(No Model.) 3 Sheets—Sheet 1.

E. A. OWEN.

CASH AND PARCEL CARRIER APPARATUS.

No. 491,130. Patented Feb. 7, 1893.

Fig-1-

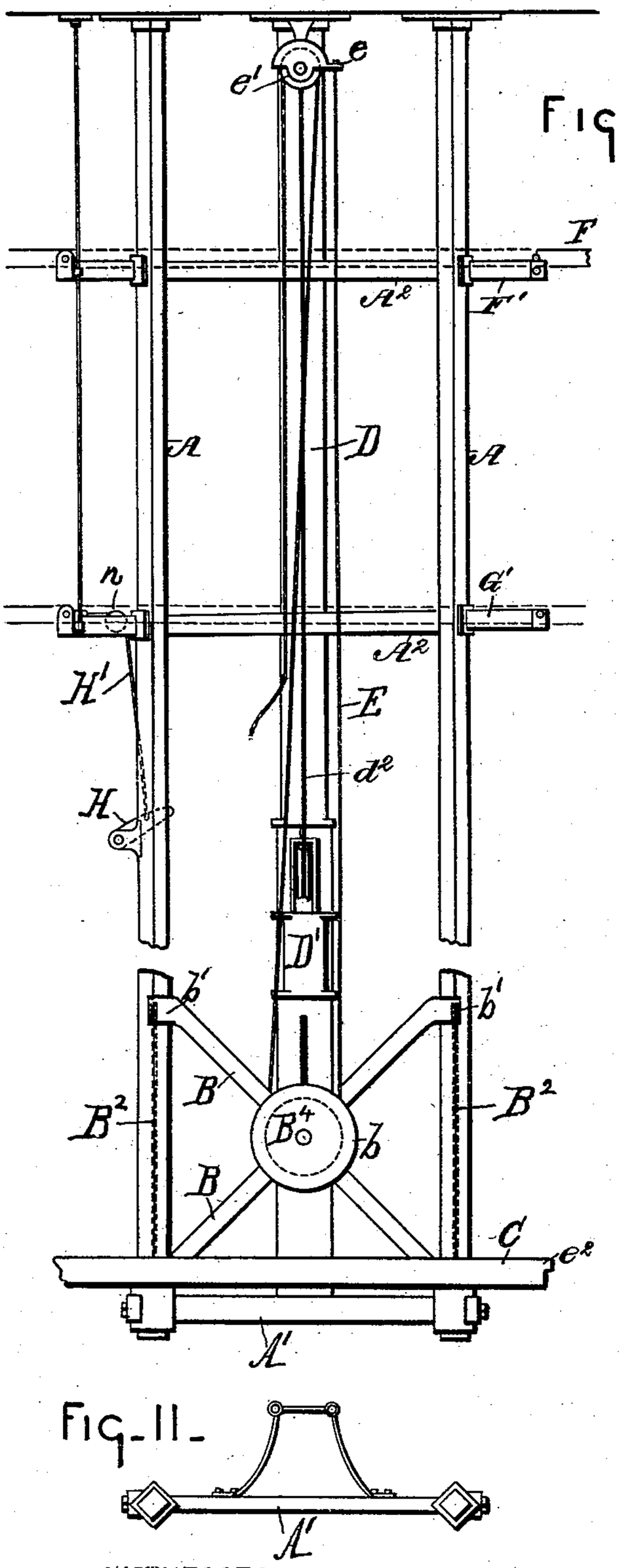
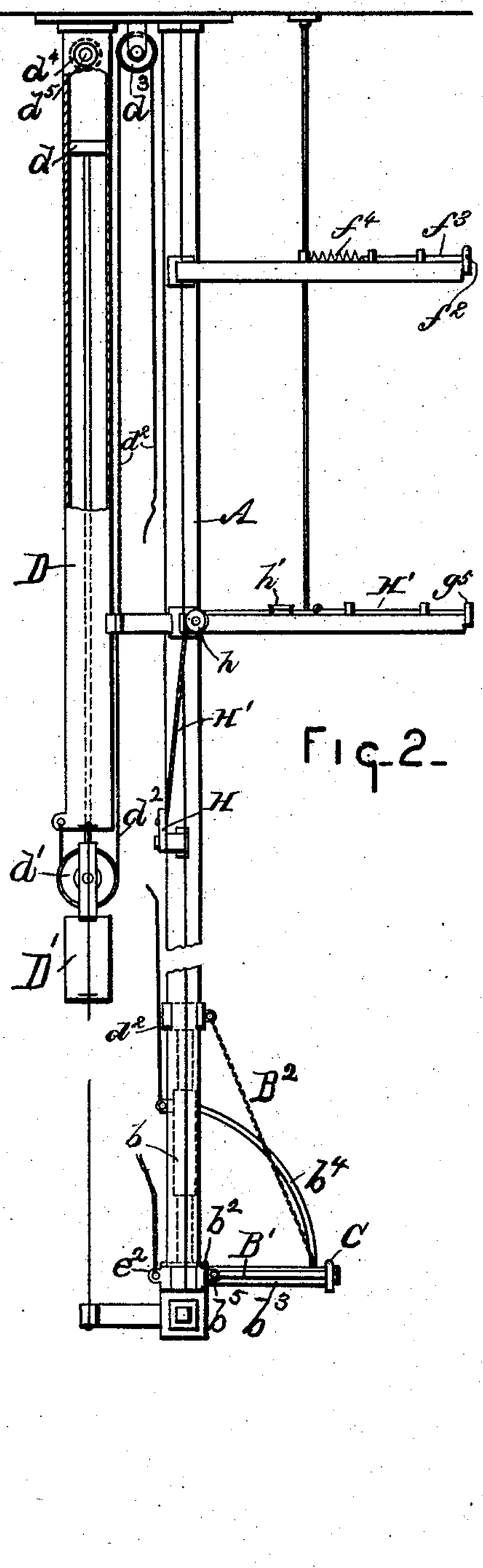


