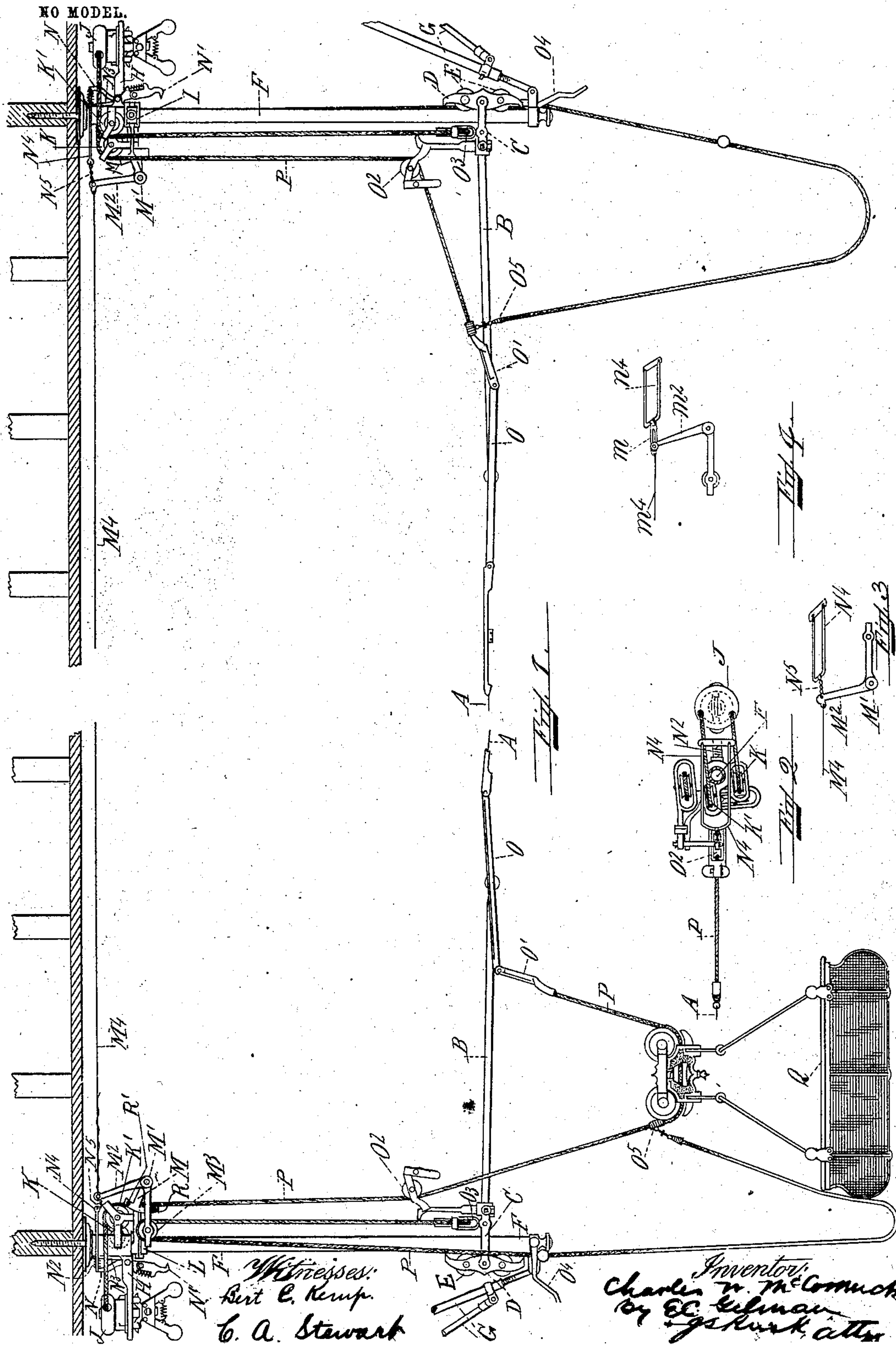


No. 726,090.

PATENTED APR. 21, 1903.

C. W. McCORMICK.
STORE SERVICE APPARATUS.

APPLICATION FILED AUG. 21, 1901.



UNITED STATES PATENT OFFICE.

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STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 726,090, dated April 21, 1903.

Application filed August 21, 1901. Serial No. 72,758. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. MCCORMICK, of Emporia, in the county of Lyon and State of Kansas, have invented certain new and useful Improvements in Store-Service Apparatus, of which the following is a specification.

My invention relates to new and useful improvements in store-service apparatus; and the object of the invention is to provide automatic releasing means for both ends of the line.

My invention consists of certain novel features hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, which illustrate a construction embodying my invention, Figure 1 is a side view of my improved apparatus. Fig. 2 is a top plan view of one end of the line. Fig. 3 is a perspective view of the releasing-wire and operating mechanism hereinafter described. Fig. 4 is a modification hereinafter described.

Like letters of reference refer to like parts throughout the several views.

A represents the usual track-wire connected to the trap B, having the bracket C, in the rear end of which is mounted the carriage D, having wheels E, which travel up and down on the hanger F, and said hanger has suitable braces G, by which it is attached to the ceiling. The upper end of the hanger F has a bracket H, carrying on its outer end the usual governor J, and pivoted on its forward end are the pulleys K K'. Secured on the hanger F below the bracket H is a clamp L, having a projection M, to which at M' is pivoted the bell-crank lever M², in one end of which is journaled the pulley M³ and to its upper end is secured the releasing-wire M⁴. Pivoted in the upper bracket H is a catch N, having a hook N' at its lower end to engage the carriage D when raised to its upper position, and against the upper end of the catch N bears one end of the spring N², the opposite end of which bears against the lug N³, extending upwardly from the bracket H, and the tendency of said spring is to hold the upper end of the catch outwardly and the hook end N' inwardly in position to engage the car-

riage when it is raised to its upper position. To the upper end of the catch N are secured the ends of the loop N⁴, and the loop N⁴ is connected to the upper end of bell-crank lever M² by the chain N⁵.

