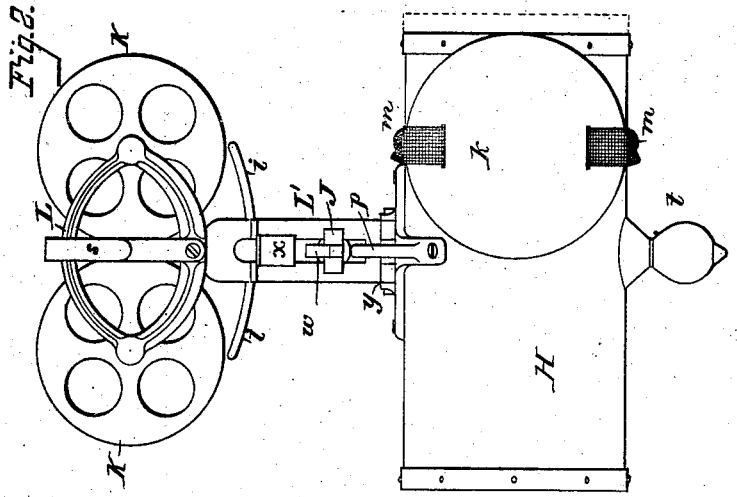
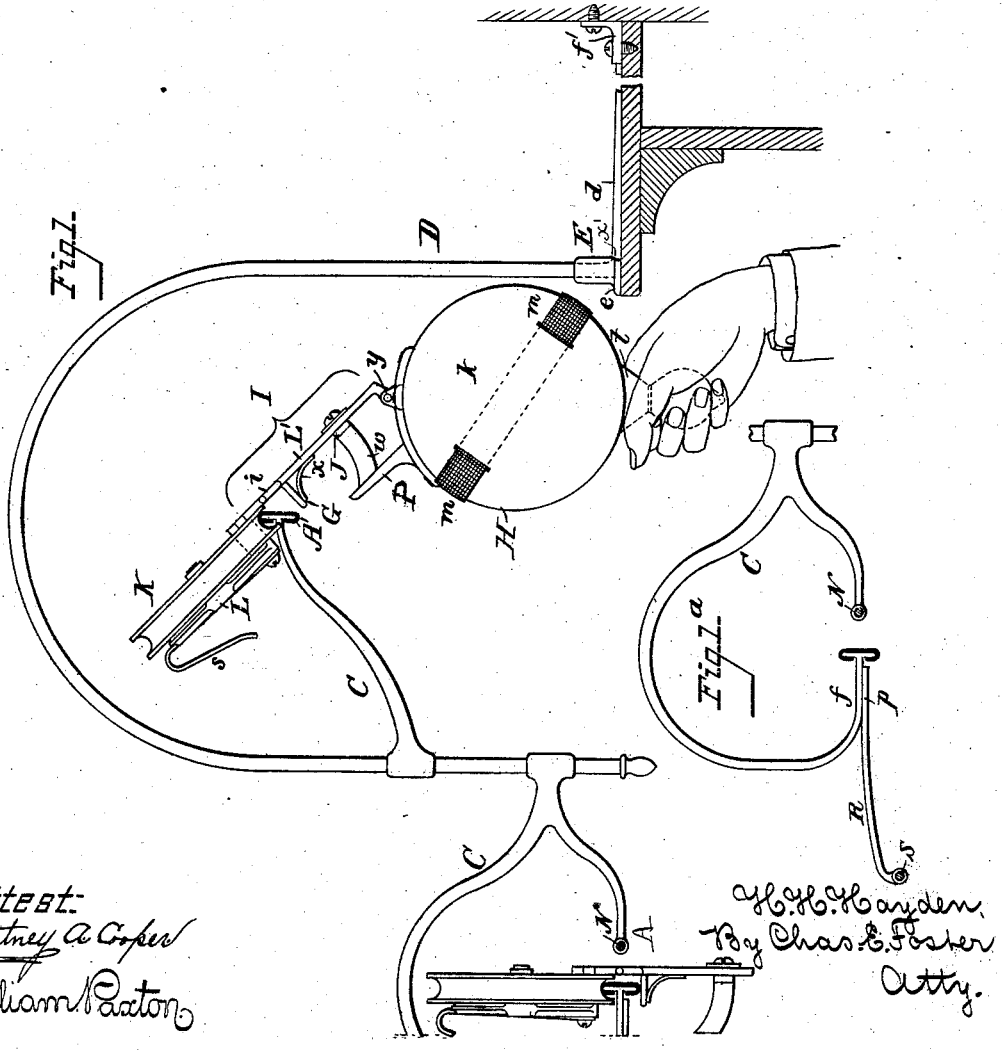
(No Model.) 2 Sheets—Sheet 1.

