

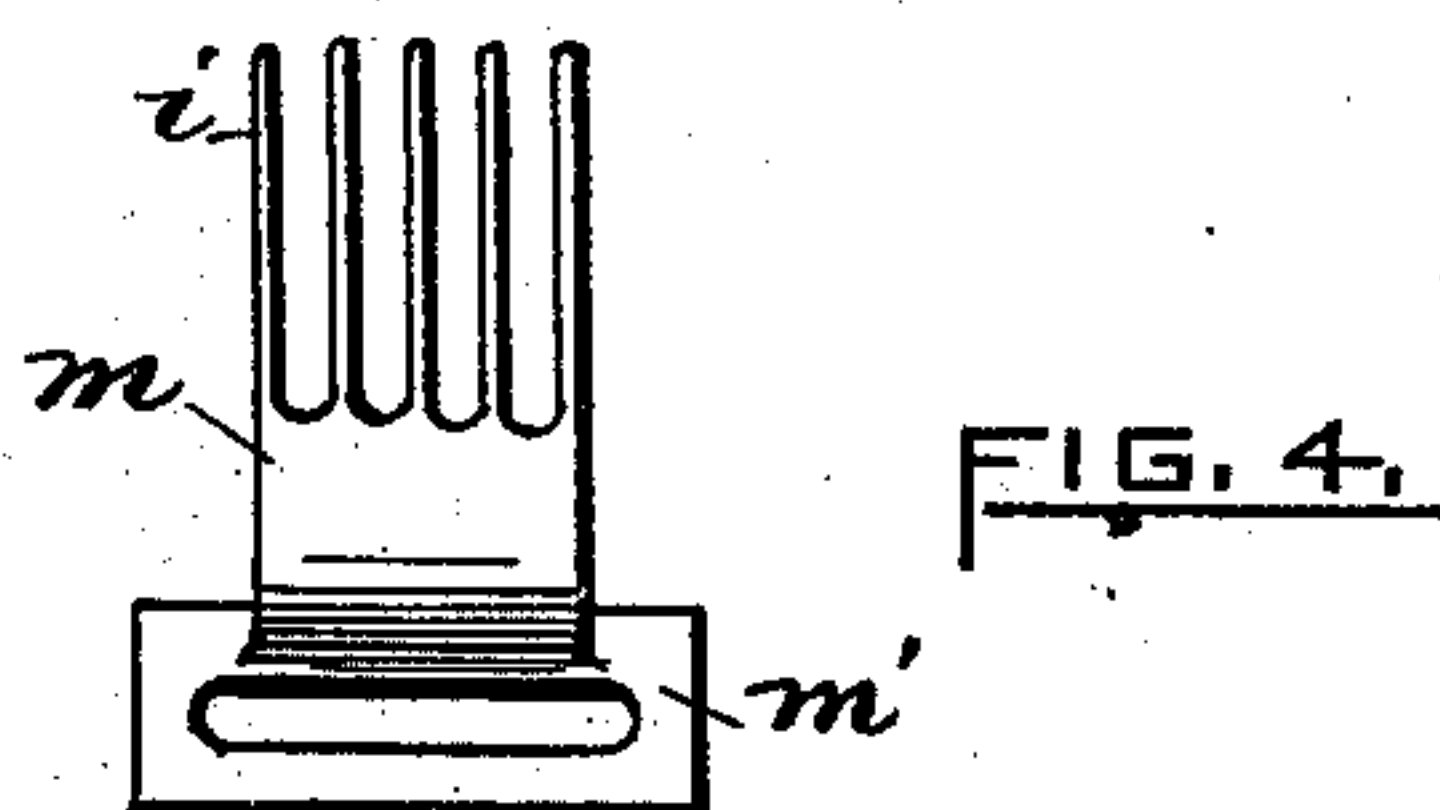
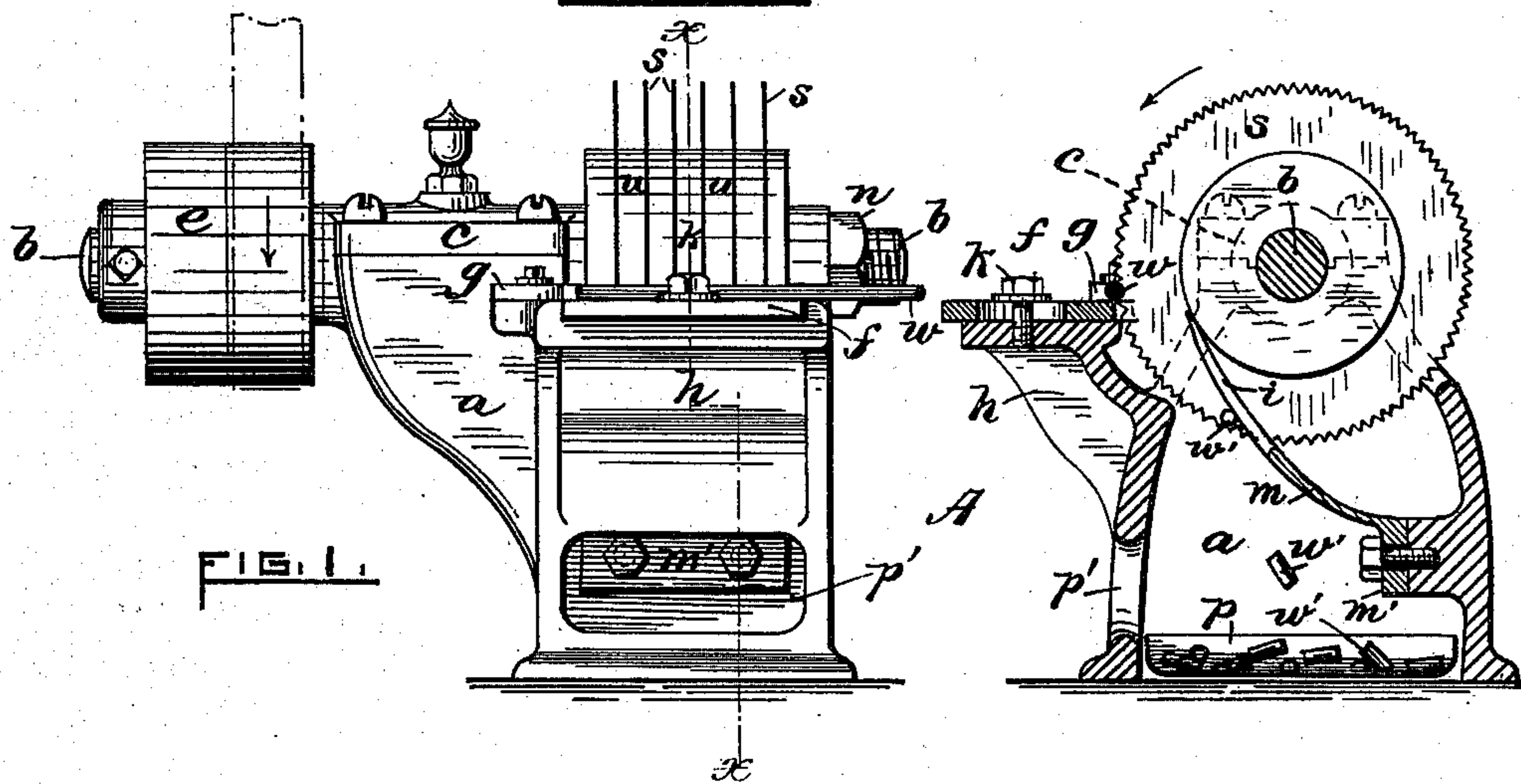
