No. 811,576. PATENTED FEB. 6, 1906.

T. PANKOW.

BOTTLE LABELING MACHINE.

APPLICATION FILED SEPT. 23, 1904.

2 SHEETS—SHEET 1.

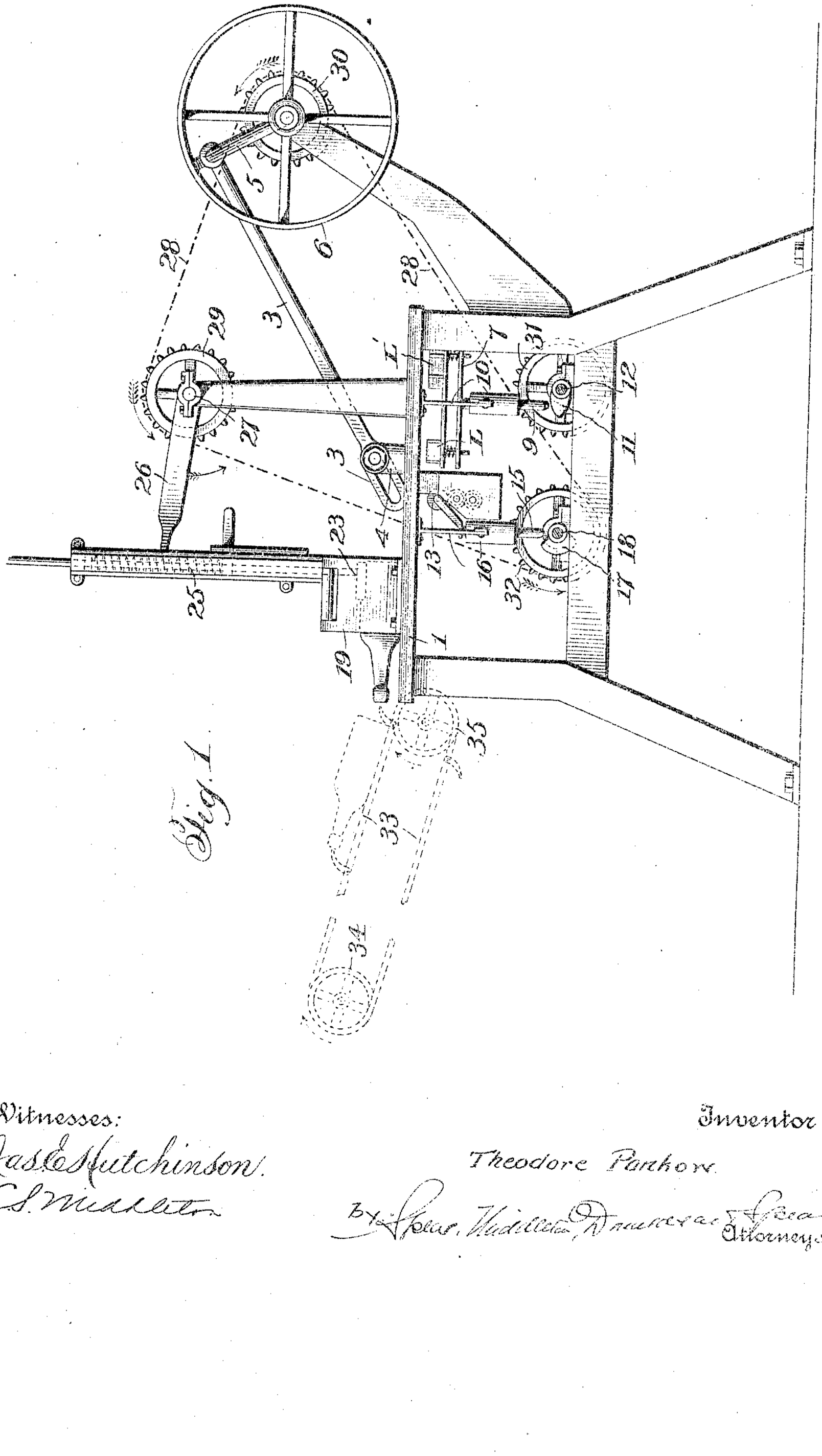


Fig. 1.

