

No. 664,797.

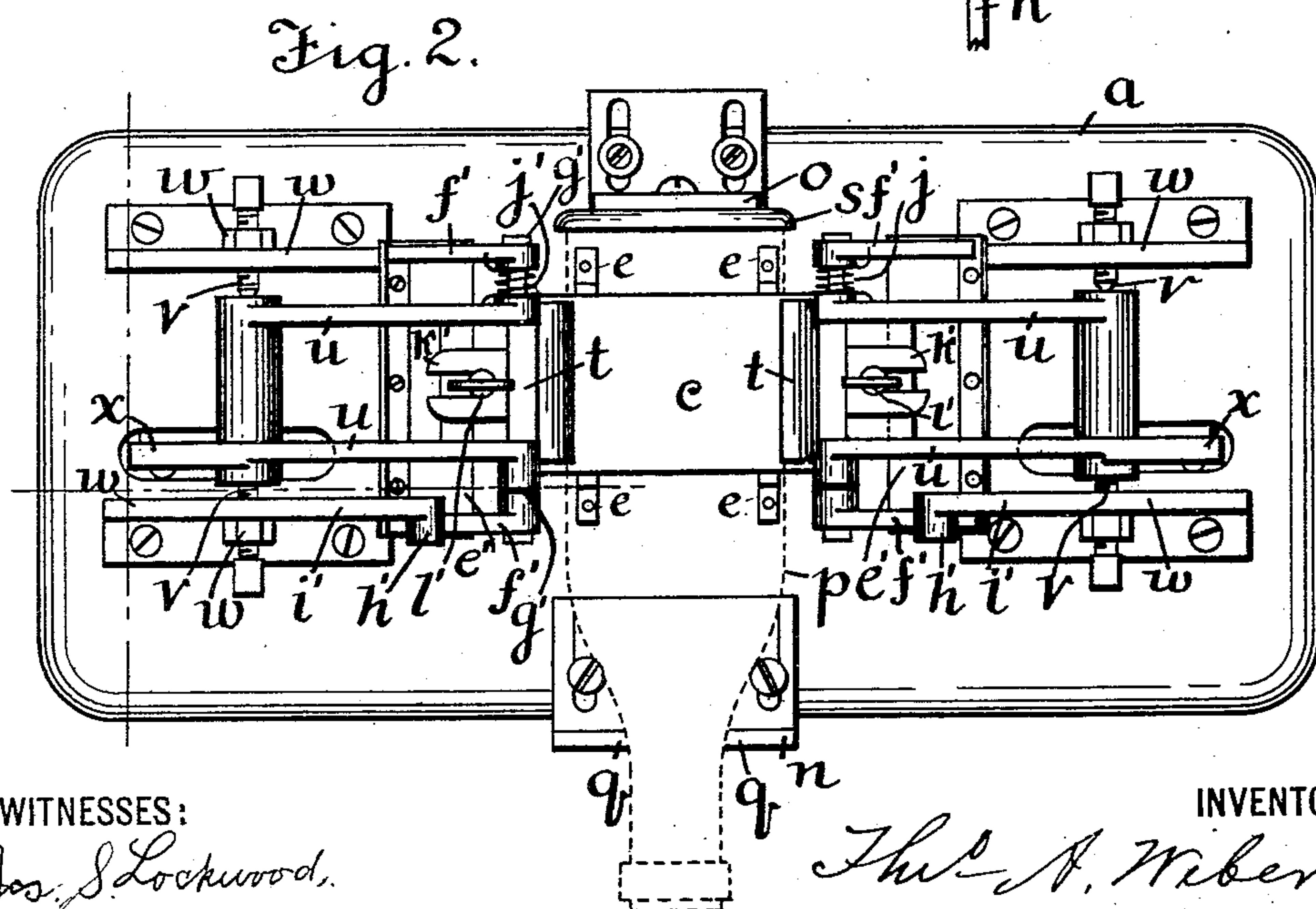
