July 4, 1944. N. TESTI 2,352,813

MAGAZINE SAFETY RAZOR

Filed Dec. 8, 1943

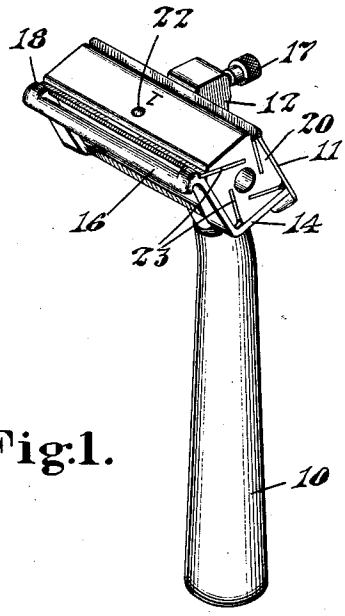


Fig.1.

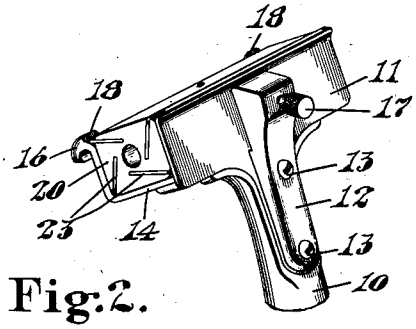


Fig.2.

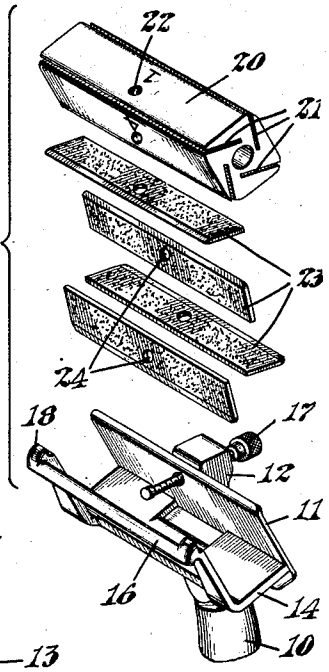


Fig.3.

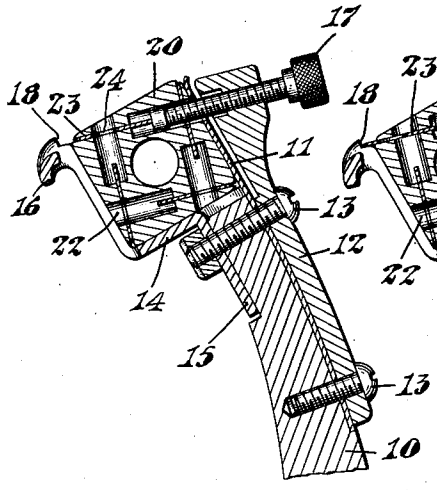


Fig.4.

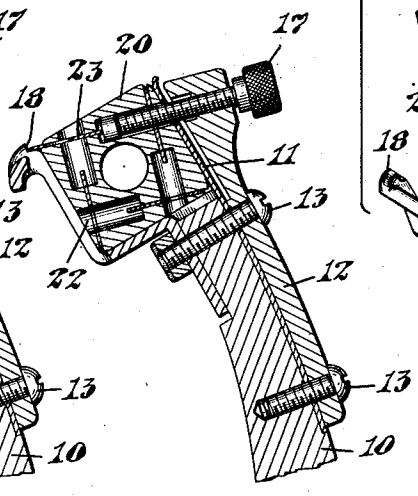


Fig.5.

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Patented July 4, 1944

2,352,813

UNITED STATES PATENT OFFICE

2,352,813

MAGAZINE SAFETY RAZOR

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Application December 8, 1943, Serial No. 513,346

9 Claims. (Cl. 30—40)

This invention relates to safety razors and consists in a new and improved safety razor of the magazine type in which a substantial number of fresh unused blades are maintained in readily accessible position so that the user may conveniently bring a sharp blade into operation at any time preparatory to or during a shaving operation. The invention includes within its scope a novel magazine which may serve as a dispensing receptacle for blades. Such a magazine may be loaded by the manufacturer with the desired number of blades and these are then effectively protected against damage to the fragile structure of their keen sharp edges and maintained in this fully protected condition until the magazine is placed in the safety razor and the blade actually advanced directly into shaving position.

In handling safety razor blades under commercial conditions of transportation and distribution and in the more or less casual treatment to which such blades are subjected by the user the extremely fine keen edge of the blade is likely to become dulled by being brought into contact with its wrapping or with other objects before it can be actually clamped in shaving position in the razor. On this account the best and most skillful efforts of the manufacturer in sharpening the blades are often brought to naught. The principal object of the present invention is to insure positively against any impairment of the blade edge from such causes by insuring complete protection of the blade from the time it leaves the manufacturer's hands to the time it is moved the least fraction of an inch into its final shaving position.

