

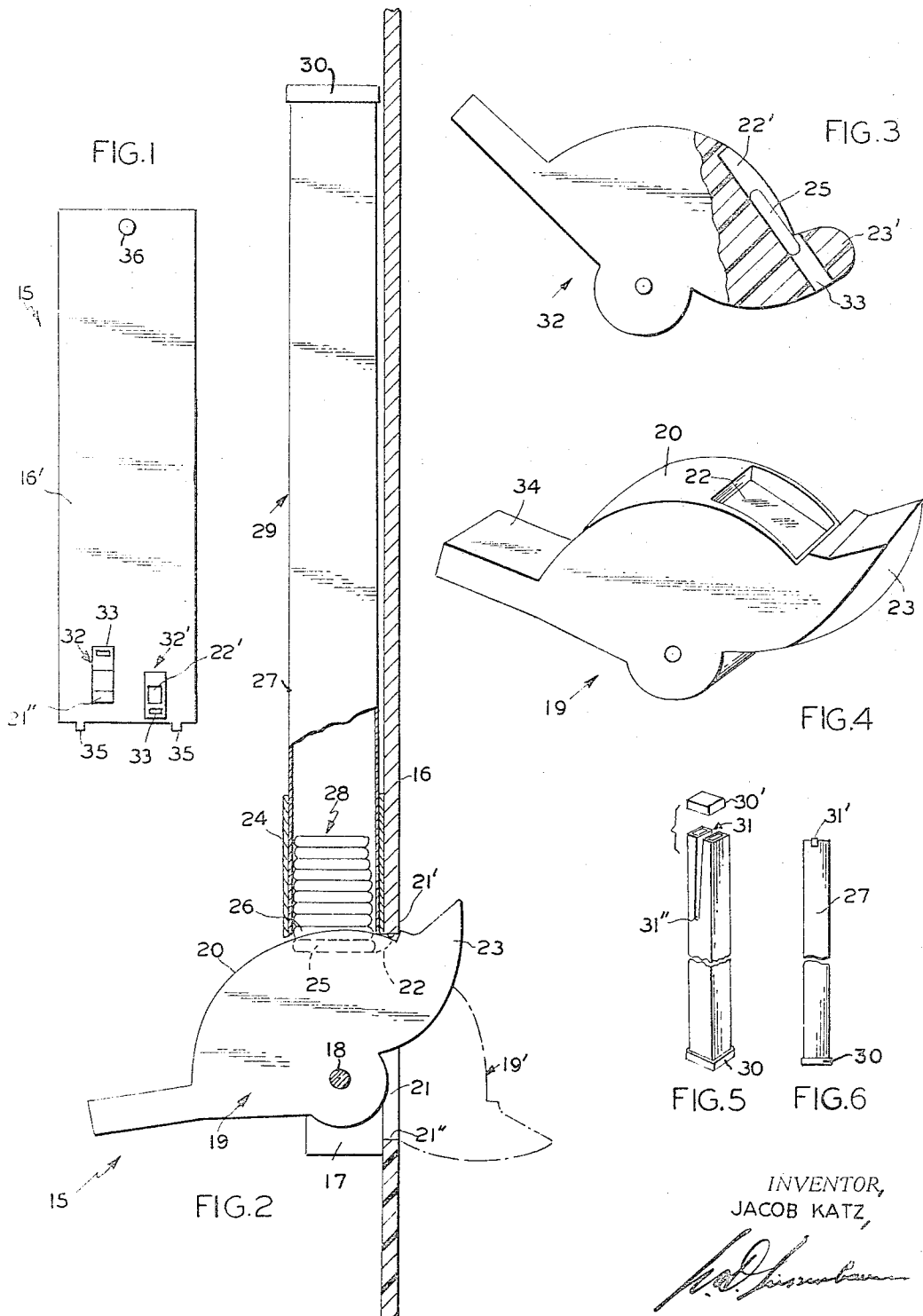
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DISPENSING DEVICE HAVING A PIVOTED ARTICLE DELIVERY MEMBER

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**DISPENSING DEVICE HAVING A PIVOTED
ARTICLE DELIVERY MEMBER**
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1 Claim. (Cl. 221-268)

The present invention relates to dispensing devices, and as an example thereof, one for dispensing one-use soap tablets for use in public washrooms, is shown and described.

