

(No Model.)

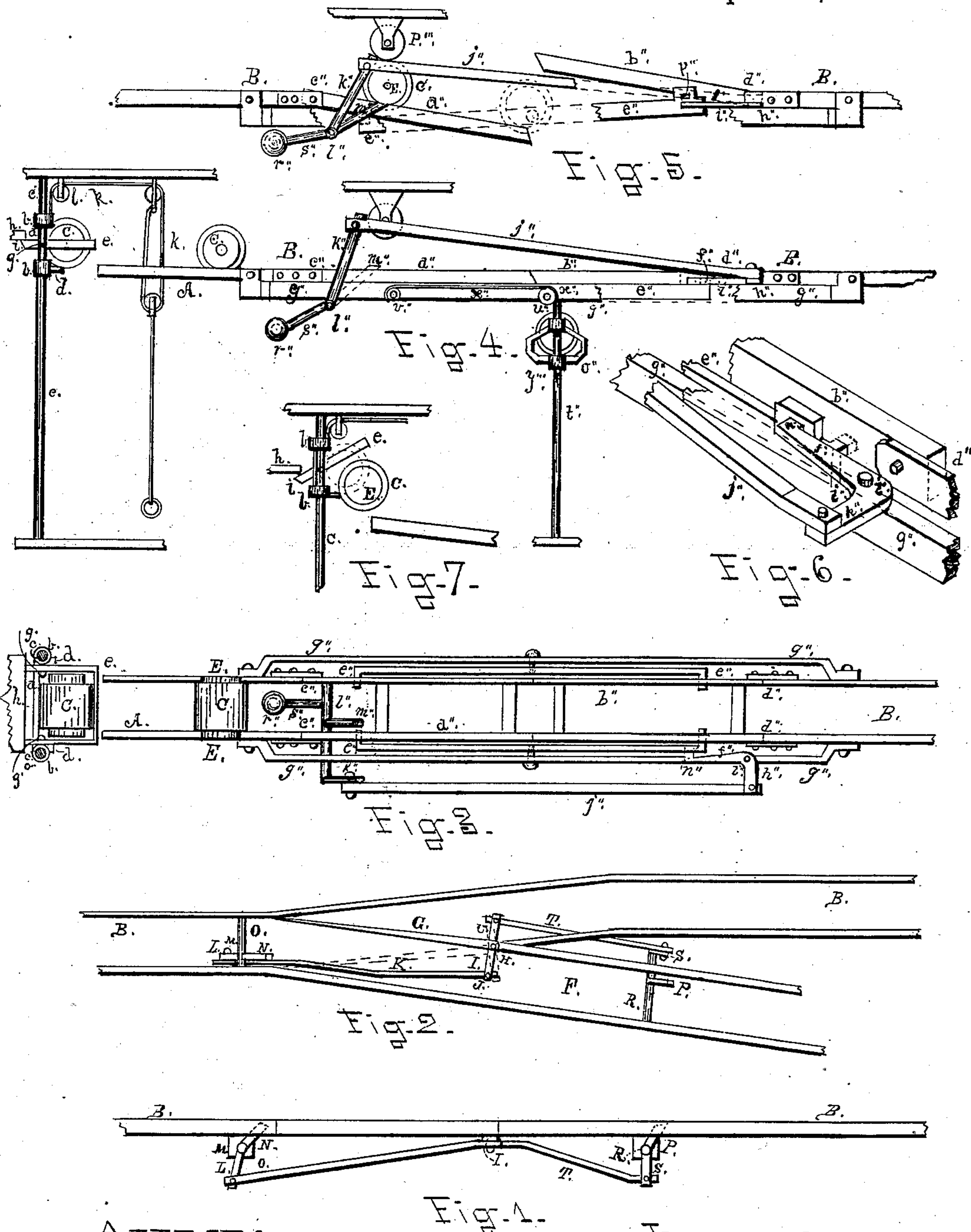
2 Sheets—Sheet 1.

H. A. BAKER.

CASH CARRIER.

No. 285,375.

Patented Sept. 25, 1883.



ATTEST:

James E. Thomas
M. B. Thomas

INVENTOR:
Hudson A. Baker.

(No Model.)

