

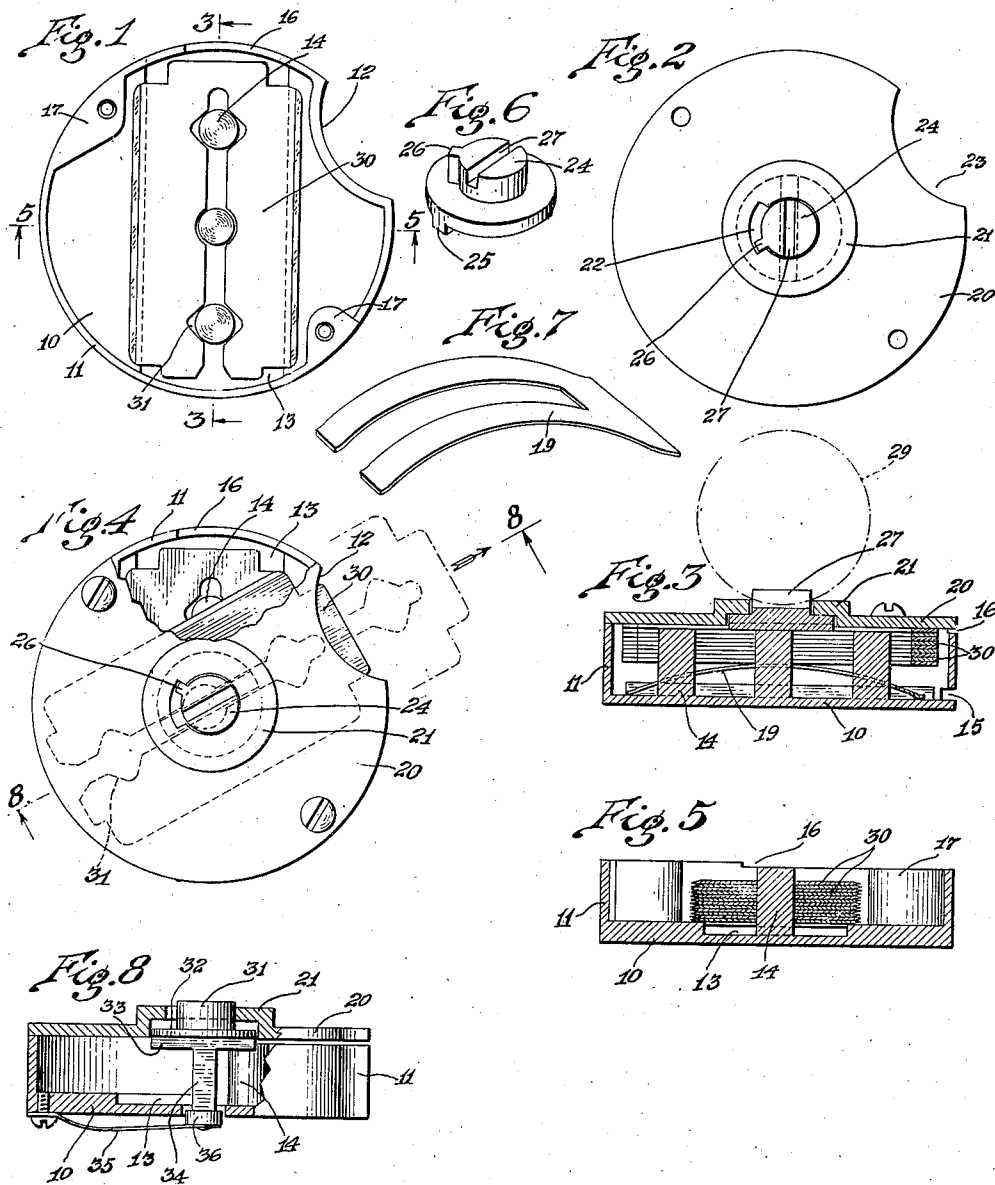
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BLADE DISPENSING CONTAINER

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BLADE DISPENSING CONTAINER

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This invention relates to blade dispensing containers providing a convenient form of packaging razor blades for distribution, and furnishing the user with a reserve supply of fresh blades completely protected against mechanical damage and rusting up to the moment of use.

