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BLADE MAGAZINE FOR RAZORS

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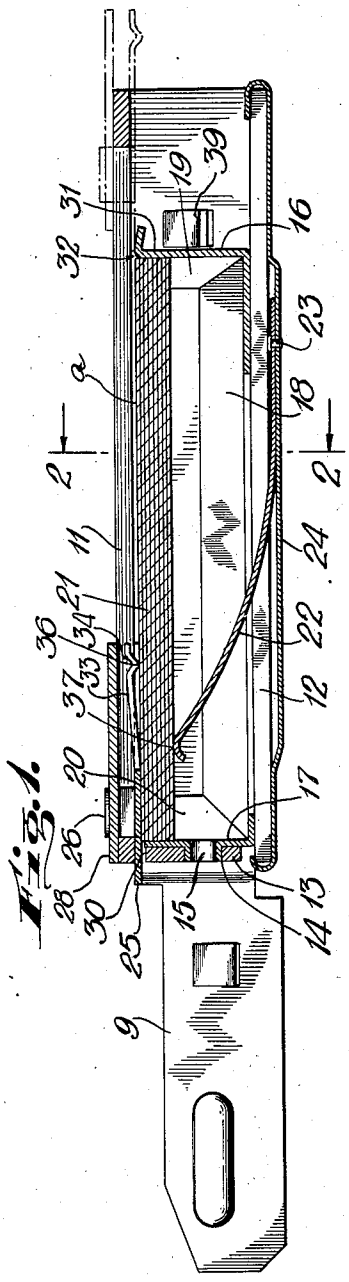


Fig. 1.

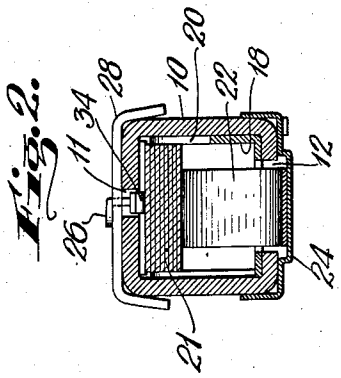


Fig. 2.

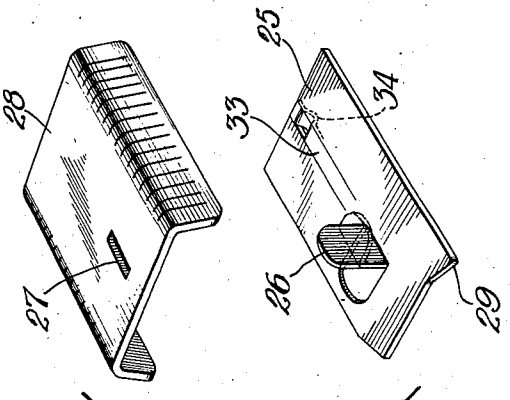


Fig. 3.

INVENTOR

OCTAVIUS V. RODRIGUES

BY John A. Hilliard

ATTORNEY

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BLADE MAGAZINE FOR RAZORS

Octavius V. Rodrigues, Fairfield, Conn., assignor to Magazine Repeating Razor Company, New York, N. Y., a corporation of New Jersey

Application February 21, 1938, Serial No. 191,723

4 Claims. (Cl. 206—16)

The invention relates to improvements in blade magazines for razors of the type such as is described in my United States application for "Improvement in magazine for razor blades," Ser. No. 104,984, filed October 10, 1936, allowed July 24, 1937. This type of blade magazine comprises a receptacle, or casing, which contains a blade holder or container so constructed and arranged that the topmost blade is in line with a discharge slot in the casing and is capable of being discharged through the slot by means of a suitable ejector slide, such as will be presently described.

The casing is provided with an aligning finger 9 which may be projected into a slot suitably positioned in the head of the razor into which a blade is to be injected, so that the blade will travel into its position in the razor head on a true course and without danger of contact of the blade with metal parts of the razor head. This feature of construction has not however any essential relation to the invention as it is immaterial how the magazine is aligned with the razor, or whether it is separate therefrom or a part thereof.

In blade magazines of this general type, as modified by particular features of construction to which I will hereafter refer, it now and then happens that on retraction of the ejector slide (i. e., the member whereby a blade is ejected from the magazine and projected into the razor head), the act of retraction exerts sufficient frictional contact on the topmost blade to cause it to be dragged back, with the result that the topmost blade jams in the mechanism or becomes partially ejected from the rear end and can be restored to position only with considerable trouble.

Referring to the drawing,

Fig. 1 is a view in elevation and in longitudinal section of an injector embodying my improvement;

Fig. 2 is a view in section on the line 2—2 of Fig. 1;

Fig. 3 is a perspective view showing the plunger mechanism disassembled.

Referring more particularly to the drawing, the magazine in which I embody the invention comprises a box-like casing 10 provided with a longitudinal slot 11 in its upper wall and a wider longitudinal slot 12 in its bottom wall. The casing is open at its rear end (the right side of Fig. 1) but is closed at its other end by the wall 13, which is provided with an aperture 14 for the reception of the projecting tip 15 of the blade container. The blade container comprises a box-like structure comprising the end walls 16 and 17 and partial side walls 18, 19, and 20. This blade container contains a stack 21 of blades, the stack being upwardly and resiliently pressed by the spring 22, which may be attached as by the rivet 23 to the bottom plate 24, which in turn covers the wide slot 12 in the bottom of the casing previously referred to.

The ejector assembly consists of a slide 25 provided with the lug 26 projecting up through the slot 11 in the top wall of the casing, thence through the slot 27 of the thumb piece 28, whereupon it is then turned over so that it securely locks the thumb piece 28 and the slide 25 in assembled relation.

