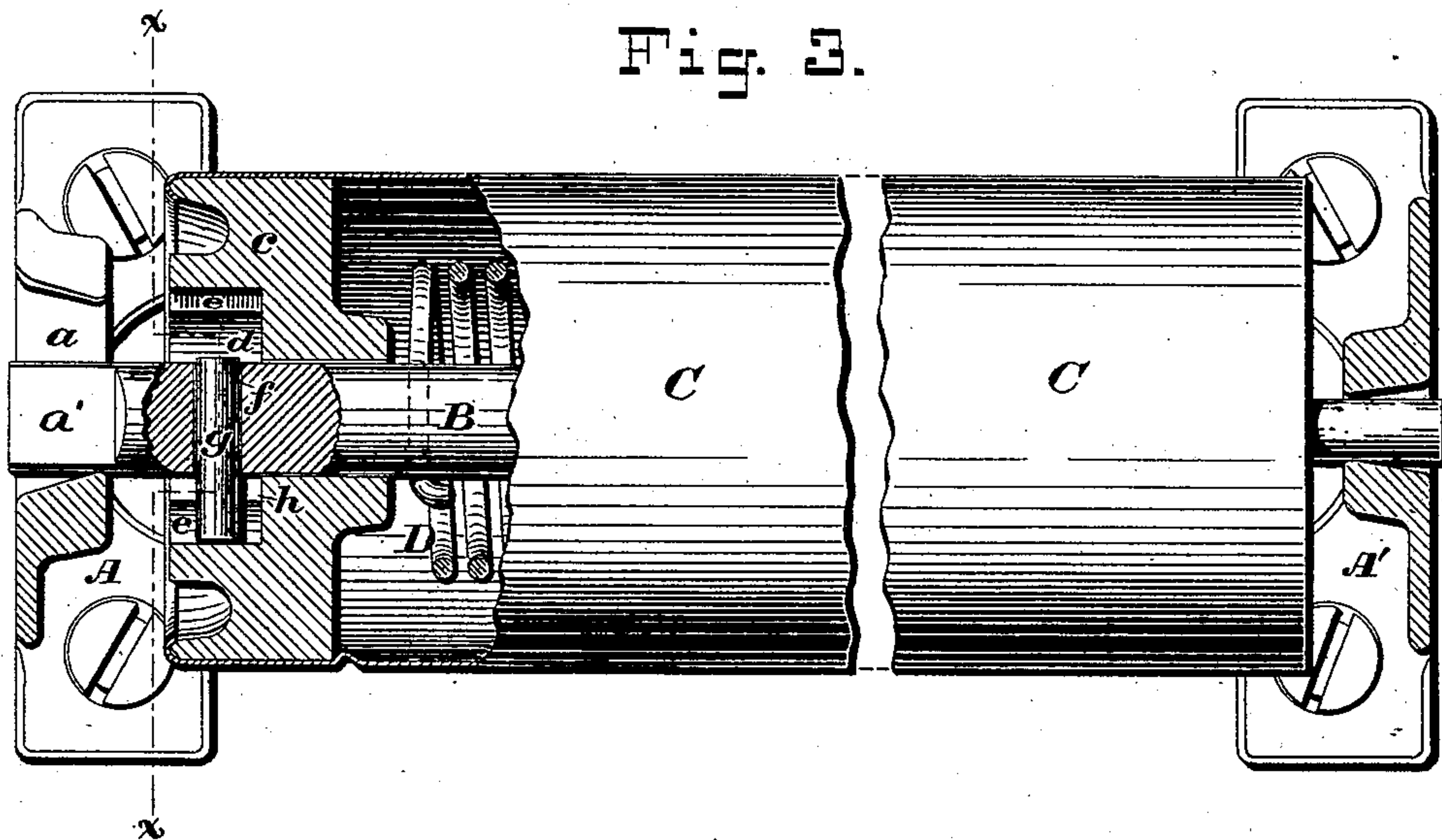
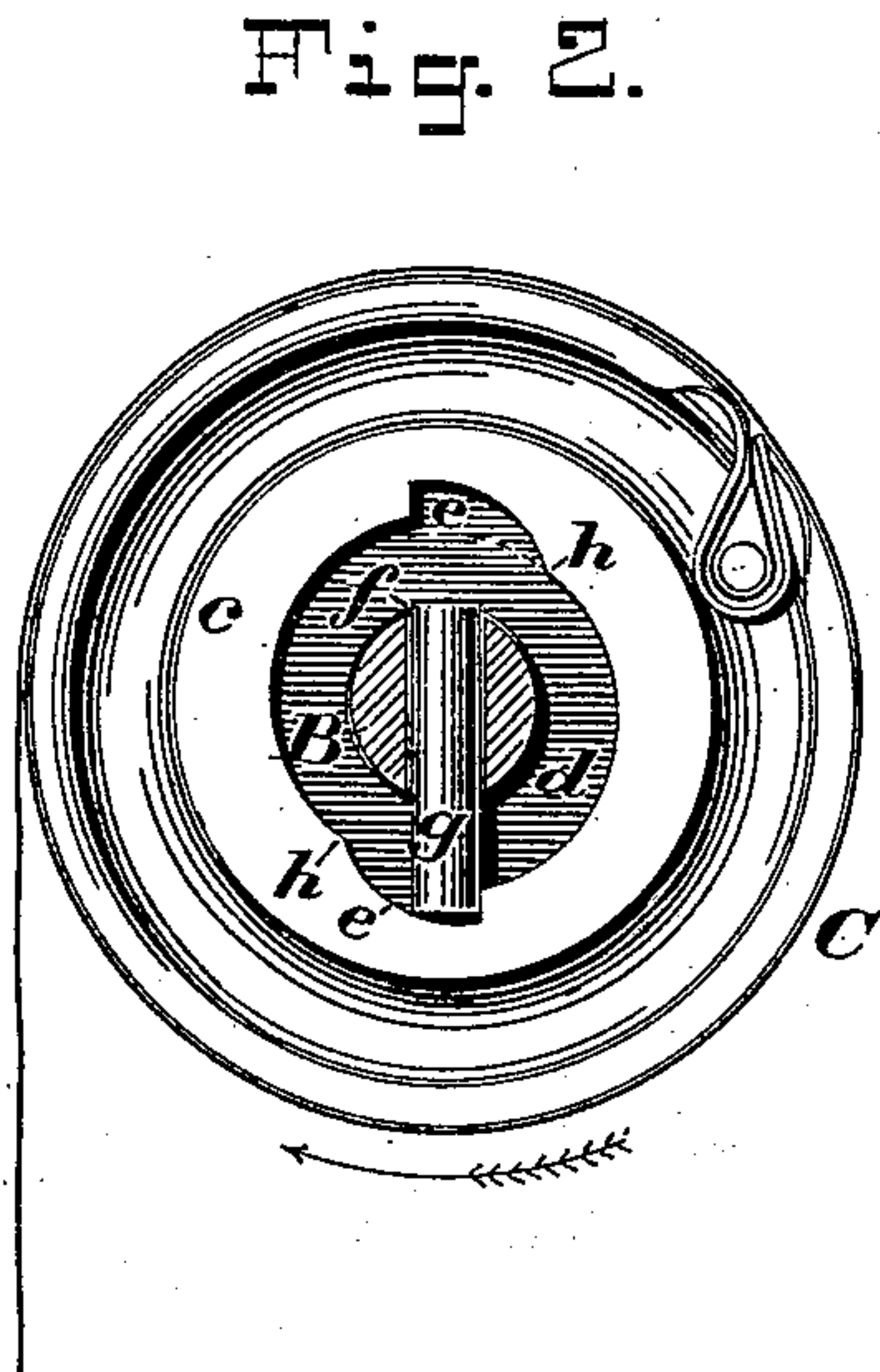
