

No. 652,718.

Patented June 26, 1900.

A. KRESS.

MACHINE FOR COATING CAN COVERS.

(Application filed July 18, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

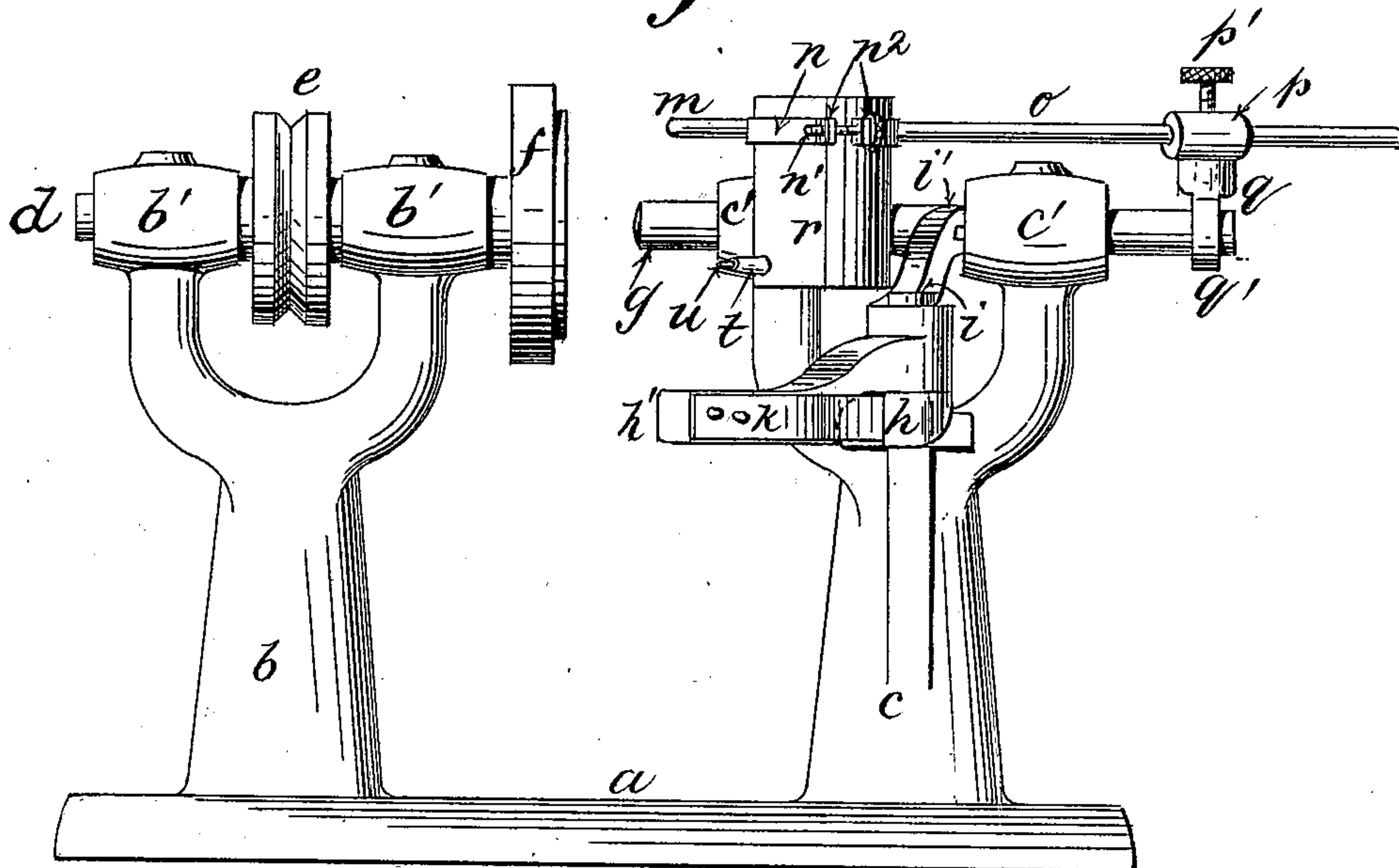
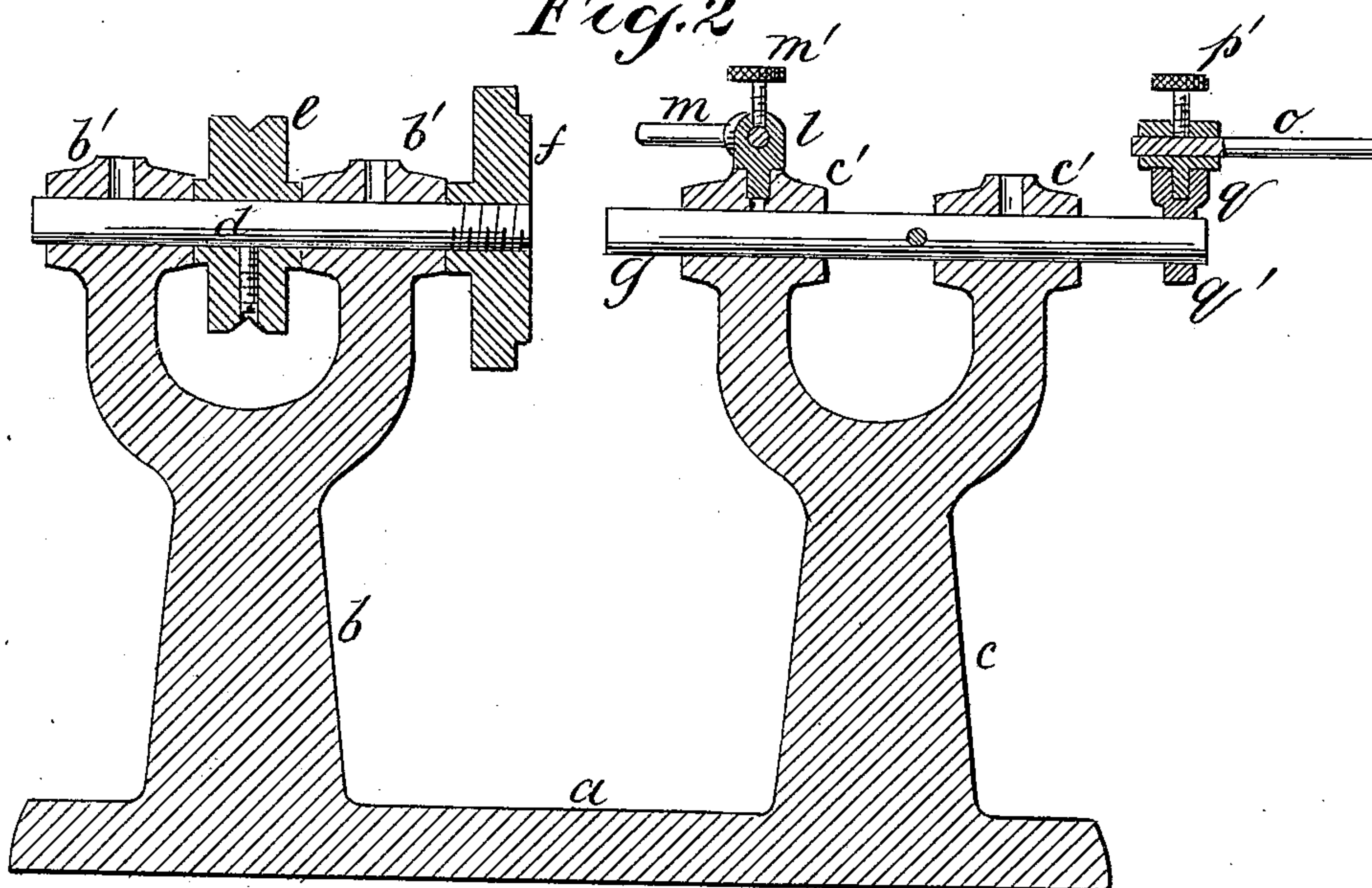


