

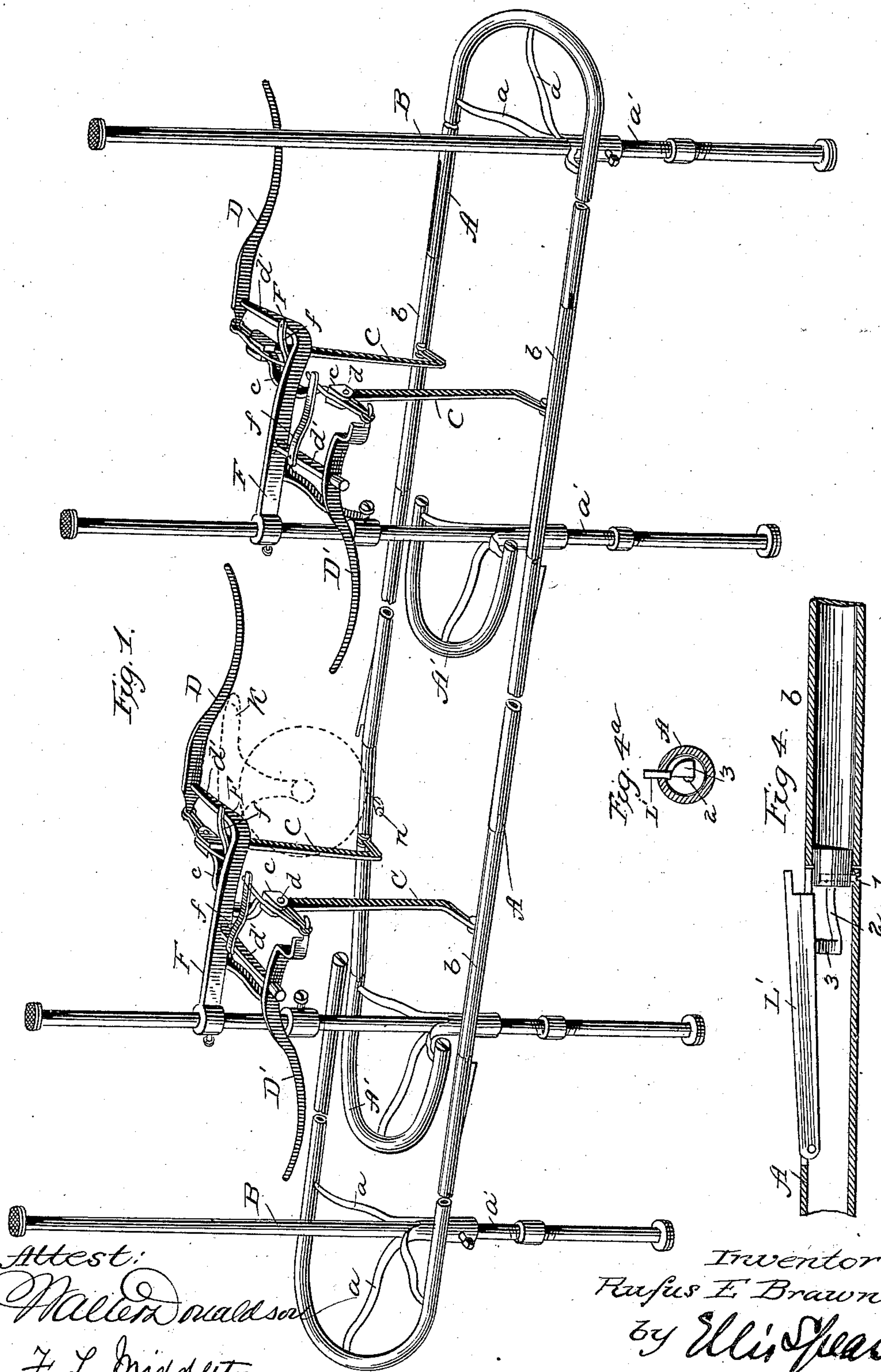
(No Model.)

2 Sheets—Sheet 1.

R. E. BRAWN.
CASH CARRIER TRACK.

No. 365,668.

Patented June 28, 1887.



Attest:
Matters & Co.
J. L. Middleton

Inventor
Rufus E. Brawn
by Ellis Spear
Atty.

