Jan. 26, 1926. 1,570,909

F. L. MILLS

SLOT GUARD DEVICE

Filed May 3, 1924

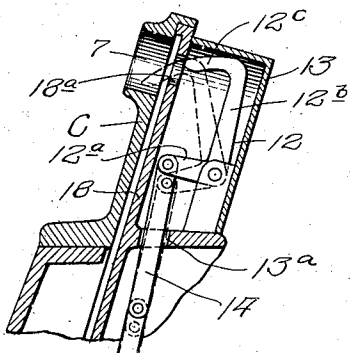


Fig. 1.

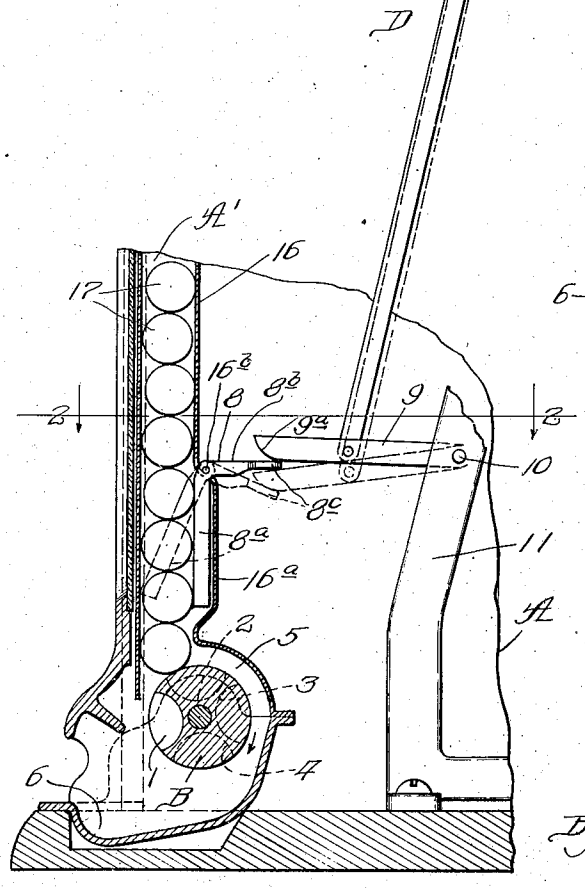
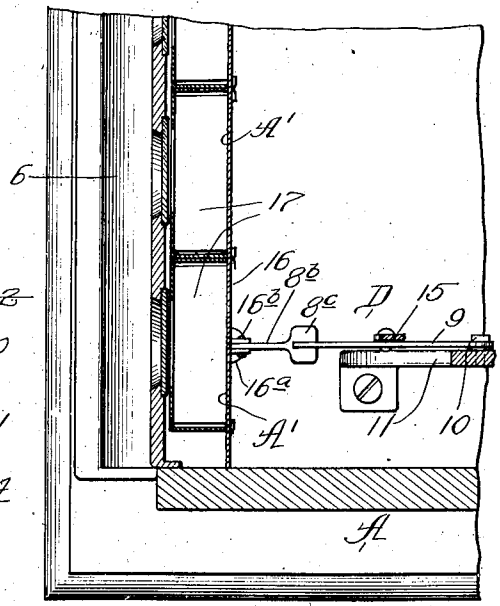


Fig. 2.



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UNITED STATES PATENT OFFICE.

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SLOT-GUARD DEVICE.

Application filed May 3, 1924. Serial No. 710,782.

To all whom it may concern:

Be it known that I, FRED L. MILLS, a citizen of the United States, residing at Oak Park, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Slot-Guard Devices, of which the following is a specification.

This invention relates particularly to equipment for closing or obstructing the passage for a coin or slug, for example, in a coin-controlled vending machine. The primary object is to provide a simple device which will operate to obstruct the coin-slot when the supply of articles is exhausted in any one of a plurality of vending-chambers served by a common ejector.

The invention is illustrated in the accompanying drawing, in which—

Fig. 1 represents a broken vertical sectional view of a vending machine equipped with the improved slot-closing device; and Fig. 2, a broken plan section taken as indicated at line 2—2 of Fig. 1.

