

No. 803,405.

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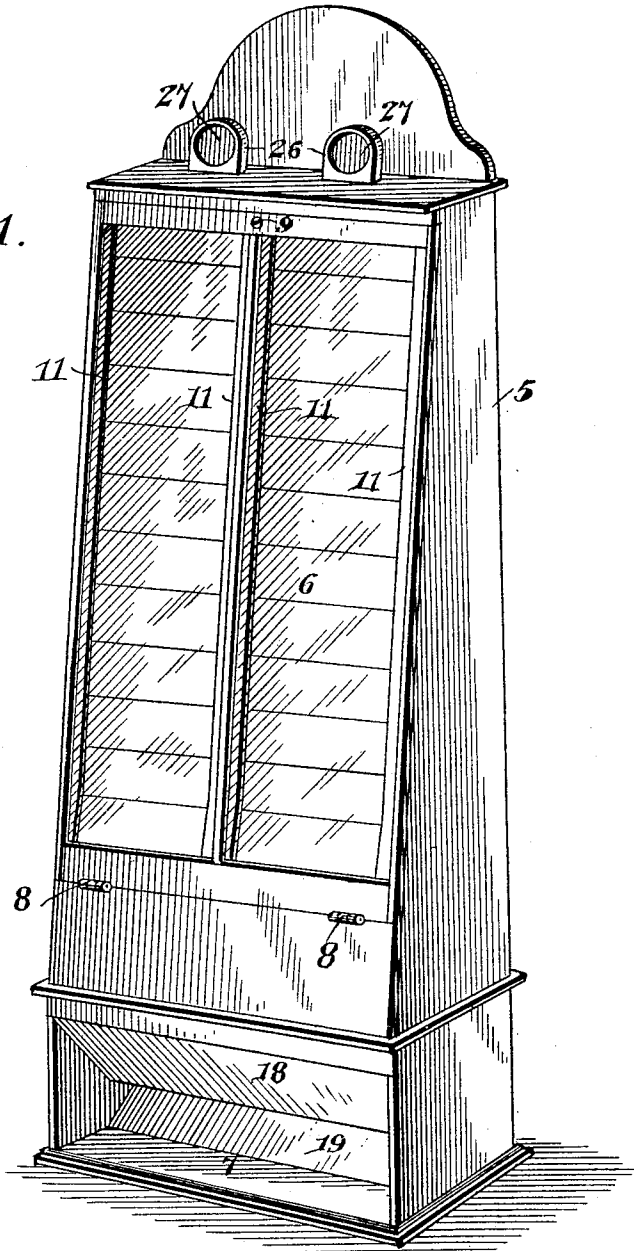
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VENDING MACHINE.

APPLICATION FILED OCT. 14, 1904.

2 SHEETS—SHEET 1.

Fig. 1.



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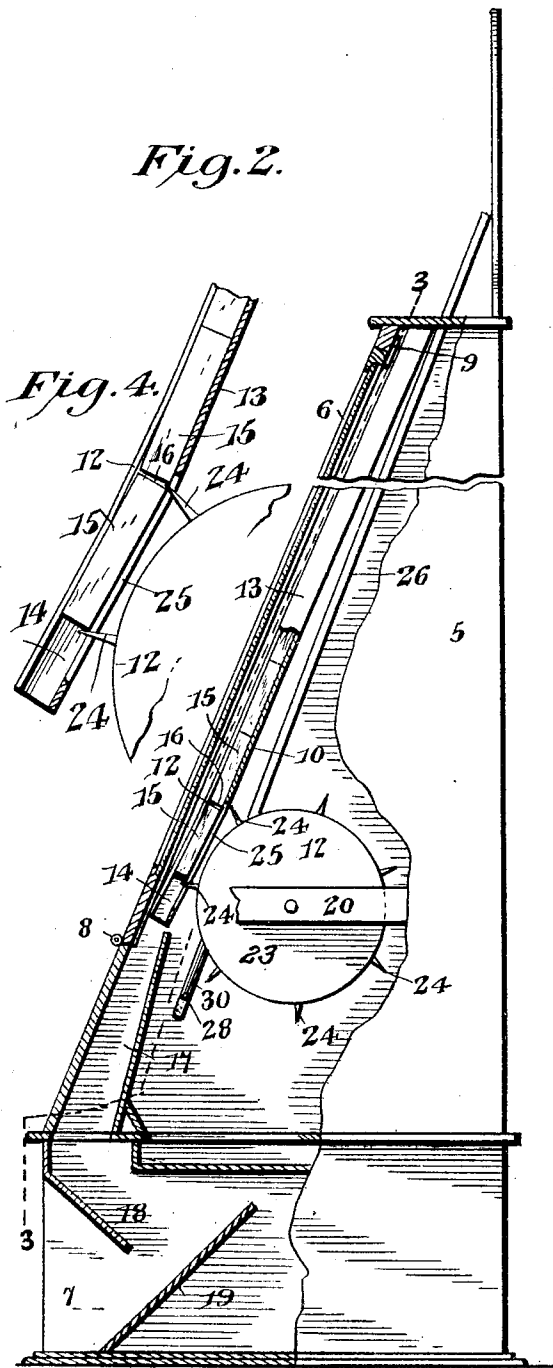


