

(No Model.)

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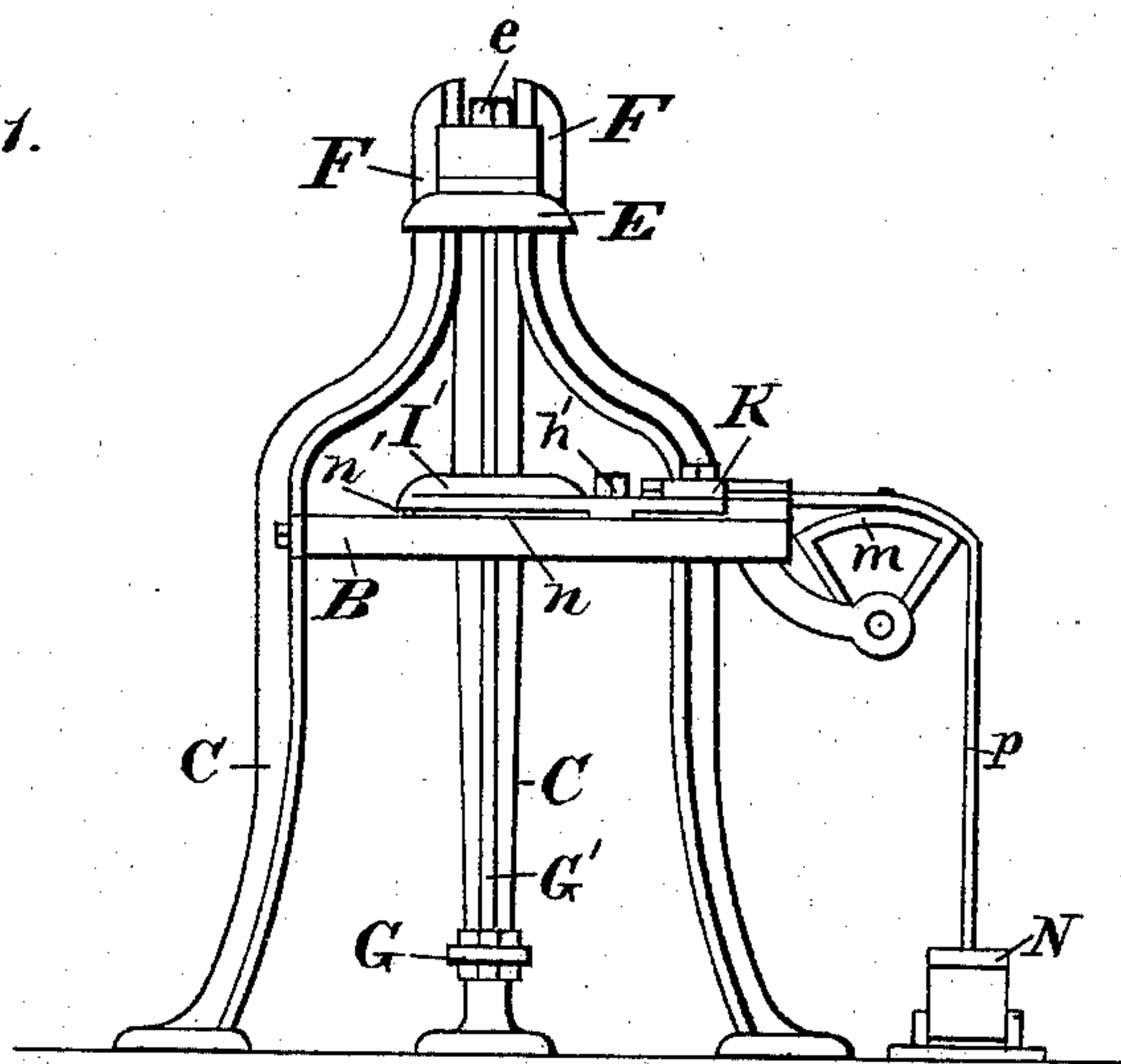
J. G. JONES.

MACHINE FOR PUTTING TOPS AND BOTTOMS ON CANS.

