

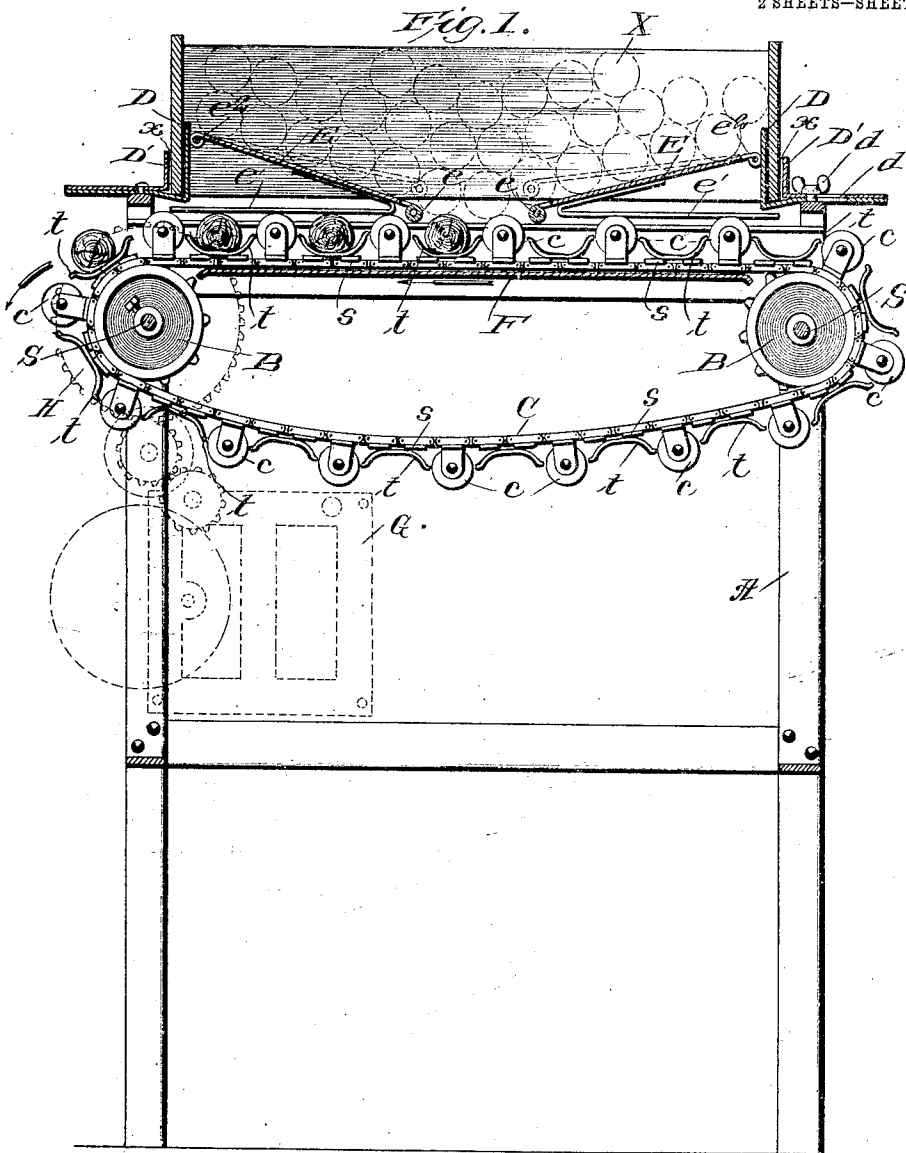
No. 884,186.

PATENTED APR. 7, 1908.

M. R. MEREDITH.
CIGAR VENDING MACHINE.

APPLICATION FILED OCT. 8, 1907.

2 SHEETS—SHEET 1.



WITNESSES
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Edw. H. Byrne

INVENTOR
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BY *Munn & Co.*
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Fig. 2.

