(No Model.) 3 Sheets—Sheet 1.

R. GORNALL.

STORE SERVICE APPARATUS.

No. 342,252. Patented May 18, 1886.

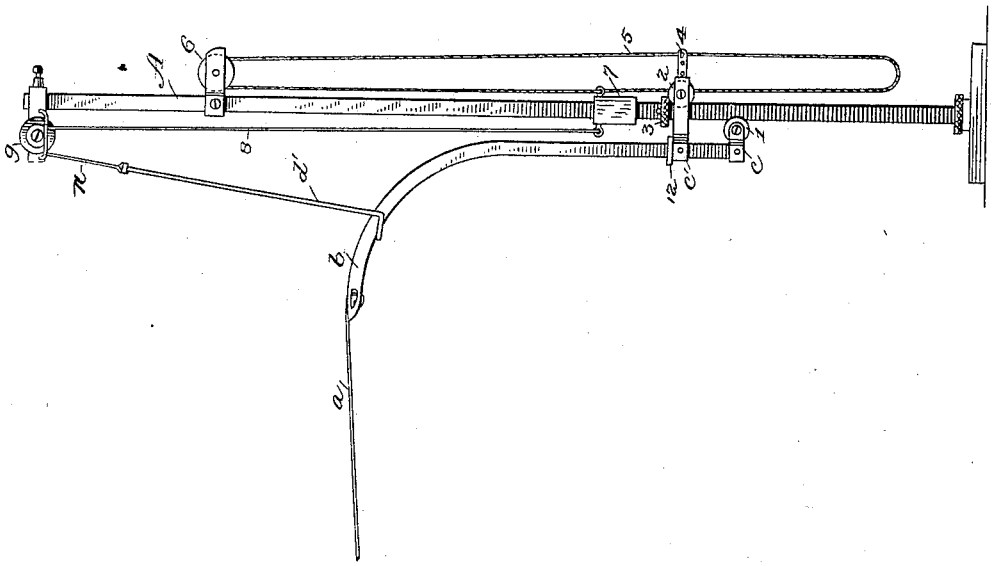
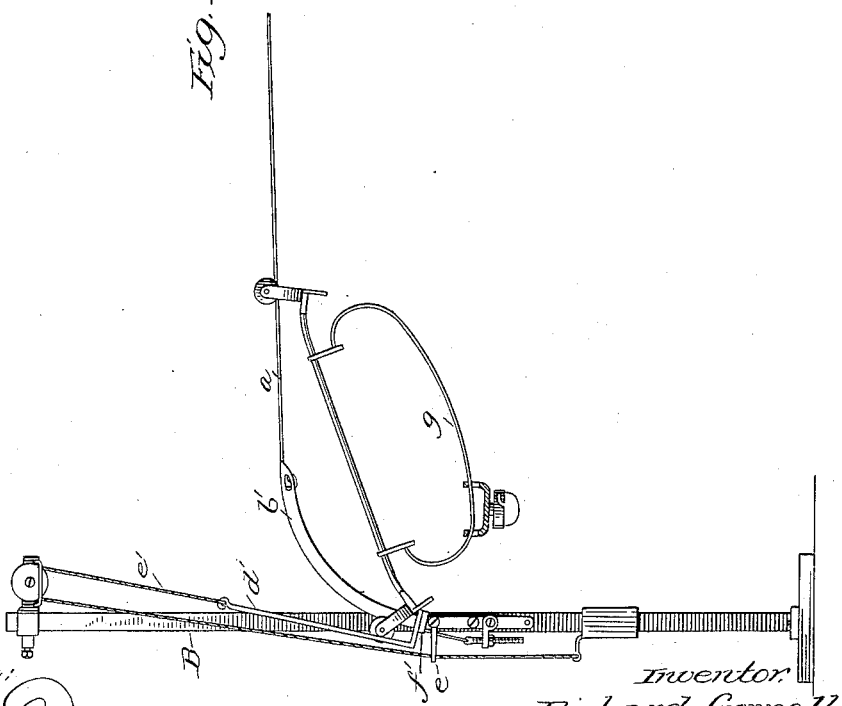


Fig. 1.



