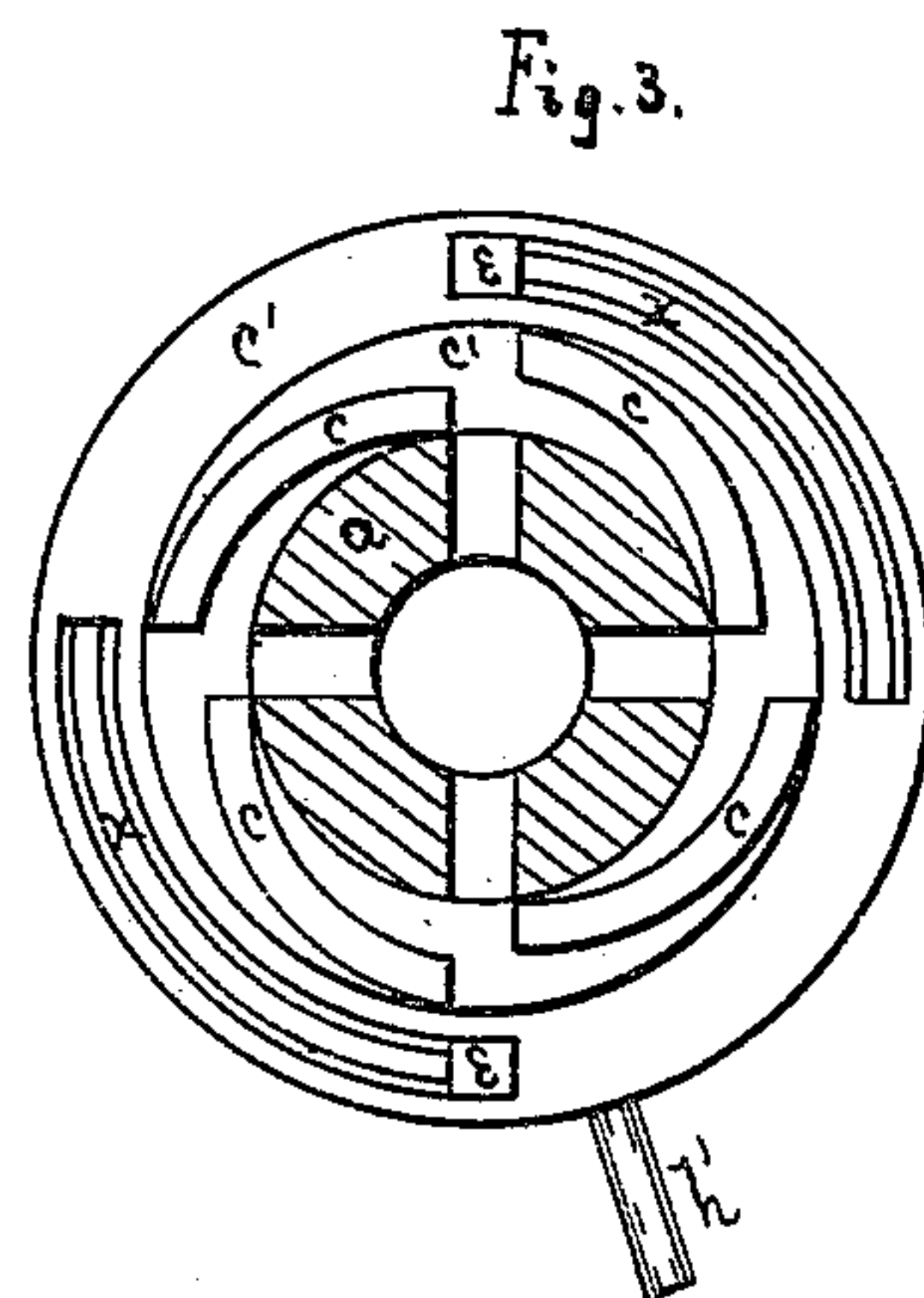