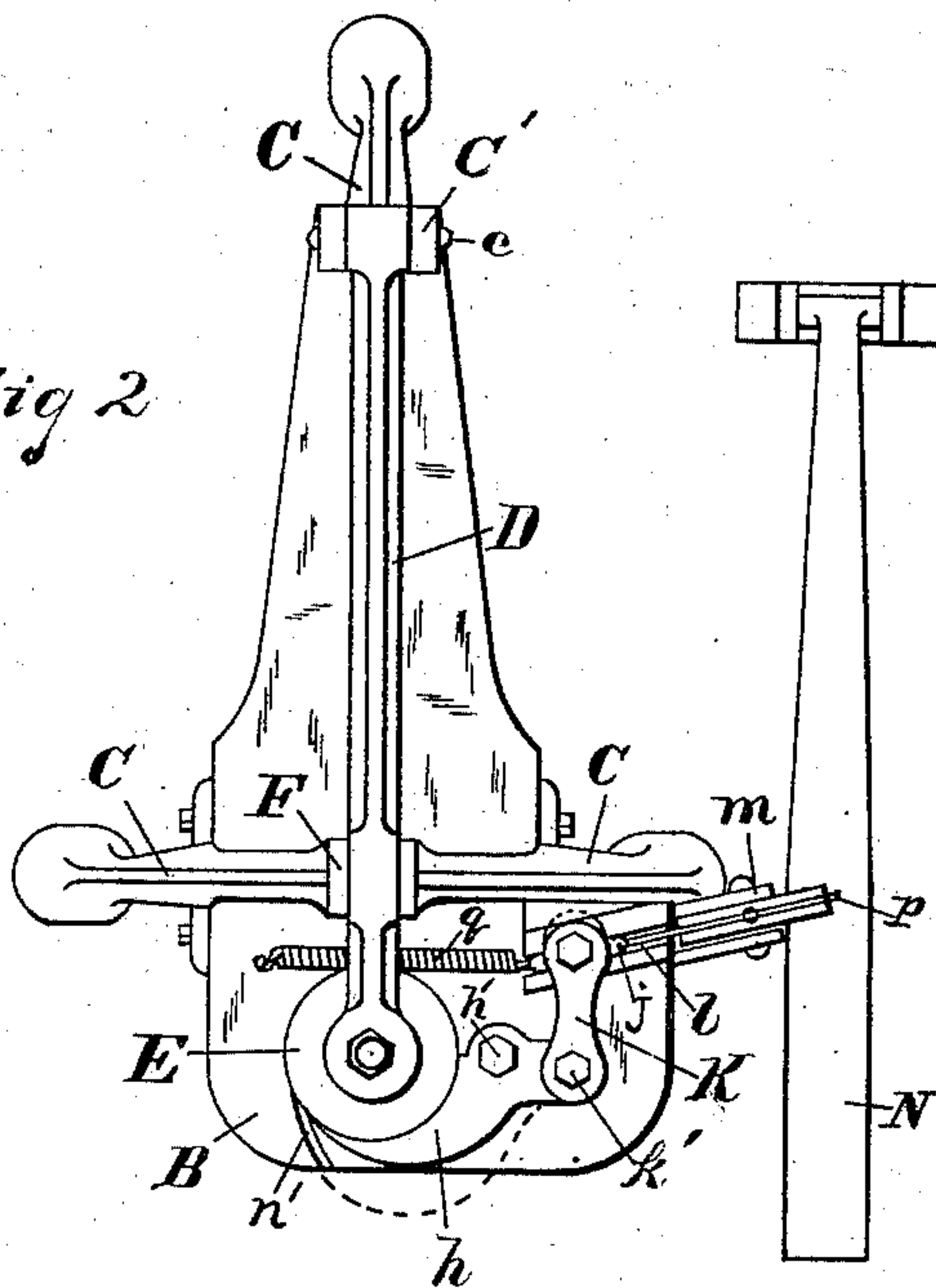
No. 271,860.

Patented Feb. 6, 1883.

*Fig. 1.*



*Fig 2*



*Witnesses:*  
*A. C. Eader*  
*John E. Morris.*

*Inventor:*  
*Jacob G. Jones*  
*By Chas B. Mann*  
*Attorney*

(No Model.)

