June 23, 1925. 1,543,587

J. F. O'MALLEY

SAFETY RAZOR

Filed March 28, 1924

Fig. 1,

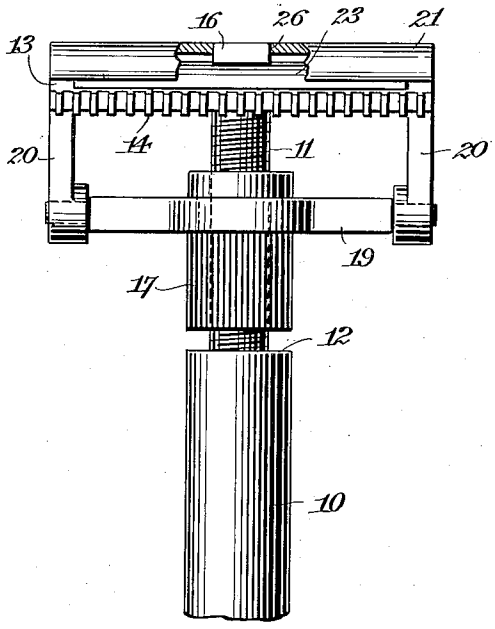


Fig. 3,

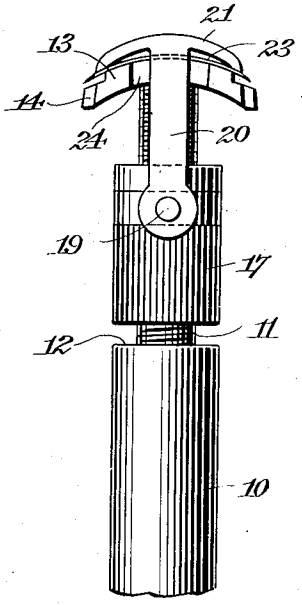


Fig. 2,

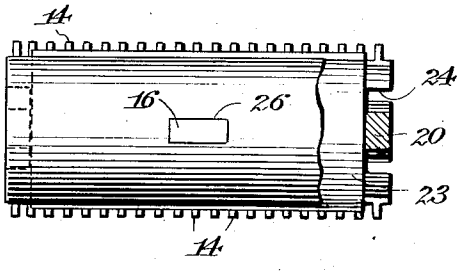


Fig. 4,

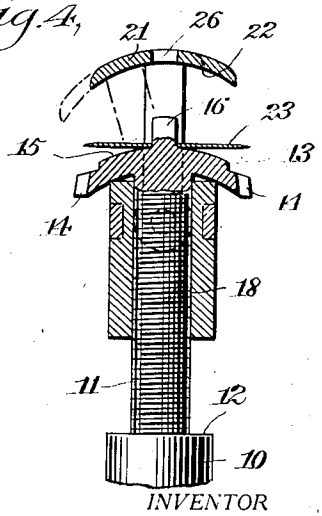
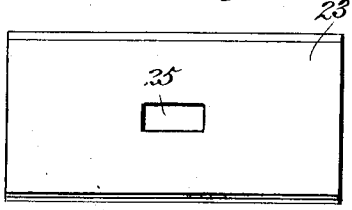


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN FRANCIS O'MALLEY, OF MAMARONECK, NEW YORK.

SAFETY RAZOR.

Application filed March 28, 1924. Serial No. 702,635.

To all whom it may concern:

Be it known that I, JOHN F. O'MALLEY, a citizen of the United States, and a resident of Mamaroneck, in the county of Westchester and State of New York, have invented a new and Improved Safety Razor, of which the following is a full, clear, and exact description.

This invention has relation to safety razors and has particular reference to an improvement in safety razors of the double edged flexible blade type.

The outstanding object of the present invention chiefly resides in the construction of the blade holding means, several parts of which are permanently connected together in order to facilitate the application and removal of the blade and to prevent dropping or loss of the elements as is the case with holders in which the parts are separable.

As a further object the invention contemplates in a safety razor of the character set forth a blade and blade holding means in which adjustments to vary the flexing of the blade for a coarse or fine shave is not disturbed during the use of the razor by the ordinary handling of the same.

The invention furthermore contemplates a safety razor which is comparatively simple in its construction, inexpensive to manufacture and produce, and which is highly efficient in its purpose.

With the above recited and other objects in view, the invention resides in the novel construction set forth in the following specification, particularly pointed out in the appended claims and illustrated in the accompanying drawings, it being understood that the right is reserved to embodiments other than those actually illustrated herein to the full extent indicated by the general meaning of the terms in which the claims are expressed.

In the drawings—

Figure 1 is a front view of a razor constructed in accordance with the invention with parts broken away and shown in section to disclose the underlying structure.

Fig. 2 is an end view thereof with parts broken away.

