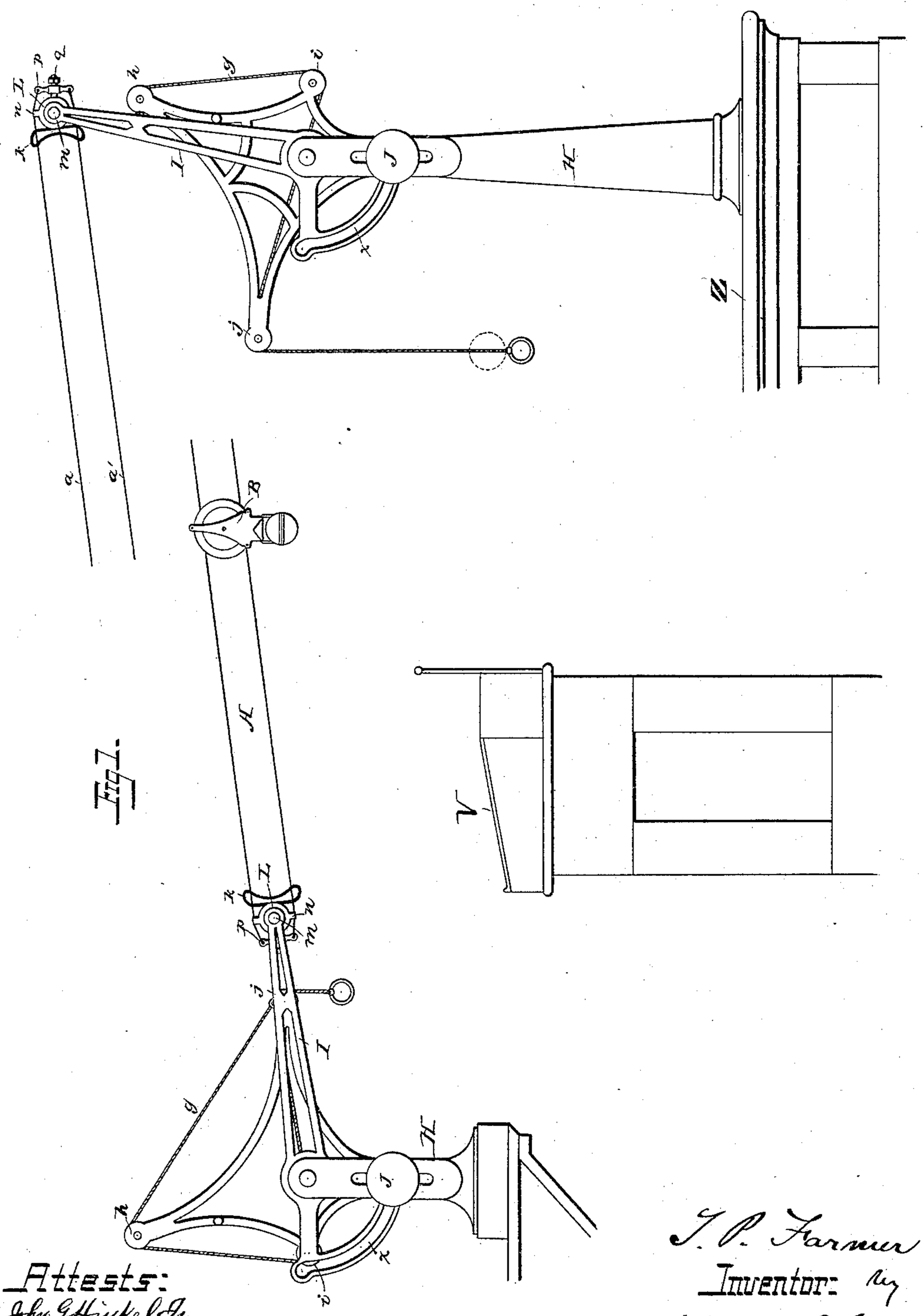
(No Model.) 2 Sheets—Sheet 1.

# T. P. FARMER.

## STORE SERVICE APPARATUS.

No. 378,545. Patented Feb. 28, 1888.

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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## STORE SERVICE APPARATUS.

No. 378,545. Patented Feb. 28, 1888.

Fig 2.

