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MAGAZINE FOR SAFETY RAZOR BLADES

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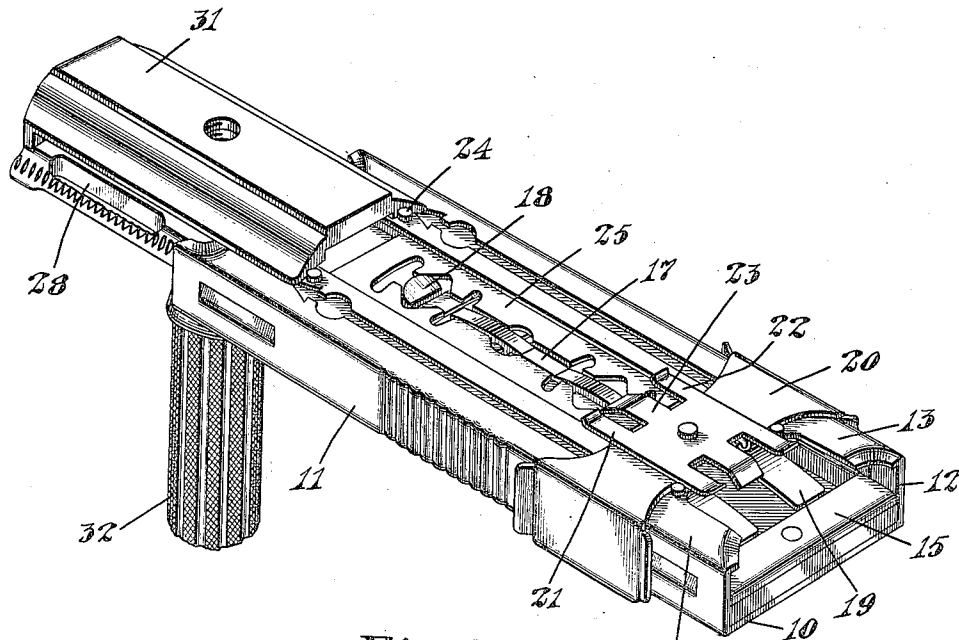


Fig. 1.

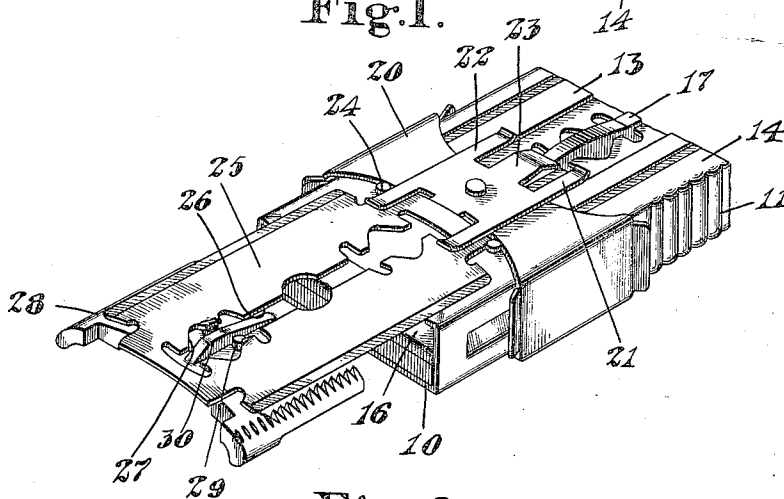


Fig. 2.

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## UNITED STATES PATENT OFFICE

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## MAGAZINE FOR SAFETY RAZOR BLADES

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5 Claims. (Cl. 30-40)

This invention relates to magazines for safety razor blades and comprises an improved magazine so organized that it may be used to present a fresh blade to a safety razor and to withdraw a used blade in a single operation. This is desirable because it relieves the user of the necessity of touching either blade while it is being presented or withdrawn and thereby obviates the danger of cutting his fingers or of impairing the keenness of the shaving edge of the fresh blade.

In certain types of safety razors the blade is retained in shaving position by short spurs or pins from which it must be stripped or disengaged before it can be withdrawn. I have found that disengagement of a blade from these retaining spurs is facilitated by transversely flexing the blade prior to its withdrawal. The magazine of the present invention is designed to effect this desirable and novel result. Going more into detail, the magazine of my invention is provided with means for engaging a blade located in flat condition upon the blade seat of the razor and flexing it transversely so that it is bowed out of engagement with its retaining spurs and is accordingly freed for withdrawal from the razor when the razor and the magazine are separated.

In one aspect, the invention consists in improvements upon the magazine disclosed in my prior application Serial No. 562,966, filed November 11, 1944. The magazine of that application is arranged to withdraw the used blade in flat condition from the safety razor and, accordingly, means must be provided for elevating the used blade sufficiently to disengage it from the retaining spurs. While in some instances the transverse bowing or flexing imparted to the used blade by the magazine of this invention may be sufficient of itself to effect the desired disengagement, it will be understood that the bowing or flexing effect is desirable and useful also in connection with razor constructions in which the disengagement of the blade is effected by elevating means in that the bowing effect imparted to the blade reduces the amount of lifting otherwise necessary and a more compact construction of razor is thus rendered practicable.

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 drawing in which:

Fig. 1 is a view in perspective, on an enlarged scale, showing the magazine in operative relation to a safety razor; and

Fig. 2 is a fragmentary view of one end of the magazine and a portion of the safety razor.

