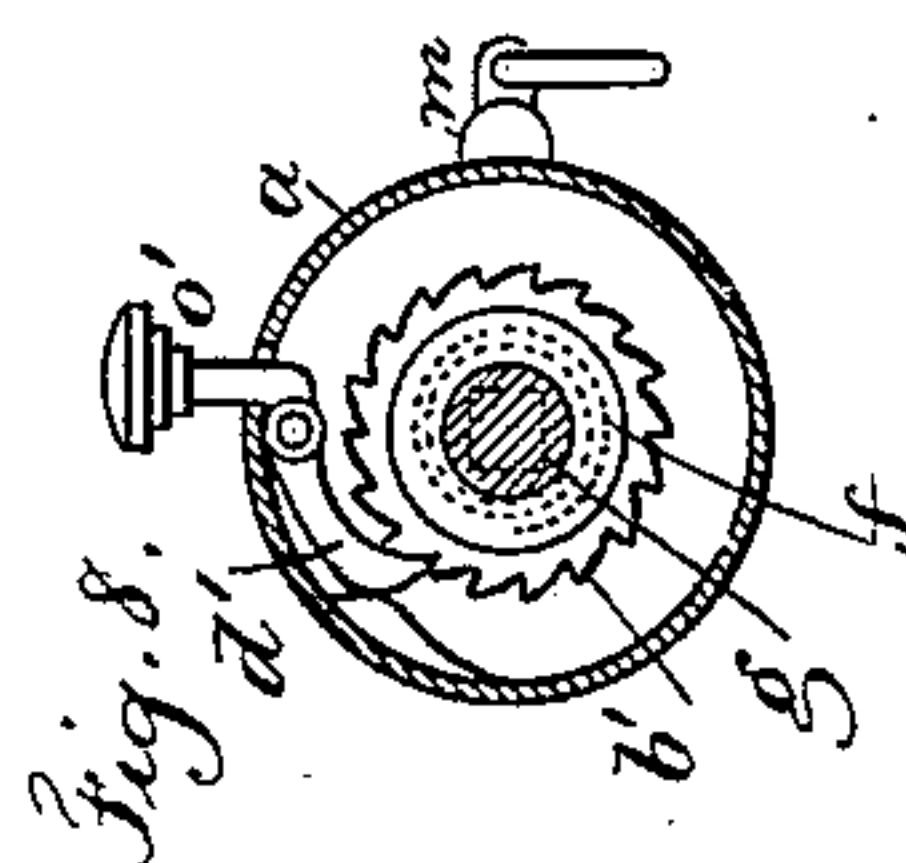
