

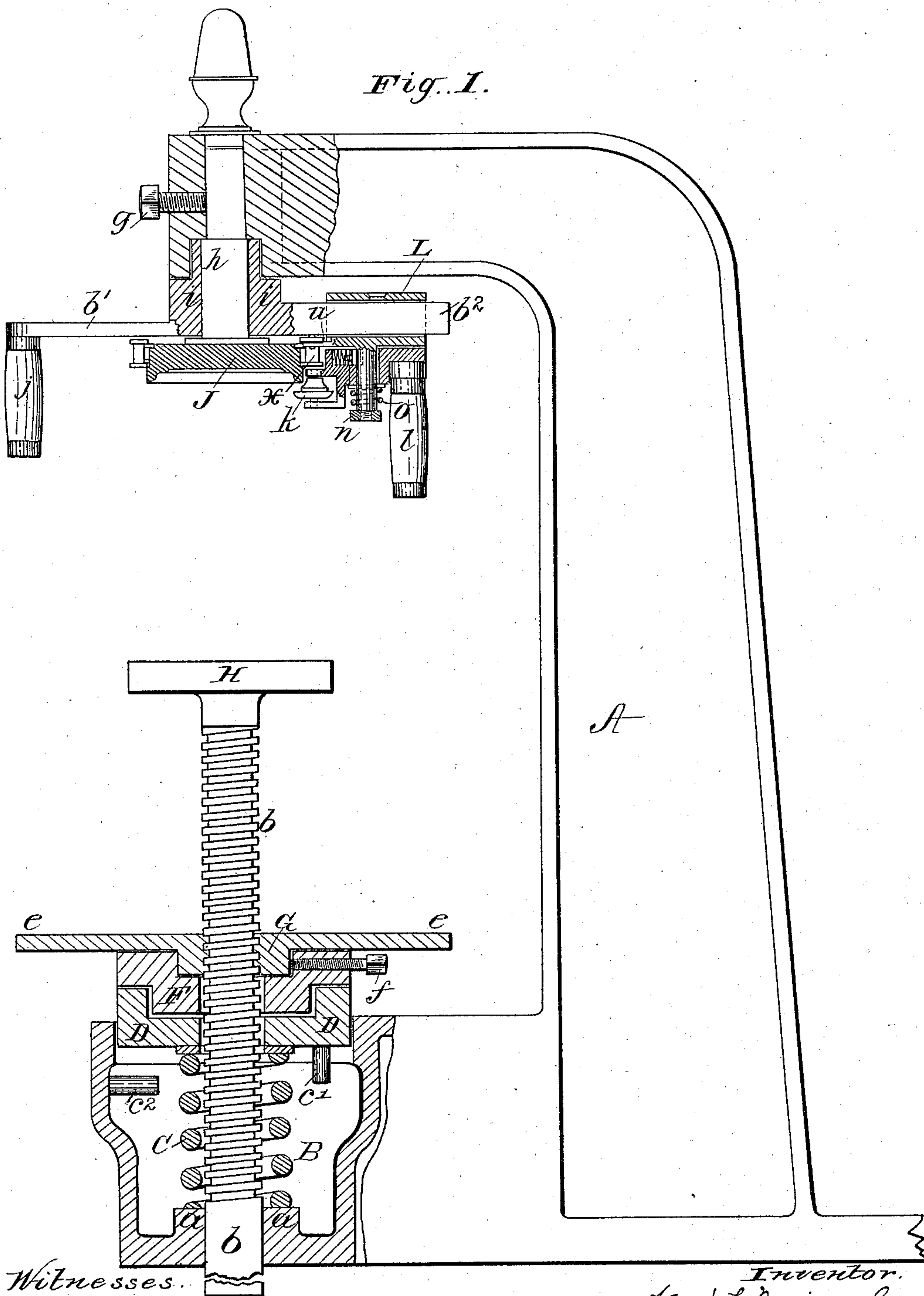
(No Model.)

