(No Model.) 2 Sheets—Sheet 1.

H. M. WEAVER.

CASH CARRIER APPARATUS.

No. 500,642. Patented July 4, 1893.

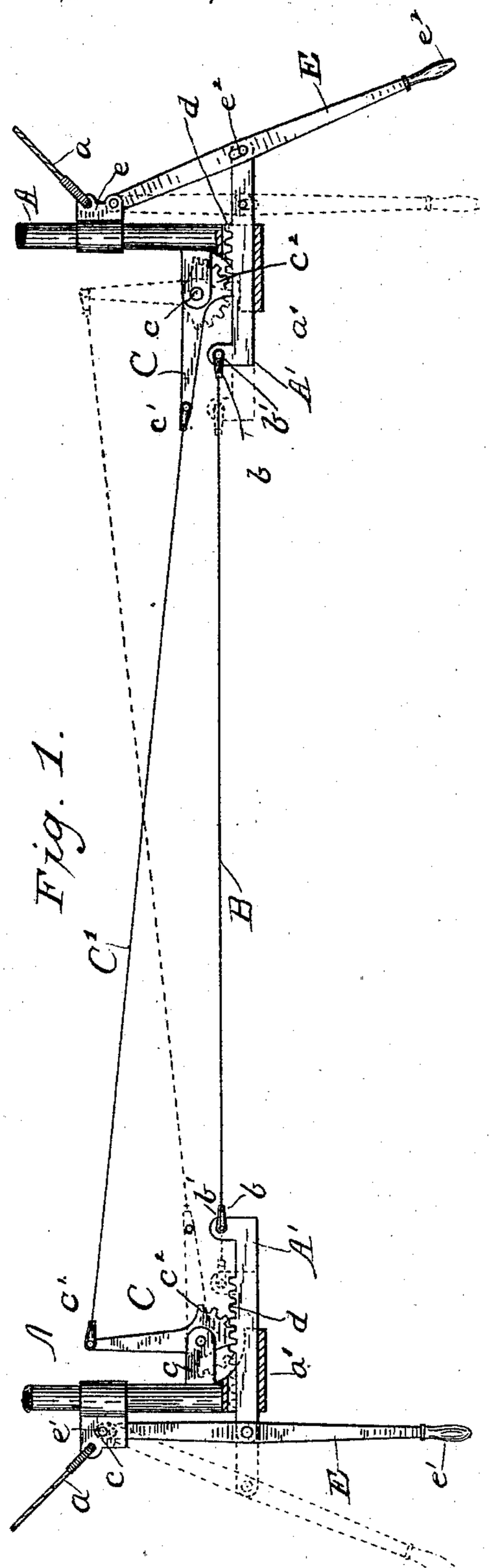

Fig. 1.