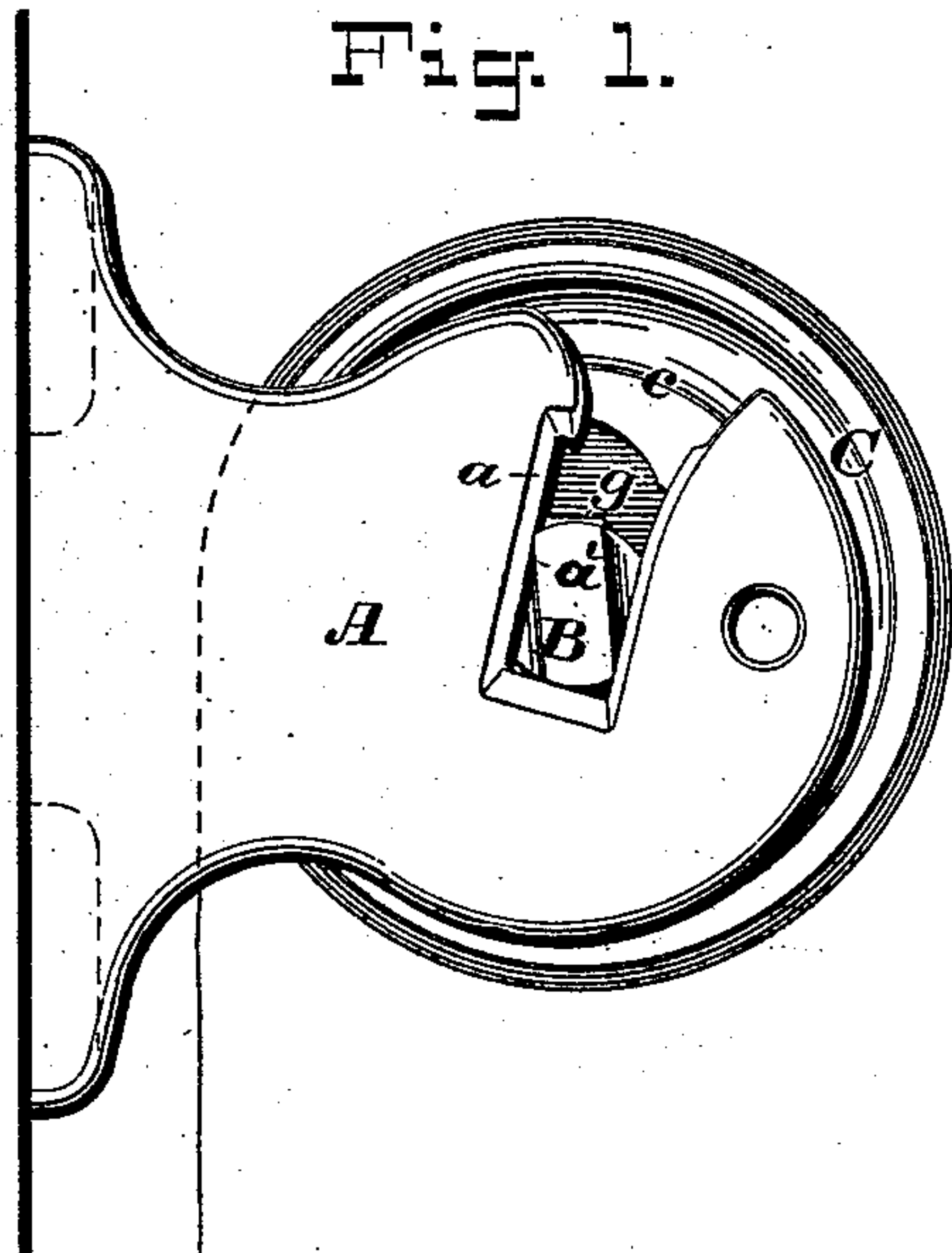


