

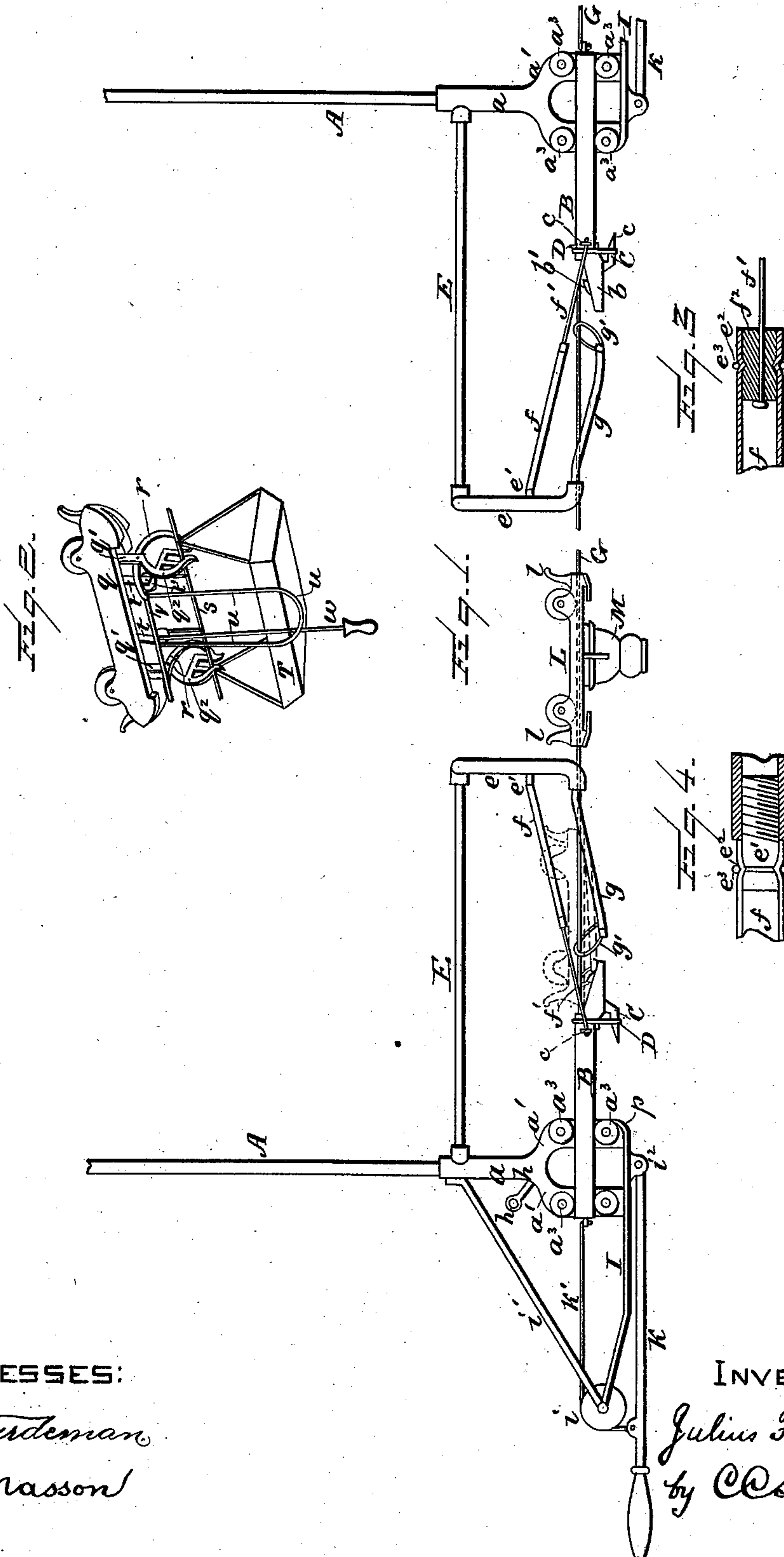
(No Model.)

2 Sheets—Sheet 1.

J. F. CAMP.
STORE SERVICE APPARATUS.

No. 373,268.

Patented Nov. 15, 1887.



