

(No Model.)

2 Sheets—Sheet 1.

S. W. BARR.

STORE SERVICE APPARATUS.

No. 413,477.

Patented Oct. 22, 1889.

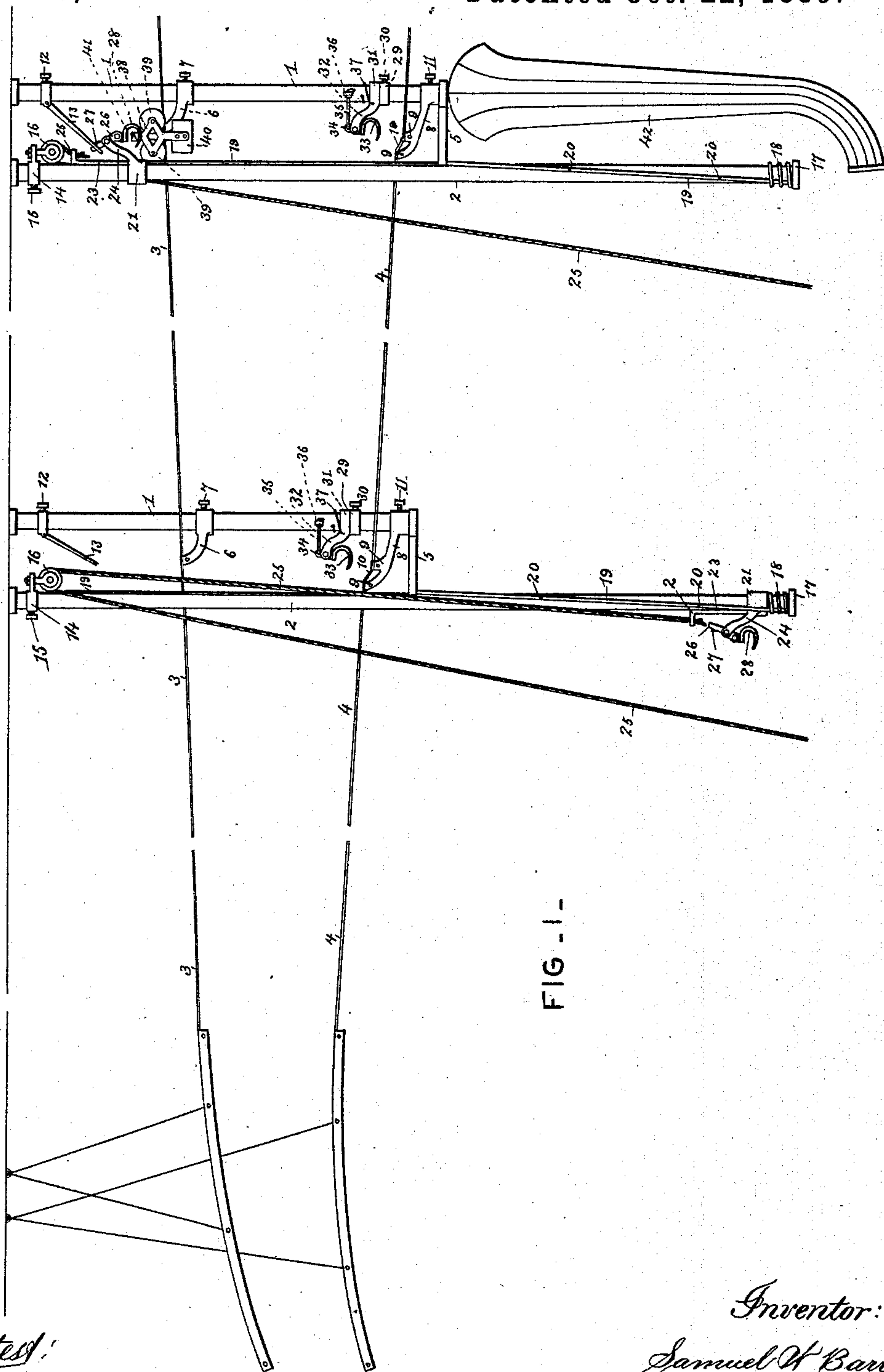


FIG. 1.

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(No Model.)