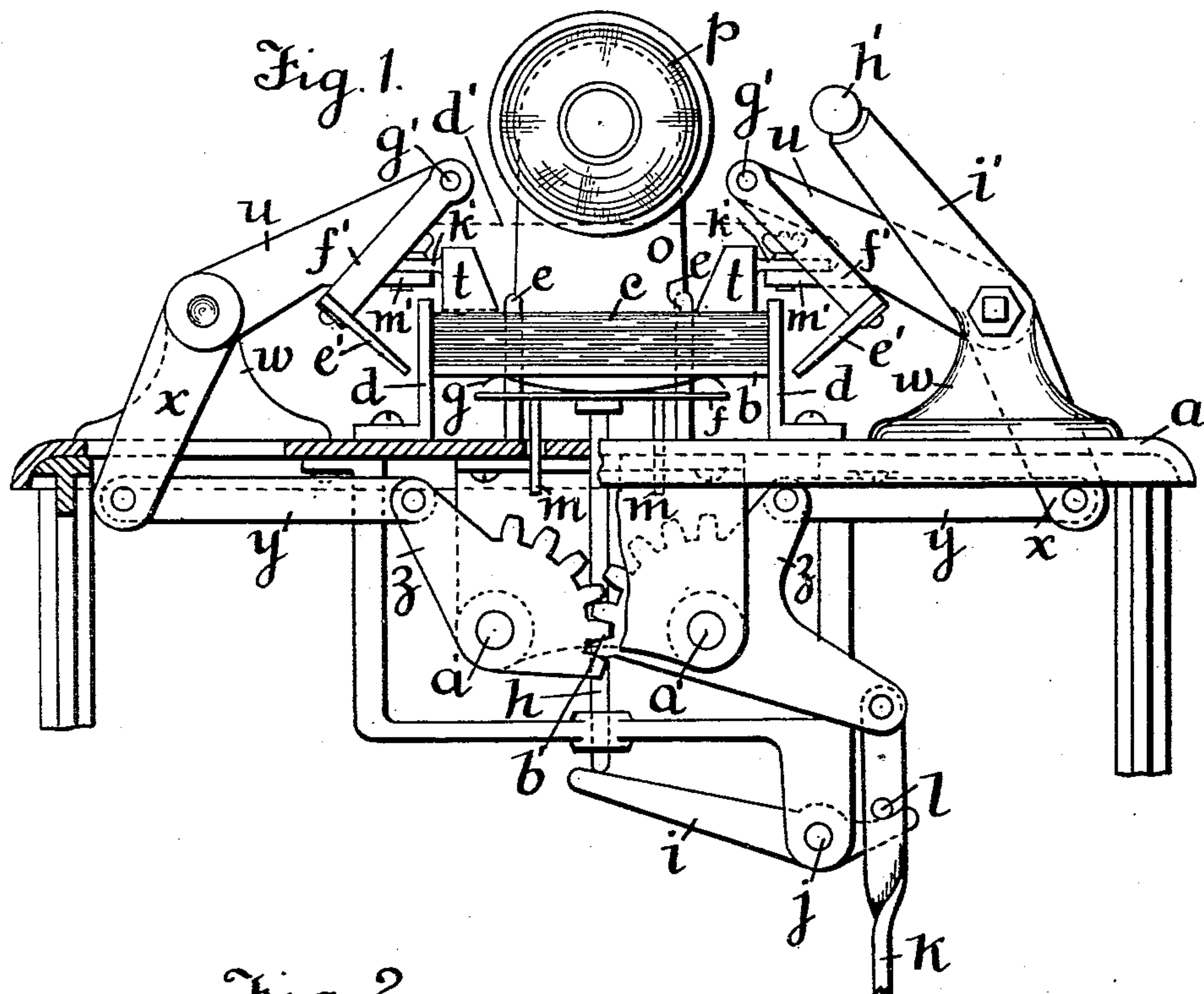
Patented Dec. 25, 1900.