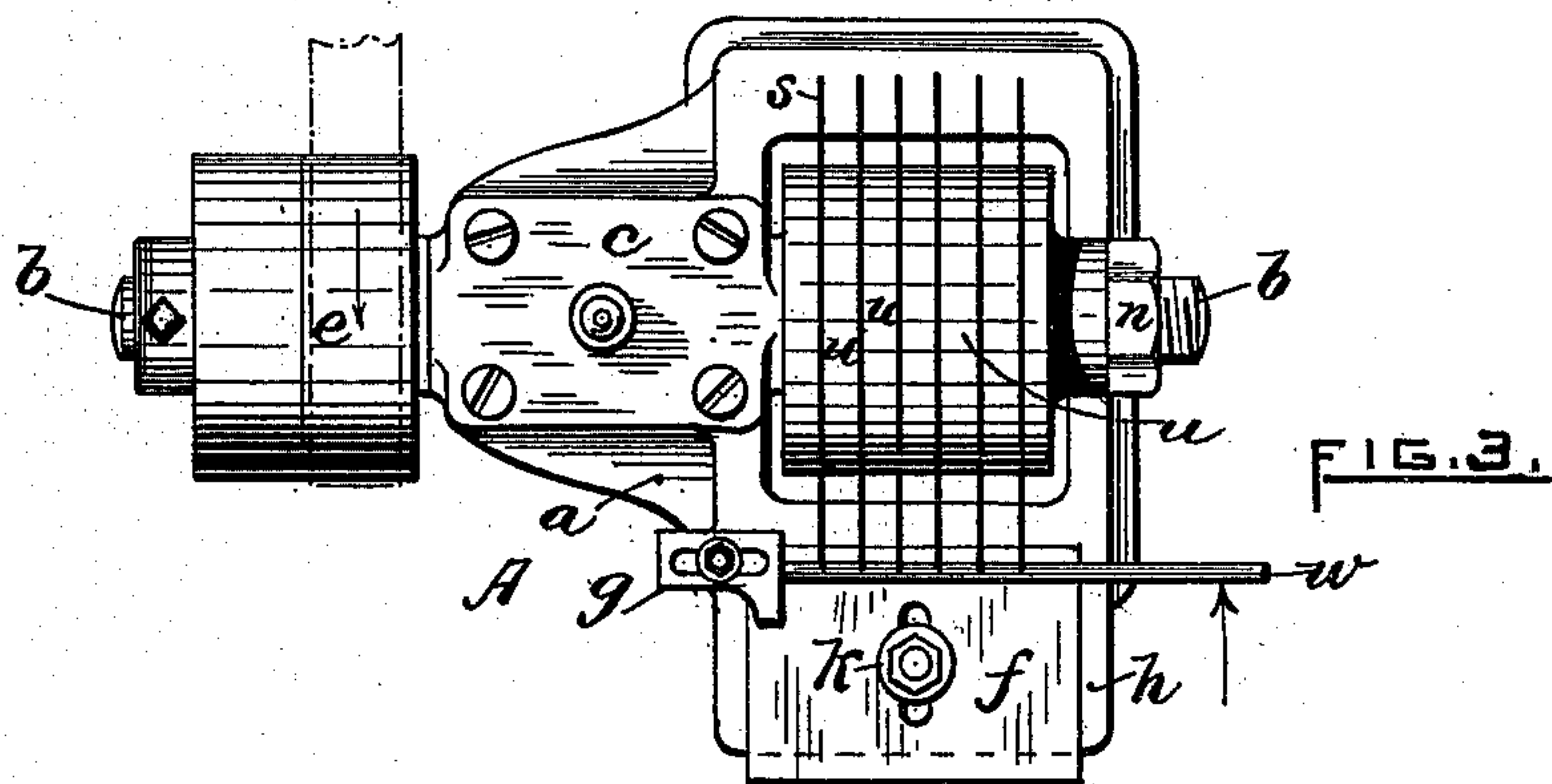
(No Model.)