3 Sheets—Sheet 1.

A. L. WEISSENTHANNER.  
MACHINE FOR CLOSING JARS.

No. 590,196.

Patented Sept. 14, 1897.



Witnesses.  
H. R. Edelin,  
Geo. Lewis

Inventor.  
A. L. Weissenhanner  
by Solomon Mauro,  
his attorney.

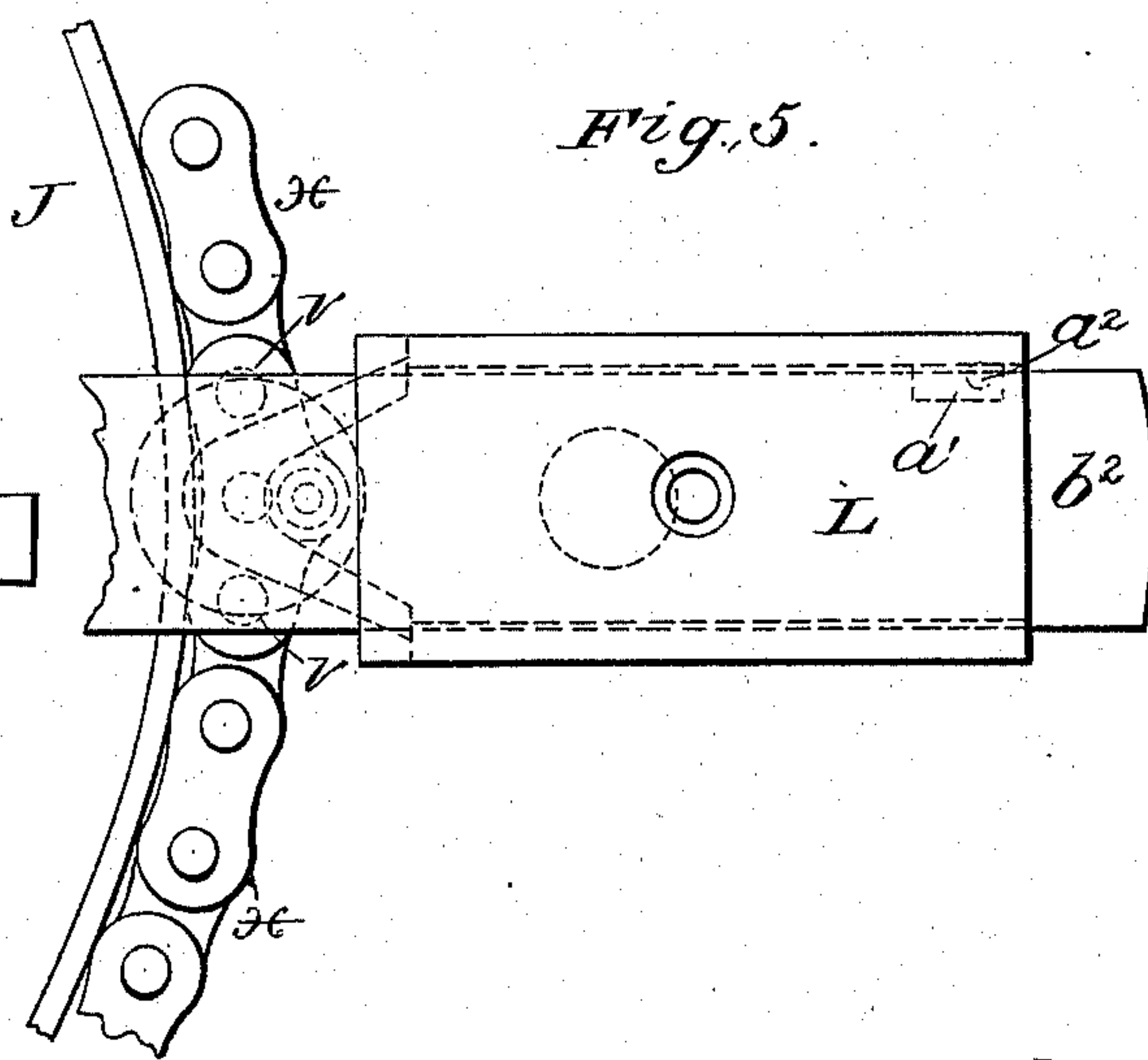