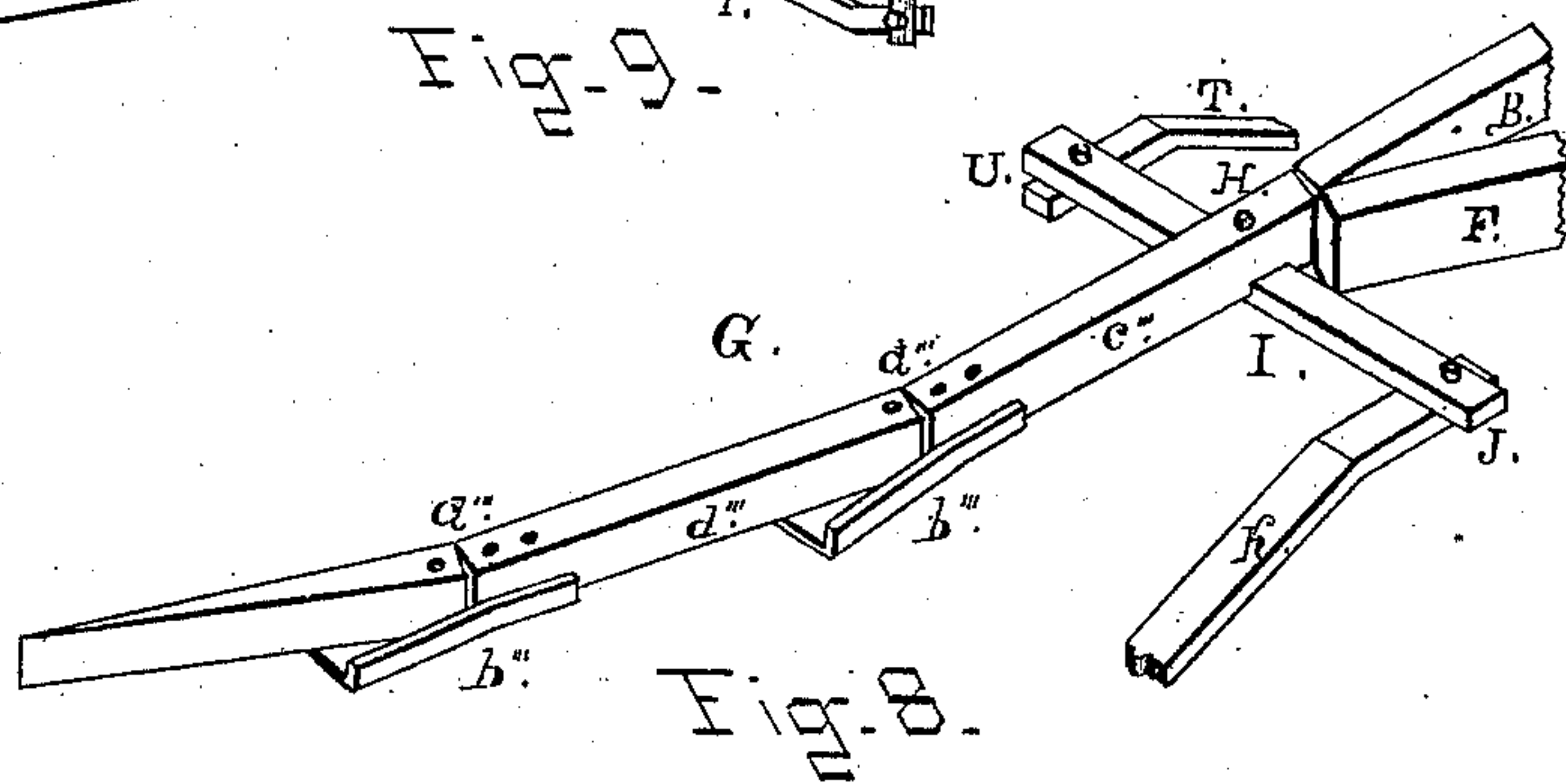
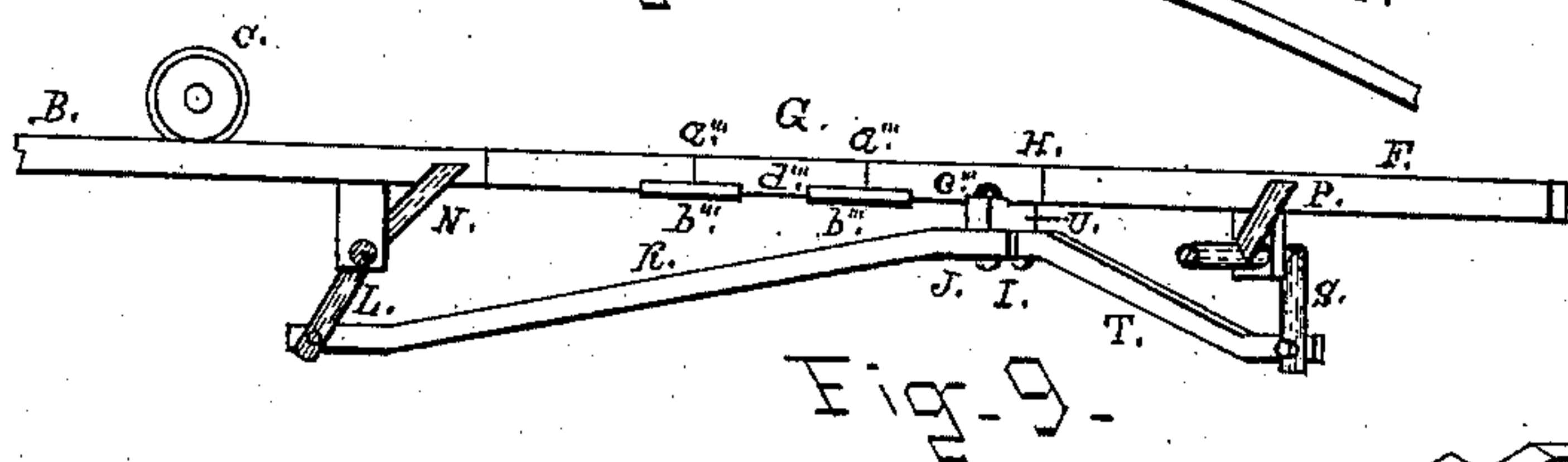
