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POCKET RAZOR HAVING BLADE STORING MEANS

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2 Sheets-Sheet 2

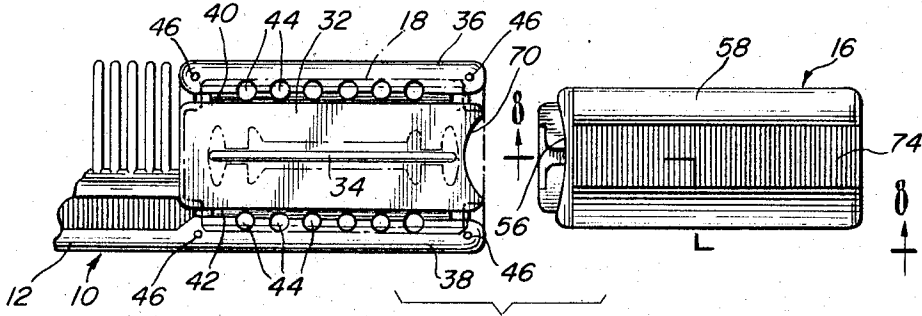


Fig. 7

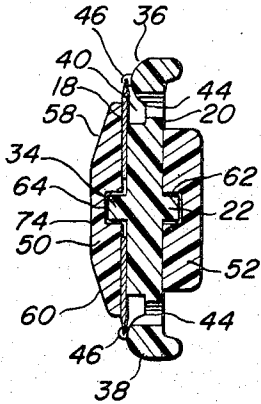


Fig. 5

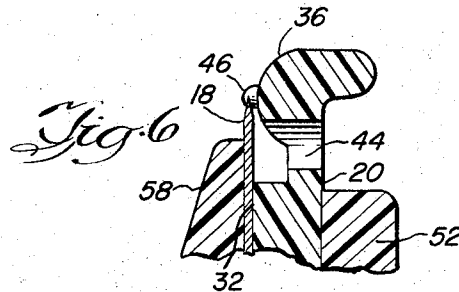


Fig. 6

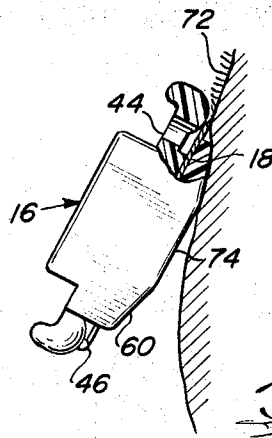


Fig. 9

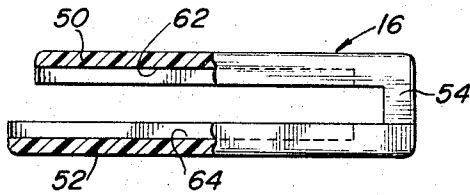


Fig. 8

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**POCKET RAZOR HAVING BLADE
STORING MEANS**

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ABSTRACT OF THE DISCLOSURE

A pocket razor having a razor head formed of a rectangular body which has a pair of opposed faces, one face carrying a flat bed blade storing recess and the other face having an elevated planar blade seat, co-planar elongate juxtaposed ridges formed respectively on said one face and said blade seat for holding a blade against lateral movement when the latter is engaged on a selected one of said faces, spaced rounded guide lips on the peripheral edges of the other face and located spaced from the opposite longitudinal sides of said blade seat, said blade seat being in an elevated plane relative to the crest of the guide lips and a bifurcated resilient clip member engageable frictionally on said head by an endwise rectilinear movement so as to secure the blade on a selected face of said head, the clip having facing groove means on the inner planar facing surfaces thereof engageable with the ridges to guide the movement of the clip relative to the head and also to fix the blade immovably on said selected face of the head and further to prevent lateral movement of the clip when same is installed; one outer leg of the clip being provided with beveled edges so as to define, with the guide lips, the proper shaving angle.