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(No Model.) 3 Sheets—Sheet 2.

R. GORNALL.

STORE SERVICE APPARATUS.

No. 342,252. Patented May 18, 1886.

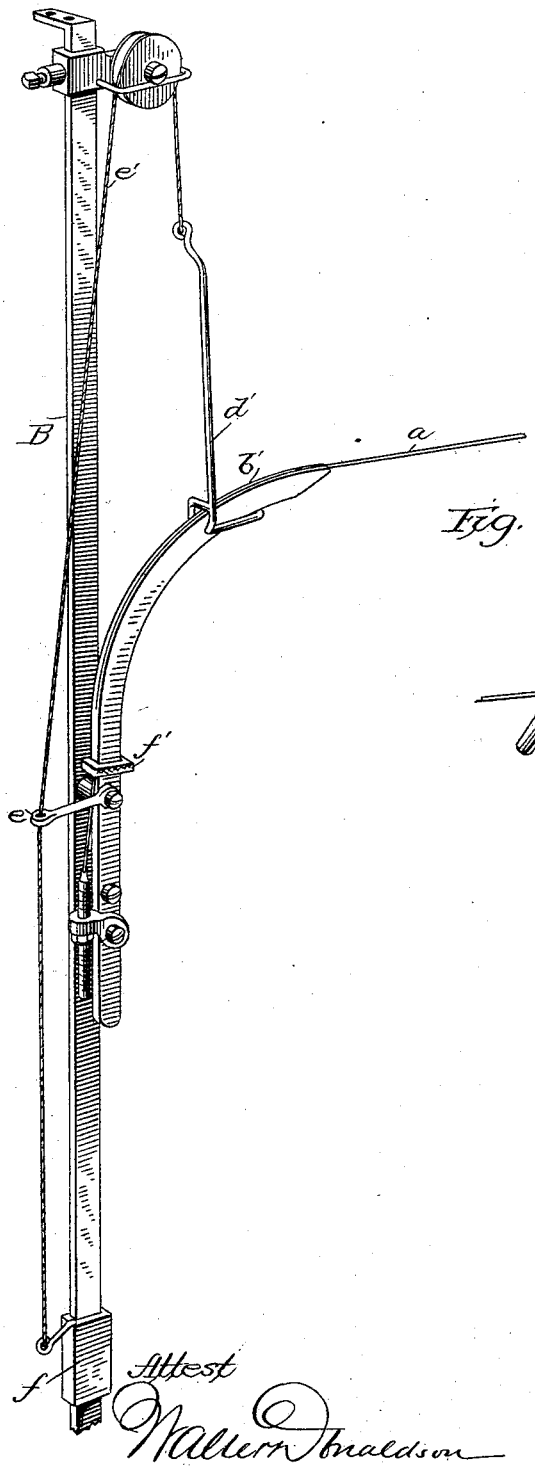
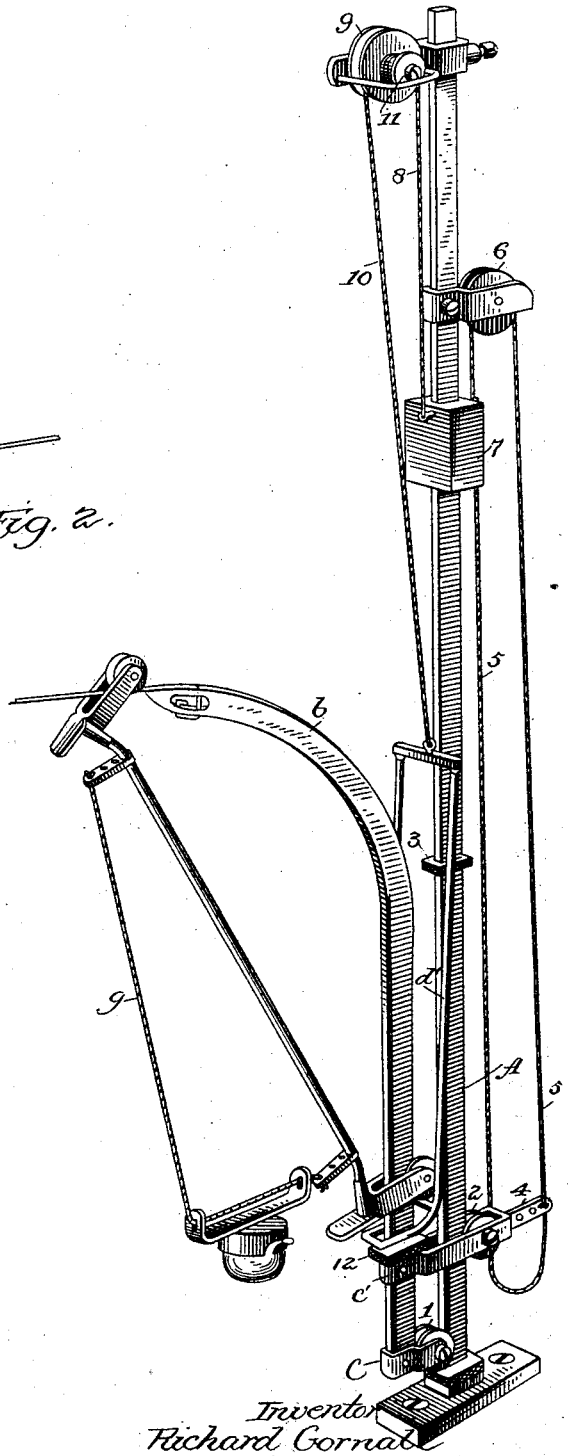


