

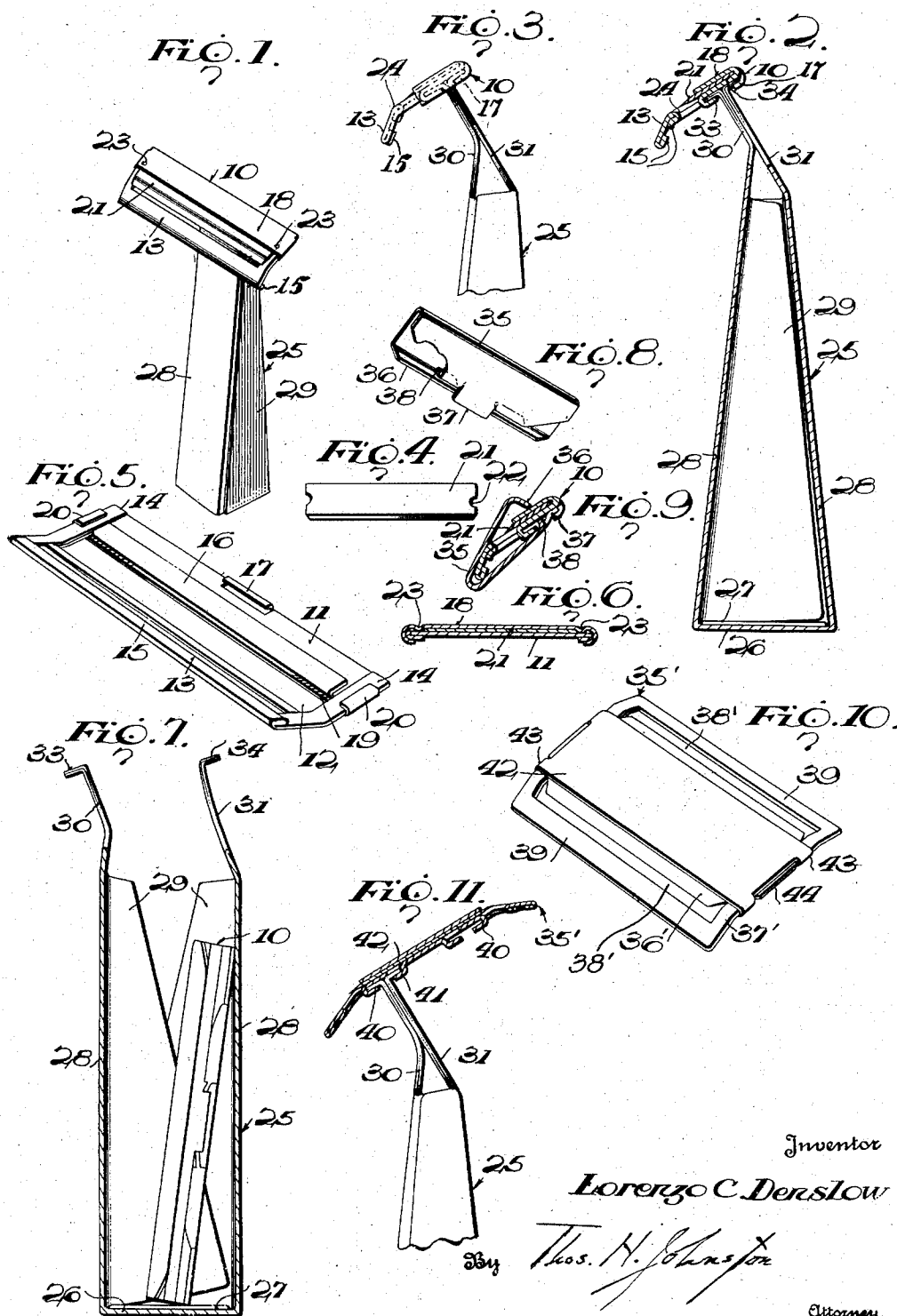
Aug. 14, 1951

L. C. DENSLOW

2,563,802

SAFETY RAZOR WITH DISCARDABLE HEAD

Filed Nov. 30, 1945



Inventor

Lorenzo C. Denslow

Thos. H. Denslow

Attorney

UNITED STATES PATENT OFFICE

2,563,802

SAFETY RAZOR WITH DISCARDABLE HEAD

Lorenzo C. Denslow, Washington, D. C.

Application November 30, 1945, Serial No. 631,804

1 Claim. (Cl. 30-47)

1

This invention relates to an improved safety razor.

Heretofore, in devices of this kind, the objective, for the most part, seems to have been to provide a blade which could be installed between some expedient of a handle and clamp, used, sharpened, and finally discarded, while the main parts of the razor would remain a permanent investment to be employed in conjunction with new blades ardently advertised to refit the razor. Many disadvantages could be cited against the conception.