WITNESSES:

E. E. Muddeman
E. E. Masson

INVENTOR

Julius F. Camp
by *C. Shepherd*
att'y.

(No Model.)

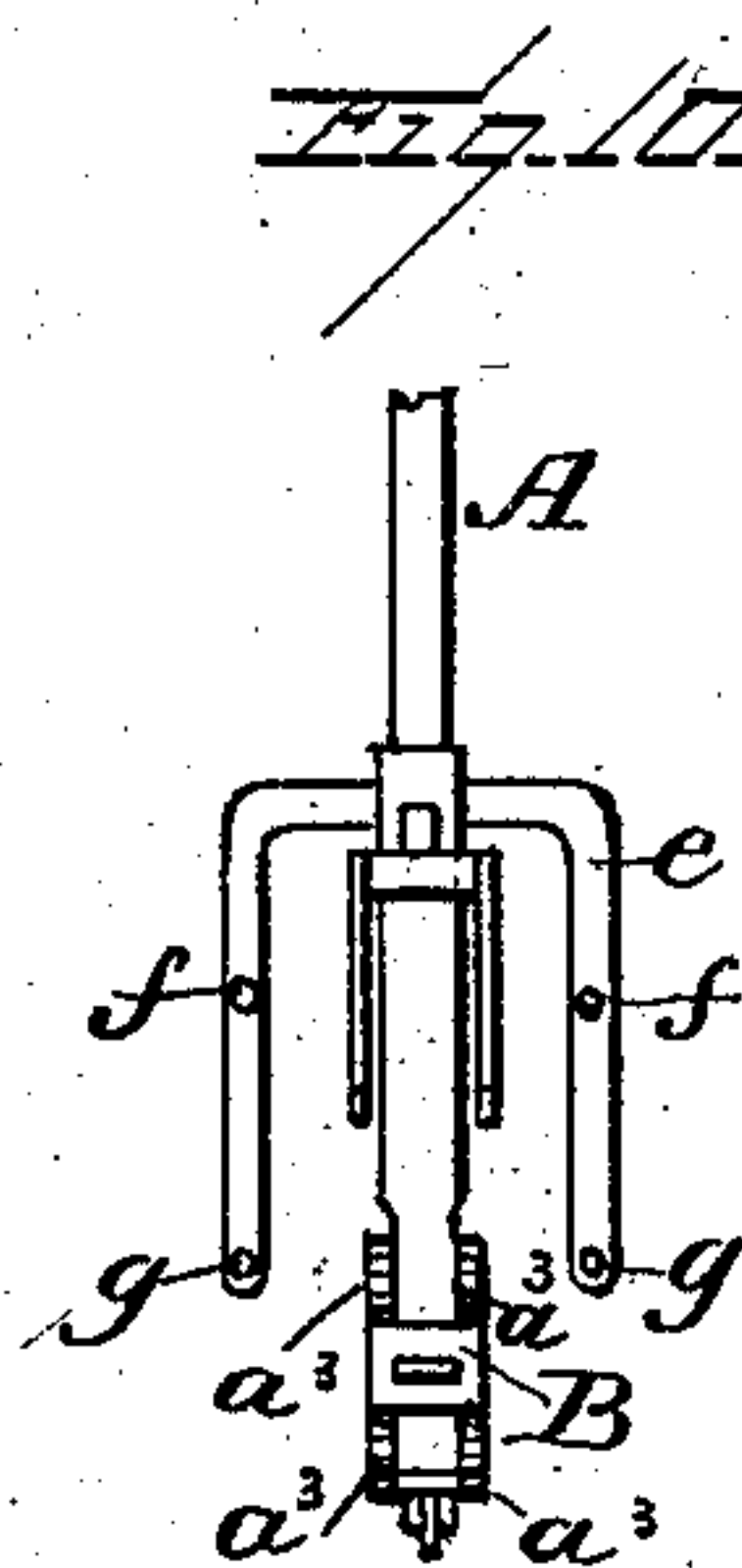
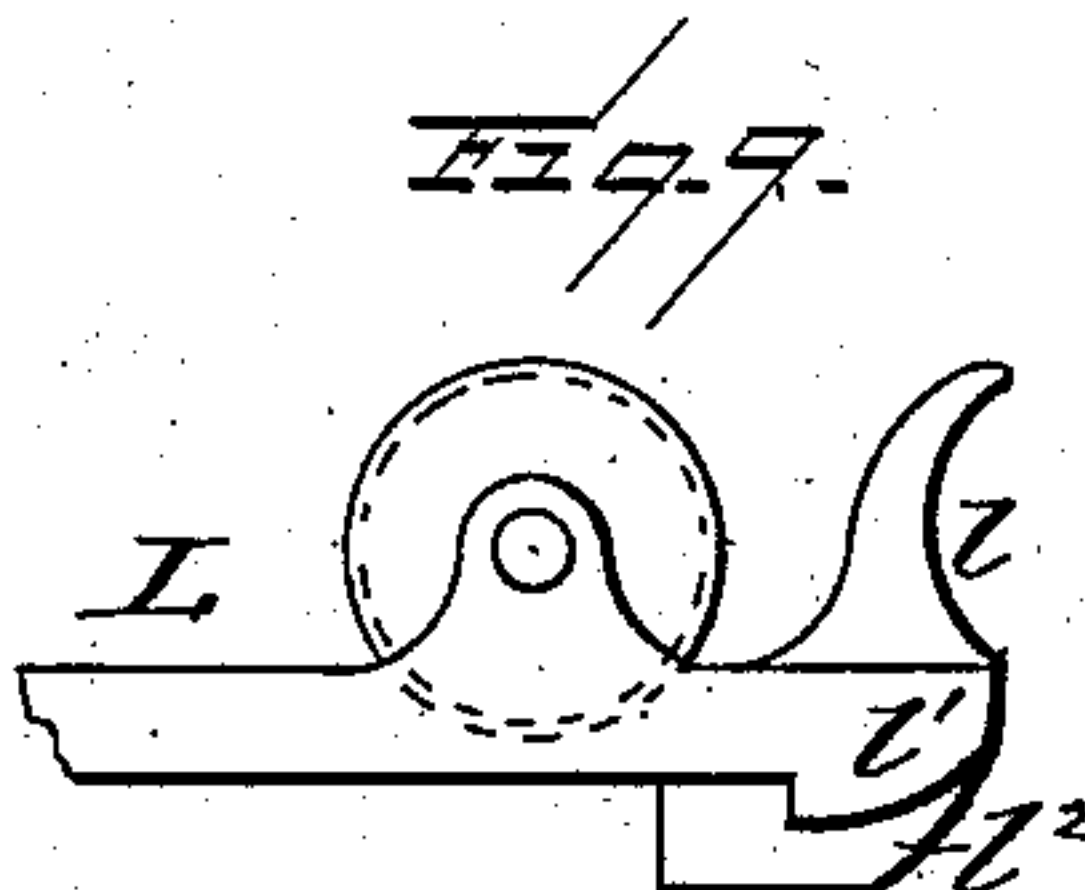
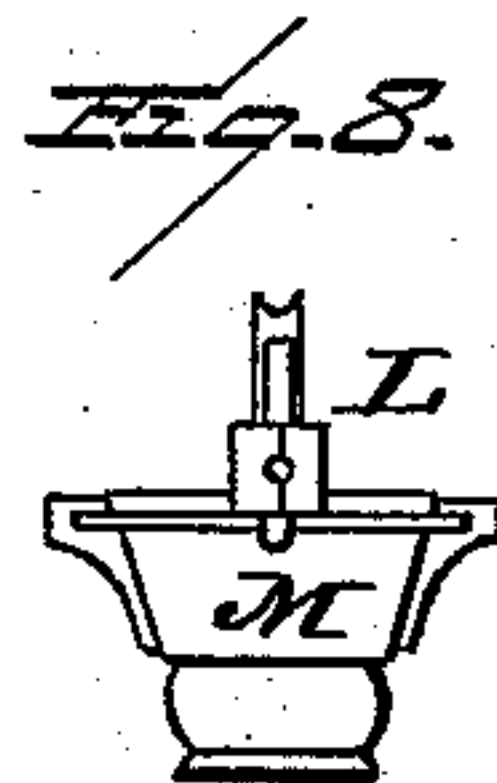
