No. 872,840. PATENTED DEC. 3, 1907.

H. R. NELSON.

CURTAIN DISPLAY RACK.

APPLICATION FILED DEC. 1, 1905.

3 SHEETS—SHEET 1.

Fig. 1.

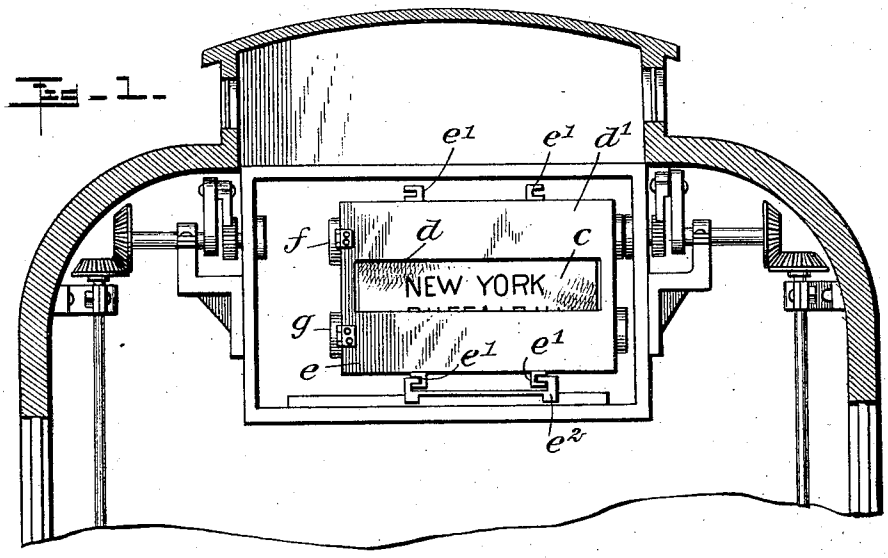
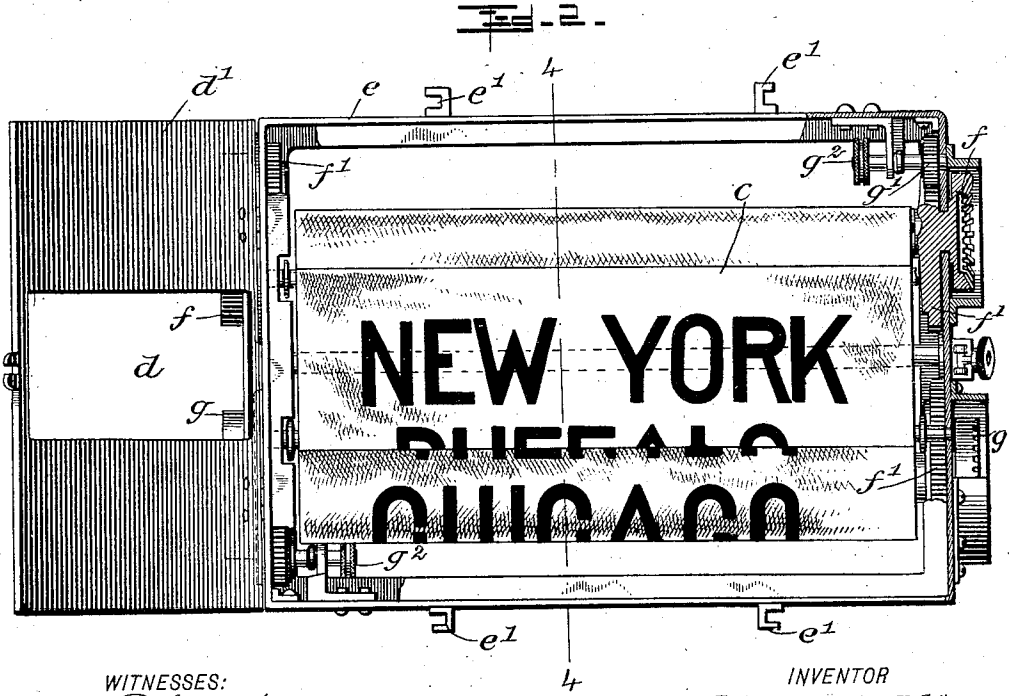


Fig. 2.



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3 SHEETS—SHEET 2.

Fig. 4.