H. H. HAYDEN.

STORE SERVICE APPARATUS AND APPLIANCES.

No. 260,568. Patented July 4, 1882.





Attest:
Courtney A. Cooper
William Paxton

H. H. Hayden.
By Chas. E. Foster
Atty.

(No Model.) 2 Sheets—Sheet 2.

H. H. HAYDEN.

STORE SERVICE APPARATUS AND APPLIANCES.

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Fig. 9.

Fig. 10.

Fig. 3.

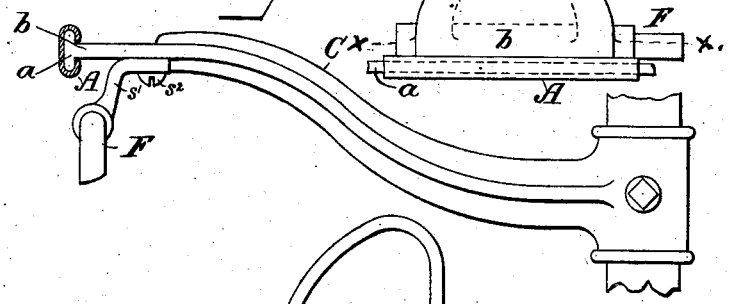


Fig. 3ª

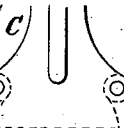


Fig. 4.

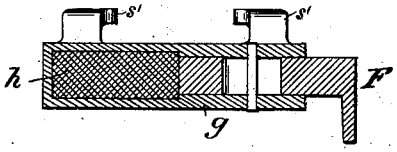
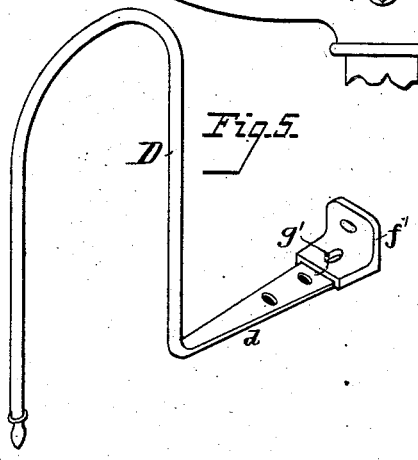


Fig. 5.



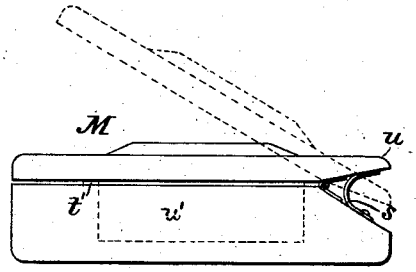


Fig. 7.

Fig. 6.

Fig. 8.

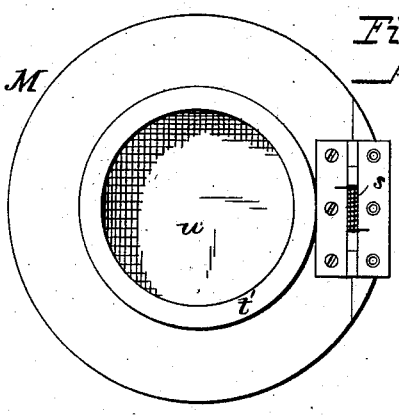
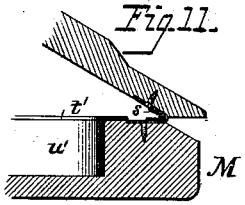


Fig. 11.



Attest:
Courtney C. Cooper
William Baxton

Yours H. H. Hayden,
By Chas. E. Foster,
Atty.

UNITED STATES PATENT OFFICE.

HARRIS H. HAYDEN, OF NEW YORK, N. Y., ASSIGNOR TO THE AUTOMATIC PARCEL DELIVERY COMPANY, OF SAME PLACE.

STORE-SERVICE APPARATUS AND APPLIANCES.

SPECIFICATION forming part of Letters Patent No. 260,568, dated July 4, 1882.