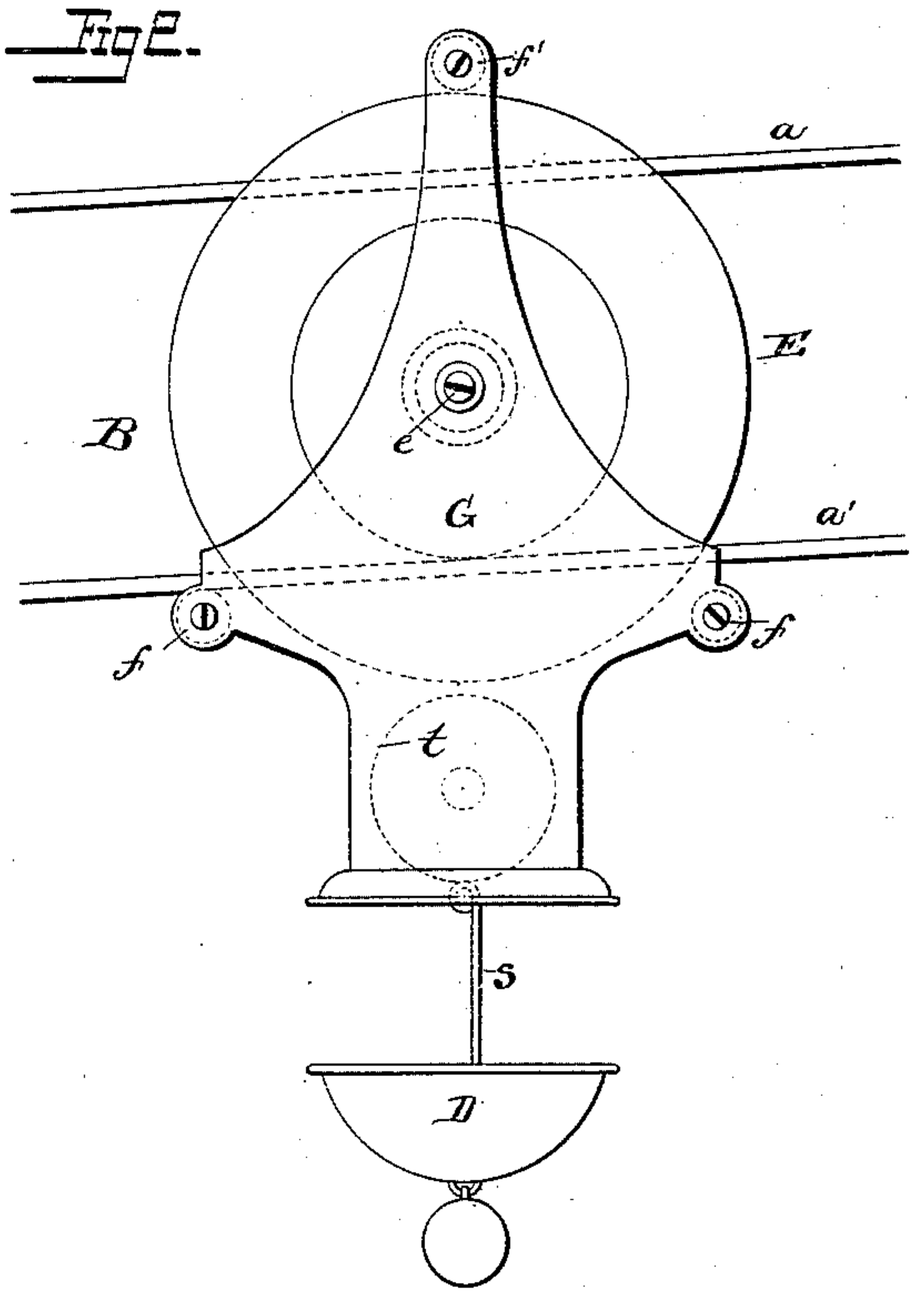



Fig 3.