This invention relates generally to so-called safety razors of the type which use a replaceable blade and more particularly is concerned with a so-called pocket razor having a head provided with opposed faces, one capable of storing a blade in sheathed condition and the other for mounting a blade in use condition and resilient clip means for securing a blade to the head on a selected one of said faces.

There has been a long felt need for a razor which may be carried in one's pocket for occasional or emergency use, or which may be dispensed from automatic vending machines or sold over the counter for minimum use and discard. While this concept is old, prior proposed structures have suffered from one or more disadvantages which have severely limited their use and commercial success. Some of these disadvantages will be enumerated hereinafter.

One disadvantage of prior structures has been that the razor has been complex and made of numerous parts. Such razors are therefore expensive and difficult to manufacture, hard to manipulate, heavy and bulky.

Another disadvantage of prior razors has been their ineffectiveness in dry shaving because prior structures require the use of lather in all cases and are difficult to manipulate to obtain an acceptable shave.

Still a further disadvantage of the prior structures has been that they are not completely safe, either to handle or to use.

The invention herein has as important objects the obviating of the disadvantages enumerated above, and the provision of a pocket razor which has several advantages and features not previously available.

An important object of the invention is to provide a pocket razor which is made of only two simple parts which may be molded of plastic, but which stores a razor

blade safety during periods of non-use when the razor is being carried in the pocket, or is being handled and which is immediately converted into an effective razor by a simple and easily accomplished movement.

5 One of the most important objects of the invention is concerned with the provision of a pocket razor which is assembled in a novel manner by means of a simple clip that is moved endwise of the razor to convert the razor from its blade-storing condition to its blade-using condition and vice versa.

10 Another object of the invention is to provide a pocket razor of the type described in which the razor is mounted to a comb or the like which serves as a handle to enable manipulation of the razor during shaving, and in which the razor is held by such handle in a manner to enable the blade to pass over the skin at a very small angle. Such shaving action, it will be appreciated, approaches the type of slicing action characteristic of the venerable straight razor. The modern safety razor achieves such action by flexing the blade concavely in the razor, or by joining the head to the handle at an angle, both structures being quite complex. Accordingly, the pocket razor of the invention is a highly effective shaving implement, and as will be seen, such shaving is done with complete safety.

20 Another important object of the invention is to provide a portable or pocket razor in which the construction is such as to require the user to handle the blade as little as possible during changeover from blade-storing to blade-using condition.

25 Still another object of the invention is to provide a pocket razor which has means to prevent the blade corners from cutting the user during shaving.

30 Many other objects of the invention will occur to those skilled in this art as a description of the preferred embodiment is set forth hereinafter in detail in order to provide an understanding of the invention, its construction, operation and use. In connection with such description, said preferred embodiment is illustrated in detail in the accompanying drawing in which:

35 FIG. 1 is a top plan view of a pocket razor combined with a comb and constructed in accordance with the invention, the razor being here illustrated in blade-storing condition.

40 FIG. 2 is an end-on elevational view of the razor of FIG. 1.

45 FIG. 3 is a sectional view taken through the razor of FIG. 1 along the line 3—3 and in the direction indicated.

50 FIG. 4 is a fragmentary bottom plan view of the razor portion of the structure illustrated in FIG. 1 but in this case, the blade has been removed from its storage recess and has been installed on the blade seat in blade-using condition.

55 FIG. 5 is a sectional view taken through the razor as shown in FIG. 4 along the line 5—5 and in the direction indicated.

60 FIG. 6 is a fragmentary sectional view of the upper portion of FIG. 5 on an enlarged scale to show the relationship of the blade and the guide lip.

65 FIG. 7 is a fragmentary exploded bottom plan view of the razor showing the manner in which the clip is assembled to the razor.

FIG. 8 is a sectional view through the clip of FIG. 7 along the line 8—8 of FIG. 7 and in the direction indicated.

FIG. 9 is a diagrammatic view showing the manner in which the razor is used.

