E. E. WHITMORE.

VESTIBULE CURTAIN.

APPLICATION FILED JULY 1, 1914.

1,197,320.

Patented Sept. 5, 1916.

Fig. 2

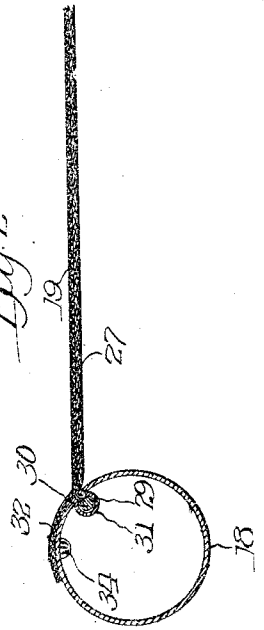
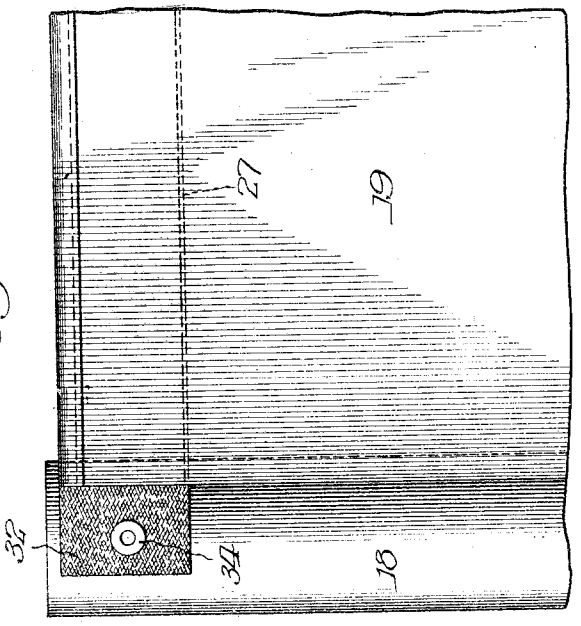



Fig 3



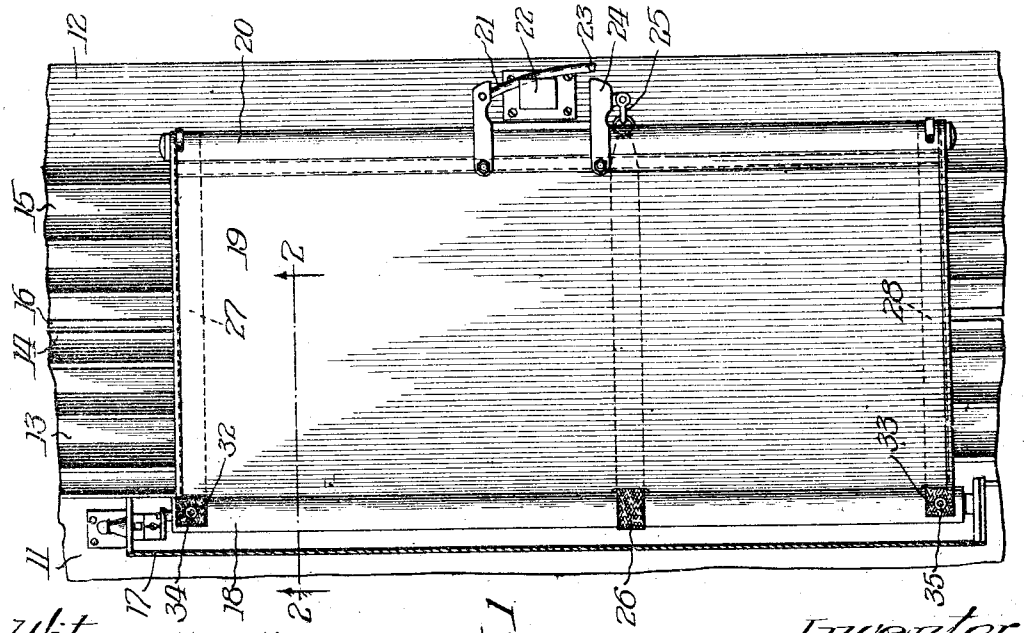




Fig 1

Witnesses:

Geo. Davison

Louis J. Greist

Inventor:

Edward E. Whitmore,

By C. C. Linthicum

Atty.

