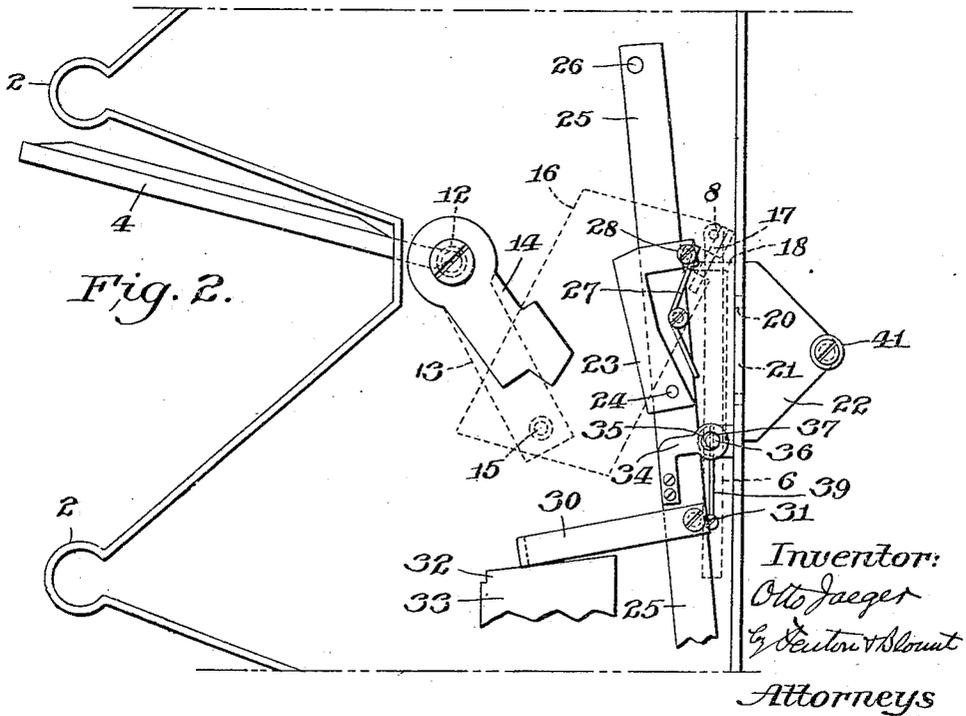
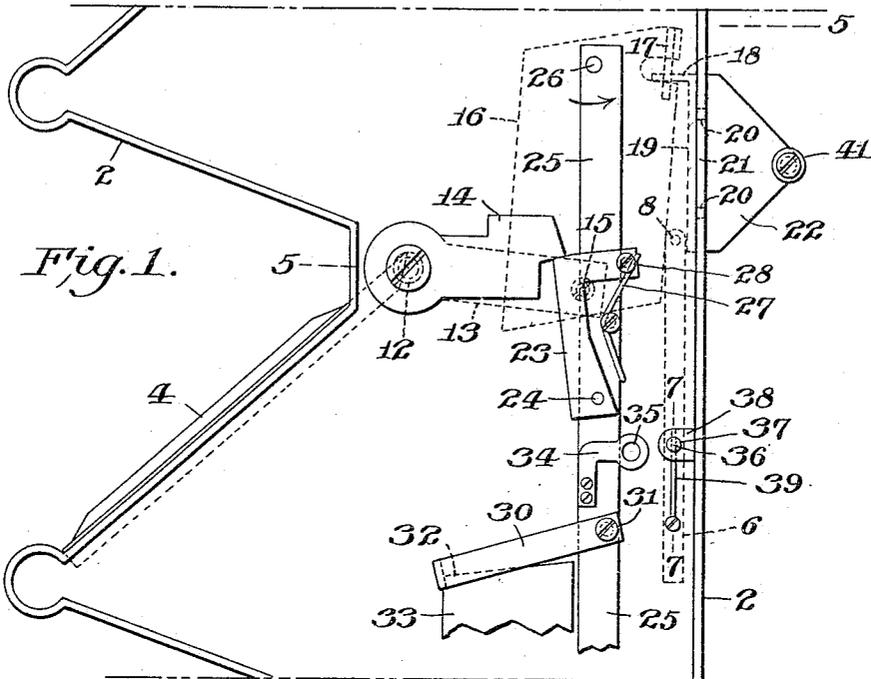


O. JAEGER.
DISPENSING DEVICE.
APPLICATION FILED DEC. 20, 1917.

1,298,048.

