H. SCHAPEKAHM & O. SCHELL.

LABELING MACHINE.

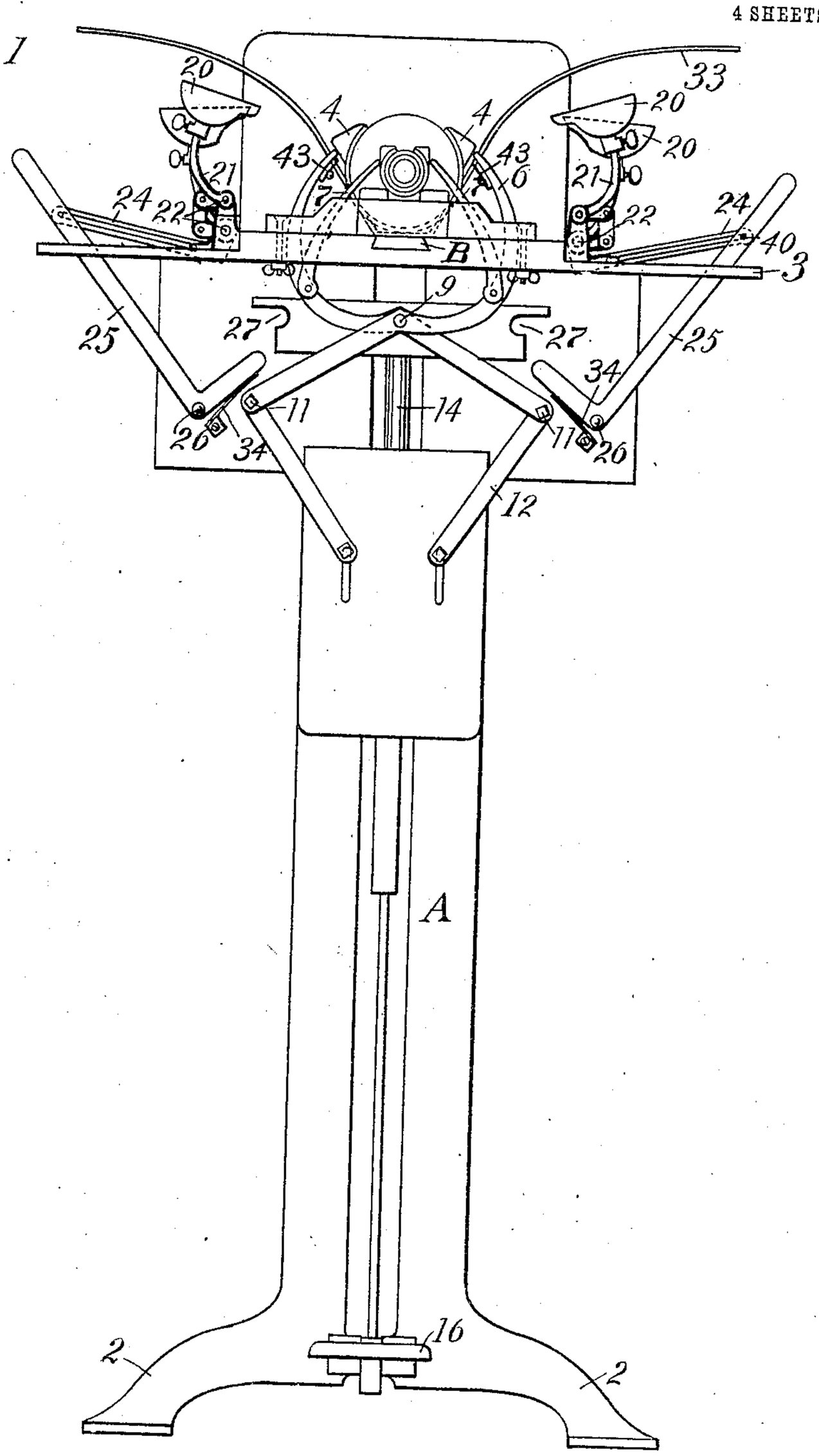
APPLICATION FILED MAR. 16, 1907.

907,705.

Patented Dec. 22, 1908.

4 SHEETS—SHEET 1.

Fig. 1



Witnesses,
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Inventors,
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4 SHEETS—SHEET 2.

