

936,906.

C. M. JEWELL.
DISPENSING MACHINE.
APPLICATION FILED MAR. 2, 1909.

Patented Oct. 12, 1909.

2 SHEETS—SHEET 1.

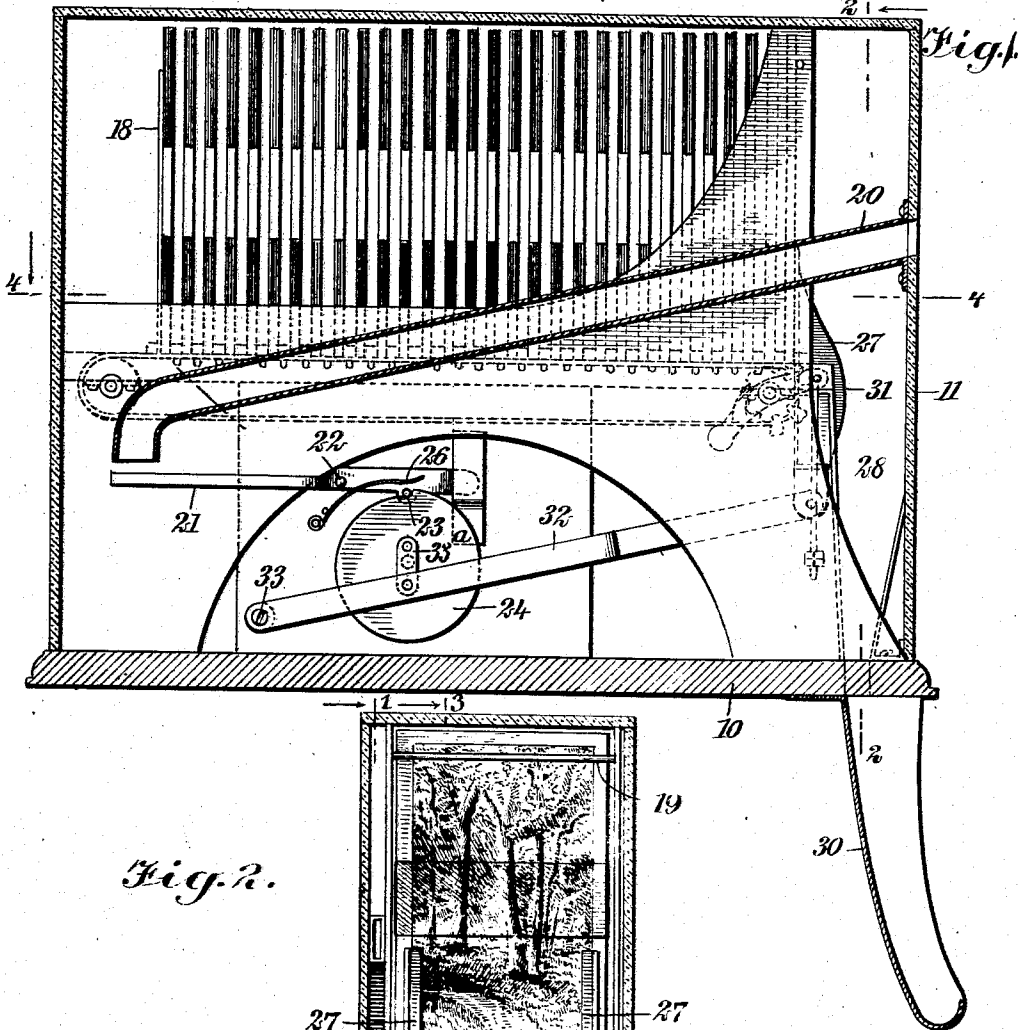
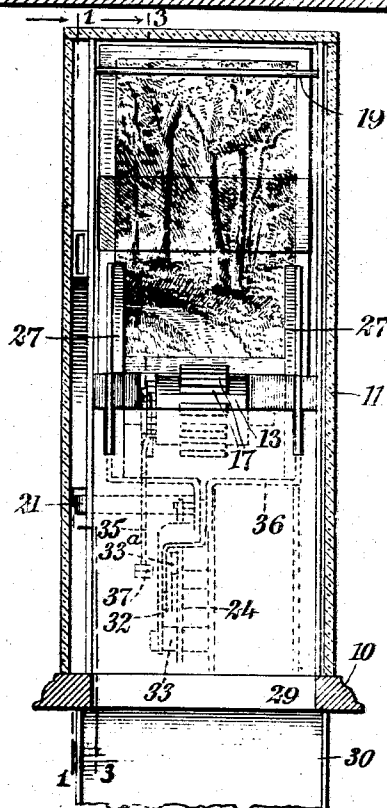


Fig. 2.



