

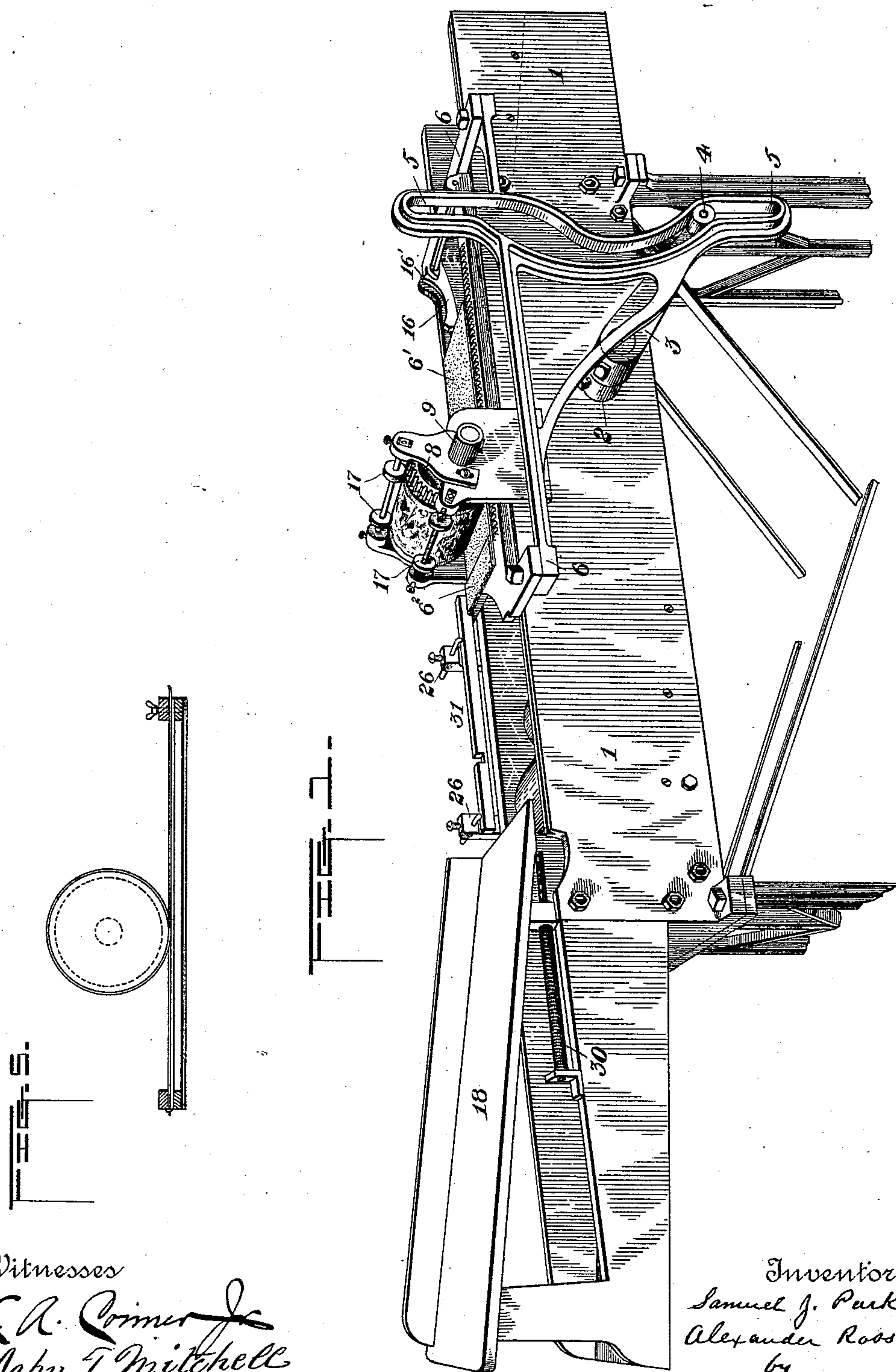
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3 Sheets—Sheet 1.

S. J. PARKER & A. ROSS.  
MACHINE FOR ATTACHING LABELS.

No. 414,991.