The magazine and razor herein shown for illustrative purposes are designed to handle a double-edged blade of the well-known "Gillette" type, but the invention is not limited in its application to that or to any specific type of blade and with suitable modifications may be adapted to deal with blades of many different shapes.

The magazine comprises an elongated receptacle of sheet metal or suitable plastic material having a bottom 10, side walls 11 and 12 and a top formed by two intumed flanges 13 and 14 which are spaced from each other at their opposite edges. The receptacle formed by these walls is open at its ends so that a portion of the safety razor may be telescopically received therein and also to afford exit passage for the blades. Cross-bars 15 and 16 are arranged at the respective ends of the magazine and these bars present guide surfaces which control the presentation of the safety razor to the magazine.

Within the enclosure of the magazine is provided a rib 17 and two studs one of which 18 is shown in Fig. 1. These projections serve to locate in the magazine a stack of longitudinal slotted blades with which the magazine may be supplied by the manufacturers. As herein shown, the individual blades of the stack are held in staggered relation, their ends being located alternately beyond and within the stop 18. This arrangement has the effect of fanning out the ends of the blades and so providing desirable clearance for operating the feeding device in advancing one blade after another from the stack. A forked and curved spring 19 underlies the blade stack and at all times presses the uppermost blade of the stack into contact with the flanges 13 and 14 forming the top of the blade enclosure.

The magazine is provided with a feeding device comprising a slide 20 which fits across the top of the magazine and has down-turned side walls that are flanged beneath the magazine. The bridge of the feeding device is provided internally with an abutment for advancing the uppermost blade of the stack. It is provided externally with a double-ended blade engaging device of sheet metal comprising at each end a pair of side arms 21 and 22, flaring upwardly at their outer ends and a central arm 23 spaced between the two side arms and flaring downwardly at its outer end. These three arms are disposed in substantially the same plane and it will be apparent that, when they are forced upon the end of a flexible blade, the center of the blade will be bowed upwardly

and pass above the central arm 23 while the two edges of the blade will be bowed downwardly and pass under the side arms 21 and 22.

The razor with which the magazine is intended to be used is shown in Fig. 1 and partially in Fig. 2. It comprises a blade-supporting and guard member 28 having a pair of spaced spurs or blade-retaining pins 29 and an intermediate blade elevating rib 30 which is tapered longitudinally in both directions. The member 28 supplies the blade seat of the safety razor organization and is convex in transverse contour. Cooperating with the guard member 28 is a cap member 31 having a blade-engaging face which is transversely concave. The cap has a threaded connection with a clamping spindle within the handle 32 so that it may be drawn into blade-clamping relation with the guard member 28.

The blade shown in Fig. 2 is represented as resting upon the guard member 28 of the razor without having been moved longitudinally from its shaving position, but as having been engaged by the feeding device of the magazine preparatory to withdrawal. The blade 25 is formed of thin sheet steel, sharpened at both edges for cutting and provided in each corner with a reentrant notch. These notches define elongated unsharpened end portions in the blade. The blade is also provided with a longitudinal medial slot 26 provided with various intermediate enlargements. One of these enlargements 27 is designed to receive the blade-retaining spurs 29 of the guard member.

In use, the cap 31 is released so that it may be separated to some extent from the guard member 28 and thus leave the used blade 25 lying in a flat condition thereon. The razor and magazine are now brought together by telescopically inserting one end of the guard member 28 into that open end of the magazine indicated by the arrows in its top flanges. The feeding device is then moved toward the razor, that is to say toward the left as in Fig. 1. The uppermost blade 25 in the stack is accordingly advanced and passes into the razor beneath the used blade already located therein. As the feeding device approaches the end of its stroke the right-hand end of the used blade is engaged by the projecting arms 21, 22 and 23 of the feeding device, as shown in Fig. 2, and the blade is accordingly transversely flexed and bowed so that the sides of its recess 27 are

carried upwardly to a position above the end of the spurs 29. The blade is thus released and when the magazine and razor are separated the blade is withdrawn from the safety razor in the manner suggested in Fig. 2. The user is now free at any convenient time to remove the used blade from the feeding device and dispose of it.

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 magazine, having in combination, an elongated receptacle for a stack of blades, and a reciprocatory blade-feeding device movable on the receptacle for advancing one blade at a time from the stack therein, said feeding device having blade-gripping means operating in its advancing movement for engaging a used blade lying in flat condition on the blade seat of a razor and flexing it transversely, thus bowing it from the blade seat.

2. A blade magazine, having in combination an elongated receptacle for a stack of blades, and a reciprocatory blade-feeding device movable on the receptacle for advancing one blade at a time from the stack therein, said feeding device having spaced blade-gripping fingers operating in its advancing movement for engaging a used blade in the razor and bowing it into transverse upwardly convex contour.

3. A blade magazine comprising an elongated receptacle containing a stack of blades and having an exit opening at one end, a feed slide movable longitudinally upon the receptacle toward the exit opening, and a blade-gripping device carried by the feed slide, projecting in advance thereof and having arms shaped to deflect in one direction the center of a blade located adjacent to the said exit opening and to deflect the edges of the blade in the opposite direction.

4. A blade magazine comprising an elongated receptacle, and a blade-gripping device carried thereon and having arms shaped to deflect in one direction the center of a blade disposed endwise with respect to the receptacle and to deflect the edges of the blade in the opposite direction.

5. In a blade magazine, a blade-gripping device including in its structure spaced upwardly flared arms and an intermediate downwardly-flared arm.

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