2 Sheets—Sheet 2.

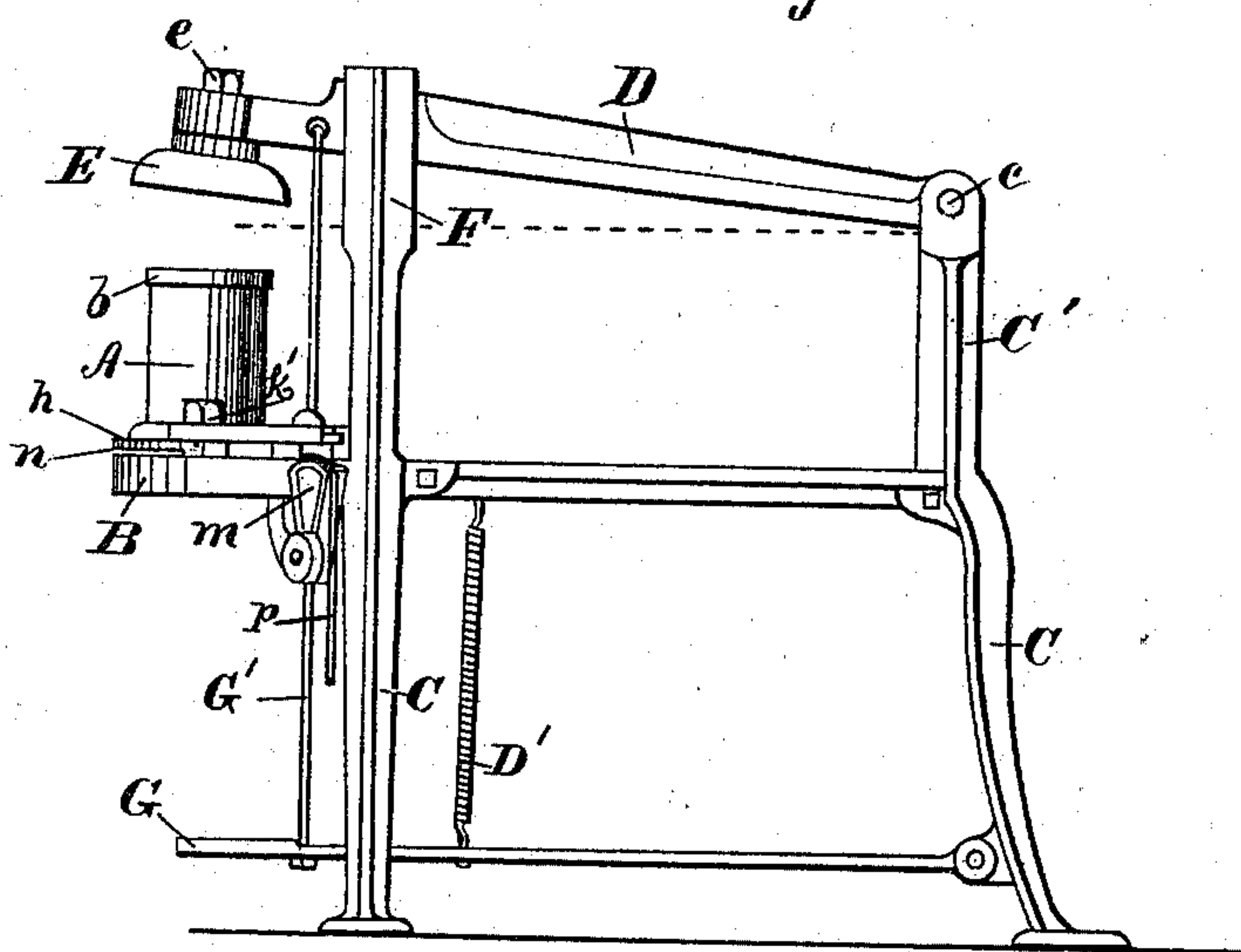
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