Nov. 11, 1952 M. D. BENEDICT, JR., ET AL 2,617,520

BLADE DISPENSING MAGAZINE

Filed July 23, 1948 2 SHEETS—SHEET 1

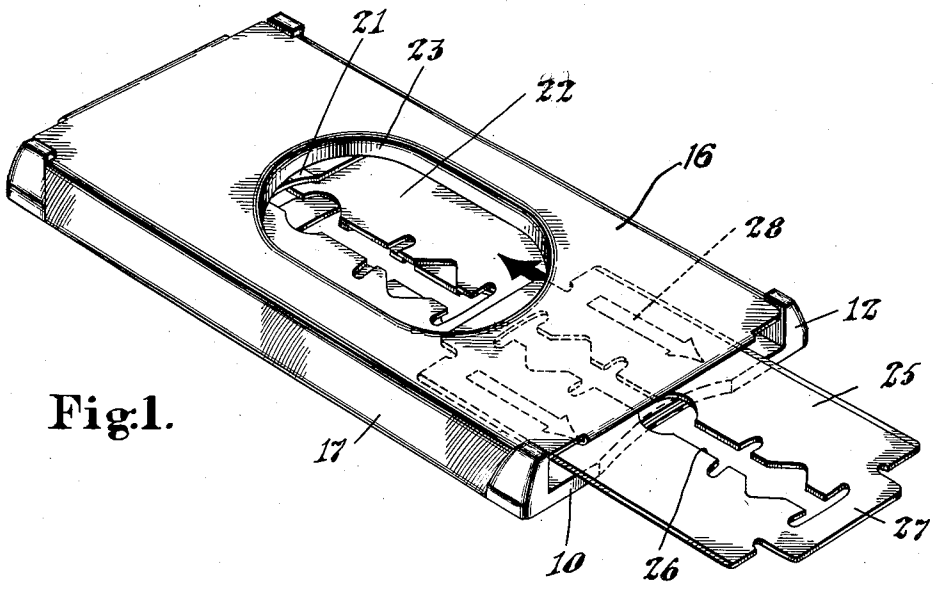


Fig. 1.

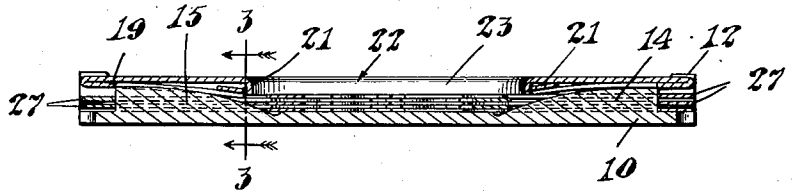


Fig. 2.

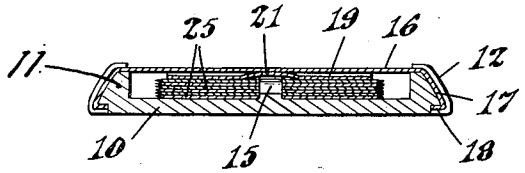


Fig. 3.

INVENTORS.

Michael D. Benedict Jr. & Meyer J. Kwitzler.

