

No. 813,162.

PATENTED FEB. 20, 1906.

J. A. MILLIKEN.  
NAIL AND RIVET DELIVERING MACHINE.

APPLICATION FILED APR. 23, 1904.

3 SHEETS—SHEET 1.

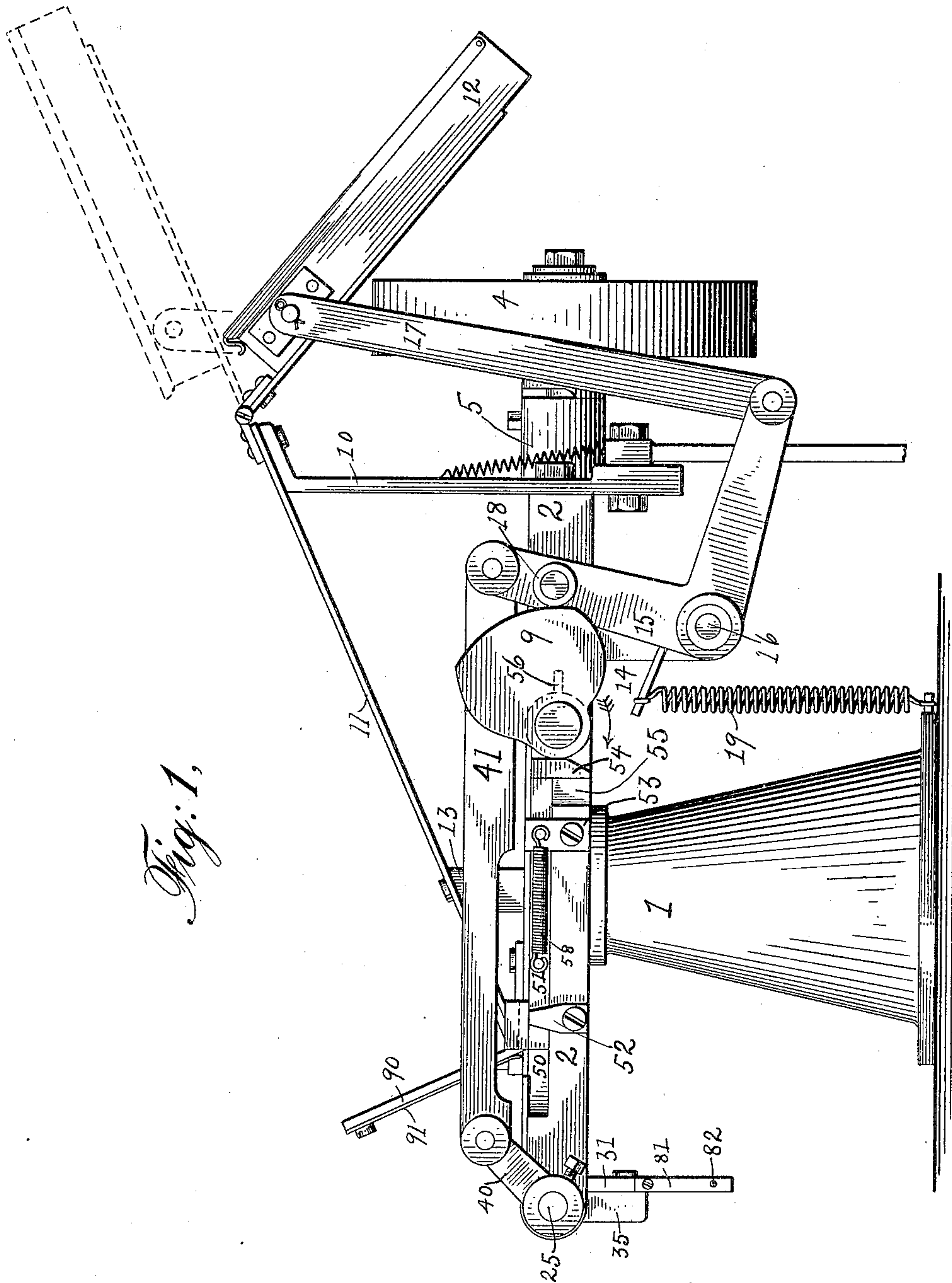


Fig. 1,

Witnesses  
Max B. A. Doring.  
Frank H. Wimmel.

John A. Milliken  
Inventor

By his Attorney  
Robt. B. Kilgore.

No. 813,162.

