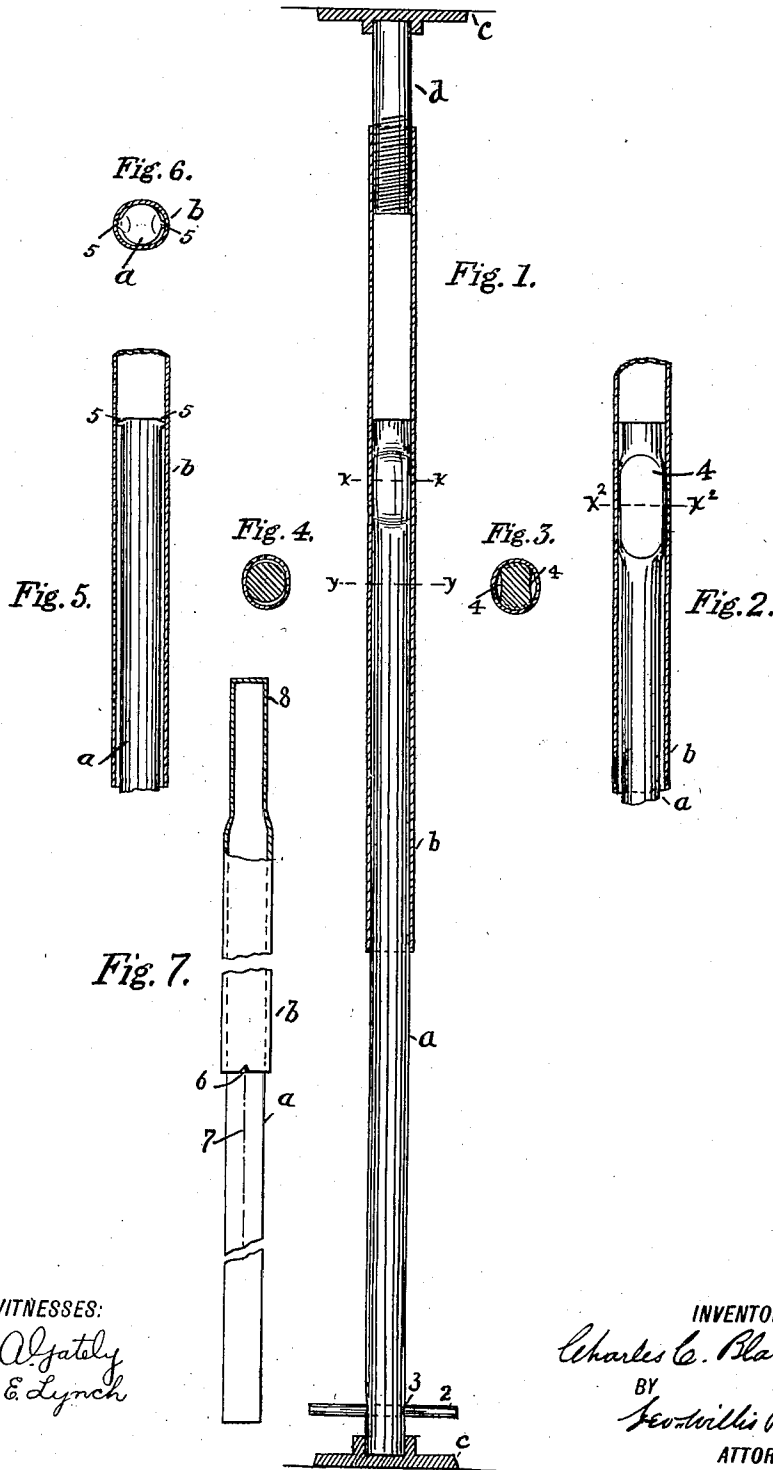


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EXTENSION ROD.
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935,885.

Patented Oct. 5, 1909.



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CHARLES C. BLAKE, OF BROOKLINE, MASSACHUSETTS.

EXTENSION-ROD.

935,885.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES C. BLAKE, residing at Brookline, in the county of Norfolk and State of Massachusetts, have invented certain Improvements in Extension-Rods, of which the following is a specification.