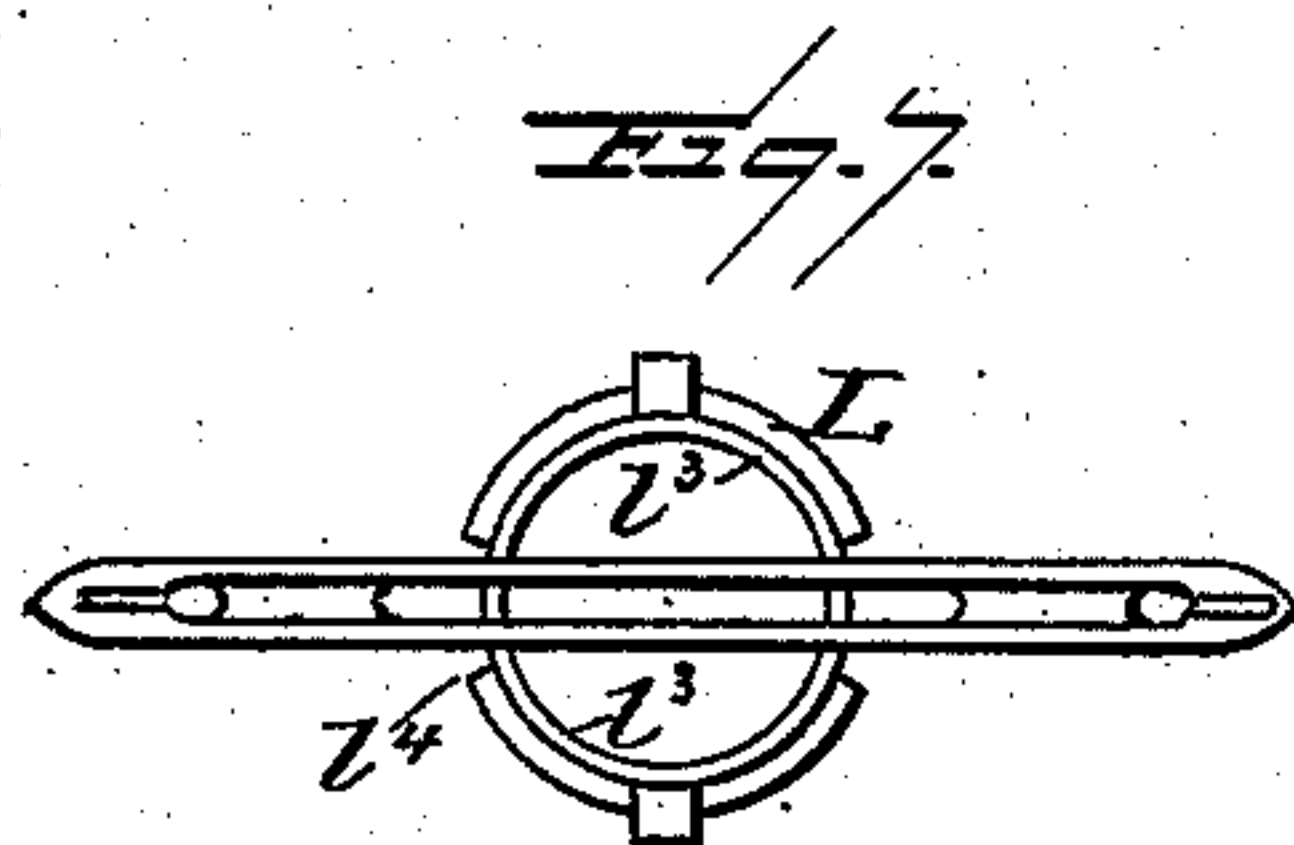
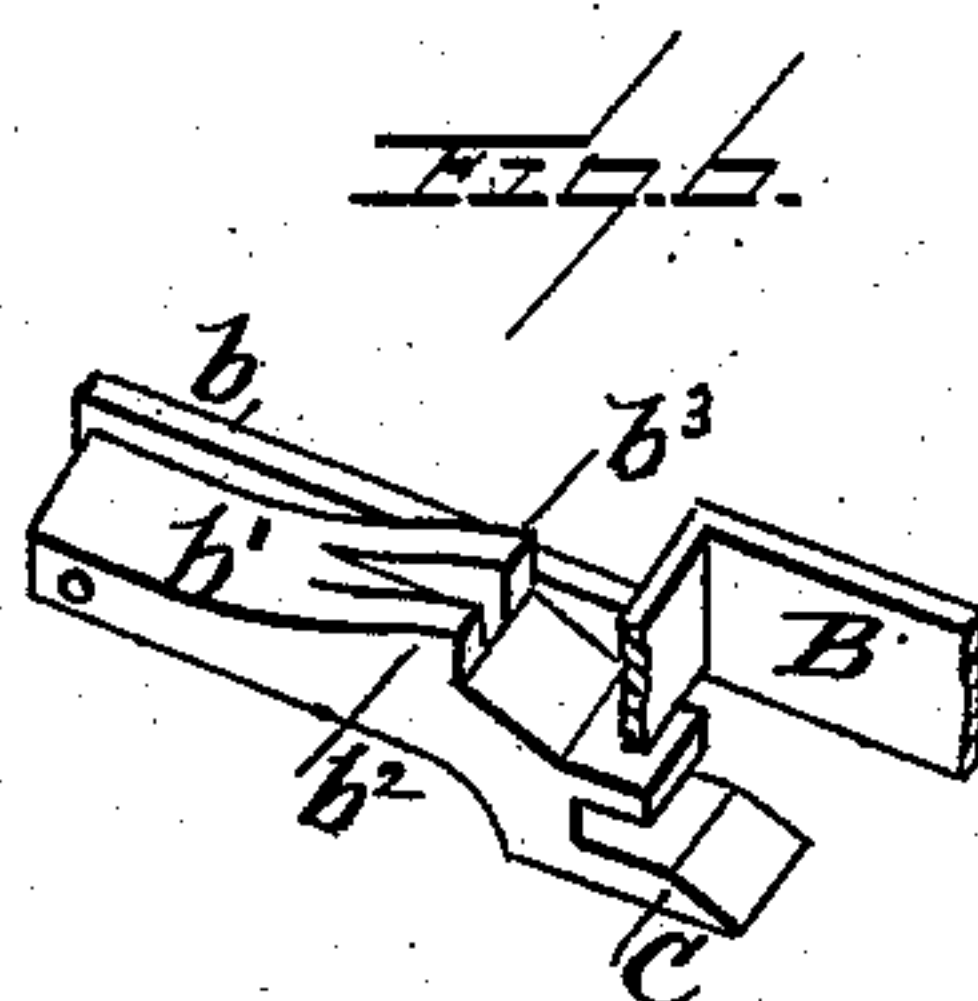
