

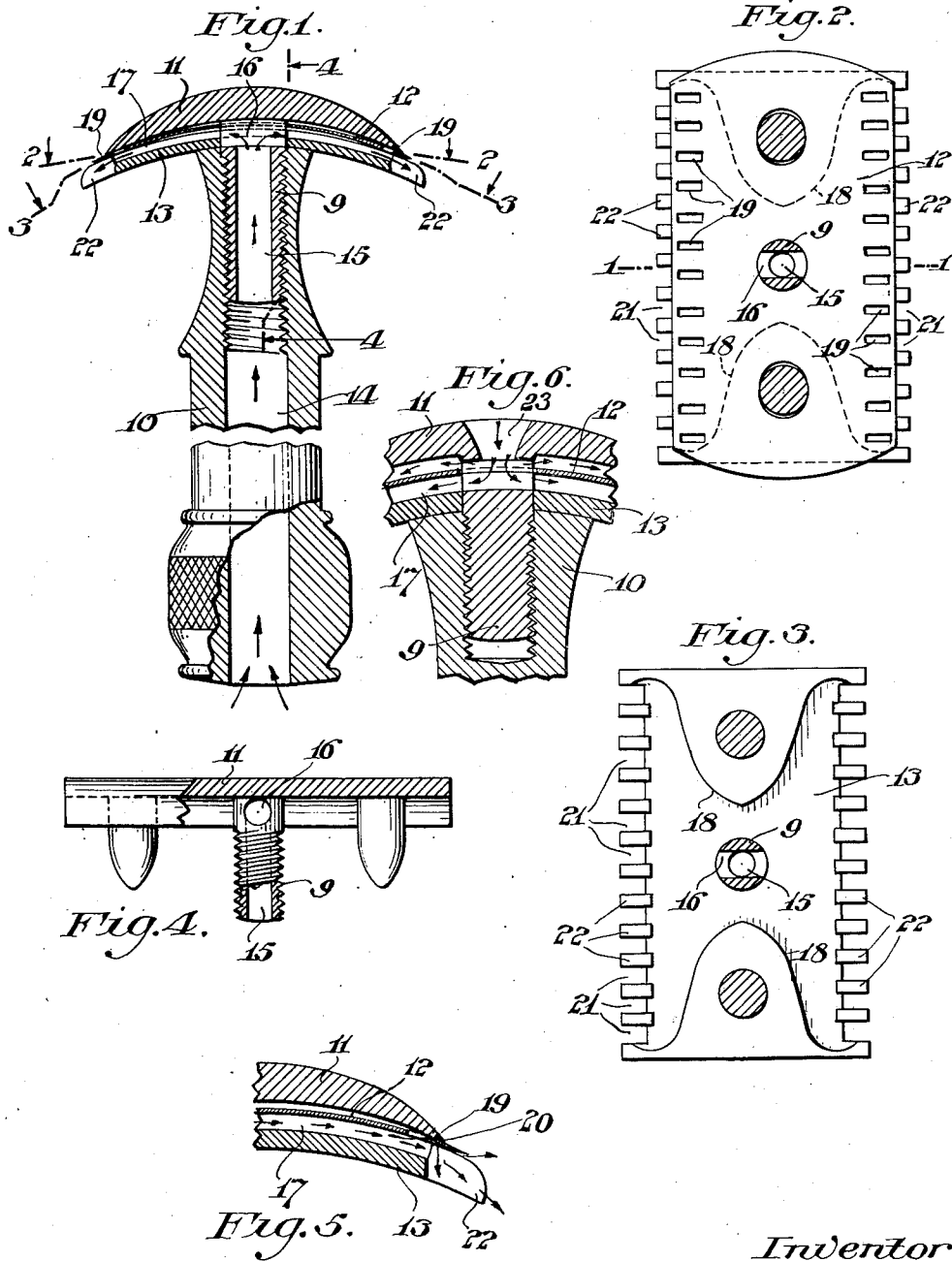
April 5, 1932.