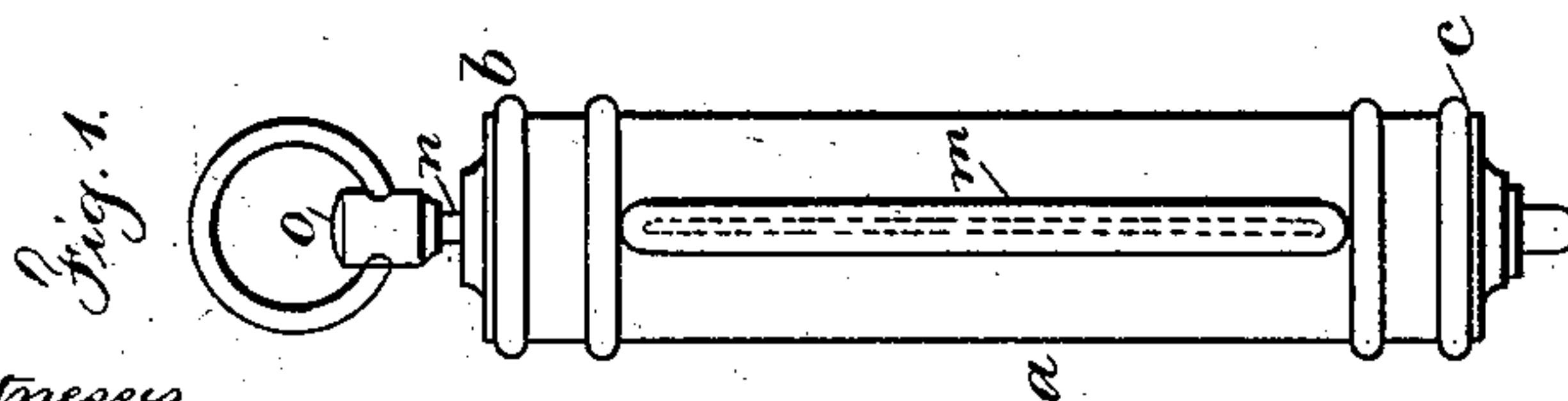
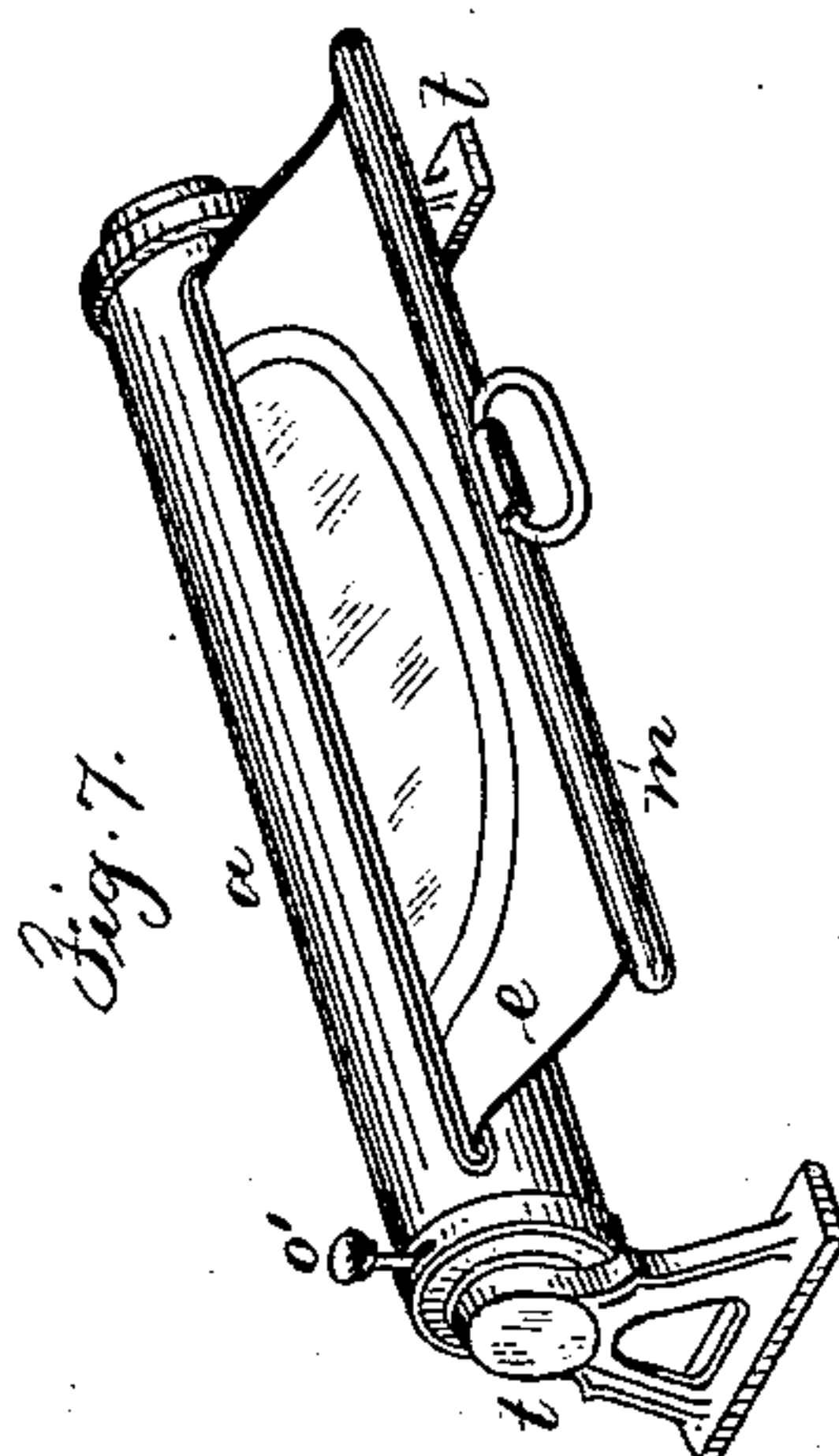
