

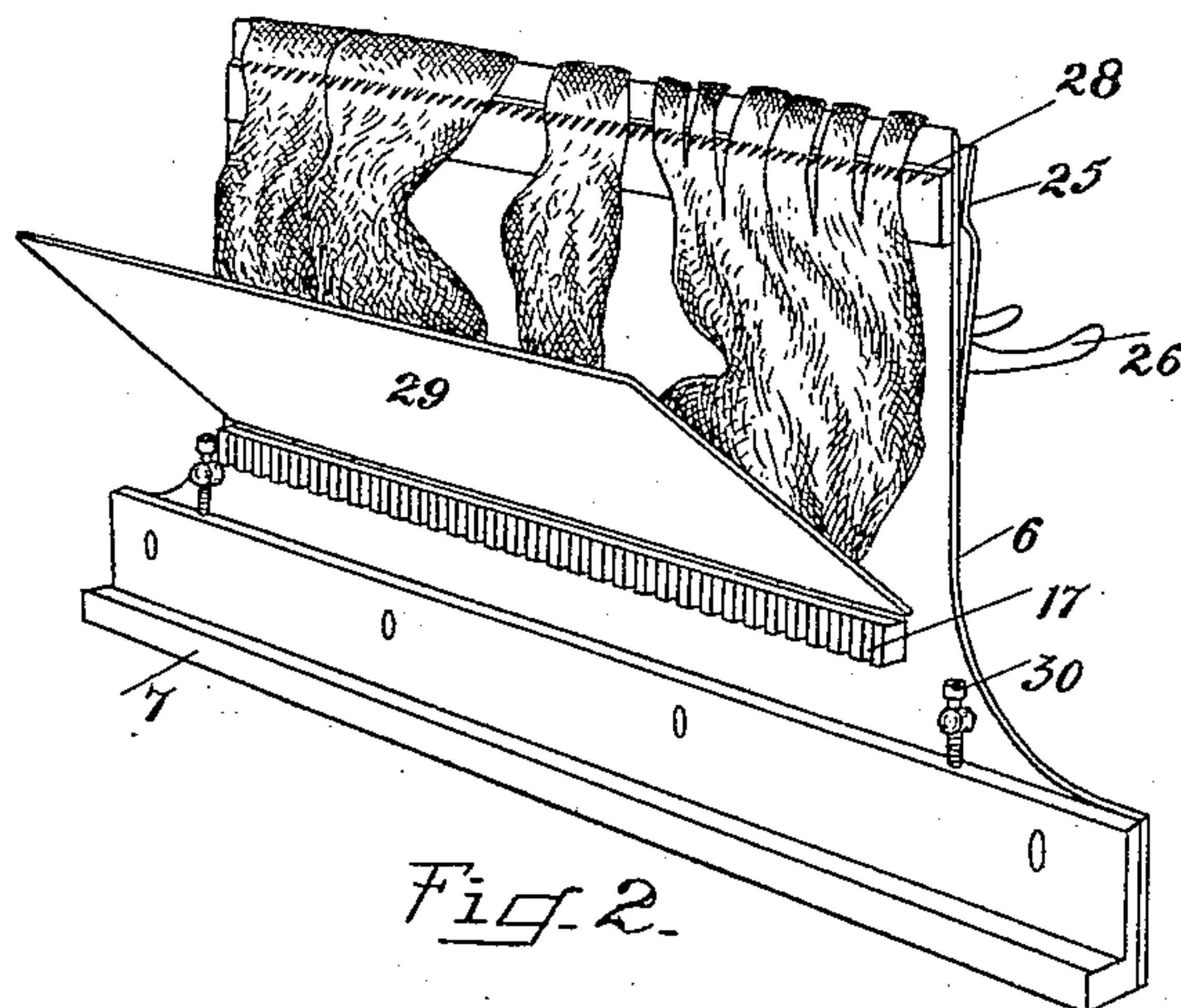
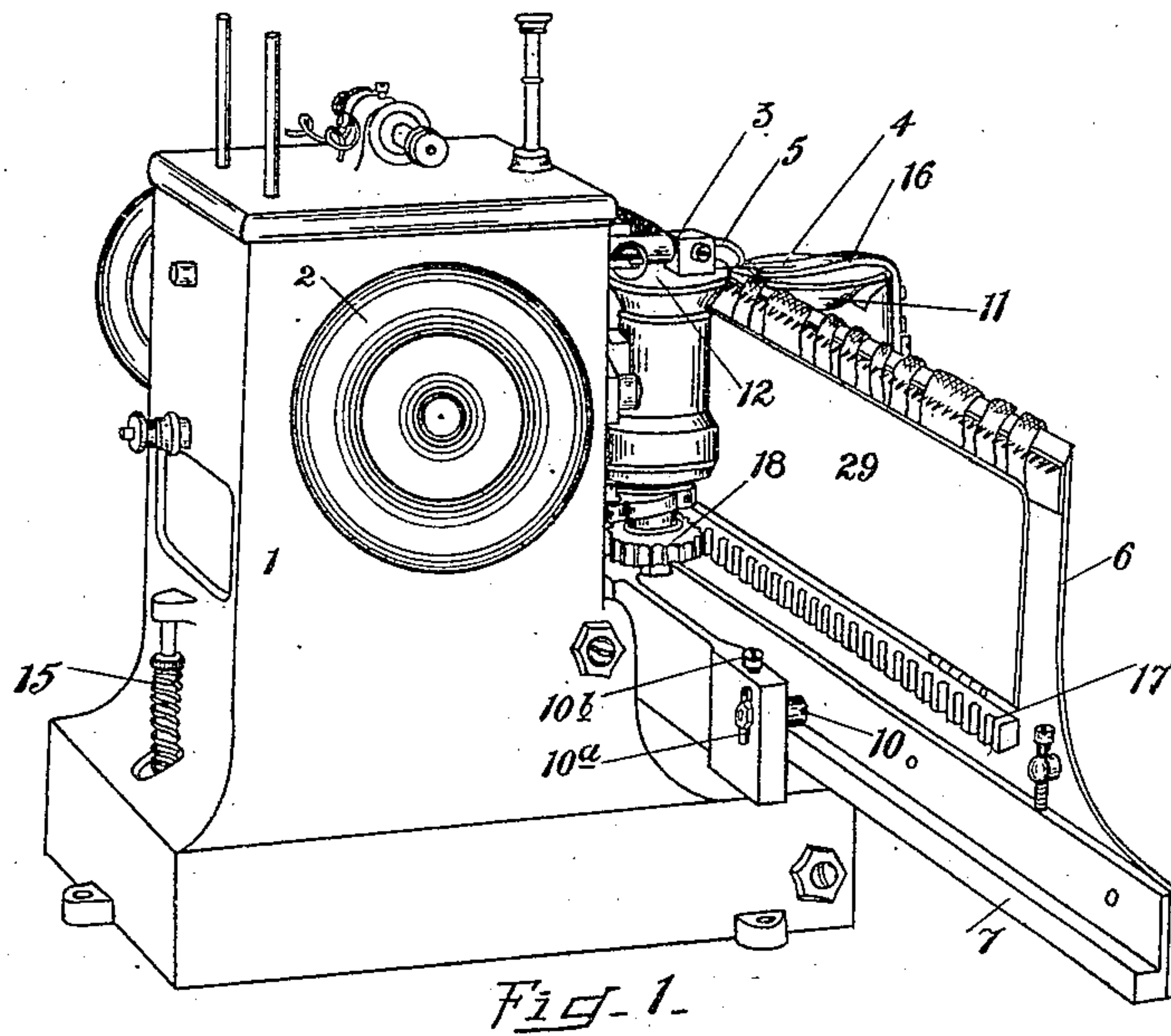
No. 875,586.