Fig. 2.

Fig. 4.

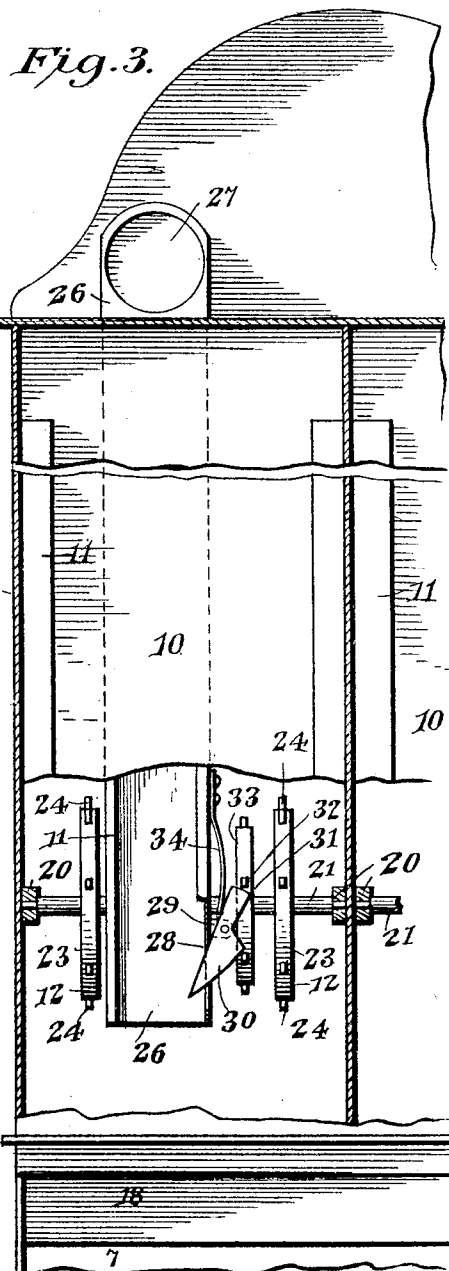


Fig. 3.

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UNITED STATES PATENT OFFICE.

FRANK DAVIS AND LOT Q. SWETLAND, OF PORTLAND, OREGON.

VENDING-MACHINE.

No. 803,405.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed October 14, 1904. Serial No. 228,451.

To all whom it may concern:

Be it known that we, FRANK DAVIS and LOT Q. SWETLAND, citizens of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Vending-Machine, of which the following is a specification.

This invention relates particularly to means for vending packaged articles—such as chewing-gum, candy, and the like—though perhaps useful for other articles, particularly those having flat faces that are abutted when stacked.

The object is to provide novel and extremely simple means for effecting the delivery of the articles one by one and a simple structure whereby such articles are properly arranged in order that the delivery means may separate and discharge such articles consecutively.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view of the machine. Fig. 2 is a view partially in section. Fig. 3 is a sectional view taken on the line 3 3 of Fig. 2; and Fig. 4 is a detail sectional view, on an enlarged scale, of a portion of the article-holding tube and the delivery means.

Similar reference numerals indicate corresponding parts in all the figures of the drawings.

In the embodiment illustrated a casing 5 is employed having an upwardly and rearwardly inclined transparent front wall 6 and a discharge-opening 7 in the front of its lower portion. The wall 6 is hinged at its lower end, as shown at 8, while its upper end is adapted to be locked in its closed position, as shown at 9.

Within the casing are located a plurality of holders and delivering mechanisms for different articles, two being shown in the present instance, though more or less may be employed, as desired. As these holders and their respective delivering mechanisms are similar in all respects, but one will be described.