The fine cutting edge of a safety razor blade is so delicate in its structure that it is easily damaged by any chance contact that may occur before actual use. It is desirable that the manufacturer, who is best qualified to produce the fine edge of the blade, should also protect and pack the blades so that they may arrive safely in the user's hands and be maintained at his disposal until he is ready to proceed with the shaving operation. At that time the user should be able to draw fresh blades one by one from their container as required.

The present invention consists in a new and improved container meeting all the requirements above discussed and having other advantages which will be pointed out hereinafter. Among these is adaptability or capacity for conveniently handling blades of the open-end type, that is to say, blades having two similar sharpened portions separated by a longitudinal medial slot and connected at one end only by a transverse hinge member. Blades of this character have the advantage that, while they may be used in safety razors in which blade-clamping members are detachably connected, they may be also presented by endwise movement to safety razors in which the blade-clamping members are connected to permit only a limited degree of separation.

An important feature of the invention consists in an enclosure for containing a stack of blades of any convenient number in superposed parallel relation, the enclosure having an outlet slot disposed out of line with the stack and means under the control of the operator for engaging a single blade in the stack and swinging or turning it into the outlet slot where it can be conveniently grasped and withdrawn by the user. Preferably and as herein shown the enclosure is circular in contour and the turning of the blade selected for withdrawal is arranged to take place approximately about its geometrical center or axis of symmetry. This permits a particularly compact and symmetrical design of container and the provision of one particularly well adapted for handling double-edged razor blades.

In this connection another feature of the invention consists in so constructing and arranging the blade-deflecting device that in manipulating it the user will naturally hold the container

in such a manner as to place his fingers where they may not be endangered by the blade as it is advanced or directed into its discharging position. As herein shown this is effected by providing a blade-turning key with a spring mounting extending through the bottom of the container and so arranged that in order to render the blade-turning key operative the user must displace the spring mounting and in doing so locate his fingers at points remote from the outlet slot.

These and other features of the invention will be best understood and appreciated from the following description of a preferred embodiment thereof selected for purposes of illustration and shown in the accompanying drawing, in which:

Fig. 1 is a plan view of the container with its cover removed;

Fig. 2 is a similar view of the container cover;

Fig. 3 is a view of the container in cross-section on the line 3—3 of Fig. 1;

Fig. 4 is a plan view of the complete container showing a portion of the cover broken away;

Fig. 5 is a view of the container in cross-section on the line 5—5 of Fig. 1;

Fig. 6 is a view in perspective of the key or blade-directing device;

Fig. 7 is a view in perspective of a spring designed to underlie the blade stack; and

Fig. 8 is a view in elevation partly in section illustrating a container equipped with a modified blade-turning key.

The container herein shown is adapted for use in connection with double-edged open-end blades of the well-known "Gillette" type, that is to say, a flat blade 30 substantially rectangular in outline provided with reentrant corner recesses defining elongated unsharpened end portions in the blade and separated into two similar side portions by a long medial slot which opens out through one end of the blade. The slot in turn is provided with several intermediate enlargements 31 designed to receive the blade-locating projections of the safety razors in which it is to be used. Advantage is taken of these intermediate enlargements or apertures in the blade slot to hold the blades in superposed stack formation in the container. The illustrated container is of such dimension and shaped as to accommodate "Gillette" blades, but it is, of course, not limited in its application to that or to any other particular type of blade but may be substantially modified in these respects to handle blades of other types, all within the scope of the present invention.

The container is circular in outline and gen-

erally flat or disk shaped. A container of this character, one-quarter of an inch in thickness for example, has the capacity for twenty blades of a thickness between .003 and .007. The body of the illustrated container comprises a substantially circular base 10 having an upstanding circumferential wall 11, both having a concave recess 12 or lateral depression roughly 45° in length and approximately one-quarter of an inch in depth. The bottom 10 is provided with a diametrically disposed well 13 in its bottom which is slightly narrower than the width of the blade to be handled and of sufficient width to retain in position the leaf-spring of Fig. 7. Rising from the well 13 in the bottom of the container are three aligned posts or studs 14 these being spaced to enter the intermediate enlargements in the slot of the stacked blades and to locate the blades in this formation, holding them against shifting either transversely or longitudinally and maintaining them always with their sharpened edges disposed well within the circumferential wall of the enclosure. The wall 11 is provided with an inlet slot 15 in line with one end of the well 13 and also with a segmental outlet slot 16 which extends for about 60° along its upper edge. Within the wall 11 are provided diametrically opposite posts or bosses 17 and these are tapped to receive screws by which the cover is held in place.