Patented Nov. 12, 1889.



Witnesses

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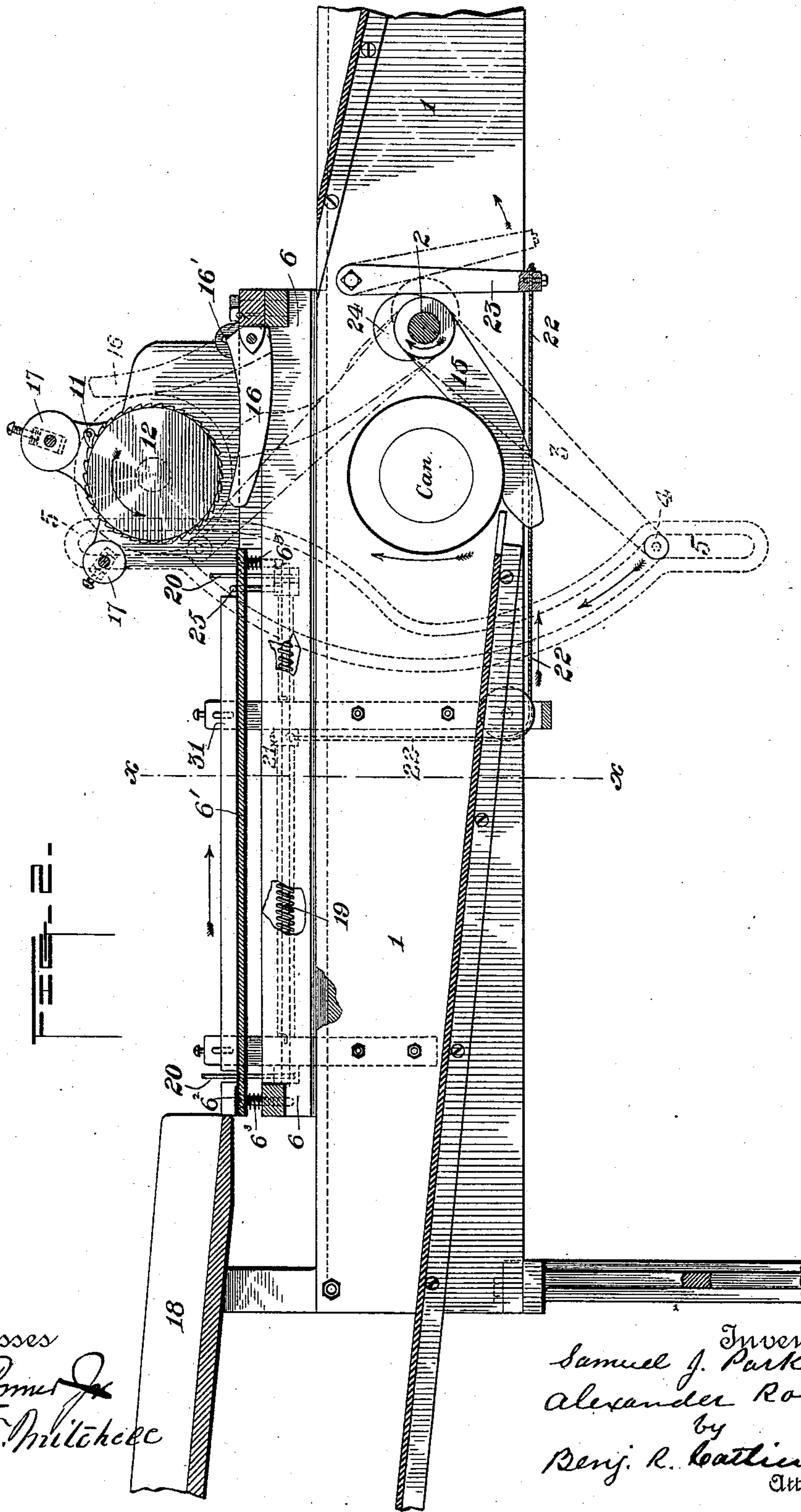
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3 Sheets—Sheet 2.