Fig. 2



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Fig. 3.

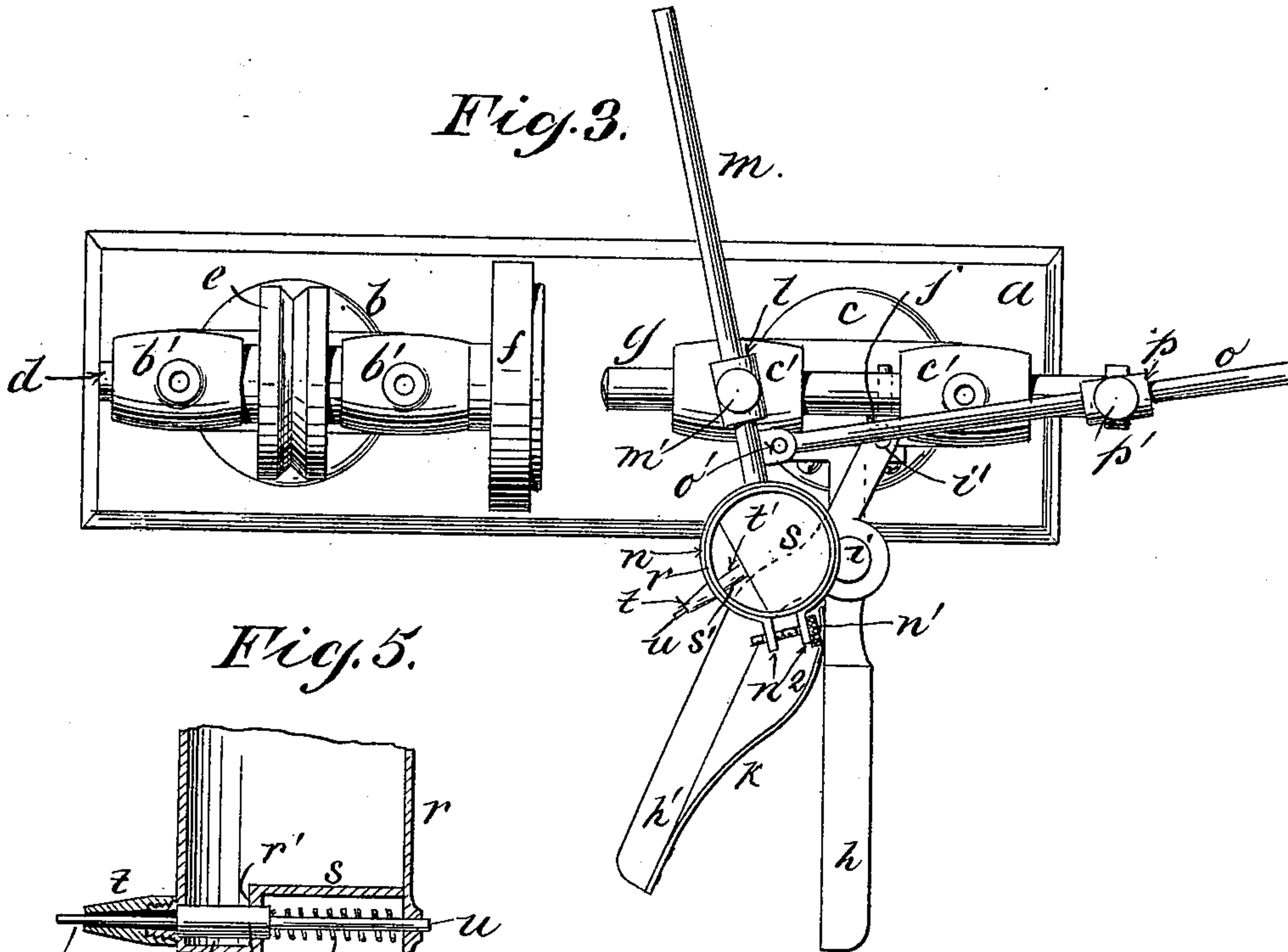


Fig. 5.

