Feb. 27, 1940. J. MANFREDI 2,191,573

TOOTHPICK DISPENSER

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Fig. 1.

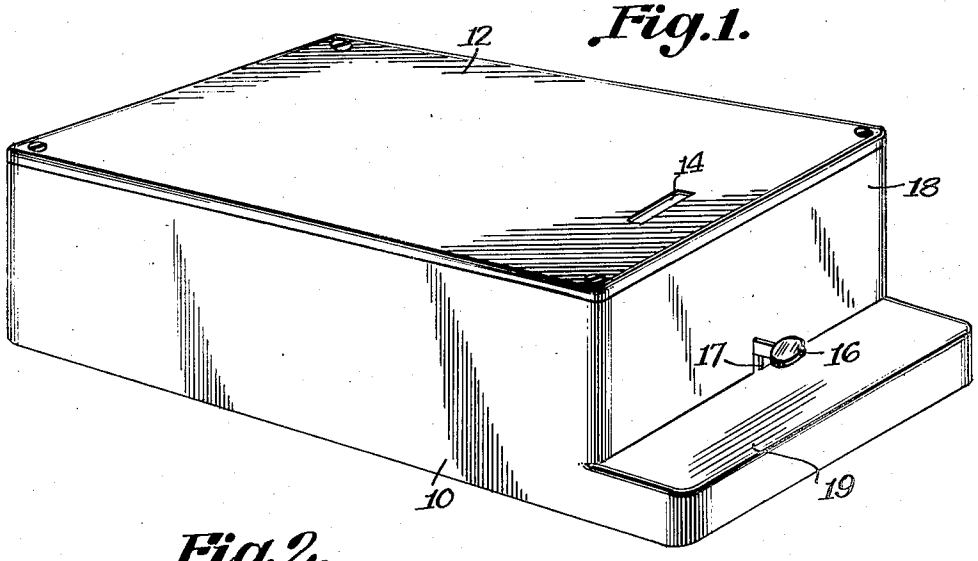
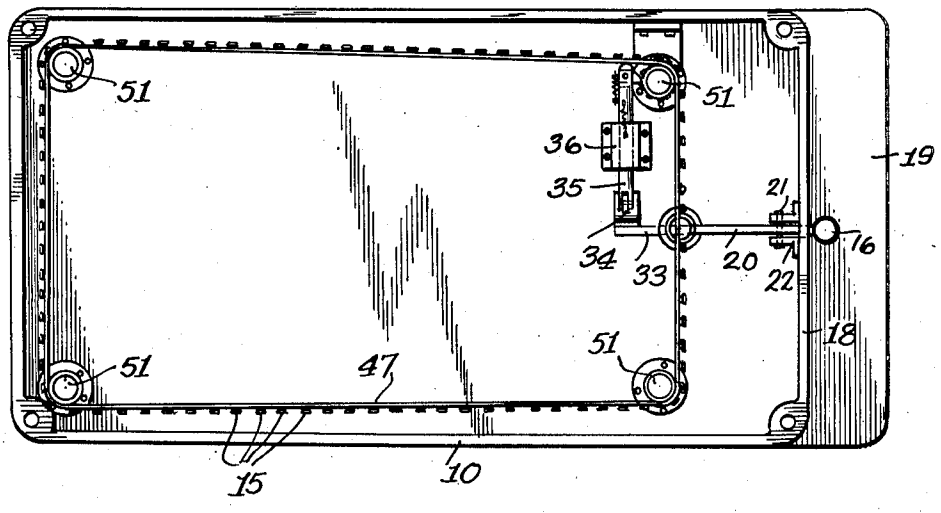


Fig. 2.



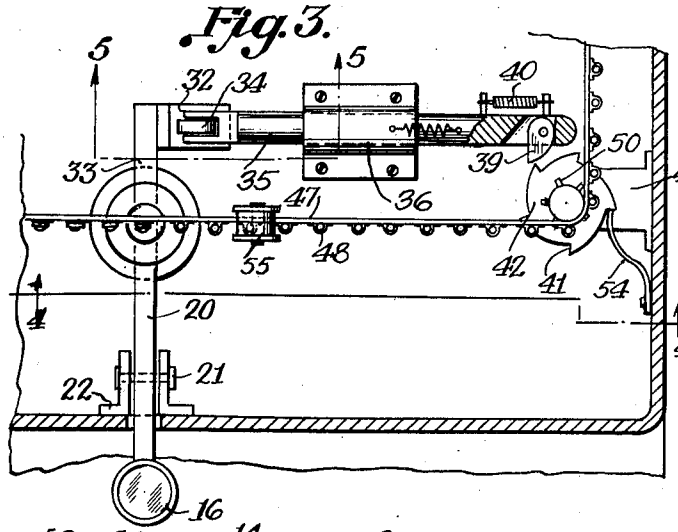
INVENTOR.
JOSEPH MANFREDI.
BY Miller & Miller.
ATTORNEYS.