WITNESSES

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Fig. 3.

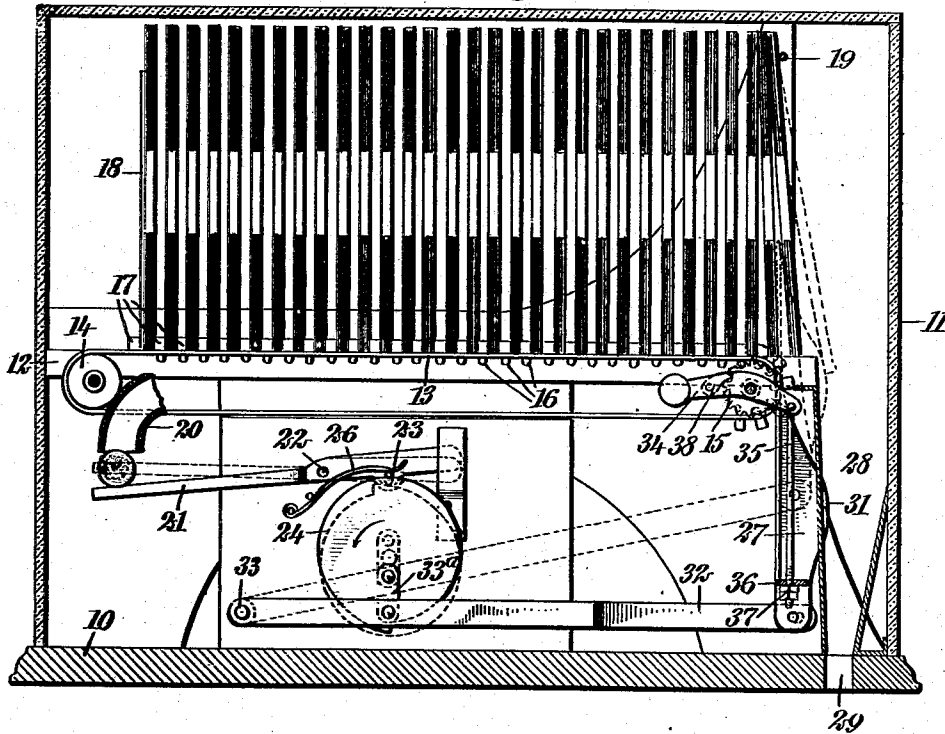
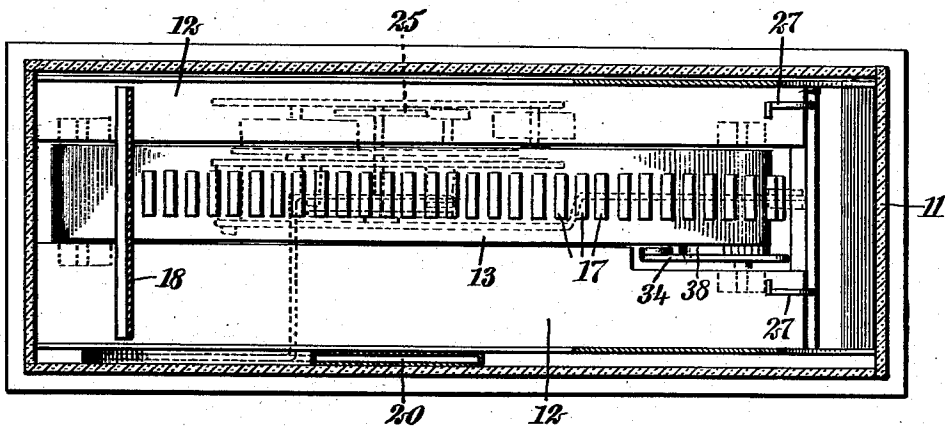


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES MOODY JEWELL, OF CANASTOTA, SOUTH DAKOTA.

DISPENSING-MACHINE.

936,906.

Specification of Letters Patent.

Patented Oct. 12, 1909.

Application filed March 2, 1909. Serial No. 480,896.