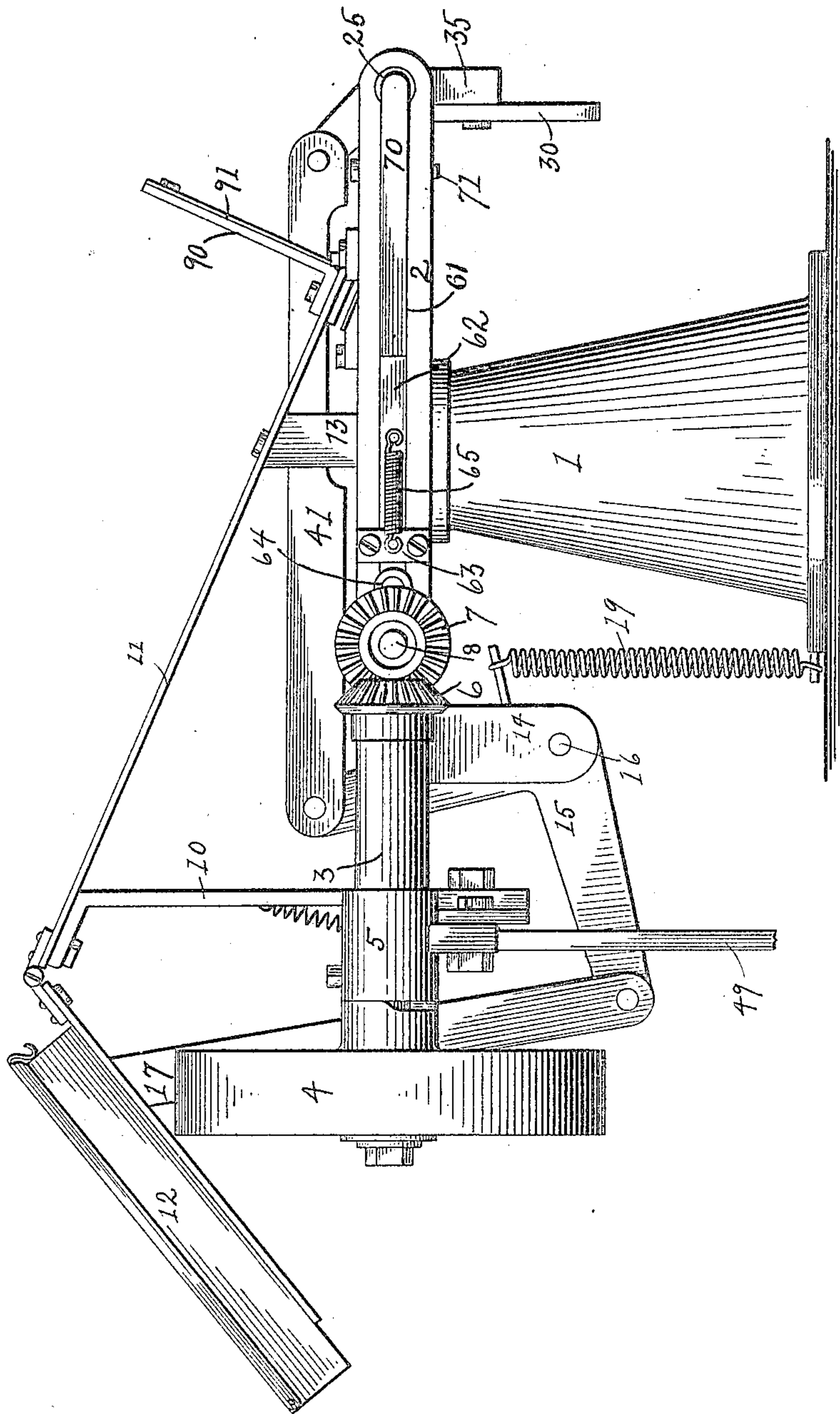
PATENTED FEB. 20, 1906.

J. A. MILLIKEN.  
NAIL AND RIVET DELIVERING MACHINE.

APPLICATION FILED APR. 23, 1904.

3 SHEETS—SHEET 2.

*Fig. 2.*



Witnesses  
Max B. A. Doring.  
Frank W. Wimmel.

John A. Milliken  
Inventor

By his Attorney  
Robt. B. Killgore.



No. 813,162.

PATENTED FEB. 20, 1906.

J. A. MILLIKEN.  
NAIL AND RIVET DELIVERING MACHINE.

APPLICATION FILED APR. 23, 1904.