PATENTED DEC. 31, 1907.

C. R. MORLEY.
GLOVE TIP SEWING MACHINE.

APPLICATION FILED OCT. 15, 1906.

5 SHEETS—SHEET 1.



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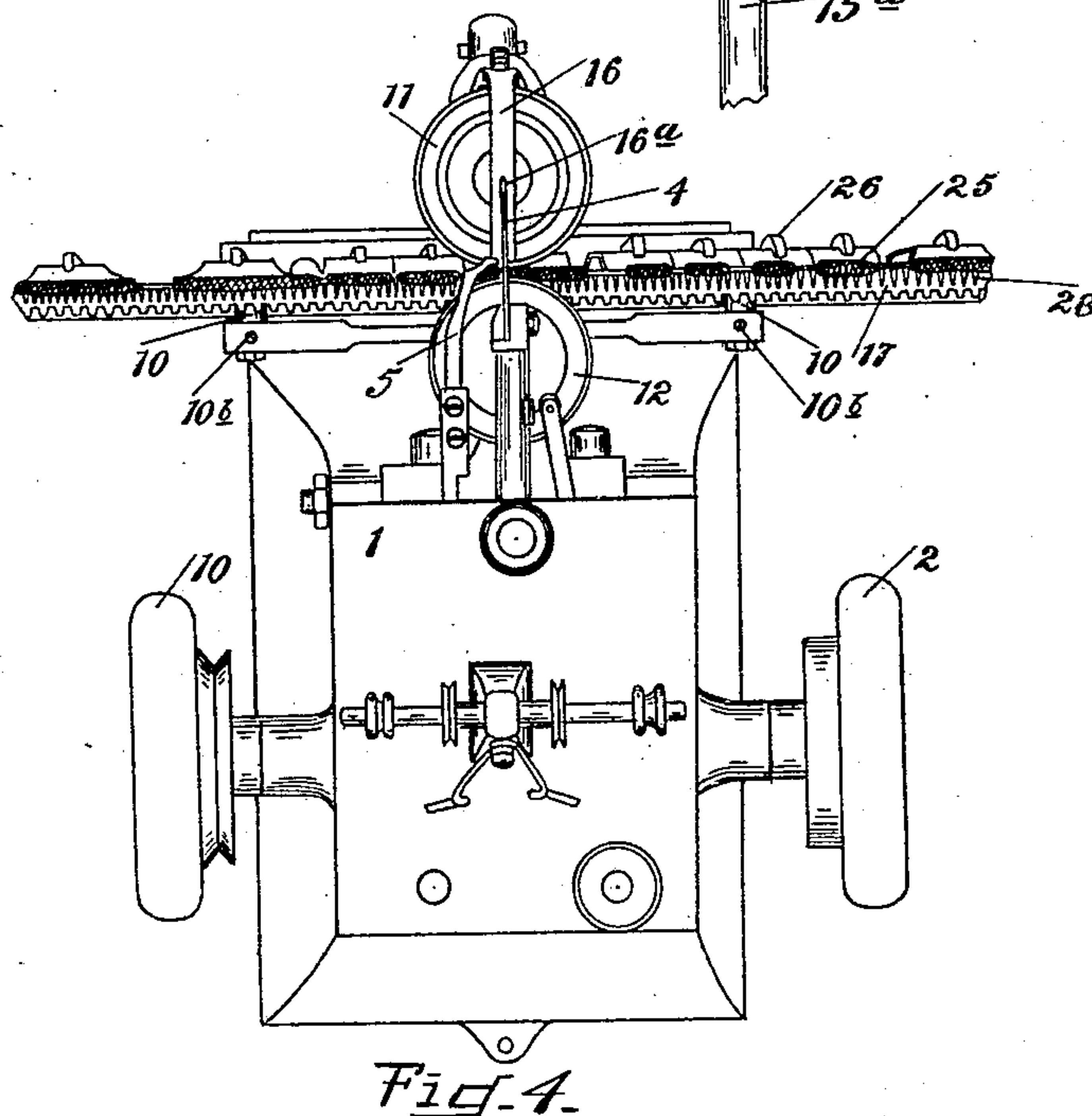
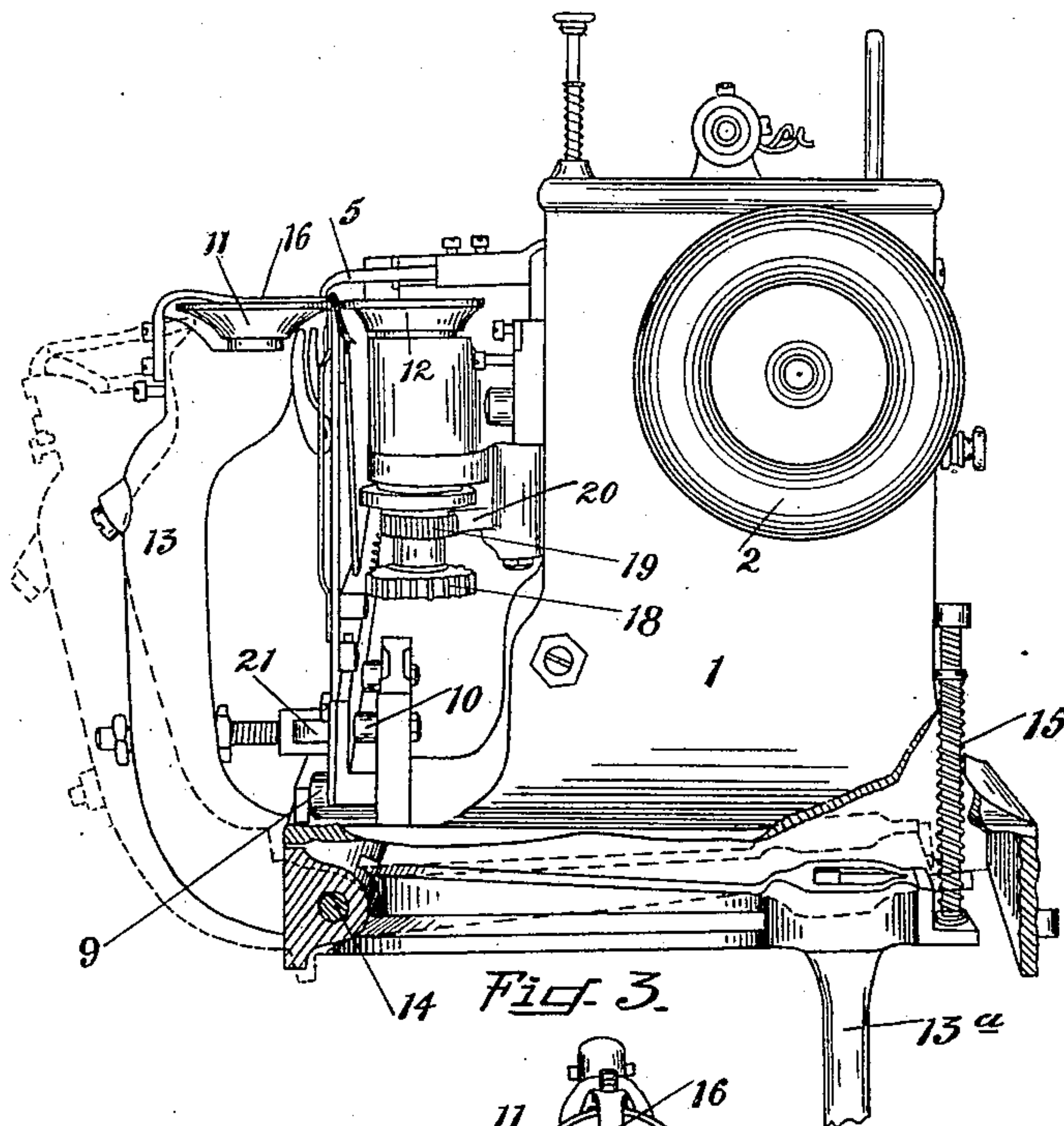
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5 SHEETS—SHEET 2.