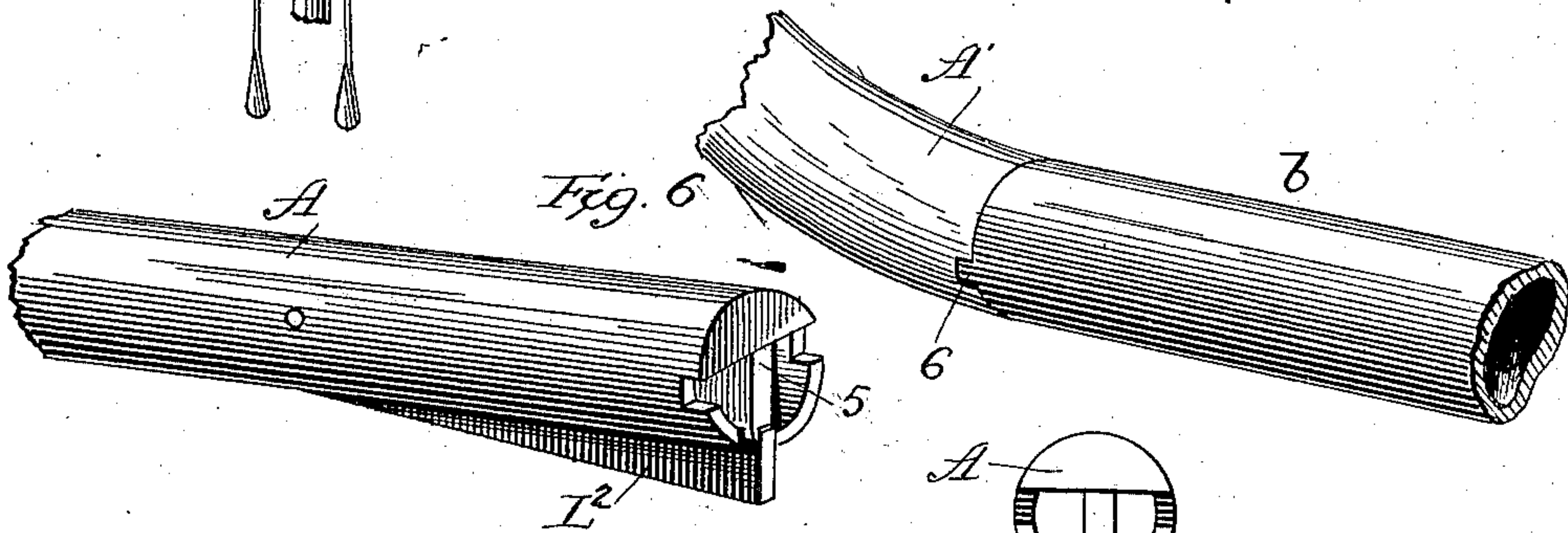