Generally the invention comprises an elongate handle which is conveniently in the form of a comb having a razor head at one end thereof, the head having two faces one for storing a blade and the other for positioning the blade for use, and clip cooperating with the head in

either blade-storing or blade-using condition, the clip being removed or attached to the head by an end-wise movement.

Referring now to the drawing, the reference character 10 designates the pocket razor of the invention, and it will be seen that the razor has a handle portion 12 which is here formed as a comb and a head portion 14. The head portion 14 is integral with the handle or comb portion 12 and these two portions are integrally molded from some type of plastic or resin. The razor 10 has a second part 16 which is a clip that holds a conventional double-edge razor blade 18 in position on one face or the other of the head 14. The clip 16 is also molded from plastic or resin. Since the clip 16 is required to have resilience for the purpose of enabling the securement of the blade in its alternate positions, preferably the clip is molded from one of the more durable and resilient resins such as nylon or the like.

Looking now at the details of the head 14, the side shown in FIG. 1 is provided with a flat planar rectangular surface 20 which has a center ridge 22 extending along the major length of the surface. This ridge 22 is of a thickness and length to engage the center slot of a conventional double-edged blade 18 and secure the same against either lateral or lengthwise movement on the surface providing the blade is held against the surface. The edges of the head 14 include upstanding flanges 26 and 28 which extend above the surface 20 and such flanges connect at the comb end of the head 14 by means of a transverse web 30. The flanges and web form a recess or tray sheathing the blade edges in which the surface 20 is spaced below the remainder of the razor 10 for holding the razor blade 18 in blade-storing condition with complete safety. The right hand end of the head 14 has no flange or web so that in effect it provides an entrance for pushing the clip 16 onto the surface 20 in a manner which will be explained below.

The head 14 provides a blade seat 32 on its opposite face as best shown in FIGS. 4 and 7. This seat 32 is rectangular but much narrower than the head and has a center ridge 34 whose purpose is also to engage the center slot of the razor blade 18. The edges of the head 14 on the face which is to mount the blade for use are provided with rounded guide lips 36 and 38 separated from the seat 32 by respective grooves 40 and 42. The grooves catch the hair which accumulates during shaving, and perforations 44 along the lengths of the grooves enable the hair and lather, if used, readily to be washed from the razor 10 without the need for disassembly.

The corners of the blade-using face of the razor 10 are provided with small projections 46 which are positioned to protect the user from the corners of the blade 18. The skin will not be engaged by the blade corners during use because of these projections, thereby preventing cutting during shaving.

As best seen in FIG. 6, the seat 32 has its surface in a plane spaced from the plane defined by the outward facing crests of the guide lips 36 and 38 so that the blade edges will likewise be outwardly spaced from their respective guide lips, thus presenting a cutting edge during shaving.

The clip 16 is a bifurcated member formed of two relatively flat parts or legs 50 and 52 connected by an end root 54. The part 50 is shorter than the part 52, but is wider. It is provided at its free end with a finger recess 56 and its edges are bevelled at 58 and 60. The bevelled edges 58 and 60 cooperate with the blade to control the closeness of the shave, since they establish to a great extent the angle at which the shaving will be executed. Accordingly they approach the exposed edges of the blade and permit only a small part of such edges to be exposed.

The part 52 is of any suitable configuration, since its only function is to hold the blade against the storage face 20 when in blade-storing condition.

Both parts have an elongate groove at 62 and 64 in

their respective inner surfaces to cooperate with the ridges 22 and 34, respectively, when the clip is installed. Obviously the clip can only be installed or removed in an end-wise movement, but this is a simple and easily accomplished maneuver. The finger recess 56 facilitates pushing the clip 16 off the head 14. The fact that one part 52 is longer than the other enables the user to apply lateral pressure on this part when installing the clip to open the throat of the clip against its resilience. In other words, the clip is poised for installation with the razor 10 held in one hand, and first the free end of the part 52 is laid on the entrance to the blade-storing recess, with the fingers preferably holding the sides of the beveled edges 58 and 60. The part 50 is now flexed opposite to the part 52 opening the entrance to the clip 16 in a movement which involves slight upward or downward pressure on the root end of the clip, and in the same movement the clip is pushed home. By the construction described, the manipulation is so deft and naturally flowing from the construction described, that most users of the razor do not realize that they are doing just this.

