

No. 700,438.

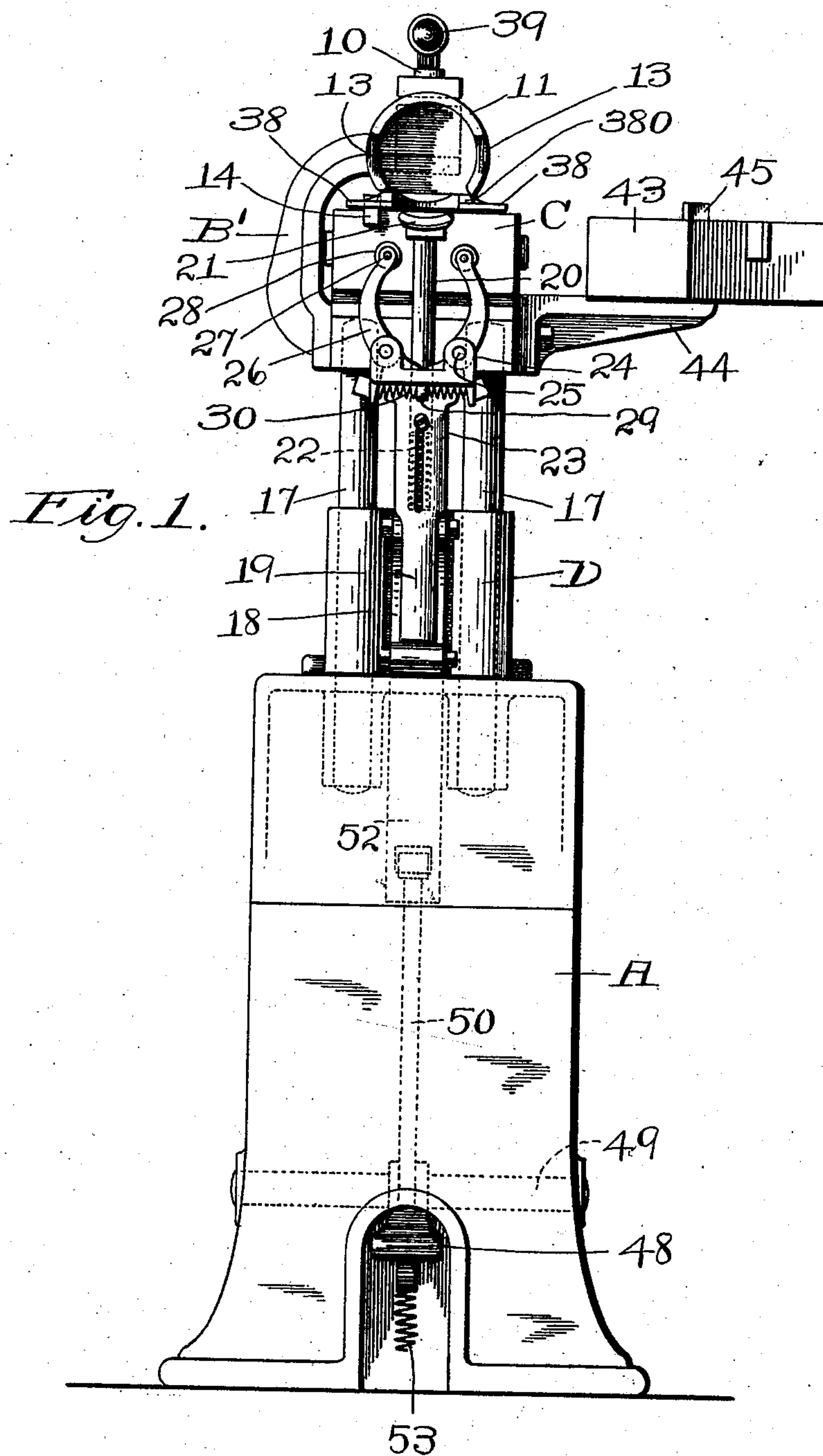
Patented May 20, 1902.

N. MUSLAR.
BOTTLE LABELING MACHINE.

(Application filed Oct. 8, 1900.)

(No Model.)

4 Sheets—Sheet 1.



Witnesses.
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M. C. Regan.