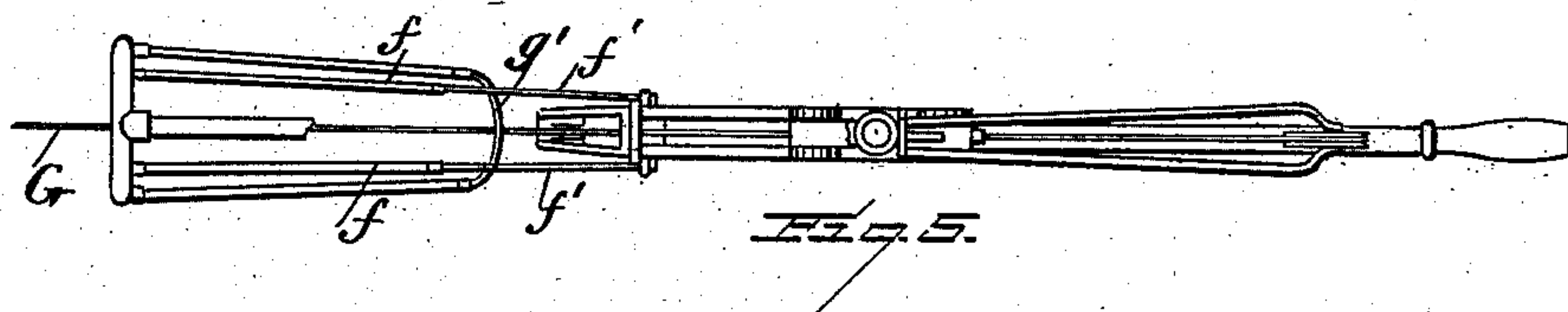
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UNITED STATES PATENT OFFICE.