3 SHEETS—SHEET 3.

Fig. 6,

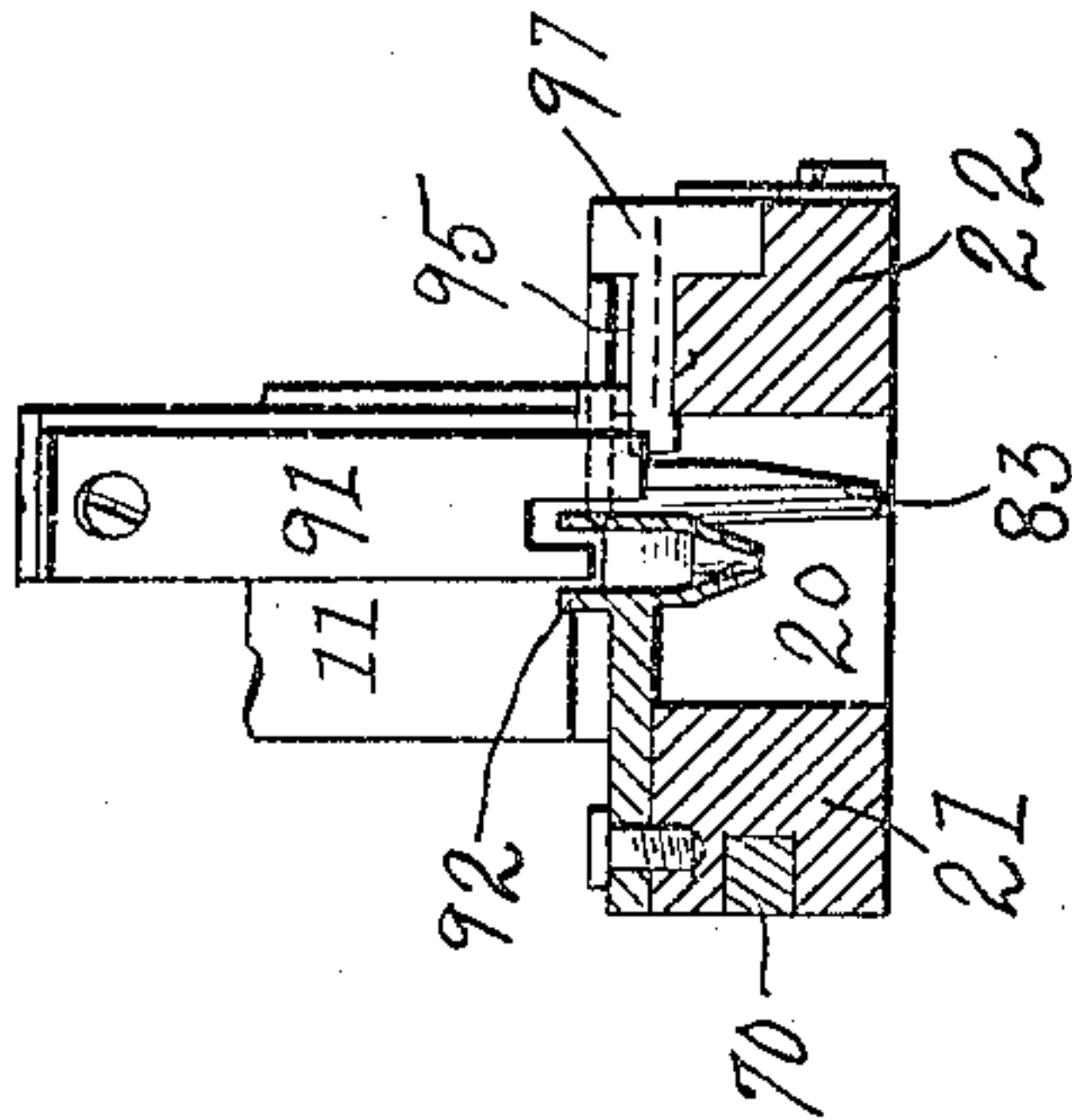


