Sept. 29, 1936. S. DABROSKI 2,055,837

SAFETY RAZOR

Filed Sept. 26, 1935

Fig. 3.

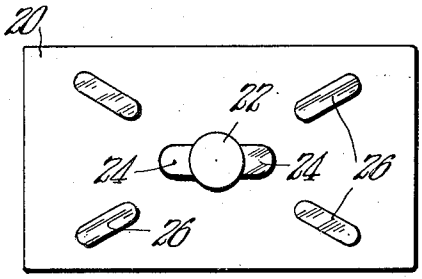
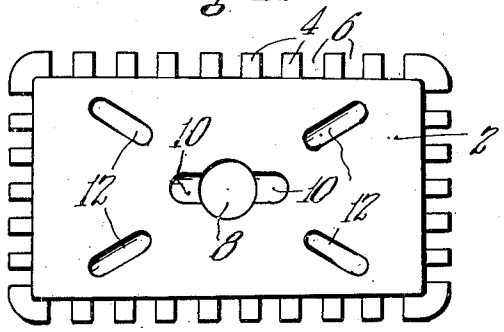


Fig. 1.



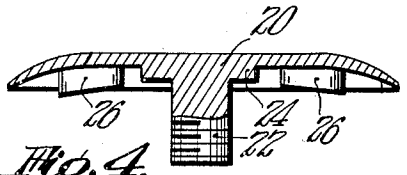


Fig. 4.

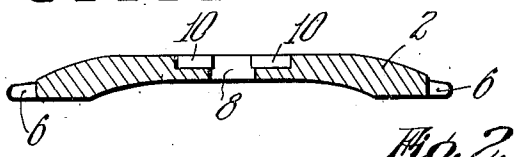


Fig. 2.

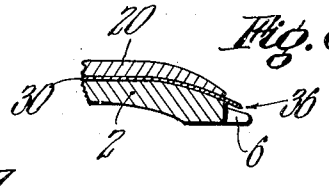


Fig. 6.

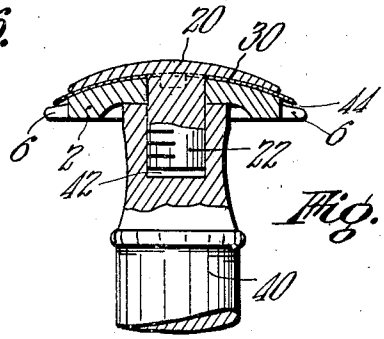
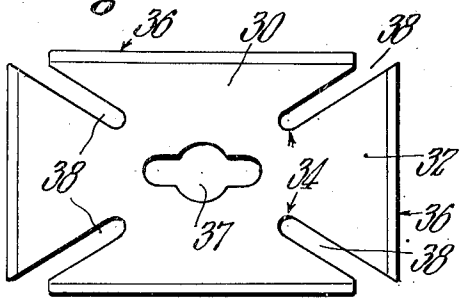


Fig. 5.

Fig. 7.



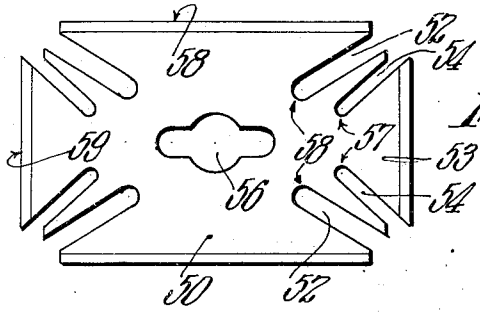


Fig. 8.

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SAFETY RAZOR

Stanley Dabroski, Springfield, Mass.

Application September 26, 1935, Serial No. 42,290

2 Claims. (Cl. 30—73)

This invention relates to improvements in safety razors and is directed more particularly to a novel safety razor construction so arranged that the blade thereof has maximum flexibility.

It is a principal object of the invention to provide a safety razor assembly including a blade-supporting member, a guard, a blade and a handle all associated with one another in such a way that an economical yet safe device is provided and constructed in such a way that the blade thereof is substantially more flexible than those of ordinary razors.

A still further object of the invention is the provision of a safety razor which is arranged to have at least four cutting edges, two of which are relatively long and two of which are relatively short. The latter two edges are particularly suitable for shaving those parts of the face, such as beneath the nose, which are not readily accessible to razors of common form.

Various other objects and advantages of the invention will become more apparent after a reading of the following description and reference will be had to the accompanying drawing wherein:

Fig. 1 is a plan view of the blade-supporting member of the invention;

Fig. 2 is a longitudinal sectional view through the blade-supporting member shown in Fig. 1;

Fig. 3 is an inverted plan view of the clamping member of the invention;

Fig. 4 is a longitudinal sectional view through the clamping member shown in Fig. 3;

Fig. 5 is a transverse sectional elevational view showing the parts in assembled relation to explain certain features of construction;

Fig. 6 is a partial sectional elevational view of the assembly to explain certain other features of construction;

Fig. 7 is a plan view of a blade member of the invention; and

Fig. 8 is a plan view of a modified form of blade member embodying the features of the invention.

