

(No Model.)

A. F. TEMPLE.
EXTENSION CURTAIN ROLLER.

No. 570,719.

Patented Nov. 3, 1896.

Fig. 1.

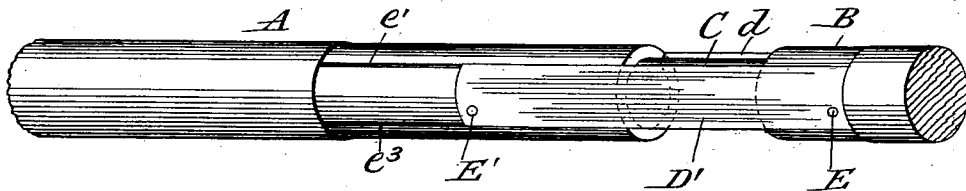


Fig. 8. Fig. 9.

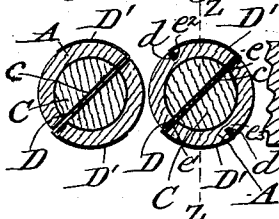


Fig. 2.

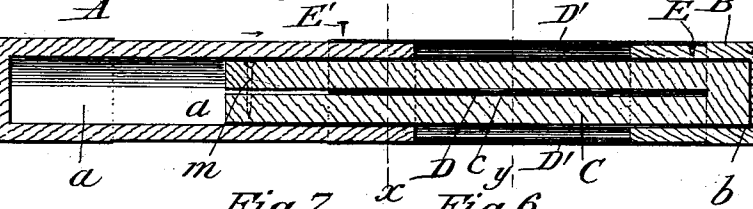


Fig. 7.

Fig. 6.

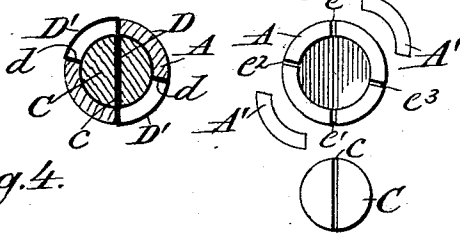


Fig. 4.

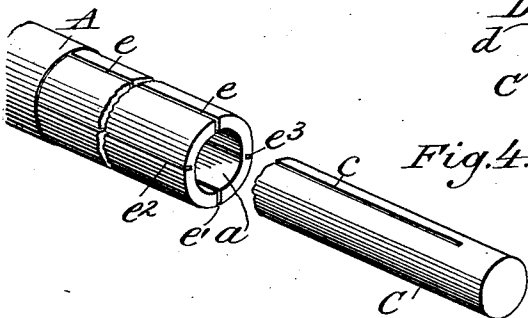


Fig. 5.

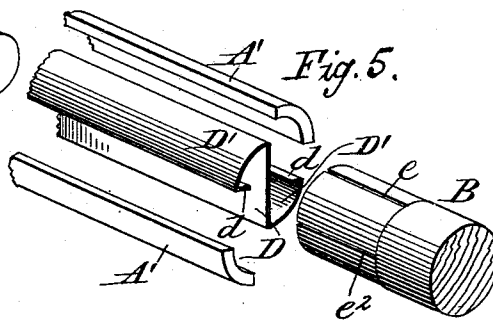
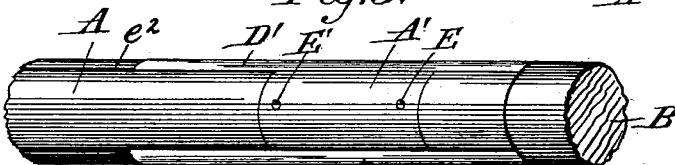


Fig. 3.



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per Charles W. Schott
Att.

UNITED STATES PATENT OFFICE.

ANSEL F. TEMPLE, OF MUSKEGON, MICHIGAN, ASSIGNOR TO THE STEWART HARTSHORN COMPANY, OF NEWARK, NEW JERSEY.

EXTENSION CURTAIN-ROLLER.

SPECIFICATION forming part of Letters Patent No. 570,719, dated November 3, 1896.

Application filed March 27, 1896. Serial No. 585,093. (No model.)

To all whom it may concern:

Be it known that I, ANSEL F. TEMPLE, a citizen of the United States, residing at Muskegon, in the county of Muskegon and State of Michigan, have invented certain new and useful Improvements in Extension Curtain-Rollers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in curtain-rollers, and more particularly to that subdivision of the general class of curtain-rollers which is known as "adjustable" or "extension" rollers.

The object of the invention is to promote cheapness in the manufacture of extension-rollers of the class described, as well as to insure an extension-roller having an equal stiffness to those that are formed throughout of one integral piece.

The invention consists, essentially, in the construction, arrangement, and combination of parts, substantially as will be hereinafter described and then more particularly pointed out in the claims.

