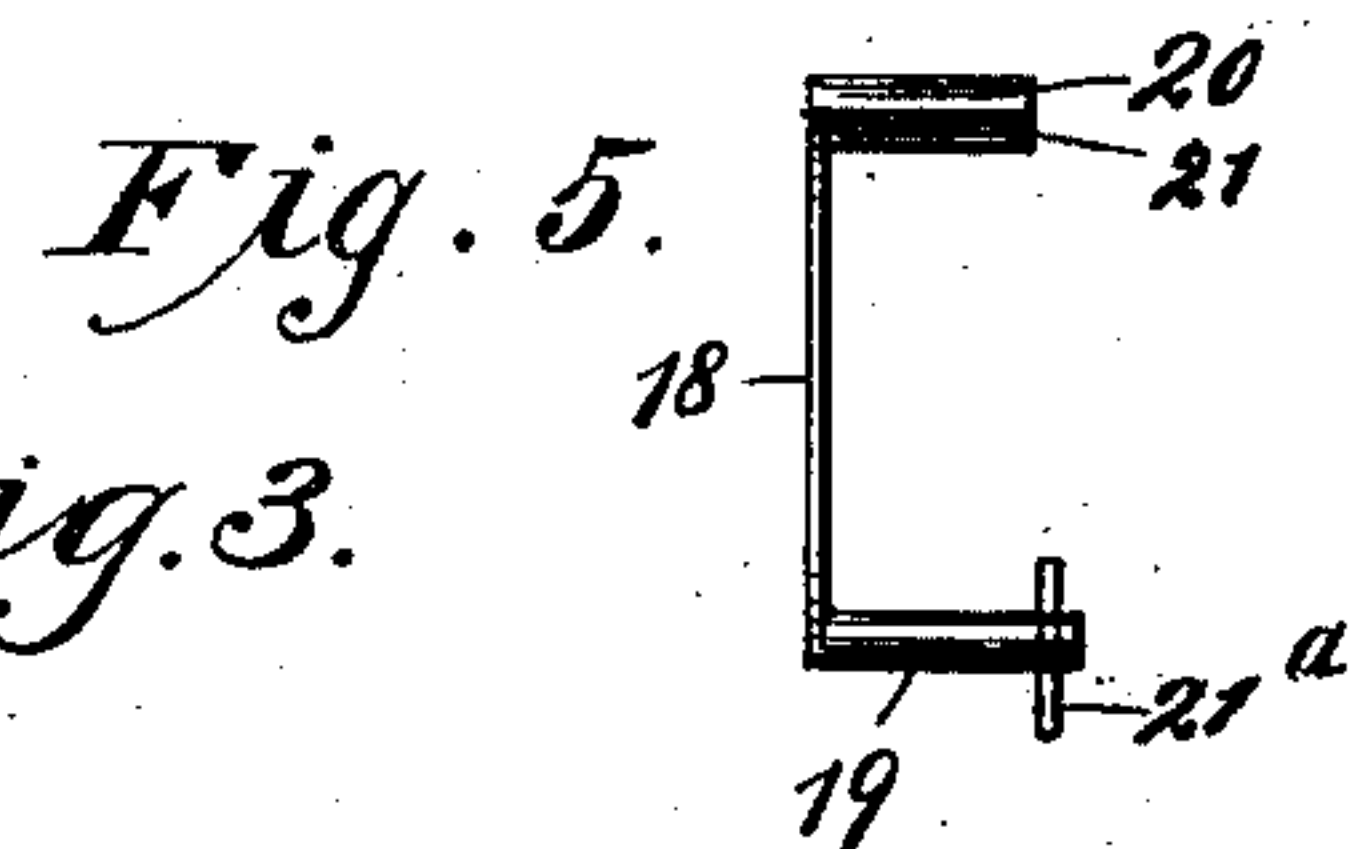