Patented Mar. 25, 1919.

3 SHEETS—SHEET 1.



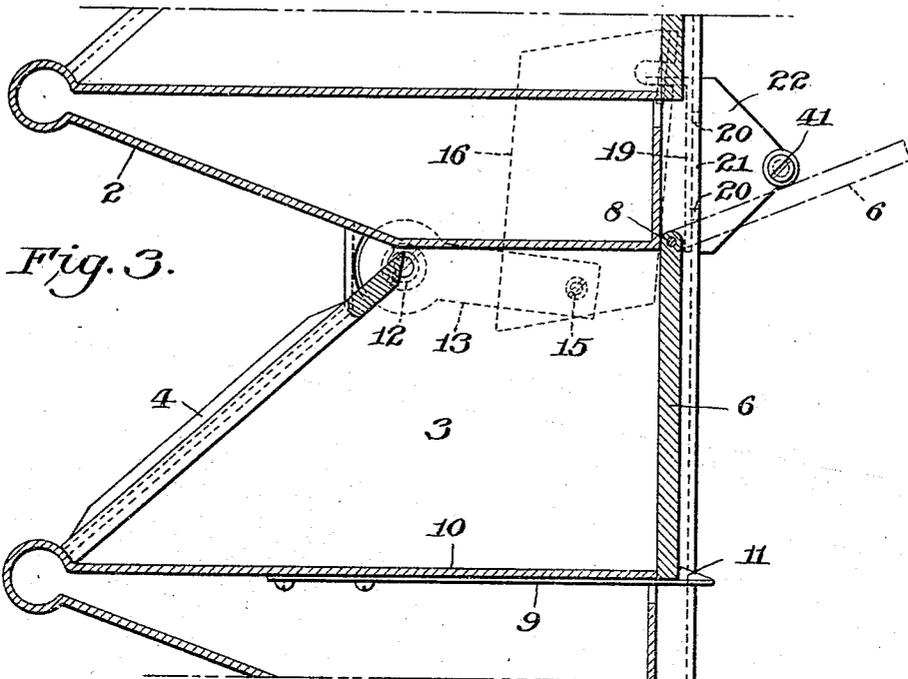


Fig. 3.