JULIUS F. CAMP, OF COLUMBUS, OHIO.

STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 373,268, dated November 15, 1887.

Application filed July 29, 1887. Serial No. 245,619. (No model.)

To all whom it may concern:

Be it known that I, JULIUS F. CAMP, a citizen of the United States of America, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Store-Service Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to the improvement of store-service apparatus for the transmission of cash or parcels from point to point within store-rooms; and the objects of my invention are to provide an effective device of this class by means of which a car carrying either a cash-cup or parcel-basket may be made to travel with rapidity over a horizontal track-wire from station to station, to provide improved means for catching and holding the car at each station, and to easily and readily release the car from its catch. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 represents in side elevation my improved operating mechanism at two oppositely-located stations, showing the track-wire broken. Fig. 2 is a perspective view of the car with the parcel-basket raising and lowering device attached. Fig. 3 is a detail view in section showing the connection of the operating rubbers and cords. Fig. 4 is a detail view in section showing the connection of the supporting-arms and rubbers. Fig. 5 is a plan view of my device. Fig. 6 is a perspective view of the car-catch, showing a portion of its support. Fig. 7 is a plan view of the car with cash-cup attached. Fig. 8 is an end view of the car and cash-cup. Fig. 9 is a side elevation in detail of one end of the car. Fig. 10 is a front end view of the device.

Similar letters refer to similar parts throughout the several views.

A represents a vertical depending arm having its upper end secured to the ceiling or other high point of a room, one of said arms being located at each station. This arm A is provided at its lower end with an enlarged extension, *a*, having a U-shaped termination formed by two diverging arms, *a'*. Pivoted to each side of each of the arms *a'* a short distance apart are two bearing-rollers, *a²*, be-

tween which are made to bear the upper and lower side of an oblong slotted sliding block, B, through which is made to pass the arms *a'*. This sliding block B is provided at its front end with an extension in the form of two parallel arms, *b*, the upper and lower sides of which are slightly lower than the upper and lower sides of the block B. Between these parallel arms *b* near their outer ends is pivoted one end of a rearwardly-extending catch-piece, *b'*, the forward portion of which is of such shape as to fit loosely within the arms *b*. Made to project slightly above the upper sides of the arms *b* from the upper side of the catch-piece *b'* is a lug, *b²*, having its front surface beveled rearwardly and having its center cut away to form an open slot, *b³*. From the lug *b²* the catch-piece extends obliquely downwardly and thence rearwardly, said rearwardly-extending portion being adapted to bear against the under side of the front end of the block B and having a downwardly and rearwardly projecting lug, C, the upper surface of which is beveled toward its outer end, as shown in Fig. 6 of the drawings.

The catch-piece *b'* is held in spring-connection with the arms *b* in the position above described, preferably by means of a rubber band, D, made to embrace the rear end of the block B and the catch-lug C. The front end of the block B is provided on each side with a small projecting perforated lug, *c*, for the purpose hereinafter described.

E represents a horizontal rod rigidly secured to and made to extend forwardly from near the upper end of the arm-extension *a*. To the end of the rod E is secured, at the center of its length, a rod, *e*, bent in the form of an inverted U, having each of its downwardly-extending members provided with a short rearward bend. These rods are, for convenience in connecting, preferably formed of piping, and each of the downwardly-extending members of the arm *e* has projecting from its rear side and slightly below the center of its length a short projecting pin, *e'*, which may be screwed or otherwise secured in holes formed in said arms, or may be cast therewith. Each of the pins *e'* is provided with peripheral groove *e²*.

