W. T. BRADSHAW & W. E JOOST.

TOOTHPICK VENDING MACHINE.

APPLICATION FILED MAR. 27, 1914.

1,132,239. Patented Mar. 16, 1915.

Fig. 2.

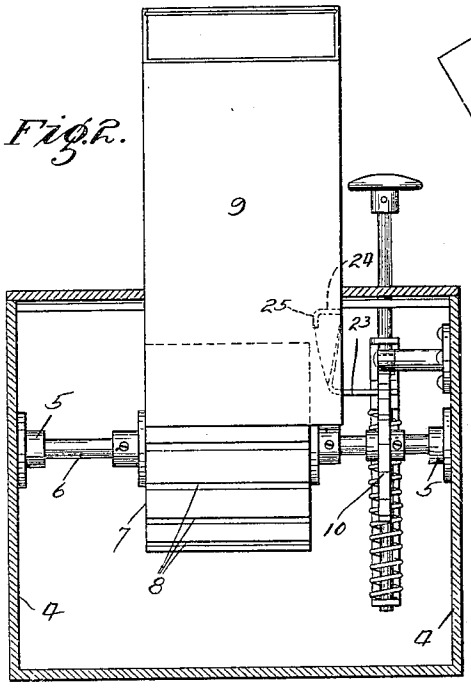



Fig. 1.

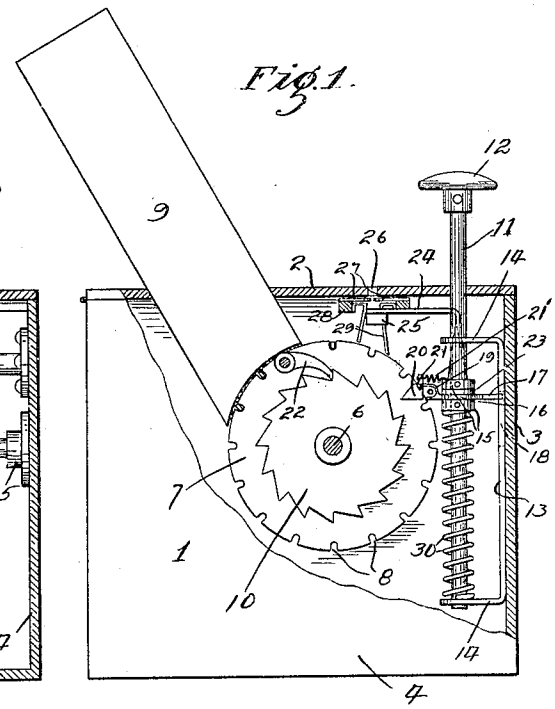



Fig. 4.

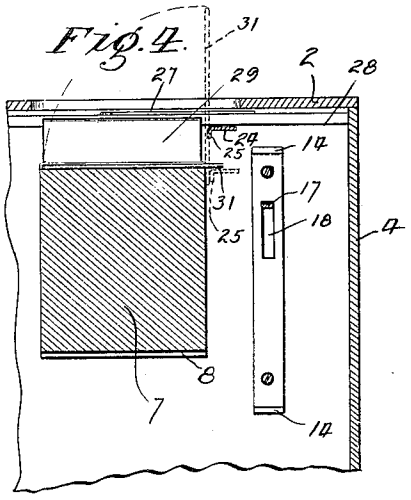
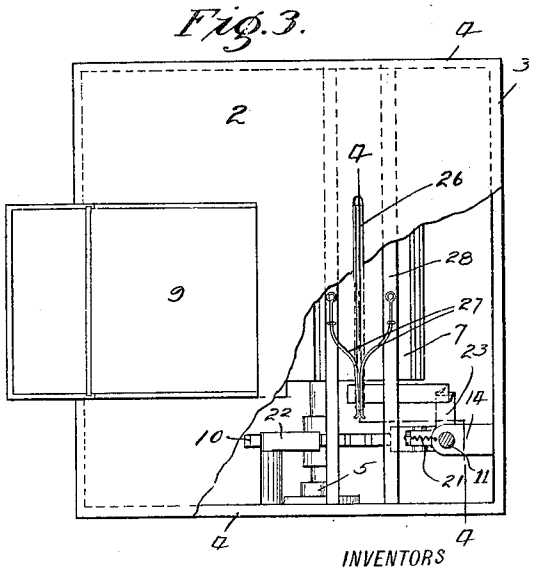



Fig. 3.




