No. 742,295. PATENTED OCT. 27, 1903.

H. J. DAVIS.

VENDING MACHINE.

APPLICATION FILED JULY 30, 1901.

NO MODEL. 2 SHEETS—SHEET 1.

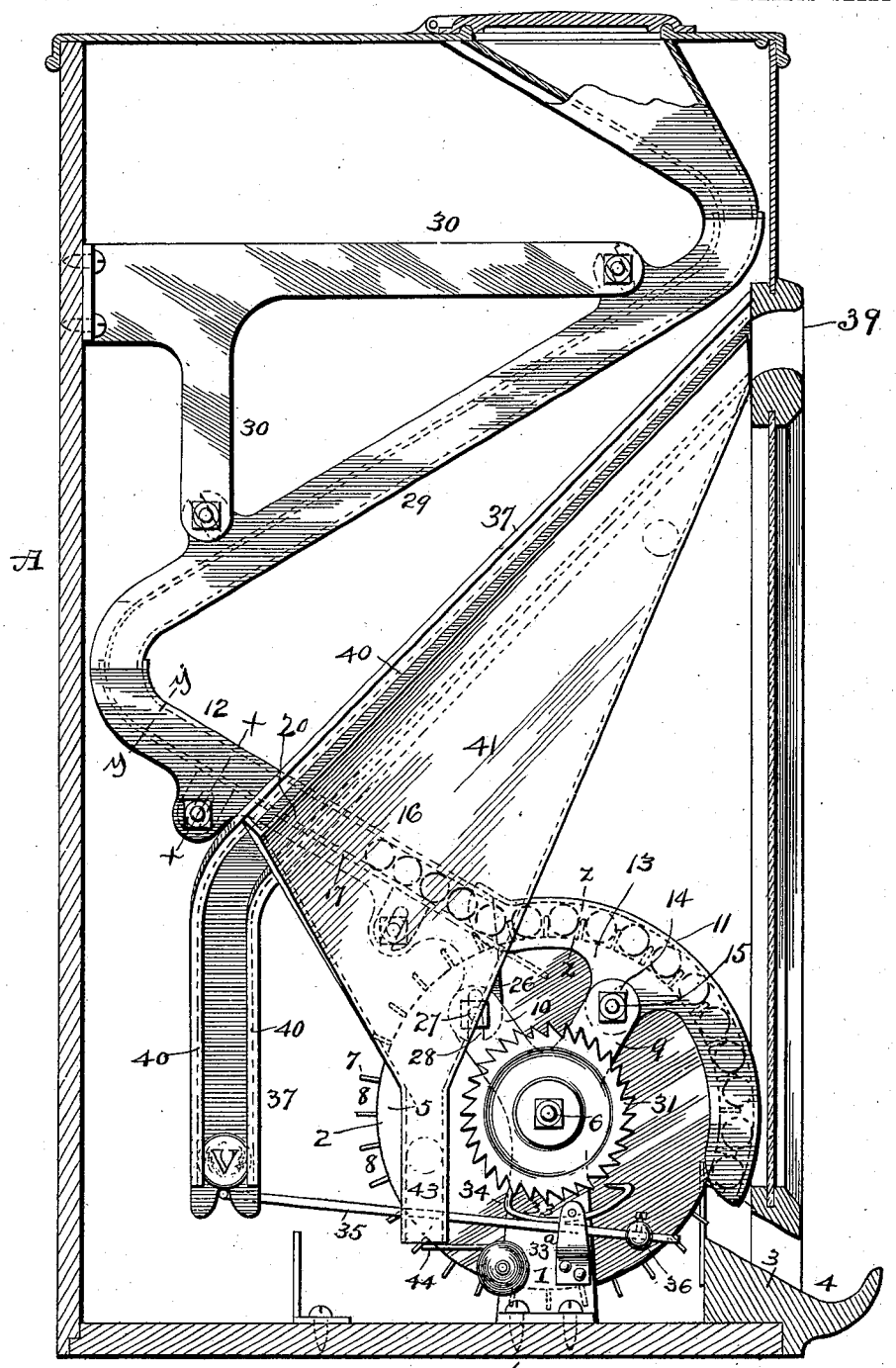

Fig. 1.