T. A. WEBER.
BOTTLE LABELING MACHINE.

(Application filed Sept. 10, 1898.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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INVENTOR

Thos. A. Weber

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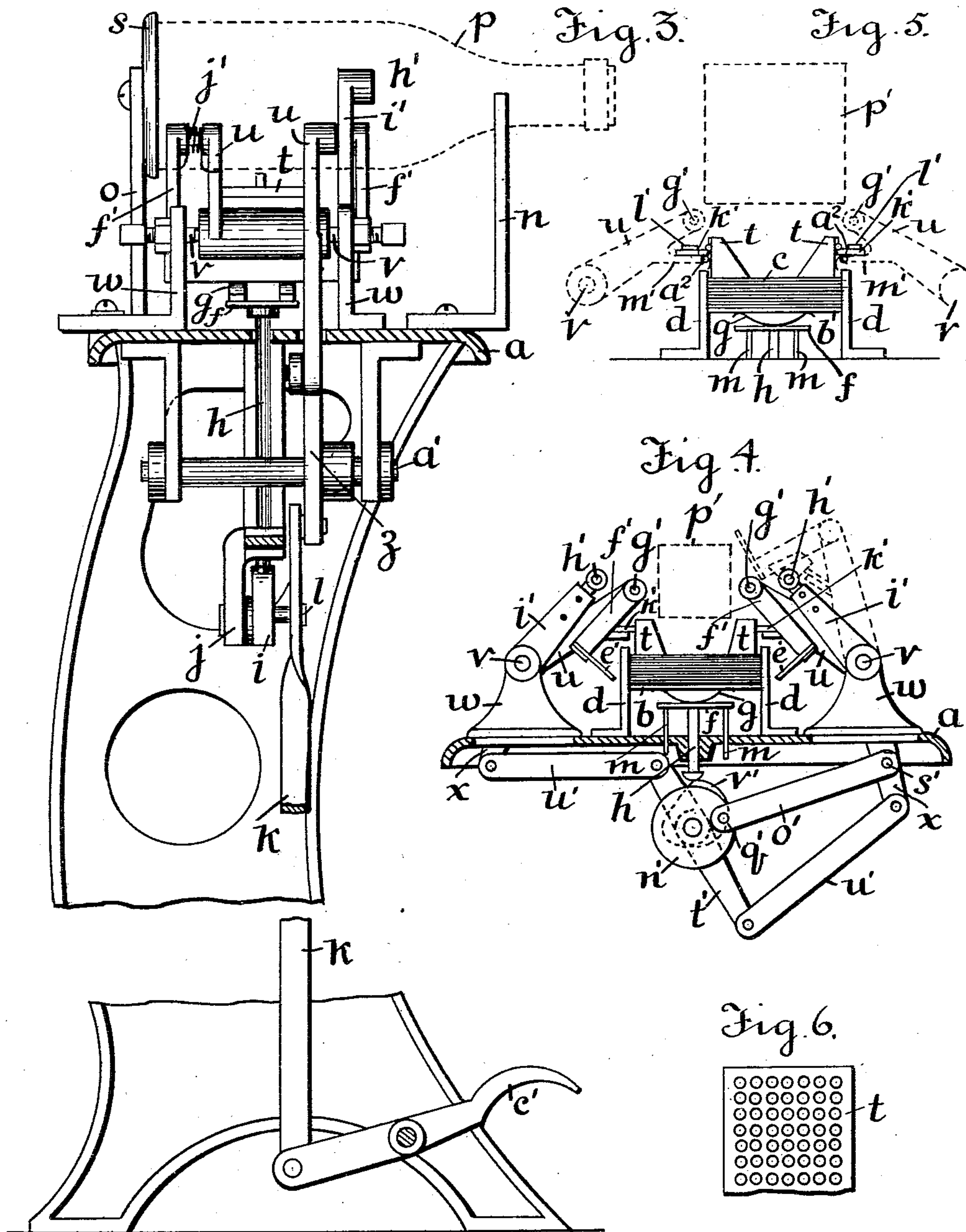
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UNITED STATES PATENT OFFICE.

THEODORE A. WEBER, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO ERNST LUNDGREN, OF SAME PLACE, AND CHARLES A. HANSON, OF CINCINNATI, OHIO.

BOTTLE-LABELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 664,797, dated December 25, 1900.

Application filed September 10, 1898. Serial No. 690,690. (No model.)

To all whom it may concern:

Be it known that I, THEODORE A. WEBER, a citizen of the United States of America, and a resident of New York city, county and State of New York, have invented certain new and useful Improvements in Bottle-Labeling Machines, of which the following is a specification.

My invention relates to machines for labeling bottles, and comprises an organization of labeling apparatus in which the bottles to be labeled are applied directly over the pack of labels and the labels have only to be moved from the pack directly to the bottles in a simpler way and by simpler means than as in other machines, where the labels must be first moved laterally from the pack to the place of application and then be attached to the bottle.