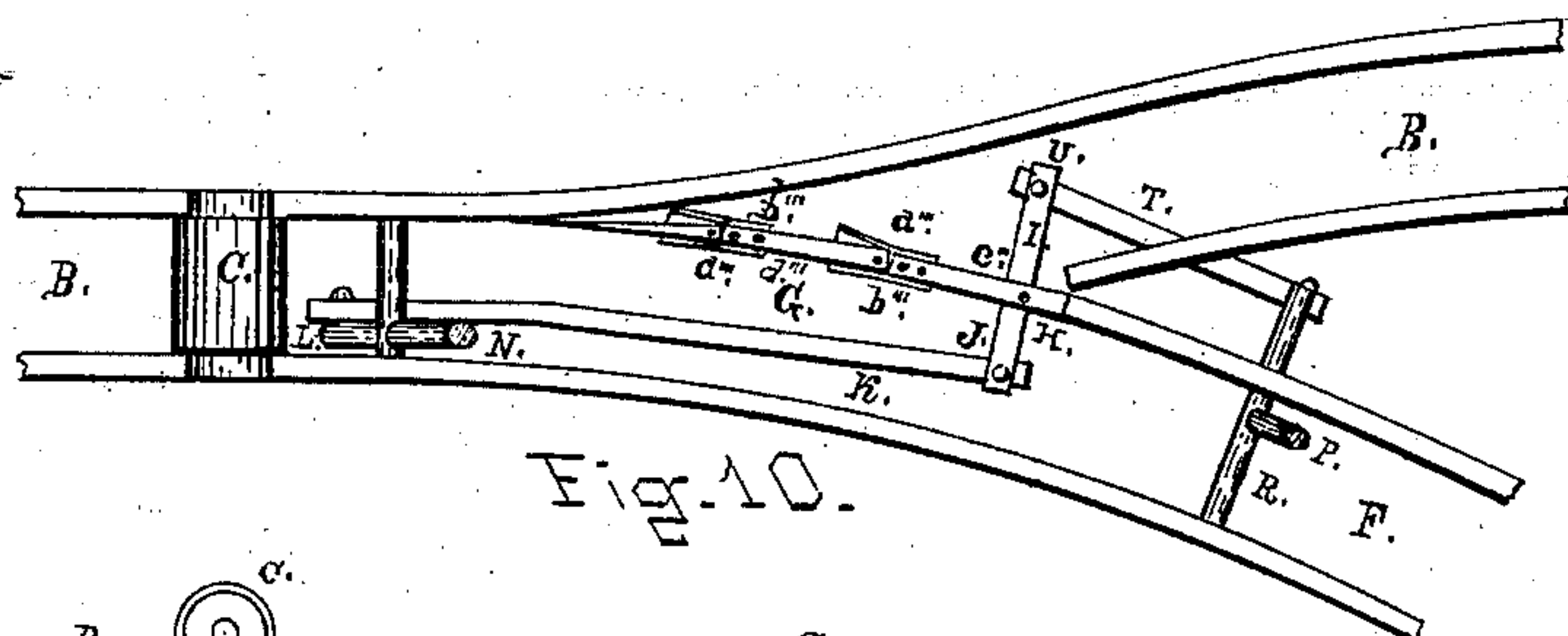
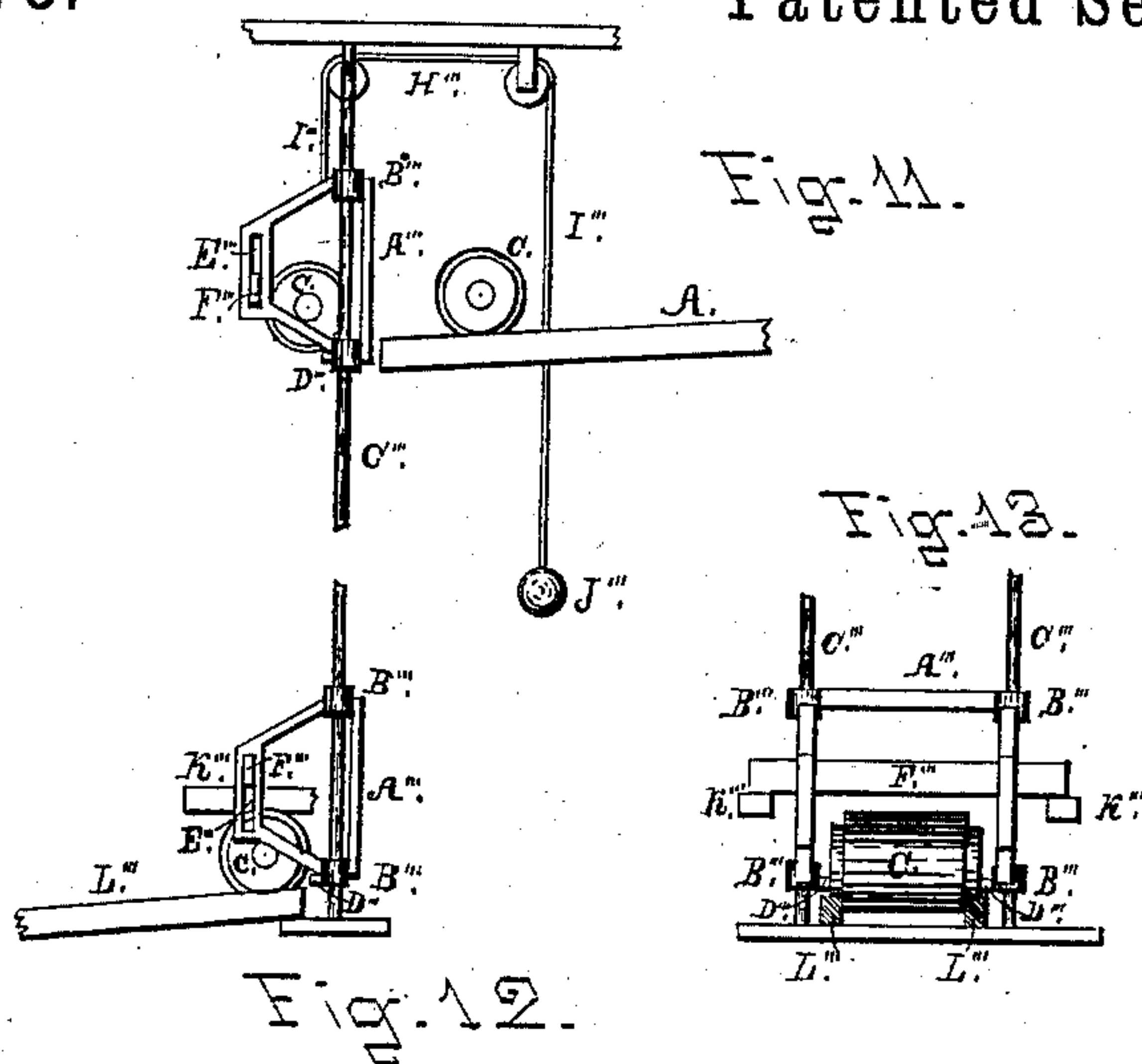
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UNITED STATES PATENT OFFICE.

