Aug. 23, 1949. L. W. OTIS 2,479,860

TOOTHPICK DISPENSER

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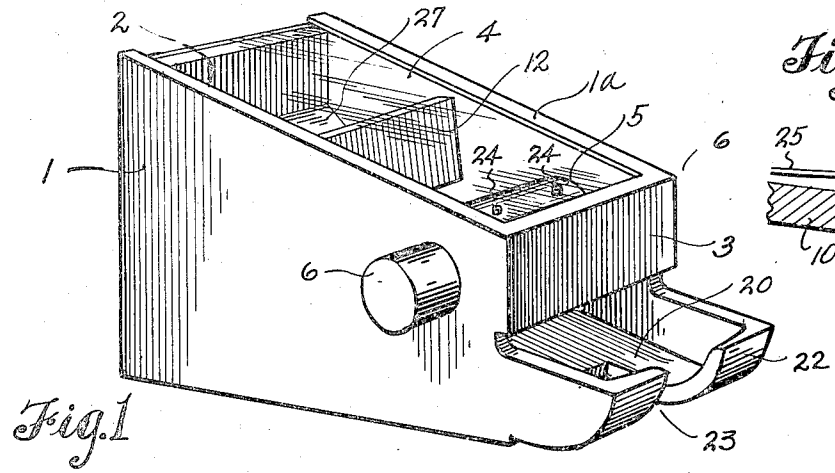


Fig.1

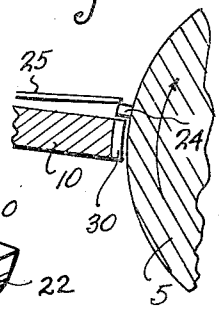


Fig.4

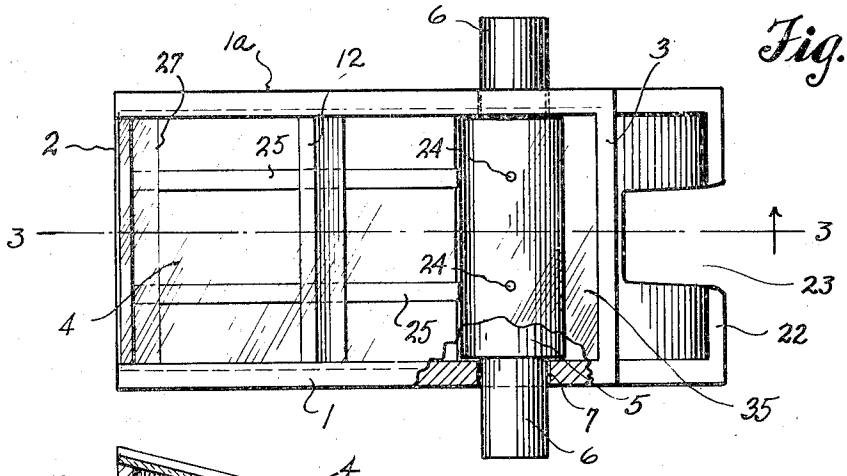


Fig.2

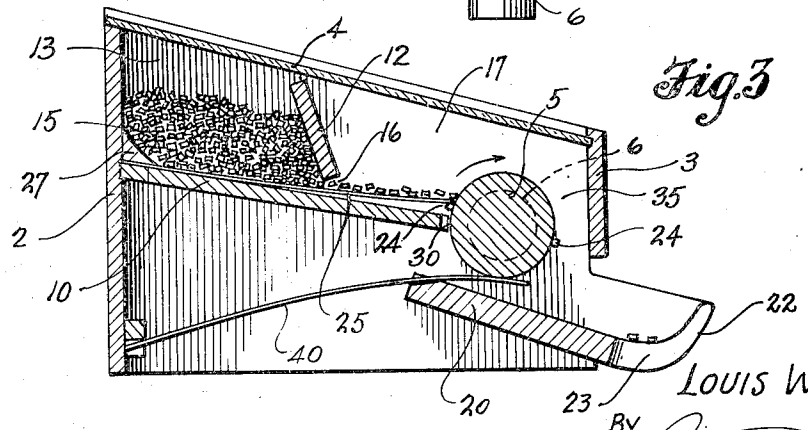


Fig.3

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TOOTHPICK DISPENSER

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3 Claims. (Cl. 312—84)

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This invention relates to toothpick holders and dispensers and it has reference more particularly to a device of a kind suitable for use in restaurants and at lunch counters, in which a substantial supply of toothpicks may be stored and from which they may be dispensed for use one at a time.