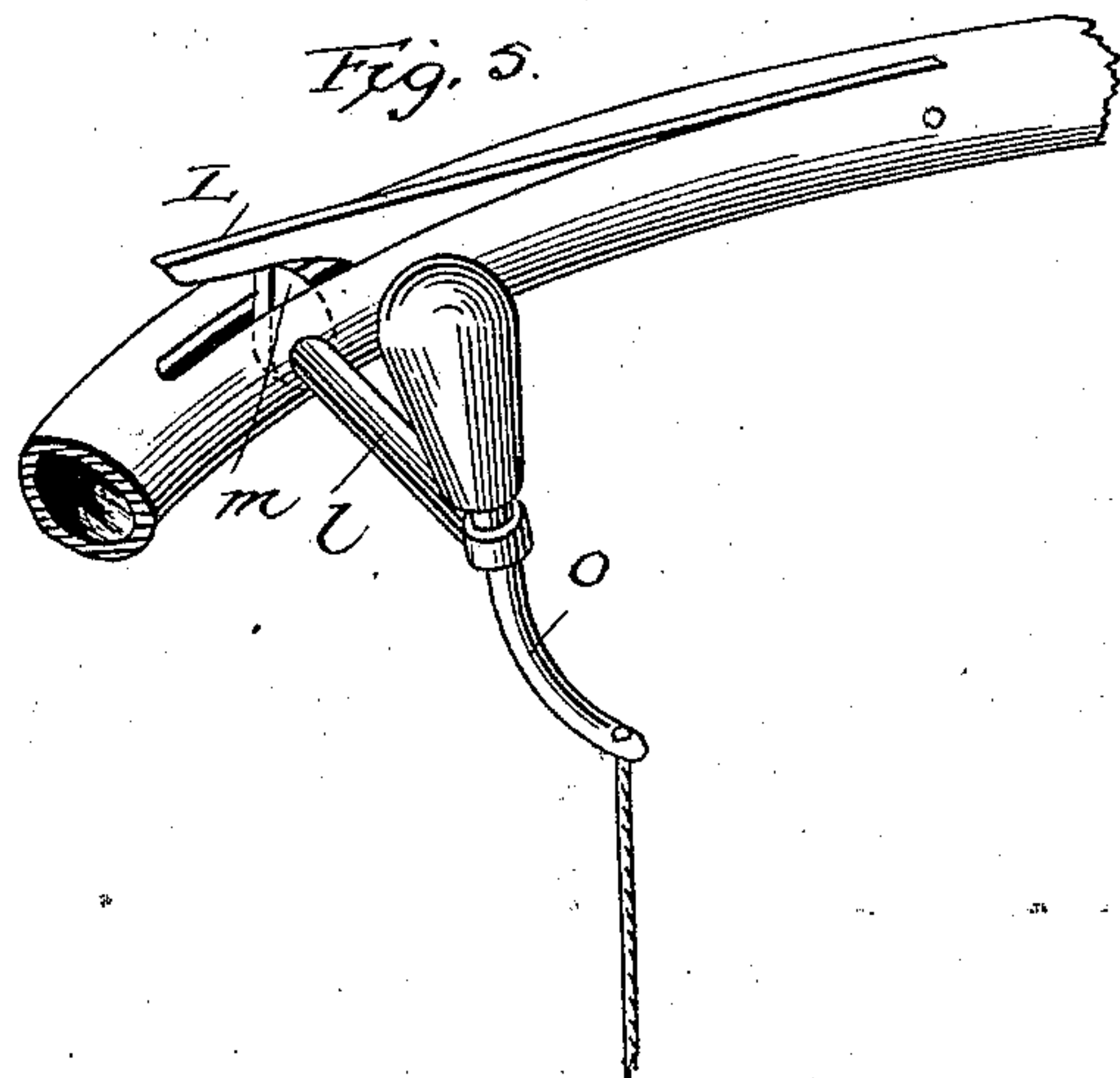
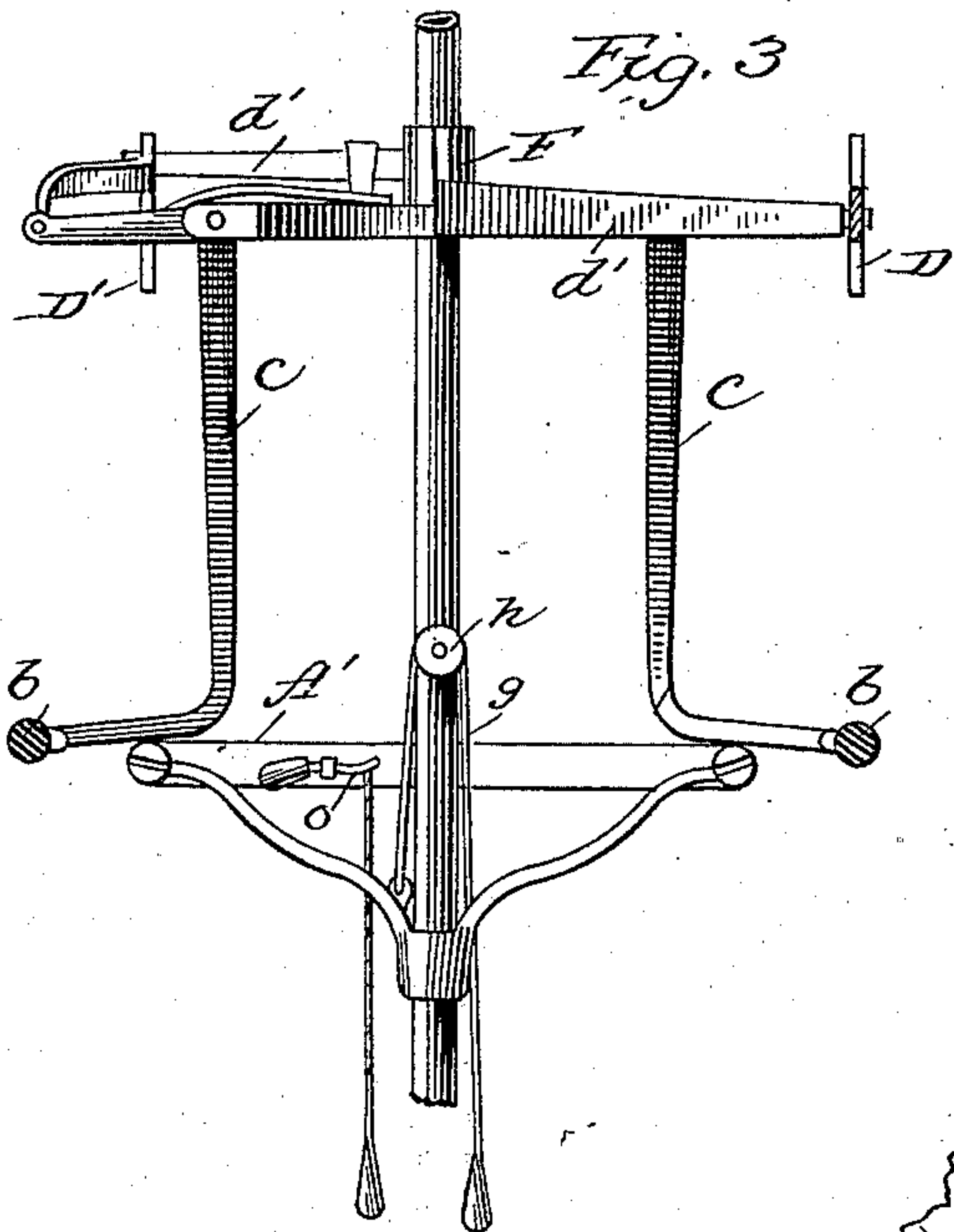
