

No. 767,061.

PATENTED AUG. 9, 1904.

J. JONSON.
VENDING MACHINE.

APPLICATION FILED SEPT. 9, 1903.

NO MODEL.

4 SHEETS—SHEET 1.

Fig. 2.

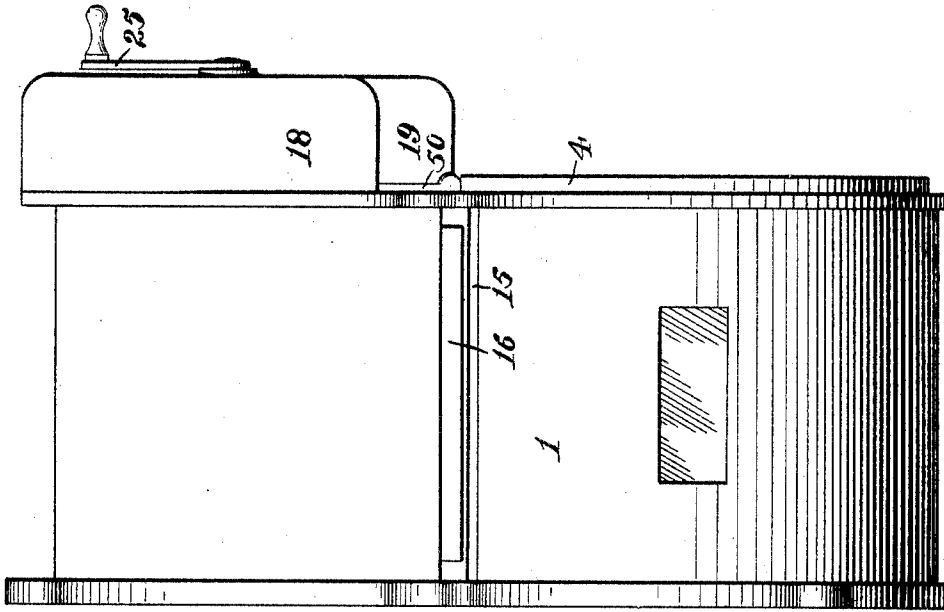
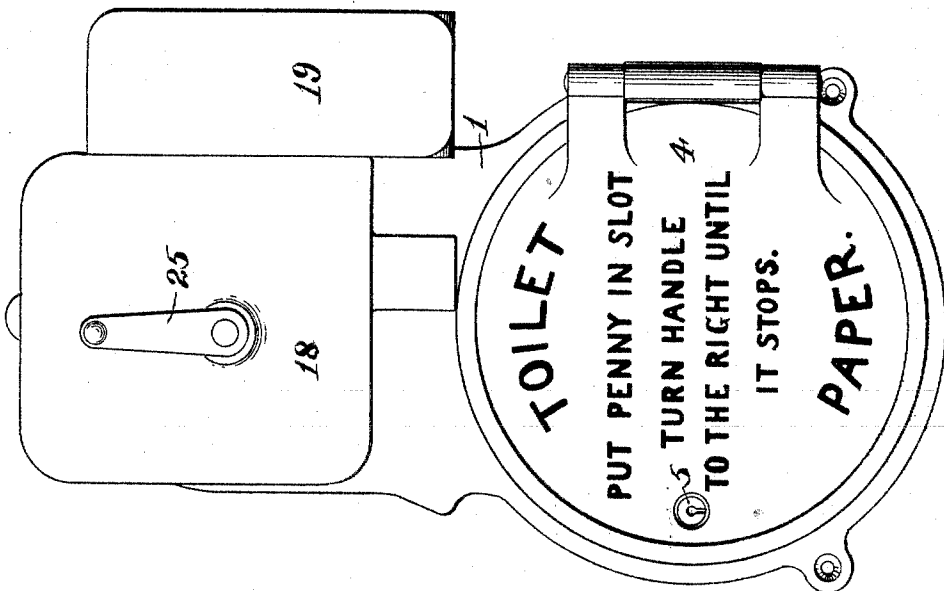


Fig. 1.



