

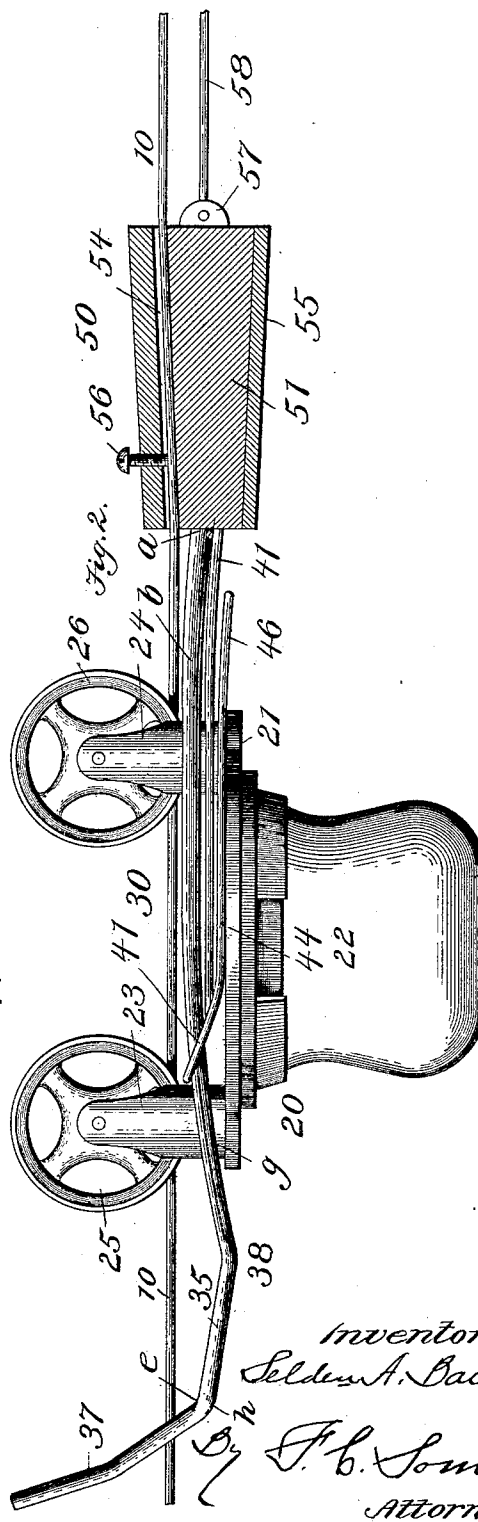
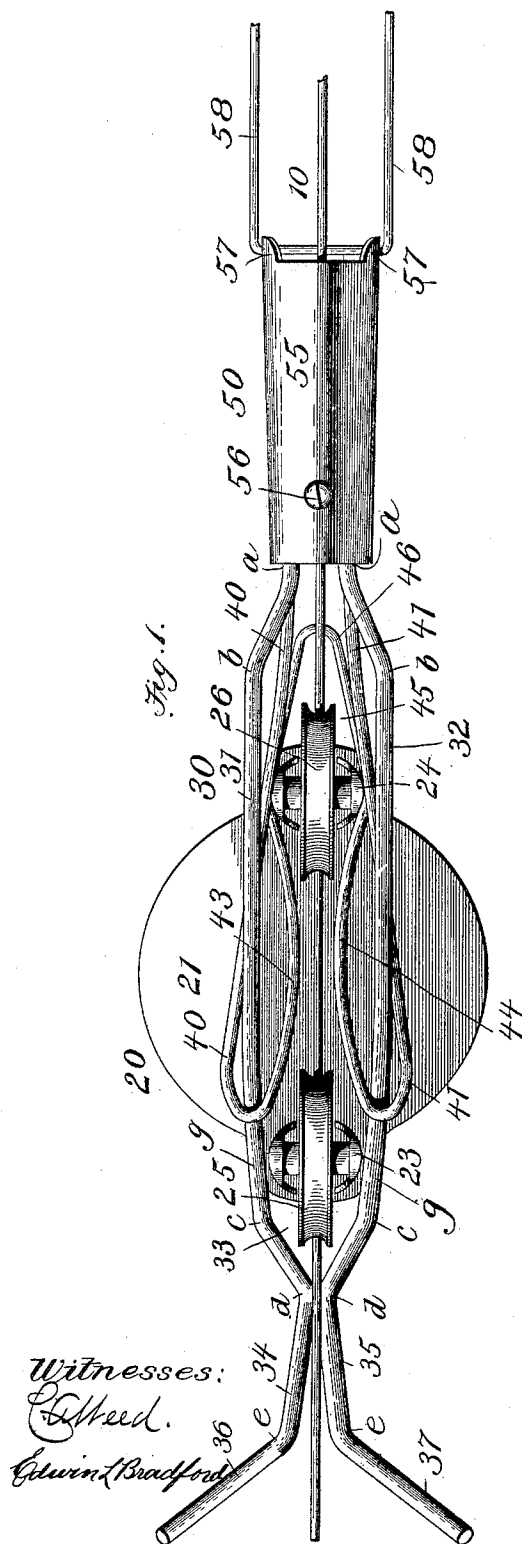
(No Model.)