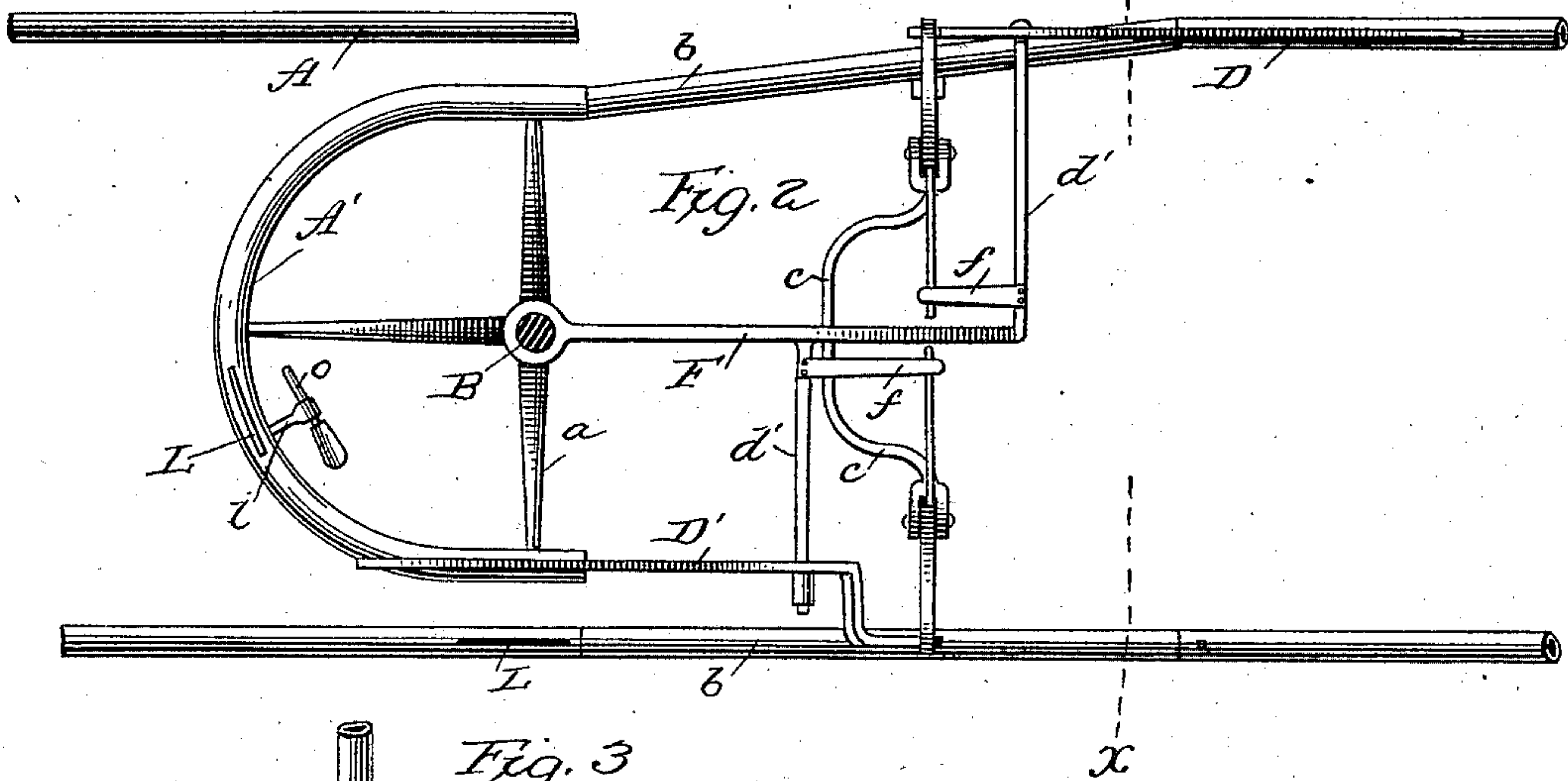
(No Model.)