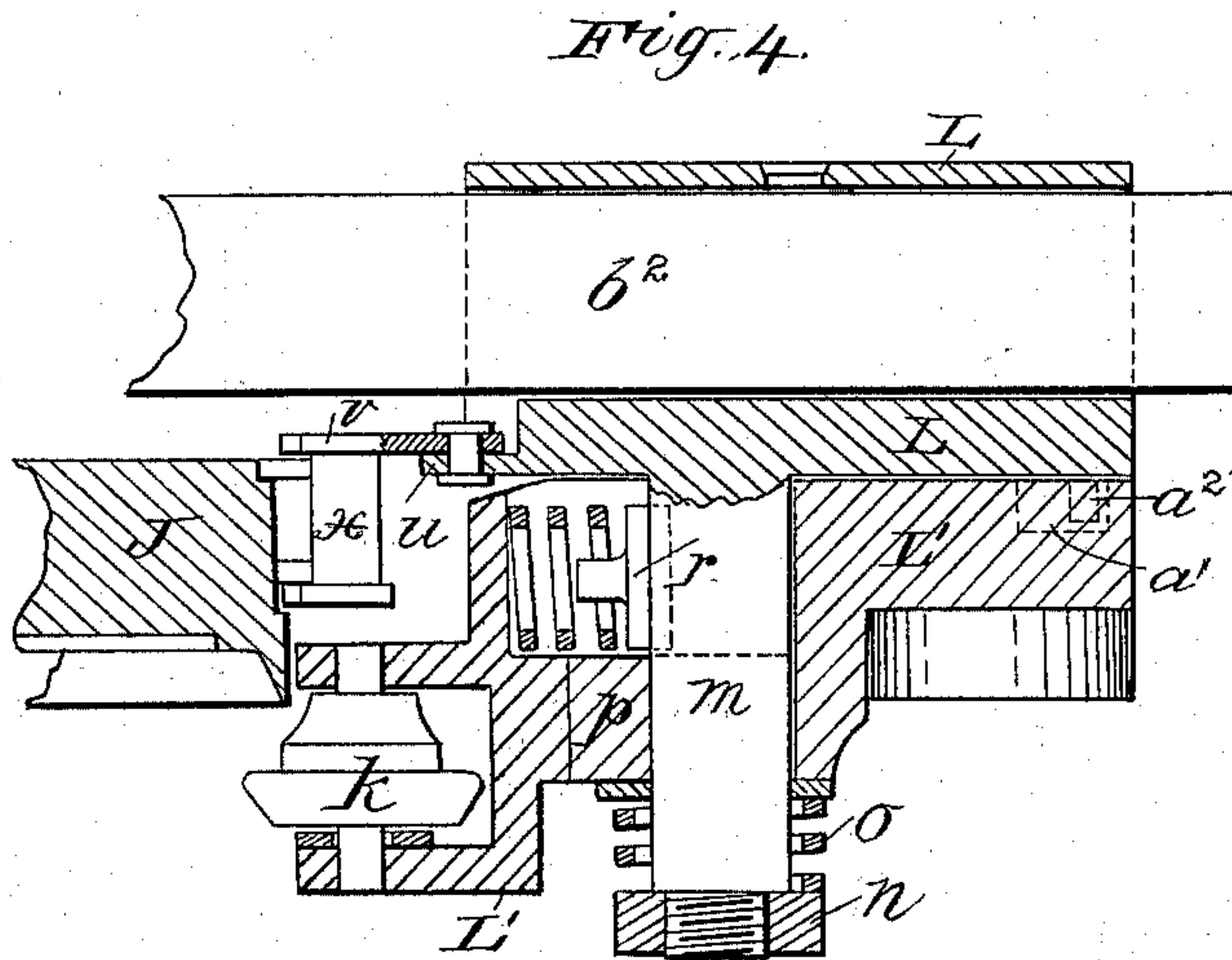
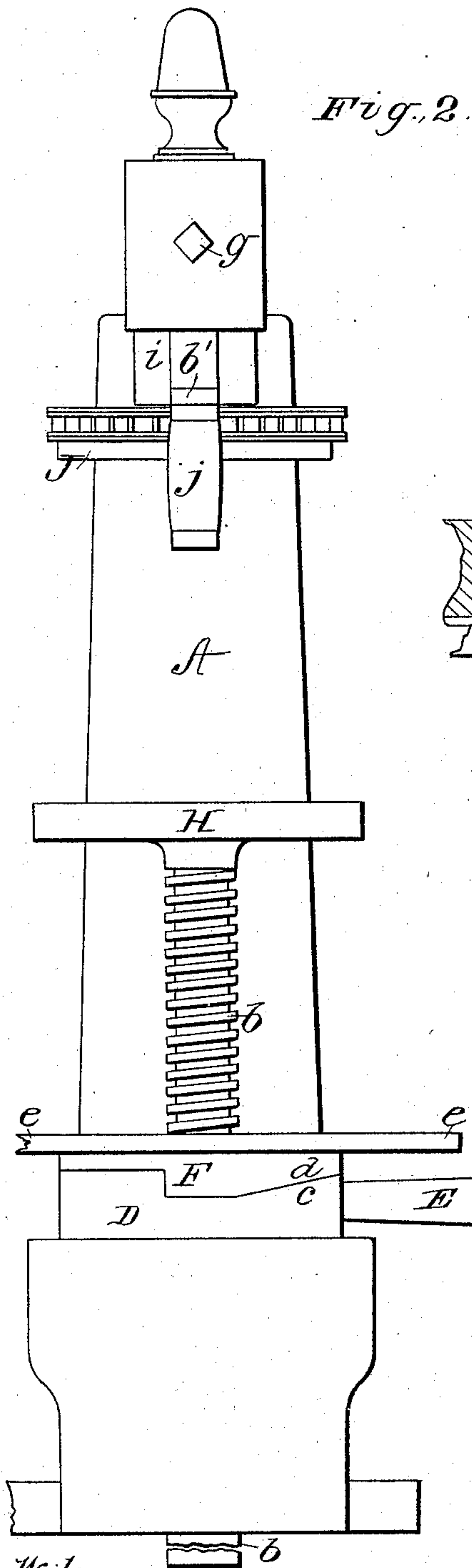
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3 Sheets—Sheet 2.