Fig. 2

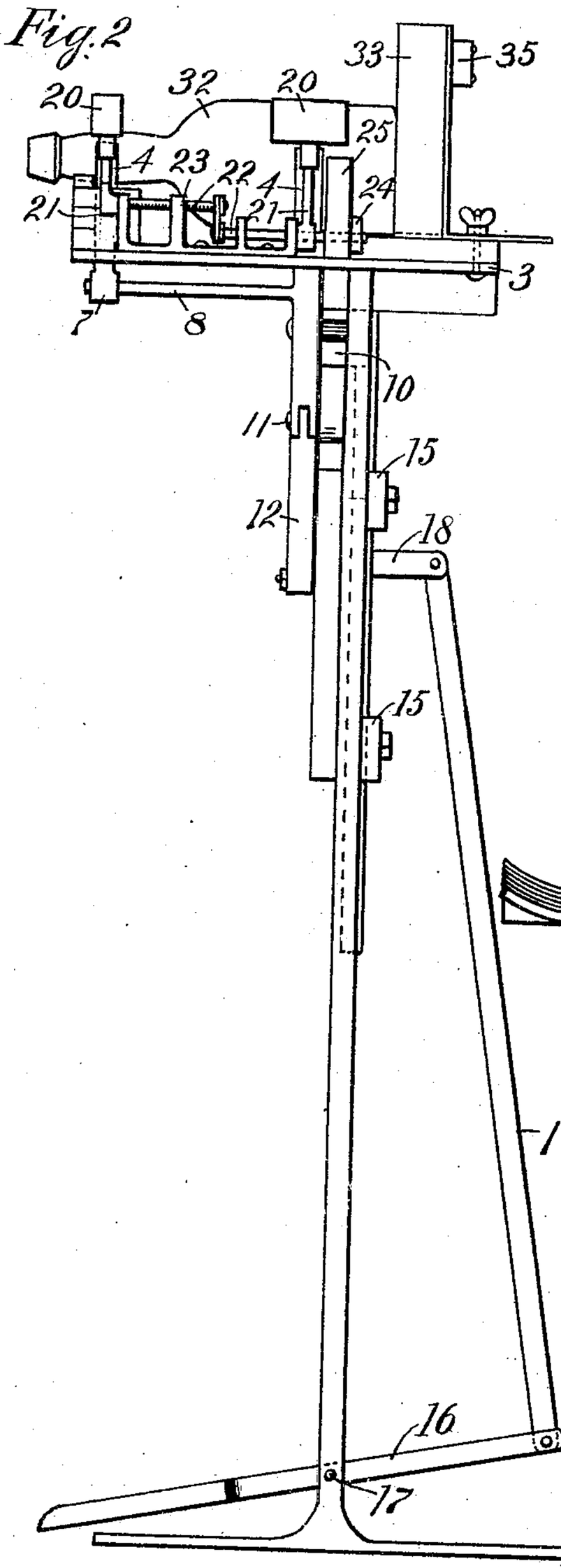


Fig. 3

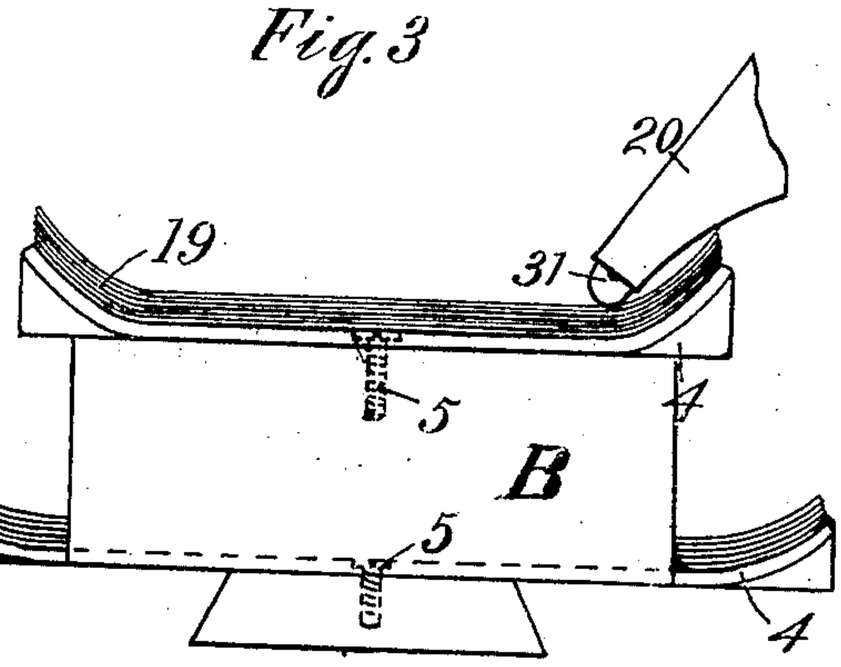
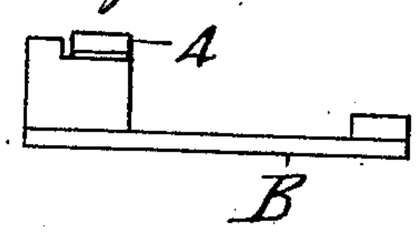


