

(No Model.)

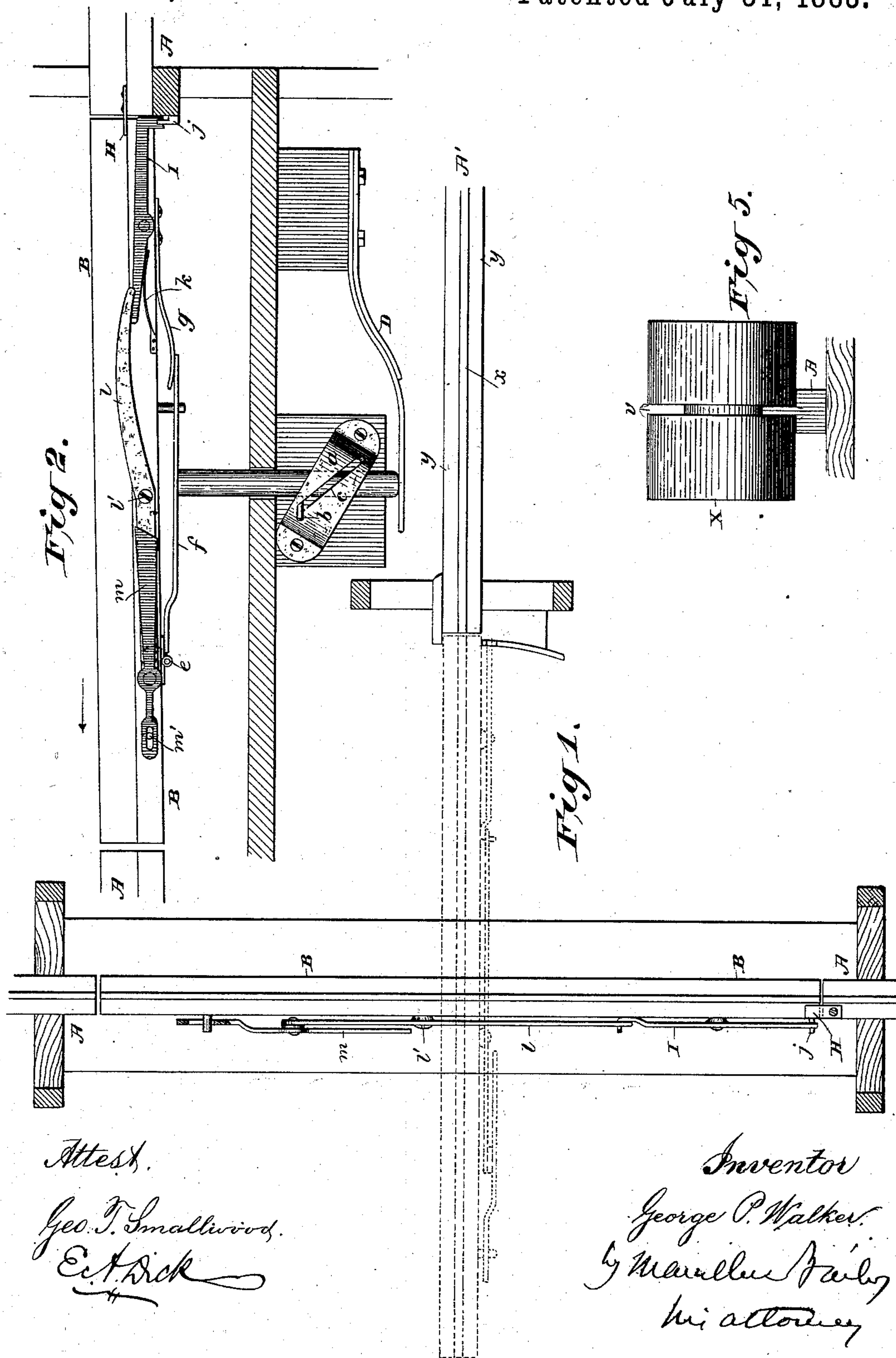
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G. P. WALKER.

TRACK FOR CASH AND PARCEL CARRIERS.

No. 282,416.

Patented July 31, 1883.



Attest.

Geo. T. Smallwood.