Fitted over each of the projecting pins *e'* is one end of an elastic tube, *f*, said tubes being

secured thereto by means of a tightly-drawn binding wire or cord, e^3 , made to surround the tube immediately above the groove e^2 and force the rubber into said groove, as shown in detail in Fig. 4 of the drawings. To the remaining ends of the elastics f are secured the ends of extension-cords f' , each of said cord ends being made to pass through a central hole formed in a short cylindrical block, f^2 , and being prevented from being withdrawn therefrom by means of a knot formed in the end of the cord. This block f^2 is inserted within the end of the tube and held therein by means of a surrounding binding wire or cord, which, as described for the pin e' , forces the rubber into a peripheral groove formed in the block. The remaining end of the cords f^2 are secured, respectively, to the lugs e , thus forming an elastic or spring connection between the block B and arms e . Each of the lower rearwardly-bent ends of the arms e is provided with a rearwardly-projecting extension or pin corresponding with the pin e' , to which is secured, as described for the pin e' , the end of a rearwardly-extending elastic tube, g . These tubes g are connected at their remaining ends by means of a cord, g' , having its ends secured, respectively, to the ends of the tubes g in the manner described for the connection between the tubing f and cords f' . A horizontal track-wire, G , is made to pass through holes formed in the ends of the block B and through the arms a' at each of two oppositely-located stations, and has its ends secured, respectively, to lugs h , made to project from the rear side of the arms a .

The loops formed by the cord connection between the elastics g are adapted, when not in engagement with the car, as hereinafter described, to rest on the track-wire.

I represents a rearwardly-extending and car-releasing supporting-arm secured to the under side of the arms a' , having its front end, which extends slightly beyond the front line of the rollers a^3 , beveled or slightly curved upward and carrying on the end of its rearwardly-extending portion a grooved or pulley wheel, i . i' is a brace-rod running from said arm a , to which it is secured.

Made to project downwardly from the under side of the arm I at a point beneath the arm A is a lug, i^2 , to which is loosely pivoted the front end of a lever, K, the handle of which extends to a point in rear of the pulley-wheel i . A cord, K' , having one end secured to a lug formed on the rear end of the block B and made to pass over the pulley-wheel i , has its rear end secured to a lug formed in the lever K in front of its handle.

Although but one apparatus has been described, one is used at each end of the line, as shown in Fig. 1 of the drawings.

L represents the car, having pivoted between its sides two grooved track-wheels adapted to be made to rest and run on the track-wire G, which passes through holes formed in the ends

of the car. The car is provided at each of its ends with a short upwardly-projecting hook or bent arm, l , and has beneath each of its ends a short downwardly-projecting lug, l' , of the width of the car. From the center of the under side of this lug l' is made to project downwardly a guide-tongue, l^2 , slightly longer than the lug l' and having, as may be described for the lug l' , its end adjoining the end of the car beveled upward, as shown more plainly in Fig. 9 of the drawings.

Made to project from the bottom of the car near the center of its length, and preferably cast therewith, is a circular rim, l^3 , having an outwardly-projecting flange on its lower side, said flange being cut away for a short distance at two oppositely-located points, l^4 .

M represents a cash box or cup, of wood, papier-maché, or other material, having its upper open end circular, the latter being cut away to form on its periphery a circular shoulder, against which is adapted to bear the bottom of the flange of the rim l^3 when the upper end of the cup is inserted within said rim.

Secured to each side of the cup near the top and at opposite points thereon is a metallic catch-strip, m , said strips extending upward until their upper ends or heads are flush with the top of the cup and having said heads grooved or notched on their inner sides. The cup thus described may be attached to the car by inserting the upper end of the cup within the rim l^3 of the car in such manner as to bring the heads of the catch-strips m into the openings l^4 , formed in the flange of the rim. The cup may then be turned until the notches in the heads of the strips m engage with the flange of the rim. This method of attaching the cup to the car is, however, well known, and any other suitable means may be employed to effect the same. All of the above-described parts, where not otherwise indicated, are preferably formed of metal.