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FIG - II -

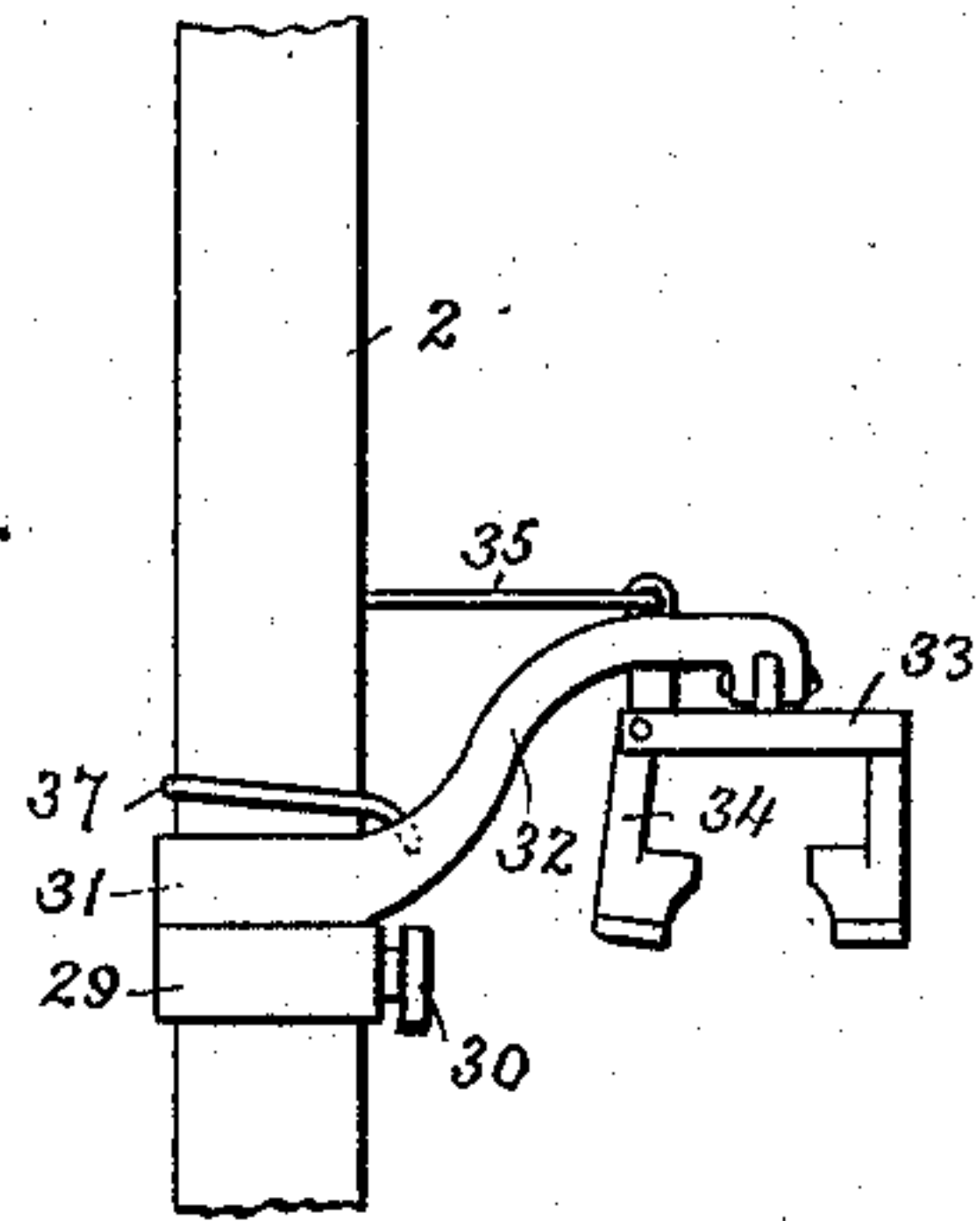


