SAFETY RAZOR WITH INTEGRAL HINGE MEANS FOR A PIVOTAL CAP AND LOCKING MEANS FOR SAID CAP
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The present invention relates to safety razors and more particularly to disposable safety razors.

Although many types of disposable razors and safety razors have been developed, the need for a disposable safety razor in which blades may be changed and which is particularly economical to manufacture still exists. The present invention provides a disposable safety razor which, in general form, resembles the standard safety razor, but has a single molded plastic structure which includes a flexible hinge and a flexible latch holding and interchanging a double cutting edge safety razor blade.

Therefore, it is an object of the present invention to provide a new and improved disposable safety razor.

An additional object is to provide a disposable safety razor composed of a single structure which may be a molded plastic structure and which, in addition, allows razors to be held therein to be replaced.

Another object is to provide a disposable safety razor which contains a new and improved means for securing a razor blade between a blade support and a blade cover.

A further object is to provide a disposable safety razor having a single plastic structure which contains a pair of studs projecting from a blade support portion of the structure, a pair of cooperating elongated slots in a blade cover portion of the structure which cooperates with the studs, and a latch to hold a razor blade between the support and cover.

Yet another object is to provide a disposable plastic safety razor which has a blade support having a flat center portion joined on opposite sides by downwardly slanting portions and a cover having a concave surface which overlies the support surface to secure a safety razor blade therebetween.

Further objects and advantages will become apparent from the following detailed description taken in connection with the accompanying drawings, in which:

FIGURE 1 is a perspective view of an embodiment of the present invention;

FIGURE 2 is a side elevational view of the embodiment of the invention illustrated in FIGURE 1;

FIGURE 3 is an enlarged end view of the embodiment of the invention illustrated in FIGURES 1 and 2;

FIGURE 4 is a sectional view, in which cooperating parts are separated, of a portion of the embodiment illustrated in FIGURES 1—3 taken along line 4—4 in FIGURE 1;

FIGURE 5 is a partially enlarged end view of a modified embodiment of the present invention; and

FIGURE 6 is a sectional view, in which cooperating parts are separated, of a portion of the modified embodiment illustrated in FIGURE 5 taken along line 6—6.

While this invention is susceptible of embodiment in many different forms, there is shown in the drawings and will herein be described in detail, embodiments of the invention with the understanding that the present disclosures are to be considered as an exemplification of the principles of the invention and are not intended to limit the invention to the embodiments illustrated. The scope of the invention will be pointed out in the appended claims.

While disposable razors have previously been constructed of molded plastic, they were either constructed of a multiplicity of separable parts similar to that utilized in standard metallic safety razors, or if they were constructed of a single head portion, a razor blade would be molded into the structure and thus, it could not be removed and replaced without destroying the razor structure. The present invention not only provides a single integral plastic disposable safety razor structure, but this structure has a cover which is pivotable in relation to a blade support that allows the cover to be pivoted away from the support for the removal of a blade and its replacement by a new blade.

Referring now to FIGURES 1 and 2, a safety razor constructed of a single piece of plastic has a handle 10, a blade support 11, and a blade cover 12. The blade cover 12 is pivotally connected to the blade support 11 by a thin plastic section 13.

Referring now to FIGURES 1 and 3, the blade support 11 has a surface which is composed of a flat center portion 14 and a pair of downwardly slanting portions 15 and 16 adjoining the center portion 14. A series of guard fingers 17 adjoin the slanting portion 15, and a series of guard fingers 18 adjoin the slanting portion 16 so that their top surfaces are spaced downwardly from the respective slanting portions 15 and 16. A pair of elongated studs 19 and 20 extends perpendicularly from the surface portion 14 of the support 11. The studs 19 and 20 have straight sides surfaces, and are utilized to protrude through the center slot of a conventional double cutting edge safety razor blade 21, as illustrated in FIGURE 3, to position the razor blade 21 on the support 11 with the cutting edges of the blade 21 extending outwardly toward the guard fingers 17 and 18, respectively.