WITNESSES

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2.

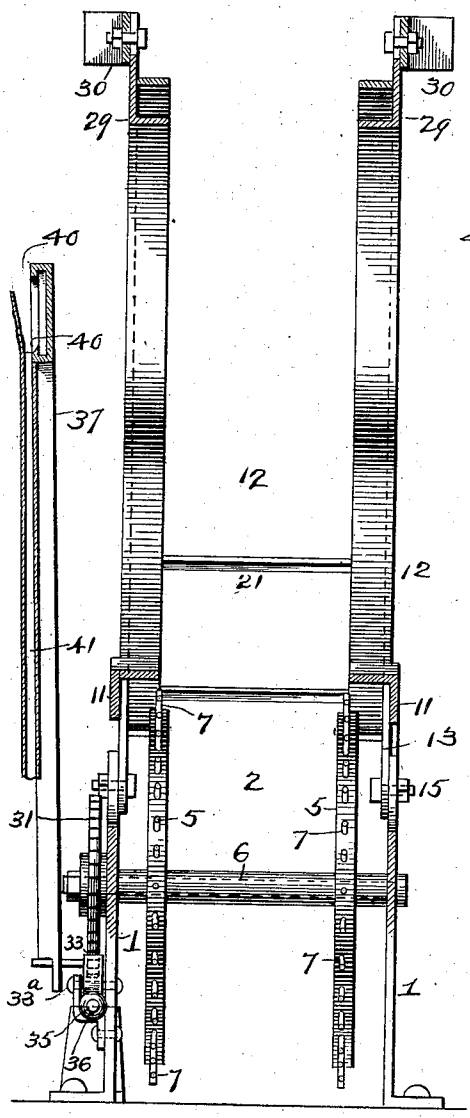


Fig. 6.

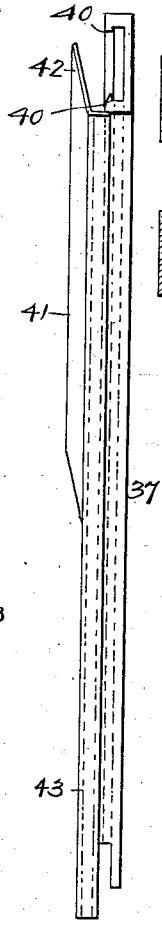


Fig. 3.

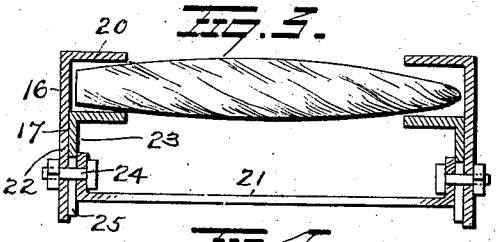


Fig. 4.

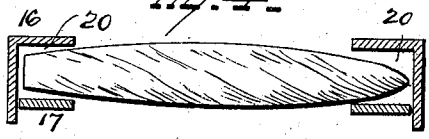
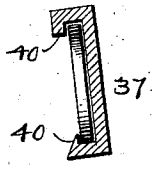


Fig. 5.

Fig. 7.



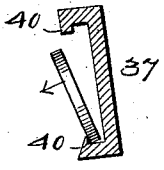


Fig. 8.

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No. 742,295. Patented October 27, 1903.

UNITED STATES PATENT OFFICE.

HENRY JEFFERSON DAVIS, OF WAYNESBORO, GEORGIA, ASSIGNOR OF TWO-THIRDS TO WILLIAM EVERETT JONES AND WILLIAM HUDSON DAVIS, OF WAYNESBORO, GEORGIA.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 742,295, dated October 27, 1903.