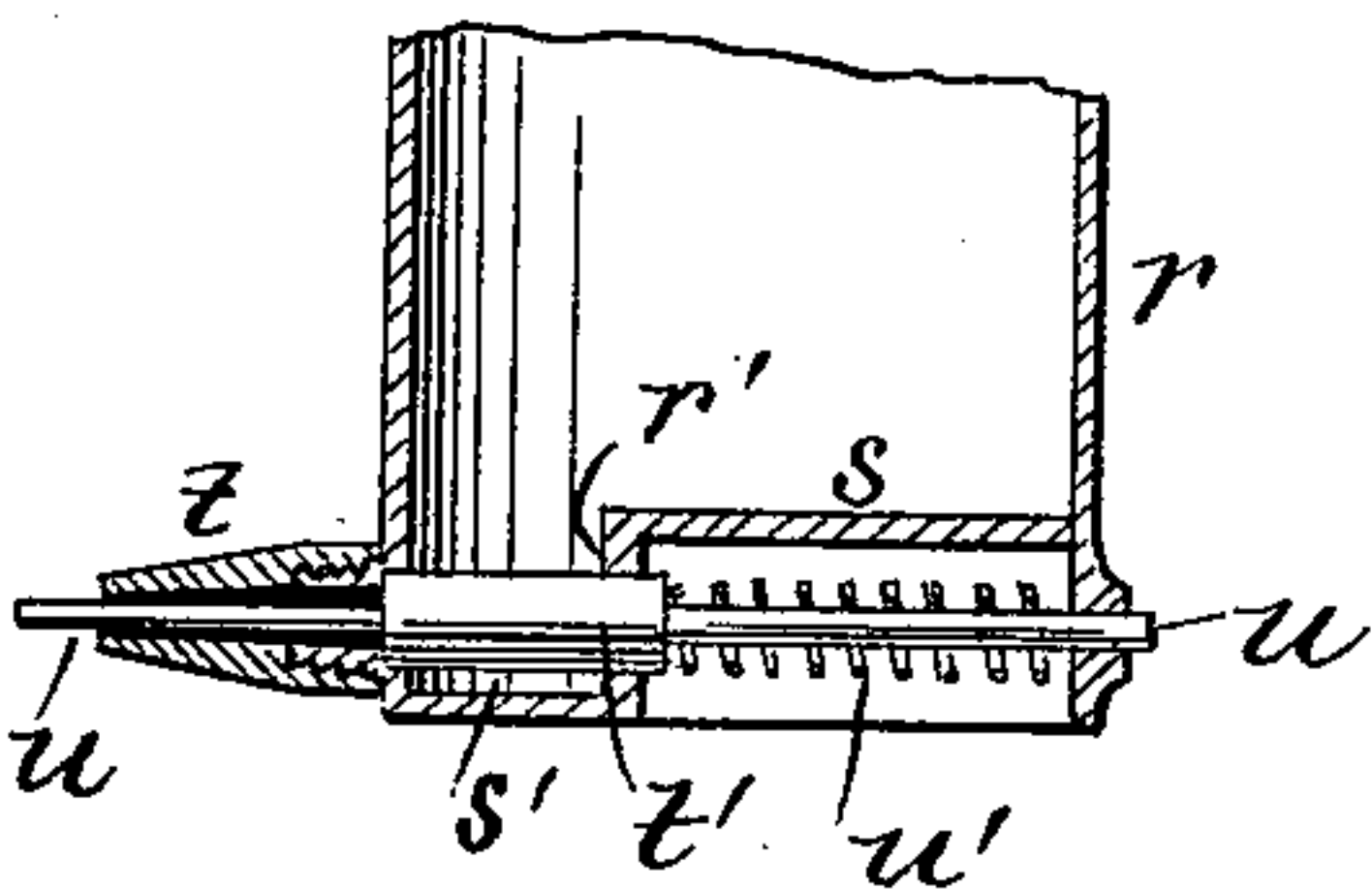


Fig. 4.

