

915,035.

N. MUSLAR.
BOTTLE LABELING MACHINE.
APPLICATION FILED DEC. 15, 1906.

Patented Mar. 9, 1909.
3 SHEETS—SHEET 1.

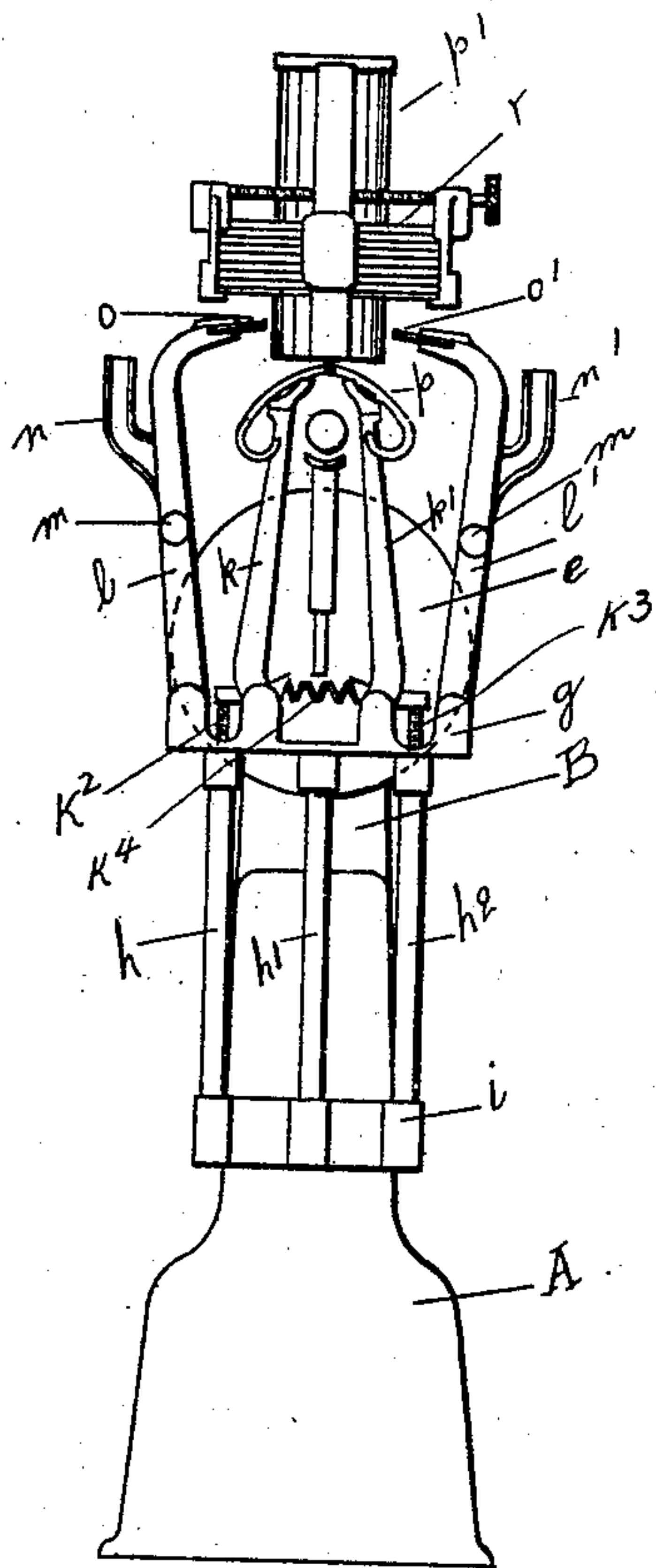


Fig. 1

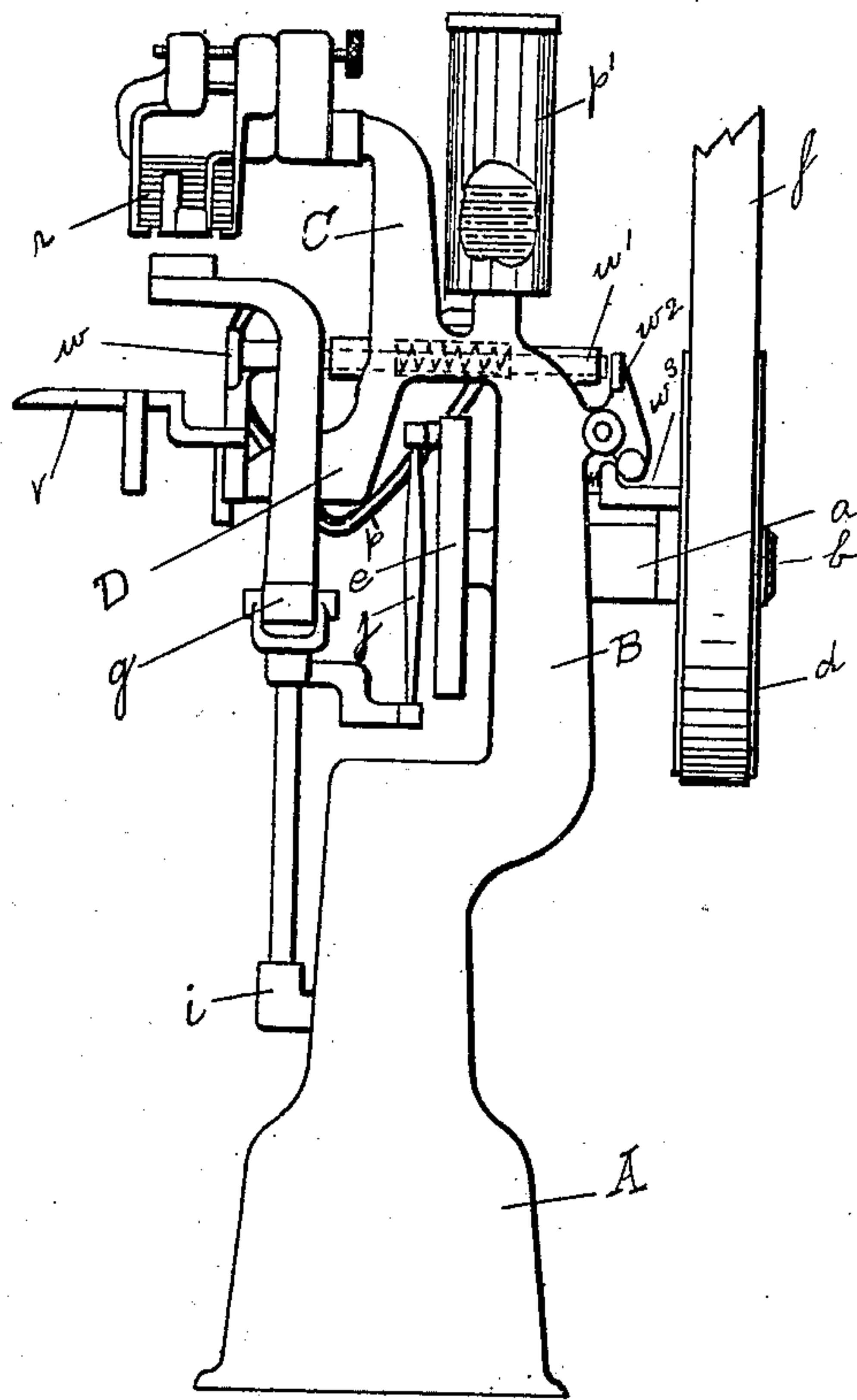