Witnesses:
Jas. E. Hutchinson.
C. Middleton.

Inventor
Theodore Pankow.
By Howson, Sheridan, Townsend & Howson
Attorneys.

No. 811,576. PATENTED FEB. 6, 1906.

T. PANKOW.

BOTTLE LABELING MACHINE.

APPLICATION FILED SEPT. 23, 1904.

2 SHEETS—SHEET 2.

Fig. 2.

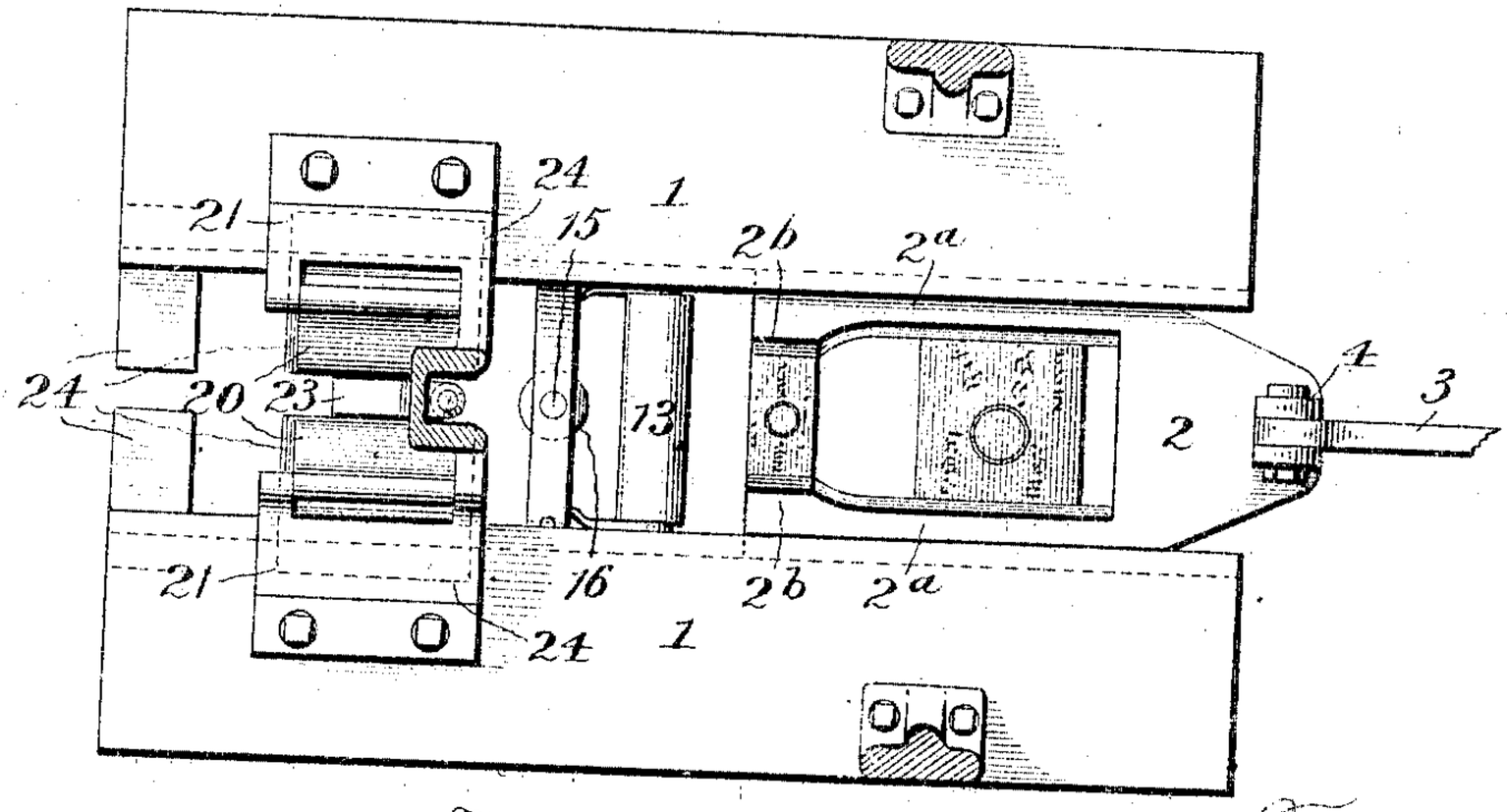


Fig. 4.

