Nov. 30, 1948. W. J. WOLPERT 2,455,152

SAFETY RAZOR

Filed July 25, 1945

Fig 1

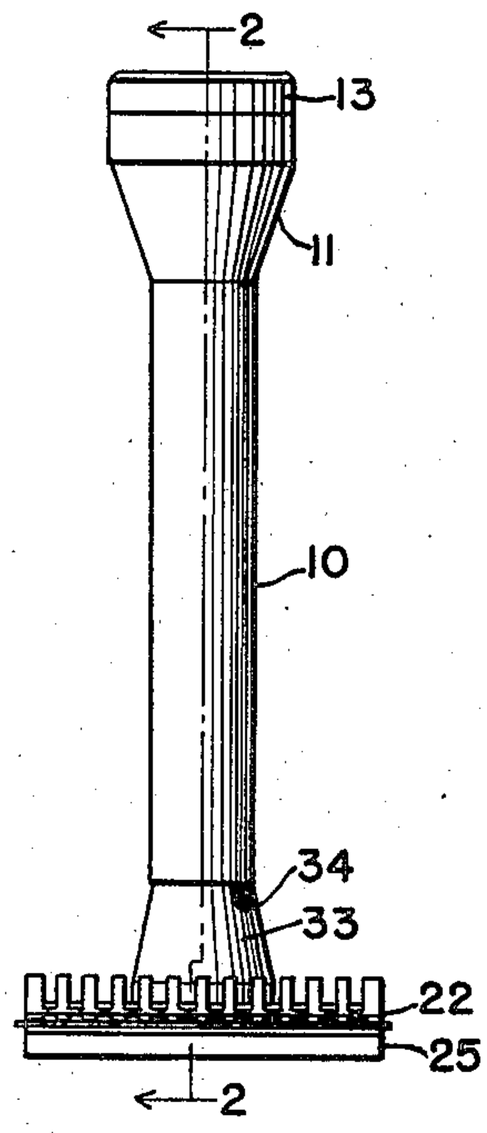


Fig 2

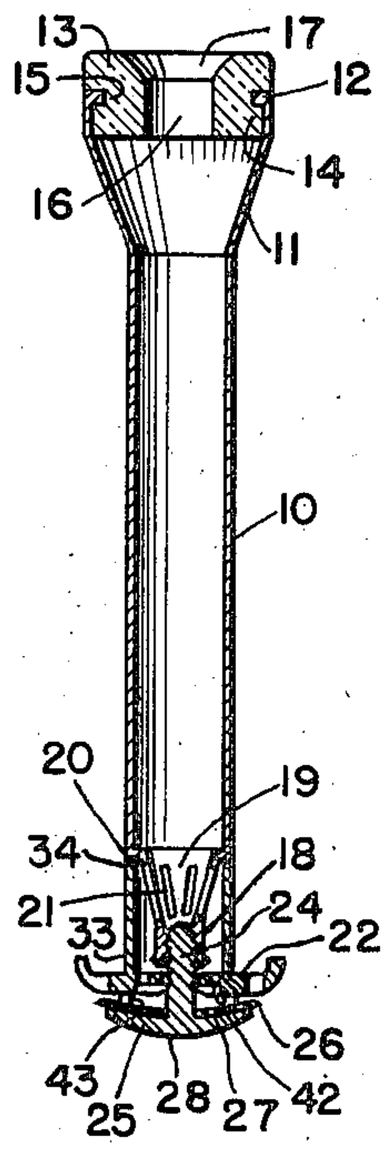


Fig 3

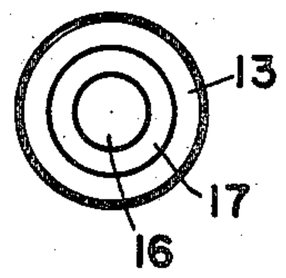


Fig 8

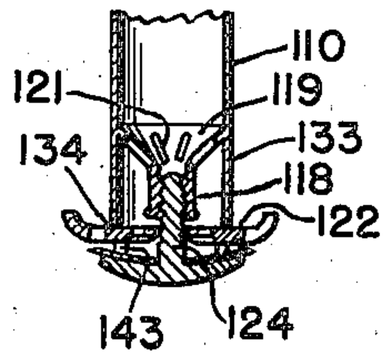


Fig 6

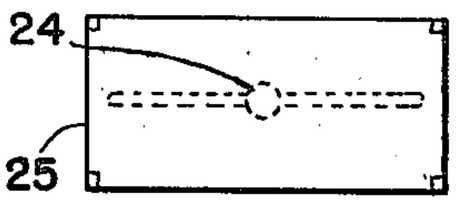


Fig 4

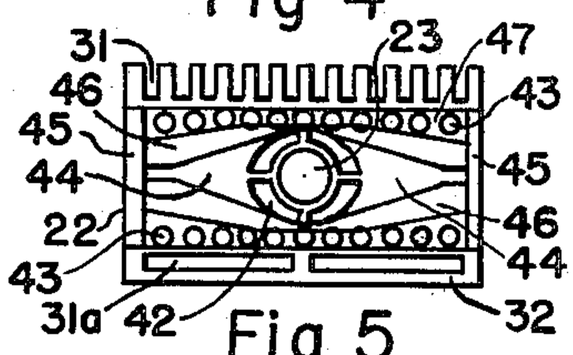


Fig 9

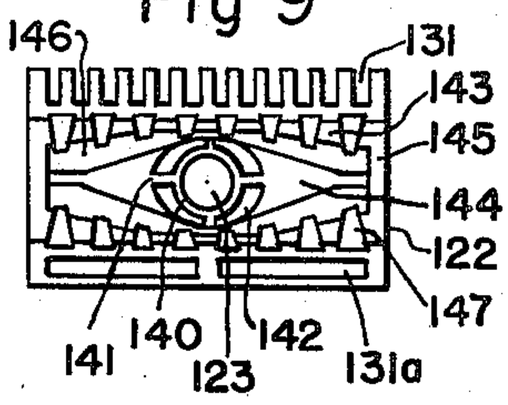


Fig 7

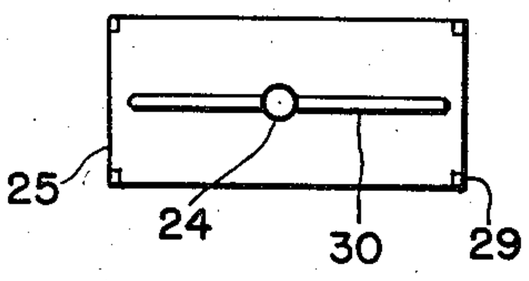
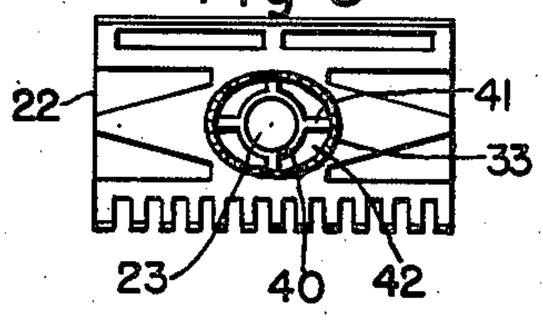


Fig 5



INVENTOR.

WALTER J. WOLPERT

BY

Lockwood, Goldsmith & Galt

Patented Nov. 30, 1948

2,455,152

UNITED STATES PATENT OFFICE

2,455,152

SAFETY RAZOR

Walter J. Wolpert, Indianapolis, Ind., assignor of one-half to Martin A. Milling, Indianapolis, Ind.

Application July 25, 1945, Serial No. 607,019

3 Claims. (Cl. 30—41)

1

This invention relates to a safety razor.

The chief object of this invention is to provide a safety razor so equipped that following use it may be cleaned by water, pressure supplied from the handle through the guard to the blade and then to the guard exterior (or comb) for washing the severed bristles, lather and shaving cream from the razor.