It is the principal object of the present invention to provide a device of the above stated character having a storage compartment and embodying a novel arrangement of parts whereby a regulated flow or delivery of the toothpicks from the storage compartment to the delivery element is effected, thus to insure against the dispensing of the toothpicks in excessive numbers.

It is also an object of the present invention to provide a dispensing device including a housing in which the toothpicks will be retained in a sanitary condition and which prevents them being picked out by hand.

Still further objects of the invention reside in the provision of an agitator element of novel kind whereby the tooth picks are caused to advance only as needed from the storage compartment to position to be picked up and discharged by the dispensing member.

Other objects and advantages of the invention reside in the details of construction and combination of parts and in their mode of operation as will hereinafter be fully described.

In accomplishing the above mentioned and other objects of the invention, I have provided the improved details of construction, the preferred forms of which are illustrated in the accompanying drawings, wherein—

Fig. 1 is a perspective view of a toothpick holder and dispenser embodied by the present invention.

Fig. 2 is a top or plan view of the same.

Fig. 3 is a longitudinal, vertical section of the device as seen on the line 3—3 in Fig. 2.

Fig. 4 is an enlarged detail of a part of the dispensing roller and agitator means.

Referring more in detail to the drawings:

In its present preferred form of construction, the device comprises a housing of a box-like character, having parallel opposite side walls 1 and 1a, a rear end wall 2 and a front end wall member 3 that joins the side wall members 1 and 1a across their upper portions, as best shown in Fig. 1. The top of the housing preferably is downwardly and forwardly sloped and is closed with a transparent panel 4 of glass or other suitable material that will permit the user to see the toothpicks that are contained in the device. This panel is held at its edges in grooves formed

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in the wall members and may be slipped out when it is desired to fill the housing with toothpicks.

Revolubly mounted transversely of the housing, slightly spaced from its front end wall 3 and about midway between the top and bottom edges of the side walls, is a horizontally disposed delivery roller 5, formed at its opposite ends with supporting trunnions 6—6 that project rotatably through openings 7 in the side walls 1 and 1a; these trunnions, aside from being supports, serve as handle means whereby the roller may be rotated for the dispensing of the toothpicks as will presently be explained.

Mounted in the housing between the back wall 2 and roller 5 is a bottom wall 10. This is downwardly inclined from wall 2 toward the roller as shown in Fig. 3 and lies substantially in the plane of its axis. Also, extended between the opposite side walls of the housing, above the wall 10, is a partition wall 12 that sets off a compartment 13 at one side thereof in which the supply of toothpicks, as shown at 15 in Fig. 3, may be held. This partition wall 12 is inclined toward the roller and its lower edge is somewhat spaced from the bottom wall 10 to provide a relatively narrow passage 16 between them. This prevents more than one or two of the tooth picks passing at a time from the compartment 13 into the roller containing compartment; this latter compartment being designated by reference character 17 in Fig. 3.

Extended between the opposite side walls of the housing below the roller 5 is a downwardly and forwardly inclined wall 20. This extends beyond the wall 3 and at its forward end has an upturned lip 22 forming a retaining trough in which the dispensed toothpicks will be retained until picked up. The trough has its medial portion cut away to provide a finger recess 23 that gives easy access to the tooth picks as delivered into the trough.

Mounted in the roller in alignment lengthwise thereof, as noted best in Fig. 2, are one or more pairs of studs 24—24. These studs extend about one-sixteenth of an inch from the roller surface and the distance apart of the studs of each pair is somewhat less than the length of the tooth picks that are to be dispensed. In Fig. 3 I have shown the roller as being equipped with two pairs of studs, located at diametrical opposite sides of the roller.

Extending along the top surface of the bottom wall 10 are two parallel spring metal strips 25—25. These strips are fixed at their ends adjacent to the wall 2 by an overlying cleat 27 which

holds the strips yieldingly and flatly against the wall 10, and they extend through the passage 16 and terminate closely adjacent the roller 5 in such position that as the roller is turned in the direction of the arrow thereon in Fig. 3, the paired studs will simultaneously contact with their ends and will slightly lift the strips from the bottom wall then allow them to snap back against it as the studs disengage the strips. This lifting and snapping action of the spring strips effects an agitation of the toothpicks as contained in the compartment 15 and causes them to work through the passage 16 and to move along the strips toward the roller and finally to come to rest thereagainst.