Primarily, it may be noted that in the average razor of the kind the lateral distance between the blade edge and the effective face-contacting surface of the clamp is too great, with the result that the razor must be tilted more or less at an acute angle to the face in order that the blade may do its work. As a consequence, most razors of the kind must be used somewhat in the manner of a hoe. Furthermore, blades installed by the user have no precise spacing or relation between blade edge, clamp, and guard.

It is therefore an object of the present invention to provide a razor wherein but extremely small lateral thickness will lie between the face-contacting surface of the head and the blade edge so that, to all intents and purposes, the blade may lie substantially parallel to the face and thus, in the same manner as a straight edge razor, cut the beard at substantially a right angle to the hairs.

A further object of the invention is to provide a razor wherein the razor head will comprise a composite unit of blade and sheath precision-made to securely anchor the blade in the sheath in a predetermined fixed position, and adapted to be sold as a unit to supplant a like unit when the blade thereof has become dulled.

Another object of the invention is to provide a razor wherein, by pre-fabricating the blade and sheath as a unit, the relation between blade edge and guard will be fixed and predetermined.

And a still further object of the invention is to provide a razor wherein a single handle may be readily attached to a new head whenever an old head must be discarded, wherein flanges will be provided on the head with which the handle may be slidably and removably engaged, fixing the angular relation between head and handle, and wherein the handle will provide a container for the head.

Other and incidental objects of the invention will appear during the course of the following description, and in the drawings:

Figure 1 is a perspective view of my improved razor.

2

Figure 2 is an enlarged vertical sectional view through the device.

Figure 3 is a fragmentary side elevation.

Figure 4 is a detail of the blade.

Figure 5 is an enlarged bottom perspective view of the head, the blade being removed.

Figure 6 is a medial longitudinal sectional view through the head, and particularly showing the manner in which the blade is anchored in its sheath.

Figure 7 is an enlarged vertical section through the handle, and showing the handle open.

Figure 8 is a rear perspective view of the blade shield.

Figure 9 is an end view showing the shield attached to the head.

Figure 10 is a front perspective view of a modified form of head.

Figure 11 is a detail transverse section showing the modified form of head attached to the handle, a portion of the handle being shown in elevation.

In carrying the invention into effect, I employ a head, indicated as a whole at 10. This head comprises, as will be explained, a blade, and a sheath therefor which securely mounts the blade to thus provide a composite, pre-fabricated unit so that when the blade of a head in use becomes dull, a new head is substituted for the old head.

In the interests of clarity, the sheath will be first described, and while it may be stated at the outset that the sheath and handle, which latter will also be later described in detail, may both be formed of plastic or other suitable material, still, for the purposes of the present disclosure, I have chosen to show the parts of suitable resilient sheet metal.

Referring now to the sheath mentioned, said sheath is preferably formed as an integral blank and comprises, as best seen in Figure 5 of the drawings, a body plate 11 in which is formed a slot 12, the plate being bent longitudinally to define an angularly disposed guard 13 in front of said slot. At its ends, the body plate is bent under to provide stiffening flanges 14 at the ends of the head, while at the forward and rear edges of the guard 13 said plate is likewise bent under to define stiffening flanges 15 the leading one of which provides a smooth leading edge for the guard. The metal freed to provide the slot 12 is bent rearwardly to define a longitudinal flange 16 extending between the flanges 14, and struck from the body plate medially thereof at the lower side of the head is a short flange 17 facing the flange 16.

The body plate 11 further comprises, as perhaps best seen in Figure 1 of the drawings, a face

3

plate 18 which overlies the portion of the body plate rearwardly of the slot 12 to thus provide a socket 19 substantially U-shaped in cross section, and extending from the ends of the face plate are ears 20 bent under to lie flat against the flanges 14 and anchor the face plate.

The blade 21 employed is shown in detail in Figure 4 of the drawings. The blade will, of course, be formed of suitable steel and sharpened to provide a cutting edge. Formed in the blade at its ends are notches 22. The blade is seated solidly in the socket 19 of the head 10, and the parts are so proportioned that the blade fits the socket so that no play of the blade in any direction is possible, the blade being clamped tight between the body plate 11 and the face plate 18. Indented from the face plate, as particularly seen in Figure 6, are knobs 23 which engage in the notches 22 of the blade and lock the blade in place.

It will thus be seen that the head 10, as a whole, is actually, as previously stated, a composite, pre-fabricated unit. The location of the cutting edge of the blade relative to the width of the slot 12 and relative to the guard 13 is predetermined and fixed so that the head provides an entity devised for best shaving without likelihood of being tampered with by the user. In this connection, it is to be noted that the head 10, when laid flat against the face, will dispose the cutting edge of the blade 21 at substantially a right angle to the hairs of the beard. The face plate 18 of the sheath of the head 10 is in reality extremely thin, notwithstanding the exaggerated showing of the drawings as to the thickness thereof, and the heel 24 of the guard 13 lies in a plane with the bottom face of the blade, while the front face of the guard slopes off gently at only a few degrees from the horizontal. Thus, the guard 13 in front of the cutting edge of the blade 21, and the face plate 18 in the rear of the cutting edge of the blade will provide areas of contact of the head against the face and guide the head for most efficient position for best cutting of the beard at substantially a right angle of said edge to the hairs.