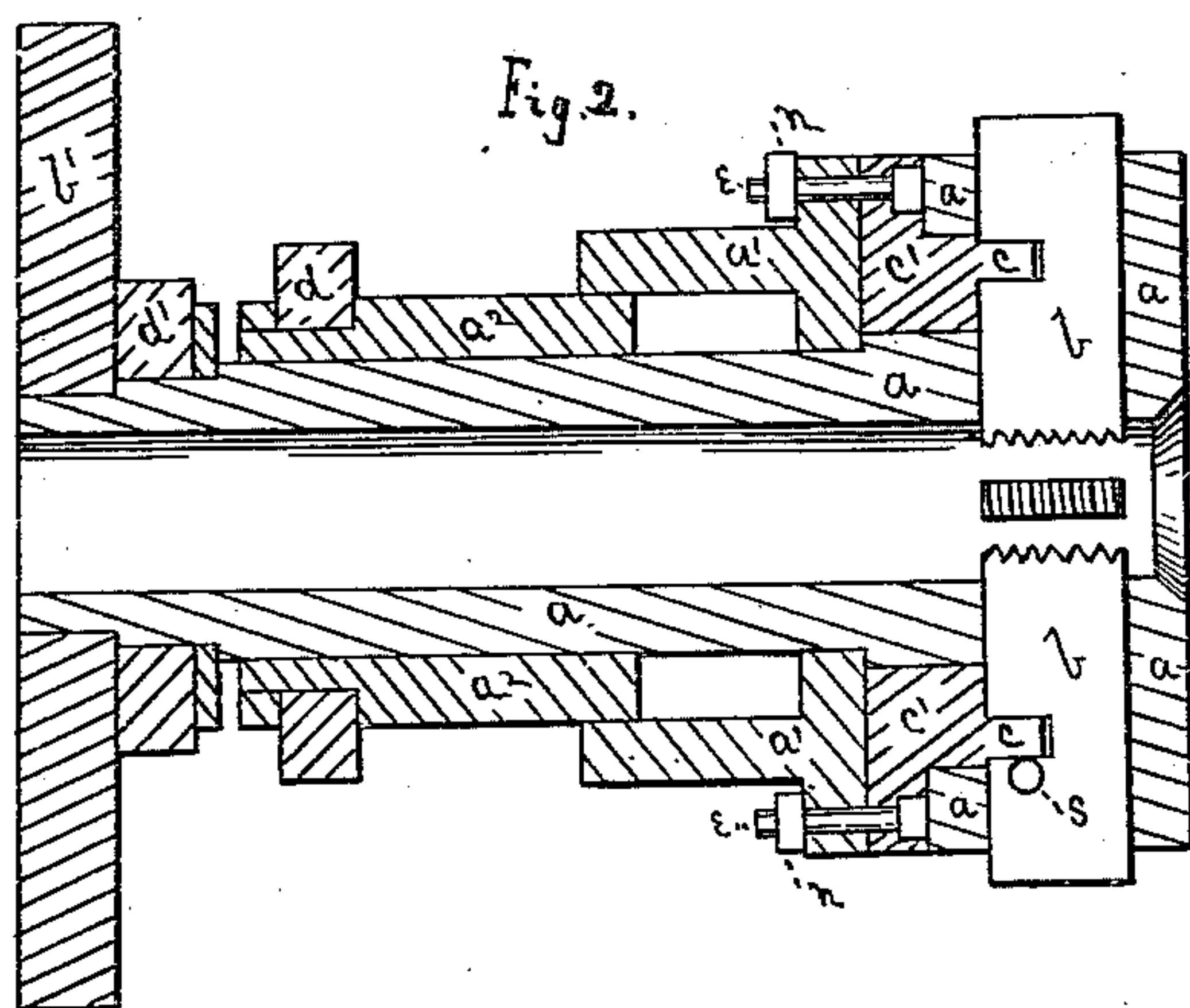