The principal object of this invention is to provide a dispensing device of novel and improved construction, for dispensing articles one at a time upon movement of an operating member from a normal rest position to which said member is automatically biased to return without the use of any springs, when it is let go. In one embodiment illustrated herein, the delivered article is presented in a socket in said operating member, from which it can be easily picked. In a slightly modified construction, the item dispensed will fall into the palm of the hand, the thumb of which is used to shift the operating member.

Another object thereof is to provide a dispensing device of the character described, of novel, improved and simple construction, which is reasonably cheap to manufacture, easy to operate and efficient in carrying out the purposes for which it is designed.

Other objects and advantages will become apparent as this disclosure proceeds.

For one practice of this invention, the dispensing device comprises a fixed holder for a vertical stack of tablets, on the back of a panel which has an opening through which extends the finger-piece of an operating member swingably mounted below said stack holder on an axis near and parallel to said panel. In the normal rest position of said operating member, said finger-piece is at an upward position and said member presents a socket immediately below the bottom of said holder which is open; the size of such socket being just to hold one tablet. The periphery of said operating member continues in proximity with the lower end of said holder as the finger-piece is shifted downwardly to expose the socket forwardly of said panel. The operating member is so shaped that it is weighted to bias itself to said normal rest position when the finger-piece is let go. Stops are provided to limit the scope of swing of said operating member.

In one embodiment shown herein, the tablet is picked up by hand out of the socket, and in a slightly modified embodiment, the tablet in the socket falls in the palm of the hand whose thumb is used to press the finger-piece down.

In the accompanying drawings forming part of this specification, similar characters of reference indicate corresponding parts in all the views.

FIG. 1 is a front view of an apparatus comprising two identical tablet-dispensing units embodying the teachings of this invention. The operating member of one of these units is shown in normal rest position while that of the other unit is shown in shifted position and because the hand which shifted it has been taken away, it will automatically return to normal rest position as will be explained. The operating member at the right is the one last referred to.

FIG. 2 is an enlarged section through one of the dispensing device units, taken at line 2-2 in FIG. 1, but showing an operating member of slightly modified construction.

FIG. 3 is a side view of an operating member of the type included in FIG. 1, shown partly in section.

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FIG. 4 is a perspective view showing the operating member included in FIG. 2.

FIGS. 3 and 4 are drawn to the same scale as FIG. 2.

FIG. 5 is a perspective view of a preferred package structure containing a stack of tablets to be mounted as a cartridge, one in each of the dispensing devices, as the supply source therefor.

FIG. 6 is a rear view of FIG. 5.

FIGS. 5 and 6 are drawn to a smaller scale than FIG. 1.

In the drawing, the numeral 15 designates generally a tablet dispensing device, having a front panel 16, on the back of which, framework 17 is carried, to serve as the support for a horizontal shaft 18, on which the article dispensing or operating member 19, is swingably mounted. This member 19 is sector-shaped and is positioned in a general vertical plane, with its arcuate surface 20 uppermost; said surface being concentric with said shaft 18. This operating member extends through an opening 21 in the front panel 16, the edges 21', 21'' of which serve as stops to permit a required limited movement of said operating member. Said arcuate surface 20 has a socket 22 therein, very near the finger piece 23 which is at the outer part of said operating member. At normal rest position of said operating member, when it is stopped at 21', its socket 22 is in back of the panel 16, directly and immediately below the discharge end of a holder 24 of an upright stack of tablets. It is evident that when the operating member 19 is at normal rest position, the bottom tablet 25 will fall into said socket which is made to hold only one tablet. When the operating member is shifted by pressing its finger piece 23 downward to be stopped at 21'', whereupon said operating member will be in the position 19', the laden socket will become exposed in front of the panel 16, for the tablet 25 to be picked up therefrom.