Fig. 11



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4 SHEETS—SHEET 3.

Fig. 4

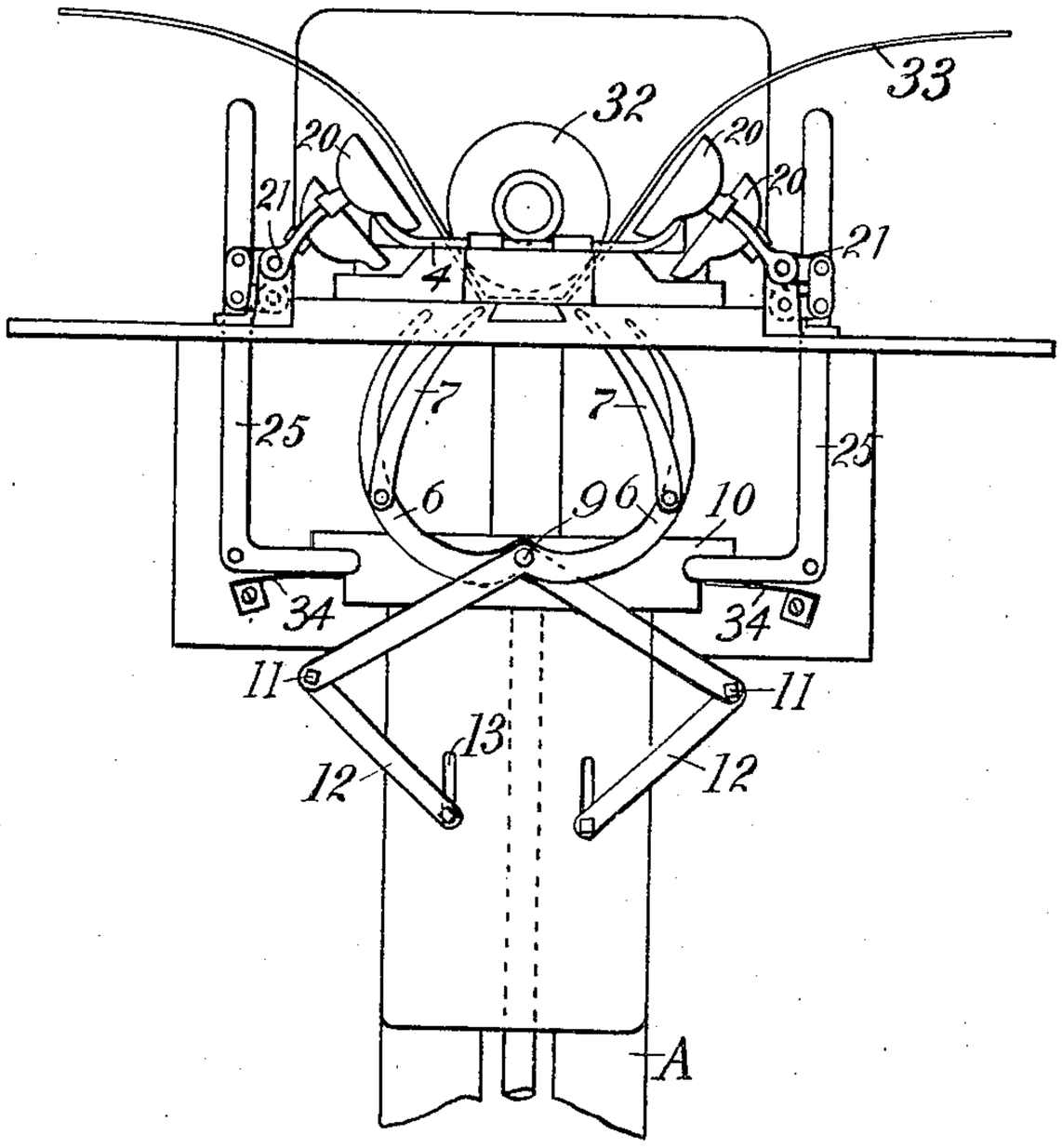


Fig. 5

