

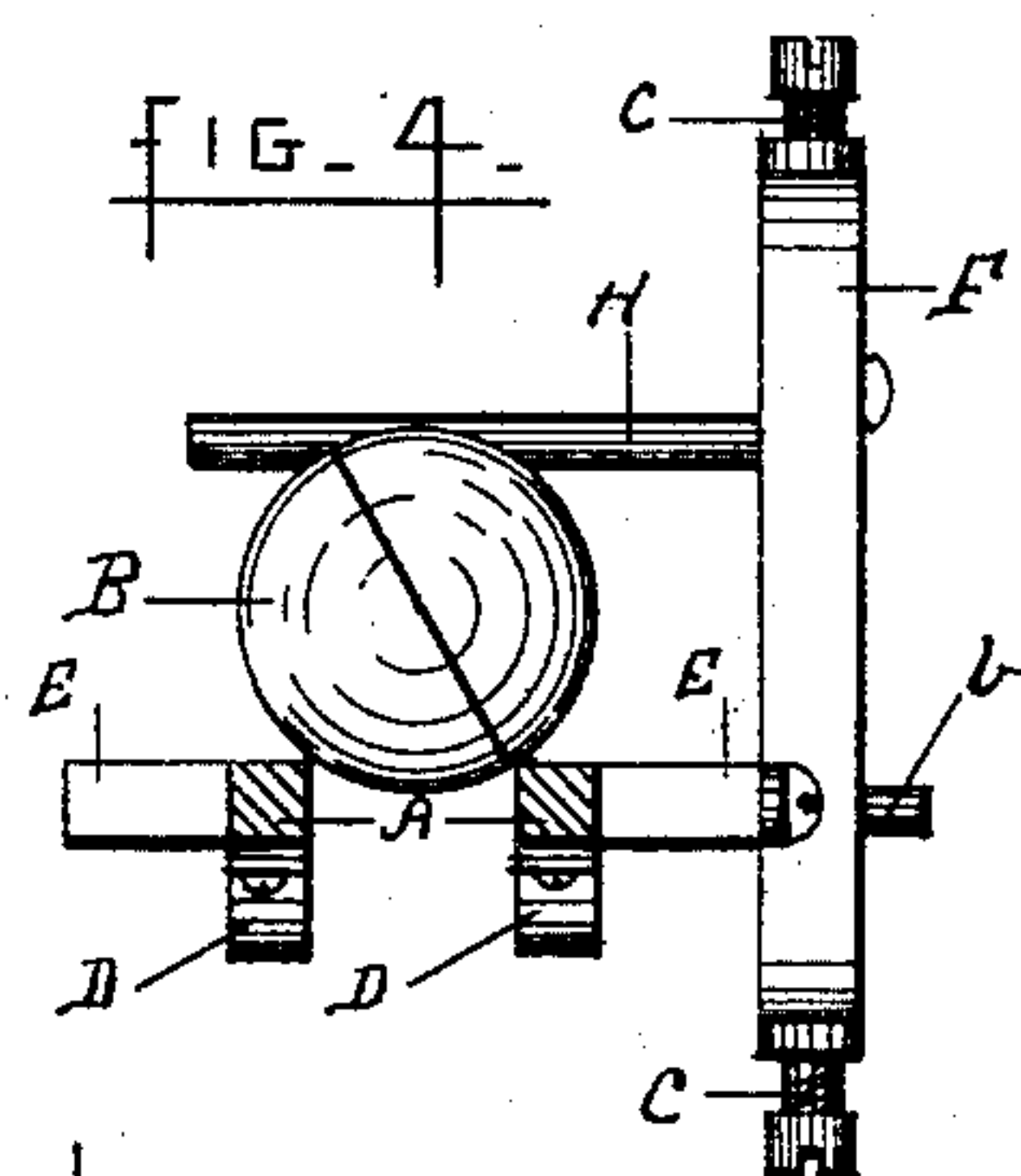
