

No. 879,533.

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G. H. FORSYTH.
CURTAIN FIXTURE.
APPLICATION FILED MAR. 6, 1905.

Fig. 1.

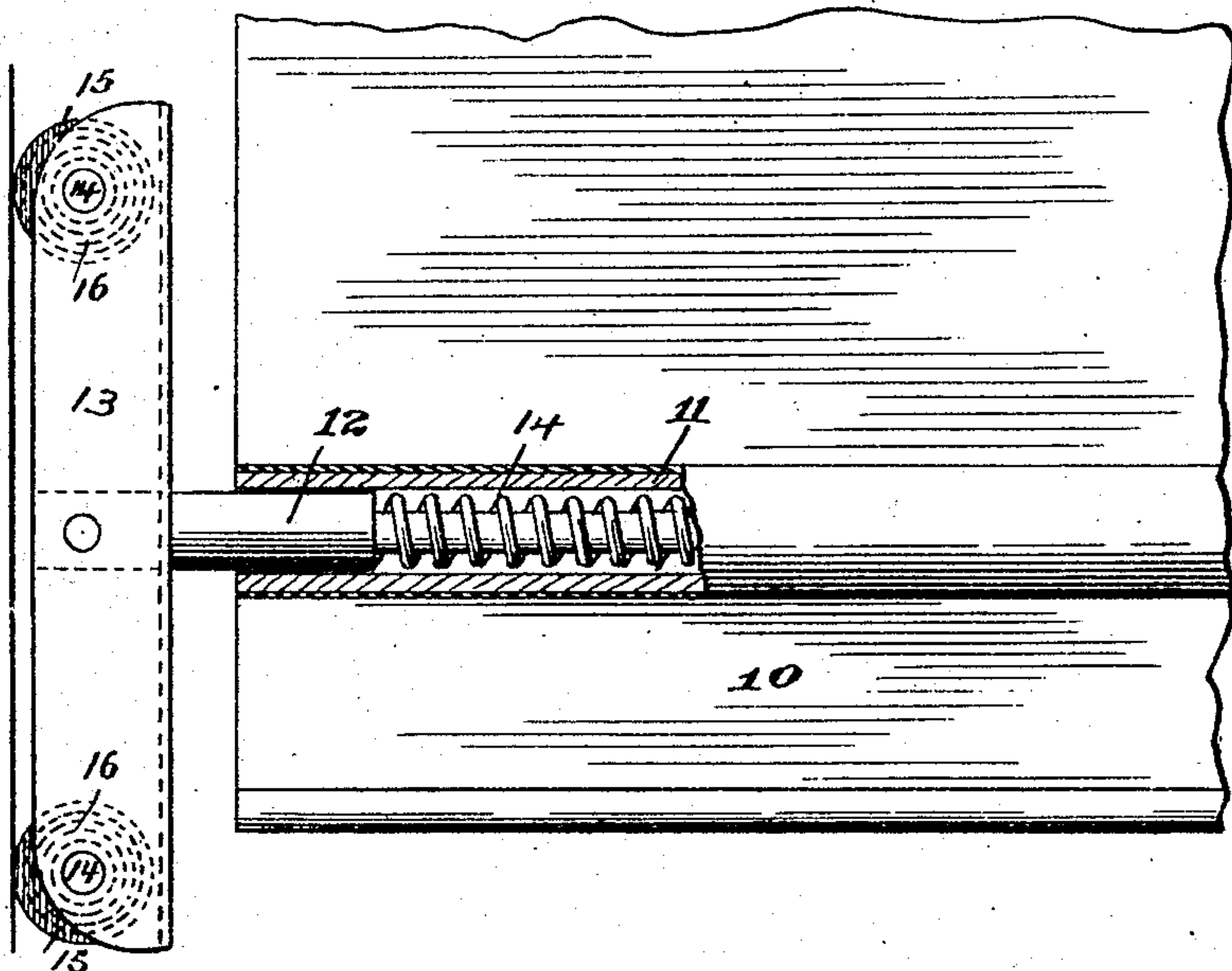


Fig. 6. Fig. 7. Fig. 2.

