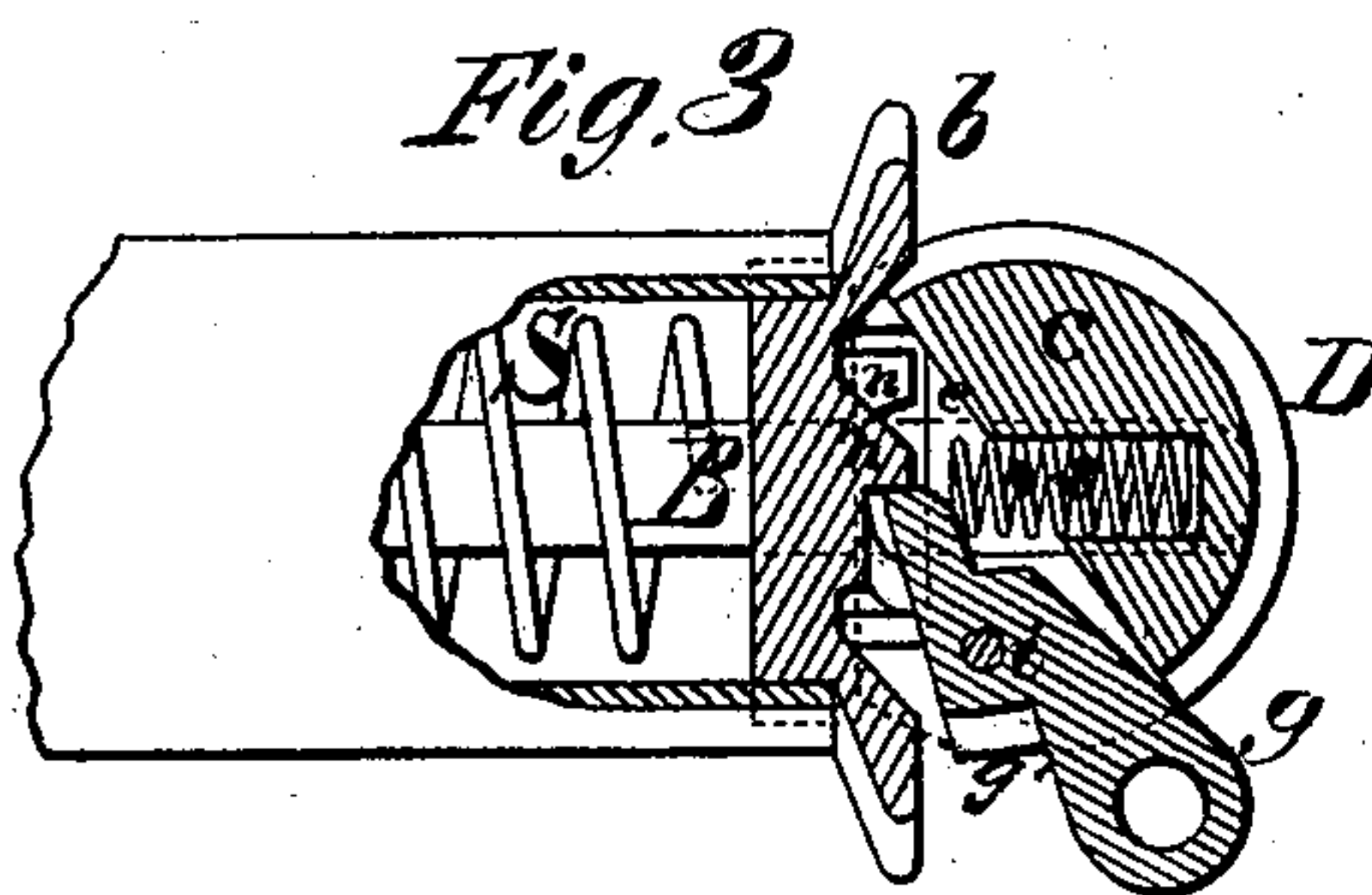
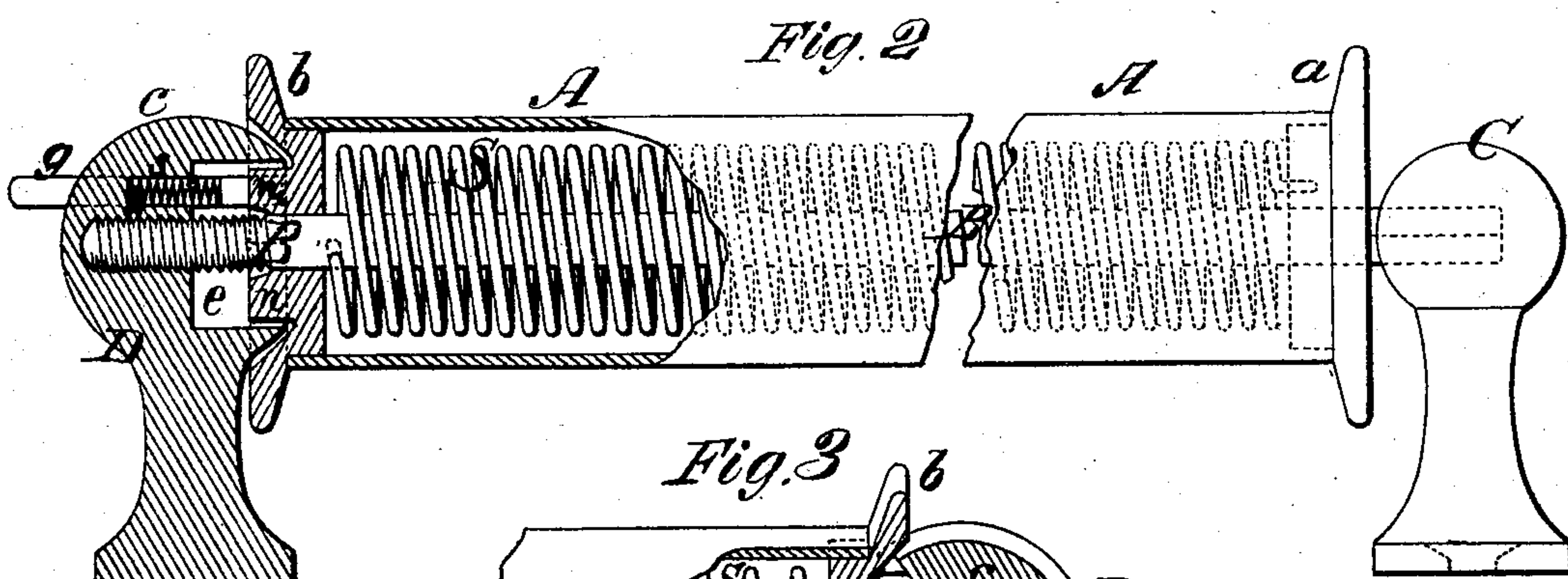
