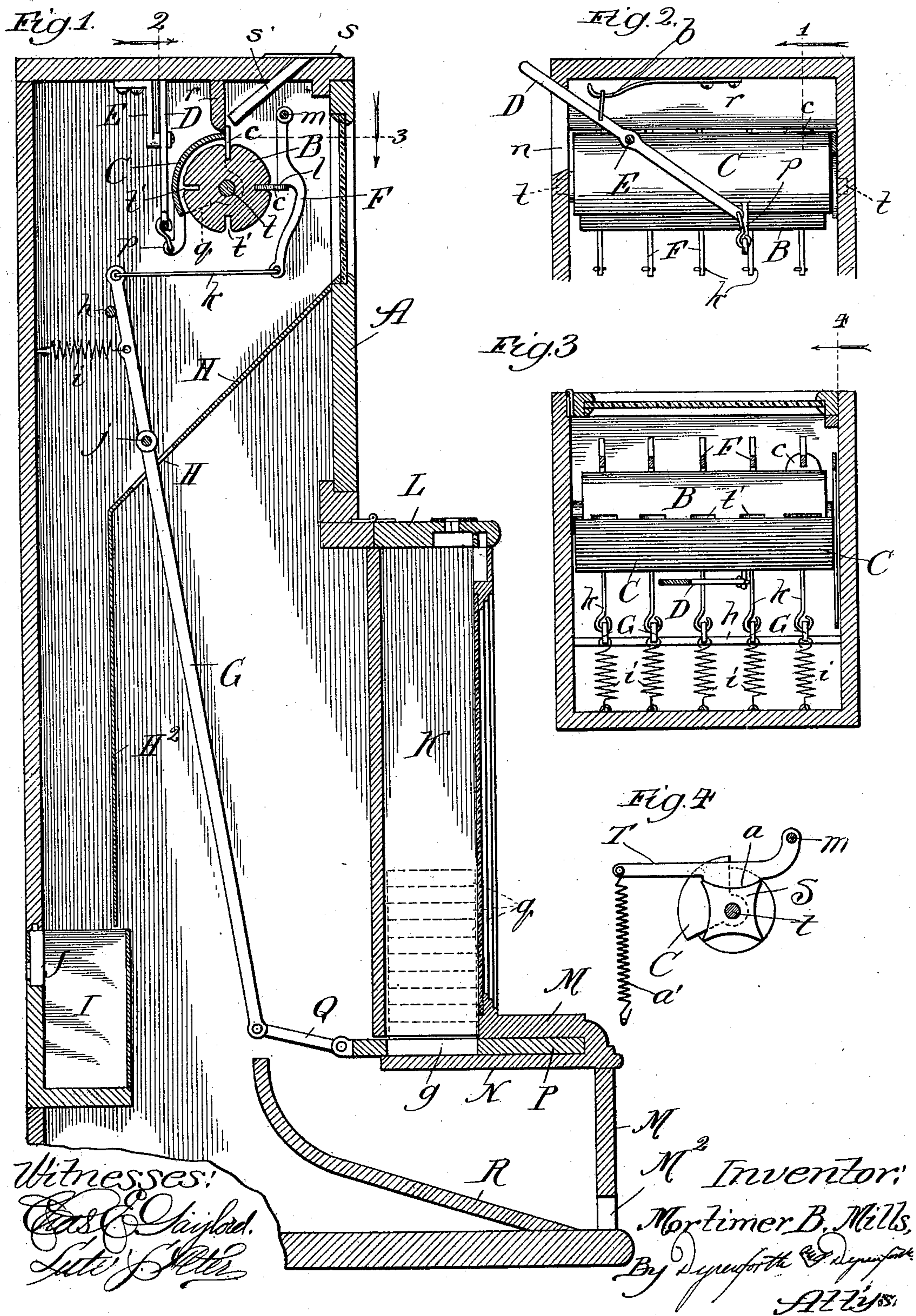


M. B. MILLS.
VENDING DEVICE.

Patented Oct. 12, 1897.



UNITED STATES PATENT OFFICE.

MORTIMER B. MILLS, OF CHICAGO, ILLINOIS.

VENDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 591,559, dated October 12, 1897.

Application filed July 9, 1897. Serial No. 644,021. (No model.)

To all whom it may concern:

Be it known that I, MORTIMER B. MILLS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Vending Devices, of which the following is a specification.

My invention relates to an improvement in vending devices designed for use in the mechanical vending of small articles, such as packages of chewing-gum and the like.