Fig-11-

Fig-2-



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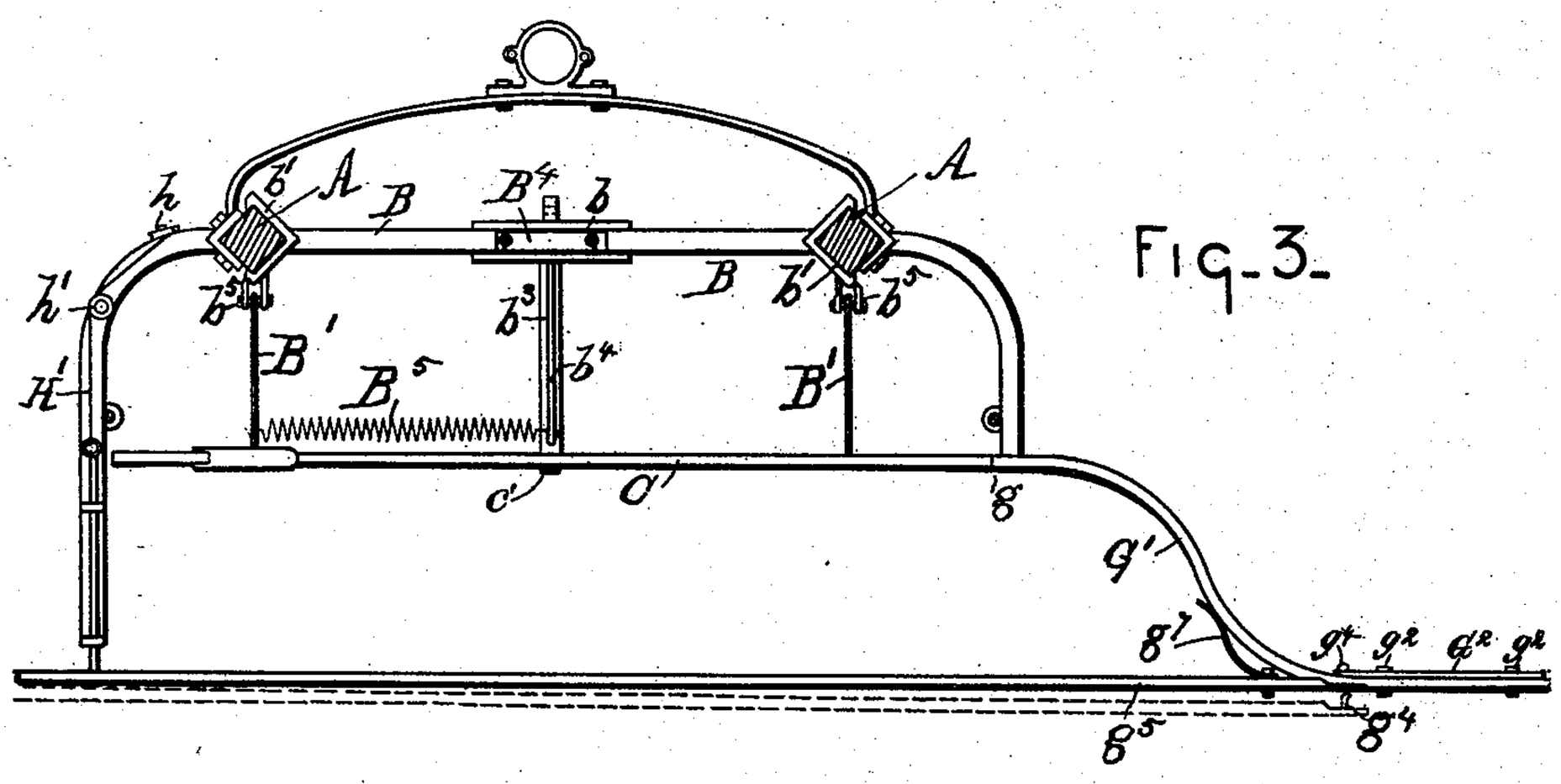