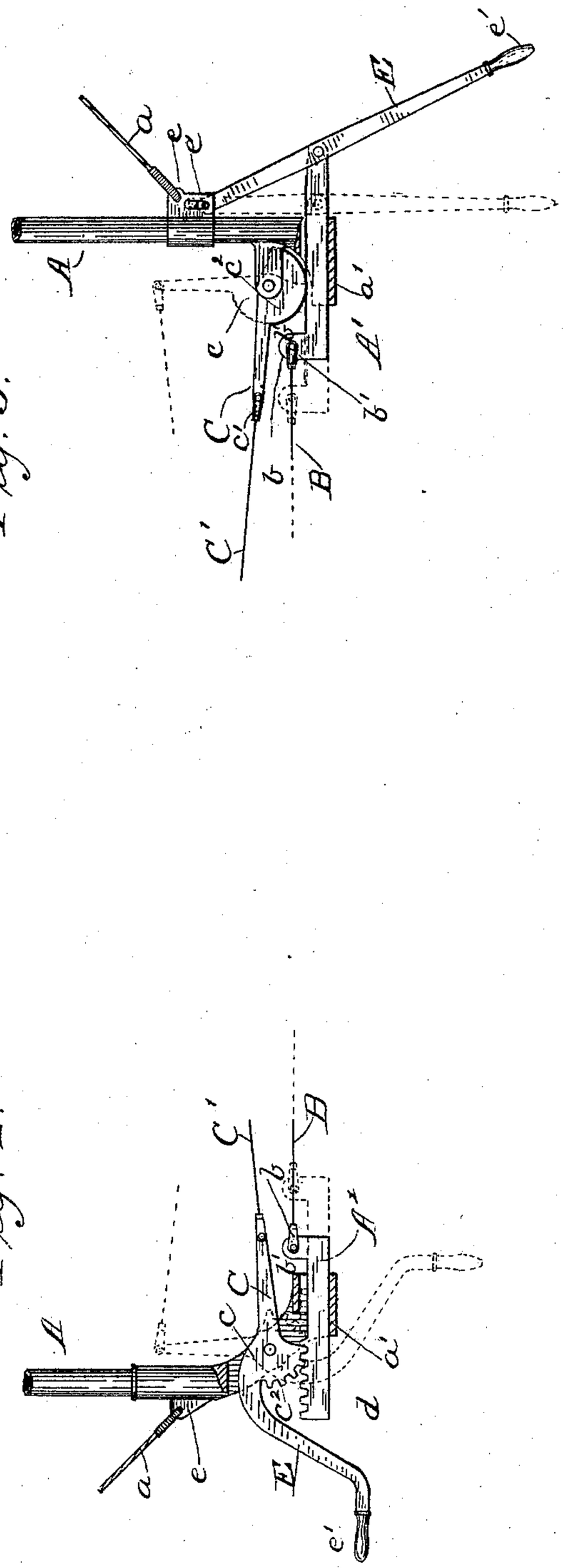

Fig. 3.

Fig. 2.

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(No Model.)

2 Sheets—Sheet 2.

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Fig. 5.

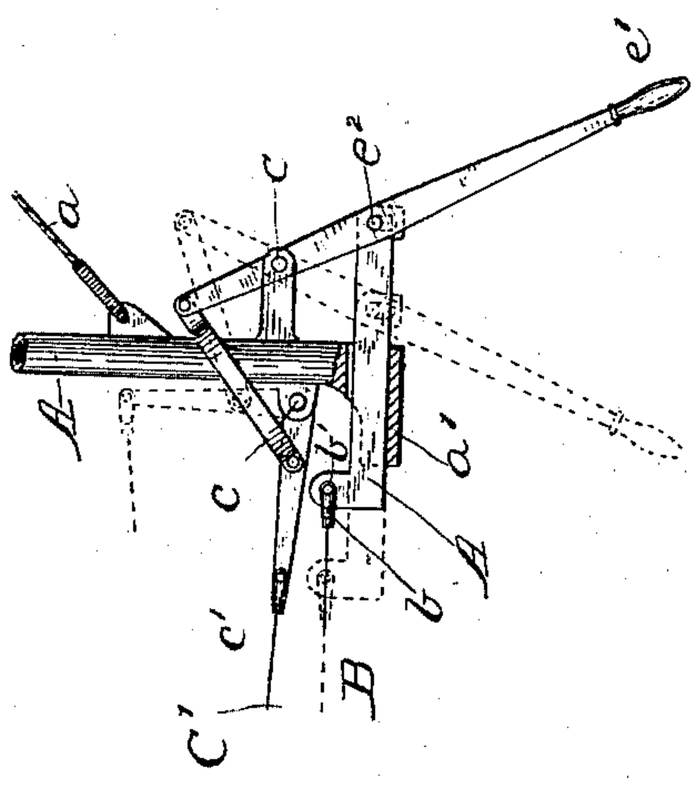


Fig. 6.

