

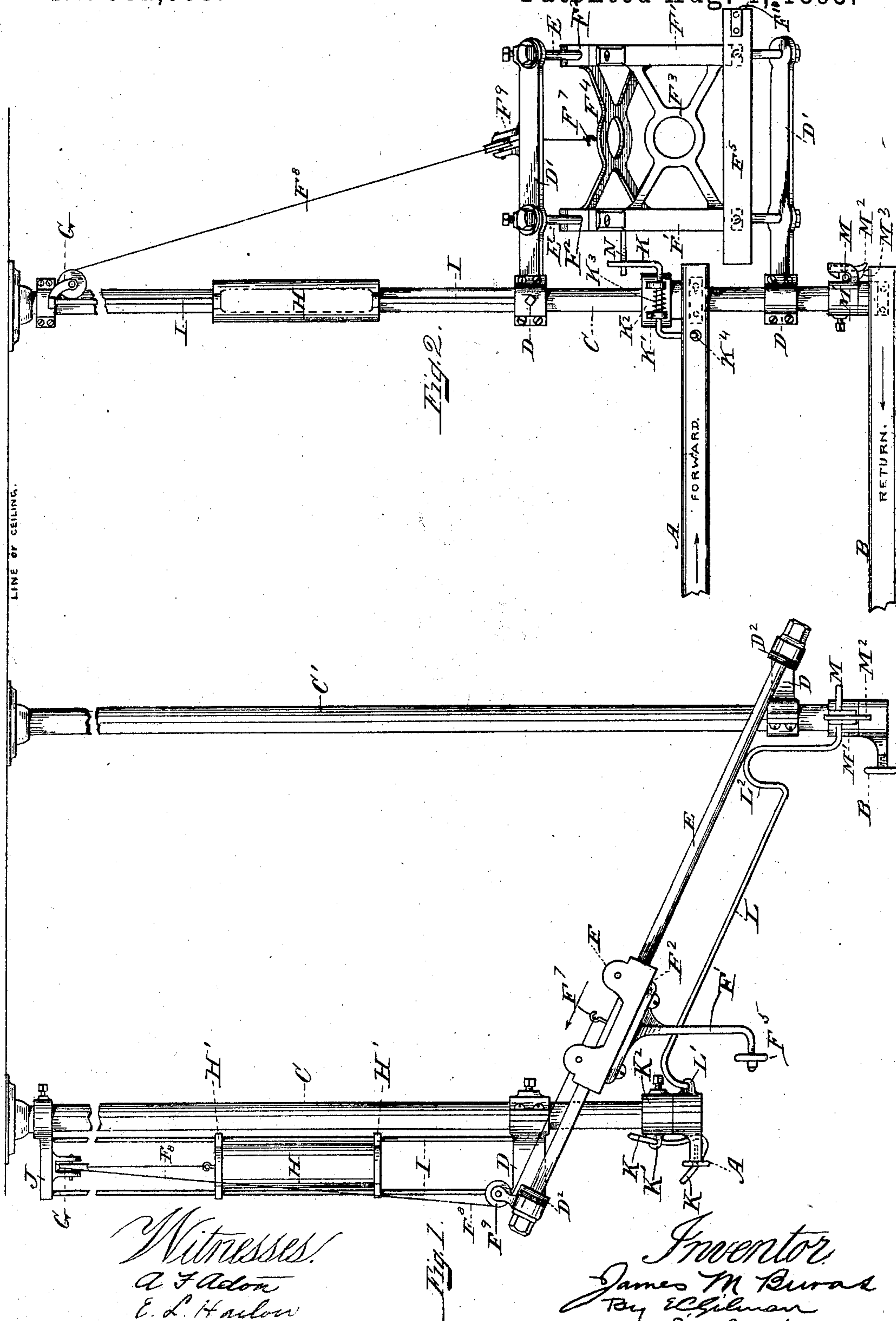
(No Model.)

2 Sheets—Sheet 1.

J. M. BURNS.
STORE SERVICE APPARATUS.

No. 502,395.

Patented Aug. 1, 1893.