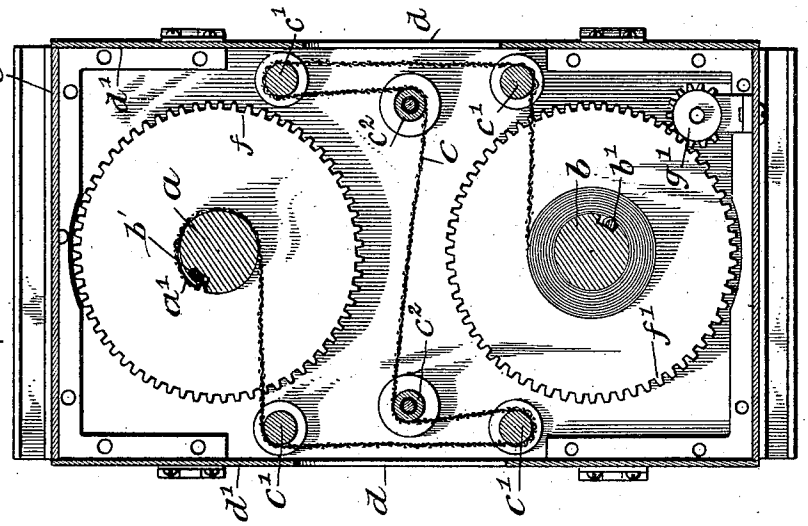
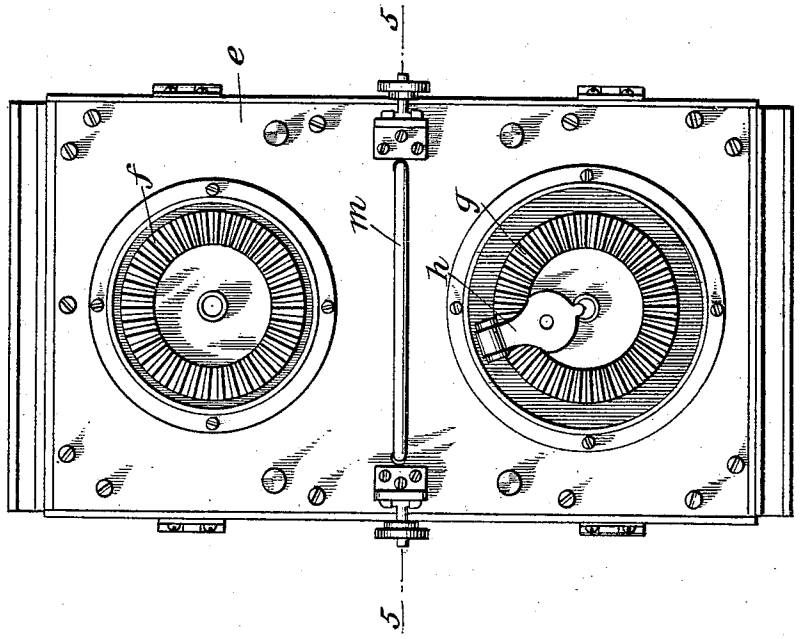


Fig. 3.



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3 SHEETS—SHEET 3.

Fig. 5.

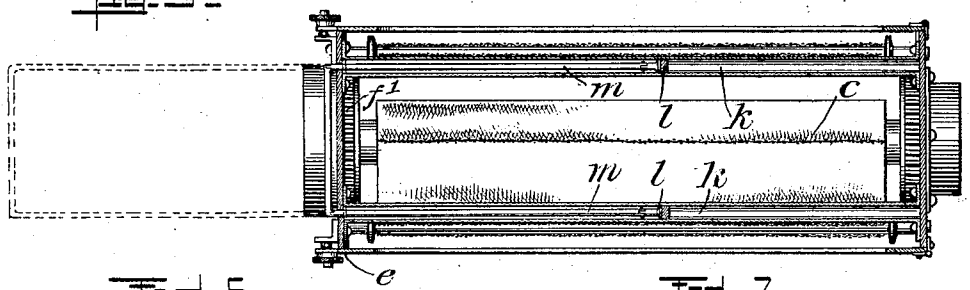


Fig. 6.

