

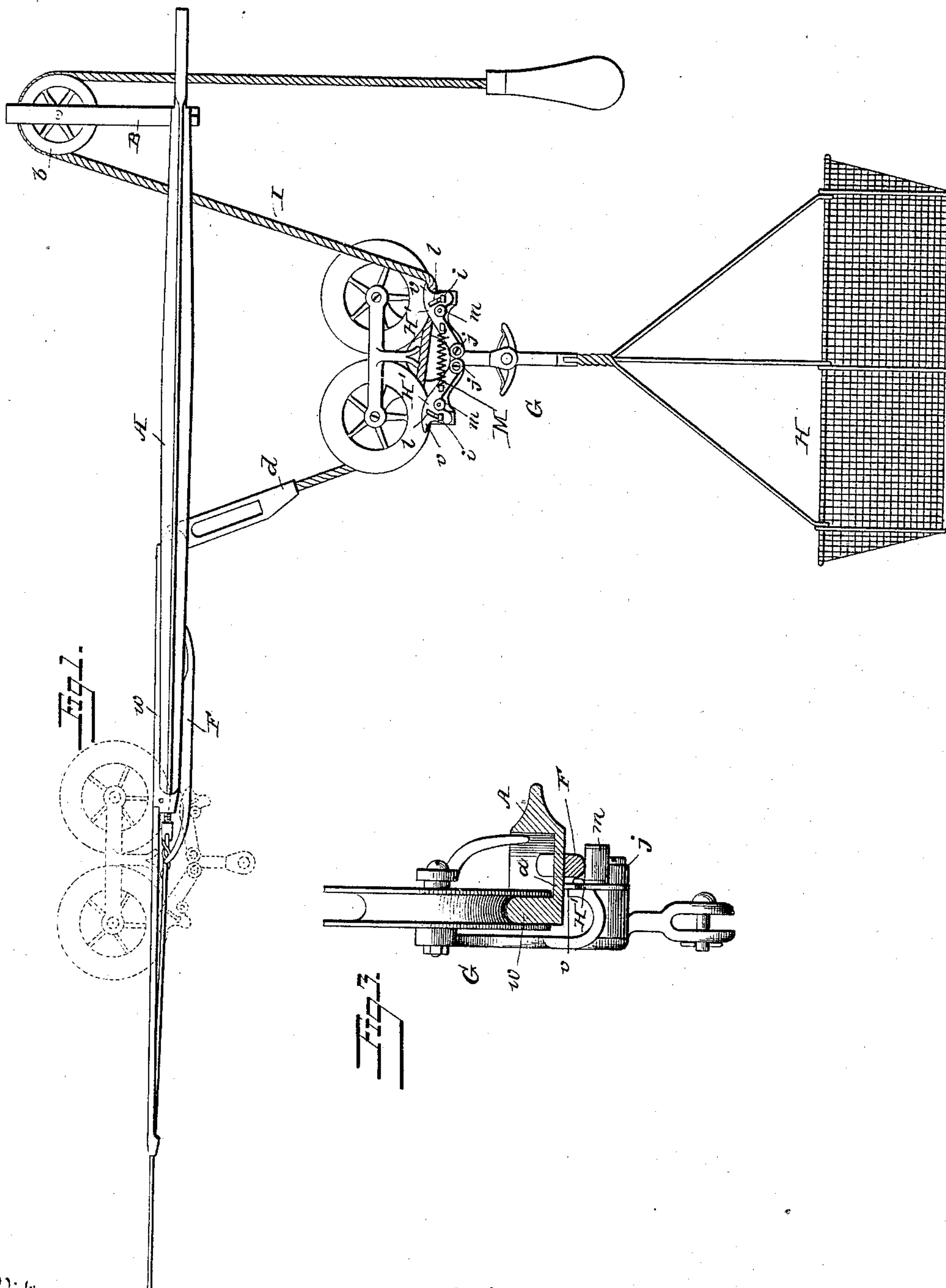
(No Model.)

