

Jan. 18, 1944.

M. HOLLIS

2,339,480

BLADE MAGAZINE AND PACKAGE

Filed Aug. 28, 1942

2 Sheets-Sheet 1

Fig. 1

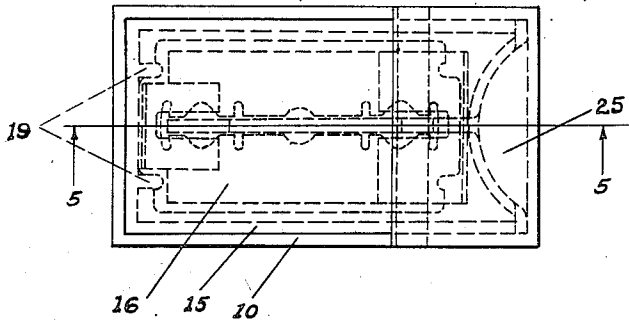


Fig. 2

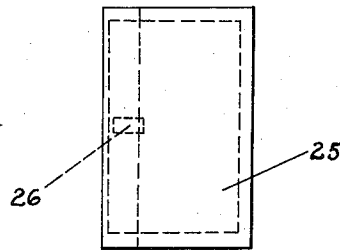


Fig. 3

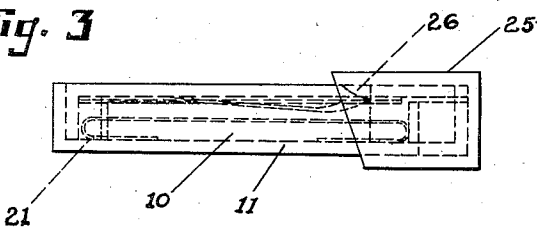


Fig. 4

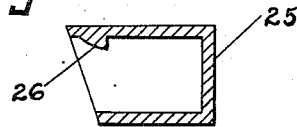


Fig. 5

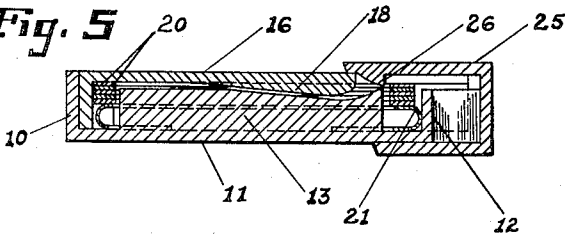


Fig. 6

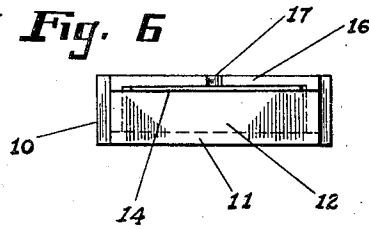
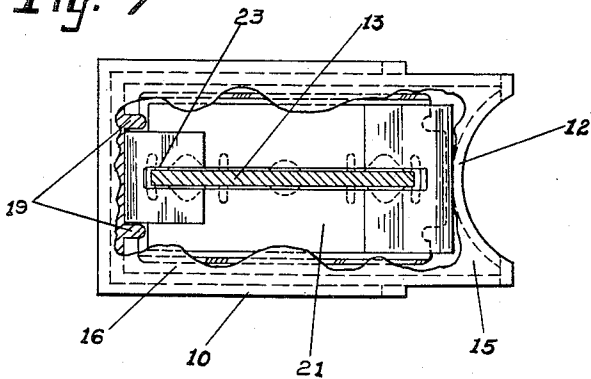