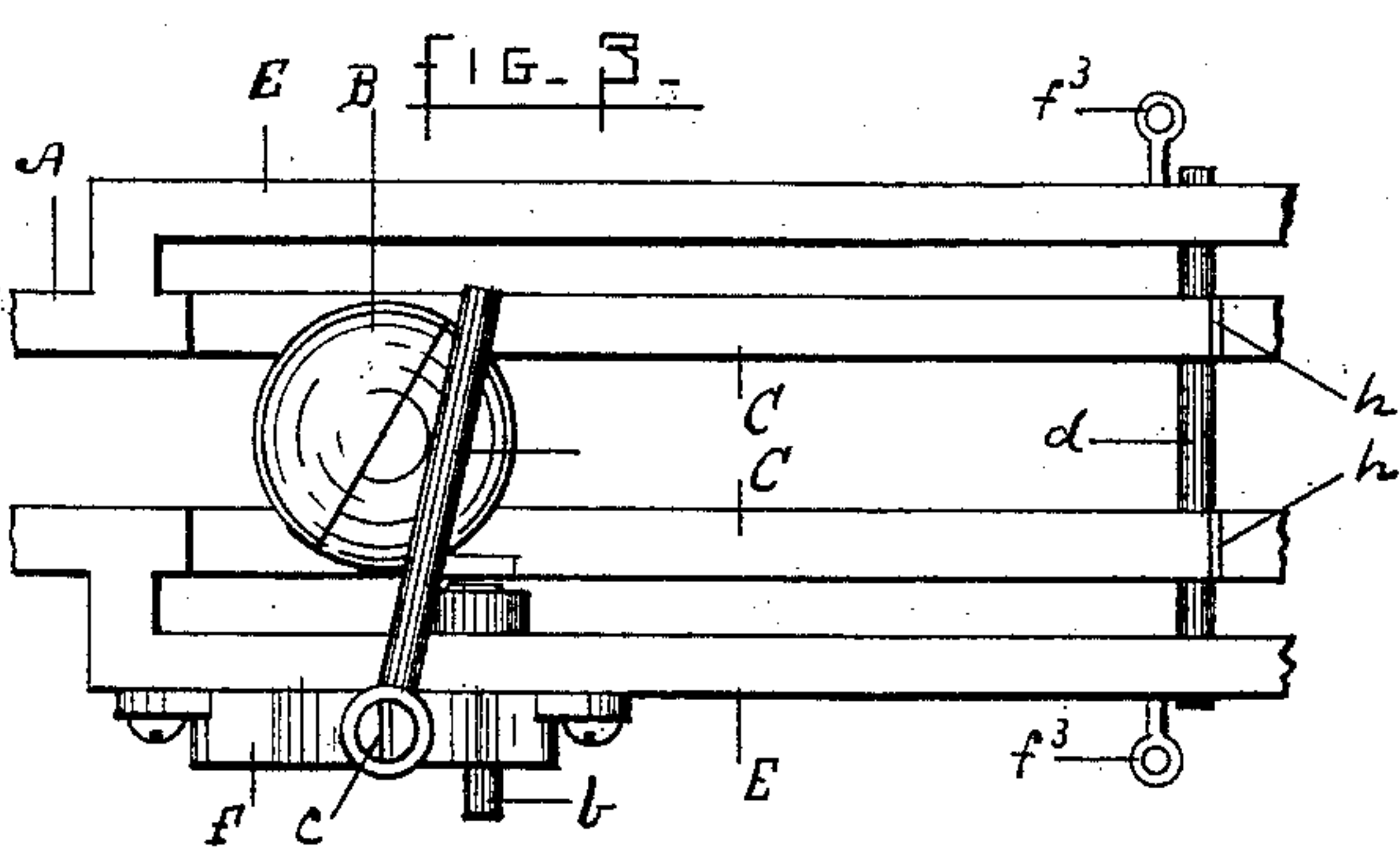
