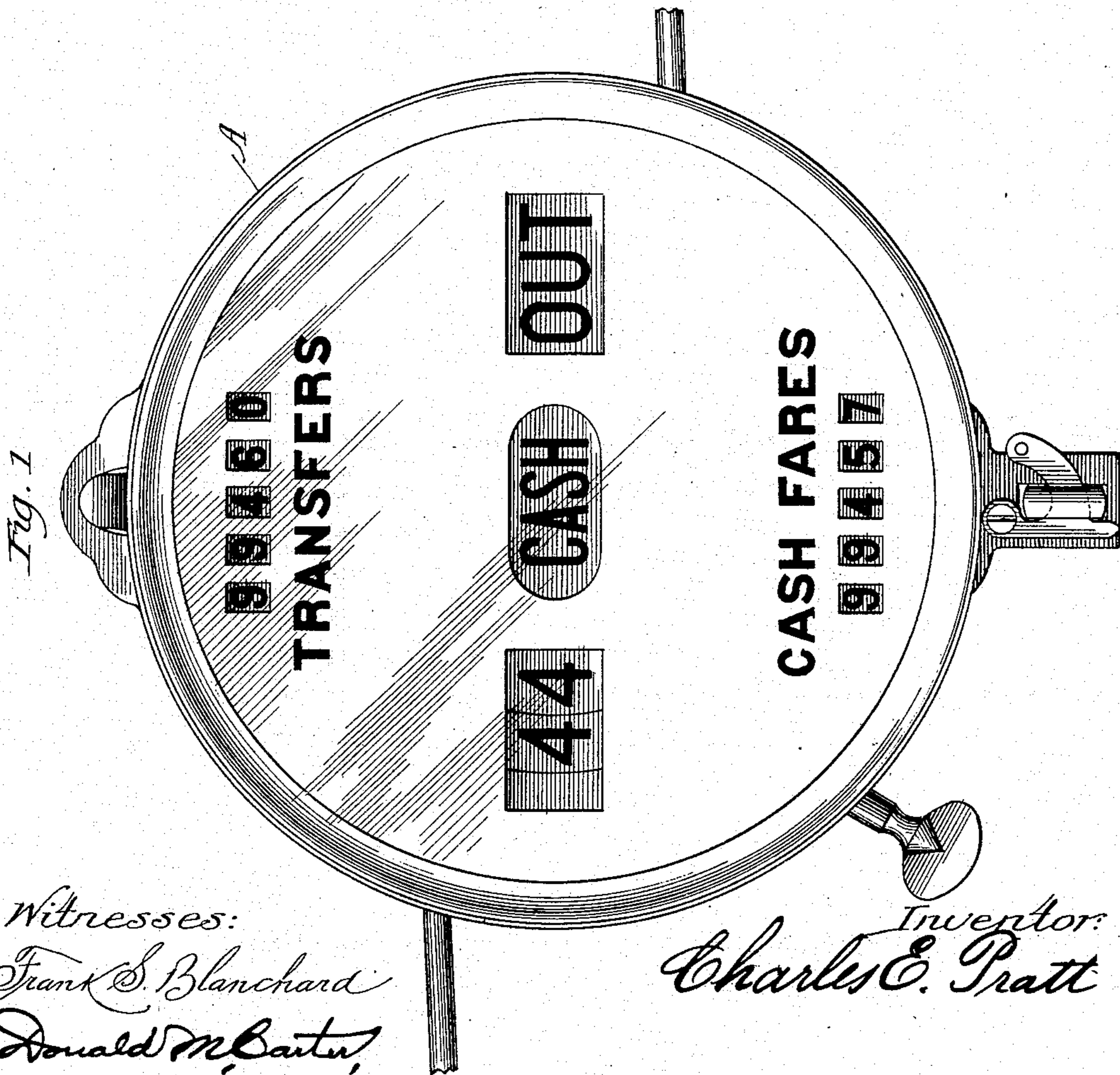
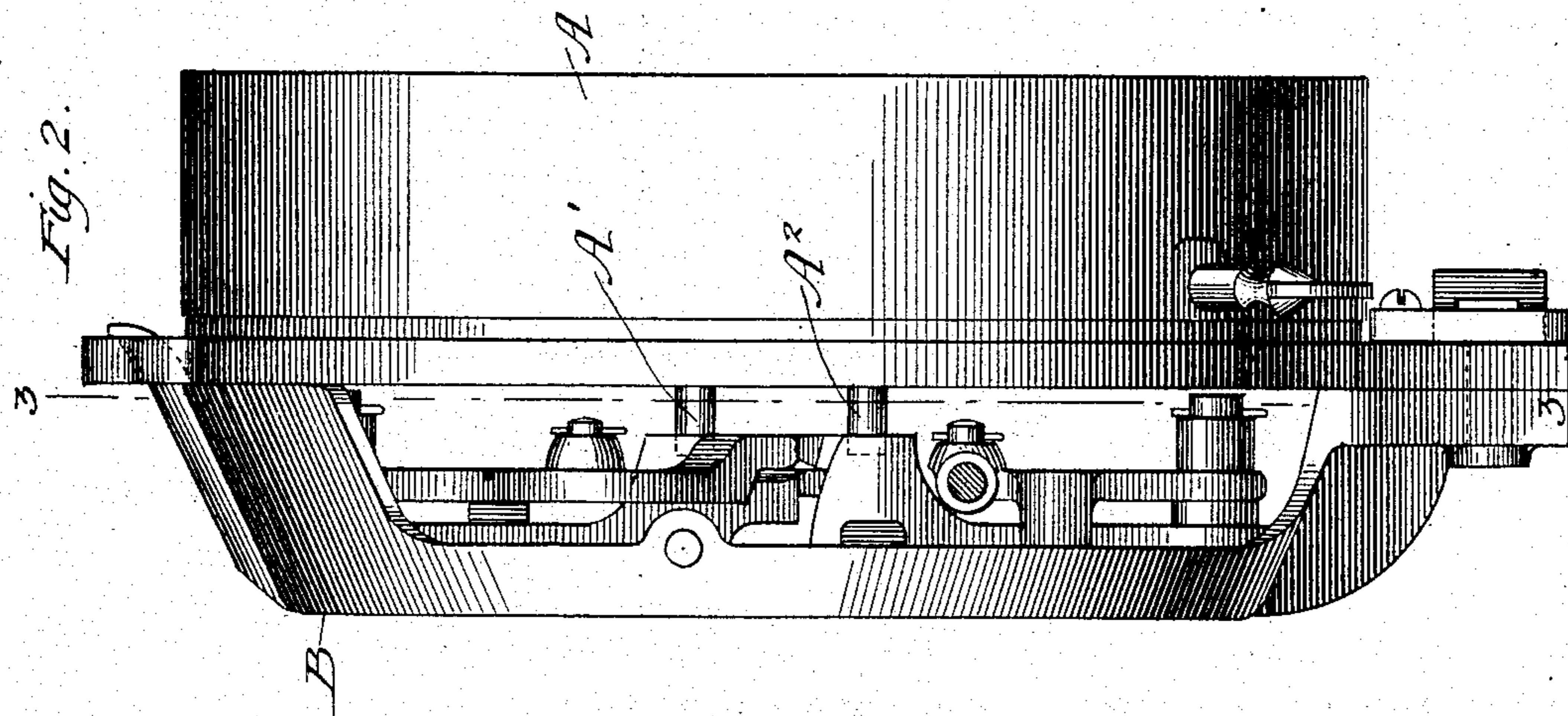


C. E. PRATT.  
FARE REGISTER.

(Application filed Sept. 11, 1899.)