FIG - IV -

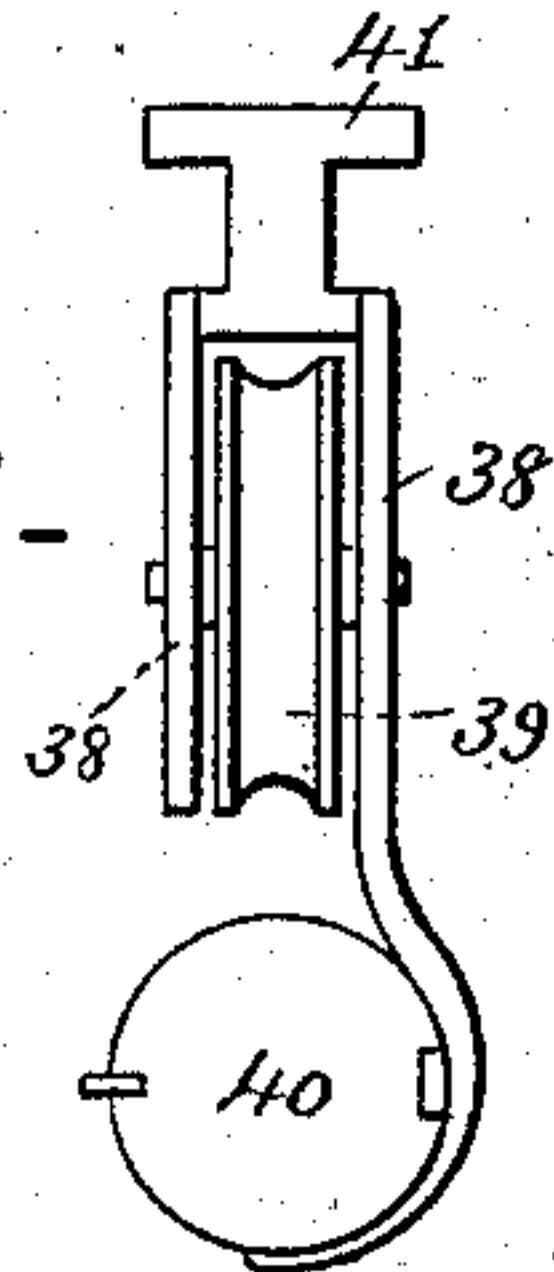


FIG - III -

