Aug. 2, 1927. 1,637,767

W. H. DELANO

SANITARY STRAW VENDING MACHINE

Filed Nov. 1. 1926

Fig. 1.

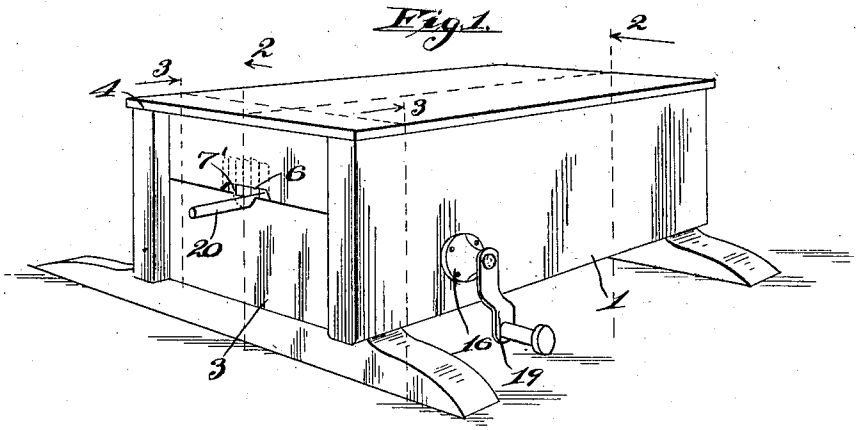


Fig. 2.

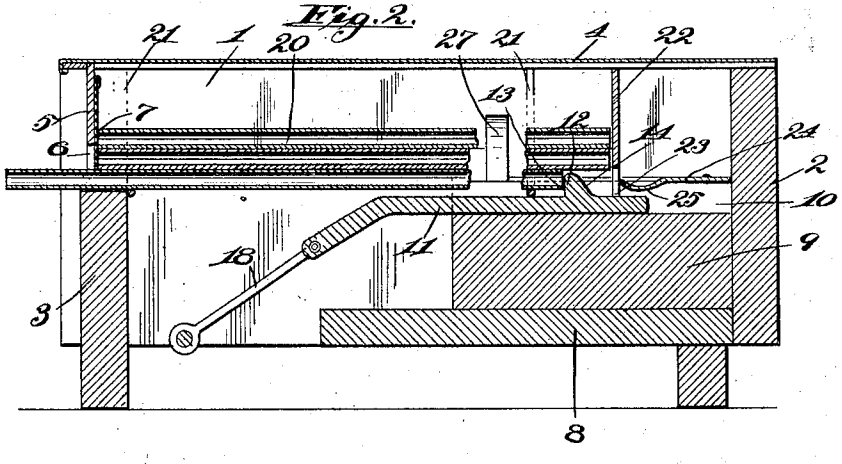
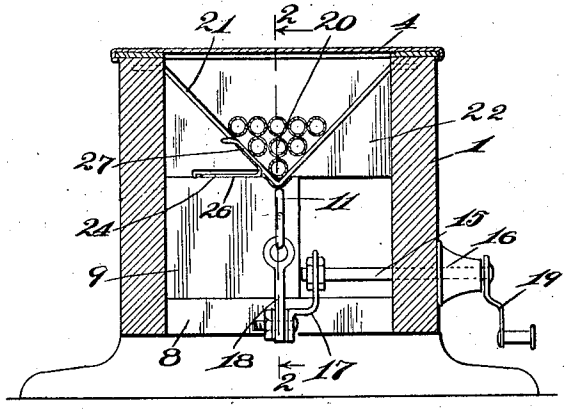


Fig. 3.



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UNITED STATES PATENT OFFICE.

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SANITARY STRAW-VENDING MACHINE.

Application filed November 1, 1926. Serial No. 145,556.

My invention is a sanitary straw vending machine to vend so-called straws utilized in soda fountains or the like for drinking liquids.

An object of my invention is a machine which will vend so-called straws one by one for use in drinking liquids, the straws being held in a closed receptacle or retainer, and, therefore, cannot be touched until each straw is individually vended by the machine and then the straw is only touched by the person who intends using the same.

A more particular object of my invention is to have the straws enclosed in a suitable housing or casing such straws being held in a cradle and vended one by one by a hand operated device outside of the housing, such device projecting the straw through an opening so it may be grasped by the person intended to use the same.

From the construction of my invention, I may use any suitable shape of housing or casing and have the straws preferably hung in an inverted V shaped cradle. A reciprocating plunger has a projected tooth or the like to engage the rear end of the lowermost straw and project it through an opening in the housing or casing. At the same time the reciprocating plunger actuates a vibrating device which vibrates or shakes the straws, causing them to roll downwardly in the cradle.