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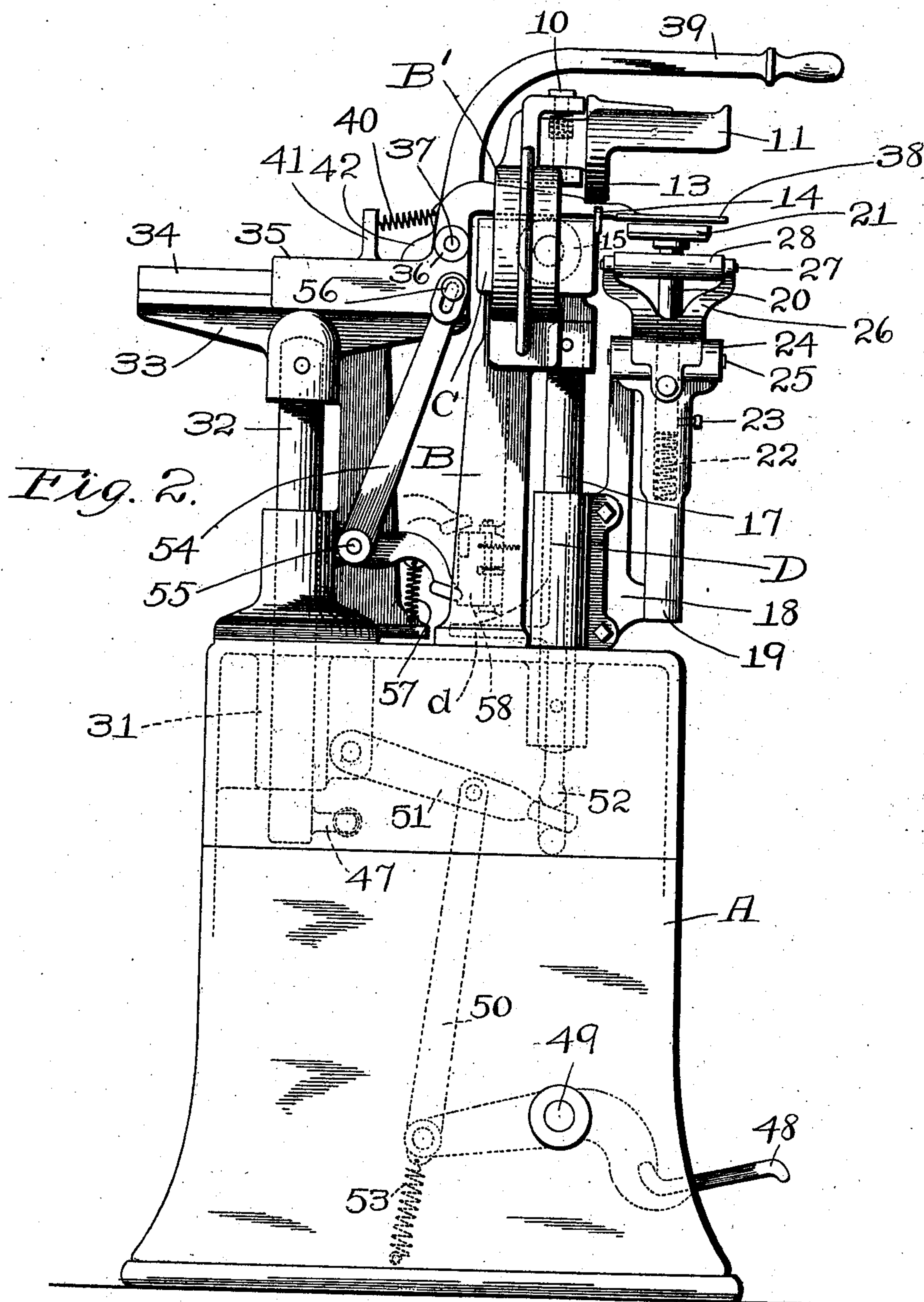
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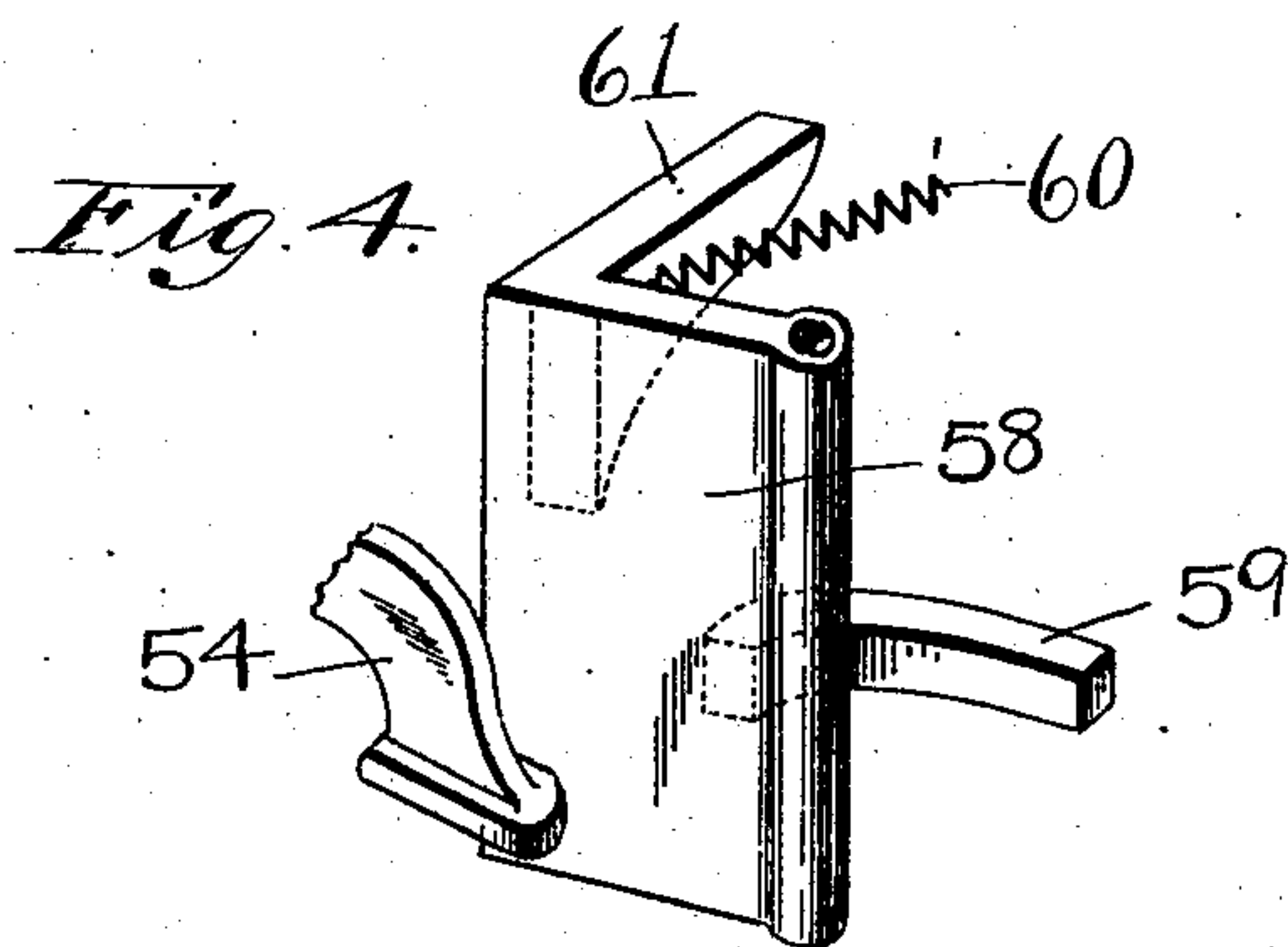
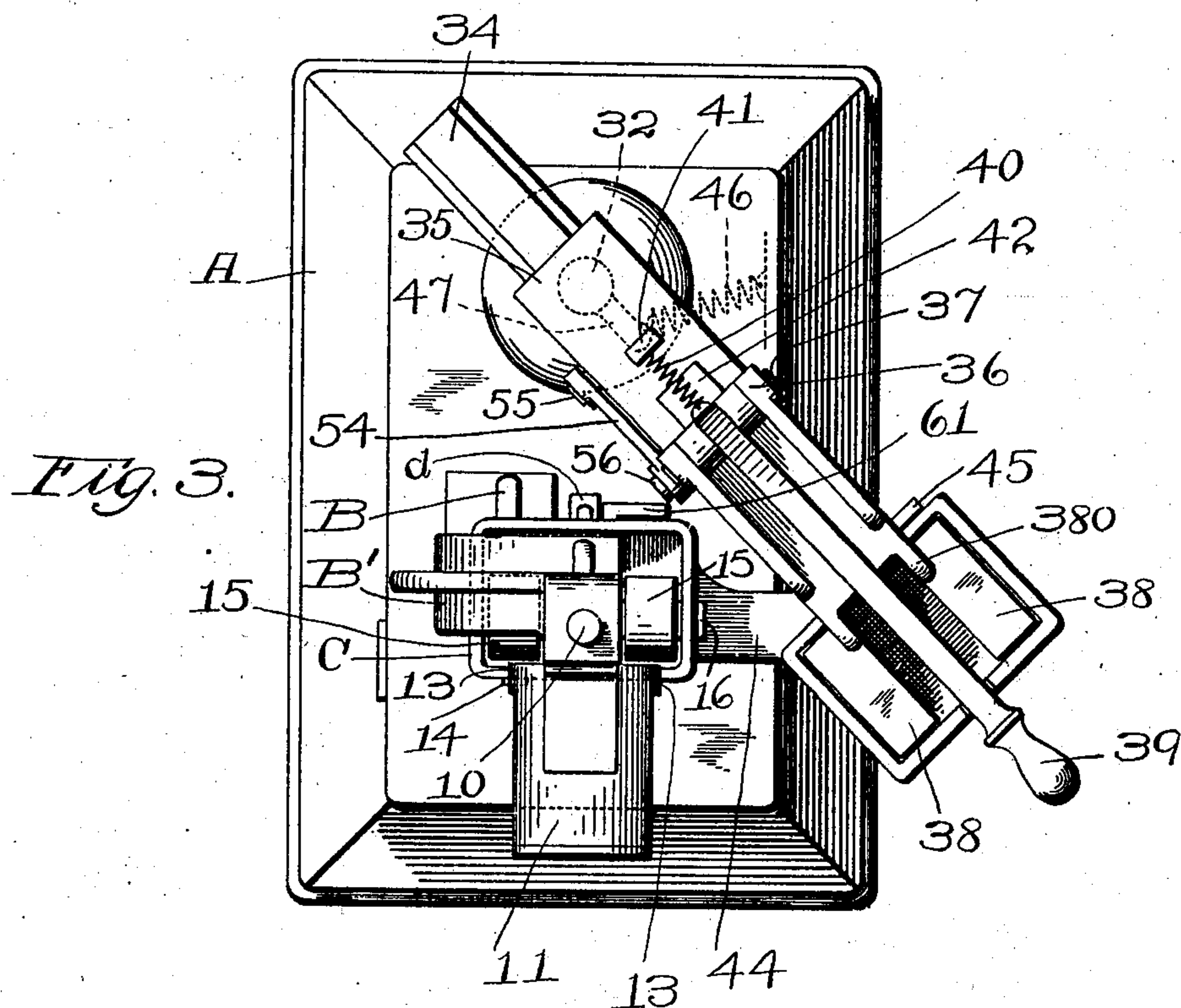
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4 Sheets—Sheet 3.



