

(No Model.)

2 Sheets—Sheet 1.

C. R. HERRINGTON.
CASH CARRIER.

No. 472,924.

Patented Apr. 12, 1892.

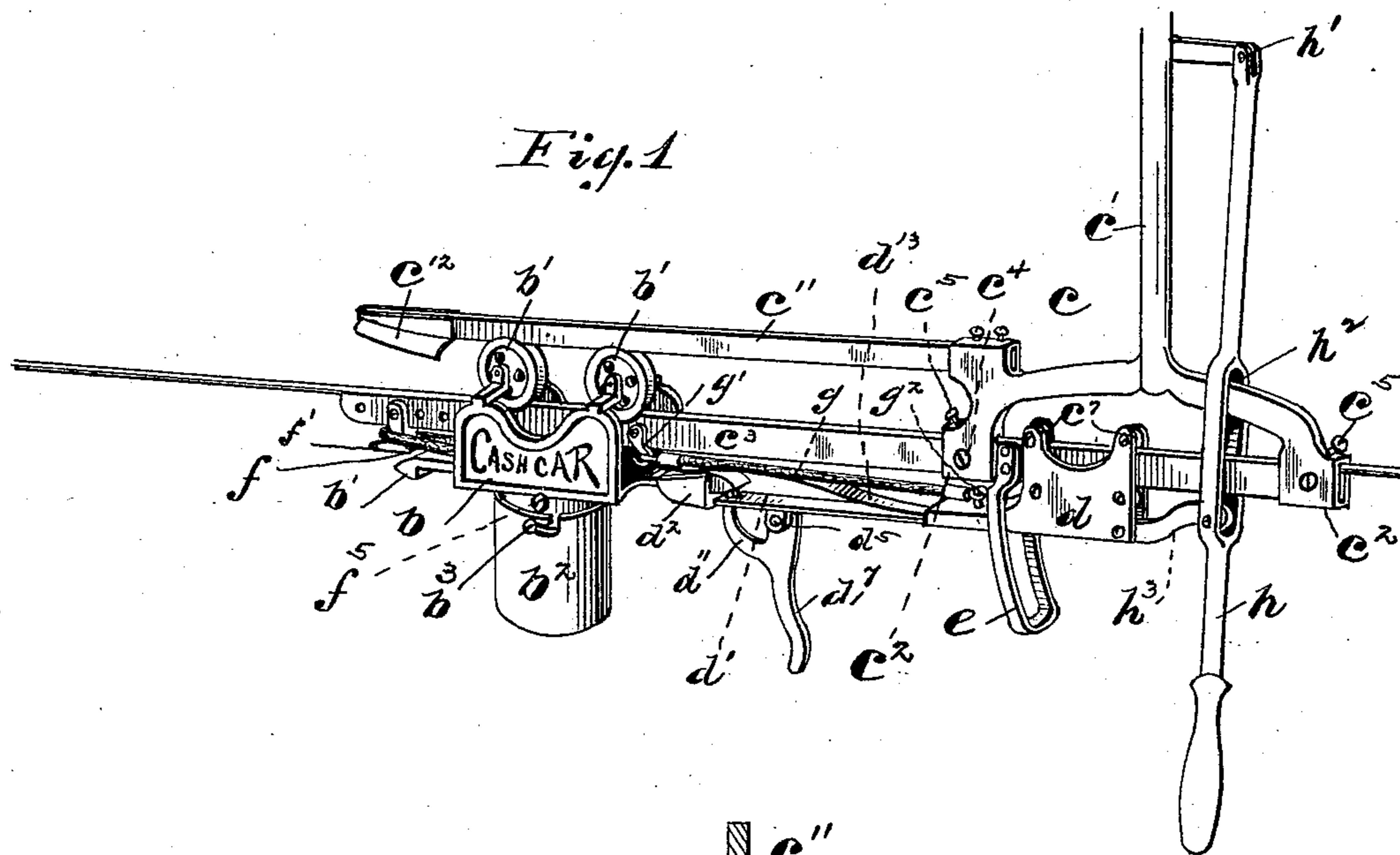
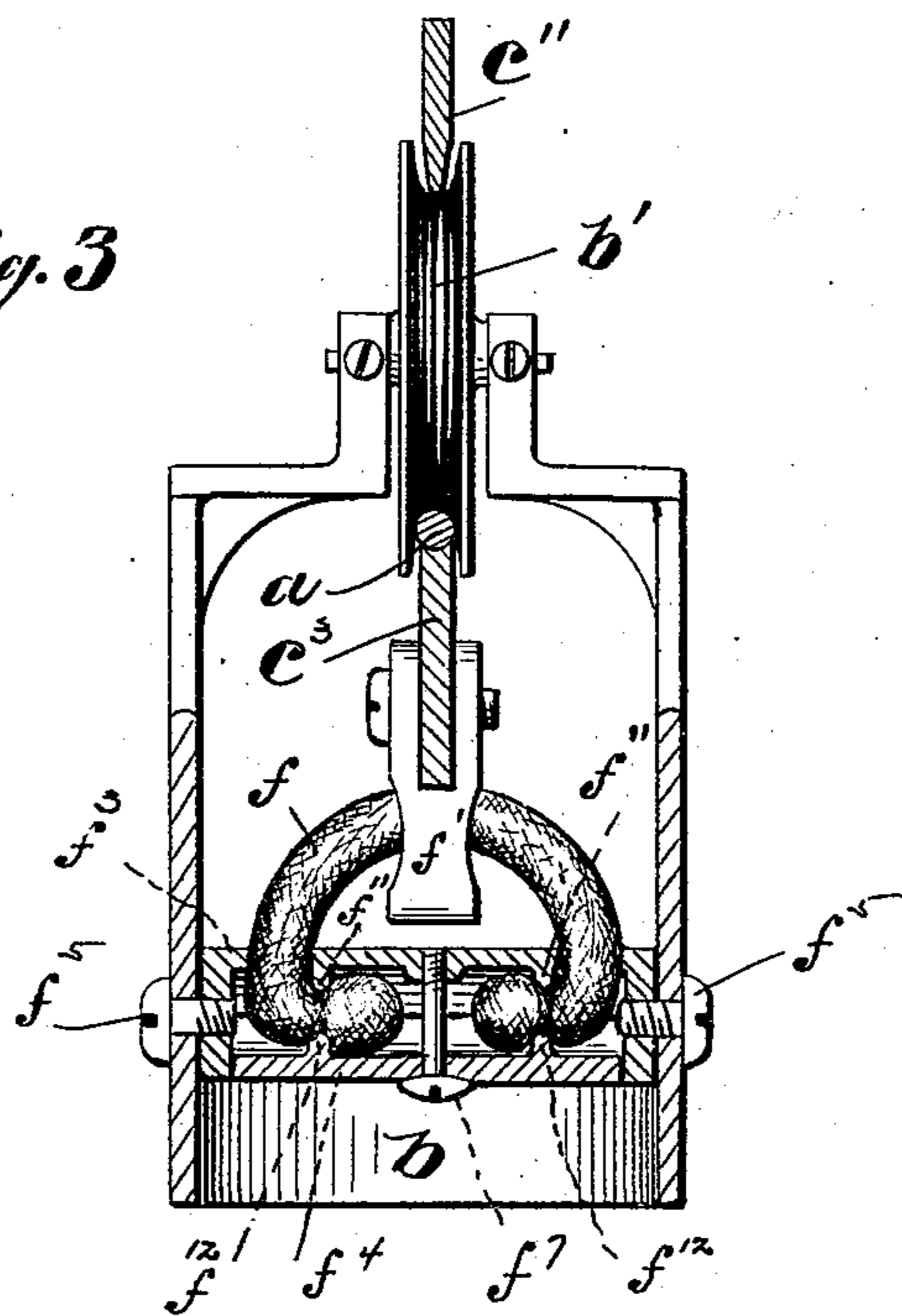


