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J. E. FISK

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DOUBLE EDGE BLADE TYPE PERMANENTLY ASSEMBLED RAZOR

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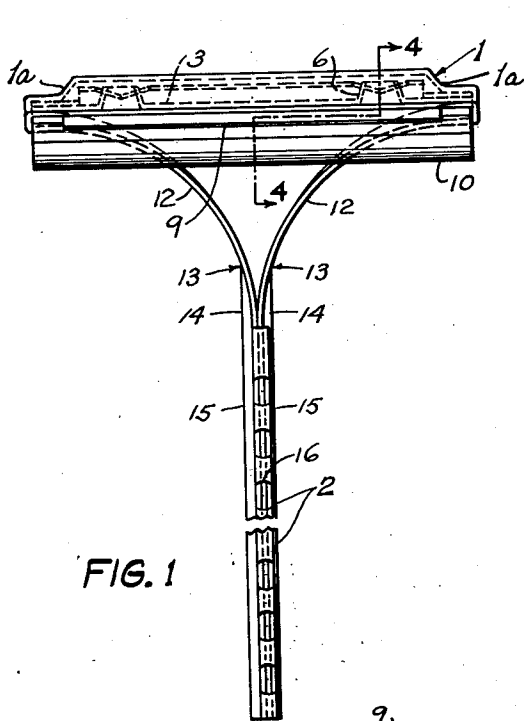


FIG. 1

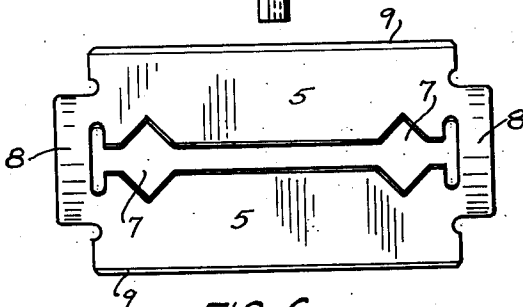


FIG. 6

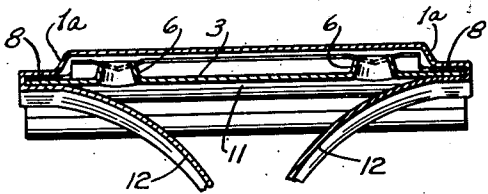


FIG. 3

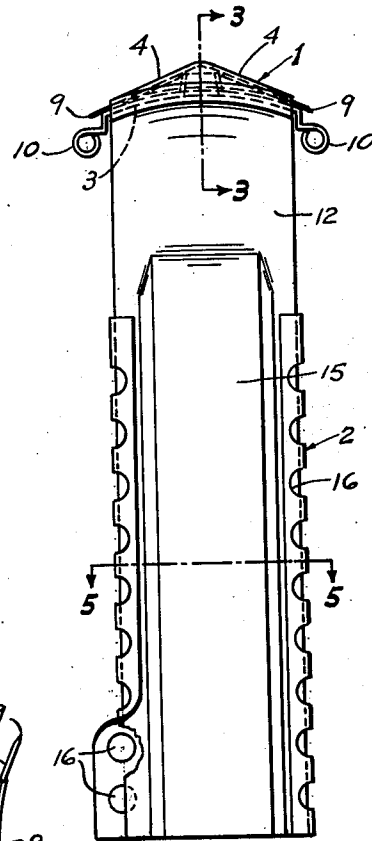


FIG. 2

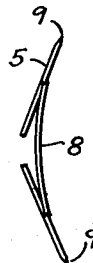


FIG. 7

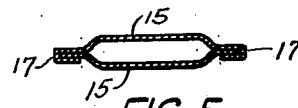


FIG. 5

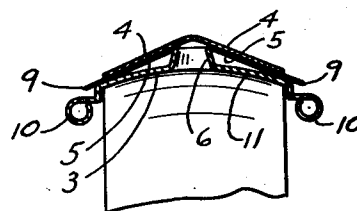


FIG. 4

INVENTOR.

John Edwin Fisk

BY

George M. Smith
ATTORNEY.