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Fig. 3.



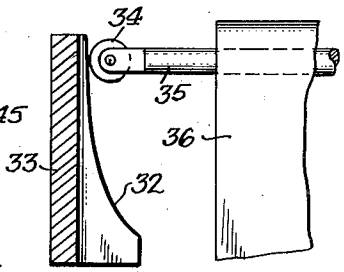


Fig. 5.

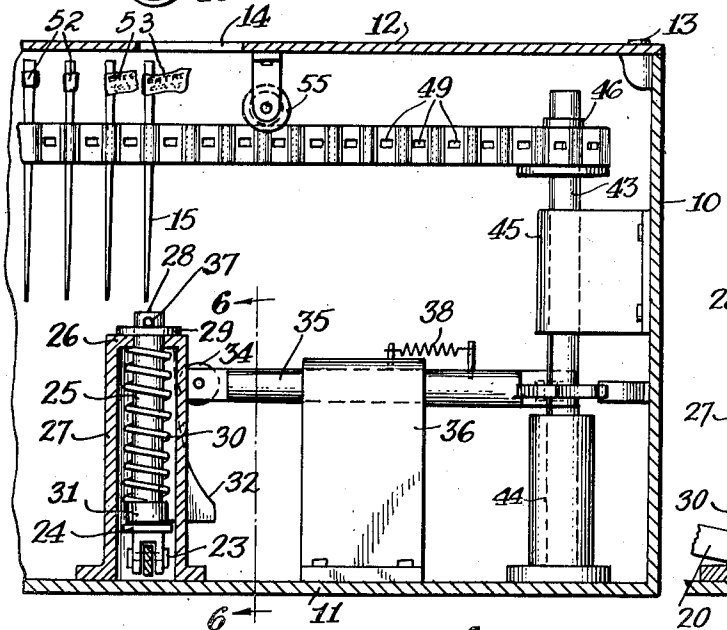
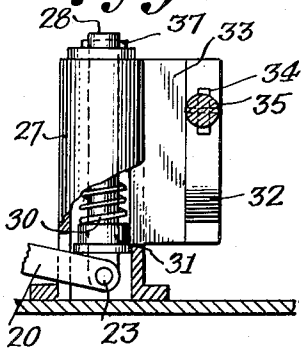


Fig. 4.

Fig. 6.



INVENTOR.
JOSEPH MANFREDI.
BY Miller & Miller.
ATTORNEYS.

Patented Feb. 27, 1940 2,191,573

UNITED STATES PATENT OFFICE

2,191,573

TOOTHPICK DISPENSER

Joseph Manfredi, Monongahela, Pa.

Application December 15, 1937, Serial No. 179,985

2 Claims. (Cl. 312—74)

This invention relates to a toothpick dispenser and has for an object to provide an improved toothpick dispenser especially intended for use in restaurants and other public eating places, but equally usable in the home as well.

A further object of this invention is to provide a toothpick dispenser which especially serves to dispense toothpicks individually without it being possible for any one patron to handle other than the particular toothpick which he is procuring, so that each patron will have the assurance that the particular toothpick he is procuring has not been handled by any previous patron.

Still a further object of this invention is to provide a toothpick dispensing machine which will be equally operative with a toothpick carrying advertising matter thereon, which advertising matter may be in the form of a band or flag mounted on one end of the toothpick and readily removable by the patron.

Yet a further object of this invention is to provide a toothpick dispenser which will dispense a single toothpick at a single operation thereon and necessitate a further operation for each additional toothpick dispensed, thus discouraging unnecessary waste to the toothpicks.

With the foregoing and other objects in view, as will hereinafter become apparent, this invention comprises the constructions, combinations, and arrangements of parts, hereinafter set forth, disclosed, and shown on the accompanying drawings, wherein:

Fig. 1 is a perspective view of the toothpick dispenser.

Fig. 2 is a top plan view with the top cover removed.

Fig. 3 is an enlarged top plan view of the operating mechanism, partly in section.

Fig. 4 is an elevational view of the operating mechanism, being on line 4—4 of Fig. 3.

Fig. 5 is a fragmentary detail view on line 5—5 of Fig. 3, and

Fig. 6 is a fragmentary detail view on line 6—6 of Fig. 4.

There is shown at 10 a housing on a base plate 11 and carrying a top cover 12 detachably secured thereto by screws 13. The top cover 12 has a slot 14 through which the toothpicks 15 are individually dispensed by pressing an operating key 16 which extends through opening 17 in the front 18 of the housing, a step 19 being provided in the front 18 for limiting the downward movement of the key 16.