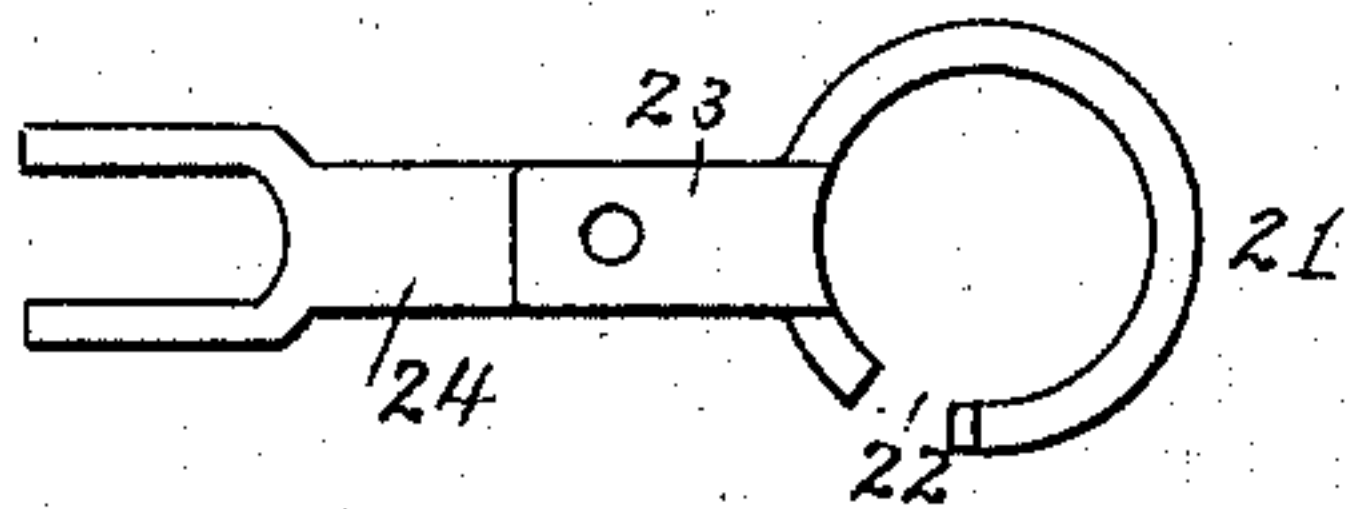


FIG - V -

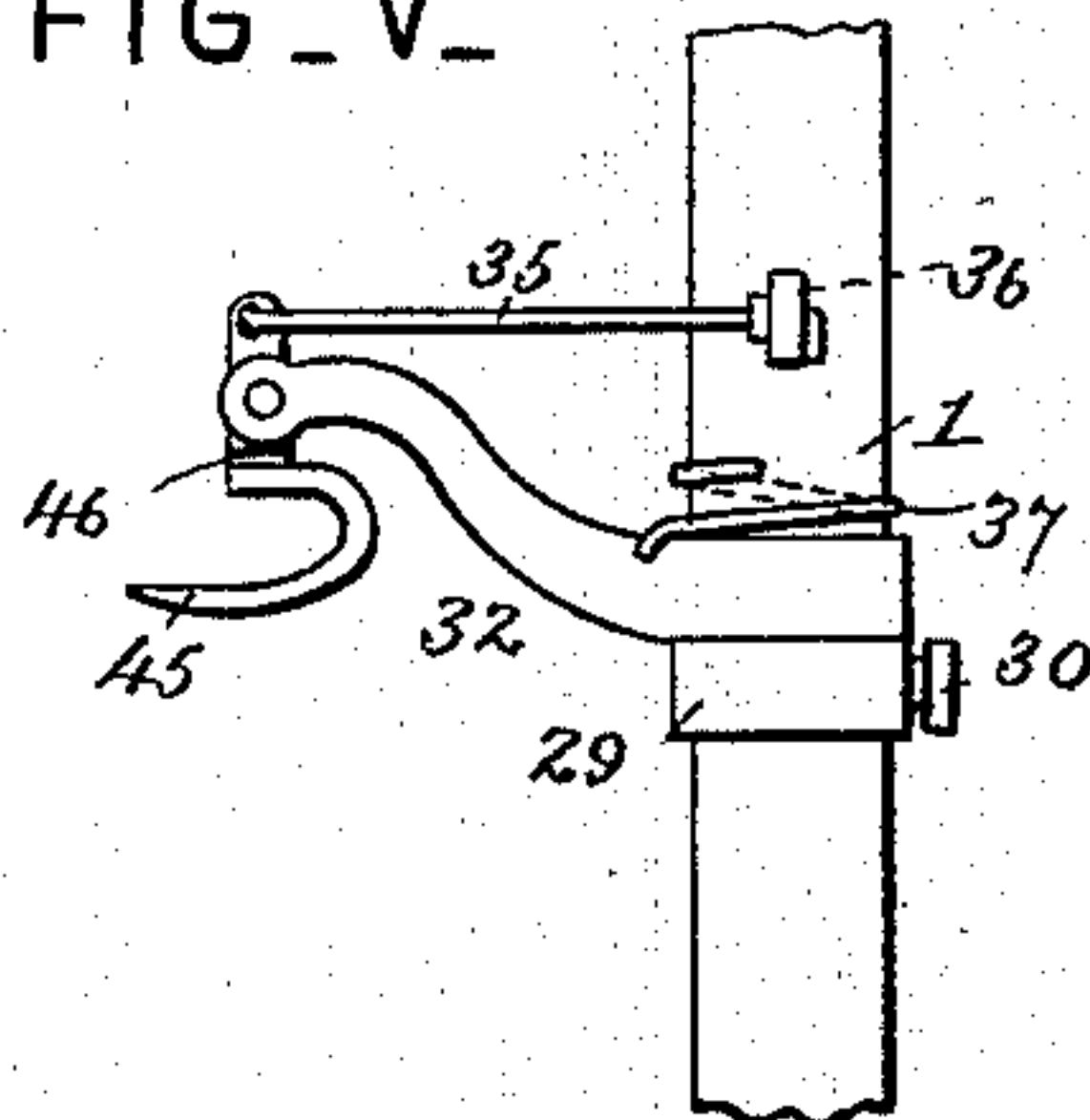