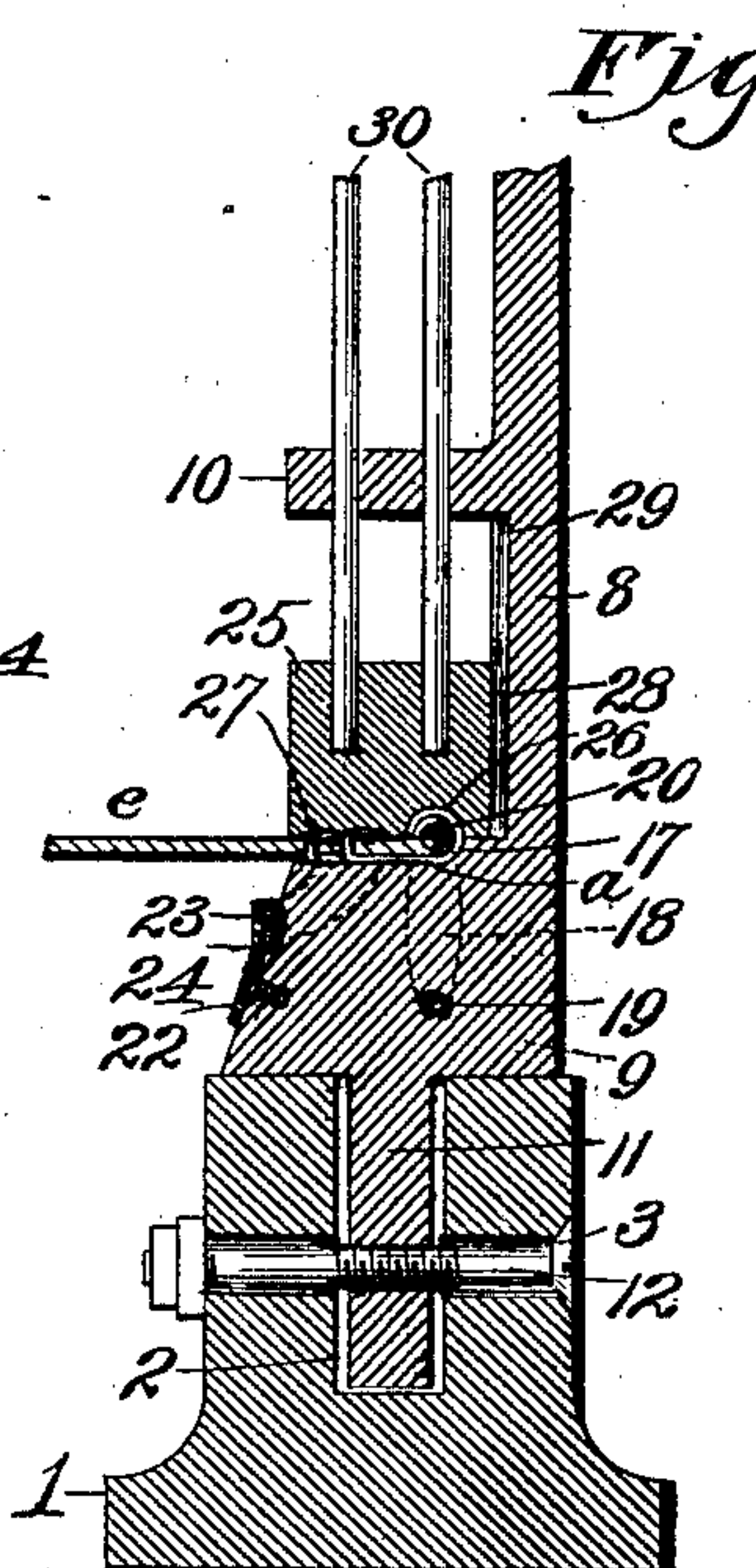
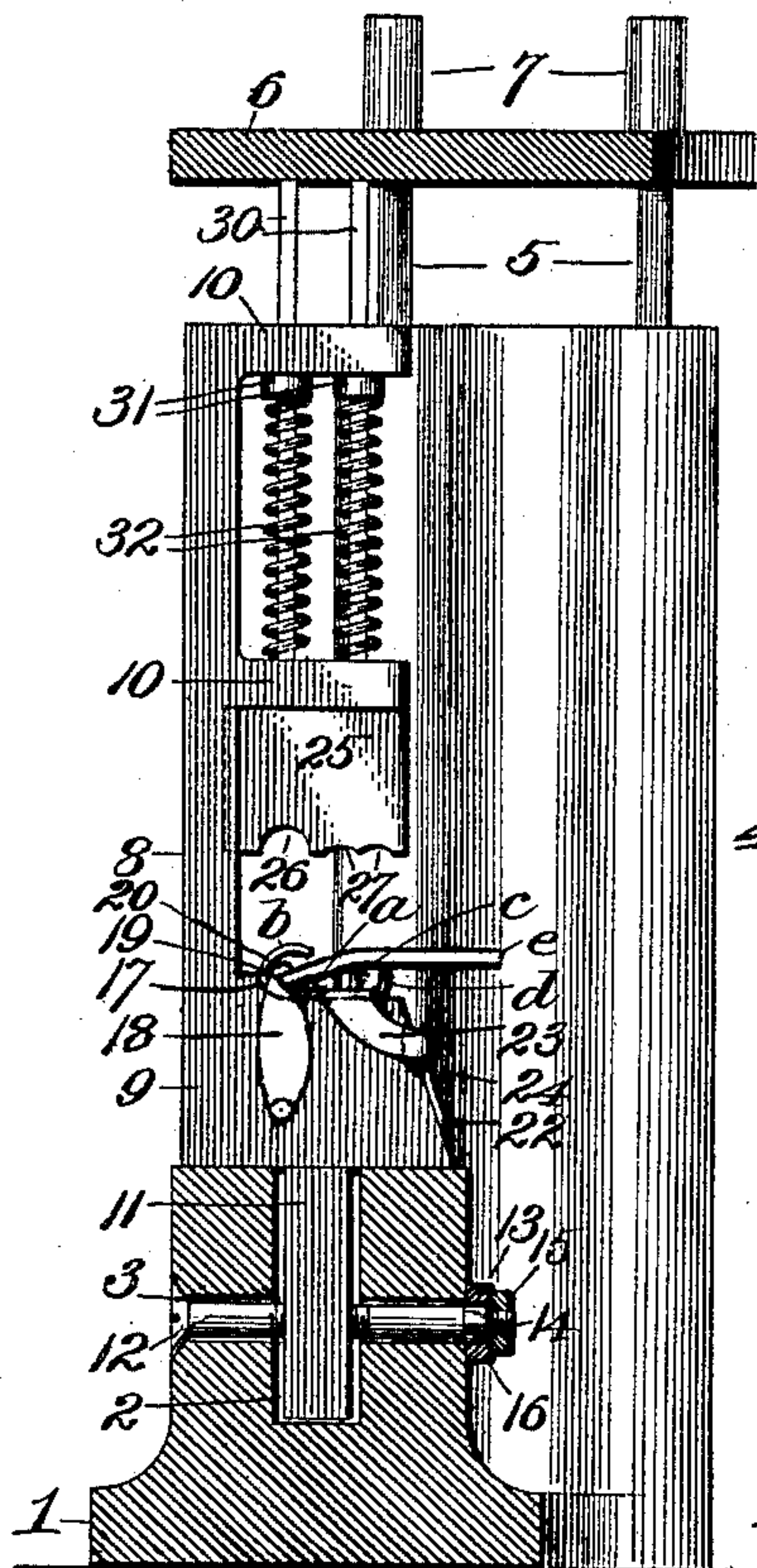