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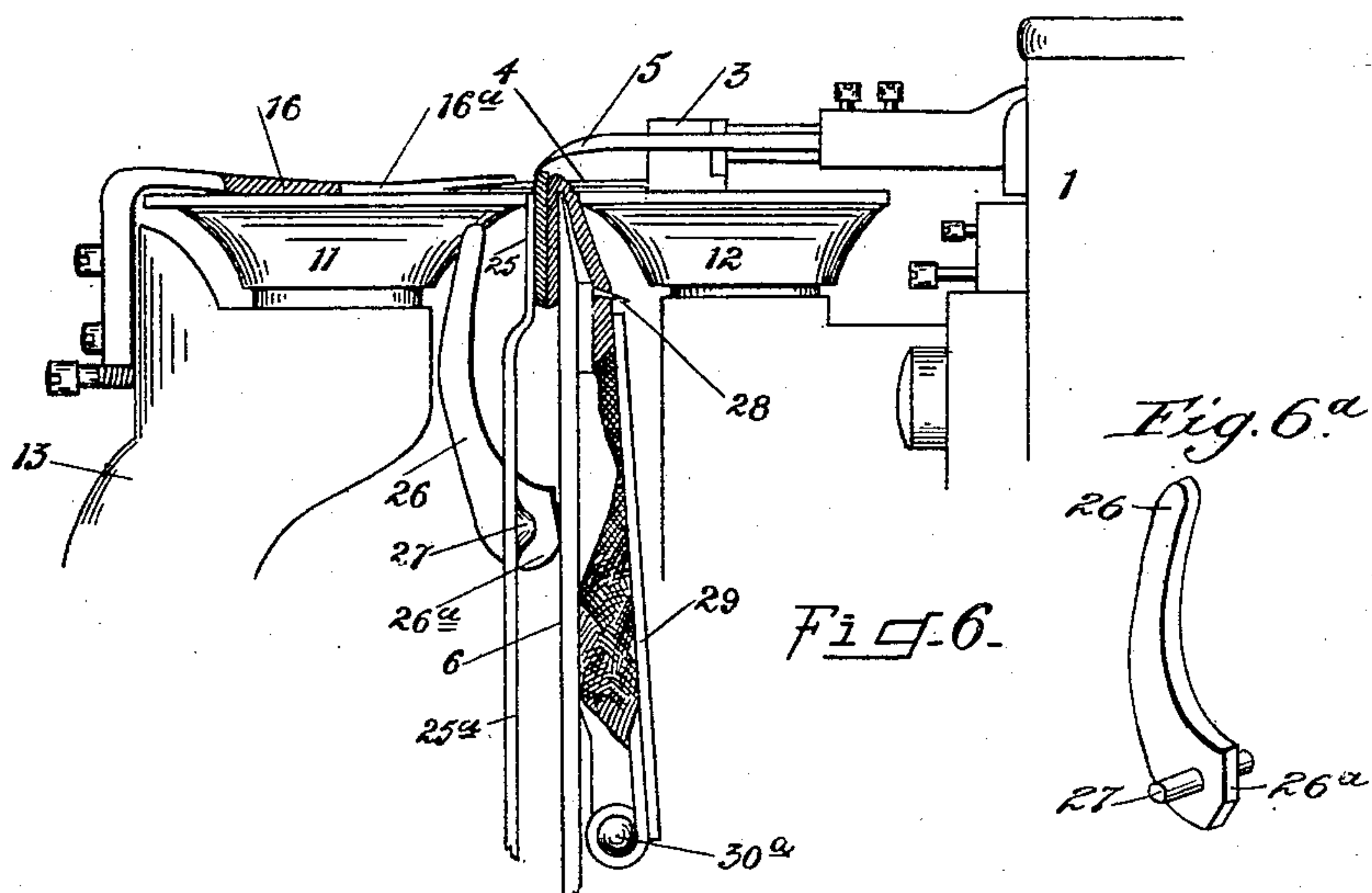
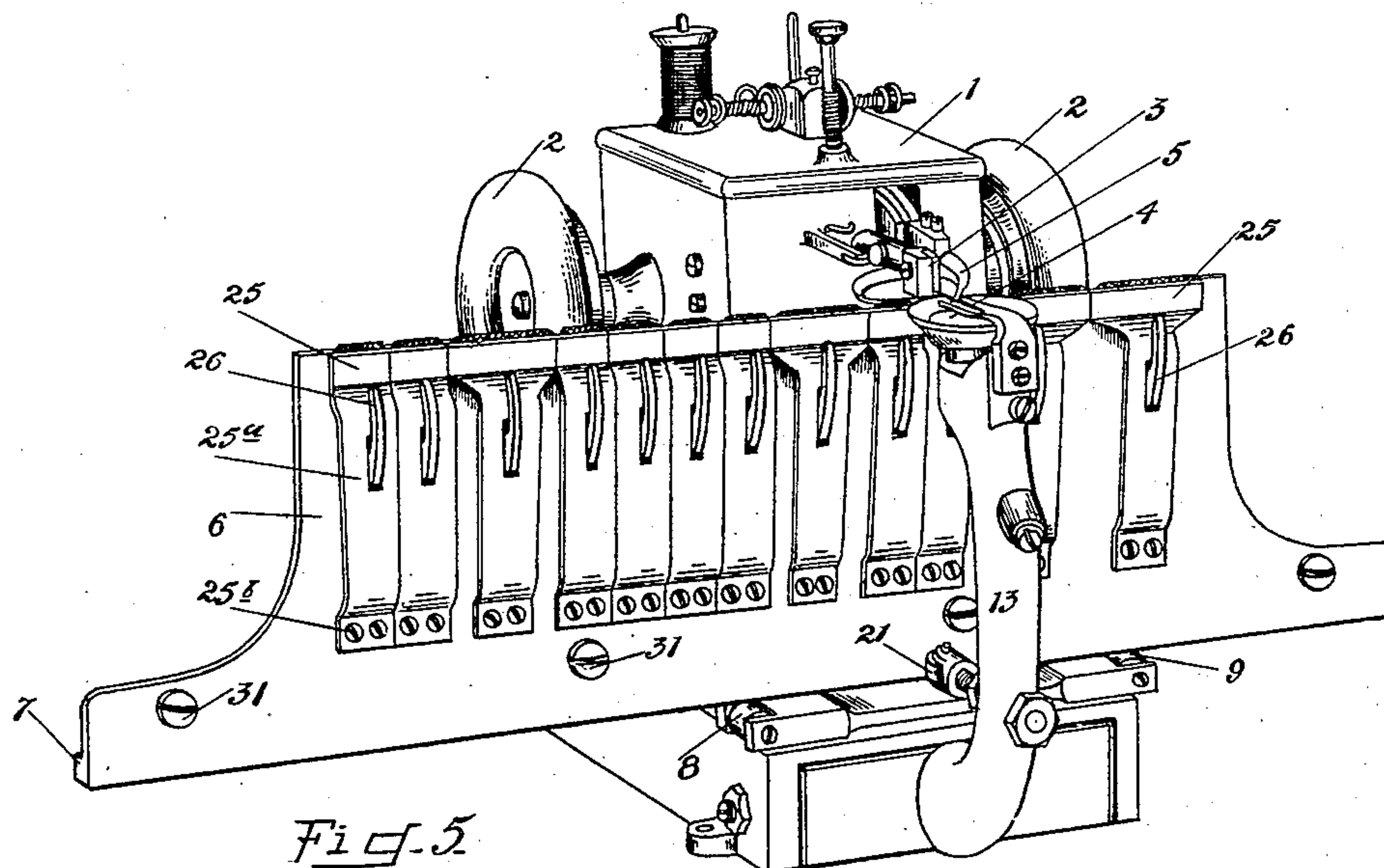
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5 SHEETS—SHEET 3.