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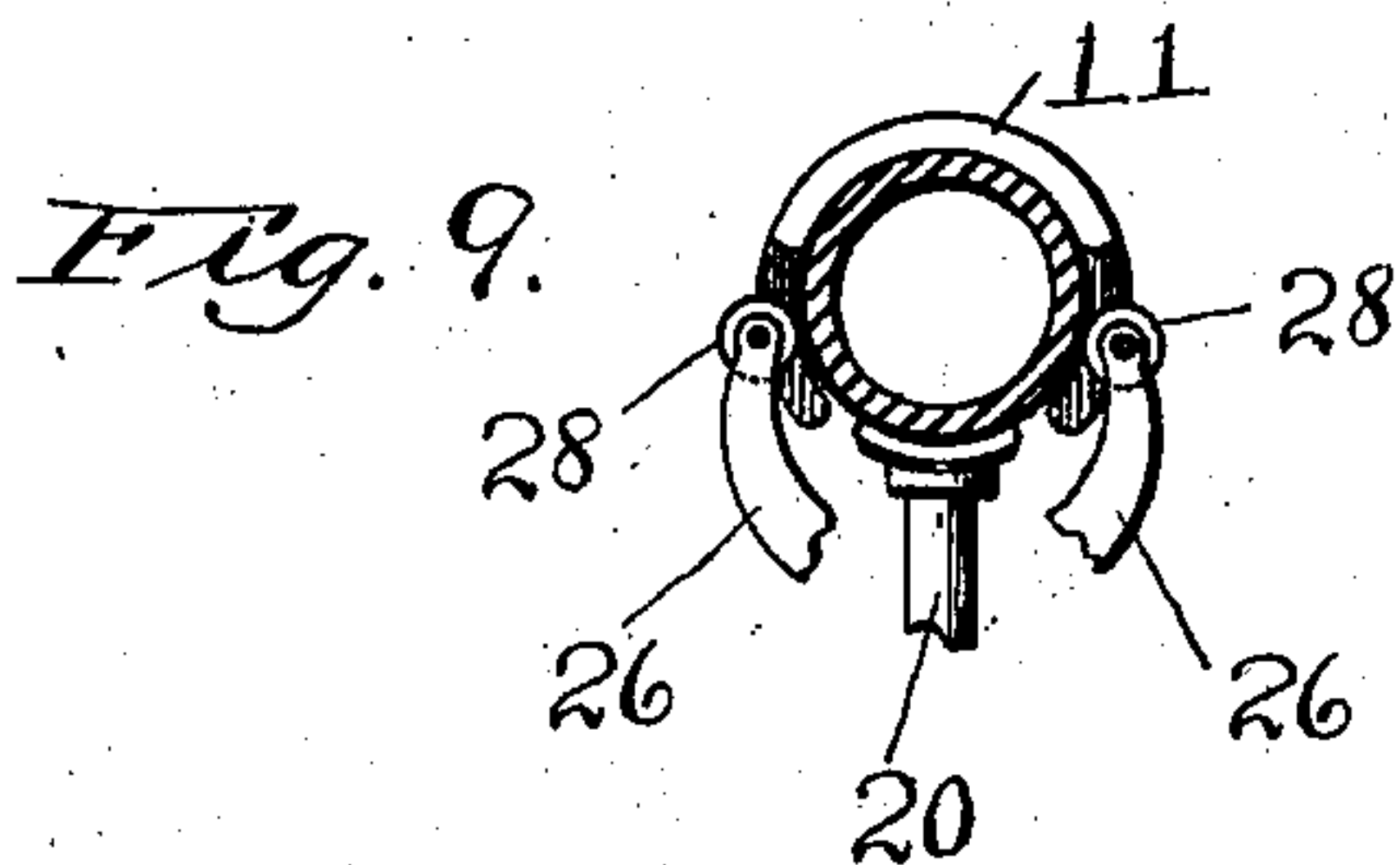