HUDSON A. BAKER, OF BAY CITY, MICHIGAN.

CASH-CARRIER.

SPECIFICATION forming part of Letters Patent No. 285,375, dated September 25, 1883.

Application filed June 8, 1883. (No model.)

To all whom it may concern:

Be it known that I, HUDSON A. BAKER, a citizen of the United States, and residing in Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Cash-Carriers, of which the following is a specification.

My invention relates to improvements in cash-carriers in which an arrangement of rail-way-tracks are used—one leading from the salesman to the cashier's desk, and another from the cashier's desk to the salesman, the one inclined to and the other from the cashier's desk—the said tracks being located near the ceiling or in an elevated position in a business-place, and provided with a suitable device for elevating the carrier from the counter to the said tracks, an apparatus for stopping and lowering the carrier at different stations along the line, an automatic switch for guiding the carrier to a branch or side track, and a carriage for lowering the carrier to the cashier's desk, all being hereinafter more fully described.

In the drawings, Figures 1 and 9 represent side views of my automatic switch. Figs. 2 and 10 are plan views of the same. Fig. 3 is a top or plan view of my device for stopping the carrier at a way-station. Fig. 4 is a side view of the same, and shows my device for lowering the carrier to the salesmen, also the elevator for raising the carrier from the salesmen or cashier to the track. Fig. 5 is a side view of Fig. 3, showing the stopping device being operated by the carrier. Fig. 6 is a detached view of a portion of Fig. 5. Fig. 7 is a detached view of a portion of the elevator, showing the carrier about to leave the elevator for the track. Fig. 8 shows a detached view of jointed switch-rail shown in Fig. 10. Fig. 11 is a side view of my device for lowering the carrier from the track to the cashier's desk. Fig. 12 is a view of the same, showing the carrier leaving the lowering-carriage. Fig. 13 is a front view of Fig. 11.

Similar letters refer to similar parts throughout the several views.

B is the main line of track, inclined and leading from the cashier's desk to different parts of the store.

C is a car or carrier, and is a hollow cylindrical body, C, to each end of which is at-

tached an independently-revolving wheel, E, which travels upon the track B. The body C being somewhat larger than the wheel E, and its length being the same as the space between the rails, it acts as a flange for keeping the carrier upon the rails.

In Figs. 3 and 4 is an elevator consisting of a frame, *a*, provided with suitable boxes, *b*, on each side, through which pass the rods *c*, which act as guides and extend from the counter to a short distance above the track A. At the lower part of the frame *a*, and extending across the frame, is a shelf or rest, *d*. The width of this rest *d* is nearly, but not quite, half the diameter of the carrier C, so that should the carrier be placed upon the rest without other support it would at once roll off, the center of gravity being beyond the front edge of the rest *d*. *e* is a yoke, which is pivoted at *g* on the sides of the frame *a*, and extends across in front of the carrier for holding it on the rest *d*, and it also extends back beyond the pivots *g* to a proper distance to engage with the stationary piece *h*, which is arranged and placed above the line of the track A, so that when the elevator-frame is raised and the projecting end *i* of the yoke *e* comes in contact with the stationary piece *h* the front part of the yoke is lifted and the carrier rolls off the rest *d* and on the track A, as shown in Fig. 7, and then, as the elevator is lowered, the yoke *e* resumes its level position, and is ready to receive another carrier.