To all whom it may concern:

Be it known that I, CHARLES MOODY JEWELL, a citizen of the United States, and a resident of Canastota, in the county of McCook and State of South Dakota, have invented a new and Improved Dispensing-Machine, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in dispensing machines particularly adapted for dispensing sheets, envelops, pictures, cards, packages of cards, or similar sheet material, and relates more particularly to the operating and controlling means for delivering the articles to be dispensed to the discharge opening.

My improved machine is preferably coin-controlled, and is so constructed that the purchaser may inspect the card, picture or the like before purchasing the same.

The invention consists in the features and combinations of parts hereinafter referred to and particularly pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, and in which—

Figure 1 is a vertical section through a machine constructed in accordance with my invention, said section being taken on the line 1—1 of Fig. 2; Fig. 2 is a vertical transverse section through the machine, said section being taken on the line 2—2 of Fig. 1; Fig. 3 is a vertical section taken on the line 3—3 of Fig. 2; and Fig. 4 is a transverse section on the line 4—4 of Fig. 1.

My improved machine may be mounted upon any suitable form of base and inclosed in any suitable form of casing. As illustrated, all of the moving parts are supported upon a base 10 and the sides, ends and top of the casing 11 are formed of glass, so that all parts of the mechanism may be readily inspected.

As previously stated, cards, pictures or other similar articles, may be dispensed by the machine, and although I will hereinafter refer only to packages of cards, which are illustrated in the drawings, yet I wish it understood that the machine is not limited in any way to packages of cards. The articles to be dispensed occupy the upper half or portion of the casing, while the dispensing mechanism is mounted in the lower portion

and serves to advance the articles to the discharge opening and deliver them therefrom. The casing is of slightly greater width than the width of the cards, the latter being supported vertically within the upper half, and all lying substantially parallel and extending transversely of the casing. The sides of the casing are provided with side shelves or supports 12, upon which the lower edges of the cards rest and between these two shelves is a movable belt or conveyer 13, substantially in the plane of said shelves. The two shelves and the belt serve to form a partition subdividing the casing into two separate compartments. The belt is supported upon two pulleys 14 and 15, and one of these pulleys, 15, is disposed adjacent the front or discharge end of the machine and is provided with a series of recesses or grooves to receive projections 16 on the under side of the belt. Upon the upper or outer surface of the belt are a series of transverse cleats or blocks 17 spaced apart to leave grooves or recesses for receiving the lower edges of the packages of cards. The main weight of the cards is borne by the two side partitions or shelves 12, 12, but as the belt moves along, the cleats or blocks 17 cause all of the cards to be moved along the shelves while maintaining their erect or vertical position. The belt may carry a vertically-extending plate 18 adjacent the rear block 17, so as to hold the rear package of cards substantially vertical, but no other support need be provided for the intermediate packages. A single transverse rod 19 may be provided adjacent the front end of the machine for limiting the forward movement of the upper ends of the cards.

For moving the belt to advance the packages of cards and for removing the cards from the belt and delivering them from the machine, I provide mechanism which is preferably coin-controlled. A coin chute 20 leads through the front of the casing to adjacent the rear end thereof and directly below the open end of the chute is the rear end of a lever 21. The lever is supported upon a pivot 22 intermediate the ends of the lever, and the front portion of the lever carries a pin 23 for engagement with the periphery of a cam disk 24. The disk has a notch in the periphery thereof for engagement with the pin to normally prevent the rotation of the disk and any suitable form of clockwork

or mechanical motor 25, shown in dotted lines in Fig. 4, may be connected to the disk 24 to normally tend to rotate it in the direction indicated by the arrow in Fig. 3.

5 Directly above the pin 23 is a spring 26 for restricting and tending to limit the upward movement of the front end of the lever 21. A coin after passing through the chute 20 strikes the rear end of the lever 21 and the weight of the coin depresses the lever until the pin 23 strikes the spring 26. This liberates the disk and the clockwork rotates the latter through one complete revolution.