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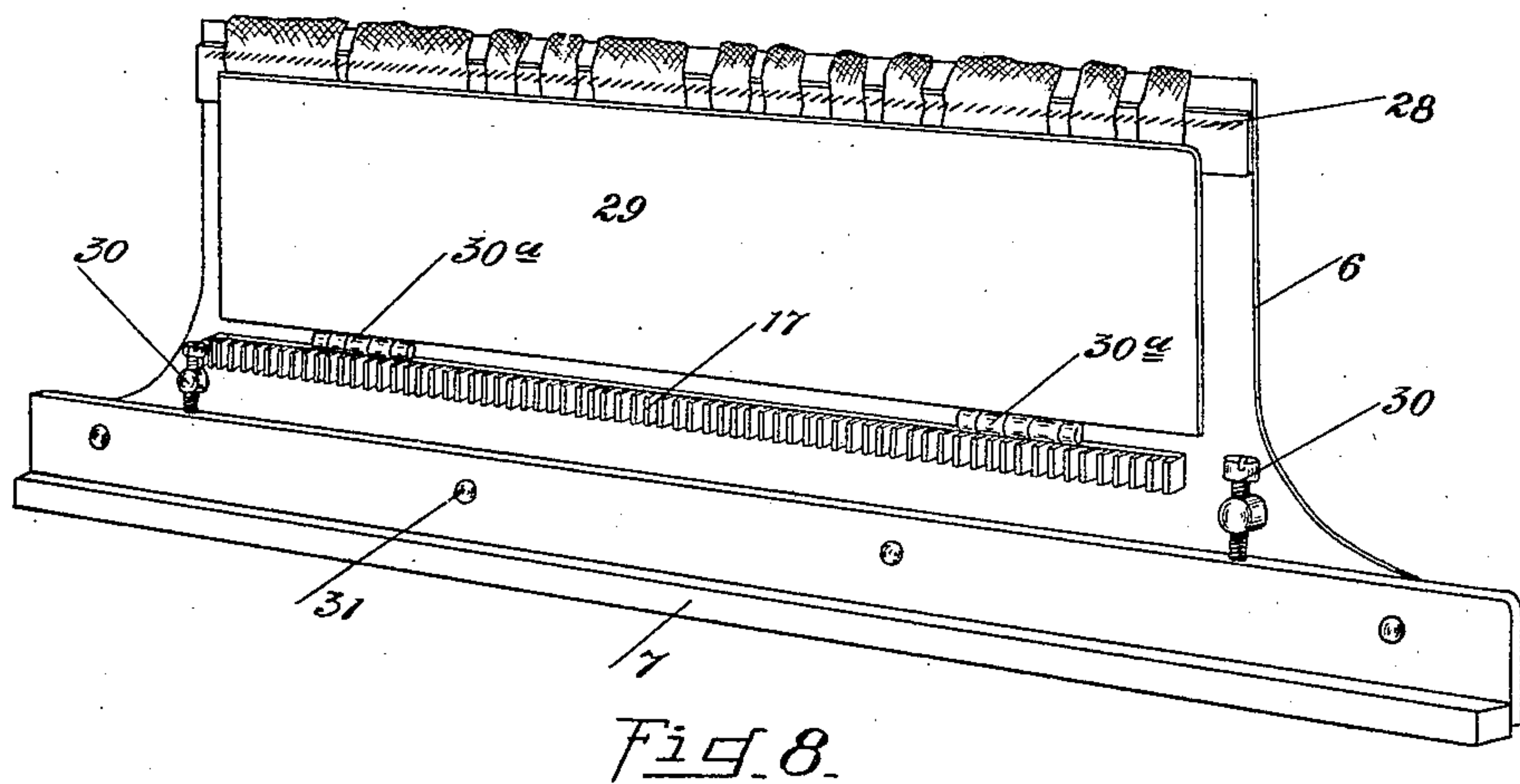
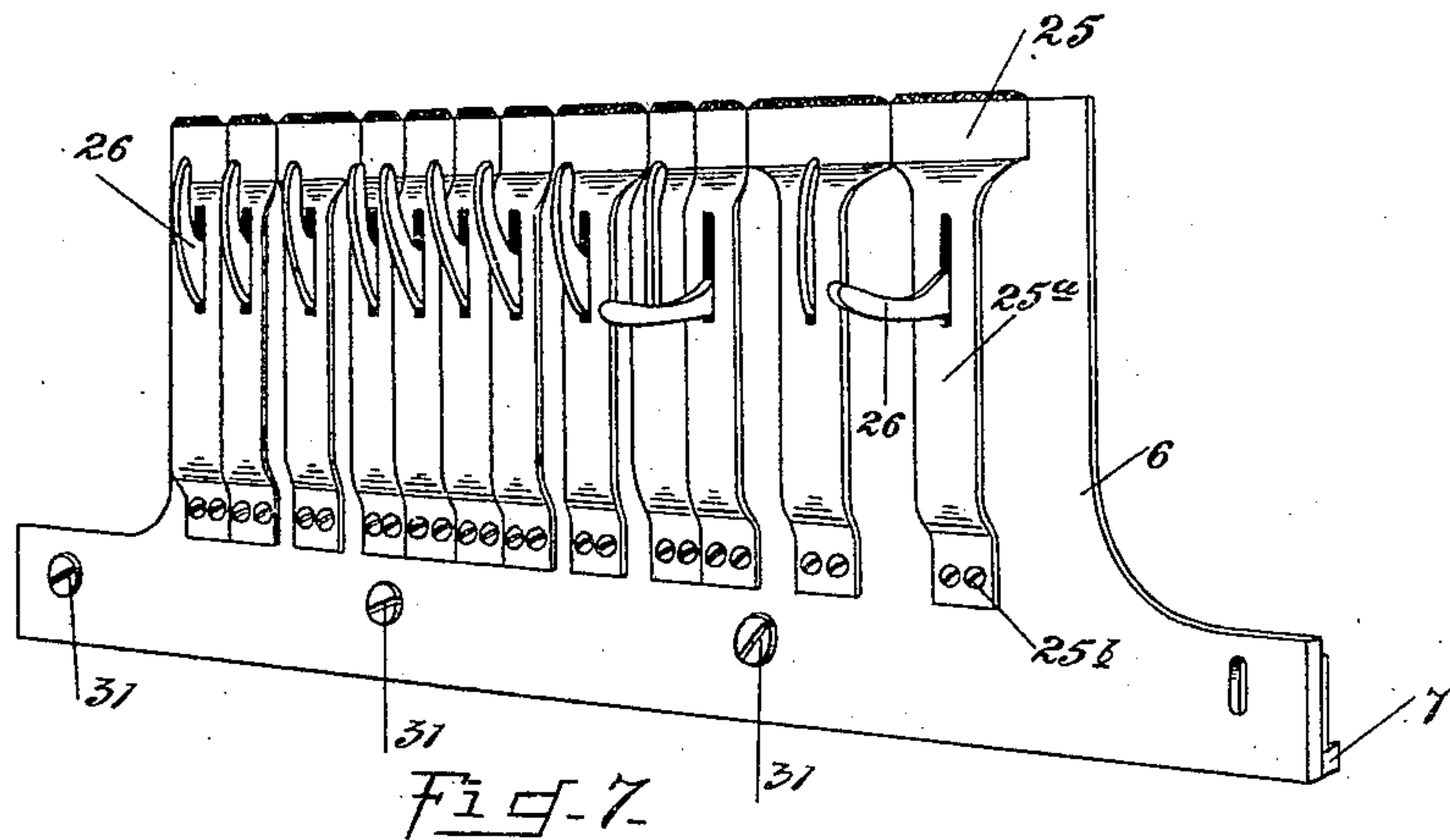
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5 SHEETS—SHEET 4.



