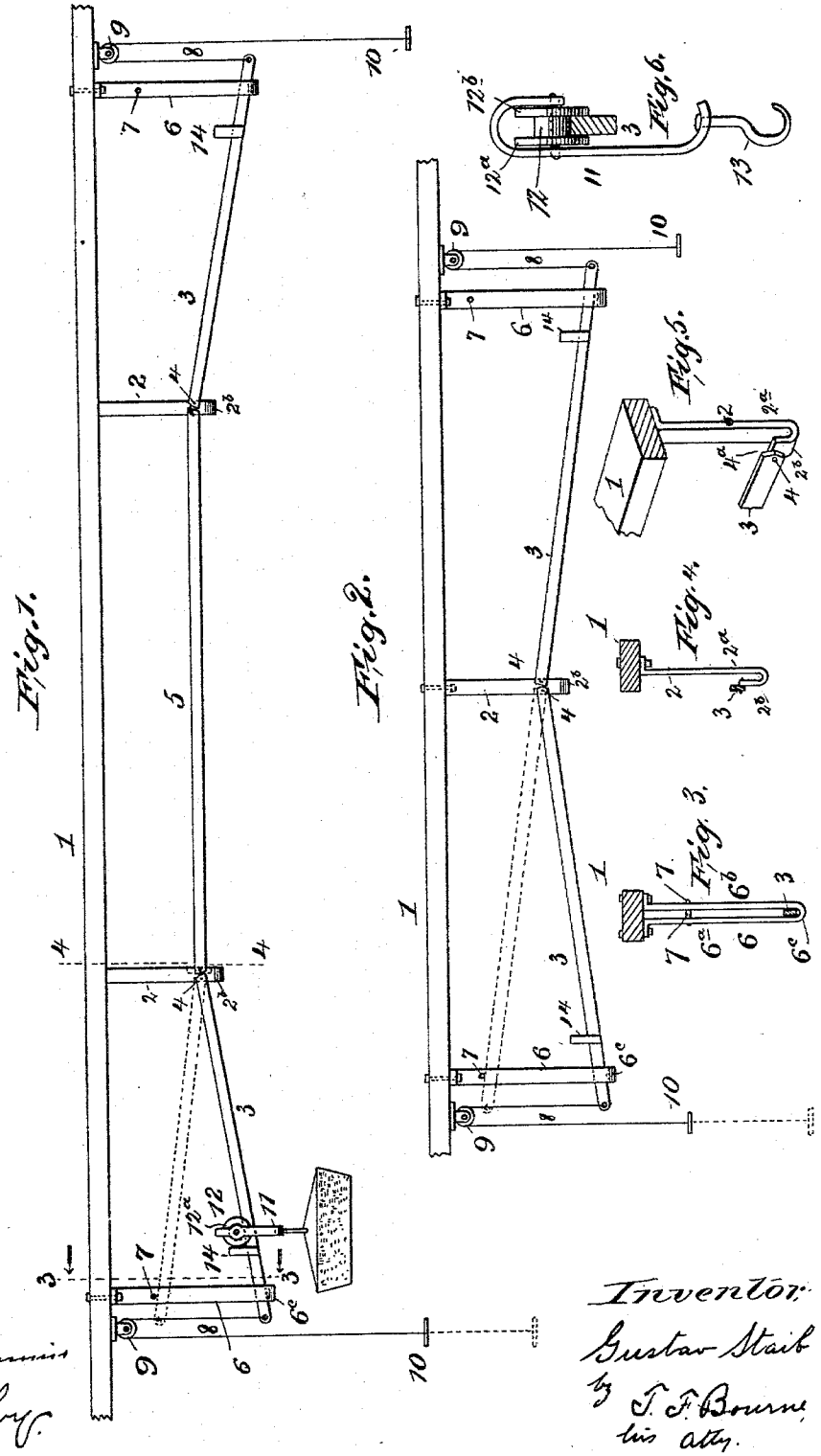
(No Model.)