WITNESSES:

A. A. Stock

M. A. Stock

INVENTORS

William T. Bradshaw

William E. Joost

BY

Harry C. Schneider

ATTORNEY

THE NORRIS PETERS CO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

WILLIAM T. BRADSHAW AND WILLIAM E. JOOST, OF OAKLAND, CALIFORNIA.

## TOOTHPICK-VENDING MACHINE.

1,132,239. Specification of Letters Patent. Patented Mar. 16, 1915.

Application filed March 27, 1914. Serial No. 827,745.

*To all whom it may concern:*

Be it known that we, WILLIAM T. BRADSHAW and WILLIAM E. JOOST, citizens of the United States, residing at Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Toothpick-Vending Machines, of which the following is a specification.

This invention relates to improvements in receptacles of the single delivery type for matches, tooth picks and the like.

The principal object of our invention is to provide means for dispensing tooth picks to which the latter are held in a receptacle and only one delivered at a time through a suitable slot in the casing.

In our device a grooved roller is used to deliver a single article from a magazine and carry the same to the point of delivery where a novel mechanism is provided for ejecting the same through a slot and holding it in position until taken by the user.

In general our invention produces a new and novel mechanism for effecting these results which is simple in construction and effective in operation. The advantages of dispensing tooth picks with this apparatus are two-fold. In the first place the article can thus be delivered in a sanitary condition and in the second place only one is delivered at a time thereby very materially reducing the number required in large restaurants.

With these and other objects in view our invention consists in the novel construction and arrangement of parts as herein illustrated and described in the specification and as more particularly set forth in the appended claims.

Reference should be had to the accompanying drawing forming a part of this specification wherein,

Figure 1 is a view in side elevation of the device having the casing partly broken away to disclose the interior mechanism. Fig. 2 is a view in section through the rear portion of the device. Fig. 3 is a top plan view with a portion of the lid broken away to disclose the operating mechanism. Fig. 4 is a fragmentary sectional view on the line 4—4 Fig. 3.

Denoting corresponding parts by the same numerals of reference, 1 is a box like casing having a top 2, sides 3 and ends 4, to the latter of which are attached journals 5 wherein is pivotally mounted a shaft 6. Intermediate the length of this shaft is a roller 7 having a plurality of longitudinal grooves 8 of such size that they are adapted to contain a single one of the articles to be dispensed. These articles are contained in an inclined chute 9 having its lower surface curved to conform to the curvature of the roller 7, its front and rear ends being positioned close to the periphery thereof, and having one side projecting beyond the edge of the roller. Between this roller and one of the bearings a ratchet wheel 10 is attached to the shaft 6 having teeth the number of which corresponds to the number of grooves 8.

The mechanism for imparting the intermittent forward motion to the ratchet wheel consists of a plunger 11 passing through the lid of the case and provided exteriorly thereof with a suitable knob 12. Within the case this rod is slidably mounted in the lateral bent ends 14 of a strip 13 secured or fastened to the front wall 3 of the case.

Mounted on rod 11 intermediate the brackets 14 are collars 15 between which is secured a plate 16 having a rearwardly extending arm 17, which fits in a groove 18 in the strip 13, and thus prevents rotation of the plunger and associated parts. The front end of plate 16 is provided with upturned ears 19 between which is pivoted a pawl 20, and these ears are provided with a square shoulder 21 with which the back part of the pawl is adapted to contact and limit the upward movement of the same. The underside of the ears are rounded which allows the pawls to move downward as the plunger rises and a spring 21′ returns the pawl to normal. The pawl is so positioned as to contact with the teeth of ratchet wheel 10 and the length of slot 18 is such that the downward movement of rod 11 moves the ratchet wheel an amount equal to the angular distance between two teeth.