2 Sheets—Sheet 1.

J. T. COWLEY.  
STORE SERVICE APPARATUS.

No. 378,542.

Patented Feb. 28, 1888.



Witnesses  
Geo. G. Hinkel, Jr.  
Sidney L. Johnson

J. T. Cowley Inventor.  
By his Attorneys,  
Foster & Freeman.

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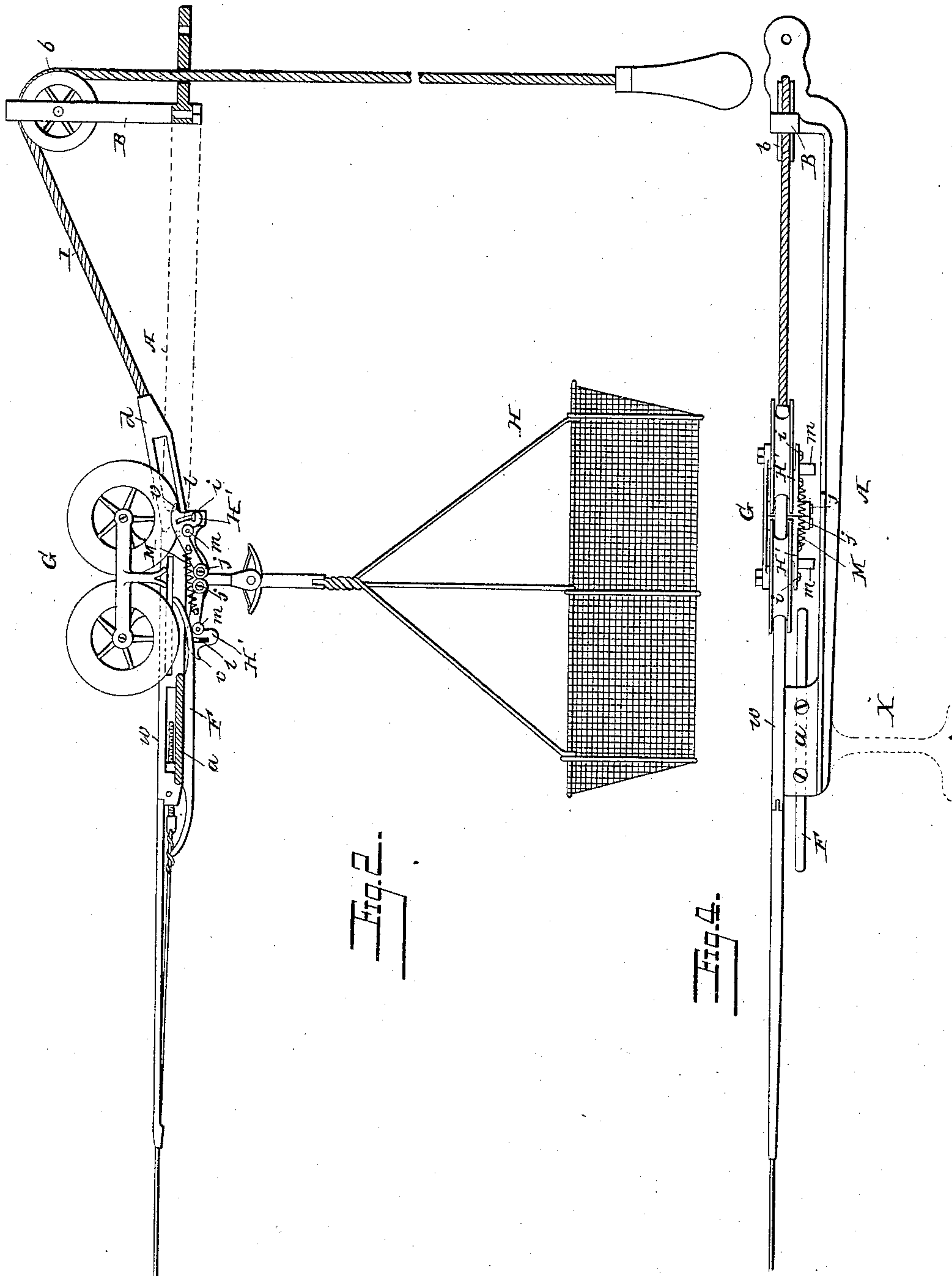
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# UNITED STATES PATENT OFFICE.