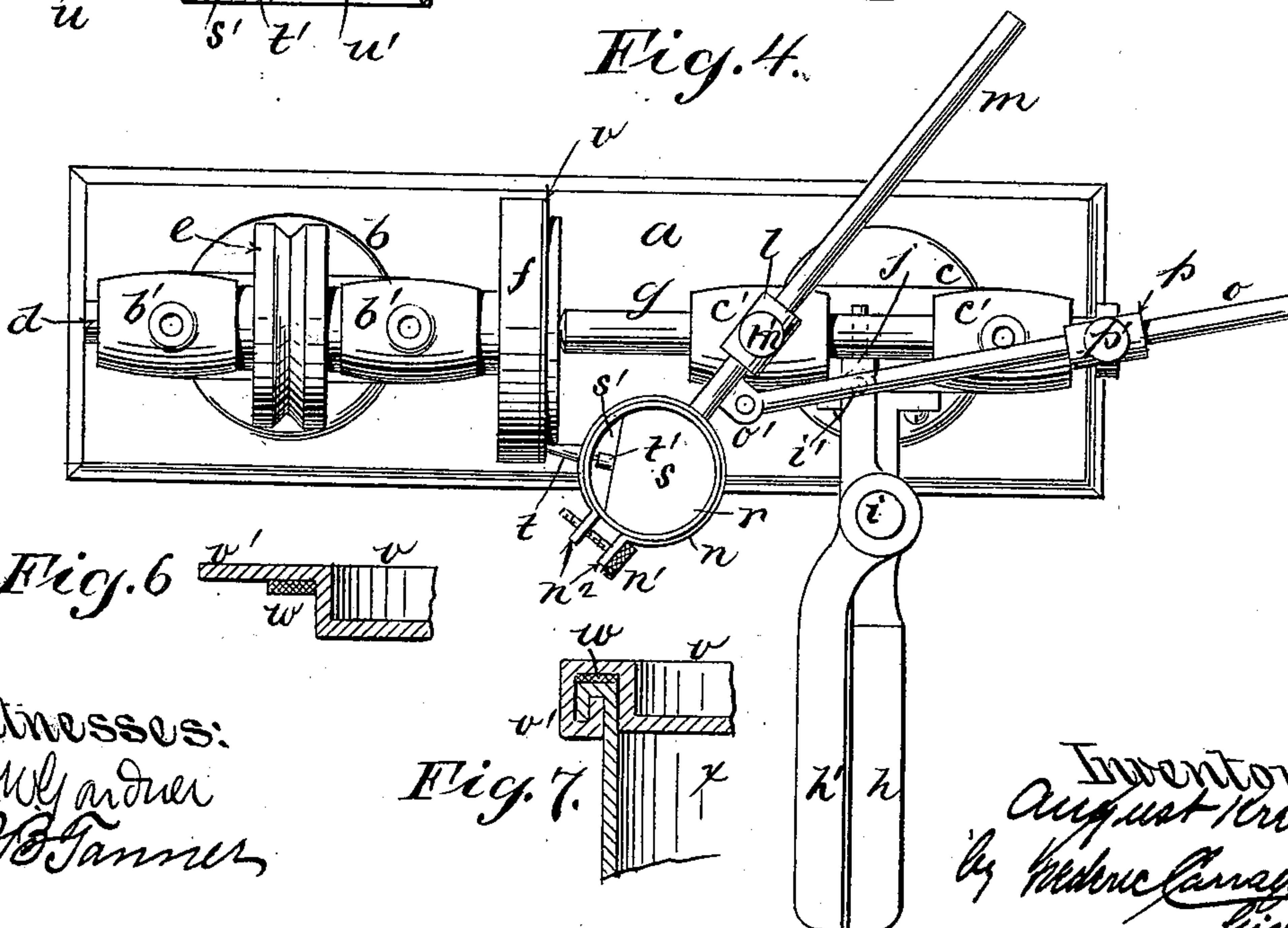
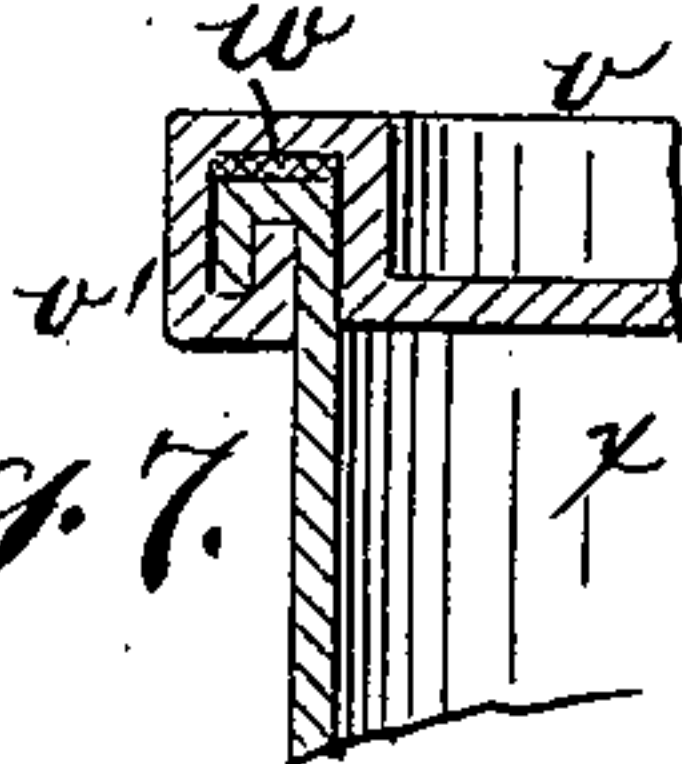


Fig. 6.



Fig. 7.



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# UNITED STATES PATENT OFFICE.

AUGUST KRESS, OF BAYONNE, NEW JERSEY, ASSIGNOR OF ONE-HALF TO  
GEORGE CARRAGAN, OF SAME PLACE.