Fig-3-

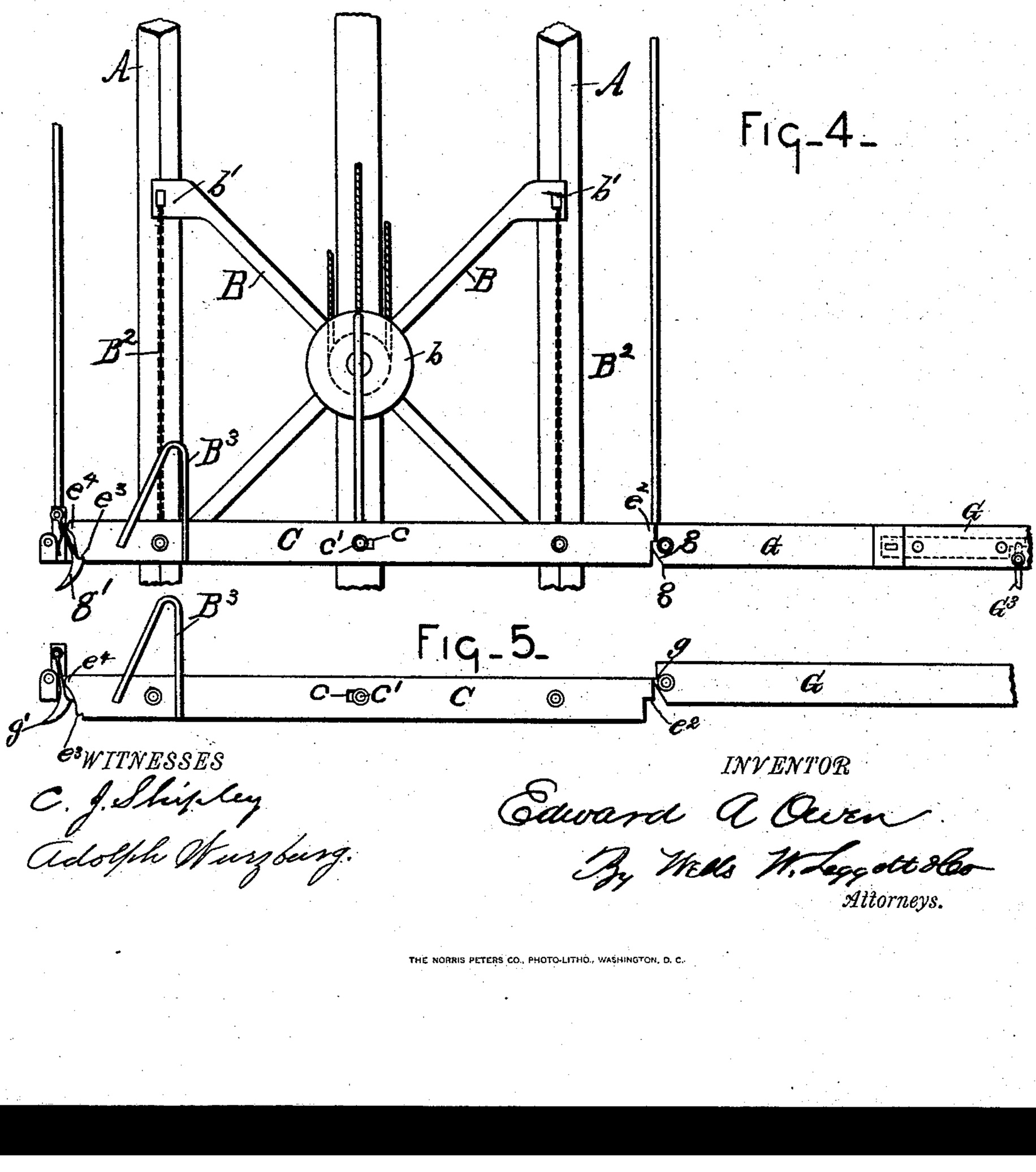

Fig-4-

Fig-5-

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Fig. 6.