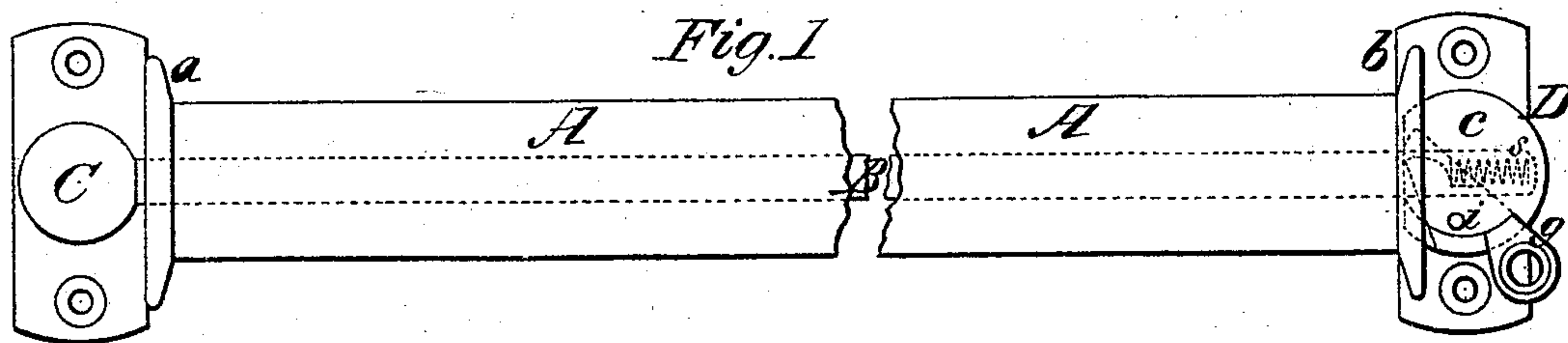