## MACHINE FOR COATING CAN-COVERS.

SPECIFICATION forming part of Letters Patent No. 652,718, dated June 26, 1900.

Application filed July 18, 1899. Serial No. 724,219. (No model.)

*To all whom it may concern:*

Be it known that I, AUGUST KRESS, a citizen of the United States, and a resident of Bayonne, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Machines for Coating Can-Covers, of which the following is a specification.

This invention relates to certain new and useful improvements in machines for coating can-covers, and has for its object the production of a machine for applying to a desired portion of a can-cover a coating which is adapted to engage with a part of the top of the can and hermetically seal the closure, which will be compact, simple, and economical in construction and not liable to derangement in use, and in which greater speed in coating the covers may be attained than heretofore.

To these ends, therefore, my said invention consists in the novel features, all as hereinafter more particularly described, and pointed out in the claims.

Referring to the accompanying drawings, in the several figures of which like parts are similarly designated, Figure 1 is a front elevation of my said machine. Fig. 2 is a central vertical section thereof, partly in elevation. Fig. 3 is a top plan view. Fig. 4 is a similar view showing the machine in the act of coating a can-cover. Fig. 5 is an enlarged vertical sectional view of the lower part of the reservoir for holding the coating compound and of the valve through which the same is applied. Fig. 6 is a fragmentary sectional view of a can-cover, showing the coating applied to the inner half of its flange; and Fig. 7 is a similar view of a can and cover united by an ordinary lap-joint.

*a* is a base from which rise the bifurcated standards *b* and *c*, provided with the journals or bearings *b'* and *c'*. Mounted in the bearings *b'* is the rotatory horizontal shaft *d*, to which is keyed the belt-wheel *e* and which carries at its projecting inner end the disk or mandrel *f*, on which the can-cover to be coated is placed and rotated. Extending through the bearings *c'* and in line with shaft *d* is the horizontal reciprocating shaft *g*, operated by

the spring or grip levers *h h'*, one of which, *h*, is rigidly secured to standard *c* and the other of which, *h'*, is fulcrumed at *i* to lever *h* and pivoted at *i'* to a lug *j*, projecting from the shaft *g*. A leaf-spring *k* serves to keep the levers normally apart, as in Fig. 3.

Secured in the swivel *l*, which has its seat in the top of the inner bearing *c'*, is the rod *m*, adjustable by means of the set-screw *m'* and carrying at its forward end the ring-clamp *n*, controlled by the set-screw *n'*, engaging the two offset portions *n<sup>2</sup>* of said ring in the usual manner. A lever *o* is pivoted in lugs *o'* to the rod *m* in front of the swivel *l* and is adjustably secured by the set-screw *p'* in the swivel *p*, having its seat in the lug *q* secured, as by the collar *q'*, to the shaft *g*, near the end thereof.

The receptacle for holding and applying the coating solution and which is adjustably confined in the ring-clamp *n* comprises the cup or reservoir *r*, the bottom of which is divided by the transverse vertical wall *r'* into an upper portion *s* and a smaller lower portion *s'*, from which latter projects the spout or nozzle *t*. Said nozzle is normally closed by the piston-valve *t'*, extending rearwardly through the dividing-wall *r'* and mounted on the rod *u*, the front end of which projects beyond the end of nozzle *t* and the rear end of which passes through an appropriate aperture in the rear wall of reservoir *r*. A coil-spring *u'* between the rear of the piston *t'* and the rear wall of the reservoir *r* serves to keep the valve normally closed, as in Fig. 5.

The operation of my invention is as follows: A can-cover *v*, Fig. 4, is placed with its outer face against the face of the disk or mandrel *f*, and the rod *m*, the lever *o*, and the reservoir *r* are adjusted by the set-screws *m'*, *p'*, and *n'*, so that the spout or nozzle *t* of the reservoir strikes that portion of the cover which it is desired to coat when the grip-levers *h h'* are brought together, as in Fig. 4. The shaft *d* and mandrel *f* are then rotated by a belt passing over the pulley *e* and communicating with a suitable source of power, and the coating compound or solution is placed in the reservoir *r*. A cover *v* being in position on the mandrel *f*, the grip-levers *h h'* are brought to-