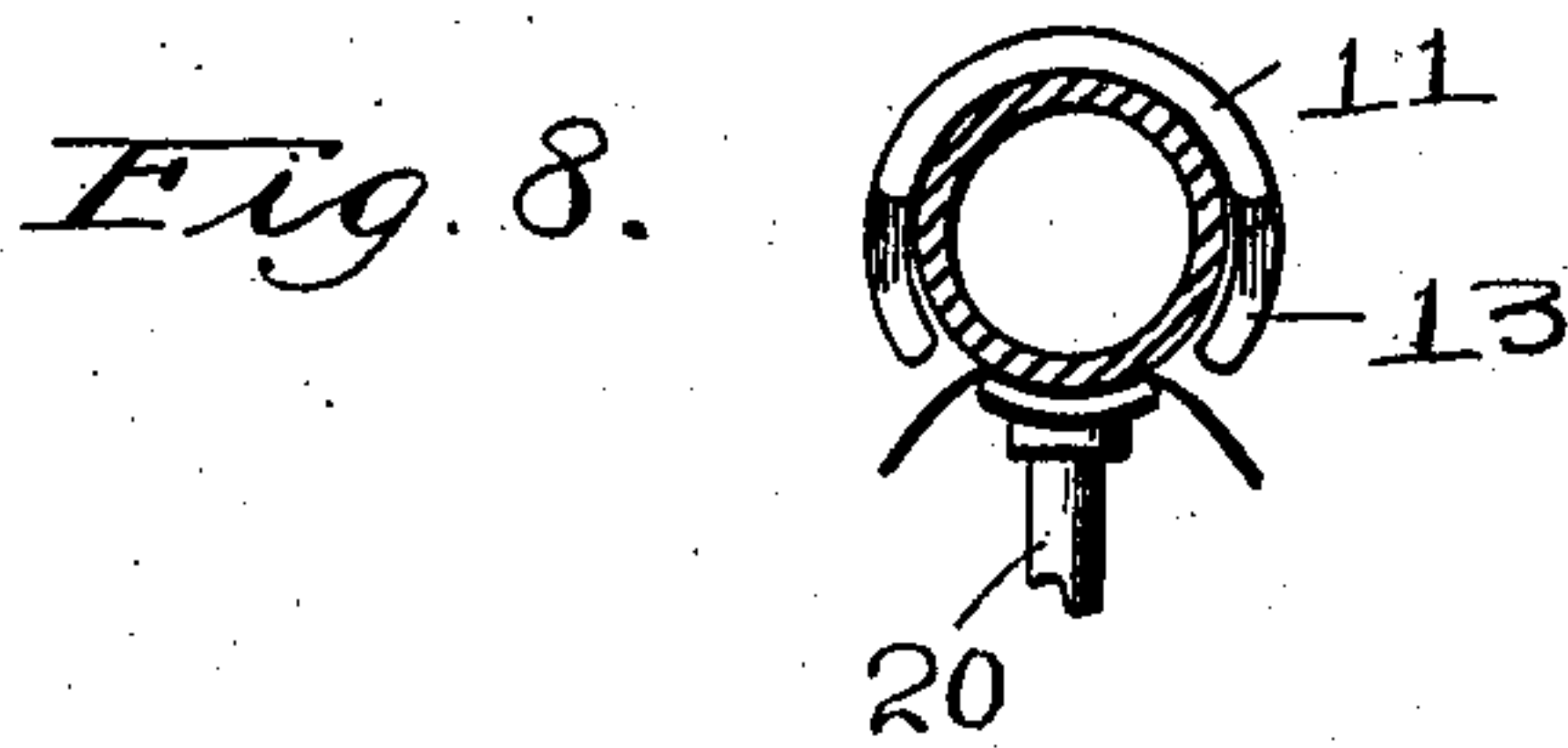
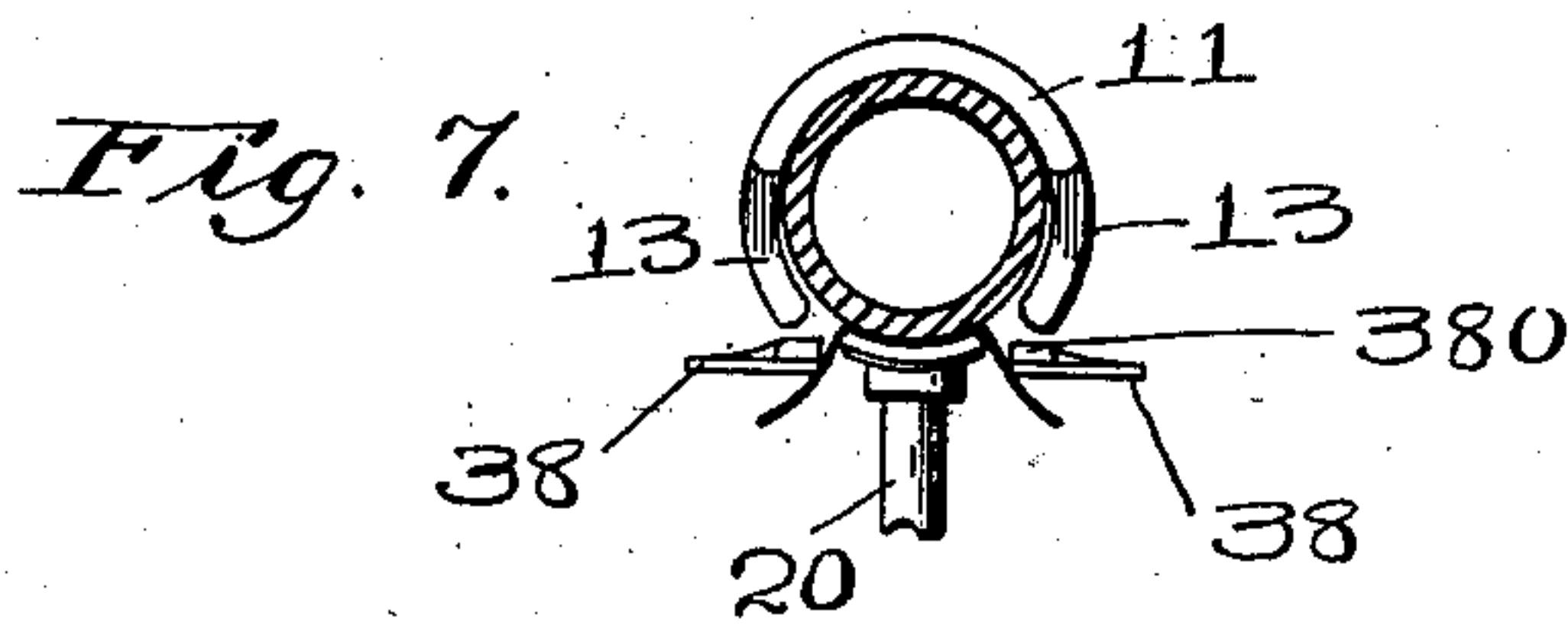
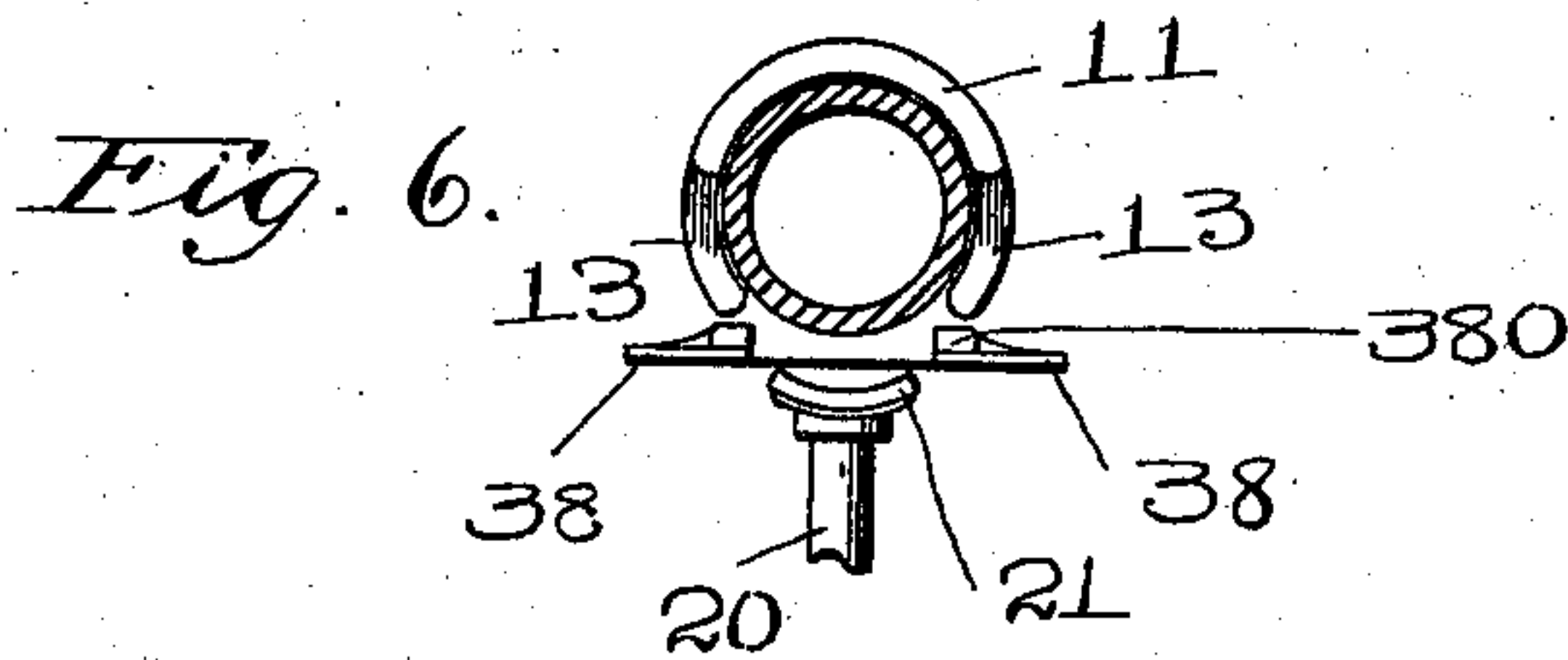
