H. H. SCHROYER.

CURTAIN FIXTURE.

APPLICATION FILED JULY 12, 1911.

1,051,641.

Patented Jan. 28, 1913.

Fig. 1

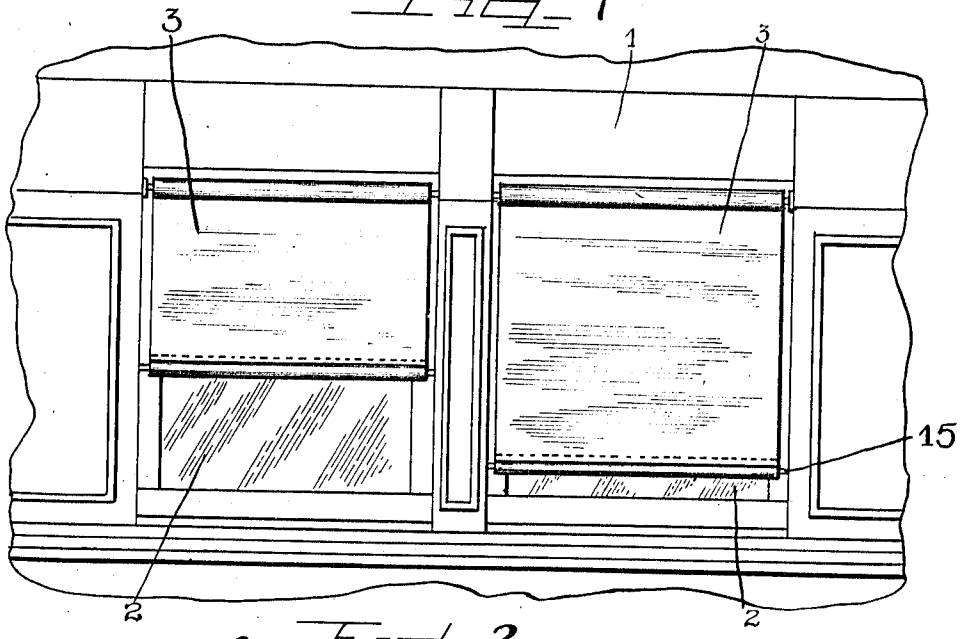


Fig. 2

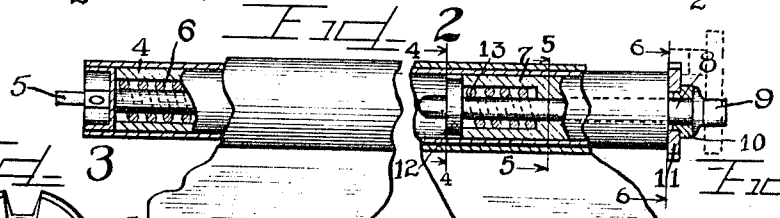


Fig. 3

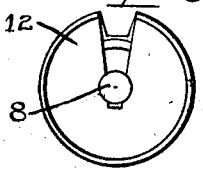


Fig. 4

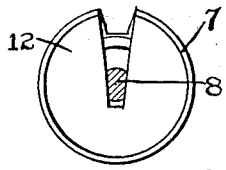


Fig. 5

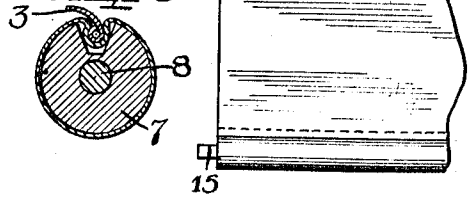
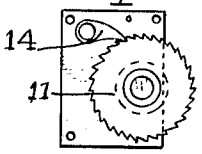


Fig. 6



Witnesses

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UNITED STATES PATENT OFFICE.

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CURTAIN-FIXTURE.

1,051,641. Specification of Letters Patent. Patented Jan. 28, 1913.

Application filed July 12, 1911. Serial No. 638,205.

To all whom it may concern:

Be it known that I, HARRY H. SCHROYER, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Curtain-Fixtures; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the numbers of reference marked thereon, which form a part of this specification.

This invention relates to improvements in curtain fixtures of that class set forth in my prior patent for curtain fixtures, No. 882,082, issued March 17, 1908, and in which the curtain is positively supported in any desired adjustment by means frictionally engaging the roller.

The object of the invention is to afford a curtain fixture for cars and other purposes, in which a torsion spring acts normally to roll the curtain up, and in which frictionally operated means seated partly within the end of the curtain roller, act to hold the curtain in any adjusted position, and in which a weight, as, for example, a weighted rod, is secured at the bottom of the curtain to assist in maintaining the same in adjusted position.

It is also an object of the invention to afford a construction adapted to be used with ordinary spring curtain rollers by insertion in a bore in the end thereof opposite the spring gudgeon.

It is further an object of the invention to afford as an article of manufacture, a curtain retaining device adapted for attachment to, and use with spring operated rollers of any kind.

It is a further object of the invention to afford a construction in which coacting parts are protected from wear and also to afford an exceedingly strong, simple and durable construction.

The invention consists in the matters hereinafter described and more fully pointed out and defined in the appended claims.

In the drawings: Figure 1 is a fragmentary face view of the inner side of a car, showing the windows equipped with devices embodying my invention. Fig. 2 is an enlarged fragmentary section of a curtain roller embodying my invention. Fig. 3 is an enlarged face view in elevation of the inner end of the friction plug. Fig. 4 is an enlarged section on line 4—4 of Fig. 2, with the roller removed. Fig. 5 is a section on line 5—5 of Fig. 2. Fig. 6 is a detail of the ratchet and pawl whereby, in part, the curtain is held in adjusted position taken on line 6—6 of Fig. 2.