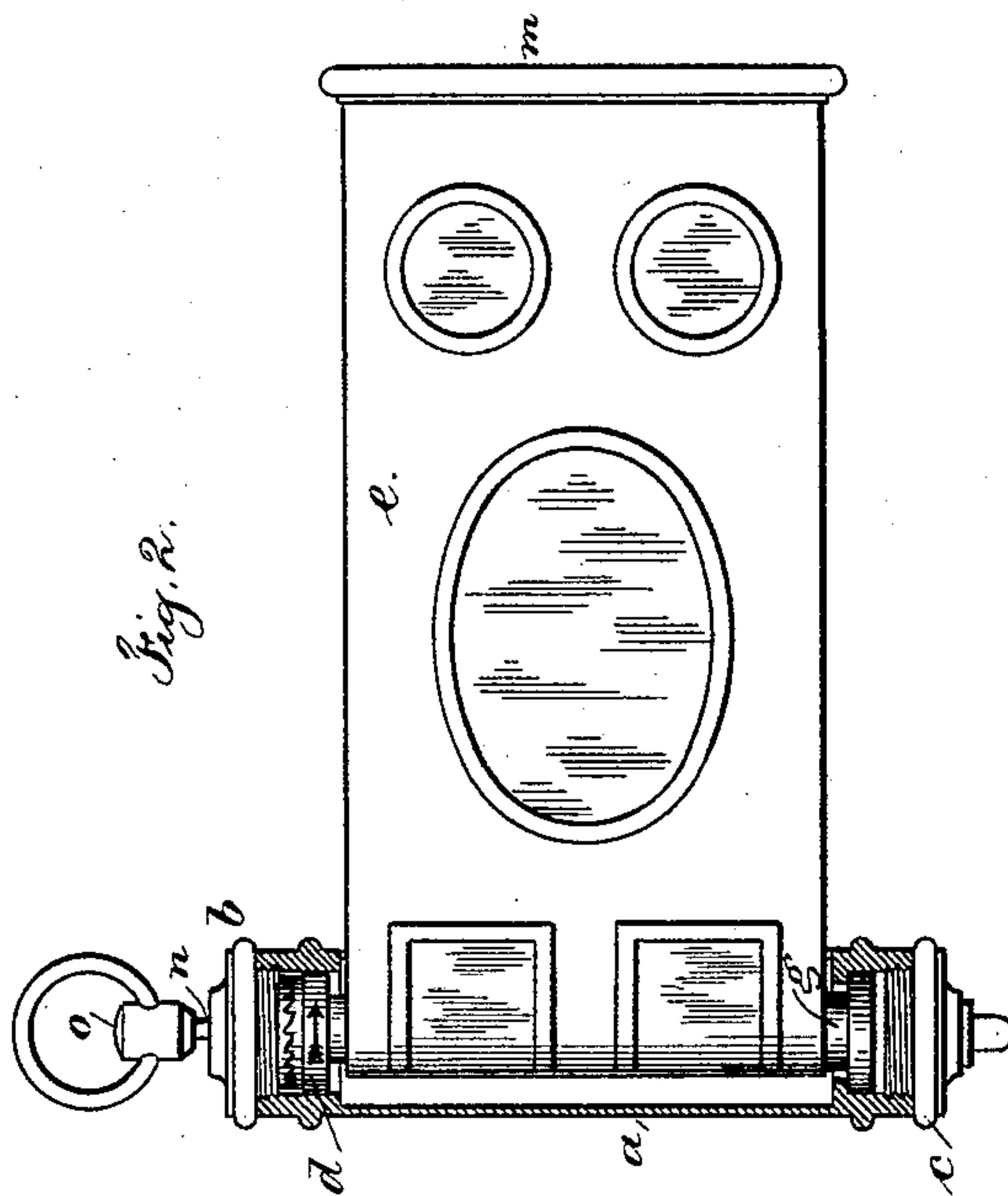