My object is to provide an improved machine for the above purpose which while performing its work perfectly shall be extremely simple, and consequently not liable to get out of order easily.

My invention involves the use of a revolvable drum provided with small recesses or pockets into which the coins descend from slots and from which the coins project to be engaged by a device for turning the drum and to act upon an appropriate lever to discharge the vended article.

In the accompanying drawings, Figure 1 is a vertical section taken near one side of the machine, as indicated at Fig. 2. Fig. 2 is a broken vertical section taken on line 2 of Fig. 1, Fig. 3 a plan section taken on line 3 of Fig. 1, and Fig. 4 a broken sectional view taken on line 4 of Fig. 3, all the sections being viewed as indicated by the arrows.

I shall describe the machine as it is constructed for vending several different kinds of chewing-gum; but it is to be understood that the invention is not to be thereby limited to any particular article and, furthermore, that the number of different articles provided for may vary from one to any reasonable number, according to the number of store-chambers and discharge-chutes provided.

A is a casing of convenient height and of a width depending upon the number of different kinds of articles to be provided with separate store-chambers. In the side walls of the casing and toward the tops thereof is journaled a shaft *t*, upon which is mounted a drum B. The drum B is provided on its periphery with one or more rows (preferably four) of longitudinally-extending pockets or slots *t'* sufficiently large to receive a coin to a depth of about one-third its diameter and each row

having as many pockets as there are different kinds of articles to be provided for. The top of the casing is provided toward its front with a plate *s*, having a row of slots *s'*, which slant rearwardly and downwardly to the slots on the top side of the drum. Above the drum and slightly in the rear of its axis is a downwardly-projecting baffle-plate *r*, which depends from the top of the casing.

Partially encircling the drum is a cylindrical hood or hollow cylindrical segment C, having its ends closed by sectors of disks *q*, journaled on the shaft and partially enveloping the ends of the drum. The cylindrical segment C is provided with a lug *p*, to which is linked one end of an operating-lever D, which is pivotally mounted upon a support E, which depends from the top of the casing. The lever D slants upwardly and laterally and projects out through a slot *n* in one side of the case.

Pivotally joined to a shaft *m*, supported by the side walls of the casing to depend a short distance in front of the drum, is a series of links or rocker-arms F, each provided with an offset *l* and each pivotally connected at its lower end, through the medium of a link *k*, to the upper end of a lever G. Each lever G is pivotally mounted upon a shaft *j*, supported in the side walls, and is provided toward the upper end with a spring *i*, attached to the rear wall of the casing. The movement of the levers G under the action of the springs is limited by a cross-rod *h*, fixed in the sides of the casing. The levers extend downward through an inclined floor H, provided for the purpose with slots H', which slants backward and is joined to a vertical wall H², which, with the rear of the casing, forms chutes leading to a receptacle I, where the coins collect and are removed through a door J.

The front of the casing is provided with an offset which affords a series of vertically-disposed store-chambers K, adapted to receive packages of gum or other small articles *g*. These chambers are closed at the top by a lid L, but are open at the bottom. At the lower ends of the chambers K the casing is provided with a further offset, affording a ledge M and a vertical wall M', the latter being provided with a series of discharge-openings M². Projecting inwardly from the wall M' at a dis-

tance below the lower ends of the chambers approximately equal to the thickness of a package of gum is a platform N, upon which are slidably mounted a series of delivery-slides P, provided with openings of sufficient area to receive a package of gum. Each of these slides is connected, through the medium of a link Q, to the lower end of the corresponding lever G. Beneath the platform N, which extends substantially flush with the inner wall of the chambers K, is an inclined floor R, affording chutes into which the packages drop to descend by force of gravity to the openings M².

There remains to be described the means (shown in Fig. 4) whereby the drum is caused to remain in correct relation to the slots s', thereby insuring the perfect operation of the machine. For this purpose the shaft t is provided at one end just inside the casing-wall with a rigidly-attached square-shaped plate S. The plate or disk has each of its four edge faces slightly concaved, as shown. Pivoted upon the shaft m is a rocker-arm T', having a convex projection a on its under surface adapted to fit into one of the concaved edges of the plate. The rocker-arm T extends over the plate some distance and is provided at its free end with a spring a', attached to the side wall of the casing, the spring being of sufficient resilience to cause the rocker-arm to force the shaft t and drum to their correct position after the drum has been moved through the medium of the lever D.

