

(No Model.)

S. W. BARR.
STORE SERVICE APPARATUS.

No. 413,478.

Patented Oct. 22, 1889.

FIG. I -

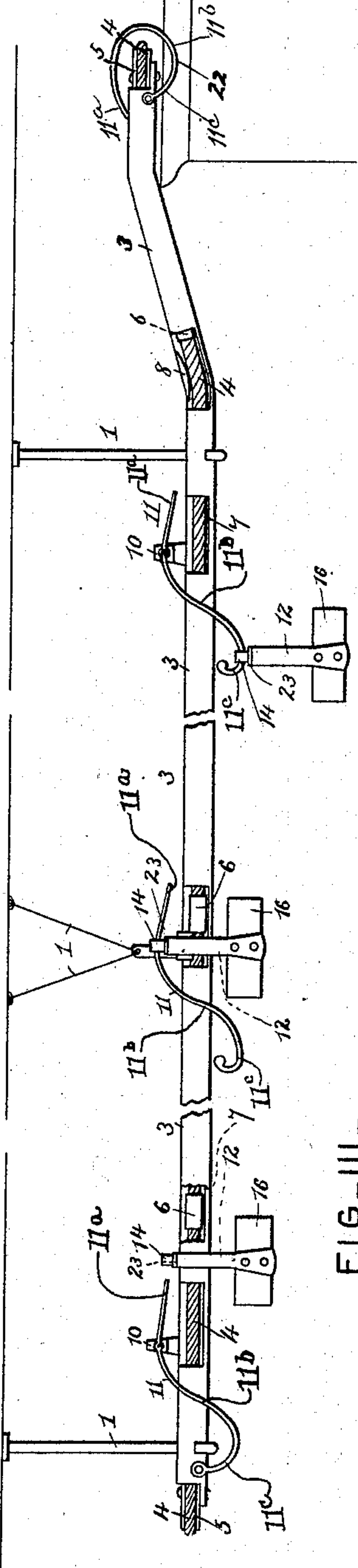


FIG. II -

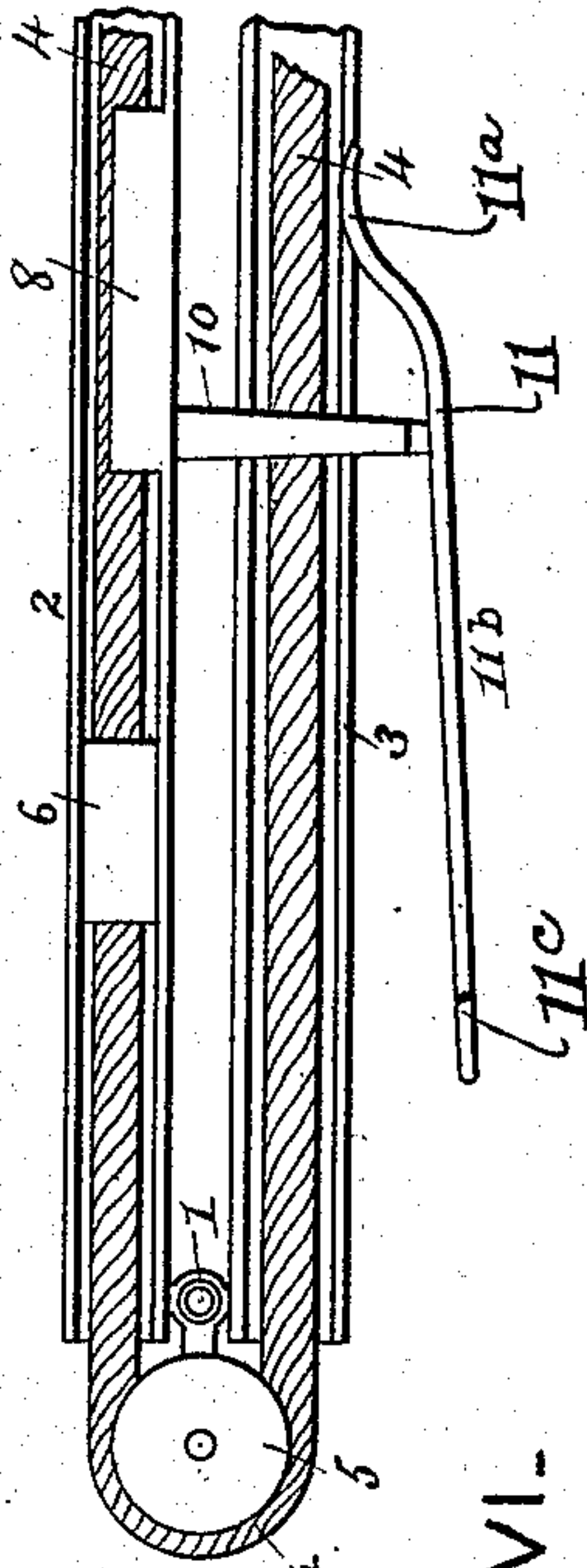


FIG. III -

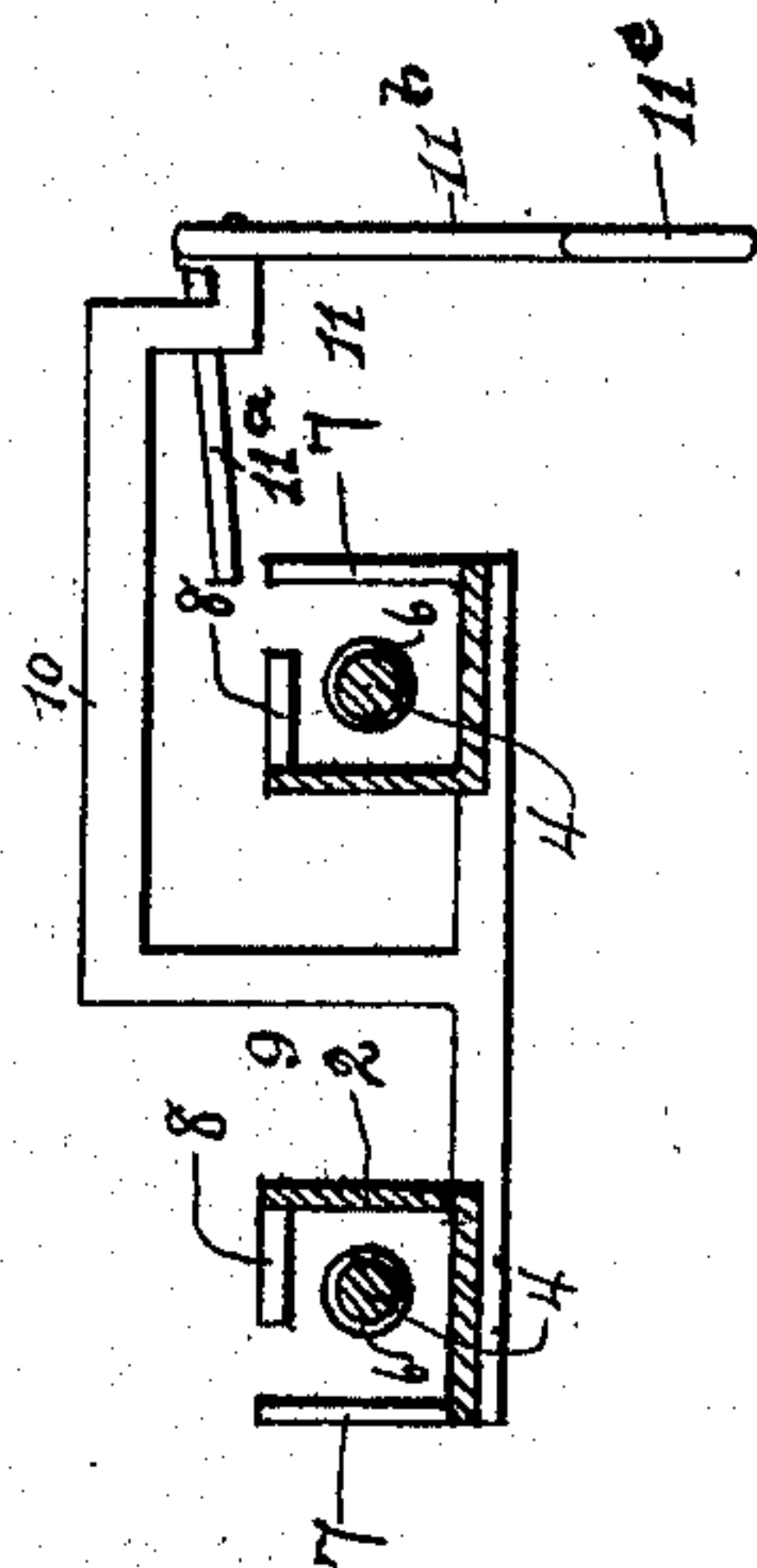


FIG. VI -

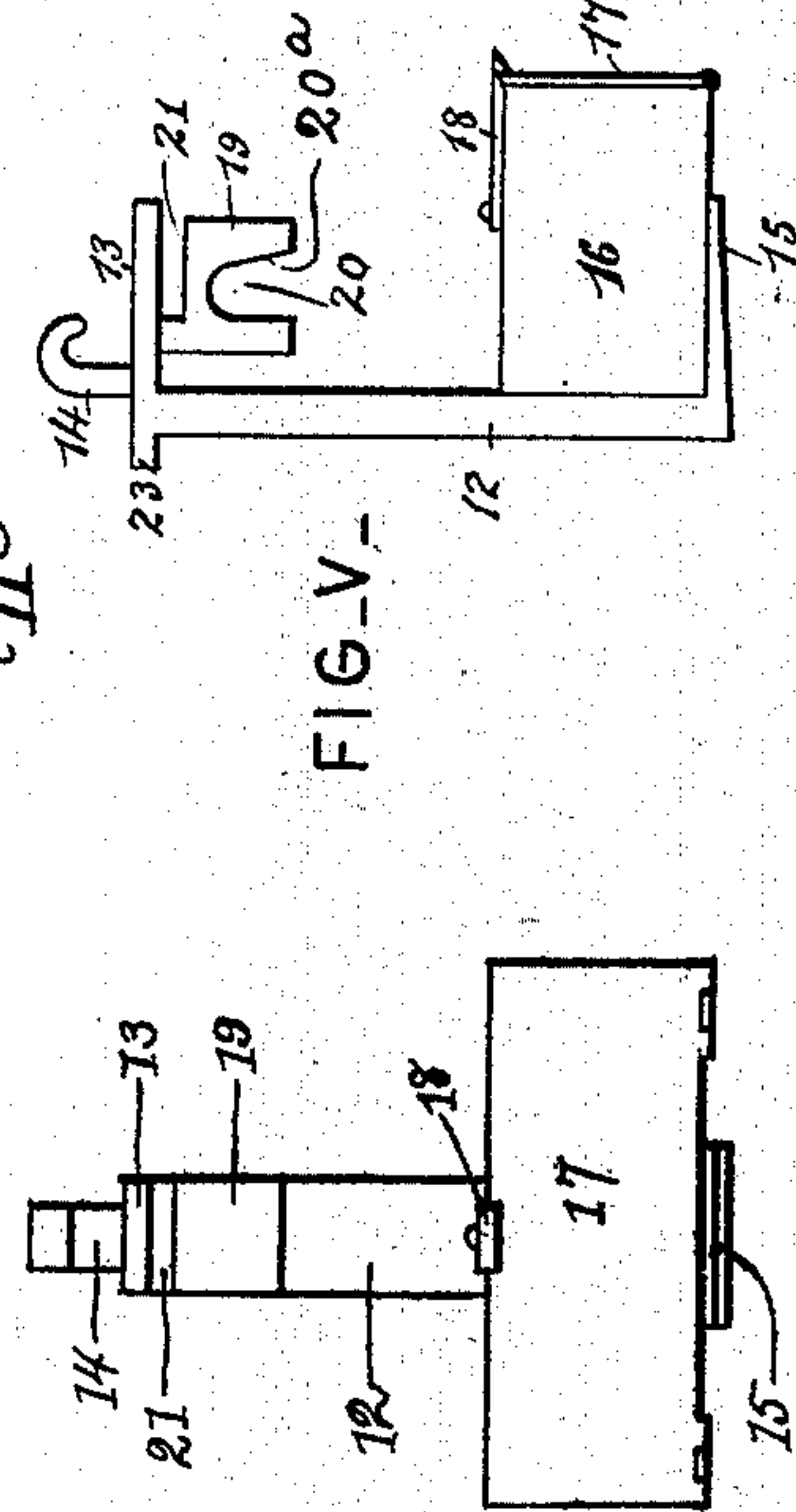


FIG. V -

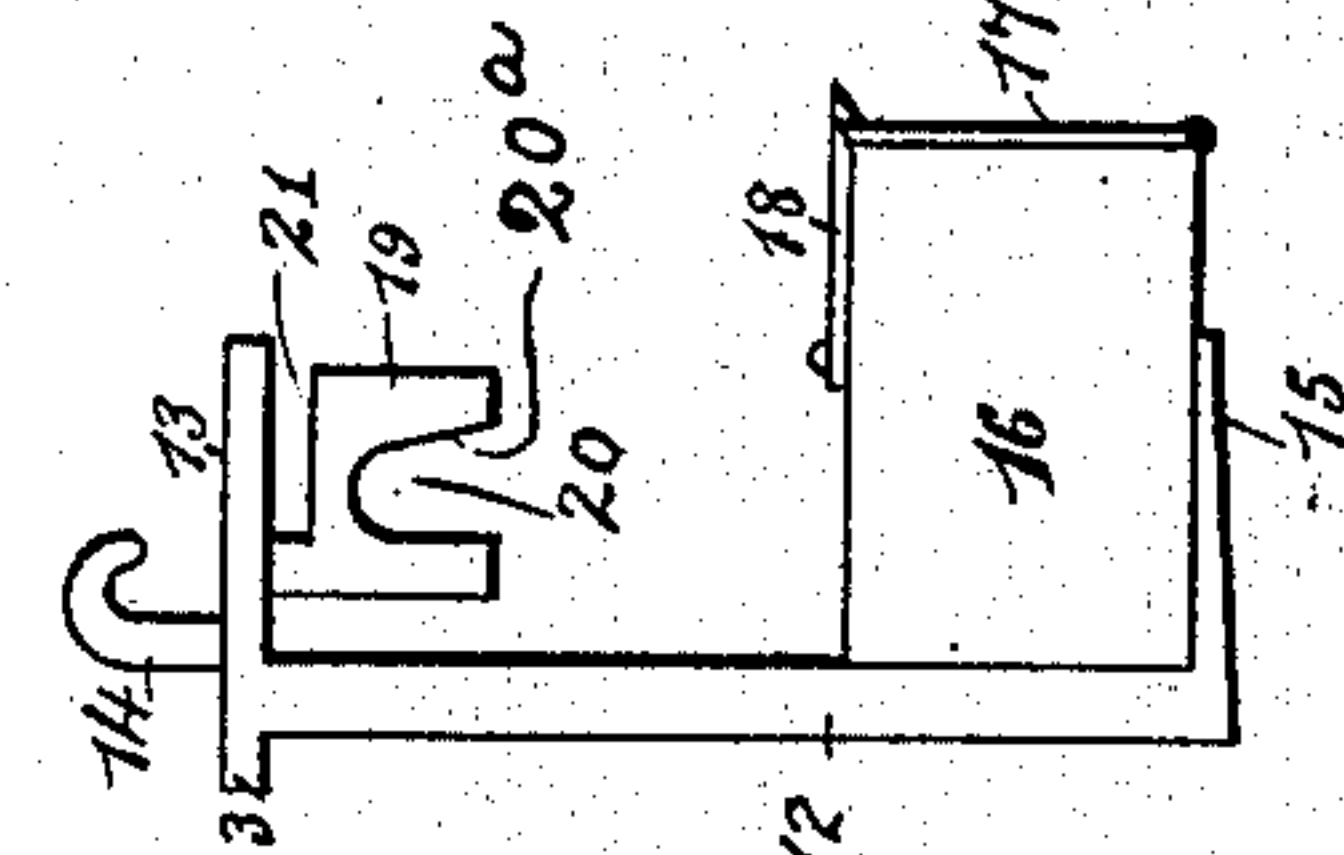


FIG. IV -

1/4	1/4	1/2	3/4	1
1/4	1/4	1/2	3/4	1
1/4	1/4	1/2	3/4	1
1/4	1/4	1/2	3/4	1
1/4	1/4	1/2	3/4	1

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UNITED STATES PATENT OFFICE.

SAMUEL W. BARR, OF MANSFIELD, OHIO.

STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 413,478, dated October 22, 1889.

Application filed April 4, 1889. Serial No. 305,950. (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 furnish a simple store-service apparatus which will not occupy much room and at the same time be rapid and adapted to run around curves.

My invention relates to that class of store-service apparatus in which a traveling cable is employed to convey the carriers; and my improvements consist in the construction of parts, 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 the apparatus with my improvements applied thereto. Fig. II is a plan view of a portion of the cable-way. Fig. III is a side elevation of a switch-support. Fig. IV is a diagram showing the changes that may be made to the square inch in the position of the carrier staple or hook for switching. Fig. V is an end elevation of a carrier. Fig. VI is a front elevation thereof.

1 are suitable hangers, which may be pipes or wires, secured to a ceiling or overhead floor, forming supports for a way consisting of a pair of cable-troughs 2 and 3, formed of brass or other suitable material and of suitable size for the rapidly-moving cord or cable 4, running along the bottom and working around pulleys 5. The cord or cable is driven by water-power or other inexpensive motor. At suitable intervals on the cord or cable are secured plain thimbles or short pieces of tube 6, made of brass, rubber, leather, or other suitable material. Each cable-trough is formed rectangular in cross-section and with an opening 7 in its side at each station for the entrance of and exit of the carrier-block hereinafter described.