The head itself has a finger notch at 70 to facilitate handling the blade 18 without touching its edges.

In use, the handle 12 is held between the fingers and the skin surface 72 is stroked in swinging movements. The arrangement provides good visibility and control. Lather may readily be used if desired.

The razor 10 is ideal for inclusion in compact kits and is readily packaged in thin containers. It can be made so cheaply as to enable its sale as a disposable item, suitable for dispensing from automatic machines in public wash-rooms and the like. Nonetheless it is a highly effective shaving implement and is re-usable in the same manner as the safety razor of well known construction. It is superior to the conventional safety razor in that it provides storage for a blade in an utterly safe condition.

Considering the change from blade-storing to blade-using condition, in FIG. 1, the blade 18 is stored in the storage recess. The razor may be used as a comb without removing the blade 18, it may be carried safely in the pocket or in a kit, it is small, light-weight and has no protuberances of any kind. When it is desired to use the razor for shaving, the clip 16 is grasped and pulled off, with the user inserting his finger in the recess 56, if one is provided. The surface 74 may be roughened to give a better grip, if desired. The clip removed, the blade end extends over the finger notch 70 so that the user lifts the blade by its end and replaces it on the seat 32. He then replaces the clip 16 being certain that the bevelled edges are on the blade-using face of the head.

The clip 16 is molded separately from the handle and head part of the razor. The two relatively flat parts 50 and 52 are spaced apart a distance to provide a tight fit for the clip 16 when pushed home on the head. This may be done by making this distance slightly less than the combined thickness of the blade and the body of the head, this distance being indicated at 76 in FIG. 3. The clip 16 advantageously may be molded in a mold which has the space between parts converging slightly from the root 54 toward the free ends of the parts. This would provide a bias to the clip tending to bring the parts toward one another, if the clip parts must be spread to enable accommodation of the clip upon the head.

Modifications of the invention are capable of being made without departing from the spirit or scope of the invention. For example, different forms of blades would necessitate different configurations of the razor. A single edge blade having a formation on its opposite edge would be accommodated in a blade recess in which there is a groove in a surface to seat the edge formation, and suitable cooperative grooving in the clip. Likewise, the blade storage face of the head may be arranged to hold two blades, so that the user will have a spare if he desires, and in this case, the spare will remain when one blade is trans-

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ferred to blade-using condition. This, however, would not be the usual manner in which the razor is used.

What it is desired to secure by Letters Patent of the United States is:

1. A portable razor having a rectangular relatively flat razor head with opposite surfaces and an integral handle formed at one end of said head, the other end of said head having a resilient clip, movably engaged on said head, said clip including a root with two relatively flat facing parts connected to said root and straddling said head, each flat facing part engaged against an opposite surface of said head and the surfaces and inside faces of the clips having tongue and groove means cooperating to limit the movement of said clip relative to said head to a rectilinear movement in the plane of said head, one surface of the head part being recessed to provide blade storage, the second surface of said head having an elevated blade seat and guide edges lower than said seat to expose the shaving edges of a blade positioned on said blade seat.