Fig. 5,

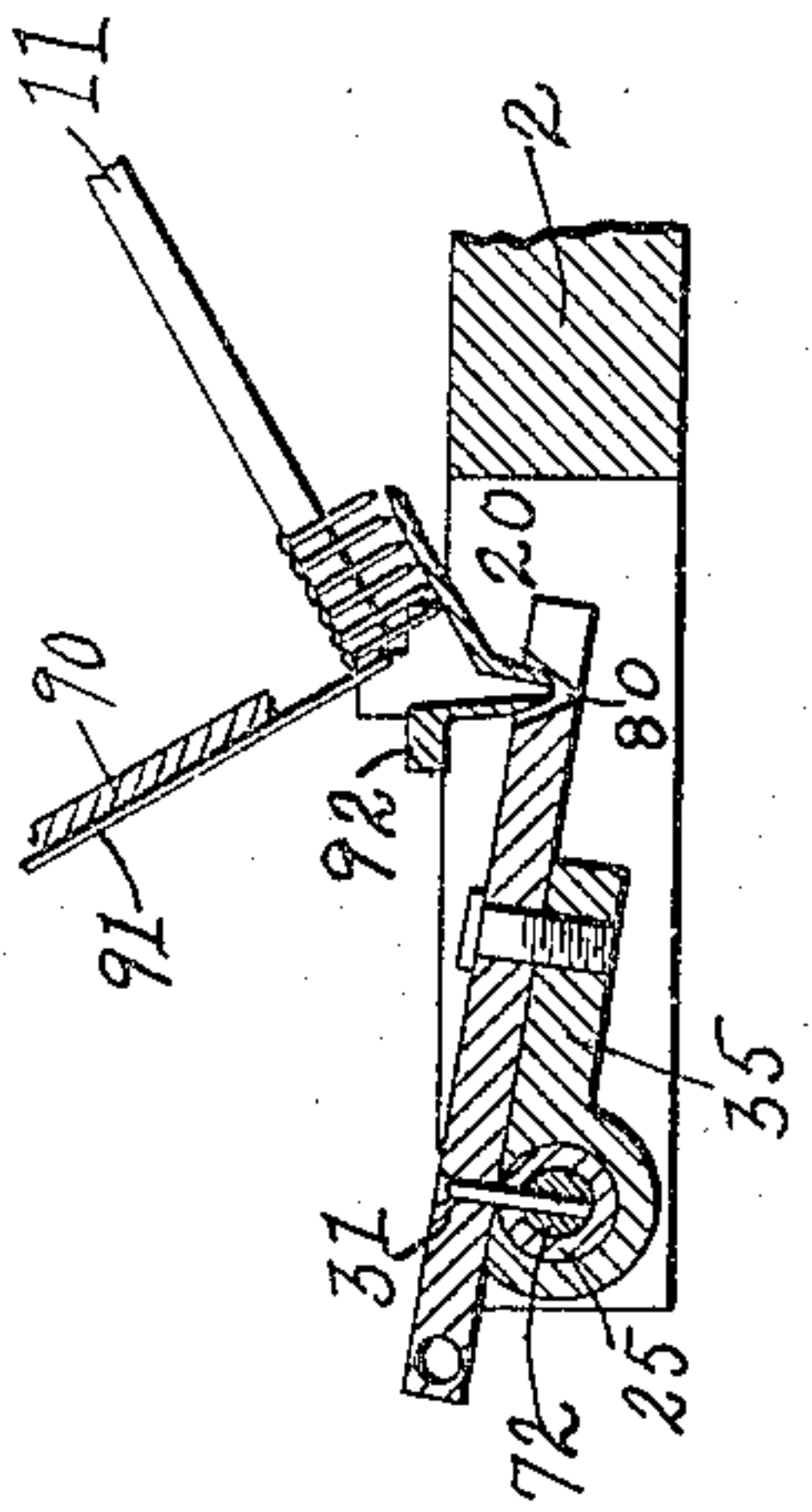
