Jan. 18, 1955 R. W. FINLEY 2,699,602

SAFETY RAZOR

Filed June 17, 1954

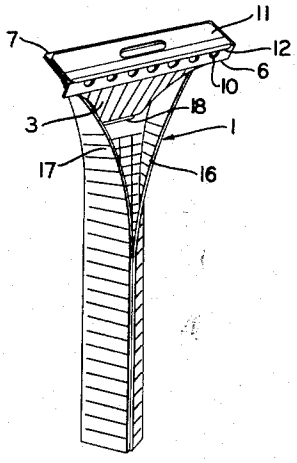


Fig. 1

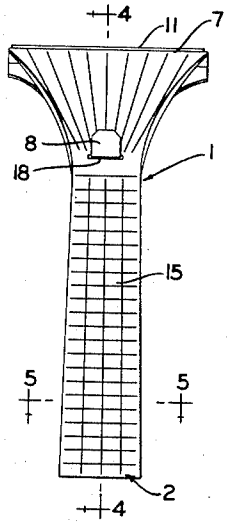


Fig. 2

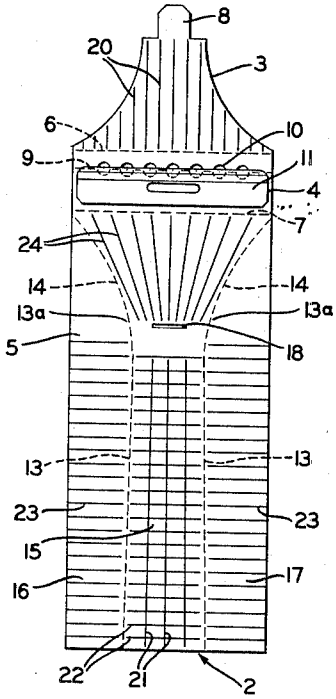


Fig. 6

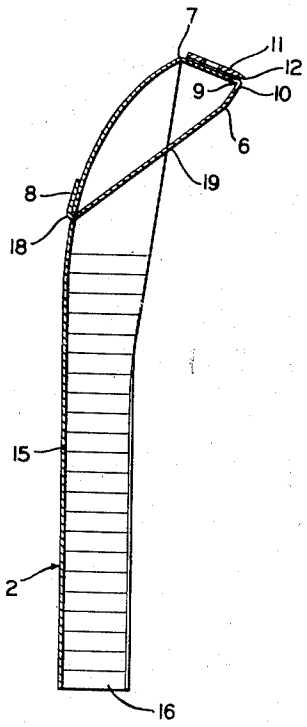


Fig. 4

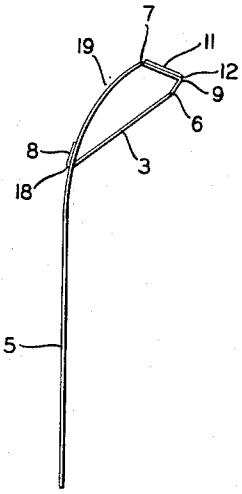


Fig. 3

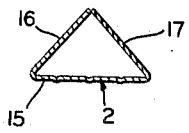


Fig. 5

INVENTOR.
Robert W. Finley
BY
Frease & Bishop
ATTORNEYS

United States Patent Office 2,699,602
Patented Jan. 18, 1955

2,699,602

SAFETY RAZOR

Robert W. Finley, Massillon, Ohio, assignor to Basic Improvements, Inc., Canton, Ohio, a corporation of Ohio

Application June 17, 1954, Serial No. 437,409

6 Claims. (Cl. 30—47)

This invention relates to safety razors and more particularly to disposable razors suitable for sale at low cost.

The present invention is designed to meet a need for an inexpensive safety razor. A need for such a razor often arises with travelers, campers and others when remote from readily accessible shaving supplies. In such circumstances it is desirable to have an inexpensive razor that can be disposed of after a minimum number of shaves. Such a razor must necessarily be uncomplicated and possess a minimum number of parts. At the same time the razor must be sufficiently rigid and durable to withstand handling when it is used.

A razor meeting these qualifications can be made in sheet-like form ready for use after making a few simple folds along score lines embodied therein. In such sheet-like form very little space is occupied during storage. Thus, it is particularly convenient for carrying in luggage for emergency use. In addition, the sheet-like form is adapted for dispensing the razor in ordinary coin machines located in washrooms, in trains, transportation depots, and the like. Finally, the sheet-like form of the razor makes it readily adaptable for use as a medium for advertising or as a gift novelty.

Accordingly, the primary object of this invention is to provide an inexpensive safety razor for use in emergencies which has a compact design.

Another object of this invention is to provide a safety razor that is so inexpensive that it can be discarded after a single use.

Finally, it is an object of the invention to provide a disposable razor in blank form including a blade, which may be folded to a usable shape and which satisfies the foregoing objectives and desiderata.