The chief feature of the present invention resides in the handle confined, pressure discharged water which flushes and cleans the blade and the guard in the discharge.

Another feature, although not restricted thereto, resides in the razor handle formation as a tube and open at the end remote from the blade so that upon handle application to a faucet there will result a pressure washing of the razor without any other operation being required of the shaver and such application may be continued as long as desired or required to clean said razor.

A further feature of the invention resides in the one-way and cleaning direction of flow of the water through the razor in the faucet associatable type.

Other objects and features of the invention will be set forth more fully hereinafter.

The full nature of the invention will be understood from the accompanying drawings and the following description and claims:

In the drawings:

Fig. 1 is a side elevational view of a safety razor embodying one form of the invention and is the position held for razor cleaning.

Fig. 2 is a vertical sectional view thereof taken on line 2—2 of Fig. 1 and in the direction of the arrows.

Fig. 3 is a top plan view of the open end of the razor handle and adapted for faucet contact.

Fig. 4 is bottom plan view of the guard looking toward the blade engaging face thereof.

Fig. 5 is a top plan view of the guard.

Fig. 6 is a bottom plan view of a conventional head.

Fig. 7 is a top plan view thereof looking toward the blade engaging face thereof.

Fig. 8 is a central sectional view of a modified form of handle-guard and is similar to the lower end of Fig. 2.

Fig. 9 is a bottom plan view of a modified form of guard looking toward the blade engaging face thereof.

In Figs. 1 and 2 of the drawings 10 indicates a tubular handle which at its free end may be enlarged as at 11 and terminate in an inwardly directed flange 12. Seated in the enlarged open

2

end of the handle is a semi-resilient or resilient tubular bearing 13 having the slightly reduced portion 14 terminating in a groove 15 in which is seated flange 12 whereby the bearing and handle are semi-permanently connected.

This bearing has passage 16 therethrough which is flared outwardly as shown at 17. This formation permits butt contact with a faucet end to insure non-squirting connection therewith, or if the faucet be small externally, the flared passage seats the faucet end. Also if that end be polygonal or elliptical the outer face of the end member 13 will effect proper seal with the faucet end when held thereto. However associated, when the water supply is turned on, water under pressure will be discharged to, into and through the tubular handle 10 for razor cleansing.

At the opposite end of handle 10 is the internally tapped socket portion 18 and same, see Fig. 2, is connected to the tube 10 by the conical portion 19 and the shoulder forming portion 20 that has a stop function. The conical portion 19 is provided with elongated ports 21 therethrough for water discharge.

Herein guard 22, see Figs. 4 and 5, is centrally apertured at 23 to pass the threaded stem 24 carried by head 25, see Figs. 6 and 7. Between the guard and head is mounted the double edge blade 26 of flexible character. Head 25 has the conventional curvatures 27 and 28, see Fig. 2, and see Figs. 6 and 7, the head may have the corner portions 29 and central ridge means 30 or equivalent blade interlocking portions conventional to safety razors of this general type.

Herein guard 22, see Figs. 2, 4 and 5, is illustrated as of dual character for illustration purposes, one edge being of comb type, this is notched as at 31 and the other edge 32 is continuous in character. The guard may be of comb type on both edges or both edges may be continuous or of any other suitable formation, conventional to safety razors.

In Figs. 1, 2 and 5 there is illustrated a sleeve portion 33 rigid with guard 22 and enlarged laterally near said guard and longitudinally thereof, see Fig. 1, for longitudinal distribution of water from the handle to the blade. The free end 34 of said sleeve 33 is adapted to telescope the widest end of conical portion 19 of the handle and bear against shoulder 20 to limit movement of the guard relative to the handle when the blade is clamped in the razor and also to form a water seal.

Reference will now be had to Fig. 8 wherein a

reverse construction is illustrated. Herein sleeve portion 133 constitutes an extension of tubular handle 110 having inner cone 119 slotted as at 121 and terminating in threaded socket 118. Herein guard 122 is, in blade clamping position, adapted to engage end 134 of sleeve 133 for bearing and water seal purposes. Operation of this modification so far as razor cleansing is concerned, is identical to that previously described.