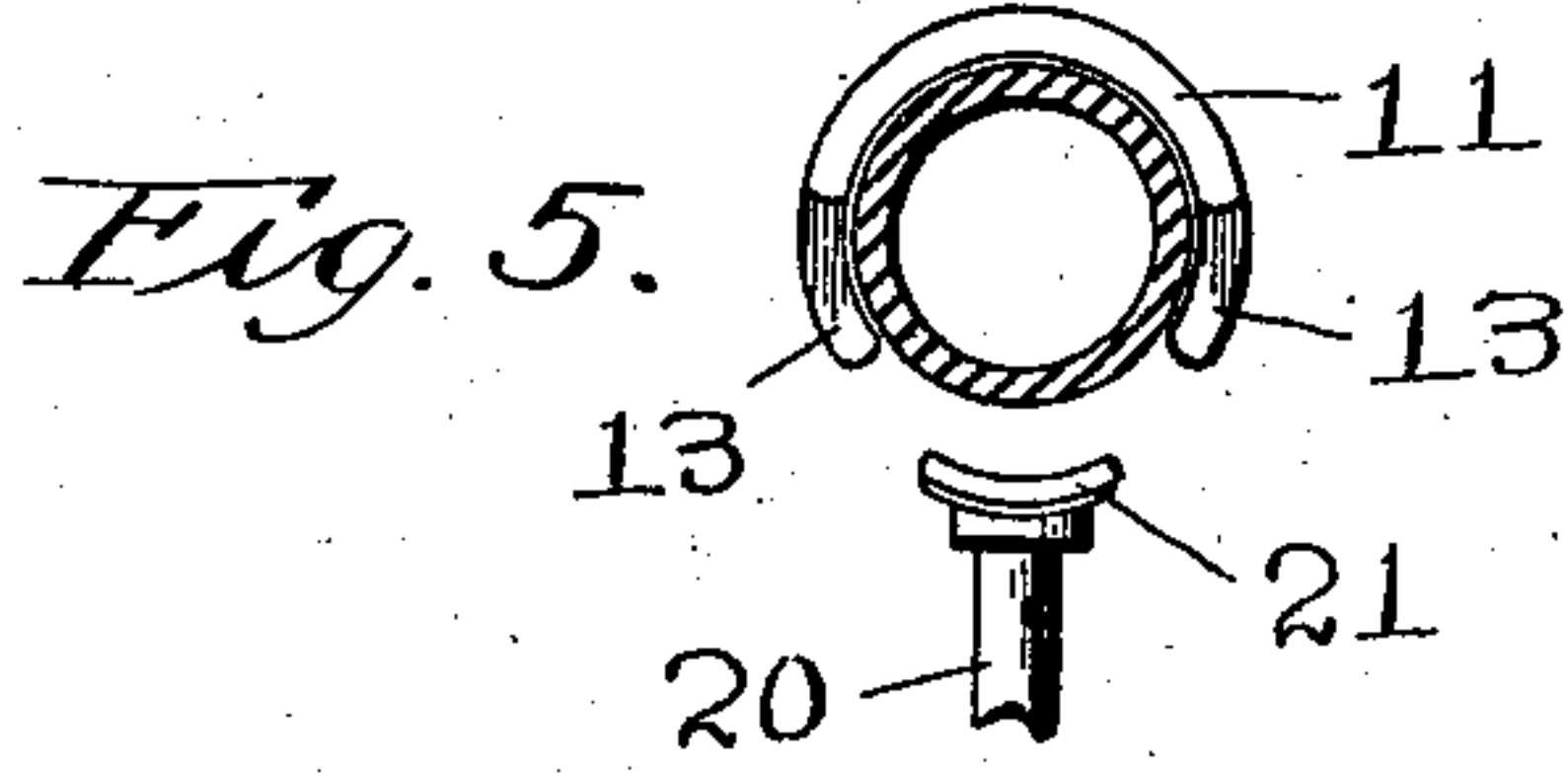
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4 Sheets—Sheet 4.