3 Sheets—Sheet 1.

S. A. BAILEY.
STORE SERVICE APPARATUS.

No. 462,906.

Patented Nov. 10, 1891.



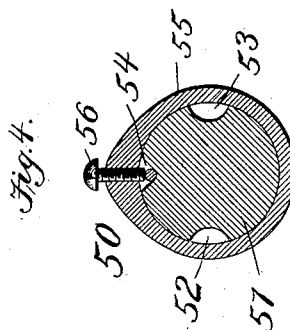
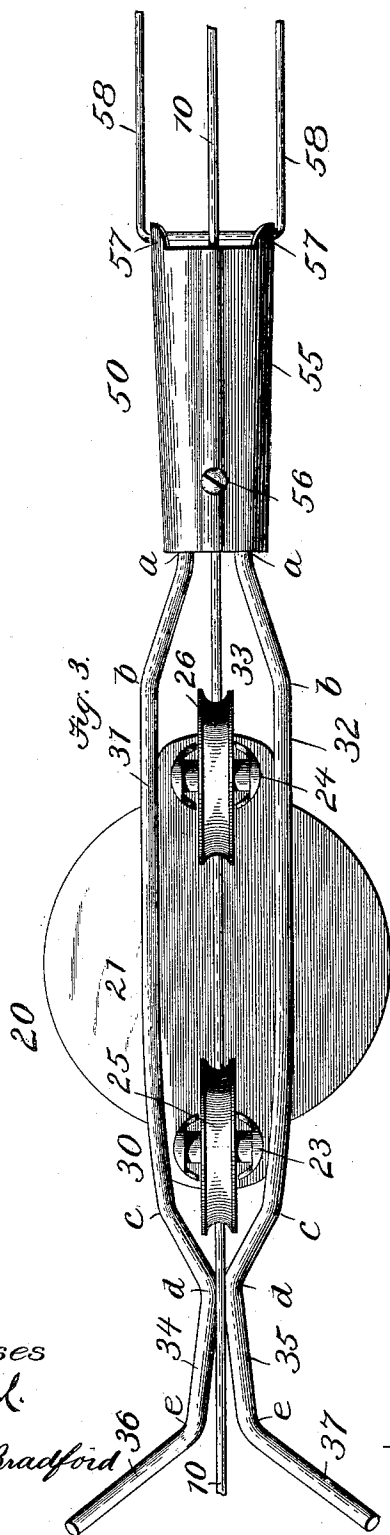
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3 Sheets—Sheet 2.

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3 Sheets—Sheet 3.