F. L. LEWIS.

CUTTING OFF MACHINE FOR JEWELERS' STOCK.

No. 402,171.

Patented Apr. 30, 1889.



WITNESSES.

Charles Harrigan.

Hubert F. Fournelle.

INVENTOR.

Frank L. Lewis.

by *Remington & Henthorn*
Attys.

UNITED STATES PATENT OFFICE.

FRANK L. LEWIS, OF PROVIDENCE, RHODE ISLAND.

CUTTING-OFF MACHINE FOR JEWELERS' STOCK.

SPECIFICATION forming part of Letters Patent No. 402,171, dated April 30, 1889.

Application filed January 10, 1889. Serial No. 295,918. (No model.)

To all whom it may concern:

Be it known that I, FRANK L. LEWIS, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Cutting-Off Machines for Jewelers, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to machines for transversely cutting or severing jewelers' stock or wire into suitable lengths. Usually heretofore it has been the practice to provide a suitably-mounted spindle or arbor with a cutting-off saw or disk adapted to be rapidly revolved, combined with a movable rest provided with an adjustable stop, thereby furnishing means whereby the blanks may be cut off from the rod or wire and to any desired length. Such former arrangements, however, are objectionable from the fact that the blanks were cut singly, whereas it is very desirable that a series of them be cut at once, thereby not only increasing the capacity of the machine, but obviously effecting considerable saving of time. Take, for example, the studs or posts which enter into the construction of collar-buttons, &c.. These are usually made of round plated wire, (solid or hollow, as the case may be.) It is very essential that such blank studs be very uniform in length and that the ends be cut off true and smooth in order to avoid filing, &c., so that when they are placed in position upon the button-back to be soldered they will stand true and vertical after the parts are thus united.