Fig. 3



WITNESSES:

D. H. Graham
F. A. Rice

INVENTOR.

Charles R. Herrington
BY *Shepherd*
ATTORNEYS.

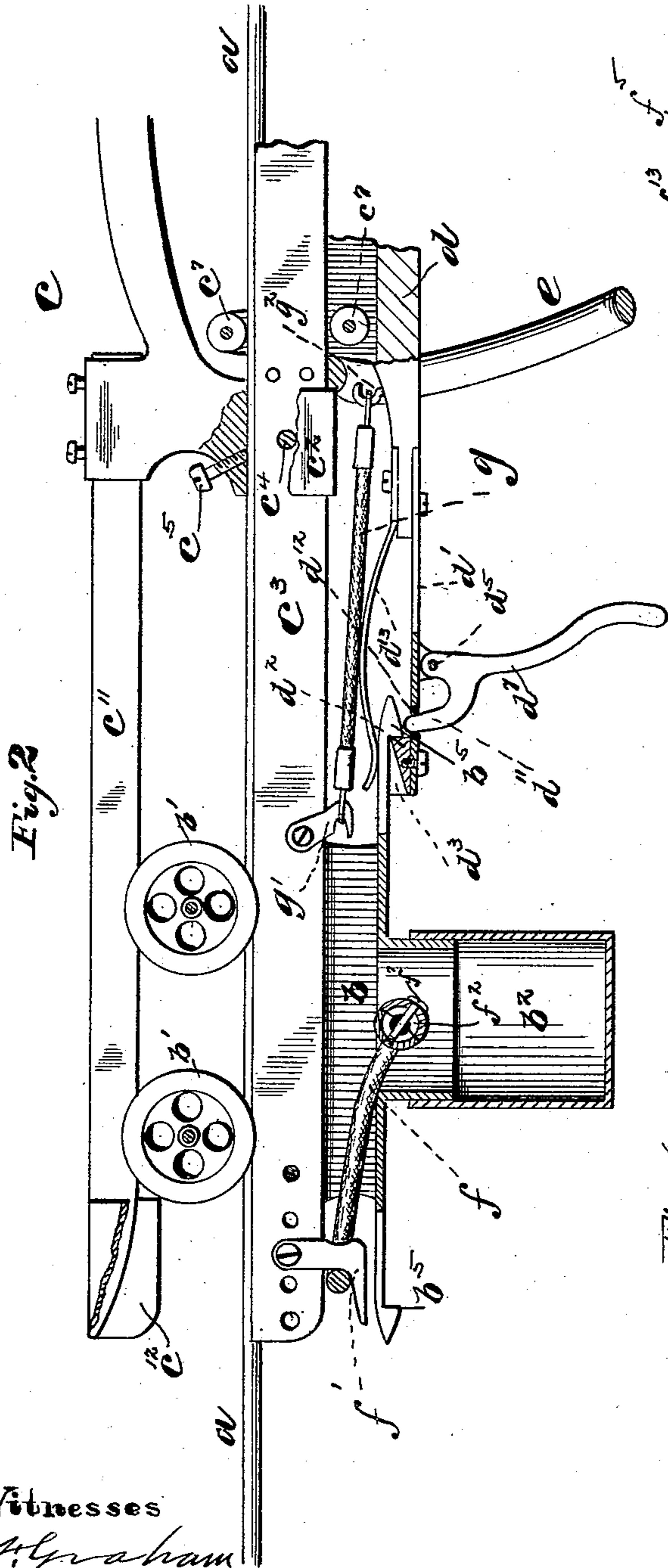
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