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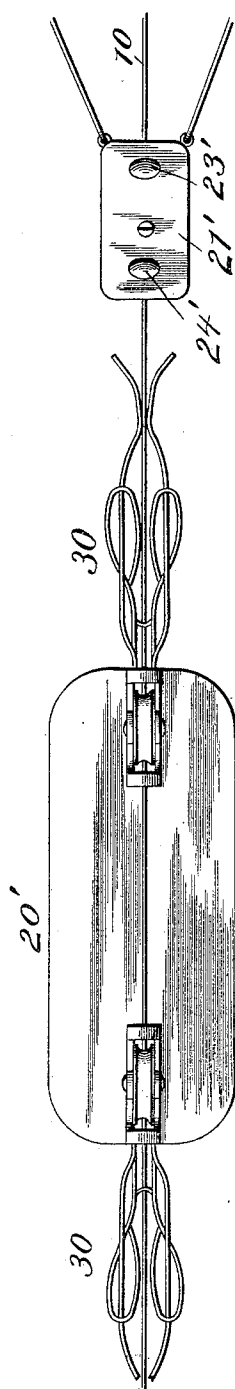


Fig. 5.

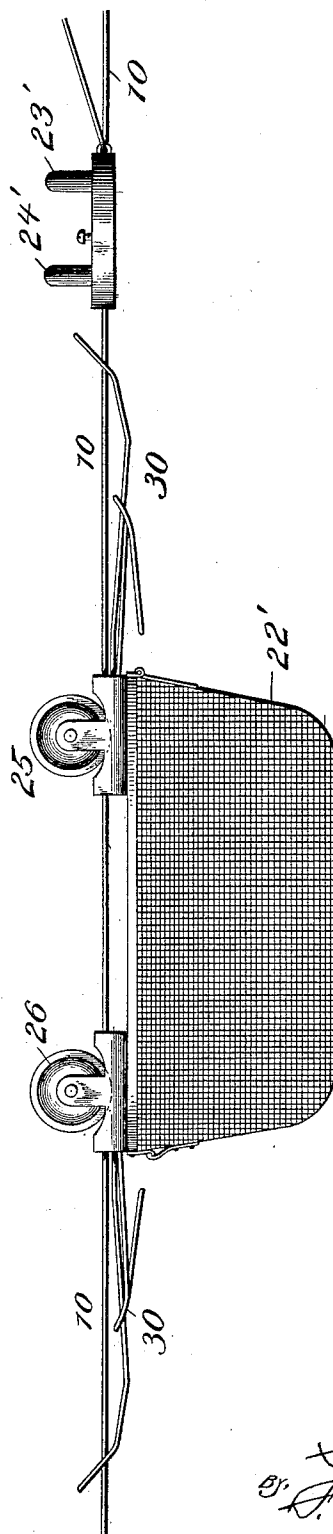


Fig. 6.

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UNITED STATES PATENT OFFICE.

SELDEN A. BAILEY, OF NEW LONDON, CONNECTICUT.

STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 462,906, dated November 10, 1891.

Application filed September 3, 1891. Serial No. 404,620. (No model.)

To all whom it may concern:

Be it known that I, SELDEN A. BAILEY, a citizen of the United States of America, residing at New London, in the county of New London and State of Connecticut, United States of America, have invented certain new and useful Improvements in Store-Service Apparatus, of which the following is a specification.

The objects of this invention are to effect the stoppage of the carrier without injury thereto under the different degrees of force with which it is moved upon its way, to prevent rebounding thereof, and to enable it to be thrown out with facility from a terminal station.

This invention consists, principally, of a trap, substantially as hereinafter set forth and claimed, which is sufficiently yielding to receive a carrier thrown with a light impulse, and which has a series of successive frictional contact-surfaces whereby the movement of the carrier will be arrested without impact or rebound when thrown over the way with a violent force.

Figure 1 of the accompanying drawings represents a plan of a section of a store-service track, a cash-carrier thereon, and the trap for stopping and holding said carrier fixed to said track. Fig. 2 represents a side elevation thereof, partly in section, the carrier being within the trap. Fig. 3 represents a plan of this improved apparatus, one set of spring-fingers being omitted from the trap. Fig. 4 represents a transverse section of the holder for fastening the trap to the track. Fig. 5 represents a plan of a section of a track embodying this improved apparatus, the carrier being shown as adapted for conveying parcels, and the cage for stopping said carrier as located on the carrier, the standards with which it engages being fastened to the way. Fig. 6 represents a plan view of the form of apparatus illustrated in Fig. 5.