During the movement of the operating member 19 from normal rest position to dispensing position 19', the next tablet 26 will be held in its container tube 27, while the underside of said tablet will be wiped by the moving arcuate surface 20. Upon return of said operating member 19 with its empty socket 22, to normal rest position, the tablet 26, which is now the lowest in the stack 28, will drop into said socket. It is evident that every time the finger piece 23 is pressed down, a tablet will be delivered until the entire supply is used up, whereupon a new supply stack needs to be furnished.

The stack 28 may be loaded into a tall tube (not shown) whose lower end is very near the arcuate surface 20 of the operating member 19, as is well known in the art, but same is quite difficult to load. Instead, a short adaptor tube 24 is provided herein for a cartridge package structure 29, which pack is a convenient way to market them to users of these dispensing devices. Such package consists of a thin-walled cardboard or plastic tube 27, closed by end caps 30, 30' and containing a stack of round tablets 28. The cap 30' is removable, and the end it was on, has a tape 31 thereacross, one short end portion 31' of which is adhered by a pressure-sensitive adhesive on one tube wall, and an intermediate short portion is likewise adhered to the opposite tube wall, with its other end portion 31'' extending along the tube to be accessible to get hold of to pull the tape off said cover tube 27, after the package is inverted and set into the adaptor 24 so that its tape-bearing end rests near the arcuate surface 20 of the operating member 19.

A slightly modified construction for the operating member is shown at 32, which is like 19, except that the socket 22' is communicative with a slot 33 through the finger piece 23', which opens in the forward face of said operating member. When this operating member is in dispensing position akin to 19', the tablet transported in the

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socket 22' will slide out through the slot 33 into the hand of the operator whose thumb is used to press down on the finger piece 23'.

Of importance to note is that the operating member is so shaped, or loaded with inserted weights (not shown), or by having an extension as 34, so that when it is in dispensing position 19', its center of gravity shall be rearward of the shaft 18, whereupon said operating member is biased to automatically return to normal rest position when it is let hold of at dispensing position.

In FIG. 1, the apparatus includes two dispensing units in tandem, the operating members of which are of the type denoted by the numeral 32. The one marked 32 is in normal rest position, and the one indicated by the numeral 32' is shown just as it is let free at dispensing position. These units are associated with a front panel 16'; the assembly being arranged to be set into a wall recess, with said panel as the front cover for such recess, and there is provision (not shown) to receive the downward lugs 35, and to be locked in place by a lock 36, which manner of mounting is believed well known in this art and needs no further explanation, as means for removal so that the supply of tablets can be replenished.

This invention is capable of numerous forms and various applications without departing from the essential features herein disclosed. It is therefore intended and desired that the embodiments shown herein shall be deemed merely illustrative and not restrictive and that the patent shall cover all patentable novelty herein set forth; reference being had to the following claim rather than to the specific showings and description herein to indicate the scope of this invention.

I claim:

A device for dispensing identical articles one at a time, including a frame, a sector-shaped article dispensing member rotatably mounted on a horizontal axis on the frame, a socket provided in the arcuate surface of said member

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to hold one of said articles, means on the frame to hold an upright stack of said articles free for downward movement so the bottom article of said stack sits within said socket, cooperating stop means on said frame and said member to limit the movement of said member to a predetermined part of a revolution, from a normal rest position where the socket is positioned directly under the stack to a second position where the socket is positioned away from the stack; the center of gravity of said member being so positioned that said member is biased by the action of gravity to said normal rest position, and an accessible finger-piece extending upwardly from said member for manually moving said member from its normal rest position to said second position; said finger-piece having a slot therethrough communicative with said socket, whereupon on movement of said member from its normal rest position to its second position, any article in the socket will slide through said slot; the arcuate surface of said member being of such length that it supports the stack of articles when the member is in an article dispensing position.

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