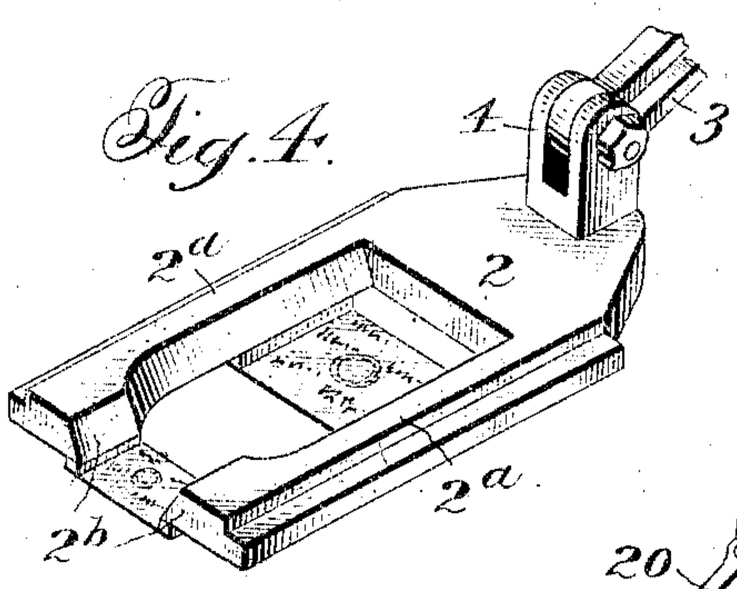


Fig. 5.

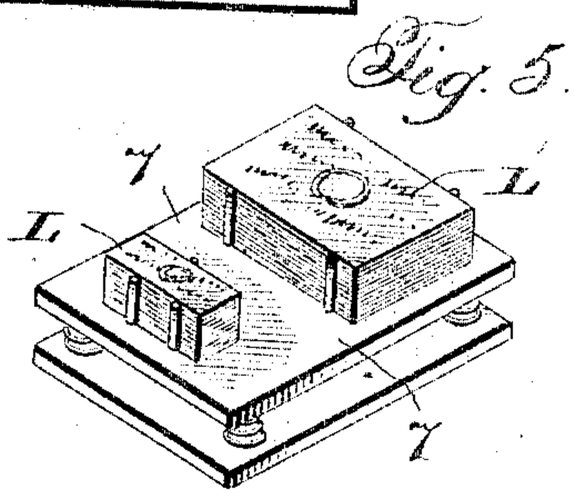
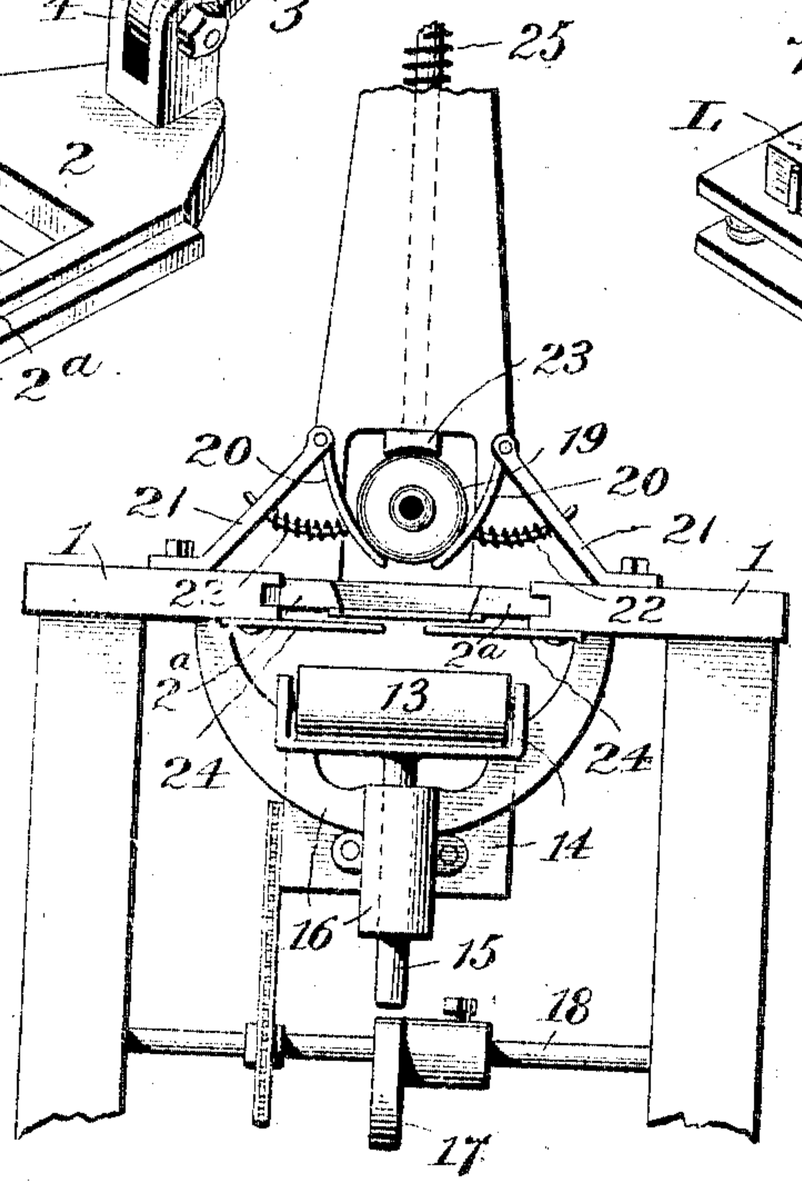