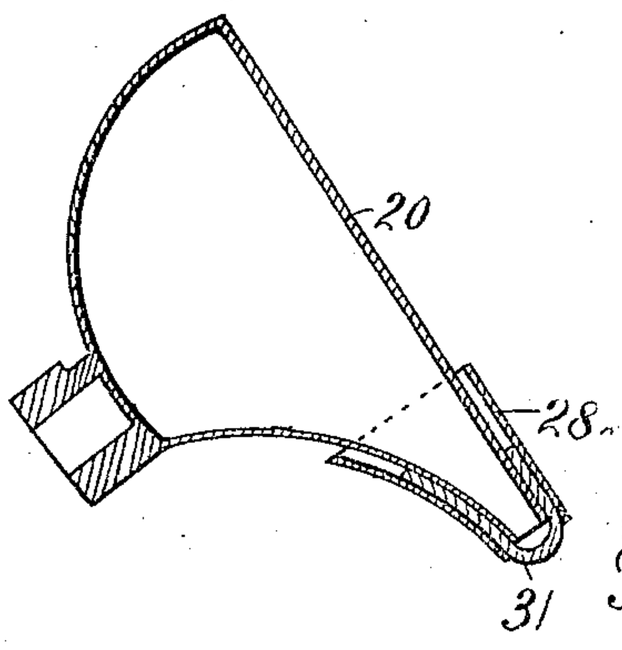
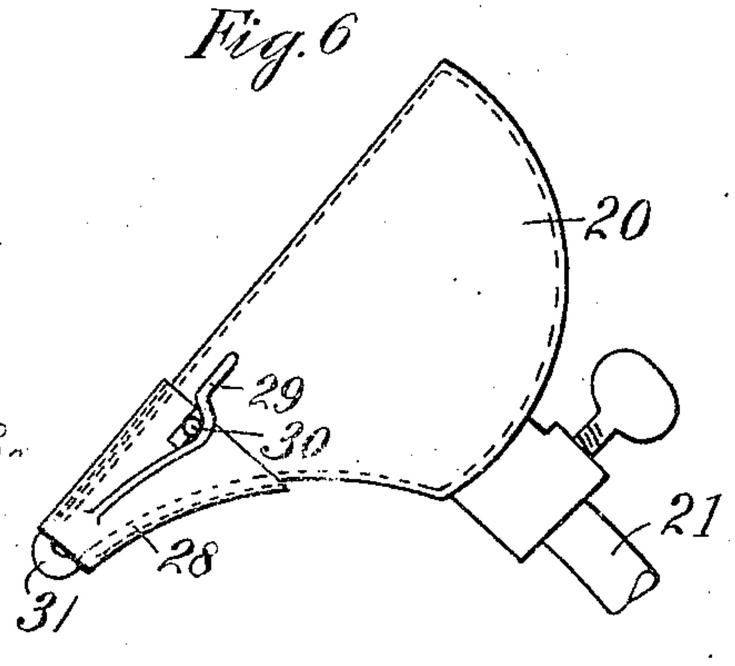


Fig. 6



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4 SHEETS—SHEET 4.