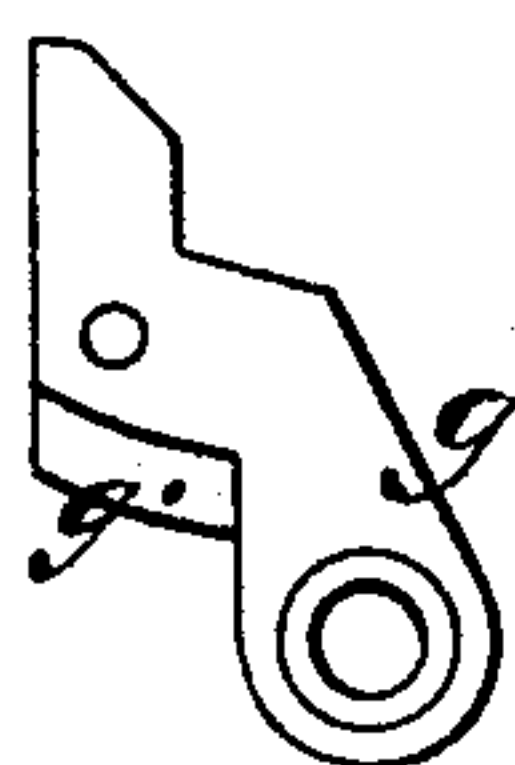
G. W. BEERS.  
Curtain-Fixtures.