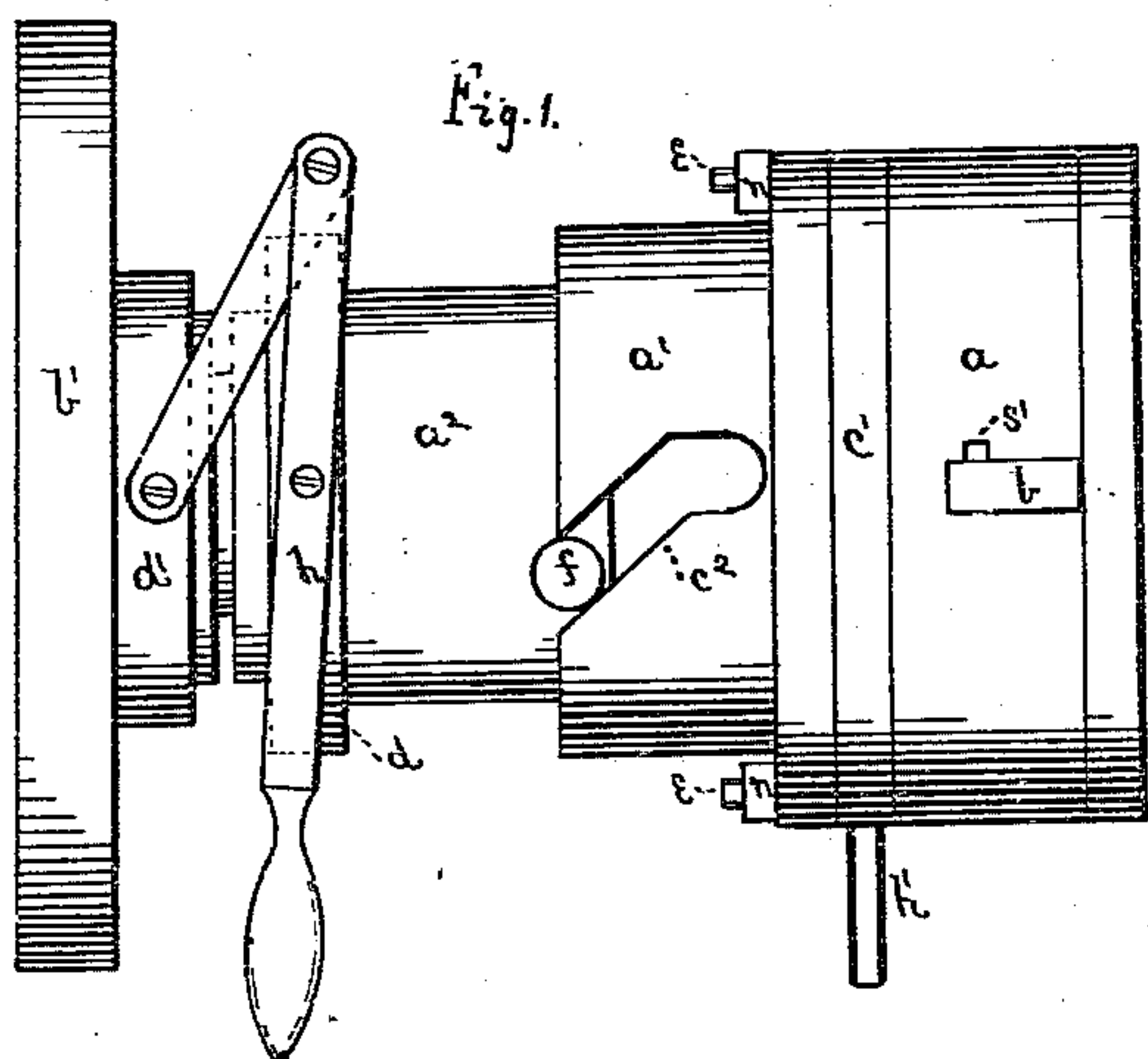


