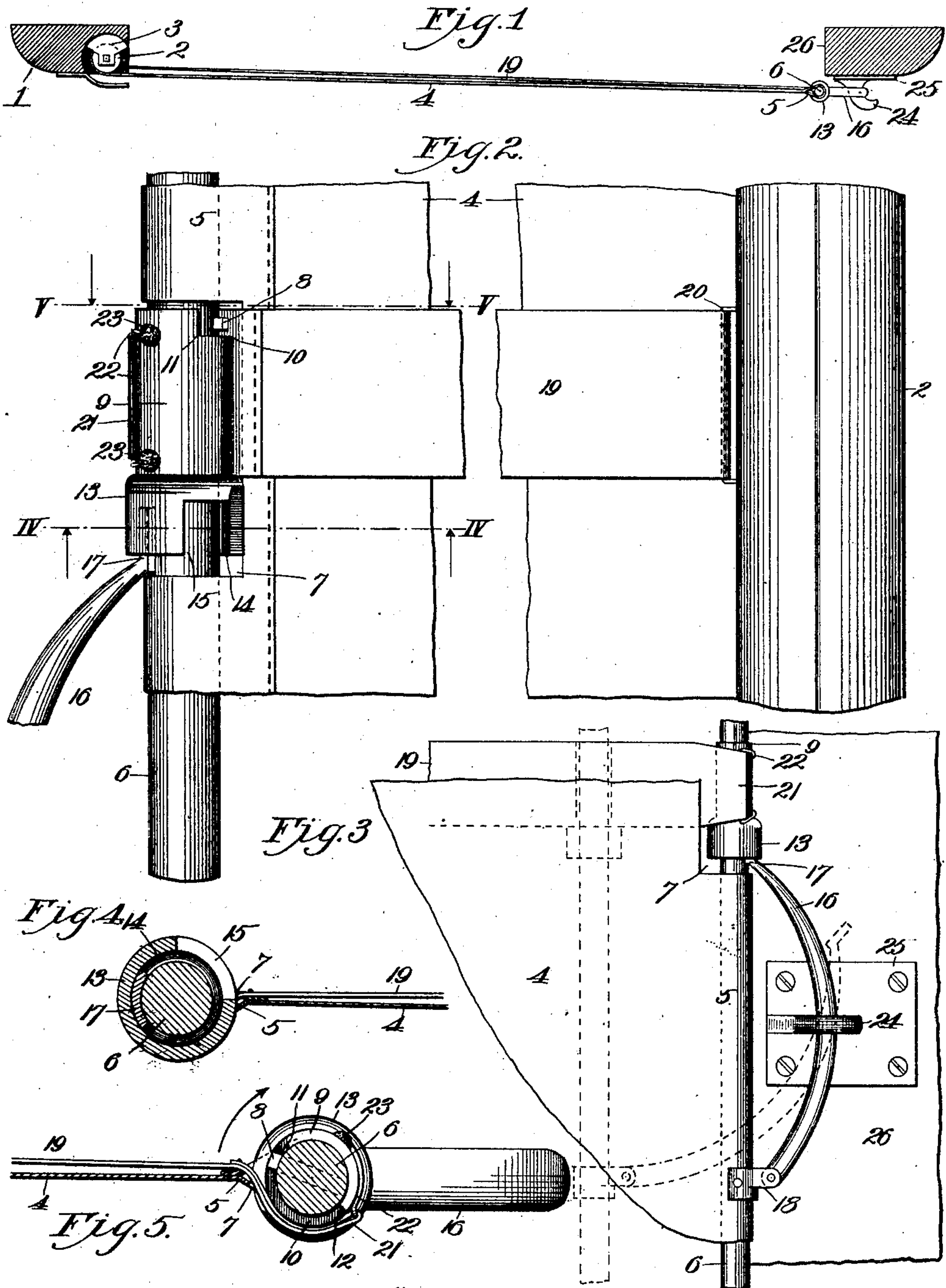


No. 830,647.

PATENTED SEPT. 11, 1906.

