(No Model.)

C. S. BATDORF.

COIN OPERATED VENDING APPARATUS.

No. 424,591. Patented Apr. 1, 1890.

Fig. 1.

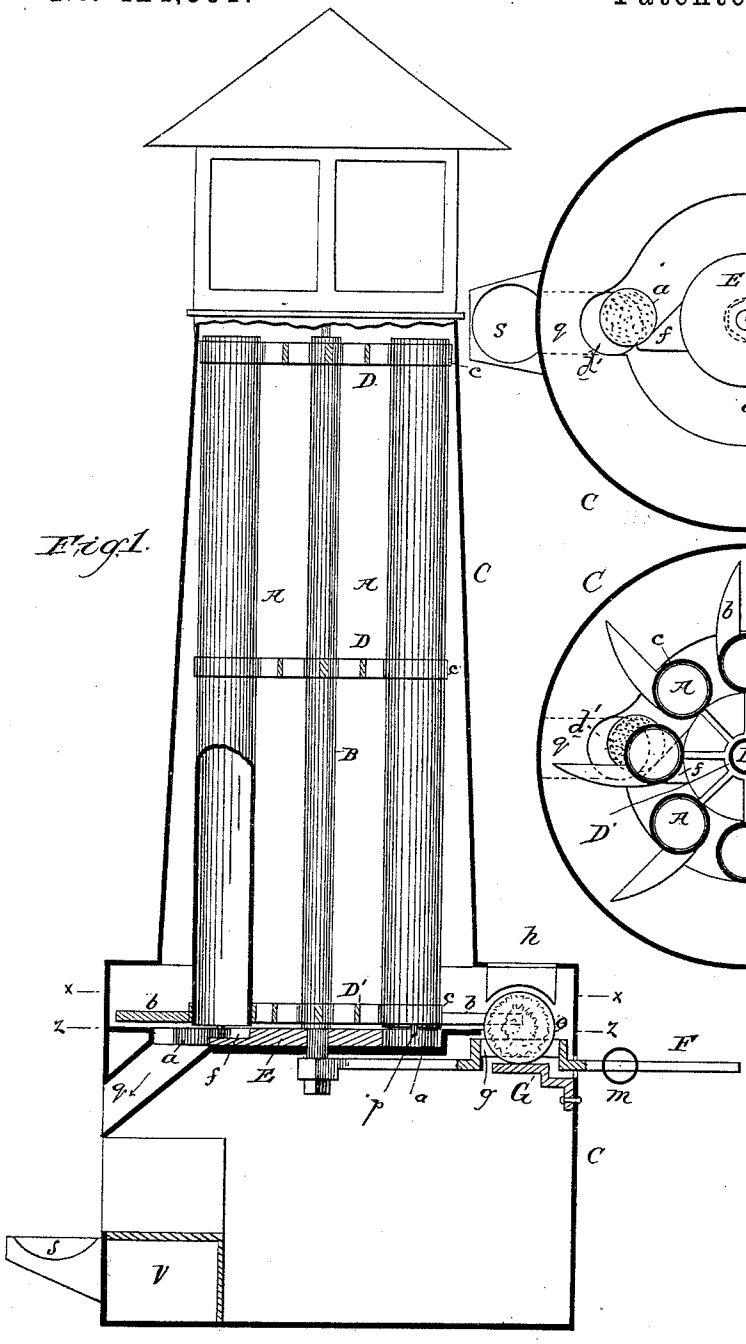


Fig. 2.

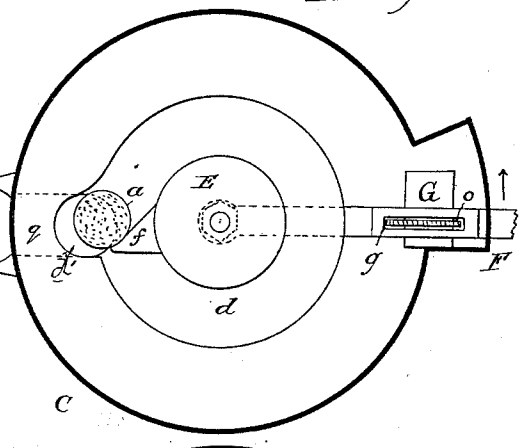


Fig. 3.

