No. 821,761 PATENTED MAY 29, 1906.

A. M. STANLEY.

CIGAR VENDING MACHINE.

APPLICATION FILED DEC. 5, 1904.

3 SHEETS—SHEET 1.

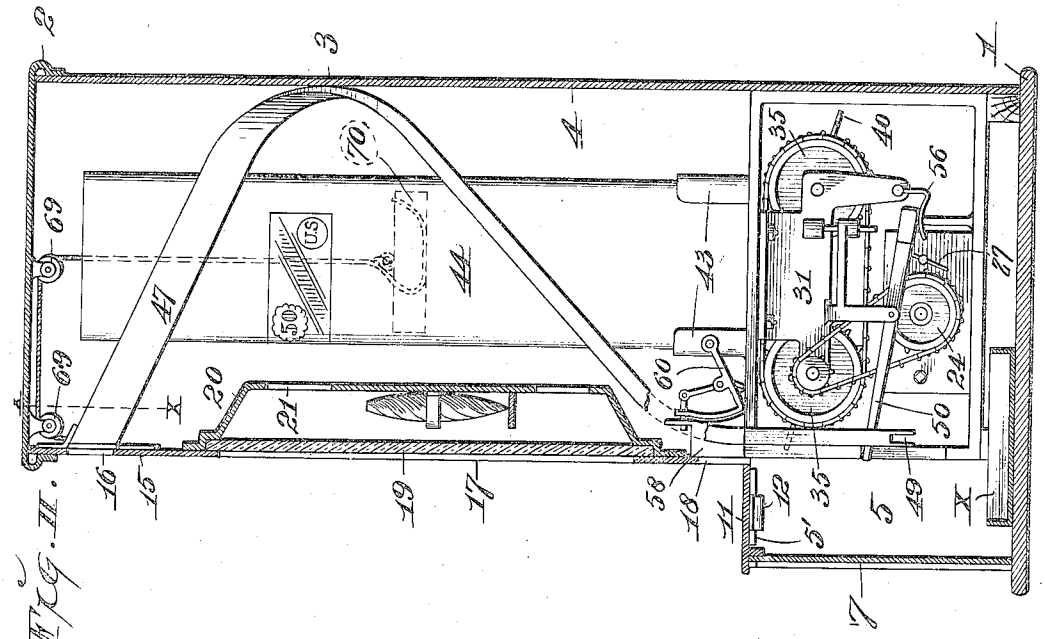


Fig. II.

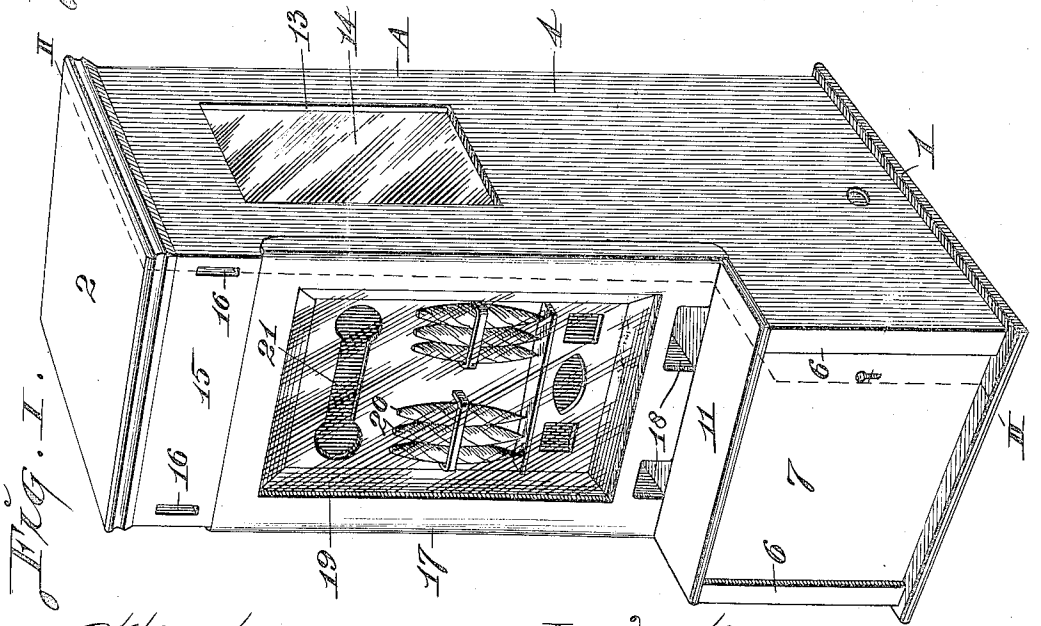


Fig. I.