These and other objects are accomplished by the parts, elements, devices, constructions, arrangements, combinations and sub-combinations comprising the present invention, the nature of which is set forth in the folding general statement, a preferred embodiment of which—illustrative of the best mode in which applicant has contemplated applying the principles—is set forth in the following description and illustrated in the accompanying drawing, and which is particularly and distinctly pointed out and set forth in the appended cliams forming a part hereof.

In general terms, the disposable safety razor constituting the present invention may be stated as including a sheet-like member of light metal or plastic to which a razor blade is attached, and which is provided with transverse score lines on which the member is folded for forming a safety razor head, and which is provided with generally longitudinally disposed score lines on which the member is folded for forming a handle portion for the razor. The member need not be folded until the razor is to be used.

Referring to the accompanying drawing, which is illustrative of a preferred embodiment of the invention, by way of example, and in which similar numerals refer to similar parts throughout:

Fig. 1 is a perspective view of a disposable safety razor after having been folded along score lines provided in a blank to prepare the razor for use;

Fig. 2 is a rear elevational view of the safety razor shown in Fig. 1;

Fig. 3 is a side elevational view of the safety razor after folding certain parts to form the razor head;

Fig. 4 is an enlarged sectional view of the safety razor, taken along the line 4—4 of Fig. 2;

Fig. 5 is an enlarged transverse sectional view taken on the line 5—5 of Fig. 2; and

Fig. 6 is an enlarged plan view of a sheet-like blank from which the safety razor may be formed and showing certain of the score lines and apertures embodied in the blank.

As shown in Fig. 1, a safety razor is generally indicated at **1** in a form ready for use after having been folded along certain score lines provided in a manner described hereinbelow.

A sheet-like member **2** is shown in Fig. 6. It is a blank or flat piece of sheet material of either plastic or metal sheet or foil. The preferred material is aluminum sheet of .008" to .010" thickness. But, an aluminum sheet having .005" thickness may be used if rigidized. However, the member **2** may be composed of steel sheet of .001" to .002" thickness if the steel is of proper analysis to permit bending or folding in a manner described hereinbelow. Whatever may be the thickness of the material, it must be thick enough to provide rigidity for shaving yet thin enough for relatively easy folding.

The member **2** consists of a tapered portion **3**, a razor portion **4**, and a handle portion **5**. As shown in Fig. 6, the member **2** is an elongated rectangular member and the razor portion **4** is divided from the tapered portion **3** and the handle portion **5** by score lines **6** and **7**, respectively, extending transversely of the longitudinal axis of the member.

The tapered portion **3**, having converging sides extending from the longitudinal edges of the member **2**, is provided with a tongue **8** at the zone of convergence. For the purpose of facilitating the folding of the blank it is preferred that the converging sides be concavely arcuate. Thus, clearance is provided for the sides of the handle extending from the score line **7** during the final folding of the handle (Fig. 1).

The razor portion **4** is provided with a transverse score line **9** (Fig. 6) near the score line **6**. Along the score line **9** is disposed a plurality of apertures **10**, the centers of which are aligned with said score line. A razor blade **11** is attached to the razor portion **4** so that cutting edge **12** of the razor blade overlies the apertures **10** (Fig. 4) and particularly that portion of the apertures disposed between the score lines **6** and **9**. The razor blade **11** is secured to the member **2** by means of a water-proof adhesive, but other means of attachment may be used. For example, if the member **2** is composed of steel sheet, the razor blade may be attached thereto by spot welding.

The handle portion **5** constitutes the greater portion of the length of the member **2**. It includes a pair of spaced score lines **13** (Fig. 6) extending longitudinally over a greater portion of the handle **5** from the end of the handle remote from the razor portion **4** to points **13***a* spaced from the score line **7**. In addition, the score lines **13** extend from the points **13***a* to the opposite side edges by divergent arcs **14**. The score lines **13** thereby divide the handle into longitudinal elements, including an intermediate element **15** between score lines **13**, and side elements **16** and **17** on either side thereof. Finally, the handle portion **5** is porvided with a tongue-receiving slot **18** disposed between the score lines **13** near the points **13***a*.

The first folding operation in the forming of the razor **1** from the sheet member **2** is on score lines **6**, **7** and **9**, as shown in Fig. 3. At the same time the tongue **8** is inserted into the tongue-receiving slot **18** and folded back over the intermediate handle element **15**. By these operations a head portion **19** is made whereby the cutting edge **12** of the razor blade **11** is disposed in a cutting position overlying the leading edge formed by the fold about the score line **9**. The segments of the score line **9** between the apertures **10** provide protection against cutting by the cutting edge **12** in a manner similar to guards on the conventional safety razor. In addition, that segment of the razor portion **4** between the score lines **6** and **9** serves as a reinforcement for the structure adjacent the razor and the apertures **10**. Likewise, that portion of the handle **5** between the score line **7** and the slot **18** is arched, when the tongue is secured in the slot, thereby providing reinforcement for the razor head **19**.