In the accompanying drawings, illustrating my invention, Figure 1 is a side elevation of my improved extension-roller. Fig. 2 is a longitudinal section of the same on the line $z z$ of Fig. 9. Fig. 3 is a partial side elevation similar to Fig. 1 and showing the strips which are inserted laterally between the sections of the roller after the same has been extended to the proper length for the purpose of completing the cylindrical form of the roll when in use. Fig. 4 is a perspective view of one of the bored sections of the roll and of the slotted dowel which is adapted to be introduced thereinto. Fig. 5 is a perspective view of the other bored section which receives the other end of the dowel and shows likewise the Z-shaped metallic connection for the sections and the lateral insertible strips which complete the cylindrical form of the roller when desired. Fig. 6 is an end elevation of the bored section, dowel, and lateral insertible strips. Fig. 7 is a cross-sectional view on the line $y y$ of Fig. 2. Fig. 8 is a cross-section

of my improved roller, showing the edges of the Z-shaped connection unprovided with flanges. Fig. 9 is a transverse section on the line $x x$ of Fig. 2 and shows the Z-shaped connection with its edges of the flanged form also shown in Figs. 5 and 7.

Similar letters of reference designate corresponding parts throughout the different figures of the drawings.

In carrying my invention into practical operation I first provide two sections or pieces, both of which are rolls and of substantially equal diameter, but different, if desired, in length, one being comparatively long and the other comparatively short, although it is obvious that the relative length of the two parts is unimportant. By the employment of the beneficial features of my invention to be presently explained I do not at the same time sacrifice the advantages of stiffness, durability, and efficiency.

A and B designate examples of two cylindrical pieces of wood employed together to constitute an extension-roller of the kind referred to, A being the longer piece and B the shorter piece. Both of these pieces A and B are hollowed out or bored for a certain length inward from the two contiguous ends thereof in order to provide the internal cylindrical cavities or bores a in the piece A and b in the piece B. Into these bored sections I insert a dowel C, which fits neatly and tightly into the tubular bores a and b . This dowel may likewise be made of some waste piece of wood unfitted for any other use. In the construction of the parts the dowel C will first be inserted into one of the bores a or b , and then a single saw cut is made longitudinally through the center of the bored part and likewise through the center of the dowel. The saw cut c through the center of the dowel does not extend the full length of the dowel, but stops short of the end thereof, as shown in Fig. 4, in order that the dowel may not be completely severed into two parts.

$e e'$ represent the oppositely-located cuts made in the roller-section A, which cuts are in coincidence with the dowel cut c when the latter is in position within the section A. Similar cuts e and e' are made in the roller-

section B, and hence when the dowel is in position in both sections A B the cut *c* will register with the saw cuts in both sections.

Through the longitudinal central cuts *c* in the dowel C is inserted a rectangular piece of tin or other suitable metal or material, which is bent so as to form substantially the letter Z. The portion of this tin sheet which lies within the cut *c* extends in a flat piece a short distance on each side of the dowel C until it reaches the point where it is bent, respectively, in opposite directions, said directions being curved to correspond with the curvature of the roller and of such a form as to easily overlap the external contour of the roller, as shown in Figs. 1 and 3. The central flat and straight part of this Z-shaped metallic connection is designated by the reference-letter D and the branching curved arms of the Z-shaped connection are designated D' and D'. When the Z-shaped connection, after being inserted into the groove in the dowel C, has been bent into the requisite form, the split end of the dowel will be fastened together by means of a tack or pin, as shown at *m*, and thus the dowel and the Z-shaped metallic connection will be united permanently together. Inasmuch as they operate in conjunction it is unnecessary to have them so related as to be capable of disconnection, and therefore it is found advisable to permanently unite them as stated. The outer edges of the curved arms D' D' of the Z-shaped connection are intumed to form flanges *d d*, which flanges are designed to engage additional saw cuts *e² e³* made in the sections A and B at suitable distances and parallel to the aforesaid saw cuts *e* and *e'*.

In assembling together the several parts just described, which together constitute the new and improved curtain-roller of my present invention, I find it convenient and desirable to first insert the dowel carrying the Z-shaped connection, as just explained, into one or the other of the sections A and B, as, for instance, the section B, as shown in Fig. 2, and, as will be readily understood, when the end of the dowel C is introduced into the cavity *b* and the cut *c* caused to register with the slots *e* and *e'* the Z-shaped connection will be so related to the other parts that the outlying edges of the central flat portion D of said Z-shaped connection will enter into the slots *e* and *e'* and the curved arms or flaps *d' d'* will overlap the surface of the roller-section B and the intumed flanges *d d* will enter the additional cuts or grooves *e²* and *e³*, and after this position of the several parts has been established it is found best to secure them thus by passing a pin, tack, or screw through one of the arms D' and driving it into the roller-section B in order that a firm connection between these parts may be made. This having been done, it will be readily seen that the other end of the dowel C and the other end of the Z-shaped connection may be introduced into the bore *a* of the other roller

A, the dowel entering the bore in such a way that the saw cuts *c* in the dowel will register with the saw cuts *e* and *e'* of section A, thereby allowing the Z-shaped connection to engage the grooves *e e'* and also permitting the intumed flanges *d d* to engage the grooves *e² e³*. The parts having all assumed the relative positions specified, it will be clear that the parts A and B may be adjusted relatively to each other by being forced nearer to each other or being drawn farther apart, thus shortening or extending the roller as may be required and adjusting it to suit any desired length that may be needed, the range of the adjustment being regulated by the length of the dowel and the Z-shaped connection and the extension being preferably three inches or so.