Application filed July 30, 1901. Serial No. 70,284. (No model.)

To all whom it may concern:

Be it known that I, HENRY JEFFERSON DAVIS, of Waynesboro, in the county of Burke and State of Georgia, have invented certain new and useful Improvements in Vending-Machines; and I do hereby 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 appertains to make and use the same.

My invention relates to an improvement in vending-machines, and more particularly to machines for vending cigars, pencils, and similarly-shaped articles, the object of the invention being to provide a machine by which cigars may be vended without breaking them, which can be readily adjusted for cigars or other articles of different sizes, and which can be made to discharge one or more articles at a time.

A further object is to provide a vending-machine which will operate when released by a coin to discharge an article without the use of springs, the weight of the articles being depended upon to effect their discharge.

A further object is to provide means for preventing the operation of the machine except by the use of a proper coin.

A further object is to produce a vending-machine which shall be simple in construction, not easy to get out of order, and which shall be effectual in all respects in the performance of its functions.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is an elevation partly in section and partly broken away, illustrating my improvements. Fig. 2 is an edge view, partly broken away, showing the discharging devices. Fig. 3 is a view on the line x x of Fig. 1. Fig. 4 is a view on the line y y of Fig. 1. Fig. 5 is a view on the line z z of Fig. 1. Figs. 6, 7, and 8 are views illustrating certain details.

A represents a casing, which will preferably be made of metal and may be provided with a glass front, if desired. In the bottom of the casing two standards 1 1 are located and spaced apart for the accommodation of the discharging-wheel 2 between them, and the front of the casing is provided at its lower end with a slot 3 for the escape of articles from the wheel 2 to a lip or trough 4, projecting from the front of the casing. The wheel 2 comprises two disks or wheels 5 5, spaced apart and secured to a shaft 6, mounted in the standards 1, and each disk or wheel 5 is provided on its periphery with a number of pins or projections 7, the spaces between the pins of the respective disks or wheels 5 coöperating to form pockets 8 for the reception of the articles to be vended. Each standard is provided at its upper end with two diverging arms 9 10. Each arm 9 supports a hood 11, extending from a point near the outlet-slot 3 in the front of the casing to the lower end of a chute 12, and each hood consists of an angle-iron curved concentric with the discharging-wheel and provided with a lug 13. The lugs 13 of the hoods are disposed alongside the arms 9 of the standards and are slotted, as at 14, for the reception of bolts 15. By thus mounting the hoods 11 they will prevent the escape of articles from the discharge-wheel and can be adjusted relatively to the latter to accommodate cigars or other articles of different sizes.

The arms 10 of the stands serve to support the lower end of the chute 12. The chute 12 may comprise several sections arranged in zigzag order, the number of sections or the length of the chute being dependent upon the capacity it may be desired the machine shall have. The lower section of the chute comprises two angle-irons 16, spaced apart, irons 17 disposed within the angle-irons 16, the respective irons 16 17 being spaced apart to form pockets 20, which coöperate to form the chute or guideways for the cigars or other articles, and the respective pairs of angle-irons are retained rigidly spaced apart by means of bars 21. The plates or irons 16 17 are provided with lugs 22 23, respectively,

through which bolts 24 are passed, said bolts also securing the spacing-bars 21 in place. The lugs 23 are made with slots 25 to permit the adjustment of the irons or plates 17 relatively to the angle-irons 16 for the purpose of accommodating the chute to articles of different sizes. The lower ends of the angle-irons 16 are provided with depending lugs 26, secured to the arms 10 of the standards by means of bolts 27, and said lugs are made with slots 28 to permit the vertical adjustment of the chute. The upper section 29 of the chute is constructed in the same manner as above described, (except that the locations of the parts are reversed,) and said upper section is adjustably supported by means of an arm or bracket 30, secured to the casing. The various sections of the chute are joined together, so as to be capable of more or less adjustment relatively to each other, a convenient manner of accomplishing this being to make the end of one section flaring and the end of the adjacent section inserted into the flaring portion.

