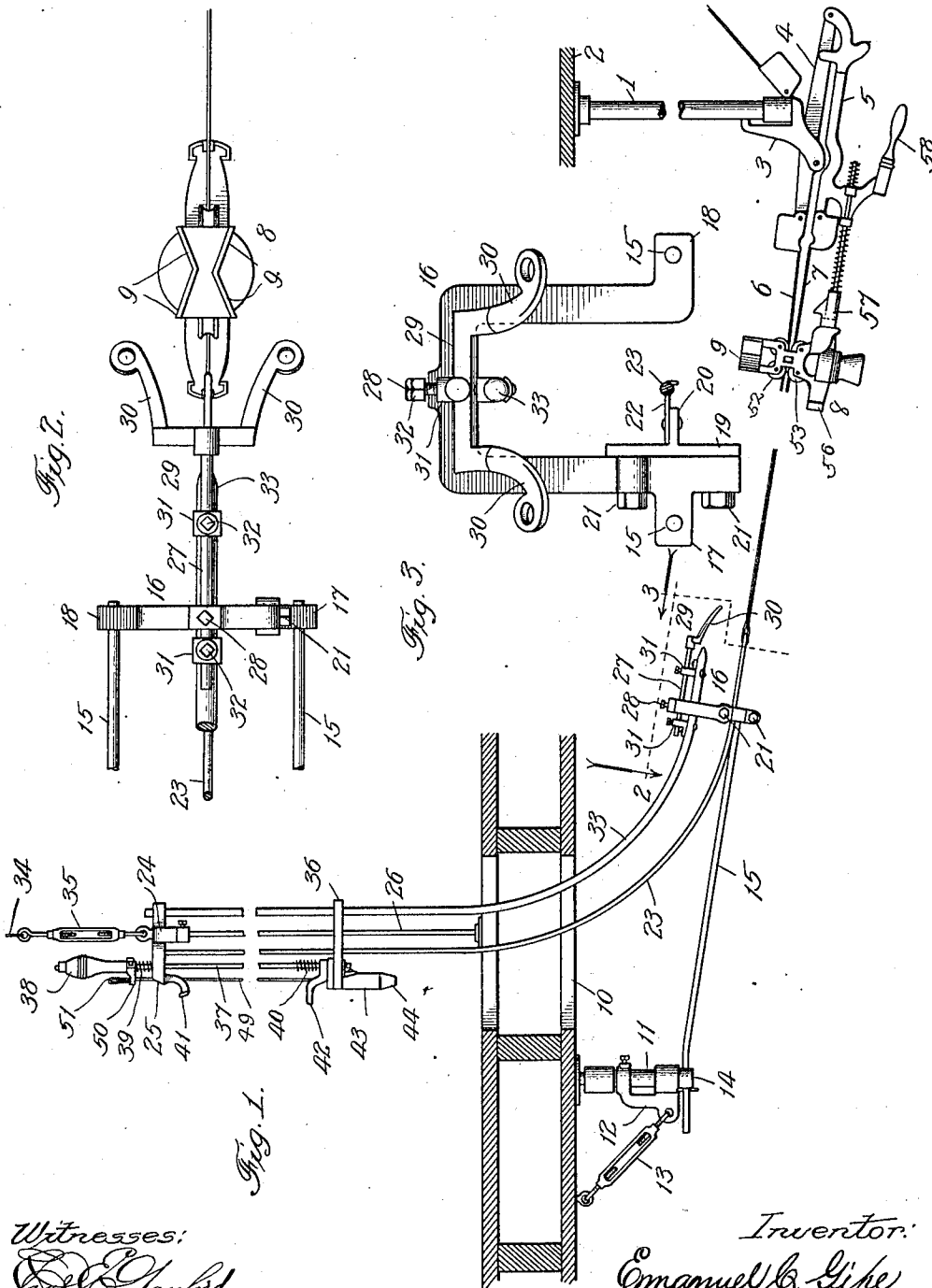


E. C. GIPE.
STORE SERVICE APPARATUS.
APPLICATION FILED SEPT. 21, 1911.

Patented Dec. 31, 1912.

2 SHEETS—SHEET 1.

1,048,524.



Witnesses:
Ed. C. Gipe
Chas. H. Bull.