Fig. 2.



Attest
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(No Model.) 3 Sheets—Sheet 3.

R. GORNALL.

STORE SERVICE APPARATUS.

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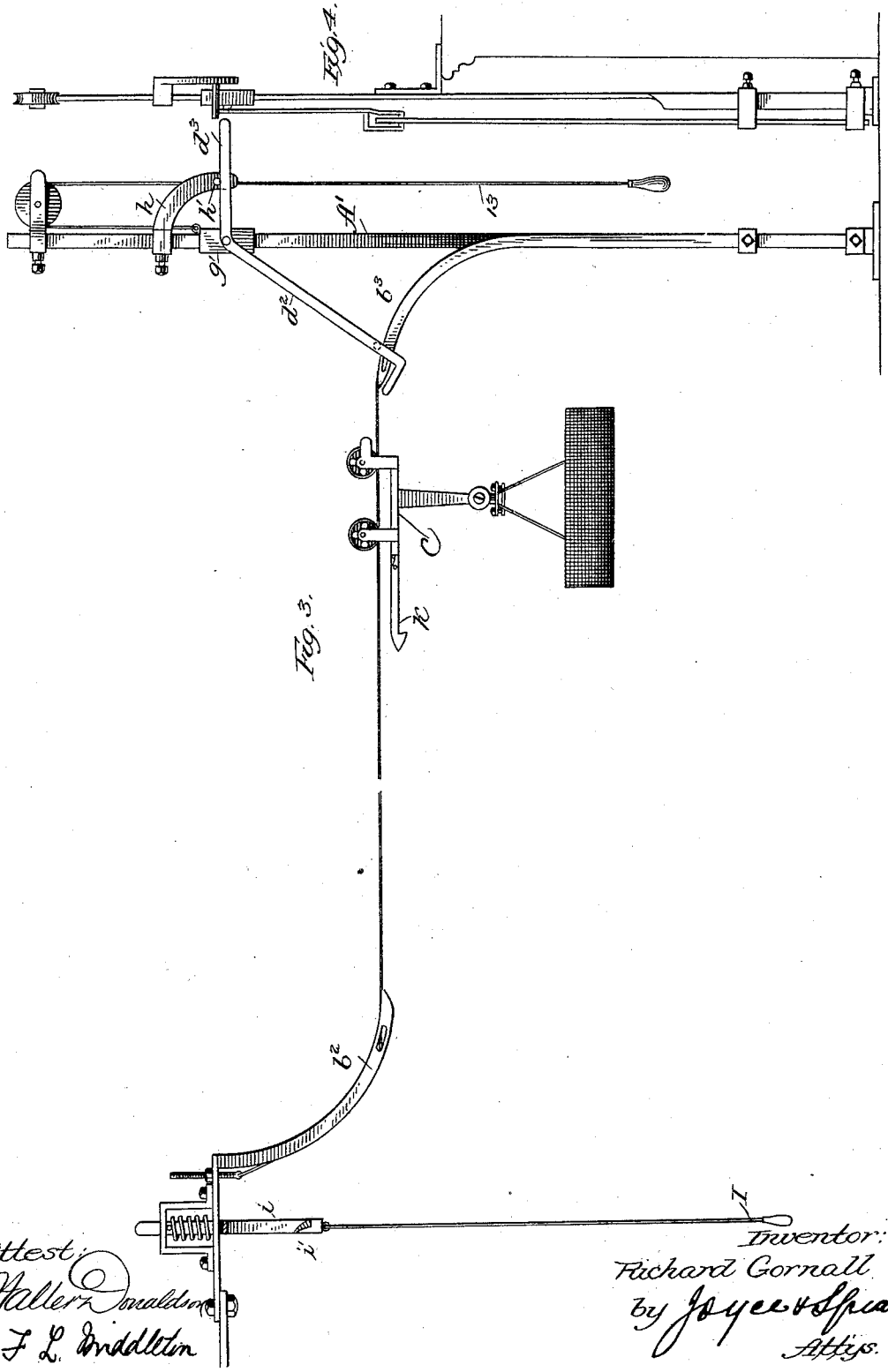

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UNITED STATES PATENT OFFICE.

RICHARD GORNALL, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF TO GEORGE A. DUBREUIL, OF SAME PLACE.

STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 342,252, dated May 18, 1886.

Application filed February 11, 1886. Serial No. 191,608. (No model.)

To all whom it may concern:

Be it known that I, RICHARD GORNALL, of Baltimore, State of Maryland, have invented a new and useful Improvement in Store-Service Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention is an improved store-service apparatus for carrying cash and parcels to and fro between the salesman's counter and the cashier's desk.

It consists in the various devices and combination of devices hereinafter fully described, and enumerated in the claims.

I have illustrated the invention in the accompanying drawings in connection with various details of construction similar to those shown in Letters Patent Nos. 325,168 and 325,205, these details being modified to meet the requirements of the present invention.

Figure 1 is a side elevation of the way extending between the salesman's counter and the cashier's desk, the wire being broken away. Fig. 2 is an enlarged view of the mechanism at the ends of the way. Fig. 3 is a view of modifications. Fig. 4 is a rear view of the mechanism for operating the carrier at the salesman's counter.

In Figs. 1 and 2 the wireway is represented at *a*. It is stretched between the cashier's desk and the salesman's counter, and at either end is securely fastened to the projecting ends of curved metal rods or tracks *b b'*. These curved rods form an extension of the way upon which the carrier runs, and guides the carrier, as shown in the left of Fig. 1, down within convenient reach of the cashier.

At the salesman's counter a standard, A, is secured from the counter or the floor, if desired, and the curved rod *b* is adapted to have vertical movement upon this standard. A strap, *c*, encircles the lower end of the rod *b*, and between its inside ends it supports a pulley, 1, which bears against the front of the standard A.