2 Sheets—Sheet 2.

R. E. BRAUN.
CASH CARRIER TRACK.

No. 365,668.

Patented June 28, 1887.



Attest:
Walter M. Mendenhall
J. L. Middleton

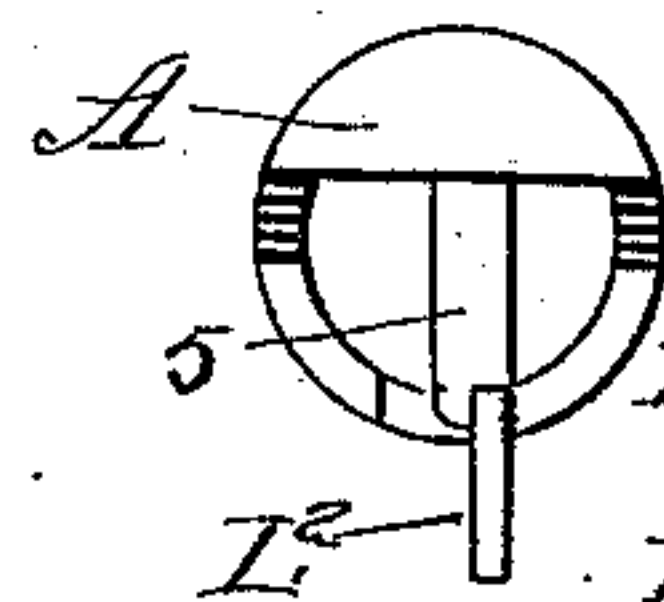
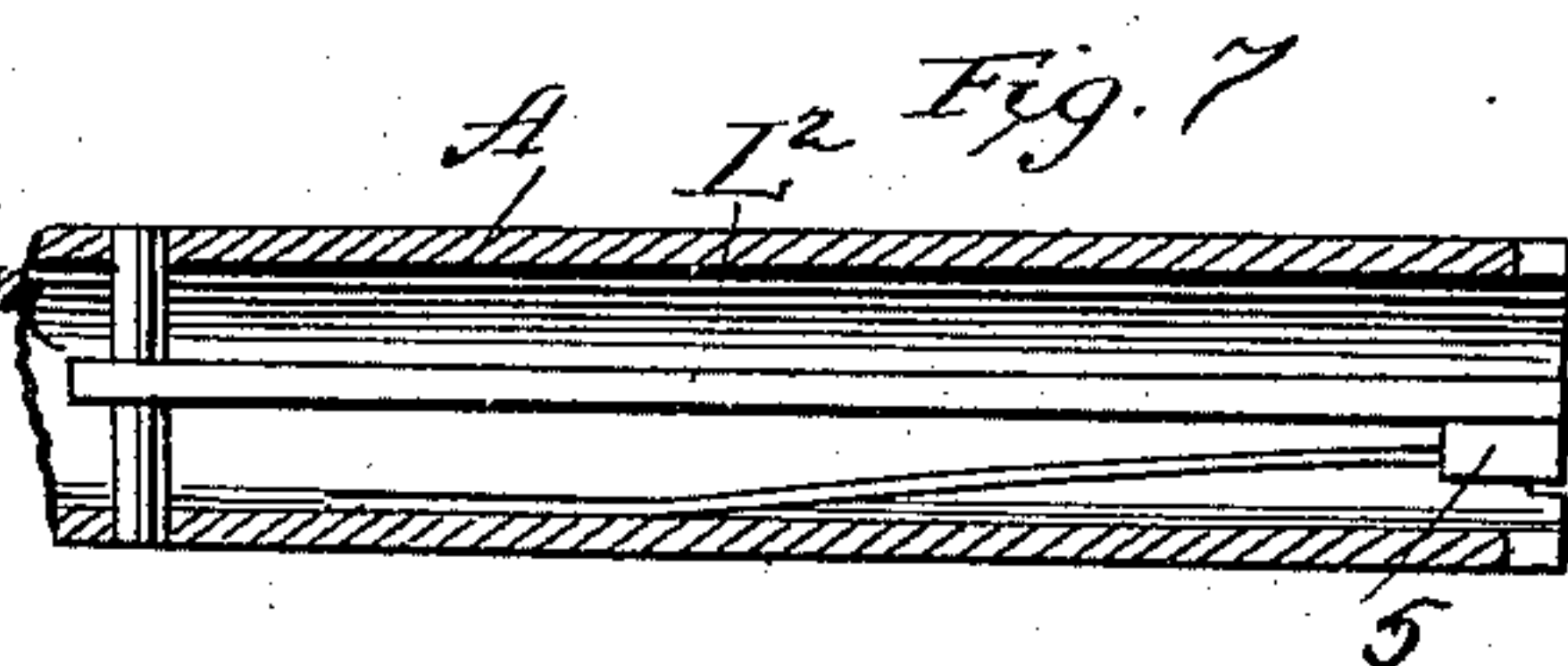


Fig. 8. Inventor
Rufus E. Braun
by E. L. Spear
Atty.

