No. 670,585. Patented Mar. 26, 1901.

H. A. FOWLER.

CURTAIN ROD.

Application filed Nov. 14, 1900.

(No Model.)

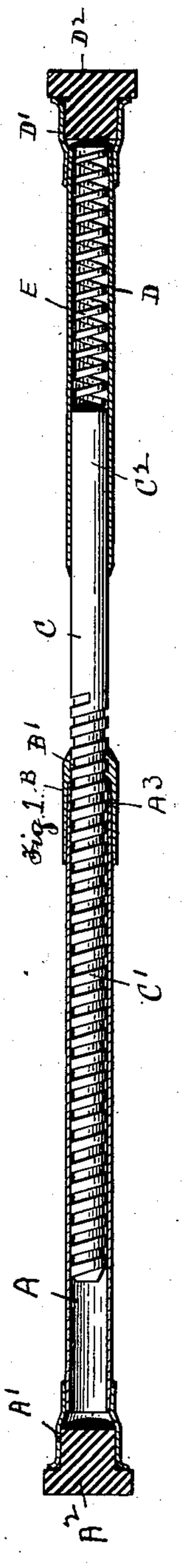

Fig. 1.

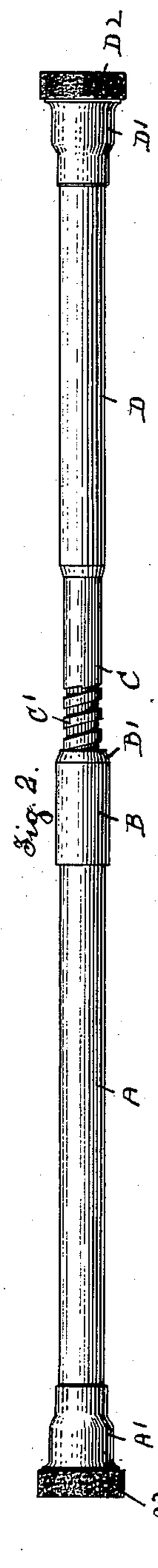

Fig. 2.

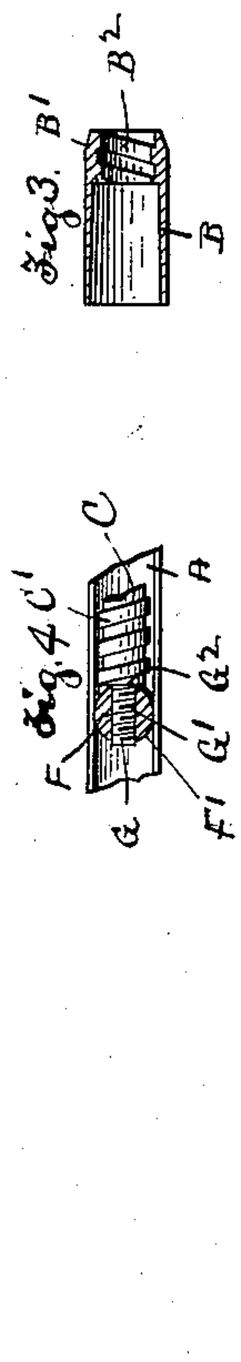

Fig. 3.

Fig. 4.

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HENRY A. FOWLER, OF WORCESTER, MASSACHUSETTS.

CURTAIN-ROD.

SPECIFICATION forming part of Letters Patent No. 670,585, dated March 26, 1901.

Application filed November 14, 1900. Serial No. 36,432. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. FOWLER, a citizen of the United States, residing at Worcester, in the county of Worcester and Commonwealth of Massachusetts, have invented a new and useful Improvement in Curtain-Rods, of which the following is a specification, reference being had to the accompanying drawings, forming a part of the same, on which—

Figure 1 represents a curtain-rod embodying my invention. Fig. 2 is a central longitudinal section through the tubular portion of the rod, the screw-threaded portion being shown in full. Fig. 3 is a central longitudinal sectional view of the nut which engages the screw-threaded section; and Fig. 4 represents a short portion of the tubular section A, with the end of the screw-threaded rod inclosed therein and the collar F attached to said rod, the screw-threaded rod being shown in full, with the tubular section A and collar F shown in sectional view.

Similar reference-letters refer to similar parts in the different views.

My present invention relates to certain improvements in that class of curtain-rods embodying a compression-spring and adapted to be held by the pressure of the ends of the rod against the opposing surfaces of a door or window casing; and it consists in the construction and arrangement of parts hereinafter described, and set forth in the annexed claims.