The cover 20 is generally circular, coinciding with the contour of the circular wall 11 and including also a corresponding concave recess 23. It is also provided with a circular boss 21 centrally located and shaped to present a fixed annular flange. In one wall of this flange is provided a segmental notch 22 which is about 60° in length.

Within the boss 21 is mounted a key 24 shouldered to provide a disk portion fitting beneath the annular flange of the boss 21 and freely rotatable therein. A downwardly projecting rib 25 extends diametrically across the disk portion of the key 24 and above the disk portion is provided an ear 26 arranged to move in the notch 22 of the boss 21 and so limit movement of the key to an oscillation of approximately 45°. In its upper surface the key is provided with a transverse slot 27 supplying convenient means for engaging and rotating the key as by a coin 29 suggested in Fig. 3.

In filling the container above described it may be assumed that the manufacturer will supply a stack of blades to the walled portion of the container as shown in Fig. 1, the cover 20 being removed for that purpose. The blades are disposed in the container in any desired number and with their solid or hinged ends located adjacent to the outlet slot 16. The cover 20 is then secured in place by attaching screws as herein shown, or any other desirable manner, and the manufacturer may then slip the curved leaf spring 19 through the slot 15 into the well 13 beneath the blade stack. The spring 19 is forked to accommodate the blade-locating posts 14 and when once inserted has no tendency to be displaced but serves always to elevate the blade stack and hold the uppermost blade therein pressed against the cover 20. The posts 14 terminate beneath the cover 20 by a distance equal to the thickness of a single blade. Accordingly, all the blades of the stack are held positively against displacement except the uppermost blade which of course is free to move in the space between the tops of the posts and the under sur-

face of the cover 20. The center post 14 of the three is located beneath and in alignment with the axis of the key 24 and its rib 25. The rib 25 is of such width as to fit freely into the slot of the uppermost blade 30 but is positively prevented by engaging the center post 14 from passing through the uppermost blade to make engagement with the second blade in the stack.

It may be assumed that the filled container comes to the user with a stack of blades positioned in alignment as shown in Fig. 1. In order to remove a single blade he has only to turn the key 24 until the rib 25 thereof enters the slot of the uppermost blade, or it may be that the rib 25 will be found initially engaged in the slot of the uppermost blade. Having once made engagement with the blade, however, the user has only to turn the key about 45° in order to rotate the uppermost blade of the stack into the position shown in Fig. 4, that is to say, with its solid or hinge end protruding into the recess 12 of the container. In that position the user may conveniently grasp the unsharpened solid or hinge portion of the blade and pull it outwardly in a radial direction. It will be noted that as the blade is withdrawn the rib 25 remains in the blade slot and so tends to guide the blade centrally through the outlet slot of the container and without danger of having the sharpened edges of the blade touch any part thereof.

In Fig. 8 is illustrated a container of a construction modified in that the key must be lifted by the user and moved to operative position by pressure applied beneath the casing of the enclosure. The purpose of this construction is to force or induce the user to keep his fingers completely out of range of the outlet slot and the blade as it is being delivered in order to avoid all danger of cutting himself as might happen if the container were otherwise handled carelessly.

In this construction the bottom 10 of the enclosure, the upright walls 11, the depression 12, the wall 13 and the two intermediate posts 14 may correspond to the similar elements above described. The key 31, however, is mounted to rotate and to lift within a circular boss 21 formed in the cover 20. The key is provided with a disk portion 32 below which is disposed a diametrical rib 33 of a width fitting freely into the slot of the blade 30. The rib 33, however, is extended downwardly in a flat narrow shank 34 which projects into a central opening in the bottom 10 of the container. A spring 35 is attached to the bottom 10 near one edge and this extends radially beneath the bottom of the casing and carries a button 36 at its free end located directly in line with the end of the shank 34.