Witnesses.
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UNITED STATES PATENT OFFICE.

NELSON MUSLAR, OF WORCESTER, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO JULIA E. HACKETT, OF WORCESTER, MASSACHUSETTS.

BOTTLE-LABELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 700,438, dated May 20, 1902.

Application filed October 8, 1900. Serial No. 32,321. (No model.)

To all whom it may concern:

Be it known that I, NELSON MUSLAR, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Bottle-Labeling Machine, of which the following is a specification.

The aim of this invention is to provide a simple device by which labels can be accurately and expeditiously pasted onto bottles or similar articles.

To this end the invention consists of the construction described and claimed in this specification and illustrated in the accompanying four sheets of drawings.

Referring to said drawings, Figure 1 is a front elevation of the machine. Fig. 2 is a side elevation thereof. Fig. 3 is a plan view. Fig. 4 is a detail view, on an enlarged scale, of a locking-catch; and Figs. 5 to 9, inclusive, are fragmentary views illustrating the operation of the device.

A bottle-labeling machine constructed to embody my improvements consists of a bottle-clamping mechanism into which the bottle is inserted, a label gumming and picking-up device which will gum the label and pick the same up and carry it in position under the bottle; and connections so that the bottle-clamping device will then clamp the bottle on the middle line of the label, so that the label-gumming device can then withdraw axially of the bottle. As the label-gumming device withdraws the fingers thereof move over a paste-fountain, and then the whole device swings back to its normal position over the box containing the supply of labels. As this action takes place a wiping device will securely press the gummed label onto the bottle. In this way the device can be rapidly operated.

The details are as follows:

A designates a suitable base-piece or frame, secured on the top of which is a bracket B. Secured on top of the bracket B and extending therefrom is a supplemental curved bracket B'. Extending down from this bracket is a bolt 10, on which is loosely mounted a partial semicylindrical jaw 11, which forms the top member of the bottle-clamping mechanism. The jaw 11 is loosely mounted on the bolt 10,

and a small spring is preferably inserted between the curved bracket B' and said jaw. This arrangement is used to provide a slight lost motion, so that the clamping-jaw will yield to various sizes and shapes of bottles. The inner end of the jaw 11 is provided with extending partial circular arms 13 to firmly bite the rear end of the bottle, and the inner part of the jaw 11 is made solid to limit the distance to which the bottle can be inserted into the clamping mechanism.

