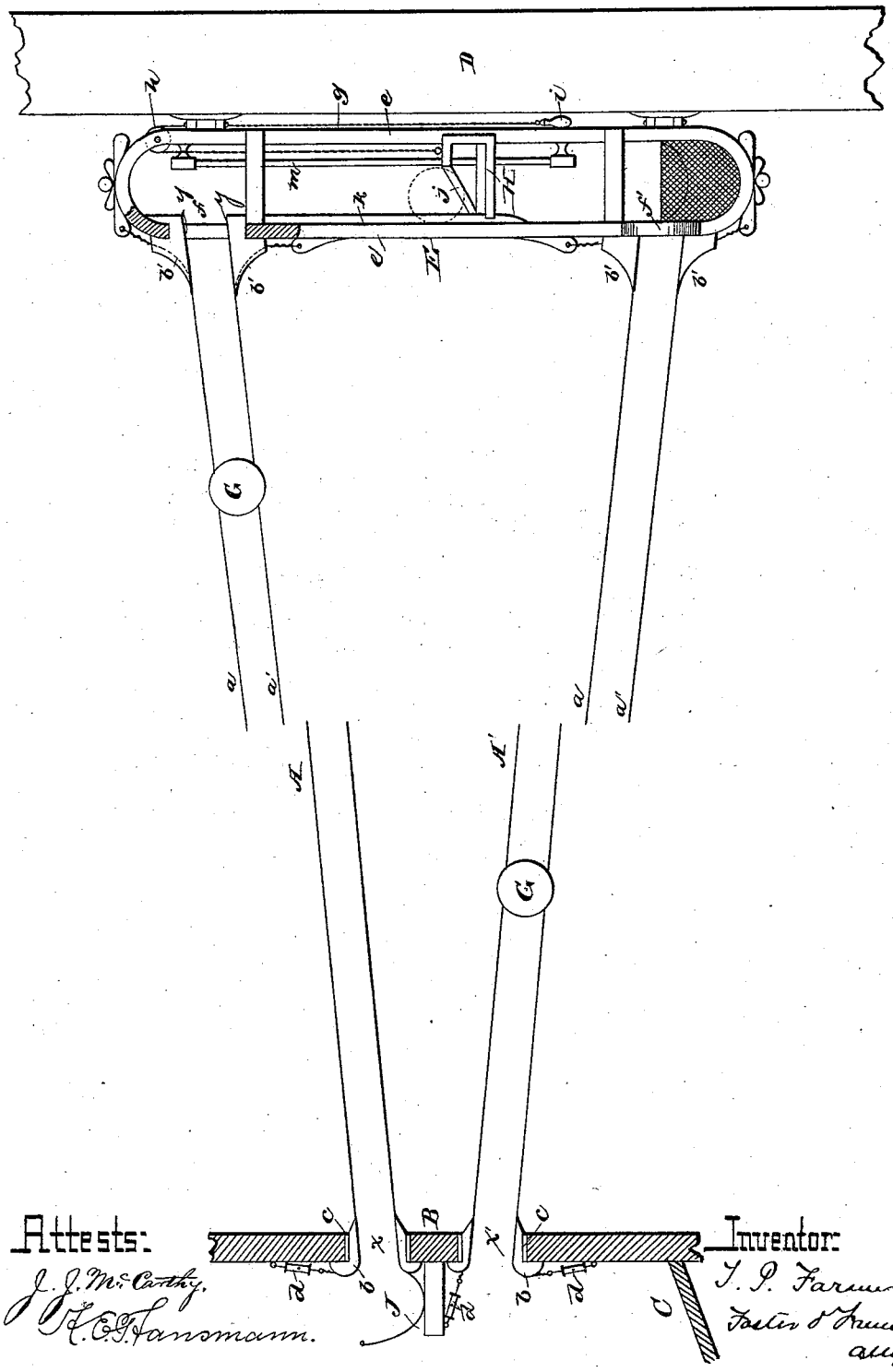
(No Model.)

T. P. FARMER.

STORE SERVICE APPARATUS.

No. 455,315. Patented July 7, 1891.



UNITED STATES PATENT OFFICE.

THEODORE P. FARMER, OF BOSTON, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE LAMSON CONSOLIDATED STORE SERVICE COMPANY, OF NEW JERSEY.

STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 455,315, dated July 7, 1891.