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Inventor:

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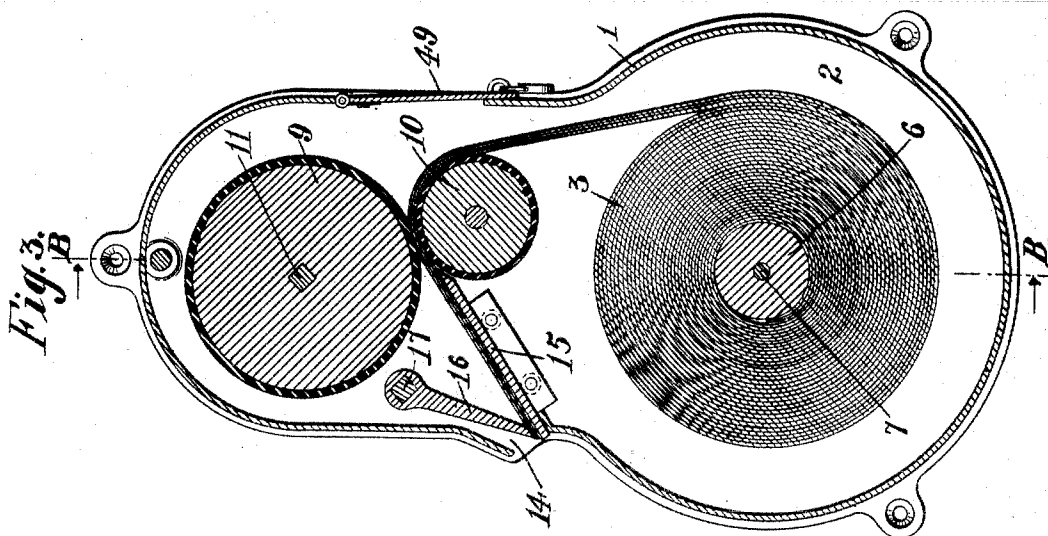
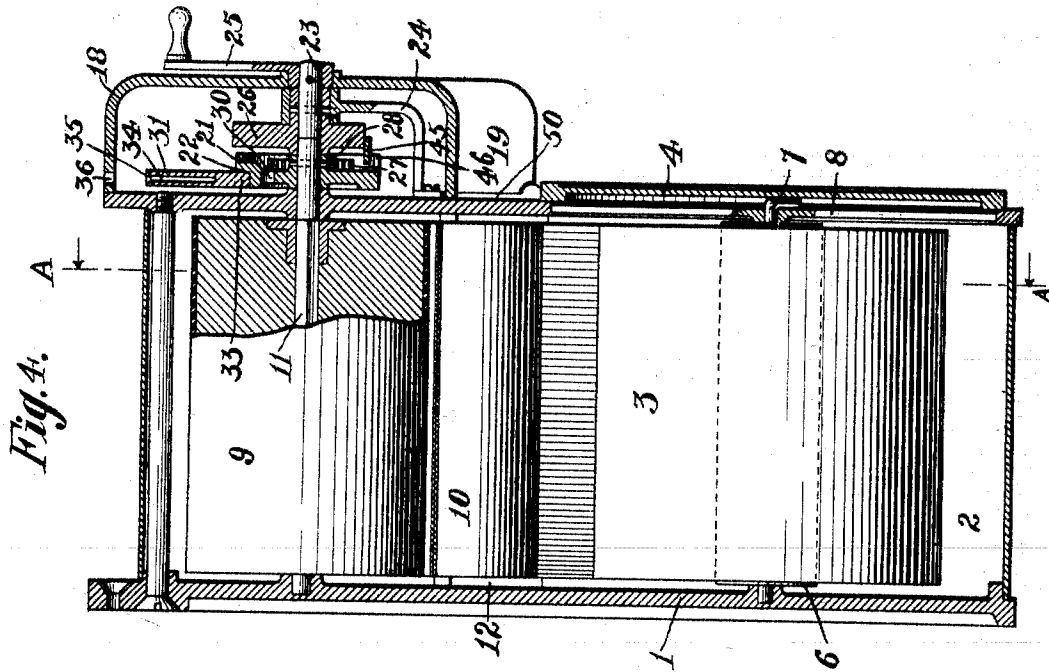
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4 SHEETS—SHEET 2.