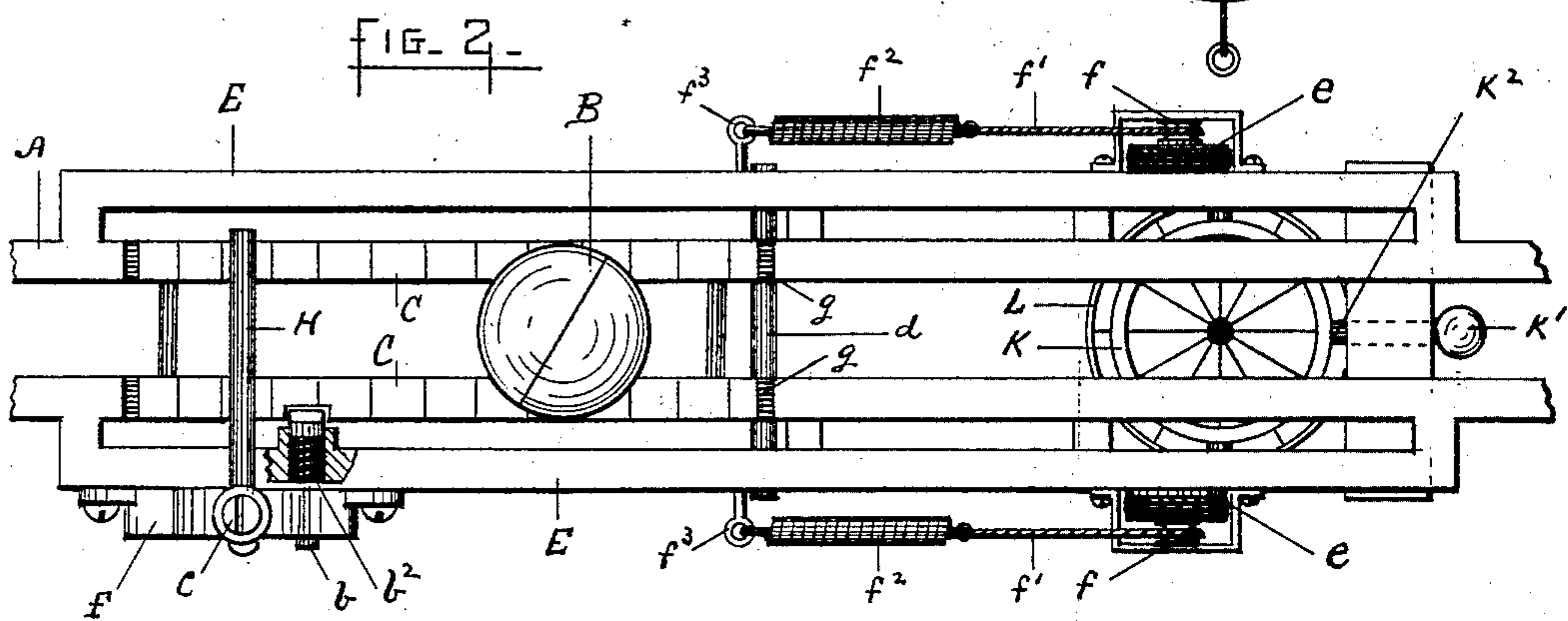
