

C. E. DUEBER.
VENDING MACHINE.
APPLICATION FILED MAR. 31, 1914.

1,151,347.

Patented Aug. 24, 1915.

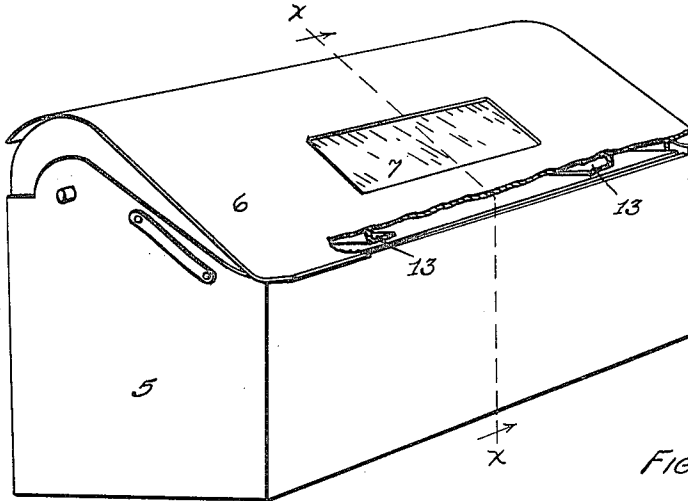


FIG. 1

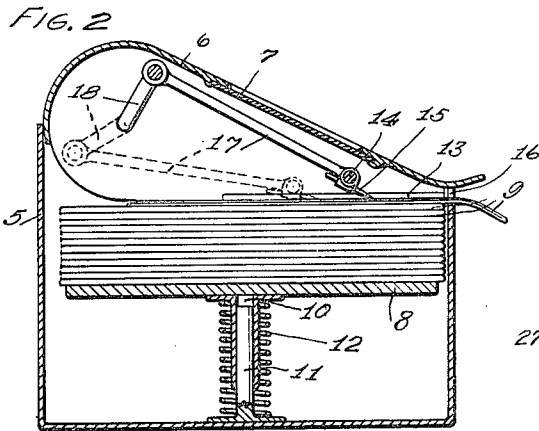


FIG. 2

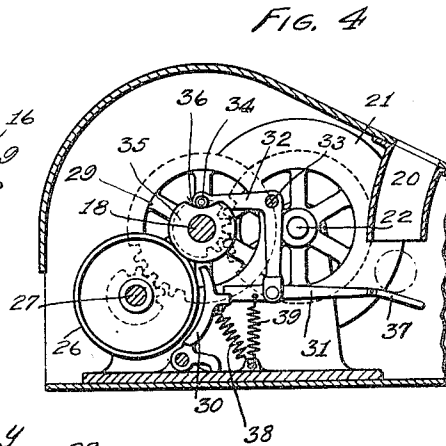


FIG. 4

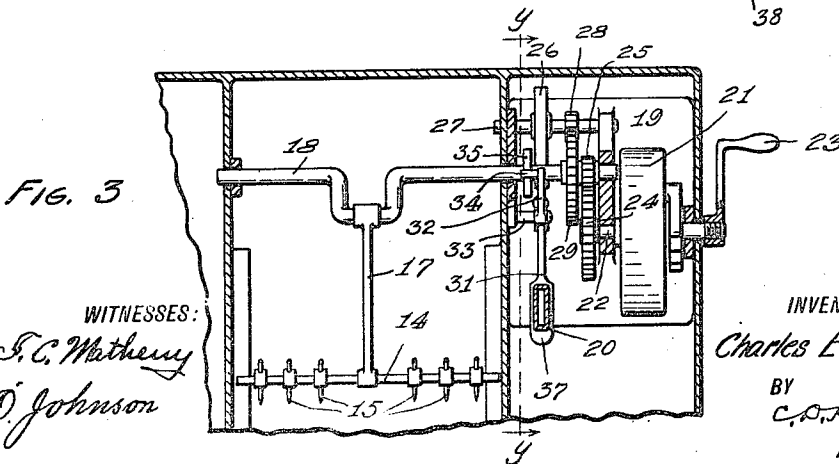


FIG. 3

WITNESSES:

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CHARLES E. DUEBER, OF WINLOCK, WASHINGTON.

VENDING-MACHINE.

1,151,347.

Specification of Letters Patent.

Patented Aug. 24, 1915.

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To all whom it may concern:

Be it known that I, CHARLES E. DUEBER, citizen of the United States, residing at Winlock, in the county of Lewis and State of Washington, have invented a certain new and useful Improvement in Vending-Machines, of which the following is a specification.

