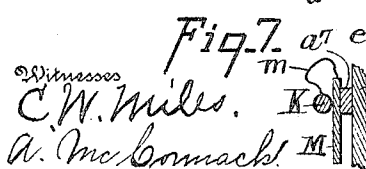
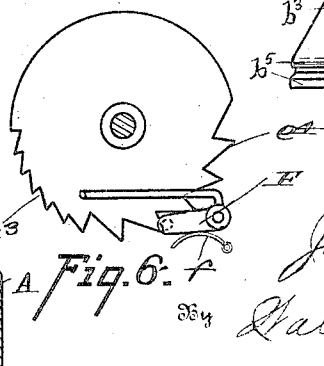
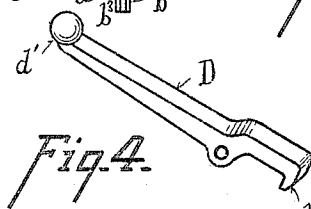
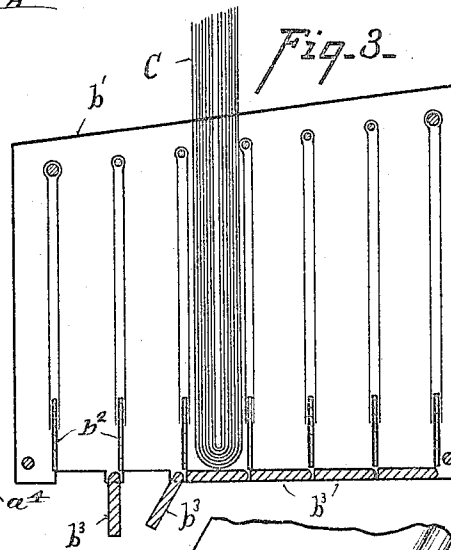
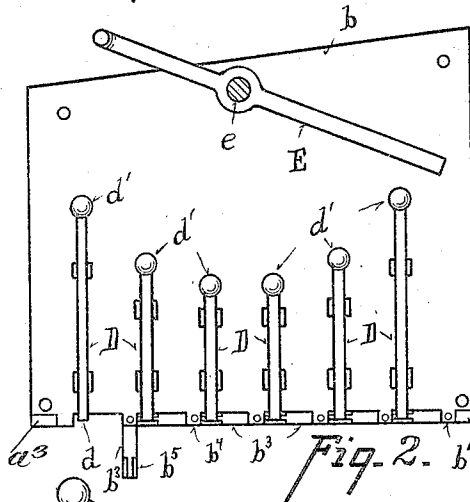
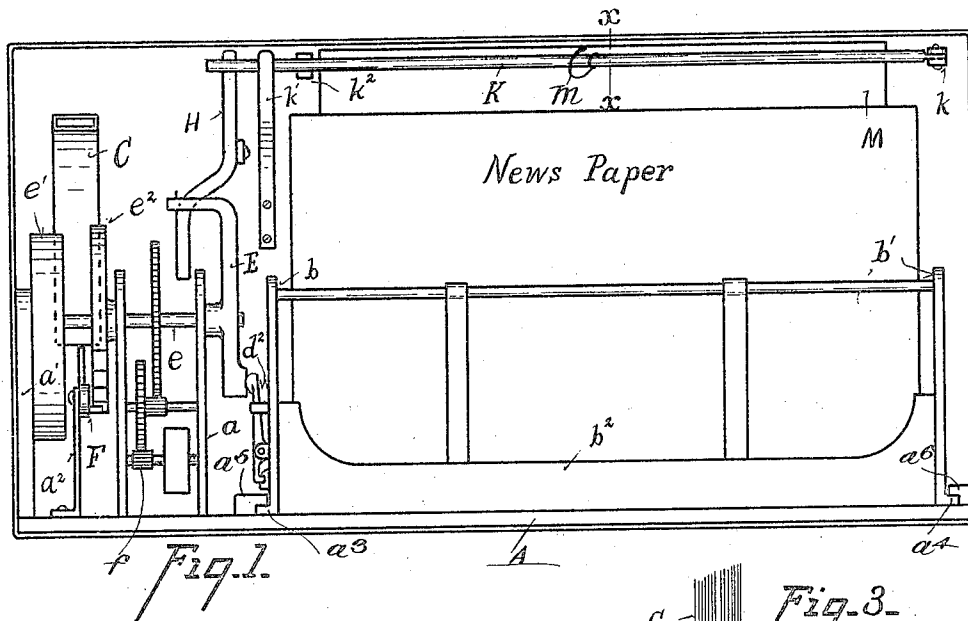