With these objects in view an important feature of the invention consists in a safety razor having an open channel and a guard, in combination with a magazine filling the channel and having a plurality of internal blade-receiving slots which open out through a portion of the magazine so located that the blade may be advanced from a protected position directly out of the slot and into shaving position with respect to the guard; all without the possibility of any contact with the keen sharp edge of the blade. Preferably and as herein shown the blade-receiving slots are arranged tangent to a common circle and each leads to one corner edge of the magazine. Slots arranged in this way provide convenient and compact distribution of blades in a magazine.

Another feature of the invention consists in a provision of convenient and easily accessible means for advancing any selected blade from fully protected position to its slot in the magazine to its shaving position above the guard. As herein shown a clamping screw projects forwardly from the back of the safety razor and into the magazine where it may engage the rear edge of whichever blade is to be presented in shaving position. This arrangement is made possible by perforating each blade and arranging the blades in the magazine so that the perforation in one blade provides clearance of the clamping screw in engaging and advancing the particular blade selected for shaving.

The magazine may have any desired number of faces but is shown herein as having four faces and as containing four blades. This arrangement brings the blade slots and the contained blades into right angular relation, but it will be apparent that equivalent results could be secured in a magazine of hexagonal, octagonal or even cylindrical cross-section. Preferably and as herein shown the razor includes an open channel in which the magazine may be readily inserted and from which it may be temporarily removed when it is desired to bring a fresh blade into operative position or to reload the magazine with a charge of fresh blades. In this connection one wall of the channel may be made resilient for the purpose of yieldingly retaining the magazine in the safety razor while permitting its removal at any time.

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 of the complete razor on an enlarged scale;

Fig. 2 is a similar view of the razor head seen from a different angle;

Fig. 3 is a view in perspective showing the parts of the razor head, the magazine of the blades in exploded relation;

Fig. 4 is a view of the razor head in cross-section on a scale still more enlarged; and

Fig. 5 is a similar view showing one of the blades advanced into shaving position.

The razor comprises a handle 10 carrying at its upper end a head presenting a transversely disposed open channel which is substantially square in cross-section. In the razor head are included a thin resilient back plate 11, a clamping bar 12 and a guard member. The back plate 11 has a rectangular body and a downwardly projecting shank portion which is clamped to a flattened rear face of the handle by screws 13 pass-

ing also through the clamping bar 12. The clamping bar is a straight stiff bar 12 overlying the downwardly projecting shank portion of the back plate 11, thickened substantially at its upper end and extending to within a short distance of the upper edge of the back plate 11. The thickened upper end of the clamping bar is drilled and tapped to receive a blade-locating and clamping screw 17 having an enlarged knurled head by which it may be conveniently turned by the user.

The guard member comprises a rectangular bottom plate 14 which extends forwardly at right angles to the back plate 11. Formed as an integral part of the bottom plate 14 is a downwardly extending ear 15 which is engaged by the upper of the screws 13 which hold the back plate and clamping bar in place. The guard member has upwardly extending arms which are substantially parallel to the back plate 11 and carried between them is a guard bar 16 having projecting blade stop lugs 18 at each end and a curved skin-engaging face.

The blade magazine herein shown comprises an elongated rectangular block 20 shaped to fit into the channel of the razor head so that it may be readily presented thereto by pushing it vertically into the channel or by pushing it in endwise. The block 20 may be of wood or plastic material or light metal and is preferably bored longitudinally for the sake of lightness. It is provided with four blade slots 21, each slot opening out through one of the corner edges of the block 20 and extending inwardly at an angle of about 20° to the face of the block immediately above it. The arrangement is such that the slots lie tangent to a circle which is common to all of them and described on the axis of the magazine block as a center. Each slot is disposed at right angles to the next adjacent slot and deep enough completely to receive and protect a blade therein. The magazine block is of such size and shape that the plane of the slot 21 which is uppermost is substantially tangent to the surface of the guard bar 16 and positions a blade properly to be advanced out of the slot and across the guard bar until arrested by the blade stops 18. Leading from the inner edge of each blade slot 21 in the magazine block is a bore 22 which opens through the wall of the magazine opposite the opening of the blade slot and in alignment with the screw 17.

The screw 17 normally extends into one of the bores 22 of the magazine block and so retains the magazine in the razor head. When it is desired to release the magazine the screw 17 may be backed out sufficiently to disengage it, whereupon the magazine may be lifted out of its channel and turned to bring a fresh blade into operative position or may be reloaded with four fresh blades. On the other hand when it is desired to advance a blade into shaving position the screw 17 is turned inwardly engaging the rear edge of one of the blades 23 and advancing it out of its slot until the blade is arrested by engaging the two blade stops 18 at its opposite corners. When the screw 17 is advanced it positively supports the selected blade in shaving position.