FIG - VI -

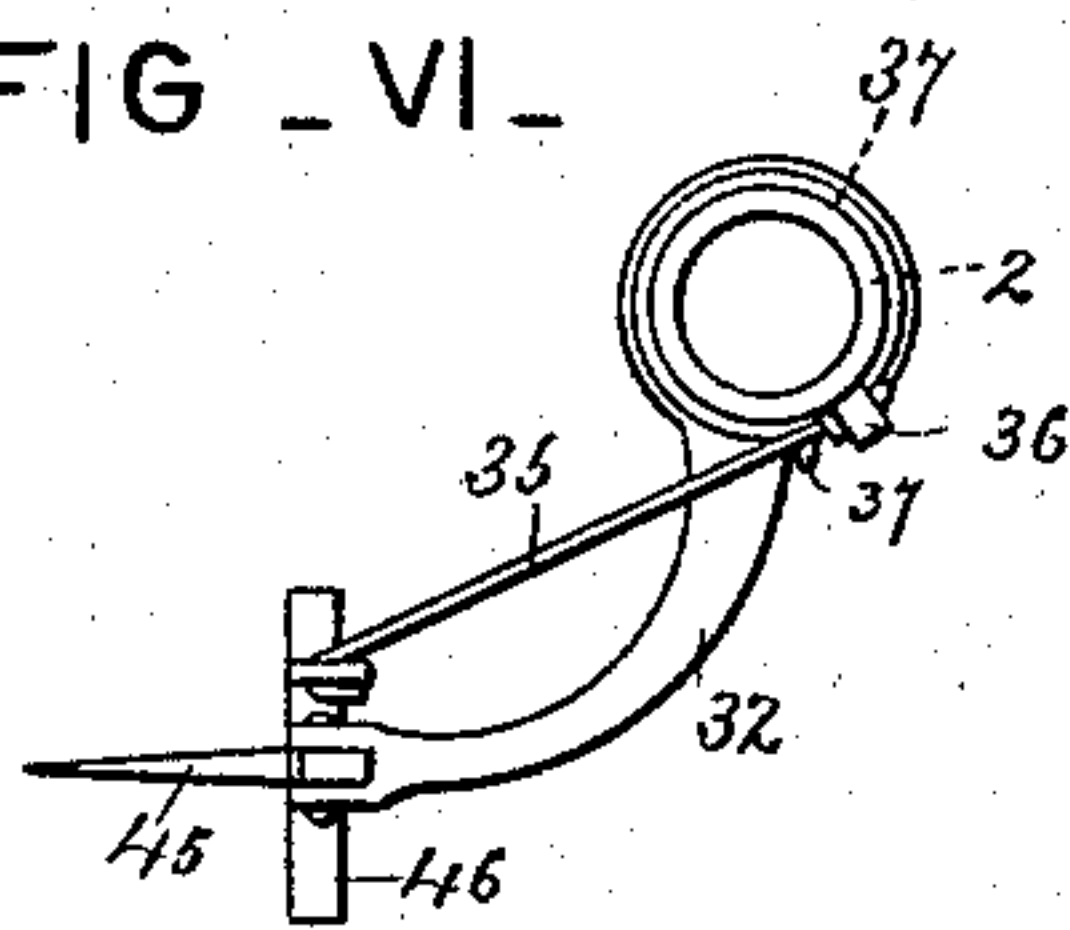
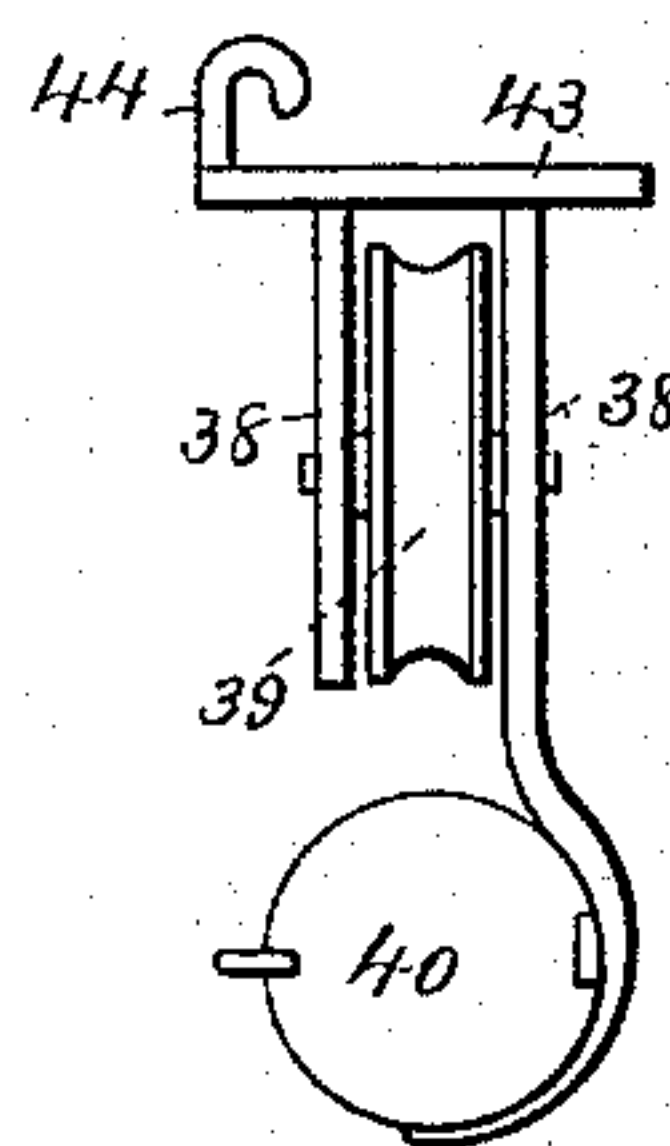