The key 16 includes a lever 20 pivoted at 21 to a bracket 22 on the inside of the housing front 18 and has its other end pivotally pinned at 23 to the base 24 of a plunger 25. The plunger 25 extends through the top 26 of a cylindrical housing 27 and a pin 37 extends through its end 28 over a washer 29 to prevent it from dropping into the housing 27. The plunger top end 28 comes exactly under a toothpick 15 below the slot 14 in the top cover 12.

A coil spring 30 is placed on the plunger 25 between the cylindrical housing top 26 and the plunger base 24 so as to urge the plunger positively downwardly against the action of the key 16 and lever 20. A collar 31 on the plunger 25 between the base 24 and the coil spring 30 carries a cam 32 on the end of a web 33, extending through a slot in the back of cylindrical housing 27, the web 33 holding the cam 32 so that when it is moved upwardly simultaneously with the plunger 25, it will press against a roller 34 in the end of a transversely movable arm 35 slidably mounted in a support 36 on base 11, a tension spring 38 anchored to the support 36 and the arm 35 normally urging the arm against the cam 32 at all times.

The other end of arm 35 carries a pawl 39 pivoted therethrough and carrying a light tension spring 40 urging it to operative position. This pawl 39 is adapted to catch on a tooth 41 of a ratchet 42 fixed on a rotatable post 43 which is supported in a hollow foot 44 on base 11 and a bracket 45 on the inside of housing 10. On the top of post 43 there is affixed a sheave 46 around which passes an endless belt 47 having toothpick cups or openings 48 in which the toothpick 15 is supported. Between each cup or opening 48 there is an eye 49 and the sheave 46 carries pins 50 to enter these eyes so that rotation of post 43 will positively advance endless belt 47. Other rotatable posts 51 are provided at each corner of the base 11 although if desired, still additional posts may be provided so as to carry a much longer endless belt in a labyrinth path so that more toothpicks may be inserted at one filling. Each toothpick may carry a removable band 52 or flag 53 carrying advertising matter, such as the name of the restaurant or announcements or the like. A leaf spring 54 prevents accidental reversal of the ratchet 42 and post 43. A grooved roller 55 holds the belt 47 from jumping up when the toothpick 15 is ejected.

In operation, the endless belt 47 is placed in position after being filled with toothpicks 15. Pressing key 16 by a patron raises plunger 25 against the bottom of toothpick 15 which is thus projected through slot 14 to become accessible

to the patron, who may then remove it. At the same time cam 32 moves arm 35 against spring 38 to cause pawl 39 to engage beyond the next ratchet tooth 41. Release of the key 16 restores plunger 25 to its lowermost position, aided by spring 30, and withdraws cam 32 from against the end of arm 35, permitting spring 38 to retract arm 35 and cause pawl 39 to rotate ratchet 42, rotating post 43 to advance belt 47 exactly the distance that the cups 48 are spaced apart, thereby bringing the next toothpick over the plunger top 28 of plunger 25, ready for a repetition of the cycle of operation.

The novel features and the operation of this device will be apparent from the foregoing description. While the device has been shown and the structure described in detail, it is obvious that this invention is not to be considered limited to the exact form disclosed and that changes may be made therein within the scope of what is claimed without departing from the spirit of the invention.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

1. A toothpick dispenser comprising a housing, a base on which said housing is mounted, a removable cover on said housing, a toothpick dispensing aperture in said cover, a plurality of rotatable posts mounted on said base, a belt mounted for step by step advancement on said posts, a plurality of open ended toothpick carrying cups on said belt, and a single lever-operated means for projecting a toothpick carried by one of said cups through said aperture and then advancing said belt one step, said means including a plunger under said belt, a belt advancing mechanism actuated by the operation of said plunger and a manually pivoted lever extending over said plunger to raise said plunger to first project the toothpick and then advance said belt.

2. A toothpick dispenser comprising a housing, a base on which said housing is mounted, a removable cover on said housing, a toothpick dispensing aperture in said cover, a plurality of rotatable posts mounted on said base, a belt mounted for step by step advancement on said posts, a plurality of open ended toothpick carrying cups on said belt, and means for projecting a toothpick carried by one of said cups through said aperture and then advancing said belt one step, said means including a plunger under said belt and a belt advancing mechanism actuated by the operation of said plunger, said belt advancing mechanism including a cam mounted on said plunger, an arm, means for mounting said arm for slidable, reciprocable movement, said arm being operable against a yieldable retracting means by said cam, a ratchet carried by one of said posts, and a pawl on said arm adapted to actuate said ratchet on retractive movement to rotate said post and advance said belt.

JOSEPH MANFREDI.