Application filed August 4, 1881. (No model.)

To all whom it may concern:

Be it known that I, HARRIS H. HAYDEN, a citizen of the United States, and a resident of the city, county, and State of New York, have invented certain Improvements in Store-Service Apparatus and Appliances, of which the following is a specification.

My invention relates to that class of store-service in which carriers moving upon rails serve as means of transferring cash and parcels between the counters and the central desk of a store; and my invention consists in constructing the various appliances connected with such service, as fully described hereinafter, so as to reduce the cost, secure greater strength and durability, facilitate manipulation, and increase their efficiency.

In the drawings forming part of this specification, Figure 1 is a side elevation, showing the rails, rail-supports, and car with my improvements. Fig. 1ª is a view of the rail-supporting arm, shown in connection with a device on which the cars or carriers may be placed or hung when not in use. Fig. 2 is a front view of the car; Fig. 3, a detached view, showing one of the supporting-arms and stops. Fig. 3ª is a plan view of the head of the rail-supporting arm, showing by dotted lines the manner of attaching the stop device to said arm; Fig. 4, a section of one of the stops on line *x x*, Fig. 3ª; Fig. 5, a perspective view of one of the rail-supports, with the corner-clamp by which it is anchored from the shelving to the wall; Fig. 6, a detached view of one of the support clamps or feet; Fig. 7, a side view of one of the cash-boxes. Fig. 8 is a plan of the lower half, (open,) showing the spring-hinge of a different form from that shown in Fig. 7; Figs. 9 and 10, sections showing different forms of rails. Fig. 11 is a part section of Fig. 8.

The rails A A′, on which the cars travel between the desk and the counters, instead of being bars of metal, as heretofore generally used, are made in the form of split tubes of round, flat, or angular cross-section, as shown in Figs. 3, 9, and 10, this form securing great strength with comparatively light weight, and permitting of ready attachment to an arm, C, having at the end a projection, *a*, corresponding in form to the interior of the rail, and a narrow neck, *b*, extending through the slot or split of the rail. Rails thus made may be connected rigidly to their end supports without any positive connection with the intermediate arms, where, however, they will be held securely without interfering with such slight play as results from expansion or contraction or slight movements of the parts of the apparatus.

The arms C are supported by suitable brackets, D, one form of which is illustrated in Figs. 1 and 5, consisting of an inverted U-shaped tube or bar, with one end bent out at right angles and flattened to form a flat arm, *d*, which will afford a steady bearing on the part to which it is clamped, the outer vertical end serving as a support for the arms C, adjustably secured thereto, so as to be set at any height or angle.

The flattened arm *d* is secured to its bearing by a corner-clamp, E, consisting of a ring-nipple having a flat flange, *e*, through which the securing-screws pass, and a rear notch, *x′*, fitting the arm *d*, as shown in Figs. 1 and 6. The end of the arm *b* is clamped to the wall or other support by means of a staple or corner-piece, *f′*, which is provided with a slot at *g′*, Fig. 5, to permit of easy adjustment of the flattened end of the curved tube D and the use of screws as additional fastenings. This support is light, strong, cheap, and easily applied in various situations, so as to support the rails in any desired position.

In place of securing the stops F to the rail as heretofore, I secure them by ears *s′* and screws s^2 to the arms C, avoiding the weakening of the rail, and in place of rigid stops I interpose a spring at some point, so as to relieve the shock. This may be done in various ways, using flat or coiled springs or blocks of rubber. One form which has proved effective is shown in Fig. 4, where the stop-case *g* contains a rubber block, *h*, against which the stop-pin F bears, the said pin being slotted and prevented from turning by a transverse pin that permits a slight longitudinal motion against the rubber block.

In placing the car upon the rails it is neces-

sary to bring it to an inclined position to carry the guard-pin G to the side of the rail, from whence it drops with the car-frame to its place under the rail. It is sometimes difficult when the rail is high to tilt the car sufficiently while at the same time holding it in its elevated position. I remedy this by hinging the frame I to the receptacle or basket H, so that when the latter is held in the hand the frame will tilt to the angle that it should occupy in placing it in position. Thus in Fig. 1 the frame I is pivoted at *y* to a cylindrical receptacle, H, the joint being constructed to permit the frame to vibrate between a vertical position over the center of the receptacle, and an inclined position limited by an arm, P, against which the stop-stud J strikes, as shown.