At a suitable distance above the lower end of the curved track *b* is secured a strap, *c'*, which encircles said rod, similar to the strap *c*, and extends to the opposite side of the standard A, carrying a suitable pulley, 2, which bears upon the back part of the standard, thus firmly supporting the track *b* in position, and allowing it to be moved up and down to raise or lower the end of the way carried thereby. The movement of the curved track is limited by means of a rubber collar, 3, secured to the standard at the point indicated in Figs. 1 and 2.

I have provided the following simple mechanism for raising and lowering this end of the way. A projection, 4, is secured to the rear of the strap *c'*, and a cord, 5, is secured thereto, extending up and over a pulley, 6, fastened to the standard, and down to an eyebolt of the weight 7, which encircles the standard A. The cord is made continuous, and thus forms a loop between the point where it is secured to the weight and the point where it is secured to the projection 4.

In order to elevate the curved track *b*, to incline the way from the salesman's counter to the cashier's desk, it is only necessary to grasp the loop at the side nearest the standard, and a single pull will elevate the end of the curved track to the stop 3. In order to lower it, the other cord of the loop is pulled upon, and it is returned to its lowest position.

In order to elevate the car to the curve of the track *b*, and to give it an initial impulse, I provide a light wire frame, *d'*. In Fig. 2 this frame is shown at its lowest point ready to lift the end of the carrier-frame to the track, and in Fig. 1 it is shown in its elevated position after it has given the impulse to start the car. It is secured to a large pulley, 9, by means of a rope, 10, the pulley being adjustably supported upon the standard A and the rope 10 being directly secured to said pulley. By the side of this large pulley 9 is a small pulley, 11, and from this pulley a rope, 8, is coiled around the said pulley and extends to a weight, 7, to which it is secured. It will thus be seen that in the downward movement of the cord 5 to elevate the curved track the weight 7 will be pulled down by said cord, and by means of the connections between the weight and the frame *d'* this frame will be raised. It encircles the curved track, as shown in Figs. 1 and 2, and in the movement of the parts, as the curved track *b* is elevated to incline the way the frame or kicker *d'* will travel faster by reason of the arrangement of the pulleys 9 and 11, and will lift the end of the carrier-frame from the position

shown in Fig. 2, and start it over the end of the track *b* with a sudden impulse, which is sufficient to carry it to the cashier's desk. The salesman then lowers the curved track, and consequently the way at his end, by pulling on the rope, and thus places the way in condition for the return of the carrier. As the end of the curved track is lowered, the weight 7 is raised and the frame or kicker *d'* drops by its own weight. The cord which connects the kicker to the pulley 9 is of such length that the lower end of the kicker does not quite extend to the buffer 12 carried on the curved track, but is held a little above that point, so that on the return of the carrier the forward end of the frame strikes against the bottom of the kicker *d'*, which thus acts as a buffer, the shock being taken up by the lifting of the weight 7, the buffer 12 being placed below it to prevent any shock that might occur at this point from a heavily-loaded car.

I have thus fully described the means for lowering and raising the way and for elevating and impelling the carrier upon the way at the salesman's counter.

At the cashier's desk a suitable standard, B, is provided, and to this is secured a curved track, *b'*, by means of bolts a short distance from the side of said standard, as shown on the left of Fig. 2, so that the front end of the frame of the carrier may pass down within convenient reach of the salesman's hand without any obstruction being offered to its passage by the said standard B. The wire of the way is laid in a groove in this curved track from its front end to near its lower end, where it is secured to the eye of a screw passing through an eyebolt with a nut on the under side, so that the wire may be tightened by turning up the nut on the end of the screw. This end of the way is stationary; but I have provided a frame or kicker, *d'*, at its end, similar to that described for the other end of the way. This kicker is slightly different in construction, and is held normally in an elevated position near the upper end of the curved track by means of a rope, *e'*, passing over a pulley, held adjustably to the upper end of the standard B, said rope passing down through an eye in a guide, *e*, its lower end being secured to a sliding weight, *f*. As the car passes onto this curved track, the frame *d'* acts as a buffer, and it descends gently to the end of the curved way, where it is within convenient reach of the cashier, and when the opposite way of the carrier has been lowered and the carrier is ready to be returned, the cashier simply pulls upon the rope *e'*, and thus elevates the carrier and gives it an impulse in the same manner as heretofore described. A buffer, *f'*, is secured at the lower end of the curved track *b'*, as shown. The frame of the carrier consists of wheels having a connecting-rod. From this rod a curved rod, *g*, is suspended, as shown in Fig. 1, or a cord, as shown in Fig. 2, and upon this curved rod or cord the cash-box or parcel carrier is supported, so as to swing from one end to the other when the carrier-frame is inclined at the cashier's desk or the salesman's counter.