My invention will be more readily understood from the following description and drawings in which:

Figure 1 is a perspective view of a straw vending machine,

Fig. 2 is a longitudinal section taken on the line 2—2 of Figure 1 in the direction of the arrows,

Fig. 3 is a transverse section taken on the line 3—3 of Figure 1 in the direction of the arrows.

The main portions of the housing comprise opposite side walls 1, a back wall 2, a front wall 3 and a removable top 4, this top being preferably slidable. The upper portion of the front wall 5 is provided with an opening 6; behind said opening is a flexible curtain 7 preferably of rubber having a series of slits 7′ through which the straws may be projected. A base 8 may extend partway of the length of the housing or the full length thereof if desired and supports a block 9, which block has a longitudinal slideway 10 in which the reciprocating plunger 11 has sliding movement. This plunger is provided with an upwardly projecting tooth 12 having a front substantially vertical abutment face 13 and an inner cam face 14.

The plunger is reciprocated in the following manner. A shaft 15 extends through an opening in one of the walls and rotates in a journal 16, a crank 17 is connected to the shaft and by means of a link 18 pivotally connected to the plunger 11 actuates said plunger, the shaft being rotated by a handle 19 on the other side of the housing.

The manner of holding and projecting straws is substantially as follows: The straws designated by the numeral 20 are supported on a pair of cradles 21, these being of V shape and such straws fit substantially snugly between the upper part 5 of the front wall and the partition 22. This partition has a cut-out section 23 at the bottom to allow the traversing of the plunger 11 and the tooth 12.

A vibrator to agitate the straws is constructed by having a resilient metal strip 24 secured to the block 9 preferably upon one side of the groove 10, this strip has a cam shaped bend 25 to engage the cam face 14 of the plunger during the reciprocation of the plunger. The strip metal extends forwardly as indicated at 26 and has a finger at 27 which bears against the straws.

The operation of my straw vending device is substantially as follows:

As above mentioned the top of cover 4 may be removed to deposit straws in the cradle, and as said cradles are of inverted V-shape the straws tend to roll about and there can be only one straw at the lowermost point of the cradle. When the plunger is in its innermost position the tooth 12 is back of the partition 22 so that on turning the handle either way the plunger is drawn forwardly, the tooth engages the rear end of the lowermost straw and projects the same through the opening 6, whence, it may be grasped by the person desiring same and pulled out the remainder of the distance. On the return stroke of the plunger the tooth 12 forces its way longitudinally of the straws and passing under the partition 22 engages the cam portion 25 of the agitator, hence, causing the finger 27 to agitate the straws and roll them so that one straw will occupy the lowermost position. It will be seen that on each stroke the agitating device is operated.

It is to be understood that my invention may be constructed of any suitable shape or design and may be located in some other position besides horizontal provided there are some means to force a single straw into engagement with the tooth of the plunger, said plunger ejecting the straw in reciprocation thereof.

It will be understood that various changes may be made in the details of the construction without departing from the spirit and scope of the invention as defined by the appended claims:

I claim:

1. A straw vending machine comprising a combination, a housing having an opening, a V-shaped cradle for straws, a reciprocating plunger having a tooth to engage the rear end of the lowermost straw, an agitating device comprising a resilient strip, part of said strip being engaged by the tooth upon the reciprocation of the plunger, and a finger in engagement with the straws to agitate same.

2. A straw vending machine comprising a combination, a housing having a removable top or cover, a front wall having an opening therein, a partition, a cradle between the front wall and the partition to support the straws, a slidable plunger having a tooth to engage the rear end of the lowermost straw and project same through the said opening, an agitating device having a resilient strip of metal secured upon the partition, the strip being engaged by the tooth on reciprocation of the plunger, said strip extending forward of the partition, and a finger engaging the straws to agitate same.

3. A straw vending machine comprising a combination, a housing having a base, a block supported thereon, said block having a slideway, a reciprocating plunger slidable in the slideway and having an upwardly projecting tooth, the housing having a front wall with an opening, a removable cover, cradle to support the straws, a partition at the rearward end of the straws having a cut-out section, an agitating device formed of a strip of sheet metal secured to the block upon the partition, the strip being engaged by the tooth, said strip extending forwardly of the partition and having a finger engaging the straws to agitate same.

In testimony whereof I have signed my name to this specification.

WILLIAM H. DELANO.