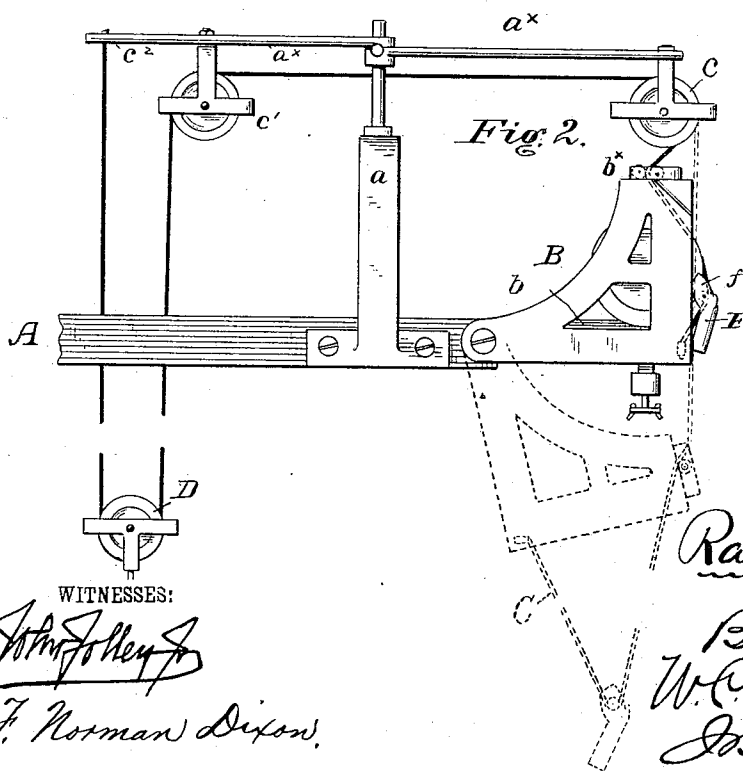
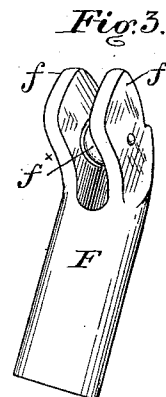
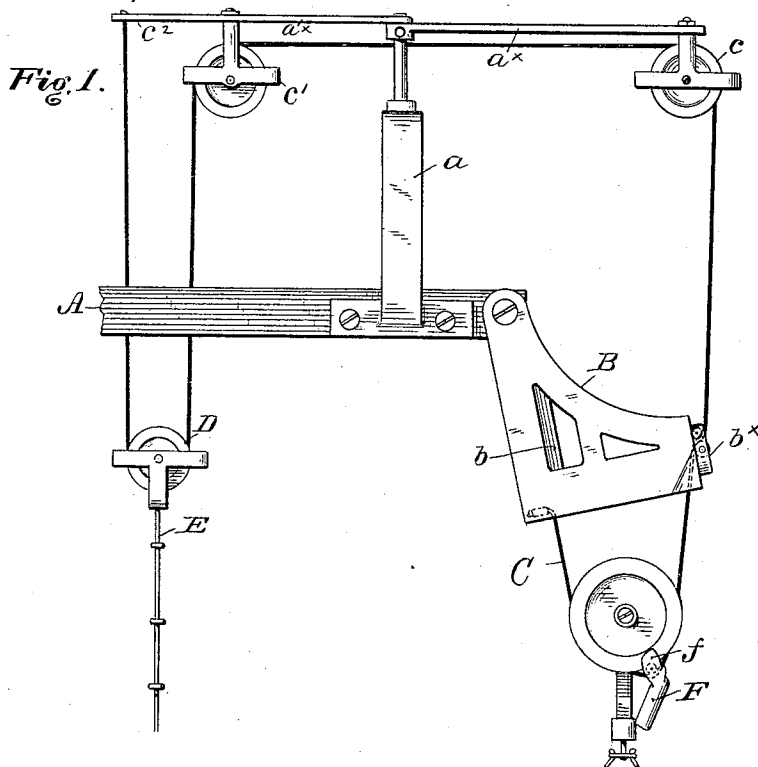


(No Model.)