Arranged on top of the bracket B is a paste-fountain C, which has two rollers 15, journaled on a shaft 16, and a stop 14 to limit the motion of the label-carrying fingers, hereinafter mentioned.

Arranged between the top of the bracket B and bosses formed in the top of the base A are two shafts or guides 17, fitting on which is a sliding carrier D. This carrier has an extending arm d for engaging the short end of a bell-crank lever, hereinafter referred to. Secured to the front of this carrier is a piece 18, which has a cylindrical shank 19, loosely fitting in which is a shaft 20, which carries at its upper end the other member 21 of the clamping mechanism. This clamping member or jaw 21 is made in the form of a straight piece shaped to bear on the bottle on a line parallel to the axis thereof. A spring 22 is arranged below the shaft 20, and a screw 23 is tapped into said shaft and passes through a slot cut in the shank 19. By this arrangement the clamping member 21 will be kept in proper position and will be capable of a spring-controlled lost motion relatively to the movement of the carrier D.

Formed on the top of the carrier D are lugs 24, in which are mounted shafts 25. Journaled on the shafts 25 are curved pronged levers 26, each of which carries a shaft or pin 27 in the end of its prongs, on each of which pins 27 is journaled a wiping-roller 28. The lower ends of the levers 26 are extended down, and arranged between the same and a boss 29 on the carrier D are springs 30, which tend to normally force the wiping-rollers 28 together.

Journaled in a bearing 31, formed in the upper part of the framing A, is a shaft 32, mounted on which is a bracket 33. The top

of this bracket 33 is made in the form of an inverted T, so as to form a guide 34. Fitting on this guide 34 is a sliding piece 35, having lugs 36 extending up from the same and in which lugs is journaled a shaft or pin 37. Fitted on this shaft are the label gumming and lifting fingers 38 38. These label-carrying fingers 38 have cams 38^o for a purpose hereinafter described. Also secured to said shaft 37 is a handle 39, which is extended upwardly and outwardly, so as to pass over the top of the clamping mechanism, as shown. A spring 40 is arranged between a lug 41 on the sliding piece 35 and said handle 39, so as to keep the fingers 38 38 normally in raised position, the handle 39 being provided with a stop 42 to limit this movement.

The labels are arranged in a box 43, which is secured to the end of a bracket 44, secured to the side of the bracket B. The label-box is provided with a stop 45, so that the label-fingers will accurately come over the box. The parts on the shaft 32 are kept normally in position to have the label-fingers over the label-box by means of a spring 46, which is arranged between a pin 47, projecting from the lower end of said shaft 32, and the side of the framing A.

The connections for operating the parts are as follows: A treadle 48 is arranged on a shaft 49, secured in the framing A. The treadle connects by link 50 to a pivoted lever 51, the end of which fits into a yoke-rod 52, which connects to the carrier D. A spring 53 is used to keep the treadle in raised position. A bell-crank lever 54 is mounted on a pivot 55, arranged in lugs extending from a casting or bracket secured on the shaft 32. The upper end of the bell-crank lever 54 engages a pin 56, projecting from the sliding frame 35. A spring 57 is arranged between the lower end of the bell-crank lever and the bracket 33, so to keep the label gumming and carrying fingers normally in their forward position. A pivoted catch 58 is arranged in lugs projecting from the face of the bracket B. This catch is provided with a projecting arm 59, which strikes on the bracket to limit the motion of said catch, and a pulling-spring 60 is arranged to keep said catch in position with the arm 59 striking on the bracket. It will thus be seen that the rear edge of the catch 58, as shown in Fig. 2, is free to move toward the bracket, but that motion in the opposite direction is restrained by said arm 59. The catch thereby forms a sort of a locking-pawl, and the same is placed in such position that the short end of the bell-crank lever 54 will swing in behind and catch on the same as the bracket 33 is swung in position to bring the label-carrying fingers under the bottle. The said catch 58 is also provided with a projection 61, as shown in Fig. 4, so that the end of the bell-crank lever will have to move some distance over the top of the same when released before it can move down again, thus insuring the swinging outwardly of the label-

fingers before they move forwardly, thereby surely clearing the label-fingers from the paste-fountain.

The operation with this construction is as follows: The operator places a bottle in the clamping mechanism and holds the same in the jaw 11 with his left hand, as indicated in Fig. 5. With his right hand he forcibly presses down on the lever 39. This will force the freshly-gummed label-carrying fingers down into the label-box 43, so that the top label will be gummed and picked up by said fingers. The operator then pulls on the handle 39 to bring the same over and in line with the bottle, necessarily having to raise the handle slightly to allow the label-carrying fingers to come up over the top of the box. This will cause the top label to be picked up and will prevent any sliding or scuffling motion of the fingers over the pile of labels in the box. The label-carrying fingers by this last motion of the handle 39 will bring the label in position under the bottle. The cams 38^o on the label-carrying fingers will slightly raise the bottle in the clamping mechanism if the operator is not holding the bottle up against the top jaw thereof, as he should, so that the label will not strike the under surface of the bottle. The label-carrying fingers are locked in this position by the catch 58, before described, thus bringing the parts to the position indicated in Fig. 6. The operator then presses down with his foot upon the treadle, which raises the carrier D and brings the clamping member 21 up against the bottle between the label-carrying fingers, thus clamping the label along its middle line to the bottle, as shown in Fig. 7. Just as the clamping-jaw engages the bottle the arms *d* on the carrier D engage the short end of the bell-crank lever 54, and thereby the continued upward movement of the carrier D will cause the label-carrying fingers to move parallel with the axis of the bottle, so as to leave the label tightly clamped between the bottle and the jaw 21, as indicated in Fig. 8. As the label-carrying fingers move in this direction they will pass over the paste-fountain and will receive a fresh charge of gum or paste for the next operation. The continued upward movement of the carrier will lift the short end of the bell-crank lever 54 over the top of the catch 58, and this will allow the label-carrying fingers to swing sideways and then to move outwardly to their normal position over the label-box. The continued upward movement of the carrier will also move the wiping-rollers 28 against the free sides of the label and will accurately and nicely wipe and press the label onto the bottle, as indicated in Fig. 9. The operator then releases the treadle, which releases the bottle and passes it on, thus leaving his left hand free for inserting the next bottle and bringing his right hand out over the handle 39, which is then in its normal position. In this manner labels can be very accurately and rapidly applied to bottles or similar objects.