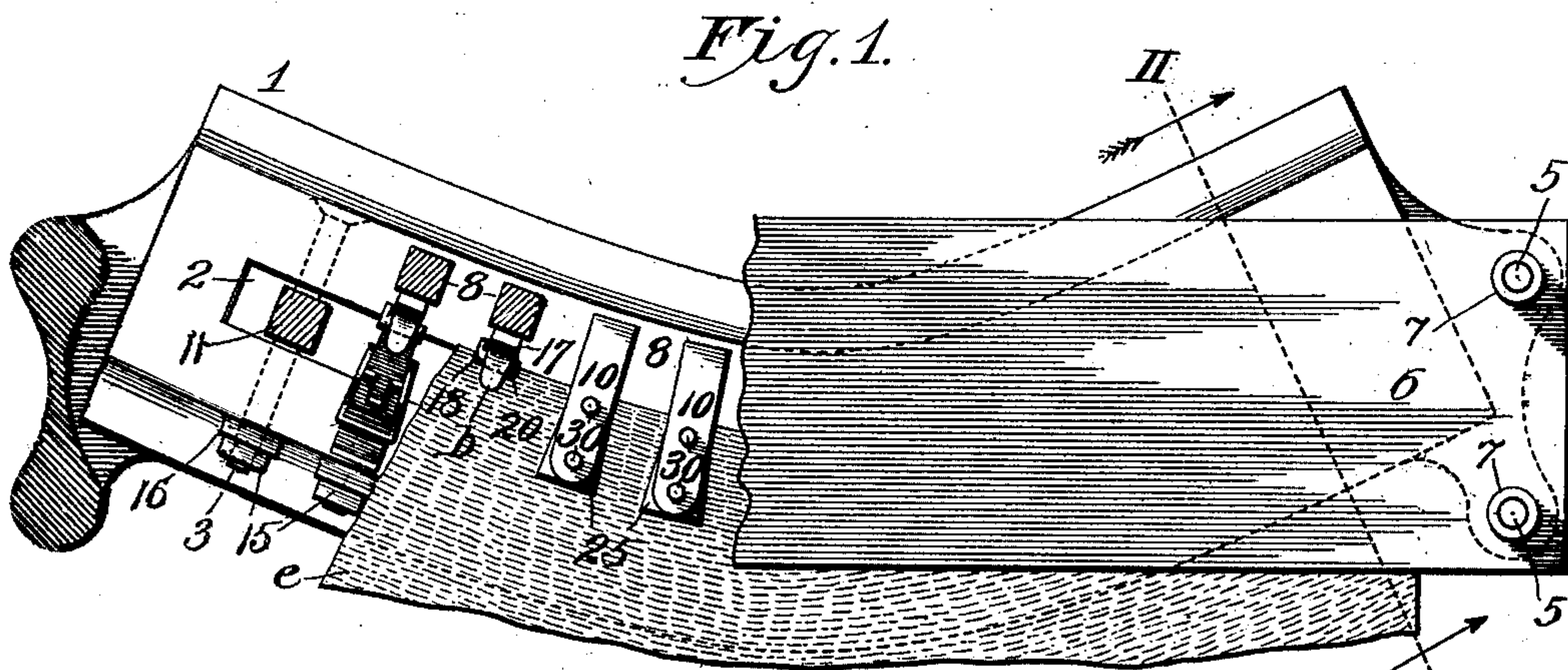
No. 713,715.