UNITED STATES PATENT OFFICE.

RUFUS E. BRAWN, OF NEWBURYPORT, MASSACHUSETTS, ASSIGNOR TO
NATHANIEL WILSON, OF WASHINGTON, DISTRICT OF COLUMBIA,
AND BYRON A. OSGOOD, OF WAKEFIELD, MASSACHUSETTS.

CASH-CARRIER TRACK.

SPECIFICATION forming part of Letters Patent No. 365,668, dated June 28, 1887.

Application filed November 24, 1886. Serial No. 219,765. (No model.)

To all whom it may concern:

Be it known that I, RUFUS E. BRAWN, of Newburyport, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Cash-Carrier Tracks; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to cash-carriers or what are called in the trade "cash and parcel carrier systems," these being well-known devices for moving cash and parcels in retail stores.

The invention relates more particularly to the track, and is designed to be used in connection with an automatic carrier or any freely-moving carrier suspended from a wheel or wheels and adapted to run upon the track.

My invention consists, first, of an endless track adapted to allow the carriers to go and return without being reversed upon the way.

It consists, secondly, of a side track or tracks included within the endless track, with switches turning out any required car.

It consists, thirdly, of mechanism operated by the car itself and arranged above the track, so that any car designed to be turned upon any particular side track will operate the switch automatically for that purpose.

It consists, further, of a special form of stopping device, of devices for raising and lowering the track, of a special form of track, and of special devices for operating the switches.

It consists, lastly, of a special construction of the supporting-standards, whereby the apparatus may be readily set up and as readily taken down.

In the accompanying drawings, Figure 1 is a perspective view of the apparatus, one of the switches being shown as open. Fig. 2 is a plan view of a portion of the apparatus, showing a siding and the mechanism employed in connection therewith. Fig. 3 is a sectional view on line *x x*, Fig. 2. Figs. 4 and 4^a are detail views of the automatic stopping device. Fig. 5 is a perspective view of the stop situated in the siding. Figs. 6, 7, and 8 are detail views of the automatic stop mechanism, that is placed in a different position from that illustrated in Fig. 5.

In the drawings, A represents an endless

track, designed to reach from the cashier's desk to the remotest part of the store from which it may be desired to send cash or parcels. It consists of an outgoing and a return track, which are connected to each other at both ends by a curved track, as shown, so that the car running, for example, from the cashier to the salesman returns to the cashier by passing around the curve and continuing upon the other track. This track is made, preferably, of brass tubing, the sections of which are connected to each other by suitable interior couplings. It is supported upon arms *a*, which are attached to a post, B. These arms may be adjusted on the post and may be fixed thereto in any desired manner. The post consists also of tubing, but may be of solid rods. It is provided at the upper and lower ends with disks faced with rubber or other suitable padding, adapted to bear upon the counter or ceiling and to hold the post in place by frictional contact with the counter or ceiling, or secured with bolts or screws, the pads being soft enough to protect the surfaces against which they bear.

In order that the pads may be pressed with sufficient force, the post is composed of two parts, the upper end having the part *a'* connected to the lower end by a coupling having a right and left hand thread, by turning which coupling the post may be extended. The construction shown allows the post to be put up or taken down without marring the store in which they are placed and without difficulty. Within this endless track I also provide sidings *A'*. These consist of substantially semi-circular ways formed of the same kind of material as the main track and similarly supported upon a post on the same level with the track. Only two are shown in the drawings; but it will be understood that any desired number may be used, according to the number of salesmen. At every siding the track upon each side is provided with a point or switch, *b*, continuous with the main track, to which it is hinged at one end, while the free end is adapted to move from the end of the main track to the end of the siding which is by the side of the main-track end, so that the switch may be shifted to make the main track continuous with itself or with the siding. This arrange-

ment allows the car appropriated to any salesman to run upon the siding at his counter and there to be stopped, and after being there used to be allowed to continue around the siding and to pass off at the other end upon the main track again to continue toward the cashier. In this way practically at each siding the continuous track is shortened; but the continuity of it is maintained.