In conjunction with the head 10 I provide a handle, indicated as a whole at 25. The handle is preferably formed from a blank of suitable resilient sheet metal and is triangular in edge elevation. The handle includes a flat base 26 reinforced by lateral overlying flanges 27, and rising from the base are converging front and rear walls 28 which carry slidably overlapping pairs of side flanges 29. The front and rear walls are continued to provide prongs 30 and 31 respectively, and formed on the free ends of said prongs are lateral flanges 33 and 34 respectively. The prong 30 is angular while the prong 31 is straight. As shown in Figure 7, the base 26 may be flexed to permit separation of the front and rear walls 28, when the head 10 may be disposed in the handle. Thus, the handle provides a convenient container for the head.

The head 10 is attached to the handle 25 by first squeezing the prongs 30 and 31 of the handle into contact, when the head is applied endwise over the flanges 33 and 34. The flange 33 is slipped beneath the flange 16 of the head while the flange 34 is slipped beneath the flange 17 of the head. The parts are resilient and the connection is tight. Thus, the angular relation of the head in respect to the handle is fixed, and since the prongs 30 and 31 of the handle are in contact with each other throughout the major portion of

4

their outer extremities, rigidity is imparted to the shank formed by said prongs so that the head is solidly supported by the prongs without tendency under stress to twist in either one direction or the other.

In connection with the structure provided by the assembled head 10 and handle 25, it will be noted, as more particularly seen in Figures 2 and 3 of the drawings, that the prongs 30 and 31 of the handle extend at an oblique angle to the body of the handle and mount the head to lie at a right angle to the prongs. The head thus lies in front of the vertical axis of the handle and is inclined with respect thereto. The inclination shown for the head has been chosen as best adapting the head by convenient grasp of the handle to lie flat against the face of the user.

In some instances, a shield for the head 10 when detached from the handle may be preferred. I accordingly provide the element shown in Figures 8 and 9 of the drawings. The shield, in the embodiment shown, is of resilient sheet metal and comprises a substantially channel shaped clip 35 provided at one side with an angular flange 36, and at the other side thereof with a tongue 37, at opposite sides of which tongue are formed inturned flanges 38. The clip is applied endwise to the head 10 in the manner shown in Figure 9. The flange 36 abuts the face plate 18, the tongue 37 engages beneath the flange 17 of the body plate 11, and the flanges 38 impinge the free edge of the flange 16 and, as the clip is moved endwise, guide the tongue 37 under the flange 17, the side walls of the clip being tensioned so that the clip is frictionally held in place.

In Figures 10 and 11 of the drawings, I have shown a modification of the invention which involves provision of a head 35' which mounts a double edge blade 36'. The sheath 37' for the blade is in most respects like the sheath first described, except that the body plate of the sheath 37' is provided with a pair of slots 38' to accommodate the edges of the blade, and is further provided with a pair of guards 39, corresponding to the guard 13 of the head 10. Lying in the rear of each of the slots 38' is a pair of flanges 40 and 41 respectively, corresponding to the flanges 16 and 17 first described and adapted for detachable engagement with the handle 25 in the manner previously explained, so that the head may be arranged upon the handle to selectively dispose either one edge or the other of the blade in position for use. It is further to be noted that in this variation of the invention, the blade 36' is clamped in place by a separate face plate 42 provided at its ends with spaced ears 43 which straddle lobes 44 on the ends of the blade and are bent under the body plate for locking the parts in fixed assembled relation. Otherwise, the modified structure is substantially identical with the preferred form of the invention first described, and further description is accordingly believed unnecessary.

Having thus described my invention, what I claim is:

A safety razor including a body plate having an overlying face plate and provided with a slot therein, a blade clamped between said plates and having its cutting edge exposed at said slot, ears formed on one of the plates and engaging the other plate to permanently secure the blade in place for the period of usefulness of the blade and provide a composite discardable razor head, flanges formed on said head, and a handle hav-

5

ing flexibly connected normally converging front and rear walls continued to provide prongs rising in contact with each other from the upper end of the handle in angular relation thereto and provided with flanges engaging said first mentioned flanges and detachably mounting the head upon the handle, the front and rear walls of the handle being adapted to be flexed apart to receive the head in the handle when detached therefrom.

LORENZO C. DENSLOW.

REFERENCES CITED

The following references are of record in the file of this patent:

6**UNITED STATES PATENTS**

Number	Name	Date
919,719	Hart -----	Apr. 27, 1909
1,044,476	Bean -----	Nov. 19, 1912
1,195,259	O'Reilly -----	Aug. 22, 1916
1,824,203	Fisher -----	Sept. 22, 1931
1,863,495	Manley -----	June 14, 1932
2,386,536	Bensel -----	Oct. 9, 1945
2,421,540	Clarke -----	June 3, 1947