Patented Nov. 18, 1902.

J. C. TELFER.  
LACING EYE BLANK FASTENING DEVICE.

(Application filed Aug. 10, 1901.)

(No Model.)



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## LACING-EYE-BLANK-FASTENING DEVICE.

SPECIFICATION forming part of Letters Patent No. 713,715, dated November 18, 1902.

Application filed August 10, 1901. Serial No. 71,603. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN C. TELFER, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Lacing-Eye-Blank-Fastening Devices, of which the following is a specification.

My invention relates to shoe-lacing-eye-blank-fastening devices; and my object is to produce a device of this character which can be adjusted to fasten lacing-eye blanks to the lacing edges of shoe-uppers of any configuration or length and of any kind or quality.

With this general object in view the invention consists in certain novel and peculiar features of construction and combinations of parts, as hereinafter described and claimed, and in order that it may be fully understood reference is to be had to the accompanying drawings, in which—

Figure 1 represents a top plan view, partly broken away, of a machine embodying my invention. Fig. 2 represents a section taken on the line II II of Fig. 1. Fig. 3 represents a section taken on approximately the same line, but from the opposite side. Fig. 4 is an enlarged perspective view of a part of one of the adjustable standards provided with the bed and the devices for holding the lacing-eye blank thereon and gaging the position of the shoe-upper with relation to the said blank. Fig. 5 is a side view of the gage.