It will be observed that as the wheel rotates the pins thereon will enter between the cigars as they emerge from the chute, and thus receive the cigars into the pockets.

The shaft 6 is provided with a ratchet-wheel 31, having a number of teeth corresponding with the number of pockets on the wheel, so that when the wheel is moved to the extent of one tooth of the ratchet-wheel the contents of one pocket will be discharged. If it be desired, however, to discharge the contents of two pockets at once—as, for instance, two cigars—the ratchet-wheel will be provided with only half as many teeth as there are pockets in the wheel. One of the standards 1 is provided with an arm 33^a, between which and the standard an escapement-pawl 33 is mounted, the end 34 of said pawl being somewhat heavier than the other end, so that it will tend to leave or release the ratchet-wheel. The end 34 of the pawl is maintained normally in engagement with the ratchet-wheel by means of a trigger-lever 35, pivoted in the arm 33^a, and is kept in contact with the pawl by means of a weight 36 on one end of said lever. The other end of the lever (which is of considerable length) terminates in the discharge end of a coin-guide 37, so that when a coin drops through the end of said guide it will strike the lever or trigger 35, turn it on its fulcrum, and permit the pawl to release the ratchet-wheel, said lever returning to its normal position (after the coin has passed into a drawer) when the ratchet-wheel shall have moved one tooth. When the ratchet-wheel is thus released, the weight of the cigars in the pockets of the discharge-wheel will cause said wheel to turn sufficiently to discharge the contents of one of its pockets or of two of its pockets if the ratchet-wheel is provided with half as many teeth there are pockets.

The coin-guide (which terminates at its upper end in a slot 39 in the front of the casing) comprises a bar having flanges 40 at its respective edges, said flanges being grooved in their inner faces, the diameter of the guideway from the bottom of the groove in one flange to the bottom of the groove in the other flange being just sufficient to permit the free passage of a proper coin, such as a nickel. It is desirable, however, to prevent the operation of the trigger-lever by means of a coin of smaller value, such as a cent. The coin-guide will therefore be inclined laterally, so that if a cent be inserted it will drop out laterally, being of insufficient diameter to enter the grooves in both flanges 40. A funnel 41 is provided to receive the pennies, and this funnel is provided at its upper edge with a flange 42 to insure the entrance of the pennies thereinto. It is also made of considerable width at its upper end and extends some distance along the guideway, so that if the momentum of the penny should carry it some distance along the guideway before it falls laterally it will be caught by the funnel by the time it reaches the bend in the guideway, if it is not sooner discharged into said funnel.

The funnel 41 terminates at its lower end in a chute 43, beneath which a trigger 44 is located, and this trigger may be made to operate an alarm in any suitable manner.

My improvements are simple in construction; but slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope, and hence I do not wish to limit myself to the precise details herein set forth.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with standards, a delivery-wheel having peripheral pockets, mounted between said standards, hoods supported by said standards and overhanging the ends of the delivery-wheel, a chute also supported by said standards and communicating with the hoods and means for controlling the operation of said delivery-wheel.

2. The combination with a delivery-wheel having peripheral pockets, a rachet device connected with said wheel and means for controlling the ratchet device, of a chute for delivering articles to the wheel, said chute comprising two pairs of angle-irons, the irons of each pair spaced apart to form guideways for the ends of the articles to be delivered, a separating-bar between the pairs of angle-irons and means for supporting the chute.

3. The combination with a delivery-wheel having peripheral pockets, a ratchet device

connected with said wheel and means for controlling the ratchet device, of a chute for delivering articles to the wheel, said chute comprising two pairs of angle-irons, the irons of the respective pairs spaced apart to form guideways, means for adjusting one iron of each pair relatively to the other and means for supporting the chute.

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

HENRY JEFFERSON DAVIS.

Witnesses:
E. S. GARLICK,
C. B. GARLICK.