An article-holding tube 10 is located within the casing in rear of the transparent front wall 6 and is preferably provided with an open front and overhanging front retaining-flanges 11. This tube is provided contiguous to its lower end with a bend 12, forming upper and lower angularly-disposed sections 13 and 14. The tube preferably inclines forwardly and downwardly within the casing,

and the articles 15 located therein will have their ends abutted, as shown. It will be observed, however, that the two adjacent articles located on opposite sides of the bend 12 and arranged, respectively, in the sections 13 and 14 will be supported by said sections in angular relation, so that a recess 16 is formed between them. The lower end of the holding-tube 10 is open and aligns with a delivery-chute 17, beneath which is arranged a downwardly and rearwardly inclined baffle-plate 18, located in rear of the upper portion of the delivery-opening 7 and extending toward and spaced from a downwardly and forwardly inclined baffle-plate arranged in the bottom of the casing in rear of said delivery-opening 7.

Located within the casing on opposite sides of the article-holding tube are horizontal supporting-bars 20, in which is journaled a shaft 21, disposed in rear of the lower end of the tube. This shaft carries spaced wheels 23, provided with radially-projecting teeth 24. The teeth 24 operate through slots 25, formed in the rear of the holding-tube 13 and are movable longitudinally downward through the tube, entering at substantially the juncture of the upper and lower sections 13 and 14 thereof, so as to engage in the recesses 16, formed between the adjacent articles.

The delivering means is coin or check controlled; but the coin or check controlling mechanism constitutes no part of the present application, being covered by claims in a co-pending application, Serial No. 228,452.

An outstanding ear 29, arranged within the casing, has pivoted thereto a dog 30, the upper end of which is provided with a terminal shoulder 31, normally in the path of movement of a plurality of radially-disposed teeth 32, carried by a wheel 33, that is secured to the shaft 21. A spring 34, bearing against the dog, urges the upper end outwardly into the path of movement of the teeth 32, but permits its inward movement under the impulse of a coin passing downwardly through the chute.

When the wheel 33 is locked by the dog 30 against movement, the wheels 23 are in the position illustrated in Figs. 2 and 4—that is to say, one set of teeth 24 is arranged beneath the articles 15, and the lowermost article is located in the lower section, supporting the article above in the lower end of the upper section, thus forming the recess 16, while the

tooth 24 that is located in rear of the tooth supporting the stack of articles is in a position to enter the recess. When the mechanism is operated to deliver an article, the dog 5 30 is first moved so that the shoulder is disengaged from the tooth 32. As a result the shaft, and consequently the wheels carried thereby, is released, said wheels under the weight of the articles being consequently permitted to partially revolve. Thus the tooth 10 beneath the lowermost article is withdrawn from the chute, permitting said article to gravitate down the chute 17 over the baffle-plates 18 and 19 and the discharge-opening. 15 The succeeding tooth 24, however, enters the recess formed between the adjacent articles, and the article thereupon takes the position of the article discharged, so that another recess is formed. In the meantime the dog is 20 released and under the action of the spring returns, so as to be in the path of movement of the succeeding tooth of the wheel 33, and the delivering mechanism is again locked.

It will be evident that the structure is very 25 simple and not liable to derangement. It is operated merely by the weight of the articles and has no exterior mechanism liable to be wrenched or otherwise injured by malicious persons. Attention is particularly invited to 30 the construction of the article-holding tube, whereby the articles are brought into angular relation in order to provide the recesses for the reception of the teeth 24 of the delivery-wheel.

From the foregoing it is thought that the 35 construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction 40 may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is— 45

1. In a vending-machine, the combination with an article-supporting device having upper and lower inclined supporting wall-sections, the lower of which is disposed at an angle to the upper to maintain the adjacent articles in angular relation and thereby forming a recess between them, the lower section having a longitudinally-disposed slot extending 50 downwardly from its upper end, of a revolvable wheel journaled in rear of the lower section below the lower end of the upper section and having teeth that successively enter the recesses between the articles and pass downwardly through the slot of the lower wall-section in projecting relation to said section. 60

2. In a vending-machine, the combination with an article-holding tube comprising upper and lower sections disposed in angular relation and thereby maintaining adjacent articles 65 in angular relation with a recess between them, said lower section having spaced longitudinally-disposed slots extending downwardly from its upper end, of a shaft journaled in rear of the lower section, wheels carried by 70 the shaft and having their peripheries located in line with and in rear of the slots, spaced radial teeth carried by such peripheries, said teeth successively entering the recesses between the articles and operating downwardly 75 through the slots of the lower section, and means for controlling the rotation of the shaft.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

FRANK DAVIS.
LOT Q. SWETLAND.

Witnesses:

E. B. BUTLER,
A. B. SNYDER.