The switches might be operated by hand, so as to divert the car from the main track onto the siding whenever the salesman so desired; but in order to relieve the salesman from this duty of attending to the car I have provided automatic apparatus, by means of which the car itself operates the switch to turn it from the main track to the siding. The special automatic mechanism shown consists of a pendulum, *C*, pivoted upon an arm, *c*. Its lower end is bent to a horizontal position, and is pivoted to ears on the inside of the switch. The upper end is bent at right angles, and is pivoted in the angle to the arm *c* a little off the center, as shown at *d*. On another arm, *d'*, is pivoted the lever *D*, and the free end of this lever extends away from the siding to which it belongs. The other end is pivoted to the upper arm of the pendulum. This upper arm has a prolongation extending inwardly toward the center of the track beyond the pivot, and this is pressed down by a spring, *f*, attached to the arm *d'*, and this tends to hold the switch in connection with the main track.

The under side of the free end of the lever is of a cam shape and is adapted to be lifted by means of a curved projection carried upon the car as it passes under the lever, and the lever is shaped and arranged so that the projection upon the car will give sufficient movement to shift the switch from the main to the side track. The eccentric pivoting of the pendulum which carries the switch causes the weight of the car when on the switch to aid in the movement. When the car has passed from the switch onto the siding, the spring and weight of the lever return the switch to the main track. The switch on the other side of the way is constructed in the same manner; but the lever *D'* projects in an opposite direction and over the track of the siding, so that the car runs under it just before leaving the siding and raises the lever to throw the switch inward into connection with the siding in time to form a continuation of the siding, so that the car may run onto the main track, and then the spring and weight of the lever return the switch to the main track. This automatic return of the switches to the main track holds the track practically continuous, it being open only for an instant while a car is passing to or from a siding. The arms which support the levers are fixed to a bracket, *F*, which is supported adjustably on the post and held by means of a set-screw. The siding may be fixed upon the post, as shown in Fig. 1, or may be vertically movable thereon, as shown in Fig. 3. In the latter figure it is shown as being

capable of lowering by means of a cord and pulley, *g h*, and when so made the siding can be lowered to bring the car down to within reach of the operator.

It will be understood that where there are several sidings forming stations for several salesmen the levers which operate the switches are arranged to lower as they operate the sidings nearer to the end of the track. The lever of the second siding being lower than the first, its car will pass under the first and strike the second, and the lever of the third, being lower than that of the second, will pass under the second and strike the third, and so on. The projection on the car is shown in dotted lines, Fig. 1, at *K*, and it is arranged in relation to the lever which it operates in such manner as to hold the lever until the car has passed the junction of the switch with the main track.

It will be observed that the weight of the lever tends also to throw the switch outward, and the weight of it may be such as to obviate the necessity of a spring. I have also devised a new form of stop adapted to the kind of track described. This track may be of tubing three-fourths of an inch in diameter. I slot the upper surface of the tube and insert in it a tongue, *L*, Figs. 2 and 5, pivoted at one end and adapted to lie flush with the upper surface of the track. Underneath the free end of the tongue is a shaft, *l*, carrying a cam, *m*, so that when the shaft is turned the tongue is lifted. When it is lifted, the wheel runs up on the tongue and is lifted, and this causes a small bar, *n*, Fig. 1, on the frame of the carrier to bind upon the lower part of the track and stop the car. On the end of the shaft *l* is an arm, *o*, carrying a weight upon one end and a cord upon the other. By pulling the cord the tongue is raised, and it is lowered by the weight when the cord is released. This is placed in suitable position on the siding to arrest the car in a position convenient to the operator. Another stop of similar or suitable construction is arranged in a similar manner to be operated automatically by the switch to prevent another car from coming onto the switch or running off the track while one is leaving its turn-out.

On the outgoing track the automatic stop is situated in the fixed section at the point of connection with the switch, while upon the return track the said device is placed in the main track at a point adjacent to the free end of the switch. I aim to utilize the movement of the switches as a means of effecting the operation of the pivoted tongues or stops *L'*, and for this purpose I have devised special means for each of the above situations. The manner of operating the tongues *L'* in the position first mentioned is shown in Figs. 4 and 4^a, in which *A* represents the fixed portion of track, and *b* the switch hinged thereto. The tongue *L'* is arranged in a manner similar to that referred to above. A screw or pin, *1*, forms the pivotal connection between the sections. An arm,

2, projects from the end of the switch beyond the pivotal point, and carries upon its end a cam-shaped head, 3, which is adapted to have movement laterally across the tube to act upon the tongue L'. When the parts A and b are in line, the cam will be at the extreme limit of its movement and the tongue will be allowed to fall to its normal position by its own weight. When, however, the switch is swung to connect with the siding, the cam face of the part 3, passing under the tongue, effects the raising and holding of the same until the return movement of the section b takes place.