Referring now to the drawing in detail the invention will be more fully described.

In Figs. 1 and 2, there is shown what may be called a plate or guard member 2 which is substantially rectangular in form and has two opposite sides which are relatively longer than the other opposite sides. Alternate teeth 4 and grooves 6 are provided along the four marginal edges of the blade and the teeth 4 are in a plane which is below that of the edges of the member 2 as shown in Fig. 2. This is for a purpose which will later appear.

According to the preferred form of the invention, however, the four corners of the blade-supporting member 2 are somewhat rounded, as is shown in Fig. 1, and the teeth 4 are all in substantially the same plane with one another and have substantially straight outer edges. In this way there are no objectionable projecting parts which are apt to hurt the face.

There is provided in the plate 2 a centrally-disposed aperture 8 and also, if desired, there may be recesses 10 in the upper surface of the plate at opposite sides of the aperture 8 for a purpose presently to be described. What may be called key-receiving sockets 12 are formed in the upper surface of the guard 2 and these extend diagonally towards the four corners thereof as shown.

According to the form of the invention at present preferred, the said upper surface of the plate 2 curves concavely transversely as shown in Fig. 5. Also, preferably, the outer end portions of the said surface curve downwardly more or less, as shown in Fig. 2.

A clamping or cap member 20 is shown in Fig. 3 and this is provided with a centrally-disposed stud 22 which extends downwardly from the lower or inner side of the cap. The stud 22 is adapted to be received in the aperture 8 of the plate and its lower end may be threaded as shown. If desired, keys 24 may be provided at opposite sides of the stud 22 which are of such size and shape as to be capable of being received in recesses 10 of the plate 2.

Extending diagonally of the under side of the clamp member 20 are other keys 26 which are so located as to be receivable in the sockets 12 of the plate 2 when the stud 22 is received in aperture 8 of the plate. These keys 26 preferably extend in diverging relation towards the corners of the cap 20 and they terminate at a distance inwardly from the edges of the member 20, just as the sockets 12 terminate at a distance inwardly of the edges of plate 2.

The inner or lower surface of member 20 curves generally concavely transversely thereof as shown in Fig. 5 so as to be complementary to the upper surface of the guard 2 and the outer end portions of its lower surface are also curved somewhat as shown in Fig. 6 so as to be complementary to the ends of the guard. The member 20 may be substantially rectangular in shape and has two relatively long sides and two relatively short sides.

The blade of the invention will now be de-

scribed, one form being shown in Fig. 7 and a modified form being shown in Fig. 8.

In Fig. 1 there is shown a blade 30 of relatively flexible metal which is rectangular in shape and has two relatively long sides and two relatively short sides. The marginal edges 36 of all four sides are sharpened to provide a pair of relatively long cutting edges and a pair of relatively short edges for shaving beneath the nose or other places which are not readily accessible with a blade having long edges only.

The blade 30 is provided with a plurality of diagonally extending slots 38 which, as will appear, not only render the blade substantially more flexible than heretofore, but which are adapted to receive the keys 26 of the member 20 when the parts are in assembled relation. Preferably, as shown in Fig. 7, there are at least two pairs of slots 38, with those of each pair in diverging relation.

The slots 38 are open-ended and extend outwardly from points inwardly of the edges 36 towards the corners of the blade so that their open ends lie between one end of a long edge 36 and the adjacent end of a short edge 36. That is to say, the long and short edges 36 do not meet but instead are separated by the slots 38.

The slots 38 are of such length and in such diagonal relation relative to the edges 36 that there are formed at opposite ends of the blade what may be called dove-tail portions 32 which are connected to the blade by reduced neck parts 34. That is to say, the slots 38 extend adjacent lateral edges of the portions 32 and in this way the blade may be readily flexed transversely thereof at the portions 34 and, of course, the blade may also be flexed longitudinally.

It will be noted that the slots 38 in the blade are so formed that the portions 32 project beyond the plane of the ends of the long edges 36, but that the short edges 36 are not so long as to project beyond the plane of the long edges 36. Thus, when the parts are assembled as will be described, there are no objectionably projecting parts but at the same time the blade 30 has a maximum amount of flexibility.

The edges 36 are, of course, substantially straight, as shown, and the long edges 36 are at substantially right angles to the short edges 36. Through the blade there is a centrally disposed aperture 37 which is adapted to receive the stud 22 of the member 20 and it may be of such shape and size as to also receive the keys 24, if such are provided in the member 20.

