(No.Model.)

D. LIPPY.

STORE SERVICE APPARATUS.

No. 489,537. Patented Jan. 10, 1893.

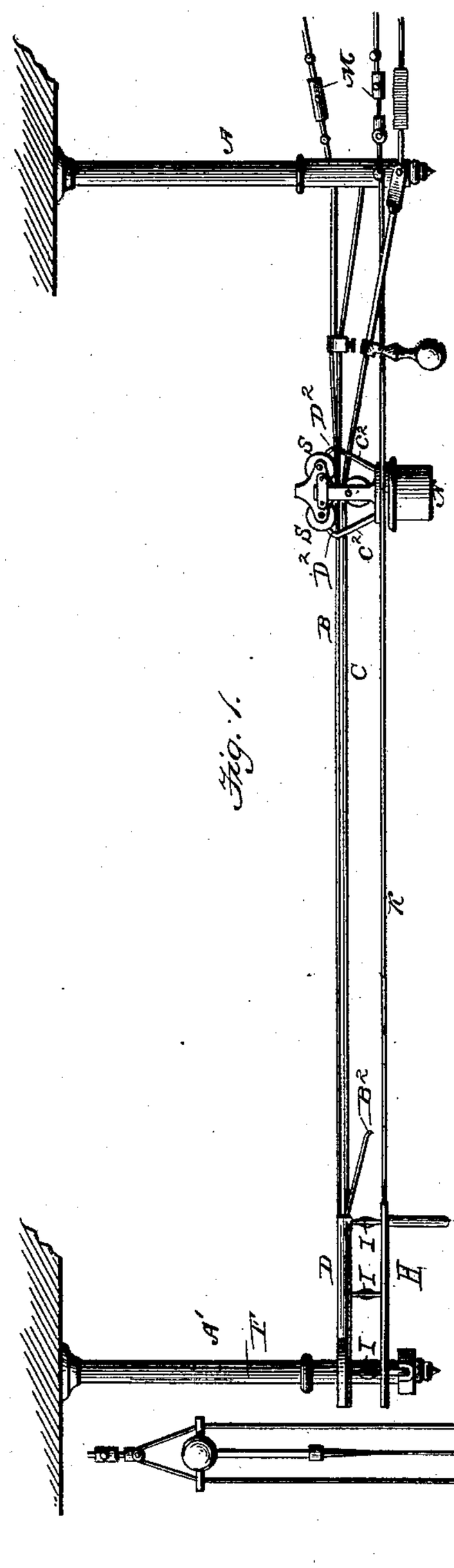

Fig. 1.

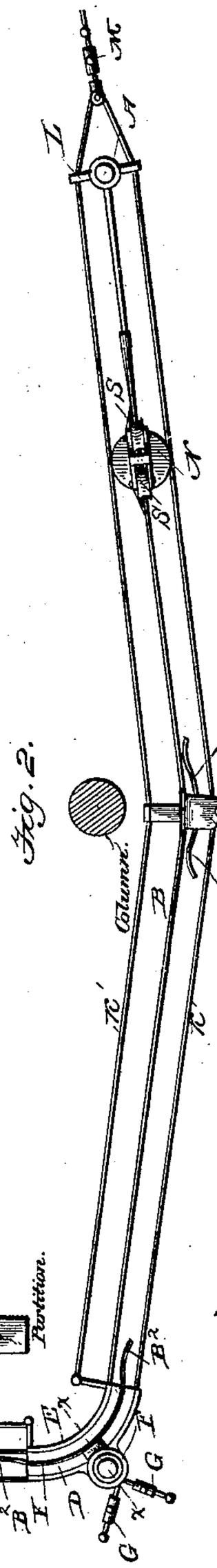

Fig. 2.