No. 152,065.

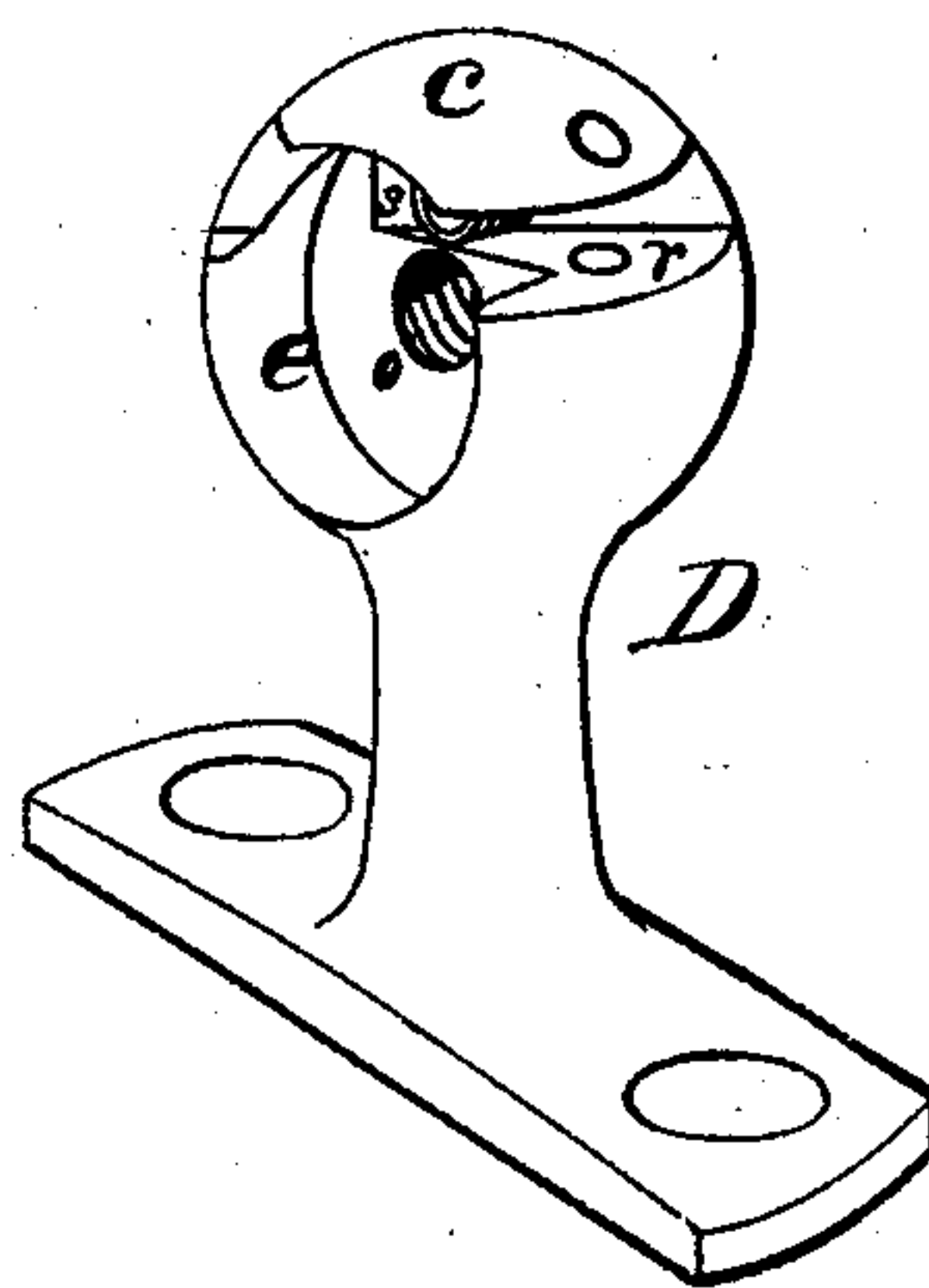
Patented June 16, 1874.