Application filed August 22, 1885. Serial No. 175,080. (No model.)

To all whom it may concern:

Be it known that I, THEODORE P. FARMER, a citizen of the United States, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Store-Service Apparatus, of which the following is a specification.

My invention relates to that class of store-service apparatus in which rolling carriers traverse ways extending between the cashier's desk and the salesmen's stations; and my invention consists in the carrier-elevating mechanism described fully hereinafter, and illustrated in the accompanying drawing, in which the figure is a side elevation in part section illustrating my invention.

Each way or track consists of two rails *a a'*, arranged parallel to each other in the same vertical plane, each rail consisting of a strip or bar of wood or metal, or of a cord or wire stretched taut and supported wholly at the ends or at the ends and at intermediate points, as may be found most desirable. The track is horizontal or inclined, or is adjustable to alter the inclination, according as the carrier or carriers are to be impelled by gravity or otherwise.

In the construction shown there are two tracks A A', the track A being inclined downward from a standard D at the salesman's station toward the front support or standard B of the cashier's desk C, and the track A' being inclined in the opposite direction, and the two tracks are preferably in the same vertical plane. The rails *a a'* of each track are wires stretched taut, and at the cashier's desk each wire passes through an opening *x* in the front or standard B and over and round the grooved edge of a fin *b*, extending from a plate *c*, which is bolted to the edge of the opening. The inner end of each wire is secured to a tightening device *d*, connected to some stationary part of the support D, so that slack may be taken up from time to time and the wire kept taut. The opposite ends of the wires near the salesman's standard D are connected to a frame E, consisting of parallel bars *e e'*, connected by curved end pieces, the bar *e* being broken at two points to receive yokes or rings *f f'*, and into each wing extends two radial fins *b'*, which also project laterally toward the desk C, each of the wires being attached at its end to the frame and passing over a shoulder to the inner edge *y* of the fin, so that said edge constitutes a continuation of the track extending into and through the yoke *f* or *f'*.

Each carrier G is hollow and has an annular tread. Each carrier is of such size that when its tread is supported by the lowermost rail of the track the upper rail will serve as a guide or retainer to prevent its lateral movement and hold it in position on the lower rail, upon which it will travel with a rolling motion by gravity when the track is inclined, as shown in Fig. 1. The carriers are passed through the lower opening *x'* to place them upon the lower or delivery track, the fins *b b* holding the wires so that the carriers may be introduced between the latter from the ends, and the fins *b' b'*, supported by the yoke *f*, also hold the wires of the upper track in like manner to permit the carriers to be introduced between them to return said carriers to the desk.

The elevator shown is a carriage sliding between the sides *e e'* of the frames as guides and connected to a cord or chain *g*, which passes over a guide-pulley *h* and is provided at the end with a handle *i*, and the carriage is provided with an inclined rail *j*, and the side *e'* of the frame has a vertical rib *k* in the same vertical plane as said rail, the latter and rib being adapted to the groove or tread of the carrier, which slides on the rib and remains on the rail in the position shown in dotted lines, Fig. 1, until the rail is above the top of the lower fin *b'* of the upper track, when the carrier will pass onto said fin and onto the track. The rib *k* terminates at a point so far above the carriage when in its lowest position that the carrier may be put on the rail *j*, with its groove in position to receive the rib as the carriage rises, and a guard-rod *m* prevents the backward motion of the carrier and holds it in place until it is opposite the yoke *f*.

The frame E is hinged to the support or standard D, so as to assume a position in line

with the ways when the wires of the latter are drawn taut.

Beyond the lower end of the track A is arranged a basket or receptacle J to receive the carriers passing from the track and hold them in a position accessible to the cashier.

When but one track is used and the carriers are to be moved by gravity, the track is arranged so that one end may be lifted to a higher position than the other to direct the carriers first to one end and then to the other, according to the inclination.

Without limiting myself to the precise construction and arrangement of parts described, I claim—

1. The combination of the elevator-carriage, a frame therefor, a guiding-rib k, and a guard m, substantially as described.

2. The combination, with a casing, of an elevated carriage sliding therein, having an inclined rail, a track connected with the front of said casing, a guard-rail in the rear of the said casing, and a rib within the forward portion of the said casing, all as set forth.

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

T. P. FARMER.

Witnesses:
CHARLES E. FOSTER,
EDWIN C. GILMAN.