G. A. RITZ.

VENDING MACHINE.

APPLICATION FILED SEPT. 18, 1918.

1,293,200.

Patented Feb. 4, 1919.

2 SHEETS—SHEET 1.

Fig. 5.

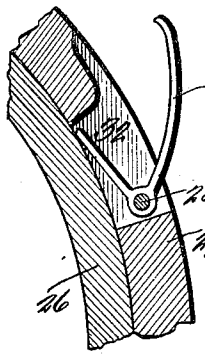


Fig. 1.

Witnesses

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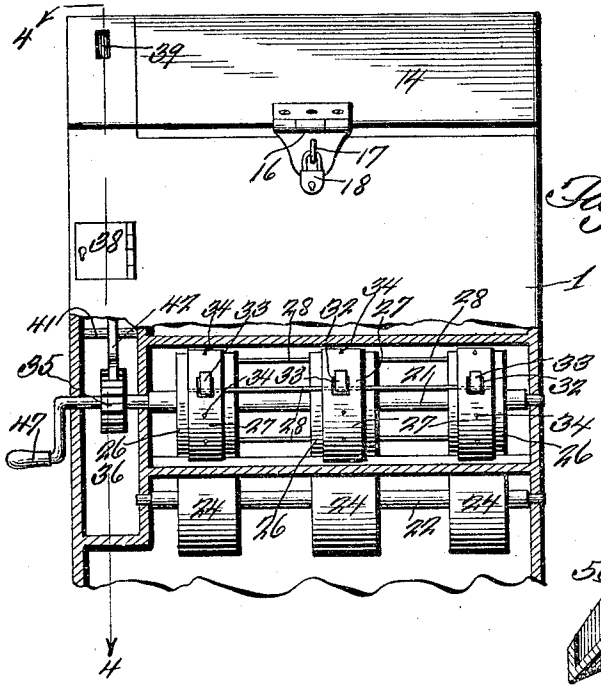


Fig. 3.

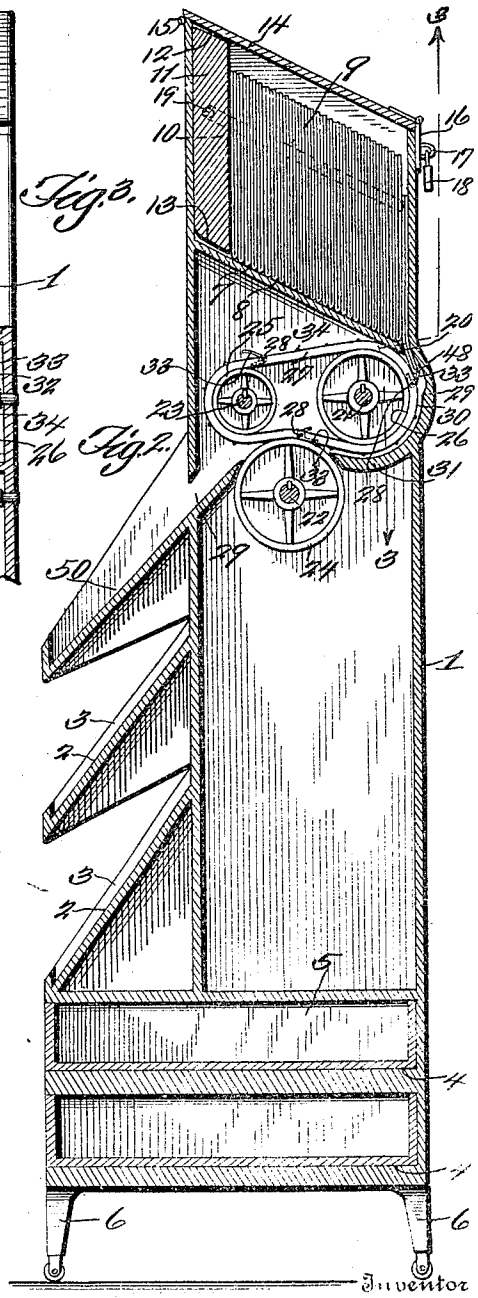


Fig. 2.

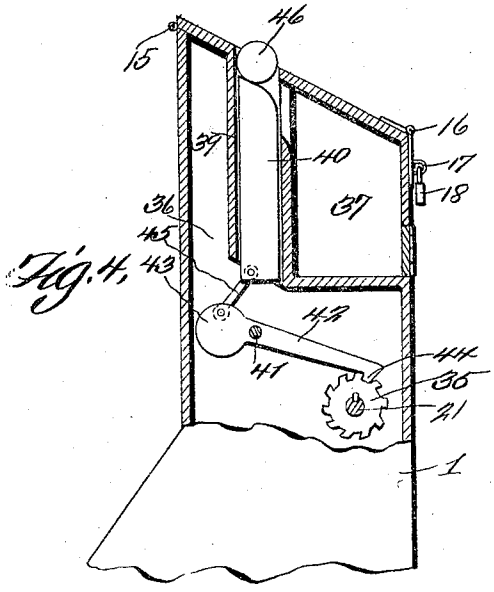


Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE A. RITZ, OF ROCHESTER, NEW YORK.