W. CAMPBELL.  
Curtain-Fixture.

No. 227,146.

Patented May 4, 1880.



ATTEST:

*Thomas P. Pemberton*  
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INVENTOR:

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# UNITED STATES PATENT OFFICE.

WILLIAM CAMPBELL, OF BROOKLYN, NEW YORK.

## CURTAIN-FIXTURE.

SPECIFICATION forming part of Letters Patent No. 227,146, dated May 4, 1880.

Application filed July 17, 1878.

*To all whom it may concern:*

Be it known that I, WILLIAM CAMPBELL, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain Improvements in Curtain-Fixtures, of which the following is a specification.

My invention relates most particularly to spring curtain-fixtures of that class in which, while a spiral spring in the roller is arranged to raise the shade, the latter is normally held in place by an automatic stop or catch, which does not prevent its being lowered by the hand or its being raised by the spring if moved rapidly, but which, if the shade is raised slowly, comes into action and prevents its further elevation.

My invention provides an improved automatic stop or catch for this purpose, which is especially applicable to spring curtain-fixtures, but which may without essential change be adapted to fixtures of several other kinds.

In the accompanying drawings, which represent my invention as applied to an ordinary spring curtain-fixture, Figure 1 is an end elevation of the fixture. Fig. 2 is a similar view of the roller removed from its supporting-bracket, its spindle being in section on the line *xx* in Fig. 3. Fig. 3 is a vertical longitudinal mid-section of Fig. 1.

Let *A A'* represent the brackets for supporting the curtain-roller, the latter of which is a closed bracket with a round pivot-hole, and the former an open bracket, formed with a notch, *a*, for the reception of the roller-spindle *B*. This spindle is flattened at the end *a'* to fit the notch *a*, which thereby prevents it from turning.