Fig. 3 is a side view of the same.

Fig. 4 is a vertical sectional view therethrough illustrating the holding and clamping means in opened position to admit of the application and removal of the blade.

Fig. 5 is a plan view of the blade which is used in connection with the holding and clamping member.

Referring to the drawings by characters of reference, 10 designates the handle of the holding member which is provided at one end with a reduced threaded stem 11 forming at their juncture a shoulder 12. The free end of the shank 11 has integrally formed thereon or otherwise secured thereto a guard member 13 which is of substantially arcuate shape in cross section and is provided at its opposite edges with guard teeth 14, the said guard member presenting an outer convexed face 15 which has centrally projecting therefrom a non-circular projection or pin 16. A nut 17 having a knurled outer surface and an internal threaded bore 18 is mounted on the shank for longitudinal adjustments between the shoulder 12 and the guard member 13. A yoke comprising a bight 19 and side arms 20 is provided, which bight is centrally swiveled to the nut 17. The side arms 20 are each pivoted at one end to an outer end of the bight 19 and the opposite end of each arm is rigidly connected to the opposite end of an arcuate head 21, the inner face of which is concaved as at 22 to clamp therebetween the flexible double edged blade 23. The opposite ends of the guard member 13 are provided with notches 24 of greater width than the width of the side arms 20 which are received thereby whereby the side arms and head 21 are permitted to swing forwardly or rearwardly a limited distance with respect to the guard member 13 in order to facilitate the application or removal of the blade. In order to provide means for centering the blade and for preventing rotation of the same, the said blade and head 21 are formed with central non-circular openings 25 and 26 which are of the same configuration as the projection or pin 16 and which receives said pin when the blade is in clamped relation.

In use and operation of the device the nut 18 is turned to adjust the same longitudinally on the shank 11 until it contacts with the guard member 13, at which point the head 22 is relatively separated from the guard member. At this point the opening 26 is disengaged from the pin or projection 16 and the head and arms 21 and 20 are swung forwardly or rearwardly as indicated by dotted lines in Fig. 4 to facilitate the re-

moval or application of the blade 23. To associate the blade with the holding and clamping member, the central opening 25 thereof is positioned over the pin or projection 16 and the nut 17 is turned to adjust the same toward the shoulder 12 at the juncture of the shank with the handle 10, the pin or projection 16 entering the central opening 26 in the head 21. The clamping of the blade between the concaved and convexed faces 22 and 15 serves to flex the same and by variations in the flexing the coarseness or fineness of the shave is regulated. It will thus be seen that when the adjustment is made the operator in grasping the handle 10 in no way interferes with the adjustment during the manipulation of the razor. It will be further noted that the parts of the holding and clamping member are permanently connected together to prevent dropping or loss of the same during the application or removal of the blade as is the case with razors in which the parts are capable of separation.

I claim:

1. A safety razor including a flexible double edged blade and holding and clamping means therefor comprising a handle, a guard member rigidly attached thereto and a head having pivotal and slidable connection with the handle to permit of lateral movement in addition to movement in a line parallel to the axis of the handle whereby to effect clamping and unclamping of the blade to associate and disassociate the same with the holding and clamping means.

2. A safety razor including a flexible double edged blade and a holding and clamping means therefor, said means comprising a handle, a guard member rigidly attached thereto, a head for clamping and releasing the blade and a connection between said head and handle to permit of relative lateral swinging and shifting movement of the head in a line parallel to the axis of the handle for clamping and unclamping the blade between the head and guard member.

3. A safety razor including a flexible double edged blade and holding and clamping means therefor comprising a handle, a guard member rigidly attached thereto and a head having pivotal and slidable connection with the handle to permit of lateral swinging movement and movement in a line parallel to the axis of the handle for clamping and unclamping the blade to associate and disassociate the same therewith, the said means of connection consisting of a nut threadedly engaged with the handle, an element swiveled to the nut for axial movement therewith and arms rigidly connected to the head and pivotally connected with said element.

4. A safety razor comprising a handle, a reduced threaded shank at one end thereof defining a shoulder at its juncture, an arcuate guard member at the free end of the shank, an interiorly threaded nut mounted on the shank for longitudinal adjustments between the shoulder and the guard member upon rotation of the nut, a yoke including a bight element centrally swiveled to the nut and including side arms, each pivoted at one end to a free end of the bight, an arcuate head rigidly secured to the free ends of the side arm of the yoke, the said guard member having notches at its opposite ends receiving said side arms whereby to permit of a limited swinging movement of the yoke and head with respect to the guard member, and a flexible blade adapted to be clamped between the convex face of the head and the concaved face of the yoke upon adjustment of the nut between the shoulder.

JOHN FRANCIS O'MALLEY.