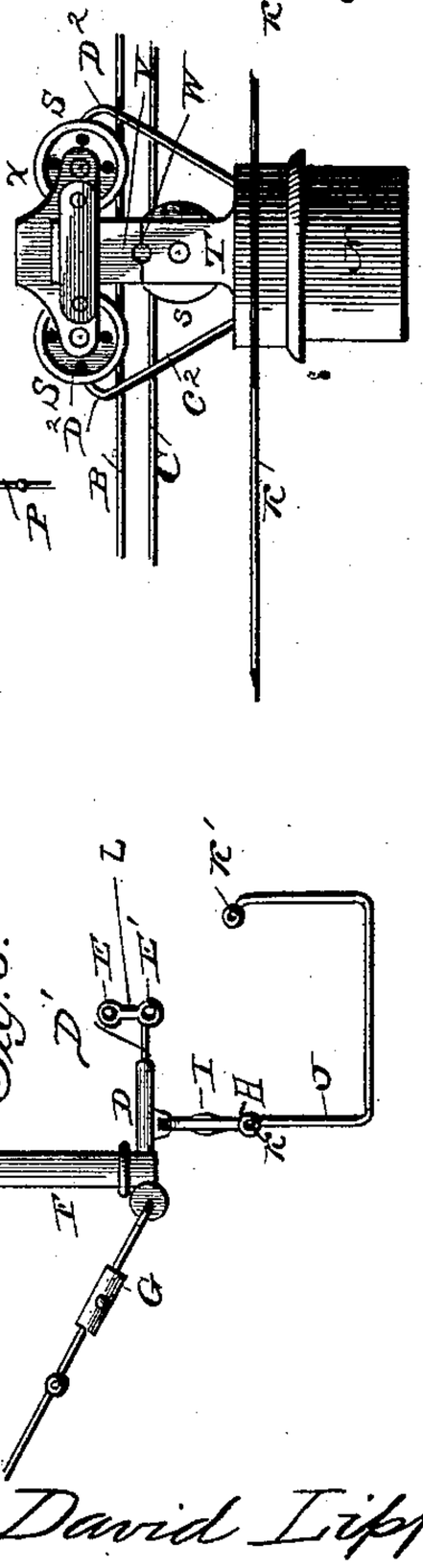

Fig. 3.

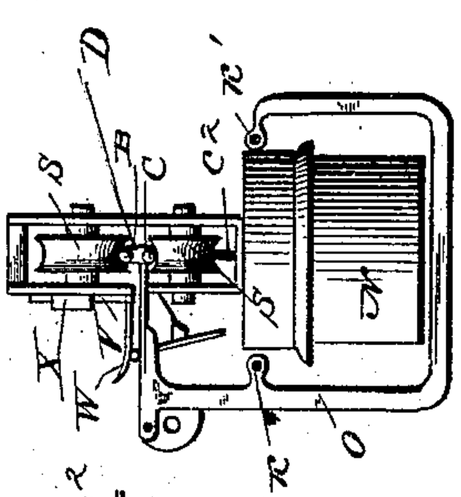

Fig. 4.

Fig. 5.

Witnesses:

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UNITED STATES PATENT OFFICE.

DAVID LIPPY, OF MANSFIELD, OHIO.

STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 489,537, dated January 10, 1893.

Application filed December 12, 1891. Serial No. 414,827. (No model.)

To all whom it may concern:

Be it known that I, DAVID LIPPY, 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 Store-Service Apparatus; 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 improvements in store service apparatus, of that class in which a stationary track wire and a movable wire for propelling the car from station to station are employed.

The object of my invention is the provision of an apparatus which will propel the car from station to station; which will run the car easily and safely around curves; and which will be simple, durable and inexpensive in construction.

To attain the objects stated the invention consists in certain novel features of construction and combination of parts substantially as illustrated, described and claimed.

In the accompanying drawings Figure 1 represents a side elevation of a complete line embodying my invention. Fig. 2 is a top plan view of same. Fig. 3 is a side view of car, enlarged showing its general construction. Fig. 4 is a transverse sectional view of same also showing construction of angle bracket. Fig. 5 is an end view, on an enlarged scale, of the curved plate and its attached parts the guides Y being omitted.