By placing a handle, *t*, upon the receptacle at the bottom, as shown, the car may be readily raised to a considerable height and the use of separate appliances is avoided. This handle may be employed with cars of different constructions.

Heretofore the frame of the car has been made with side pieces, the wheels turning on cross-pins. To reduce the weight I use but one side piece L, provided with fixed journals for the wheels K, and connect the lower portion or shank, L′, so that below the wheels it will be upon the opposite side thereof, thus distributing the weight so that a very light basket will serve to balance the frame when the wheels are on the track.

To prevent the guard-pin G from catching upon the rail when the car is being placed thereon, I bevel or curve the under side *x*, as shown.

As the cars, in the hurry of business, are subject to careless manipulation, I provide on the shank L′, adjacent to the lower edge of each wheel, projecting arms *i i*, which serve a double purpose: first, of preventing the car from turning around sidewise on the track and falling when one wheel only is put on the track; and, second, when the car for any cause is started on a swinging motion likely to impede its progress, the arms *i i* slightly touch the rail and check the swing of the car.

As the salesman sometimes fails to place the car on the rail properly and drops it if the handle is released too soon, I provide it with a hook, *s*, which will catch on the rail and retain the car as it drops. To prevent the latter swinging or jumping back so as to carry the hook away from the rail before it can catch and hold the car, I use a bar, cord, or wire, N, suitably supported and arranged to prevent the car jumping so far from the rail that the hook cannot catch thereon. The stop-pin *w* is adjustable in the frame, so as to make contact with any desired stop.

The arm C may be provided with a device for suspending or hanging the cars or carriers when not in use. In Fig. 1ª I have shown the device as consisting of a detachable arm, R, secured to the arm C at *p*, projecting out and having a cylindrical end, S, through which a continuous rod or wire is run from this arm to the next, and so on, forming a bar or way parallel to the main rail on which to put the car. It will be apparent, however, that any other form of device may be used to effect the same result.

To avoid the objections incident to the ordinary open baskets upon the carriers, I use a receptacle, H, of a tubular form, of paper, wire, wicker-ware, or other material, and make one end, *k*, movable or detachable, securing it in place in any suitable manner. For instance, the cover may be held in place on the end of the receptacle by elastic bands *m m*, which, however, also permit it to be turned to the position shown in Fig. 2.

It is very desirable that the cash-carrier may be opened by using but one hand, as the carrier is held in one hand while the other holds the goods. I therefore use a box, M, of any convenient form, with a portion, *u*, projecting beyond the pivot, so that when said projection is pressed upon the lid will open, a spring, *s*, or spring in the hinge, Fig. 8, serving as a means of closing it. The box thus constructed may be held in the hand and opened by pressing the thumb upon the projection *u*, and may be provided with a rubber ring, *t′*, around the edge of the cash-receptacle *w′*, to hold firmly any checks or memoranda that are laid inside the cover, but not in the cavity *w′*.

I do not here claim the stop having an elastic bearing, nor the carrier having a handle or projection, as these may form subjects of a separate application for a patent; but

I claim—

1. The combination of the hollow slit bar or tube and a support consisting of an arm or bracket with a head and neck adapted to the interior and slot of the rail, substantially as specified.

2. The combination of the case *g*, stop-pin F, and spring *h*, substantially as specified.

3. The combination, in the car, of the receptacle and the wheel-carrying frame pivoted thereto to permit a limited motion, substantially as specified.

4. The combination of the basket or receptacle, pivoted carrying-frame, and stop, limiting the side motion of the frame, substantially as set forth.

5. The frame consisting of the upper and lower parts, L L′, connected to occupy positions on opposite sides of the wheels, substantially as described.

6. The stopping-pin *w*, adjustable in the slotted frame L, to fit any desired stop, substantially as and for the purpose set forth.

7. The guard-pin provided with an inclined side, *x*, for the purpose set forth.

8. The combination, with the frame, of the arms *i i*, for the purpose specified.

9. The car provided with a receptacle open at the end and having an end cap, substantially as specified.

10. The combination of the receptacle open at the end, the cap, and elastic retainers *m m*, substantially as specified.

11. A car provided with a safety-hook, *s*, for the purpose specified.

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

HARRIS H. HAYDEN.

Witnesses:
J. D. VERMILYA,
F. M. BAILEY.