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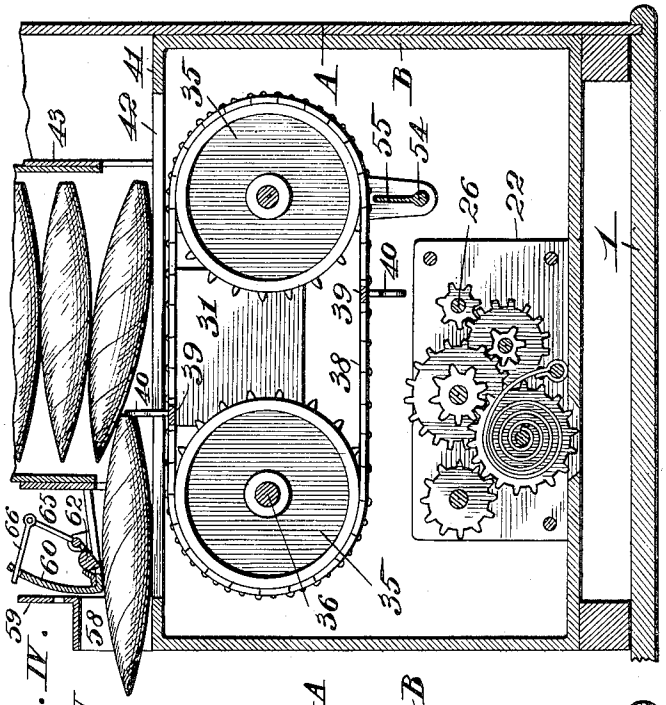


Fig. IV.

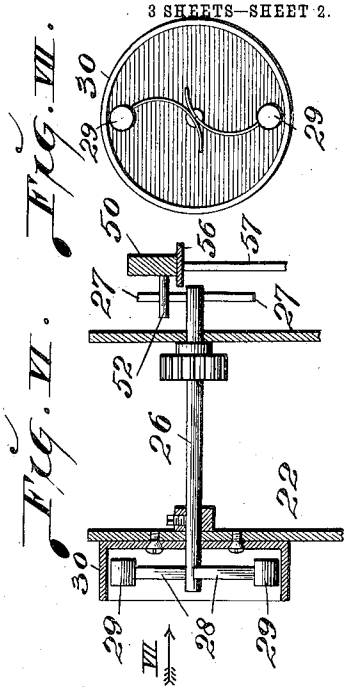


Fig. VII.

Fig. VI.

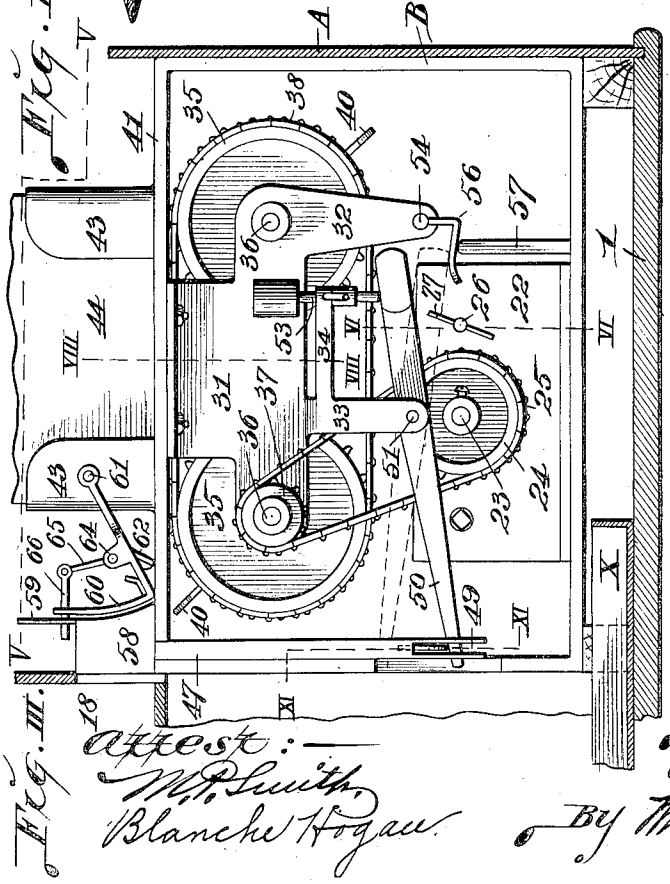


Fig. III.