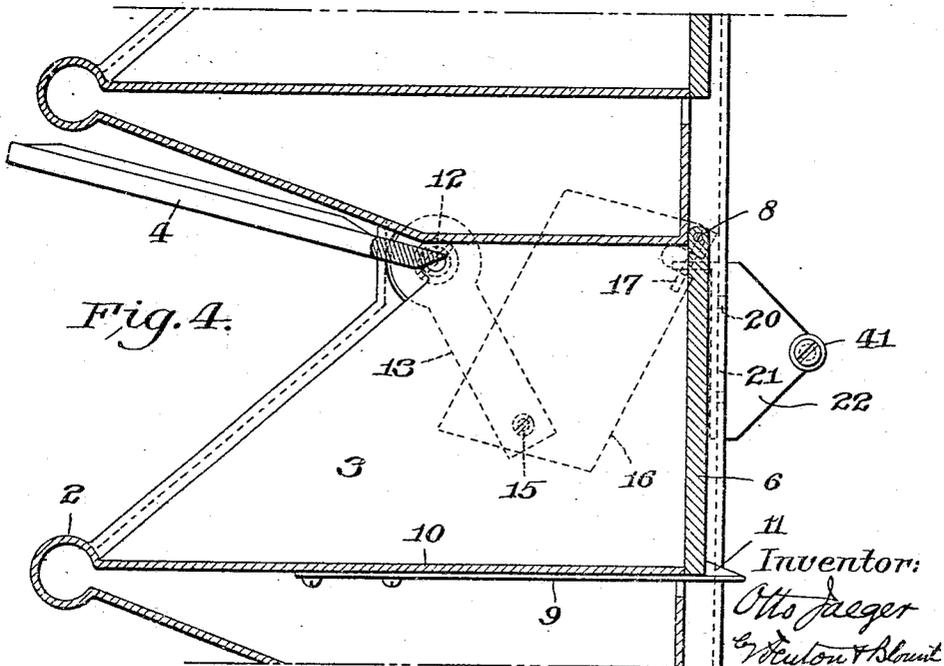


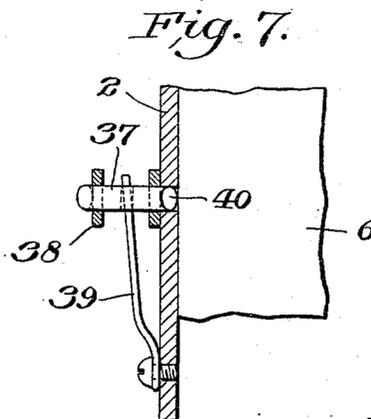
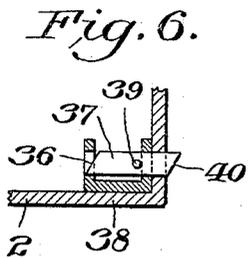
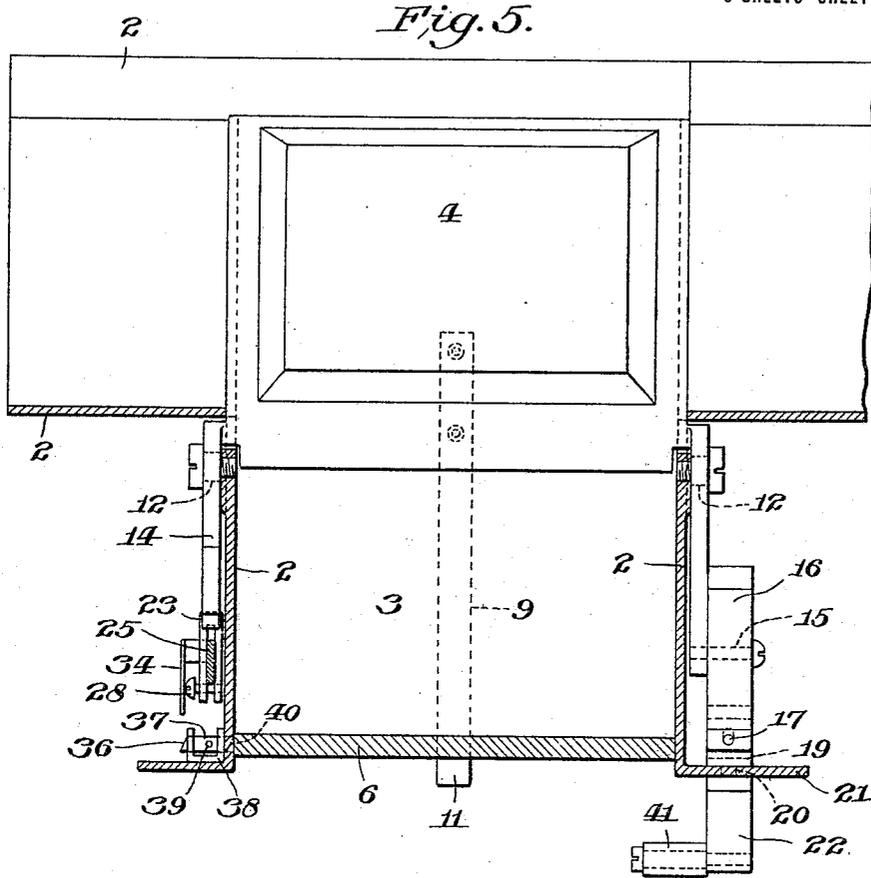
Fig. 4.

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1,298,048.