Referring to the drawings, where like reference-numerals designate corresponding parts, 1 designates a heavy metal frame, which is preferably curved to approximate the curve of the lacing edge of a shoe-upper and is provided centrally with a longitudinal slot 2, of suitable length and width to accommodate an upper of any size or style, and it is also provided with a horizontal slot 3, intersecting the vertical slot and of substantially the same length. At opposite ends this metal frame is provided with vertical standards 4, projecting upward a suitable distance and having at their upper ends the vertical guide-pins 5 for the vertically-reciprocating presser-plate 6, said plate being formed, preferably, with sleeves 7, engaging said pins, so

as to insure its perfectly horizontal position at all times.

8 designates standards corresponding in number to the eye-blanks for the shoe, these standards each comprising the foot portion or bed 9, resting squarely upon the slotted frame, the horizontal arms 10, vertically above portion 9 and separated a suitable distance therefrom, and the stem 11, depending vertically from the foot portion or bed and through the vertical slot 2 and intersecting slot 3.

12 designates screw-bolts which extend transversely through intersecting slots 2 and 3 and engage the stems 11 of said standards. Near one end each bolt is of angular or square form in cross-section, as at 13, and has said end diametrically reduced and threaded, as at 14, for engagement by a clamping-nut 15, which is adapted to force the sliding head 16, fitting non-rotatably on portion 13 of the bolt, against frame 1, and thereby draw the head of the bolt tightly and immovably against the opposite side of said frame, the threaded relation between the bolt and stem insuring the immovability of the latter.

When it is desired to adjust the standards laterally of slot 2, for a purpose which hereinafter appears, it is accomplished by loosening nut 15 slightly and turning the bolt through the instrumentality of a wrench (not shown) applied to the sliding head 16. This action turns the bolt, and thereby shifts the standard forward or rearward. Should it also be desired to shift the standards longitudinally of the slots, it is accomplished at this time by simply sliding the standard upon the frame, the bolt of course partaking of this movement. When properly adjusted, the standard is again clamped immovably in position by screwing the nut home.

The upper side of the bed 9 is formed in its rear end with an upwardly-curving shoulder 17, and in the vertical plane of the center from which said shoulder is struck is a gage, consisting of a vertical plate 18, preferably of spring metal, and provided at its lower end with a horizontal arm 19, extending through the bed, and at its upper end with a horizontal arm 20, which extends across the bed a slight distance from the



same and about centrally of the center from which the curved shoulder 17 is struck. Arm 20 will preferably be provided with a recess or notch 21 in its lower front side to arrest and hold any object, such as the lacing edge of a shoe-upper *e*, when it is placed upon the bed. (See Figs. 2 and 3.) In some cases, as suggested, it will be unnecessary to provide the gages with notches, and for this reason I prefer to secure them in position by means of spring-cotters 21<sup>a</sup>, engaging the projecting ends of arms 19. By thus making the gages removable it is possible to substitute an unnotched gage for a notched gage.

For the purpose of guarding against slippage of the eye-blanks, hereinbefore referred to, the bed is provided with yieldingly elevated guard-plates 23 at opposite sides, which guard-plates are preferably integrally formed with spring 22 secured to the front side of the bed and bridging at its upper end a cavity 24 of the same, said cavity being formed in order to give the spring perfect freedom of action.

25 designates a movable clencher, the same having curved recesses 26 27 in its lower face for a purpose which hereinafter appears. It is also preferably provided with a tongue 28, engaging a vertical groove 29 of standard 8, this tongue-and-groove connection assisting the guide-rods 30 in insuring a perfectly vertical action of the clencher. Said guide-rods extend up through arms 10 of the standard and carry at a suitable point between the same collars 31 and spiral expansion-springs 32, the latter bearing at their upper ends against said collars and at their lower ends on the under arm 10 for the purpose of re-elevating the clenchers as the presser-plate 6, which depresses them, makes its upward stroke.