JAMES T. COWLEY, OF NEW YORK, N. Y., ASSIGNOR TO THE LAMSON  
STORE SERVICE COMPANY, OF BOSTON, MASSACHUSETTS.

## STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 378,542, dated February 28, 1888.

Application filed April 13, 1887. Serial No. 234,692. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES T. COWLEY, a citizen of the United States, and a resident of the city, county, and State of New York, have  
5 invented certain new and useful Improvements in Store-Service Apparatus, of which the following is a specification.

This invention relates to certain new and useful improvements in store-service apparatus; and it consists, substantially, in the construction, arrangement, and combinations of parts  
10 to be hereinafter more particularly set forth.

The class of store-service apparatus for which the invention is more particularly designed is that wherein the car is raised and  
15 caused to descend onto the track by means of a flexible elevator arranged at one or both ends of the track, and which also acts to receive the car on its return and lower it to  
20 within convenient reach of the operator or attendant. With this class of apparatus it has been found in practice that the car frequently becomes unseated from its place while traveling the track or way, thereby causing considerable inconvenience, and so, too, has it been  
25 found that in suddenly elevating the car by means of the flexible elevator the same thing often occurs, as well also when the car arrives at the end of the way with an excess of speed  
30 or velocity.

The object of this invention is to prevent the car from becoming displaced or unseated from the track or elevator accidentally, but permit its ready removal from the track when  
35 desired.

In the accompanying sheets of drawings, Figure 1 represents in side elevation a car and part of the way-support embodying my improvements, the same indicating the car as  
40 having been received by the flexible elevator and being lowered toward the operator, and also representing the manner in which the yielding gates are operated by the trip device arranged at the end of the supporting-bracket  
45 for the track or way. Fig. 2 is a similar view representing the car as elevated and about to descend upon the track or way. Fig. 3 is an enlarged vertical sectional view of the bracket and end view of the car. Fig. 4 is a top or  
50 plan view of the supporting-bracket and car,

representing the latter as about to be received by or descended from the elevator.

In the class of store-service apparatus referred to, in order that the passage of the car to and from the track and elevator be made in  
55 a direct or straight line, it is usual to provide supporting-brackets for the ends of the track or way slightly curved outward to one side of the part supporting said ends, by which to accommodate the passage of the car from the  
60 elevator to the track, and vice versa, the extremity of the bracket being provided with an extension to which the track is secured or fastened, such extension being jointed and forming the connection between the elevator and  
65 track. This described construction and arrangement of parts has rendered it difficult heretofore to prevent the cars from slipping at times from the way. Efforts have been  
70 made to secure this result by applying hinged gates to the cars; but such gates have been so formed that on the cars descending on the elevator-rope the latter would often slip between the gate and the wheels and the car would fall to the floor.

In my improvement the car is provided  
75 with automatically-yielding gates, which, while acting effectually to prevent displacement of the car from the track and elevator, also permit the car to pass, without danger of slipping, the supports for the end of the way.

Reference being had to the several parts by the letters marked thereon, A represents the supporting-bracket for the end of the track or way, the same having a blade or offset, *a*, to  
85 support a bar, *w*, in line with and supporting the end of the track in proper alignment with the flexible elevator I, and provided with a frame or yoke, B, in which is journaled a grooved wheel or pulley, *b*, the said pulley  
90 being supported slightly above the plane of the track or way, as shown, by which to give to the flexible elevator an incline to carry the car onto the way. To the inner end of the bar *w* is hinged a link, *d*, to which one end of the  
95 flexible elevator I is secured in the manner shown.