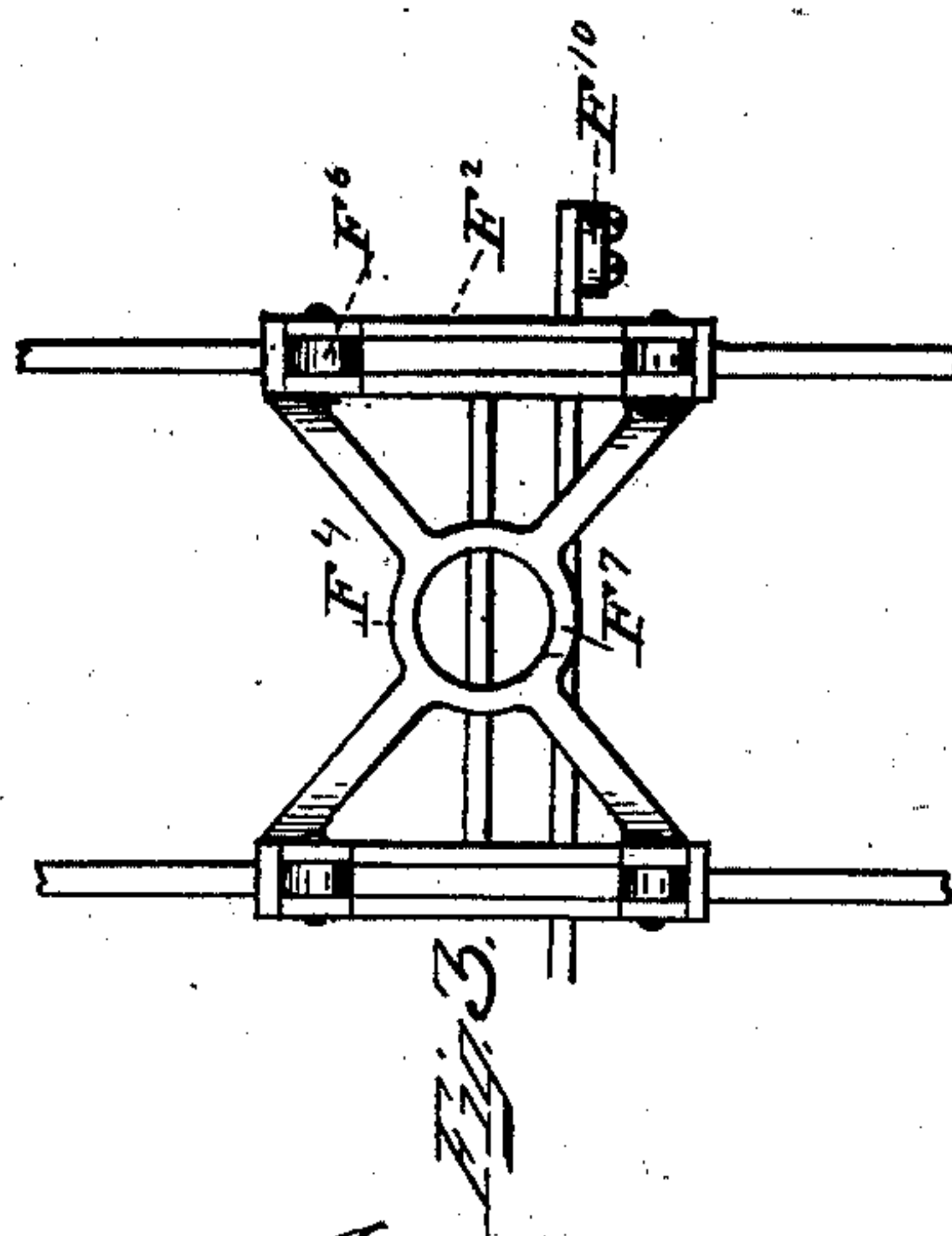
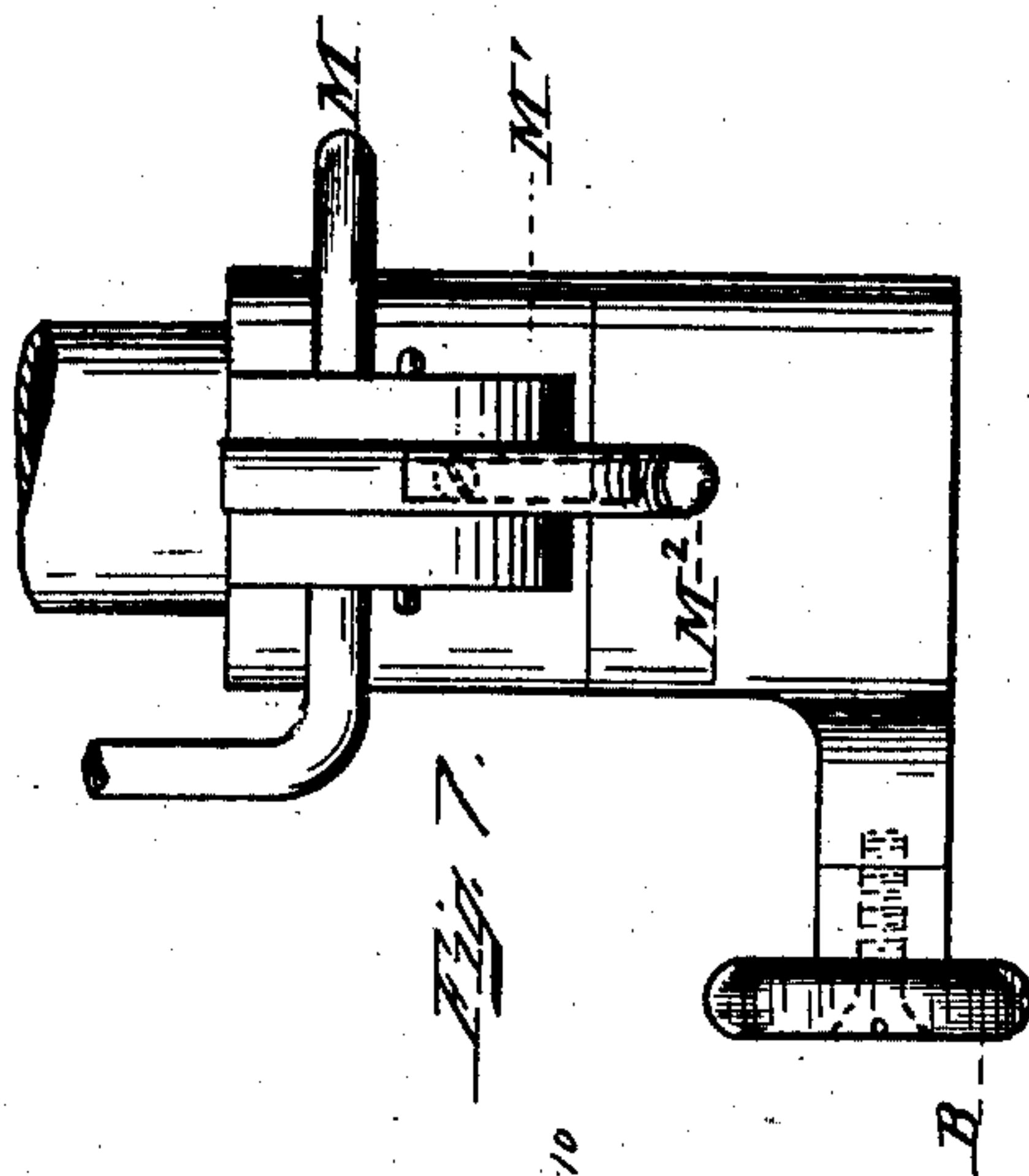