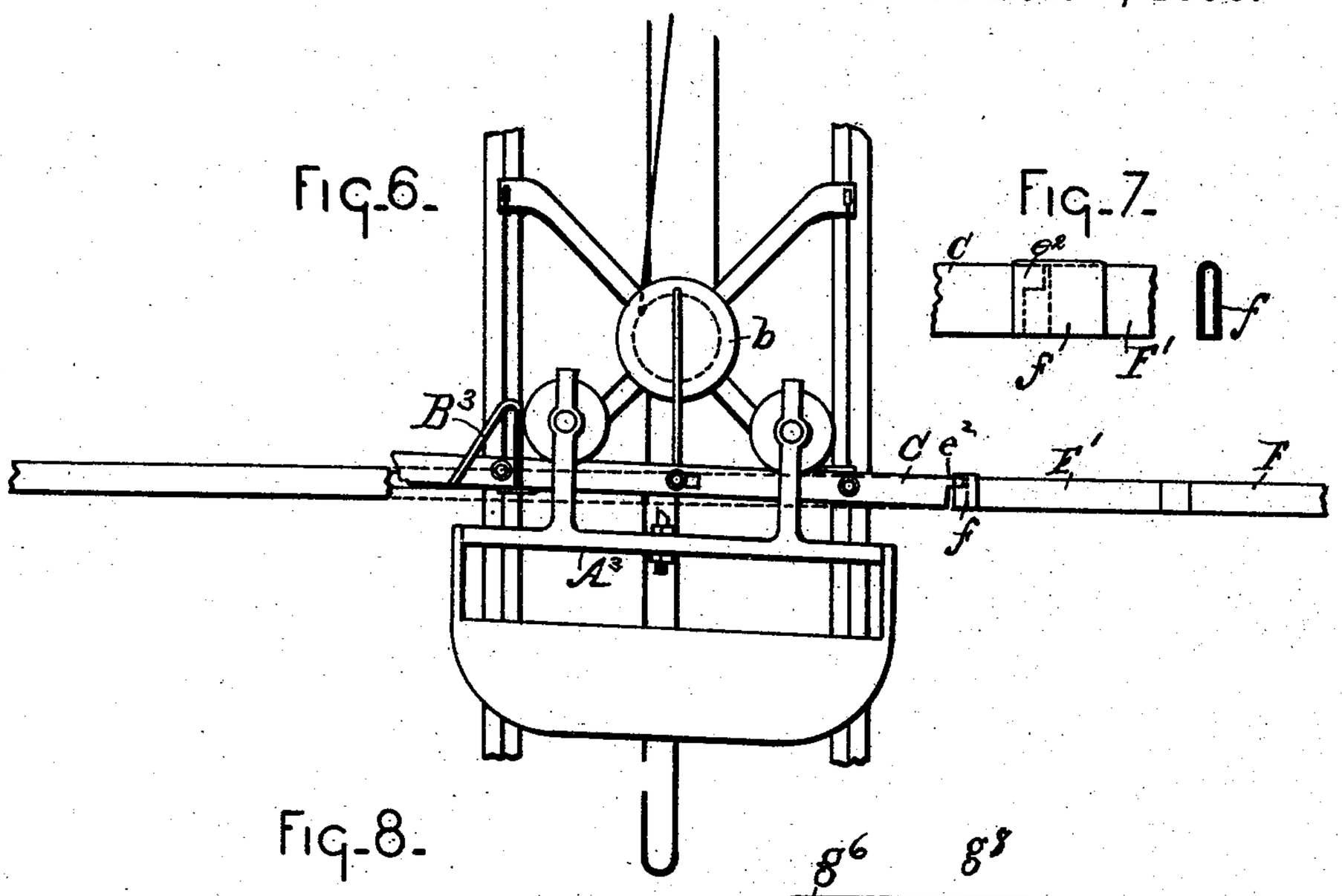


Fig. 7.

Fig. 8.