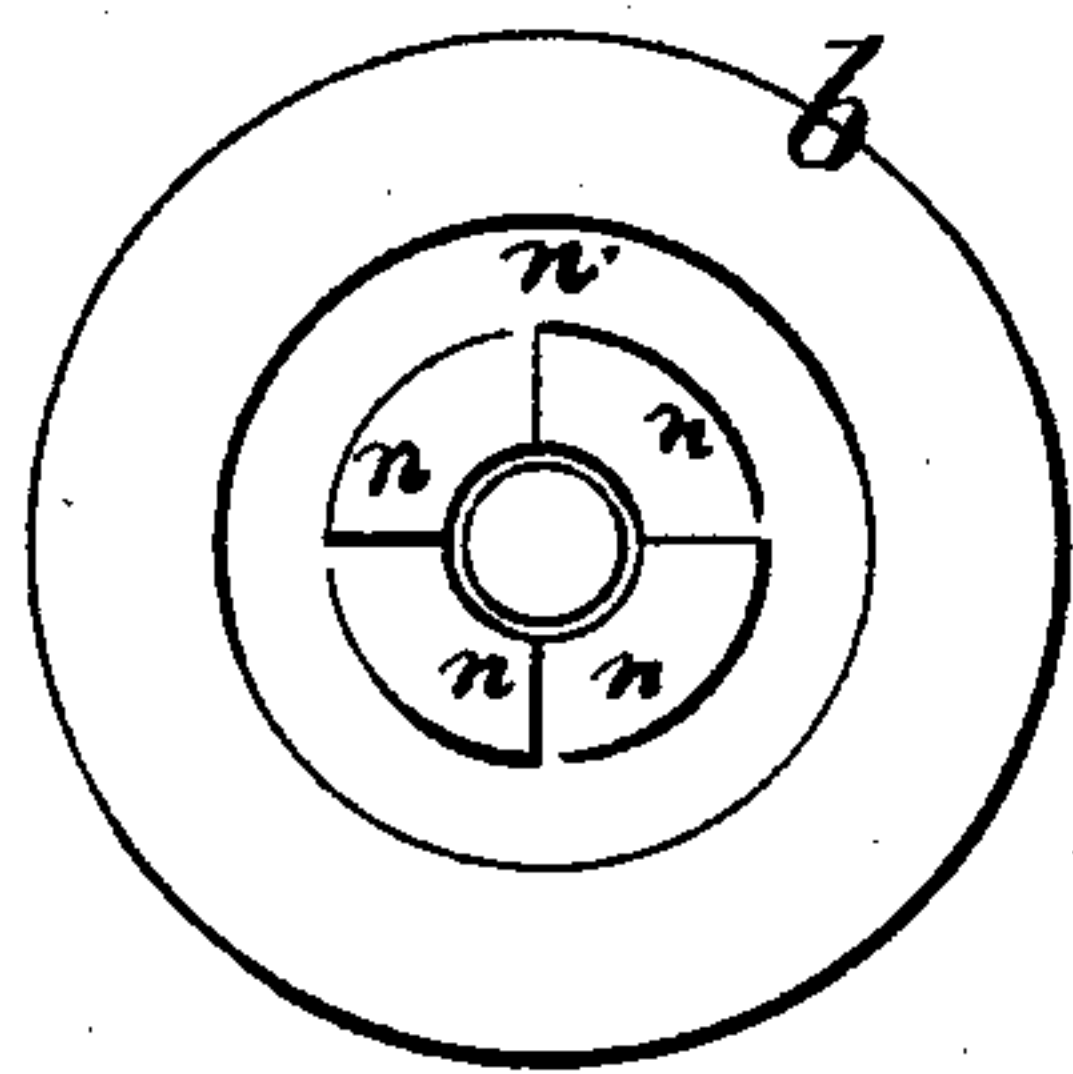
*Fig. 6*



*Fig. 4*



*Fig. 5*



WITNESSES.

*Villette Anderson.*  
*George E. Upham,*

INVENTOR.

*Geo. W. Beers,*  
*Chipman & Osmer & Co.,*  
*Attys.*



# UNITED STATES PATENT OFFICE.

GEORGE W. BEERS, OF BRIDGEPORT, CONNECTICUT.

## IMPROVEMENT IN CURTAIN-FIXTURES.

Specification forming part of Letters Patent No. 152,065, dated June 16, 1874; application filed January 17, 1874.

*To all whom it may concern:*

Be it known that I, GEORGE W. BEERS, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new and valuable Improvement in Curtain-Rollers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a top view of my curtain-roller. Fig. 2 is a sectional view of the same. Figs. 3, 4, 5, and 6 are detail views.

This invention has relation to curtain-rollers which are acted on by springs for rolling up the curtains, and which are provided with a pawl-and-ratchet connection for catching the rollers and holding the curtains wherever desired. My improvement consists chiefly in the construction and novel arrangement of the circularly-channeled roller-head, having a central face-ratchet; the large post-head, recessed to receive said central face-ratchet, and extending by the wall of said recess into the circular channel of the roller-head; the spring-pawl let into said post-head, and pivoted by a pin having a bearing at each end close to the plane of the ratchet; and the roller-shaft, having a screw-extension to engage with a threaded aperture in said post-head, for tightening the annular bearing, all as hereinafter more fully described.