The invention also comprises novel special contrivances of the apparatus employed and adaptations of the same for labeling either round or square bottles, as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is partly a front elevation and partly a sectional elevation of my improved bottle-labeling machine with a bottle in the position for receiving a label. Fig. 2 is a plan view. Fig. 3 is an elevation in a plane at right angles to that of Fig. 1 with the supporting-stand and some other parts in section, the stand being represented nearly in full. In these figures the machine is represented as contrived to be worked by foot-power. Fig. 4 is partly a front elevation and partly a sectional elevation of the machine adapted for labeling square bottles and for being operated by power. Fig. 5 is an elevation of parts of the machine, showing a construction adapted for labeling square bottles with labels not wider than the side of the bottle to be labeled. Fig. 6 is a plan of part of the bottom of a paste-box, showing the paste-giving perforations.

On any suitable table or bench, as *a*, a vertically-movable follower *b* for carrying the labels *c* in packs is placed between suitable upright plates *d* and other upright guides *e*,

of approved form, constituting a holder in which the packs of labels are confined laterally while being free to be taken away one by one in an upward direction. The follower is mounted on a slightly vertically movable table *f*, with intermediate springs *g*, affording a yielding support for the packs of labels, the said table being carried on a standard *h*, supported at one extremity of a lever *i*, pivoted at *j* and at or near its other extremity subject to the thrust of the connecting-rod *k* to raise the labels slightly just prior to the termination of the falling movement of said connecting-rod, when the apparatus assumes the normal position after the application of a label and preparatory to applying another. A stud-pin *l* of the connecting-rod lodges on the short arm of the lever *j* for so causing the connecting-rod to raise the labels. The purpose of so raising the labels will appear farther on. The table *f* has suitable guides *m*, working through guideways in the bench *a* to insure the proper action of the table. In front of this pack-holder is a standard *n*, and behind it is another standard *o* for support of the bottles *p* to be labeled directly over the pack of labels. Standard *n* has a notch *q* in the top adapted for the neck of the bottle to drop in, and standard *o* has a tray *s*, set up edgewise for reception of the base end of the bottle within its flange, while the neck rests in the notch of standard *n*, the bottle being at the same time held by the hand of the attendant grasping the part of the neck projecting beyond the standard *n*.

The labels are placed with the blank side upward, and two paste-boxes *t*, having perforated or other paste-giving bottoms, are employed to paste two opposite margins of the labels and to lift the labels which adhere to them by the paste up against the under sides of the bottles. The paste-boxes are attached to arms *u*, pivoted at *v* in suitable supports *w* for swinging the boxes up and down, said arms being in this example of my invention connected by levers *x* and rods *y* with rock-levers *z*, pivoted at *a'*, which are geared together by the toothed segments *b'* for operating one by the other, and one of said levers is

coupled to the connecting-rod k of the foot-treadle c' , so that when the treadle is pressed down the boxes will rise and present a pasted label to the bottle for being attached thereto.

5 To take the labels from the paste-boxes when so lifted up in about the position indicated by the dotted line d' , Fig. 1, rubber or other flexible brushes e' , carried on arms f' , pivoted at g' to the swinging ends of arms u , are
10 caused by the arms f' coming in contact with the extremities h' of the stationary arms i' to swing forward under the labels and under the bottles and press and stick the labels thereon, said brushes being thus given an up-
15 ward sweep along the outer portions of the labels and beyond the edges, respectively, as will be understood by the dotted lines at the right-hand side of Fig. 4. When the label is thus attached, the bottle is removed, and the
20 treadle is relieved of pressure, allowing the arms u to fall, also allowing the brushes to return to the positions represented in Fig. 1 and the paste-boxes to drop onto the upper label of the pad, ready for the next operation.
25 The springs j' cause the back set of the brushes clear of the pad-crib, as shown. The paste-boxes are detachably connected to the arms u to facilitate their removal for refilling and also for adjustment as to radial distance
30 from the pivots v . In this case they are represented as having a slotted arm k' , with a clamping-bolt l' and bolted on branches m' of the arms; but any other approved means of such connection may be employed.

35 It will be seen that when the paste-boxes t drop onto the pack of labels the pack is at the same time given an upthrust against the boxes for sufficient impact to insure good delivery of paste and effective sticking of the
40 labels, this being caused by stud-pin l of the connecting-rod k acting on lever i , so as to force up the follower f , and it will also be noticed that in the beginning of the operation of affixing the label slight rise of stud l away
45 from the short arm of lever i allows considerable drop of the pack of labels before the paste-boxes begin to rise, which opens free space between the label adhering to the paste-boxes and the next one below with less suc-
50 tion than if the pack remained stationary and the suction had to be entirely broken by the lifting of the upper label directly from the pack, whereby the labels are less liable to be detached in the start.