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No. 875,586.

PATENTED DEC. 31, 1907.

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5 SHEETS—SHEET 5.

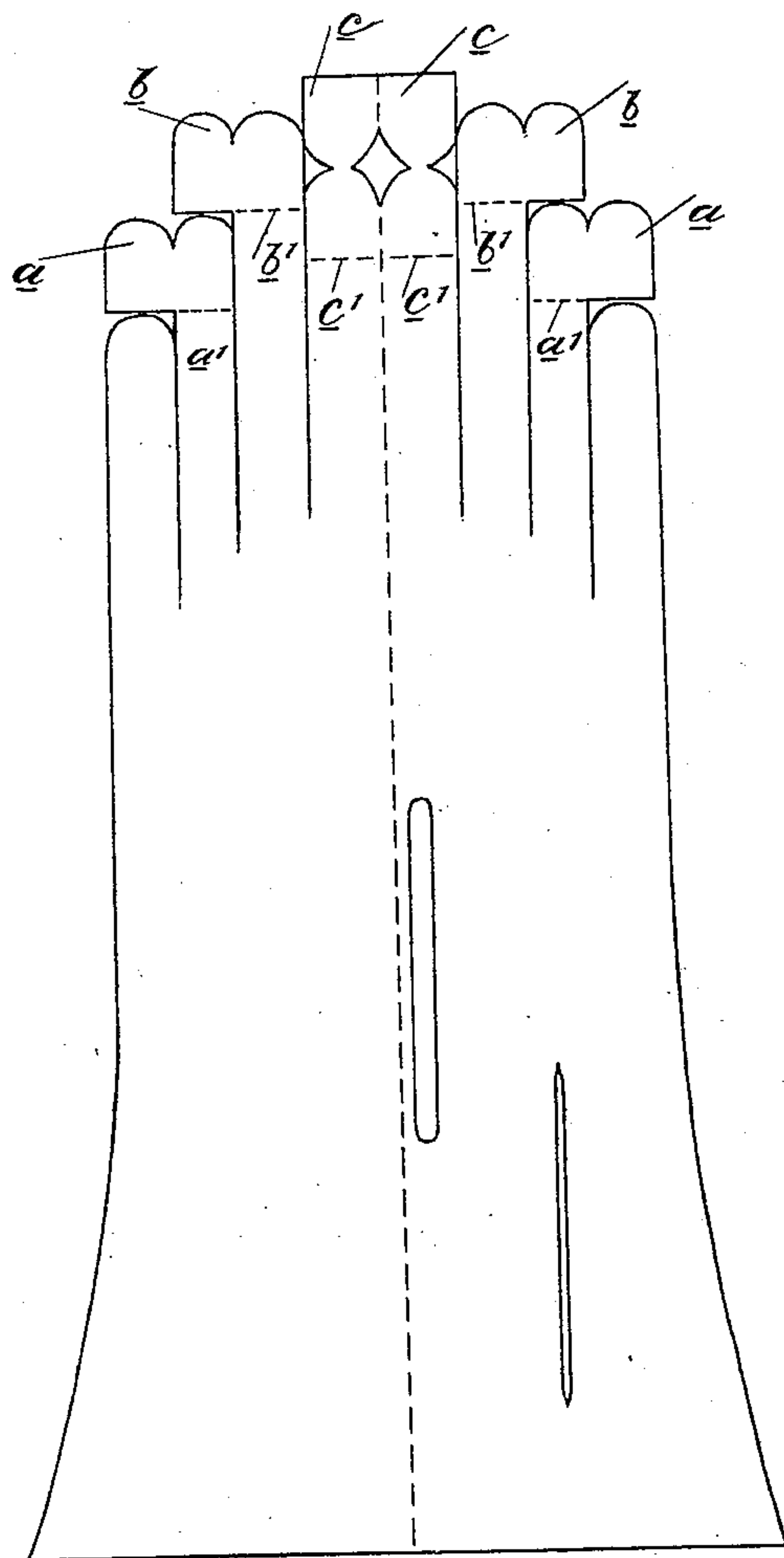


Fig. 9.