Patented Mar. 25, 1919.

3 SHEETS—SHEET 3.



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DISPENSING DEVICE.

1,298,048.

Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed December 20, 1917. Serial No. 208,035.

To all whom it may concern:

Be it known that I, OTTO JAEGER, a citizen of the United States, and a resident of Elkins Park, county of Montgomery and State of Pennsylvania, have invented certain new and useful Improvements in Dispensing Devices, of which the following is a full, clear, and exact disclosure, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to improvements in dispensing devices of the type comprising a casing inclosing a chamber and provided with a front door and a rear door by means of either of which access may be had to the chamber for the removal or insertion, respectively, of the article or articles to be dispensed.

The object of my invention is to provide a device of this type of novel, simple and efficient construction in which the doors may be opened and closed independently of each other, the front door may be held in its closed position when moved thereto, and the front door holding means may be operated and controlled by the movement and position of the rear door, so that after the device has been operated to open the front door for the removal of the article or articles contained within the dispensing chamber, the means for holding the front door closed will be prevented from operating by the rear door in its closed position and until the rear door is opened to recharge the dispensing chamber.

With this and related objects in view, my invented device consists of the elements and the combinations of them hereinafter fully described and claimed.

In the accompanying drawings illustrating my invention:

Figure 1 is a side elevation of a dispensing device embodying my invention, showing the doors in the closed position.

Fig. 2 is a view similar to Fig. 1, showing the front door in the open position.

Fig. 3 is a vertical section through the device showing the doors closed by full lines and the rear door open by dot-and-dash lines.

Fig. 4 is a vertical section through the device showing the front door in the open position.

Fig. 5 is a horizontal section through the device on line 5—5 of Fig. 1.

Fig. 6 is a sectional detail showing the controlling part or pin in the operative position.

Fig. 7 is a sectional detail of the controlling part or pin, on line 7—7 of Fig. 1.

Referring to the drawings, 2 designates a frame or casing having walls which inclose a chamber 3 to receive the article or articles to be dispensed.

The casing 2 is provided with a front door 4 which normally closes the front of the chamber 3 and by means of which access may be had to the chamber for the removal of the contents thereof through the front of the casing 2; and the casing 2 is provided with a rear door 6 which normally closes the back of the chamber 3 and by means of which access may be had to the chamber for refilling or placing the article or articles to be dispensed into the chamber from the rear of the casing 2.

The rear door 6 is pivoted or hinged, at 8, to the frame or casing 2, and it is adapted to be raised on its hinge 8 from the closed or full line position to the open or dot-and-dash line position shown in Fig. 3. The door 6 is held in its closed position by a spring latch 9 which is secured to the bottom of the floor 10 of the chamber 3 and which projects rearwardly beneath the floor 10 and door 6 and has a beveled projection 11 on its rearward end which engages the door 6. When the latch 9 is depressed by hand, the door 6 may be raised on its hinge 8 to the open position, shown by dot-and-dash lines in Fig. 3. When the door 6 is moved to the closed position, the bottom thereof engages the beveled projection 11 and forces the latch 9 down until the door clears the projection 11 which, thereafter, springs back to its normal position and holds the door 6 in its closed position.

The front door 4 is pivoted or hinged on two alined screw studs 12 which are screwed into the walls of the casing 2 forming the sides of the chamber 3. This door 4 is movable on its hinge 12 from the closed position shown in Fig. 3 to the open position shown in Fig. 4, and back again.

Projecting from the respective sides of the front door 4 are rearwardly extending arms 13 and 14, as shown. The arm 13 is pivoted, at 15, to the lower end of a weight 16 which tends to lower the arm 13 and thereby raise the door 4 from the closed

to the open position. The upper portion of the weight 16 is provided with a pin 17 which penetrates and bears against an arm 18 on the upper end of a guide plate 19. This plate 19 is guided by pins 20 which extend therefrom through a slot in a vertical wall 21 of the casing 2 and into a block 22 fitted against the side of the wall 21 opposite to the plate 19, whereby the weight 16, plate 19 and block 22 may descend and move the arm 13 and its door 4 on the pivot 12 from the normal position shown in Fig. 3 to the position shown in Fig. 4.