To the trap B is pivoted the movable section O, having pivoted thereto the link O', to which is secured the rope P, which extends upwardly past the pulley O², around the pulley K, through the governor J, around the pulley K', and down around the pulley O³, mounted in the bracket C, and up around the pulley M³, pivoted in the bell-crank lever M², and down through the rope-holder O⁴ and is connected to the rope P by the sliding clamp O⁵.

In beginning the operation of the apparatus it will be assumed that the basket is in the position shown at the left-hand end, Fig. 1. When the operator pulls upon the cord and moves the trap B upwardly until the carriage D engages the hook N', then the carrier Q will take its departure by gravity to the opposite end of the line. After the carrier has reached the right-hand end of the line, and assuming the movable part of the track to be in its lowest position, as shown, and the operator desires to return the carrier to the end from which it came, the operator pulls down on the rope P, and the movable end of the track is raised, and the carriage D engages the hook N' at the right-hand end, and the carriage at the left-hand end is automatically released, and the movable end of the track at the left-hand end is lowered by the usual governor mechanism, and the carrier returns by gravity to the left-hand end and drops into the loop of the rope P, as shown at the left-hand end. Beginning again at the left-hand end of the carrier, in full lines, as shown, the operator pulling on the rope P pulls down the pulley M³ and with it the bell-crank lever M², which tightens the releasing trip-wire M⁴ and pulls it toward the left, which operates on the upper end of the catch N at the right-hand end and moves the hook from engagement with the carriage D, which descends to the lower end of the hanger F and is governed in its descent by the governor mechanism J and assumes the position shown in full

lines at the right-hand end of Fig. 1. The upper end of the bell-crank lever is connected to the loop N^4 by the chain N^5 , and the links of said chain offer a means for obtaining the desired adjustment. The function of this particular construction is to permit a given motion to the bell-crank M^2 and apply it to the bell-crank connected to the catch N at the right-hand end of the line, or vice versa, as the case may be, so that simultaneously with the downward pull upon the rope at one end to raise the carrier for transmission the movable portion of the track at the opposite end is released and lowered. As an equivalent to the chain and loop a slot m may be provided in the end of the loop n^4 , and through said slot the upper end of the bell-crank m^2 projects and when properly set permits of the bell-crank lever moving freely in one direction and engaging with the loop n^4 when moved in the opposite direction to actuate releasing trip-wire.

Heretofore, so far as I am aware, double-trip wires have been used for double-reverse lines—that is, lines which automatically reverse at both ends; but I believe myself to be the first to construct a double-reverse line where one wire only is used for releasing the carriage at both ends.

In package-carriers which employ gravity as a motive power it is often necessary to limit the movement of the track and to use means by which the track may be raised and lowered at both ends, thus reducing the vertical space used. This is especially true in low ceilings in order to give sufficient head room.

The movement of the bell-crank lever M^2 is limited by the lugs $R R'$ on the projection M of the clamp L .

The construction and operation of the apparatus is identical at both ends of the line.

I do not limit myself to the arrangement and construction shown, as the same may be varied without departing from the spirit of my invention.

Having thus described the nature of my invention and set forth a construction embodying the same, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a store-service apparatus, a track, a carrier movable upon said track, a support at each end of the track, a carriage connected at each end of the track and movable on each support, means for elevating the carriage at each end of the track, a latching device at each end for engaging the carrier when raised to its upper position, and means operated upon the upward movement of the carriage at one end for operating said latch-

ing device and automatically releasing the carriage at the opposite end.

2. In a store-service apparatus, a track, a carrier movable upon said track, a support at each end of the track, a carriage connected at each end of the track and movable on each support, means for elevating the carriage at each end of the track, a latching device at each end for engaging the carrier when raised to its upper position, and a single release-wire operated upon the upward movement of the carriage at one end for operating said latching device and automatically releasing the carriage at the opposite end.

3. In a store-service apparatus, a track, a carrier movable upon said track, a support at each end of the track, a carriage connected at each end of the track and movable on each support, means for elevating the carriage at each end of the track, a latching device for engaging the carrier when raised to its upper position, a single release-wire operated upon the upward movement of the carriage at one end for automatically releasing the carriage at the opposite end, and a yielding connection between the said release-wire and the latching device at each end.

4. In a store-service apparatus, a track, a carrier movable upon said track, a support at each end of the track, a carriage connected at each end of the track and movable on each support, means for elevating the carriage at each end of the track, a latching device for engaging the carrier when raised to its upper position, a single release-wire operated upon the upward movement of the carriage at one end for automatically releasing the carriage at the opposite end, and a yielding adjustable connection between the said release-wire and the latching device at each end.

5. In a store-service apparatus, a track, a carrier movable upon said track, a support at each end of the track, a carriage connected at each end of the track and movable on each support, means for elevating the carriage at each end of the track, a latching device for engaging the carrier when raised to its upper position, and means operated upon the upward movement of the carriage at one end for operating said latching device and releasing the carriage at the opposite end.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 1st day of August, A. D. 1901.

CHARLES W. McCORMICK.

Witnesses:

A. L. MESSER,

C. A. STEWART.