(No Model.)

H. M. WEAVER.

CASH AND PACKAGE CARRIER.

No. 412,144. Patented Oct. 1, 1889.

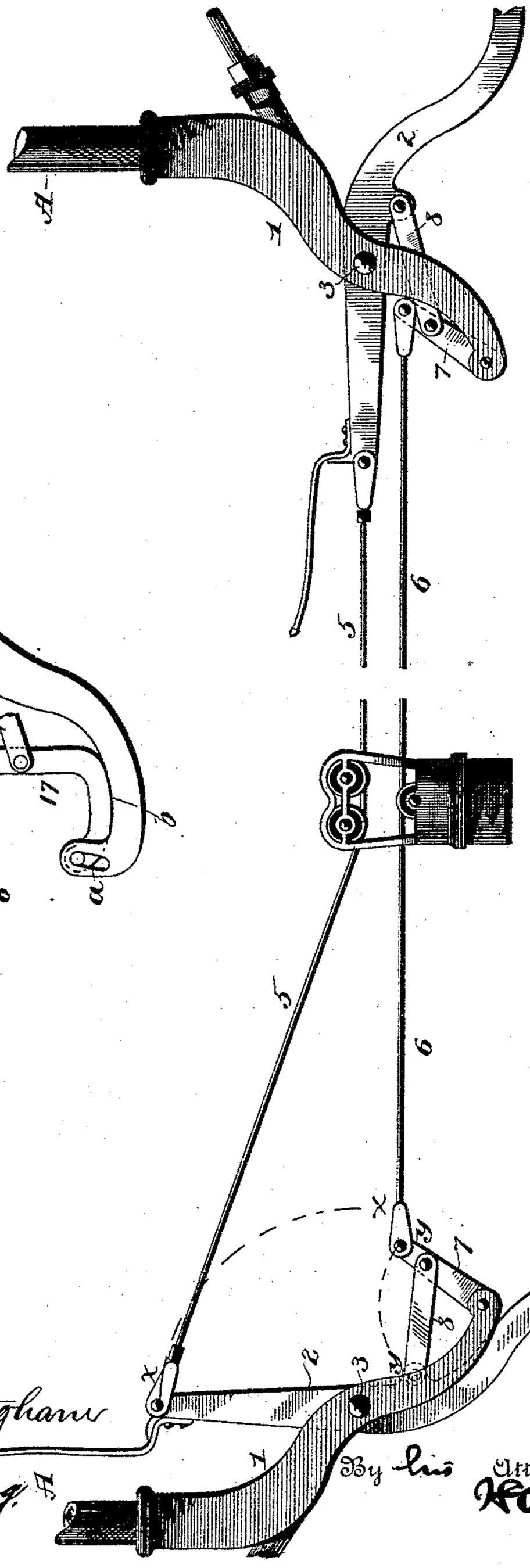

FIG. 2.

FIG. 1.

Witnesses
E. L. Nottingham
G. F. Downing

Inventor
Henry M. Weaver
By his Attorney
H. A. Seymour

UNITED STATES PATENT OFFICE.

HENRY M. WEAVER, OF MANSFIELD, OHIO.

CASH AND PACKAGE CARRIER.

SPECIFICATION forming part of Letters Patent No. 412,144, dated October 1, 1889.

Application filed March 12, 1889. Serial No. 303,026. (No model.)

To all whom it may concern:

Be it known that I, HENRY M. WEAVER, of Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Cash and Package Carriers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in propelling apparatus for cash and package carriers.

Heretofore a class of apparatus has been in use in which a pair of track-wires have been so connected and arranged that the carriers mounted thereon were driven by the spreading of the wires against the backs of the rear wheels of the carriers. This has generally been accomplished by connecting the ends of the track-wires with swinging levers at points equidistant from their fulcrums in such a manner that the lowering or opening of one lever gives an opposite swing to the other, due to the fact that the tensions of the wires are in balance. It is evident where long levers are used or the systems are placed in rooms having low ceilings that the result may sometimes be harmful, as it would tend to drop the lower wire in the way of persons moving about on the floor.

The object of my invention is to overcome this objection; and to this end it consists in means for propelling the carriers in practically the same manner as before, but in so doing giving the lower wire a substantially endwise movement by moving its ends in a limited arc.

The invention further consists in certain novelties of construction and combinations of devices, as will be hereinafter minutely described, and set forth in the claims.

In the accompanying drawings, Figure 1 is a view in elevation of my improved propelling apparatus with connected track-wires and carrier thereon, and Fig. 2 is a modification.

As the letters and numerals herein employed apply equally to corresponding apparatus at each end of the lines, only one need be referred to in the detailed description.