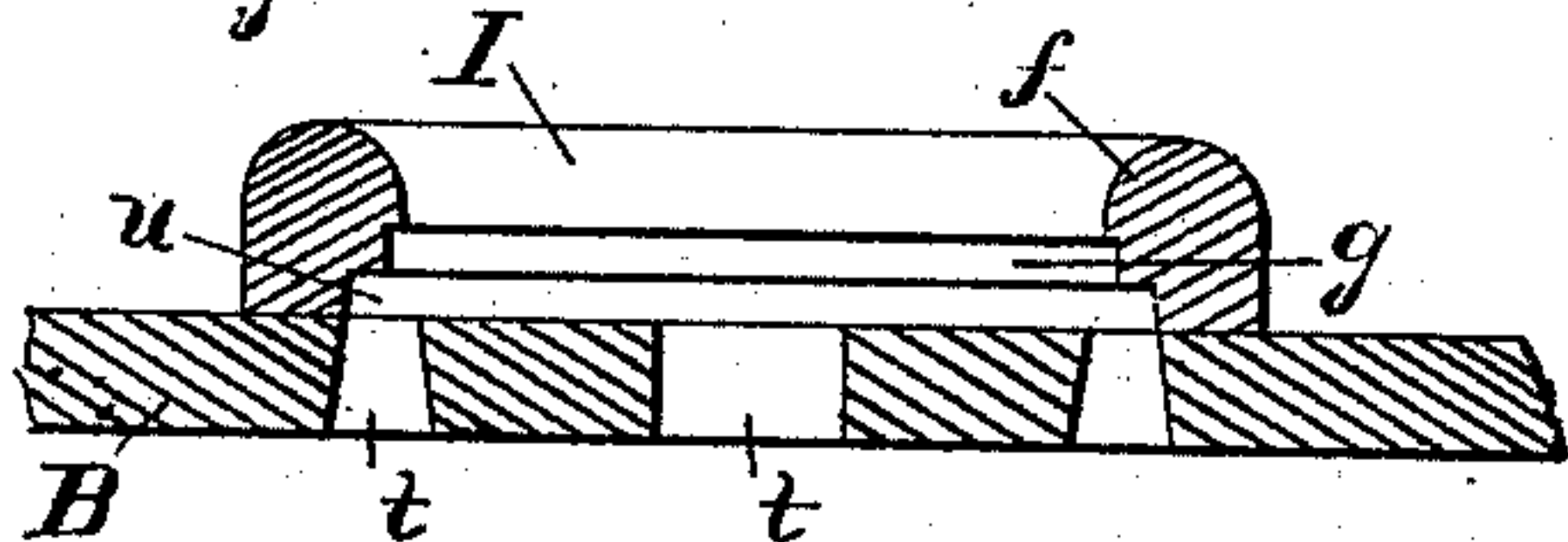
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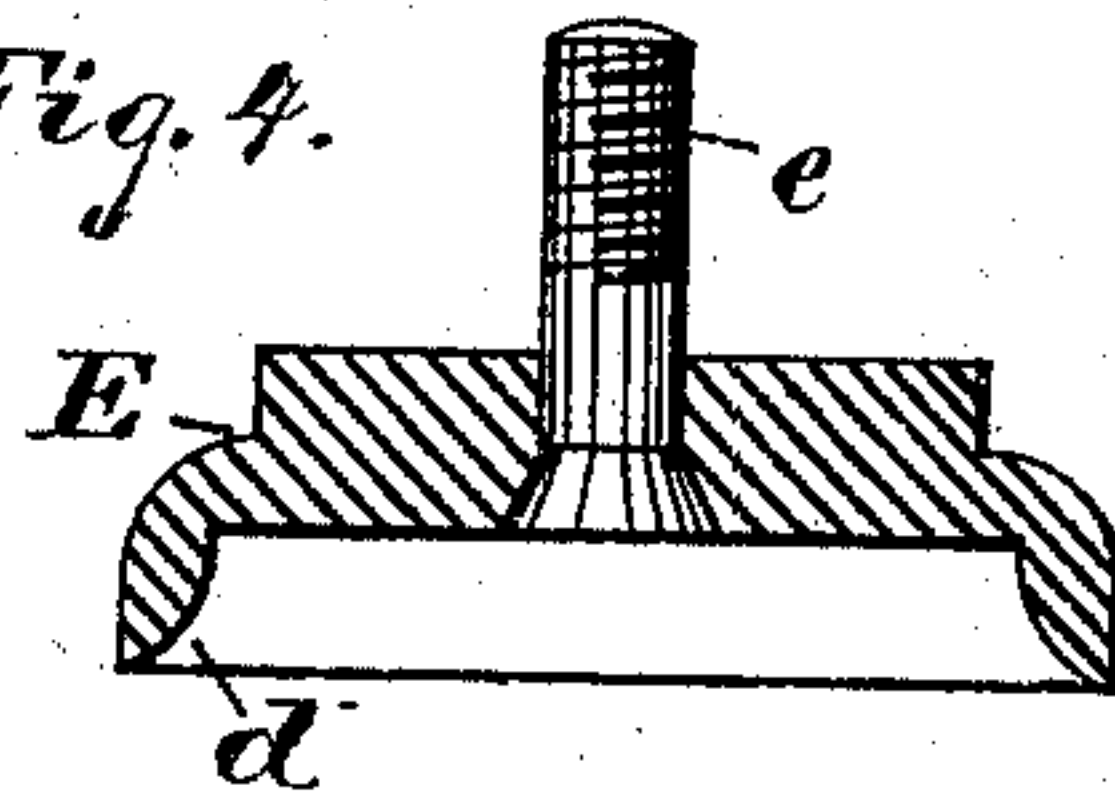
*Fig. 3.*