Fig. 7



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2 Sheets-Sheet 2

Fig. 8

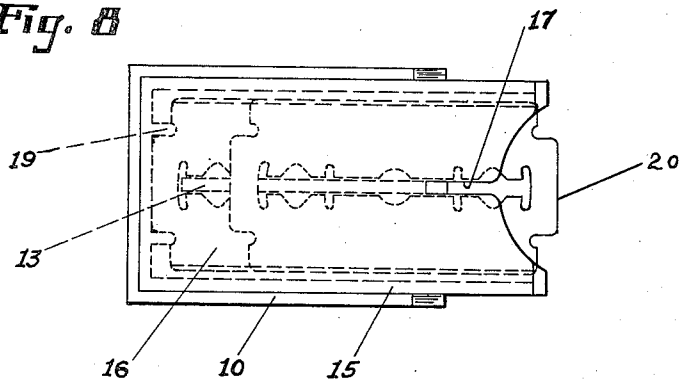


Fig. 9

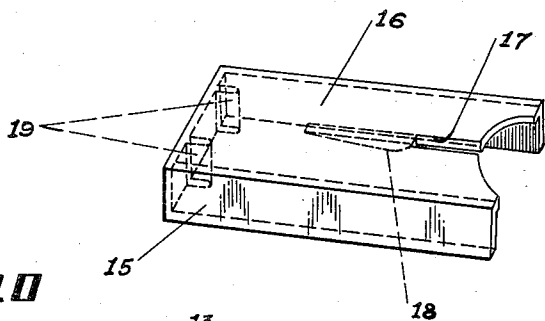


Fig. 10

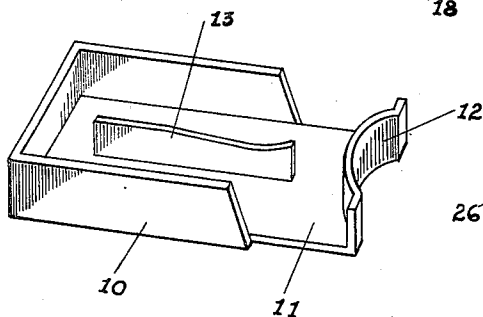


Fig. 11

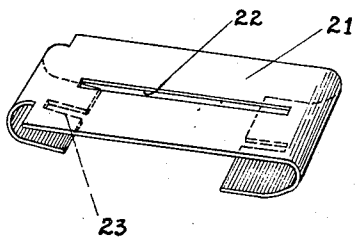
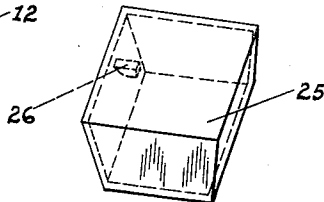


Fig. 12

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UNITED STATES PATENT OFFICE

2,339,480

BLADE MAGAZINE AND PACKAGE

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Application August 28, 1942, Serial No. 456,517

9 Claims. (Cl. 206—16)

This invention consists in an improved package or magazine for safety razor blades or other fine edged blades. It may be used, if desired, for dispensing blades in sale to the public, to keep a reserve supply of blades in fully protected condition and to deliver them one by one as required for use in a safety razor or other holder.

The general object of my invention is to improve packages or magazines of this type in respect to security of the product and convenience and safety of the user. It is important that a magazine should be capable of being easily filled by the manufacturer, by automatic machinery if desired, and that the blades in the magazine should be maintained with their sharp edges out of contact with all parts thereof, not only while in the magazine but when being withdrawn therefrom. If this is not done reliably the skill and care of the manufacturer in producing exceedingly fine keen cutting edges in his blades goes for naught because the slightest contact in withdrawing the blade from the magazine is likely to disturb the delicate structure of the blade edge. All these conditions are met in the package or magazine of my invention. It is provided internally with positive means for locating the stack of blades out of contact with the walls of the magazine and in line with the delivery opening. The interior of the magazine and its internal blade-locating means are fully exposed when the top or inner casing is removed, and when the magazine has been filled the two may be securely attached without in any way disturbing the blade stack.

An important feature of the invention consists in a telescopic cap or cover having, first, the function of completely closing and sealing the magazine so that the blades are completely protected from moisture and, second, the function of partially withdrawing a blade from the stack in the magazine when the cap is removed. This is accomplished as herein shown by providing the cap with an internal tooth or detent which is arranged to engage an aperture in the uppermost blade of the stack through a slot provided for that purpose in the inner casing of the magazine. Accordingly, when the cap is removed the uppermost blade in the stack is drawn after it either completely from the magazine or sufficiently to permit the user to grasp it without any danger of cutting himself.

It is important in blade packages or magazines having a narrow outlet slot to prevent positively the danger of two blades being jammed at the same time in the slot. This undesirable occur-

rence is positively prevented in the magazine of my invention by providing a blade depressing rib in the top of the magazine leading toward the delivery slot. When a slotted blade is drawn forwardly, and advanced through the outlet slot, its solid end portion will encounter the blade-depressing rib. The blade itself will, therefore, be depressed as its solid end passes along the rib and all the blades beneath it will be correspondingly depressed and thus carried positively below the exit slot.

Accordingly, another feature consists in a pair of blade-locating ribs arranged within the enclosure of the magazine in opposed relation upon the top and bottom of the enclosure and spaced slightly from each other and having mating sinuous contours. The blade stack is registered upon the lower rib except for the uppermost blade thereof which is pushed upwardly by the stack and a spring beneath the stack upon the uppermost rib. When that blade is ejected its solid rear end follows the sinuous contour of the upper rib and depresses all the blades below as above explained.