*C* is the shade-roller, supported at one end by the spindle *B*, which projects into it, and at the other by a pivot-pin, *b*, engaging the hole in the bracket *A'*.

The spindle *B* enters the roller far enough to have coiled around it a helical spring, *D*, of sufficient length to give the shade the necessary play. This spring is fixed at one end to the roller and at the other to the spindle, so that as the roller is rotated on the spindle when the shade is being lowered the spring is wound up.

The construction thus far described is com-

mon to spring shade-fixtures, and forms no part of my present invention.

To the end of the roller *C* is affixed a plate, *c*, through the center of which passes the spindle *B*, the plate and roller being free to turn upon the spindle.

The plate *c* has an annular recess, *d*, formed in it, and in the ledge or wall of the recess are one or more notches or ratchets, *e e*, as best seen in Fig. 2.

A straight vertical diametrical hole is drilled through or formed in the spindle *B* at *f*. (See Fig. 3.) This hole, when the spindle is in place in the roller, is in the plane of the recess *d*, and in it is placed a loosely-fitting straight pin or stop-piece, *g*, as represented. This pin, which is arranged to stand vertically, is free to drop until its lower end rests upon the ledge or wall of the recess *d*, and is of such a length that it is prevented by this contact from falling out.

It will be seen that the pin is guided in its longitudinal movement wholly by the wall of the hole, which also serves to prevent its moving in any other direction than longitudinally; hence no external plate is necessary to keep the pin in place, and the cavity or recess *d* may be left open or uncovered.

As seen in Fig. 2, the pin or stop-piece is alike on opposite ends, so that its operation will be the same whichever side of the spindle is uppermost when it is placed in the bracket. As the roller is turned the pin falls into the notches or ratchets *e e*, which, being abrupt on one side and inclined on the other, engage the pin when turning in one direction and pass it without obstruction when turning in the other.

To enable the pin to ride over the notches when turning against their abrupt faces, or in the direction of the arrow in Fig. 2, I prefer to form the wall of the recess *d* higher or nearer the roller-center at the inclined side of each notch than at its abrupt side, as at *h* in Fig. 2, so that when the roller is revolved rapidly the lower end of the stop-piece will be thrown up sufficiently to permit the notch to pass completely under it before it falls back; but when the roller is revolved slowly the stop-piece falls before the notch can pass it, and drops in and engages its abrupt face, thus stopping the roller.



It will be evident that the notch might be made with both faces abrupt, and the lower end of the stop-piece be beveled, so as to produce the same result, such a construction being an equivalent of that shown; but some means must be provided to keep the stop-piece from revolving.

I have shown my invention in the preferred form, though it is susceptible of some modification without departing from its essential features.

As my invention relates only to the automatic stop or catch, I do not wish to confine myself to its use with the precise form of roller shown, as it may be used with any kind to which it is thought best to apply it.

I am aware that a gravitating stop-piece in the form of a rectangular ring, adapted to be slid over and have bearings on the stationary spindle, and arranged to play within a recess in the roller end, is not new. In such construction the bearings on the spindle guide the pin only in its vertical movement, and additional guides are required to prevent the stop-piece from sliding out of place or becoming tilted, while my stop-piece is both guided and held in place by the simple hole *f* through the spindle.

I am also aware that it is not new to provide a stop-work or locking device for a curtain-fixture consisting of an internal ratchet having

rising inclines and a single-acting pawl, and to this I make no claim.

I claim as my invention—

1. An automatic stop for curtain-fixtures, consisting of a gravitating stop piece or pin, *g*, having its bearing in the spindle B, and formed with interchangeable ends, either of which is adapted to engage notches or projections on the roller, substantially as set forth.

2. The combination, with the open recessed roller end, having notches *e e*, of a straight parallel-sided pin, *g*, arranged to play vertically through a diametrical hole, *f*, in the stationary spindle B, and to be guided in its longitudinal movement by the wall of the said hole, and by that only, substantially as set forth.

3. An automatic stop for curtain-fixtures, consisting of a gravitating pin, *g*, arranged to play in a hole, *f*, through the spindle B, in combination with a notch, *e*, in the end of the roller C, formed with one side approaching nearer the roller-center than the other, substantially as and for the purposes set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WILLIAM CAMPBELL.

Witnesses:

ARTHUR C. FRASER,  
HENRY CONNETT.