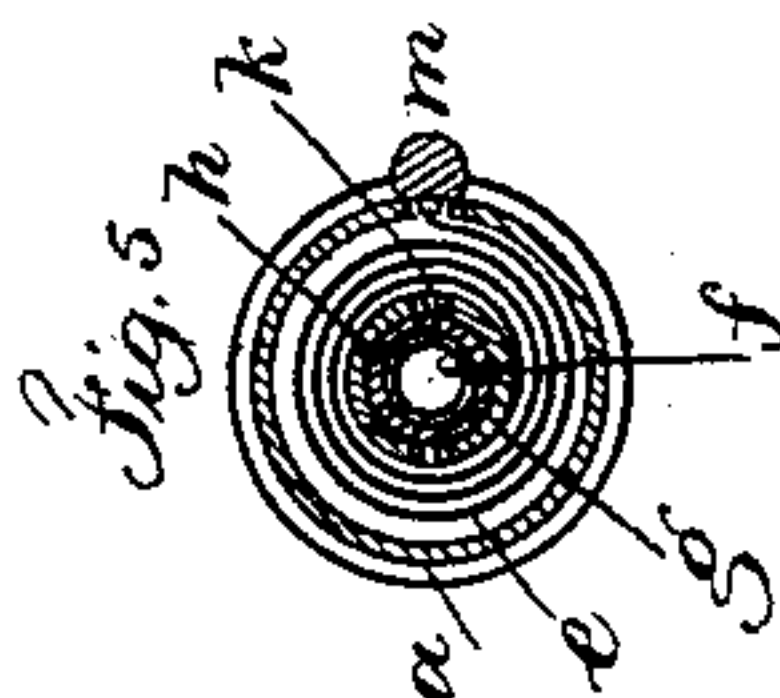
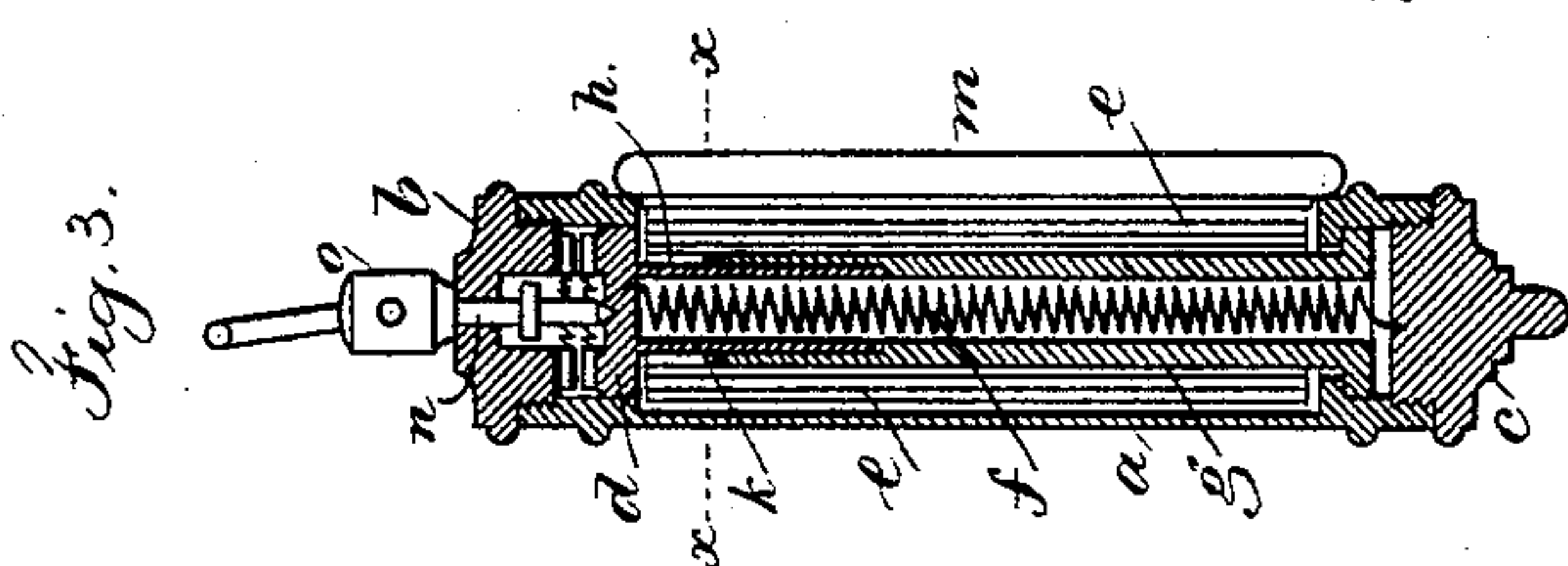