Reference will again be had to Figs. 2, 4 and 5. Herein guard 22 is illustrated as having collar 40 defining aperture 23 and reenforced by ribs 41 on opposite sides. Therebetween are the arcuate like apertures 42 by which the sleeve confined water discharges through the guard to directly engage the blade 26. Also engaging the same are the studs 43 and 143, see Figs. 2, 4, 8 and 9. The free ends of the studs are beveled as illustrated in Figs. 2 and 8 to conform to the curvature of the blade when in clamped position. The studs provide passages between the guard and blade for escape of the water under pressure to cleanse the blade and guard.

In Fig. 4 the guard is illustrated as provided with two elongated chambers 44 closed at the outer ends as at 45 and having downwardly and inwardly inclined walls 46. By this arrangement water supplied by sleeve 33 through ports 42 to chambers 44 discharges towards the opposite ends of the guard and also transversely thereof through the grooves 47 between the studs 43 to the blade edge and thence to the guard edge adjacent thereto, whether of comb type or otherwise. By this arrangement the water, pressure discharged from the sleeve, reverses direction as it were for blade and guard cleansing.

Reference will now be had to Fig. 9 wherein a guard similar to that shown in Fig. 4 is illustrated. Herein numerals of the one hundred series designate parts similar or equivalent to those illustrated in Fig. 4 and designated by corresponding primary series numerals. The major difference herein is that instead of studs 43 and end walls 45, the walls 145 are continuous and connected and those parallel to the blade edges have grooves or channels 147 therein which flare outwardly as illustrated and the end channels have the greatest flaring and the wall portions between channels constitute studs 143 of the form shown.

This provides for equal pressure water discharge along the blade edges from chambers 144 with inclined walls 146 and provides for the overlapping of the water discharge jets for cleaning the entire length of blade and guard. Note in Fig. 4 the studs 43 are cylindrical thus forming grooves 47 which flare outwardly for the same purpose.

While the invention has been illustrated and described in great detail in the drawings and foregoing description, the same is to be considered as illustrative and not restrictive in character.

The several modifications described herein as well as others which will readily suggest themselves to persons skilled in this art, all are considered to be within the broad scope of the invention, reference being had to the appended claims.

The invention claimed is:

1. In a safety razor including a head, a guard and a handle, threadedly connected together for blade clamping purposes, the combination of chamber forming means in the blade confronting face of the guard, water discharging passageways from the chamber means to the blade edge and formed in the blade confronting face of the guard, the handle being tubular, and the guard being ported for water passage therethrough, and sleeve means operatively interposed between the handle and guard for confining handle discharged water to the guard ports, the sleeve means is rigid with the guard and engages the handle.

2. In a safety razor including a head, a guard and a handle, threadedly connected together for blade clamping purposes, the combination of chamber forming means in the blade confronting face of the guard, water discharging passageways from the chamber means to the blade edge and formed in the blade confronting face of the guard, the handle being tubular, and the guard being ported for water passage therethrough, and sleeve means operatively interposed between the handle and guard for confining handle discharged water to the guard ports, the sleeve means, adjacent the guard, is elongated in the direction of the longitudinal axis of the guard.

3. In a safety razor including a head, a guard and a handle, threadedly connected together for blade clamping purposes, the combination of chamber forming means in the blade confronting face of the guard, water discharging passageways from the chamber means to the blade edge and formed in the blade confronting face of the guard, the handle being tubular, and the guard being ported for water passage therethrough, and sleeve means operatively interposed between the handle and guard for confining handle discharged water to the guard ports, the blade end of the handle terminates in a coaxial threaded portion, and a conical portion connecting said threaded portion to the handle and having elongated slots therethrough.

WALTER J. WOLPERT.

REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
1,723,765	Churchill	Aug. 6, 1929
1,852,708	Stuart	Apr. 5, 1932