The operation is as follows: A coin c is dropped into the proper slot s' and descends till it strikes the baffle-plate r, which directs it into the corresponding vertically-disposed slot t' on the drum-surface. If now the handle of the lever D be shoved down, the lower end is raised, thus rotating the cylindrical segment C about the shaft t. The upper part of the segmental cylinder bears against the coin c and rotates the drum till the coin bears against the downwardly-depending link F, and thus draws the upper end of the lever G forward, forcing the lower end backward and withdrawing the slide P with the entrapped package of chewing-gum g. After the slide P has moved sufficiently over the platform the package drops through the opening onto the incline floor R. This occurs just before the coin passes the offset l, after which the lever D strikes the bottom of the slot n and being released returns to its original position under the action of a spring b, attached to the lever and to the top of the casing. The parts are so adjusted that when the coin has passed the offset on the link F the drum has rotated sufficiently to bring another slot to the vertical position. As above suggested, the provision of four rows of slots ninety degrees apart upon the drum is admirably adapted to this purpose. The rocker-arm T, pressing upon the disks under the action of its spring, effectually prevents the drum from being jarred out of its proper position, and should the le-

ver be released before the drum has been rotated a sufficient distance the spring a', acting upon the rocker-arm, completes the necessary rotation to bring the drum to the proper new position. In the second operation of the lever D the first coin rotates downward from the shoulder l and dropping upon the floor H is guided to the receptacle I. It should be here noted that with my improved vending device it is impossible for a purchaser unfamiliar with the operation of the machine to lose his money, since the device just described insures the correct position of the drum always, and should the purchaser inadvertently push the lever D before dropping in a coin the coin will simply rest in an upright position upon the hood C, sustained by the slot and baffle-plate, till the hood is rocked back out of the way by allowing the lever to rise, when the coin immediately drops into the pocket upon the drum and the operator by again depressing the lever secures his package. It will be understood that by dropping a coin into each slot s' packages from all the chambers might be simultaneously discharged by one operation of the lever. It may be stated also that while the size of the slot is depended on to regulate the size of the coins which may be used in the machine, yet, if desired, a weighing device may be interposed in the path of the coin before it reaches the slots in the drum.

Minor changes in matters of detail within the spirit of my invention may be made. Hence I wish to be understood as intending no limitation by the particular description given above, except as shall appear from the appended claims.

What I claim as new, and desire to secure by Letter Patent, is—

1. In a vending device, the combination with the casing, of a drum journaled therein provided with a pocket, a store-chamber for the articles to be vended, means controlling the discharge from said chamber, a coin-slot in the casing leading to the pocket in said drum, a cylindrical hood partially enveloping the drum and journaled concentric therewith, and an operating-lever connected with said hood and projecting through the casing for rotating the drum through the medium of the hood and coin thereby to operate said controlling means guarding the discharge from said store-chamber, substantially as and for the purpose set forth.

2. In a vending device, the combination with the casing, of a drum journaled therein provided with a pocket, a store-chamber for the articles to be vended, a slide guarding the discharge-opening of said chamber, a hood partially enveloping said drum and journaled concentric therewith, an operating-lever connected with the hood, a slot in the casing leading to the pocket in said drum, a rocker-arm pivotally suspended in the casing adjacent to the cylindrical surface of said drum, a lever pivotally secured in the casing and

operatively joined to the lower end of said rocker-arm and to said slide, and a spring controlling said lever, substantially as and for the purpose set forth.

5 3. In a vending device, the combination with the casing, of a drum journaled therein provided with four longitudinally-extending rows of pockets, separated by an angle of substantially ninety degrees, a series of slots in
10 the casing leading to the vertically-disposed pockets on the drum, a rotatable hood partially enveloping said drum, a lever pivotally joined to the casing and connected with said hood, a series of rocker-arms pivotally sus-
15 pended in the casing adjacent to the drum-surface, vertically-disposed store-chambers provided with discharge-openings, slides guarding said discharge-openings, levers pivotally mounted in the casing and linked at
20 their upper ends to said rocker-arms and at their lower ends to said slides, springs controlling said levers, and guide-chutes for the

coins discharged from the drum, substantially as set forth.

4. In a vending device, the combination 25 with the casing, a drum journaled therein provided peripherally with four pockets at substantially ninety degrees apart, a slot in the casing leading to a point above said drum, a store-chamber and discharging means, of a 30 device for automatically regulating the turning movement of the drum, comprising a square-shaped disk rigid with the drum-shaft provided with concaved edges, a rocker-arm pivoted in the casing and provided with a 35 convex projection fitting said concaved edges, and a spring pressing said curved surfaces together, substantially as and for the purpose set forth.

MORTIMER B. MILLS.

In presence of—

J. H. LEE,

R. T. SPENCER.