S. J. PARKER & A. ROSS.  
MACHINE FOR ATTACHING LABELS.

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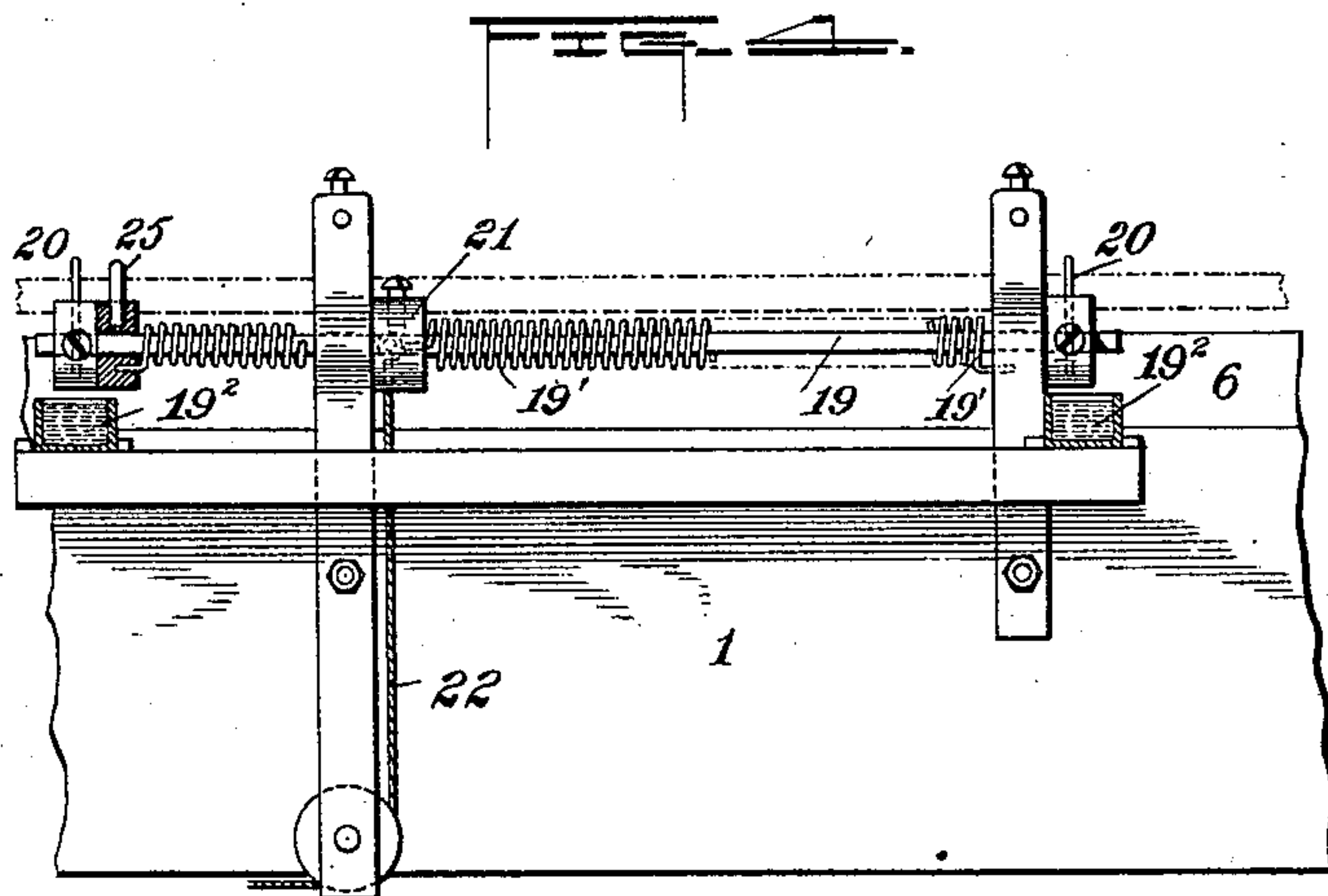
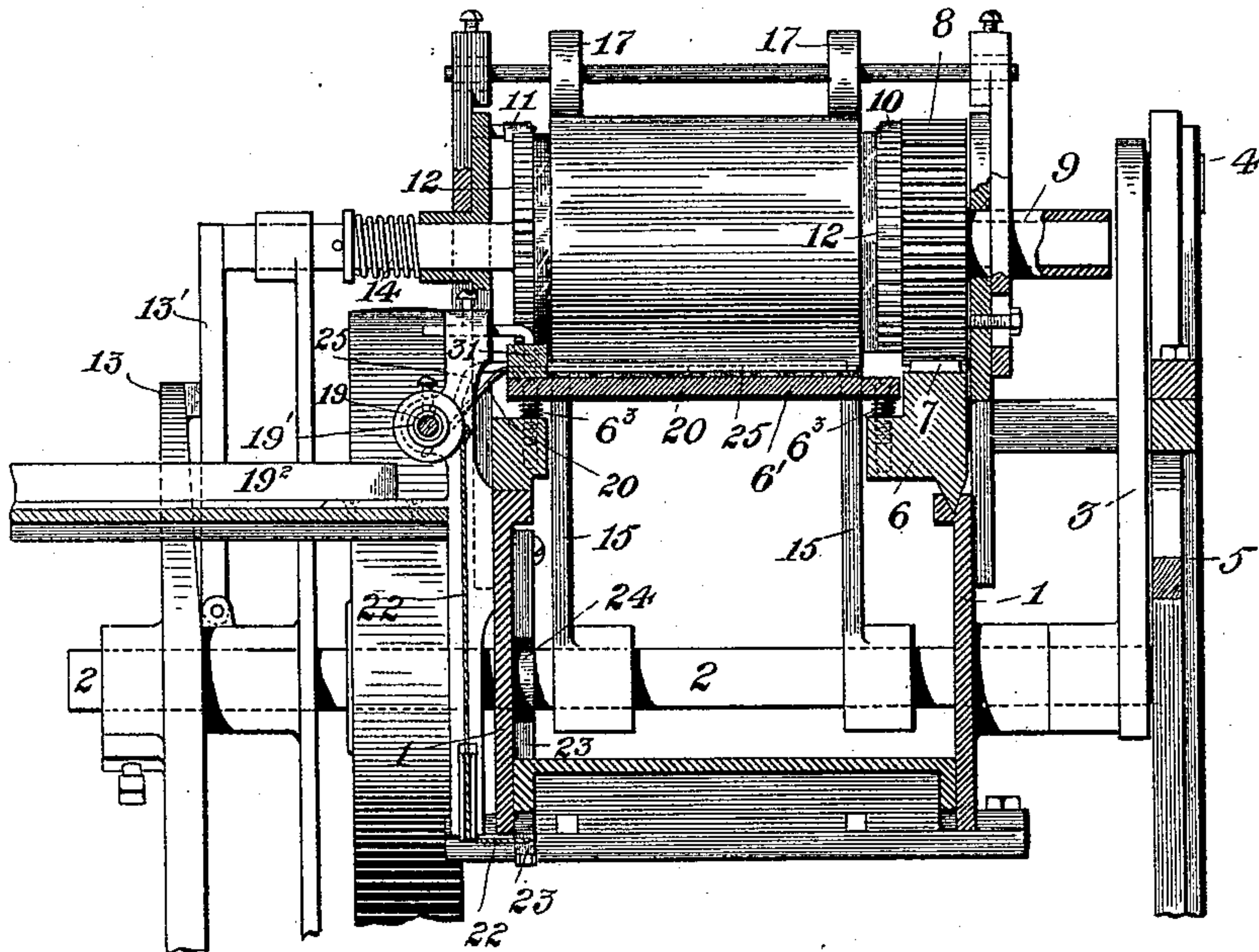
3 Sheets—Sheet 3.

