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dispenser for safety razor blades

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This invention relates to a blade dispenser for unwrapped, double-edge, safety razor blades having the usual longitudinal slots and corner notches, particularly to that type of dispenser which employs a slide for ejecting the blades. It is an object of the invention to design such a dispenser so that only one blade can be ejected at a time while providing an inexpensive structure that need have only one accurate dimension: that of the blade discharge slot. It is a further object of the invention to provide such a dispenser with a removable used blade vault.

In the accompanying drawings I have illustrated a preferred embodiment of my invention in which

Figure 1 is a plan view of the dispenser with the ejector slide retracted to its rearmost position,

Figure 2 is a longitudinal section taken along line 2—2 of Figure 1,

Figure 3 is a transverse section taken along line 3—3 of Figure 2,

Figure 4 is a front end view of the dispenser of Figure 1, but showing a blade in the process of being ejected,

Figure 5 is a perspective view of the upper part of the magazine with the used blade vault removed,

Figure 6 is a perspective view of the removed vault and,

Figure 7 is a perspective view of the plate which constitutes the bottom of the magazine and the top of the vault.

The dispenser shown in these drawings comprises a magazine for a stack of blades and an ejector slide for ejecting the topmost blade of the stack. The magazine itself comprises a top 1, side walls 2 and end walls 3, all molded as a unit from any suitable plastic. The side walls 2, as shown in Figure 5, are only approximately one-half as deep as the end walls 3 and are each provided with a pair of spaced lugs 4 designed to removably secure the used blade vault. This vault, as shown in Figure 6, comprises a single sheet of metal bent into channel form to form a bottom 5 and side walls 6. These side walls are provided with longitudinal grooves 7 designed to snap over and embrace the lugs 4. The open ends of the vault are closed by means of the downwardly extending end walls 8 of the magazine.

Mounted upon the bottom 5 of the vault is a plate 8 having downwardly extending supporting flanges 9 which rest on the bottom of the vault. This plate constitutes the top of the vault and the bottom of the magazine. Two springs 10, lanced from the plate 8, are bent upwardly and serve to press a stack of blades against the underside of the top 1 of the magazine.

The underface of the top is provided with two downwardly extending spaced longitudinal guide ribs 11, the side walls with two inwardly extending guide ribs 12 and the front wall 3 with two inwardly extending guide ribs 13. The ribs 12 and 13 are designed to fit within the corner notches of the blades to hold them in vertical alignment and the ribs 11 are designed to align the topmost blade with the blade discharge slot 14. This slot is formed at the juncture of the top 1 and the front end wall 3, as shown best in Figures 2 and 5. The top terminates short of the front end wall and the front end wall terminates some distance below the top. The ribs 13 extend upwardly slightly beyond the upper edge of the front end wall, terminating below the bottom plane of the ribs 11 a distance greater than the thickness of one blade, but less than the thickness of two. It is this space between the upper ends of the ribs 13 and the lower faces of the ribs 11 which constitutes the effective discharge slot. The ribs 12 and 13 being slightly tapered, as shown, exert a funneling action on the blades so that maximum edge clearance is afforded at ejection.

The top 1 of the magazine is provided with a centrally located longitudinal slot 15. Lying below the slot and between the ribs 11 is an ejector slide 16 provided with a head 17 which extends through the slot 15 and overlies the top 1. This slide is provided, near its rear end, with a downwardly extending blade pickup step 18 pressed from the metal constituent of the slide, and a tongue 19 which projection 19 pressed upwardly from the middle of the slide just in front of the blade pickup step 18. The slide normally occupies the position shown in Figure 2 at the rear end of the slot 15, the greater part of its length overlying the blades.

Contained within the magazine is a stack of blades 20 centered by means of the ribs 12 and 13 and pressed against the ribs 11 by means of the springs 10, as shown best in Figure 2. The topmost blade is thus in alignment with the blade discharge slot 14, and may be ejected from the magazine as follows: The thickness of the slide 16 being substantially the depth of the ribs 11, it lies between those ribs and overlies the topmost blade. The blade pickup step 18 however, projecting below the lower face of the slide a distance less than the thickness of one blade will engage the topmost blade when the slide is moved forward. In order to facilitate that removal and to avoid the necessity of accurate machine work I have provided the projection 19 previously described. This projection bearing against the underface of the top 1 tilts the slide 16 downwardly and rearwardly, as shown in somewhat exaggerated form in Figure 2. This, in turn, slightly depresses the rear end of the blade stack 20 and facilitates the engagement of the blade pickup step 18 with the rear end of the topmost blade. Movement of the slide toward the front of the magazine causes the topmost blade to move forward through the exit slot. At the same time the downward pressure on the stack occasioned by the effective backward taper of the pusher, due to the action of the projection 19, causes the emerging blade to be slightly warped, as shown in somewhat exaggerated form in Figure 4. This action tends to hold the blade firmly in position until it is withdrawn by the user.

When a blade has become dull and is to be discarded, it is removed from the razor and inserted into the used blade vault through a transverse slot 21 in the bottom 5. A sharp new blade is thereupon ejected by proper manipulation of the slide 16. The vault will hold the entire complement of blades originally loaded in the magazine so that when the magazine is emptied the vault is full. It can then be removed from the magazine by springing the side walls 6 to free the grooves 7 from the lugs 4, and the used blades can be properly disposed of. The magazine may then be re-loaded with a stack of sharp blades and the plate 8 and the vault returned to position.

I claim:

1. A dispenser for safety razor blades comprising a generally rectangular new blade containing upper chamber member having a top wall, depending front, rear and side walls, and an open bottom, said front wall having a discharge mouth at substantially its juncture with the top wall and said front and rear walls being each substantially twice as deep as said side walls, a vault for used
blades comprising a used blade containing lower chamber member having a bottom wall, upstanding side walls, and an open top, a partition member interposed between the two chamber members and forming the bottom of the upper member and the top of the lower member, said partition member comprising a sheet metal plate having integral spring finger means projecting upwardly into the upper chamber member for yieldably supporting a stack of new blades therein for sequential discharge through the front wall mouth of said member and having flanges depending from its opposite side edges with the free edges of said flanges supported by the lower member and the side margins of the partition member at the juncture of said flanges underlying the edges of the side walls of the upper member, and means holding the upper and lower members and the partition member detachably clamped in assembled relation with the front and rear walls of the upper member closing the front and rear of the lower member, said means comprising cooperating lugs and slots formed respectively on the juxtaposed surfaces of the side walls of the two chamber members.

2. A dispenser as set forth in claim 1 wherein the upper chamber member is made of molded plastic and includes integral spaced ribs for aligning and guiding blades in said chamber.

3. A dispenser as set forth in claim 1 wherein the bottom wall of the lower chamber member is slotted at one end portion for admission of used blades.

4. A dispenser as set forth in claim 1 in which the flanges of the partition member are seated on the bottom wall of the lower member.

5. A dispenser as set forth in claim 1 wherein portions of the front and rear edges of the lower member extend beneath the front and rear walls respectively of the upper member and are engaged therewith.

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