Fig. 2

Witnesses

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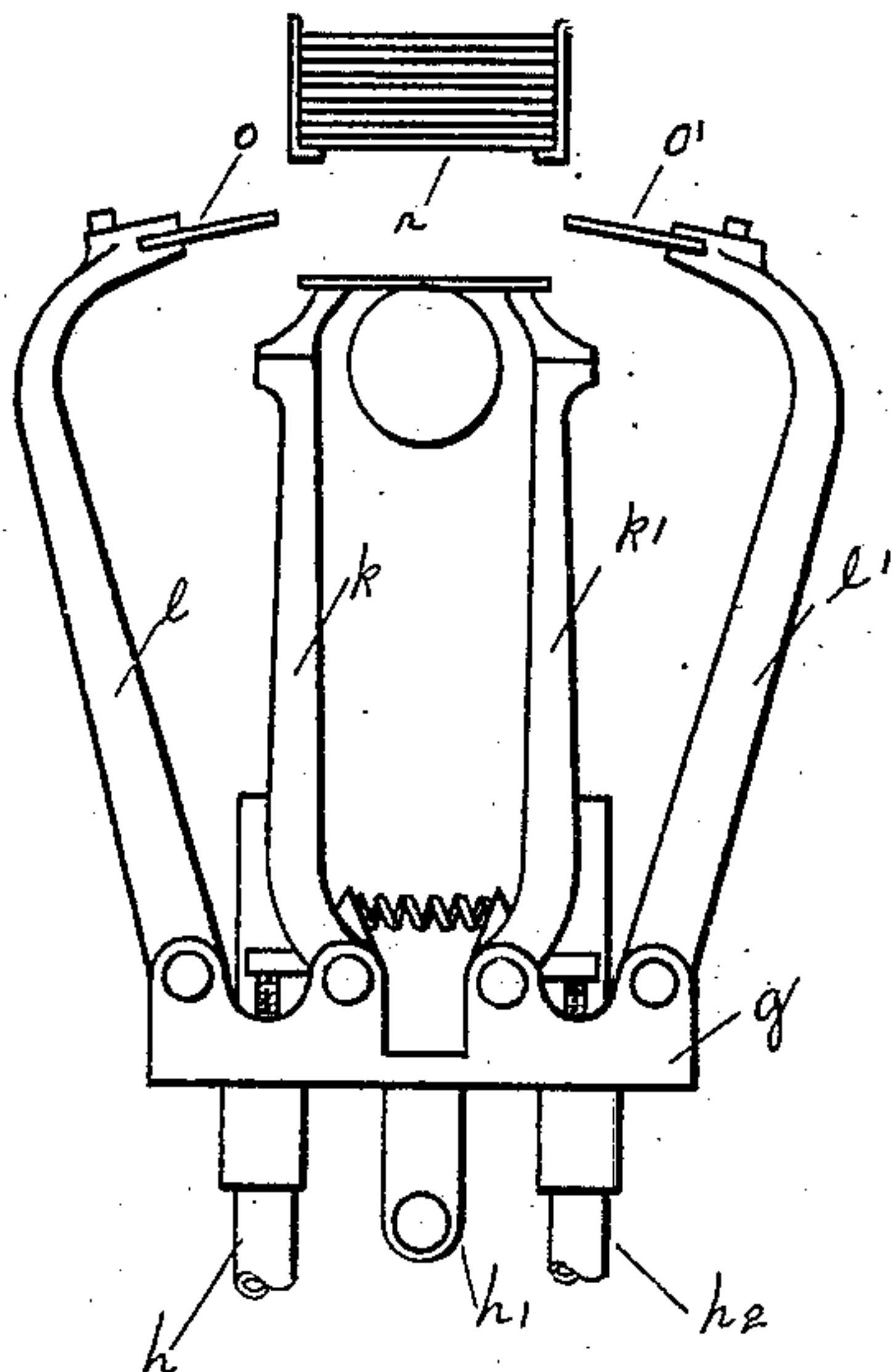