BY

M. W. McEnany Atty.

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BLADE DISPENSING MAGAZINE

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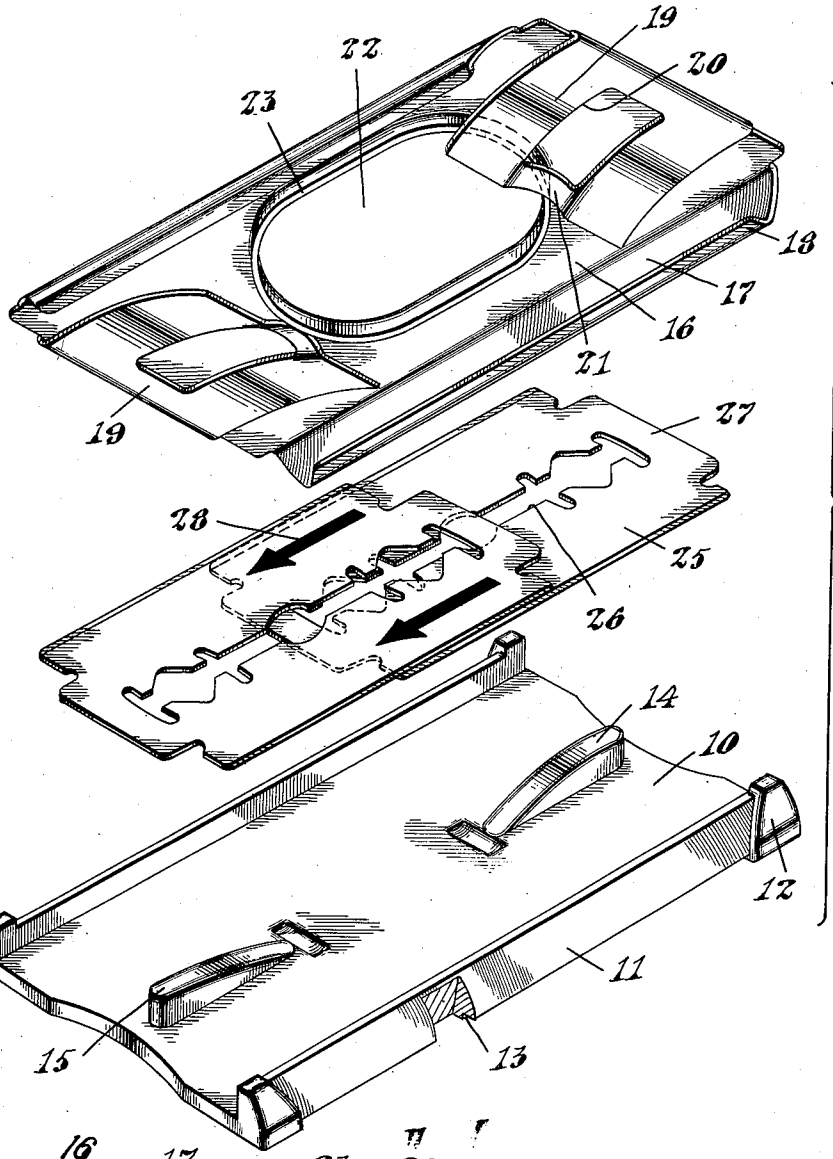


Fig.4

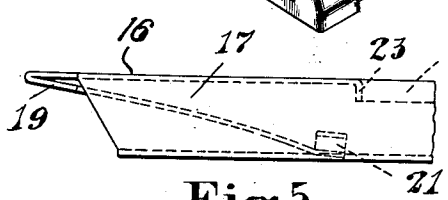


Fig.5.

INVENTORS.
Michael D. Benedict Jr. & Wayne J. Steinigler.
BY
Kirkpatrick, Conway & Colby.

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UNITED STATES PATENT OFFICE

2,617,520

BLADE DISPENSING MAGAZINE

Michael Douglas Benedict, Jr., Lynn, and Meyer J. Shnitzler, Brookline, Mass., assignors to The Gillette Company, a corporation of Delaware

Application July 23, 1948, Serial No. 40,348

12 Claims. (Cl. 206—16)

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This invention comprises a new and improved magazine for dispensing unwrapped safety razor blades in condition for immediate use.

It has been found that the fine cutting edge of a safety razor blade is so delicate in itself that it is likely to be easily dulled by any chance contact occurring before actual use of the blade. It is very desirable, therefore, that the manufacturer, who is best qualified to produce the required fine cutting edge should also package and protect the blades as they are finished in order that they may arrive in unimpaired condition in the user's hands.

The general objects of the present invention are to provide a magazine and blade combination that will insure safety of the blade edge in a reliable and effective manner, which may be assembled by automatic machinery and packed at low cost, which will be convenient for manipulation by the user and which will be so inexpensive in its construction that the magazine may be discarded when the supply of blades has been exhausted.

In the construction of the present novel magazine, advantage is taken of the staggered arrangement of longitudinally-slotted blades which has already been found entirely satisfactory by the shaving public. In accordance with this system, the blades are partially separated when the magazine is loaded, and this partial separation facilitates the ejection of the blades one by one by the user by permitting a limited preliminary movement of the outermost blade of the stack while the blade is still under full control in the magazine and while the next underlying blade is held positively against movement with it.

With these ends in view, an important feature of the invention consists in a magazine having a spring-metal cover with its ends inturned to act as a spring or springs for controlling the position of the blade stack. By this expedient, we eliminate the necessity of providing a spring as a separate element of the magazine and razor combination. This object has been heretofore attempted by confining the stack of blades under an initial stress in the magazine, but it has been found that in long periods of storage such continually stressed blades will eventually deform a magazine formed of plastic material. This difficulty is avoided in the present magazine by confining the blades in substantially flat condition without appreciable tension except the internal stress developed in the inturned ends of the metal cover.

The inturned ends of the cover not only serve as retaining springs for the blades but they provide a smooth rolled-edge exit opening for the magazine through which the blades may pass smoothly and with assurance that their sharp edges will be guided in a path clearing all parts of the magazine.