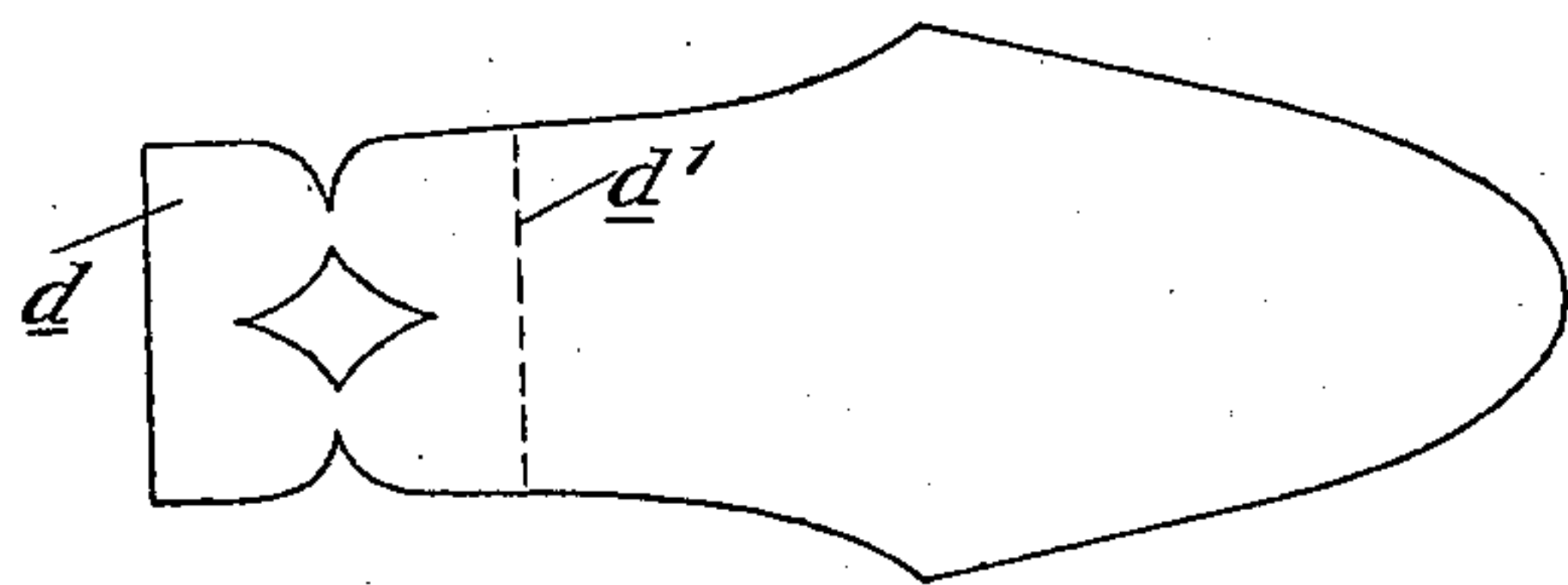


Fig. 10.

WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES R. MORLEY, OF AMSTERDAM, NEW YORK.

GLOVE-TIP-SEWING MACHINE.

No. 875,586.

Specification of Letters Patent.

Patented Dec. 31, 1907.

Application filed October 15, 1906. Serial No. 338,913.

To all whom it may concern:

Be it known that I, CHARLES R. MORLEY, of Amsterdam, in the county of Montgomery and State of New York, have invented certain new and useful Improvements in Glove-Tip-Sewing Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The object of my invention is to provide certain improvements in said finger tip sewing machines wherein arrangement is made for the ready and rapid placing and removal of the goods or material to be operated upon while holding the same securely during the sewing operation. Also to provide means for the ready removal and replacing of the work holding plate and for its accurate holding and adjustment with reference to the needles.

Other features of improvement will also hereinafter be pointed out.

In the drawings Figure 1 shows a perspective view of a machine embodying the features of my improvement. Fig. 2 is a perspective view of the work holding plate removed from the machine and partially open to show the goods in position thereon. Fig. 3 is mainly a perspective view from the side and in part a sectional view showing also the movement of certain parts in dotted lines. Fig. 4 is a top or plan view of the machine. Fig. 5 is a perspective from another point of view from that shown in either Figs. 1 or 3. Fig. 6 is an enlarged detail view partially in section. Fig. 6^a shows a perspective detail of a lever employed in the machine. Fig. 7 is a perspective view from one side of the work holding plate removed from the machine. Fig. 8 is a similar view of the same plate showing the opposite side from that shown in Fig. 7. Fig. 9 is a diagram of the glove blank upon which the machine is intended to operate, showing more particularly the manner in which the finger tip reinforcing pieces are cut. Fig. 10 is a diagram of the glove thumb showing also the finger tip reinforcing piece.

Referring to the reference letters and figures in a more particular description, 1 indicates the body of the machine which is of general box form containing the mechanism

for operating the needle. The details of the mechanism for operating the needle, or doing the stitching, constitute no part of my invention and specific description thereof may be omitted except to mention that 2, 2 are the driving pulleys, 3 the needle bar, 4 the needle and 5 the thread looper.

The work holding plate 6 is mounted in a vertical position at one side of the machine and provided with a track 7, which runs on rollers 8, 9 of the frame as to its lower side and engages with rollers 10 on the upper side. The work plate is thus mounted for movement transversely with reference to the needle. The upper edge of the plate 6 occupies a position and is adapted to travel between the edges of rollers 11 and 12, the former pivotally mounted on the swinging end of a movable arm 13 and the latter mounted on a fixed support on the frame 1. The arm 13 is pivoted in the frame at 14, and being extended under the frame is provided with a spring 15 operating to move the roller 11 towards the roller 12 and thereby confine the upper edge of the plate 6 between the rollers 11 and 12. The arm 13 also carries a needle supporting and guiding plate 16 having a groove 16^a into which the point of the needle is adapted to pass after passing through the work on the plate 6. For giving the longitudinal movement to the plate 6 there is provided on one side thereof a toothed rack 17, which when the plate is in position in the machine engages with a rack pinion 18 supported on the frame and driven from mechanism within by a pawl 20 engaging with a ratchet wheel 19 attached to or formed integral with the rack pinion 18. The plate track 7 is held to its position between the rollers 8 and 9 on the one side and 10 on the other by a pressing roller 21 adjustably mounted on the arm 13, the arrangement being such that when the arm 13 is thrown back into the position shown in dotted lines in Fig. 3 the roller 11 is not only withdrawn or removed from the upper edge of the work holding plate 6, but the roller 21 is removed or withdrawn from its holding position at the lower edge of the plate 6 so that the plate may be readily released from the rack pinion 18 and the track rollers 8, 9 and 10, and removed from the machine. The arm 13 may be operated by a connection 13^a to a treadle. On one side the holding plate 6 is provided with a series of clamps 25, some of which are preferably relatively narrow adapted to engage with the finger tip