The standards are made adjustable both laterally and longitudinally in order to adapt the machine for use upon shoe-uppers of different curvature and of different length, and, as hereinafter referred to, the curved frame 1 corresponds almost exactly in shape with the lacing edge of an average shoe-upper and the standards are relatively proportioned and arranged for securing about eleven lacing-eyes to the upper. By adjusting the standards longitudinally of the slot it is obvious that more or less of the lacing-eyes can be used and that the same machine may therefore be employed for applying studs to low quarters, children's, men's, or women's shoes, the latter usually containing a greater number of lacing-eyes than men's. The variation of contour in the lacing edges of shoes is comparatively small, and I have found that it is possible in a single machine to effect sufficient lateral adjustment of the standards laterally of the frame to parallel a lacing edge of any average contour, which fact makes the machine applicable for use with all kinds, qualities, and shapes of shoe-uppers.

This machine is for the purpose of securing lacing-eye blanks of a particular type to the lacing edge of a shoe-upper. In accomplishing this object the blanks *a*, which are originally of the form shown most clearly in Figs. 2 and 4, are placed upon the upper face of the foot portions of beds 9, with their ends *b* partially encircling the arms 20 of the gages and fitting snugly against shoulders 17, which limit their rearward movement, the gage-arm obviously preventing forward movement. Their spurs *c* and *d* project vertically upward, and the guard-plates 23, which project above the face of said bed, prevent lateral movement. When the standards are thus equipped with lacing-eye blanks, the leather of the shoe-upper is disposed in the position shown in Figs. 1 and 2, where, it will be noticed, it is engaged with gage-arm 20, and thus held for the purpose of insuring the proper alinement of the lacing-blanks. By the time the upper is thus arranged the presser-plate 6 is again moving downward, this movement continuing until the curved recesses 26, by engagement with the ends *b*, and the curved recesses 27, by engagement at first with the interposed leather *e* and then with the upper ends of the spurs after they penetrate the leather, have bent said ends to circular form and turned said spurs rearwardly and clenched them tightly down upon the leather, as shown in Fig. 3. In this action the gage-arm 20 acts as an anvil to positively insure the proper bending of the end *b*, while the plates 23 hold the blanks against lateral movement as the spurs penetrate the leather, and then under the pressure of the clencher yield downwardly, so as not to injure the interposed leather. As the presser-plate rises the clenchers are elevated by springs 32, and the shoe-upper completely equipped with lacing-eyes is withdrawn to permit another set of blanks to be placed upon the beds. All future operations being repetitions of those described, it is unnecessary to pursue the operation further.

The machine as arranged is adapted particularly for equipping the upper at one operation with a full set of lacing-eye blanks.

It is to be understood, of course, that while I have illustrated and described the preferred embodiment of the invention it is susceptible of various changes in the form, proportion, detail construction, and arrangement of the parts without departing from its spirit and scope.

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

1. In a machine of the character described, a bed adapted to receive a lacing-eye blank, a gage attached to the bed, comprising an arm disposed over and at a slight distance above and extending transversely of the same and adapted to receive the eye-blank between it and the bed, and to engage the lacing edge of



a shoe-upper which rests upon the eye-blank, and a clencher, adapted to engage said eye-blank and upper and secure them together.

2. In a machine of the character described, 5 a bed adapted to receive a lacing-eye blank, a gage attached to the bed, comprising an arm disposed over and at a slight distance above, and transversely of the same and adapted to receive the lacing-eye blank between it and 10 the bed, and provided with a notch in the front side of said arm which is adapted to receive the lacing edge of a shoe-upper overlying the eye-blank, and a clencher adapted to engage said eye-blank and upper and secure 15 them together.

3. In a machine of the character described, a bed provided with a forwardly-disposed shoulder against which an eye-blank is adapted to be placed, a gage attached to the bed and 20 provided with an arm extending transversely above the same and through the eye of said blank, and adapted to engage the lacing edge of a shoe-upper overlying the blank, and a clencher movable relatively to the bed and 25 adapted to complete the formation of the eye and secure it to the shoe-upper.

4. In a machine of the character described, a bed provided with a forwardly-disposed shoulder, a gage secured to the bed and provided with an arm extending transversely 30 over the bed and spaced therefrom and from said shoulder, and a clencher movable with relation to said bed and provided with a plurality of curved recesses in its opposing face 35 one of which recesses registers and coöperates with said shoulder.