FIG - VII -



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UNITED STATES PATENT OFFICE.

SAMUEL W. BARR, OF MANSFIELD, OHIO.

STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 413,477, dated October 22, 1889.

Application filed April 4, 1889. Serial No. 305,949. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL W. BARR, a citizen of the United States, and a resident of Mansfield, in the county of Richland and State of Ohio, have invented new and useful Improvements in Store-Service Apparatus, of which the following is a specification.

The object of my invention is to provide a simple, inexpensive, and effective apparatus that will occupy as little room as possible and do the work of cash-boys in large stores.

My invention relates to a gravity cash-carrier for store-service apparatus; and my improvement consists in the construction of the apparatus, as hereinafter described, and pointed out in the claims.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure I is a side elevation of my improved gravity cash-carrier apparatus, showing two stations. Fig. II is an elevation of the rotating arm carrying the arresting and releasing double hook open. Fig. III is a top view of the carrier-elevator. Fig. IV is an end elevation of a carrier with elevator-engaging block. Fig. V is an elevation of a rotating arm carrying the arresting and releasing single hook. Fig. VI is a top view thereof. Fig. VII is an end elevation of a carrier with elevator-engaging staple or hook.

1 is a short pipe, and 2 a long pipe, rigidly secured to a ceiling or overhead floor for supporting the upper track-wire 3 and lower track-wire 4, respectively, the upper track-wire being inclined from the sales-clerk's station to the cashier's desk, and the lower track-wire being inclined from the cashier's desk to the sales-clerk's station. The short pipe 1 is connected at its lower end to the long pipe 2 by means of a tapered bar 5, which steadies or braces the two pipes at each station.

6 is an arm secured to the short pipe for supporting the upper track-wire, adjustable on the pipe and held thereto by a set-screw 7. The lower track-wire is supported on an arm 8, having two fingers 9 of different height to provide a depression 10 in the lower track and secured adjustably to the lower end of the short pipe 1 by a set-screw 11. At the upper end of the short pipe is secured

adjustably by a set-screw 12 the downwardly-projecting hinged forked tilting arm 13. To the upper end of the long pipe is secured adjustably a pulley-supporting arm 14 by means of a set-screw 15. 16 is a pulley swiveled to the arm 14. The long pipe has a cap 17 providing a flange on its lower end, on which is supported a cushioning-spring 18, coiled around the pipe.

19 is a narrow spiral strip preferably of metal and secured by means of screws 20 lengthwise of and to the long pipe. It winds around one-half the circle of the pipe and leads across the narrow end of the tapered brace-bar 5.

21 is a carrier-elevator adapted to slide up and down the long pipe, having an opening 22 in its side occupied by the narrow strip, which guides it in its vertical movement past the tapered bar 5. This carrier-elevator is provided with an upwardly-extending stem 23 and with an arm 24. To the stem is secured the elevating cord or rope 25, which passes over the pulley 16 and extends downward within reach of the sales-clerk.

26 is a lever pivoted to the arm 24 and formed with a projection 27, which is engaged by the tilting bar when the carrier-elevator is raised. The lever carries the carrier-hook 28 at its lower end. Just above the lower track-wire on the short pipe is a collar 29, fixed at the desired height by means of a set-screw 30. Bearing on this collar and turning on the short pipe is a sleeve 31, having an arm 32, carrying the arresting and releasing double hook 33. This hook has a hinged prong or jaw 34, swinging sidewise from and toward the fixed prong or jaw, connected by a rod 35 with a fixed lug 36 on the short pipe.