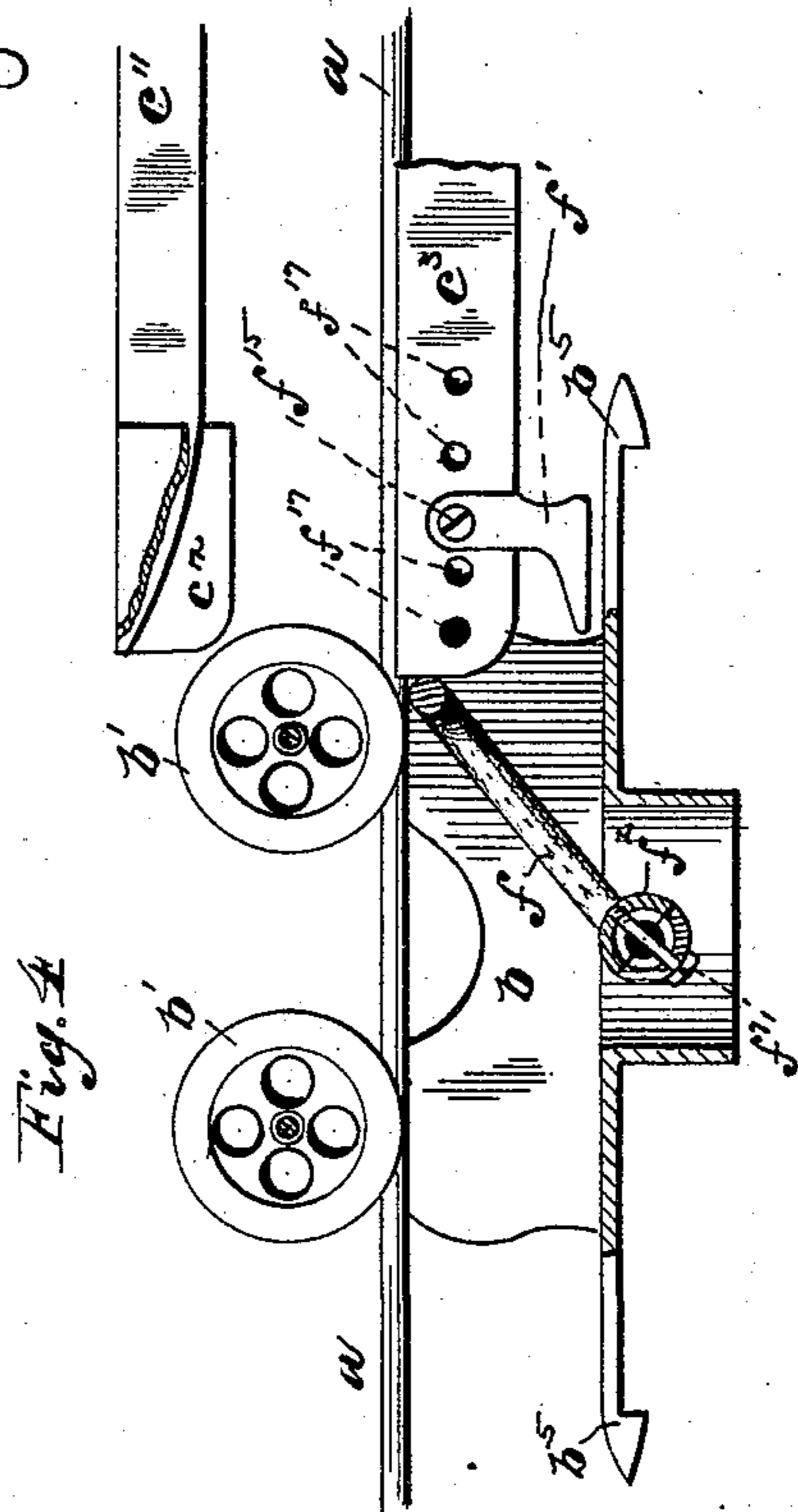
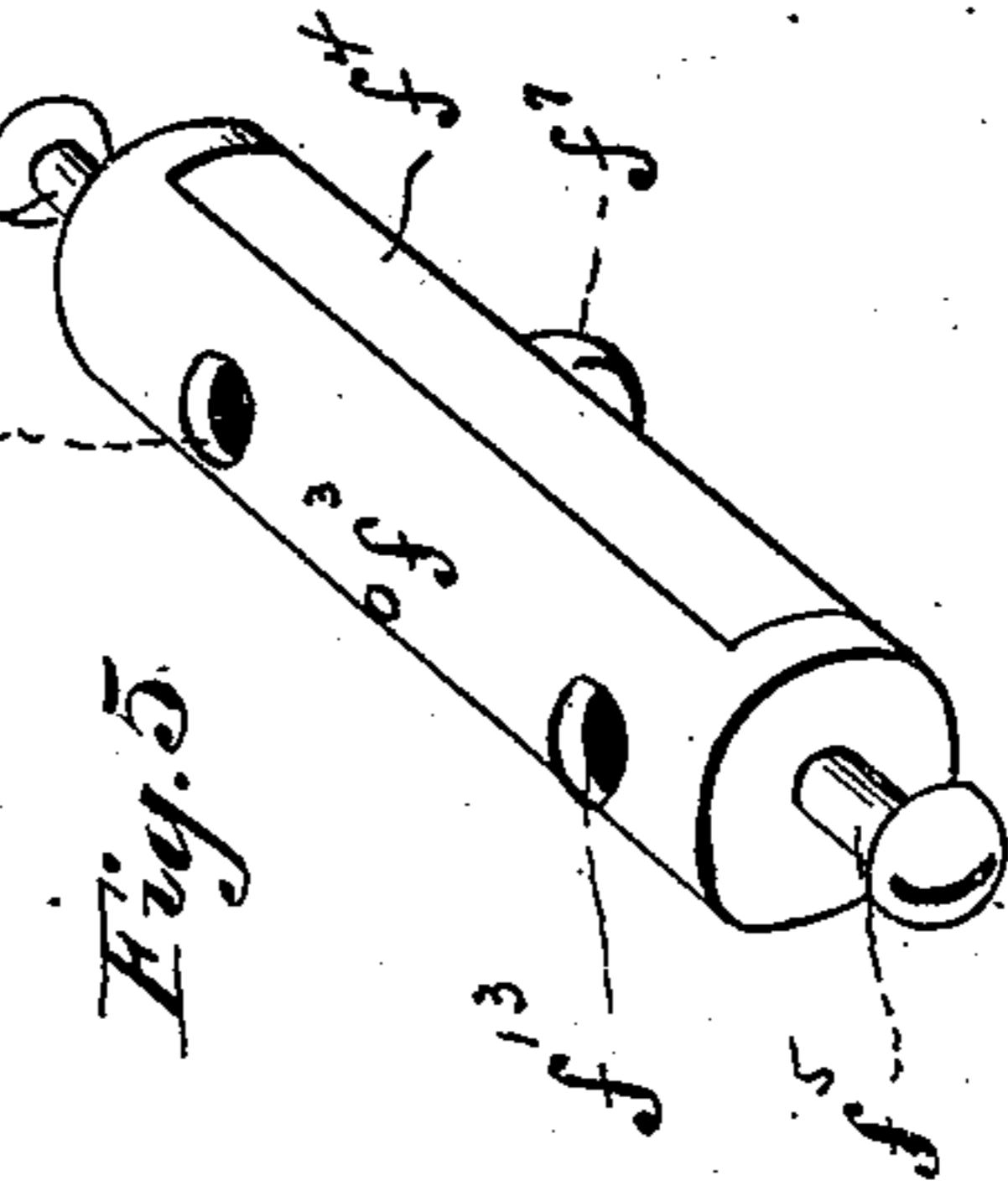
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Witnesses
D. H. Graham
F. A. Rice