Fig. 7

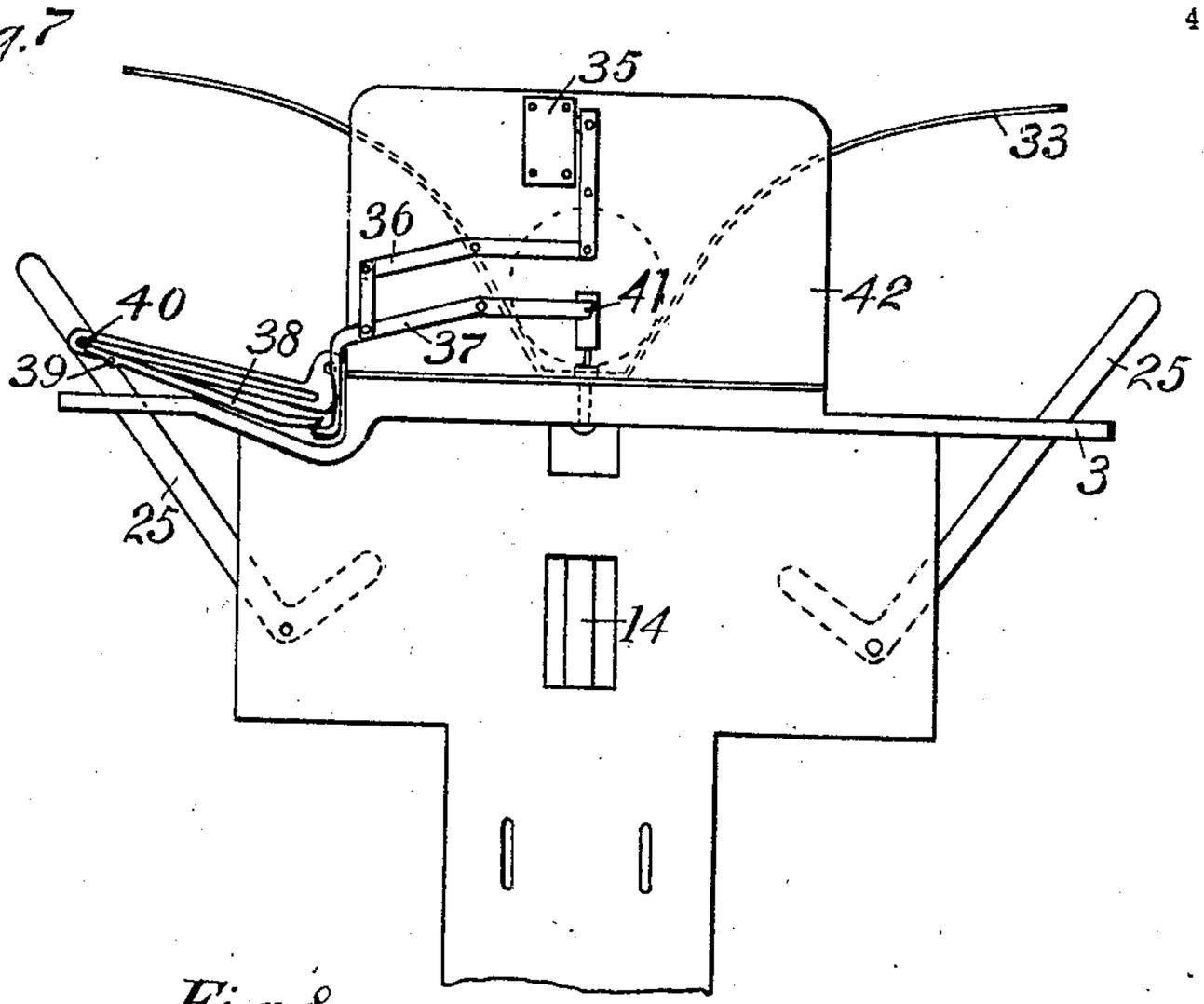


Fig. 8

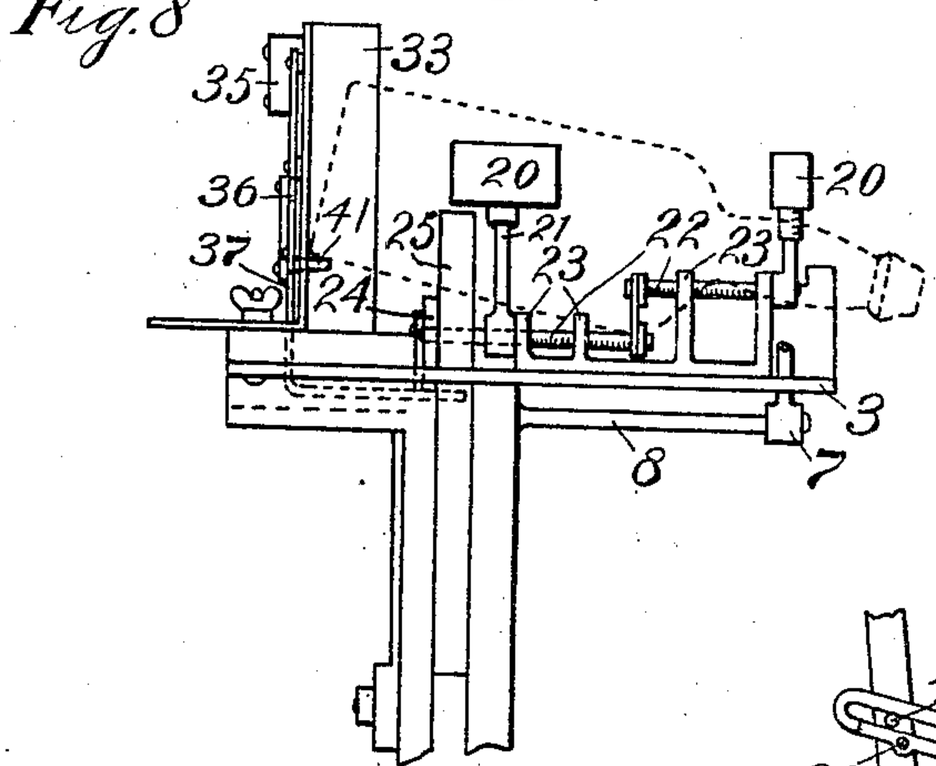


Fig. 9

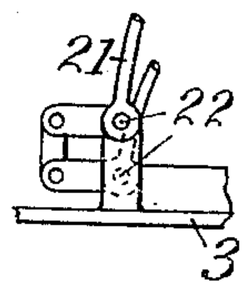
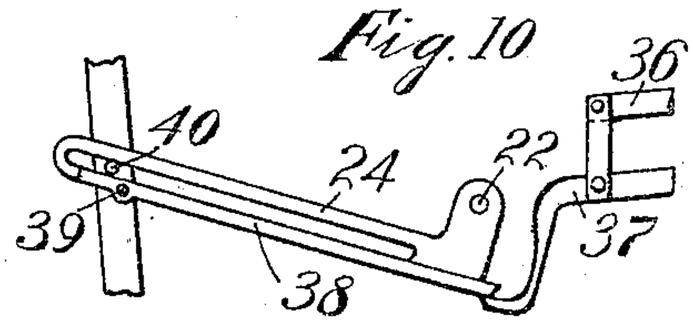


Fig. 10



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UNITED STATES PATENT OFFICE.

HERMAN SCHAPEKAHM AND OTTO SCHELL, OF NEW ULM, MINNESOTA.

LABELING-MACHINE.

No. 907,705. Specification of Letters Patent. Patented Dec. 22, 1908.

Application filed March 16, 1907. Serial No. 362,677.

To all whom it may concern:

Be it known that we, HERMAN SCHAPEKAHM and OTTO SCHELL, citizens of the United States, residing at New Ulm, in the county of Brown and State of Minnesota, have invented certain new and useful Improvements in Labeling-Machines, of which the following is a specification.

Our invention relates to improvements in labeling machines its object being particularly to provide a machine of simple and convenient construction for gluing labels upon bottles.

To this end our invention consists in the features of construction and combination hereinafter particularly described and claimed.

In the accompanying drawings forming part of this specification, Figure 1 is a front elevation of our improved machine with the parts shown in position to glue the labels upon a bottle; Fig. 2 is a side elevation of the same; Fig. 3 is a detail showing the label holders and a glue distributer; Fig. 4 is a front elevation of the upper end of our machine in normal position; Figs. 5 and 6 are sectional and side elevations, respectively, of a glue holder or distributer forming part of our invention; Fig. 7 is a rear elevation of the upper end of our machine; Fig. 8 is a side elevation of the upper end of our machine; Fig. 9 is a detail of part of the actuating mechanism for the glue distributers; Fig. 10 is a detail view of part of the actuating mechanism for an indicator forming part of our invention, and Fig. 11 is a side view of the label holder support.