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FIG. 3.



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# UNITED STATES PATENT OFFICE.

SAMUEL J. PARKER AND ALEXANDER ROSS, OF ROCHESTER, NEW YORK.

## MACHINE FOR ATTACHING LABELS.

SPECIFICATION forming part of Letters Patent No. 414,991, dated November 12, 1889.

Application filed April 11, 1889. Serial No. 306,779. (No model.)

*To all whom it may concern:*

Be it known that we, SAMUEL J. PARKER and ALEXANDER ROSS, citizens of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Machines for Attaching Labels; and we 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 object of our invention is to produce a machine for pasting labels upon cans and other articles that will avoid the fouling and clogging incident to the use of paste-rollers, and also avoid the wrinkling of the label on the can and insure certainty and economy of operation; and the invention consists in the devices and combinations hereinafter described and particularly pointed out.

In the drawings, Figure 1 is a perspective view of our improved machine. Fig. 2 is a longitudinal section. Fig. 3 is a transverse section on line  $x x$ , Fig. 2; Fig. 4, an elevation of pasting-shaft, the paste-boxes being shown in section; and Fig. 5 is a view of a modified detail of means for reciprocating the pasting-table.

Reference-figure 1 indicates a frame supported in any usual or suitable manner, in which is journaled a driving-shaft 2, provided with a crank-arm 3, having a stud upon which is journaled a wheel 4, which engages the cam 5. This cam is rigidly attached to a horizontal table or frame 6, which has a tongue-and-groove or equivalent connection with the main frame that will permit the table to be moved to and fro horizontally on the frame by means of the crank and cam aforesaid. The table 6 is provided with a rack 7, which engages a gear-wheel 8, placed loosely on the gripper-shaft 9, journaled in brackets or upward extensions of the main frame. This shaft at its inner end bears a ratchet-wheel which is made to move in one direction by the pawl 10, which pawl slides over the teeth of wheel 12 when the latter is revolved in an opposite direction. Accidental reverse rotation of the gripper disks or wheels 12 is positively prevented by pawl 11, placed on the oppositely-located gripper-wheel 12. The wheel 8 may be made slightly

smaller in diameter than the can, so that it will have the effect to draw the label as it is applied to the same.

The gripping disks or wheels are made to grip and release a can at suitable times by means of a cam 13 and lever 13' and oppositely-acting spring 14, substantially as described in application Serial No. 283,483, filed August 29, 1888.

The table proper 6', which has an adjustable connection with frame 6 by means of screws 6<sup>3</sup>, does not extend the whole length of the frame, but is made shorter to allow the cans to pass through the frame or table 6. As shown, the screws 6<sup>3</sup> pass through the table and enter screw-threaded sockets in the table-frame, a spring being interposed between the table and frame to sustain the former above the latter in a yielding manner, the tension of the springs and the height of the table above the frame being varied by turning the screws in their screw-threaded sockets in the frame.

The bed or table 6' is preferably covered on its upper face with rubber or other elastic material, which may be made double or thickened, as indicated at 6<sup>2</sup>, the object being to give an increased pressure to the label when the can passes over said thickened part.

Upon the driving-shaft 2, adjacent to the point of attachment of crank-arm 3, but on the inside of the side plate of the frame, is rigidly secured an arm 15, arranged, together with a similar arm adjacent to the opposite side plate of the frame, to receive a can from the inclined feeding-table and to raise it up against pivoted arms 16 and push said arms and the labeled can resting upon them upwardly until arms 16, moving about their journals, have been arrested by stops 16' and are held in the position indicated by dotted lines in Fig. 2. The table is then carried forward (the previously-labeled can having been discharged) by the operation of the machine a sufficient distance to permit these arms to drop by gravity to the position indicated in full lines in Fig. 2, to be again raised, as above described. The first-named can, having in the meantime been raised by arms 15 to its position in the gripping apparatus, is arrested by the "centering-wheels" 17, secured on shafts adjustably journaled, as indicated, in



yielding boxes, to accommodate variation in the size of the cans, the aforesaid arms 16 aiding in the operation of directing the can to its exact place between the gripping disks 5 or wheels. The arms 15 make a complete revolution, the outer ends passing under and away from the can just as it is gripped and as the table 6', carrying a pasted label, is brought under and in contact with it.