Fig. 3.



Witnesses

Jas. E. Hutchinson.

C. S. Middleton

Inventor

Theodore Pankow

by Spear, Middleton, Donnelan & Spear,

Attorneys

UNITED STATES PATENT OFFICE.

THEODORE PANKOW, OF SIOUX FALLS, SOUTH DAKOTA.

BOTTLE-LABELING MACHINE.

No. 811,576. Specification of Letters Patent. Patented Feb. 6, 1906.

Application filed September 23, 1904. Serial No. 225,678.

To all whom it may concern:

Be it known that I, THEODORE PANKOW, a citizen of the United States, residing at Sioux Falls, South Dakota, have invented certain new and useful Improvements in Bottle-Labeling Machines, of which the following is a specification.

My said invention relates to a machine for applying labels to the bodies and necks of bottles; and I have aimed to provide a simple, durable, and efficient machine capable of receiving the bottles from a feeding device, simultaneously applying labels to the neck and body of each bottle, and ejecting the bottles automatically from the machine.

With these and other objects in view the invention comprises the construction and arrangement of parts hereinafter described, and particularly set forth in the appended claims.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation. Fig. 2 is a part sectional plan. Fig. 3 is a part end elevation. Fig. 4 is a perspective detail of the slide, and Fig. 5 is a similar view of the label-supporting table.