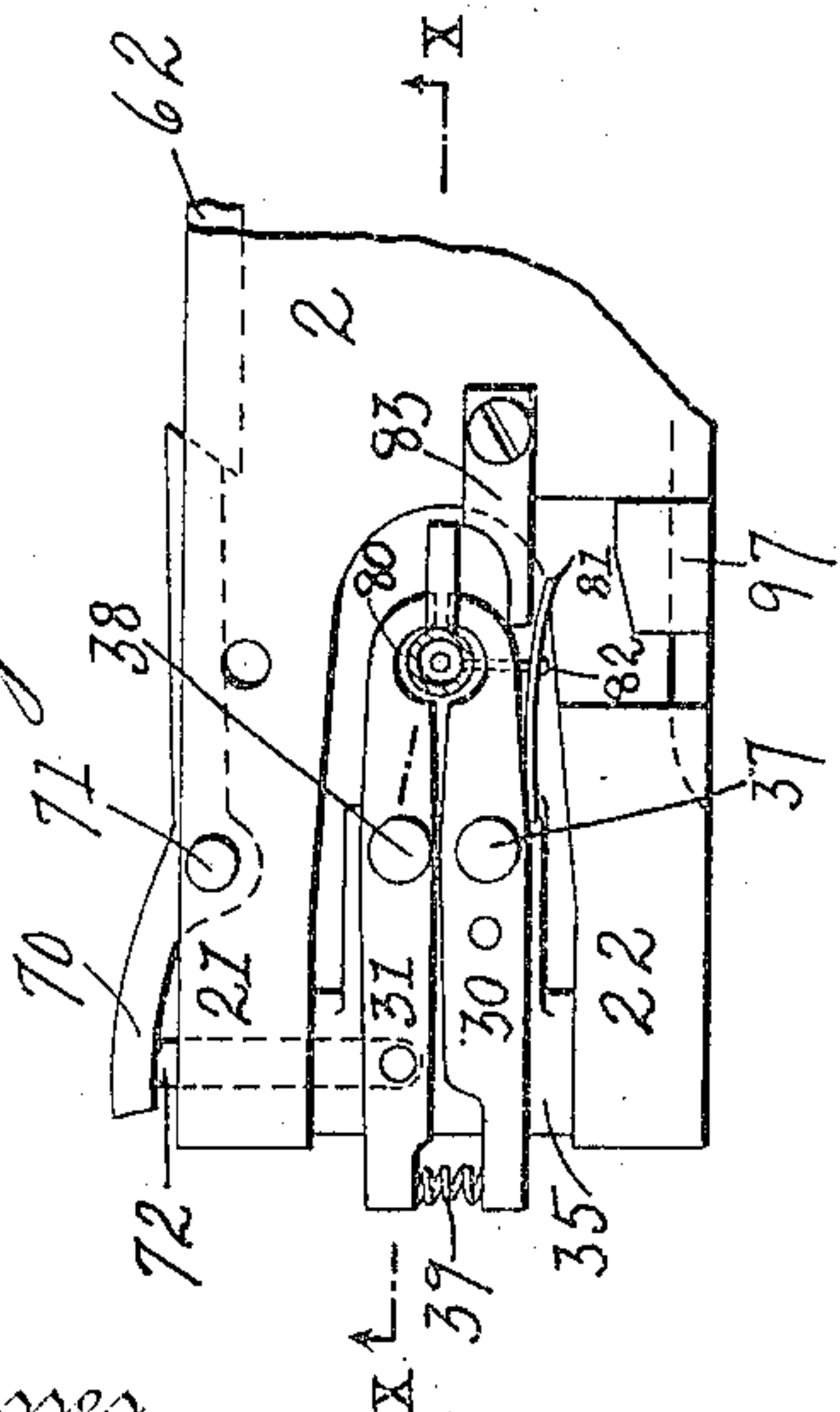
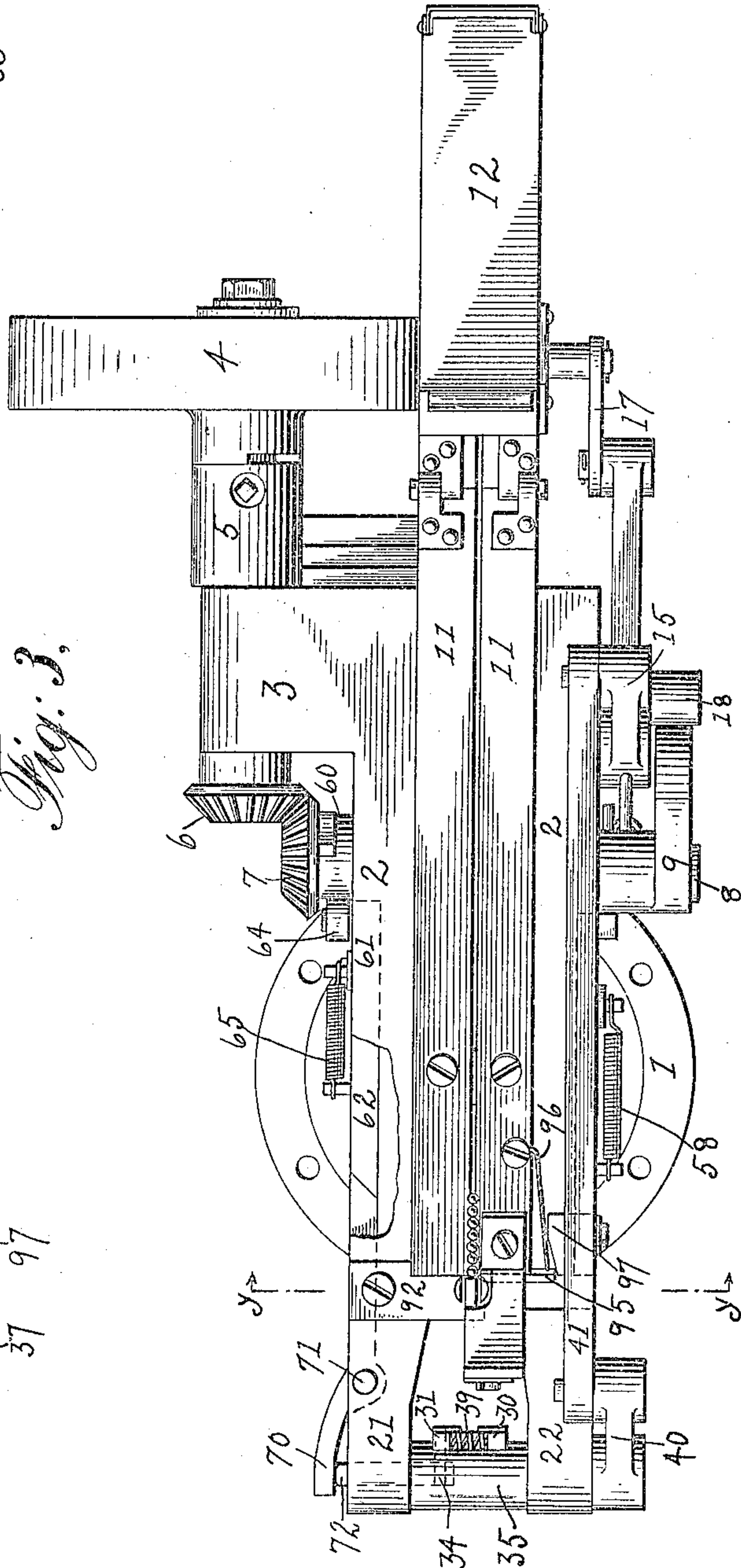