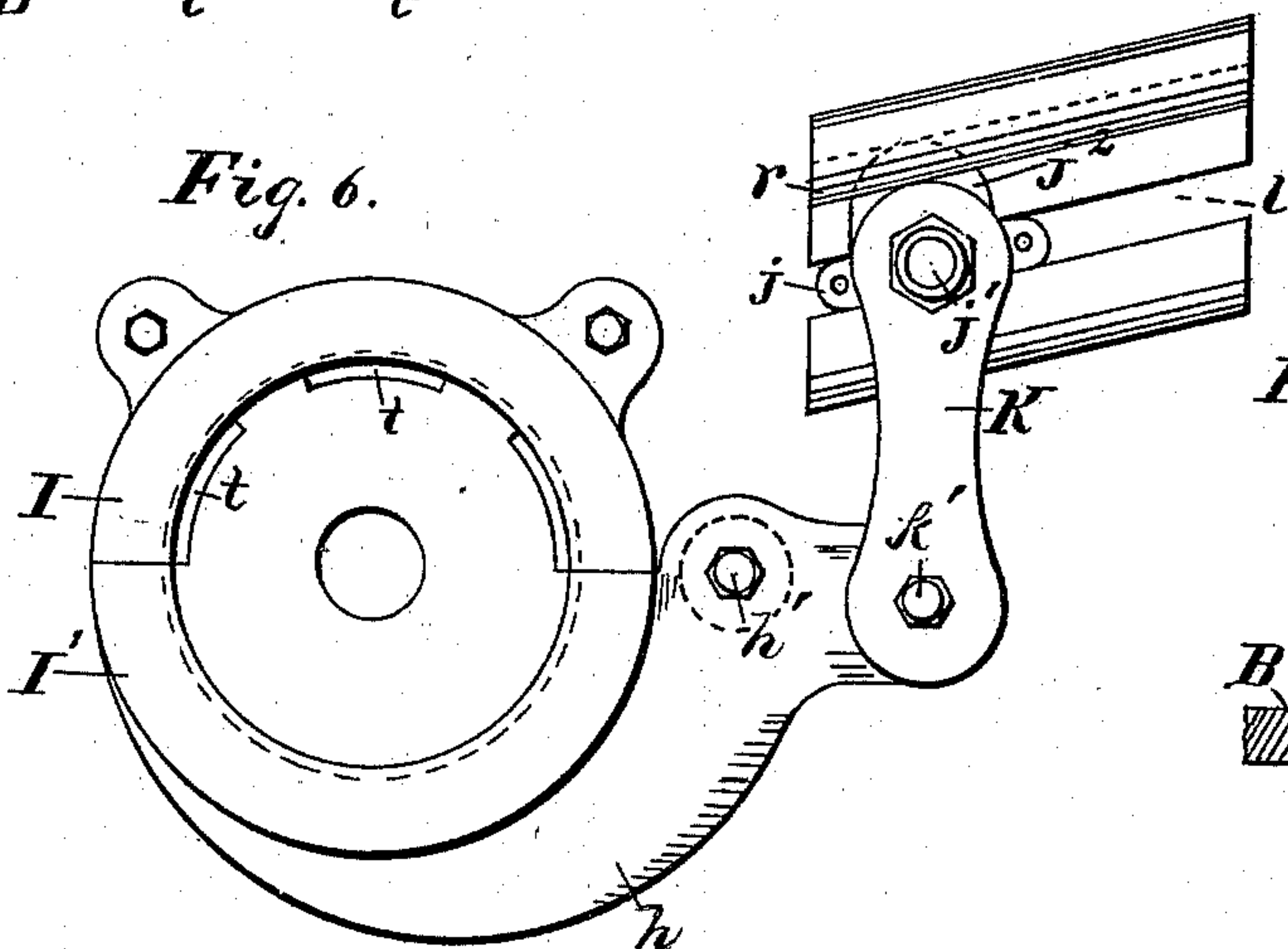
*Fig. 5.*



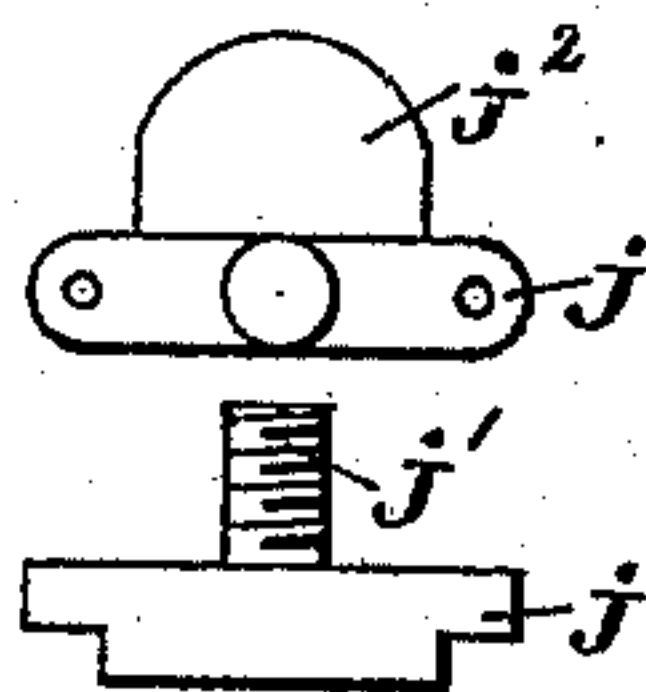
*Fig. 4.*



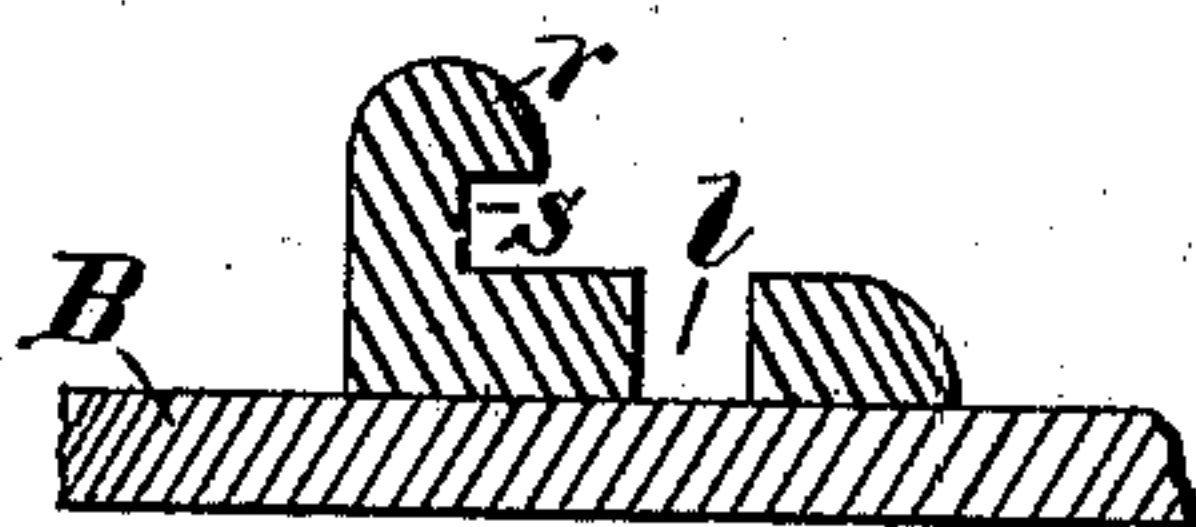
*Fig. 6.*



*Fig. 7.*



*Fig. 8.*



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# UNITED STATES PATENT OFFICE.

