Dec. 7, 1954 N. TESTI 2,696,293

BLADE DISPENSING MAGAZINE

Original Filed Aug. 9, 1947

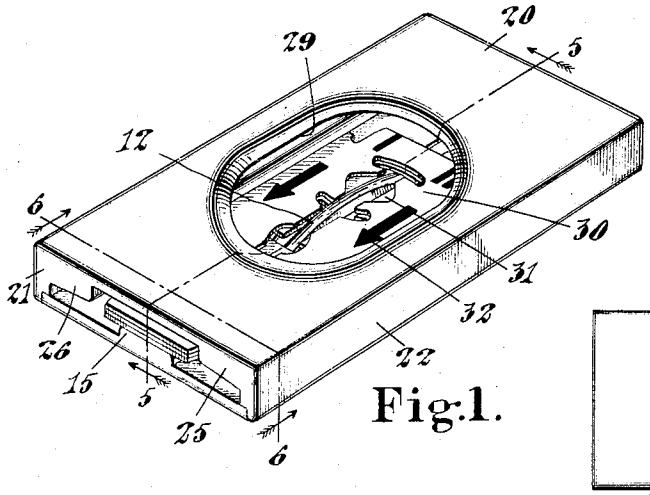


Fig.1.

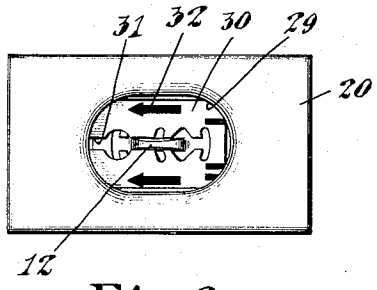


Fig.2.

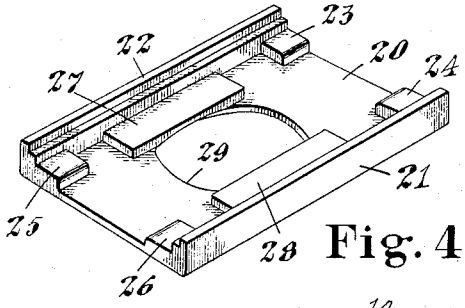


Fig. 4.

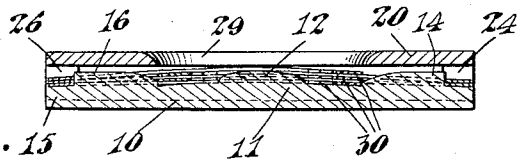


Fig.5.

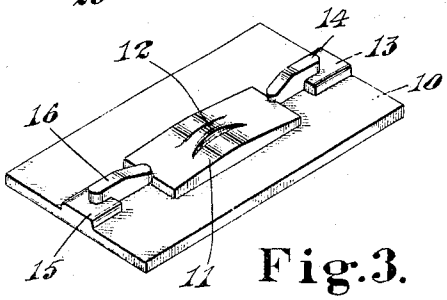


Fig.3.

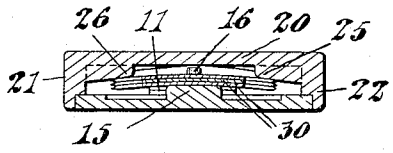


Fig.6.

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United States Patent Office

2,696,293

Patented Dec. 7, 1954

2,696,293

BLADE DISPENSING MAGAZINE

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Continuation of application Serial No. 767,750, August 9, 1947. This application August 7, 1952, Serial No. 303,032

9 Claims. (Cl. 206—16)

This invention comprises a new and improved dispensing magazine for safety razor blades and the like of the general type in which is contained a stack of blades, usually unwrapped, which the user by simple manipulation may separate and eject from the magazine one by one as required.

This application is a continuation of application Serial No. 767,750 filed August 9, 1947, now abandoned.

It has been found that the fine cutting edge of a safety razor blade is so delicate in structure that it is likely to be easily damaged by any chance contact occurring before actual use of the blade. It is desirable, therefore, that the manufacturer, who is best qualified to produce the fine cutting edge, should also package and protect the blades as they are finished in order to insure that the blade shall reach the user with its edge unimpaired and in the same finished condition imparted to it by the manufacturer.

In magazines of the type under discussion, it is essential that the blade stack be held yieldingly in contact with the upper or lower wall of the magazine enclosure in order to present a predetermined blade in position for ejection. Heretofore a spring has been commonly employed as a separate and distinct element of the magazine structure. In the magazine of the present invention, however, the separate spring may be dispensed with according to one concept of that invention.

The present invention is based on the discovery that the blades may be initially flexed in the magazine by contact with various internal projections therein in such a manner that the stack as a whole will be positioned in the magazine and will act and move by reason of the inherent resiliency of the blade as if subjected to the action of a separate spring.

By flexing the blade stack within the magazine, it is entirely practicable (1) to hold the blades of the stack against accidental displacement or emergence from the magazine; (2) to hold one of the blades of the stack in position for ejection; (3) to hold that particular blade in a position accessible to the user and at the same time (4) to maintain all the blades with their sharp edges out of contact with the walls of the magazine, both while at rest and while in process of ejection.