Referring to the drawings, the numeral 1 indicates a pair of guides upon which a carriage or slide 2 runs, being propelled back and forth by suitable operating connections, such as link 3, connected to lug 4 at one end and at the other to crank 5, driven by belt-pulley 6. The carriage or slide is of substantially U shape, having two arms 2^a; which are spaced sufficiently far apart to permit a bottle to pass through between them for the major portions, the arms having their forward portions projected toward each other, as at 2^b, where the bottle-neck comes. At one end of the guides 1 and beneath the same is located a label-carrying table 7, upon which the two piles of labels L L′ are suitably carried. This table is yieldingly supported upon a plate which is carried by a vertical rod 9, mounted to slide in a bracket 10, secured to the frame of the machine, the rod being raised and lowered by the action of a cam 11, secured on a transverse shaft 12. After a bottle has been properly labeled the carriage is drawn backward along the guideways to receive new labels from the piles, and on its backward movement the under side of the arms are gummed (or if the labels are previously-gummed labels then the arms are simply moistened) by a suitable gumming or moistening device. As a convenient means for accomplishing this I provide a pasting or moistening roller 13, journaled in a suitable receptacle 14, carried by a rod 15, which slides vertically in a bracket 16, carried by or secured to the machine-frame. The lower end of the rod is designed to contact with and be operated by a cam 17 on the transverse shaft 18. After the carriage has moved back into a position directly above the labels the pile of labels is raised by the cam 11 until the topmost labels are forced against the gummed or moistened under sides of the arms, to which of course the labels adhere. The carriage is then propelled forward again until it comes beneath a guide or hopper in which the bottle 19 is held. These guides are simply yielding arms 20, pivoted to supporting-plates 21 and pressed toward each other by springs 22, and when the carriage is in position beneath the spring-arms 2 plunger 23 forces the bottle down between the arms of the carriage, and as it passes down the labels are applied to the body and neck by suitable flexible wipers 24, carried by the guides 1, which draw the labels tightly around the bottle and neck and press the gummed edges, which have been pulled away from the arms by the downward movement, closely against the bottle. The plunger is held upwardly by a spring 25 and is depressed against the tension of the spring by the action of an arm 26, carried by a shaft 27, driven from the crank-shaft by chain 28 and sprockets 29 and 30. The shafts 12 and 18 are operated by the same sprocket-chain which passes around or engages the teeth of wheels 31 and 32 on said shafts.

I prefer to feed the bottles to the machine by an endless carrier 33, passing around wheels 34 and 35 and having pawls or the like for engaging the mouths of the bottles.

In order to effect a pause in the movement of the slide at each end of the stroke to allow the labels to be raised at one end and the bottle to be forced down by the plunger at the opposite end, the link 3 is provided with a slot, which forms a limited sliding connection with the lug or projection 4.

Having thus described my invention, what I claim is—

1. In combination, a suitable guide, a forked carrier traveling thereon, yielding bottle-holding means at one end of the guide, means for supporting a pile of labels at the other end of the guide, a roller between said

bottle-holding means and label-holding means, for supplying to the under side of said carrier a material to cause the labels to adhere thereto, means for reciprocating the carrier and for raising and lowering the roller and label-support and means for feeding bottles down through between the arms of the carrier, substantially as described.

2. In combination, a suitable guide, a forked carrier traveling thereon, yielding bottle-holding means at one end of the guide, a vertically-movable plunger, a plate for holding a pile of labels yieldingly supported by said plunger, a cam for raising and lowering the plunger, a second plunger, a roller supported thereby, a cam for raising and lowering said second plunger, means for reciprocating the carrier, and means for feeding the bottles, substantially as described.

3. In combination, a suitable frame including a horizontal guide, yielding bottle-supporting means at one end thereof, a forked carrier traveling in said guide, a crank-shaft journaled in the frame having a pitman connecting it to the slide, a vertically-movable label-support beneath the carrier, a cam-shaft having a cam for operating the label-holder, a roller beneath the carrier, a second cam-shaft having a cam for raising and lowering the roller, sprocket-wheels on the crank-shaft and cam-shafts and a single sprocket-chain engaging all said sprocket-wheels, substantially as described.

4. In combination, a suitable frame including a horizontal guide yielding bottle-supporting means at one end thereof, a forked carrier traveling in said guide, a crank-shaft journaled in the frame having a pitman connecting it to the slide, a vertically-movable label-support beneath the carrier, a cam-shaft having a cam for operating the label-holder, a roller beneath the carrier, a second cam-shaft having a cam for raising and lowering the roller, a vertically-movable plunger for forcing the bottle through said bottle-supporting means, a spring for holding said plunger elevated, a shaft having an arm adapted to engage and depress said plunger, sprocket-wheels on all of said shafts, and a single sprocket-chain meshing with all of said wheels, substantially as described.

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

THEODORE PANKOW.

Witnesses:
D. L. McKINNEY,
M. L. ENGEBRETSON.