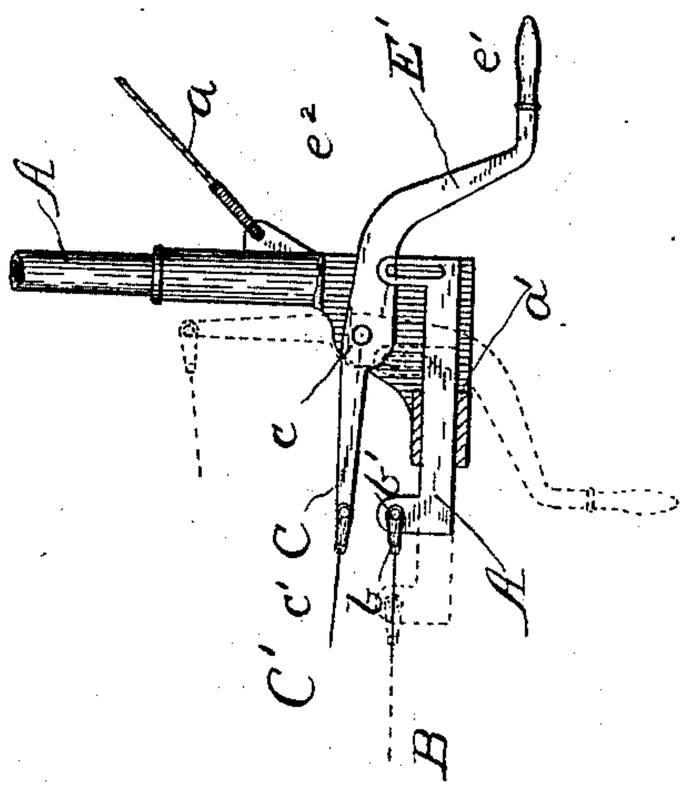
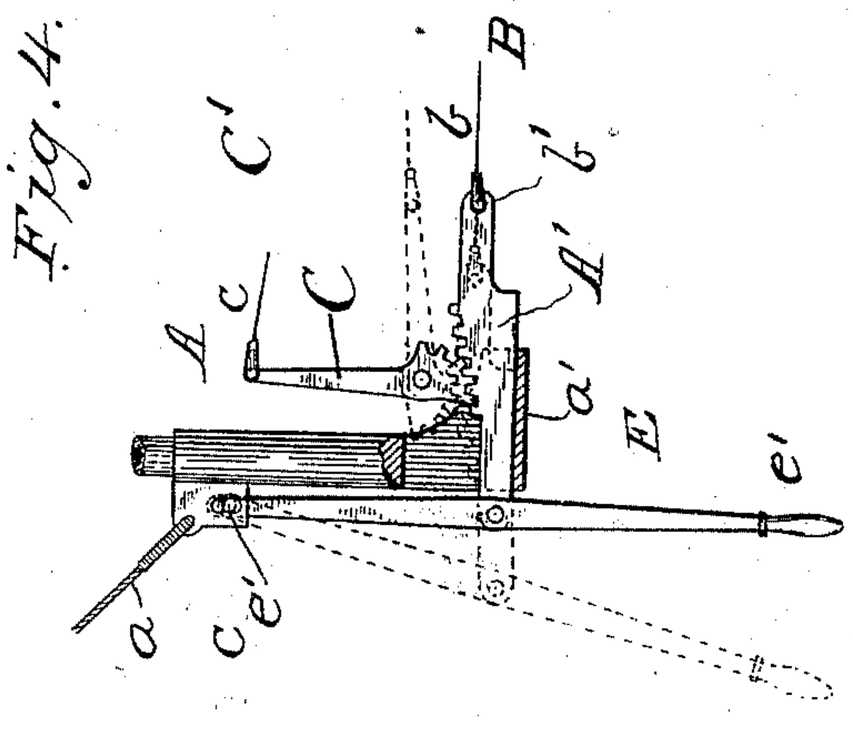


Fig. 4.



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UNITED STATES PATENT OFFICE.

HENRY M. WEAVER, OF MANSFIELD, OHIO, ASSIGNOR TO THE BARR CASH AND PACKAGE CARRIER COMPANY.

CASH-CARRIER APPARATUS.

SPECIFICATION forming part of Letters Patent No. 500,642, dated July 4, 1893.

Application filed June 29, 1889. Serial No. 316,107. (No model.)

To all whom it may concern:

Be it known that I, HENRY M. WEAVER, a citizen of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Cash-Carrier Apparatus, of which the following is a specification.

My invention relates to that type of cash-carrier apparatus in which the carrier is impelled by the spreading of wires in its rear and the converging of said wires in advance, as shown, for instance, in Letters Patent granted Samuel W. Barr on the 8th day of February, 1887, No. 357,449, to which reference may be had for an extended description of the general principle upon which such apparatus operates. In the specific system described and claimed by said Barr, however, the bottom wire is given a downward motion when the top wire is carried upward, to simultaneously diverge the two behind the carrier, while at the other end of the track the two wires are concurrently moved toward each other to converge them in front of the carrier. In my present improvement, I propose that one of the wires, preferably the bottom wire, shall remain constantly in the same plane, except so far as it may be sprung out of that plane at points along its length by the pull of the opposite wire and of carrier-wheels, while the other or upper track-wire is alternately carried away from and converged toward this, or what may be termed the stationary wire. In order, however, to operate the spreading devices from either station at will, it is necessary that both track-wires shall extend from station to station and be attached to said spreading devices, that motion may be conveyed from one station to the opposite station in both directions. That is, when it is intended to spread the wires at the cashier's desk from the salesman's station to bring the carrier back from said desk, one of the track-wires must pull upon the spreading devices, while the other track-wire, if it was a stiff rod, would push; but being flexible, will simply be slackened. And when it is intended to converge said wires at the cashier's desk from the salesman's station, the action will be reversed; that is, the wire which was before slack must now pull, and the one which before pulled will be slack. Therefore, in my improvement, I attach the spreading wire, or the one which has lateral movement away from the stationary wire,—and which may be termed the impelling wire,—to the ends of spreading or track-levers, while the so-called stationary wire is attached to the ends of reciprocating bars mounted in ways in line with each other and connected mediately or immediately with the adjacent spreading levers, so that when one of these bars is retracted or projected at either station, said stationary wire and the opposite bar may be moved longitudinally, and the levers at each end actuated to spread and converge the propelling wire.