The blade stack is located, as before, within the circular enclosure being positively held by the two posts 14 which fit the intermediate enlargements or apertures of the blades, holding them superposed in alignment with their sharp edges out of contact with the wall of the casing. The shank 34 on the other hand passes freely through the central circular aperture of the blade in the stack and may be oscillated with the key 31, being limited only by an ear 26 similar to that shown in Fig. 2. The spring 35 is normally set so that the key occupies its lowermost portion with the rib 33 of the key fitting into two or more of the uppermost blades in the stack and thus anchoring the uppermost blade, which is otherwise free to move above the top of the posts 14, to the blades immediately beneath it, those, of course being anchored by engagement

with the stationary posts 14. However, when the spring 35 is pressed to lift the shank 34 the key 31 is moved upwardly in the boss 21 until its disk engages the upper wall of the boss 21. When this occurs the rib 33 has been elevated to a position disengaging all but the uppermost blade of the stack. Consequently, the key 31 may be oscillated and the uppermost blade turned or swung substantially 45° into delivery position with its unsharpened end projecting into the recess of the enclosure, that is to say, into the same delivering position illustrated in Fig. 4. Thereupon, the user is free to withdraw the uppermost blade and the latter is guided in its movement of withdrawal by the rib 33 of the key which directs the blade safely out through the outlet slot of the dispenser.

The container herein disclosed may be constructed of metal, as for example by die casting, or it may be produced from moulded plastic material, or partly metal and partly plastic material. I prefer in any case to form the cover 20 of a transparent plastic, such as methyl-poly-methacrylate, in order that the contents of the dispenser may be always visible to the user and he may determine at a glance when his supply of blades is running low.

Having thus disclosed my invention and described in detail two illustrative embodiments thereof, I claim as new and desire to secure by Letters Patent:

1. A blade dispensing container comprising walls including an annular wall forming a substantially circular enclosure having an outlet slot for endwise removal of a blade, projections within the enclosure for locating a stack of slotted blades therein out of line with the said outlet slot, spring means within the enclosure for disengaging the uppermost blade of the stack from said projections, and means movable from outside the enclosure for swinging the disengaged blade into line with said outlet slot.

2. A blade dispenser comprising a substantially circular enclosure including an annular wall having a blade outlet slot therein for endwise removal of a blade and a flat cover, projections within the enclosure for holding a stack of slotted

blades and terminating below the cover by approximately the thickness of one blade, and a key mounted rotatably in the cover and having a rib fitting the slot of the uppermost blade in the stack.

3. A blade dispenser comprising a substantially circular enclosure including an annular wall having a blade outlet slot therein and a cover, projections within the enclosure for holding a stack of slotted blades in position at one side of the outlet slot, and a key mounted in the cover of the enclosure and having a rib movable through an angle limited for swinging a blade from the stack to said outlet slot.

4. A dispenser for slotted razor blades comprising a substantially circular casing having a concave depression in one wall and an outlet slot in said wall leading to the depression, projections within the enclosure for holding a stack of slotted blades in a diametrical position at an angle to the direction of blade-movement through the slot, means for disengaging one blade of the stack from said projections, and a key having a rib fitting the slot of the disengaged blade and movable with the blade for directing its path of movement through said outlet slot.

5. A dispenser for open-end slotted blades, comprising an enclosure including an annular wall having a blade outlet therein, projections within the enclosure for holding a stack of open-end blades directed away from the outlet, and a key having a rib fitting the slot of the blades and mounted in the dispenser to rotate for turning a blade from the stack into the outlet, the rib of the key then serving as a guide for the blade as it is drawn from the outlet.

6. A dispenser for razor blades, comprising an enclosure having upper, lower and peripheral walls, the latter having a blade outlet therein, means for locating a stack of slotted blades within the enclosure in a position away from said outlet, a normally inoperative key mounted in the upper wall for turning a blade from its position in the stack toward said outlet, and means associated with the lower wall for rendering the key operative.

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