In operating the ejector assembly (assuming, for example, that it is in position shown in full lines in Fig. 1), the thumb piece is seized between the thumb and the forefinger and the assembly drawn to the rear of the casing until the tip 29 of the slide has passed the rear end of the topmost blade *a* of the stack. Pressure exerted by the spring 22 then forces the entire stack upwarly until the blade *a* contacts with the top wall of the casing and is in line with the slide. Forward movement of the slide then drives the topmost blade *a* through the slot 30 in the front wall of the casing and into position in the razor head, (assuming that the finger has been projected into the usual slot in the razor head and the parts are in alignment). It is now quite apparent that withdrawal of the ejector assembly to the rear of the casing involves frictional contact of the slide with the topmost blade *a* which if, as it sometimes is, sufficient, will drag the topmost blade *a* back over the wall 31 of the blade container, in which case it will not be possible to withdraw the slide sufficiently far to permit the tip 29 thereof to pick up the blade *a*. It is, of course, necessary to leave the gap 32 between the upper edge of the rear wall of the blade container, since otherwise it would not be possible to retract the slide sufficiently far to the rear to pick up a blade.

In order to avoid the possibility of the objectionable occurrence above noted, which is ordinarily known as "jamming," I provide the slide 25 with a spring tongue 33, the tip of the spring tongue being depressed as shown at 34. This spring tongue may be conveniently made by an ordinary stamping operation. It is to be noted that the normal position of the spring tongue is such that the tip 36 resiliently bears downwardly against the topmost blade of the stack, but that its shape (as viewed in Fig. 1) is such that it can ride over the rear wall 31 of the blade con-

tainer when traveling in either of its two directions of travel. It is further to be noted that the bearing point of the tip **36** is to the rear of the bearing point **37** of the spring **22**, so that the spring tongue **33** tends at all times to cause the rear end of the stack of blades to be forced downwardly against the resistance of the spring **22**.

In explaining the mode of operation, it will be assumed that the ejector assembly is being retracted—i. e., withdrawn from its position as shown in full lines to its position as shown in dotted lines (Fig. 1). As the slide moves rearwardly, the pressure of the tip **36** of the spring tongue on the topmost blade causes the stack, including the topmost blade *a*, to move slightly downwardly so that the topmost blade *a* is below the gap **32**, and, therefore, any rearward motion of the topmost blade *a* would cause it to abut against the end wall of the blade holder. However, the spring tongue tip **36** is capable of moving up and down in the slot **11** and therefore will ride easily over the rear wall of the blade container to the position shown in dotted lines. As soon as the tip **36** has cleared the topmost blade *a*, the rear end of the stack as a whole rises because of the pressure of the spring **22** until it contacts with the underside of the slide **25**. Then when the tip **29** of the slide has by further retraction cleared the rear end of the blade *a*, the whole stack rises until the blade *a* is in contact with the upper wall of the container and is in line with the slide **25**. Forward movement of the slide will then cause the tip **29** of the slide to abut against the rear end of the topmost blade *a* and drive it through the slot **30** and into the razor head with which the magazine finger **9** is engaged.

It is recognized that the present invention may be embodied in other constructions than those herein specifically illustrated, and therefore it is desired that the constructions disclosed shall be considered as illustrative and not in a limiting sense.

I claim:

1. A magazine for use with razors of the magazine type, said magazine comprising a casing, an ejector slide for successively feeding blades from a stack of the same, a container for holding a stack of blades, the rear end wall of the container rising to such a height that a gap is left between it and the top wall of the casing to permit the slide to pass therethrough, a spring for normally pressing the stack upwardly so that the topmost blade is in contact with the upper wall of the casing and in alignment with the said gap, the said slide being provided with means adapted normally to depress the stack, including the topmost blade, out of alignment with said gap, said means comprising a leaf spring extending in the direction of said gap, the said spring having at its end region a tapered portion projecting downwardly whereby the end of the spring may ride over the edge of the rear end wall in either direction of movement of the slide.

2. A magazine for use with razors of the magazine type, said magazine comprising a casing, an ejector slide for successively feeding blades from a stack of the same, a container for holding a stack of blades, the rear end wall of the container rising to such a height that a gap is left between it and the top wall of the casing to permit the slide to pass therethrough, a spring for normally pressing the stack upwardly so that the topmost blade is in contact with the upper wall of the casing and in alignment with the said gap, the said slide being provided with resilient means adapted normally to depress the stack, including the topmost blade, out of alignment with said gap, the said resilient means being provided with a tapered portion projecting downwardly whereby the end of the spring may ride over the edge of the rear end wall in either direction of movement of the slide.

3. A magazine for use with razors of the magazine type, said magazine comprising a casing with a front discharge opening for blades and a rear opening to permit the passage of an injector slide, resilient means adapted to exert a thrust against a stack of blades so that the topmost blade tends to become aligned with the blade discharge opening and with the rear opening, an ejector slide adapted to be reciprocated in line with the blade discharge opening and the rear opening, said ejector slide being provided with means adapted resiliently to press the said topmost blade out of alignment with the said rear opening, said means being provided with a tapered portion projecting downwardly whereby the end of the spring may ride over the edge of the rear end wall in either direction of movement of the slide.

4. A magazine for use with razors of the magazine type, said magazine comprising a casing with a front discharge opening for blades and a rear opening to permit the passage of an injector slide, resilient means adapted to exert a thrust against a stack of blades so that the topmost blade tends to become aligned with the blade discharge opening and with the rear opening, an ejector slide adapted to be reciprocated in line with the blade discharge opening and the rear opening, said ejector slide being provided with means adapted resiliently to press the said topmost blade out of alignment with the said rear opening, said means being provided with a tapered portion projecting downwardly whereby the end of the spring may ride over the edge of the rear end wall in either direction of movement of the slide.

OCTAVIUS V. RODRIGUES.