A. L. WEISSENTHANNER.  
MACHINE FOR CLOSING JARS.

No. 590,196.

Patented Sept. 14, 1897.



Witnesses.  
W. R. Edging.  
Jesse Lewis.

Inventor.  
Alfred L. Weissenhanner  
by J. J. Mauro  
his attorney.

(No Model.)

3 Sheets—Sheet 3.

A. L. WEISSENTHANNER.  
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Fig. 3.

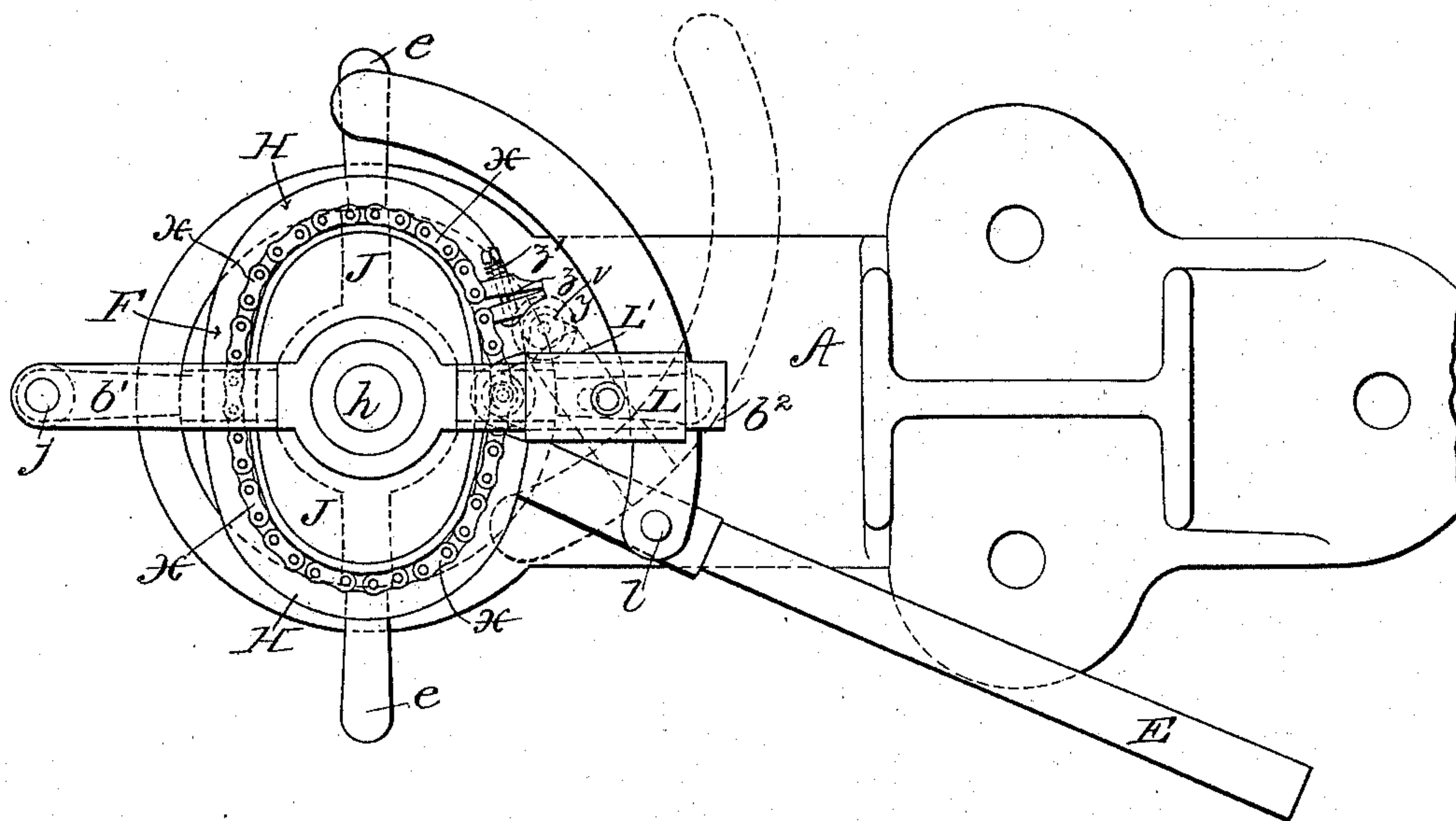
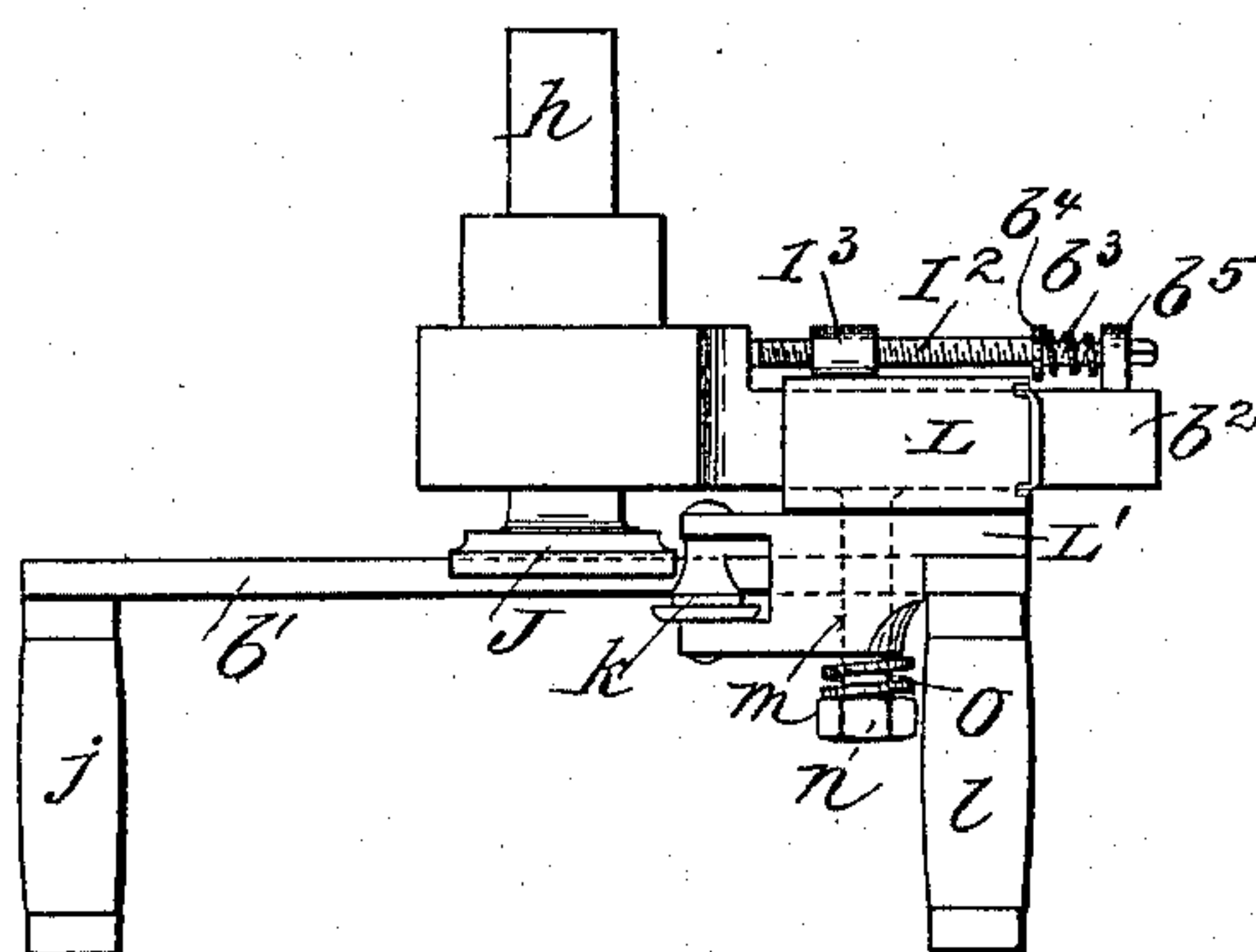