(No Model.)

4 Sheets—Sheet 1.



Witnesses:  
Frank S. Blanchard  
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No. 675,410.

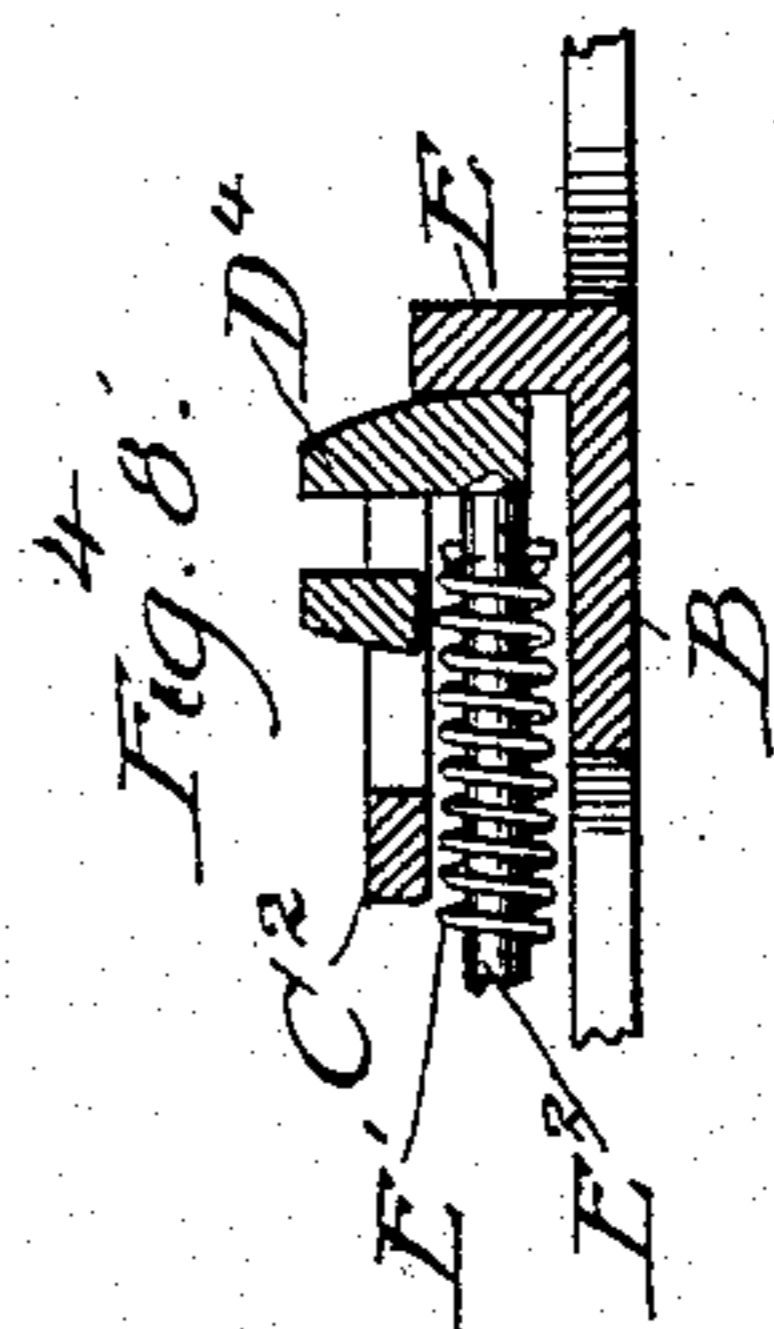
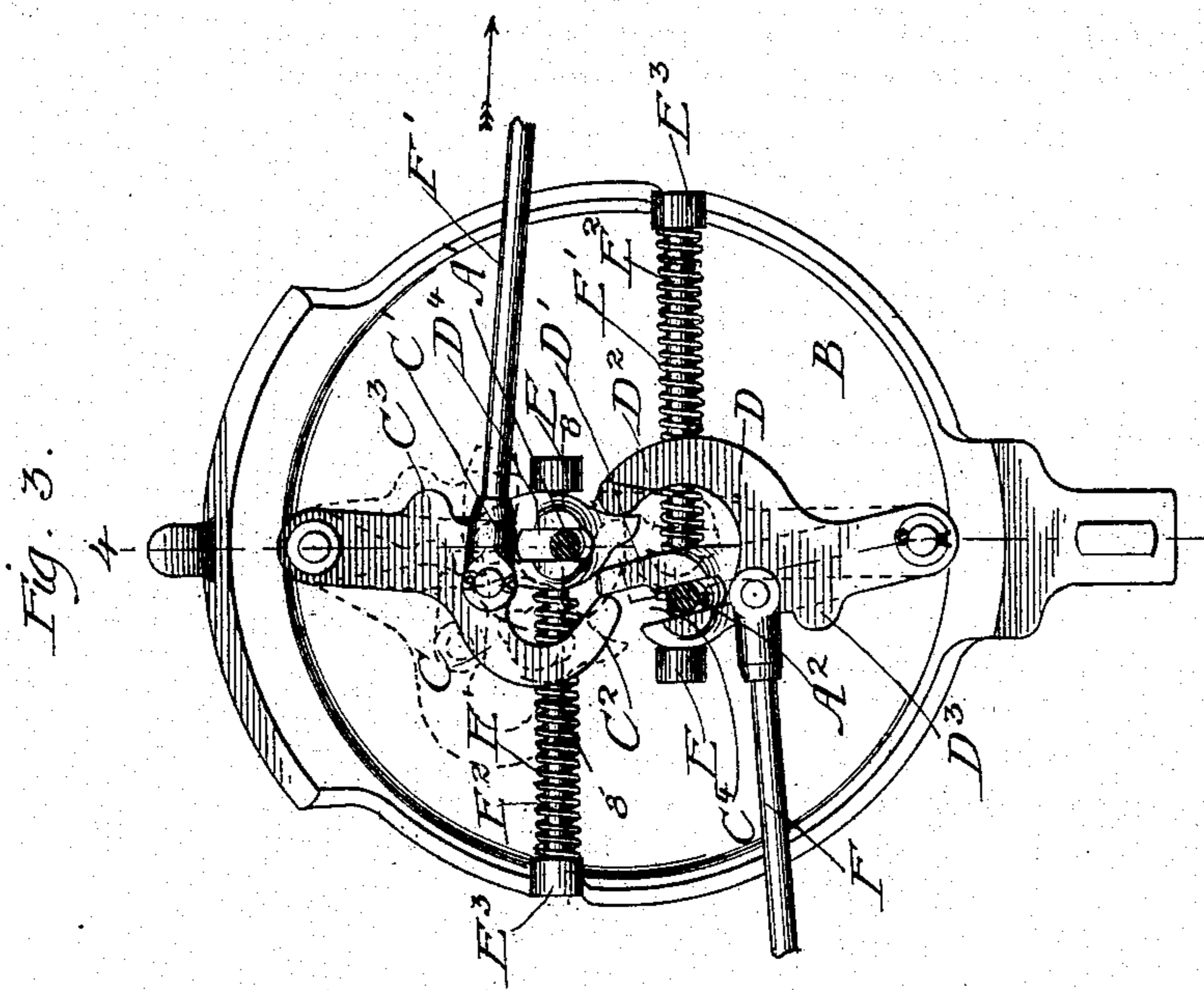
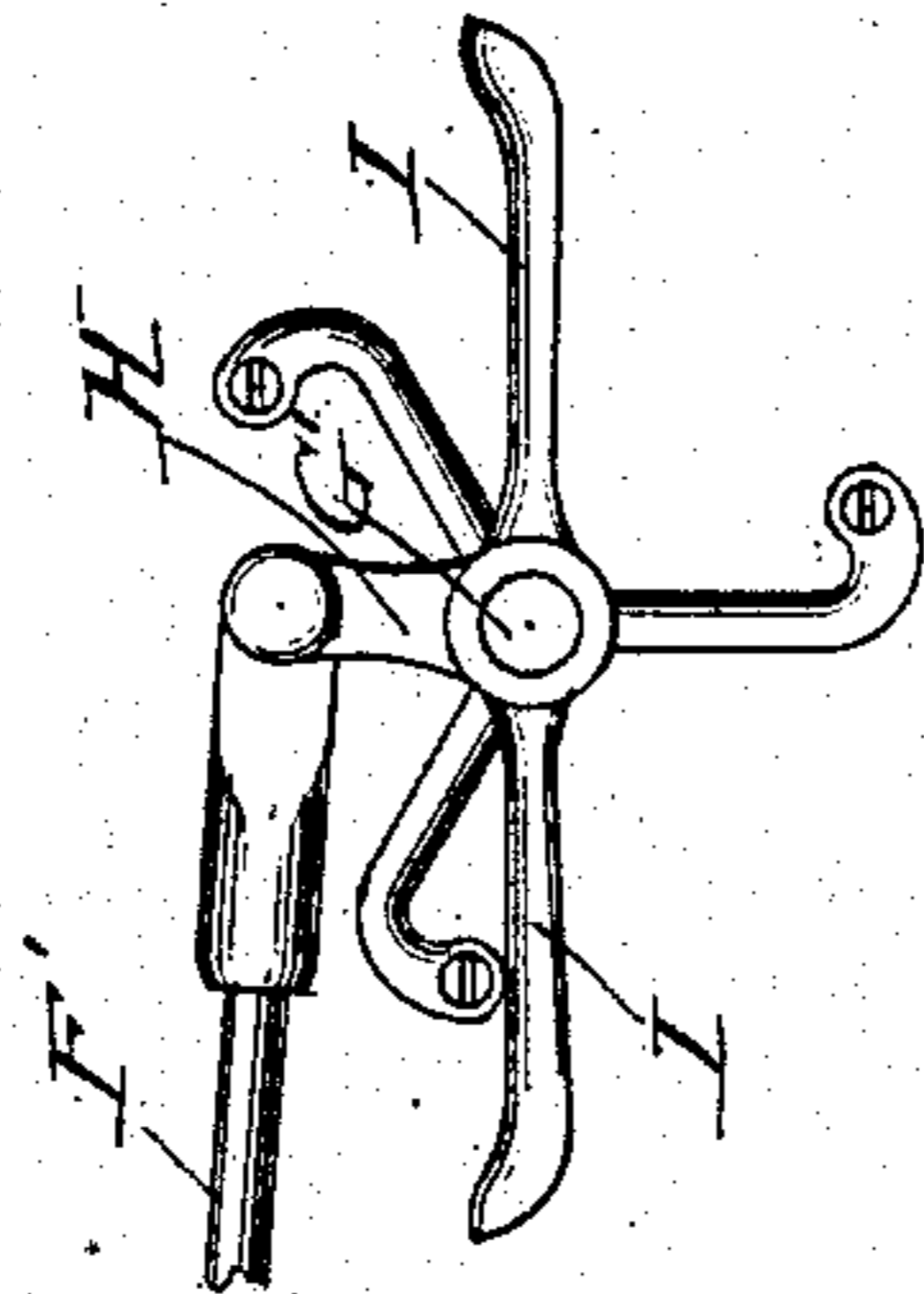
Patented June 4, 1901.

