No. 732,766. PATENTED JULY 7, 1903.

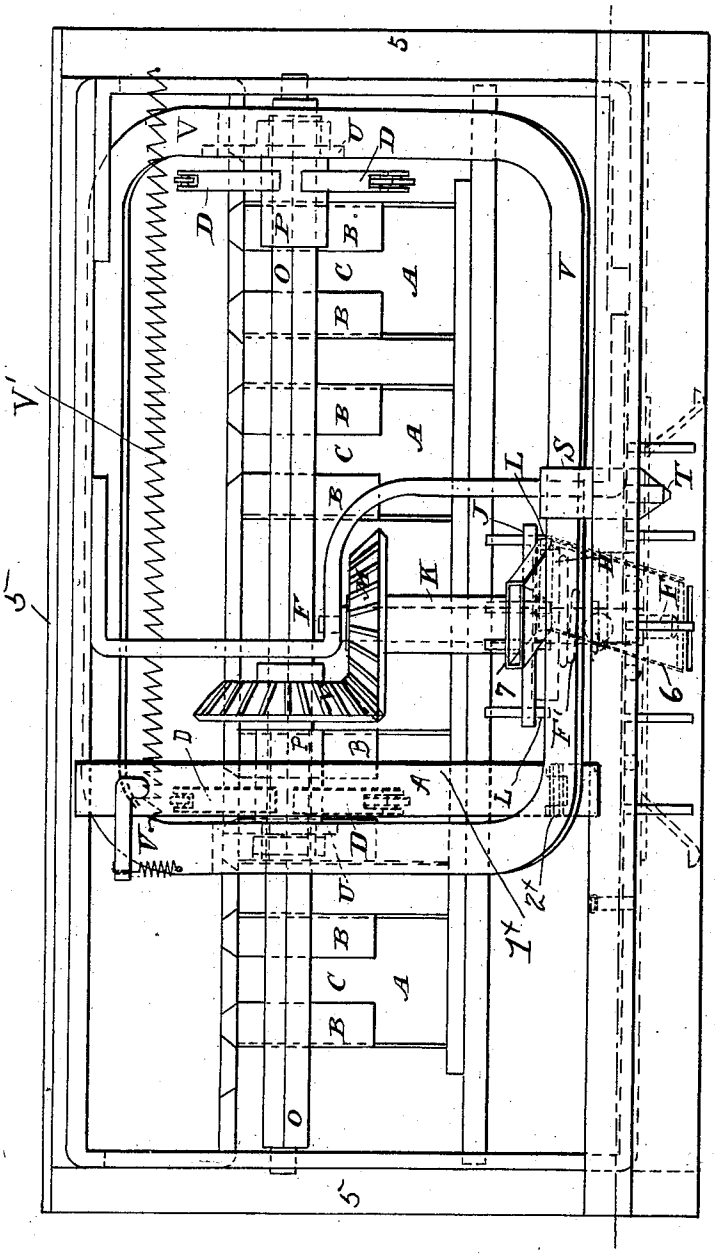
E. G. MATTHEWSON.

VENDING APPARATUS.

APPLICATION FILED JULY 18, 1899.

NO MODEL. 3 SHEETS—SHEET 1.

Fig. 1.