In the accompanying drawings A represents the frame work of the machine supported upon suitable feet 2. Carried by the upper end of the machine is a horizontal table 3, which supports the label holder support B and the label affixing mechanism. The label holder support is removably secured in the plate 3 as indicated in Fig. 1. The label holder support as shown is relatively higher at its front end to receive the neck of the bottle and is provided with flexible label holders 4 centrally secured to the support as by means of screws 5. The label holders 4 correspond in number and length to the number and length of the labels to be affixed to the bottle, two being shown in the drawings; one to affix the labels to the body of the bottle and the other to affix the labels to the bottle neck. Arranged below the table in position to pass through openings underneath the ends of the label holders are two pairs of bent lever arms 6 and 7, the lever arms 7 being connected to the arms 6 by rods 8. The pair of lever arms 6 have central fulcrum support 9 upon a block 10 and have pivotal connection 11 at their lower ends with the links 12, the lower ends of the links 12 being slidable in vertical slots 13 in the framework. The block 10 is supported upon a bar 14 which bar is slidable in bearings 15 carried by the framework. The bar 14 is adapted to be raised by means of a treadle 16 having fulcrum support 17 in the lower end of the machine, said treadle being connected at its rear end by an arm 17^a with rearwardly extending support 18 upon said bar.

In order to deposit glue upon the ends of the labels 19 we provide glue cups or receptacles 20 adjustably supported upon the ends of arms 21, the arms 21 being carried by transverse shafts 22 having journal support 23 upon the table 3. The shafts 22 are each made in two connected members to give relatively higher support for the front cups so that in operation the said cups will stand in proper position with reference to the bottle. Each shaft is connected at one end by a link 24 with a bent lever arm 25, the link 24 having slidable connection with said arm. The lever arms 25 each have fulcrum support 26 and in the operation of the machine engage at their lower ends with the recessed ends 27 of the block 10, as hereinafter pointed out. Springs 34 are arranged in connection with the lower ends of the arms 25 to take up play of the parts.

In order to register the number of bottles to which labels are affixed we provide an indicator 35 secured upon the back of the machine and connected by lever arms 36 with a tripping lever 37 which in turn engages with a lever 38 having fulcrum support 39 upon the adjacent link and normally engaging with the pin 40 which connects the link and arm 25. The engagement of the lever 38 with the pin 40 holds the links 25 and connected mucilage cups from movement. The tripping lever 37 is connected, as shown in Fig. 7, with a trigger 41 extending through the back 42 of the machine.

The lever arms 6, as shown, are preferably provided with extension members 43 to make the machine adjustable for different sizes of bottles.

Each of the mucilage cups or holders carries a detachable cap 28 held in position by a spring 29 engaging with a pin 30 carried by the cup, said cup having an open outer end and carrying a mucilage brush or distributer 31. In filling the cup the cap 28 can be removed.

In operation with the parts standing in position shown in Figs. 7 and 8, with a number of labels face downward upon the holders 4 a bottle 32 can be placed upon the holders being guided to position by the guide 33. As the bottle is placed in position it will engage and depress the trigger 41 turning the lever 37 upon its pivot and raising the lower end of the lever 38 to throw said lever out of engagement with the pin 40, and simultaneously actuating the indicator 35 through the lever arm 36. The releasing of the lever 38 from the pin 40 leaves the arms 25 free to be turned upon their pivots by the block 10 which stands ready to drop by gravity into the position shown in Fig. 4. The block 10 in dropping turns the arms 25, also turning the connected glue cups against the outer ends of the label holders and depositing glue thereon. As the block 10 is raised it will first turn the levers 25 upon their fulcrum carrying the glue holders away from the labels. The raising of the block 10 raises the levers 6 and 7, the lever arms 12 sliding in the slots 13 and as the arms 12 reach the upper ends of the slots, the continued upward movement of the block 10 will turn the arms 6 and 7 upon their fulcrum connection 9 into the position shown in Fig. 1 This movement of the arms 6 and 7 raises the ends of the label holders and turns them inwardly against the sides of the bottle, as shown in Fig. 1, pressing the supported labels against the bottle and causing the upper labels to adhere. The treadle then being released the parts will drop to the position shown in Figs. 7 and 8 with the lever 38 in engagement with the pin 40 holding the parts in position for a second operation of the machine. It will be evident that when the parts as heretofore described are carried to position shown in Fig. 4 by the disengaging of the lever 38 from the pin 40, the lever 38 will be carried away from the lever 37 and be free to swing upon its pivot 39. Thus when the treadle is depressed to lift the block 10 and turn the levers 25 into position shown in Fig. 1 the lever 38 will by gravity swing into locking engagement with the pin 40. Thereafter when the bottle is removed releasing the trigger the block will drop as far as the inner ends of levers 25 upon which it will be supported and the inner end of the lever 37 will spring past the inner end of the lever 38 into the position shown in Fig. 7 ready for another operation of the machine.