C. E. PRATT.  
FARE REGISTER.

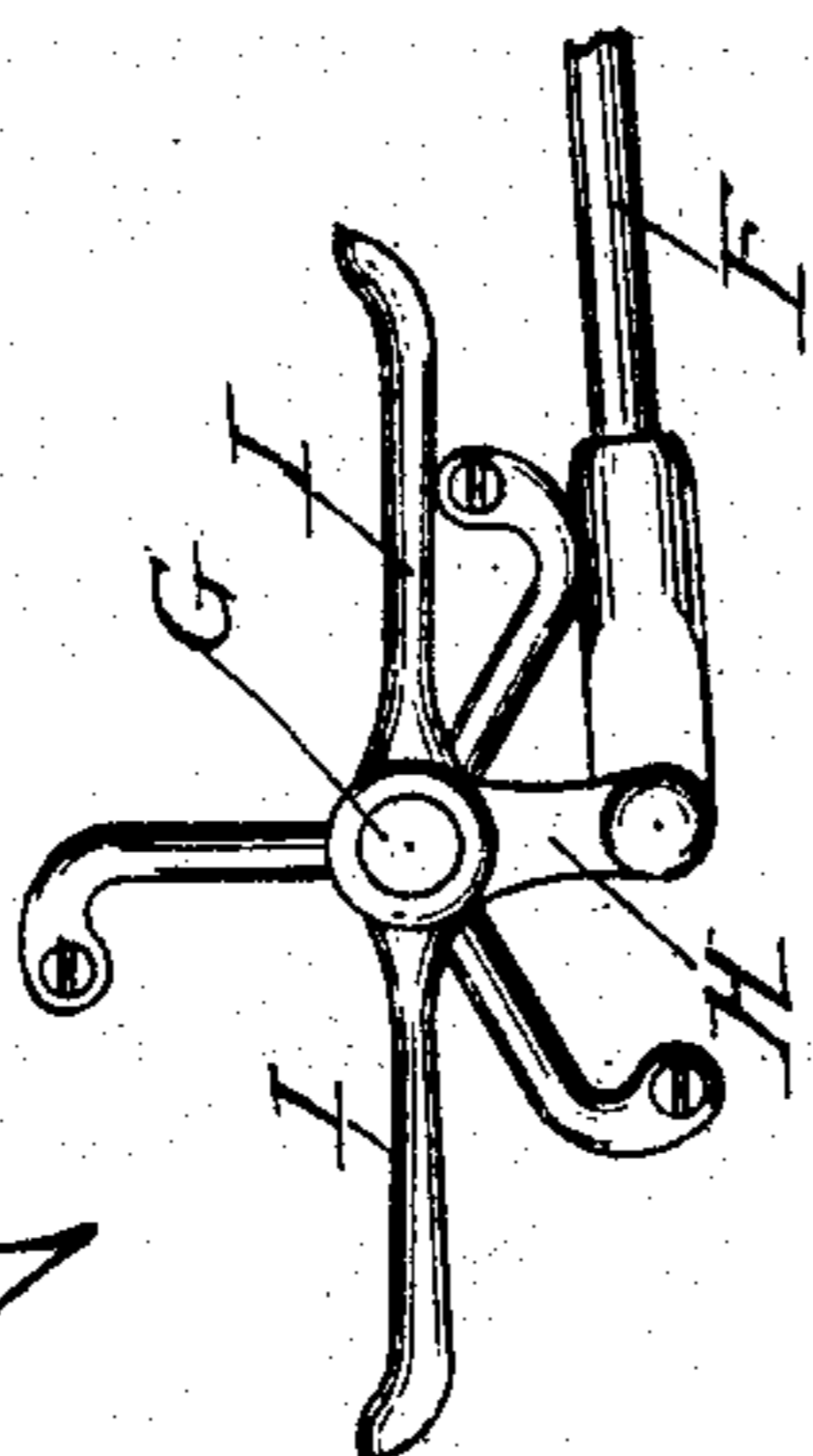
(Application filed Sept. 11, 1899.)

(No Model.)

4 Sheets—Sheet 2.



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Patented June 4, 1901.

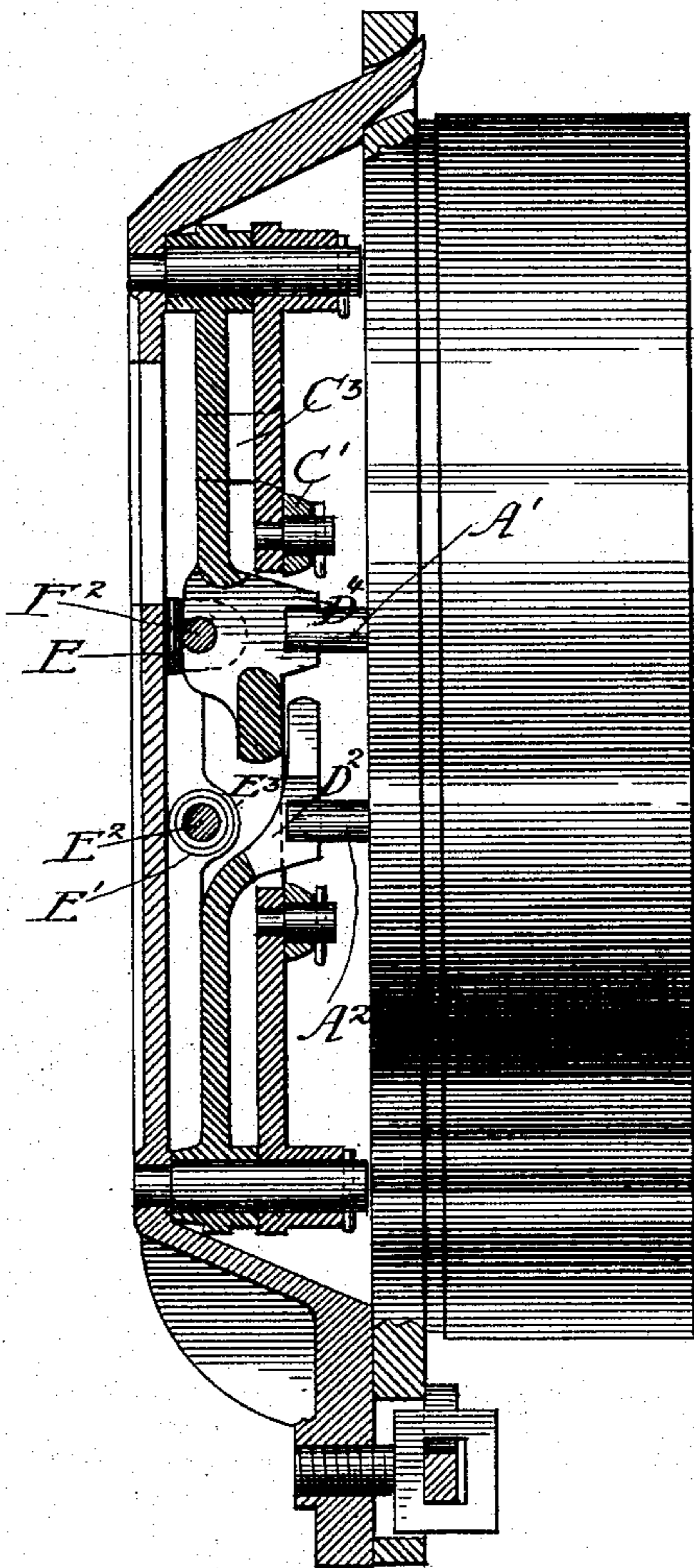
C. E. PRATT.  
FARE REGISTER.

(Application filed Sept. 11, 1899.)

(No Model.)