It will be understood that in order to have the carrier-frame descend upon the curved track the distance between the two ends must be considerable, and it is therefore desirable, in order to bring the cash-box or parcel carrier within convenient reach of the salesman or cashier, that the box be adapted to slide toward the lowest end of the carrier, and for this reason I provide the curved bar *g*, as shown in Fig. 1, or a flexible support, as shown in Fig. 2.

In Fig. 3 I have shown a modification of the apparatus at both ends of the way, and while I have shown these two forms together I desire it to be understood that I do not limit myself in this connection, as the construction heretofore described for the ends of the way may be substituted for one or the other form to be described. In this form the track is shown as fixed in a horizontal position at the cashier's desk to a curved rod, similar to the rod or bar *b'* in Fig. 2, except that it is inverted, and the wire passes along the face thereof, having a tightening device on the end similar to that heretofore described. At the opposite end of the way, secured to a suitable standard, is a curved track, b^3, similar to that heretofore described, except that it is secured rigidly to the supporting-standard A' by means of suitable bolts, which hold it away from the said standard in order to let the carrier pass down within reach of the salesman. The end of the way is fixed to the end of this curved track, as heretofore described. A frame or kicker, d^2, is pivoted upon a sliding weight, *g'*, the kicker having a projecting tail-piece, d^3. The front end of the kicker extends around in front of the curved track b^3. The weight *g'* is adapted to move up and down upon the standard A', and has a rope, 13, secured to it, which passes over a pulley adjustably secured to the top of the standard and terminating in a handle within easy reach of the salesman. A curved bracket or arm, *h*, is adjustably secured to the standard A' near the top, curving downward and having a stop or projection, *h'*, and in the operation when the carrier, which I have shown at C, is ready to be sent from the lower end of the curved track b^3 to the cashier's desk the kicker d^2 is at its lowest point, the end of the carrier resting upon it, and a quick pull upon the cord 13 will lift the weight *g'* and the kicker secured to it, which will elevate the carrier to the upper part of the curved track, and as the tail-piece d^3 of the carrier comes into contact with the projection *h'* of the bracket *h* the front end of the kicker is thrown forward and gives a quick impulse to the carrier just as it starts on the wire way, which is sufficient to carry it to the

cashier's desk. The kicker in this case, as in the form first described, acts as a buffer on the return of the carrier.

At the cashier's desk, immediately in rear of the inverted track b^2, is a spring-rod, i, which is slotted to form a hook, i', at its lower end, and upon the end of the carrier is pivoted a divided hook, k, which is adapted to pass upon either side of the track b^2 and hook into the spring-rod i, the impulse imparted by the kicker d^2 being sufficient to carry the car up to this point. A handle, l, is secured to the rod i, and when it is desired to return the carrier the cashier simply pulls upon this handle, which releases the pivoted hook and allows the carrier to return to the salesman, the inclination or curve of the track b^2 being sufficient for this purpose. The inverted shape of the track b^2 serves as a buffer, and no additional means is required to stop the carrier at this point. The mechanism for each end is entirely independent of each other and capable of being used with any of the forms described.