The present invention relates to extension rods such as are used in windows and doors to support curtains and draperies, in which it is desirable to provide a rod which can be adapted for varying widths of the windows and doors.

In all extension rods that I am aware of there are two parts, one of which slides within the other, and when the required length is obtained the two parts are supposed to maintain it by the friction of one part upon the other—which is an uncertain thing, as the parts are liable to become collapsed or extended easily.

I employ in my invention an extension rod made in two parts, one of which slides within the other, both of which may be tubular, or one may be tubular and the other solid; and I provide means whereby when the required length has been obtained by sliding one on the other, the two parts may be locked to each other so that they can neither be extended nor collapsed. All of which I will now proceed to describe and claim, reference being had to the attached drawings, in which—

Figure 1 is a side view of my extension rod partly in section. Fig. 2 is a fragment of the previous figure turned one-quarter way around. Fig. 3 is a section on line $x x$ of Fig. 1 and on line $x^2 x^2$ of Fig. 2. Fig. 4 is a section on line $y y$ of Fig. 1. Fig. 5 is a sectional view of a modification; and Fig. 6 is an end view of the same. Fig. 7 is a side view of a modified end of the outer rod.

I refer to the device as a whole as an extension rod, and in the drawings a represents a rod adapted to slide within the cylindrical rod b , and d is a short piece of rod or plug screwed into the end of the rod b , and $c c$ are abutments in which the ends of the extension rod are supported.

The rod b is flattened on two opposite sides for the greater part of its length so that its cross-section is ovoid shape, as shown, while the end of the rod a within the tubular rod is flattened on each side 4, so that its larger diameter fits easily within

the larger diameter of the rod b , and a hole 3 is made in the opposite end of the rod a in order to receive a short removable lever 2 to assist in rotating the same.

As has been remarked, when the flattened part 4 of the rod a is turned in the direction of the axis of the larger diameter of the other rod the parts may slide freely upon each other, and when the extension rod is to be used to support a curtain the latter is placed over the former and the ends of the parts a and b are placed in the abutments $c c$ and the parts pushed along until their ends touch the bottoms of the abutments, when the part b is held firmly while the part a is turned around so that the opposite cam-like edges of the part 4 are forced toward the shorter axis of the part b and are firmly held by frictional pressure, and prevented from sliding toward each other.

In the modification shown in Figs. 5 and 6 the part b is made in ovoid cross-section, while the end of the part a is offset on opposite sides to form two teeth or prongs 5 5, adapted to slide in the longer axis of the part b , and when it is desired to lock the parts together a is turned around so that the teeth 5 5 cut into the inner surface of the tubular part b and securely lock the parts together.

Instead of inserting a rod or plug d into the end of the part b as shown in Fig. 1, I may draw the end down to a smaller diameter 8, as shown in Fig. 7, and at the same time draw the metal over the end to close the same, thus making a much preferable construction.

In order that the user may determine how far to rotate the parts of the expansible rods about each other I provide at the open end of the part b a notch 6, and make upon the part a a line or a series of indentations 7; when the parts are in an unlocked position the notch 6 coincides with the line 7, but of course if the parts are rotated relatively to each other there is a space between the notch and line, and if they are separated one-quarter of the circumference the user may know that they are rotated the maximum distance or angle.

Having described my invention, I claim—

1. An extension rod composed of two parts, one adapted to slide within the other, the outer part being a seamless tube ovoid in cross-section, and having one end closed; the inner part provided with cam-like means

for locking with the outer part when either part is rotated.

2. An extension rod composed of two parts, one within the other, and adapted to slide upon each other; the outer part being
5 a seamless tube in cross-section having different axial diameters, the inner part provided with cam-like means for locking with the outer part when either part is rotated,
10 with means for indicating the angle of rotation.

3. An extension rod composed of two parts, one adapted to slide within the other, the outer part having its sides flattened for

a portion of its length, the inner part provided with extensions or teeth on opposite sides whereby when one part is rotated the teeth engage the inner surface of the outer part.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses, this third day of April 1909.

CHARLES C. BLAKE.

Witnesses:

GEO. WILLIS PIERCE,
BERTHA NURENBERG.