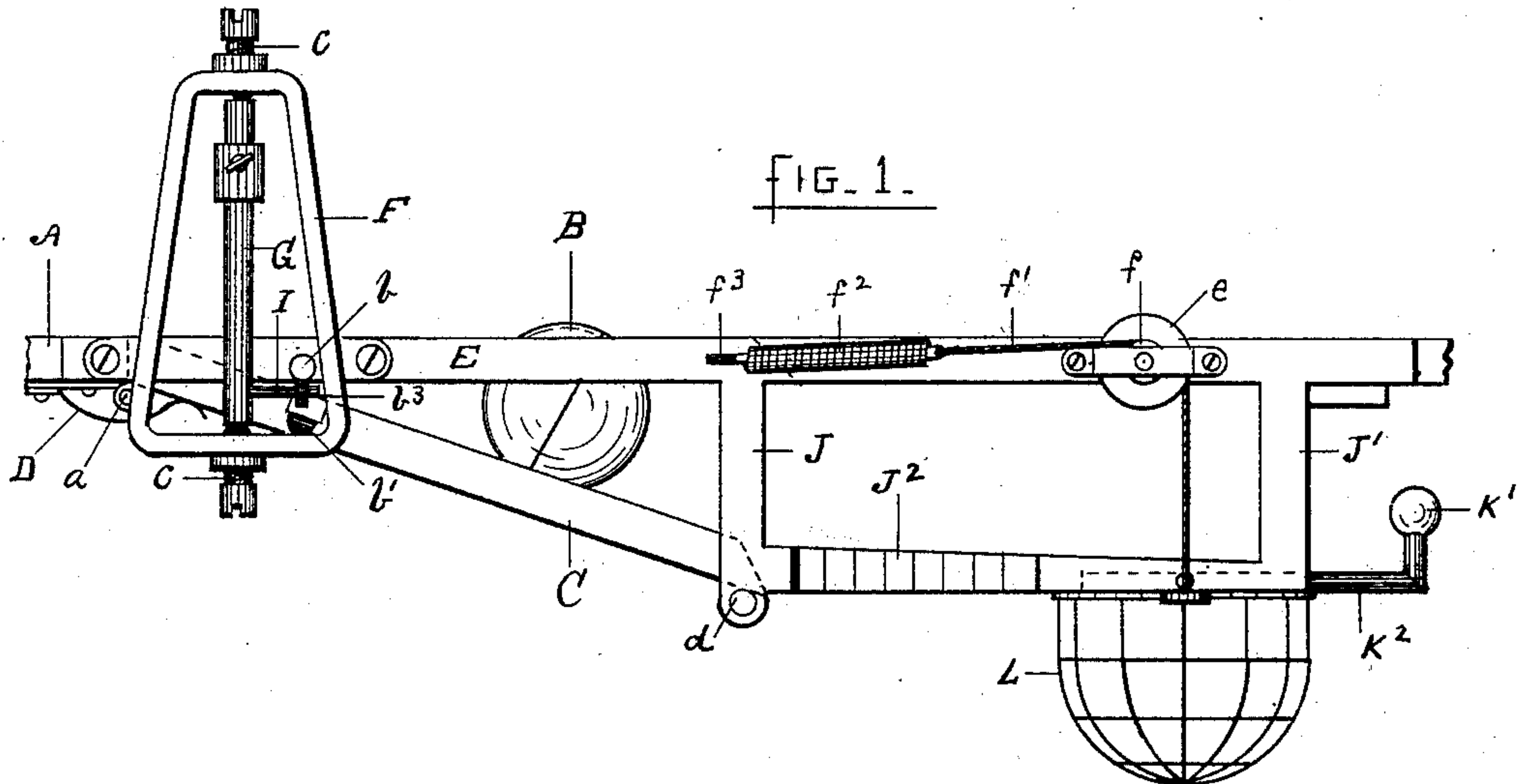
(No Model.)