55 In Fig. 4 the bottle p' (dotted) is indicated in rectangular cross-section, showing the apparatus as alike applicable for labeling such bottles, the labels being of greater breadth than one side of the bottle to overlap the two
60 lower corners of the bottle.

If small labels not so wide as the side of the bottle are to be applied, the paste-boxes are to be hinged to their connecting-arms k' , and said arms are to be longer, as represented at
65 a^2 in Fig. 5, so that the boxes will reach within the limits of the narrower labels and will duly paste them and then on rising and coming in

contact with the bottle, because of reaching farther under it, will swing clear on the hinges, and thus will not be obstructed in their up-
70 ward movement out of the way of the brushes. Means may be employed, if necessary, to cause parallelism of the faces of the boxes with the labels when making contact with them.

For the application of continuous motive
75 power instead of intermittent foot-power, as represented in Figs. 1 and 3, various different contrivances may be employed. For example, a pulley n' may be located under the center of the machine, to be driven by a belt
80 or otherwise, as preferred, with a connecting-rod o' coupled with a crank-pin q' and at s' coupled to a lever x of one of the arms u , and the levers x of the two arms u may be coupled together by the rock-lever t' and the links u' ,
85 and in such a case a cam v' may be employed to lift the follower f . It is obvious that various other contrivances of power actuating apparatus may be employed.

What I claim as my invention is—

1. In a bottle-labeling machine, the combination of a bottle-holding stand, a label-holder located in relation to the stand for enabling the transfer of the labels directly upward from the top of the pack onto the bottles, means
95 for pasting the labels, and means for detaching the labels from the top of the pack successively and transferring them separately from the pack onto the bottles, substantially as described. 100

2. In a bottle-labeling machine, the combination of a bottle-holding stand, a label-pack holder located in relation to the stand for holding the pack of labels directly under the
105 bottles to be labeled, means for pasting the labels in such location, and means for detaching the labels from the top of the pack successively and transferring the pasted labels directly therefrom to the bottles, substantially as described. 110

3. In a bottle-labeling machine, the combination of a bottle-holding stand, a label-holder located in relation to the stand for holding the
115 pack of labels directly under the bottles to be labeled, paste-boxes adapted for pasting opposite margins of the labels in such position and lifting said labels up to the bottles, and means for brushing the labels onto the bottles substantially as described.

4. In a bottle-labeling machine, the combination of a bottle-holding stand, a label-holder located in relation to the stand for holding the label pack directly under the bottles to be
120 labeled, paste-boxes adapted for pasting opposite margins of the labels in such position, and lifting said labels up to the bottles, and brushes adapted to swing under the paste-boxes and the uplifted labels and brush them on the bottles substantially as described. 125

5. The combination with the bottle-holding
130 stand, a label-holder located in relation for holding the label packs directly under the bottles to be labeled, paste-boxes for opposite margins of the labels, pivoted at opposite sides

of the bottle-stand respectively, label-stick-
ing brushes pivoted on the paste-box-carrying
arms, means for actuating the paste-box-car-
rying arms and means for actuating the piv-
5 oted brushes relatively to the paste-boxes and
bottles substantially as described.

6. In a bottle-labeling machine, the combi-
nation of the bottle-holding stand, a label-
holder located in relation for holding the label
10 pack directly under the bottles to be labeled,
a label-supporting follower in said holder,
paste-boxes for opposite margins of the labels,
brushes for sticking the labels on the bottles,
and means for retiring the follower to open
15 the pack preparatory to applying the labels
substantially as described.

7. In a bottle-labeling machine the combi-
nation of the bottle-holding stand, a label-
holder located in relation for holding the label
pack directly under the bottles to be labeled, 20
swinging paste-boxes for opposite margins of
the labels, and brushes for sticking the labels
on the bottles, said paste-boxes pivoted on
their carrying-arms for escaping the sides of
the bottles substantially as described. 25

Signed by me at New York, State of New
York, this 8th day of September, 1898.

THEODORE A. WEBER.

Witnesses:

ERNST LUNDGREN,
A. P. THAYER.