When the parts are set in the normal position shown in Figs. 1 and 3, the arm 14 bears upon the upper end of a dog 23 whose lower end is pivoted, at 24, to an arm or member 25 having its upper end pivoted, at 26 to the frame or casing 2. The dog 23 is pressed toward the door pivot or hinge 12 by a suitable spring 27 carried by the member 25, and the movement of dog 23 by the spring 27 is limited by a pin 28 which projects from the dog 23 and engages the member 25. The connections between the dog 23 and the member 25, and the location of the pivot 26 with relation to the engagement of the arm 14 with the dog 23 are such that the pressure of the weight 16 holds the pin 28 of the dog 23 against the member 25 and tends to move the member in the direction of the arrow, from its operative position shown in Fig. 1. The movement of the member 25 in the direction of the arrow is prevented by a latch 30 which is pivoted, at 31 to the member 25 and which has a projection on its free end engaging a shoulder 32 formed on a plate 33 which is attached to the frame or casing 2.

When the latch 30 is raised from engagement with the shoulder 32 to release the member 25, the action of the weight 16 opens the door 4 and, at the same time, causes the arm 14 to act upon the dog 23 to release itself therefrom by swinging the member 25 on its pivot 26 from the operative position shown in Fig. 1 to the position shown in Fig. 2.

The member 25 is provided with a spring arm or extension 34 having an opening 35 therein; and, when the member 25 moves to the position shown in Fig. 2, the free end of the arm 34 engages the beveled outer end 36 of a pin or part 37 which forces the arm 34 laterally until the opening 35 comes into registry with the pin 37, whereupon the arm 34 springs back to its normal condition and causes the wall of the opening 35 to extend around the pin 35 which then prevents the return of the member 25 to the normal or operative position shown in Fig. 1.

The pin 37 is adapted to be withdrawn from the opening 35, as will be presently explained, to free the arm 34; and, when the arm 34 is thus freed the member 25

swings back by gravity to the position shown in Fig. 1 and automatically reengages the latch 30 with the shoulder 32, the latch 30 resting on the top of the plate 33 during the movement of the member 25 from and back to the position shown in Fig. 1. As the member 25 is thus returned to the operative position shown in Fig. 1, the door 4 and arm 14 remain in the position shown in Fig. 2. Thereafter, when the door 4 is closed, the arm 14 is returned to the position shown in Fig. 1; and, as the arm 14 is thus returned, it presses the dog 23 back against the action of the spring 27 until the arm 14 escapes the top of the dog 23, whereupon the dog 23 is moved by the spring 27 to the position shown in Fig. 1, beneath the arm 14 to hold and lock the door 4 closed for a succeeding opening operation, by raising the latch 30, as previously explained.

The pin or part 37 is made cylindrical in form and is slidably fitted in a bracket 38 which is secured to the frame or casing 2. The inner end portion of the pin 37 is adapted to slide longitudinally through an opening in one of the side walls of the chamber 3. When the rear door 6 is closed, the inner end of the pin 37 bears against one side thereof, as shown in Fig. 5; and the pin 37 is pressed normally against the door 6 by the action of a spring arm 39, the upper end of which penetrates the pin 37 and the lower end of which is secured to the frame or casing 2. When the rear door 6 is moved to the open position, shown in Fig. 3, the spring 39 moves the pin 37 inwardly, from its operative position shown in Fig. 5, to the position shown in Fig. 6, and into the path of movement of or the space occupied by the door 6 when the door 6 is in the closed position. When the rear door 6 is closed, one side thereof engages the beveled inner end 40 of the pin 37 and moves it back to its operative or normal position shown in Fig. 5, against the action of the spring 39. It will thus be seen that when the pin 37 is in the operative position shown in Fig. 5, the spring arm 34 may be engaged with the outer end thereof to hold the member 25 in the position shown in Fig. 2, and that, when the pin 37 is moved to the position shown in Fig. 6, the arm 34 will be freed therefrom to release the member 25, as previously explained.

