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[54] **ANGLE HEAD SAFETY RAZOR**

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[52] **U.S. Cl.** **30/70,** 30/85
[51] **Int. Cl.** **B26b 21/18**
[58] **Field of Search** 30/70, 85, 89

[56] **References Cited**

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1,184,875	5/1916	Ridgely	30/89 X
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[57] **ABSTRACT**

A safety razor wherein a forward or leading end of the usual type handle is provided with a reduced offset shank disposed at an angle oblique to the longitudinal axis of the handle. This shank functions to accommodate an attachable and detachable head made up of a guard plate and a complemental clamping plate. Central portions of these plates are provided with aligned openings or holes. The hole in the clamping plate is threaded to accommodate the screw-threaded shank. The threads on the shank also serve to accommodate a knurled collar-type nut which is manually adjustable to maintain the over-all head in an advantageous keen cutting but safe position. Experience has shown that a razor of the type shown promotes expedient handling in that it reliably cleaves the hair, does not pull, simplifies shaving and minimizes painful knicks and cuts.

6 Claims, 4 Drawing Figures

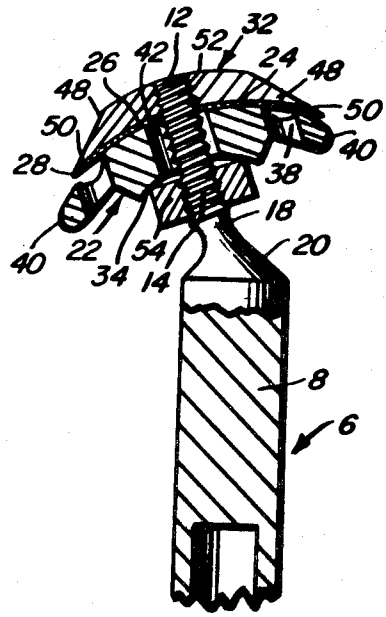


Fig. 1

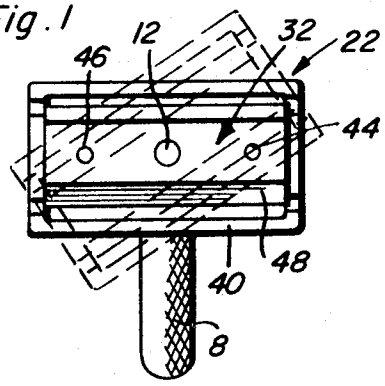


Fig. 2

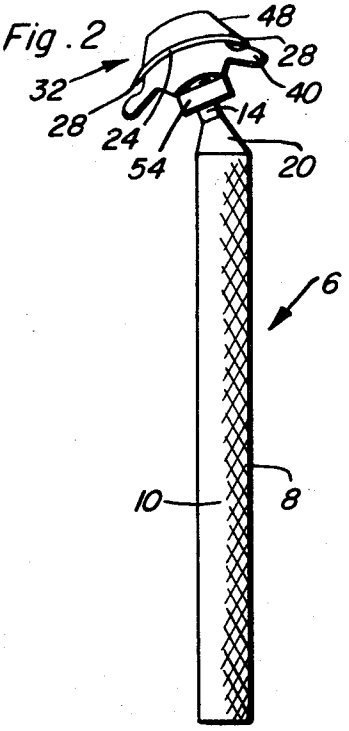


Fig. 3

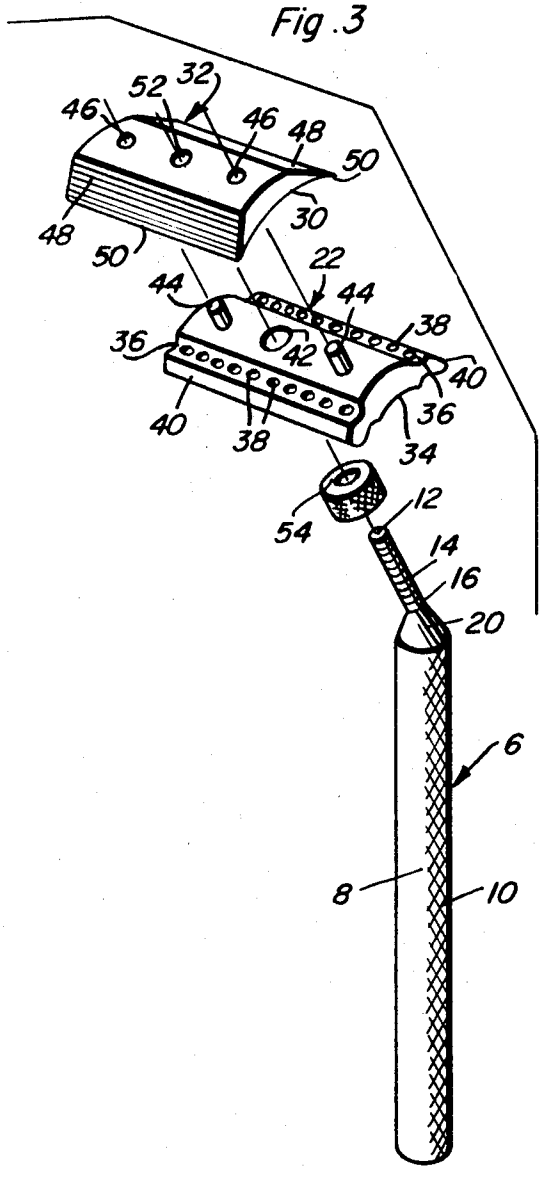
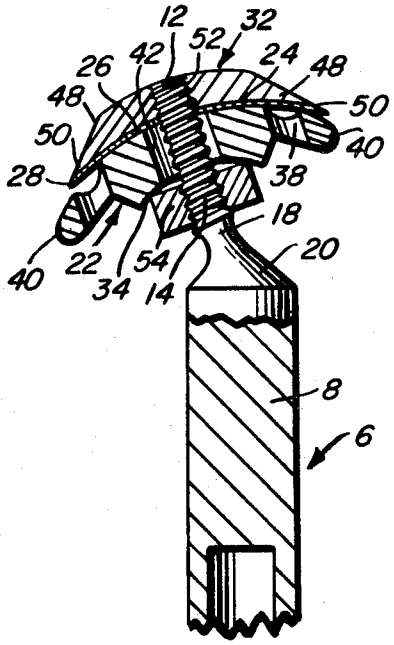