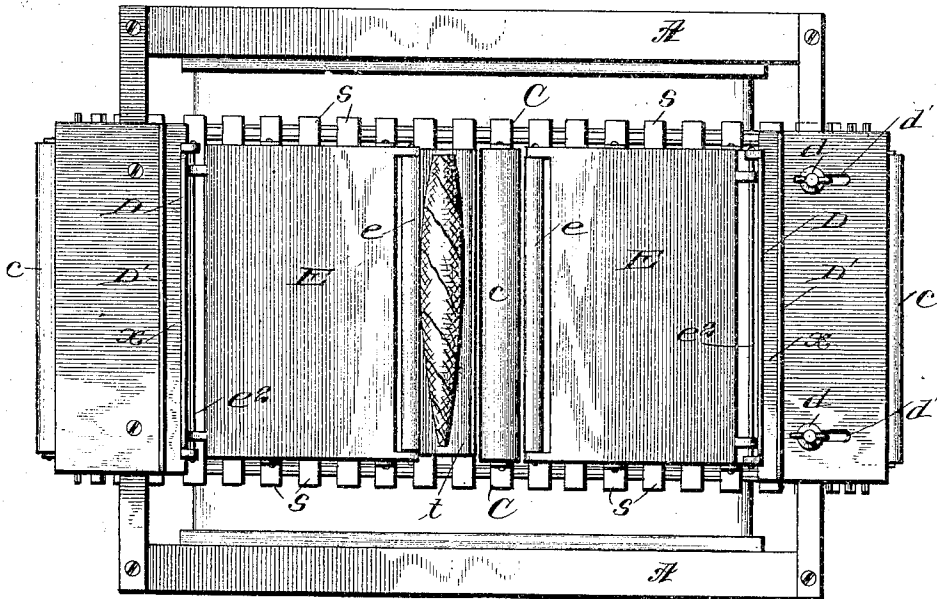
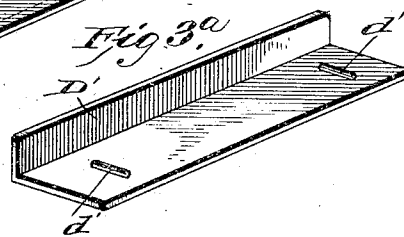
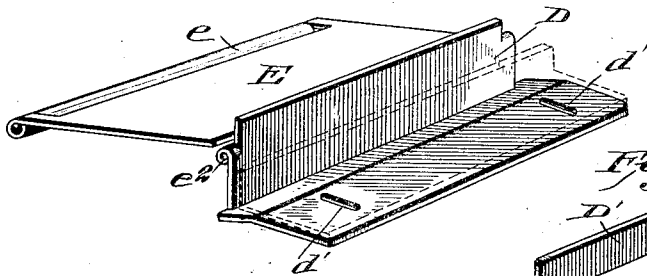


Fig. 3.



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UNITED STATES PATENT OFFICE.

MILO R. MEREDITH, OF WABASH, INDIANA.

CIGAR-VENDING MACHINE.

No. 884,188.

Specification of Letters Patent.

Patented April 7, 1908.

Application filed October 8, 1907. Serial No. 396,373.

To all whom it may concern:

Be it known that I, MILO R. MEREDITH, a citizen of the United States, residing at Wabash, in the county of Wabash and State of Indiana, have invented a new and useful Improvement in Cigar-Vending Machines, of which the following is a specification.

My invention is in the nature of a new automatic vending machine designed to be operated by a motor and gears set into operation by the deposit of a coin. It is intended primarily for the vending of cigars, but may be employed for vending packages or units of any other kind of merchandise which are of uniform size.

The invention consists in the novel construction and arrangement of the carrying and delivering mechanism for selecting and delivering from a box one or more cigars, or packages, as will be hereinafter fully described with reference to the drawings, in which

Figure 1 is a vertical longitudinal section of my carrying and delivering mechanism, with a box of cigars on top of the same. Fig. 2 is a plan view with the box of cigars removed and Figs. 3 and 3^a are details in perspective of devices for holding the box and supporting the cigars.

The carrying and delivering mechanism herein shown represents one vending unit, of which there may be any number assembled in a single cabinet in the manner shown and described in the United States Patents, No. 823,954, 823,955 and 823,956, June 19, 1906. A plurality of these units is designed to provide for a variety of styles, prices, and number of cigars to be delivered for a single coin, but as my invention relates only to the carrying and delivering mechanism, I have not shown either the cabinet or the coin controlled devices and have only shown the motor gears in dotted lines at G for actuating my carrying and delivering mechanism.

A represents a stiff rectangular metal framework having journaled at its opposite ends two horizontal shafts S S carrying rigid sprocket wheels B B one at each end of the shaft. Around these sprocket wheels there is distended an endless carrier belt C composed of chains at each side connected by slats s and carrying a series of transverse rollers c approximately of the size of a cigar and spaced apart a distance far enough from each

other to receive a cigar or other package to be vended. The upper run of this carrier belt is sustained in true horizontal position by a subjacent table surface F.

X is a cigar box which is the original box in which the cigars are packed for sale, but with its bottom removed. This bottomless cigar box is sustained above the carrier belt in a manner to feed its cigars to the carrier belt as follows: At each end of the main frame are fixed a pair of vertical holding plates D D' one of which D rests inside the vertical end wall of the cigar box, and the other of which D' rests outside the vertical end wall of the box and the two together tightly hold said end wall between them. The inner end plate D is made taller or higher than the outer plate D' and has hinged to it by means of an axial rod e² near the top a movable wing E formed as a flat metal plate bearing at its free edge a small roller c. On the under side of each wing E is attached a bent spring strip e' which rests upon the top of the rollers c of the carrier belt and prevents the wings E from dropping down too low. The two superposed wings E E extend in inclined position toward the middle of box and form a sort of movable hopper bottom which sustains the cigars and gradually feeds them one at a time down into the cells of the carrier belt.