A represents a hanger stationed at the required position and suitably braced. On its lower end an elbow 1 is secured. This elbow may be made in various shapes; but an approved form is the one shown, in which it extends forward in the shape of a compound curve. A lever 2 is pivoted to the elbow at point 3, and this lever is furnished with a handle 4 at one end, and the track-wire 5 extends forward from its other end to its corresponding lever, where the opposite end is secured. A short arm 7 is pivoted to the lower end of the elbow 1, and is loosely connected by a link 8 to the lever 2, near the fulcrum of the latter. Lower track-wire 6 extends forward from the free end of this arm 7 to the free end of a corresponding arm at the next station, where its other end is secured.

It will be observed that, as shown in Fig. 1, the parts at the ends of the wires assume opposite positions—*i. e.*, when one lever is horizontal or closed the other is vertical or open, and when one arm 7 is forced back the other is pulled forward. The result is that the wires are nearly parallel in front of the car. Hence, to propel the carrier, the lever 2, adjacent to which the carrier is standing, is opened or swung to a vertical position. This carries the ends of the upper wire through the arcs $x\,x$ in reverse directions, and the ends of the arms 7 through the limited arcs $y\,y$, and gives motion to the carrier by the combined forward motion of the lower wire in the direction of the carrier and the movement of the diverging wire away from the horizontal wire. At the opposite end the parts are in the position of receiving, the wires being together, and the carrier is stopped by the buffer and retained by a suitable catch-hook. In this connection especial attention is directed to the course taken by the arms 7, as indicated by the dotted lines $y\,y$, for it is seen that, while the end of the wire must be raised slightly as the arm swings, the parts are so arranged that the essential movement of this wire is endwise, and hence it never drops between the points of its extreme throw; or, in other words, the lowest positions reached by this wire, whether the levers 2 be horizontal or vertical, are identical.

As shown in the modification illustrated in Fig. 2, the arm 17, which is the equivalent of the lever 7 of Fig. 1, need not be confined in its movement to the arc of a circle, but in-

stead it may be rocked approximately in the arc of a circle. In this construction the forward end of the elbow is turned slightly upward and provided with a slot *a*, and the arm 17 is J-shaped, with one end loosely pivoted in the slot *a*, and its rounded lower portion *b* acting as a rocker on the elbow to facilitate its movement back and forth. The other parts are the same as in former construction.

It is evident that the arms 7 could be of any desired length and that their pivots could be in a variety of places, as well as the one shown above or below the line of travel of wire 6; hence I do not wish to confine myself to the construction shown. It is also evident that some other means might be used to communicate motion from levers 2 to arms 7 than those shown, such as I have already embodied in other cases; hence I do not wish to limit myself to the exact constructions set forth; but,

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

1. The combination, in a store-service apparatus, of supports, levers pivoted to said supports, a wire attached to said levers, arms pivoted to the supports and connected to the levers, and a wire attached to the arms.

2. In a store-service apparatus, the combination of a longitudinally-movable track-wire, a diverging longitudinally-movable track-wire, and devices for changing the direction of inclination of the diverging wire relative to the longitudinally-movable wire and for moving the latter.

3. In a store-service apparatus, the combination, with a horizontal longitudinally-movable wire and a movable wire located normally at an inclination or angle to the horizontal wire, of levers attached to the opposite ends of the inclined wire for changing the direction of its inclination and arms attached to the ends of the other wire, substantially as set forth.

4. In a store-service apparatus, the combination, with a pair of movable track-wires, one of which is maintained continuously in approximately horizontal position and the other inclined or at an angle to the horizontal wire, of rigid supports, levers pivoted thereto for changing the angle of inclination of the inclined wire, and arms actuated by the levers for moving the horizontal wire longitudinally, substantially as set forth.

5. In a store-service apparatus, the combination, with a track-wire and levers attached to the ends thereof for moving it longitudinally and changing its inclination relative to the lower wire, of a lower approximately horizontal wire and arms connected to the ends of said wire for moving same longitudinally.

6. In a store-service apparatus, the combination, with a track-wire and levers for moving said wire longitudinally and the ends thereof in arcs of a circle, of a second wire maintained continuously in approximately a horizontal plane and arms for moving said second wire longitudinally.

7. The combination, with supports and a pair of track-wires, of a pair of pivoted levers for one wire and a pair of pivoted arms for the other wire, the levers connected to one wire adapted to move in arcs of a circle and the arms connected to the other wire adapted to move in arcs of a circle, and links connecting the levers and arms, substantially as set forth.

8. The combination, with a pair of track-wires and carriers, of hangers having elbows thereon, levers pivoted to the elbows to which the ends of one wire are secured, arms pivoted to the elbows with the ends of one wire connected thereto, and connecting-bars loosely joining the pivoted arms with the levers, substantially as set forth.

9. The combination, substantially as hereinbefore set forth, in a store-service system, of a reciprocating track-wire extending from station to station, operating devices at each station to which it is connected, a wire extending from station to station, and spreading devices at each station to which it is connected, said spreading devices connected mediately or immediately to the mechanism for operating the reciprocating wire.

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

HENRY M. WEAVER.

Witnesses:
S. L. LUTZ,
J. P. HENRY.