Inventor
Charles R. Herrington
By *Edward M. Shepherd*
Attorney

UNITED STATES PATENT OFFICE.

CHARLES R. HERRINGTON, OF SPRINGFIELD, OHIO, ASSIGNOR TO JACOB K. MOWER, OF SAME PLACE.

CASH-CARRIER.

SPECIFICATION forming part of Letters Patent No. 472,924, dated April 12, 1892.

Application filed May 25, 1891. Serial No. 393,964. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. HERRINGTON, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Cash-Carriers, of which the following is a specification.

My invention relates to that class of carriers in which a cash-receptacle is impelled over a suitable wire or track by an initial impulse imparted thereto at a terminal station, and it especially relates to that class of carriers in which the impelling device is located on the traveling carrier or receptacle.

The object of my invention is to provide in a traveling carrier a reversible impelling device adapted to be automatically reversed by the forward movement of the carrier, so as to be in proper position to impart to the carrier an impelling impulse in the opposite direction.

The further object of my invention is to simplify the constructions heretofore employed in carriers of this character.

To this end my invention consists in the various constructions and combinations of parts hereinafter described, and set forth in the claims.

In the accompanying drawings, Figure 1 is a perspective view showing a terminal station of a cash-carrier embodying my invention, the supporting connections from the ceiling or wall, as the case may be, being omitted, as any suitable connections for this purpose may be employed. Fig. 2 is a partial sectional elevation of the same. Fig. 3 is a transverse sectional elevation through the carrier, showing the construction of the loop or spring holding device and its arrangement with the carrier. Fig. 4 is a partial sectional view illustrating the manner of reversing the impelling device at a terminal. Fig. 5 is a detailed view in perspective of the loop or spring holding device removed.

Like parts are indicated by similar letters of reference in the several views.

In the said drawings, *a* represents the carrier-track, which is preferably formed of a single flexible wire.

b is a carrier consisting of a suitable frame having grooved traveling wheels *b'* *b'*, adapted

to travel on the wire *a* and provided at the bottom with a detachable cash-receptacle *b*², adapted to be connected to or detached from the carrier-frame by a suitable bayonet-joint-locking device *b*³, or in any other suitable and well-known manner. At each end of the carrier, and preferably formed integral with the frame thereof, are engaging hooks *b*⁵ *b*⁵, adapted to be engaged by a suitable retaining device at the terminal station in the manner hereinafter more fully set forth.