An optional but very attractive feature of the casing employed in the magazine of my invention is that it may be transparent so that at a glance the user can determine how many unused blades he has in reserve. Accordingly, I prefer to employ Vinylite or other transparent synthetic resin for the entire magazine or at least for sufficient of it to expose fully to view the blades contained therein.

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 drawings, in which—

Figs. 1 and 2 are respective plan and end views of the complete magazine;

Fig. 3 is a corresponding view in side elevation;

Fig. 4 is a view of the cap in central longitudinal section;

Fig. 5 is a view of the complete package or magazine in longitudinal section;

Fig. 6 is an end view of the magazine with the cap removed;

Fig. 7 is a plan view partly in section of the magazine with the cap removed as seen from beneath;

Fig. 8 is a plan view of the magazine with the cap removed showing one blade partially withdrawn;

Fig. 9 is a view in perspective of the inner casing member;

Fig. 10 is a corresponding view of the outer casing member;

Fig. 11 is a view in perspective of the cap; and

Fig. 12 is a view in perspective of the spring.

The magazine herein shown comprises inner and outer casing members 10 and 15 of transparent material which, in the finished magazine, are fitted together with transparent cement and form an integral rectangular enclosure. The outer casing, as shown in Fig. 10, comprises side walls and a flat bottom 11 which extends forwardly beyond the ends of the side walls, the latter terminating in inclined edges. At its forward end the bottom 11 carries an upstanding outwardly concave wall 12, the upper edge of which constitutes the lower edge of the delivery slot of the magazine. The outer casing is also provided with a straight upstanding blade-locating rib 13 extending symmetrically between the side walls of the casing and spaced at its ends from both the rear and the front concave wall of the casing. The upper edge of the rib 13 is straight and parallel to the bottom of the casing for little less than half its length while the forward part of its edge is concaved in a long smooth slope giving a sinuous contour to the edge as a whole.

The inner casing, as best shown in Fig. 9, is also rectangular in shape and includes side walls spaced to fit snugly within the side walls of the outer casing 10 and a rear wall. Its top wall 16 terminates in a concave front edge corresponding in curvature to the curvature of the concave wall 12 of the inner casing. The top 16 of the outer casing is provided with a central longitudinal slot 17 which extends inwardly for about one-half an inch from the concave front edge of the top. To the rear of the slot 17 and in alignment therewith is provided an internal depending blade-depressing rib 18 having a lower convex edge which corresponds in curvature to or mates substantially with the sinuous edge of the blade-locating rib 13 already referred to. The two ribs are arranged in vertical alignment and spaced from each other by a slit that permits the passage of a single blade with clearance between them. The rear wall of the inner casing is provided with a pair of spaced vertical ribs 19 which are arranged to engage corresponding notches formed in the corners of the blade. It will be seen that the outer casing member 10 has no top and the inner casing member 15 has no bottom. The package is completed by assembling the two casing members as shown in Figs. 1, 3, 5 and 8 and cementing them together. Where the package is used to dispense blades by the manufacturer to the public a stack of blades to the number of eight or ten or more may be inserted by automatic machinery before the two casings are cemented together.

Within the complete casing is provided a leaf spring 21 best shown in Fig. 12. This is rectangular in outline and of sufficient length and width to fit with clearance within the casing. It is longitudinally slotted in its main body portion at 22 to receive a blade-locating rib 13. Its ends are intumed beneath the body of the spring and these too are slotted at 23 to receive the rib 13. The spring may be made of Vinylite or other transparent resilient plastic material or it may be made of metal, if preferred. If it is transparent the stack of blades within the enclosure may be inspected from either the top or bottom of the package.

The package is closed by a rectangular cap 25 best shown in Fig. 11. This is designed to telescope upon the end of the magazine having the delivery slot therein. It is herein shown as having the same width as the outer casing 10 and side walls having edges inclined to correspond to the end edges of the side wall of the outer casing 10. It is of sufficient depth to receive freely the end of the complete casing having the concave wall 12. Its upper wall is provided internally with a downwardly extending tooth or detent 26 designed to pass freely through the slot 17 in the top wall 16 of the inner casing and to engage the outer end of the slot in the uppermost blade 20 of the stack. The tooth 26 is forwardly bevelled and consequently when the cap is closed it will slightly depress the uppermost blade of the stack against compression of the spring 22 and snap into the end of the blade slot when fully in place as shown in Fig. 5. When the cap is removed, however, the tooth 26 draws the uppermost blade forwardly out through the blade exit slot to some such position as is indicated in Fig. 8 in which the end of the blade is fully exposed so that it may be conveniently grasped by the user and drawn entirely out of the magazine.