C. H. STUART

1,852,708

SAFETY RAZOR

Filed Nov 25, 1929



Inventor,  
Charles H. Stuart,  
By *Ernest L. East*  
Attorney.

# UNITED STATES PATENT OFFICE

CHARLES H. STUART, OF NEWARK, NEW YORK

## SAFETY RAZOR

Application filed November 25, 1929. Serial No. 409,448.

My invention relates to improvements in safety razors.

In using safety razors of the various types constructed heretofore, it is desirable, if not necessary, to obtain satisfactory shaving action, to clean the razor of lather and hair particles which have a tendency to accumulate at the cutting edge of the blade, for which purpose the practice generally is to wash the razor off by passing the same through water or holding the razor under an open spigot. While such practice is effective to remove some of the lather and hair particles, the same are not completely dislodged to expose the entire cutting edge of the blade. For this reason, it is necessary to disassemble the razor, clean the separate parts, wiping the same dry to prevent rust or corrosion, and then reassemble the parts. This latter method of cleaning safety razors of the various types constructed heretofore consumes an appreciable amount of time, and is rather troublesome.

In accordance with my present invention, safety razor construction is improved by providing a passage permitting of fluid-flow into the razor construction upon placement of the same under an open spigot, and flow of the fluid or water through the razor construction and thence outwardly across the cutting edge of the blade whereby all lather and hair particles are dislodged and washed away, and the clean cutting edge of the blade completely exposed for further use, all without need to disassemble the razor elements.

Further in accordance with my invention, an improved safety razor construction is provided wherein the passage referred to includes a passage formed in the handle thereof whereby water may be caused to flow through the razor construction by inverting and holding the same under an open spigot so that water passes downwardly through the handle and thence across the cutting edge portion of the blade.

My invention further resides in the improved construction as hereinafter described and claimed.

For the purpose of illustrating my invention, several embodiments thereof are shown in the drawings, wherein

Fig. 1 is an elevational view, partly in section and partly broken away, the section being taken on the line 1—1 in Fig. 2;

Fig. 2 is a sectional view, the section being taken on the line 2—2 of Fig. 1;

Fig. 3 is a sectional view, the section being taken on the line 3—3 in Fig. 1;

Fig. 4 is a sectional view, partly broken away, of one of the parts, the section being taken on the line 4—4 in Fig. 1;

Fig. 5 is enlarged, fragmentary view taken from Fig. 1; and

Fig. 6 is an enlarged, fragmentary view similar to Fig. 1, showing a modification.

Referring more particularly to Fig. 1, the improved razor construction includes the handle part 10 and the part or plate 11 complementary with respect thereto, the plate being provided with the nipple 9 threaded into the adjacent end of the handle to provide a screw-threaded connection between parts 10 and 11, whereby the blade 12 and the guard member or plate 13 are clamped between parts 10 and 11 by the screw action of such connection.

The handle part 10 is provided with the passage 14 extending longitudinally through the same, as shown, and with which communicates the passage 15 in nipple 9.

The base of nipple 9 is provided with the transverse passage 16 communicating with the longitudinal or axial passage 15 and arranged to communicate with the space or passage 17 between blade 12 and the adjacent face of member 13. The space or passage 17 is provided by forming member 13 with a recess 18 in the face thereof adjacent blade 12.

Blade 12 may be provided along the cut-

ting edge portions thereof with openings 19 for the purpose hereinafter explained, such openings being rectangular or of some other suitable shape, and arranged as more clearly shown in Fig. 5 to extend an appreciable distance inwardly from the point of contact 20 between the blade and the outer edge of the plate or part 11. The openings 19, further, are in direct communication with passage 17 between the blade and member 13.

For the purpose of cleaning the razor, the same is inverted and placed under an open spigot, whereupon water flows through the hollow handle part 10 in the direction of the arrows shown, thence through passages 15, 16 and 17, and is discharged from the razor construction by way of the spaces 21 between the usual teeth 22 with which member 13 is provided, and which extend outwardly from the cutting edge portions of blade 12. As shown in Fig. 2, openings 19 in the blade register with the spaces 21.