Fig. 5

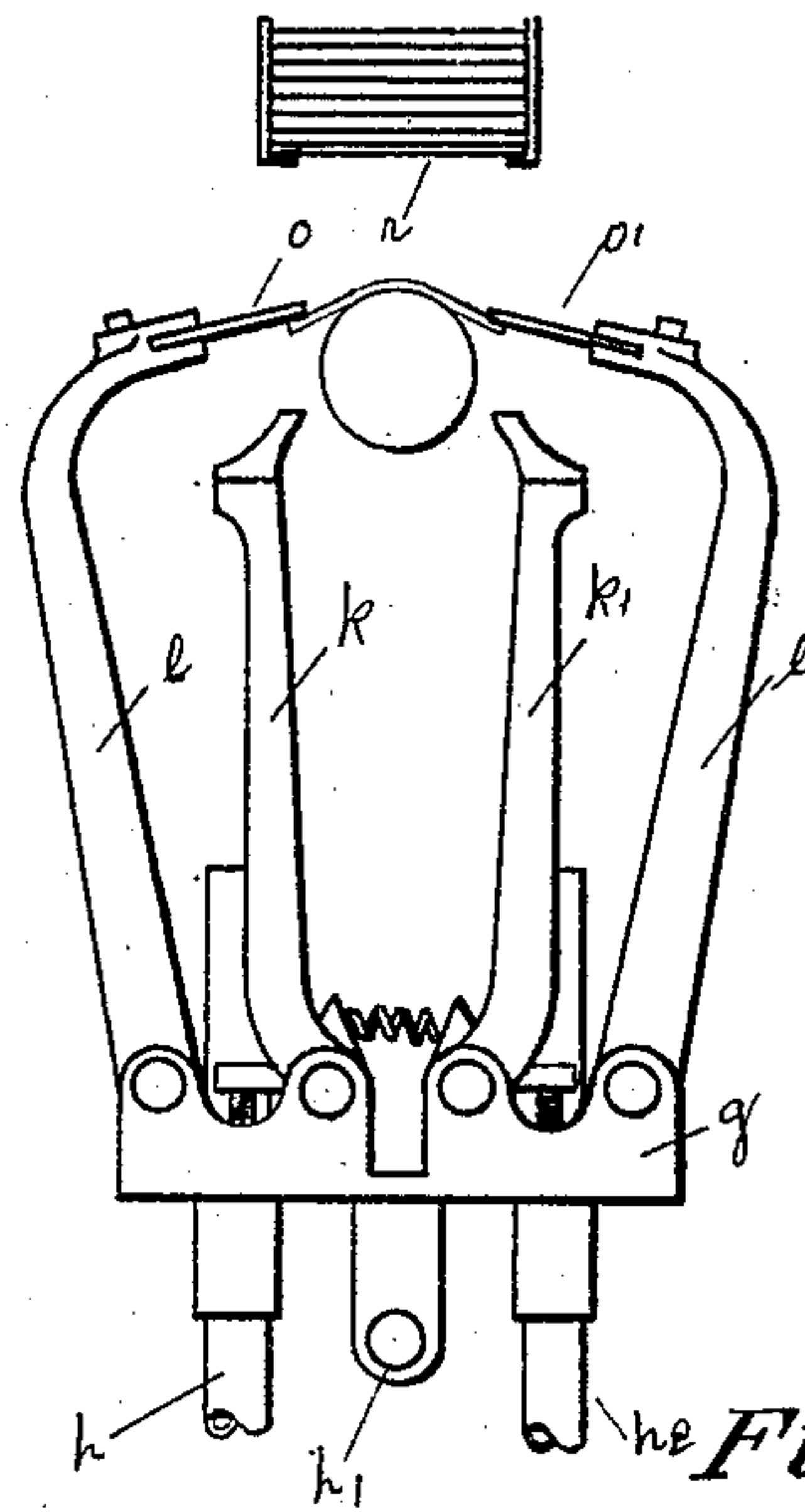


Fig. 6

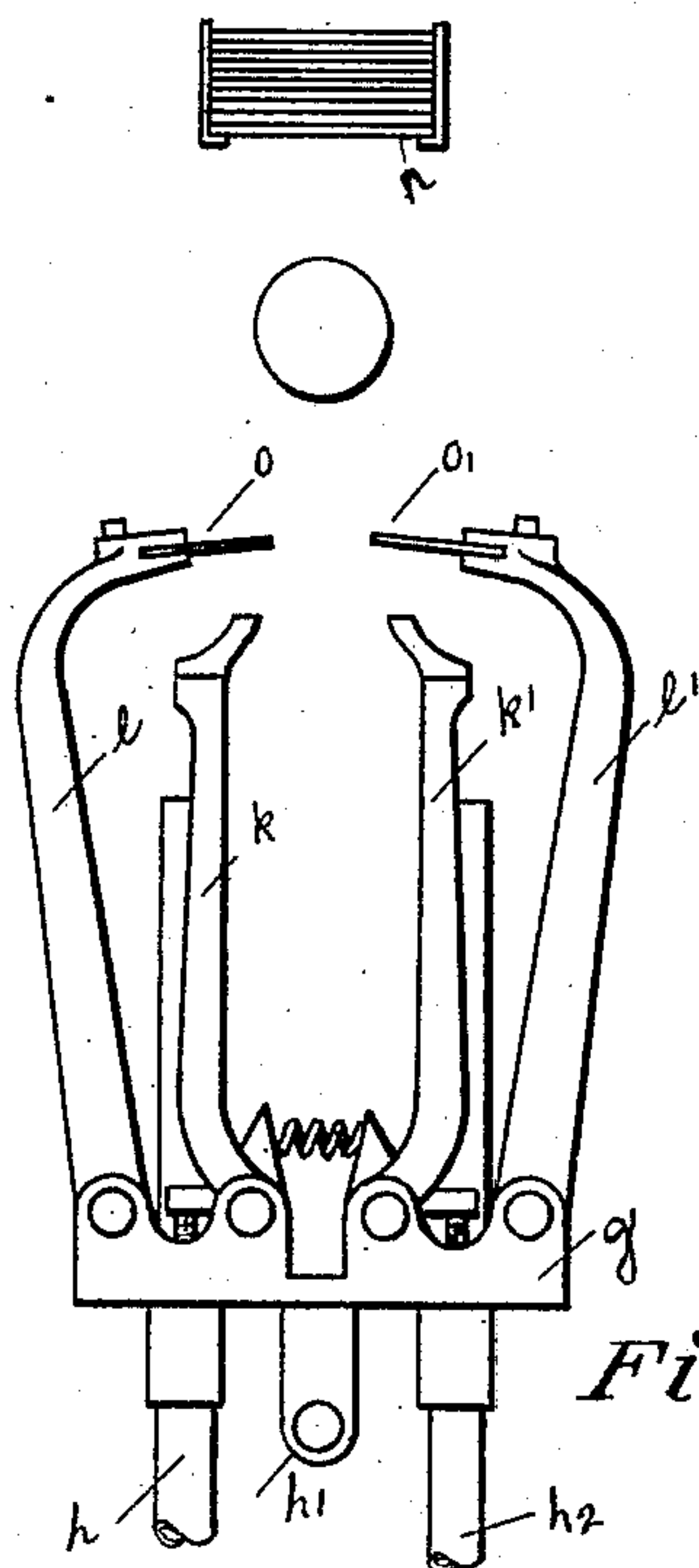