Similar numerals of reference indicate corresponding parts in the different figures.

The way 10 may be of any form adapted for store-service apparatus, that shown being an ordinary single-wire track. This track is stretched from station to station between dependent, upright, or other supports in any

suitable manner, which need not be herein illustrated or described.

A carrier 20, of any suitable construction, for conveying cash or other articles is used in connection with this improved store-service apparatus. The carrier illustrated in Figs. 1, 2, and 3 is a cash-carrier, and as therein shown comprises a top plate 21, a cash-box 22, detachably connected by a bayonet-joint or otherwise to said plate, forked standards 23 and 24, attached to the upper side of said plate, and grooved wheels 25 and 26, journaled in the upper ends of said standards and adapted to engage the wireway. A trap 30 for gradually stopping the carrier at a receiving-station comprises two spring-fingers 31 and 32, disposed adjacent to each other, forming a skeleton-pocket 33, and flaring diverging jaws 34 and 35 at the outer end of said pocket. The spring-fingers are preferably inclined outward laterally for a short distance from their sockets from the points *a* to the points *b*, thence extend parallel, or nearly so, with each other from the points *b* to the points *c*, and thence bend inward to a meeting or touching point *d*, forming the pocket, which is preferably somewhat longer than the cash-carrier. The spring-fingers then flare outward slightly from the points *d* to the points *e*, forming the diverging-jaws, and thence extend laterally and upwardly from the points *e* to their outer extremities, forming guides 36 and 37 for directing the cash-carrier into the jaws of the trap. The fingers are also curved or inclined downward, preferably, from a point *g* near the outer end of the pocket to a point *h* beyond the jaws, forming horizontal contact-surfaces 38 for frictional contact with the top of the carrier, the sides of the jaws forming vertical contact surfaces for frictional contact with the standards of the carrier. Secondary spring-fingers 40 and 41 extend outward from their sockets to points near the outer end of the pocket 33, formed by the primary spring-fingers, being slightly bent laterally or flared from their sockets to their outer ends. These secondary spring-fingers are looped over the primary spring-fingers, being bent backward and inward and forming inwardly-frictional lips 43 and 44 at or about the center of the pocket 33. These secondary

fingers are bent outward at the inner ends of the loops which pass over the primary fingers, forming a secondary pocket 45 for engaging the first standard of the carrier. A reverse loop 46 unites the two secondary fingers and forms the tapered inner end of the secondary pocket and springs downward into frictional contact with the top of the carrier. Both of these secondary fingers are preferably composed of wire in one piece. A suitable holder 50 is provided for attaching the trap to the way or to the carrier. The holder herein shown consists of a tapered cylinder 51, provided with longitudinal peripheral grooves 52 and 53 at its sides and a peripheral groove 54 at its top and a shell 55, adapted to fit over said tapered cylinder, said shell being provided with a clamping-screw 56. The wire-way 10 is passed through the groove 53 and clamped therein by the clamping-screw 56, and the shanks of the primary and secondary spring-fingers are inserted in the grooves 53 and 54 and held therein by the shell 55. The shell 55 is provided at its rear end with ears 57, to which supporting or guy wires 58 are attached.

In the form of trap illustrated in Fig. 3 the secondary spring-fingers are omitted. In some cases the primary spring-fingers, with their double contact surfaces acting laterally and vertically, will be sufficient as a stop mechanism; but in that case they should be constructed of tempered steel, whereas when used in conjunction with the secondary spring-fingers they may be composed of heavy brass wire.