Connected with the upper part of the frame *a* is a cord, *k*, which is led over a stationary pulley, and then through two or more movable pulleys, as may be necessary, and then to the desk, and by pulling the cord *k* the elevator is raised to the track, and when the cord is released the elevator returns to the desk.

In Figs. 1, 2, 8, 9, and 10, B is a main line from the cashier's desk, and F a side or branch track intersecting the main line diagonally. The main line B is preferably slightly curved at the intersection, but may be used straight. The switch-rail G is movable, being pivoted at the end H, so that the other end may be swung around in a direct line with either track. This switch-rail G is provided with the joints *a'''*, which are formed by bolting firmly to the lower side of the pivoted section *c'''* the joint-

plate b''' , the said plate b''' being constructed with its edges turned up, forming a flange which fits to the two sides of the one piece of rail c''' , while the other end, being wider between the flanged edges, allows the rail d''' , which is pivoted to the plate b''' , to swing either way until its sides come in contact with a flange of the joint-plate b''' , and the next joint being constructed in the same manner, the whole forms a switch-rail which will bend in either direction to conform to the curve in the opposite track. Beneath the switch-rail G, and secured to and at right angles with the same, at or near the pivoted end H, is the lever I, which extends equidistant each side of the rail. To the end J of this lever is pivoted the connecting-rod K, the opposite end of the rod K being pivoted to the downward-extending arm L of the lever M, which is located near the front part of the switch, the upper arm, N, being placed and arranged so as to reach nearly to the top of the rails B, and is inclined somewhat toward the switch, so that when a carrier, C, rolls along toward the switch the body part of the carrier comes in contact with the arm N, pressing it forward and downward, and moving the arm L backward, which causes the rod K and lever I to move backward, and throws the loose end of the switch-rail G over to the opposite rail of the track B, and turns the carrier on the branch track F. As the carrier passes along the branch track it comes in contact with and operates the lever P, which is placed in a proper position and fastened to the shaft R, which extends across beneath the track, and to which is also attached the lever S, leading downward and pivoted at the lower end to the connecting-rod T, the other end of which is pivoted to the arm U of the lever I, so that, the lever P being pushed forward and downward by the moving carrier C, the switch-rail G is moved back to its former position, and leaves the track B clear for the passage of another carrier.

In Figs. 3, 4, and 5 a portion, a'' and b'' , is made movable. The part a'' is pivoted at e'' to the main rails B, and b'' is pivoted to the main rails at d'' , in such a manner that one end of the part a'' will swing below the rail B, while the portion b'' swings above the line of the rail B, and when both parts are in a level position they form a continuous line with the rails B. These two parts a'' and b'' are connected together by the levers e'' , to the ends of which they are attached by pivots or lugs. The centers of these levers e'' are pivoted to the supports g'' , which are fastened at either end to the rails B, and are bent near each end, so that the levers e'' may operate between them and the detached portions of track a'' and b'' , as shown in Fig. 3. Near one end of the support g'' , and pivoted to the upper side of the same, is placed the bell-crank lever i'' , of which one arm, f'' , is provided with a lug, n'' , which engages with a hole, p'' , in the lever e'' , for locking the parts a'' and b'' in a level position;

and to the arm h'' of the bell-crank lever i'' is pivoted the connecting-rod j'' , while at the other end of the rod j'' , and above the track, is pivoted the lever k'' , which extends to and is firmly connected with a shaft, l'' , which is located near the pivots e'' and across beneath the track. Between the tracks a'' , and firmly attached to the shaft l'' , is a short lever, m'' , which extends upward in a diagonal direction to a proper distance, so that a carrier passing must press it forward and downward. This operates the lever k'' forward, also the connecting rod j'' and the bell-crank lever i'' , disengaging the lug n'' from the lever e'' , and the carrier being on the pivoted portion a'' , its weight causes the loose end of the part a'' to drop below the line of the main track, which at the same time actuates the levers e'' , which causes the loose end of the part b'' to rise above the line of the main track, and allows the carrier to pass beneath it and into a carriage, o'' , which is placed in a proper position to receive it, and as soon as the track a'' is relieved of the weight of the carrier it is returned to its former position by the weight of the section b'' acting on the connecting-lever e'' , which, on arriving at its former position, engages the hole p'' with the lug n'' on the lever i'' , which is operated by a weight, r'' , being attached to the lower end of the lever s'' , which is firmly secured to the shaft l'' .