Fig. 3

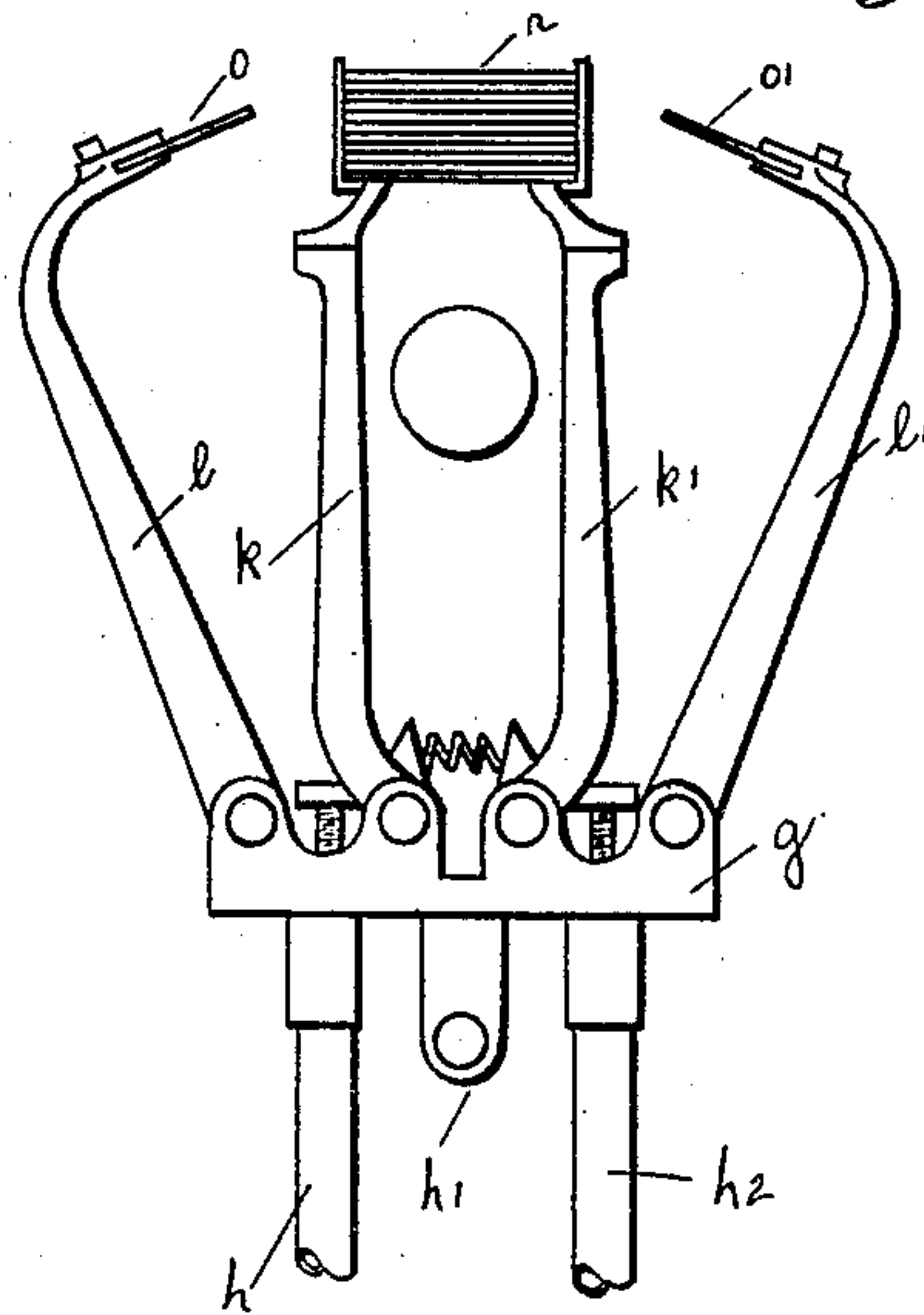


Fig. 4