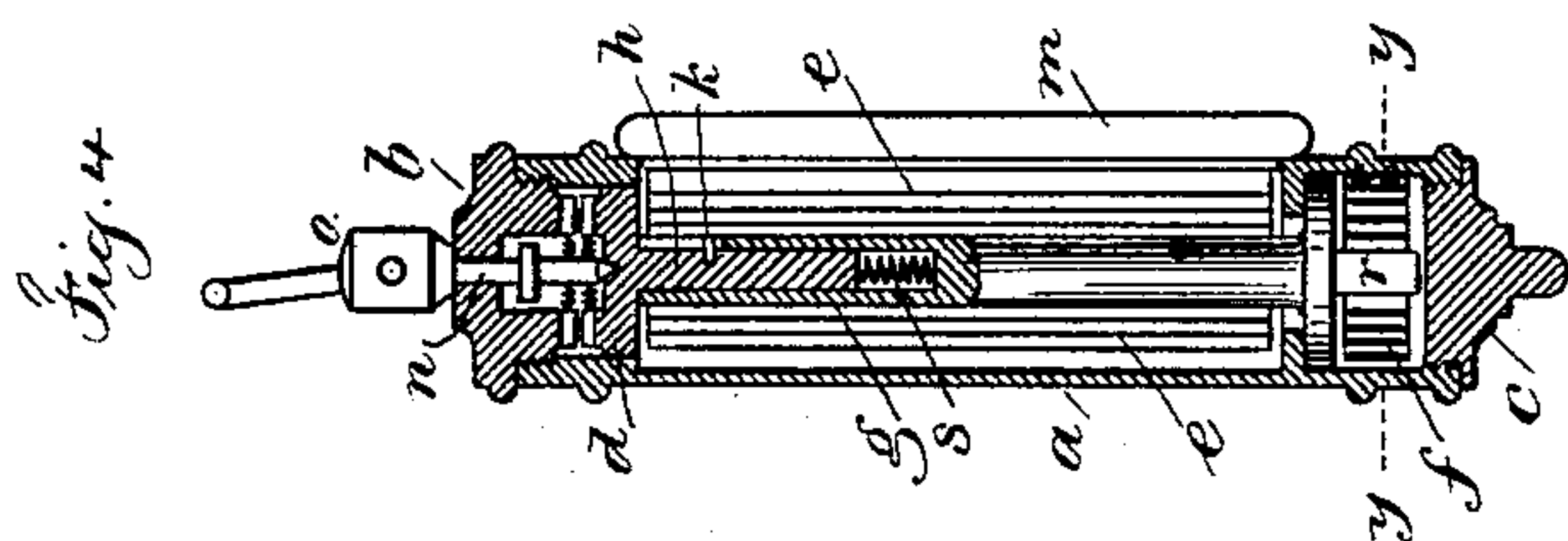


