(Model.)

A. J. SLONECKER.

STORE SERVICE APPARATUS.

No. 490,168. Patented Jan. 17, 1893.

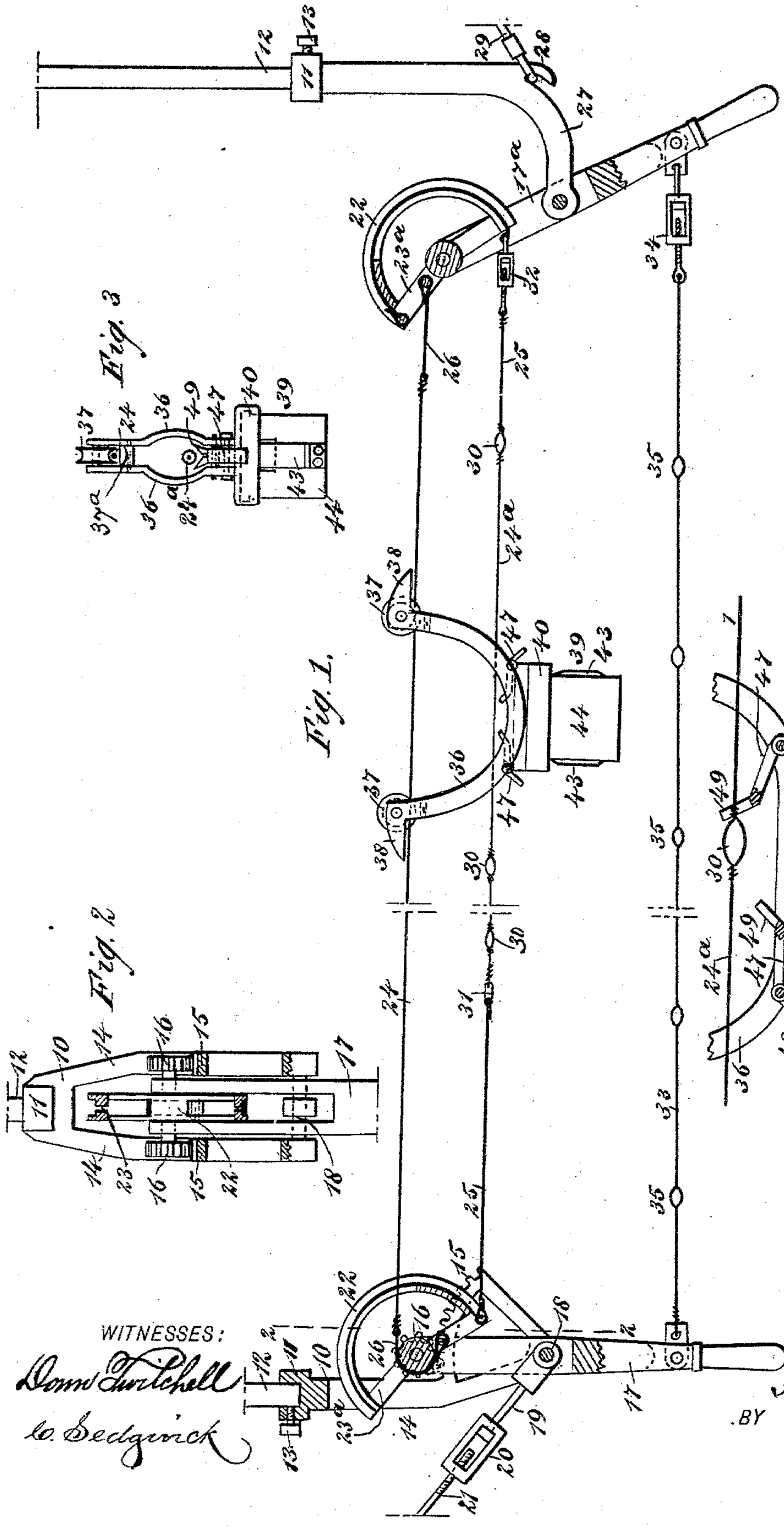

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

UNITED STATES PATENT OFFICE.

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STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 490,168, dated January 17, 1893.

Application filed June 22, 1891. Serial No. 397,119. (Model.)

To all whom it may concern:

Be it known that I, ABIRAM J. SLONECKER, of Farmersville, in the county of Livingston and State of Missouri, have invented a new and Improved Store-Service Apparatus, of which the following is a full, clear, and exact description.

My invention relates to improvements in store service apparatus, and the object of my invention is to produce a simple, durable and efficient apparatus for carrying money and merchandise from one part of a building to another.