Each terminal station *c* consists of a suitable frame connected to the track-wire *a* and preferably to the ceiling, side wall, or other suitable stationary support through the medium of a suitable supporting-column *c'*. This column *c'* is preferably bifurcated at the bottom and provided at the forked extremities with small housings or sockets *c*², adapted to receive a longitudinal bar *c*³, grooved at the top to receive the track-wire, which passes with said bar through the housings or sockets *c*². The bar *c*³ is secured in said sockets by suitable screws *c*⁴ or other suitable fastening devices, and the track-wire is clamped to said bar and also connected to the column *c'* by binding-screws *c*⁵, which pass through the tops of said sockets and bear directly against the track-wire *a*, as shown in Figs. 1 and 2. The longitudinal bar, track-wire, and column are thus firmly connected together, and means are furnished whereby the tension of the track-wire may be adjusted with reference to said bar by loosening the screws *c*⁵, drawing the wires through, and tightening said screws, that portion of the wire behind the terminal station being preferably extended to the wall or other suitable point of attachment.

Located on the bar *c*³ and track-wire *a*, preferably between the housings *c*² *c*² and guided longitudinally by small guiding-rollers *c*⁷ above and below said bar is a traveling frame *d*, provided with a forwardly-extending spring *d'*, having at its extremity an engaging projection *d*², preferably provided with an enlarged mouth *d*³, having beveled sides to receive and guide the hook-shaped projections *b*⁵ on the carrier, so as to engage said projection *d*², as shown in Fig. 2, a leaf-spring *d*¹³, normally resting on the projection *d*² and curved to form one side of the mouth of said

projections, being adapted to engage the top of the carrier projection b^5 , and thus hold the several parts in engagement. Pivoted at d^5 to the spring d' is a bell-crank lever d^7 , having an upwardly-extending finger d^{11} , which projects through a slotted opening d^{12} in the spring d' in close proximity to the engaging face of the projection d^2 , the other end of said lever being extended downwardly, as shown in Figs. 1 and 2.

Means are provided for drawing back the traveling frame d , and with it the carrier h , through the medium of the engaging projections, as described. A stationary stop projection, preferably in the form of a loop e , is secured to the bar c^3 and projects below the traveling frame d , so as to engage the bell-crank-lever d^7 , and thus cause it to move about its pivoted center and force the finger d^{11} in contact with the hook b^5 of the carrier, and thus withdraw the projection d^2 from said hook, permitting the carrier to be released from the traveling frame.

The carrier-impelling device consists, preferably, of a spring f of rubber or other suitable material, preferably formed in the nature of a loop adapted, as the carrier comes to its terminal station, to be engaged by a projection f' on the bar c^3 . As the carrier is drawn back by the traveling frame d , the tension of this spring-loop is increased until the carrier is released by the backward movement of said frame, when the tension of said impelling device forces the carrier along the track-wire to the next terminal station.

To provide for operating the carrier by the same loop or impelling device from each terminal station, I connect the said loop f at the center of the carrier-frame, so that it may extend in either direction therefrom. As the carrier approaches a terminal station after being impelled as before described, the loop is extended in the direction in which the carrier is moving, as shown in Fig. 4. The loop comes in contact with the end of the longitudinal bar c^3 of the terminal station, as shown in Fig. 4, and is thus brought to rest, while the carrier continues into engagement with the hook-shaped projection d^2 . The end of the bar c^3 is rounded off to prevent the loop from engaging therewith. The track-wire prevents its rising above said bar. It is thus automatically reversed and moves with said carrier until it engages with the hook-shaped projection f' on said bar.

To facilitate the reversal of the loop f and to provide means for readily connecting or disconnecting the said loop to or from the carrier-frame, so that the same may be removed for repairs or renewed, as desired, I preferably connect said loop to a removable clamping-cylinder f^2 , secured at each end in said carrier-frame by small trunnion-screws f^5 , which pass through the outer frame of the carrier h and engage in the ends of the cylinder f^2 , as shown in Figs. 3 and 5, the said screws being preferably adapted to screw firmly into

the ends of said cylinder without clamping said cylinder to the outer frame, so that said cylinder is free to turn in said casing upon said screws as trunnions. The opposite ends of the loop f are connected to the cylinder f^2 , so that in reversing the loop the cylinder is permitted to make a partial revolution, and thus prevent an undue strain of the loop f , which would result if the ends were secured stationarily to the center of the carrier-frame.