As indicated by the arrow in Fig. 5, the outer edges of openings 19 operate to deflect the stream of water so that the same is directed upwardly between teeth 22.

In causing water to pass through the razor construction in the above manner, the open end of handle part 10 may be pressed firmly against the end of the spigot whereby the water is caused to flow through the razor under appreciable pressure and across the cutting edge of the blade and past teeth 22 of member 13 with a greater washing effect. The water flowing through the razor assembly meets with little restriction in passages 15, 16 and 17 and expends its energy usefully at the constrictions, of passage 17, formed by the teeth 22 and the razor blade 12. The water spurts through these constrictions defined by the teeth and blade in the form of jets which forcibly remove the accumulated material, as lather and hair particles.

Passage 17 might be formed wholly in the blade, in which case a blade of sufficient thickness for this purpose would be used. The recess 18 in guard 13 would then not be necessary.

In lieu of the construction just described wherein water is admitted into the razor construction by way of handle part 10, the construction as shown in Fig. 6 may be adopted wherein the part or plate 11 is provided with the opening 23 communicating with passage 16 in nipple 9. In cleaning the construction of Fig. 6, the razor is held in an upright position under or against an open spigot whereupon water is caused to pass through passages 23, 16 and 17, and thence is discharged across both edges of the blade and between teeth 22 of member 13. The construction of Fig. 6, otherwise, is identical to that of Fig. 1.

The razor may also be cleaned by blowing into the end of handle 10 in the construction in Fig. 1, or through the central opening in

plate 11 in the construction in Fig. 6, in which case air is forced through the razor and across the cutting edge of the blade to dislodge particles accumulated thereon and to dry the blade edge, thereby protecting the same against corrosion. After using the razor, therefore, the same may be first washed out with water in the manner explained, and then blown through to remove the last drops of water from the parts and to dry the edges of the blade.

From the foregoing, it will be seen that improved safety razor construction has been provided wherein a passage is provided for the flow of fluid such as water or air into the same by way of one of the parts 10 and 11, and thence across the cutting edge portions of the blade and past teeth 22 of member 13 to completely dislodge and wash away all lather and hair particles which might have accumulated, and that the improved construction provides for complete cleaning of the razor and drying of the blade edge without the necessity of disassembling the same, as in the various constructions proposed heretofore.

While the construction disclosed is presented as a preferred, practical embodiment of my invention as defined by the claims, it will be appreciated that various changes may be made, such as in size, shape and arrangement of the parts without departing from the spirit of the invention or the scope of the claims.

The invention claimed is:

1. In safety razor construction, a handle part, a guard plate at one end of said part, a second part complementary with respect to said handle part and provided with a nipple threaded on said end of the latter, and a blade clamped between said parts and against said plate, said handle part provided with a passage providing for fluid-flow into said construction by way of such part, said nipple provided with a passage communicating with said first-named passage, and means including said last-named passage for directing the fluid across an edge portion of said blade, the opposite end of said handle being permanently open for application to a device delivering wash water under pressure for effecting flow of water under pressure through said passages and outwardly across said edge portion of said blade.

2. In safety razor construction, a blade provided with openings in an edge portion thereof, and a guard member associated with said blade and having teeth extending outwardly beyond an edge portion of the blade, said construction provided with a passage providing for fluid-flow into the same and thence across said openings and across said edge portion of the blade, said openings disposed in such wise that the outer edges thereof deflect part

of the fluid stream from the blade and thence through the spaces between adjacent teeth.

3. A safety razor comprising a holder consisting of elements detachably secured to each other, a blade held between said elements, one of said elements and said blade being so disposed as to form a passage for fluid passing outwardly at the edge of said blade, one of said elements having a fluid passage communicating with said first-named passage, and said blade being cut away adjacent its edge for directing the fluid flowing through said first-named passage.