For convenience in describing the operation of my apparatus we will suppose the car to be midway between two stations and the sliding block B of the apparatus, toward which the car is traveling, to be drawn forward by means of the elastics f , until its rear end is bearing against the rear side of the rear arm, a' . The car, moving at a rapid speed, passes between the U-shaped arms e , and continues onward until the tongue l^2 passes into the slot b^3 of the lug b^2 of the latch-piece b' , and thereby depressing the latch-piece b' until the lug l' of the car passes and engages with the rear side of the lug b^2 . As the car nears its destination its hook l takes up the cord g' , connecting the elastics g , the tension of the latter operating to ease any jar which might be occasioned by any abrupt stop. The car consists of a slotted block, q , from the interior of which project arms q' , having fingers q^2 , to which are pivoted the fingers r . The pulley-supports t are also made to project from the interior of the car.

T represents the package-basket, supported, as shown, by the fingers q^3 and r .

The cord u runs over the pulley-wheels supported by the straps t , and has its ends secured to the basket-rod s . The cord w connects with the cross-rod v , the latter extending between the upper ends of the fingers r .

The operation of the device is as follows: When the car L is interlocked with the block B at one of the stations, as shown by dotted lines in Fig. 1, and it is desired to propel the car forward with the required force to the connecting-station, the block B and car L are drawn back by means of the cord K' and lever K until the projecting lug C upon the block B is tripped by the upturned end of the arm I, and the car thereby released and pushed forward with the required momentum by the elastic force of the rubber cords f and g to travel over the track G to the receiving-station and engage with the catch upon the block B. The elastic cord g' engages with the hook l of the car and arrests its movement without jar or concussion. When the car is released, the force of the elastic cord g assists in propelling the car to the next station.

The car may be adapted to receive a cash-cup, M, as hereinbefore described, or to receive a basket, T, suspended from the car by arms q' , having fingers q^2 q^3 , bent and turned inwardly and downwardly to receive the rods s , from which the basket is suspended. The arms q' also have fingers r pivoted thereto and connected together by a cross-rod, V, which swing down across the openings between the fingers q^2 q^3 and hold the basket-rod s securely between them, and a cord, w , secured to the rod v , within reach of the operator, may be pulled to release the basket-rod from between the fingers.

Cord-pulleys t' , suspended from the car by rods t , support a cord, u , secured to the basket-rod s , which extends downwardly within reach of the operator, by which means the basket may be raised or lowered to engage with or be lowered from the depending fingers of the car.

I claim as my invention and desire to secure by Letters Patent—

1. In a cash-carrier apparatus, the combination of a suspension-arm having a U-shaped extension and rollers on the sides thereof, and a forwardly-extending rod located centrally

above the track-wire and carrying a similarly-shaped extension, a track-wire, a sliding block, and an elastic cord secured to the forwardly-extending rod and to the sliding block, substantially as and for the purpose described.

2. In a cash-carrier apparatus, the combination of a suspension-arm having rollers on the sides thereof, a forward extension located centrally above the track-wire, the track-wire, a sliding block, an elastic cord connected to said block and forward extension, and an elastic cord or loop, also secured to said forward extension, for arresting the movement of the car, substantially as and for the purpose described.

3. In a cash-carrier apparatus, the combination of the suspension-arm having a downward extension carrying friction-rollers and a rearward extension carrying a cord-roller, a sliding block supported between said friction-rollers, an elastic cord connecting the block and suspension-arm, a track-wire, a hand-lever pivoted to the suspension-arm, and a cord connecting said block and lever and passing over the cord-roller, substantially as and for the purpose described.

4. In a cash-carrier apparatus, the combination of the suspension-arm A, carrying rollers a^3 , the arm I, having a forward upturned end, and the roller i , the block B, having catch C, the lever K, and the cord K' , substantially as and for the purpose described.

5. In a cash-carrier apparatus, the combination of the suspension-arm, a track-wire, a sliding block, B, provided with a catch, C, pivoted to said block, having lugs b^2 , and slot b^3 , and a car, L, provided at its forward end with lugs l' and tongues l'' , adapted to engage with the said catch, substantially as described.

6. In a cash-carrier apparatus, the suspension-arm having a rod, E, located centrally above the track-wire, and a forward extension, e , U-shaped, the projections e' , elastic tubes f , and cords f' , with the block B, all combined substantially as and for the purpose described.

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

JULIUS F. CAMP.

Witnesses:

W. S. SHEPHERD,
IRA KOEHNE.