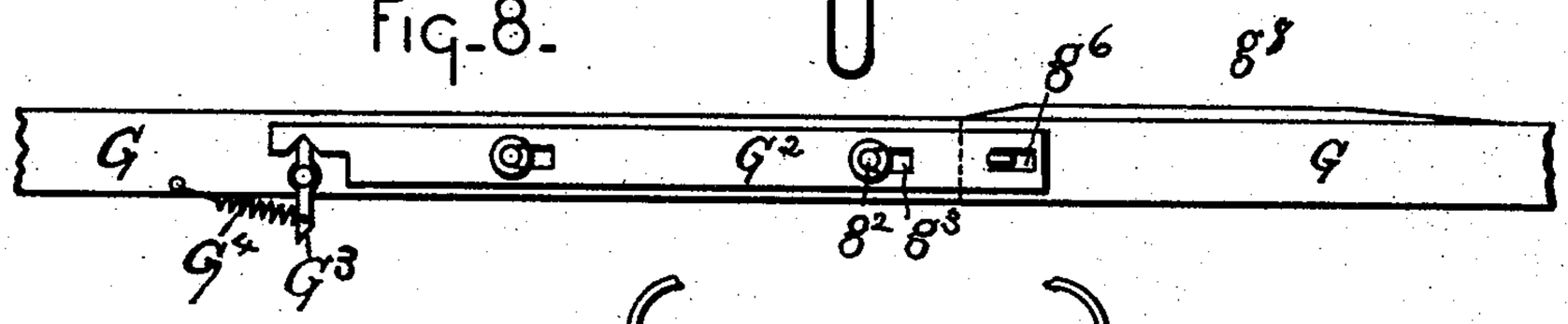


Fig. 9.

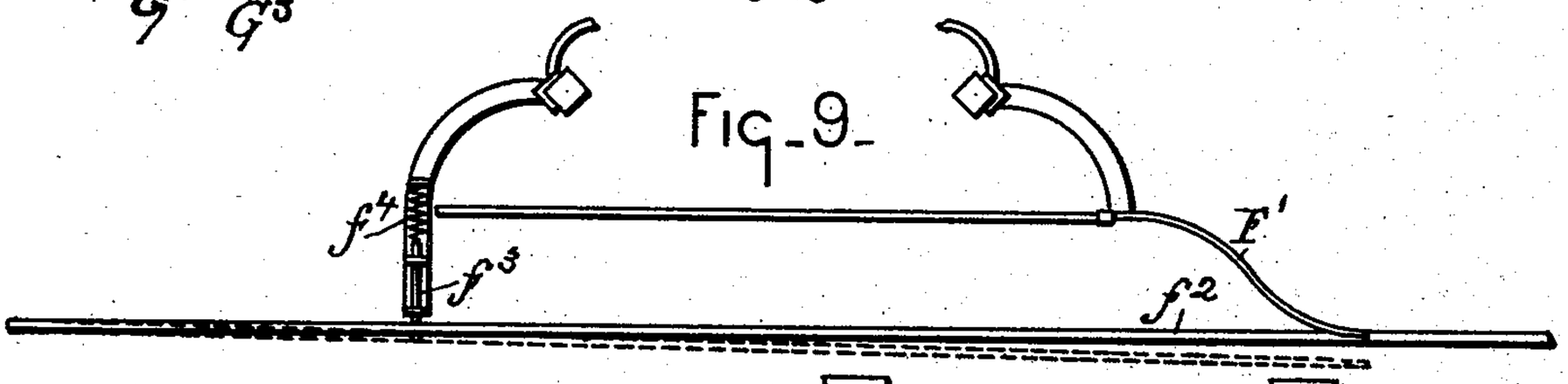
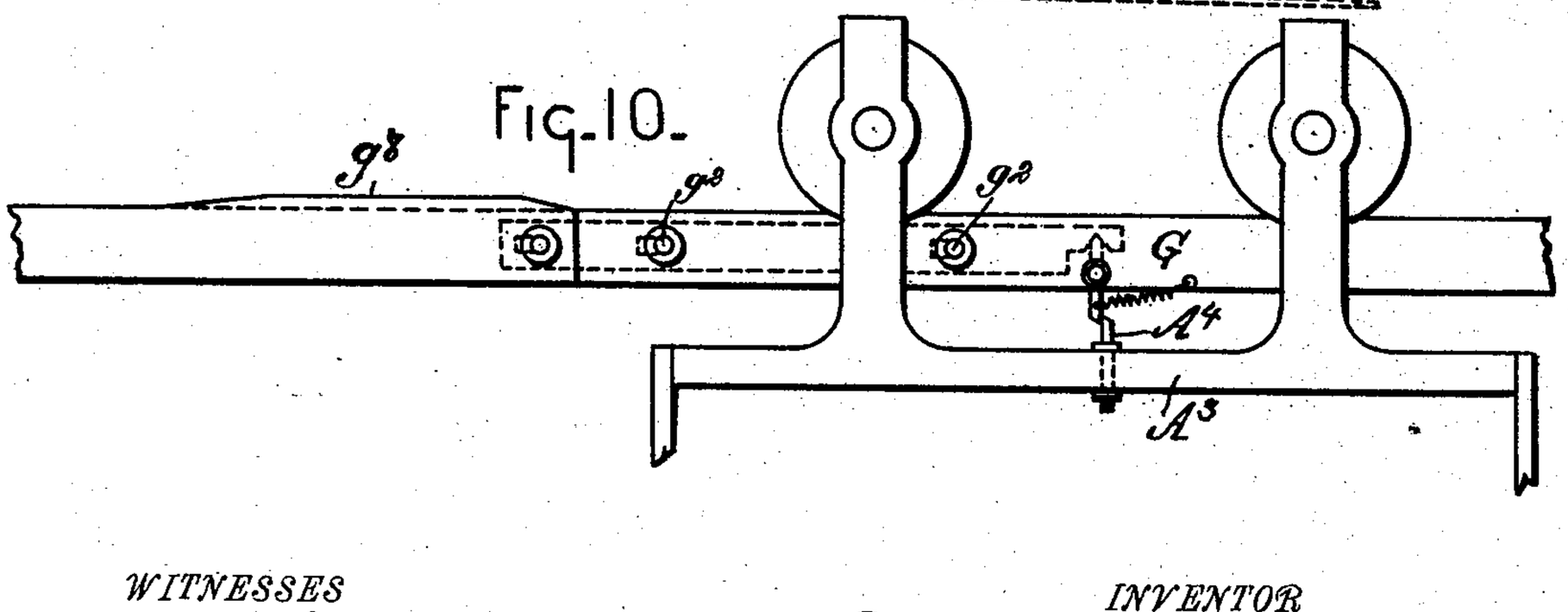