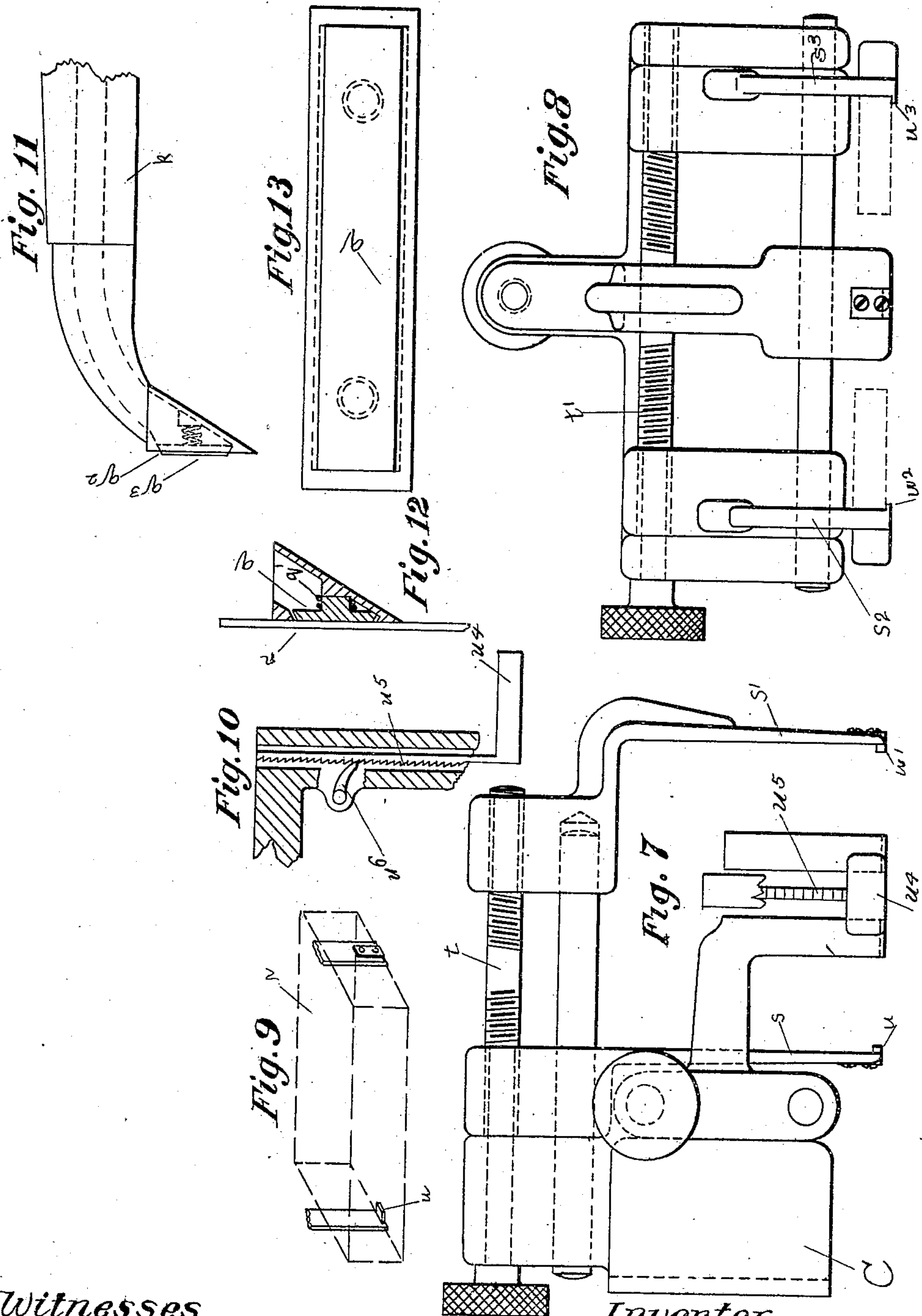
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