The mechanism placed in the return track to prevent a carrier running off while the switch is swung inward is illustrated in Figs. 6, 7, and 8. In the former figure the fixed portion of track is shown at A and the switch at b, and a portion of the siding at A', the switch being shown as open or in connection with the siding. In this case the tongue L² is arranged in the under side of the track, and is adapted to fall by gravity to bar the movement of the carrier. A spring-catch, 5, has lateral movement in the tube across the path of the tongue or stop L², and is adapted to move into position directly over the tongue and hold the same down. This action takes place when the switch is open, as shown, and the movement of the carrier from the track is thus prevented. When, however, the switch is returned to its normal position, the projecting stud 6 strikes the catch and forces it aside, and the upward movement of the tongue is then permitted when a carrier passes along that portion of the way.

I contemplate placing the apparatus over the counter, resting the bases of the posts upon the counter and holding them in the manner aforesaid, or by any suitable expansion devices by which the posts may be held by frictional contact above and below.

As I contemplate using a spring-motor in the car, it is necessary that the switches should operate easily, and in the construction this is effected by the swinging or pendulum movement, which avoids friction.

When not in use, the carrier may remain upon the turn-outs between the tracks, where it is ready for use by the salesmen.

I claim—

1. A store service apparatus comprising a stationary track supported in the described relation to the counters, a wheel-carrier supported thereon, and curved sidings extending across between the portions of the continuous track, the main track being provided with pivoted sections at the sidings, the said sections serving as switches to divert the carrier to the sidings, substantially as described.

2. An elevated endless track consisting of straight tracks joined by curves, in combination with curved sidings placed between the straight tracks, switch mechanism for connecting the main tracks with the sidings, and means for raising and lowering the sidings, substantially as described.

3. In combination, an endless main track composed of straight portions joined by curves, a siding arranged to shorten the circuit of said track and to make it continuous through the shorter circuit, a pivoted section of the main track forming a switch to connect the main track with the siding, and mechanism, substantially as described, adapted to be operated by the car for shifting the switch and shortening the circuit, substantially as described.

4. In combination with the main track and siding, a switch to connect the two supported upon an arm, C, pivoted to one side of the center of gravity, a lever connected with said arm adapted to be operated by the car, whereby the switch is moved, and means for returning the switch to its normal position, substantially as described.

5. An endless track consisting of straight tracks joined by curves and curved siding placed between the straight tracks, a switch adapted to connect the siding with the main track, consisting of a hinged section of the main track, a hinged vertical or pendulum support for the switch, a cam-shaped lever projecting away from the siding and over the main track for operating the switch toward the siding and adapted to be operated by a projection on the car, a similar switch and supporting mechanism on the opposite side or other straight part of the track, and a similar cam-shaped lever projecting over the siding and adapted to be operated by a projection on the car as the car is leaving the siding to shift the switch to the siding, all combined substantially as described.

6. A stop mechanism consisting of the tongue inserted in the upper surface of the track and pivoted at one end and means for raising and lowering the tongue, in combination with the car having a wheel or wheels adapted to run upon the track, and an arm adapted to bind upon the lower part of the track when the wheel is lifted by the tongue, substantially as described.

7. In combination, the fixed portion of the track, the switch portion pivoted thereto, a tongue or stop positioned close to said pivot, and means, substantially as described, for operating said tongue on the movement of the switch, for the purpose set forth.

8. The combination of the fixed portion of the track, provided with a tongue or stop pivoted therein, with a switch provided with a stud or projection for automatically operating the tongue or stop, substantially as described.

9. In combination with the fixed portion A and switch b, the gravity-stop L, pivoted in the fixed portion, and means carried in the pivoted end of the switch for positively raising the tongue, substantially as described.

10. In combination, the sections A and b, the tongue L', pivoted to the former, and the arm 2 and cam 3, carried by the latter and adapted to act upon said tongue, substantially as described.

11. In combination, the fixed section A, the tongue L², pivoted thereto, means for holding the said tongue in its outward position, and the switch b, adapted to act upon said means
5 for releasing the tongue, substantially as and for the purpose explained.

12. In combination, the fixed section A, the tongue L², pivoted on the under side thereof, the catch 5, adapted to have lateral move-
10 ment, and the free end of the switch b, adapted

to act upon said catch, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

RUFUS E. BRAWN.

Witnesses:

RODNEY LUND,
E. O. HOWARD.