(No Model.)

J. C. KOCH.  
WATCH CHAIN ATTACHMENT.

No. 480,430.

Patented Aug. 9, 1892.



Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN C. KOCH, OF BERLIN, GERMANY.

## WATCH-CHAIN ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 480,430, dated August 9, 1892.

Application filed October 15, 1889. Serial No. 327,092. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN CASPAR KOCH, a citizen of the United States, residing in Berlin, Prussia, Germany, have invented an Improvement in Watch-Chain Attachments, of which the following is a specification.

This watch-chain attachment is adapted to hold portraits or pictures or engravings, addresses or other matters of interest, and to be suspended from the watch-chain as a charm, or when too large to be thus employed it may be provided with feet or a stand for supporting the same on a table or desk. The pictures or other device are upon a sheet or web of paper, silk, or other suitable material, and there is a small roller within the slotted case and a spring for revolving the roller and winding up the strip or web of material upon which the pictures or other device are placed, and ratchet-teeth are made use of for holding the cylinder or roller when the strip of material is drawn out to a greater or less extent.

In the drawings, Figure 1 is an elevation of a locket. Fig. 2 is a partial section with the strip of material drawn out. Fig. 3 is a section through the center of the locket. Fig. 4 is a similar view with a different character of spring. Fig. 5 is a sectional view at the line  $x x$ . Fig. 6 is a similar view at the line  $y y$ . Fig. 7 is a perspective view of the locket supported on a stand, and Fig. 8 is an elevation of the ratchet-wheel and a section of the ring surrounding the same.

The web or strip  $e$  is of any suitable material—such as paper or silk—and upon it are placed the pictures, engravings, or any other device which may be desired, and the size of the locket is dependent upon the size of the strip or web  $e$ . Usually the whole article will be sufficiently small to be worn as a charm upon a watch-chain.

At one end of the web  $e$  is a head-piece  $m$ , and the other end of the web is firmly secured to the roller or cylinder  $g$ , which is within the inclosing case  $a$ , such case being slotted longitudinally at one side for the web  $e$  to pass through such slot, and there is a spring  $f$ , by means of which the roller  $g$  is rotated to wind up the web  $e$  as the same is drawn into the cylinder  $a$ , and this spring  $f$  is wound up as the web  $e$  is drawn out.

The spring  $f$  may be of any desired character. I have shown in Fig. 3 a helical spring within the roller  $g$ , which is represented as tubular. One end of this helical spring  $f$  is fastened to the cap-piece  $c$  and the other end is connected with the roller  $g$ , as hereinafter more fully explained.

In Fig. 4 the spring  $f$  is a volute or coil similar to a watch-spring, the outer end being connected with the interior of the cylinder  $a$  and the inner end connected with the roller  $g$ , and it is preferable to prolong the roller  $g$  in the form of a square  $r$ , setting within the inner end of the spring  $f$ , which is bent rectangular to receive such square  $r$ .

The cap  $b$  is preferably screwed into the upper end of the case  $a$ , and there is a stem  $n$ , passing centrally through the cap and terminating in the head  $o$  and suspending-ring, and its stem  $n$  can receive a slight endwise movement, there being a collar upon such stem  $n$  to prevent the same being drawn out from the cap  $b$ . The inner end of the head  $b$  is made with radial ratchet-teeth, and there is a disk  $d$  with similar teeth engaging the teeth on the head  $b$ , and this disk  $d$  has a tubular extension  $h$ , passing down within the roller  $g$ , and there is a pin  $k$  in this tubular extension and within the longitudinal slot in the roller  $g$ , so that this disk  $d$  and extension  $h$  are moved endwise and at the same time the roller  $g$ , disk  $d$ , and extension  $h$  will revolve together. It will now be understood that if the upper end of the helical spring  $f$  is connected to this disk  $d$ , as seen in Fig. 3, the spring  $f$  will be coiled up more closely by drawing out the web  $e$  and rotating the roller  $g$ , disk  $d$ , and extension  $h$ , and in so doing the parts will revolve in the direction indicated by the arrow, Fig. 2, and the ratchet-teeth on the disk  $d$  will slide past the ratchet-teeth on the head  $b$ , and by the expansive action of the spring  $f$  the ratchet-teeth will interlock and hold the web in its extended position; but when the web is to be withdrawn into the case  $a$  it is only necessary to press the head  $o$  and stem  $n$  downwardly and the point of the stem will move the disk  $d$  and disengage the ratchet-teeth, so that the spring  $f$  is free to revolve the roller  $g$  and parts connected with it and wind up the web as it is drawn into the case. The same parts