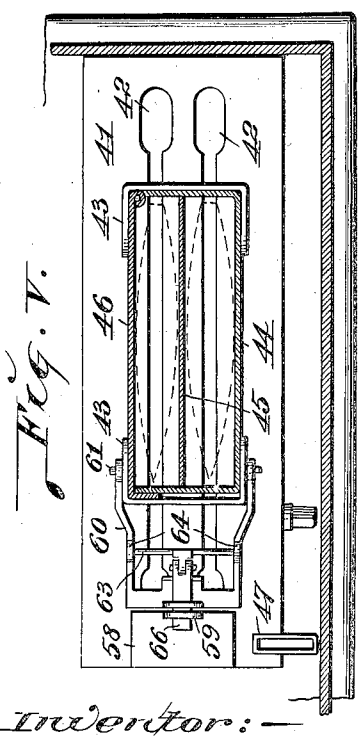


Fig. V.

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3 SHEETS—SHEET 3.

Fig. VIII

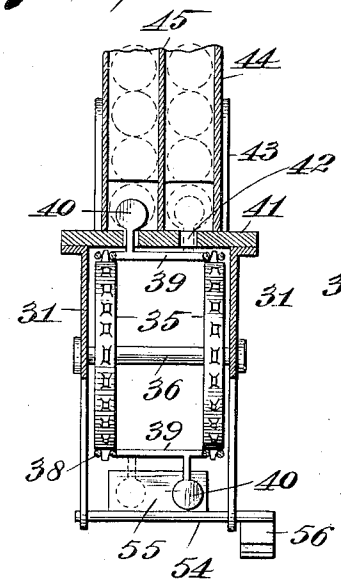



Fig. IX.

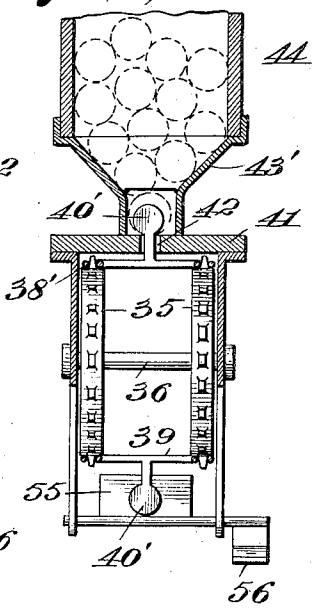



Fig. X.

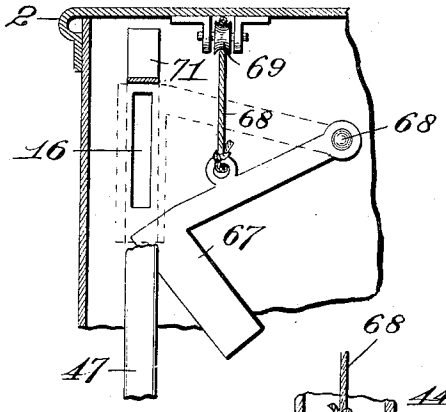



Fig XI

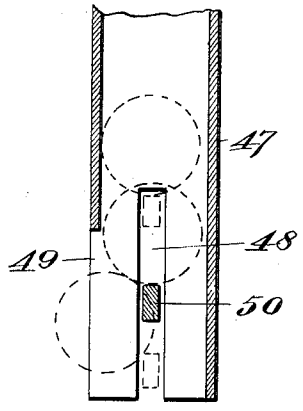
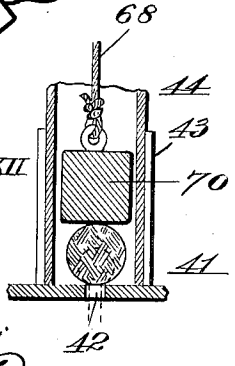



Fig. XII




Attest,

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Inventor:—

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Attys.