Fig. 10.



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UNITED STATES PATENT OFFICE.

EDWARD A. OWEN, OF EAST SAGINAW, MICHIGAN, ASSIGNOR TO THE UNION STORE SERVICE COMPANY, OF SAME PLACE.

CASH AND PARCEL CARRIER APPARATUS.

SPECIFICATION forming part of Letters Patent No. 491,130, dated February 7, 1893.

Application filed April 14, 1890. Renewed August 12, 1892. Serial No. 442,857. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. OWEN, a citizen of the United States, residing at East Saginaw, county of Saginaw, State of Michigan, have invented a certain new and useful Improvement in Cash or Parcel Carrier Apparatus; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

It is the object of my invention to produce a cash or parcel carrier apparatus in which the car shall travel upon inclined tracks, one track being inclined toward the cashier's desk, and the return track being inclined toward the station; in which a novel means is employed to switch the car from the main track to the desired station, in which a novel means is employed to release the elevator and lower it within the reach of the operator, and in various other novel features.

The invention consists in a combination of devices and appliances hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of the apparatus at one of the stations. Fig. 2 is a view at right angles to Fig. 1. Fig. 3 is a plan view of the station at the lower track with uprights or standards in section. Fig. 4 is a side elevation at the lower track. Fig. 5 illustrates a portion of the apparatus shown in Fig. 4 in a different position. Fig. 6 is a side elevation of the station at the upper track. Fig. 7 is a detail illustrating the construction of the track at this point. Fig. 8 is a side elevation of a portion of the lower track illustrating the switch. Fig. 9 is a plan view of a portion of the upper track. Fig. 10 illustrates the manner in which the car operates the switch. Fig. 11 is a view illustrating the brace at the lower end of the uprights or standards.

In carrying out my invention, A represents suitable hangers extending from the ceiling down adjacent to the counter or other point to which it is desired to lower the car. These hangers are preferably square, and placed in such position that their edges will be toward each other as illustrated in Fig. 3.

A′ A^2 represent braces adapted to steady the standards, and A^3 represents the carrier or car. On these standards A the elevator carrying the movable section of track travels. This elevator consists of the arms B extending radially from a suitable center block *b* and provided on their ends with what may be termed sleeves *b′*, shaped as illustrated in Fig. 3 to embrace three of the corners of the standard, and thus be retained thereon, and yet be free to slide up and down. A suitable cross brace extends between the two lower sleeves *b′*, and from this cross brace extends out the arm b^3, and a suitable arch brace b^4 extends from the outer end of the brace b^3 up to the center block *b*. To this arm b^3 is attached the movable section of track C on which the car rides. The track is provided with the slot *c*, and through this slot extends the pin or projection *c′* from the arm, so that, while the track is supported by the arm, it can move slightly longitudinally, and might also be tilted slightly with respect to the frame.