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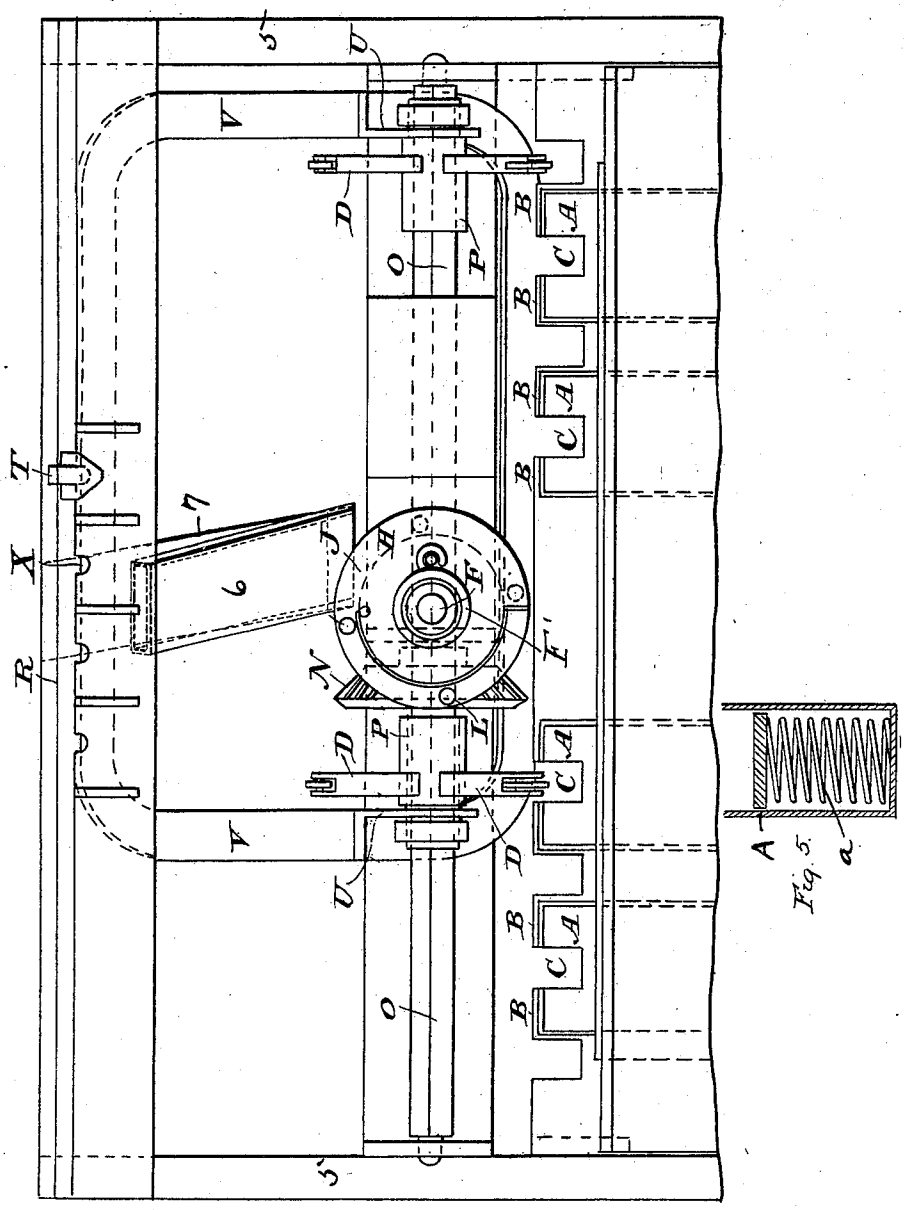
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NO MODEL. 3 SHEETS—SHEET 2.

Fig. 2.



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NO MODEL. 3 SHEETS—SHEET 3.