With these ends in view, an important feature of the invention consists in an elongated shell or enclosure having on its upper and lower walls cooperating internal projections or surfaces offset with respect to each other and so located as to engage the blade stack on one face adjacent opposite end portions and at the other face in an intermediate area and thus transversely flexing or bowing the whole stack and so holding it yieldingly in place as a whole within the magazine. The expedient of thus bowing the blade stack also has the effect of pressing the outermost or uppermost blade of the stack toward the top or cover of the magazine where it may be readily engaged by a feeding member or by the thumb of the user in magazines wherein the cover is provided with a thumb opening. The spring action of the blade stack may be brought about by flexing the stack either transversely or longitudinally, or both. As herein shown and as another feature of the invention, the internal projections of the magazine enclosure are so disposed as to flex the blade stack in both directions.

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 on an enlarged scale of the blade magazine;

Fig. 2 is a plan view of the magazine on a reduced scale;

Fig. 3 is a view in perspective of the base or bottom section of the magazine;

Fig. 4 is a view in perspective of the cover shown in inverted position;

Fig. 5 is a view of the magazine in longitudinal section on the lines **5—5** of Fig. 1; and

Fig. 6 is a view in cross section on the line **6—6** of Fig. 1.

The magazine may be constructed of a suitable plastic composition or of wood or metal. It comprises a base section **10**, of rectangular outline, having a fulcrum plate or pad **11** which provides an intermediate upwardly projecting area also of rectangular outline and sloping slightly downwardly towards both ends. The pad **11** may be provided with a shallow, centrally-disposed upstanding guide rib **12** extending longitudinally in the median axis of the base and tapering at both ends downwardly to the pad **11**. At one end of the base is provided a flat centrally disposed pad **13**, and projecting from this is a narrow upstanding stud **14**. Similarly, at the other end of the base section is provided a pad **15** and a stud **16**. The two studs or short ribs **14** and **16** are spaced apart by substantially the length of the central pad **11**. They are aligned in the median axis of the base and of such width as to fill with clearance the slots of the blades to be contained within the magazine, as will presently be described. The inner ends of the studs are beveled and sloped downwardly and inwardly toward the pad **11** and the outer ends provide substantially vertical shoulders. Thus, it will be seen that the upper edges of these studs include inclined ramp portions, the purpose of which will presently appear.

The structure of the cover section **20** of the magazine is best shown in Fig. 4. This has side walls **21** and **22**, shouldered to receive in flush relation the edges of the base section **10**. It is also provided inside the side walls with projecting pads **23**, **24**, **25** and **26**, one located at each corner of the cover. Midway between its ends, the cover is provided with two elongated pads **27** and **28** which lie adjacent to the side walls and are spaced symmetrically between the end pads **23—26**, and also far enough apart transversely to receive the pad **11** of the base between them with substantial clearance. The cover is centrally apertured to provide an oval thumb opening **29** of substantial area, this opening extending between the two side pads **27** and **28**.

The magazine herein shown is designed to accommodate blades of a well-known commercial type, that is to say, thin flexible double-edged blades **30**, each having a central longitudinal slot **31** and being provided with direction indicators herein shown as comprising an arrow **32**.

In loading the magazine, a stack of blades, for example five blades, is placed upon the base section in longitudinally staggered relation. Two blades may be empaled upon the stud **14** and the rib **12**, while the three alternate blades may be empaled upon the stud **16** and the rib **12**. In the first instance, the blade stack will rest in substantially horizontal position upon the pads **11**, **13** and **15** of the base section. The cover **20** is now inverted, placed over the loaded base and secured in position by cement, fusing or any other convenient means. In this assembling operation the side pads **27—28** of the cover engage the opposite side portions of the blade stack and flex the stack transversely at its ends over the center fulcrum pads **13**, **11** and **15** of the base section. Similarly the end pads **23—26** of the cover flex the blade stack longitudinally over the center fulcrum pad **11**. The blade-exit openings are formed at both ends of the magazine, being defined in part by the corner pads **23—26** of the cover and the centrally located pads **13**, **15** of the base section.

The blade stack as a whole is now maintained in flexed condition within the magazine enclosure. Its yielding contact with the various internal projections of the magazine holds both the stack and the individual blades on

the studs **14** and **16**, and against accidental displacement. The blades are held positively against displacement in one direction or the other by their engagement with the outer vertical end shoulders of the studs **14** and **16**. The blades of the stack are assembled with the arrows **32** pointing in the direction in which they are free to be moved for ejection. Accordingly, when the user wishes to remove a blade from the magazine, he has merely to advance the uppermost blade by frictional engagement in the direction of the arrow exposed to view through the opening **29**. The forward pressure upon the uppermost blade advances it, overcoming the yielding resistance offered by its initial flexed condition. For example, when the uppermost blade shown in Fig. 5 is advanced toward the left, it is at first guided by engagement of the rib **12** and stud **16** in the slot of the blade while still flexed by the side pads **27** and **28** over the central pad **11**.