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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—

Fig. 1 is a view in perspective of a magazine, drawn on an enlarged scale and showing one blade partially ejected therefrom;

Fig. 2 is a view in longitudinal section of the magazine shown in Fig. 1;

Fig. 3 is a view in cross-section on the line 3—3 of Fig. 2;

Fig. 4 is a view in perspective of the magazine parts and blades shown in exploded relation; and

Fig. 5 is a fragmentary view in side elevation of the magazine cover.

The base 10 of the magazine herein shown may be constructed of any suitable material as by molding from synthetic resins or diecasting from light metal. In one very effective form the base is molded of transparent Lucite. It is rectangular in form and provided with two upwardly tapering and inwardly inclined side walls 11. At each corner of the base is provided a projecting lug 12 which extends outwardly beyond the outer face of the side walls 11 and upwardly slightly above the top edge of the side walls. As herein shown, the opposite side edges of the lugs 12 taper upwardly and outwardly at each end of the base.

Each side wall 11 of the base is provided in its foot with a rectangular channel or groove 13. A pair of blade-locating ribs 14 and 15 is disposed in the main axis of the base 10. These ribs are aligned and spaced apart longitudinally in the base. They have abruptly shouldered outer edges and inner edges which slope gradually outwardly and upwardly from the face of the base and merge smoothly into the top edge of the rib. In width, the ribs 14 and 15 fit with slight clearance the longitudinal slot in the blades with which they are to be used. At the foot of each rib the base 10 is provided with a small concave recess to insure that there shall be no obstruction that would delay outward movement of a blade by catching its solid end as the blade is being ejected.

The magazine includes in its structure a cover 16 of spring sheet metal, and this is provided with side walls 17 having hooked flanges 18 at

their lower edges. The walls of the cover are shaped to fit over the side walls 11 of the base and of a length to occupy the space between the corner lugs 12, and to fit into the channels 13 which run along the foot of the walls 11. The cover 16 is sufficiently resilient as a whole so that it may be attached to the base by springing its side walls 17 over the walls of the base and into interlocking engagement therewith after a charge of blades has been placed in position upon the base.

The material of the cover extends at both ends beyond the ends of its side walls 17 as best shown in Fig. 5, and is then folded inwardly and extends downwardly in the form of a spring 19, which is normally biased to contact with the base when the magazine is empty of blades. Each turned-in spring portion 19 is provided with a longitudinal slot or cut-out portion 20 which provides ample clearance for the ribs 14 and 15 of the base, and the material at the inner end of each spring portion may, if desired, be formed as an upwardly convex transverse bridge 21, thus providing two transversely spaced blade-engaging faces in each spring. In any case the spaced end portions of the two springs 21 engage the top of the blade stack on opposite sides of the ribs 14 and 15 and in four separate areas, distributed so as to hold the stack flatly against the bottom of the magazine.

The cover 16 is also provided with a finger or thumb opening 22 which is centrally and symmetrically disposed therein and provided with a downturned rim 23 which thus provides a smooth rolled edge for the opening. In the assembled magazine the finger opening 22 is located above the space between the inner ends of the ribs 14 and 15. The springs 19, moreover, are of such length that they clear the outer periphery of the flange 23 when they are sprung into their uppermost position and engage a full stack of blades within the magazine and provide an extended upwardly inclined surface above the blade stack leading to the exit opening.

The magazine is herein shown as constructed and arranged to handle double-edged blades of a well-known commercial type; that is to say blades 25 having a median slot 26 and solid elongated unsharpened end portions 27 defined in part by corner notches in the blade. The median slot 26 is herein shown as provided with local enlargements shaped to fit the blade-locating projections of razors in which these blades are to be used. Each blade, moreover, is provided with a pair of arrows 28 indicating the direction in which it should be moved to be ejected from the magazine. As herein shown, the blades are arranged in flat condition in a stack upon the base 10, with alternate blades impaled on the rib 14 and on the rib 15, respectively. The blade 25, which is shown as partially ejected in Fig. 1 has been impaled upon the rib 14 with the abrupt end shoulder of the rib in contact with the solid end portion 27 of the blade at the end of the slot 26. Accordingly, this blade has been positively held against movement toward the left in the magazine but may be moved freely toward the right, and as indicated by its arrows 28. The user may effect this movement by engaging the blade through the finger opening 22 and frictionally urging the blade outwardly against the yielding resistance of one of the springs 19. In this preliminary movement the blade is positively guided by the directing action of the rib 14 in the slot 26 of the blade. This continues until the solid rear end of the blade encounters the inclined inner edge of the rib 14. When this occurs, the end portion of the blade rides up the incline of the rib against the pressure downward of the spring 19. Finally, in the continued movement of the blade the solid end portion 27 passes beyond the inner end of the spring and off the end shoulder of the rib so that the blade is suddenly released and is snapped out of the magazine without any tendency to transverse displacement that would otherwise bring the edge of the blade into contact with the wall of the magazine. During this movement of the uppermost blade toward the right the next underlying blade is held positively against movement toward the right, but as indicated by the arrows thereon, is free for movement toward the left.