In the use of this improved store-service apparatus the carrier when not in use is held in the pocket 33, formed by the spring-fingers 31 and 32, as illustrated in Figs. 1, 2, and 3, and one of its standards is also held in the secondary pocket 45, as shown in Figs. 1 and 2, when the secondary spring-fingers are employed. When the carrier is desired for service its load is placed therein, and an impulse of the hand sends it on its mission, the trap opening freely to permit it to pass out. When it reaches its destination the front standard thereof enters between the diverging-jaws 34 and 35, and spreads the primary spring-fingers laterally. At the same time the top plate 21 of the carrier engages the downwardly-curved portion of the spring-fingers and the combined lateral and vertical pressures thus exerted upon the carrier partially arrest its movement. After the first standard passes the jaws of the primary spring-fingers and enters the pocket 33, formed by said fingers it encounters the frictional resistance of the curved lips 43 and 44, and the downward pressure of the connecting loop 46 of the secondary jaws 40 and 41, and at the same time the second standard is engaged by the jaws of the primary fingers. After the second standard enters the primary pocket the first standard reaches the widest portion of the secondary pocket and the carrier comes to a rest.

If the carrier is moving with great violence, so that its momentum is not entirely taken out on reaching the point above specified, the tapering end of the secondary pocket will cause a frictional resistance upon the first standard, which will take out whatever momentum remains. The trap thus presents in the primary fingers two series of frictional contact-surfaces acting simultaneously in directions at right angles to each other, and in the secondary fingers three series of contact-surfaces acting simultaneously and successively in different directions.

In the form illustrated in Figs. 5 and 6, the interlocking parts are reversed, the standards 23' and 24' being attached to a friction-plate 21', fastened to the way, and the trap being attached to the carrier. The operation of this specific form of the improvement will be obvious without an explicit description.

The apparatus herein described is very simple and economical in construction and durable in use. It is not liable to get out of order, and therefore it does not require frequent repairs. The tension of the trap is such that the carrier may be thrown with great violence without being injured or caused to rebound, and yet when the carrier is thrown with a light impulse it will pass between the jaws and be held by the trap.

I claim as my invention—

1. In a store-service apparatus, the combination of a way, a carrier adapted to travel thereon, and two spring-fingers for stopping and holding said carrier, said fingers having vertically-inclined frictional contact-faces and laterally-diverging jaws.

2. In a store-service apparatus, the combination of a way, a carrier adapted to travel thereon, and a trap comprising two spring-fingers forming an elongated pocket and laterally-diverging jaws at the mouth thereof, said jaws being also inclined vertically, substantially as described.

3. In a store-service apparatus, the combination of a way, a carrier adapted to travel thereon, and two spring-fingers for stopping and holding said carrier, said fingers having vertically-inclined frictional contact-faces and laterally-diverging jaws, said jaws being provided with upturned guides at their outer ends.

4. In a store-service apparatus, the combination of a way, a carrier adapted to travel thereon, and two spring-fingers for stopping and holding said carrier, said fingers having laterally-diverging jaws and upturned guides at the outer ends thereof.

5. A trap for store-service apparatus, comprising two spring-fingers provided with vertically-inclined and laterally-diverging jaws forming vertical and horizontal frictional contact-surfaces, and a holder for said fingers.

6. In a store-service apparatus, the combination of a way, a carrier adapted to travel thereon, and a trap consisting of two spring-fingers forming an elongated pocket and di-

verging jaws at the mouth thereof, and two supplemental spring-fingers provided with curved contact-faces.

5 7. In a store-service apparatus, the combination of a way, a carrier adapted to travel thereon, and a trap consisting of two spring-fingers forming an elongated pocket and diverging jaws at the mouth thereof, and two supplemental spring-fingers provided with
10 curved contact-faces, said supplemental fingers having a downwardly-extending loop.

15 8. In a store-service apparatus, the combination of a way, a carrier adapted to travel thereon, and a trap for stopping and holding said carrier, said trap consisting of two bent spring-fingers forming a pocket and diverg-

ing depressed jaws at the outer ends thereof and two supplemental spring-fingers provided with contact-faces.

9. In a store-service apparatus, the combination of a way, a carrier adapted to travel thereon, and a trap consisting of two bent spring-fingers forming a pocket and diverging depressed jaws at the outer end thereof, and two supplemental spring-fingers looped
20 around said primary fingers and provided
25 with lateral contact-faces.

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