The spring 39 not only serves to move the pin or part 37 to the position shown in Fig. 6 but it also serves as a stop to engage the bracket 39 and limit the movement of the pin 37, and also to prevent the rotation of the pin 37 and thereby hold the beveled ends 36 and 40 thereof in the proper relation to the arm 34 and door 6, respectively.

The block 22 hereinbefore referred to is provided with a laterally extending projection or roller 41 which is adapted to be en-

gaged by the rear door 6 to raise the block 22 and weight 16 from the position shown in Fig. 4 to the position shown in Fig. 3 to thereby close the front door 4, when it is open and the rear door 6 is moved from the closed to the open position, shown by dot-and-dash lines in Fig. 3.

The device is particularly adapted for use in connection with coin or check operated vending machines, in which suitable coin or check controlled mechanism is employed to raise the latch 30 from the shoulder 32, to release the member 25, for the opening of the front door 4, as previously explained, to permit the purchaser to remove the contents of the chamber 3; and, when the device is used in this connection, the frame or casing 2 may be built into or form a part of a wall which separates the customer from the person that attends the machine.

The operation of the device, briefly described, is as follows:

Starting with the parts set in the position shown in Figs. 1, 3 and 5, and assuming that the article or articles to be dispensed have been placed within the chamber 3, the latch 30 is raised, by the operation of coin controlled mechanism, or by hand or other means, from engagement with the shoulder 32, thereby releasing the member 25. When the member 25 is thus released, the weight 16 moves down to the position shown in Figs. 2 and 4, by gravity, and opens the front door 4, and, at the same time, causes the arm 14 to act upon the dog 23 and swing the member 25 from the position shown in Fig. 1 to the position shown in Fig. 2. The contents of the chamber 3 may now be removed through the open front thereof by the customer in front of the casing 2. When the member 25 is moved to the position shown in Fig. 2, by the opening of the front door 4, the spring arm 34 of the member 25 engages itself with the outwardly projecting pin 37 and holds the member in the position shown in Fig. 2, so that, if any one in front of the casing 2 should close the door 4, the arm 14 would not reengage itself with the dog 23 to retain the door 4 closed; and, therefore, the open front door would indicate to prospective purchasers of the commodity being dispensed that the chamber 3 was empty. After the front door 4 has been opened, and the contents of the chamber 3 removed, as above described, the attendant in the rear of the casing 2 operates the latch 9 to release the rear door 6 and opens it to the position shown by dot-and-dash lines in Fig. 3 and recharges the chamber 3 through the back thereof. During the initial opening movement of the rear door 6, it moves from the inner end of the pin 37 and permits the pin to be moved inwardly by the spring 39 to release the arm 34, thereby permitting the member 25 to return by gravity to the posi-

tion shown in Fig. 1, and the latch 30 to be automatically reengaged with the shoulder 32, to hold the member 25 in the operative position, while the arm 14 remains down in the position shown in Fig. 2. During the continued opening movement of the rear door 6, it engages the roller or projection 41 and raises the block 22 and weight 16 to the position shown in Figs. 1 and 3, thereby closing the front door 4 and raising the arm 14 to the position shown in Fig. 1 and reengaging the arm 14 with the top of the dog 23 to hold or lock the front door 4 in the closed position and maintain the weight 16 elevated, as previously explained. The rear door 6 is now closed, by the attendant after he recharges the chamber 3, and the closing of the door 6 causes it to engage the beveled inner end 40 of the pin 37 and project it to the operative position shown in Fig. 5 to be again engaged by the spring arm 34, and leaving the parts in the position shown in Figs. 1, 3 and 5 for a succeeding operation.

I claim:

1. In a dispensing device, the combination of a casing having a front door and a rear door each being movable to open and closed positions, means acting automatically to hold the front door in its closed position when it is moved thereto, and means controlled by the movement of the rear door to prevent the operation of the first named means by the movement of the front door to its closed position when the rear door is in one position and to permit the operation of the first named means when the rear door is moved to another position.