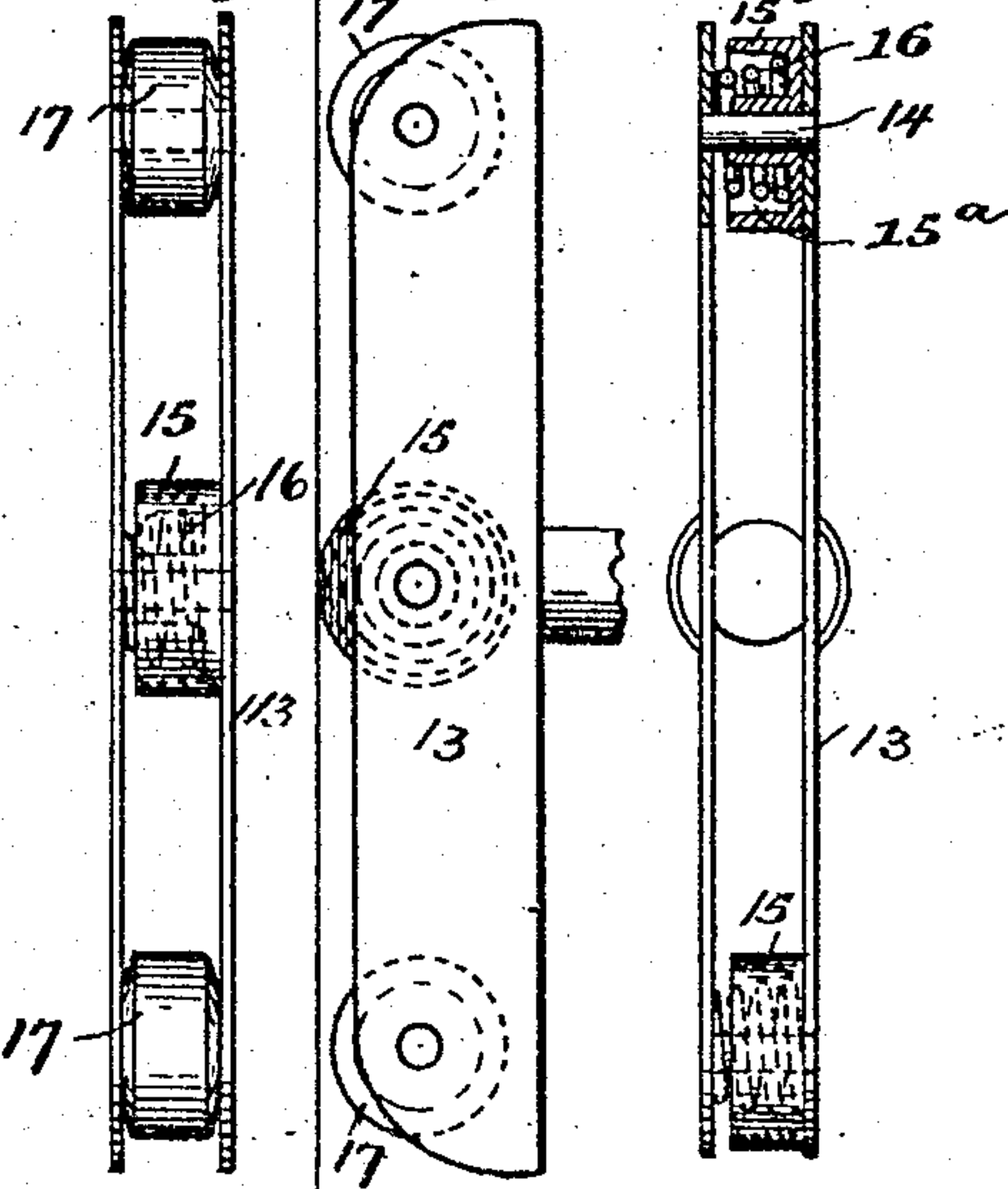


Fig. 3. Fig. 5.