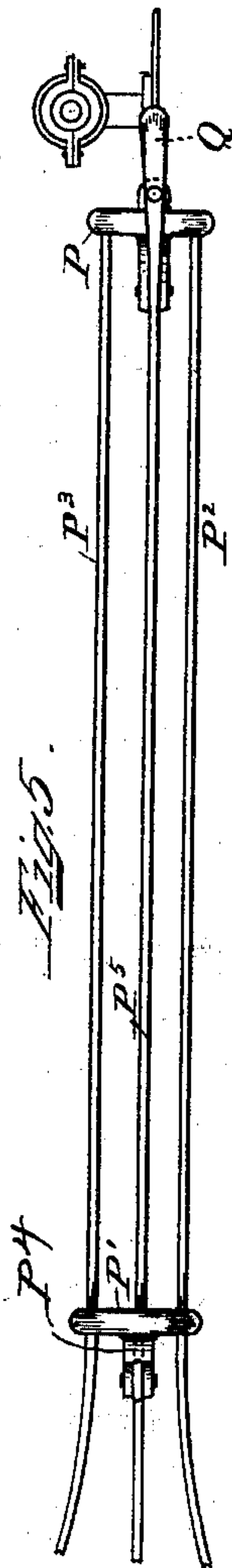
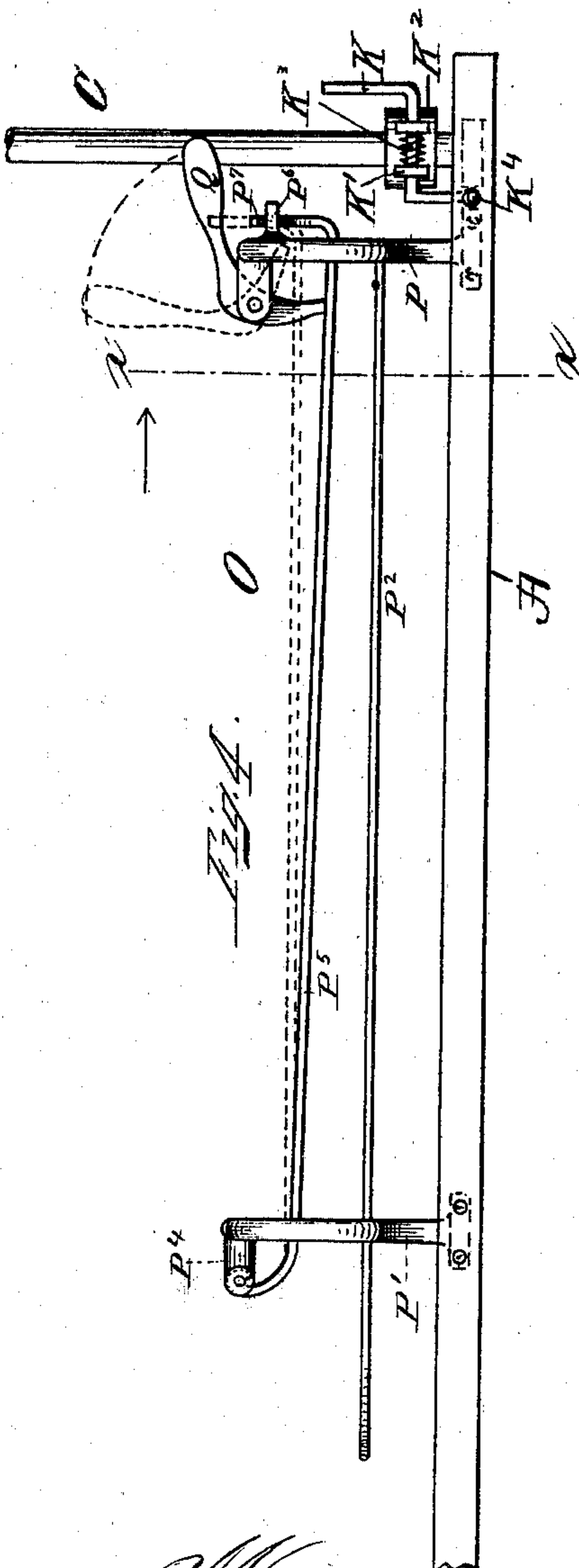
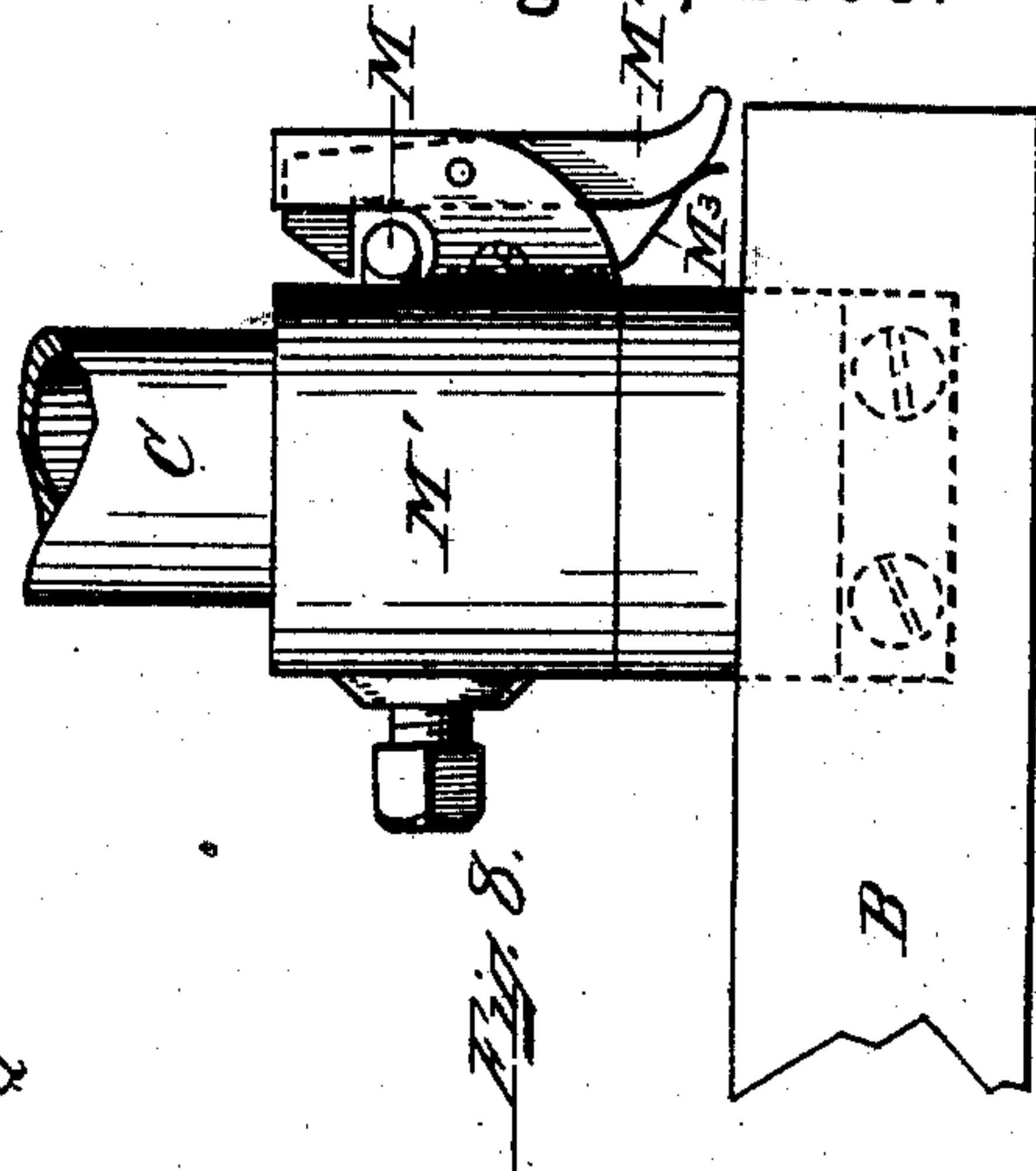