The final forming operation of the razor **1** consists

of folding the handle **5** about the score lines **13** and the divergent arcs **14** so that a handle is formed having a triangular transverse cross-section as shown in Fig. 5. The portions of the side elements **16** and **17** adjacent the divergent arcs **14** provide reinforcement between the head portion and the handle by the folds about the divergent arcs **14** which extend longitudinally as well as transversely of the sheet member **2**. Moreover, said portions of the side elements **16** and **17**, when folded, are at substantially right angles with the aforementioned arched portion of the handle **5** between the score line **7** and the slot **18** (Fig. 4), thereby combining to further reinforce the razor head **19**.

This configuration results from the concavely arcuate sides of the tapered portion **3** which give clearance for the proper angle of the upper ends of the side elements **16** and **17**. In short, the particular combination of said arched portion of the handle **5**, together with the folding of the side elements **16** and **17** along the divergent arcs **14** at substantially right angles to the arched portion, establishes maximum reinforcement for the razor head **19**, which reinforcement is strengthened by the continuation of said parts as portions of the handle. The reinforcing folds extend transversely as well as longitudinally providing a more rigid unit.

Additional reinforcement of the various portions of the safety razor **1** may be provided by the use of light score lines on the several surfaces. Accordingly, the surface of the tapered portion **3** is provided with a plurality of light score lines **20** extending longitudinally thereof. Likewise, the intermediate element **15** of the handle is provided with longitudinal light score lines **21** as well as transverse light score lines **22**. Also, the side elements **16** and **17** of the handle are provided with transverse light score lines **23**. Finally, that portion of the handle between the divergent arcs **14** is provided with light score lines **24**. Hence, the light score lines **20–24** provide rigidizing or reinforcing means for the elements of the razor member **2** and permit the use of lighter gauge sheet material, such as metal foil, than would be otherwise usable.

In the foregoing description certain terms have been used for brevity, clearness and understanding, but no unnecessary limitations are to be implied therefrom, because such words are used for descriptive purposes herein and are intended to be broadly construed.

Moreover, the embodiment of the improved construction illustrated and described herein is by way of example, and the scope of the present invention is not limited to the exact details of construction shown.

Having now described the features, constructions and principles of invention, the characteristics of the new safety razor, and the advantageous, new and useful results provided; the new and useful discoveries, principles, parts, elements, combinations, sub-combinations, structures and arrangements, and mechanical equivalents obvious to those skilled in the art, are set forth in the appended claims.

I claim:

1. A safety razor including a sheet member having a razor portion, a handle portion on one side of the razor portion, and a tapered end portion on the other side thereof, said portions being divided by foldable score lines extending substantially transversely of the member, the handle portion having a pair of foldable score lines extending from the end thereof remote from the razor portion to points spaced from the razor portion and then extending in divergent arcs to one of said transverse score lines at opposite edges of the member, said pair of foldable score lines dividing the handle portion into intermediate and integral side elements, the intermediate element being provided with a tongue-receiving slot spaced from the razor portion, the tapered portion having an end tongue, and a razor blade attached to the razor portion, the cutting edge of the blade extending slightly beyond the foldable score line between the razor and tapered portions.

2. The safety razor defined in claim 1 in which a foldable score line is disposed in the razor portion parallel to and near the score line dividing the razor and tapered portions.

3. The safety razor defined in claim 2 in which the razor portion is provided with a plurality of apertures having centers aligned in the foldable score line in the razor portion.

4. The safety razor defined in claim 3 in which the cutting edge of the razor blade overlies the aligned centers of the apertures on the side adjacent the tapered portion.

5. The safety razor defined in claim 4 in which the tapered portion is provided with a plurality of substantially light reinforcing score lines extending longitudinally of the sheet member, in which the handle portion is provided with a plurality of light reinforcing score lines extending transversely of the sheet member, in which the intermediate element of the handle portion is provided with a plurality of light reinforcing score lines extending longitudinally of the sheet member, and in which the intermediate element is provided with light reinforcing score lines between the divergent arc portions of the foldable score lines and extending divergently from the tongue-receiving slot to the foldable score line between the razor and handle portions.

6. A safety razor including an elongated sheet member of substantially rectangular shape and having a handle portion comprising the major portion of said member, a tapered end portion and a transverse razor portion between the handle and tapered end portions, said portions being divided by foldable score lines; the handle portion having a pair of foldable score lines extending from the end remote from the razor portion to points spaced from the razor portion and then extending in divergent arcs to opposite edges of the member adjacent the razor portion, said pair of foldable score lines dividing the handle portion into longitudinal intermediate and side elements; the intermediate element being provided with a tongue-receiving slot spaced from the razor portion; the tapered portion having an end tongue and having concavely divergent sides extending between the edges of the razor portion and the tongue; the razor portion being provided with a plurality of apertures having centers aligned on a foldable score line near and parallel to the score line adjacent the tapered portion; and a razor blade attached to the razor portion having a cutting edge overlying the apertures on the side of their centers adjacent the tapered portion; whereby the sheet member may be folded along said score lines and the tongue inserted into the tongue-receiving slot so as to form a rigid razor head member and a rigid handle member having a triangular transverse section formed by the intermediate and side elements of the handle.

No references cited.