Fig. 4,



Witnesses  
Mar B. A. Doring.  
Frank H. Wimmel.

Fig. 3,



John A. Milliken  
Inventor

By his Attorney  
Robt B Killgore.



# UNITED STATES PATENT OFFICE.

JOHN A. MILLIKEN, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE SCHEUER FACTORY, A CORPORATION OF NEW YORK.

## NAIL AND RIVET DELIVERING MACHINE.

No. 813,162.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed April 23, 1904. Serial No. 204,567.

*To all whom it may concern:*

Be it known that I, JOHN A. MILLIKEN, a citizen of the United States, residing in the borough of Brooklyn, city of New York, county of Kings, and State of New York, have invented a new and useful Nail and Rivet Delivering Machine, of which the following is a specification.

My invention relates to machines for delivering nails, rivets, &c., to a fixed point, where they will be retained until the operator has inserted them in their proper place in the article to be secured, when they are released, and the particular machine shown in the accompanying drawings and described herein is adapted to the needs of purse and bag makers.

In the drawings similar reference characters relate to similar parts throughout the several views.

Figure 1 is a side view of a machine embodying my invention. Fig. 2 is a view of the opposite side. Fig. 3 is a top view. Fig. 4 is a detail view of the jaws in open position. Fig. 5 is a sectional view on the line  $x x$  of Fig. 4. Fig. 6 is a sectional view on the line  $y y$  of Fig. 3.

The machine proper is mounted on a standard 1, which is flanged at the bottom to permit its being fastened to the floor or table. A platform 2 is secured to the top of the standard 1. This platform 2 has an extension 3, which affords a bearing for the driving-shaft. A pulley 4 is secured to the outer end of the shaft, and a clutch 5 is provided of the ordinary type permitting one full revolution of the shaft with the driving-pulley and then automatically releasing it, permitting the pulley to run free. A bevel-gear 6 on the opposite end of the driving-shaft meshes with the bevel-gear 7 on the end of a driven shaft 8, extending through the platform 2 at right angles to the axis of the driving-shaft. A cam 9 is mounted on the other end of the shaft 8. Uprights 10 and 13 on the platform carry an inclined slotted chute or guide 11, which has a suitable hopper 12 hinged at the upper end thereof.

A depending lug 14 carries the bell-crank 15, which is pivoted at 16. A connecting-rod 17 is secured at one end to the hopper and at the other to the horizontal arm of the bell-crank. The vertical arm is provided

with the friction-roller 18, which is held against the cam 9 by the spring 19.

The front end of the platform 2 is cut out at 20, leaving the horns 21 and 22 on either side thereof. A rock-shaft 25 is carried in bearings in these horns and has the lug 35 secured thereon between the horns, the lug 35, carrying the clamp-jaws 30 and 31, constituting the holder for the nails or rivets. A crank 40 is secured to the shaft 25 on the outside of the horn 22 and is connected to the vertical arm of the bell-crank 15 by the rod 41.

The side edge of the platform 2 is grooved at 50, Fig. 1, and the slide-block 51 works therein, being held in place by the plates 52 and 53. This slide-block 51 is provided with a depending lug having a beveled face 54 on the rear side thereof, which works in the recess 55 in the platform 2. A pin 56 is mounted on a collar on the shaft 8, and the slide-block 51 is normally held against this collar by the spring 58.

A cam 60 is mounted on the shaft 8 between the bevel-gear 7 and the platform 2. In the other edge of the platform 2 another channel 61, Fig. 2, is cut having the slide-block 62 therein. This slide-block is beveled at the front end and is held in place by the plate 63. A friction-roller 64 on the rear end of the slide-block 62 bears against the cam 60, the pressure being maintained by the spring 65. A finger-piece 70 is pivoted in the channel 61 at 71, the rear end being beveled and meeting the beveled end of the slide-block 62. The outer end of the finger 70 bears against a pin 72, which extends through the shaft 25 and bears against a lug 34 on the jaw 31. This jaw-lug 34 extends through openings in the side of the lug 35 and shaft 25.

The nail or rivet holder is composed of two jaws 30 and 31, which are pivoted to the lug 35 at 37 and 38 and which are normally held together at their lower ends by the spring 39. These jaws 30 and 31 have the tapered nicks 80 in their lower meeting faces. A spring 81 on the side of the jaw 30 normally holds a pin 82 across the wide rear part of the notches 80. This pin, which extends through a hole in the jaw and is secured to the spring, is retracted or withdrawn on the upward movement of the jaws 30 and 31 by the



wedge 83, which is secured to the platform 2 and which passes between the jaw 30 and the spring 37, thereby forcing them apart and carrying the pin 82 out of the notches.