# UNITED STATES PATENT OFFICE.

ALBERT M. STANLEY, OF WELLINGTON, KANSAS.

## CIGAR-VENDING MACHINE.

No. 821,761. Specification of Letters Patent. Patented May 29, 1906.

Application filed December 5, 1904. Serial No. 235,470.

*To all whom it may concern:*

Be it known that I, ALBERT M. STANLEY, a citizen of the United States, residing in Wellington, in the county of Sumner and State of Kansas, have invented certain new and useful Improvements in Cigar-Vending Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a machine for vending cigars and including therein coin-controlled mechanism by which the cigars are automatically discharged from the machine when a coin is delivered thereinto to release and permit the operation of a motor by which the cigar-delivery mechanism is actuated.

Figure I is a perspective view of my machine. Fig. II is an enlarged vertical section taken on line II II, Fig. I. Fig. III is an enlarged vertical cross-section taken through the case of the machine and showing the cigar-delivery mechanism in elevation. Fig. IV is an enlarged vertical cross-section taken on a line extending through the cigar-delivery mechanism, the parts surmounting said mechanism, and the motor by which said mechanism is operated. Fig. V is a horizontal section taken on line V V, Fig. III, with parts beneath said line shown in plan. Fig. VI is a vertical cross-section taken on line VI VI, Fig. III. Fig. VII is a face view of the motor-governor. Fig. VIII is a vertical cross-section taken on line VIII VIII, Fig. III. Fig. IX is a similar view to Fig. VIII, illustrating a single cigar-holding box in lieu of the partitioned box seen in Fig. VIII. Fig. X is an enlarged vertical section taken on line X X, Fig. II. Fig. XI is an enlarged vertical section taken on line XI XI, Fig. III. Fig. XII is an enlarged vertical section of the lower end of the cigar-holding box, showing the weight therein which controls the gate at the entrance of the coin-chute.

The case A of my vending-machine consists of the following parts: 1 is the base of the case; 2, the top; 3, the rear wall, and 4 the side walls. The side walls are provided with forward extensions 5, which have inturned flanges 6 at their front edges, within which the front door 7 fits. The extensions 5 of the side walls are provided at their upper edges with inturned flanges 5′, on which seats a shelf 11, (see Figs. I and II,) the shelf being provided at each end with brackets 12, that engage beneath the flanges 5′ and serve to hold the shelf in place. In the side walls 4 are side openings 13, in which are transparent panes 14, through which a view of the interior of the machine may be secured.

15 is the front of the case A, which is provided with one or more coin entrance-ways 16. (See Figs. I and II.)

17 is a front plate secured to the front of the case A and provided immediately above the shelf 11 with one or more cigar-exits 18. In this front plate is a transparent pane 19, and at the rear of the front of the plate is a display-box 20, that is provided with means for supporting cigars in a position to be readily observable through the pane 19 in the front plate of the case. In the display-box is a side opening 21, through which a view may be obtained to observe the internal-revenue stamp applied to the cigar-holding box located immediately at the rear of said display-box.

B designates a boxing within the lower part of the case A and in which the motor and cigar-delivery mechanism of my machine are located. Supported upon the bottom of the boxing B is a motor 22, that may be of spring-operated type, as illustrated in Fig. IV, or of any other suitable type. On the power-shaft 23 of this motor is a toothed wheel 24, that receives an endless chain 25, the utility of which will be hereinafter set forth, and on the controlling-shaft 26 of the motor are stems 27, the utility of which will also be hereinafter pointed out. The controlling-shaft bears a pair of spring governor-arms 28, equipped with weights 29, which operate within a case 30, (see Figs. VI and VII,)) secured to one of the motor side walls. These governor-arms are of a curved form, as seen in Fig. VII, and when the motor-controlling shaft 26 attains more than a normal speed of rotation the arms are caused to straighten, due to a centrifugal motion, and the weights 29 are therefore thrown outwardly to impinge against the case 30 and ride in frictional contact therewith to act as a brake in retarding the speed of the motor-controlling shaft.

31 designates a pair of hanger-frames suspended from the top of the boxing B, each hanger-frame being provided with a bracket-arm 32 and one of the hanger-frames being provided additionally with a leg 33, that bears an arm 34.