# UNITED STATES PATENT OFFICE.

EDWARD E. WHITMORE, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE CURTAIN SUPPLY COMPANY, OF NEWARK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

## VESTIBULE-CURTAIN.

1,197,320. Specification of Letters Patent. Patented Sept. 5, 1916.

Application filed July 1, 1914. Serial No. 848,335.

*To all whom it may concern:*

Be it known that I, EDWARD E. WHITMORE, 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 Vestibule-Curtains, of which the following is a specification.

In car vestibule construction it is usual to provide side curtains carried by spring-actuated rollers mounted one on the side post of each car with the free end of the curtain releasably attached to the side post of the other car so that the vestibule diaphragm will have a smooth interior finish on both sides of the passageway between the cars. These curtains are advantageously arranged to have their free ends disconnected automatically upon the separation of the cars so as to prevent damage in case their manual release is overlooked, and for this purpose a trigger mechanism is sometimes employed which is arranged to be actuated by a tape of less length than the curtain and wound with the curtain on the roller, although such contrivance is open to the objection that as heretofore constructed it has caused a ridge in the rolled curtain due to the thickness of the tape wound with the curtain on the roller. Furthermore, it has been found that the upper and lower edges of the curtain become stretched due to the rocking of the connections in a vertical plane and consequent excess strain at the top and bottom as compared with the medial portion of the curtain.

The primary object of the present invention is the provision in such a vestibule curtain of constructional features which will prevent the stretching of the curtain edges and at the same time compensate for the extra thickness of the releasing tape and thus secure an even winding of the curtain on the roller. In curtain rollers generally it has been usual to attach the curtain to the roller by means of a rod traversing a hem in the edge of the curtain, said rod and hem being slidably engaged within a reentrant channel of the roller shell, the walls of which channel outwardly converge so as to permit the curtain fabric to extend therethrough while preventing the escape of the hem and rod. In vestibule curtains this mode of attachment has not been found to be practicable for the reason that as the roller is mounted vertically the rod and curtain tend by gravity to shift their position longitudinally of the roller.

A further object of the invention is, therefore, the provision of means coöperating with such a curtain attachment to anchor the curtain and roller against relative longitudinal displacement.

In order that the invention may be readily understood a preferred embodiment of the same is set forth in the accompanying drawing and in the description based thereon.

As, however, the invention is susceptible of embodiment in other and varied constructional forms the drawing and description are to be taken in an illustrative and not in an unnecessarily limiting sense.

In the drawing Figure 1 represents in front elevation a vestibule curtain embodying the invention; Fig. 2 is a fragmentary sectional view upon an enlarged scale taken on the line 2—2 of Fig. 1; and Fig. 3 represents a fragment of Fig. 1 upon an enlarged scale.

As illustrated the reference numeral 11 designates the end post of one car, and 12 the end post of an adjacent car between which extend the diaphragm 13 with its face plate 14 and the diaphragm 15 with its face plate 16. The end post 11 has suitably mounted thereon a casing 17 within which in suitable brackets is journaled a curtain roller 18. The curtain 19 is attached at one end to the roller 18 in a manner to be hereafter described, while the free end of the curtain is provided with a stiffening rod 20 extending from the top to the bottom thereof. The free end of the curtain is provided with a latch which forms no part of the present invention, but is shown as including a pivoted arm 21 adapted to engage within a keeper 22 and to have its free end 23 caught within a lower member 24 where it is releasably held by means of a trigger 25 so that the curtain bridges the

space between the end posts of the two cars just within the diaphragm.

A tape 26 is attached to the trigger 25 at one end and at its other end to the roller 18, this tape being slightly less in length than the curtain so that before the curtain is unwound to its full capacity the tape will become taut and will operate the trigger and release the curtain permitting the same to wind upon the roller 18 under the tension of the spring associated therewith as is common.