B′ are frames extending from the lower sleeve b^2 out to the track; these frames are loosely pivoted to the sleeves at b^5, so that the outer ends can be raised and lowered, and the pivot being loose, there can also be given to the outer ends a slight lateral motion. The outer ends of the arms B′ are rigidly engaged to the track. Suitable wires or chains B^2 extend from the upper sleeve *b′* down to the outer ends of the arms B′. These wires or chains will, when the track is in its normal position, *i. e.*, horizontal, be somewhat slack, but when the track is tilted, as shown in Fig. 6, they act to support the ends and prevent their tilting too far, and also prevent the strain coming too heavily on the arms B′.

B^3 is a suitable stop on the end of the movable section or track against which the car strikes as it rides on to the track.

B^4 is a sheave journaled in the block *b*, around which the elevating rope or cord is passed.

I will now describe a dash-pot mechanism, whereby the motion of the elevator is regulated in its descent.

D is an air tight tube extending from the ceiling down adjacent to and parallel with the standards, as illustrated in Fig. 2; work-

ing in this tube is a piston d on the end of which and outside of the tube is a weight D'. On this weight is supported a sheave d'; a cord or rope d^2 is attached to the lower end of the tube; it passes down under the sheave d' up over the sheave d^3 which is attached to the ceiling, and down to and engaged with the block b on the elevator. In the upper end of this tube is located a valve d^4, this valve being on the interior of the tube and being provided with a small opening d^5. As the car descends, thus raising the piston, only that air can escape from the tube which passes through the opening d^5, thus preventing the car from descending too rapidly; but as the operator raises the car and the piston descends, air can pass freely through the valve d^4 and thus allow a free motion of the elevator in ascending.

E is the elevating rope; this rope is attached to a sheave bracket e at the ceiling, extends down and over the sheave B^4 on the elevator, up over the sheave e' at the ceiling, and down to and engaged with the elevator, as at e^2 in Fig. 2.

F represents the upper track, or the one to which the car is elevated when being sent from the station to the cashier's desk, and G is the lower track, or the one on which the car returns.

F' is the side track leading to the station from the upper track, and G' is the corresponding side track for the lower track.

Assuming that the car is in its lowermost position, *i. e.*, adjacent to the operator, the operator grasps the elevating cord and raises the car to the upper track. On the end of the side track F' is a hood f extending out over the end, as shown in Fig. 7. The end e^2 of the movable track, as it is raised, strikes this hood, and the operator continuing to pull, tilts the track as shown in Fig. 6, and the car is started off from the track, pushes open the switch f^2, and rides down on the track to the cashier's desk. The pin f^3 attached to the track and entering a suitable socket attached to the standard braces is engaged to a coil spring f^4 which acts to return the switch to its normal position after the car has passed off from the side track. As soon as the car has passed off from the movable section of track, the operator releases his tension on the elevating rope and the elevator drops back to the lower track. Here it is held by the end e^2 striking the ledge g of the track and the end e^3 striking the catch or pawl g'; the track thus remains held until the car coming in on the side track G' rides on to the movable section and strikes the stop B^3. As before explained, the elevator section of track is supported in such a manner that it is movable lengthwise. The momentum of the car striking the stop B^3 carries this movable section along until the end e^2 is disengaged from the ledge g and the movement of the movable section of track causes the projection e^4 to strike the pawl or catch g' and disengage it from the end e^3 of the track. The weight of the car then acts to carry it down adjacent to the operator, while the spring B^5 acts to return the elevating track to its normal position laterally with respect to the elevating frame, the connection with the dash pot serving to retard the descent of the basket so that it will not move too fast.

I will now explain the manner of opening the switch on the lower track to allow each car to enter its respective station. On the bed plate of the car A^3 is a suitable projection A^4. On the track G adjacent to the switch is a movable plate G^2 engaged to the track by pins g^2 passing through the slots g^3, thus making the plate movable along the track. A beveled catch g^4 extends rigidly from the side of the switch track g^5, passes through an opening in the track G, and engages in an orifice g^6 in the end of the plate G^2. A small trigger G^3 is pivoted to the track G, the upper end engaging with the end of the movable plate G^2, while the lower end projects down beneath the track; thus, a movement of the lower end of the trigger moves the plate G^2, releases the switch track g^5, and the spring g^7 operates to throw the track out thus allowing the car to ride in on the side track G'. The spring G^4 being connected with the trigger G^3 serves to return the plate G^2 to its normal position after the switch portion has been released. Now, by regulating the height of the projections A^4 on the cars, and regulating the distance to which the lower end of the trigger projects, each car may be made to operate its particular switch, and thus be carried to its particular station. After the car has entered its station and passed on to the elevating section of track, the elevator is, as before explained, released, and the car lowered.