2 Sheets—Sheet 1.

J. W. FLAGG.
AUTOMATIC CASH CARRIER.

No. 348,957.

Patented Sept. 14, 1886.



WITNESSES.

Refus B. Brown
N. C. Steen

INVENTOR.

J. W. Flagg

(No Model.)

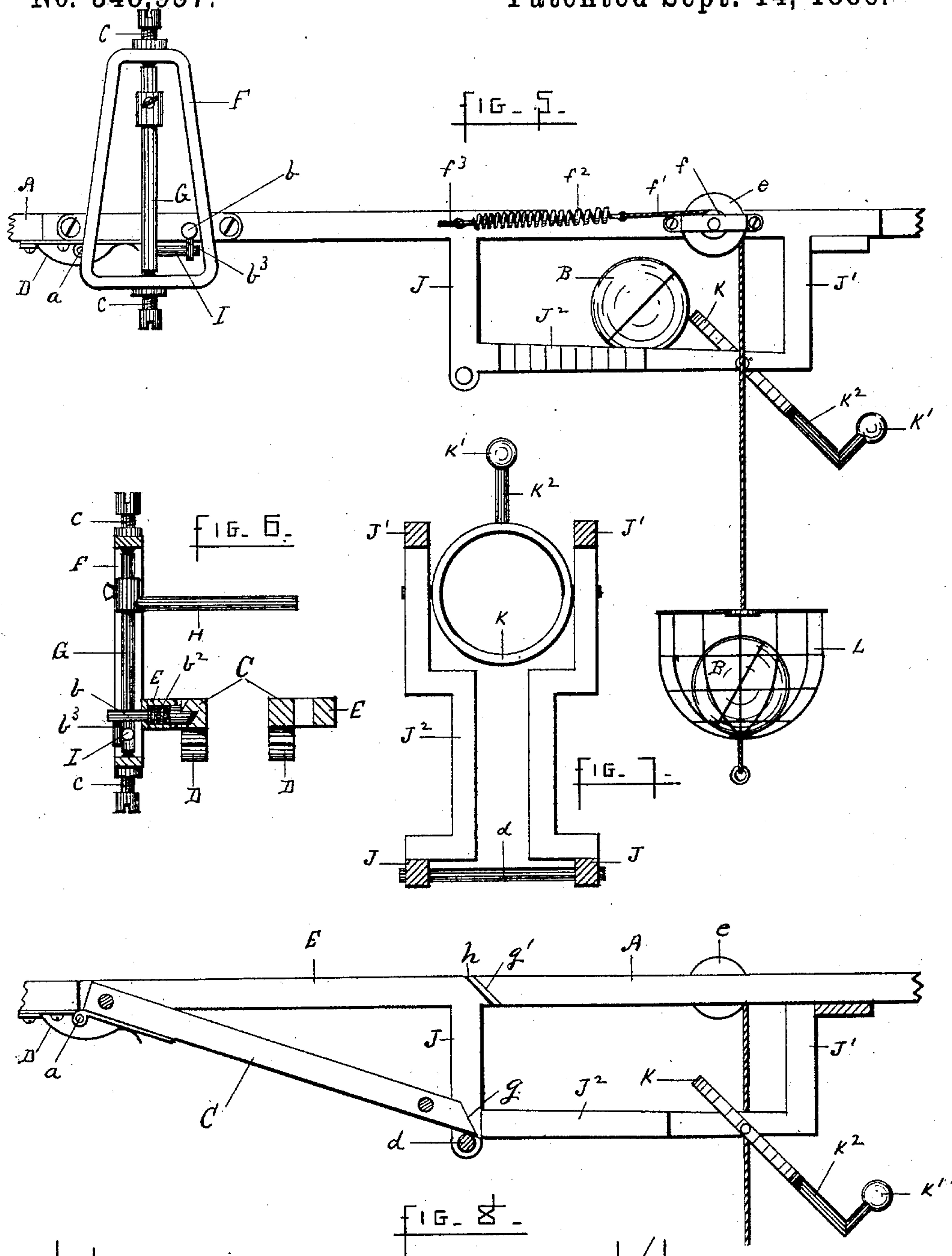
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No. 348,957.

Patented Sept. 14, 1886.



WITNESSES.

August B. Fowler
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UNITED STATES PATENT OFFICE.

J. WALTER FLAGG, OF WORCESTER, MASSACHUSETTS.

AUTOMATIC CASH-CARRIER.

SPECIFICATION forming part of Letters Patent No. 348,957, dated September 14, 1886.

Application filed January 4, 1886. Serial No. 187,578. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WALTER FLAGG, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Automatic Cash-Carriers, of which the following is a specification, reference being had to the accompanying drawings, representing such portions of the cash-carrying system as embody my improvements.

My invention relates to that class of cash-carrying systems in which inclined tracks and rolling carriers are used, and particularly to that portion concerned in the delivery of the carriers from the outward or distributing track to the salesmen at their respective counters; and my invention consists in hinging a section of the outward track so as to form a continuous way to the intermediate chamber or track for successive carriers; in devices for latching said hinged section in alignment with the outward track; in a horizontal bar vertically adjustable and extending over the track in position to receive the impact of certain of the rolling carriers, said bar being connected with and actuating said latching devices; in stops to receive the free ends of the hinged rails and hold them in proper position to deliver the carriers to the intermediate track; in devices for raising and sustaining the delivery baskets, and in the details of construction, as hereinafter described, and specifically set forth in the claims.

In the accompanying drawings, Figure 1 is a side elevation of that portion of the outward track containing the devices for the delivery of the carriers. Fig. 2 is a top view of same. Fig. 3 is a top view of a portion of the outward track, showing one of the carriers in contact with the horizontal arm and actuating the latching devices. Fig. 4 is an end view of the same. Fig. 5 is a side elevation of a portion of the outward track, showing the several devices employed in the delivery of the carriers in different positions from Fig. 1. Fig. 6 is a sectional view of the latching mechanism. Fig. 7 is a top view of the intermediate track, and Fig. 8 is an elevation of the outward track with the rail nearest the beholder removed.

Similar letters refer to similar parts in the several views.