Similar letters refer to similar parts throughout the several views.

In the accompanying drawings A indicates hangers or supports to which is secured the stationary track-wire B which extends from station to station.

C is a propelling wire.

D is a curved plate, which is provided with the reduced part D′ to which is secured the curved tubular tracks E E′ through which passes the track-wire B and propelling-wire C this is for the purpose of forming a continuous track from station to station.

F is a hanger or support to support the curved plate in position.

G are brace-wires.

H indicates a lower curved guide. This is secured to the underside of the curved plate D by studs or links I. This is for the purpose of guiding the lower portion of the car when passing around the curve.

J indicates U shaped brackets which are secured to each end of the curved plate D. The U shaped brackets J are for the purpose of securing the ends of the guide wires K and K′. The said wires extend from the curved plate to the stations A and A′ and are held parallel and a distance apart by the cross bar L. The guide wires are made taut by the turnbuckle M. This device constitutes the guides for the car N the car passing between the guide wires. near the lower end. of the car to prevent all swinging motion. of the car while passing from station to station.

O indicates a U shaped bracket through which pass the track-wire B propelling-wire C and guide-wires K and K′, the object of the said bracket being for the purpose of drawing the track and guide-wires out of a straight line to pass a column or any other obstruction. The said U shaped bracket is held in position by the brace wire P. This device is shown in Figs. 2 and 4.

A car to pass around a curve must be constructed with one side open the car I have shown enlarged in Fig. 3 and 4 the car R is constructed with a T shaped hollow case, in which are journaled the carrier-wheels S. The inner face T has a slot formed between the upper and lower portion central between the wheels. This space is filled by a U shaped slide V and is provided upon its face near the lower end with an outwardly projecting pin W. The slide V operates vertically in the guide X. The inner upwardly projecting arm of the U shaped slide V is in line with the face of the wheels and is slotted and passes between the hubs of the carrier wheels. This allows a free vertical movement to the slide V. Secured upon the upper side of the curved plate D and U shaped bracket O are the wire guides Y, the projecting ends B^2 of which incline downwardly to pass under the pin W, which raises the slide V, allowing the car to pass over the bracket or curve. It will be readily seen that when the car is propelled from one station to the other, the slide V will rise before the car reaches the curved track by the pin passing up the incline wire guide.

As soon as the car passes the curve the slide V drops by its own weight, preventing all danger of derailing the car. C^2 are wire guides which are secured to the car. The curved portions D^2 are bent inward or in line with the outer face of the carrier wheels. This device prevents the car from derailing on the outside.

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

1. In combination with hangers or supports a stationary track-wire secured to said hangers. a curved plate placed intermediate the stations. composed of the plate D tubular curved tracks E E′ secured to the said plate a curved guide H secured to the underside of the curved plate by studs I., U-shaped brackets J secured to each end of the curve-plate, guide wires K and K′ secured to the upwardly projecting arms of the U-shaped brackets. and extending parallel with the track wires to each station a car adapted to travel upon the said track wire and between the guide wires. substantially as shown and described.

2. In a store service apparatus, the combi nation of hangers or supports, stationary track wire and propelling wire, a curved plate having openings for the passage of said wires, and a car having the upper track rollers and the lower roller engaging the propelling wire, all adapted to operate as described.

3. The combination with hangers or supports, of a stationary track wire secured to said hangers, a curved plate having tubular curved track, a curved guide on the under side of said plate, U-shaped brackets secured to each end of the curved plate, guide wires secured to the upwardly-extending ends of said brackets and extending parallel with the track wires in opposite directions, substantially as shown and described.

4. In a store service apparatus, the combination of hangers or supports, stationary track wire and propelling wire, a curved plate having openings for the passage of said wires, a car having the upper track rollers and the lower roller engaging the propelling wire, the slide having a finger and carried by the car and the guides for operating on the finger or pin for raising the slide, all adapted to serve in the manner and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID LIPPY.

Witnesses:
J. BAHL,
HENRY C. MCCLUER.