L. W. STOCKWELL.
SCREW THREADING MACHINE.

No. 259,433.

Patented June 13, 1882.



Witnesses.
Geo. F. Robinson
A. D. Knapp

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UNITED STATES PATENT OFFICE.

LEVI W. STOCKWELL, OF CLEVELAND, OHIO, ASSIGNOR TO WILLIAM H. PRICE, OF SAME PLACE.

SCREW-THREADING MACHINE.

SPECIFICATION forming part of Letters Patent No. 259,433, dated June 13, 1882.

Application filed October 9, 1879.

To all whom it may concern:

Be it known that I, LEVI W. STOCKWELL, of Cleveland, Ohio, have invented a new and useful Improvement in Screw-Threading Machines, of which the following is a specification.

The nature and object of my invention is a screw-threading machine in which the scroll that holds and adjusts the threading-dies in the cutter-head is turned to open and close the dies by means of a sliding collar having a pin which enters a cam-slot in a ring attached to the scroll.

Figure 1 is an elevation. Fig. 2 is a horizontal section. Fig. 3 represents the scroll-ring.

The cutter-head or stock *a* carries threading-dies *b*, which are held and moved toward and from the axis of the cutter-head by concentric cams *c* on scroll-ring *c'* entering slots in the dies. The cutter-head *a* has a flange, *b'*, at the end of its shank, through which it may be bolted to the face-plate of a lathe or any rotating wheel to operate the machine. The ring *a'* is attached by bolts *e e* to scroll-ring *c'*, and has a flange extending backward over a part of sliding collar *a²*. It has a cam-slot, *c²*, diagonal to the axis of the cutter-head, except at the closed end of the slot nearest to scroll-ring *c'*, where the sides of the slot are parallel with the axis of the cutter-head. By sliding forward collar *a²* on the shank of the cutter-head its pin *f* in cam-slot *c²* turns ring *a'* and scroll *c'* on the cutter-head *a*, and thereby causes the concentric cams *c* to close the threading-dies. By sliding back collar *a²* the motion of ring *a'* and scroll *c'* on the cutter-head is reversed and the dies opened. When the dies are closed and cutting-threads, scroll *c'*, and ring *a'* are prevented from turning on the cutter-head by the sides of slot *c²*, which are then in contact with pin *f*, being parallel with the axis of the cutter-head.

Sliding collar *a²* is feathered to the shank of cutter-head *a*, and is operated by the jointed lever *h*, pivoted to loose rings *d d'*. Sliding collar *a²* rotates in ring *d*, which is in an annular groove in collar *a²*, and the shank of cutter-head *a* rotates in ring *d'*.

Cam-slot *c²* may be made in collar *a²*, and pin *f* placed in ring *a'*, if preferred.

Scroll *c'* has two circular slots, *x x*, to receive bolt *e* and its head. Bolts *e e* extend through

slots *x x* and ring *a'*, and are for the purpose of firmly attaching scroll *c'* and ring *a'* together, which is done by turning threaded nuts *n n* on the bolts. When nuts *n n* have been loosened on bolts *e e* scroll *c'* may be turned without turning ring *a'* for the purpose of adjusting the dies *b*. The circular slots *x x* are of a length to permit scroll *c'* to be thus turned sufficiently to move the whole length of cams *c* through the slots in the dies. There is a space between the ends of adjacent cams *c* equal to the width of die *b*. When scroll *c'* has been turned, as above stated, on cutter-head *a* until cams *c* and the die-slots in the cutter-head are in the relative positions shown in Fig. 3, the dies *b* become dislodged from cams *c*, and may be removed and replaced. In replacing the dies in the cutter-head a pin *s* in the side of each die comes in contact with the side of cam *c* at the outer end of the cam, and arrests the die in position for the cam to enter the slot in the die by turning scroll *c'* on the cutter-head. Scroll *c'* is thus turned by handle *h'*, inserted in a hole in the circumference of the scroll. There is a small slot, *s'*, in cutter-head *a*, at the side of the die slot, for pin *s* to enter.

Machines have heretofore been made in which the scroll actuating the dies has been turned by means of spiral projections on a sliding sleeve, and in expansion-taps a sleeve having a rotary motion has been given a sliding motion by means of a cam-slot somewhat similar in form to the one herein described, but in a different relative position to the axis of the spindle, for the purpose of arresting the sliding motion of the sleeve and dies in a direction lengthwise of the spindle.

I claim as my invention—

The cutter-head *a*, provided with scroll *c'*, having a rotary motion to open and close the dies, and ring *a'*, formed with a cam-slot, *c²*, a part of which is parallel with the axis of the cutter-head for the purpose of arresting the rotary motion of the scroll, in combination with the sliding collar *a²*, having pin *f*, substantially as described.

LEVI W. STOCKWELL.

Witnesses:

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