NELSON MUSLAR, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO ARTHUR C. HIGGINS,
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BOTTLE-LABELING MACHINE.

No. 915,035.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed December 15, 1906. Serial No. 348,041.

To all whom it may concern:

Be it known that I, NELSON MUSLAR, a citizen of the United States of America, and resident of the city and county of Worcester, Commonwealth of Massachusetts, have invented certain new and useful Improvements in Bottle-Labeling Machines, of which the following is a specification.

My invention relates to improvements in bottle labeling machines and has for its object to provide an improved machine for applying labels to bottles, or other packages, rapidly and effectively, and particularly to simplify the mechanism for this purpose.

In the drawings, Figure 1 is a front elevation of the entire machine. Fig. 2 is a side elevation of the entire machine. Figs. 3, 4, 5, and 6 show means for applying and affixing the labels, showing in several views the different positions of the mechanism during the operation of the machine. Figs. 7, 8, 9, and 10 show views of the label box and its mechanism. Figs. 11, 12 and 13 show the gumming mechanism.

The main frame of the machine is composed of base A, the post B, and the arms C and D. The post B is provided with the journal bearing *a*, having the shaft *b*, on which is mounted the driving pulley *d* and the crank disk *e*. The pulley *d* is driven by the belt *f* from some suitable motor-means, and is made fast or loose to the shaft, as required in the operation of the machine by means of any suitable clutch mechanism.

The cross-head *g* is mounted on the front of the machine and adapted to have an up-and-down reciprocating motion, being mounted on the rods *h*, *h'* and *h²* in the stand *i* attached to the base A. This cross-head *g* is reciprocated by means of the connecting rod *j* attached to the crank disk *e*. To the cross-head *g* are attached the gumming fingers *k* and *k'*, and also the wiping fingers *l* and *l'*. These fingers are all hinged to the cross-head, and are opened and closed in their reciprocating motion to take the label and to effect the gumming of the same, placing it on the bottle and wiping it in place, as will hereafter more fully appear. Fingers *l* and *l'* are controlled in the opening and closing motions by the cam rolls *m* and *m'*, running in tracks *n* and *n'*. These fingers are fitted at their upper ends with flexible wipers *o* and *o'*. The levers *k* and *k'* are adjusted

for the size of label and bottle by the set screws *k²* and *k³* acting against the spring *k⁴*.