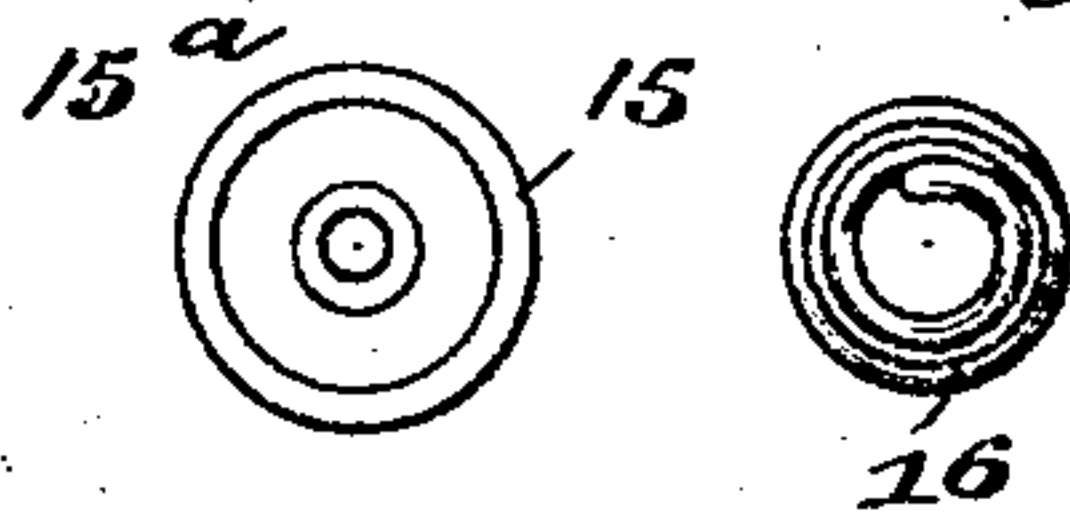
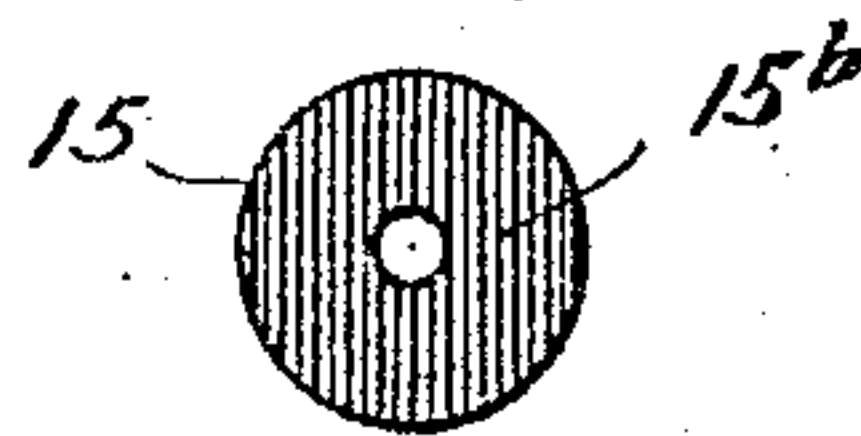


Fig. 4.



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CURTAIN-FIXTURE.

No. 879,533.

Specification of Letters Patent.

Patented Feb. 18, 1908.

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To all whom it may concern:

Be it known that I, GEORGE H. FORSYTH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Curtain-Fixtures, of which the following is a specification.

My invention relates to improvements in curtain fixtures of that general type wherein a spring-actuated curtain or shade is provided at its lower end with a curtain-stick carrying spring-pressed heads or shoes adapted to frictionally engage the sides of the casing or grooves therein to hold the curtain at any adjusted position against the pull of the curtain-roller.

My invention has for its principal object the production of an improved and simplified fixture of that class wherein spring-pressed elongated heads on the ends of the curtain-stick carry rollers adapted to engage the vertical side members of the window or other casing. Heretofore in such devices the heads have usually been provided with frictional holding devices which are pressed into frictional holding engagement with the bottom or side walls of grooves in the casing in order to hold the shade in adjusted position against the upward pull of the curtain-roller spring.

In some cases braking devices carried by the head are applied to rollers under the outward thrust of the curtain-stick springs whereby it is proposed to convert the rollers from anti-friction devices into frictional holding devices. My present invention is an improvement upon this latter type, being chiefly distinguished by the omission of such separate braking devices, and employing in place thereof means whereby the friction roller is retarded through continuously acting expansible means serving to force a side of the roller against the adjacent wall of the head, thereby producing friction therebetween retarding freedom of rotation of the roller on its bearing.

My invention, in its preferred form, is illustrated in the accompanying drawing, wherein—

Figure 1 is an elevational view, partly broken out, of a portion of a curtain carrying one end of the fixture; Fig. 2 is a face view of the head or shoe of the fixture with one of the rollers and its mounting in central vertical section; Fig. 3 is a face view of one of the friction rollers; Fig. 4 is a similar view of the

opposite face of the roller; Fig. 5 is a detail end view of the preferred expansible means for frictionizing the roller against the side wall of the head, consisting of a coil compression spring; and Figs. 6 and 7 are respectively face and side elevational views of a modification, wherein a single frictionizing device is employed in association with anti-friction rollers in the ends of the head.

Referring to the drawing, 10 indicates a fragment of the lower portion of a window or other curtain, in and transversely of which is mounted the usual hollow curtain stick 11, the latter carrying in each end the shank 12 of a hollow head 13, normally pressed outwardly by the curtain stick spring 14.