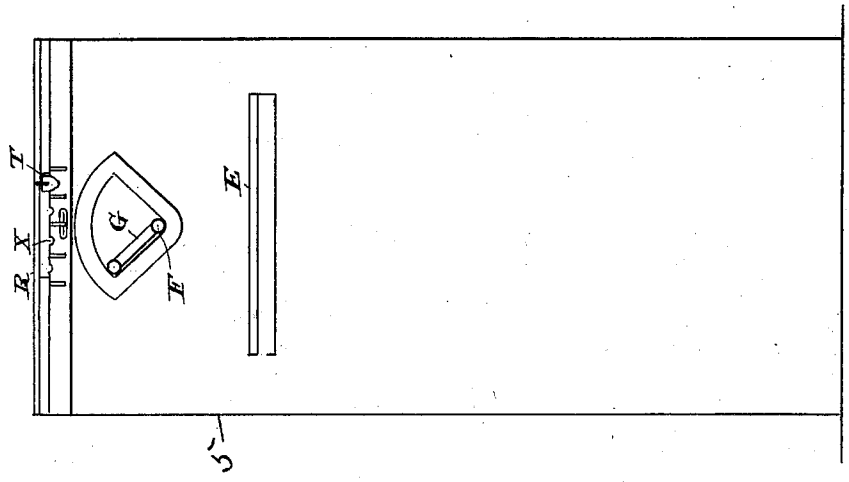


Fig. 4.

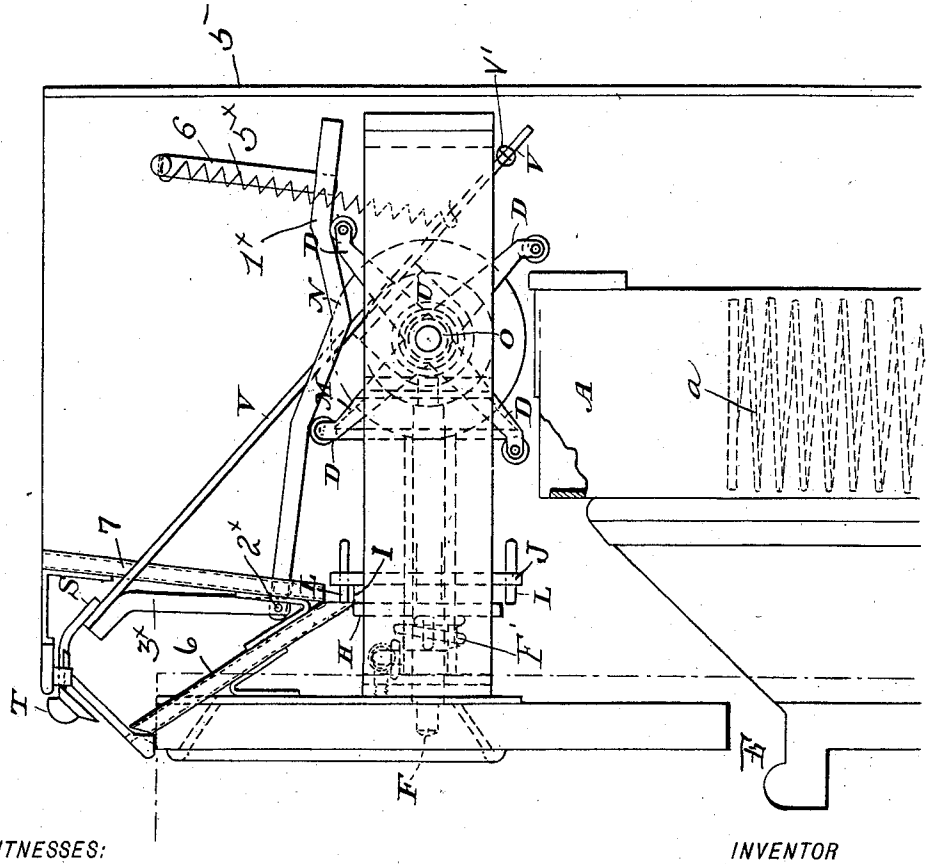


Fig. 3.

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No. 732,766. Patented July 7, 1903.

UNITED STATES PATENT OFFICE.

ERNEST GEORGE MATTHEWSON, OF UPPER NORWOOD, ENGLAND.

VENDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 732,766, dated July 7, 1903.

Application filed July 18, 1899. Serial No. 724,305. (No model.)

To all whom it may concern:

Be it known that I, ERNEST GEORGE MATTHEWSON, a subject of the Queen of England, and a resident of Upper Norwood, in the county of Surrey, England, have invented certain new and useful Improvements in Vending Apparatus, of which the following is a specification.