J. A. RULE.
NEWSPAPER VENDING MACHINE.
APPLICATION FILED DEC. 31, 1904.



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JOHN A. RULE, OF CINCINNATI, OHIO.

NEWSPAPER-VENDING MACHINE.

No. 818,296.

Specification of Letters Patent.

Patented April 17, 1906.

Application filed December 31, 1904. Serial No. 239,088.

To all whom it may concern:

Be it known that I, JOHN A. RULE, a citizen of the United States of America, and a resident of Cincinnati, county of Hamilton, State of Ohio, have invented certain new and useful Improvements in Newspaper-Vending Machines, of which the following is a specification.

The object of my invention is a newspaper-vending machine in which the delivery mechanism is adapted to discharge accurately, smoothly, and quickly one newspaper at a time and which may be regulated readily, so as to deliver different-sized papers. This object is attained by the means described in the specification and illustrated in the drawings, in which—

Figure 1 is a rear elevation of a vending-machine embodying my invention, the rear of the casing being removed to expose the interior mechanism. Fig. 2 is a detail end elevation, upon an enlarged scale, of the newspaper-receptacle. Fig. 3 is a sectional view of the same. Fig. 4 is a perspective view of one of the levers for engaging the doors in the newspaper-receptacle. Fig. 5 is a perspective view of the end of one of the doors of the newspaper-receptacle upon a much enlarged scale. Fig. 6 is a detail view of a ratchet-wheel which is mounted upon the shaft which carries the swinging arm which contacts the levers. Fig. 7 is a detail sectional view taken upon line $x x$ of Fig. 1.

The casing A, within which the removable newspaper-receptacle B is located, is open upon the bottom below the place for receiving the newspaper-receptacle. The newspaper-receptacle B consists of end pieces $b b'$ and is divided off by partitions b^2 into several longitudinal compartments of a width sufficient to accommodate a single newspaper C. Upon each end $b b'$ of receptacle B are lugs $a^3 a^4$, which engage ways $a^5 a^6$ upon the bottom of casing A. When it is desired to place the receptacle B within the casing A, it is necessary only to slide it inward, so that the lugs $a^3 a^4$ take under the ways $a^5 a^6$. Each compartment of the receptacle has its bottom closed by a swinging door b^3 , which swings upon pivots b^4 at one of its sides. Upon the other side of the door b^3 are a couple of lugs b^5 . Fulcrumed upon the end b of the receptacle are a series of levers D, which have at their lower ends fingers d for engaging lugs b^5 and at the opposite ends have knobs d' , which knobs lie in a circular path,

so as to be contacted successively by the swinging arm E, which is mounted upon the actuating-shaft e . Shaft e is journaled in brackets $a a'$ within the casing and carries a coiled spring e' and a ratchet-wheel e^2 , the teeth of which are engaged by one end of the lever F, which is fulcrumed upon the bracket a^2 , so that its other end stands below the discharging end of a coin-chute G, the lever being held in contact with the ratchet-wheel by means of a spring f . As shown in Fig. 6, one set of teeth e^3 of the wheel e^2 are larger than the other set e^4 , one set being designed to engage the lever F when it is desired to deliver large or bulky papers, the other for those with fewer sheets. When it is desired to deliver a sheet of larger size, one paper-receptacle is removed from and another is placed in the casing in which the partitions are fewer and farther apart and in which likewise the levers D are fewer and correspondingly farther apart.