37 is a spiral spring connected at one end to the arm 32, coiled around the short pipe, and secured at its other end to the latter. The space between the prongs of the hook varies in width from one-eighth of an inch to two inches or more, each hook increasing one-eighth of an inch in width. The lug 36 is located at one side of the center of motion of the arm 32, so that when the arm swings toward the lug the rod presses against the upper portion of the pivoted jaw or prong of the hook and spreads the latter, as shown in Fig.

II. The spiral spring 37 returns the arresting and releasing hook and the pivoted jaw to normal position. One of these expansible automatically-acting hooks is located at each station. The carrier-hook at each station has a space between its prongs or jaws corresponding to the space between the prongs or jaws of the arresting and releasing hook at its station.

The carrier-frame 38 is cast integral for two grooved wheels 39 and a cash-box 40. An elevator-engaging T-shaped block 41 is secured to the top of the carrier-frame, with its extensions or arms at right angles to the carrier-frame. The neck of the block varies in thickness from one-eighth of an inch to two inches or more, and is adapted to fit the hooks. A carrier having a T-shaped block two inches wide would be caught by an arresting and releasing hook with jaws or prongs two inches apart, while a carrier having a block with a neck one inch and seven-eighths wide would pass through the hook having two-inch space and be caught by the next hook. By this arrangement the carriers will all be caught at their proper station.

42 is a wire trough or chute down which the carrier drops when arrested and released, having a curved lower end for retaining the carrier.

Instead of the block 41 the carrier may be provided with a cross-bar 43, carrying an elevator-engaging hook or staple 44, as shown in Fig. VII. This hook or staple 44 is caught by an arresting and releasing hook having a single prong or jaw 45, as shown in Figs. V and VI, secured to a cross-bar 46. In this arrangement the hook-prong may be varied in position along the bar that holds it. If it is set at the end of the bar and the hook or staple on the cross-bar of the carrier is at the end of the cross-bar, the arresting-hook will catch the carrier, and when the arresting-hook is carried around by the momentum of the carrier the arresting-hook, which is pivoted in the arm, will be tilted by the rod connected thereto and the carrier will drop off. The hook or staple and the arresting-hook may be varied one-fourth of an inch from right to left or left to right along the cross-bars that hold them. The arresting-hook will catch the carrier that has a hook or staple to match it, and can be raised to catch a higher tier of carrier hooks or staples, if required. When a carrier is drawn up to set it on the upper track, the forked bar catches the projection

on the lever and tilts the carrier over to set the wheels on the track, and by slacking the cord a little the carrier moves off. The carrier-elevator is then allowed to drop to the lower end of the pipe. When the carrier returns, it is caught by the arresting-hook adapted to it before it drops in the depression made in the lower track-wire at its station, and the momentum gained carries the arresting-hook around until the wheels are to one side of the track and the hook-jaws open or spread enough to let the T-shaped block slip through. The carrier then slides down the wire trough or chute to the sales-clerk. The arresting-hook is then carried back into normal position by the spring and the movable jaw closes, ready to catch another carrier provided with a block adapted to it, if several are needed for each station.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. The combination of the support and the rotating arm carrying the arresting and releasing hook, substantially as described.

2. The combination of the rigid support 1, having lug 36, the arm 32, carrying the arresting and releasing hook, the rod 35, connecting the hook with the lug, and the spring 37, connected at one end with the support and at the other end with the arm, substantially as described.

3. The combination of the rigid support 1, having lug 36, the arm 32, carrying the arresting and releasing hook 33, having pivoted jaw 34, the rod 35, connecting the jaw with the lug, and the spring 37, connected at one end with the support and at the other end with the arm, substantially as described.

4. The combination of the support 1, having lug 36 and the adjustable collar 29, with the arm carrying the arresting and releasing hook, substantially as described.

5. The combination of the support 1 with the arm carrying the arresting and releasing hook and the carrier-receiving trough or chute 42, substantially as described.

6. The combination of the support 1 and the return-track wire having a depression with the carrier arresting and releasing device and the carrier-receiving trough or chute 42, substantially as described.

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Witnesses:

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SAML. MARRIOTT.