35 designates toothed wheels of the cigar-

delivery mechanism, mounted in pairs upon shafts 36, journaled in the hanger-frames 31. One of the shafts 36 has fixed to it a toothed wheel 37, to which power is communicated from the motor 22 by the endless chain 25, that travels on the toothed wheel 24, fixed to the power-shaft of the motor.

38 represents endless chains that travel upon the toothed wheels 35 and to which motion is imparted, due to one pair of said wheels being operated by the motor 22.

39 represents cross-rods connected to the endless chains 38, (see Figs. IV and VIII,) and 40 represents pusher-fingers carried by these cross-rods, the fingers being offset from each other, as seen in Fig. VIII, so that they will travel in different paths.

The top of the boxing B constitutes a table 41, that is provided with slots 42, through which the pusher-fingers 40 may pass in their travel, the slots being preferably enlarged at their ends, as seen in Fig. V, in order that the enlarged free ends of the pusher-fingers may enter thereinto previous to their travel above the table into the position seen in Figs. IV and VIII.

43 designates sockets surmounting the table 41 and in which the cigar-holding box 44 seats in an upright position. The box 44 is provided with a central partition 45, that subdivides the box into two compartments, one immediately surmounting one of the slots 42 and the other immediately surmounting the other slot 42. At one side of the box 44 is a door 46, through which access is gained to the interior of the box. The partition 45 is removable, so that cigars may be placed in one compartment of the box, the partition then introduced, and the cigars laid onto said partition in the other compartment, after which the door is closed.

While I prefer to use the partitioned cigar-holding box 44 and utilize the two sets of pusher-fingers 40 for ejecting cigars from the multiple of compartments in said box, I may, as illustrated in Fig. IX, utilize in my machine the ordinary cigar-stock box 44′, from which one end is broken, so that when the box is seated in a hopper 43′ the cigars will be delivered from the box through said hopper onto the table 41, to be ejected from the hopper by pusher-fingers 40′, that travel through a single slot 42′ in said table and are carried by the endless drive-chain 38′

47 designates a coin-chute that leads from the coin entrance-way 16. This coin-chute is made with compound curves to obviate the possibility of a wire being passed therethrough to operate the coin-controlled mechanism of the machine, and at the lower discharge end of the coin-chute is a transverse slot 48 (see Fig. XI) and a longitudinal slot 49. (See Figs. II, III, IV, and XI.)

50 designates a trigger that is pivotally supported at 51 by the hanger-frame leg 33 and the forward arm of which operates within the slot 48 in the coin-chute. The rear arm of the trigger 50 extends in juxtaposition with the controlling-shaft stems 27 and is provided with a stop-pin 52, that is adapted to engage one of said stems and hold the controlling-shaft against rotation when the forward end of the trigger is in elevated position previous to the introduction of a coin into the chute 47. When a coin is introduced and descends in the chute, it falls onto the forward end of the trigger and depresses it, thereby elevating the trigger's rear arm and freeing the controlling-shaft 26, due to the removal of the stop-pin 52 therefrom. The motor is then permitted to operate and transmits motion to the toothed wheel-shaft 36, to which it is geared, thereby causing travel of the endless chains 28 to convey one of the pusher-fingers 40 through a slot 42 in the table 41 to act upon the lowermost cigar in the surmounting tier descending from the cigar-holding box.

53 designates a weighted gravitating stem loosely mounted in the leg-carried arm 34 of the hanger-frame 31 and having its lower end positioned immediately above the rear arm of the trigger 50.

54 is a rock-shaft pivotally mounted in the hanger-frame bracket-arm 32 and provided with a blade 55, that projects upwardly from the shaft in the path of travel of the pusher-fingers, to be engaged and tripped by said fingers when they travel thereto in the downward portion of their course of travel. The rock-shaft 54 has fixed to it an arm 56, that normally rests upon a supporting-post 57 and is adapted to be swung upwardly to the rear arm of the trigger 50 when the rock-shaft 54 is rotated by the engagement of a pusher-finger with its blade. When this movement occurs, the arm 56 is elevated to the rear arm of the trigger and raises the said arm against the depressing action of the weighted stem 53, with a result that the forward end of the trigger is lowered from the position seen in full lines, Fig. XI, to the position seen in dotted lines at the bottom of said figure, thereby permitting the previously-supported coin to pass from the coin-chute through the slot 49 and fall into the till X, placed to receive it. After this operation has taken place the trigger 50 is caused to resume its normal position, due to the downward pressure of the weighted stem 53 against the rear arm of the trigger, and the stop-pin 52 moves into a position in front of the motor-controlling-shaft stem 27, moving thereto, and the operation of the motor is stopped, thereby bringing the cigar-delivery mechanism into a condition of rest until another coin is introduced to cause operation of the parts, as before.