R. H. NORTH.
STORE SERVICE APPARATUS.

No. 332,674.

Patented Dec. 15, 1885.



WITNESSES:

John Jolley
J. Norman Dixon

Ralph H. North
INVENTOR
By his Attorney,
W. C. Strawbridge
Edison Taylor

UNITED STATES PATENT OFFICE.

RALPH H. NORTH, OF PHILADELPHIA, PENNSYLVANIA.

STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 332,674, dated December 15, 1885.

Application filed November 12, 1885. Serial No. 182,521. (No model.)

To all whom it may concern:

Be it known that I, RALPH H. NORTH, a citizen of the United States, residing in the city and county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Store-Service Apparatus, of which the following is a specification.

My invention relates, in general, to that class of store-service apparatus in which the traveling carrier is a basket or other goods-receiver suspended from the depending arm or hanger of a one or two wheeled truck, the wheel or wheels of which travel upon an elevated track composed of a single rail.

My invention relates, specifically, to the carrier-dispatchers or send-off devices which are employed for elevating the carriers from a lower level and depositing them upon the track.

The object of my invention is to provide automatic means for bringing down the carrier-cord, which operates in connection with the dispatcher or send-off, to within reach of the salesman or operator immediately after the said cord and dispatcher have been employed to elevate a carrier to the track, so that the said carrier-cord may automatically present itself to the operator in a position convenient for the reception of the next carrier.

In Letters Patent No. 325,385, granted September 1, 1885, to Isidore Birge, there is shown and described in connection with the carrier-cord D, that operates the send-off or carrier-dispatcher, what is termed a "send-off" cord, R, provided with a little ring, *r*, pulley, or other equivalent contrivance, through which the carrier-cord is threaded, and which is applied, as shown, to the send-off, and it is stated that the office of this send-off cord is to permit the operator to draw down the carrier-cord from the position which it is represented as occupying in Figure 1 in the drawings of said patent to that depicted in Fig. 2, so that a carrier may be placed upon its (for the time being) light.

The specific object of my present invention is to dispense with this send-off-cord and ring, and to provide in its place an automatically-operating counter-weight, which will occasion the automatic descent of the carrier-cord,

which is connected with the dispatcher after the said cord has been elevated to occasion the dispatch of a carrier.

In the accompanying drawings, which represent apparatus conveniently embodying my improvements, Fig. 1 is a side elevation, the parts being in the position which they occupy when traction is being exerted upon the pulling-cord to elevate the carrier to the track. Fig. 2 is a view similar to Fig. 1, except that the parts are represented in full lines in the positions which they occupy when the dispatcher has been raised to the limit of its upward movement and when the carrier is about to gravitate from it, and in dotted lines in the positions which they occupy when the device is at rest. Fig. 3 is a view in perspective of the carrier counter-weight.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents the delivery-track of a station, along which the carriers are to be dispatched.

a is a forked suspender supporting the delivery-track. The track may, however, be supported upon brackets or otherwise, as convenience of erection may dictate.

B is the carrier-dispatcher or send-off, it being a cage-like device pivoted to the delivery-track A, and containing a track-bar, *b*, of the usual character.

b^x are friction-rolls applied to the dispatcher for the carrier-cord to run through. The dispatcher or send-off represented is a convenient one; but any other dispatcher of similar general construction and operation may, of course, be employed instead of that represented.

C is the carrier-cord which operates the dispatcher. This cord is secured to the dispatcher, as shown, passes between the friction-rolls with which said dispatcher is provided, passes up and over a pulley, *c*, passes across to a second pulley, *c'*, passes down and beneath what I term the "operating-pulley" D, which is contained in a suitable housing and controlled by a single pulling-cord, E, and passes up and is, in the form of apparatus shown, fixedly connected to the bracket *c*², which is shown as connected with and sup-

ported by one of the arms a^x , which are connected conveniently to rods erected from the forked suspenders.