E. T. Dick

Inventor

George P. Walker.

by Marshall Fairley
his attorney

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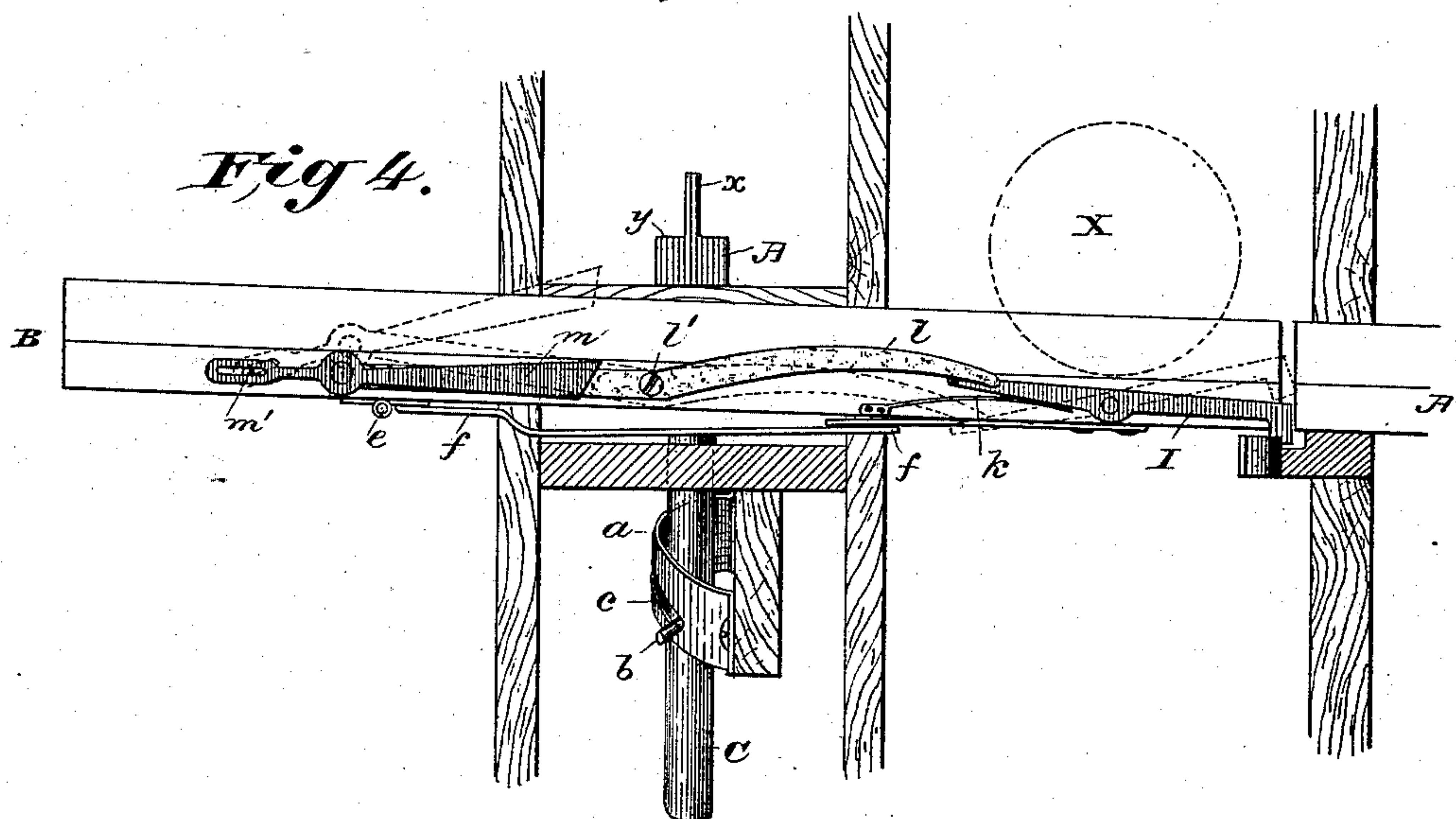