In the drawings: Figure 1 represents a side elevation of apparatus embodying my improvement, showing two stations, the one at the left hand being for the purpose of the present description considered the "in" or cashier's station, and the opposite one the "out" or salesman's station. Fig. 2 represents a modification of the actuating apparatus in which the spreading-lever is made integral with the operating-lever; Fig. 3, another modification showing an alternate method of operating the track-lever; and Figs. 4, 5 and 6, still further modifications of the improvements for operating the track-lever and reciprocating-bars.

A, in all of the figures, represents brackets or hangers located at the respective stations for the support of the operative and actuating parts of the line. Each bracket is properly braced; as, for instance, by guys, *a*, leading from lugs thereon, to a suitable part of the building in which the system is located; and at the foot of each bracket is formed a guide-way, *a'*, in line with the similar guide-way in the other bracket for the reception of a reciprocating bar, A', one at each station, reciprocating in line with the length of the stationary track-wire, B, which is attached to ears, *b*, hinged to lugs, *b'*, outsetting from said bars, or it may be directly to said lugs themselves, and reciprocates with them endwise toward and from the respective brackets without change of place or lateral displacement when the bars are moved.

Pivoted to lugs, *c*, on the station-brackets,

and for the purposes of the present description above the sliding-bars, are spreading or track-levers, C, one arm of which has a hinged ear, c', for the attachment of the propelling-wire, C', which, when one of said track-levers is horizontal or nearly so and the other vertical or nearly so, should be stretched taut between the two, as shown in the first figure of the drawings. These track-levers should be so connected with the sliding-bars, mediately or immediately, that when said bars are reciprocated the levers will be swung upon their pivots, one being carried down to the horizontal and the other up to the vertical, or vice versa. When one of the levers is carried down it will through the mediate or immediate connection with the reciprocating bar at its station, and through the stationary track-wire and bar at the other station, swing up the lever at such latter station; or, if it itself is swung up, it will, through the propelling wire, draw down the lever at the other station, and at the same time through the mediate or immediate connections with said sliding-bars, reciprocate them concurrently to keep the stationary wire taut, and to position them for the return action. Means by which this reciprocal movement can be produced may be almost indefinitely varied, but those which I have preferably adopted, as represented in the first figure of the drawings, and, with variations, in the succeeding figures, are as follows: Each track-lever has its power-arm formed as a segment, c^2, meshing with a rack, d, upon the adjacent sliding or reciprocating bar connected with the stationary track-wire. Fulcrumed to the lug, e, from the bracket, which may be the same bracket to which guys are attached, is a pendent hand-lever, E, pivoted to the outer end of the sliding bar at that station, and having its grip, e', depending therebeneath, so that when drawn back to the position represented by dotted lines at the cashier's station to the left-hand of said figure, it will pull upon said bar and, through the rack, depress the intermeshing track-lever to the position shown by dotted lines, converging the propelling wire at that station, and at the same time by the draft through the stationary track-wire moving the sliding-bar at the opposite or salesman's station from the position shown in full lines to that shown in dotted lines, thereby raising the track-lever at that station to its second position shown in dotted lines and spreading the propelling wire at that end. Should the operator at the first station, desire to return the carrier from his end to the opposite end, he will push the lever from the position indicated in dotted lines to that represented in full lines, when the movement of the parts will be reversed and the motion transmitted from the track-lever at that station, as it rises to carry the propelling wire again to the position shown in full lines, through said wire to the opposite track-lever, which will be drawn down, and from this track-lever to the sliding-bar at that station, retracting it to still keep the stationary wire taut and reset it for further action.