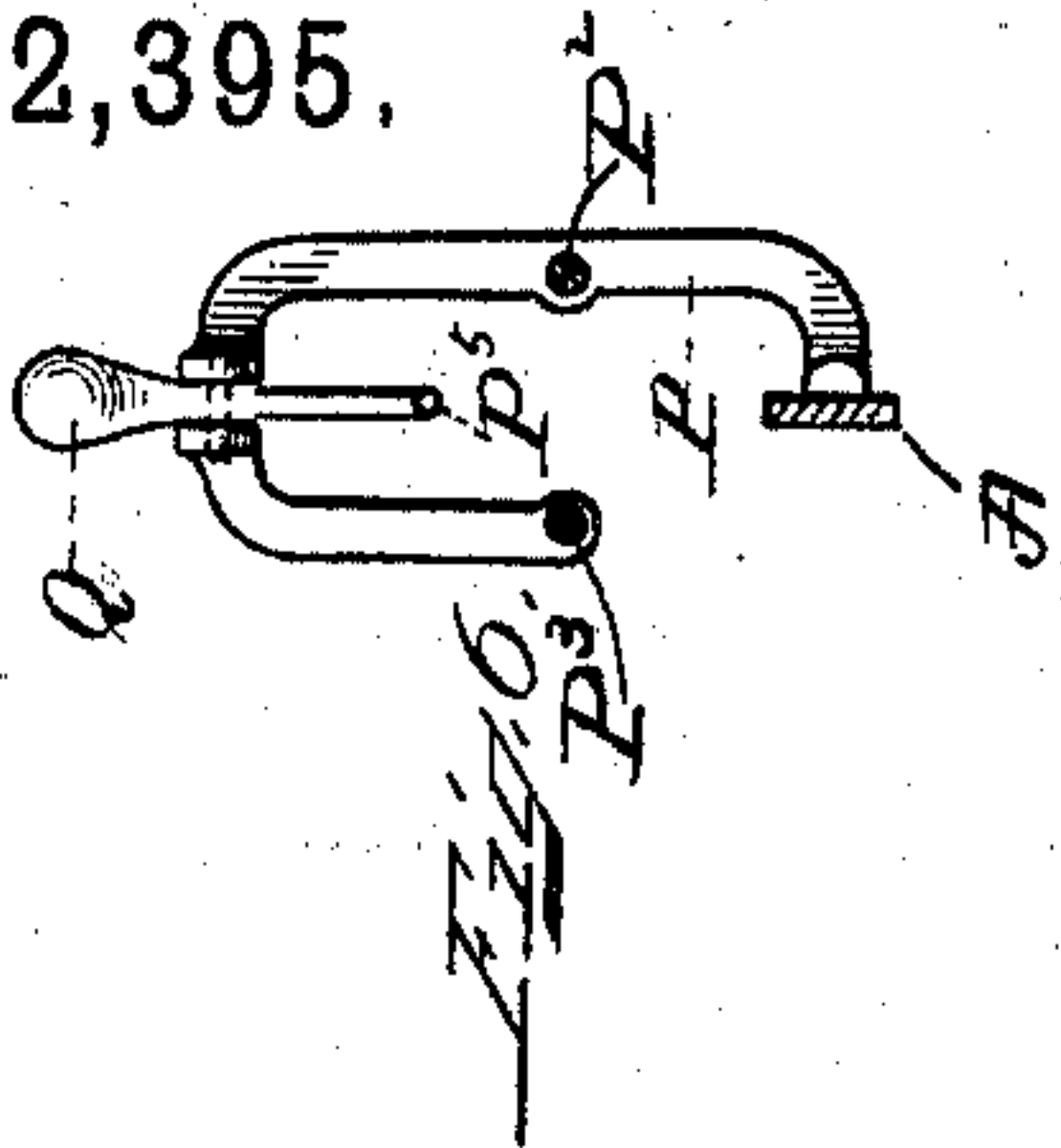
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2 Sheets—Sheet 2.