Carried by the ends of the head and fixed in and between the side walls thereof are pins 14 constituting the axles or journals of a pair of rollers 15, each of said rollers, as best shown in Fig. 3 and in the sectional portion of Fig. 2, is angularly concaved or hollowed on one side, as shown at 15^a to constitute the housing and bearing for one end of a coil compression spring 16, said spring bearing at one end against the counter-sunk face of the roller and at its other end against the inner surface of the opposite side wall of the head. Preferably, and as herein shown, said spring is of a conical form externally, and is disposed with its larger end bearing against the roller and its smaller end engaging the head. The flat side of the roller which engages the side wall of the head is preferably provided with a roughened frictional surface, as indicated at 15^b in Fig. 4.

As seen in Fig. 1, the head 13 is engaged with the vertical side of the casing or with the usual groove therein, being either fitted accurately thereto or outwardly thrust thereagainst by the spring 14, where the latter is employed; so that the peripheries of the rollers 15 are in contact with the vertical wall of said casing or groove therein. Owing, however, to the fact that the spring 16 acts continuously, through its expansive quality, to force the flat side of the roller against the inner surface of the adjacent side of the head, a considerable friction is created therebetween, especially where said flat side of the roller is roughened or corrugated or otherwise provided with a friction surface, as indicated in Fig. 4, thus retarding the freedom of rotation of the roller upon its axle, and thereby producing sufficient friction between the periphery of the roller and the wall of the casing

to overcome the pull of the curtain-raising spring and cause the curtain to remain in any position to which it may be adjusted. To adjust the curtain manually, the rods carrying the heads may be provided with the usual retracting pinch-handles (not shown) whereby the friction rollers are retracted from engagement with the casing; or, where the head-retracting means are absent, the fixture can be manually moved up or down by applying sufficient force to overcome the retracting effect created by the action of the springs 16.

Figs. 6 and 7 illustrate a slight modification, wherein, instead of employing a pair of friction rollers, one at each end of the head, I may employ a single friction roller 15 at the center of the head, in association with anti-friction rollers 17 mounted to rotate freely in the ends of the head and serving to facilitate self-righting of the curtain when tilted or canted from a horizontal position, as is well understood in the art.

From the foregoing it will be seen that when the fixture is in place in the casing the continuously acting expansive thrust of the spring or springs 16 causes one side of the roller or rollers 15 to continuously hug the adjacent surfaces of the side wall, the friction resulting from which produces a considerable braking effect upon the roller; and this prevents the free rolling movement of the periphery of the roller over the wall of the casing and causes it to frictionize against the latter sufficiently to overcome the normal upward pull of the curtain-raising spring and remain in any fixed or adjusted position.

This invention is believed to embody a broadly new principle of operation in a curtain fixture of this general type, to the extent that the roller braking effect is produced laterally between the roller and the head under the thrust of a continuously acting expansible member engaging the opposite side of the roller. Hence, I do not limit the invention to the particular construction shown or to the particular means herein shown and described for carrying out this principle, except to the extent indicated in specific claims.

I claim:

1. The combination with a curtain stick, of a head at the end of the stick, a roller rotatably mounted in the head, and expansible means acting upon said roller to force the same laterally of the head into frictional engagement with the latter, substantially as described.

2. The combination with a curtain stick,

of a hollow head at the end of the stick, a roller rotatively mounted in said head, and expansible means interposed between one side of said roller and the adjacent side of the head serving to force the opposite side of said roller into frictional contact with the side of the head adjacent thereto, substantially as and for the purpose described.

3. The combination with a curtain stick, of an elongated hollow head at the end thereof, a roller rotatably mounted in said head and adapted to peripherally contact with the window frame, and expansible means operating laterally upon said roller to create frictional contact between one side of the latter and the adjacent surface of the head, substantially as described.

4. The combination with a curtain stick, of a head carried thereby, a roller carried by said head, and an elastic thrust-member to force said roller sidewise laterally of the head into frictional contact with a side wall of the latter, whereby the rotation of said roller is retarded, substantially as described.

5. The combination with a curtain stick, of a hollow head at the end thereof, a roller rotatably mounted in said head and adapted to peripherally contact with the window casing, and a spring located and operating between one side of said roller and the adjacent side of the head to crowd said roller into frictional lateral engagement with the opposite side of the head, whereby the rotation of said roller is retarded, substantially as described.

6. The combination with a curtain stick and a spring-pressed head mounted on the end thereof, of a roller carried by said head, and continuously acting means engaging one side of said roller to force the opposite side of the latter into frictional engagement with the head, substantially as described.

7. The combination with a curtain stick and a hollow head mounted on the end thereof, of a roller rotatably mounted in said head, said roller having one face thereof made flat and the other face hollow, and a spring housed in said hollow face of the roller and abutting against the opposite side of the head whereby to retard the rotation of said roller by forcing the flat face thereof into frictional engagement with the adjacent side of the head, substantially as described.

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