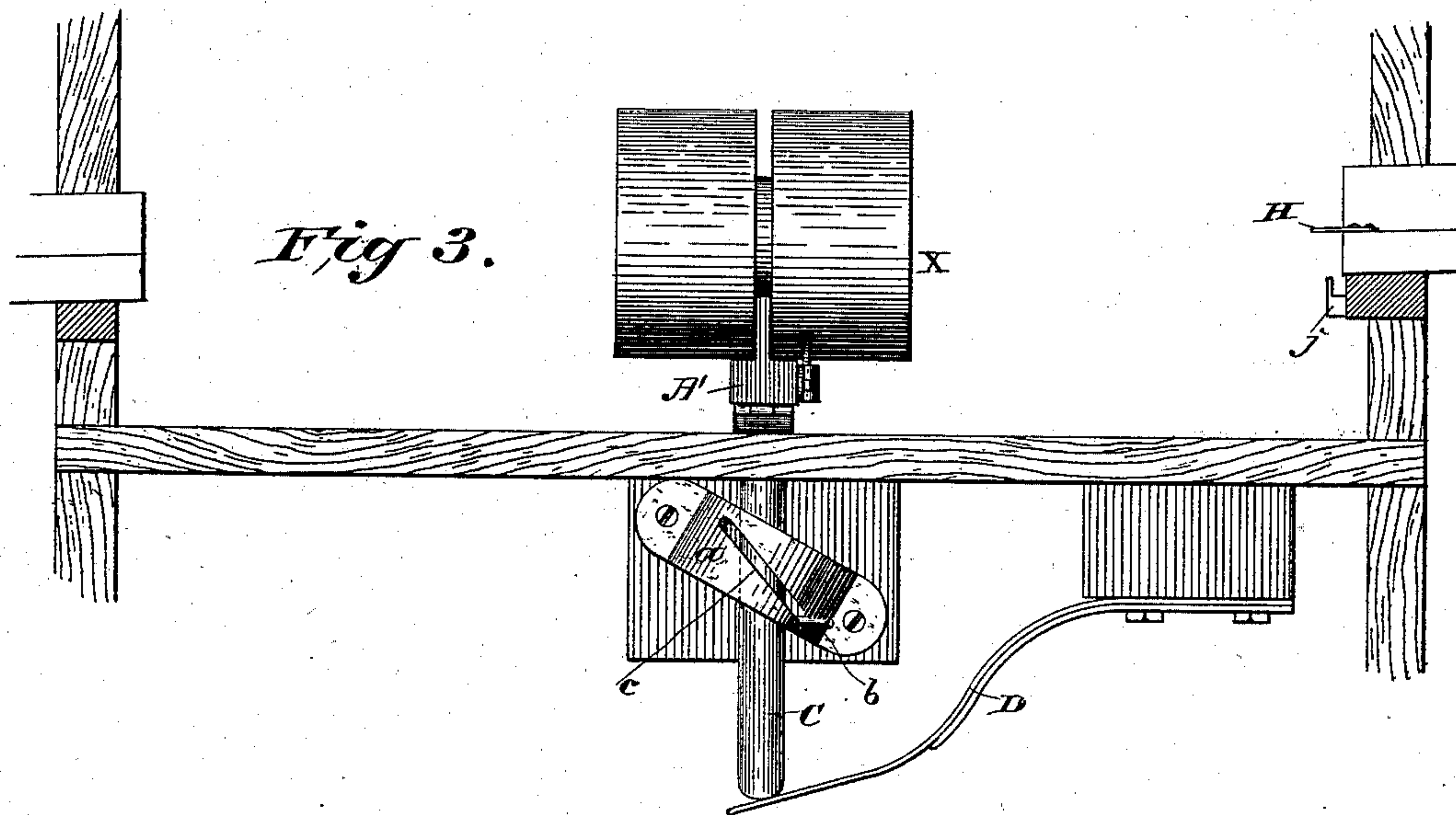
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G. Muller & Bailey
his attorney