J. M. BURNS.
STORE SERVICE APPARATUS.

No. 502,395.

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Witnesses.
a F. Acton
E. L. Harlow.

Inventor
James M. Burns
By *cczianen*
J. S. Rush
Attys.

UNITED STATES PATENT OFFICE.

JAMES M. BURNS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE LAMSON CONSOLIDATED STORE SERVICE COMPANY, OF BOSTON, MASSACHUSETTS.

STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 502,395, dated August 1, 1893.

Application filed October 5, 1891. Serial No. 407,742. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. BURNS, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Store-Service Apparatus, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to devices for transferring the carrier from the forwarding to the return track of package and cash carriers, of the type set forth and described in my application for Letters Patent of the United States, Serial No. 387,088, filed May 31, 1891.

In the apparatus set forth in the above mentioned application there is employed a two-track apparatus, the tracks being located one above the other but in different vertical planes, the upper track being used to convey the carriers to the cashier or wrapping department, and the lower track for returning them to the salesman. At intervals along these tracks stations are arranged and elevators employed at said stations so that the cars are raised to the dispatching track and lowered from switch tracks of the return track.

My present invention relates particularly to a device for transferring the carrier with its basket from the upper or forwarding track to the lower or return track at the cashier's or wrapping department, avoiding the necessity of removing the carrier from the forwarding track and replacing it on the return track after the removal, wrapping up of goods, and return of the same to the proper station.

My invention consists of certain novel features of construction hereinafter described and particularly set forth in the claims.

In the accompanying drawings which illustrate my invention,—Figure 1 is an end view of the apparatus taken at the cashier's or wrapping department showing the transfer carriage as starting from the forwarding toward the return track. Fig. 2 is a side elevation of the forwarding track, the return track and the transfer carriage, the carriage being shown as starting from the forwarding track toward the return track. Fig. 3 is a plan view of the carriage. Fig. 4 is a side view of the device attached to the forwarding track for stopping the carrier as it approaches the track section

of the transfer carriage. Fig. 5 is a plan view of the same device. Fig. 6 is a cross-section on the line $x-x$ of Fig. 4. Figs. 7 and 8 illustrate a detail hereinafter described.

Like letters of reference refer to like parts throughout the several views.

In the said drawings, A represents the forwarding track, B the return track, and C C' hangers for supporting the said tracks. Near the lower end of each of said hangers is secured an arm D having an extension D' at right angles to it. The rods E extend between said extension D', and upon said rods a transfer carriage is adapted to travel from the upper or forwarding track A to the lower or return track B. A cushion D² of rubber, is placed at the upper and lower ends of the said inclined rods E. The transfer carriage F is formed by the lower sides F' and upper sides F². Between these sides the braces F³ and F⁴ respectively extend for holding them in their proper position. A track section F⁵ is secured to the sides F' of the carriage and is adapted to align with the forwarding track A to receive the carrier and after the same has been received by the transfer carriage, to transfer it to the lower or return track. Rollers F⁶ are journaled in the bearings in the upper sides F² of the transfer carriage and roll along said rods E as the carriage moves from the upper track A to the lower track B.

From a projection F⁷ in the top brace F⁴ of the transfer carriage, extends a rope F⁸ around a pulley F⁹ attached to the upper extension D' of the arm D; said rope then extends upwardly around pulley G and downwardly to weight H to which it is secured. An extension F¹⁰ is secured to the outer end of the track section F⁵ to prevent the carrier from running off. The weight H is sufficient to hold the transfer carriage in its upper position, that is with the track section F⁵ in alignment with the forwarding track A so as to receive the carrier coming along said forwarding track but when the carrier with its load is upon the track section F⁵ the weight of said carrier and load is sufficient to cause the transfer carriage to move along the rods E toward the return track B, the difference in weight being such as to cause the said transfer carriage to travel gradually from one

track to the other. When the carrier passes onto the return track from the track section of the transfer carriage the weight H falls and thereby draws the said carriage upward along the ways E until the track section is in alignment with the forwarding track.

The weight H has projections H' at its top and bottom and is adapted to travel on guide rods I which extend from the upper arm J secured to the upper end of the hanger C, to the lower arm D also secured near the bottom of said hanger. A rod K passes through projections K' on the piece K² attached to the lower end of the hanger C. A spring K³ is wound around said arm between the projections K' and normally tends to keep the lower end of the said rod K projecting through the opening K⁴ in the forwarding track A so as to prevent the carrier from running along said rod when the track section of the transfer carriage is not in alignment with said forwarding track A. A rod L is pivotally secured at L' to the bottom of the hanger C and is gradually inclined toward the lower end of the hanger C'. The free end rests in an opening M of the sleeve M'; the spring-pressed rod M² is pivoted in the outer extension of the sleeve M', and its upper end has a projection which normally extends over the free end of said rod L so as to hold it in its place.