S. M. DAWSON.
VESTIBULE CURTAIN FOR CARS.
APPLICATION FILED MAR. 6, 1906.



Witnesses:

Fred V. Griffith
H. B. Rogers.

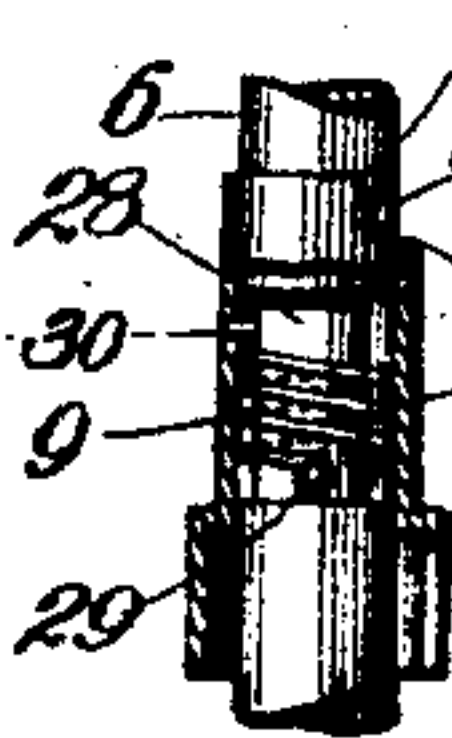


Fig. 6.

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UNITED STATES PATENT OFFICE.

SAMUEL M. DAWSON, OF KANSAS CITY, MISSOURI.

VESTIBULE-CURTAIN FOR CARS.

No. 830,647.

Specification of Letters Patent.

Patented Sept. 11, 1906.

Application filed March 6, 1906. Serial No. 304,446.

To all whom it may concern:

Be it known that I, SAMUEL M. DAWSON, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Vestibule-Curtains for Cars, of which the following is a specification.

My invention relates to vestibule-curtains for railway-cars; and my object is to produce a curtain of this character which will be automatically disconnected from one of a pair of cars in case said cars become separated or assume such relative positions that the distance between the points to which the curtain is attached exceeds the length of the curtain when unwound.

A further object is to produce a curtain of this character which operates efficiently and is of comparatively inexpensive construction.

With these objects in view and others as hereinafter appear the invention consists in certain novel and peculiar features of construction, as hereinafter described and claimed, and in order that it may be fully understood reference is to be had to the accompanying drawings, in which—

Figure 1 represents a horizontal section of portions of two vestibules of a pair of cars equipped with a curtain embodying my invention. Fig. 2 is an outer face view of a portion of said curtain when stretched nearly its full length. Fig. 3 is an inner face view of a portion of the curtain and also shows the means whereby it is detachably engaged with one of the cars. Fig. 4 is a section on the line IV IV of Fig. 2. Fig. 5 is a horizontal section on the line V V of Fig. 2; and Fig. 6 is a detail view, partly in section, of a modification of the device.

In the said drawings, 1 indicates an upright adapted to be attached to or form a part of the vestibule of a car.

2 indicates a spring-roller of the common type of construction, the internal mechanism of the roller being omitted because of well-known construction.

3 indicates brackets, one only appearing, between which the roller is mounted in the usual manner.

4 indicates the curtain, secured at one end to the roller in the usual manner and bent back upon and secured to the body portion at its opposite end to provide the loop 5 for the rod 6. Said loop is bifurcated at a suitable point, as at 7, preferably about midway the height of the curtain, and within and near the upper end of said bifurcation the rod is provided with a stop-pin 8.

9 indicates a sleeve journaled on rod 6, 60 notched in its upper edge, as at 10, to receive the stop-pin 8, the opposite ends of the notch providing shoulders 11 and 12 to limit turning movement of the sleeve upon the rod. Depending from the lower end of the sleeve 65 and of greater diameter than the same is a hood portion 13, which provides between it and rod 6 an annular chamber 14, and said hood is provided in its lower portion with a notch 15.

16 indicates a bowed handle having a flattened vertical portion 17 adapted to occupy chamber 14, the lower end of said handle being pivoted to the sleeve 18, secured rigidly to the curtain and rod 6, as shown in Fig. 3.