VENDING-MACHINE.

1,293,200. Specification of Letters Patent. Patented Feb. 4, 1919.

Application filed September 18, 1918. Serial No. 254,647.

To all whom it may concern:

Be it known that I, GEORGE A. RITZ, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Vending-Machines; and 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to an improved machine for vending newspapers and the like. The invention aims as one of its objects to provide a machine of this kind having a newspaper receiving compartment and a coin controlled mechanism adapted, when unlocked by the coin, to be manually operated for feeding one newspaper at a time from the machine.

A further object of the invention is to provide an improved newspaper feed means for a vending machine for feeding newspapers, one at a time, through a throat and into a receptacle on the floor of the casing of the machine, where it may be removed by the purchaser.

A further object of the invention is to provide a newspaper receiving compartment having an inclined bottom and in which the newspapers upon their folded edges are disposed perpendicularly in parallelism, in combination with a gravity actuated feed member to exert constant pressure upon the papers, in order to feed them toward the newspaper extricating mechanism.

A further object of the invention is to provide a machine of this kind having magazine display racks in the front of its casing and also suitable receptacles in the base of the casing.

In practical fields the various details of construction may be altered, provided the alterations fall within the scope of what is claimed.

The invention comprises various other details of construction, combination and arrangement of parts which will be hereinafter fully described, shown in the accompanying drawings and then specifically defined in the appended claims.

The invention is illustrated in the accompanying drawings which, with the numerals of reference marked thereon, form a part of this application and in which:

Figure 1 is a perspective view of the improved newspaper vending machine constructed in accordance with my invention.

Fig. 2 is a vertical sectional view through the machine on line 2—2 of Fig. 1 looking in the direction of the arrow.

Fig. 3 is a sectional view on line 3—3 of Fig. 2.

Fig. 4 is a sectional view on line 4—4 of Fig. 3, and,

Fig. 5 is an enlarged detail view of one of the clips carried by the newspaper carrier belts.

Reference now being had to the details of the drawings by numerals:

1 designates the casing which may be of any suitable shape or configuration, preferably rectangular, as shown in the drawings. The front of the casing is provided with a plurality of downwardly and forwardly extending shelves 2 provided with marginal flanges 3 and adapted for the support of magazines and the like on display. The lower portion of the casing 1 is provided with suitable guides 4 for one or more drawers for the reception of various articles, such as newspapers, magazines, etc., particularly those of back dates. The casing is supported upon suitable legs 6. The upper part of the casing has a newspaper receiving compartment 7, the bottom 8 of which is inclined rearwardly and downwardly, as shown. The newspapers, indicated at 9, are arranged in parallelism so that their folded edges may engage the inclined bottom 8. The inner faces of the sides of the compartment 7 are provided with elongated downwardly and rearwardly inclined grooves 10. Mounted in the receptacle 7 is a weight or gravity actuated member 11, the upper and lower edges 12 and 13 of which are inclined in parallelism, as shown, so as to conform to the inclined bottom and top 14. The top of the cover 14 is hinged at 15 and is provided with a conventional form of hasp 16, the usual slot of which receives the staple 17 to which a padlock 18 may be connected for holding the top or cover closed and locked. Said weight or gravity actuated member 11 extends the full length of the compartment 7 and its end edges are provided with lugs or projections 19 adapted to engage the grooves 10 so as to hold the weight or gravity member 11 substantially perpendicularly in a dis-

posed position while in the act of exerting pressure on the newspapers, the aim being to feed the newspaper rearwardly and downwardly toward the outlet mouth 20 of said compartment.

A plurality of shafts 21, 22 and 23 are mounted in bearings of the casing 1 and are disposed transversely thereof and arranged as shown clearly in Figs. 2 and 3. A plurality of pulleys 24 is keyed upon the shaft 22. Pulleys 25 are carried by the shaft 23. Keyed to the shaft 21 is a plurality of pulleys 26. Traveling about the pulleys 25 and 26 (which are alined) is a plurality of carrier belts 27. These belts may be constructed of any suitable material, preferably heavy but flexible leather, or the like. The belts 27 are inter-connected by the elongated rods 28, whereby as the shaft 21 is rotated, they will move in unison.

The back wall of the casing 1 has a curved portion concentric with the shaft 21 and the pulleys 26, and between this curved portion 29 and the several belts a newspaper throat 30 is provided. A flange 31 (which is also concentric with the pulleys 26) extends from the rear wall of the casing toward and in closed position to the pulleys 24, as shown clearly in Fig. 2. The belts 27 adjacent where the rods 28 pass therethrough, are provided with openings 32, and pivotally connected to said rods 28 are V-shaped clips or nippers 33. The jaws of the nippers are flexible or yielding and are capable of being forced toward each other. Also carried by the belts 27 intermediate the clips or nippers, is a plurality of small lugs or points 34. One end of the shaft 21 has keyed thereto a toothed wheel 35. A space 36 is formed in the casing 1 adjacent one end of the newspaper receiving compartment, and in this space the toothed wheel 35 is located. A coin compartment 37 is formed in the space 36, there being a hinged closure 38 whereby access may be had to the compartment.