The blade cover 12 has a pair of elongated slots defined by wall surfaces 22 and 23. Referring specifically to FIGURES 3 and 4, a pair of abutments 24 and 25 extend from an end of the blade support 11 opposite the thin plastic section 13 to form a notch 24' in the end of the support 11. A latch 26 is formed integrally in an end of the cover 12 opposite the thin plastic section 13 and has a pair of projections 27 and 28 for gripping the notch abutments 24 and 25. The cover 12 has a lower concave surface 29 which terminates in a pair of longitudinally extending ridges 30 and 31. A pair of raised inner rims 32 and 33 are formed on a lower portion of the respective wall surfaces 22 and 23.

When it is desired to place a blade in the razor, the cover 12 is pivotally away from the support 11 about the thin plastic section 13, as illustrated in FIGURE 1. The conventional double cutting edge razor blade 21 is placed on the support member 11 with the studs 19 and 20 protruding upwardly through its center slot. The cover member 12 is then pressed down on the razor blade 21, as illustrated in FIGURES 2 and 3, until the latch 26 enters the notch and the projections 27 and 28 grip the abutments 24 and 25 to snugly secure the blade 21 between the cover 12 and the support 11. At the same time, the inner rims 32 and 33 grip the sides of the respective studs 19 and 20 to aid in snugly securing the blade 21 throughout its length. With the cover closed upon the razor blade 21, as illustrated in FIGURE 3, the ridges 30 and 31 bear down on the razor blade 21 along its cutting edges to firmly align the cover and with the series of guard fingers 17 and 18.

Upward thumb pressure applied to the latch 26 while the fingers of the hand are closed about the handle 10 will cause the cover 12 to "snap" upwardly disengaging the projections 27 and 28 from the abutments 24 and 25 and the studs 19 and 20 from the rims 32 and 33 respectively, in order to allow the blade 21 to be removed.

Referring now to FIGURES 5 and 6, a modified latch structure is illustrated. The remainder of the razor is identical to the razor illustrated in FIGURES 1—4, and therefore, similar parts bear the same reference numerals.
with a suffix "a." An end of the blade support 11a has a downwardly extending ridge 40. A pivotal latch, generally indicated at 41, includes a pair of arms 42 and 43 which form an integral part with a hook member 44. The arms 42 and 43 are joined to an end of the blade cover 12a by a pair of thin plastic sections 45 and 46. When the cover 12a has been brought down over a razor blade 21a which has been placed upon the support 11a, the latch 41 is pivoted about the the thin sections 45 and 46 until it is in the position shown in FIGURE 6 around the ridge 40. FIGURE 6 shows the latch 41 and the ridge 40 separated from each other merely for clarity. When it is desired to remove a blade, the latch 41 is swung counterclockwise, as illustrated in FIGURE 6, until the hook 44 disengages the ridge 40, allowing the blade cover 12a to be pivoted upwardly and freeing the razor blade 21a.

I claim:

1. A disposable razor comprising:
   a blade support adapted to receive a double edge razor blade on a surface thereof, said support surface having a flat center portion and a pair of downwardly slanting portions adjoining said center portion,
   a series of guard fingers adjoining the slanting portions and having surfaces spaced downwardly from said slanted surface portions,
   a pair of elongated studs extending perpendicularly from said support to position a double edge razor blade on said flat center portion of the support,
   a blade cover having a concave blade engaging surface terminating in a pair of longitudinally extending ridges, said blade cover being pivotally joined to said support by a thin section of plastic and having apertures therethrough for receiving said stubs when said cover is pivoted over said blade, said ridges on said blade cover extending on either side of said center portion of said blade support to below the lowermost edges of said slanting portions, and means for engagingly securing the razor blade between said center portion of the blade support and said blade cover with the cutting edges of the blade being adjacent to and spaced from said guard fingers and with said ridges on said cover bearing on said blade along its cutting edges.

2. A razor as claimed in claim 1 wherein said means is a latch connected to said cover on the end opposite said thin plastic section by another thin plastic section for securing said end of said cover to the juxtaposed end of said support.

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