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HORACE K. THURBER, OF NEW YORK, N. Y.

## MACHINE FOR PUTTING TOPS AND BOTTOMS ON CANS.

SPECIFICATION forming part of Letters Patent No. 271,860, dated February 6, 1883.

Application filed December 7, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB G. JONES, a citizen of the United States of America, residing at Baltimore, and State of Maryland, have invented certain new and useful Improvements in a Machine for Putting Tops and Bottoms on Cans, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improved machine for putting tops and bottoms on cylindric can-bodies. It may be called a "can-body tucking and heading" machine.

In the drawings hereto annexed, Figure 1 is a front elevation of the machine. Fig. 2 is a top or plan view. Fig. 3 is a side elevation. Fig. 4 is a diametrical section of the top bumper. Fig. 5 is a section of the can-body tucker or guide. Fig. 6 is a plan view of the same. Fig. 7 shows views of the sliding block. Fig. 8 is a cross-section of the slot or groove in which the block slides.

This machine is designed for facilitating the putting of heads on the bodies of cans of that class whereof the heads, (or, as they are commonly designated, the "tops and bottoms,") have flanges which fit around the outside of the body. A can of this description is shown in Fig. 3, A designating the body, and b the head-flange which surrounds the body.

The letter B designates the bed, and C the legs which support it. In the present instances three legs are employed, and each one is extended above the bed to serve special purposes; but this construction is not essential.

A standard, C', extends above the bed at the rear side, and an arm, D, is jointed at c to the top of the standard, and has vertical movement. The end of this arm carries a bumper, E, which is a circular head having a flaring flange, d. The diameter of the head inside of the flange should be of size to easily take in the top or bottom of a can, and the inner side of the flange is slightly flaring in order that if the can should not set perfectly true under the bumper the latter will nevertheless readily come down over the top. The bumper may be secured to the end of the arm in any suitable manner. In the present instance a bolt, e, is employed.

Two vertical guides, F, are employed, between which the arm D moves up and down. These guides may be of any desired construction. In the present instance they consist simply of an extension of the front legs above the bed. A treadle, G, below the bed, is connected with the arm by means of a rigid rod, G', and a spring, D', attached to the treadle and bed, serves, by lifting on the treadle, to keep the bumper-arm normally in an elevated position. It will be manifest that the spring might be dispensed with and a cord and pulley and weight substituted to effect the same end.

A combined can-head holder and body tucker or guide consists of a ring divided diametrically in two parts, I I'. The inner dimension of the ring must correspond with the outer dimension of the cylindric can-body. The inner side of the ring is flaring or beveled, as shown at f, in order to serve as a tucker or guide for the end of the can-body and to slightly contract the said end. Just below the flared or beveled part the ring is provided with an annular recess, g, which receives the flange of the can-head. The one half, I, of the ring is permanently fixed or secured to the bed, while the other half, I', is adapted to be moved away from the fixed half. This is effected by means of an arm, h, pivoted to the bed at h'. The movable half I' of the ring is attached to one end of this arm, and to the other end a rod or link, K, is jointed at k', and serves to operate the pivoted arm. The other end of the rod or link is pivoted to a block, j, by a pin or bolt, j', and the said block is adapted to slide back and forth in a straight slot or groove, l, which extends obliquely. While this oblique position has advantages, it is not essential. It will be seen that when the block end of the rod or link is moved in one direction along the groove the pivoted arm h is turned so as to swing the movable half of the ring open, thus permitting a can-head to be placed in position within the ring, and when the rod or link is moved in the opposite direction along the groove the effect is to close the ring and clamp or hold the can-head. When the ring is closed the link K has such position with respect to the arm-pivot h' that the pivots h', k', and j' are disposed in the



form of an acute angle, and when occupying this position the link constitutes a brace, which will hold the movable half of the ring, when closed, rigidly to its position. It is found that  
 5 rosin flux left on the can-body side seam scales off and drops on the bed. To prevent this rosin from hindering the movement of the arm which carries the part *l'* of the ring a side opening, *n*, is formed at the ring, and below  
 10 the arm, so that when the arm and half-ring move the rosin on the table will not be scraped thereby. This opening is formed by a boss at the pivot-hole *h'*, which raises the arm, and by an upward-projecting bead or rail, *n'*, on the  
 15 top of bed, upon which bead the end of the arm slides.