In order that the switch may be again closed, I provide a latch H pivoted to one side of the standard. Extending from this latch is a cord H', which passes up over the sheaves h h', as shown in Fig. 3, and out to the switch where it is engaged. Now, as the elevator is lowered, it strikes this latch, exerts a tension on the cord, and the latter operates to close the switch and cause the catch g^4 to engage in the movable plate G^2. In order that the track may, when the elevator is being raised, pass by the track G', I bevel the under face of the end g of the track so that the end e^2 striking this bevel is forced over until it clears the projection g; and the other end forcing the pawl over, is permitted to pass the latter.

In order that a car not designed to be switched on to a particular side track may ride over the side track, I raise the surface of the switch portion, as shown at g^8 in Figs. 8 and 10, so that when the car is not switched it rides up on this raised portion, and thus the flanges of the wheels clear the side track.

It is of course obvious that the shape of the elevator frame might be varied without de-

parting from the spirit of my invention, as might also many other details of construction, such, for instance, as the connecting of the elevating rope to the elevator, the connection of the weight D′ with the elevator, and many other similar minor details. So, also, the construction of the dash pot might be materially varied without departing from the spirit of my invention, since other fluids besides air might be employed, as water or oil, and the valve, instead of being located in the tube, might be located in the piston itself.

What I claim is—

1. In a cash or parcel carrier apparatus, the combination, with the elevator frame, of a section of track on which the car rides, said track supported adjacent to its middle by the projection c' working in the slot c of the track, and supported at its ends by the pivoted arms B′, substantially as described.

2. In a cash or parcel carrier apparatus, the combination with the elevator frame, of an elevating section of track on which the car rides, said track supported by said frame and movable lengthwise thereon, and the spring B^5 for returning said elevating track to its normal position laterally after it has been moved, substantially as described.

3. In a cash or parcel carrier, the combination with the track G, provided on its ends with the projection g and latch g', of the elevating track C supported by the elevating frame, said track C provided on its ends with the projections e^2 and e^3, adapted to engage with the projection g, and pivoted latch g', respectively, substantially as described.

4. In a cash or parcel carrier apparatus, the combination with the car track G provided on its ends with the projection g and the pivoted latch or pawl g', and the elevating frame, of the elevator track, movably supported by said frame, and having the projections e^2 and e^3 adapted to engage the projection g and latch g' respectively, and the stop B^3 on said elevator track, the construction being such that as a car rides on the elevator track and strikes the stop B^3, its momentum moves the elevator track until it disengages from its supports g, g', and is thus released, substantially as described.

5. In a cash or parcel carrier apparatus, the combination with an inclined track, one or more side tracks extending therefrom, and cars adapted to travel on said tracks, of switch mechanism for switching each car to its respective side track, consisting of the spring impelled switch portion g^5 held in contact with the main portion G by suitable retaining mechanism, and a projection on the car for tripping said retaining mechanism, thereby allowing the spring impelled switch section g^5 to be thrown out and the car conveyed to the side track, substantially as described.

6. In a cash or parcel carrier apparatus, the combination with an inclined track G, one or more side tracks G′ extending therefrom, and cars adapted to travel on said tracks, of switch mechanism for conveying each car to its respective side track, consisting of the spring impelled switch portion g^5 held in contact with the main portion G by the plate G^2, beveled catch g^4 and trigger G^3 engaged with said plate G^2, and the adjustable projection on the bed plate of each car adapted to operate its respective trigger, whereby a movement of the trigger releases the spring impelled switch section G^5, and thus conveys the car to the side track, substantially as described.

7. In a cash or parcel carrier apparatus, the combination with the inclined track leading to the station, provided with switch mechanism, substantially as described, and the elevator for raising and lowering the car, of the pivoted latch H located in the path of the elevator and adapted to be operated thereby, said latch connected with said switch mechanism, whereby the lowering of the elevator operates to close the switch, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

EDWARD A. OWEN.

Witnesses:
GEORGE P. ROBBINS,
G. N. PERRY.