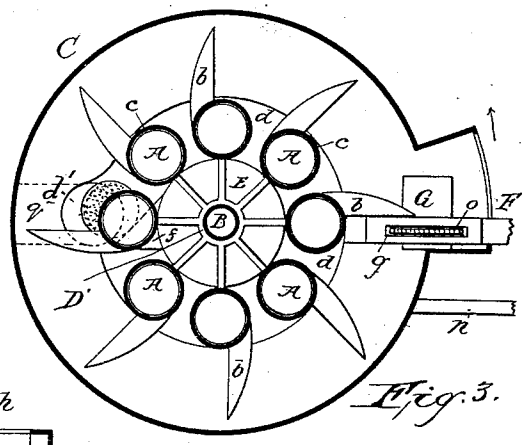
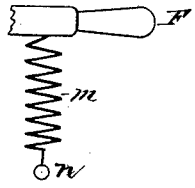


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES S. BATDORF, OF BROOKLYN, NEW YORK, ASSIGNOR TO HELEN G. BATDORF, OF SAME PLACE.

COIN-OPERATED VENDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 424,591, dated April 1, 1890.

Application filed July 29, 1889. Serial No. 319,097. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. BATDORF, of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Coin-Operated Vending Apparatus, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of this invention is to provide an improved coin-operated apparatus for the automatic delivery of prepaid goods; and it consists in the peculiar construction, arrangement, and combinations of parts hereinafter described, and then definitely pointed out in the claims.

Similar letters of reference designate corresponding parts in all the figures.

Figure 1 is a partly-sectional side elevation of my improved apparatus with parts broken away to exhibit other parts. Fig. 2 is a cross-section of the same on line *z z*, Fig. 1. Fig. 3 is a cross-section of the same on line *x x*, Fig. 1. Fig. 4 is a plan of lever-handle and attached spring.

In the drawings, A A represent the tubes or cylinders designed to hold the articles *a* (round boxes shown in this case) to be vended. These tubes A are set in a circle about a vertical shaft B, which is journaled in the frame or case C of the apparatus, so as to be capable of freely revolving. Suitable connections D D′ hold the said tubes to the shaft B, as shown in Fig. 1, so that all may be revolved together. These devices D consist, essentially, of wheels whose spokes terminate in rings, that part of the connection corresponding with the wheel-hub being fitted over the shaft B, while the rings *c* at the ends of the spokes are fitted about the respective tubes. The lower connection D′ has a finger *b* projecting radially from each wheel-ring *c*, so that in fact the said wheel D′ may be termed a "ratchet-wheel," of which the fingers *b* are the teeth.

In the base of the lower and enlarged part of the case C is fixed a circular block E, in the upper face of which is formed an annular channel *d* of a width equal to the diameter of a tube A, of an outer diameter equal to that of the circle formed by the group of tubes, and of a depth sufficient for one of the articles to be vended to drop clear from a tube. This block E is fixed in such a position that articles dropping from the tube shall drop into the block-channel *d*, and from one point of its periphery there extends a triangular stop *f*, whose function will be hereinafter set forth. A lever F, loosely pivoted on the lower end of the shaft B, extend soutward through the base of the case C, and that part of said lever within said base is provided with a vertical slot *g*, that is directly beneath and coincident with the coin-slot *h* in the top of said base, through which the coin is to be introduced. A helical retracting-spring *m* connects the handle of said lever F with a stud *n*, that projects from the base of the case, whereby said lever is brought back to its normal position after having been moved by the operator.

Directly beneath the lever-slot *g*, within the base of the case, is fixed a small shelf G, whose function will be hereinafter set forth.