So much of the apparatus as is embraced in the foregoing description is not novel with me.

F is what I term a "carrier counter-weight," it being a weight of metal, wood, or other material, preferably of the form shown, and which is provided with ears $f f$, which form between them a housing for an anti-friction roll, which I term the "cord-roll" f^x , and beneath which the carrier-cord passes, and which also form embracing devices for engaging about the wheel of the carrier, in the manner represented in Fig. 1, and steadying the counter-weight when traction is exerted upon the pulling-cord to elevate the carrier. Instead of the cord-roll housed, as set forth, a simple hole or eye for the carrier-cord to run through may be formed or provided in the counter-weight. Such being a description of a good form of my improvements, the carrier-cord occupies normally the position represented in dotted lines in Fig. 2, the counter-weight depending in the bight formed below the dispatcher, and serving to retain the cord in such position and within reach of the operator.

When a carrier-wheel is placed upon the bight of the cord, the said wheel enters between the ears of the counter-weight, in the manner shown in Fig. 1, and bears against the cord-roll f^x . When, then, traction is exerted to raise the carrier, the counter-weight does not interfere with the running of the wheel of the carrier, but is drawn up with said carrier until the dispatcher assumes the position indicated in full lines in Fig. 2, and the carrier gravitates from it onto the delivery-track. Traction is to be exerted upon the pulling-cord until the carrier runs out of the dispatcher, after which, traction being no longer exerted, the counter-weight serves to carry down the carrier-cord into the position represented in dotted lines in Fig. 2.

While I have represented and described ears $f f$ in the form of parallel plates slightly angled from the longitudinal axis of the body of the weight, I do not confine myself to this structure, as other forms of ears may, if desired, be employed to contain between them the cord-roll; or the ears may be dispensed with and the cord-roll be secured by any con-

venient housing contrivance which will answer the purpose in such regard of the ears. It is of advantage, however, to provide ears, as shown, and so form them that they will embrace the carrier-wheel.

The operating-pulley D is to be made sufficiently light to be overcome by the carrier counter-weight F, and at the same time is preferably to be heavy enough to prevent the weight of the descending counter-weight from violently jerking it upward.

Having thus described the operating of my device, it is proper for me to state that the form of the counter-weight is not essential, the provision of a counter-weight in conjunction with the carrier-cord of the dispatcher being the important feature of the invention.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. In a store-service apparatus, the combination of a carrier-dispatcher or send-off, a carrier-cord, and a weight, for the purpose specified.

2. In a store-service apparatus, the combination of a dispatcher or send-off, a carrier-cord so suspended as to have two bights formed in it, an operating-pulley suspended in one of the bights, and a counter-weight suspended in the other bight, for the purpose specified.

3. In a store-service apparatus, the combination of a dispatcher or send-off, a carrier-cord so suspended as to have two bights formed in it, an operating-pulley suspended in one of the bights, and a counter-weight of greater weight than the operating-pulley suspended in the other bight, for the purpose specified.

4. The combination of the carrier-dispatcher or send-off, the carrier-cord, the counter-weight provided with cord roll or eye, and the carrier, substantially as described.

5. The combination of the carrier-dispatcher or send-off, the carrier-cord, the counter-weight provided with ears and with a cord roll or eye, and the carrier, substantially as described.

In testimony whereof I have hereunto signed my name this 10th day of November, A. D. 1885.

RALPH H. NORTH.

In presence of—

J. BONSALE TAYLOR,
WM. C. STRAWBRIDGE.

It is hereby certified that Letters Patent No. 332,674, granted December 15, 1885, upon the application of Ralph H. North, of Philadelphia, Pennsylvania, for an improvement in "Store Service Apparatus," was erroneously issued to said Ralph H. North; that said Letters Patent should have been issued to *The Transit Apparatus Company, (Limited;)* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 22d day of December, A. D. 1885.

[SEAL.]

H. L. MULDROW,
Acting Secretary of the Interior.

Countersigned:

R. B. VANCE,
Acting Commissioner of Patents.