The plates D D' which form holders for both the box and the wings E are constructed with right angularly bent base flanges, as seen in Fig. 3, which have transverse slots d' in them, so that when the plate D', Fig. 3^a, is seated adjacent the plate D, as indicated by dotted lines in Fig. 3, and set screws d d' Fig. 2 are put through the slots and screwed down to the base frame, the plates D D' are firmly held a predetermined distance apart as seen at x in Fig. 2 just far enough apart to receive the wooden end walls of the cigar box, as shown in Fig. 1. One or both pairs of plates are formed with the slots d' disposed longitudinally to the belt to permit the pairs of plates to receive between them cigar boxes of different lengths. When these plates are tightly adjusted to the ends of the cigar box the latter is held immovable as against strains in all directions.

In operation the bottom is taken out of the cigar box and the box is placed on the framework, the ends resting in the spaces x as seen

in Figs. 1 and 2. A temporary bottom to the box in the form of a strip of tin may be used in adjusting the box and be then pulled out as the box is set in its seat. The cigars immediately gravitate toward the center on account of the sharp incline of the hinged wings, some of the cigars falling into the spaces between the rollers on the endless carrier belt. As the endless carrier belt is propelled forward in the direction of the arrow by the motor or other actuating device, which has been released by the deposit of the proper coin, the forward wing E with its roller on the lower end moves up and down as it passes over the roller on the endless carrier belt, the small adjustable strip of tin underneath the wing forming a stop or guide and preventing the roller in the lower end of the wing from dropping below the center of the roller on the endless carrier belt. The roller in the forward wing smoothly rides over the cigars in the conveyers on their way to the delivery end and over the roller conveyers, thus accomplishing the work of separating the cigars without injuring them in the least and in the gentlest manner possible. The rear wing trails and drops into the empty roller conveyor cells as they approach and is raised as the roller conveyor passes under and in contact with the roller in the end of the said rear wing. Thus, while the endless roller conveyor belt is in motion the two wings by rising and falling inside the box keep the cigars sufficiently agitated to facilitate their falling into the roller conveyor cells as the roller conveyers pass beneath the box, the front wing performing the double function of agitation and separation. The rollers on the hinged wings and on the endless belt are intended to prevent abrasion of the wrappers of the cigars and to accomplish the separation of the cigars without injury.

Between the rollers *c* of the endless belt are troughs or seats *t* made of sheet metal which receive the cigars and cause the rollers *e* to ride up over the rollers *c* on the belt, so that said rollers *e* cannot get under the rollers *c* and thus lock the belt. Furthermore these troughs may be varied in size to suit different sizes of cigars without changing the distance between the rollers *c* on the belt. The troughs *t* extend up to about the middle of the rollers *c*, but do not touch the same.

I claim

1. A vending machine, comprising an endless carrier belt with receiving cells, and one or more hinged wings arranged at an incline above the carrier belt and oscillated by the same to promote the transfer to the belt of the superposed articles to be vended.

2. A vending machine, comprising an endless carrier belt having transverse rollers forming cells between them and one or more hinged wings arranged at an incline above

the carrier belt and oscillated by the passage of said rollers.

3. A vending machine, comprising an endless carrier belt with transverse receiving cells, and one or more oscillating wings hinged on an axis transverse to the belt above the same and having a roller along its free edge riding upon and agitated by the belt.

4. A vending machine, comprising an endless carrier belt having transverse rollers forming cells between them and one or more hinged wings arranged at an incline above the belt and riding upon the rollers and having underneath the same a stop to limit the downward movement of the hinged wings.

5. A vending machine, comprising an endless carrier belt having transverse cells and two superposed wings hinged at their outer edges transversely to the belt and converging downwardly toward each other in the middle and having beneath them stops resting upon the carrier to limit the downward movement of the wings.

6. A vending machine, comprising an endless carrier belt having transverse rollers forming cells and two superposed wings hinged upon axes transversely to the belt and having at their free edges rollers riding upon the rollers of the carrier belt.

7. A vending machine, comprising an endless carrier belt, a stationary framework and two pairs of holder plates for firmly holding a box above the carrier belt, each pair of plates consisting of two members each bent at a right angle and having a perforated base flange to receive retaining screws, and one pair of said plates having its perforations made in the form of slots arranged longitudinal to the belt to accommodate boxes of varying lengths.

8. A vending machine, comprising an endless carrier belt, a stationary framework and a pair of holder plates for a superposed box consisting of two detachable and right angularly bent plates with means for securing them together and to the framework, the inner plate having also hinged to its upper edge a movable wing resting above the carrier belt.

9. A vending machine, comprising an endless carrier belt having transverse cells, a stationary subjacent supporting table for the upper run of the belt and two superposed hinged wings pivoted on axes transverse to the belt at their outer ends and converging downwardly toward the belt in the middle and vibrated by the passage of the belt.

10. In a vending machine, an endless carrier belt having a series of transverse rollers journaled on its outer surface to form intervening carrier cells and troughs arranged in said cells.

11. A vending machine comprising an end-

transverse belt formed of transverse slats connected at their ends by endless chains, transverse rollers arranged on the belt and extending entirely across the same, sprocket wheels for distending the belt, and a subjacent table surface arranged beneath the upper run of the belt and holding its rollers up against the gravity of the articles to be conveyed.

MILO R. MEREDITH.

Witnesses:

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