In order to prevent the unequal stretching of the curtain at its upper and lower edges as compared with its medial portion and to compensate for the thickness of the tape 26 in the rolling of the curtain upon the roller, I marginally reinforce the curtain at its upper and lower edges by folding the same or securing along said edges supplemental strips of fabric 27 and 28, the upper and lower edges of the fabric thus reinforced being of substantially the same thickness as the aggregate thickness of the tape and curtain whereby the formation of a ridge is prevented at the point where the tape is inserted and the curtain is caused to be wound uniformly upon the roller and the upper and lower edges of the curtain are prevented from stretching as has heretofore been the case.

While the curtain may be attached to the roller in any approved manner, I preferably provide that end of the curtain with a hem 29 adapted to be inserted within a channel 30 of the roller and to have a rod 31 slidably disposed within the hem and channel so as to prevent the lateral withdrawal of the hem from said channel, thus securing the curtain firmly to the roller. In order to prevent the curtain from shifting longitudinally of the roller the reinforcements 27 and 28 are extended beyond the point of attachment of the curtain proper in the form of tapes 32 and 33 which tapes are equipped with buttons 34 and 35 adapted to snap into apertures provided for that purpose in the shell of the roller. These buttons are not intended to serve as means of attachment to resist the pull of the curtain itself but merely to anchor the same against longitudinal shifting.

It will thus be seen that I have adapted the rod and channel form of curtain attachment for use in connection with vertically mounted curtain rollers and have also provided against the undue stretching of the edges of the curtain and for the uniform winding of the curtain upon the roller notwithstanding the employment of a tape for operating the automatic release of a vestibule curtain.

I claim:

1. The combination of a rotatable roller, and a curtain attached thereto, said curtain having its lateral edges provided with a flexible reinforcement, and a flexible connection between the roller and free end of the curtain intermediate the marginal reinforcement and of a thickness corresponding substantially thereto.

2. The combination of a rotatable roller, and a curtain attached thereto, said curtain having its lateral edges formed of double thickness, and a tape connecting the roller and the free end of the curtain intermediate the marginal reinforcement and of a thickness corresponding substantially thereto.

3. The combination of a rotatable roller, a curtain attached thereto, mechanism forming a releasable connection between the free end of the curtain and the support, a tape operatively connected to the said mechanism and the roller and adapted to wind and unwind with the curtain and to release the said mechanism before the curtain is entirely unwound, the curtain provided on each side of the tape with a portion of greater thickness to compensate for the thickness of the tape and to facilitate the even winding on he roller.

4. The combination of a rotatable roller, a curtain attached thereto, mechanism forming a releasable connection between the free end of the curtain and the support, a releasing tape connecting the said mechanism and the roller and adapted to wind and unwind with the curtain and to release the said mechanism before the curtain is entirely unwound, the curtain having its lateral edges of increased thickness to marginally reinforce the same and to compensate for the thickness of the tape to facilitate the even winding on the roller.

5. The combination of a roller, a curtain, means to secure the roller and curtain against separation but permitting of shifting of the curtain longitudinally of the roller, and supplemental releasable fastening means connecting the curtain and roller to prevent accidental displacement of the curtain longitudinally of the roller.

6. The combination of a longitudinally channeled roller, a curtain having a hemmed edge inserted in the channel, a rod slidably disposed within the hem within the channel to prevent the lateral withdrawal of the hem from the channel while permitting of shifting of the curtain longitudinally of the roller, and a releasable connection between the curtain and roller to prevent accidental displacement of the curtain longitudinally of the roller.

7. The combination of a longitudinally channeled roller, a curtain having a hemmed edge inserted in the channel, a rod slidably disposed within the hem within the channel to prevent the lateral withdrawal of the hem

from the channel, the roller having an aperture at one side of the channel, a tape on the curtain extending beyond the hem, and a button on the tape adapted to snap in the aperture to prevent longitudinal displacement of the curtain.

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

EDWARD E. WHITMORE.

Witnesses:
S. G. MEDELL,
R. N. REYNOLDS