A denotes an outward-inclined track, upon which the rolling cash-carriers B are distributed to the salesmen, a section, C C, of its rails being hinged at *a*, so their free ends may be carried down by the weight of the carrier, forming an opening in the track. Springs D, acting against the under side of the hinged rails C C, return them in alignment with the track A, where they are held by a bolt, *b*, sliding in one of the outer rails, E, and entering a hole, *b'*, in one of the rails C. The end of bolt and a portion of the rail engaged by the bolt are slightly chamfered, so the upward movement of the rail will force the bolt back, the spiral spring *b*² carrying the bolt *b* forward into the hole *b'*.

I attach a frame, F, to one of the outer rails, E, carrying the screws *e e*, upon the points of which the vertical post G turns. A horizontal arm, H, vertically adjustable on the post G, extends across the track A at such a height that it will receive the impact of all rolling carriers intended to be delivered at this station, permitting those smaller to pass beneath it. From the post G an arm, I, extends past a pin, *b*³, in the bolt *b*. Upon the passage of a carrier on the track large enough to move the post G by means of the horizontal arm H, the bolt *b* will be withdrawn, allowing the hinged section C of the track A to fall beneath the weight of the passing carrier. The outer rails, E E, are attached at each end to the rails of the track A, and form a frame, which preserves the alignment of the track A. From the outer rails, E E, posts J J' extend downward, sustaining the intermediate track, J².

I place a rod, *d*, between the posts J, slightly below the intermediate track, J², to receive the free ends of the hinged rails C C and sustain them in position to allow the carrier B to pass without jar onto the track J². The upper surface of the track J² is inclined, so the carriers will roll across to the lower and opposite end, in which is pivoted a circular gate, K, with its opening slightly larger than the carriers to be delivered at this station, having a weight, K', and an arm, K².

A delivery-basket, L, is attached by cords to the scored pulleys *e e*, turning upon studs

attached to the outer side of the rails E. To the sides of the pulleys *e e* are attached the smaller scored pulleys, *f f*, to which I fasten the cords *f' f'*, with their opposite ends attached to the spiral springs *f² f²*, fastened to the studs *f³ f³* in the rails E E. The basket L, when held against the under side of the intermediate track, will raise the arm K² and maintain the gate K in a horizontal position, allowing the carriers entering upon the intermediate track to pass through the gate K and enter the delivery-basket L. When the basket L is drawn down for the removal of the carrier, the weight K' will bring the gate K in the position shown in Fig. 5, its upturned edge checking the passage of any carrier that may enter the intermediate track while the basket is withdrawn, the difference in the diameters of the attached pulleys *e* and *f* allowing the basket L to be lowered a considerable distance with but a slight movement of the cord *f'* and expansion of the spiral springs *f²*.

The construction and operation of the tilting gate K and delivery-basket L is similar to that shown and described in my Letters Patent Nos. 316,531 and 308,032; but in my present invention, instead of a winding-drum having inclosed springs, I employ the differential pulleys *e* and *f* and springs *f²*.

I am aware that a differential winding mechanism has been employed attached to and carried by the delivery-tray of a cash-carrying system, with cords or flexible connections attached to a carriage or car on the track, which were wound and unwound as the delivery-tray was moved up or down. Such I do not claim.

I am aware that an intermediate track has been used with the outward track of a cash-carrying system such as was shown in my Letters Patent No. 319,692. I am also aware that a section of the outward track has been pivoted so its free ends may fall and convey the carriers from the main track to the intermediate track. I claim none of these features, broadly.

In my present invention I hinge the rails C C at the point *a*, forming a continuous track, so that whenever a carrier has operated the latching mechanism and depressed the free ends of the rails C C the opposite ends will not be raised above the track A so as to check a following carrier. I also carry the free ends of the rails C C below the intermediate track to the stop-rod *d*, thereby preventing any jar as the carrier leaves the hinged section C C. When a carrier has withdrawn the latching-bolt *b* and passed beneath the horizontal arm H, the spiral spring *b²* in carrying the bolt forward will also return the horizontal arm H to its position at right angles with the track A, and after the passage of the carrier to the intermediate track, J², the springs D will return the hinged rails C C in alignment with the main track A, the rail C becoming automatically latched as the chamfered section of the rail C passes the bolt *b*.

Between the beveled ends *g* of the hinged rail and the correspondingly-beveled end *g'* of the main rails, Fig. 8, I place a cushion, *h*, of rubber or some elastic material, to receive the force of the ascending rails when carried up by the springs D.