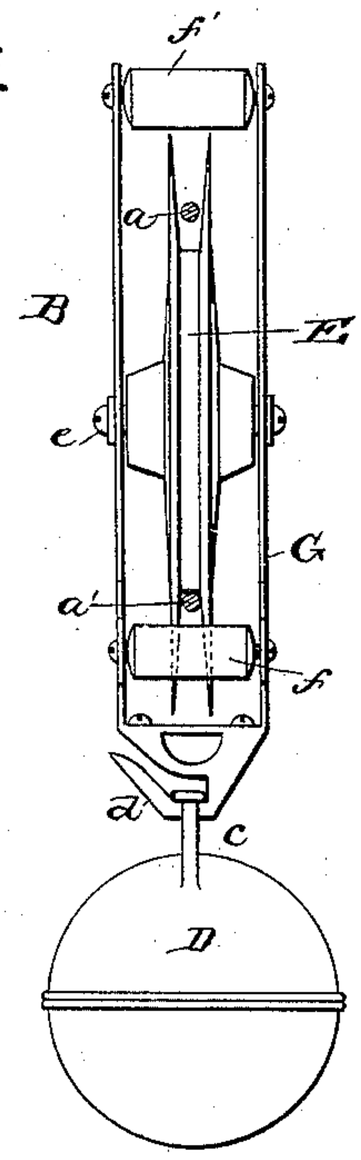
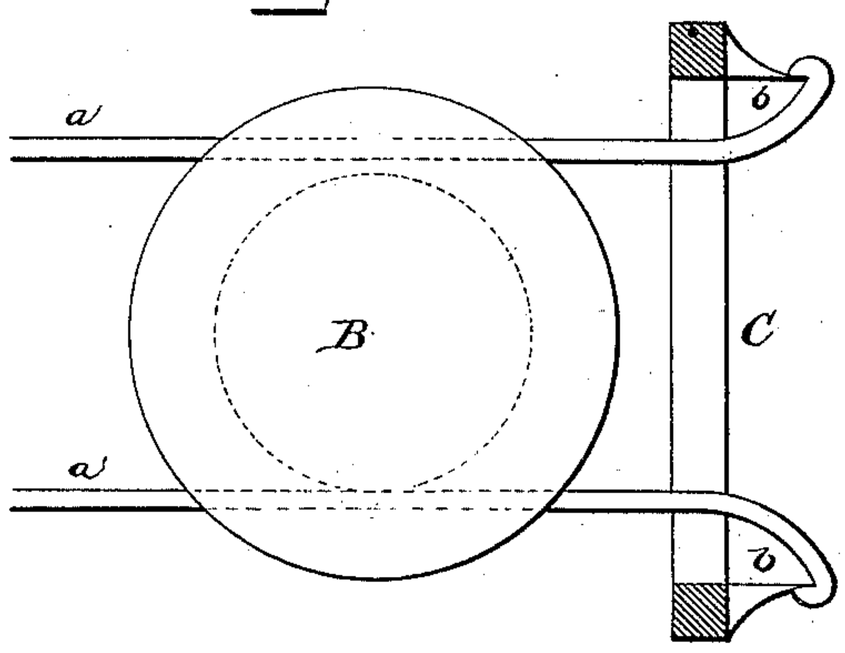



Fig 4.

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# UNITED STATES PATENT OFFICE.

THEODORE P. FARMER, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE LAMSON CASH RAILWAY COMPANY, OF SAME PLACE.

## STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 378,545, dated February 28, 1888.

Application filed September 12, 1885. Serial No. 176,951. (No model.)

*To all whom it may concern:*

Be it known that I, THEODORE P. FARMER, of Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Store-Service Apparatus, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to store-service apparatus; and it consists in constructing the track and carriers and in supporting the track, as fully described hereinafter, so as to secure a rapid connection between the counters and desk and facilitate the manipulation of the parts.

In the drawings, Figure 1 is a side view of one line of store-service apparatus, showing its arrangement in respect to the counters and desk. Fig. 2 is an enlarged side view of one form of carrier, slightly modified to show a different mode of attaching the receptacle. Fig. 3 is an edge view of Fig. 2. Fig. 4 is a view illustrating a modification.

The track A consists of any suitable support for a carrier, B, that travels back and forth thereon. Preferably it consists of two parallel wire or other rails, *a a'*, in the same vertical plane, and the carrier has a peripheral tread, as described in my application for Letters Patent, Serial No. 175,080. The ends of the rails may be secured to fins *b*, projecting inward from rings or frames C, as described in said application, and as shown in Fig. 4, the carriers consisting of grooved hollow spheres and passing through the frames to and from the track. I prefer, however, in this instance to provide each track with one carrier traveling back and forth thereon and having a detachable or movable receptacle. For instance, I use a hollow spherical receptacle, D, Fig. 3, in two separable parts, the upper part having a loop or eye, *c*, for hanging onto a hook, *d*, of a pendent yoke, G, suspended from the central shaft, *e*, of the grooved carrier-wheel E, as shown best in Figs. 2 and 3. I prefer, however, to use a receptacle, D, attached to bands *s*, wound upon a spring-actuated drum, *t*, dotted lines, Fig. 2, supported by the yoke G, so that said receptacle can be pulled down while the car is on the track, and will rise automatically when released.