My invention relates to improvements in coin controlled vending machines and more particularly to vending machines which embody a receptacle adapted to contain newspapers, magazines, and like formed articles for sale, and which are provided with mechanism adapted to be operated to make accessible to a purchaser an article stored within such receptacle in response to the action of a coin of a required value when such coin is disposed in certain parts of such mechanism, and the object of my improvement is to provide a simple, efficient and reliable coin operated vending machine within which may be stored newspapers, periodicals and like publications and which may be placed in a location accessible to the general public who, by depositing a coin of the proper value within a slot in such machine may procure one of the articles contained therein.

I attain this object by devices illustrated in the accompanying drawings in which—

Figure 1 is a view in perspective of a vending machine embodying my invention; Fig. 2 is a view in cross-section on broken line x, x of Fig. 1; Fig. 3 is an enlarged sectional view of a portion of the cover showing by a plan view certain working parts, and Fig. 4 is an enlarged view in vertical section on broken line y, y of Fig. 3.

In a general way my invention consists in a box like structure of wood, steel, sheet metal or other suitable material, within which structure may be stored a plurality of newspapers or magazines which are folded in the usual manner and placed in a horizontal position upon a flat spring-pressed feed board that is adapted by its lifting force to maintain the uppermost one of the papers that are placed thereon always in contact with guides that are placed on the cover portion of the box like structure, the forward edge of such uppermost paper always being adjacent to and on the same level with a slot that is provided in the front side of such box-like receptacle whereby

when a plurality of sharp pointed devices, as needles, that are provided on a horizontal bar which is connected, by a suitable connecting rod, with a crank shaft that is adapted to be rotated by a motor in response to the depositing of a suitable coin are caused to move forwardly and engage with the uppermost one of such papers, such paper will be thrust forwardly and caused to project itself outwardly through said slot from which position it readily may be removed by the purchaser.

Referring to the accompanying drawings in which like reference numerals indicate like parts, 5 is a box which is provided with a hinged cover 6 that is adapted to be raised and lowered to provide suitable means of access to the inside of such box 5, such cover 6 preferably having a plate 7, of transparent material, as glass, provided in the central portion thereof through which a portion of a newspaper that may be contained therein may be seen and read.

Within the box 5 is provided a vertically movable platform or newspaper support 8 upon which a plurality of newspapers 9 or other articles of merchandise may be placed for sale, the platform 8 being provided on its bottom side with a tubular guide piece 10 that is adapted to fit over a cylindrical guide bar 11 that extends upwardly from the bottom of the box 5 and a helical compression spring 12, that may preferably encircle said guide piece and guide bar, adapted to press upwardly against the bottom side of the platform 8 to keep the uppermost one of the newspapers 9 always pressed snugly against the lower side of guides 13, 13 that are provided on the cover 6.

Extending lengthwise of the central portion of the cover 6 and resting its two ends upon the top sides of the guides 13, 13 is a shaft 14 in which are secured a plurality of needles 15, 15 that are adapted by their angular position to slide over the paper 9 when the shaft 14 is moved rearwardly and to project into such paper 9 and move it forwardly to cause it to project out of a slot 16 when such shaft is moved forwardly, as more clearly shown in Fig. 2.

The shaft 14 is adapted to be moved backwardly and forwardly by a connecting rod 17 which is secured to a crank shaft 18 that is adapted to be turned through one complete revolution by a motor 19 in response to

the depositing of a coin in a suitable coin chute 20 to move the needle shaft 14 backwardly to the position shown in Fig. 2 and then to move such needle shaft forwardly to cause the needles 15, 15 to engage with and project a paper 9 outwardly through the slot 16.

The motor 19, herein shown as mounted in the cover 6, consists essentially in a spring (not shown) which may be disposed within a casing 21 and connected with a shaft 22 in such manner that when such spring is wound up by turning a crank 23 then such spring will exert a force tending to rotate the shaft 22 which rotary movement of the shaft 22 will be transmitted by gearwheels 24 and 25 to the crank shaft 18, the gear-wheel 25 being secured to such crank shaft 18 whereby such crank shaft 18 may be rotated to cause the needle shaft 14 to move backwardly and forwardly over the papers 9 to project such papers one at a time, outwardly through the slot 16.