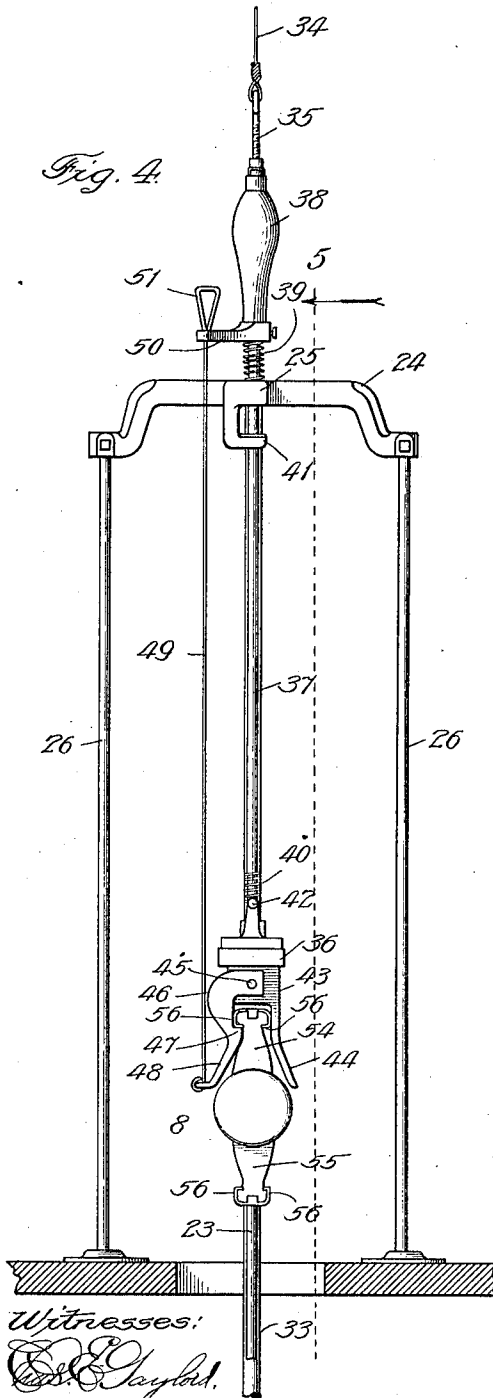
Inventor:
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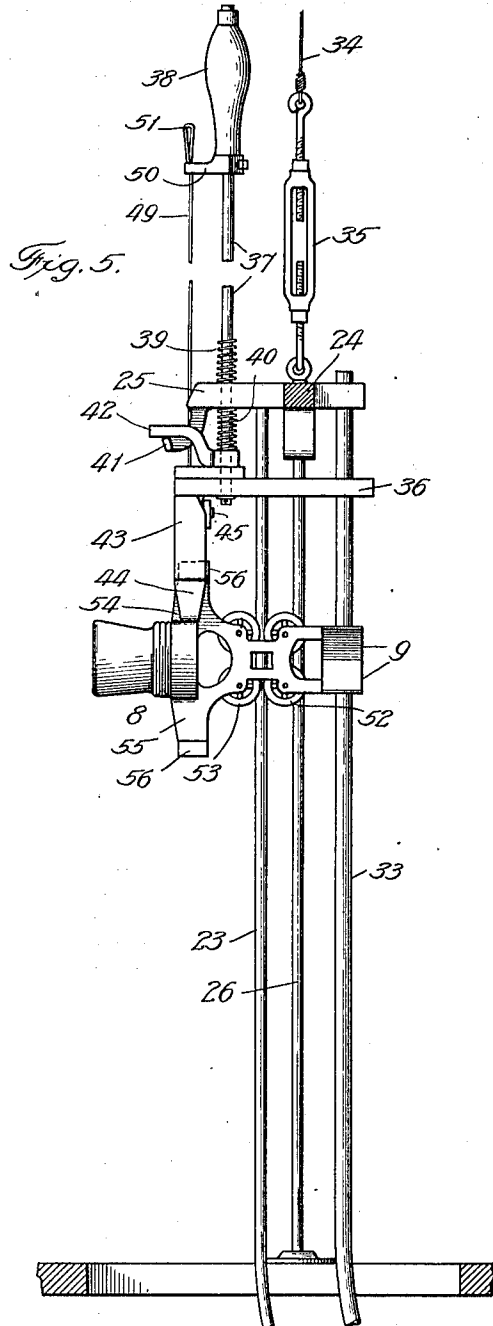
1,048,524.

Patented Dec. 31, 1912.

2 SHEETS—SHEET 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

EMANUEL C. GIPE, OF TORONTO, ONTARIO, CANADA.