The object of my invention is to construct a machine which shall be less likely to get out of order than those heretofore made and one which will deliver any article or several articles from one machine, the said machine having but one coin freed or operated mechanism, and to carry my invention into effect I construct my improved coin freed or operated delivery-machine as follows, reference being made to the accompanying drawings, of which—

Figure 1 is a plan of the machine with the top cover removed; Fig. 2, an elevation of the upper part of the machine with the front cover removed; Fig. 3, an end elevation of the upper part of the machine with end cover removed, and Fig. 4 a front elevation of the outside of the machine. Fig. 5 is a view of a detail.

Preferably I use a pedestal form of machine, the said pedestal standing upon the ground and being preferably of oblong rectangular form, as shown at Fig. 4, and forming a casing 5, containing the articles to be delivered, which are arranged in vertical tubes A, in which the articles for delivery fit loosely. These are placed one above another in the tubes and are kept up, so that the uppermost article is always kept in contact with the top of the tube by means of springs *a a'*, as shown in Fig. 5. The tops of these tubes are partially closed at B to prevent the articles coming out by means of the upward pressure of the springs; but the fronts of the tubes at the top have an opening sufficient to allow of the uppermost article being pushed out. The teps and backs of the tubes also have a partial opening C to allow of an arm D, attached to the coin freed or operated mechanism, to pass across the upper part of the tubes and push the top article out of the opening in front, which falls and is conducted through an opening E in the front part of the case or pedestal. The pedestal may contain as many of these tubes for various articles as the pedestal will conveniently take arranged in line with a space between each.

The coin freed or operated mechanism is similar to that for which Letters Patent of the United States were granted to me, No. 619,897, but modified to suit the requirements of this machine. The part used is as follows: A spindle F runs from front toward the back of the case and terminates in a handle G in front of the case, having its movement limited, preferably, to a quarter of a revolution; but any other convenient part of a revolution may be used. This spindle carries a fixed disk H, and this disk has a projecting piece I projecting from its inner face near the periphery. Upon this same spindle a disk J, fixed on a sleeve K, running loose on the spindle F, is attached, the loose disk being kept by the length of the sleeve a short distance (about a quarter of an inch for machines working with pennies) from the fixed disk and has four or other convenient number of pins L projecting from its face on the side facing the fixed disk. These four pins are nearer the periphery than the projecting piece on the fixed disk, so that when the handle G, actuating the spindle F and fixed disk H, is partially revolved the projecting piece clears the pins upon the loose disk J and does not communicate any movement to it. When a coin, however, is inserted in the machine, it is led by guides 6 or 7 between these two disks and falls between the two disks between the projecting piece I on the fixed disk and one of the four or other convenient number of pins L on the loose disk, and if then the handle operating the fixed disk is partially revolved its movement will be communicated through the coin connection to the loose disk and partially revolve that also. When the handle is released, it is brought back to its normal position by means of a spring F', coiled around the spindle F, fixed at one end to the disk H and at the other end to a part of the frame actuating the spindle to which it is attached; but the loose disk remains in the position it was driven to—namely, a quarter of a revolution if four pins are used ahead—so that another coin would have to be inserted, which would fall between the projection on the fixed disk and the next pin on the loose disk before further movement could be