gether, forwarding the reciprocating shaft *g* until its end abuts against the cover, thereby holding the same in place during the coating operation, as shown in Fig. 4. By the movement of shaft *g* the lever *o* partially rotates the cup or reservoir *r* through the described connections, and as the projecting end of valve-rod *u* comes in contact with the cover it is forced inwardly, carrying with it the piston *t'*, uncovering the inner opening of the spout or nozzle *t*, and permitting the coating compound or solution to flow through said nozzle and onto the cover, forming an annular coating *w* thereon at the point of contact. As soon as the grip on levers *h h'* is released they are forced into open position by the spring *k* retracting the shaft *g* and connected parts, as in Fig. 3, and the coated cover is removed from the mandrel *f* and an uncoated cover substituted. Covers of various sizes may be coated by substituting a larger or smaller mandrel *f* and by adjusting the reservoir *r*, the rod *m*, and lever *o* so that the nozzle *t* may impinge upon the cover at the desired point.

By the use of my machine a coating *w'*, Fig. 6, may be applied to any desired portion of the cover *v* to the exclusion of other portions. I have here shown the same applied at the preferred point—viz., on the inner half of the cover-flange *v'*. Coatings, adhesive or otherwise, and washers have heretofore been applied to the entire flange, and when the cover is applied to the can *x* and bent to form a lap-joint, as in Fig. 7, such coating or washer is apt to buckle or to be torn, stretched, or disarranged, forming channels or apertures through which air may enter the can, thus destroying the efficacy of the closure. By the use of my invention, however, the coating may be applied to some desired portion of the cover, between the bends therein, leaving only the uncoated portions to be bent and leaving the coating intact and unsubjected to the tearing tendency of the jointing-machine. Obviously, if desired, the entire flange may be coated by my machine by making the opening of the spout or nozzle *t* broader, or two or more concentric coatings may be applied, and many other changes, alterations, and modifications may be made without departing from the scope and purview of my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with means for holding and rotating a can-cover, of a reservoir adapted to be moved toward and from said cover, and provided with mechanism whereby the contents of said reservoir may be transferred to a portion of said cover, substantially as described.

2. The combination with means for holding and rotating a can-cover, of a reservoir adapted to be automatically moved toward and from said cover, and provided with an automatically-controlled outlet whereby the contents of said reservoir may be transferred to

a portion of said cover, substantially as described.

3. A rotatory mandrel; a reciprocating shaft, and a movable reservoir; means for moving said shaft, and means for moving said reservoir toward and from said mandrel, substantially as described.

4. A rotatory mandrel; a reciprocating shaft, and an adjustable reservoir connected to said shaft, and means for moving said shaft and reservoir toward and from said mandrel, substantially as described.

5. A rotatory mandrel; a reciprocating shaft; a swiveled rod carrying a reservoir; a lever pivotally connected to said rod and to said shaft, and means for moving said shaft and reservoir toward and from said mandrel, substantially as described.

6. A rotatory mandrel; a reciprocating shaft; an adjustable swiveled rod carrying a clamp; a reservoir adjustably confined in said clamp; an adjustable lever pivotally connected to said rod and to said shaft, and means for moving said shaft and reservoir toward and from said mandrel, substantially as described.

7. A rotatory mandrel; a reciprocating shaft; a reservoir connected to said shaft and having a projecting spout or nozzle and a spring-controlled piston-valve normally closing said nozzle and adapted to open the same upon contact with a cover; in combination with means for moving said shaft and the nozzle of said reservoir into and out of contact with a cover, substantially as described.

8. A rotatory mandrel; a reciprocating shaft; a reservoir connected to said shaft and having a bottom divided by a transverse wall into an upper and a lower portion; an opening from the latter to a projecting spout or nozzle, said opening being normally closed by a piston having a bearing in said wall and mounted on a spring-controlled rod, the forward end of which projects through and beyond said nozzle; in combination with means for moving said reciprocating shaft and nozzle into and out of contact with a cover, substantially as described.

9. In machines for coating can-covers, a rotatory mandrel, adapted to receive and rotate a cover; a reciprocating shaft, adapted to hold said cover on said mandrel; a swiveled rod carrying a reservoir provided with a valve-controlled outlet; a lever pivoted to said rod and swiveled to said shaft; and spring or grip levers, one of which is pivoted to said reciprocating shaft, whereby the latter and the reservoir are moved toward and from the said mandrel, substantially as described.

Signed at New York, in the county of New York and State of New York, this 15th day of July, A. D. 1899.

AUGUST KRESS.

Witnesses:

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