Fig. 6.



Witnesses:  
W. R. Edelen,  
Rear Lewis.

Inventor.  
A. L. Weissenhanner  
by John Mauro,  
his attorney



# UNITED STATES PATENT OFFICE.

ALFRED L. WEISSENTHANNER, OF NEW YORK, N. Y., ASSIGNOR TO THE  
PHOENIX CAP COMPANY, OF SAME PLACE.

## MACHINE FOR CLOSING JARS.

SPECIFICATION forming part of Letters Patent No. 590,196, dated September 14, 1897.

Application filed February 18, 1897. Serial No. 624,034. (No model.)

*To all whom it may concern:*

Be it known that I, ALFRED L. WEISSENTHANNER, of New York city, New York, have invented a new and useful Improvement in  
5 Machines for Closing Jars and other Vessels, which improvement is fully set forth in the following specification.

This invention has reference to apparatus for applying to vessels containing vegetables,  
10 preserves, sardines, and the like my system of closure set forth in Letters Patent No. 509,834, granted November 28, 1893. According to that system the cap, consisting of a plate, compressible washer, and holding-band, is  
15 placed on the top of the jar or vessel, and while subjected to great downward pressure the lower edge of the holding-band is bent under a shoulder on the neck of the vessel. Certain vessels of this class are now made of  
20 oval shape; and the object of the present invention is mainly to furnish means whereby vessels of oval or other curvature or outline may be expeditiously closed according to the system referred to above.

25 In the accompanying drawings, Figures 1 to 5 illustrate a machine constructed for operation upon vessels of oval outline, this form being selected for purposes of illustration, Fig. 1 being a side elevation, partly in vertical section, Fig. 2 an end elevation, Fig. 3 a  
30 plan view, and Figs. 4 and 5 an enlarged longitudinal section and plan, respectively, of a rowel or bezeling device and its operating mechanism. Fig. 6 is a side elevation of an attachment which may be applied to the  
35 same machine for applying round covers.

Referring first to Figs. 1 to 5, frame A is provided at the bottom with a hollow boss B, containing a helical spring C, which rests  
40 upon a perforated boss *a*, through which is guided a screw-rod *b*, capable of vertical movement without rotation. Upon this spring C rests a ring D, which is provided with two inclined planes *c*, Fig. 2, and which can be actuated by a handle E. On top of ring D is  
45 another ring F, also provided with inclined planes *d*, corresponding to the inclines *c*. Ring F is connected with rod *b*, so that it can rise and fall with it without turning. A nut  
50 G above ring F engages a thread on screw-

rod *b* and is furnished with arms *e*, by which the height of plate H on the end of rod *b* can be regulated according to the size of the vessel. When properly adjusted, rod *b* can be clamped in position by means of a set-screw  
55 *f* on ring F.

At the top of the frame is a plate J, corresponding with plate H, carried by a pin *h*, detachably secured in the frame by a set-screw  
60 *g*. The outline of top plate J is of the same configuration as that of the vessel to be closed. It is, moreover, recessed underneath, so as to firmly hold the vessel between it and the supporting-plate H during the bezeling of the  
65 cover.

Around the rod *h* of the plate J, which may be termed the "gage-plate," is a collar *i*, mounted to turn on pin *h* and provided with arms *b'* *b''*, one of which has a handle *j*, and the other serves as a guide to a slide L, which  
70 carries bezeling-rowel *k* and a handle *l*. The slide or rowel-carrier L is in two parts, united by connections capable of yielding vertically and horizontally, Figs. 4 and 5. To this end the rod carries a rod or journal-pin *m*, which  
75 enters a socket in the part L' of the slide, the socket being a little larger than the pin. Part L' is held against part L by a nut *n* and an interposed spring *o*. To obtain the proper elasticity in a horizontal direction, the part  
80 L' is recessed at *p*, Fig. 4, and a lug *r*, with a helical spring *s*, is arranged between pin *m* and the wall *t* of the part L'. This part of the slide carries the rowel *k*, which is journaled,  
85 as shown, in suitable ears or projections on the part L'. The object of mounting the rowel on a support or carrier capable of yielding is to avoid breakage of vessels, which would occur if the rowel were held with absolute rigid-  
90 ity in case of any irregularity in the outline or in the shoulder at the neck of the vessel.

Slide L has an ear *u*, to which is fixed a link *v*, connected with a chain *x*, which completely surrounds the gage-plate J. The ends of chain  
95 *x* are connected by two plates *y*, a bolt *z*, and an interposed spring *z'*, so as to make an expansible connection.