4 Sheets—Sheet 3.

*Fig. 4.*



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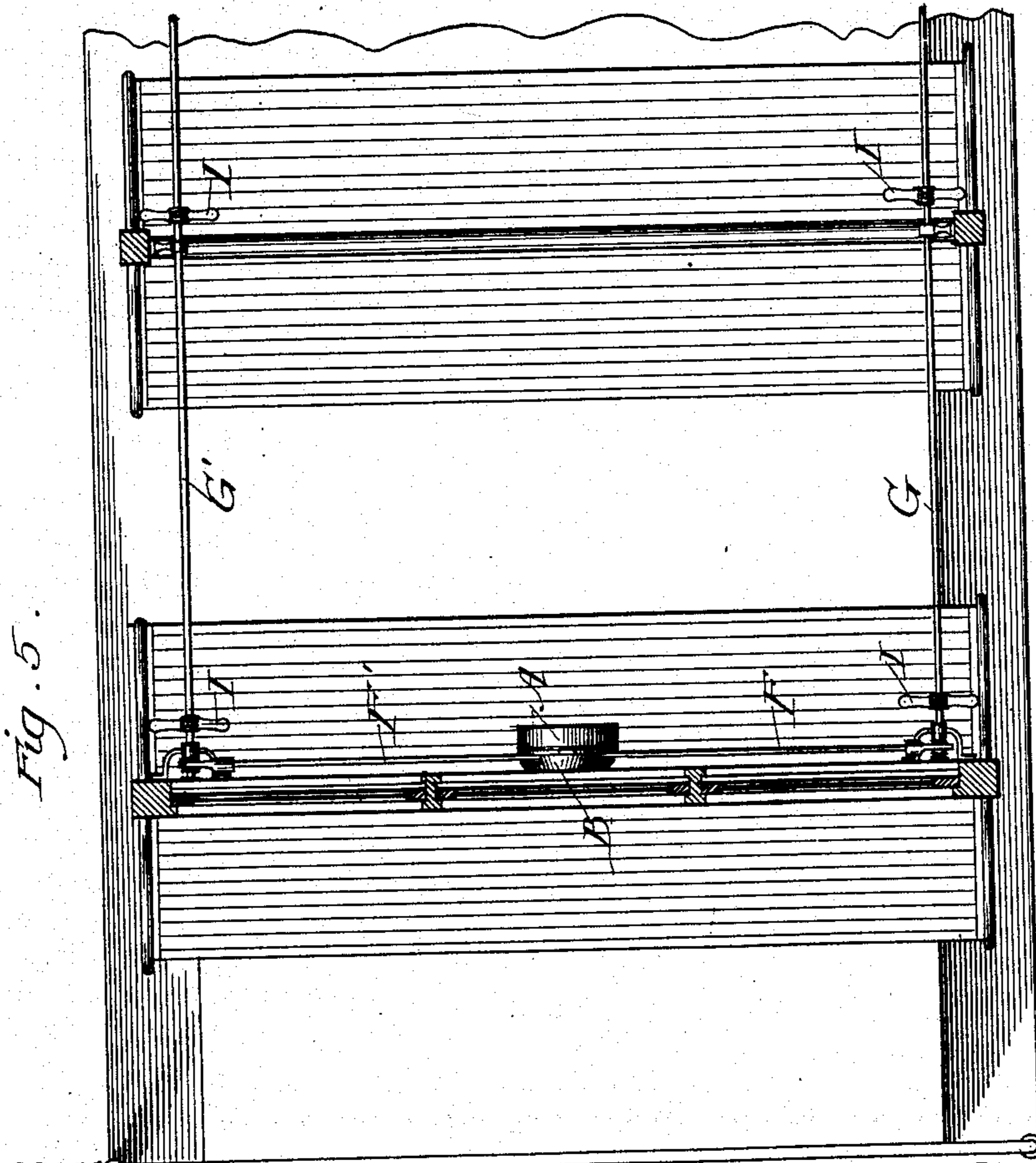
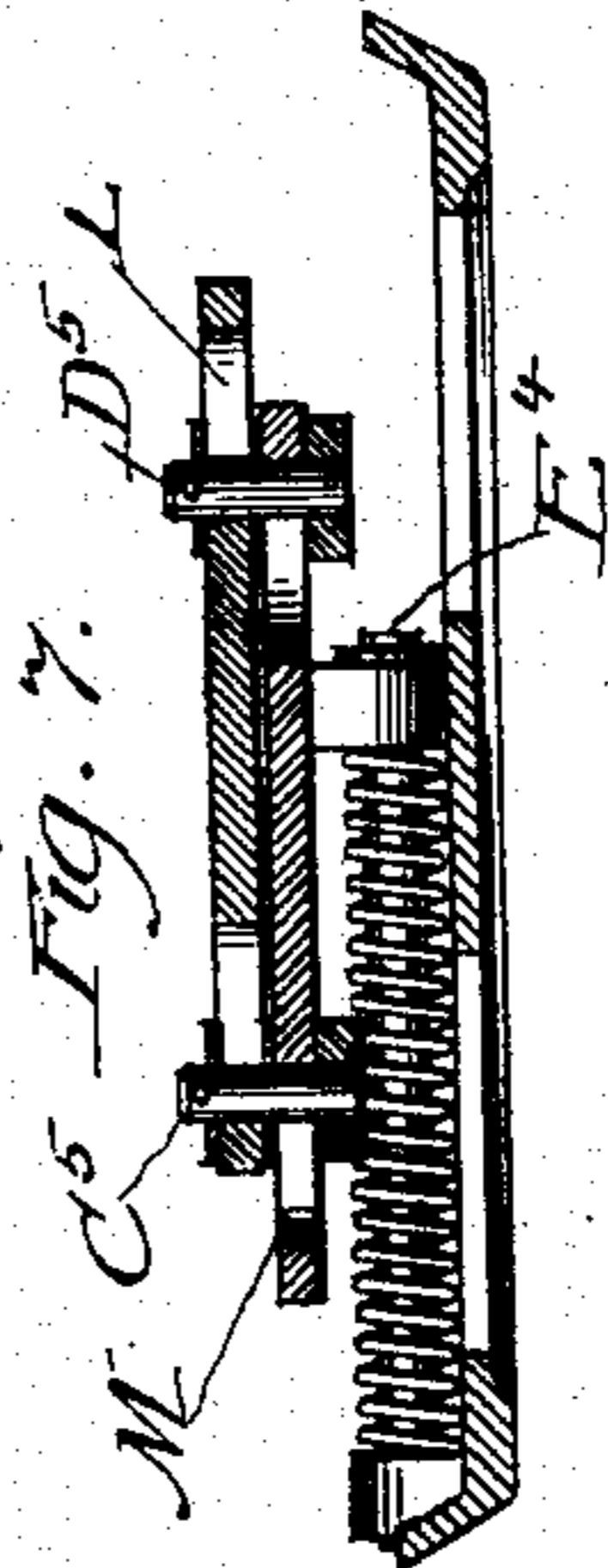
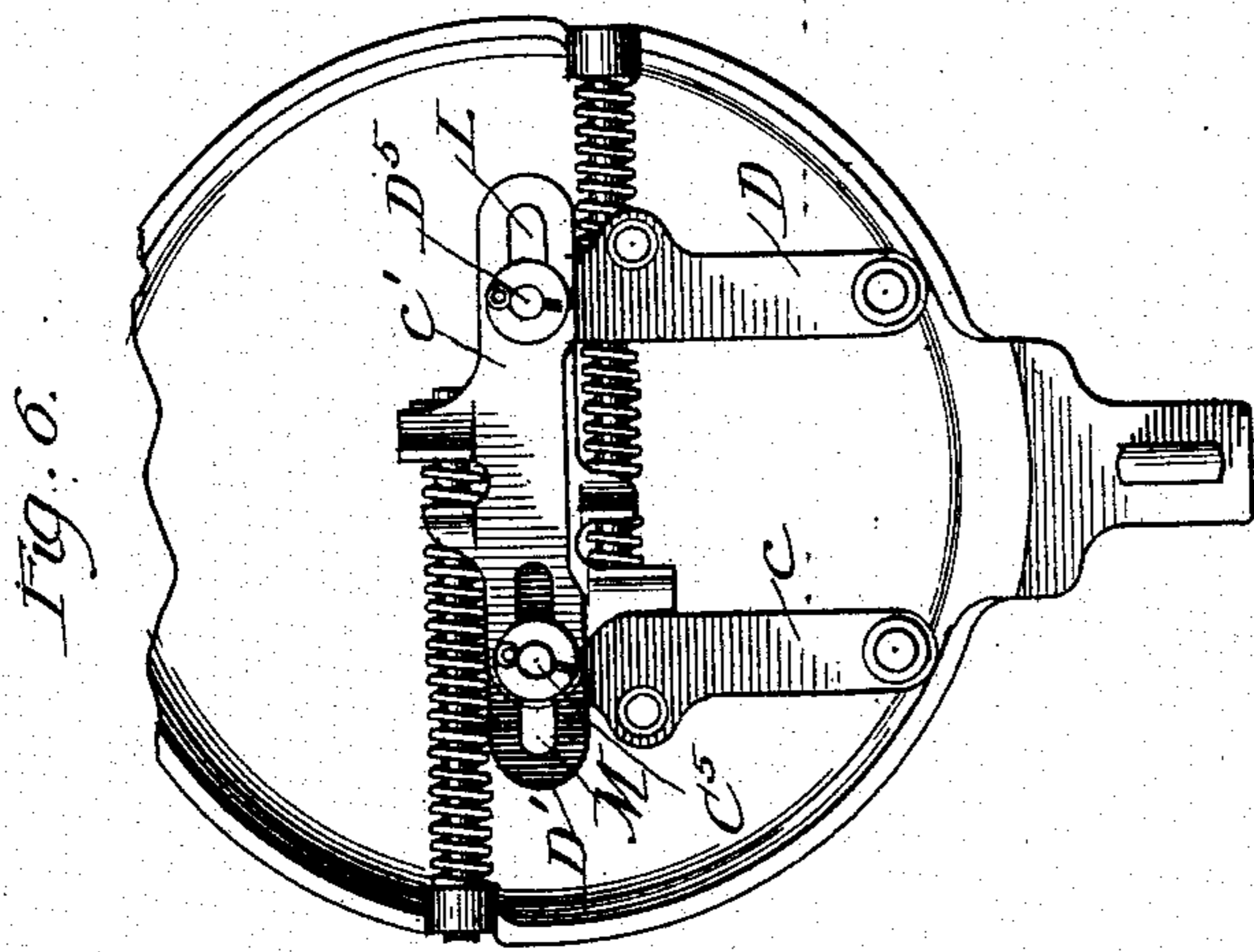
Patented June 4, 1901.