Referring to the drawings, A denotes a tubular section of the curtain-rod, having attached to one of its ends a tip A′, containing an elastic washer A^2, adapted to bear against the casing. The opposite end of the tubular section A is slightly tapered at A^3 and adapted to receive the interiorly-tapered sleeve B, which is forcibly crowded upon the tapering section A^3 of the tubular section A. The end B′ of the sleeve B is provided with interior screw-threads B^2, adapted to engage the screw-threads of the rod C. The rod C is screw-threaded at C′ throughout a portion of its length, and the plain portion C^2 receives a sliding telescopic sleeve D, having at its outer end a tip D′, containing an elastic washer D^2, adapted to press against the casing. Between the outer end of the telescopic sleeve D and the end C^3 of the rod C is placed a compression-spring E, having one end bearing against the end of the rod C and its opposite end pinched within the sleeve D and held from longitudinal movement. The length of the curtain-rod is adjusted by means of the screw-threaded rod C and screw-threaded sleeve B to bring the distance between the ends of the curtain-rod greater than the distance between the opposing casings, so that when the rod is placed in position between the casings the spring E will be compressed and cause the curtain-rod to exert an endwise pressure against the casings. If the pressure exerted by the rod against the casings is insufficient, it may be increased by turning the screw-threaded rod C in the sleeve B.

The area of the elastic washer A^2 is much greater than the cross-section of the screw-threaded rod C, so that the pressure exerted by the spring E will produce sufficient friction between the washer A^2 and the casing to hold the section A from turning as the screw-threaded rod C is rotated. The pressure of the spring E also tends to crowd the sleeve B upon the tapering portion A^3 and hold it from turning upon the section A. By making the section A tubular throughout its entire length I am able to use a screw-threaded rod C slightly longer than the tubular section A, and thereby secure a wide range of adjustment.

It is desirable that the screw-threaded portion of the rod C turn with great freedom in the screw-threaded sleeve B, allowing a slight lost motion. When the rod is to be extended to a great length, I prevent the lost motion of the screw-threaded connection by attaching to the inner end of the screw-threaded rod C a collar F, preferably of vulcanized fiber, rubber, or other semi-elastic material. The collar F should substantially fill the interior of the tubular section A, and it should be screwed upon or otherwise attached to the screw-threaded rod C. I prefer to reduce the end of the rod C, as at G, and form a screw-thread G′ upon the reduced portion, making a shoulder G^2, against which the collar F may be screwed tight enough to prevent its accidental displacement. The collar F is preferably made with a rounded or beveled periph-

ery, as shown at F', Fig. 4, in order to enable it to slide freely and in close contact with the interior of the tubular section A.

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

1. The within-described curtain-rod, consisting of a tubular section A, having one end adapted to bear against the casing and its opposite end tapered, an interiorly-tapered sleeve fitting the tapered end of the tubular section and having an interior screw-thread, a screw-threaded rod engaging said screw-threaded sleeve, a telescopic sleeve sliding on said screw-threaded rod and having its outer end adapted to bear against the casing, and a compression-spring inserted in said sliding sleeve and pressing against the end of said screw-threaded rod, substantially as described.

2. In a curtain-rod the combination of a tubular section provided with a tapered end, an interiorly-tapered and screw-threaded sleeve fitting said tapered end of the tubular section, a screw-threaded rod entering said screw-threaded sleeve, tips carried by the opposite ends of the rod adapted to bear against the casing, and a compression-spring with its pressure applied to force said tapered and screw-threaded sleeve upon the tapered end of said tubular section, substantially as described.

3. In a curtain-rod the combination of a tubular section A having one end adapted to bear against the casing, a sleeve fitting the opposite end of said tubular section and having an interior screw-thread, a screw-threaded rod engaging said screw-threaded sleeve, a telescopic sleeve sliding on said screw-threaded rod and adapted to bear against the casing, and a compression-spring inserted in said telescopic sleeve and pressing against the end of said screw-threaded rod, substantially as described.

4. The combination of the tubular section A, a sleeve carried by the end of said tubular section and provided with an interior screw-thread, a screw-threaded rod engaging said interior screw-thread and entering said tubular section, and a collar carried by the end of said rod and fitting the interior of said tubular section, substantially as described.

Dated this 12th day of November, 1900.

HENRY A. FOWLER.

Witnesses:

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