5. In a machine of the character described, a bed adapted to receive a lacing-eye blank, a gage attached to the bed and overlying the 40 same and said blank and adapted to engage the lacing edge of a shoe-upper overlying the blank, yieldingly-elevated guard-plates at opposite sides of and projecting normally above the bed forward of the gage, and a clencher 45 adapted to engage said eye-blank and secure it to the upper.

6. In a machine of the character described, a bed provided with a forwardly-disposed shoulder, a gage attached to the bed and provided with an arm extending transversely of 50 the bed and spaced therefrom and from said shoulder, yieldingly-elevated guard-plates at opposite sides of and projecting above the bed forward of the gage, and a clencher movable 55 relatively to the bed and provided with curved recesses in its opposing face, one of which recesses registers and coöperates with said shoulder, substantially as described.

7. In a machine of the character described, 60 a bed, and a gage, comprising a plate at one side of the bed, an arm mounted movably in the bed, and a second arm disposed over and at a slight distance above, and extending transversely across the bed, in combination 65 with a clencher movable relatively to the bed and provided with curved recesses, one of

which is adapted to register with the overlying arm of the gage, substantially as described.

8. In a machine of the character described, a frame, standards relatively adjustable thereon and each provided with a bed resting on the frame, a clencher movable toward and from the bed and provided in its opposing face with curved recesses, and a gage attached to the bed and provided with an arm extending 75 transversely above and a slight distance from the same and arranged in alinement with one of said curved recesses, substantially as described.

9. In a machine of the character described, 80 a frame, standards relatively adjustable thereon, and each comprising a bed having a forwardly-disposed shoulder at its upper side, and a vertically-reciprocating clencher having a recess registering and coöperating with 85 said shoulder, a gage overlying the bed and spaced therefrom and from said shoulder, and yieldingly-elevated guard-plates at opposite sides of and projecting above the bed forward of said gage, substantially as described. 90

10. In a machine of the character described, a frame provided with a longitudinal slot, a series of standards, each comprising a bed resting upon the frame, and a stem depending therefrom into said slot, a clencher carried by said standard and movable vertically 95 toward or from the bed thereof, and means, engaging said stems, for clamping said standards rigidly at the desired point in said slot, substantially as described. 100

11. In a machine of the character described, a frame provided with intersecting vertical and horizontal slots extending longitudinally, a series of standards mounted on the frame and each comprising a bed resting upon the 105 frame, a stem depending therefrom into said slots, and a clencher vertically above and movable toward and from the bed, a screw-bolt extending through the horizontal slot, and provided with a threaded portion engaging 110 said stem, and means for turning said screw-bolt to effect adjustment of the standard laterally on the bed, and means to clamp said screw-bolt immovably at the desired point in the horizontal slot, substantially as 115 described.

12. In a machine of the character described, a frame provided with intersecting vertical and horizontal slots extending longitudinally, a series of standards mounted on the frame, 120 each comprising a bed resting on the frame, a stem depending therefrom into said slot, and a clencher vertically above and movable toward and from the bed, a screw-bolt extending through the horizontal slot, and provided with a threaded portion engaging said 125 stem, with a squared portion, and a reduced threaded portion projecting beyond said portion, a head mounted slidingly and non-rotatably on said squared portion, and a nut engaging the reduced portion and adapted to clamp the bolt and sliding head against op- 130



posite sides of the bed, substantially as described.

13. In a machine of the character described, a frame having a longitudinal slot therein, 5 and a second longitudinal slot intersecting the first-named slot, a series of beds, each having a stem entering the first-named slot and extending across the intersecting slot, a headed bolt extending through and rotatable 10 in said intersecting slot, and having a threaded portion engaging a threaded seat in said bed-stem, and means upon the non-headed end of said bolt for clamping the latter upon the frame.

14. In a machine of the character described, 15 a frame, a bed, a bolt rotatably seated in and having a threaded portion engaging said bed, a washer slidably and non-rotatably mounted upon said bolt, and adapted to be turned to rotate the same, means for clamping said 20 washer against said frame, for securing the bolt rigidly in position.

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

JOHN C. TELFER.

Witnesses:

ARTHUR MCARTHUR,  
H. C. RODGERS.