UNITED STATES PATENT OFFICE

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DOUBLE-EDGE BLADE TYPE PERMANENTLY
ASSEMBLED RAZOR

John Edwin Fisk, Cleveland Heights, Ohio

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5 Claims. (Cl. 30—32)

1

The invention relates to a permanently assembled double-edge-type safety razor blade mounting construction (hereinafter called razor) adapted to be made available to the public at extremely low cost, yet which will enable a person to shave therewith at least as effectively and safely as with currently offered, relatively expensive razor frames designed for use with the various makes of double-edge springy blades commonly on sale.

The construction is arranged to employ readily pliable sheet metal (e. g. thin aluminum) or other sheet material which, when distorted, as by bending between dies will remain in the desired form and retain the necessary strength and rigidity.

Correlative objects are to provide a razor device wherein the blade edges are maintained in an effectual cutting but guarded position; wherein non-skid means for handhold purposes are provided without disproportionate cost, and wherein, in order to minimize weight, the necessary rigidity is accomplished by shaping of relatively soft and pliable thin-section sheet material rather than by the use of relatively heavy cross sections such as required for example in die castings.

Other objects will be indicated below.

Figures 1 and 2 are side elevations of the razor device taken at right angles to each other;

Figures 3, 4 and 5 are cross sectional views as indicated on Figures 1 or 2; and

Figures 6 and 7 are plan and end elevational views of a conventional blade when sprung to the shape it assumes in the present mounting.

The following is a description of a preferred form, by way of example.

The main head portion 1 of the razor and the handle portion 2 are formed of a single strip of soft, readily pliable sheet metal, the head being supplemented by a similar sheet metal blade-backing piece 3, hereinafter usually called a bolster plate.

The head portion top member 1 has the shape of a conventional double-shed i. e. gable roof with identical relatively sloping approximately flat sides or panels 4 overhanging and depressing the side marginal portions of the blade 5, as shown best in Fig. 4, in cooperation with central blade-locating hollow bosses 6 which enter or engage (as locating dowels) the usual holes or slot-enlargements 7 common in conventional double-edged readily flexible blades. The bosses 6 are of tapered form so as operatively to fit different sized holes (or enlargements of the blade

2

slot). If the top ends of the bosses fit the holes or enlargements than the bosses will elevate the central longitudinal portion of the blade as illustrated. Depressed gable end portions 1a of the head portion 1 complementary to the bolster in cross section flex the side-connecting end portions 8 of the blade into curved form as shown. The free margins of the roof-shaped formations 4 depress the blade margins to bring the cutting edges 9 into overhanging but guarded relationship to hollow bead formations 10 formed on the bolster plate 3 as shown in Figs. 2 and 4. The bead formations are in downwardly stepped relation to the arched central area portion 11 of the bolster plate, so as to underhang the cutting edges of the blade in spaced relation thereto.

The roof-like shape of the head portion 1 and the arch shape of the bolster 3 afford substantial rigidity to the head structure.

To assemble the razor, a perforated double edged razor blade is placed over the projections 6 and sandwiched between the head portion 1 of the strip and the bolster plate. Respective portions of the strip which form the upper limits of the handle are then bent around the longitudinal ends of the blade and bolster plate, leaving the edges of the blade exposed. Distortion of the strip from a comparatively flat shape into tightly folded condition about the arched end margins of the bolster plate inherently causes work hardening of the comparatively soft metal strip at each bend in the strip, imparting sufficient permanent rigidity to the distorted portions to retain the end portions 8 of the blade permanently in the curved form illustrated in Fig. 7 while binding the head portion of the strip, the blade and the bolster plate firmly together. It is intended that this razor be used only for the life of the blade permanently fastened therein. Disassembly can only be accomplished by complete distortion of the razor unit.

The upwardly diverging arm portions 12 of the handle are preferably of gradually diminishing arch shape, cross-sectionally, being forced into underhanging complementary relationship to the under-side arched end portions of the bolster 3 as shown by comparison of Figs. 2 and 3. The arched cross-sectional shape of the curved arms 12 merge into flat areas of the arms at 13, where pivoting of the head relative to the main part of the handle about its longitudinal axis is adequately resisted by joining together of the parts constituting the handle. The parallel portions 14 of the strip composing the handle are preferably made twist-proof by form-

3

ing said portions into channel shape (see opposite embossings 15) as shown particularly by Figs. 2 and 5. The embossings 15 merge into the approximately flat strip stock composing the lower portions of the curved arms 12.