My invention consists in providing an arbor with a series of two or more circular saws separated from each other by collars whose thickness is the same as the length of the blanks to be produced, combined with a rest or table adapted to support the wire and present it simultaneously to the cutting-disks and a stop or gage adjustably secured to the rest.

It also consists in providing the machine with a series of stationary clearer fingers or

guards, the ends of which are inserted between the saws, thereby serving to force the blanks from the space between the cutters. In case the said guards be omitted some of the blanks are carried round and round with the saws, new blanks being constantly accumulating and wedging themselves therein to the injury of the saws. In such event the thin saws frequently become forced to one side, thereby, if the stock be continually fed along, producing blanks irregular in length and having slightly-beveled ends. Another advantage of the clearer is that it prevents the blanks from being thrown tangentially from the saws and scattered about the room, all as will be more fully hereinafter set forth and claimed.

In the annexed sheet of drawings, Figure 1 represents a front elevation of a small sawing-machine provided with my improvements. Fig. 2 is a transverse sectional view taken on line *xx* of Fig. 1. Fig. 3 is a plan view, and Fig. 4 is a front view of the clearer-guard detached.

A detailed description of my improved cutting-off machine is as follows:

A designates the machine as a whole.

a is the bed or frame to which the several parts are mounted and attached.

b indicates the saw arbor or spindle, the same being mounted to revolve in a bearing, *c*, of the frame. To the arbor is secured a pulley, *d*, which in turn is adapted to be revolved by a belt leading thereto from a suitable driving-pulley, as usual. The opposite end portion of the arbor, as drawn, is adapted to receive a series of circular saws or cutting-disks, *s*. The saws are placed at intervals upon the arbor, intermediate collars, *u*, of the desired thickness serving to accurately separate the saws from each other. A nut, *n*, fitted to the screw-threaded end of the arbor in conjunction with the outside collar, affords means for firmly securing the saws upon the arbor.

To the front side of the bed is attached a support or bracket, *h*, upon which a rest or table, *f*, is mounted. The rest is fitted to be moved to and from the saws, or it may be adjusted to the desired position with relation to the saws and then secured in place by means of a bolt, *k*. A stop-gage, *g*, is adjustably secured to one side of the bracket *h*.

This gage is so mounted and adjusted with relation to the first saw (nearest the pulley) that the first blank to be severed will have exactly the same length as the other simultaneously-severed blanks.

5 *m* designates the clearer, which forms another part of my invention. The clearer is made of suitable metal and attached to the frame *a* by bolts passing through the clearer-
10 base *m'*, as clearly shown. The clearer or guard is provided with a series of spring-fingers, *i*, adapted to bear lightly against the said spacing-collars *u*, as shown in Fig. 2. By
15 means of this device it will be seen that as the wire or stock *w* is fed forward to the revolving saws or cutters the wire is severed simultaneously into a series of short pieces or blanks, *w'*, which are forced from the saws by
20 the spring fingers or clearer *i* in case the blanks do not fall freely from the table *f* and drop into a receptacle, *p*, beneath. The pan may be removed through an opening, *p'*, formed in the bed *a*.

I would state that my improvement is well
25 adapted to be employed when other forms of stock are to be cut into lengths—as, for example, drawn wire, plated or otherwise, solid or tubular, round, angular, or polygonal in cross-section, or even ribbon or flat stock may be
30 as readily cut simultaneously into lengths.

It is obvious that the saws and collars may be so arranged upon the arbor as to simultaneously cut off two or more series of blanks having different lengths, and by the introduction of thin stationary partitions the blanks
35 thus cut may be deposited in the respective receptacles or compartments without being intermixed.

I do not claim as my invention a series of saws mounted upon an arbor or gang-saws
40 adapted to simultaneously cut stock into shorter lengths.

I claim as my invention—

1. The combination, with a series of suitably-mounted cutting-off saws, *s*, of stationary
45 guards or clearers *i*, arranged to intercept the severed blanks, substantially as shown and described, and for the purpose set forth.

2. The combination, with a series of mounted cutting-off saws, *s*, of a series of stationary
50 guards or clearers, *i*, arranged to intercept the severed blanks, and a sliding table provided with a stop-gage, substantially as shown and described.

In testimony whereof I have affixed my signature in presence of two witnesses.

FRANK L. LEWIS.

Witnesses:

CHARLES HANNIGAN,
GEO. H. REMINGTON.