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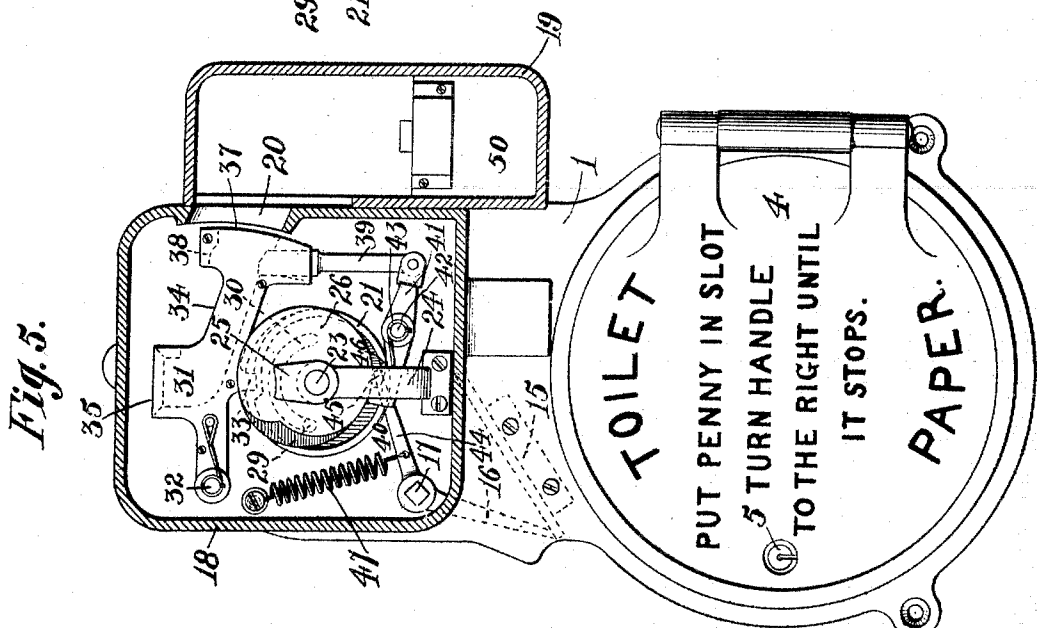
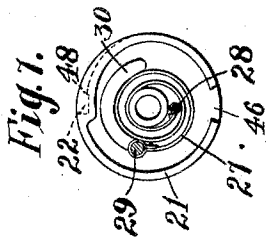
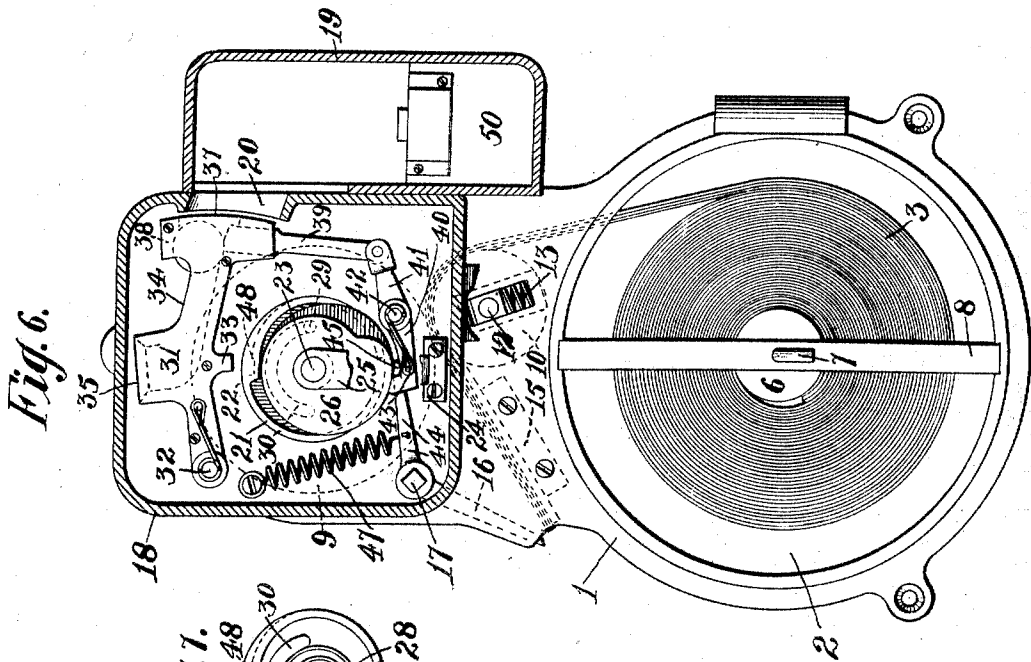
Inventor:
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J. JONSON.
VENDING MACHINE.