10 When the disk has rotated through approximately one-half a revolution, an enlargement in the disk contacts with the pin to raise the latter against the action of the spring 26 a sufficient distance to permit the coin to drop out of the lower end of the chute and off of the lever 21. The continued rotation of the disk eventually brings the stop or shoulder of the disk into engagement with the pin, as illustrated in Fig. 1, and the rotation of the disk is terminated until

15 another coin is inserted. For moving the belt by the rotation of the disk, and also for delivering the cards from the machine, I provide two vertically-movable ejectors 27, adjacent the front pulley 25 and operating to separate the front package of cards from the second package and force them forwardly beyond the end of the shelves 12, so that they may drop downwardly through a chute 28 and be delivered through an opening 29 in the bottom of the machine. Below this opening there may be provided any suitable receiver 30 for catching the cards and permitting them to be removed by the purchaser. The shelves extend forwardly a slight distance beyond the pulley and the ejectors 27 move upwardly through the shelves closely adjacent their ends. Each of these ejectors is pointed at its upper end and its front edge constitutes a cam 31, the front

20 portion of which extends beyond the front end of the shelf. Thus as the ejectors are moved vertically their pointed upper ends enter between the last two packages of cards, and as the ejectors continue to rise, their front edges push the front package of cards forwardly until it slides off the front end of the shelves and drops downwardly. The two ejectors are connected together, so as to operate simultaneously, and for operating

25 them, I provide a lever 32 having its rear end secured to a stationary pivot 33 and having its front end pivotally connected to one of the ejectors. The lever passes adjacent the disk and is connected to a link 33^a eccentrically pivoted to the face of the disk. Thus as the disk is rotated the front end of the lever 32 is moved up and down once during each revolution of the disk. It is desirable that the belt and cards remain sta-

tionary during the ejecting of a package of cards, but it is necessary that the belt be advanced one step after each package is ejected.

For advancing the belt, the pulley 15 is provided with a ratchet wheel and a lever 34 is pivoted upon the shaft or journal of the pulley. This lever is weighted at its rear end, and at its front end is connected by a link 35 extending downwardly through a transverse member 36 connecting the two ejectors. At the lower end of the link 35 is a nut 37 for engagement with the under side of the transverse member 36, and on the lever 34 is a dog 38 for engagement with the ratchet wheel. As the ejectors are raised from the position indicated in Fig. 3, the lever 34 is permitted to swing under the influence of its weight and the dog passes over one or more teeth on the ratchet wheel. As soon as the lever moves to its limiting position, the ejectors may continue to move upwardly independently of the lever and its link. After the ejectors have traveled through a portion of their return movement, the transverse member 36 comes into contact with the nut 37 and the link 35 is pulled down to rotate the pulley 15. This advances the belt and its packages of cards one step, so that a new package will be in position to be ejected by the next upward movement of the ejectors. By varying the position of the nut 37 on the link 35, the amount of lost motion between the ejector and the pawl-carrying lever 34 may be controlled, so that each operation of the ejector means advances the belt for a single package, or for two or more packages, dependent upon the character of the cards, the size of the packages, and the value of the coin.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A vending machine, comprising two substantially horizontally-disposed shelves or supports in substantially the same plane, a conveying belt intermediate said shelves and operating to advance articles to be dispensed along said shelves, and an ejector for removing the articles from said shelves at one end thereof.

2. A vending machine, comprising two substantially horizontally-disposed shelves or supports in substantially the same plane, a conveying belt intermediate said shelves and operating to advance articles to be dispensed along said shelves, and a vertically-movable ejector for engagement with an article adjacent one end of said shelves for removing the article.

3. A vending machine, comprising a substantially horizontal supporting shelf, means for advancing articles to be dispensed along said shelf, and an ejector movable upwardly

through said shelf and adjacent one end thereof for removing articles therefrom, said ejector having a pointed upper end and a cam edge.

5 4. A vending machine including a conveying belt having a substantially horizontal portion for engagement with the articles to be dispensed, a vertically-movable ejector for removing the articles from said belt, 10 means for advancing said belt, and means for operating said ejector and advancing means alternately.

15 5. A vending machine, comprising two substantially horizontal shelves in substantially the same plane, a conveying belt intermediate said shelves and in substantially the same plane, ejectors having pointed upper ends and cam edges and movable upwardly through said shelves adjacent one 20 end thereof for removing articles therefrom,

means for advancing said belt, and means for operating said ejectors and advancing means alternately.

6. A dispensing machine, including a supporting shelf, means for advancing articles 25 along said shelf, an ejector vertically movable to said shelf, adjacent one end thereof and having a pointed upper end with a cam edge, means for moving said ejector upwardly, and means for moving said advancing means during the return movement of 30 the ejector.

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

CHARLES MOODY JEWELL.

Witnesses:

A. S. ALLEN,
H. M. KUHN.