To secure together the handle-forming portions of the strip stock, and also to provide a non-skid handle surface, one of the strip portions composing the handle 2 is made wider than the other and has a double series of apertures 16 (see developed portion, lower left, Fig. 2), along which the opposite margins of the wider portion of the strip are bent at 17 around the associated edges of the complementary handle-forming portion of the strip. Obviously one edge of each of the handle-forming portions 14 of the strip could carry the row of holes 16 and be flanged about the adjacent edge of the other handle-forming portion 14; but that would not of itself be certain to maintain registration of the two overlapped handle-forming portions as in the preferred construction illustrated.

I claim:

1. A razor construction comprising a strip of sheet material formed into a roof shaped head portion with gable ends connecting approximately flat sides and with handle-forming extensions brought together and joined beneath the head portion, and a bolster retained by the strip in underhanging relation to the head portion and having upstanding, dowel-like, blade-positioning means operative to engage edges of an elongated springy metal blade, which edges define portions of an elongated opening along the longitudinal axis of such blade, to hold the blade in registration with the bolster, said bolster having guards underhanging the cutting edges of such blade in spaced relation thereto.

2. In a shaving device comprising a permanently assembled razor frame and flexible blade, an elongated bolster of arch shaped cross section having depending sides and contiguous marginal at the side marginal edges so as to underhang the cutting edges of the blade, and a top strip of sheet material overhanging the blade and generally of gable roof shape in cross section, the strip having gable end portions and U-shaped portions extending therebeyond in tightly embracing relation to respective end marginal portions of the blade and underlying end marginal portions of the bolster.

3. In a shaving device comprising a permanently assembled razor frame and blade, a sheet metal bolster of arched transverse cross section having depending sides and contiguous marginal blade guard portions extending outwardly in opposite directions at the lower limits of the sides, a flexible blade overlying the arched portion of the bolster, and a top piece of strip material having a raised and thereby hollow central portion the side edges of which engage respective portions of the blade inwardly from the cutting edges toward its longitudinal axis all along the blade edge portions, the top piece longitudinally of the blade beyond the raised portion at each end thereof being in tight engagement with end marginal portions of the blade and extending

4

around the ends of the bolster between the depending sides thereof and located thereby to hold the top piece, blade ends and bolster firmly clamped together in face to face relationship.

4. A permanently assembled razor wherein an elongated strip of sheet material forms a blade retaining portion of the razor and has overlapped portions below the blade to form a handle, one of said end portions being wider than the other and with its edge margins extending around the edges of said other to fasten said end portions together, said wider portion having an aligned series of holes therethrough extending on two principal faces of the handle and therebetween to provide a non-skid gripping surface.

5. A razor frame adapted to mount a springy, double-edge, elongated, normally flat, metal blade having a central slot lengthwise thereof and connecting narrow end portions bridging the slot, the frame comprising a bolster coextensive with such blade and having substantially rigid rests positioned to support in straight form respective blade margins which lie inwardly from but adjacent the cutting edges of the blade, the bolster having guards depending below the rests and extending therealong, the top side of the bolster at the location for the two end portions of the blade being upwardly arched transversely of the blade as a substantially rigid curved support for the narrow end portions of the blade, and a top member of sheet material adapted to be secured to the bolster for holding the blade thereon, the top member, when secured, having arched transversely extending end portions the under surfaces of which are substantially complementary to the said arched portions of the bolster for pressing downwardly upon said narrow end portions of the blade, thereby—in conjunction with the bolster surfaces mentioned, by flexure of the blade metal—diverting the main body portions of the blade which lie between the cutting edges into planar sided gable roof form, the top member, for its entire length between the arched surface portions thereof exclusive of the side margins of the top member, having its under surface concaved to an extent such as to exert substantially no downward pressure on said diverted main portions of the blade, the side margins of the top member being substantially straight and disposed sufficiently close to the underlying top surface portions of the bolster to maintain the cutting edge margins of the blade thereagainst in downwardly inclined position above the guards.

JOHN EDWIN FISK.

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