Means to open and close the ring are provided. The device to open it consists of a bell-crank lever, *m*, a treadle, *N*, and a cord, *p*,  
 20 one end of which is attached to the block *j*, and passes over the bell-crank, and the other end to the treadle. The device to close the ring consists of a spiral spring, *q*, one end of which is attached to the block *j* and the other end  
 25 is made fast to the bed. By depressing the treadle *N* the rod *K* will be moved one way and the ring will be opened, and upon removal of the foot from the treadle the spring *q* will draw the block end of the rod the other way,  
 30 thereby closing the ring.

The block *j* may be constructed in any suitable manner which will retain it to its position in the groove as it slides. In the present instance one side of the groove *l* has a flange, *r*,  
 35 and a groove, *s*, under the flange, and the block *j* has a lateral projection, *j'*, which occupies the said groove *s*. This arrangement serves the desired purpose of retaining the block.

An important feature consists of the openings *t* through the bed, arranged to come within the fixed portion of the ring. These openings are to serve as clearance-outlets for the rosin which scales off from the side seam of the can-body, and which without the openings  
 45 accumulates within the ring to such an extent as to render the device practically inoperative. To make the openings most effectual, a second groove or recess, *u*, is made on the inner side of the fixed part of the ring, and this recess is  
 50 of less height than the groove or recess *g*, and is formed within the annular one by cutting the latter recess deeper, as shown in Fig. 5. The rosin-escape openings *t* intersect the second or lower recess. By this arrangement the rosin will by the can-heads be brushed or  
 55 pushed over toward and into the recess *u*, thereby keeping the upper recess, *g*, for the can-head flange clear, and then the rosin escapes from said recess *u* through openings *t*.  
 60 Instead of these openings having a downward direction through the bed, they may be formed through the side of the ring and intersect the groove *u*, so that the rosin will pass sidewise,

similar to the opening *n* on the movable half of the ring. 65

To operate the machine, by means of the foot depress the treadle *N*, which opens the can-head holder. Place a can-head in the holder, remove the foot from the treadle, take a can-body and place one end within the flaring or  
 70 beveled edge *f* of the ring, then, by the foot, depress the treadle *G*, which brings the bumper *E* on the upper end of the can-body, and the pressure of the bumper forces the body down into the can-head holder and into the flange *b*  
 75 of the can-head. The foot is now removed from the treadle *G* and the bumper automatically rises, when, by again depressing the treadle *N*, the ring *I I'* is opened and the can removed with the one head on. This opera-  
 80 tion is now repeated with the can-body in reversed position to have a head put on the other end.

Having described my invention, I claim and desire to secure by Letters Patent of the United  
 85 States—

1. In a machine for putting heads on can-bodies, a half-ring fixed rigidly to the bed, a half-ring adapted to move to and from the rigidly-fixed half, and a bumper provided with  
 90 a flaring flange and having vertical movement, as set forth.

2. In a machine for putting heads on can-bodies, the link *K*, having one end jointed to the movable part of the head-holding ring and  
 95 the other end pivoted to the sliding block *j*, whereby, when the ring is closed, the link may take a position which will constitute a brace to hold the ring closed, as set forth.

3. In a machine for putting heads on can-  
 100 bodies, the combination, with the two-part head-holder and body-tucker, of the link *K*, jointed to the movable part of said holder and tucker, a groove, *l*, along which one end of the link moves, means, substantially as de-  
 105 scribed, to move said end of the link in one direction and means to draw or return it in the other direction, as set forth.

4. In a machine for putting heads on can-bodies, a head-holder and body-tucker consist-  
 110 ing of a two-part ring having outlets for the clearance or escape of rosin, as set forth.

5. In a machine for putting heads on can-bodies, a two-part ring having an internal annular groove for the head-flange, a second  
 115 groove, *u*, formed within the annular groove, and openings which intersect the second groove for the escape of rosin, as set forth.

In testimony whereof I affix my signature, in presence of two witnesses, this 2nd day of  
 120 December, 1882.

JACOB G. JONES.

Witnesses:

JOHN E. MORRIS,  
 JNO. T. MADDOX.