pieces, while others are relatively large to adapt them for holding the thumb and index finger pieces. These clamps are provided with and mounted by means of spring shanks 5 25^a on the plate 6, the same being secured at their lower ends at 25^b to the plate 6. The tension of the spring part 25^a is to force the clamping end against the edge of the plate 6, and the edge of the clamp 25 is practically in 10 the plane of the upper edge of the plate 6 and particularly so that the pressing roller 11 will bear on the clamp 25 whereby the clamps are more securely held at the time that the stitching is taking place. For throwing open the 15 clamps 25 they are severally provided with a clamp lever 26 passing through suitable openings in the clamps and provided with a transverse pin 27, engaging on the inner side of the clamp arm. The inner end of the lever 26 is 20 provided with a flattened face 26^a and the arrangement is such that when the lever 26 is thrown over into a substantially horizontal position it will throw out the clamp and the end of the lever resting on the flat end 26^a 25 against the plate 6 will maintain itself in that position with the clamp held in open position until closed by the operator or otherwise. Along the opposite side of the plate 6 from that on which the clamps are provided, there 30 is provided and arranged a series of sharp points or pins 28. These are located somewhat below the upper edge of the plate 6 as particularly shown in Fig. 6. On the same side of the plate 6 there is also provided a retaining cover 29 hinged at 30^a at its lower 35 side and preferably held to closed position by a spring in the hinge.

The work to be performed by this machine is to stitch the lower ends of the finger tip 40 reinforcing pieces *a*, *b*, *c* and the thumb tip reinforcing pieces *d* to the several fingers and thumbs of which they form a part, along the lines *a'*, *b'*, *c'* and *d'*, respectively. As this work is what is known as overcasting and the 45 stitches are to be made so that they will not show through on the face of the thumbs and fingers, it is evident that the machine must be finely adjusted and work very close and accurately. The work may be placed on the 50 plate 6 when removed from the machine, or when in position in the machine as desired. In placing the work, the clamps 25 are thrown into open position by means of the lever 26, and the operator folds over the several reinforcing pieces into line with the fin- 55 gers (or thumb) of which they constitute a part, and inserts them between the clamp and the edge of the holding plate 6 as shown particularly in Fig. 6. The lower end as 60 shown in Fig. 9 of the reinforcing pieces being allowed to project slightly above the edges of the clamp and work carrying plate 6. The balance of the finger together with the material for the body of the glove are 65 then carried down on the rear side of the

work plate and engaged with the points 28, the same being drawn quite tightly over the upper edge of the plate 6. The cover 29 having been open, the body of the glove is placed against the back of the plate 6 and 70 confined in this position by the cover 29 out of danger of contact with the machine and protected against being soiled or otherwise damaged by the machine or otherwise.

The work plate 6 having had the goods or 75 material to be operated on duly placed in position thereon as described, preferably while removed from the machine is placed in position therein and conveniently so while the arm 13 with its attached parts is thrown 80 back into position, shown in dotted lines in Fig. 3. The machine then being put in operation the plate is gradually fed past the needle, the stitching being performed as it is fed along, the needle passing in close prox- 85 imity to the upper edge of the plate in forming the stitches. After the plate 6 has passed through the machine under the needle it may be removed and the goods removed, and the plate loaded with other goods for 90 sewing. Also the plate may be removed readily at any time by throwing out the holding lever 13 and sliding the plate out of the machine.

It is evident that if the needle in passing 95 through the goods held on the plate pass in too close proximity to the upper edge of the plate the stitches would show through on that side of the goods, which will be the out- side when the glove is finished and would be 100 objectionable. On the other hand if the needle did not pass in close enough proximity to the upper edge of the plate it might fail to engage sufficiently with the goods to accomplish the purpose of stitching the two 105 parts together. It is, therefore, necessary that the machine be capable of very nice adjustment at this point. In order to accomplish this the following mechanism is provided: the track piece 7 is secured to the 110 plate 6 by a series of large headed screws 31 passing through slotted openings in the plate as shown at the right of Fig. 7, so that the plate is vertically adjustable with reference to the track piece when these screws are 115 loosened. In order to accomplish the adjustment there is provided on the back of the plate 6 a pair of projections carrying upright screws 30, which engage upon the top of the track piece. By adjusting the position of 120 these screws 30 and afterwards tightening up the screws 31, the position of the upper edge of the plate relative to the needle may be very nicely adjusted. Farther, in order to assure the upper edge to the work plate trav- 125 eling accurately with reference to the needle, the rollers 10 are made adjustable by providing a vertical slot at 10^a receiving the roller pintle and a screw 10^b to adjust it therein. By this adjustment the track 7 130

may be held between the rollers 8 and 9 on the one side and the rollers 10 on the other side so closely as to obviate any vertical movement incident to wear or otherwise.

5 What I claim as new and desire to secure by Letters Patent is:

1. In a machine of the character described, the combination of stitch forming mechanism and a movable work holding plate, a
10 clamp on the plate mounted on a spring arm and provided with opening mechanism consisting of a lever 26 passing through an opening in the clamping plate, and having a transverse pin 27 and an angular head, both
15 arranged between the plate and the spring arm, substantially as set forth.

2. The combination in a machine of the character described of a sewing mechanism, a work supporting plate mounted on a track
20 for longitudinal movement past the sewing mechanism, a roller mounted on the machine

in substantially the same vertical plane with the needle, and against which the edge of the work supporting plate is adapted to travel, a toothed rack on the plate, a driving gear 25 therefor on the machine, a clamping roller and a presser mounted on a movable arm, the roller adapted to oppose the roller on the machine and the presser adapted to hold the toothed rack in engagement with the driving 30 gear, and means for operating said arm to open the rollers and release the plate laterally from the track and rack, substantially as set forth.

In witness whereof, I have hereunto af- 35
fixed my signature this 4 day of October, 1906.

CHARLES R. MORLEY.

In the presence of—

EDWARD A. McCaffrey,
THOS. F. McCaffrey.