The operation of the device is as follows: The doors b^3 being held in their closed positions by the levers D, whose fingers d are held in contact with the lugs b^5 by springs d^2 , a newspaper is placed in each compartment of the receptacle. When the coin is placed in the chute G, it strikes one end of the lever F and carries the other end out of contact with the tooth of the ratchet-wheel e^2 , which allows the shaft e to rotate through one step. This brings the arm E in contact with the first of the knobs d' and throws the finger d at the other end of the lever out of contact with the lugs b^5 , whereupon the door of the first compartment falls of its own weight and allows the paper to drop out through the open bottom of the casing. When the next coin strikes the lever F, it carries the arm E to the next lever D and releases the next door b^3 . If a larger paper is to be sold and the compartments are larger in the receptacle, the levers D being farther apart and the larger teeth of the wheel e^2 being brought into contact with the lever F when the lever F is released by a coin, it permits the arm E to move through a greater arc, and thus to contact the levers D, likewise of a greater distance apart than those used with the smaller papers. It is thus seen that each paper being held in a compartment by itself and each compartment being of a size sufficiently large to accommodate a newspaper there is no friction between the paper and the walls of the compartment and that the same

readily falls from the compartment when the bottom of the same is opened.

I have also provided a means by which to indicate to a prospective purchaser when all the newspapers have been discharged from the machine, in that I have hinged a lever H to the casing, one end of which is contacted by the arm E when it has reached its extreme position after all of the compartments have been opened by it. The upper end of the lever H contacts a horizontal shaft K, which is pivoted at end k to the casing and at the other end is held by a spring k' in contact with a lug k^2 , which then releases a card M, which drops down in front of the casing and contains a notice to the effect that all the papers have been sold. Card M is connected to rod K by a cord m , from which it hangs when released. When it is in its uppermost position, it is held by friction between the rod K and a strip a' , secured to the front of the casing A.

What I claim is—

1. In a vending-machine of the character described the combination of a receptacle divided into a series of compartments, doors in the bottoms of the compartments, latches for holding the doors closed, and an automatic means for successively engaging the latches to release the doors.

2. In a vending-machine of the character described the combination of a receptacle divided into a series of compartments, doors in the bottoms of the compartments, latches for holding the doors closed, and a swinging arm for successively engaging the latches, and a step-by-step feed for moving the arm from one latch to the succeeding latches.

3. In a vending-machine of the character described the combination of a receptacle having a series of swinging doors in its bottom, levers fulcrumed upon the receptacle

adjacent to and engaging each door, and a swinging arm for successively engaging the levers to release them from the doors.

4. In a vending-machine of the character described a casing, removable receptacles adapted to be secured in the casing, each receptacle being divided into compartments of a size varying from that of the other receptacles, and having doors in the bottom of the compartments, means for holding the doors closed, and an adjustable releasing mechanism for opening the doors of the different receptacles.

5. In a vending-machine of the character described a series of compartments, means for varying the size of the compartments, doors in the bottoms of the compartments, levers journaled adjacent to the compartments for engaging the doors, a shaft, a means for exerting a normal pressure on the shaft tending to rotate it, an arm journaled upon the shaft to engage the levers, a ratchet-wheel with different-sized teeth secured upon the shaft and a pawl for engaging the teeth of the ratchet-wheel.

6. In a vending-machine of the character described a receptacle having doors in its bottom for releasing the papers, latches upon the receptacle for holding the doors closed, a swinging arm for engaging successively the latches, a slide for indicating when the papers are all sold, and a lever journaled in the casing having one end in the path of the swinging arm at the limit of its travel to be struck by the same when the papers are all sold, and engaging the slide at the other end to automatically actuate the same.

JOHN A. RULE.

Witnesses:

WALTER F. MURRAY,
AGNES McCORMACK.