STORE-SERVICE APPARATUS.

1,048,524.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed September 21, 1911. Serial No. 650,496.

To all whom it may concern:

Be it known that I, EMANUEL C. GIPE, a citizen of the United States, residing at Toronto, in the county of York and Province of Ontario, Canada, have invented certain new and useful Improvements in Store-Service Apparatus, of which the following is a description, reference being had to the accompanying drawings, forming a part of this specification, in which corresponding letters of reference in the different figures indicate like parts.

The object of my invention is to provide a simple and effective store service apparatus which shall be so constructed as to enable a car to be carried upon a wire way from any pre-determined point upon a given level or floor to a different level, said device being adapted, if necessary, to pass through an opening in an intervening floor. I accomplish said object by so combining with the main track wire and other features, a novel form of track curve and guide mechanism so constructed as to deflect the car upwardly in a vertical path or at any desired angle thereto, all of which is hereinafter more particularly described and definitely pointed out in the claims.

In the drawings, Figure 1, is a side elevation of my improved store service apparatus as it would appear when arranged to pass through an upper floor, the latter being shown in vertical section. Fig. 2, is a plan view in detail as indicated upon the line 2, Fig. 1, Fig. 3, is an enlarged sectional view taken upon the line 3, Fig. 1, viewed in the direction of the arrow there shown, Fig. 4, is an enlarged rear view of that portion of the device which would appear above the upper floor, the latter being shown in vertical section, and Fig. 5, is a vertical sectional view taken upon the line 5, Fig. 4.

Referring to the drawings, 1, Fig. 1, represents the usual vertical hanger attached to the ceiling 2, and having a fitting 3, upon its lower end to which is pivoted a well known form of actuating lever 4, having a bar 5 jointedly connected to its rear end. To the forward end of the lever 4, is attached the upper track wire 6, of the usual "spread wire" system while the lower wire 7, is attached to the forward end of the bar 5. The car 8, mounted thereon, is provided with guide flanges 9, arranged to flare outwardly in opposite directions at front and

rear, to serve as guides in the manner hereinafter stated.

When it is desired to transmit the car to an upper floor, an opening 10, is formed in the latter and behind said opening, in alignment with the track, a short hanger 11, is attached to the ceiling and provided with a bracket 12, which is anchored by means of a turn-buckle 13. A cross-bar 14, is attached to the lower end of the hanger 11, having horizontal bores in its ends in which rods 15 are secured and extended forward parallel to each other to a point near to the converging ends of the line wires 6 and 7. A bracket or arch, generally designated by 16, is provided with laterally extended lugs 17 and 18, which are rigidly attached to the outer ends respectively, of the bars 15. A fitting 19, having a horizontal member 20, Fig. 3, is secured by means of bolts 21, to the inner face of the arch 16. A thin plate 22, is attached to the member 20 and serves as a support for one end of a curved track wire 23, into a horizontal slot in which the end of said plate is soldered or otherwise rigidly secured, said plate being of such a length as to support the wire 23 midway between the vertical parts of the arch. The track wires 6 and 7 are looped through a bore in the end of the wire 23, which latter forms a continuation thereof. The track wire 23 is curved rearwardly and upwardly through the floor opening 10 and thence extended vertically to a cross-bar or yoke 24, having a cross arm 25, to the rear end of which, said wire is rigidly attached. The ends of the yoke 24, are secured to vertical rods 26, the lower ends of which rest upon the floor and serve as supports therefor.

A rod 27, Figs. 1, 2 and 3, is extended through a bore in the upper part of the arch 16 on the same vertical plane with the track-wire 23, and adjustably secured in place by means of a set-screw 28. Upon the forward end of said rod is mounted a fork 29, having laterally diverging arms for the purpose hereinafter stated. Brackets 31 are mounted upon the rod 27 and held by means of set-screws 32, for the purpose of longitudinal adjustment. The lower ends of said brackets are rigidly attached to a guide-bar 33, which is located in the same vertical plane with the track wire 23 and curved concentrically therewith. Said guide rod is preferably formed from com-

pressed fiber, wood or other suitable material and the upper part of said guide is extended vertically and parallel to the track-wire 23, and the upper end attached to the forward end of the cross-piece 25. The yoke 24 is anchored to the ceiling above by means of a wire 34, in which is interposed a turn-buckle 35 to provide for adjustment.