The yoke G is expanded to support two guide-rollers, *f f*, which extend below the lower rail and serve to prevent the carrier from jumping from the rail even if the upper rail should break. The yoke is also extended upward to support a guard pin or roller, *f'*, above the upper rail or wire, *a*, so that if the lower rail should sag or be bent down the guard-roller would rest on the upper rail and prevent the detaching or overturning of the car.

The rails may be bars, strips, or rods of any material, but preferably of wire, as shown. With this track are combined movable supports, whereby it may be inclined by lifting or lowering one or both ends, so as to cause the carrier or carriers to travel in one or other direction toward the lower end by gravity.

When the track is open at the ends, any number of carriers may be sent first in one direction and then, after the inclination is altered, in the other, so that a single track is the means of affording means of rapid communication between the salesman's counter Z and central desk, Y.

Different appliances will suggest themselves to those skilled in the art for varying the position of the track. In the drawings I have shown devices adapted for use when both ends of the track are to be raised and lowered without permitting the wires to become slackened. Each support consists of a standard, H, and a pivoted arm, I, attached at the outer end to one end of the rail and having a segmental slot, *x*, at the other end, receiving a set-screw, J, whereby the arm is guided, and whereby it may be fixed in position, if desired. To each arm I is connected a cord or chain, *g*, which passes round guide-pulleys *h i j*, supported by arms of the standard H and hanging downward in reach of the salesman or cashier, so that either arm and its attached end of the track is raised to the position shown at the right, Fig. 1, by pulling downward on the chain *g*, the opposite arm descending to the position shown at the left. This causes the carrier to pass to the end opposite to that raised by the operator, and it is sent back by raising the other arm in like manner.

To prevent noise and shock, a buffer-spring, *k*, of any suitable construction, is secured near the end of each arm I. As shown, the buffer is a plate-spring crossing the track and arranged to be struck by the wheel E.

As the angle of the track in respect to the arms varies with each movement, I connect the rails or bars of the track to a block, L, which is pivoted by a pin, *m*, to the end of the arm and turns freely on the pivot, so that the parallelism of the two blocks is preserved whatever may be the positions of the parts.

To tighten the wires with facility, each is extended through an ear, *n*, of the block, and both are attached to a cross-bar, *p*, which may be carried to and from the block by a screw, *q*.

It will be evident that any other suitable tightening device may be employed, and that a weight, W, may be hung to each cord *g*, so as to resist the action when the opposite cord is drawn down, thereby keeping the line taut.

Although I have shown but one line or way and its supports and carriers, I of course in practice use as many lines as circumstances demand.

It will be evident that the carrier may have two or more wheels.

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

1. A store-service track consisting of two parallel rails in the same vertical plane and adjustable supports for the track, each support consisting of a single arm loosely connected at one end to the track and pivotally supported at its opposite end, whereby the track can be inclined to direct carriers thereon from end to end, substantially as described.

2. The combination of adjustable supports adjacent to the main desk and counter of a store, and a track consisting of two parallel rails connected to the supports and provided with a carrier, and spring-buffers at the ends of the track and located between the rails thereof, substantially as described.

3. The combination of a store-service track consisting of two parallel rails, standards at the ends of the track, arms pivoted to the standards at one end and pivotally connected to the track at the opposite end, and guide-pulleys supported by the standards, and cords connected to the arms and guided by said pulleys, substantially as described.

4. The combination of the track consisting of two parallel rails, and spring-buffers, each consisting of a plate-spring extending across between the track-rails, substantially as described.

5. The combination of the track, standards, arms pivoted to the standards at one end, attachments pivotally connecting the track to the opposite end of the arms, and cords connected to the arms to operate the same, substantially as described.

6. The combination of the slotted standard, pivoted and slotted arm connected to the track, and securing device J, substantially as described.

7. The combination of the pivoted arms, pivoted blocks, and track connected to said blocks, substantially as described.

8. The combination, with the pivoted arm, of a pivoted block, track consisting of wires, and a tightening device supported by the block to which the wires are connected, substantially as described.

9. The combination of the pivoted arm, pivoted block, wires, and adjustable cross-piece to which the wires are connected, substantially as described.

10. The combination of the wheel, yoke, receptacle, and guide-rollers *f f*, substantially as described.

11. The combination of the wheeled carrier adapted to parallel rails in the same vertical plane and a guard extending over the upper rail, substantially as described.

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

T. P. FARMER.

Witnesses:
E. F. FARMER,
E. F. ENDICOTT.