The apparatus is made ready for use by introducing into the tubes from above the boxes or packages *a* to be vended, the first box or package introduced into each tube falling into the channel *d* of the block E, as best shown in Fig. 1. Then the operator—the proposing purchaser of a box or package—drops a coin edgewise into the slot *h*, which coin, as *o*, enters the lever-slot *g* and rests upon the shelf G. The operator then moves the lever F in the direction of the arrow, Figs. 2 and 3, until the coin *o* is thereby brought in contact with a ratchet-tooth *b* and revolves the wheel D′ and all the tubes. As the tubes are thus revolved, the pins *p*, (shown in Fig. 1,) projecting downward from each tube, engage against the boxes or packages in the channel *d* and move them toward the delivery-chute *q*. Then the box or package nearest the chute *q* is quickly forced in contact with the triangular stop *f*, and is thereby deflected into the offset *d′* of the channel *d*, whence it falls into the said chute *q* and out of the lower end thereof into the bowl *s*, so that it can be taken

by the purchaser, and at the same instant the coin *o*, reaching the end of the shelf G, drops therefrom into the base-chamber or receptacle, and thus ceases to operate as a dog or pawl to revolve the ratchet-wheel D′, and the lever F, being released, is returned to its normal position by the action of the spring *m*, and the apparatus is then ready for a repetition of the operation. Through a door *v* the collected coins may be taken from the base-chamber.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A coin-operated vending apparatus constructed substantially as herein shown and described, with a group of revoluble vertical tubes provided with terminal pins set within a suitable case, a ratchet-wheel and other suitable devices holding the group of tubes in position, a block provided with annular channel and deflecting-stop fixed beneath the tubes, a vertically-slotted lever for receiving and holding a coin, constructed to carry said coin into contact with the teeth of the ratchet-wheel, a shelf fixed beneath the coin, a retracting-spring attached to the said lever, and coin-receiving slot and package-delivery chute, all arranged and operated substantially as set forth.

2. In a coin-operated vending apparatus, the combination, with a group of revoluble vertical tubes, of a ratchet-wheel serving as an auxiliary in moving the tubes into position, and of a lever adapted when moved by hand to revolve said group of tubes by means of a coin inserted in a slot in said lever and pressing on the teeth of the ratchet-wheel, substantially as herein shown and described.

3. The combination, with the group of vertical tubes and the central shaft, of ratchet-wheel D′, having on the outer extremities of its spokes rings constructed to receive the vertical tubes and provided with radial fingers, and a slotted lever constructed to bring a coin in direct contact with said fingers, substantially as herein shown and described.

4. The combination, with the revoluble group of vertical tubes and the block E, having an annular groove therein, substantially as herein shown and described, of the terminal pins *p*, projecting downward into the annular groove, substantially as and for the purposes described.

5. In a coin-operated vending apparatus provided with groups of tubes revoluble through the medium of a ratchet-wheel having teeth projecting beyond the outer circumference of the group, a slotted lever adapted to receive and hold a coin and to revolve said wheel through the medium of a coin introduced into said lever-slot and acting on said projecting teeth, substantially as herein set forth.

6. In a coin-operated vending apparatus provided with a group of revoluble tubes having an attached ratchet-wheel, and with a lever adapted and arranged to revolve said tubes and wheel through the medium of an interposed coin operating as a dog or pawl, and acting directly upon the teeth of the ratchet-wheel, a coin-supporting shelf fixed beneath the lever, substantially as herein shown and described, wherein the length of said shelf limits the operation of said coin as a dog or pawl, as set forth.

7. In a coin-operated vending apparatus, and in combination with a revoluble group of tubes, a stationary block provided with an annular channel in its superior face corresponding to said tubes and adapted to receive the articles to be vended, substantially as herein shown and described.

8. In a coin-operated vending apparatus, the combination, with a stationary block having an annular channel in its face adapted to receive the articles to be vended, of a deflecting-stop set in said channel to deflect said articles from said channel, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand, in the presence of two witnesses, this 26th day of July, 1889.

CHARLES S. BATDORF.

Witnesses:
JACOB J. STORER,
HERBERT VALENTINE.