Beneath the blade *a* is secured, by screws or otherwise, a trip device consisting, preferably, of a curved arm, F, having inclined or cam-  
100



shaped ends designed to automatically operate the yielding gates of the car in the manner hereinafter explained.

G represents the car, and H the receptacle  
5 for cash or parcels, suspended thereto in any well-known manner. This car is constructed of a yoke or frame having two grooved or flanged wheels for traveling the track or way, the said yoke or frame extending below the  
10 periphery of the flanged wheels at one side and beneath the same to the opposite side, where it terminates on a plane in vertical line with the outer faces of the wheels.

H' H' represent two blades or gates, each  
15 formed at one end with a hollow hub, *j*, for the passage of a screw or pivot securing it to the yoke or frame, while the other end of the gate has a slot, *l*, through which extends a guide-lug, *i*, on the frame, each of said gates having  
20 projecting from the side thereof a pin supporting a small roller, *m*, and the two gates being drawn together by a spring, *M*, the tendency of which is to normally maintain the gates in their upper position when they close  
25 the space between the frame and wheels, so that the car cannot possibly leave the track.

At the outer end of each gate is an ear, *v*, for a purpose described hereinafter.

The car having been elevated by drawing  
30 upon the flexible cord or elevator and bringing it to the position shown in Fig. 2, the said car will descend by gravity toward the blade *a*, and in so doing the rollers *m* of the gates will come in contact with the inner inclined  
35 or curved end of the arm *F*, and will be successively automatically lowered or drawn down to permit the car to pass the supporting-blade *a* until carried beyond the outer curved end of said arm or trip *F*, whereupon  
40 the gates will again be drawn upwardly by the spring connecting the same, thereby closing the space between the frame and the wheels, preventing the car from becoming accidentally displaced from the track. On reaching  
45 the opposite end of the track or way these gates will yield in like manner, and after passing the trip or arm will close together in such manner as to prevent the car from falling or dropping from the flexible elevator, by which  
50 it is received in the manner indicated in Fig. 2.

Should the car descend abruptly, so that the flexible elevator passes to one side of the wheel, it is prevented from passing between the wheel and gate by the ear *v*, beneath which  
55 the elevator-rope catches, as shown in Fig. 1, thereby tending to hold the gate up, instead of forcing it down and away from the wheel,

as heretofore. It will be seen that, by virtue of the construction of the yoke or frame of the car and the arrangement of the gates, the  
60 car will always be maintained in place on the track and elevator, and also that the said car can readily be removed when desired by simply depressing the gates by hand.

Instead of attaching or securing the supporting-bracket at its extreme inner end, I may  
65 provide a lateral extension, *X*, to secure the same to a side wall or support, as shown in Fig. 4, dotted lines.

While I have shown certain constructions  
70 and arrangements of parts, I do not wish to be understood as limiting myself thereto in precise detail, since various changes therefrom could be resorted to and still come within the scope of my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a cash and parcel carrying apparatus, the combination, with the supporting-bracket  
80 for the way, of a trip device secured to the bracket and consisting of an arm, *F*, having inclined ends, and a car traveling the way, provided with automatic spring-actuated gates adapted to contact with and be tripped  
85 by said trip device, substantially as set forth.

2. In cash or parcel cars, the combination, with the yoke or frame carrying the grooved wheels, of gates *H' H'*, pivoted to the yoke, as shown, and a spring connecting the gates, said  
90 gates having projections extending laterally from their sides, whereby the gates may be tripped, substantially as described.

3. The combination, with a wheeled carrier, of yielding gates pivoted thereto and provided with ears *v*, substantially as described.

4. The combination, with the track or way and means for supporting the same, of a flexible elevator, and a car traveling the way, provided with spring-actuated gates for preventing  
100 displacement thereof from said way, said gates having ears *v*, substantially as and for the purpose described.

5. The combination, with a wheeled carrier, of the pivoted gate *H'*, having contacting-roller *m*, slot *l*, and a guide-lug, *i*, substantially as described.

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

JAMES T. COWLEY.

Witnesses:

EDWIN L. GILES,  
C. W. LOCKE.