In the construction illustrated, A represents a cabinet provided with a plurality of parallel article-compartments A′, each of which is adapted to support or contain a column of articles; B, an ejector common to said compartments; C, a coin-slot into which a coin or slug may be inserted, such coin serving through any suitable coin-controlled device (not shown) to enable the ejector B to be operated; and D, the improved slot-controlling device serving to obstruct the coin-slot when the supply in a compartment A′ becomes exhausted.

The ejector B is shown in the form of a rotatable member having recesses 1, 2, 3, 4, which are arranged spirally to enable articles to be vended in succession from the several chambers A′. At each actuation of the ejector one of the recesses of the ejector receives an article from a compartment and carries the article through a curved passage 5 leading to the exit. The ejected article is deposited in an open chamber 6 from which it can be extracted by the purchaser.

The coin-slot C is provided with the insertion-orifice 7.

The device D comprises a bell-crank lever 8 associated with one of the article-compartments A′, said lever having a depending arm 8^a engaged by articles in the compartment and having a rearwardly extending arm 8^b; an arm or lever 9 connected by a pivot 10 to the frame member 11, the arm 9 having its free end bearing upon the rear end of the arm 8^b; a slot obstructer 12 mounted in a housing 13 back of the slot 7; and links 14 and 15 connecting said slot obstructer with the pivoted arm 9.

The compartment A′ which is equipped with the bell-crank lever 8 has a rear wall 16 which may be of sheet metal. This wall is provided near its lower end with a rearwardly struck portion 16^a which affords a housing for the depending arm 8^a of the lever 8 so that the front edge of the arm 8^a lies normally substantially flush with the inner surface of the wall 16 and is engaged by the lowermost articles in the chamber A′. In the illustration given, the chambers A′ are loaded with articles to be vended which are designated 17. These articles may be rolls of mints, for example. Normally, some of these rolls are interposed between the arm 8^a and the front wall of the compartment, thus holding the arm 8^a in the vertical depending position and causing the arm 8^b to support the pivoted arm 9. The lever 8 is shown supported on a pivot 16^b disposed at the upper end of the housing 16^a. The rear end of the arm 8^b is broadened, as indicated at 8^c, thus affording an adequate bearing for the front end of the pivoted arm 9. The front end of the arm 9 may have a rounded lower edge, as indicated at 9^a. This feature facilitates the assembly of the mechanism, and also affords a better working surface at the front end of the arm 9.

The slot obstructer 12 is provided with a forwardly directed short arm 12^a and an upwardly directed long arm 12^b which is of angular form and has the forwardly curved, or hooked, portion 12^c which is adapted to obstruct the slot 7 when the articles in the chamber A′ become exhausted. The rear wall of the coin-slot C is designated 18. It is provided back of the coin admission orifice 7 with a perforation 18^a through which the hooked portion 12^c of the lever 12 works.

The link 14 which has its upper end pivotally connected with the short arm 12^a works freely through a slot 13^a in the bottom wall of the housing 13.

In the operation of the device, the arm 8^a is normally held in the sheathed position shown in full lines in Fig. 1 by the column of articles in the compartment A′. When

the compartment becomes empty, the bell-crank lever 8 is thrown to the dotted position shown in Fig. 1, the weight of the arm 9 and links 14 and 15 being sufficient to effect this result. When this occurs, the curved portion 12^c of the slot obstructer 12 is thrown to the dotted position shown in Fig. 1, thus obstructing the coin-slot.

The device described is simple, cheap, easily installed and effective for its purpose.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, but the appended claim should be construed as broadly as permissible in view of the prior art.

What I regard as new, and desire to secure by Letters Patent, is:

In a machine of the character set forth, the combination of a vertically disposed elongated article chamber for holding a column of articles, the rear wall of said chamber being equipped near its lower end with a housing, a bell-crank lever pivotally mounted in the upper portion of said housing and having a depending arm normally sheathed within said housing which is adapted to be projected into said chamber, said bell-crank lever having at its upper portion a rearwardly projecting arm, a lever having its free end supported on said rearwardly projecting arm, a coin-slot, a slot-obstructing bell-crank lever pivotally supported back of said coin-slot and having an arm adapted to be projected into the coin-slot and having a forwardly extending actuating arm, and links connecting said second-mentioned lever with said actuating arm and normally supporting said slot-obstructing bell-crank lever in the non-obstructing position.

FRED L. MILLS.