18 indicates a receptacle for labels, which, being placed singly upon table 6' when in the position illustrated in Fig. 2, are supplied with paste by means of the following-described mechanism.

19 is a shaft suitably journaled in boxes or otherwise at the side of the frame, and having radially secured thereto the bent pasting-fingers 20, of wire or other like material, which are arranged to be normally held in paste-receptacles 19<sup>2</sup>. These wires are held by hubs adjustably secured on the shaft by means of set-screws, whereby they can be adjusted to paste the ends of labels of different lengths.

At 21 (see dotted lines, Fig. 2) is a collar fixed on shaft 19, bearing a radial arm connected by cord 22 with a journaled lever 23, which is arranged to be moved about its axis by a cam 24. This cam may be an extension of one of the arms 15, or may be otherwise secured to or formed upon the driving-shaft. The movement of the arm 23 in the direction of the arrow pulls the cord and partially rotates shaft 19 against the action of a spring 19', suitably secured to the shaft and to the frame. This operation raises the paste-fingers out of the paste-receptacles 19<sup>2</sup> and moves them radially toward and upon the label lying on the table. As soon as cam 24 passes off the lever 23 the pasting-fingers are returned to the paste-receptacles by the spring 19'.

25 is a stripping device made larger than the pasting-wires and connected to a hub placed loosely on shaft 19, and connected therewith by a spring so arranged that said spring must be compressed somewhat by the rotation of the shaft before the stripper will be raised from the label, and not until the end of the latter is under or in contact with the can.

31 is a gage or guide for the label, made adjustable laterally to correspond with labels of different widths by means of supporting-wires 26 held in suitable posts or supports by set-screws.

In the position of parts indicated in Fig. 2 the machine is at rest and in readiness to receive a fresh can and label and to apply paste to the latter and simultaneously discharge a previously-labeled can. These operations are effected by the revolution of the driving-shaft, as above described. The arms 15 are thereby made to raise an incoming can. The cord connecting the pasting-finger shaft to the cam-operated lever 23 at the same time partially revolves said shaft and throws the

paste-covered wires onto the ends of the label, the fresh can having been raised to its highest position and simultaneously gripped 70 between the gripping-disks by the action of the cam-wheel 13, affixed to the driving-shaft, acting upon the pivoted lever 13', moving a gripper-disk 12 against the can, at the same time overcoming the tension of spring 14, 75 which spring operates to relieve the can when lever 13 is released by the cam. During this part of the operation the friction-wheel 4 of the crank 3 has moved up through about a quarter of a revolution in a part of the cam 80 concentric with the shaft, the table remaining stationary. As soon as the fresh can is gripped, the pasting-wires being about to be retracted, the cam 5 is engaged on its opposite side at the top and the table is moved to 85 bring the end of the label against the can, the end of the label being held down momentarily by the stripper. The continued revolution of the shaft carries the table under the can revolved by the wheel and rack, pressing the label upon it until the position indicated in Fig. 1 is reached.

Labels are preferably used of sufficient length to overlap when placed about a can, and the rack and gear-wheel are constructed 95 and arranged to revolve the can a little more than a complete revolution, so that a label of the desired length may be applied to the can, the rubber-covered table being made of suitable length for the purpose and so arranged 100 that the thickened part of the elastic covering before mentioned will be brought under and pressed upon the lap. At the completion of the above steps the parts are in position shown in Fig. 1, and wheel 4 is acting 105 upon the cam to return the table toward the position represented in Fig. 2. Pawl 11 now engages the teeth on one of the grippers and holds the can from rotation, so that the table slides under the can and wipes the lap. As 110 the table reaches the feeding end of the machine it strikes a spring-buffer of any suitable construction, such as is illustrated at 30.

The machine can be operated with a continuously-running shaft, or it may be stopped 115 and started by ordinary clutch mechanism between the application of labels.

It is obvious that an eccentric and pitman or a cord connection—such as illustrated in Fig. 5—may be employed to reciprocate the 120 table, and also that the labels may be fed laterally onto the pasting-table without departing from our invention; and it is further apparent that several details of the described machine can be varied by mechanical skill 125 without substantially changing the construction and mode of operation.