and mode of operation exist when the lock is made in the form represented in Fig. 4. In this case the volute spring being at one end of the roller *g* simply acts to wind up the web by revolving the roller, and in this form the extension *h* does not require to be tubular, and it is acted upon by a small helical spring *s* to give the end motion to such extension *h* and disk *d* to bring the ratchet-teeth into contact for holding the roller when the web is drawn out. A movement such as before described, given to the stem *n* and head *o* separates the ratchet-teeth and compresses the spring *s*, allowing the spring *f* to wind up the web as it is drawn into the case *a*.

The device represented in Figs. 7 and 8 is exactly the same as that heretofore described, with the exception that the case *a* is supported by end brackets or frames *t*, adapted to rest upon a stand, table, or desk, and, if desired, a ratchet-wheel *b'* may take the place of the ratchet teeth upon the head *b* and disk *d*, such ratchet-wheel *b'* being connected to the roller *g*, and there is a pawl *d'* within the case *a*, having an arm *o'* projecting through a slot in the case *a*, so that such arm may be acted upon by the finger to disengage the point of the ratchet or pawl from the teeth of the wheel *b'*.

I claim as my invention—

1. The combination, in a watch-chain attachment, of a slotted cylinder, a suspending device at one end thereof, a web passing through the slot of the cylinder, a roller to which the inner end of the web is connected, a spring for rotating the roller, a ratchet device for holding the roller, and a connection therefrom to the suspending device for liberating the ratchet by a movement of the suspending device, substantially as specified.

2. The slotted case *a* and the web *e*, in combination with the roller *g*, to one end of which the web is attached, the heads *b* and *c* to the case *a*, there being ratchet-teeth on the inner end of the head *b*, the disk *d*, having corresponding ratchet-teeth and the extension

*h*, passing into the roller *g*, and a pin *k*, passing through the slot in the roller *g* for connecting the parts together to insure their rotation at the same time that an end movement is allowed to the disk *d* for separating the ratchet-teeth, substantially as set forth.

3. The slotted case *a*, in combination with the web *e*, a roller *g*, to which one end of the web is attached, a spring *f* for rotating the roller, a head *b*, having ratchet-teeth upon its inner face, the disk *d*, having corresponding ratchet-teeth, the extension *h*, passing from the disk *d* into the roller *g*, and a slot and pin for connecting the parts, the stem *n* and head *o* for moving the disk *d* and separating the ratchet-teeth, substantially as set forth.

4. The slotted case *a* and web *e*, in combination with the tubular roller *g*, to which one end of the web is attached, the helical spring *f* within the tubular roller, the head *c*, to which one end of the spring is connected, and the extension *h*, passing into the roller *g*, the end *b*, having ratchet-teeth, the stem *n* and head *o* for acting upon the disk *d* to separate the ratchet-teeth and permit the spring *f* to rotate the roller and wind the web upon it, substantially as set forth.

5. The slotted case *a* and web *e*, in combination with the tubular roller *g*, to which one end of the web is attached, the helical spring *f*, the head to which one end of the spring is connected, the end *b*, and the suspending-stem *n*, substantially as set forth.

6. The combination, with a slotted case, of a web passing through the slot, a roller to which one end of the web is connected, a spring within the roller for actuating the same, a ratchet device for holding the roller, and a disconnecting device projecting axially from one end of the case, substantially as specified.

Signed by me this 8th day of October, A. D. 1889.

JOHN C. KOCH.

Witnesses.

GEO. T. PINCKNEY,  
WILLIAM G. MOTT.