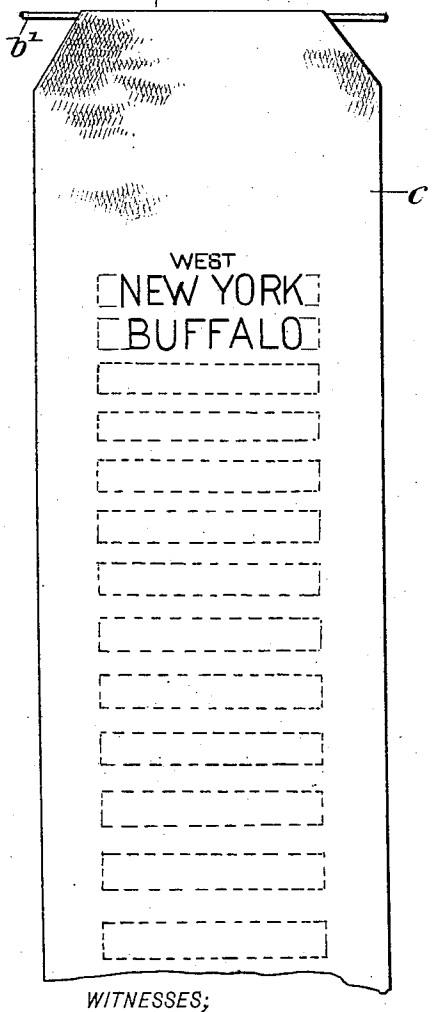
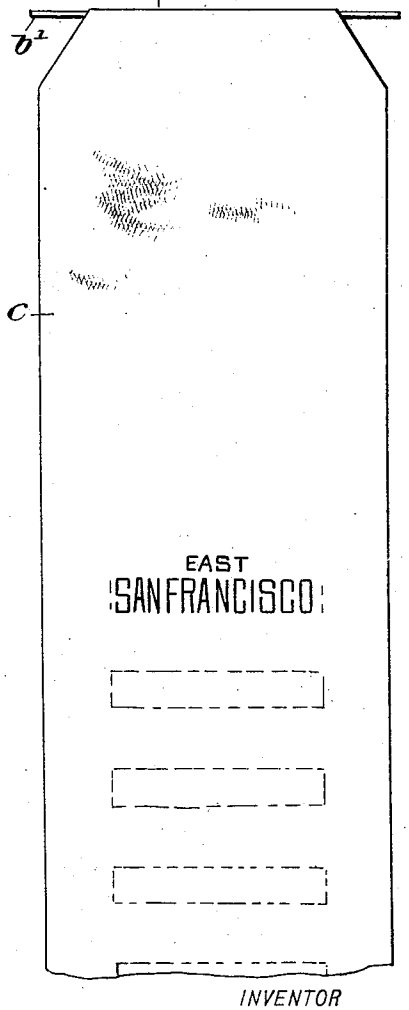


Fig. 7.



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UNITED STATES PATENT OFFICE.

HERBERT RIPLEY NELSON, OF NEW YORK, N. Y.

CURTAIN-DISPLAY RACK.

No. 872,840. Specification of Letters Patent. Patented Dec. 3, 1907.

Application filed December 1, 1905. Serial No. 289,817.

To all whom it may concern:

Be it known that I, HERBERT RIPLEY NELSON, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Curtain-Display Rack, of which the following is a full, clear, and exact description.

My invention relates to a curtain display rack which can be applied to station indicators and advertising devices of various kinds.

The principal objects of the invention are to provide means whereby the curtain may be reversed by inverting a movable carrier or casing therefor and permitting the device on the curtain to be seen from either side of the carrier, means for adjusting the curtain by hand, means for supporting a display curtain or rack in the casing or carrier and conveniently locating a handle on the casing for manipulating it, and means whereby the difference in the amount of curtain which is taken up by the rollers of machines of this character as the curtain is wound upon them will be compensated by the position of the names of stations or advertising devices on the curtain.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a transverse sectional view of a portion of a car, showing an inside elevation, and a station indicator to which my invention may be applied; Fig. 2 is a front view of a station indicator with the door open, the parts appearing in section; Fig. 3 is an end elevation of an indicator; Fig. 4 is a sectional view on the line 4—4 of Fig. 2; Fig. 5 is a sectional view on the line 5—5 of Fig. 3, on a small scale; Figs. 6 and 7 are face views of the two opposite ends of the curtain which is employed.

For convenience I have shown my invention as applied to the station indicator represented in my Patent 801,038, granted October 3, 1905, but it is to be understood that the application of the invention is not in any way limited to that form of station indicator, and, in fact, that it is not limited to station indicators generically, as it may be used for other devices of a similar nature.

Station indicators and advertising devices in which a curtain is employed are usually provided with a pair of rollers *a* and *b*, upon which a curtain or sheet *c* is wound for the purpose of presenting any matter which may appear on the curtain in a position behind openings *d* in doors *d'* on opposite sides of a carrier or casing *e* in which the device is contained. The curtain is secured to the rollers by springs *a'* on the rollers engaging over a rod *b'* secured to each end of the curtain.