Fig. 4



ANGLE HEAD SAFETY RAZOR

This invention relates to a safety razor, more particularly, to an adaptation wherein the leading or forward end of the handle is provided with a novel oblique-angled shank through the medium of which a two-part blade-equipped head is mounted in a manner which enables the user to more satisfactorily, effectually and reliably cope with shaving problems.

More specifically the concept herein under consideration has to do with an improved two-part easy-to-assemble head wherein the parts are such in construction and adaptability that they are capable of being expeditiously handled and mounted on the forward end of the handle in a manner to promote expedient but safe use.

Persons conversant with the field of endeavor under consideration are aware that it is common practice for the safety razor user to so catch hold of and utilize the handle that the selected cutting edge of the blade will be caused to traverse the path of movement at the customarily recommended oblique angle. Keeping in mind this aspect of the matter it is common knowledge that inventors working in this field of accomplishment have sug-gested the adoption and use of safety razors wherein the head is capable of occupying a pitch that the cutting blade is capable of more satisfactorily cleaving and cutting the hairs with a minimum of confusion and effort.

For background purposes and as exemplary of the state of the art to which the invention relates the reader may, if so desired, refer to the safety razor of Otto Spahr, U.S. Pat. No. 1,639,441 and, in addition, to the similarly performing safety razor and blade combination disclosed in Hyman R. Segel U.S. Pat. No. 2,002,298.

An object of the present invention is to advance the art and, in so doing, to provide an adaptation which will save time and labor, requires less painstaking effort and which can be relied upon to expeditiously and effectually assure the user he can shave without discomfort and, at the same time, assure himself a clean smooth result.

Briefly the innovation herein comprehended is characterized by a rigid one-piece handle which has a forward or leading end provided with an offset integral shank the longitudinal axis of which is disposed to assume an angle oblique to the longitudinal axis of the handle. This shank provides mounting and coupling means for an attachable and detachable head, more particularly, a head which embodies a guard plate. This guard plate has a central opening, an outward convex anvil like double-edge blade seating surface, and an inner concave surface. The complemental blade shielding and clamping plate has a centralized screw-threaded hole aligned with the opening in the guard plate. The shank passes through the opening, then through the blade and is screwed into a hole in the capping and clamping plate in a manner to permit the blade to be interposed and clamped between coacting or confronting surfaces of the two companion plates.

To the ends desired, the shank provides a mounting for a knurled readily accessible binding nut which when properly tightened screws itself against and securely positions the guard plate.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully

hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIG. 1 is a front end or elevational view of an angle head safety razor constructed in accordance with the principles of the present invention.

FIG. 2 is a view in side elevation showing the details of FIG. 1 with greater particularity.

FIG. 3 is an exploded perspective view showing all of the component parts and the manner in which they can be readily oriented when assembled for use.

And FIG. 4 is a view with parts in section and elevation drawn on a suitably enlarged scale and which shows the ready-to-use razor.

The handle means is denoted (see FIG. 3) by the numeral **6** and comprises a rigid elongated handle **8** of requisite length and cross-sectional dimension and which is externally knurled or otherwise constructed as at **10** for easy handling. As suggested in FIG. **4** the major part of the handle can be hollow. The fact that the handle, and the other primary parts too, is constructed of aluminum ensures satisfactory performance. The aforementioned elongated reduced shank is denoted by the numeral **12.** This shank is screw-threaded as at **14** and is joined to a tapered or conical connector or extension **20** (FIG. **4**). The lengthwise axis of this shank is at an oblique angle (approximately 40°) to the lengthwise dimension or axis of the handle.