A second pawl 22 is secured to one side of the case and is adapted to prevent the backward movement of the ratchet wheel on the return movement of the plunger. Secured between collars 15 on rod 11 just above the plate 16 is a bar 23, which extends in a lateral direction, is then bent upward, twisted and then bent so as to lie parallel to the end of roller 7. The forward end of the portion 24 is provided with a depending ear 25, which forms a broad surface adapted to contact with the article to be ejected.

Above the end of 24 is a slot 26 in the lid of the casing below which on either side thereof are springs 27 secured either to the underside of the lid or to supporting bars 28, and extending downwardly from the underside of the slot are plates 29 substantially the width of the roller 7 and which form an angular passage adapted to direct the article into the slot 26.

Having thus described the various features of our invention its operation is as follows:—The articles to be dispensed are placed in the chute 9 and are fed by gravity onto the roller 7 and as the latter rotates a single one drops into the slots 8 as the latter moves under the lower edge of the chute. When the rod 11 is depressed the pawl 20 contacts with one of the ratchet teeth moving the latter and the roller so to bring the uppermost slot 8 centrally under the opening 26. At the same time the bar 23 is depressed and the ear 25 is brought into contact with the end of the article which extends beyond the roller 7, this ear being closely in alinement with the side of the roller the article is caught therebetween and the opposite end projecting upwardly as shown in dotted lines in Fig. 4. Owing to the bent and peculiar shape of the bar 23 sufficient spring is secured to allow the latter to accommodate itself to the thickness of the article and to keep the latter pressed tightly against the side of the roller. As the article is raised upward it is directed into the slot by means of the inclined surfaces 29 where it comes into contact with the springs 27 by which it is held, after the rod has been released and raised by the action of spring 30.

It will thus be seen that we have provided a simple and effective device for accomplishing the results set forth in the beginning of this specification and while we have illustrated and described the preferred embodiment of our invention thereof it will be understood that changes may be made in minor detail and construction of design without departing from the spirit thereof or sacrificing any of the advantages.

What we claim is:—

1. In a dispensing receptacle comprising a casing, a drum revolubly mounted therein, an inclined chute having its lower end conforming to the curvature of said drum, one side of said chute overhanging said drum, a plurality of grooves in the surface of said drum adapted to receive the articles to be dispensed, with one end overhanging said groove, a pawl and ratchet mechanism for advancing said drum, an arm operatively connected to the rod actuating said ratchet mechanism, the end of said arm extending to the side of said drum and contacting with the end of the article extending from said slot for the purpose of ejecting the opposite end through an opening in the casing.

2. In a dispensing receptacle comprising a casing, a drum revolubly mounted therein, a pawl and ratchet mechanism for imparting an intermittent forward movement to said drum, a plurality of longitudinal slots in the surface of said drum, a feed chute for supplying the article to be dispensed to said slots, one side of said feed chute overhanging said drum so that the article overhangs said drum, a slot in said casing through which said articles are ejected, an arm adapted to contact with the projecting end of said article and rotate the opposite end to extend through said slot and spring means for holding the article in said slot.

3. In a dispensing receptacle comprising a casing, a drum revolubly mounted therein, a pawl and ratchet mechanism for imparting an intermittent forward movement to said drum, a plurality of slots in the surface of said drum, each adapted to contain one of the articles to be dispensed, a feed chute for supplying the articles to said slots, one edge of said chute overhanging said drum so that the articles as fed extend from one end of said slots, an arm attached to the plunger operating the pawl and ratchet mechanism, the end of said arm extending adjacent the side of said drum and adapted to contact with the projecting end of article as the plunger is depressed, an opening in the casing, guide means for directing the articles to said opening, and springs on each side of said opening to hold said articles.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM T. BRADSHAW.
WILLIAM E. JOOST.

Witnesses:
W. A. Stock,
R. M. Oyarzo.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."