In Fig. 8, there is shown a blade 50 which is similar to the blade 30 and has two relatively long and two relatively short marginal edges 58 and 59, respectively. Diagonal slots 52 are provided which form dove-tail portions 53, which are like portions 32 of blade 30, and a centrally disposed aperture 56 is provided for receiving the stud of the clamping member.

There are other slots 54 in the dove-tail portions 53 and these render the blade still more flexible. That is to say, with the slots 52 and 54 arranged as shown, there are provided a pair of reduced neck portions 58 and 57 at both of the relatively short sides of the blade which make it possible for the blade to be flexed transversely.

When it is desired to assemble the parts of the razor, the blade 30 may be placed adjacent the inner or under surface of the cap member 20 with its central aperture 37 receiving the stud 22 and its slots 38 receiving the keys 26. Then the guard 2 may be placed adjacent the other side of the blade with the stud 22 extending through opening 8 and the keys 26, which project through slots 38, received in sockets 12.

A handle 40 is provided and this has an internally threaded socket 42 in its upper end. With the parts 2, 20 and 30 assembled as above described, the stud 22 is then screwed into the socket 42 so that the upper end of the handle 40 bears against the under side of the guard 2.

As has been stated above, the plane of the teeth 4 on the member 2 is below that of the upper surface of the guard body 2. In this way, when the parts are assembled, there is normally a space between the marginal edges 36 of the blade and the teeth 4 and it may be stated this space extends around the four sides of the razor. This, it will be seen, also tends to contribute to the already great flexibility of the blade.

With the parts assembled as described, the keys and sockets of the members 2 and 20 co-operate with the slots 38 of the blade to provide a safe construction, the blade of which is prevented from shucking either transversely or longitudinally relative to the other parts. It will be seen, however, that the blade is adapted to flex both transversely and longitudinally which is in contrast with the ordinary razor blade which is purposely prevented from flexing transversely and is intended to be flexed longitudinally only.

While I have described the invention in great detail and with respect to a preferred form thereof, it is not desired to be limited thereto since many changes and modifications may be made therein without departing from the spirit and scope of the invention. What it is desired to claim and secure by Letters Patent of the United States is:

1. In a safety razor of the class described, a relatively elongated and rectangular razor blade of flexible metal having two substantially parallel longitudinal sharpened edges of a certain equal length and two substantially parallel transverse sharpened edges at right angles to the longitudinal edges, said transverse edges being of less length than said longitudinal edges to facilitate shaving parts of the face which are inaccessible to the longitudinal edges, the blade being formed to have four open-ended slots extending diagonally of the blade toward the four corners thereof and each slot opening between one longitudinal sharpened edge and an adjacent transverse sharpened edge so as to form at each side of the blade a dove-tail portion having an inner neck part and its outermost edge sharpened, the dove-tail portions having the transverse sharpened edges as their outermost edges projecting substantially beyond the planes of the adjacent extremities of said longitudinal sharpened edges and the inner neck parts thereof being of less width than the neck parts of the other dove-tail portions so as to render them more flexible than the said other dove-tail portions, each of the first-named dove-tail portions being provided with an additional pair of open-ended slots which extend inwardly towards one another to form relatively narrow neck portions adjacent the said inner neck parts thereof.

2. As a new article of manufacture, a safety razor comprising in combination, a relatively elongated and rectangular guard member having an upper surface which curves concavely transversely thereof and flares downwardly at its opposite ends, said guard member being provided with two pairs of sockets, one pair of which ex-

tends outwardly in diverging relation towards the corners at one end of the guard member and the other pair of which extends outwardly in diverging relation towards the corners at the opposite end thereof, a relatively elongated and rectangular blade of flexible metal disposed on said guard member and formed to have two longitudinal sharpened edges of a certain equal length and two transverse sharpened edges at right angles to the longitudinal edges, said blade being provided with two pairs of open-ended slots which extend diagonally of the blade in substantial alignment with said sockets, each slot opening between one longitudinal sharpened edge and an adjacent transverse sharpened edge so as to form at each side of the blade a dove-tail portion having its outermost edge sharpened, those dove-tail portions which have the transverse sharpened edges as their outermost edges being formed to project substantially beyond the planes of the adjacent extremities of said longitudinal sharpened edges and being disposed above said downwardly flaring ends of the guard member, and a clamping member on said blade provided on its lower side with two pairs of diverging keys which extend in alignment with and through said slots of the blade and into said sockets of the guard member, and means for holding said blade and guard and clamping members in superposed relation, all adapted and arranged whereby the blade is held in clamped position between the guard and clamping members by said means and by said keys, slots, and sockets and its last-named dove-tail portions may flex relative to said flaring ends of the guard member.

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