19 indicates a flexible strap of shorter length than the curtain and arranged at the outer side of the same by preference and having one end secured, as at 20 or otherwise, to the roller, so that said strap shall be completely unwound from the roller before the curtain is completely unwound. At its opposite end the strap is preferably doubled to form a loop 21, which extends inwardly through the bifurcation 7 to the inner side of rod 6, the extremity of the loop being secured permanently to the sleeve 9, preferably through the medium of a wire 22, having its ends soldered, as at 23, or otherwise secured to the sleeve.

24 indicates a hook projecting from a plate 25, secured rigidly to a bar or frame 26, adapted to form a part of the vestibule of the second car, and when said cars are coupled together the brakeman grasps the handle 16 of the curtain, so as to unwind the same until its handle is slipped over the hook 24, the companion curtain (not shown) at the opposite side of the car being likewise manipulated, it being preferred, of course, that the vestibule of each car shall be equipped at one side with a curtain and at the other with a hook, as is customary, in order that two cars can never be brought together which are both equipped with hooks or both equipped with curtains, in one of which events there would be no curtains and in the other there would be four curtains with no means of attaching them to the opposite cars.

Should two cars coupled together, with

their vestibules connected by the curtains, as shown in Fig. 1, round a curve and in so doing swing apart at the outer side a distance exceeding the length of the curtain, the strip 19 would become taut, and consequently impart rotary movement to the sleeve in the direction indicated by the arrow, Fig. 5, until the opening 15 in the expanded or hood portion of the sleeve registered with the flattened end 17 of the handle. As this occurred the movement of the sleeve would cease, because the strap would be pulling in line with the center of the roller 2 and rod 6, and therefore impose the strain of the pull on the handle and cause the latter to swing outward on its pivotal point and move its flattened end through the opening 15. At this release of the handle the retractile tendency of the spring-roller in conjunction with the separating movement of the cars would result in causing the handle to pull through the hook 25, as indicated by the dotted lines, Fig. 3, the curtain under the power of its retractile spring starting to rewind but not becoming wholly rewound, because the weight of the rod 6 would cause the free end of the curtain to drop and buckle to such an extent that it could not be entirely rewound by the spring. It will thus be seen that excessive separating movement of the cars in rounding curves would simply effect the automatic release of the curtain from the car to which it was hooked and that the detachment will be effected without injuring the curtain, as so frequently happens with the type of curtain now in general use on vestibule-cars. It will of course be understood that should the cars become uncoupled in switching or at any other time the automatic release of both the curtains will take place. After the curtain is released the tension is of course removed from the strap, so that the brakeman after swinging the handle until its flattened end again passes back through opening 15 and engages the rod can readily turn the sleeve by hand, so as to dispose said opening out of register with said flattened portion, and thus relock the handle in position. He can then by grasping the handle pull the curtain out and permit it to become wholly rewound upon the roller or, if the cars have been restored to their original position, can slip said handle back upon the hook with which it was originally engaged. Should the brakeman forget to disengage the vestibule-curtains preliminary to uncoupling the cars, it invariably follows that the curtains, if of the ordinary type, are torn in two, the tear usually occurring close to the rod 6. It is customary after removing the portion engaging the rod to form a new loop in the free end of the curtain and secure the rod therein, thus producing a short curtain, which is apt to be again torn the first time that the train rounds a short curve, it being understood, of course, that the curtains are originally of length sufficient to

accommodate all the curves of any road over which the cars may travel.

From the above description it will be apparent that I have produced a vestibule-curtain for cars which is automatically released before a destructive strain can be imposed upon it and which is of simple, strong, durable and inexpensive construction, it being also noticed in this connection that the stop-pin 8 positively limits the rotary movement of the sleeve upon being struck by shoulder 12 of notch 10 at the moment that the notch 15 comes opposite the portion 17 of the handle, as otherwise the pull on the strap might turn the sleeve too far around, and thus relock the handle before its upper end had time to swing out of said notch.