The fingers *k* and *k'* are made hollow at their ends, as indicated by dotted line in Fig. 13, this passage being allowed for the gum which is introduced to it by means of the flexible tubes *p* communicating with the gum reservoir *p'*, which is located above the ends of the gumming fingers in order to furnish a slight head for the flow of the gum. The ends of the gumming fingers are provided with the automatic closure or closing-plate *q*, which is held in its closed position by the spring *q'*. This plate *q* has a tight beveled joint *q²*, and in its closed position extends somewhat above the top of the gumming lever as at *q³*, so that when this portion *q³* comes in contact with the labels *r* the spring is compressed and the passage is opened, thus depositing on the label a sufficient quantity of gum.

The labels *r* are held by an adjustable box mounted on the arm C. This box is composed of the sides *s*, *s'*, *s²* and *s³*; the sides *s* and *s'* are adjusted for the width of the label by means of the screw *t*; the sides *s²* and *s³* are adjusted for the length of the label by means of the screw *t'*. Thus different sized labels are provided for. The labels are held by the projections *u*, *u'*, *u²* and *u³*; these projections, however, extend only a sufficient distance to prevent the labels from falling out and to allow the labels to be removed by the gumming fingers. The labels are held down against said projections by the weight *u⁴* attached to the leg *u⁵* engaged by the pawl *u⁶*.

Figs. 11 and 12 show the gumming reservoir, the openings at the bottom *p³* and *p⁴* being provided for the attachment of the flexible tubes *p*.

The bottle stand *v* is attached to the arm D, directly beneath the label box and in such a position that a bottle, or other package, can be laid in its horizontal position on the bottle stand and receive the label as it is deposited thereon by the gumming fingers. Behind the bottle stand is the starting mechanism adapted to be set in operation by the pressure of the bottle against the bunting plate *w*. This bunting plate *w* is mounted on the end of the rod *w'*, mounted on the main stand of the machine, and engages the bell crank lever *w²*, which in turn operates the stop block

*w*³. This stop block is slidably arranged on the bearing *a* and is adapted to operate the clutch which connects and disconnects pulley *d* to shaft *b*, and which, as above stated, may be of any well known type.

The operation of the machine is as follows:—When a bottle is placed on the bottle stand and pushed against the bunting plate, the clutch mechanism is released, allowing the pulley carrying the crank disk to make a complete revolution and to reciprocate the fingers in one complete up-and-down motion. Fig. 3, shows the normal position of the machine when the bottle is inserted. This up-and-down movement carries the gumming fingers against the label, as shown in Fig. 4, the wiping levers being forced out of the way by the cams *n* and *n'*. The closing plates on the ends of the gumming fingers are pushed open and a sufficient quantity of gum forced out to gum the back of the label in two places across same. The label adheres to the ends of the gumming fingers, which on their return stroke bring it in place on the bottle, as shown in Fig. 5. On the completion of the down stroke, the wiping fingers press the label in place, as shown in Fig. 6, completing the affixing of same to the bottle, which is thereupon removed by the operative and the operation of the machine continued, as before, on the next bottle.

What I claim is as follows:—

1. In a bottle-labeling machine, the combination of a fixed bottle stand, an adjustable label box fitted over said stand, reciprocating gumming fingers for removing the label from said box and placing it into position to apply to said bottle, said gumming fingers having passages or openings in same for gumming, a closing plate for said passages adapted to be opened by being brought into contact with the label, a gum reservoir, tubes connecting said reservoir with said gumming fingers and wiping fingers for wiping said label on said bottle, substantially as described.

2. In a bottle-labeling machine, the combination of a bottle stand, a label box, gumming fingers having openings or passages for the gum, a gum reservoir, tubes connecting said passages with said reservoir, a closing plate for said openings having a beveled seat and a spring for holding same in normally closed position, said plate extending above said fingers in its closed position whereby same is adapted to be opened when brought into contact with the label, substantially as described.

Signed by me at Worcester, Massachusetts, this 3rd day of December 1906.

NELSON MUSLAR.

Witnesses:

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ALDUS C. HIGGINS.