In the annexed drawings, the letter A represents a curtain-roller, which is a cylindrical tube of metal, having flanged heads *a b*, and a shaft, B, passing centrally through it, which shaft has its end bearings in two posts, C D. Inside of this roller A, and secured to it at one end, and to the shaft B at the opposite end, is a helical spring, S. One end of the shaft B is made with a square wrench-seat, *z*, and fitted into the post C, the other end *z'* being provided with a screw-extension, and screwed into the chambered head of the post D, as shown in Fig. 2. It will be observed that this shaft is capable of longitudinal and rotary adjustment, although when adjusted it may be considered as fixed in its relation to the roller A, for the square socket *r* in the

post C serves to hold the squared end of the shaft securely, preventing the shaft from turning. In the flanged roller-head *b* is formed an annular concentric channel, *n'*, into its outer face, leaving a raised central portion between this channel and the shaft-bearing, which is serrated radially to form the face-ratchet *n*, which is designed to engage with the pawl in the post-head *c*. The head *c* of the post D is of large size, and spherical form. This form is shown as it presents no corners to wear the edge of a curtain should it overrun the flange of the roller-head, as frequently happens when it is not properly hung. Into the inner side of this head is formed a cylindrical recess, *e*, of large diameter, equal to that of the circular channel *n'* of the roller-head, into which the flange or wall of said recess fits, forming a strong journal-bearing, which relieves the bearing on the shaft, and at the same time an end bearing, which is kept in engagement by the spring S. Into the recess *e* extends the central face-ratchet *n*, in such a manner that it is hidden from sight, and the noise of the pawl in passing over its teeth is, to a great extent, smothered. As the teeth are large and strong, this is an important feature. Near the screw-hole *o*, which is threaded, is formed a socket, for the reception of a small spring, *s*, the end of which bears against a shoulder, *r'*, formed on the back of the pawl *g*, near its bearing end, and serves to keep it in engagement. The pawl *g* is angular in its form, and flat from side to side. It is pivoted in the recess in the head *c* by means of the pin *i*, which has a bearing in the metal of the head at each end, making a very strong connection. This pawl is applied by its bearing end within the recess in engagement with the face-ratchet, so that its noise is smothered; and its power end is extended through a slot, *r*, in the wall of the recess in the post-head, and provided with an eye or other device for the attachment of an operating-cord. The pawl *g* is pivoted, it is apparent, eccentrically with reference to the axis of the post-head *c*, and near as possible to the face-ratchet. Being thus situated nearly in the direction of pressure, prevented from bending by the recess or slot wall, and having its fulcrum secured by a bearing at each end, it is admirably adapted to withstand the ir-



regular and jerking strain to which it is subjected.

By this invention it will be observed that I am enabled to use a large spherical head capable of being recessed and slotted without being weakened, and at the same time keep said head within the limited lateral space usually provided in a window-frame for its attachment. The pawl and ratchet are kept from sight, and to a great extent from hearing, the noise of their contact being smothered in the recessed head. The bearings of both pawl and ratchet are made strong and firm; the end bearing of the roller against the ratchet-head is prevented from rattling by frictional contact, which is reduced to a minimum; and the degree of frictional pressure, as well as the tension of the roller-spring, is made capable of adjustment.

I am well aware that it is not new to use a pawl and ratchet in connection with a spring-roller; hence I do not claim, broadly, such invention.

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

1. The combination, with the curtain-roller A, threaded post D, square ratcheted post C, and spring S, of the shaft B, provided with screw end  $z'$  and squared end  $z$ , substantially as specified.

2. The combination, with the shaft B, spring S, and curtain-roller A, of the circularly-channeled head  $b$ , having projecting face-ratchet  $n$ , inside pawl  $g$ , spring  $s$ , and the enlarged post-head  $c$ , having recesses  $e$ , spring-pawl, and engaging-flange, substantially as specified.

3. The combination, with the embedded spring-pawl  $g$  and cylindrically-recessed spherical post-head  $c$ , of the circularly-channeled roller-head  $b$  and its central projecting face-ratchet  $n$ , substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE W. BEERS.

Witnesses:

DAVID B. LOCKWOOD,  
CHARLES S. CANFIELD.