As shown in the drawings: 1, indicates the side of a car, as shown, the inner face thereof, the windows 2, of which are equipped with a curtain 3, and a curtain roller 4, embodying my invention. Said curtain roller 4, as shown, is provided at one end with the usual angular gudgeon 5, which is engaged by the torsion spring 6, wound about the stem thereof, which extends into the axis of the roller. Said spring acts when the gudgeon is held from rotation in its bracket, to rotate the roller to roll up the curtain after each extension thereof. In the construction shown, no dogs or pawls as such, are arranged about the angular gudgeon 5, to prevent such reverse rotation of the roller, but instead a friction plug 7, is driven into a suitable axial bore at the other end of said roller and acts to frictionally hold the roller from reverse rotation. Said plug 7, may be constructed of wood or of any suitable material, and is provided with an axial bore therethrough to receive a stem 8, provided at its outer end with an enlarged cylindric head 9, rotatably engaged in the bracket for said rod opposite the bracket for the angular gudgeon. As shown, a bushing 10, of indurated fiber, is secured on said stem to bear against the head thereof, and is flanged upwardly on the outer side and journaled on the collar of said fiber is a ratchet wheel 11, the teeth of which are directed to resist the stress of said spring. The stem 8, extends through said plug and is provided with a washer 12, as shown in Figs. 3 and 4, provided with a V shaped notch to suitably engage in recesses or seats therefor notched into each side of the stem. At its inner end the bore in said plug is enlarged to receive therein a coiled pushing spring 13, which bears against the plug at the inner end of said bore and bears outwardly on said washer and thereby acts to pull the ratchet wheel 11, firmly and frictionally into engagement with the end of the roller, as shown in Fig. 2.

Pivoted on the casing or jamb of the window at a convenient point, is a pawl 14,

which engages the teeth of the ratchet wheel 11, and which acts to hold the same and the roller from reverse rotation. Secured in the lower edge of the curtain is a rod 15, preferably of considerable weight, the ends of which protrude at each side beyond the curtain and slidably engage in the longitudinal grooves on each jamb of the window frame.

The operation is as follows: When the curtain is pulled from its fully opened position downward, to its closed position, the roller is, of course, rotated, winding up the torsion spring in the roller, inasmuch as the stem 5, is held from rotation by the bracket therefor secured on the casing. The ratchet also is firmly engaged by its pawl. When adjusted, the weight of the stick or bottom fixture in the curtain assists in holding the frictional device or otherwise, on the stick to maintain the curtain in adjustment. When it is desired to raise the curtain the relatively heavy stick is pushed upwardly and the weight of this being removed from the bottom of the curtain, permits the reverse rotation of the roller occasioned by the torsion of its spring, and the ratchet wheel also freely rotates.

Of course, my invention may be applied to any spring operated curtain roller by first providing a socket in the end thereof to receive the plug, and by removing the pawls at the spring end of said roller. The plug is exceedingly simple. It possesses practically no wearing parts, and the construction described permits the ready and satisfactory installation of the device by workmen without previous experience or special skill. Inasmuch as the washer 12, is concealed within the roller, it cannot be tampered with to put the device out of adjustment, and from the construction described, neither the plug pin nor washer can revolve in the roller but can only revolve therewith. The ratchet wheel is also frictionally held to rotate with the roller when rolling up the curtain and is held stationary while the curtain is being drawn down.

Of course, details of the construction may be varied. I therefore do not purpose limiting the patent to be granted on this application otherwise than necessitated by the prior art.

I claim as my invention:

1. The combination with a spring curtain roller having a bore in the end thereof remote from the spring, of a friction plug rigidly secured therein, a stem inserted axially through the plug and affording a gudgeon at its outer end to support that end of the curtain roller, a spring acting to force said stem inwardly, a ratchet secured on said stem, and a pawl adapted for engagement on a part adjacent said end of the curtain and acting to hold said ratchet wheel when the curtain is pulled downwardly, and a hardened bushing inserted between the ratchet and the stem to afford a bearing for the latter.

2. As an article of manufacture, a friction device for curtain rollers comprising a relatively short body adapted to be inserted in an axial bore in the roller, a stem extending therethrough, a cylindric boss on the outer end affording a gudgeon for the roller, a washer rigidly secured on the inner end of the stem, a ratchet journaled on said stem adjacent the gudgeon, and a spring acting against said washer to force the stem inwardly and the ratchet wheel into positive bearing against the end of the roller when the plug is in place.

3. As an article of manufacture a friction device for curtain rollers comprising a relatively short body adapted to be inserted in an axial bore in the roller, a stem extending therethrough, a cylindric boss on the outer end affording a gudgeon for the roller, a washer rigidly secured on the inner end of the stem, a ratchet journaled on said stem adjacent the gudgeon, a spring acting against said washer to force the stem inwardly and the ratchet wheel into positive bearing against the end of the roller when the plug is in place, and a bushing of indurated fiber secured on the stem and on which said ratchet wheel is journaled.

4. In a device of the class described a curtain roller, a torsion spring in one end thereof, an angular gudgeon engaged thereby to rotate the roller, a friction device seated in the other end of the roller and embracing a ratchet wheel at the end of the roller, a stem extending therethrough and into the roller, a split washer engaging said stem at its inner end, and a spring on said stem and bearing against said split washer and acting to draw said ratchet wheel into positive engagement with the end of the roller.

5. In a device of the class described a spring curtain roller, an adjustable friction brake adapted to retard the rotation of the roller in one direction, and releasing means adapted to permit said brake to rotate with said roller in the reverse direction.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

HARRY H. SCHROYER.

Witnesses:
LAWRENCE REIBSTEIN,
GEORGE R. MOORE.