In order to assist the carrier to operate the lever m'' , I place the loose roller P''' directly over the trip-lever m'' , and at such a distance above the rail as to allow the carrier to pass beneath without bearing against the roller P''' ; but should the carrier in operating the lever m'' be inclined to rise from the rail, it comes in contact with the roller P''' , and is thus held to the rail, and so operates the lever m'' to the full extent intended. This roller P''' can also be used in operating the switch-levers N and P in Fig. 9.

o'' is a carriage constructed and arranged with boxes y'' , which slide on the upright guides or rods t'' . Attached to the upper part of the carriage o'' is a rubber cord, x'' , which passes over a pulley, u'' , which is attached to the supports g'' , and is fastened to a roller, v'' , which is secured to the support g'' . This rubber cord x'' allows the carriage, when it has received the carrier, to descend to the salesman, and when relieved of the weight of the carrier the cord operates to draw the carriage back to the position beneath the track, where it will be ready to receive another carrier.

A in Fig. 11 is the terminus of the main line of railway at the cashier's desk, and A''' is the frame of a carriage, which is provided with the boxes B''' . Passing through these boxes B''' , and firmly secured at the upper and lower ends, are the vertical rods C''' , which act as guides for the carriage in its route from the track A to the cashier's desk and return. The bottom part of the carriage is formed by a shelf or rest, D''' , the width of which is

equal to nearly one-half the diameter of the carrier C. Across the front side of the carriage A''', and resting in the slots E''', which are provided for that purpose, is the bar F''', the ends of which extend beyond the sides of the carriage, as shown in Fig. 13. Attached to the upper part of the frame A''', and leading upward and over the pulleys H''', is the cord I''', at the opposite end of which is attached the balancing-weight J''', which serves to draw the carriage from the desk to the track A and hold it for the reception of the carrier C, as shown in Fig. 11, and on receiving the carrier the carriage passes to the desk, where are placed the lugs or projections K''', which catch the projecting ends of the bar F''' and stop the bar while the carriage passes on, and this removes the bar from before the carrier C, and the center of gravity being forward of the edge of the rest D''', it rolls out and on a track or rest, L''', on the cashier's desk, as shown in Fig. 12, and the carriage, relieved of the weight of the carrier, returns to its former position, as shown in Fig. 11.

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

1. In an automatic switch for a cash-carrier, the jointed switch-rail G, in combination with the tracks B and F and the mechanism for moving the said jointed switch-rail to intersect with either track, substantially as described, and for the purpose specified.

2. In an automatic switch for a cash-carrier, a jointed switch-rail, G, pivoted at one end to the intersection of a main and branch track, and consisting of the sections c''' and d''', in combination with the joint-plate b''', substantially as described and shown.

3. In a cash-carrier railway, the main track B and the pivoted sections a''' and b''', in combination with the connecting-levers e''', the bell-crank lever i''', the connecting-rod j''', the lever k'', and the trip-lever m'', substantially as described and shown.

4. In a cash-carrier railway, the carrier C and trip-lever m''', in combination with the roller P''', substantially as described and shown.

5. In a cash-carrier, the carriage o'', provided with the boxes y'' and the guide-rods t'', in combination with the elastic rubber cord x'', secured to the sides of the support g'', substantially as described, and for the purpose specified.

6. In a cash-carrier, the carriage A''', provided with a rest, D''', in combination with the bar F''' and the slots E''', substantially as described and shown.

7. In an elevator for a cash-carrier, a frame provided with a rest for the carrier, the said rest being of such width that the center of gravity of the carrier shall be forward of the edge of the rest, and a pivoted yoke for holding the carrier upon the said rest, substantially as described, and for the purpose specified.

8. In an automatic switch for a cash-carrier, the tracks B and F and the pivoted switch-rail G, in combination with the trip-levers P and N, the levers L and S, the connecting-rods K and T, and the lever I, substantially as described and shown.

HUDSON A. BAKER.

Witnesses:

WILLIAM GAFFNEY,
JONAH TIMMIS.