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NO MODEL.

4 SHEETS—SHEET 3.



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No. 767,061.

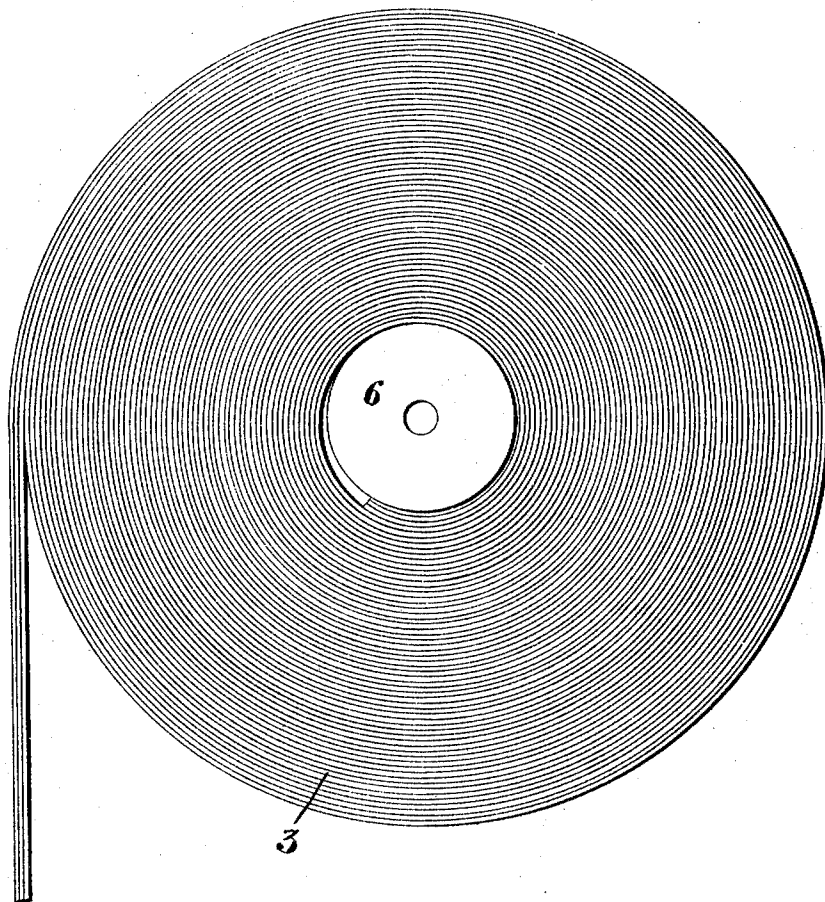
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4 SHEETS—SHEET 4.