4. A safety razor comprising a holder consisting of elements detachably secured to each other, a blade held between said elements, one of said elements and said blade being so disposed as to form a passage for fluid passing outwardly at the edge of said blade, said blade adjacent its edge having openings covered by one of said elements for directing the fluid flowing through said passage.

5. A safety razor comprising a holder including elements detachably secured to each other, a double-edged blade clamped between said elements, one of said clamping members and said blade bounding a passage for flow of cleaning fluid, and fluid inlet structure for one of said elements having an opening in communication with said passage at a region between the edges of said blade, the cleaning fluid flowing freely through said passage in opposite directions from said opening to remove accumulated material from both edges of said blade, and means in communication with said fluid inlet structure adapted to receive a flow of cleaning fluid under pressure from an external source.

6. A razor having two plates for clamping a razor blade therebetween, and means for directing an air current between the plates to each surface of the razor blade.

7. A razor having a hollow post and two clamping plates, one secured to the hollow post, the hollow post having one or more outlets, all positioned to direct a current of air to a razor blade mounted on the hollow post between the plates.

8. A razor having two clamping plates, a hollow post connecting the clamping plates, the hollow post having one or more outlets, all positioned to direct a current of air to a razor blade mounted on the hollow post between the plates.

9. A razor having a hollow post and two clamping plates, the hollow post being provided with one or more outlets, all of which are positioned adjacent a clamping plate to direct a current of air passing through the hollow post outwardly from a central portion of the razor blade disposed between the clamping plates.

10. A razor having a central hollow post and two clamping plates, the hollow post having a closed end and one or more lateral out-

lets adjacent its closed end of the hollow post to direct a current of air passing through the hollow post to a razor blade disposed between the plates.

11. A razor having two curved substantially parallel plates for curving and clamping a razor blade therebetween, and a conduit having one or more outlets for directing all of an air current passing through the conduit to a surface or surfaces of the razor blade positioned between the plates when one of the plates has been moved away from the other plate to inoperative position.

12. A razor comprising a blade, a pair of separable members stationed at opposite sides of the blade, and means normally serving to clamp the members against the blade and including openings respecting which the blade assumes a substantially medial position during the period of separation.

13. A razor having a hollow post and two clamping plates, one secured to the hollow post, the hollow post having one or more outlets, all positioned to direct a cleaning fluid blast against a razor blade mounted on the hollow post and clamped between the plates in normal shaving position.

14. A razor having a hollow post and two clamping plates, the hollow post being provided with one or more outlets, all of which are positioned adjacent a clamping plate, to direct a cleaning fluid blast passing through the hollow post outwardly from a central portion of the razor blade when the blade is disposed between the clamping plates in normal shaving position.

15. A razor having a central hollow post and two clamping plates associated therewith, the hollow post having a closed end and one or more lateral outlets adjacent its closed end, said outlets adapted to direct a cleaning fluid blast passing through the hollow post to a razor blade disposed between the plates in normal shaving position.

16. A safety razor comprising a holder including elements detachably secured to each other, a double-edged blade clamped between said elements, one of said elements having teeth, said last-named element and said blade bounding a passage extending to said teeth for flow of cleaning fluid, and fluid inlet structure for one of said elements having an opening in communication with said passage at a region between the edges of said blade, the cleaning fluid flowing freely through said passage in opposite directions from said opening to remove accumulated material from both edges of said blade, and means in communication with said fluid inlet structure adapted to receive a flow of cleaning fluid under pressure from an external source.

17. A safety razor comprising a holder including elements detachably secured to each other, a hollow handle associated therewith, a double-edged blade clamped between said

elements, one of said clamping members and  
said blade bounding a passage for flow of  
cleaning fluid, and fluid inlet structure in-  
cluding said hollow handle having an open-  
5 ing in communication with said passage at a  
region between the edges of said blade, the  
cleaning fluid flowing freely through said  
passage in opposite directions from said  
opening to remove accumulated material  
10 from both edges of said blade, said hollow  
handle adapted to receive a flow of cleaning  
fluid under pressure from an external source.

CHARLES H. STUART.

15

20

25

30

35

40

45

50

55

60

65