The shoulder 11 in the construction embodied in Figs. 1 to 5, inclusive, is adapted to normally engage the stop-pin 8, though in practice when the curtain is in operative position in a vestibule there is no tendency of the sleeve to rotate, and consequently said shoulder performs no important function. In the construction shown in Fig. 6 the shoulder 11 is held with a yielding pressure against the stop-pin by the spring 27, coiled around the rod 6, which is preferably diametrically reduced, as at 28, to receive the spring between said rod and the sleeve, the opposite ends of the spring being secured to a pin 29 of the rod and a pin 30 of the sleeve. The action of the spring will guard against any possibility of the sleeve being turned in the direction indicated by the arrow, Fig. 5, so as to release the handle unless the power of the spring is overcome by a direct pull on the strap.

From the above description it will be apparent that I have produced a vestibule-curtain for railway-trains which possesses the features of advantage enumerated as desirable in the statement of the object of the invention and which may be modified in minor particulars without departing from the principle of construction involved.

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

1. The combination of a roller, a curtain attached at one end thereto, a rod secured to the opposite end of the curtain, a sleeve journaled on the rod and provided with a notched hood portion, a strap secured at its opposite ends to said roller and sleeve and of shorter length than the curtain, and a handle carried by the curtain and having one end detachably engaging said hood.

2. The combination of a roller, a curtain attached at one end thereto, a rod secured to the opposite end of the curtain, a sleeve journaled on the rod and provided with a notched hood portion, a strap secured at its opposite ends to said roller and sleeve and of shorter length than the curtain, a handle carried by

the curtain and having one end detachably engaging said hood, and a hook engaged by said handle.

3. The combination of a roller, a curtain 5 attached at one end thereto, a rod secured to the opposite end of the curtain, a sleeve journaled on the rod and provided with a notched hood portion, a strap secured at its opposite ends to said roller and sleeve and of shorter 10 length than the curtain, and means for positively limiting rotary turning movement of the sleeve on the rod.

4. The combination of a roller, a curtain 15 attached at one end thereto, a rod secured to the opposite end of the curtain, a sleeve journaled on the rod and provided with a notched hood portion, a strap secured at its opposite ends to said roller and sleeve and of shorter 20 length than the curtain, and a pin-and-slot relation between the rod and sleeve to positively limit the turning movement of the latter.

5. The combination of a roller, a curtain 25 secured thereto at one end and provided with a bifurcated loop at the opposite end, a rod extending through said loop, a sleeve journaled on the rod within said bifurcation and provided with a depending hood portion hav- 30 ing a notch, a handle pivoted to the rod at one end and having its opposite end fitting between the rod and said hood, and a strap secured at one end to the roller and extending through said bifurcation and partially around and attached rigidly to said sleeve.

35 6. The combination of a roller, a curtain secured thereto at one end and provided with a bifurcated loop at the opposite end, a rod extending through said loop, a sleeve journaled on the rod within said bifurcation and

provided with a depending hood portion hav- 40 ing a notch and having a pin-and-slot relation with the rod, a handle pivoted to the rod at one end and having its opposite end fitting between the rod and said hood, and a strap 45 secured at one end to the roller and extending through said bifurcation and partially around and attached rigidly to said sleeve.

7. The combination of a roller, a curtain 50 attached thereto at one end, a rod attached to the opposite end of the curtain, a sleeve journaled on the rod and having a pin-and-slot connection therewith and having a 55 notched hood, a handle pivoted at one end to the rod and having its opposite end fitting between said hood and rod, and a strap shorter than the curtain secured at one end to 60 the roller and extending partially around and secured at its opposite end to said sleeve.

8. The combination of a roller, a curtain 65 attached thereto at one end, a rod attached to the opposite end of the curtain, a sleeve journaled on the rod and having a pin-and-slot connection therewith and having a 70 notched hood, a handle pivoted at one end to the rod and having its opposite end fitting between said hood and rod, a strap shorter than the curtain secured at one end to the roller and extending partially around and se- 75 cured at its opposite end to said sleeve, and means engaged by said handle to hold the curtain partially unrolled.

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

SAMUEL M. DAWSON.

Witnesses:

H. C. RODGERS,
G. Y. THORPE.