As the blade movement continues, its solid rear end must ride up and over the stud **16**. This part of the blade movement is facilitated by the beveled inner edge or ramp portion of the stud. As long as the stud projects into any part of the blade slot the blade is held against twisting and its cutting edges safely guided out of contact with the edges of the blade-exit opening in the end of the magazine. However, when the solid end of the blade passes off the top edge of the stud **16**, the blade is no longer positively guided. The final flexing of the end of the blade offers a slight additional resistance to the blade movement which the user naturally tends to overcome by increased pull on the blade. When, therefore, the end of the blade passes off the top edge of the stud and snaps into a position of little or no transverse curvature the retarding force suddenly ceases and the blade is jerked out of the magazine, with a sort of snap action, and without opportunity or tendency to twist, thus safeguarding the cutting edges at the emerging stage.

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

1. A blade dispensing magazine comprising a rectangular casing having a cover, bottom and side walls with a blade-exit slot at one end and intermediate opening in its cover, and a stack of resilient normally flat blades within the casing, the bottom having an internal intermediate area projecting upwardly and the cover having internal areas at both ends projecting downwardly in offset relation with respect to the projecting area of the bottom and flexing the blade stack longitudinally and bringing one end of the uppermost blade of the stack to the level of the exit slot.

2. A blade dispensing magazine of the character defined in claim 1, in which the intermediate projecting area of the bottom is provided with an upstanding guide rib.

3. A blade dispensing magazine comprising a rectangular shell forming an enclosure with flat top and bottom walls and a blade-exit opening at each of its opposite ends, the top wall having a thumb-opening of substantial area therein, a stack of resilient normally flat blades within the enclosure, and internal projections in the top and bottom walls of the shell offset with respect to each other, some located so as to bear upon the opposite edge portions of the blade stack and others so as to bear upon an intermediate portion thereof and thereby bow the blade stack in area beneath the said thumb opening and maintain the flexed blades substantially out of contact with the interior of the shell.

4. A blade dispensing magazine comprising an elongated shell with a blade-exit opening at one end, and having flat top and bottom walls and upright side walls, the top wall having a thumb-opening symmetrically located therein, a stack of resilient normally flat blades within the enclosure, a centrally disposed projection on the bottom of the shell, and projections on the top wall of the shell within its contour, offset longitudinally with respect to the centrally disposed projection and arranged to flex the blade stack longitudinally, to bow it upwardly beneath said thumb-opening and to maintain the flexed stack substantially out of contact with the bottom of the shell.

5. A blade magazine comprising a rectangular casing having upper and lower walls, corner pads on the upper wall within the casing, longitudinally aligned and spaced center studs on the lower wall of the casing having inner beveled edges and flat top edges terminating between the corner pads, and a stack of longitudinally slotted, solid-end blades empaled in oppositely staggered relation on said studs, the said pads and studs cooperating to flex the trailing solid ends of the blades as they are being withdrawn from the magazine and then to release them with a snap action.

6. A blade dispensing magazine comprising a rectangular casing having flat top and bottom walls and a blade-exit opening at one end, a stack of slotted normally flat blades within the casing, and relatively offset means projecting from the flat top and bottom walls of the casing for flexing the blade stack in its initial position, said means including a projection from one of said walls adjacent to one end of the magazine for flexing a blade as it is being withdrawn and releasing it with a snap action as the blade is advanced through the said opening.

7. A blade dispenser comprising a two part shell having upper and lower walls with exit openings at both ends, the lower wall having a centrally disposed elevated pad rectangular in contour and provided with a symmetrically disposed guide rib tapering at both ends downwardly to the surface of the pad, and the upper wall having a finger opening of substantial area and a pair of symmetrically disposed downwardly projecting pads at each side of said opening offset with respect to the said rectangular pad and serving to flex a stack of normally flat slotted blades transversely over the said pad while the rib is received in slots of the blades in the stack.

8. As an article of manufacture, a magazine for a plurality of resilient safety razor blades of the type having a longitudinal slot therein, said magazine comprising a substantially rectangular base having a rigid elevated centrally located fulcrum pad underlying the blades in the magazine, a pair of upstanding guide studs rigid with and longitudinally aligned on said base and being located one at either side of said fulcrum pad, blade-engaging means in said magazine to engage an inner portion of such blades, and means to depress the outer end of each of such blades affixed to and positioned over said base at each end thereof respectively.

9. As an article of manufacture, a magazine for a plurality of resilient, normally flat safety razor blades of the type having a longitudinal slot therein and arranged longitudinally in staggered stack formation, said magazine comprising an enclosure provided with blade-exit openings at each end thereof and a substantially rectangular base having an elevated centrally located fulcrum portion extending transversely at least partially across the center thereof, a pair of upstanding guide studs rigid with and longitudinally aligned respectively on said base on opposite sides of said elevated portion and passing through the slots of alternate blades of the stack, and longitudinally-spaced blade-engaging projections in said magazine which are located above and extend downwardly toward the base to flex the blades longitudinally in the magazine over the said fulcrum portion.

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