2. In a dispensing device, the combination of a casing having a front door and a rear door each being movable to open and closed positions, means automatically operative to hold the front door in its closed position when moved thereto, a part movable to and from an operative position and adapted to be moved by the rear door to its operative position when the rear door is moved to its closed position, and means controlled by said part when it is in its operative position to prevent the operation of the first named means when the front door is moved to its closed position.

3. In a dispensing device, the combination of a casing having a front door and a rear door each being movable to open and closed positions, means automatically operative to hold the front door in its closed position when moved thereto, a part movable from an operative position to an inoperative position and back again, a spring tending to move said part to its inoperative position, said part when in its inoperative position extending into the path of movement of the rear door when it is moved to its closed position, and the rear door when moved to its closed

position moving said part to its operative position, and means controlled by said part when it is in its operative position to prevent the operation of the first named means when the front door is moved to its closed position.

4. In a dispensing device, the combination of a casing having a front door and a rear door each being movable to open and closed positions, means automatically operative to hold the front door in its closed position when moved thereto, a cylindrical part having a beveled end and movable from an operative position to an inoperative position, a spring tending to move said part to its inoperative position and preventing the turning thereof, said part when in its inoperative position having its beveled end extending into the path of movement of the rear door when it is moved to its closed position, and the rear door when moved to its closed position engaging said beveled end and moving said part to its operative position, and means controlled by said part when it is in its operative position to prevent the operation of the first named means when the front door is moved to its closed position.

5. In a dispensing device, the combination of a casing having a front door and a rear door each being movable to open and closed positions, a member movable from and automatically returnable to an operative position, means made operative by said member when it is in its operative position to hold the front door in its closed position when moved thereto, said means being inoperative when said member is in its inoperative position, and means controlled by the movement of the rear door to retain said member in its inoperative position when the rear door is in its closed position and to release said member when the rear door is moved to its open position.

6. In a dispensing device, the combination of a casing having a front door and a rear door each being movable to open and closed positions, a member movable from and automatically returnable to an operative position, means made operative by said member when it is in its operative position to hold the front door in its closed position when moved thereto, a part movable to and from an operative position and adapted to be moved by the rear door to its operative position when the rear door is moved to its closed position, said part being adapted to retain said member in its inoperative position when said part is in its operative position.

7. In a dispensing device, the combination of a casing having a front door and a rear door each being movable to open and closed positions, a member movable from and automatically returnable to an operative position,

means associated with said member to hold the front door in its closed position when moved thereto when said member is in its operative position, and means controlled by the movement of the rear door to retain said member in its inoperative position when moved thereto when the rear door is in one position and to release said member when the rear door is moved to another position.

8. In a dispensing device, the combination of a casing having a front door and a rear door each being movable to open and closed positions, a member movable from and automatically returnable to an operative position, means associated with said member to hold the front door in its closed position when moved thereto when said member is in its operative position, means tending to move the front door to its open position and to move said member to its inoperative position, a latch holding said member in its operative position and operative to release the same, and means controlled by the movement of the rear door to retain said member in its inoperative position when moved thereto when the rear door is in one position and to release said member when the rear door is moved to another position.

9. In a dispensing device, the combination of a casing having a front door and a rear door each being movable to open and closed positions, means tending to move the front door to its open position, a member movable from and automatically returnable to an operative position, a latch holding said member in its operative position and operative to release the same, a spring pressed dog carried by said member, the front door having a part engaging said dog and holding the front door closed and tending to move the member from its operative position, said dog permitting the front door to be moved from its open to its closed position without moving said member from its operative position, and means controlled by the rear door to retain said member in its inoperative position when moved thereto when the rear door is closed and to release said member when the rear door is opened, whereby when both doors are closed and the latch is operated to release the member, the front door will be opened, the member will be moved to its inoperative position and retained therein to prevent its return to normal position to hold the front door closed until the rear door is opened and the last named means thereby operated to release the member.

In testimony whereof I affix my signature hereto, this 19th day of December, A. D. 1917.

OTTO JAEGER.