5 The bottom of the slotted chute 11 is provided with an upright 90, carrying a spring-plate 91, which is fixed at its upper end and whose lower end normally closes the end of the chute-slot, but is adapted to move forward  
10 to permit the passage of the nails or rivets. A small block 92, having a funnel-shaped opening therein, is secured to the platform, with the opening at the foot of the chute-slot, the small outlet end alining with the nicks 80  
15 in the inner faces of the jaws 30 and 31 when raised, as shown in Fig. 5.

A small chisel-pointed pin 95 is inserted through a hole adjacent to the end of the chute-slot 11. This pin is normally held out  
20 of the slot by the spring 96, but engages the bevel cheek-piece 97 and the slide-block 51 on its forward movement. The bottom part of this cheek-piece 97 is adapted to engage the bottom of the spring-plate 91 on the  
25 continued forward movement of the slide-block 51.

Having thus described the construction of the machine, I will proceed to explain its operation. The hopper 12 is filled with nails  
30 or rivets and power is applied to the driving-pulley 4. On throwing the clutch 5 into operation (preferably by means of a treadle connected with the rod 49) the shaft and pulley rotate together, the gears 6 and 7 transmitting motion to the shaft 8, cams 9, 60, and 56.  
35 The cam 60 pushes the slide-block 62 forward, the beveled end wedging behind the beveled end of the finger 70, thereby pushing the pin 72 against the lug on the jaw 31 and moving  
40 its lower end away from the lower end of the jaw 30 against the action of the spring 39. On the continued motion of the pulley and shaft the cam 9 engages the roller 18 on the bell-crank 15, throwing the hopper 12 in the  
45 position shown in dotted lines in Fig. 1. The nails or rivets will now feed down the chute 11, the points falling through the slot and the heads remaining above the chute, as shown in Fig. 5, the spring-plate 91 closing the end  
50 of the slot and holding back the line of rivets. The connecting-rod 41, acting on the crank 40, turns the jaws 30 and 31 into a horizontal position, with the nicks 80 directly under the funnel 92 on the platform, as shown in Fig. 5,  
55 the wedge 83 drawing the pin 82 out of the nicks 80. On the continued movement of the driving-shaft the pin-cam 56 bears on the beveled face of the block 54, pushing the slide-block 51 forward, the bottom of the  
60 cheek-piece 97 striking the bottom of the spring-plate 91, pushing it forward, the pin 95 being pushed across the slot in the chute 11 behind the first rivet, holding back the others in the chute, while the first one is free  
65 to pass into the funnel in the block 92, thence

into the nicks 80 in the open jaws 30 and 31. The pin-cam 56 then clears the face of the block 54, and the slide-block 51 is returned to its initial position by the spring 58, the  
70 spring-plate 91 again closing the end of the slot in the chute 11, the pin 95 being retracted by the spring 96. The slide-block 62 then begins its return movement, permitting the finger 70 to move out, relieving the pressure on the pin 72, the jaws 30 and 31 coming  
75 together on the shank of the nail or rivet under the action of the spring 39. The cam 9 now moves the bell-crank 15, lowering the hopper and returning the holder to its original position, the pin 95 returning to its initial  
80 location, but behind the head of the nail or rivet. These operations take place in the order described on one full revolution of the driving-shaft. The clutch now disengages the pulley, and the latter runs free until an-  
85 other rivet is desired, when the operation of the clutch starts the machine, releases the rivet in the jaws, and repeats the operation just described.

This machine is especially useful to purse  
90 and bag makers, as it enables the rivets to be speedily applied to the frames and leaves both of the workman's hands free to hold the parts together and push the rivets into position. The metal frames of purses are usually made  
95 with the rivet-holes punched therein, the purse material and lining being placed between the inner and outer frames and the whole riveted together. Pointed rivets are used, so they can be forced through the purse  
100 material, the points being afterward cut off and the riveting done in the usual manner. Heretofore these pointed rivets have been held in a pair of pliers and then inserted. By  
105 the use of my invention the rivets are presented pointed end out at a fixed point, where they are firmly held while being inserted in the purses or bags.

It is obvious that the machine can be used  
110 to deliver nails, rivets, buttons, or similar articles and that it can be combined with machines for performing various other operations.

The word "rivet" in the claims is merely  
115 typical and not limiting, and I include thereunder nails, buttons, or other similar articles.

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

1. In a rivet-delivering machine, the combination of a platform; a feeding device thereon;  
120 a rock-shaft on the platform; holder-jaws on said shaft; means for rocking the shaft to present the holder-jaws to the feeding device and return them to their initial position;  
125 and means for rigidly securing the rivets in the holder-jaws.