The details and arrangements herein described may be greatly varied by a skilled mechanic without departing from the scope of the invention as expressed in the claims.

5 Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a labeling-machine, the combination of bottle-clamping mechanism, label gumming
10 and picking-up fingers, and means for operating said fingers to move transversely with respect to the position of a bottle, to bring a label into place, and for withdrawing said fingers axially with respect to the bottle while
15 the clamping mechanism acts to hold the label in place.

2. In a labeling-machine, the combination of the jaw forming the top member of the clamping mechanism, the sliding carrier carrying the lower member of the clamping mechanism, and wiping-rollers, the said lower member of the clamping mechanism being arranged to have a lost motion relatively to the carrier, and label-picking-up fingers mounted
25 to turn on an axis and to slide axially of the bottle, substantially as described.

3. In a labeling-machine, the combination of the upper jaw of the clamping mechanism, a carrier carrying the lower jaw of the clamping mechanism, and wiping-rollers, a pivoted
30 bracket, a sliding piece arranged on the pivoted bracket, and label-picking-up fingers carried by the sliding piece, substantially as described.

4. In a labeling-machine, the combination of the clamping mechanism, the wiping-rollers, the pivoted bracket 34, the sliding piece 35 fitted thereon, the label-picking-up fingers 38 38 pivoted thereto, and the handle 39 for
40 operating said fingers, substantially as described.

5. In a labeling-machine, the combination of the clamping mechanism, the wiping-rollers, the pivoted bracket 34, the sliding piece 35 fitted thereon, the label-picking-up fingers 38 38 pivoted to said sliding piece, the handle 39 for operating said fingers, and a spring 40 for holding said handle and fingers in normal position, substantially as described.

6. In a labeling-machine, the combination of the bottle-clamping mechanism, the wiping-rollers, the pivoted bracket 34, the sliding piece 35 thereon carrying the label-picking-up fingers 38 38, the locking device for
55 locking the fingers in position relatively to the bottle, and connections so that the fingers will withdraw axially of the bottle, substantially as described.

7. In a labeling-machine, the combination of the bottle-clamping mechanism, the label-box arranged at one side thereof, the label-carrying fingers, a paste-fountain, and connections so that the label-carrying fingers can be operated to take a label from the label-box, bring the same in position relatively to the bottle, so that the clamping mechanism will then clamp the label intermediate of the fin-

gers, and so that the fingers can then be withdrawn axially of the bottle, substantially as described.

8. In a labeling-machine, the combination of the clamping mechanism, the pivoted bracket 34, the piece 35 fitted to slide thereon, and carrying the label-picking-up fingers 38 38, a spring-pulled lever 54 for holding the label-fingers in their normal position, and a catch for engaging the lower end of said lever to lock said label-fingers in proper position relatively to the bottle, and to hold them so that they will withdraw axially of the bottle, substantially as described.

9. In a labeling-machine, the combination of the bottle-clamping mechanism, the pivoted bracket 34 carrying the sliding piece 35 having the label-picking-up fingers 38 38, the spring 46 for turning the bracket 34 to normal position, the spring-pressed bell-crank lever 54 for holding the label-fingers in their forward position, and the pivoted catch 58 arranged to lock the label-carrying fingers so that the same will withdraw axially of the bottle, substantially as described.

10. In a labeling-machine, the combination of the bottle-clamping mechanism, the pivoted bracket 34 carrying the sliding piece 35 having the label-picking-up fingers 38 38, the spring 46 for turning the bracket 34 to normal position, the spring-pressed bell-crank lever 54 for holding the label-fingers in their forward position, and the pivoted catch 58 having the extension 61 arranged to lock the label-carrying fingers in position relatively to the bottle, so that they will be constrained to withdraw axially thereof, the extension 61 preventing the forward movement of the sliding piece 35 until the fingers have swung to one side, substantially as described.

11. In a labeling-machine, the combination of the upper jaw of the clamping mechanism, the carrier carrying the lower jaw of the clamping mechanism, connections for raising and lowering the carrier, the pivoted bracket 34, the piece 35 fitted to slide thereon, and carrying the label-carrying fingers 38 38, a catch arranged to hold the label-fingers in proper position relatively to the bottle, and an extension *d* from the carrier arranged to withdraw the fingers axially of the bottle, substantially as described.

12. In a bottle-labeling machine, the combination of the upper jaw of the clamping mechanism, the sliding carrier carrying the lower jaw thereof, connections for raising and lowering the carrier, the spring-controlled pivoted bracket 34, the sliding piece 35 fitted thereon and carrying the label-carrying fingers 38 38, a spring-actuated bell-crank lever 54 for holding the sliding piece in its forward position, the pivoted catch 58 for engaging the lower end of the bell-crank lever and locking the label-carrying fingers in proper position relatively to the bottle, and an extension *d* for engaging the lower end of the bell-crank lever, lifting the same up to withdraw the la-

bel-carrying fingers axially of the bottle, and to lift the said bell-crank lever clear of the catch 58, whereby the bracket 34 and sliding piece 35 can turn to normal position, substantially as described.

13. In a bottle-labeling machine, the combination of the bottle-clamping mechanism, the label-carrying fingers 38 38 for bringing a label in proper position, and cams 38⁰ 38⁰ on
10 said label-carrying fingers for preventing the

bottle from striking the label, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

NELSON MUSLAR.

Witnesses:

LOUIS W. SOUTHGATE,
M. E. REGAN.