G. STAIB.

STORE SERVICE APPARATUS.

No. 589,758. Patented Sept. 7, 1897.



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UNITED STATES PATENT OFFICE.

GUSTAV STAIB, OF TOMPKINSVILLE, NEW YORK.

STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 589,758, dated September 7, 1897.

Application filed February 17, 1897. Serial No. 623,778. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV STAIB, a citizen of the United States, residing in Tompkinsville, Richmond county, New York, have invented certain new and useful Improvements in Store-Service Apparatus, of which the following is a specification.

My invention relates more particularly to an apparatus adapted to carry packages from one part of the store to another—such, for instance, as in grocery-stores and butcher-shops, where goods of considerable weight are to be transferred to different parts of the store, although, of course, the invention is applicable to carrying other articles.

The invention consists in a store-service apparatus comprising a movable rail or bar that is pivotally carried at one end, which end is adapted to be alined with another rail or bar, the free end of which first-mentioned rail or bar is adapted to be raised or lowered above and below a horizontal plane to allow a carrier mounted thereon to travel along the same. In conjunction with the foregoing pivoted rail a second pivoted rail correspondingly arranged is used, so that the carrier can be transferred back and forth by elevating the free end of one or the other of said rails, and where a considerable distance intervenes between two stations, desks, or counters a non-movable rail or bar is interposed between the two end movable bars or rails, so that when one bar is elevated the carrier mounted thereon will travel down the incline thus formed, will ride along the intermediate rail, and will then descend the adjacent downwardly-inclined rail to the stopping-place.

The invention also consists in the novel details of improvement and the combinations of parts that will be more fully hereinafter set forth, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part hereof, wherein—

Figure 1 is a side elevation of my improved store-service apparatus. Fig. 2 is a corresponding view of the apparatus adapted for stations at short distances apart. Fig. 3 is a cross-section on the line 3 3 in Fig. 1. Fig. 4 is a cross-section on the line 4 4 in Fig. 1. Fig. 5 is a detail perspective view, partly broken, showing the connection of the movable rail with its hanger or support; and Fig. 6 is a detail edge view of the carrier, shown mounted on a rail, the latter being in section.

In the accompanying drawings, in which similar numerals of reference indicate corresponding parts in the several views, 1 indicates a main support for the store-service apparatus, which may be the ceiling of a room or any other overhead beam or other suitable sustaining means.

2 is a hanger or bracket carried by the support 1 and adapted to have one or more rails or bars 3 pivotally connected therewith. The rails 3 preferably consist of a narrow iron bar turned on edge and pivoted to the hanger 2 near one upper corner, as at 4, so that the edge 4^a of the rail may have as little movement as possible.

In Fig. 1 I have shown two hangers 2, to each of which a rail 3 is pivoted, and between these hangers is a stationary rail 5, preferably horizontal and properly secured to the hangers. This enables a considerable distance to be embraced between the opposite ends of the rails 3 without unduly lengthening said rails. In Fig. 2 I have shown the two rails 3 pivotally connected with a single hanger 2, which may be used in connection with the stations, desks, or counters at a short distance apart. The object of these arrangements is to permit light rails or rods to be used and at the same time enable them to have sufficient stiffness, so that they will not bend or sag when articles of considerable weight are carried upon them.

The hanger 2 is shown in Figs. 4 and 5 as having two parallel arms 2^a 2^b, which may be formed by bending a bar in suitable shape to produce these arms, as shown in said figures. The purpose of these two arms is to enable the rails 3 and 5 to be held at a distance from the depending arm 2^a to enable a carrier or roller to travel freely past said arm; but it is evident that the rails 3 and 5 may be otherwise supported to enable the free passage of a carrier past them.

The free ends of the movable rails 3 are normally, by preference, supported by straps or hangers 6, which are composed of two parallel arms 6^a 6^b, (see Fig. 3,) secured to the support 1 and connected together at their lower ends to provide a support or base 6^c for the rails 3 to rest upon. These hangers or

straps 6 may be formed from a single bar or strip bent at 6^c, as shown in Fig. 3. The two parallel arms 6^a 6^b serve to keep the rails 3 from side play, while permitting them to have necessary vertical movement.