The position of part L' when the rowel is out of action is illustrated in dotted lines in Fig. 3. To bring it into operative position, 100



the holder  $L'$  is turned on its journal  $m$  by means of handle  $l$  until the end of groove  $a'$  abuts against lug  $a^2$  on the part  $L$ , Fig. 4.

The operation is as follows: First adjust the position of plate  $H$  by means of nut  $G$ , according to the height of the vessel. Place the vessel, with the cover in position, on plate  $H$  and turn lever  $E$  in the direction of arrow  $M$ , Fig. 3. This movement is limited by a pin  $c'$ , which makes contact with stop  $c^2$ . The effect of the movement is to cause the inclines  $c$  to move on inclines  $d$  and by a cam action to compress the vessel between the plates  $H$  and  $J$ . The rowel is then brought into operative position, forcing inward the lower edge of the holding-band. The operator, grasping the handles  $j$  and  $l$ , rotates the collar  $i$ , arms  $b^2$ , and all parts carried thereby around the pin  $h$ , causing chain  $x$  to slide around the gage-plate  $J$ . The slide  $L$ , and with it the rowel, being connected with the chain, follows the configuration of the gage-plate, and as this corresponds with the outline of the vessel the rowel follows the latter.

In the drawings I have shown the gage-plate  $J$  adapted to a vessel of oval form; but obviously the system is applicable to any other configuration, it being only necessary to replace the oval-shaped plate with one of the desired form.

When the outline of the neck of the vessel is circular, it is not necessary to employ a gage-plate and means for giving the rowel-support a movement while in operation toward and away from the axis of the vessel. The operating mechanism arranged for vessels of circular outline is shown in Fig. 6. The rowel-support  $L'$  is connected with slide  $L$ , as already described, by a pin  $m$ , nut  $n$ , and spring  $o$ . Slide  $L$  is connected to arm  $b^2$  by a screw-rod  $l^2$ , engaging an interiorly-threaded lug  $l^3$  on slide  $L$ . By turning rod  $l^2$  the rowel-support can be adjusted toward or from the axis of the vessel, and thus be used for vessels of different diameter. A stiff helical spring  $b^3$  is interposed between a collar  $b^4$  on rod  $l^2$  and a lug  $b^5$  on arm  $b^2$  to permit a slight yielding of the support for the purpose already explained.

It will be obvious to skilled mechanics that modifications may be made in the details of construction of the apparatus without departing from the spirit of the invention.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a machine for closing jars or other vessels, the combination of the top and bottom holding-plates, and means for clamping the vessel between said plates, of a rowel, adapted to engage under a shoulder on the neck of the vessel rowel support or slide, carrier for the rowel-support rotatable about the axis of the vessel, and connections capable of yielding both horizontally and vertically for holding said rowel in operative position, substantially as described.

2. In a machine for closing jars or other vessels, the combination of top and bottom holding-plates, means for clamping the vessel between said plates, a carrier rotatable about the axis of one of said plates, a slide movable radially on said carrier, a rowel adapted to engage under a shoulder on the neck of the vessel, a support for said rowel pivoted upon said slide so as to swing into or out of operative position, the connection between the rowel-support and slide being yielding both vertically and horizontally, substantially as described.

3. In a machine for closing vessels, the combination with the holding-plates, of a gage conforming to the outline of the vessel, a carrier rotatable about the axis of the vessel, a slide on said carrier movable radially of the vessel, a chain embracing and surrounding said gage and connected to said slide, and a rowel journaled in said slide, substantially as described.

4. In a machine for closing vessels, the combination with the holding-plates, of a gage conforming to the outline of the vessel, a rotatable carrier, a slide movable thereon radially of the vessel, a flexible band surrounding said gage for causing the slide as the carrier rotates to follow the outline of the gage, a rowel-support pivotally connected to said slide, and a rowel, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ALFRED L. WEISSENTHANNER.

Witnesses:

GEO. A. WAGGAMAN,  
G. WAMOLLAR.