It will be especially observed that the dowel C has a bearing within the sections A and B for some distance beyond the points of the two sections that are connected by the Z-shaped tin connection, said dowel being longer than the tin. This feature imparts considerable strength to the roller and enables a shorter piece of tin to be used for making the connection than would otherwise be found desirable if the dowel did not have this bearing.

After the two parts A and B have been relatively adjusted in the proper way to make the complete roller of the desired length a tack or pin, as *E'*, may be driven through the free end of the Z-shaped metallic connection and the same thereby made fast to the section A, as shown in Fig. 1 and as suggested by the position of the tack *E'* in Fig. 2. Thus the metallic connection will be firmly attached to both the roller-sections, and as said connection is situated so as to interlock and interbind with the elongated dowel and substantially connect the two sections A and B firmly and rigidly together it will be obvious that the result of such connection will be the production of the stiff and inelastic roller which will not readily yield to forces which might tend to twist it or cause a flexure to take place in some weak portion; but the roller will stand rigid and strong throughout, performing its work equally well with a roller consisting of a single integral piece. An extension-roller of this kind can be applied to use with great facility and despatch, the operation of adjustment taking but a short time and being accomplished with ease even by an unskilled person. After the roller has faithfully performed its functions in such position as it may be applied it may, if desired, be removed from such position, one or more of the tacks being withdrawn from the metallic connection and the length of the roller adjusted to some new position where it may be desired to place it for use. In Fig. 8 I have shown the Z-shaped connection as not having the intumed flanges *d d*, but with the edges of the curved arms D' straight and smooth. The absence of flanges *d d* relieves the maker of the roller of the necessity of cutting the extra grooves *e² e³*, and although

a construction of this kind will not possess the same rigidity and strength as the other and flanged form, yet it will be found of considerable value and useful for many purposes.

5 A' A' designate lateral insertible pieces of wood of slightly-curved form, so as to correspond to the curvature of the roller. These sections are designed to be placed between the edges of the Z-shaped connection after
10 the latter has been inserted into its normal position and the parts of the roller have been adjusted to the desired length. As shown in Fig. 3, the parts A' serve to fill up the spaces which otherwise would be left vacant, and hence they make the contour of the roller complete. I do not find it necessary to use them at all times, but they are useful. They will be cut to the proper length after the adjustment of the roller has been effected, and
20 then will be secured in place by means of tacks or pins, as shown.

Numerous changes may be made in the precise shape, construction, size, and arrangement of the various parts, and I reserve the liberty of so modifying the parts in such particulars as may more thoroughly adapt them for use in various locations and to meet the exigencies of numerous cases which may arise, as may be found necessary.

30 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The herein-described extension-roller, consisting in the combination with the bored sections, of a slotted dowel inserted in said
35 bored sections and a metallic connection carried by the dowel and engaging the sections.

2. The herein-described extension-roller, consisting of the bored sections, the inserted dowel, and a Z-shaped metallic connection
40 carried by the dowel, said connection having overlapping edges which engage the sections.

3. In an extension curtain-roller, the com-

bination of the roller-sections, an inserted dowel having a longitudinal slot therein, and
45 a Z-shaped connection carried by the slotted dowel and engaging the roller-sections.

4. The combination in an extension-roller, of the roller parts having bored and slotted ends, a slotted dowel inserted in said bored
50 parts, and a Z-shaped metallic connection carried by the dowel and engaging the slotted sections.

5. In an extension-roller, the combination of the sections having bored and slotted ex-
55 tremities, a dowel provided with a longitudinal cut, a Z-shaped connection inserted in said cut and having its curved arms adapted to overlap the surface of the roller-sections when the several parts are brought into en-
60 gagement, substantially as described.

6. In an extension-roller, the bored sections having slots, a slotted dowel inserted in said bored sections, a Z-shaped metallic strip
65 carried by the slotted dowel and engaging at each end the roller-sections, to which it is secured by means of tacks or pins, substantially as described.

7. In an extension-roller, the combination of the bored sections, the slotted dowel, the
70 Z-shaped metallic connection carried by said dowel, and having curved arms, the extremities of which are shaped with inturned flanges, substantially as described.

8. The combination of the bored roller-sections having slots, a slotted dowel, a Z-shaped
75 metallic connection carried by said dowel, and the lateral insertible pieces for completing the cylindrical roller, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ANSEL F. TEMPLE.

Witnesses:

GERTRUDE VOGEL,
ROBT. E. BUNKER.