UNITED STATES PATENT OFFICE.

GEORGE P. WALKER, OF LOWELL, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
TO ABEL T. ATHERTON, OF SAME PLACE.

TRACK FOR CASH AND PARCEL CARRIERS.

SPECIFICATION forming part of Letters Patent No. 282,416, dated July 31, 1883.

Application filed June 18, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE P. WALKER, of the city of Lowell, in the State of Massachusetts, have invented certain new and useful
5 Improvements in Tracks for Cash and Parcel Carriers, of which the following is a specification.

My improvements have reference to the form or construction of the track and of the carrier
10 used in connection therewith, and also to means for shunting or diverting the carrier from the track on which it may be running. The shunting mechanism is adapted to tracks of various kinds used in cash-carrier systems, but is here
15 illustrated in connection with the special form of track which I have devised. The track consists of a single rail having the form of an inverted T, the vertical web of the rail being designed to enter a peripheral central groove
20 in the carrier, and the side flange on each side of the base of the web constituting bearing-surfaces on which the portions of the carrier on each side of the groove therein will run. This form of track is very effective, and at the
25 same time simple. The carrier is well supported. It will move on the rail freely and without cramping, is perfectly guided, and can be shunted easily and quickly by any suitable form of shunting mechanism. In the particular
30 form of shunting mechanism hereinafter shown I make use of a track-section which normally forms a part of the main track, and is rotatable upon a horizontal axis, so that it may be turned into line with a side track
35 placed at an angle to the main track. It is my object to make this shunting-track section automatic in its action, so that when the carrier comes upon it it will (by the weight of the carrier) be caused to automatically turn
40 out of line with the main track and into line with the side branch track, and so that, on the other hand, as soon as relieved of the weight of the carrier it will at once return to its original position in line with the main track. To
45 this end I make the rotatable vertical arbor or spindle of the track-section capable also of sliding up and down in its bearing. I uphold it by a spring, which, while sufficient to support the weight of the track-section alone, will
50 yield to the combined weight of the track-section and the carrier, and I provide the track-section

spindle or arbor with a laterally-projecting pin, which enters a spirally-formed or downwardly-slanting groove in a stationary bearing-piece. Consequently when the track-section with the carrier on it descends, the pin
55 and inclined slot-connection just referred to will compel the descending spindle or arbor to have a movement of partial rotation, with the effect of throwing the track-section out of line
60 with the main track, and of bringing it into line with a side track situated at the proper point on a lower level. As soon as the carrier quits the track-section the latter, by its up-lifting-spring, is at once raised, and in rising
65 is, by the pin-and-slot connection, caused to partially rotate in a reverse direction, so as to be returned again into line with the main track. As customary in devices of this kind, I combine with the section mechanism by which it
70 is locked in normal position, and also mechanism whereby it is released from the control of said locking mechanism, said releasing mechanism being arranged to be actuated by that
75 moving carrier only which it is desired to shunt, such carriers as are not to be shunted passing along over the track-section onto the main track beyond without operating the releasing mechanism.

My improvements in their preferred form
80 are represented in the accompanying drawings, in which—

Figure 1 is a plan view of so much of a track embodying my invention as needed for the purpose of explanation. In this figure
85 the position assumed by the track-section when in shunting position is indicated by dotted lines. Fig. 2 is a side elevation of the track-section, together with the adjoining portions of the stationary main-track rails between which
90 it is interposed. Fig. 3 is a rear elevation of the track-section depressed and turned out of line with the main track and into line with the side or branch track. Fig. 4 is a side elevation of the parts in the position which they
95 occupy in Fig. 3. Fig. 5 is a front elevation of the carrier and of the single-rail track.

The track is composed of a single rail having the form of an inverted T, as seen in Fig. 5. On each side of the vertical web *x* is a
100 flat horizontal bearing-surface, *y*. The carrier X is formed with a central peripheral groove,

v, which receives the web *x* of the rail, and its periphery on each side of the groove is in contact with the bearing-surfaces *y*. The advantages of this form of carrier and rail have been already stated, and need not be repeated.

In the drawings, the stationary portions of the main track are lettered A, the movable track-section is lettered B, and the side track is marked A'. The latter, as indicated in Figs. 3 and 4, is placed on a lower level than the main track. Track-section B is mounted on and carried by a vertical cylindrical arbor or spindle, C, supported in a bearing, *a*, in which it is free both to slide and to rotate. The spindle is supported from beneath by a comparatively light spring, D, which is of sufficient strength to uphold the unweighted track-section in line with the main track, but, as hereinbefore said, is not strong enough to uphold the combined weight of the track-section and the carrier X. From the side of the spindle projects radially a pin, *b*, which enters a spiral groove or slot, *c*, in a stationary curved plate, *d*. The spiral slot makes about half a turn, and is of such length and pitch that when the pin reaches its bottom the track-section will have descended and rotated far enough to be brought in line with the side or branch track, A'.

The arrow in Fig. 2 indicates the direction of inclination of the main track, as well as the direction in which the carrier travels thereon. Inasmuch as the track-section must incline in one direction to register with the main track A, and in the opposite direction to register with the side track A', I hinge the track-section rail at *e* to a base-plate, *f*, attached to the spindle C, and at or near its free end I interpose, between it and the base-plate, a light spring, *g*, which serves, so long as there is no carrier on the track-section, to uphold the free end of the track-section rail in line with the adjoining end of the stationary main-track rail. In this position the free end of the section-track rail is higher than the other end; but as soon as the carrier comes on the section the conditions are reversed. The weight of the carrier depresses the track-section rail against the stress of spring *g* and tilts it in the opposite direction, thus making its inclination correspond to that of the side track, A'. A stop, *h*, on the main track prevents the spring *g* from throwing the free end of the section too high.