We claim—

1. In a machine of the class described, the combination of a flexible label holder, means for distributing glue upon the outer ends of labels resting upon said holder, stationary bottle holding means supporting a bottle upon said labels, lever arms arranged below said label holder, and means for actuating said lever arms to carry the ends of said label holder upwardly and inwardly upon a bottle resting upon said bottle holder

2. In a machine of the class described, the combination of a flexible label holder, pivotally supported glue distributing devices arranged upon opposite sides of said label holder, actuating means for carrying said glue devices against the ends of labels resting upon said holder, means supporting a bottle upon said label holder, and vertically slidable means arranged below said label holder for turning the ends thereof upwardly and inwardly upon a supported bottle.

3. In a machine of the class described, the combination of a flexible label holder, glue devices having swing support adjacent to the ends of said label holder, actuating levers for said glue devices, pivotally connected levers supported below the ends of said label holder, and means for raising said levers and turning the same upon their pivots and for turning said glue distributing devices against said holders.

4. In a machine of the class described, the combination of flexible label holders, glue distributing means arranged adjacent to the ends of said holders, lever arms slidably supported below said holders, means for actuating said lever arms comprising a treadle and a connecting rod between said treadle and arms, and means connected with said arms for actuating said glue distributing devices.

5. In a machine of the class described the combination of label holders, glue distributing devices arranged in connection with said label holders, lever arms slidably fulcrumed below said holders, means for raising said lever arms against said holders to turn the same against a superimposed bottle, and means actuated by said lever arms for turning the glue distributing devices against the labels arranged upon said label holders.

6. In a machine of the class described, the combination of label holders, glue distributers having swing support adjacent to the ends of said label holders, lever arms having slidable fulcrum support below said label holders, treadle actuated means for raising said lever arms to carry the ends of said label holders upwardly and inwardly upon a superimposed bottle and means actuated by said lever arms for turning said gluing devices downward upon said label holders.

7. In a machine of the class described, the combination of flexible label holders, glue distributing devices having swing support adjacent to the ends of said holders, lever

arms having slidable fulcrum support below said holders, treadle actuated means for raising said lever arms and turning them inwardly upon their fulcrum to carry the ends of said label holders upward and inward against a superimposed bottle, and means actuated from said lever arms for carrying said glue distributing devices against labels arranged upon said holders.

8. In a machine of the class described, the combination of a flexible label holder, glue devices having swing support adjacent to the ends of said label holder, actuating levers for said glue devices, pivotally connected levers below the ends of said label holder, means for raising said levers and turning the same upon their pivot and for turning said glue distributing devices against said holder, and indicating mechanism operated by the placing of a bottle upon said holder.

9. In a machine of the class described, the combination of flexible label holders, glue distributing devices arranged adjacent to the ends of said holders, means for carrying said glue devices into and out of engagement with the upper faces of said label holders, means for carrying the ends of said label holders against a superimposed bottle, indicating mechanism, locking means connected with said indicating mechanism for holding said glue devices in inoperative position and a trip actuated by placing a bottle upon said label holders to release said locking mechanism.

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

HERMAN SCHAPEKAHM.
OTTO SCHELL.

Witnesses:
W. E. Koch,
M. Mullen.