For the purpose of preventing the introduction of any implement into the cigar-

compartments of the machine through the cigar-exits 18 I provide a mechanism that will now be described.

58 is a chamber that surmounts the table 41 at its forward end and through which the cigars pass to the exits 18 as they are pressed forwardly by the pusher-fingers 40 of the delivery mechanism, as seen in Fig. IV. This chamber is provided with an apertured keeper 59.

60 is a gate the arms of which are pivoted at 61 to the forward cigar-holding box-socket 43. The forward portion of this gate is adapted to swing in a path of travel directly at the rear of the chamber 58.

62 is a gravitating trip member carried by a rock-shaft 63, pivoted in ears 64, carried by the arms of the gate 60. Extending upwardly from the rock-shaft 63 is a lever-arm 65, that has pivoted to it a bolt 66, slidably positioned in the upright forward portion of the gate 60 and adapted to enter the aperture in the keeper 59 when the gate is in lowered position, as seen in Figs. II, III, and V.

As the cigars are pressed forwardly by the delivery mechanism in discharging them the forward end of each cigar strikes against the trip member 62 and by rocking said trip member causes the lever-arm 65, associated therewith, to be thrown rearwardly, with the result that the bolt 66 is withdrawn from the keeper 59, thereby freeing the gate 60, so the cigar may elevate it while it passes thereunder and is discharged. After the cigar has been delivered the gate returns to its lower position by gravitation, and it is again secured, due to the trip member 62 falling into suspended condition and causing the bolt 66 to be shot into the keeper 59.

For the purpose of preventing the introduction of a coin into the machine when it is empty I utilize a gate 67, (see Fig. X,) pivoted at 68 to the case of the machine and adaped to swing to the coin entrance-way 16, the gate being preferably of L shape, as shown. The gate has connected to it a cord 68, that passes to and over sheaves 69 and then into the cigar-holding box 44. Within the cigar-holding box and resting upon the cigars therein is a weight 70, (see Figs. II and XII,) to which the cord 68 is connected. This weight is adapted to travel downwardly in the cigar-box, and when the supply of cigars is exhausted and the weight has reached the bottom of the box, as seen in Fig. XII, the cord 68 is drawn taut and a pull exerted thereupon by the weight, due to which the gate 67 is thrown into the elevated position seen in dotted lines, Fig. X, where it rests against a stop 71 and serves to close the coin entrance-way.

As will be understood from the drawings and foregoing description, the cigars are ejected from my machine endwise by pressure applied to the rear ends thereof. By constructing the machine so that the cigars are so ejected I avoid all liability of the wrappers of the cigars being broken when they are ejected, which is extremely liable to occur in machines in which the cigars are ejected sidewise.

I claim as my invention—

1. In a cigar-vending machine, the combination of a cigar-receptacle, a carrier provided with means for ejecting the cigars from said receptacle, a motor having a controlling-shaft, a coin-actuated trigger for engagement with said controlling-shaft, a coin-chute in which said trigger enters to support a coin therein, and means actuated by said carrier for tripping said trigger; said last-named means consisting of a rock-shaft, a blade carried by said rock-shaft and positioned in the path of travel of said carrier, and an arm fixed to said rock-shaft and adapted to be moved into engagement with said trigger, substantially as set forth.

2. In a cigar-vending machine, the combination of a cigar-receptacle, a carrier provided with means for ejecting the cigars from said receptacle, a motor having a controlling-shaft, a coin-actuated trigger for engagement with said controlling-shaft, a coin-chute in which said trigger enters to support a coin therein, and means actuated by said carrier for tripping said trigger; said last-named means consisting of a rock-shaft, a blade carried by said rock-shaft and positioned in the path of travel of said carrier, an arm fixed to said rock-shaft and adapted to be moved into engagement with said trigger, and a weighted stem slidably positioned above said trigger, substantially as set forth.

ALBERT M. STANLEY.

In presence of—
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NELLIE V. ALEXANDER.