The track-section is locked in place by a pivoted latch, *i*, carried by it, which enters a notched plate, *j*, on the adjoining end of the stationary track A. This plate *j* is made on its upper edge beveled or slanting, so that when the track-section returns from its shunting position to its normal position the latch *i* will ride up over this edge until it reaches the point where it can fall into the notch cut therein, a light spring, *k*, being used to hold the latch to place. The end of the latch-lever farthest removed from the point where the carrier passes onto the section is overlapped by the end of a releasing-lever, *l*, pivoted at *l'*, and

projecting at this end above the horizontal part of the track-rail in a position to be acted on and depressed by the carrier. For the purpose of preventing the carrier from traveling entirely over the section onto the main track beyond, I joint the opposite end of the releasing-lever to a stop-finger, *m*, connected to the track-section by a pin-and-slot connection, *m'*. When the carrier travels over the track-section, as soon as it meets the lever *l* it depresses the same, throwing up the latch, so as to unlock the track-section, and simultaneously raising the stop-finger so as to arrest its further movement, as indicated by dotted lines in Fig. 4. As soon as the track-section is unlocked the added weight of the carrier overcomes the spring and the track-section descends; but by reason of the pin and spiral slot connection *b c*, in its descent it is caused to make a partial rotation, bringing it in line with the side track, A, as indicated in Fig. 4, and the carrier, inasmuch as its weight has reversed the tilt of the track-section rail, will pass off from the same end of the section at which it entered onto the side track, A, as shown in Fig. 4, where the carrier X is represented in dotted lines about to pass from the section onto the side track. As soon as the carrier quits the section the spring D reasserts itself and returns the section to the position indicated in Figs. 1 and 2.

It will be understood that in the use of a number of shunting devices of the kind above described—located at various points throughout the line of track—the releasing-levers will be placed in different positions, so that each lever will be operated by such carrier or carriers only as it may be desired to shunt at the particular point where that lever is situated.

I remark, in conclusion, that I do not here claim, broadly, the combination of the stop-finger and the shunting-section, the same having been claimed by me in another application of even date herewith.

Having now described my improvements, what I claim as new, and of my invention, is—

1. In cash-carrier and analogous systems, a track composed of a single rail having an inverted-T form in cross-section, in combination with a carrier having a central peripheral groove to receive the vertical web of the rail, and peripheral surfaces to run upon the flat horizontal bearing-surfaces of the rail on each side of the web, substantially as and for the purposes hereinbefore set forth.

2. The combination, with the stationary main track, of a shunting-section which normally forms part of the said track, a vertical supporting spindle or arbor capable of both rotary and lengthwise movement, a pin and spiral slot connection for said spindle, substantially as described, and a spindle-upholding spring, or its equivalent, which will yield to the combined weight of the shunting-section and the carrier, substantially as and for the purposes hereinbefore set forth.

3. The combination of the main track, the

track-section, normally a part of said track, and constructed and arranged, substantially as hereinbefore described, so as to be capable of combined rotary movement on a vertical axis and bodily rising-and-falling movement, mechanism for locking the same in its raised position, and releasing mechanism operated by the moving carrier to release said track-section from control of the locking mechanism, these elements being arranged and having the mode of operation substantially as and for the purposes hereinbefore set forth.

4. The combination, with the main and side tracks, of the vertical spindle or arbor arranged to have combined rotary and lengthwise movement, the spindle-upholding spring, the track-section carried by and hinged to said spindle, and spindle and section locking

and releasing mechanism, the combination being and acting substantially as and for the purposes hereinbefore set forth.

5. The combination, with the movable shunting track-section, of locking mechanism therefor, a carrier-stop, and releasing mechanism operated by the moving carrier to simultaneously release the track-section from control of the locking mechanism, and to move the carrier-stop into position to arrest further onward movement of the carrier, substantially as and for the purposes hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 8th day of June, 1883.

GEORGE P. WALKER.

Witnesses:

A. T. ATHERTON,
C. T. ATHERTON.