To provide for readily securing the loop to the cylinder f^2 , I construct said cylinder in two parts $f^3 f^4$, adapted to be secured together by a clamping-screw f^7 . Each of said parts is provided on the inner side with oppositely-arranged engaging projections $f^{11} f^{12}$, preferably located within the cylinder and slightly removed from openings f^{13} , through which the ends of the loop are adapted to be inserted in the part f^3 . In connecting the loop in the cylinder the ends thereof are extended through the openings f^{13} and turned at substantially right angles toward the clamping-screw f^7 . The part f^3 is then placed in position in the part f^4 and secured by the clamping-screw f^7 , which forces the engaging projections $f^{11} f^{12}$ against the respective ends of said loop, and thus holds the same firmly connected to the cylinder. The cylinder and loop are then inserted into the carrier-frame and connected thereto by the trunnion-screws f^5 .

To provide for holding the carrier against lateral and vertical movement at a terminal station and to cause it to move positively in a forward direction when the impulse is imparted thereto, I provide the frame c of the terminal station with a forwardly-extending bar c^{11} , arranged above and parallel with the bar c^3 , at a distance removed therefrom equal to the smallest diameter of the grooved wheels $b' b'$ of the carrier. This bar c^{11} is formed with a beveled end, as shown in Fig. 2, and outwardly-extending beveled guiding-wings c^{12} , adapted to form a flaring mouth for the carrier-wheels $b' b'$ and guide them below and along the guiding-bar c^{11} .

Means are provided for returning the traveling frame d to its normal position when released by the hand of the operator by a rubber spring g , extending between the hook-shaped projection g' on the bar c^3 and a similar projection g^2 on the traveling frame d . An operating-lever h , pivoted at h' to a projecting arm h^2 on the supporting-column c' , is preferably employed for operating the traveling frame a , said lever being preferably formed with a loop h^2 , which extends around the projecting arms of the supporting-column, the track-wire, and longitudinal bar, in which is pivoted the end of a link h^3 , which connects said lever to the traveling frame d .

It is obvious that any other suitable form of operating device may be employed to produce the necessary movement of the traveling frame d to release the carrier.

The hook-shaped projection f' is preferably bifurcated and secured to the longitudinal

bar c^3 by a fastening-screw f^{15} , adapted to pass through one of a series of openings f^{17} in said bar, the different openings furnishing the means for adjusting the projection to different points on the bar to vary the tension of the impelling-spring.

It is obvious that the device as shown and described admits of many modifications in its construction, and I do not therefore limit myself to the exact constructions set forth; but I claim as my invention—

1. In a cash-carrier, the combination of a flexible elastic impelling-loop, a cylindrical support for said loop, and trunnion-screws in the carrier-frame to form journals for the said cylindrical loop-support, substantially as specified.

2. In a cash-carrier, the combination, with a cash-carrier, of a reversible loop-impelling device connected to a pivoted support, said support being formed in two parts, and means for clamping the ends of said loop between the respective parts of said support, substantially as specified.

3. In a cash-carrier, the combination of an elastic impelling-loop supported centrally in the carrier-frame by a cylindrical support, and removable trunnions adapted to form journals for said support, whereby the impelling-loop may be readily reversed or removed, substantially as described.

4. The combination, with a cash-carrier, of a central pivoted support formed in two parts and having an impelling-spring clamped between the respective parts of said support, and means, substantially as specified, for reversing said spring and said pivoted support to cause the carrier to be impelled in opposite directions, substantially as specified.

5. The combination of a flexible elastic impelling-loop and a pivoted cylindrical support having receiving-openings and engaging projections, and a clamping-screw adapted to force said projections into engagement with the ends of said flexible impelling-loop, substantially as specified.

6. The combination, with a cash-receptacle supported on a movable frame, of a cylindrical support journaled on removable trunnions in said frame, a reversible elastic loop connected to said cylindrical support, a track-wire on which said carrier-frame travels, and a rounded projection connected to said track-wire to reverse said loop, and a hook in the rear of said projection to engage said loop when reversed, substantially as specified.

In testimony whereof I have hereunto set my hand this 7th day of March, A. D. 1891.

CHARLES R. HERRINGTON.

Witnesses:

F. M. JONES,
CHAS. I. WELCH.