C. E. PRATT.  
FARE REGISTER.

(Application filed Sept. 11, 1899.)

(No Model.)

4 Sheets—Sheet 4.



Witnesses  
Frank S. Blanchard  
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# UNITED STATES PATENT OFFICE.

CHARLES E. PRATT, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE INTERNATIONAL REGISTER COMPANY, OF SAME PLACE.

## FARE-REGISTER.

SPECIFICATION forming part of Letters Patent No. 675,410, dated June 4, 1901.

Application filed September 11, 1899. Serial No. 730,085. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES E. PRATT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Fare-Registers, of which the following is a specification.

My invention relates to operating mechanisms for various devices—such, for example, as fare-registers—and has for its object to provide a new and improved operating mechanism of this description.

My invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a face view of a fare-register provided with my invention. Fig. 2 is a side view of the device shown in Fig. 1. Fig. 3 is a section on line 3 3, Fig. 2. Fig. 4 is a section on line 4 4, Fig. 3, with the register in place. Fig. 5 is a view of the device shown in Fig. 1 when in position, showing the controlling-rods which extend along the car and whereby the register is operated from different positions. Fig. 6 is a view similar to Fig. 3, showing a different form of operating mechanism. Fig. 7 is a section with parts omitted on line 7 7, Fig. 3. Fig. 8 is a section on line 8 8, Fig. 6.

Like letters refer to like parts throughout the several figures.

My invention is particularly adapted to be used in connection with mechanisms having two parts or sections to be independently operated. I have illustrated my invention in connection with a fare-register. It is of course evident that it may be applied to other mechanisms for various purposes and that it may also be applied to various kinds of fare-registers.

In the drawings I have shown a fare-register adapted to register two kinds of fares—for example, transfer and cash fares—there being, as it were, two separate permanent registers inclosed within a case A, said permanent registers being connected to a common trip-register, the parts so arranged that the permanent registers may be independently operated. In this construction the mechanism is securely inclosed within the case, so that it cannot be tampered with, and there are provided two projecting parts A' and A<sup>2</sup>,

which extend through properly-protected openings in the case, said parts adapted to be independently moved and so connected with the register mechanism that a movement of one operates one permanent register, while a movement of the other operates the other permanent register. The register mechanism is no part of my present invention, and I have therefore not shown or described it in detail. The register mechanism proper which I have illustrated is, however, shown in detail in Patent No. 605,912, of June 21, 1898, to which reference may be had, if desired, for a full and complete explanation.

In the construction illustrated in the drawings the operating mechanism is connected to a suitable back B, which is in turn attached to the part A, containing the register mechanism. In the ordinary use of fare-registers such registers are located in some part of the vehicle or car and are operated from different points on the car by means of a suitable device extending along the car. In many instances it is necessary or desirable to have two devices extending along different parts of the car, so that the register may be operated from either side thereof. When a register adapted to register different kinds of fares is used, it will be seen that some mechanism must be provided which will permit both kinds of fares to be independently registered by means of either of these devices.