The closure 38 may be locked in any suitable manner, not shown. Also formed in the space 36 adjacent to the coin compartment, is a guide 39 for the reception of the plunger 40. Pivoted on a pin or shaft 41 in the space 36 is a lever 42 having a weighted end 43. One end of the lever 42 has a tooth 44 to engage between any two adjacent teeth of the toothed wheel 35 to prevent the shaft 21 from being rotated. A link 45 pivotally connects between the plunger 40 and the weighted end of the lever 42. It is obvious that by inserting a coin, such as shown at 46, into the guide 39 so as to bear upon the plunger 40, the lever 42 may be tilted to disengage the tooth 44 from the wheel 35. By so interlocking the shaft 21, it is obvious that the shaft may be rotated by means of the crank 47. When the shaft 21 is revolved, revoluble movement is imparted to the pulleys and the belts. Normally the belts are disposed as shown in Fig. 2, having been forced so that certain of the clips or nippers 33 are disposed in the throat 30, as shown, the jaws of the nippers having opened.

It is to be noted that the upper part of the throat 30 is larger than the lower part, so as to permit the clips or nippers to open, as shown in Fig. 2, for the reception of the lower folded edge of each newspaper, as shown at 48. After the lower folded edge of the newspaper has engaged between the jaws of the nippers or clips, as shown in Fig. 2, and movement has been imparted to the belts, the outer jaws of the nippers will be closed by camming against the wall of the throat. For instance, when the nippers pass through the contracted part of the throat, the outer jaws will be pressed toward the inner jaws which bear against the outer cylindrical surface of the pulleys 26, thereby firmly gripping the lower folded edge of the newspaper. By continuous movement of the belts, the newspaper will be fed through the throat and over the pulleys 24. Just so soon as the nippers pass beyond the pulleys 24, they will open by gravity, and hence release the newspaper.

By means of the small points or lugs 34 intermediate the nippers or clips contacting with the newspaper, it is obvious that the newspaper will be constantly and positively fed through the throat, even after the nippers or clips has disengaged the paper. It is further obvious that the nippers may be dispensed with if so desired, leaving only the pointed lugs 34 to feed the papers.

The detailed constructed of the nippers or clips may be varied as deemed advisable in the manufacture of a machine of this character, so as to accommodate newspapers of various thicknesses. Each paper will be fed until it is discharged through the opening 49 upon the shelf 50, which is inclined downwardly and is provided with a marginal flange, and from which shelf the purchaser may have free access to the paper so discharged.

What I claim to be new is:

1. In a newspaper vending apparatus, the combination with a casing having a compartment with an inclined bottom, with an exit opening intermediate the lower end of the opening and the adjacent wall of the casing, shafts journaled in the opposite walls of the casing underneath said compartment, pulleys rotating with said shafts, belts passing about the shafts, rods connecting the belts, friction pulleys bearing against said belts, and means carried by the belts cooperating with the wall of the casing to clamp and draw papers from said compartment, said papers being fed from the casing

by the endless belts and wheels bearing frictionally against the belts.

2. In a newspaper vending apparatus, the combination with a casing having a compartment with an inclined bottom, with an exit opening intermediate the lower end of the opening and the adjacent wall of the casing, shafts journaled in the opposite walls of the casing underneath said compartment, pulleys rotating with said shafts, belts passing about the shafts, rods connecting the belts, friction pulleys bearing against said belts, pivotal forked flexible members mounted upon the belts, one of the arms of each flexible member being adapted to be forced by contact with the wall of the casing against a paper to be drawn from said compartment and held in clamped relation therewith to feed the paper forward between the belts and the pulleys which frictionally engage the latter.

3. In a newspaper vending apparatus, the combination of a casing having a compartment with an inclined bottom, with an exit opening intermediate the lower end of said bottom and the adjacent wall of the casing, shafts journaled in opposite walls of the casing underneath said compartment, pulleys rotating with the shafts, belts having openings at intervals therein, passing about said shafts, rods connecting the belts and passing through the walls of said openings, friction pulleys bearing against said belts, flexible forked paper engaging members pivotally mounted upon each rod and within the openings in the belts, one arm of each member normally projecting outside the opening in which it is mounted and designed to contact with the wall of the casing as the pulleys rotate, causing the arm to spring back and hold the papers against the belt as the pulleys rotate.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

GEORGE A. RITZ.

Witnesses:

FRANKLIN W. HOYT,

WM. F. DOYLE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."