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

1. The combination, with the main outward track of a cash-carrying system, of a hinged section upon which the rolling carriers are conducted from the main track, the rails of said section being hinged at their ends to the rails of the main track, so as to form a continuous track, and said section having connected means for returning it in alignment with the main track after the passage of a carrier, as described, and for the purpose set forth.

2. The combination, with the main outward way of a cash-carrying system, of a hinged section of the main track, upon which the rolling carriers are conducted from the main track, the rails of said section being hinged at their ends to the rails of the main track, so as to form a continuous way, and springs applied to the hinged section so as to raise it in alignment with the main track, as described, and for the purpose set forth.

3. The combination, with the main outward track of a cash-carrying system having a section of its rails hinged at one end, so their free ends may fall down and allow the carriers to pass from the main track, and latching mechanism by which said hinged section is held in alignment with the main track, of a vertical rotating post and a horizontal arm extending from said post over the track, so as to be moved by the passing carriers, and connected mechanism for securing the simultaneous action of the rotating post and that of the latching mechanism in releasing the hinged section of rails, as described, and for the purpose set forth.

4. The combination, with the way of a cash-carrying system adapted to conduct rolling cash-carriers from the cashier's desk to the several salesmen in a store, of a section of the rails hinged at one end so the free ends of said hinged rails may be borne downward by the weight of the carriers, springs applied to said hinged rails to return them in alignment with the main track, a latching device for holding said hinged rails in alignment with the main track, and mechanism adapted to be actuated by the carrier by which it is unlatched, as described, and for the purpose set forth.

5. The combination, with the main way of a cash-carrying system, having a hinged section by which the carriers are allowed to pass from the track, of an inclosing-frame, E E, attached to the main track and inclosing said hinged section, a supporting-frame attached to said inclosing-frame E E, and carrying a vertical rotating post, a horizontal arm attached to said post and extending over the track, so as to be moved by certain of the passing car-

riers, an arm attached to said rotating post, actuating the latching mechanism, and a latching mechanism consisting of a bolt sliding in the inclosing-frame E E, and a spring applied 5 to said bolt to carry it forward to engage the hinged section of the track, as described, and for the purpose set forth.

6. The combination, with the hinged section of the main track, as described, of a sliding 10 bolt, *b*, engaging one of the rails of the hinged section, a spring, *b'*, and connected operating mechanism adapted to be moved by the passing carriers, substantially as described, and for the purpose set forth.

15 7. The combination, with the main track of a cash-carrying system and an intermediate track placed below said main track, and a hinged section of said main track opening downward, upon which carriers are conducted 20 to said intermediate track, of a stop placed below the intermediate track to receive and sustain the free ends of the hinged rails as the carriers pass to the intermediate track, as described, and for the purpose set forth.

25 8. The combination, with the main track of a cash-carrying system, having a hinged section whose rails open downward to allow the carriers to pass from the main track, and having connected means for returning said track 30 in alignment with the main track, of elastic cushions applied between the free ends of said hinged rails and the main track, as described, and for the purpose set forth.

35 9. The combination, with the main outward track of a cash-carrying system and a moveable delivery-basket below said track, to re-

ceive the carriers therefrom, of a differential winding-pulley with a fixed bearing on or above said track, cords attached to said basket and winding upon the larger step of said pul- 40 ley, and a spring whose tension is applied to the smaller step of said pulley, by which the delivery-basket is drawn up, substantially as described, and for the purpose set forth.

10. The combination, with a movable de- 45 livery-basket arranged below the main track of a cash-carrying system, and adapted to receive carriers therefrom, of a differential winding-pulley with a fixed bearing on or above said track, a cord attached to the delivery- 50 basket and winding on the larger step of said pulley, and a cord winding on the smaller step of said pulley, with a spiral spring attached thereto, whose tension resists the downward motion of the delivery-basket. 55

11. The combination, with a movable de- 55 livery-basket below the main track of a cash-carrying system, and adapted to receive carriers therefrom, of a pulley with fixed bearings on or above said track, a cord attached to 60 the delivery-basket and wound upon said pulley, and a spiral spring with a cord attached thereto and wound upon said pulley, said cords being wound upon said pulleys in opposite directions, so the tension of the spiral 65 spring shall resist the downward motion of the delivery-basket.

J. WALTER FLAGG.

Witnesses:

N. C. STEERE,
RUFUS B. FOWLER.