The magazine is herein shown as containing a stack of five double-edged blades 20 of well-known commercial type each provided with a central longitudinal slot and having reentrant notches formed in its four corners thereby defining solid elongated unsharpened end portions. As the blade is drawn forwardly its slot provides clearance for the blade-depressing rib 18 until the solid end portion of the blade encounters the rib. When this occurs the rear end portion of the blade is gradually forced downwardly as it rides along the rib 18 and consequently all the blades in the stack below it are depressed and carried below the delivery slot 14 so that jamming of two blades in the slot at the same time is positively avoided. When the rear end of the blade passes beyond the end of the rib 18 the spring 21 is free to move the stack and bring the next blade therein up into contact with the top 16 of the magazine.

The top edge of the rear portion of the upstanding rib 13 is spaced from the top 16 of the enclosure to provide full clearance for the uppermost blade in the stack. Therefore, the rear solid end portion of the blade may be moved forwardly without any obstruction until it encounters the rear end of the depending rib 18 by which it begins to be depressed as explained above.

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

1. A receptacle for slotted blades, comprising walls forming a rectangular enclosure having a bottom with an upstanding blade-locating rib and one end provided with an exit slot, a top having a downwardly extending rib shaped to fit into the blade slot and terminating short of the said exit slot, and a removable cover having a dog located to hook into a blade within the enclosure at a point between said downwardly extending rib and said exit slot.

2. A receptacle for slotted blades, comprising walls forming a rectangular enclosure having a bottom with an upstanding rib for holding a stack of slotted blades within the enclosure and a top slotted to expose one end only of a blade in said stack, the enclosure having a top with a downwardly extending rib entering the slot of the uppermost blade, and a removable cover with

a dog also entering the said slot when the cover is in closed position.

3. A receptacle for slotted blades, comprising walls forming a rectangular enclosure having a concave end wall with an exit slot and an internal lower rib for aligning a stack of blades in the enclosure, a top slotted to expose one end only of the uppermost blade in the stack and leading into the exit slot, an upper internal rib spaced inwardly from the exit slot and terminating so as to expose the outer end of the slot of the uppermost blade in the stack, and a removable cover provided with an internal projection entering the said blade slot beyond the end of said upper rib.

4. A receptacle for slotted blades, comprising walls forming an enclosure having top and bottom walls provided with internal oppositely arranged ribs, the upper rib terminating short of the lower rib, and an end wall having a blade-exit slot, the top wall having a slot extending from the forward end of the upper rib to said exit slot, and a removable cover having a projection located and shaped to enter the slot of a blade located by the upper rib adjacent to the top wall of the enclosure.

5. A blade package comprising an elongated rectangular enclosure having an exit slot in one wall, a stack of blades each having a central longitudinal slot and solid end portions, a rib in the top of the enclosure leading toward the exit slot and having a convex lower edge, spring means for maintaining the stack of blades in contact with the top of the enclosure and registering with said rib, and means for withdrawing the uppermost blade through said exit slot, whereby its rear end is displaced downwardly by said rib and the blades of the stack thus carried below the exit slot.

6. A blade package comprising transparent upper, lower and end walls providing an enclosure with an exit slot in one end and oppositely disposed internal ribs in its upper and lower walls spaced vertically from each other, in combina-

tion with a stack of steel blades having solid end portions and an intermediate longitudinal slot to receive said ribs and being visible at all times through the walls of the enclosure, the upper of said ribs serving to depress the solid end portion of the uppermost blade in the stack as the latter is moved out through the exit slot of the enclosure.

7. A blade package comprising transparent upper, lower and end walls providing an enclosure with an exit slot in one end and single oppositely disposed internal ribs in its upper and lower walls spaced vertically from and in alignment with each other, in combination with a stack of steel blades longitudinally slotted to receive said ribs and being visible at all times through the walls of the enclosure, and a spring underlying the blade stack and tending always to lift the blades from the lower to the higher of said ribs.

8. A blade package comprising an outer casing of transparent material having side walls and a bottom with an outwardly concaved end wall rising therefrom, an inner casing of transparent material having side walls fitting inside those of the outer casing and a top with a concaved front edge spaced by the width of the exit slot above said concaved end wall, centrally disposed blade-locating means within the assembled casings, and a stack of longitudinally slotted blades visible within the package from its upper and lower sides and located in the inner casing by their slots.

9. A blade magazine comprising walls forming an elongated enclosure with an exit slot in one end, an upstanding rib in the bottom of the enclosure for locating a stack of longitudinally slotted blades, said rib having a sinous edge, a depending rib in the top of the enclosure spaced from said upstanding rib and having a mating sinous edge, and means for withdrawing a blade from the magazine while the blade follows the path defined by the sinous edges of said ribs.

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