To this end, my invention consists in certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a broken side elevation, partly in section, of the apparatus, showing the manner in which it is arranged within a building; Fig. 2 is a broken vertical section on line 2—2 in Fig. 1, showing the operating mechanism at one end of the line; Fig. 3 is a detail end view of the car, showing its supporting wires in section; and Fig. 4 is an enlarged detail view of the money box, showing the manner in which it is supported, and showing it in position to be started by a wire.

At one end of the line a fork 10, is arranged for supporting the operating handle and connected parts, the fork having at its upper end a socket 11, which is adapted to be placed upon a support 12, and which is held in position by a set screw 13. The members 14 of the fork extend downward parallel with each other, and at the lower ends of the members are segmental gears 15, which mesh with pinions 16, carried by a shaft journaled in the upper end of the handle 17, the handle being also pivoted at the lower extremities of the fork by a pin 18, so that when it is moved upon the pin the upper end of it will have the necessary throw. The pin 18 is connected with the rod 19, which rod connects by means of a turn-buckle 20, with another rod 21, which is screw-threaded at the end, and may be connected to any convenient support, and by adjusting the turn-buckle, the position of the handle and the wires connected with it may be regulated.

The handle 17 is forked at its upper end and carries a segmental rim 22, which has a grooved face, and is slotted throughout nearly its entire length, as shown at 23 in Fig. 2, and which also has slotted spokes 23^a, through which the band 26, connected with the carrying wire 24, may pass. This rim 22 has a band 25, secured to its periphery at one end, which band is adapted to be wound upon the rim, and it has also secured to one of its spokes near the hub, a shorter band 26, which is adapted to extend around the hub. The band 26 is coupled to the main carrying wire 24, and the band 25 is coupled to a parallel wire 24^a, which extends beneath the carrying wire, and these two wires connect with a similar rim 22 at the opposite end of the line, said rim being also provided with bands which connect with the wires in the manner above described, and the latter rim is pivoted in the upper end of a forked handle 17^a which is suspended like the handle 17, and which is pivoted at the lower end of a bracket 27, which is provided with a socket 11, and set screw 13 like those above described, and by means of the socket and set screw it connects with the support 12. The bracket has a projecting hook 28 near its lower end which engages a suitable brace rod 29. It will thus be seen that when one of the handles 17 or 17^a is moved, the other will be moved simultaneously, owing to the connection between the two rims 22. The lower wire 24^a, connecting the two rims, is provided with a series of balls 30, which are adapted to operate the carrying car, one ball being placed near each of the handles, and the other balls being placed at intervals along the wire. The lower ends of the handles 17 and 17^a are connected by a wire 33, which has a turn-buckle 34, at one end by means of which it may be tightened, and the wire 33, has also balls 35, at intervals thereon which enable the wire to be easily grasped by a person, and by moving it in either direction the handles may be correspondingly moved. The balls 35 are preferably arranged to align with the balls 30.

The car which carries the money or other

commodity is made to run on the wire 24, and this car is provided with a U-shaped frame 36, which clasps the wires 24 and 24ª, and which is provided at the ends with pulleys 37, which run upon the wire 24. Beneath the pulleys 37 are guide blocks 37ª, which prevent the frame 36 from jumping. The extreme ends 38 of this U-shaped frame are bent so as to extend parallel with the wire 24, as shown in Fig. 1, and these ends are adapted to contact with the rims 22, and stop the car. The frame 36 carries the money box 39, which is suspended from the lower portion of the frame 36. The box has a fixed cover 40, which is secured to the frame and which has depending flanges 41 at the ends, which flanges have shoulders 42 on their inner sides. The box proper 44, is adapted to fit between the flanges, and carries springs 43, which are secured to it near the bottom, and the upper ends of these springs are formed into hooks 45, which are adapted to rest upon the shoulders 42 and support the box. The box 39 is recessed opposite the ends of the springs, as shown at 46, so that the springs may be easily moved; and to secure the box in the cover it is merely pushed upward, the flexibility of the springs permitting them to pass between the flanges 41, and the tension forces them outward after they have passed the flanges so that the hooks 45 will engage the shoulders of the flanges. To release the box, the springs are simply pressed inward so as to disengage the hooks from the shoulders of the flanges. At each end of the cover 40 is pivoted a catch 47, the lower end 48 of which is bent so that when the catch is raised, the end will engage the end of the cover, and the upper end 49, is formed into a fork, and is adapted to straddle the wire 24ª, and engage a ball 30 on the wire. It will be noticed by reference to Fig. 1, that when the band 26 is wound upon the hub of one rim the opposite band 26 will extend straight out from the opposite rim, and when the band 25 is wound upon the periphery of one rim the opposite band 25 will extend straight out from the lower portion of the opposite rim, the band 25 being wound upon one rim when the band 26 is wound upon the hub of the opposite rim, and that when one handle is in a vertical position, the other handle is inclined and the wire 24 slants from the rim of the vertical handle to the other; as a result, when the inclined handle is thrown forward, the sudden unwinding of the bands causes a ball 30 to strike a catch 47 of the car with force, and this, together with the change in the incline of the wire, causes the car to move quickly from one end of the line to the other.