8 is a top piece located at the bend of the trough for keeping the cord or cable in place in curved portions. Secured to the bottom of the way and projecting upwardly between

the troughs 2 and 3 is a switch-bracket 9, having an arm 10, projecting over an opening 7, forming a support for a switch-bar 11, which lifts and carries the carrier from the cable or cord out through its side opening 7 and upward and from the trough.

The switch-bar 11 is formed with a downwardly and inwardly curved inner end 11^a for switching the carrier, and with a downwardly-curved outer end 11^b, having a retaining-hook 11^c.

12 is a carrier-frame having an upper horizontal overhanging arm 13, provided with a switch hook or staple 14, and a lower horizontal arm 15, supporting a box 16, having a hinged front 17 and spring-catch 18. To the upper arm 13 of the carrier-frame is rigidly secured a pendent rectangular block 19, adapted to slide freely in the trough, having an opening 20 to adapt it to straddle the cord or cable, and with a recess 21 to permit it to pass the top piece 8. The cable-opening 20 is widened at one side 20^a to enable the carrier-block to move sidewise as it leaves the cable. This block is set in the trough so as to rest on the cord or cable and is moved by the thimbles on the latter.

The switch hook or staple may be varied in position to the extent indicated in the diagram to different points along the upper arm and extend to different heights, so that one staple or hook may be set at the end of the top piece and another one-fourth of an inch farther in, and another one-half of an inch farther on, &c., until several changes are made. Then the staple can be made longer or raised higher and go through the same number of changes on a higher plane. The point of the switch-bar 11 is arranged to catch the hook or staple by being placed in position over the trough to meet the hook or staple, and is varied in position in the same way as the latter. The point of the switch-bar enters the hook or staple, and the thimble on the cord or cable presses against the block 19 until the switch-bar lifts the carrier-frame, and consequently the block, above the cord or cable, and when the staple has reached its highest point on the switch-bar and the block has passed out of its opening 7 in the side of the trough the momentum of the carrier will carry the latter to the outer end or

lowest point of the switch-bar. At the cashier's desk a circular switch 22 is secured, having one end fastened to the outer edge of the trough and the other end engaging a lug 23 on the carrier-frame to lift the latter away from the track onto the circle, on which it runs or slides by gravity to the lowest point of the circle.

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 cable-way consisting of troughs 2 and 3, having side openings 7 for the entrance and exit of the carrier-block, the bracket 9, secured to the bottom of the way and extending upward between the troughs, having an arm 10 projecting over a trough, and a switch-bar 11, secured to the arm for removing the carrier-block for the cable, formed with a downwardly and inwardly curved inner end 11^a, and with a downwardly-curved outer end 11^b, having a retaining-hook 11^c, substantially as described.

2. The combination of the cable-way consisting of troughs 2 and 3, rectangular in cross-section, having side openings 7, the cable 4, having plain thimbles 6, a carrier having pendent rectangular block 19 and hook 14, the bracket 9, secured to the bottom of the way and extending upward between the troughs, having an arm 10, projecting over a trough, and a switch-bar 11, secured to the arm for removing the carrier-block from the cable, substantially as described.

3. The combination of the cable-way consisting of troughs 2 and 3, rectangular in cross-section, having side openings 7, the cable 4, having plain thimbles 6, a carrier

having pendent rectangular block 19 and hook 14, the bracket 9, secured to the bottom of the way and extending upward between the troughs, having an arm 10, projecting over a trough, and a switch-bar 11, secured to the arm, for removing the carrier-block from the cable, formed with a downwardly and inwardly curved inner end 11^a, and with a downwardly-curved outer end 11^b, having a retaining-hook 11^c, substantially as described.

4. The carrier constructed with a frame 12, the overhanging arm 13, and the rectangular block 19, depending from the arm, having a cable-opening 20, substantially as described.

5. The carrier constructed with a frame 12, the overhanging arm 13, and the rectangular block 19, depending from the arm, having a cable-opening 20, formed with widened portion 20^a at one side, substantially as described.

6. The carrier constructed with a frame 12, the upper horizontal overhanging arm 13, the rectangular block 19, depending from the arm, having a cable-opening 20, the lower horizontal arm 15, and the cash-box 16, substantially as described.

7. The carrier constructed with a frame 12, the upper horizontal overhanging arm 13, the rectangular block 19, depending from the arm, having a cable-opening 20, the lower horizontal arm 15, and the cash-box 16, having hinged front 17 and spring-catch 18, substantially as described.

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Witnesses:

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