communicated to the loose disk, and so on, each coin as it reaches the bottom position between the disks falling out. The loose disk J or sleeve K, which is attached to it in this invention, carries a beveled toothed wheel M, which gears into another beveled toothed wheel N, fixed upon a square spindle O, running from side to side of the machine, so that when the loose disk is made to partially revolve after the insertion of a coin or the like, as hereinbefore described, the said movement is communicated to this horizontal square spindle, and it is thereby revolved a part of a revolution. Upon the square spindle another loose sleeve P is fitted and, this carries four or other convenient numbers of radial arms D, and the said sleeve has a deep groove around it. In the front of the case opposite the square horizontal spindle a slot R is made, and moving in this slot an arm S is fitted. Outside the case it terminates in an index T and inside in a fork-piece or bearing U, which engages the grooved part of the sleeve. It will thus be seen that if the outside of the slot is marked in positions so that when the index T is placed opposite any position the arms D on the loose sleeve P are over the openings in the tube-tops containing the articles to be delivered a quarter or other necessary part of a revolution of the spindle will cause one of the radial arms upon the sleeve to pass across the top of that tube and push the uppermost article through the opening in the front of the tube at the top, and it will fall out and be conducted to the outside of the case. Several openings in the case may be made, or one, as shown at E, Fig. 4, may be arranged for the whole series.

The foregoing arrangement is when the coin-operated mechanism is at one end of the square spindle; but it may be varied. For instance, it may be in the center, as shown in the drawings, and in this case two loose sleeves P are fitted to the square spindle O, one on either side of the coin-disks, each sleeve being fitted with the radial arms D. One of these sleeves only may be made with a groove, or both, as shown in the drawings. The two loose sleeves are coupled together by the frame V, having projecting bearings U or fork-pieces fitting in, so that when one is nearest the center the other is beyond the last tube at the opposite end. The slot in the front of the case is in this case only half the width of the case, as shown; but the same number of positions are marked, the coupling of the two sleeves being arranged so that when the radial arms on one sleeve are over the center of the top of one tube on one side the radial arms on the other are between two tubes on the opposite side, so that only one can be in operation at the time. A spring V′ may be so arranged as to draw the coupled sleeves always one way, and the index in this case would be provided with a small spring which falls into detents X opposite or under each position marked on the front of the index-slot, so as to retain it in position during the time the machine is operated.

In Figs. 1 and 3 I show a detent for the radial arms D. This detent comprises an arm $1^{\times}$, pivoted at $2^{\times}$ to a hanger $3^{\times}$, connected at its upper end to frame V, said detent-arm resting on the arms D, so as to hold them in position ready for operation. The detent-arm is pulled downwardly by a spring $5^{\times}$, attached at one end to the frame V and at its other end to a post or standard 6 on the detent-arm. The detent always bears the same relation laterally to the arms D, as both move with the frame V when this is adjusted laterally. Only one of these detents is shown in Fig. 1 for convenience of illustration, and it is omitted from Fig. 2 for a like reason; but it will be understood that each series of arms D has one of these detents associated therewith.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. In an article-delivery machine the combination with the plurality of article-containing tubes or hoppers, of a rotatable ejector, means for imparting to said ejector a rotary motion in one direction only, and means for shifting said ejector into operative relation to any one of the hoppers, substantially as described.

2. In an article-delivery machine the combination with the plurality of article-containing tubes or hoppers, of a rotatable ejector, means for imparting to said ejector a rotary motion in one direction only, means for shifting said ejector into operative relation to any one of the hoppers, and means for indicating the position of said ejector, substantially as described.

3. In combination the plurality of article-containing tubes or hoppers, the shaft extending in proximity thereto, a sleeve carried by said shaft, radial ejecting-arms carried by said sleeve, means for shifting said sleeve longitudinally of the shaft, means for rotating the shaft and means for imparting the rotary movement of the shaft to the sleeve, substantially as described.

4. In combination the plurality of article-containing tubes or hoppers, the shaft extending in proximity thereto, a sleeve carried by said shaft, radial arms carried by said sleeve, means for shifting the sleeve longitudinally of the shaft, means for rotating the shaft and means for imparting the rotary movement of the shaft to the sleeve, and a pointer connected with the sleeve and extending outside the casing to indicate the position of the sleeve.

I witness whereof I have hereunto set my hand in presence of two witnesses.

ERNEST GEORGE MATTHEWSON.

Witnesses:
H. G. T. GALLACK,
WALTER J. SKERTEN.