Referring now to the drawings, I have shown two operating-arms C and D, said arms being connected to the actuating parts A' and A<sup>2</sup> by the connecting-pieces C' D'. Each operating-arm is adapted to be independently connected with either of the connecting-pieces, so that each arm may operate either of the actuating parts. This result may be obtained in various ways and by various constructions. As illustrated in Fig. 3, the operating-arms C and D are pivoted at one end, so that they may be moved in either direction from their initial position. The operating-arm C, for example, is adapted to engage the connecting-piece D' when moved in one direction and to be freed from said connecting-piece and engage the connecting-piece C' when moved in another direction. As shown in Fig. 3, the operating-arm C is pro-

vided with the projecting end  $C^2$ , which engages the connecting-piece  $D'$ , and a projecting part  $C^3$ , which engages the connecting-piece  $C'$ . The operating-arm  $D$  is provided with a similar projecting end  $D^2$ , which engages the connecting-piece  $C'$ , and a similar projecting part  $D^3$  for engaging the connecting-piece  $D'$ . In this view, Fig. 3, the connecting-pieces are located beneath the operating-arms and are pivoted at the same points as the associated operating-arms. A different arrangement of the parts is shown in Fig. 6. The connecting-pieces are provided with suitable retracting devices, which tend to move them to their initial position, there being provided suitable stops  $E$ , which limit their movement in one direction. As shown in Fig. 3, these retracting devices consist of coiled springs  $E'$ . These springs are held in place by suitable rods  $E^2$ . As shown, these rods are free to move longitudinally, such movement of the rods compressing the springs. Said rods are provided with the guides  $E^3$ , the ends of the rods engaging the connecting-pieces  $C'$  and  $D'$ . When the device is constructed as shown in Fig. 3, the movement of the connecting-pieces changes the relative position between said connecting-pieces and said rods, and hence the construction must be such as to permit this result. I have illustrated in Fig. 8 one construction for this purpose, wherein the rods are provided with conical ends  $E^4$ , which fit into proper openings or indentations in the connecting-pieces. When the connecting-pieces are moved, the springs are compressed, and hence will move the connecting-pieces, when released, back to their initial position. The register mechanism proper is provided with means for moving the actuating parts back to their initial position; but as there is a certain amount of friction in the operating mechanism it is necessary to have separate retracting-springs for this mechanism. The connecting-pieces  $C'$  and  $D'$  are provided with enlarged or elongated slots or openings  $C^4$  and  $D^4$ , into which the actuating parts  $A'$  and  $A^2$  are received. This permits a relative movement between the connecting-pieces and the actuating parts, and this relative movement is necessary when the device is constructed as shown in Figs. 2 and 3. By slotting these connecting-pieces in the manner shown the actuating parts are easily connected therewith, and the friction due to the relative movement of the parts is very much lessened.

When the register is in position in the car and is adapted to be operated from either side of the car, suitable controlling parts are provided, which extend along each side of the car, as shown, for example, in Fig. 5, thus permitting the register to be operated from various positions. As herein illustrated, these controlling parts consist of the connecting-rods  $F$  and  $F'$ , said connecting-rods being connected, respectively, with the operating-arms, as shown in Fig. 3. Said connecting-rods are

connected with the controlling-rods  $G$  and  $G'$  in some suitable manner—as, for example, by means of the cranks  $H$ . (See Fig. 3.) The controlling-rods extend along on each side of the car and are suitably mounted at intervals, said controlling-rods being provided with a series of handle-pieces  $I$ , by means of which they may be rotated. Referring now to Fig. 3, it will be seen that by rotating one of the handle-pieces  $I$  connected with the rod  $G'$  toward the right the connecting-rod  $F'$  will be moved in the direction of the arrow. The operating-arm  $C$  during this movement engages the connecting-piece  $D'$  and moves it to the right, thus moving the actuating part  $A^2$ , so as to actuate one of the permanent registers. It will be noted that during this movement the arm  $C$  is freed from the connecting-piece  $C'$ , and hence the actuating part  $A'$  remains stationary. If now the handle-piece  $I$  is released, the retracting-spring moves the parts back to their initial position. If the handle-piece  $I$  is now moved in the opposite direction, the connecting-rod  $F$  will be moved in a direction opposite to that indicated by the arrow. The operating-arm  $C$  will then be moved to the dotted position toward the left, being freed from the connecting-piece  $D'$ . Said operating-arm will, however, engage the connecting-piece  $C'$  by means of the projection  $C^3$  and carry it to the left, thus moving the actuating part  $A'$ , so as to operate the permanent register connected therewith. It will thus be seen that either of the actuating parts  $A'$  or  $A^2$  may be moved independently, so as to independently actuate the permanent registers. The same result may be obtained by rotating the controlling-rod  $G$  in either direction, thus permitting either actuating part  $A'$  or  $A^2$  and the mechanism associated therewith to be operated at will from either side of the car. In this construction, it will be noted, there is no undue friction between the parts, thus permitting the entire apparatus to be easily operated.

Referring now to Fig. 6, I have shown a different arrangement of the parts. In this construction the connecting-pieces  $C'$  and  $D'$  instead of being pivoted, as shown in Fig. 3, are located near the ends of the operating-arms  $C$  and  $D$ . Said connecting-pieces are provided near their ends with slots  $L$  and  $M$ , which engage the pins  $C^5$  and  $D^5$  on the operating-arms  $C$  and  $D$ . The retracting-springs are so arranged that these slots do not register when the parts are in their initial position, so that when one of the controlling-arms is moved in one direction the pin associated therewith will engage one connecting-piece, so as to move it, but will work free in the slot of the other connecting-piece. This construction allows either operating-arm to move either connecting-piece independent of the other. The parts  $A'$  and  $A^2$  are engaged by the projections at the sides of the pieces  $C'$  and  $D'$ , said parts fitting into the space between these projections. The space between

these projections corresponds to the slots C<sup>4</sup> and D<sup>4</sup> in the construction shown in Fig. 3. It is of course evident that other constructions for this purpose may be used; but I have only shown two simple constructions in order to make my invention clear, and I therefore do not wish to be limited to the constructions shown.

It is very desirable to have the different parts of the register interchangeable, so that any back may be fitted to any register. It often happens that a back will be attached to the car-frame, while a number of different registers will be successively used on said back. In manufacturing the devices it is difficult to have them all exactly alike, and hence when the backs are changed the pins A' and B' may not come in the right position to properly fit the connecting-pieces C' and D'. Some arrangement must therefore be provided by means of which said projecting parts on the various registers will properly engage said connecting-pieces. This result is very much facilitated by providing the connecting-pieces with the milled slots, as shown, thus giving a certain latitude for the inequalities or differences between the various backs and registers.

The use and operation of my invention are as follows: When my invention is used in connection with a fare-register and the parts are in the position shown in Fig. 5, the different kinds of fares collected by the conductor may be registered from either side of the car. If, for example, the conductor is on the side of the car nearest the controlling-rod G and he receives a cash fare, he simply grasps one of the handle-pieces I and rotates the controlling-rod in one direction—say to the left. This movement of the controlling-rod causes the connecting-rod F to be moved to the right, thus moving the connecting-piece D' and the actuating part A<sup>2</sup>, with which the cash fare permanent register is connected. If now a transfer fare is received, the conductor grasps one of the handle-pieces I and rotates the rod G to the right. The connecting-rod F by this operation is moved to the left, thus moving the connecting-piece C' and the actuating part A', with which the transfer permanent register is connected. The parts are so arranged that a similar movement of any of the handle-pieces connected with the rod G' produces a similar result. As shown in Fig. 5, the parts are arranged with reference to open cars, where the conductor passes along the step on the outside of the car in receiving the fares. In this construction the handle-pieces are so arranged that when the outside ends are grasped and pulled downwardly a cash fare is registered, while if moved upwardly a transfer fare is registered. This is true in connection with both controlling-rods. It is of course evident that the arrangement of these parts will depend upon the conditions to be met and may be varied at will.