We are aware that yielding tables and centering devices are not new, and that arms have been employed to move cans from a table 130 whose delivering end was at or near the level of the grippers, and such devices are not herein claimed. It is characteristic of our machine that the can-feeding chute de-



livers each can below the level of the pasting-table, and that the lifting-arms, as well as the centering-arms, have their axis below said table, and are moved into its path to raise a can and to locate it centrally in the grippers and then carried below the level of the table, which thereupon moves into contact with the can, the arms having descended below its path, as stated.

Having thus described our invention, what we desire to claim and secure by Letters Patent is—

1. In a machine for attaching labels, the combination of the pasting-wires secured to the shaft supported in journal-bearings, said shaft and means for rocking it, the paste-receptacles, the stripper connected to the shaft that operates the pasting-fingers by a spring, and a label-supporting table, substantially as specified, whereby the rocking of the shaft may move the fingers to apply paste to the label.

2. In a machine for attaching labels, the pasting-wires adjustable on the operating-shaft to adapt them to paste the ends of labels of different lengths, substantially as specified.

3. In a machine for attaching labels, the combination of the reciprocating table, the can-lifting arms, can-gripping devices, and the pasting-fingers and operating devices, substantially as specified.

4. In a machine for attaching labels, the reciprocating vertically-adjustable table having an elastic covering, combined with the gripping devices, whereby the table may be vertically adjusted and is slightly yielding under the pressure of cans of different dimensions held at various times by said gripping devices, substantially as described.

5. In a machine for attaching labels, the combination of the gripping-disks for holding a can, the reciprocating table-frame provided with a rack, devices for reciprocating the same, and a gear-wheel of a diameter smaller than the can and having the same axis as the gripping-disks, whereby the circumferential velocity of the can is made slightly greater than the velocity of the table to permit the label to be drawn upon the same, substantially as specified.

6. In a machine for attaching labels, the combination of the disks or wheels for gripping a can, one of the wheels being provided with ratchet-teeth, a pawl arranged to prevent rotation of the wheel and can when the reciprocating table is returned, said table, and devices for returning the same, whereby the label on a can may be wiped, substantially as specified.

7. In a machine for attaching labels, the

combination of the table and mechanism for moving it horizontally, the can-lifting arms journaled below the table, and the can centering arms having journals attached to the table, and the operating mechanism, substantially as set forth, whereby a can may be raised from below the plane of the table and centered in a position above it and the table moved to carry the centering-arms away from a can and permit them to drop to receive a new can.

8. In a machine for attaching labels, the combination of a table, mechanism to move it horizontally, can-gripping devices, and can-centering arms journaled in the table, whereby a movement of the table may carry the arms away from the can held in the gripping devices, substantially as described.

9. In a machine for attaching labels, the combination of the table-frame, means for moving the same to a discharging-table, said discharging-table, and the centering-arms journaled on the frame and having stops, said frame being connected and arranged to carry the arms away from the gripped can and allow them to drop by gravity, substantially as specified, whereby the cans may be held centrally for the grippers and be subsequently dropped to allow the released can to pass above them to the discharging-table.

10. In a machine for attaching labels, the combination of a table, mechanism for moving it horizontally, can-gripping devices, can-lifting arms located below said table, and mechanism adapted to operate the arms above the plane of the table and then return them below the table to allow it to pass over the same, substantially as described.

11. In a machine for attaching labels, the reciprocating table having a covering thickened at one end of the same, combined with a can and gripping devices, substantially as specified, whereby an extra pressure is imparted to the label on the can.

12. In a machine for attaching labels, the combination of the reciprocating table located below the can gripping or supporting devices, a driving-shaft and crank provided with pin or friction wheel, and a cam having a part concentric with the shaft, substantially as specified, whereby the table rests while the shaft makes about one-fourth of a revolution, and whereby it is then moved out and returned.

In testimony whereof we affix our signatures in presence of two witnesses.

SAMUEL J. PARKER.  
ALEXANDER ROSS.

Witnesses:

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GEO. W. TUTTLE.