Fig. 8.



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UNITED STATES PATENT OFFICE.

JULIUS JONSON, OF NEW YORK, N. Y.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 767,061, dated August 9, 1904.

Application filed September 9, 1903. Serial No. 172,479. (No model.)

To all whom it may concern:

Be it known that I, JULIUS JONSON, a citizen of the United States, and a resident of the borough of Manhattan, in the city and State of New York, have invented a new and useful Improvement in Vending-Machines, of which the following is a specification.

My invention relates to an improvement in coin-operated vending-machines, and more particularly to certain improvements in machines for delivering toilet-paper in predetermined quantities.

The object of my invention is to provide certain improvements in the construction, form, and arrangement of the several parts whereby a considerable amount of paper may be delivered with a relatively small movement of the delivery mechanism.

A still further object is to provide a machine in which a plurality of sheets of paper may be successfully delivered from a roll of paper so wound that the plurality of sheets will be arranged in layers, whereby a large amount of paper may be delivered with a relatively small movement of the roll-supporting spindle.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 represents a front view of the machine. Fig. 2 represents a side view of the machine. Fig. 3 is a vertical section taken in the plane of the line A A of Fig. 4 looking in the direction of the arrows. Fig. 4 is a partial vertical section taken in the plane of the line B B of Fig. 3 looking in the direction of the arrows. Fig. 5 represents a front view of the machine, the coin-operated-mechanism casing being shown in section to show the parts therein in their normal position. Fig. 6 is a similar view showing the coin-operated-mechanism parts in the position which they assume when the coin has been used for raising the coin-receiver out of its locking engagement with the main-shaft cam, the door to the paper-roll chamber being also removed to show the roll of paper in position within the said chamber. Fig. 7 is a face view of the main-shaft cam, the spring for yieldingly connecting the cam and the handle-shaft cam

being shown in its normal position; and Fig. 8 is a view, on an exaggerated scale, of the roll composed of a plurality of superimposed strips of paper.

The main casing of the machine is denoted by 1, and it has its lower portion enlarged to form a chamber 2 for the reception of the roll of superimposed strips of paper 3.

The casing 1 is provided at one end with a door 4 for gaining access to the chamber 2 for the purpose of inserting new rolls of paper as may be required, the said door being provided with a suitable lock 5 for preventing tampering with the interior of the machine at this point.

The roll of paper 3 is shown herein as composed of three superimposed strips of paper wound upon a suitable spool 6, which spool is supported by a spindle 7. This spindle is mounted at one end in the end wall of the casing and at its other end in a removable cross-bar 8, adjacent to the door 4. To insert a new roll of paper within the casing, the door is first opened, the cross-bar 8 is removed, and the spindle 7 is withdrawn from the spool 6. The spindle 7 is then inserted into the spool of the new roll and through the cross-bar 8. The inner end of the spindle 7 is inserted into its bearing in the inner end wall of the casing and the bar 8 inserted into its position in proximity to the door 4, thereby supporting the roll in its proper position.

The interior of the upper portion of the casing 1 is provided with two friction-rolls 9 and 10, between which the plurality of strips of paper are led, the roll 9 being fixed to the main cam-shaft 11 of the machine and the roll 10 being mounted in yielding bearings 12, provided with springs 13 for pressing the roll 10 toward the roll 9.

The side of the casing 1 adjacent to the rolls 9 and 10 is provided with a slot 14, through which the paper is delivered under the control of a coin. A support 15 for the paper leads from the slot 14 inwardly into close proximity to the roll 10 for supporting the paper as it leaves the rolls 9 and 10.

A combined paper-releasing flap and cutter 16 is fixed to a rock-shaft 17, mounted in the upper part of the casing 1, which combined

flap and cutter is so arranged that it will protect the paper from being tampered with through the slot 14.