The operation of the device is as follows; The car is stopped at some point on the line, and a ball 30 engages one of the catches 47 and holds the car rigidly in place. The money or other commodity to be transported is placed in the money box, and one of the handles 17 or 17ª is thrown forward, according to the direction in which the car is to be moved, thus moving the rims 22 by means of the gear connections between one of the rims and the handle 17, and the ball 30 engaging the catch 47, will start the car, which will run easily upon its supporting wire 24. As soon as the wire 24ª and ball 30 are moved to start the car, the rims 22 will be moved so as to slant the wire 24ª slightly, and the balls thereon will clear the catches 47, so that no impediment will be offered to the free movement of the car. When the car reaches the end of the line it is locked in position in the following manner; we will suppose that the car, as shown in Fig. 1, is moving toward the handle 17ª. When it reaches the rim 22, the projecting end 38 of the car will strike the upper portion of the rim, thus turning the latter slightly and lowering the wire 24ª, so that a ball 30 will drop between the catches 47, and they will thus prevent the car from being moved; it may then be sent to the other end of the wire by pushing on the handle 17ª.

It will be noticed that by means of the balls 35 and wire 33, the car may be sent in either direction from any point on the line, and the car may be also stopped at any point by moving the wire 33 and the handles 17 and 17ª so as to lower the wire 24ª, and cause a ball 30 to engage a catch 47; it may also be brought from either end of the wire to the operator at any point on the line.

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

1. A store service apparatus, comprising segmental rims pivoted at opposite ends of the line, parallel wires connecting the hubs and peripheries of the rims, the lower of said wires being provided with balls, a car adapted to run upon the upper wire and provided with catches to engage the balls of the lower wire, and a lever mechanism for operating the rims, substantially as described.

2. A store service apparatus, comprising segmental rims pivoted at each end of the line, said rims having slotted faces and slotted spokes, a connecting wire secured to the end spoke of one rim and extending over the hub to the upper spoke of the opposite rim, a connecting wire extending from the upper part of one rim to the lower part of the opposite rim and adapted to be wound upon the rims, said wire having a series of balls thereon, a car adapted to run upon the upper wire and having catches to engage the balls of the lower wire, and a lever mechanism for turning the rims, substantially as described.

3. A store service, comprising a fork suspended from a support and provided with segmental gears, a handle pivoted in the lower portion of the fork and provided with a shaft at its upper end which is geared to the segmental gears, a segmental rim secured to the shaft in the handle, a similar rim and handle arranged at the opposite end of the line, a connecting wire connecting the central por-

tions of the two rims, a lower wire connecting the peripheries of the rims and provided with a series of balls, and a car adapted to run upon the upper wire and provided with catches which engage the balls of the lower wire, substantially as described.

4. In a store service apparatus, the combination, with the oppositely arranged rims and handles connected as described, of a wire extending between the lower ends of the handles, said wire having a series of balls thereon, substantially as described.

5. In a store service apparatus, the combination, of two parallel wires, the lower one of which is provided with a series of balls, a lever mechanism for moving the wires and changing their inclinations, and a car adapted to run upon the upper wire, said car having catches to engage the balls of the lower wire, substantially as described.

6. The combination, with two parallel wires, the lower of which is provided with a series of balls, of a lever mechanism for moving the wires, and a car for running upon the wires, said car comprising a U-shaped frame embracing the wires and having pulleys to run upon the upper wire, catches pivoted in the lower part of the frame and adapted to engage the balls of the lower wires, and a detachable money box suspended from the frame, substantially as described.

7. In a store service apparatus, the combination, with the movable segmental rims and the wires connecting them, the lower wire having balls thereon, of a car adapted to run upon the wires, said car having projecting upper ends to contact with the segmental rims, substantially as described.

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Witnesses:
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