A slidable guide-member 36, Figs. 1, 4 and 5, is provided with bores for the reception of the track wire 23 and the guide rod 33. A vertical rod 37, is loosely extended through a bore in the rear of the cross-piece 25 and its lower end is journaled in the part 36, in such a manner as to enable said part to be lifted by the rod while free to be rotated therein. A handle 38 is provided upon the upper end of the rod, while buffer springs 39 and 40 are placed upon said rod and below the part 25. A downwardly and laterally bent arm 41, is rigidly formed upon the rear end of the part 25, which is in position to be engaged when the rod 37 is rotated by a similarly bent arm 42, rigidly attached to the rod 37 immediately above the part 36. Extending downwardly from the rear end of the part 36, is an arm 43, having a laterally flaring finger 44. Pivoted upon said arm at 45, is a gravity dog 46, having a detent 47, thereon adapted to form a catch and a laterally flaring arm 48, to the lower end of which is attached a releasing rod 49, which is extended loosely through a bore in the end of an arm 50 below the handle 38, and provided with a loop 51, upon its upper end.

The car 8 is provided with the usual upper and lower wheels 52, 53, and forward and rearward extensions 54, 55 with laterally projecting shoulders 56, one of which is adapted to be engaged by a well known form of stop and catch mechanism 57, Fig. 1, at the salesman's station and the other by the detent 47, upon the gravity dog 46, at the cashier's station. The operation of said device is as follows: Assuming the car 8 to be at the salesman's station as shown in Fig. 1, the operator pulls downwardly upon the handle 38, in the usual way thereby spreading the wires 6 and 7 between the upper and lower wheels of the car, thus releasing the latter and projecting it forwardly in a well known way. Should the car oscillate laterally, as it is liable to do, the wings or flanges 9 strike against one or the other of the fingers 30, thus righting the car, so that said wings may be caused to straddle the guide-rod 33, which holds it in alinement with the vertical plane of the track wire 23. The car being projected with sufficient force, rides up the curved track until brought into engagement with the catch upon the dog 46, where it is held in the manner shown in Fig. 4. The purpose of the lifting rod 37, is to enable the

catch to be lowered to a point near the floor, so that in returning the car to the salesman's station, it may not be returned with too much momentum. The car having been projected as described, the operator at the cashier's station, lifts it upwardly by means of the handle 38, and when raised to its full height, the rod is rotated so as to cause the part 42 to be brought into engagement with the part 41, as shown in Fig. 5, which serves to sustain the car in its raised position, while the cash receptacle is being removed and returned. When this is done, the handle is again grasped and the rod rotated until the catches are released when the car is lowered to the position shown in Fig. 4. The operator then pulls upwardly upon the loop 51 to release the dog 46, when the car is returned by gravity to the salesman's station.

The advantages of my improved device are too obvious to require special comment.

In the foregoing description I have assumed the upper station to be that of the cashier, but it is obvious that this arrangement may be reversed without changing the character of the invention, it being my intention to vary the arrangement of the lines and station to conform to varying conditions in different stores, and hence I do not wish to be limited to its use either way.

Having thus described my invention, I claim:

1. In a store service apparatus, the combination with an elevated way for connecting stations at different levels, of a car suspended in an upright position upon a track, means for propelling said car, a track curve directed upwardly from the main track to a higher level, a substantially vertical extension above said curve, a guide for maintaining the body of the car in a vertical plane during its movement upon and above said curve, a catch for engaging said car at a predetermined upper level and means for lifting said catch and car to a still higher level.

2. In a store service apparatus, the combination with an elevated way having a salesman's station upon a given floor and a cashier's station upon a floor above, of a track-curve arranged to pass upwardly through an opening in the upper floor, a car, propelling means therefor, a guide in the vertical plane of said curve for guiding said car, a catch located above said upper floor for engaging said car, a slidable member for supporting said catch, means for lifting said member, means for locking the same at a predetermined height and means for releasing said catch.

3. In a store service apparatus, the combination of an elevated way for connecting stations at different levels, a car, means for propelling the same, an upwardly directed

track curve, a guide in the vertical plane of
said curve for holding the car in said plane
and guide-flanges extending upwardly from
said car, said flanges being arranged to flare
5 outwardly in opposite directions at front
and rear for straddling said guide.

In testimony whereof, I have signed this

specification in the presence of two subscrib-
ing witnesses, this 19th day of September,
1911.

EMANUEL C. GIPE.

Witnesses:

DAVID H. FLETCHER,
JENNIE L. FISKE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."