The magazine herein illustrated is shown as adapted to handle and present thin straight single-edged blades 23 as shown in Fig. 3. Each of these blades is provided with a perforation 24 midway between its ends and slightly nearer to its sharpened edge than to its rear edge. The purpose of the perforation 24 is to afford clearance for the screw 17 in every blade which is located substantially vertically in the rear portion of the magazine. When the blade occupies its inner position, that is to say, when it is retracted within its slot 21 so that its cutting edge is fully protected, the perforation 24 of the blade aligns with the bore 22 in the magazine. This is clearly shown in Fig. 4 where the forwardly directed blade 23 is shown as retracted within its slot. However, when the blade is advanced into shaving position, as shown in Fig. 5, its perforation 24 is carried forwardly and the bore 22 substantially closed. The blade 23 which is uppermost in the magazine and which is disposed substantially horizontally is brought into registration with the screw 17 and the latter passes through the perforation 24 of the blade which happens to be located rearwardly and substantially vertically in the magazine. Each face of the magazine is numbered to enable the user to keep track of the blades used by him; that is, he may start a fresh magazine with its No. 1 face uppermost and then progress to the subsequently numbered faces.

The upper edge of the back plate 11 is slightly flared so that the plate may be sprung rearwardly in admitting the magazine while it yieldingly holds the magazine in place when the latter has been inserted in the channel of the head.

The magazine block may be conveniently loaded by the manufacturer, the newly ground, stropped and honed blades being inserted by mechanical means without danger to their sharp edges. If desired they may have a light coating of grease and this tends to hold the blades in place in their respective slots and also to protect them from rusting. The loaded magazine block may be wrapped and handled as a unit of merchandise in distribution and sale.

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 magazine razor having a holder presenting an open rectangular channel, an elongated rectangular magazine filling the channel and having a series of blade slots one of which opens out through each corner edge of said magazine, and a screw movable through the rear wall of the channel for advancing a blade from one of said slots.

2. A magazine razor having a holder presenting an open channel having a front wall with a guard bar and an opposed rear wall, a magazine fitting between said front and rear walls and having an internal slot opening adjacent to the said guard bar, and a screw movable through the rear wall of the holder for advancing a blade in its slot.

3. A magazine razor having a holder, a removable magazine block therein having a series of longitudinal slots, each disposed at right angles to the next adjacent slot, a perforated blade in each slot, and a screw threaded into the holder, passing through the perforation in one blade and abutting the rear edge of the blade in the adjacent slot.

4. A magazine razor having a holder, a magazine substantially square in cross section, fitting in said holder and having a series of slots each opening out through one corner edge of the block and extending inwardly at an acute angle to the adjacent face of the magazine, a bore leading from each slot to the opposite face of the maga-

zine, and a blade-clamping screw projecting into said bore from the holder.

5. A magazine safety razor having a holder with front and rear walls, the front wall carrying a guard, and a retaining screw arranged to be projected forwardly from the rear wall, in combination with a magazine fitting between said walls, having a blade-retaining slot leading toward the guard and a transverse bore for receiving the retaining screw.

6. A safety razor having a holder of rectangular cross-section opening upwardly, a guard at one side of said opening, and a blade-clamping screw at the other, in combination with a magazine of rectangular cross-section having an internal blade slot disposed adjacent to and making an angle with that face of the magazine which is uppermost in the holder and a bore in the magazine providing access by the clamping screw to the rear edge of a blade contained in said slot.

7. A safety razor having magazine-retaining walls, a guard, and a transverse blade-positioning screw projecting inwardly at a predetermined height from one of said walls, in combination with an elongated magazine of symmetrical shape fitting between said walls and having a series of blade-containing slots so disposed that by rotating the magazine any selected slot may be brought into registration with said screw.

8. A magazine safety razor including in its structure guarding means and blade-advancing means, in combination with a cooperating magazine symmetrical in cross-section and having a series of internal blade-receiving slots disposed at different angles and so located that in all positions of the magazine one slot is disposed in alignment with both the guarding means and the blade-advancing means.

9. A magazine safety razor having a holder presenting an open recess, a magazine filling the recess of the holder and provided with a plurality of blade-receiving slots opening through peripheral surfaces of the magazine, a blade of uniform thickness wholly concealed within each slot and movable therein, and means in the holder constructed and arranged to enter the magazine, advance any selected blade outwardly in its slot and positively hold the selected blade in shaving position.

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