When a construction such as herein shown

is used, it will be seen that the two sides, as it were, of the mechanism are independent of each other, so that one side remains stationary when the other side is operated. In other words, the entire mechanism connected with the rod F' remains stationary while the rod F and its associated mechanism is being operated, and said rod F and associated mechanism remains stationary while the rod F' is being operated. This is one of the important features of my present invention, as by this means only the parts which are necessary to move the given mechanism are moved at one time, and hence all undue friction which would exist if all the parts were moved is obviated.

I claim—

1. An operating device for independent mechanisms, comprising two independent operating-arms, two actuating parts connected with said mechanisms, a connecting-piece associated with each actuating part, and means for connecting the operating-arms with the connecting-pieces, so that either connecting-piece may be moved by one of the operating-arms.

2. An operating device for independent mechanisms, comprising an operating-arm, two actuating parts independent of each other and connected with said mechanisms, a connecting-piece associated with each actuating part, said connecting-pieces adapted to be independently engaged by said operating-arm, and a connection between said operating-arm and both of said connecting-pieces, whereby said pieces may be independently moved.

3. An operating device for fare-registers adapted to register different kinds of fares, comprising two actuating parts connected with the register mechanism, two independent operating-arms, a connecting-piece associated with each actuating part, a connection between each of said operating-arms and both of said connecting-pieces, the connection between any given arm and one of the connecting-pieces being inoperative when the arm is moved in one direction and operative when it is moved in the other direction.

4. An operating device for fare-registers adapted to register different kinds of fares, comprising two actuating parts connected with the register mechanism, two independent operating-arms, a connecting-piece associated with each actuating part, a connection between each of said operating-arms and both of said connecting-pieces, the connection between any given arm and one of the connecting-pieces being inoperative when the arm is moved in one direction and operative when it is moved in the other direction, two controlling-rods leading away from said register, each connected with one of said operating-arms, whereby said operating-arms may be controlled from a distance.

5. A fare-register, comprising two permanent registers, an independent actuating part for each permanent register, two independent

operating-arms associated with said register, each operating-arm free to move away from its initial position in opposite directions, a connecting-piece engaging each of said actuating parts, said connecting-pieces independent of each other, but located so that one of them is in the path of one of said arms when moving in one direction, while the other is in the path of said arm when moving in the opposite direction.

6. A fare-register, comprising two permanent registers, an independent actuating part for each permanent register, two independent operating-arms associated with said register, each operating-arm free to move away from its initial position in opposite directions, a connecting-piece engaging each of said actuating parts, said connecting-pieces independent of each other, but located so that one of them is in the path of one of said arms when moving in one direction, while the other is in the path of said arm when moving in the opposite direction, two controlling-rods leading away from said register, each connected with one of said operating-arms, whereby either of the permanent registers may be operated at a distance therefrom.

7. The combination with a fare-register having two actuating parts of an operating device, comprising two independent operating-arms, a connecting-piece connected with each of said actuating parts, an engaging part on each of said operating-arms, so positioned that one arm engages one of the connecting-pieces and moves it in one direction, and the other connecting-piece and moves it in the opposite direction, a stop for limiting the movement of each of said connecting-pieces, and a retracting device which normally moves them against said stops.

8. The combination with a fare-register of an actuating part, which when moved actuates the register, an operating-arm associated therewith, and a connecting-piece connected with the actuating part, said operating-arm adapted to move in one direction independent of said connecting-piece, but engaging the same when moved in the other direction, so as to actuate the fare-register.

9. The combination with a fare-register of two actuating parts projecting from the register-case, an operating-arm adapted to be moved in opposite directions from its initial position, and means for connecting said operating-arm with one of said actuating parts when moved in one direction and with the other actuating part when moved in the opposite direction.

10. The combination with a fare-register of an actuating part projecting from the register-case, a pivoted connecting-piece connected with said actuating part, means for moving said connecting-piece so as to move the actuating part, a longitudinally-movable rod connected with said connecting-piece, so that the angular relation of the two may be

varied when the connecting-piece is moved, and a spring surrounding said rod and adapted to move the parts back to their initial position.

11. An operating device for fare-registers, comprising a pivoted operating-arm, a pivoted connecting-piece associated therewith and adapted to be connected with the register mechanism, a projecting part on said operating-arm adapted to engage the connecting-piece when the arm is moved in one direction and to be free from said connecting-piece when the arm is moved in the opposite direction.

12. An operating device for fare-registers, comprising a removable back separate from the register-case but adapted to be connected therewith, an operating-arm attached to said removable back, two movable connecting-pieces attached to said back, each adapted to be connected with a portion of the register mechanism so as to actuate the same when moved, and a connection between said operating-arm and both of said connecting-pieces, the connection between the arm and one connecting-piece being inoperative when the arm is moved in one direction and the connection between the arm and the other connecting-piece being inoperative when the arm is moved in the opposite direction.

13. An operating device for fare-registers, comprising a removable back separate from the register-case but adapted to be connected therewith, an operating-arm attached to said removable back, two movable connecting-pieces attached to said back, each adapted to be connected with a portion of the register mechanism so as to actuate the same when moved, a connection between said operating-arm and both of said connecting-pieces, the connection between the arm and one connecting-piece being inoperative when the arm is moved in one direction and the connection between the arm and the other connecting-piece being inoperative when the arm is moved in the opposite direction, and an independent retracting device associated with each of said connecting-pieces.

14. An operating device for fare-registers, comprising a removable back separate from the register-case but adapted to be connected therewith, an operating-arm attached to said removable back, two movable connecting-pieces attached to said back, each adapted to be connected with a portion of the register mechanism so as to actuate the same when moved, a connection between said operating-arm and both of said connecting-pieces, the connection between the arm and one connecting-piece being inoperative when the arm is moved in one direction and the connection between the arm and the other connecting-piece being inoperative when the arm is moved in the opposite direction, a rod leading away from the register and provided with a series of handle-pieces, said rod connected

with said operating-arm so that the arm may be moved in opposite directions by rotating said rod.

15. An operating device for fare-registers, 5 comprising two actuating parts connected with the register mechanism, two independent operating-arms, a connecting-piece associated with each actuating part and provided with a slot into which said actuating part is 10 movably received, and a connection between each of said operating-arms and both of said connecting-pieces, whereby said pieces may be independently moved.

16. An operating device for fare-registers, 15 comprising two pivoted operating-arms, one

on each side of the center of the register, a connecting-piece associated with each of said arms and connected with the same pivot, said connecting-pieces provided with projecting parts in different planes, the projecting part 20 on any given connecting-piece being located in the path of the operating-arm pivoted on the opposite side of the center of the register, and two actuating parts projecting from the register-case, one adapted to engage each of 25 said connecting-pieces.

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