It will be explained that the lower edge of the bottom wall 10 is sufficiently close to the roller surface that the tooth picks cannot pass downwardly between them. Also, the edge of the wall is formed with channels, as at 30 in Fig. 4, through which the studs 24—24 may pass as the roller is turned. A tooth pick that comes to rest against the roller surface will be picked up by paired studs as the roller is turned and will be carried thereby upwardly and over the top of the roller and then discharged downwardly through the space 35 that is between the roller and front end wall 3 and will fall onto the inclined wall 20 and will be retained in the trough. This trough opens upwardly and the tooth pick may be easily picked up therefrom as will be understood by reference to Fig. 3.

Assuming the device to be so constructed, it is used as follows:

First, a supply of toothpicks is placed in the compartment 15, care being taken to see that they are laid parallel and transversely of the compartment and not packed but loosely placed.

Then the roller 5 is rotated by means of one of the trunnion portions that extend to opposite sides of the housing. As it is rotated, the paired studs 24—24 will engage the free ends of the spring strips 25 and the resultant lifting and snapping action of these strips causes the tooth picks in the compartment 13 to be agitated and to advance beneath the partition wall 12 and to move toward and finally come to rest against the roller. Then as the roller is turned, paired studs wil pick up the tooth picks one at a time from the ends of the strips by reason of their limited length, and the tooth picks will thus be carried over the top of the roller and discharged one at a time into the pick up trough.

In order that the roller may not turn too freely, one or more friction spring strips 40 as shown in Fig. 3 are mounted in position to bear against it. As shown, the spring strips are located in the lower part of the housing beneath wall 10 and extend from the back wall 2 forwardly and over the top edge of the inner end portion of the inclined wall 20 and have ends fixed to wall 2 and their inner end portions bear frictionally against the underside of the roller.

Devices of this kind may be made more or less ornamental as desired, and aside from affording a sanitary and convenient dispensing means, they also are attractive to the user.

Having thus described my invention, what I claim as new therein and desire to secure by Letters Patent, is:

1. In a tooth pick dispenser of the character described, a horizontally disposed and rotatably mounted dispensing roller, a compartment in which tooth picks may be held parallel with the roller, having a bottom wall sloped downwardly therefrom to the adjacent side of the roller, paired studs mounted in the roller surface in spaced relationship lengthwise thereof, and projecting a distance for the pick up of a single tooth pick thereon at a time in a dispensing operation, and said strips disposed upon the sloping wall for the passage of the toothpicks thereover and extending transversely to the length of the toothpicks and adapted to be engaged by the paired studs on rotation of the roller to agitate the toothpicks and cause them to feed toward the roller.

2. In a tooth pick dispenser of the character described, a horizontally disposed and rotatably mounted dispensing roller, a compartment in which tooth picks may be held in storage parallel with the roller, having a bottom wall sloped downwardly therefrom to the adjacent side of the roller and a side wall parallel with the roller and spaced from the bottom wall to provide a restricted outlet for the outflow of tooth picks along the sloping wall to the roller and paired studs mounted in the roller surface in spaced relationship lengthwise thereof, and projecting a distance for the pick up of a single tooth pick thereon at a time in a dispensing operation, spring strips disposed upon the sloping bottom wall beneath the stored tooth picks and extended through the restricted outlet and terminating adjacent the roller in position to be engaged by the paired studs during a dispensing operation thus to agitate the stored picks and cause them to feed toward the roller.

3. A tooth pick dispenser comprising a housing, a roller mounted horizontally and rotatably therein and having supporting trunnions extended from the housing for its rotation, in dispensing the tooth picks, a storage compartment in the housing having a bottom wall sloped downwardly to the adjacent side of the roller and a side wall parallel with and spaced from the roller and spaced from the bottom wall to provide a restricted outlet, agitating strips disposed upon the sloping wall beneath the stored toothpicks and extended through the restricted outlet and terminating adjacent the roller, means projecting from the roller surface a distance sufficient for the pick up of a single tooth pick thereon in a dispensing operation and adapted to engage and actuate the agitating strips to effect the feeding of tooth picks thereon through the restricted passage and to the roller for dispensing thereby.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
801,079	Graham	Oct. 3, 1905
1,175,386	Spery	Mar. 14, 1916