The movements of the sliding bars being in right lines, the operating levers must necessarily be allowed a little vertical play, either at their fulcrum, e', as at the cashier's station, or at their pivotal connection with the sliding-bar, e^2, as at the salesman's station; this being accomplished by the use of a slot and pin.

In the construction shown in the second figure of the drawings, the operating-lever, E', is formed integral with the track-lever and projecting therefrom, and is preferably bent or curved outwardly and downwardly, as shown, to bring it beyond the end of the sliding-bar and when so constructed either the slot and pin connection between the lever and sliding bar is dispensed with, as in said figure, or the rack and segment omitted, as in Fig. 6, and the slot and pin connection, e^2, retained, only that the slot must be sufficiently elongated to permit the pin to act as a wrist-pin or eccentric in imparting reciprocating motion, so that as the lever is depressed the pin will travel along the slot and force the sliding-bar forward to the position shown in dotted lines, and as it is lifted the pin will travel up the slot and draw the sliding-bar back. Except for this alteration the construction is the same as that already described.

In Fig. 3 the segment upon the end of the track-lever is in frictional contact with the upper surface of the sliding-bar, instead of engaging therewith by teeth, but with this exception the apparatus, as to operating lever, stationary wire, spreading or propelling wire, and sliding-bar and track-lever, is or may be the same as that shown at the two stations in the first figure of the drawings. The motion of the track-lever may also be accomplished by a scroll-segment, e^3, as in Fig. 4, meshing with a rising or stepped rack, e^4, upon the sliding-bar.

In still a further modification the operating lever is fulcrumed as before upon a lug from the supporting-bracket, and is also pivoted to the outer end of the sliding-bar, as shown in Fig. 5, but beyond its fulcrum it is projected and receives a link, f, connected to the track-lever, as shown, so that whenever the operating-lever is drawn from the position represented in dotted lines to that represented in full lines, it will retract the sliding-bar and depress the track-lever, and when returned to the position indicated in dotted lines it will project the sliding-bar and raise the track-lever.

It is evident that as the track-wire or so called stationary wire has no lateral displacement due to the operation of the mechanism, it may be, when it is the bottom wire, located in a lower plane without danger of interference, thus making the track more accessible,

or, if it is the upper wire, it may be brought closer to the ceiling or to the lower side of a counter, or placed closer to a chandelier than otherwise would be possible. Furthermore, it cannot act as a brake in front of the carrier, as it might should it move laterally, the speed of the carrier depending somewhat upon the rapidity with which the wires are converged in front of it, since at the point where these wires pass between the wheels of the carrier they are usually closer together during the journey of the latter, than they are in front of it, and thus modify its speed.

I do not intend by the preceding extended description of modifications or equivalent forms to limit myself to the use of such alone, since it is obvious that many others may be devised without departing from the principle of my invention. Nor do I limit myself to the employment of but two track-wires, or to the employment of spreading levers and a propelling wire on one side alone of the reciprocating bars and their connecting stationary wire, since as the bars in each bracket move in the same line it is obvious that such levers and propelling wire may be duplicated on opposite sides of the bars, or that such levers may radiate from the bars and carry any desired number of propelling wires, or that the propelling wire may cross the stationary wire, and the track-lever at one station be located on the opposite side of the sliding bar from the track-lever at the opposite station; but

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, substantially as hereinbefore set forth, in a store-service system, of supporting brackets at each station, ways in said brackets, in line with each other, reciprocating bars mounted in said ways, the track-wire stretched between said bars, spreading levers connected with said bars whereby the movement of one will operate the other, a propelling wire stretched between the ends of said levers, and hand levers whereby said bars are reciprocated and the spreading levers moved to spread or converge the propelling wire.

2. The combination, substantially as hereinbefore set forth, in a store-service system, of supporting brackets at the in and out stations, ways in said brackets in line with each other, reciprocating bars playing therein, a track-wire stretched between said bars, spreading levers pivoted to lugs from the brackets, and having segment gears engaging with the racks of said reciprocating bars, an impelling wire stretched between the ends of said levers, and hand levers fulcrumed upon ears from the bracket and pivoted to the bars, whereby the latter, with the connecting wire, may be reciprocated and impart movement to the spreading levers.

HENRY M. WEAVER.

Witnesses:
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H. B. DIRLAM.