The magazine is provided with an exit opening at either end formed by the upper end face of the base 10 and the folded-over end of the cover 16 above it.

Having thus disclosed our invention and described in detail an illustrative embodiment therefore, we claim as new and desire to secure by Letters Patent:

1. A blade-dispensing magazine including in its structure an elongated base of plastic material having a pair of aligned blade-locating ribs therein, a stack of longitudinally slotted blades arranged in staggered relation on alternate ribs, and a cover of spring sheet metal having side flanges engaged with the longitudinal edges of the base and end portions folded inwardly, defining exit openings at both ends of the magazine and extending inwardly and downwardly thereby providing springs engaging the top of the blade stack in separate areas distributed to hold the stack flatly against the base.

2. A blade-dispensing magazine comprising a rectangular plastic base having inwardly tapering side walls with projecting corner lugs together with a detachable cover of spring metal having flanged sides filling the space between the corner lugs, interlocking with lower edges of the walls of the base and held in place at both ends by said corner lugs, the cover and the base being spaced apart at both ends of the magazine to provide exit openings and the cover having a finger opening therein.

3. A blade-dispensing magazine comprising a rectangular base having spaced blade-locating ribs therein, and a cover of sheet metal engaged at its sides with the base in fixed position thereon and folded inwardly at both ends in spaced relation above the ends of the base to form a smooth rolled-edge exit opening at each end of the magazine and to provide an extended upwardly inclined surface leading within the magazine to said opening.

4. A blade-dispensing magazine of the character described in claim 3, in which the folded-in ends of the cover are of spring material and are extended inwardly and downwardly from both ends of the magazine and thus constitute springs.

5. A blade-dispensing magazine of the character described in claim 4, in which the cover is provided with a finger opening substantially coextensive with the space between the inner ends of the springs.

6. A blade-dispensing magazine comprising a rectangular base having parallel side walls and spaced blade-locating ribs located midway between them, a sheet metal cover engaged with the side walls of the base and having an end folded inwardly and extending downwardly in

the form of a hold-down spring, said spring being slotted to bridge one of said ribs and terminating adjacent to the inner end thereof.

7. A blade-dispensing magazine comprising a plastic base of rectangular outline having side walls and corner lugs with opposed oblique edges projecting outwardly from the side walls and blade-locating projections located in the bottom of the base, in combination with a sheet metal cover having a finger opening with an inturned peripheral flange, and resilient side walls shaped to fit upon the side walls of the base and having oblique end edges contacting those of the corner lugs.

8. A blade-dispensing magazine comprising a plastic base having a flat blade-supporting face and projecting blade-locating ribs, a stack of longitudinally slotted blades arranged in flat unstressed condition in staggered relation upon the base and said ribs, and a cover of spring sheet metal clipped to the base and having a finger opening and having its ends folded inwardly and extending downwardly in position to press the blades yieldingly against the flat face of the base.

9. A blade-dispensing magazine comprising a plastic base having side walls and blade-locating projections, in combination with a sheet metal cover having a flat top and side walls terminating short of the ends of its top and an inturned spring integral with each end of the top and turned in along a line beyond the ends of the side walls of the cover, each spring extending inwardly beside one of the blade-locating projections of the base.

10. A blade dispensing magazine comprising a base portion having a pair of longitudinally spaced blade-locating ribs with outwardly and upwardly inclined inner edges, a cover having a finger opening, longitudinally slotted blades arranged in stacked and oppositely staggered relation on said ribs within the magazine, and spring means pressing downwardly upon the uppermost blade of the stack, whereby whilst under spring pressure, the uppermost blade may be engaged by the user's finger or thumb and moved endwise until the rear solid end of the blade reaches the inclined inner edge of its associated rib whereupon that blade while still under spring pressure may be pulled out of the magazine by drawing its solid end up the said inclined edge.

11. A blade dispensing magazine comprising a base portion having a pair of longitudinally spaced blade-locating ribs rising at their inner ends in smooth continuous slopes from the base and terminating at their outer ends in abrupt shoulders, a cover of spring metal, and longitudinally slotted blades arranged in stacked and oppositely staggered relation on said ribs within the magazine, the cover being folded inwardly at both ends and having inwardly and downwardly extending spring portions passing on opposite sides of said ribs into engagement with the blade stack.

12. A blade dispensing magazine as described in claim 11 further characterized in that the base portion has a depression at the foot of the inner end of each blade-locating rib.

MICHAEL DOUGLAS BENEDICT, JR.,
MEYER J. SHNITZLER.

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