The two part head comprises a first plate which is here designated as a guard plate **22.** This guard plate is substantially rectangular in plan as is evident from FIGS. **1** and **3.** The outward or forward surface is substantially convex as at **24** and provides an anvil-like foundation or base for the double-edged flexible razor blade **26** (FIG. **4**). The cleaving or shaving edges of the blade are conveniently denoted at **28.** The central portion of the blade is appropriately slotted or otherwise constructed to permit it to be sandwiched between the anvil surface **24** and the confronting concave surface **30** of the capping and clamping plate **32.** The guard plate **22** also has a concave inward surface or side as at **34.** In addition the lengthwise top surface portions are provided with a groove along each edge which provides an open-ended channel **36.** This channel is provided with longitudinally spaced apertures or orifices **38.** Outwardly of the parallel apertured channels the flange-like extensions are provided with convexly rounded edges **40** which assist in gliding the razor head when the razor is being used in a generally well-known manner. The central portion of the guard is provided with a suitably enlarged non-threaded opening **42.** To the left and right of this in FIG. **3** the convex surface is also provided with positioning and retaining studs **44,** that is studs which are adapted to pass through keeper holes **46** provided in the central body portion of the clamping plate **32.** It will be noted in this connection that the lengthwise marginal edges of the clamping plate are chamfered as at **48** and slope in the manner shown in FIG. **4** and merge into feather-edges **50** which cooperate with the properly gauged and projecting edge portions **40** of the aforementioned razor blade. For best results the median body portion of the clamping plate is provided with a screw-threaded hole **52** which in practice lines up with the opening **42** as brought out in FIG. **4** and permits an end portion of the

shank to be screwed therein for proper assembling and retaining results.

An appropriately knurled collar-like nut is provided as at **54**, this nut being screwed on that part of the shank **12** between the neck **18** and the confronting concave side of the guard plate **22**. Reference to FIG. **4** will show how the nut is applied and cooperates to achieve the jamming and retaining result desired.

Experience has shown that a safety razor constructed as herein shown and described assures the user smoother shaving, increased life for each blade, promotes easier razor handling, slices the hair off instead of pulling it, minimizes nicks and cuts and ensures the over-all end result desired.

Not only is the oblique angle locale of the blade-equipped head capable of accomplishment as is evident in FIGS. **2** and **4** in particular, it is possible to bodily turn the head around the axis of the shank to also vary the usefulness and to enable users, by experimentation, to learn, by trial and error, how best to achieve the results desired.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

What is claimed as new is as follows:

1. A safety razor comprising, in combination, a rigid straight handle having a forward end provided with a reduced offset shank whose longitudinal axis is disposed at an angle oblique to the longitudinal axis of said handle, an attachable and detachable head embodying a guard plate having a central opening and an outward convex anvil-like double-edge blade seating surface, a blade, and a blade shielding and clamping plate having a central screw-threaded hole aligned with said opening, said shank passing through said opening and being adjustably but retentively screwed into said hole in a manner to clampingly secure said blade between the coacting opposed surfaces of said plates.

2. The safety razor defined in and according to claim **1**, and wherein an assembling and retaining nut is operatively and adjustably threaded on said shank and is proximal to and retentively engageable with an oriented and coordinating face of said guard plate.

3. The safety razor defined in and according to claim **2**, and wherein said coordinating face is concave.

4. The safety razor defined in and according to claim **2**, and wherein said coordinating face is concave, and also wherein said guard plate is substantially rectangular in plan, has convexly rounded face contacting and tracking edges and also has open-ended channels situated inwardly of and parallel to the respectively adjacent edges and each channel having a row of longitudinally spaced orifices.

5. A safety razor comprising, in combination, a straight rigid elongated handle having a leading end formed with a tapered conical extension united with an integral reduced shank, said shank being rigid, longitudinally straight, screw-threaded and offset in a manner that its longitudinal axis is disposed at a 40° angle to the longitudinal axis of said handle, an attachable and detachable two-part blade mounting head embodying a guard plate having a centralized opening, a concave inward surface and a convex outward surface, said outward surface providing a seating anvil for a flexible double-edged blade, having rigid outstanding studs, longitudinal convexly rounded guiding and tracking edges and being provided inwardly of said edges with open-ended apertured grooves providing channels, and a blade capping, shielding and clamping plate having a central screw-threaded hole aligned with the central opening in said guard plate and spaced keeper holes in which said studs are plugged in a manner to align and maintain said plates in oriented relationship, said shank being aligned with and passing outwardly through said opening and being screwed and adjustably anchored in said screw-threaded hole.

6. The safety razor defined in and according to claim **5**, and, in combination, a knurled collar-nut threaded on said shank and proximal to and retentively engageable with a coacting portion of the concave face of said guard plate.

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