The front of the casing 1 of the machine is provided with a casing 18 for housing the coin-actuated mechanism of the machine. A coin-receptacle 19 is provided for receiving and storing the coins as they are delivered from the movable coin-receiver of the coin-operated mechanism through a suitable opening 20.

The main shaft 11, which carries the friction driving or delivery roll 9, projects into the interior of the casing 18 and is there provided with a surface cam 21, the periphery of which cam is concentric with the shaft for a greater portion of its circumference and is then brought inwardly to form an abrupt-faced notch 22. A crank-handle shaft 23 is mounted in suitable bearings in a bracket 24 within the casing 18, which shaft is in alignment with the main cam-shaft 11. This shaft 23 is provided with a handle 25, exterior to the casing 18, for the use of the person operating the machine. This shaft 23 is further provided with a surface cam 26, located within the casing 18. A coil-spring 27 is housed within the main-shaft cam 21 and has one end attached to a pin 28, projecting from the face of the cam 21, and its other end attached to a pin 29, projecting from the face of the handle-shaft cam 26. This pin 29 of the cam 26 is fitted to travel around within a groove 30 in the cam 21, which groove is concentric with the shaft 11 and extends about half-way around the same. The periphery of the cam 26 presents a curve having a gradually-increasing radius around the shaft 23 to a point adjacent to where it started and is then brought rapidly down to the said point, forming what is commonly known in the art as a "snail-cam."

A rocking coin-receiver 31 is hinged on a stud 32 so as to swing vertically, and it is provided with a lug or projection 33, arranged in position to normally rest within the notch 22 in the periphery of the main-shaft cam 21. This coin-receiver is provided with a coin-slot 34, the mouth 35 of which is arranged to receive the coin as it drops from the coin-slot 36 in the top of the casing 18.

The coin of the predetermined value is temporarily arrested adjacent to the delivery end 37 of the coin-receiver between an abutment 38 in the coin-receiver and the coin-engaging bar 39, which coin-engaging bar is controlled by the handle-shaft cam 26 as follows: A two-armed rocking lever 40 41 is hinged upon a suitable stud 42, the arm 40 being held in engagement with the periphery of the cam 26 by means of a spring 43, one end of which engages the stud 42 and the other end the said arm 40. The arm 41 of the two-armed rocking lever is connected to the lower end of the bar 39, and the upper end of the said bar is extended upwardly through the coin-receiver and projects a slight distance into the

interior of the coin-slot 34 therein. When the parts are in their normal position, the free end of the bar 39 and the shoulder 38 prevent the passage of the coin through the receiver. The flap 16 is under the control of the main-shaft cam 21 by the use of the following arrangement: The shaft 17, which carries the flap 16, projects into the interior of the casing 18 and is there provided with a tappet 44, having a laterally-extended head 45 of sufficient width to be engaged by the peripheries of the cams 21 and 26. The cam 21 is provided with a laterally-projected peripheral wall, through which a slot 46 is cut, so that when the parts are in their normal position the head 45 of the tappet 44 rests upon the periphery of the cam 26 at a point nearer the center than the periphery of the cam 21. (See Fig. 5.) A spring 47 is located within the casing 18 for serving the double purpose of holding the flap 16 against the paper strips and also the tappet 44 in engagement with its cams.