7 is a stop carried by the hanger or strap 6 above the base 6^c and adapted to limit the upward movement of the rails 3.

The rails 3 may be raised or lowered at their free ends by any suitable means. I have shown them as connected to a cord, chain, or the like, 8, which passes over a pulley 9, carried by the support 1, and the lower end of each connection 8 may have a suitable handle 10 for convenience in operating it. It will be seen from Figs. 1 and 2 that when the handle is pulled down the free ends of rails 3 will be lifted, as in dotted lines, so as to form an inclined way for a carrier to travel upon.

Any suitable carrier may be mounted upon the rails 3 and 5, so as to travel along the same. I have shown a carrier consisting of a suitable frame 11, having a roller 12 to ride upon the rails 3 and 5. This roller, by preference, has a deep central groove and two parallel side webs 12^a 12^b, adapted to receive the rails 3 and 5 between them, the purpose of the deep groove with the parallel webs being to keep the roller from jumping off the rail and, furthermore, to keep the carrier from swinging laterally as much as possible. The carrier 11 is preferably provided with a hook 13, to which a basket or other receptacle may be connected for carrying packages, &c.

14 is a stop carried by rail 3 near the free end, adapted to arrest the movement of the carrier when it arrives near the station, desk, or counter.

In this apparatus the carrier will normally be mounted on the rail 3 and rest against the stop 14, and when it is desired to transfer the carrier from one end of the apparatus to the other the corresponding rail 3 is raised to about the position shown in dotted lines, whereupon the carrier will roll down the inclined plane thus formed and, in accordance with Fig. 1, will ride along the intermediate horizontal rail 5 until it reaches rail 3 at the opposite end, which, being normally downwardly inclined, causes the carrier to travel to the opposite station, desk, or counter. The attendants at that station, desk, or counter can then, by elevating the free end of the rail 3 thereat, cause the carrier to travel back to the first-mentioned station. The intermediate bar 5 being horizontal tends to retard the progress of the carrier and thus to prevent it from rushing to the opposite station with too great force. It will be found of great advantage where heavy packages are transferred for a considerable distance. Where the stations, desks, or counters are at short distances apart it may be convenient to dispense with the intermediate rail 5 and connect two movable rails to a single hanger, as in Fig. 2. By using separate rails, each of which is considerably shorter than the distance between two stations, and supporting the rails at or near their ends, instead of using one long rail between stations, they are prevented from bending or sagging under such loads as they may have to carry in a grocery or butcher-shop. By this means the apparatus can be made light, cheap, and strong.

I do not limit my invention to the precise details of construction shown and described, as they may be varied without departing from the spirit of my invention.

Having now described my invention, what I claim is—

1. In a store-service apparatus the combination of a pair of rails located in line and having their inner ends pivotally supported and so arranged that a carrier can travel over one rail to the other, a support for the free ends of said rails, parallel arms on opposite sides of the pivoted rails to prevent lateral movement of said rails, and means for raising said ends of said rails, substantially as described.

2. In a store-service apparatus, the combination of a pair of rails composed of flat bars turned on edge and pivotally supported at corresponding ends, an intermediate rail composed of a flat bar turned on edge and located between the pivoted ends of the first-mentioned rails, means for supporting the free ends of said pivoted rails, parallel arms on opposite sides of the pivoted rails, and means for raising said ends of said rails, substantially as described.

3. In a store-service apparatus, the combination of a hanger, a pair of pivoted rails having their outer ends normally inclined downwardly and outwardly, yoke-like hangers having a bottom piece and two parallel side arms for supporting the free ends of said rails and for preventing lateral play thereof, pulleys and flexible connections passing over said pulleys and connected to one end of each movable rail, the opposite end of each connection being adapted to be operated to change the normal positions of the movable rails, as and for the purposes set forth.

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Witnesses:
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