The manner of operating the rollers is not here described as the form illustrated is the same as shown in my prior patent, and can be varied in any desired way. The rollers *a* and *b* are preferably provided with gears *f* and *g*, and these gears are operated to roll up the curtain on one roller and draw it from the other in accordance with the direction of motion which it is desired to have the curtain take. I have shown the gear *g* as provided with a handle *h* by means of which it can be manipulated in any way desired.

In order to pass the curtain directly behind the two doors and bring the representation on it into proper position to be seen through either door that may be placed at the front, I place an idler roller *c'* at opposite sides of each door and lead the curtain over them and back over the idler rollers c^2. The movable casing or carrier can therefore be reversed and the devices on the curtain still read through an opening *d*.

For the purpose of supporting the casing in such position that either of the doors may be on the front, I have provided it with two sets of slotted rails *e'* on opposite sides for engagement with guide rails e^2. A boxing F is provided with transversely disposed rails G upon which are supported the guide rails e^2, the upper portions of which are bent inwardly so as to serve as a track, these portions being slidably engaged by the slotted rails *e'*. The casing *e* containing various movable parts is therefore inclosed within the boxing F. As the casing, because of its mountings, may be moved in two directions relatively to the boxing F, the casing can be readily brought into a position favorable for enabling the operator to grasp the handle *m* and to withdraw this handle to its limit.

In order to adjust the curtain by hand to take up slack and the like I have placed two gears *f'* on each roller shaft and a pinion *g'* meshing with one of them and operable by a finger wheel g^2. There are four of these gears *f'*.

One objection which has been made to this

class of indicators is that as the curtain rolls up upon one roller the diameter of the roller is increased by the additional layers of the curtain and, consequently, the amount of curtain which is taken up during each revolution of the roller is increased. In order to obviate this difficulty I have provided a curtain with names or representations of any desired character, they being provided with spaces between them, and these spaces varying gradually from a short length, as is indicated at the top of Fig. 6, to a long one, as is indicated in Fig. 7, which represents the opposite end of the curtain. It will be seen that by this simple expedient properly carried out the above mentioned difficulty is entirely overcome, and the names or representations will appear at the opening *d* in their proper position at the center of the opening, from one end of the curtain to, the other. As the curtain winds up on one roller the increased diameter of the roller and curtain, of course, causes more of the curtain to be taken during each revolution, and as the space between the names increases in the same ratio, the relative positions of the several names at the opening *d* will always be the same.

It will, of course, be understood that these indicating devices will at times have to be changed from one car to another as the different cars are put upon a line, and I have provided means whereby this could be conveniently accomplished. The casing is provided with a pair of tubular guides *k*. In these guides are slidably mounted piston-like slides *l*, which are mounted upon the ends of a U-shaped metallic member *m*, the latter being capable of rendering service as a handle. The inner ends of the U-shaped member *m* are provided with pivots *z*, *z'*. The U-shaped member may be grasped by the ends and drawn outwardly as indicated at the left of Fig. 5. When extended in their utmost limit the pivots *z*, *z'*, being then at the extreme left according to the view shown in Fig. 5, permit the U-shaped member *m* to be swung in either of two directions after the manner of a bucket bail. This U-shaped member thus serves as a handle whereby the entire casing *e* and its contents may be lifted or carried by hand.

From the above description it will be seen that my arrangement presents, among other things, a boxing F, contained within which is the revoluble casing *e*, the latter being provided with a handle *m* which is ordinarily concealed within the body of the casing *e*, but which when extended enables the casing to be lifted from one car to another, or from a station to a car, and vice versa, in much the same manner that a bucket would be handled. This arrangement affords great convenience, for the reason that it renders a number of casings, such as *e*, readily transportable in order to adapt the several cars for service upon different routes of railway.

Having thus described my invention I claim as new and desire to secure by Letters Patent:

1. A curtain display rack having a guide, a removable carrier, having slotted rails on opposite sides for engaging said guide, said carrier having a curtain and openings in opposite sides through which the curtain may be seen.

2. The combination of a guide, a carrier removably mounted on the guide and having slotted rails on a plurality of sides for engaging said guide, whereby the carrier may be placed on the guide in a plurality of positions, said carrier having openings in a plurality of its walls, and a curtain located in the carrier and observable through all of said openings.

3. The combination of a guide, a carrier removably mounted on the guide and having slotted rails on a plurality of sides for engaging said guide, whereby the carrier may be placed on the guide in a plurality of positions, said carrier having openings in a plurality of its walls, and a curtain located in the carrier and observable through all of said openings, rollers on which said curtain is wound and idler rollers located on opposite sides of said openings for passing the curtain across the openings.

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

HERBERT RIPLEY NELSON.

Witnesses:
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ALBERT E. FAY.