2. A pocket razor comprising a handle and razor head integrally formed, one face of the razor head having first means for holding a blade in blade-storing condition and the other face having second means for holding a blade in blade-using condition, a clip frictionally engageable with said head by an end-wise movement relative thereto, said clip having means cooperating with the respective holding means when the blade is in either condition, said razor head comprising a relatively thin rectangular formation, the said first means comprising a relatively shallow tray formed in said one face having flanges along the opposite side edges thereof to obstruct the edges of a blade located within said tray, one end of the tray being connected with said handle, and the other end of the tray being opposite said handle and having the bottom surface of the tray unobstructed thereat, the said second means comprising a rectangular center blade seat whose longer edges are parallel with the longer sides of the rectangular formation and spaced inwardly therefrom, said seat being planar and parallel with the bottom surface of the tray, but both the said bottom surface and seat having central elongate ridges for engaging the central slot of a double-edged blade, said second means also including guide lips along opposite edges of the rectangular formation and the lips having their crests on the said other face lying in a plane spaced below the seat so that when a blade is flat against the seat the blade edges will clear the lips, there being grooves formed between the lips and seat and the seat being unobstructed at its end, the clip having two facing parts separated by at most the thickness of the rectangular formation from the plane of the seat to the plane of the bottom surface of the tray and the clip being removably engaged upon said rectangular formation, said cooperating means of said clip including a central groove in the inner surface of each part of said clip matingly engageable with the respective ridges, the clip being assembled to or removed from said head by way of said unobstructed ends of the tray and seat.

3. A pocket razor comprising a handle and razor head integrally formed, said head formed as a unitary rectangular body having first and second opposite planar faces, one face having a recessed flat bed sheath for holding a blade in blade-storing condition and the other face having a planar elevated blade seat, rounded crest guide lips on said other face spaced from the opposite sides of said planar blade seat and parallel thereto, co-planar elongate ridge means on opposite faces of said body for holding a blade against lateral movement on a selected one of said

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faces, said blade seat being in a plane elevated from the plane of the crest of the guide lips, a bifurcated resilient clip engageable frictionally on said head by an endwise rectilinear movement with the blade on a selected one of said faces, the clip having facing groove means on the inner facing surfaces thereof engageable with the ridge means to guide the movement of the clip relative to the head, to fix the blade immovably on said selected face of said head and to prevent lateral movement of said clip relative to said head.

4. A razor as claimed in claim 3 in which said clip has one outer surface thereof having parallel beveled longitudinal edges, said beveled edges cooperating with said guide lips to define the proper shaving angle of said razor.

5. A pocket razor comprising a razor head, said razor head formed of a unitary rectangular body having opposite planar sides carrying respective first and second opposite planar faces, the first face having raised lip means along the longitudinal peripheral edges thereof to define a flat-bed recess for holding a blade in sheathed blade storing condition, the second face having an elevated planar surface spaced inwardly of the longitudinal edges of said second face to define a seat for a blade in blade using condition, rounded crest guide lip means formed along the opposite longitudinal edges of said second face co-extensive therewith and spaced from the edges of said seat, the plane of said seat defining surface being spaced from the plane defined by the crest of said guide lips to present a cutting edge of the blade during blade using condition, elongate juxtaposed ridge means formed on opposite planar sides of said head parallel to the longitudinal edges of said faces and a resilient, bifurcated clip member removably engaged on said head only by a rectilinearwise movement relative thereto to secure the blade on a selected face, said clip member having opposed planar inner facing surfaces frictionally engaged on said head and groove means formed in said facing surfaces co-operable with said ridge means for guiding said clip during movement thereof on the head and for fixing said blade immovably on the selected face.

6. A pocket razor as claimed in claim 5 in which one leg of said bifurcated member is wider than the other and the outer surface thereof has parallel beveled longitudinal edges to engage the blade and permit exposure only of the blade edges, said beveled edges cooperating with the rounded crest guide lip means for defining the proper shaving angle during use.

7. A pocket razor as claimed in claim 4 in which one leg of the bifurcated clip is longer than the other.

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MYRON C. KRUSE, *Primary Examiner.*

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,353,289

November 21, 1967

Peter L. Cipolla

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 2, line 1, for "safety" read -- safely --; column 5, line 8, for "clip," read -- clip --; lines 15 and 16, for "the head part" read -- said head --.

Signed and sealed this 31st day of December 1968.

(SEAL)

Attest:

Edward M. Fletcher, Jr.
Attesting Officer

EDWARD J. BRENNER
Commissioner of Patents