I am aware of the patent granted to John C. Coram on the 29th of May, 1883, wherein is shown tracks inclining toward and away from the cashier's desk, the end of each track having a guide-rod extending downward toward the salesman's counter, and provided with a drop-cradle adapted to slide up and down on said rod, and to lower the ball to within reach of the salesman or to elevate it to the way, and I do not desire to be understood as claiming such as my invention.

I claim as my invention—

1. In a store-service apparatus, the combination of a wireway, a carrier supported therefrom, the said wire being secured at or near the cashier's desk at one end and at the other end to a metal bar, forming an unbroken continuation of the way and curving from the approximately horizontal plane of the wire to a vertical plane, whereby it is adapted to allow the carrier to descend upon it into convenient reach of the salesman, and mechanism, substantially as described, for elevating the carrier to the upper end of the curved track and giving it an impulse to start it along the way, as set forth.

2. In a store-service apparatus, the combination of a wireway, a carrier supported therefrom, the said wire being secured at its ends to metal bars forming an unbroken continuation of the way at each end and curving from the approximately horizontal plane of the wire to a vertical plane, whereby they are adapted to allow the carrier to descend upon them into convenient reach of the salesman and cashier, and mechanism, substantially as described, for elevating the carrier to the upper end of the curved track and giving it an impulse to start it along the way, as set forth.

3. The combination, in a store-service apparatus, of the way, a carrier supported therefrom, said way being secured at one end at or near the cashier's desk, and at the other end to a curved track forming an extension of the way, the said curved track being vertically movable, whereby the way is inclined, substantially as described.

4. The combination, in a store-service apparatus, of the way, a carrier supported therefrom, said way being secured at either end to the curved tracks forming an extension thereof, the curved track at one end being vertically movable, whereby the way is inclined, and mechanism, substantially as described, for elevating the carrier to the wireway and impelling it thereon, substantially as described.

5. In combination, in a store-service apparatus, a wireway with a carrier mounted thereon, curved tracks at either end, to which the way is secured, mechanism for raising and lowering one of said tracks, and mechanism, substantially as described, at either end of the said way adapted to elevate the carrier to the track and give it an initial impulse, substantially as described.

6. In combination, in a store-service apparatus, a wireway, a curved track, a combined buffer, and elevating and impelling mechanism consisting of a weighted frame, substantially as described.

7. In combination, in a store-service apparatus, a wireway secured to curved tracks forming an extension of the wireway, the curved track at one end being adapted to be raised or lowered upon a suitable standard by means of a cord passing over pulleys, an interposed weight, 7, and connections between said weight and a kicker, d, whereby the said kicker is operated with the same motion that operates the movable track, substantially as described.

8. The combination, with a way secured to downwardly-curved tracks forming a continuation thereof, of the carrier-frame mounted on said way, adapted to descend upon the curved track, and a cash box or carrier secured to said frame so as to move from one end thereof to the other, so as to be within reach of the salesman, substantially as described.

9. The combination, with the way secured to downwardly-curved tracks forming a continuation thereof, of a carrier-frame mounted on said way, adapted to descend upon the curved track, a bent rod or wire, g, and the box or carrier supported thereon, whereby it is adapted to slide from one end to the other, so as to be in close proximity to the salesman's or cashier's hand when at one end or the other of the way, substantially as described.

10. In a store-service apparatus, the combination of the way secured at either end to a curved track forming a continuation thereof and adapted to lower the car within reach of the salesman or cashier, mechanism, substantially as described, for elevating and lowering one of said tracks, a combined buffer, elevat-

ing and impelling mechanism consisting of a weighted frame at either end of said way, and means, substantially as described, for operating said mechanism, all as set forth.

11. The combination, in a store-service apparatus, of a way, a carrier supported permanently thereon, said way being secured at one end at or near the cashier's desk and at the other end to a curved track forming an extension of the way, said curved track being adjustably supported from its lower end, substantially as described.

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

RICHARD GORNALL.

Witnesses:
WALTER DONALDSON,
ISADORE MIDDLETON.