In order that the motor may not run long enough at one time to rotate the crank shaft 18 through more than one complete revolution and thereby project more than one paper outwardly through the slot 16, I have provided a brake wheel 26 that is secured on a shaft 27 which is connected with the crank shaft 18 by gearwheels 28 and 29 whereby when the brake wheel 26 is stopped the motor will be stopped and I have provided a pivotally mounted brake shoe 30, more clearly shown in Fig. 4, that is adapted at certain times to be pressed against the brake wheel 26 by a trip arm 31 that is pivotally mounted on the lower end of a bell crank 32, which bell crank 32 is fulcrumed on a stud 33 and is provided on its upper end with a cam roller 34 that is adapted to engage with the periphery of a cam 35 that is provided on the crank shaft 18.

Fig. 4 shows the brake shoe 30 withdrawn from the brake wheel 26 in which position the motor would be running, as soon however, as the cam 35 has turned sufficiently to lift the cam roller 34 out of a recess 36 that is shown in the top side of such cam 35 the lower end of the bell crank 32 and the trip arm 31 will be moved toward the brake wheel 26 sufficiently to apply the brake shoe 30 to the periphery of such brake wheel 26 and stop the motor which motor will remain at rest until a coin is dropped through the coin slot 20 and caused to strike upon the outer flattened end 37 of the trip arm 31 with sufficient force to lift the inner end of such arm out of engagement with the brake shoe 30 and permit a helical tension spring 38 to withdraw such brake shoe 30 from the periphery of the wheel 26 whereupon the motor will be released and will begin to run and when the cam 35 has turned sufficiently to permit the cam roller 34 to drop into the

recess 36 then the trip arms 31 will be moved endwise away from the brake shoe 30 by movement of the bell crank 32 and the inner end of such trip arm 31 will be drawn downwardly by a spring 39 into the position shown in Fig. 4, whereupon further movement of the cam disk 35 will raise the roller 34 out of the recess 36 and by moving the trip arm 31 toward the brake wheel 26 will apply the brake shoe 30 to such wheel 26 thus stopping the motor after the crank shaft 18 has made one revolution.

When the vending machine is to be used, a plurality of newspapers are placed on the platform 8, as shown in Fig. 2, and the motor is wound up and the machine is placed at a point where it is easily accessible to the general public in order that persons may deposit a coin and receive a paper.

When a coin of the proper denomination is inserted in the slot 20 and is permitted to fall upon the end 37 of the trip arm 31 the impact of such coin will be sufficient to lift the shorter end of such trip arm 31 out of engagement with the brake shoe 30 thus releasing the motor and permitting such motor to turn the crank shaft 18 through one complete revolution. As the shaft 18 turns the needle shaft is moved backwardly toward the rear edge of the papers 9, as more clearly shown by broken lines in Fig. 2, and is then thrust forward as shown by full lines in Fig. 2, the needles 15, 15 engaging with the topmost paper 9 on the forward stroke and projecting such paper 9 outwardly through the slot 16, the spring 12 keeping the topmost paper 9 always snugly pressed against the guides 13 on the lower side of the cover 6.

Manifestly many changes in the form of construction of details and arrangement of the various parts embodied in my invention may be resorted to without departing from the spirit of my invention or sacrificing any of its advantages.

What I claim is:

1. An operating mechanism for vending machines comprising a casing a crank shaft, a motor connected with the shaft, a cam mounted on the shaft and formed with a peripheral recess, a bell crank lever fulcrumed adjacent to the cam, a roller mounted on one end of the bell crank lever and arranged to engage the recess, a brake device embodying a wheel geared to the crank shaft and a shoe pivoted to the casing and adapted to engage the wheel, a trip arm pivotally secured to the other end of the bell crank lever and arranged to engage said shoe when the roller moves into said recess and to move the shoe against said wheel to stop said motor when the roller moves out of said recess, and a coin chute above the free end of the trip lever.

2. In a vending machine provided with a coin chute, a motor actuated crank shaft, a

cam on the shaft having a peripheral recess,
a bell crank lever, a roller carried by one
arm of the bell crank lever and arranged to
engage the recess, a spring controlled brake
5 device, and a trip lever pivotally secured
to the other arm of the bell crank lever, one
end of the trip lever extending below the
coin chute, and its other end being posi-
tioned to engage said brake device when the
10 roller moves into the recess and to actuate

said brake device to lock said crank shaft as
the roller moves out of said recess.

In witness whereof, I hereunto subscribe
my name this twenty third day of March
A. D., 1914.

CHARLES E. DUEBER.

Witnesses:

D. B. SENAET,

L. R. QUILLEN.