A spring M³ throws the lower end of the arm M² outwardly and thereby holds the upper projection of said arm over the rod L.

When the carrier passes from the forwarding track A onto the track section F⁵ of the transfer carriage, the rod L prevents the said carrier from running off one end of said track section F⁵ and the extension F¹⁰ on the other end of the track section F⁵ prevents the carrier from running off that end, so that the transfer carriage with the carrier travels downward until the track section F⁵ is in alignment with return track B.

When the transfer carriage and the carrier have reached the lower position as above stated, the carrier can be removed if desired, by pressing the arm M² inward to release the free end of the rod L, when the latter may be swung upward to release the carrier and the goods can be wrapped up and returned to the basket and the carrier started on its return trip, as the loop L² at the lower end of rod L allows the carrier to pass along the return track B from the track section F⁵.

A projection N extends from the side of the transfer carriage and is adapted to come in contact with the upper end of the rod K when the transfer carriage approaches the returning track A, and when the track section F⁵ is in alignment with the track A, the rod K is entirely withdrawn from its extension through the opening K⁴ in the track A so that the carrier will be allowed to pass onto the track section.

In order to check the impetus of the carrier as it approaches the station where the trans-

fer carriage is located, I have provided the following device:—The stop device O is secured to the inner side of the forwarding track A by arms P and P'; rods P² and P³ extend between said arms P and P' and act as side guides for the carrier. At the top of the arm P', near its center, is provided a projection P⁴ at the outer end of which is pivoted the rod P⁵ which extends toward the arm P and thence upwardly and moves loosely in a projection P⁶. A pin P⁷ extends through the upper end of the said rod P⁵ and is adapted to bear upon the projection P⁶ when the rod P⁵ is in its lower position.

As shown in Fig. 4 as the carriage approaches the stop device O, the wheels come in contact with the rod P⁵ so that the carriage is stopped. When it is desired to allow the carrier with its load to proceed on the track A, the operator throws the handle Q upwardly as shown in dotted lines in Fig. 4, so that the carriage as it moves along owing to the weight in its basket, will lift the rod P⁵ as shown in dotted lines and roll along the track A so that if the track section is in alignment with the forwarding track A, said carrier will pass onto the track section, but if it is not in alignment, the rod K projecting through the opening K⁴ in the track A, will prevent the inward movement of the carrier until the track section of the carriage is in alignment with the said track A.

I do not limit myself to the exact constructions shown as the same may be varied without departing from the spirit of my invention.

Having thus ascertained the nature and set forth the construction of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a store service apparatus having forwarding and return tracks, a transfer carriage with a track section adapted to align with said tracks in its upper and lower positions for transferring the carrier from the forwarding track to the return track, inclined ways upon which said carriage travels between said tracks, and automatically actuated mechanism for regulating the travel of the carriage from the forwarding to the return track, substantially as set forth.

2. In a store service apparatus provided with forwarding and return tracks secured to hangers, a transfer carriage adapted to align with said forwarding and return tracks in its upper and lower positions and for transferring the carrier from the upper to the lower track, and a rod extending between said hangers for preventing the removal of the carrier, substantially as set forth.

3. In a store service apparatus provided with forwarding and return tracks secured to hangers, a transfer carriage adapted to align with said forwarding and return tracks in its upper and lower positions and for transferring the carrier from the upper to the lower track a weight for transferring the carriage

from one track to the other, and a rod piv-
oted to the lower end of one hanger and held
in place on the other hanger by a spring-
pressed arm so as to prevent the displace-
5 ment of the carrier, substantially as set forth.

4. In a store service apparatus having for-
warding and return tracks, a transfer car-
riage having a track section adapted to align
respectively with said tracks in its upper and
10 lower positions, and ways upon which the said

carriage travels between said tracks, substan-
tially as set forth.

In testimony whereof I have signed my
name to this specification, in the presence of
two subscribing witnesses, on this 18th day 15
of August, A. D. 1891.

JAMES M. BURNS.

Witnesses:

E. L. HARLOW,
A. F. ACTON.