The operation of the machine is as follows: When a coin of a predetermined size has been dropped into the coin-receiver 31, it will be stopped by its engagement with the shoulder 38 and the coin-engaging bar 39. The handle 25 is then turned to the right. This movement will swing the head 45 of the tappet 44 outwardly through the slot 46 in the periphery of the cam 21 and also will depress the arm 40 of the two-armed rocking lever and raise, by means of the coin, the lug or projection 33 of the coin-receiver out of the notch 22 in the cam 21. The advance edges of superimposed strips of paper will thus be released by the flap 16. The pin 29 of the cam 26 will also have been moved around to the other end of the slot 30 in the cam 21. Because of the locking connection between the two cams through the pin 29, the further rotary movement of the handle 25 will rotate the shaft 11, and thereby the friction delivery-rollers 9 and 10, which rolls in turn will draw off and deliver the plurality of layers of paper. A continued rotary movement of the handle 25 causes the arm 40 of the two-armed lever to pass onto the smaller diameter of the cam 26 while the lug 33 of the coin-receiver is traveling along the periphery of the cam 21, thus withdrawing the bar 39 from within the slot 34 in the coin-receiver and permitting the coin to drop through the opening 20 into the coin-receptacle 19. As the cams are still further rotated the lug 33 will drop into the notch 22 in the cam 21 and prevent a further movement of the shaft 11 and delivery-roll 9. To prevent the unintentional reverse movement of the shaft 11, the back of the notch 22 is provided with a slight shoulder 48. In the meantime the tappet 44 is permitted to return to its normal position under the influence of the spring 47, and the flap 16 presses the paper at the slot 14 in the casing against

the support or table 15. The paper exterior to the casing may then be torn off, the free edge of the flap 16 serving as a cutter for use in severing the said paper. To complete the operation, the handle 25 is released, thus permitting the spring 27 to return it and the cam 26 to their normal positions. By forming the roll of a plurality of superimposed strips of paper I am enabled to deliver a large amount of paper with a relatively small movement of the parts, thus materially simplifying the delivery mechanism.

The side of the casing 1 opposite to the delivery-slot 14 may be provided with a suitable door 49 for gaining access to the interior of the casing adjacent to the delivery-rolls 9 and 10.

The coin-receptacle 19 may be provided with a door 50 for the purpose of gaining access to the interior of the receptacle for the removal of the coins therein.

The machine constructed and arranged as hereinbefore set forth is very simple and strong and is one which is not liable to get out of order by being tampered with.

It is evident that changes might be resorted to in the form, construction, and arrangement of the several parts without departing from the spirit and scope of my invention. Hence I do not wish to limit myself strictly to the structure herein set forth; but

What I claim is—

1. In a machine for vending paper from a roll, a casing having a delivery-slot therein, means for feeding the paper through the slot and a combined flap and cutter arranged to lock and release the paper, substantially as set forth.

2. In a machine for vending paper from a roll, a casing having a delivery-slot therein, means for feeding the paper through the slot and a combined flap and cutter arranged to lock and release the paper adjacent to the delivery-slot, substantially as set forth.

3. In a machine for vending paper from a

roll, a casing having a delivery-slot therein, friction-rolls for feeding the paper through the slot, means for permitting the operation of the rolls and a combined flap and cutter arranged to lock and release the paper, substantially as set forth.

4. In a machine for vending paper from a roll, a casing having a delivery-slot therein, a friction-roll for feeding the paper through the slot, a cam-shaft means controlling the cam-shaft for permitting the friction-roll to be rotated and a combined flap and cutter arranged to lock and release the paper, substantially as set forth.

5. In a machine for vending paper from a roll, a casing having a delivery-slot therein, a friction-roll for feeding the paper through the slot, a main cam-shaft for rotating the roll and a handle cam-shaft for rotating the main cam-shaft, substantially as set forth.

6. In a machine for vending paper from a roll, a casing having a delivery-slot therein, a friction-roll for feeding the paper through the slot, a main cam-shaft for rotating the friction-roll, a handle cam-shaft for rotating the main cam-shaft and a combined flap and cutter controlled by the two cam-shafts for locking and releasing the paper, substantially as set forth.

7. In a machine for vending paper from a roll, a casing for containing the roll, a door therefor and a removable support for the roll comprising a spindle and a removable bar for supporting one end of the spindle adjacent to the door, the other end of the spindle being removably mounted in the wall of the casing, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 4th day of September, 1903.

JULIUS JONSON.

Witnesses:

FREDK. HAYNES,
HENRY THIEME.