2. In a rivet-delivering machine the combination of a platform; a feeding device thereon;  
130 a slide-block on one side thereof; a rock-



shaft on the platform; a driven shaft; cams on said driven shaft; holder-jaws on the rock-shaft; means actuated by one of said cams to oscillate the rock-shaft; means actuated by the other cam acting through the slide-block for opening the holder-jaws; and means for closing the holder-jaws.

3. In a rivet-delivering machine the combination of a platform; a feeding device thereon; slide-blocks on either side thereof; a rock-shaft on the platform; a driven shaft; cams on said shaft for actuating said slide-blocks and rock-shaft; holder-jaws on the rock-shaft; means actuated by one of the slide-blocks for opening the holder-jaws; means actuated by one of the cams to oscillate the rock-shaft and present the holder-jaws to the feeding device; means actuated by the other slide-block for feeding rivets to the open holder-jaws; and means for closing the holder-jaws.

4. In a rivet-delivering machine the combination of a platform; a slide-block on one side thereof; a rock-shaft on the platform; a shaft extending across the platform; cams on said shaft for actuating said slide-block and rock-shaft; holder-jaws on the rock-shaft; means actuated by one of the cams to oscillate said shaft and holder-jaws; and means actuated by the slide-block for feeding a rivet to the holder-jaws.

5. In a rivet-delivering machine the combination of a platform; slide-blocks on either side thereof; a rock-shaft mounted thereon; a driven shaft extending across the platform; cams on said shaft for actuating said slide-blocks and rock-shaft; a feed-chute on the platform; a hopper hinged at the upper end thereof; holder-jaws mounted on the rock-shaft; means actuated by one of the slide-blocks for opening the holder-jaws; means actuated by one of the cams for oscillating the rock-shaft, holder-jaws and hopper; means actuated by the other slide-block for feeding single rivets to the holder-jaws; and means for closing said jaws.

6. In a rivet-delivering machine the combination of a platform, a feeding device thereon; slide-blocks on either side thereof; a rock-shaft on said platform; cams for actuating said slide-blocks and rock-shaft, holder-jaws on the rock-shaft; means actuated by one of the slide-blocks for opening the jaws; means actuated by the other slide-block for feeding a rivet to the holder-jaws; means actuated by one of the cams for oscillating the rock-shaft and presenting the jaws to the feeding device; and means for closing the back of the holder-jaws, substantially as described.

7. A delivering-machine comprising a platform; a feed-chute thereon; slide-blocks on either side thereof; a rock-shaft on the platform; a driven shaft on the platform;

cams on said shaft for actuating said slide-blocks and rock-shaft; holder-jaws on the rock-shaft; means actuated by one of said cams for oscillating said rock-shaft and jaws; a closure device at the lower end of the feed-chute operated by one of the slide-blocks; a finger operated by the other slide-block; means operated by the finger for opening the holder-jaws; and means for closing said jaws.

8. In a rivet-delivering machine the combination of a platform; a feed-chute thereon; slide-blocks on either side thereof; a rock-shaft on the platform; a driven shaft on the platform; cams on said shaft actuating said slide-blocks and rock-shaft; nicked holder-jaws on the rock-shaft; means operated by one of the cams to oscillate the rock-shaft and jaws; a closure device at the lower end of the feed-chute; a cut-off device for holding back the column of rivets in the chute, said closure and cut-off being actuated by one of the slide-blocks; a finger operated by the other slide-block; means operated by said finger for opening said jaws; and means for closing said jaws.

9. In a rivet-delivering machine, the combination of a platform; a feed-chute thereon; slide-blocks on either side thereof; a rock-shaft on the platform; a driven shaft on the platform; cams on said shaft for actuating said slide-blocks and rock-shaft; nicked holder-jaws on the rock-shaft; means operated by one of the cams to oscillate said rock-shaft and jaws; a closure device for the back of the nicked jaws; a spring-actuated closure device at the lower end of the feed-chute; a cut-off device for holding back the column of rivets in the chute; said closure and cut-off being actuated by one of the slide-blocks; means for opening the holder-jaws comprising a finger actuated by the other slide-block and engaging a pin bearing against one of the jaws; and means for closing said jaws.

10. In a holder for delivering-machines, the combination of pivoted jaws having nicks in their meeting faces; means for closing the back of said nicks; and means for removing said closing device when the jaws are in open position.

11. A holder for delivering-machines comprising a rock-shaft; two nicked jaws mounted thereon; a spring normally holding said jaws together; a spring on one jaw; a pin co-operating therewith; and extending across the back of the nicks; and means operating on the spring to withdraw the pin when the jaws are in open position.

In testimony whereof I have signed my name in the presence of two subscribing witnesses.

JOHN A. MILLIKEN.

Witnesses:

ROBT. B. KILLGORE,  
ROBT. B. KNOWLES.