

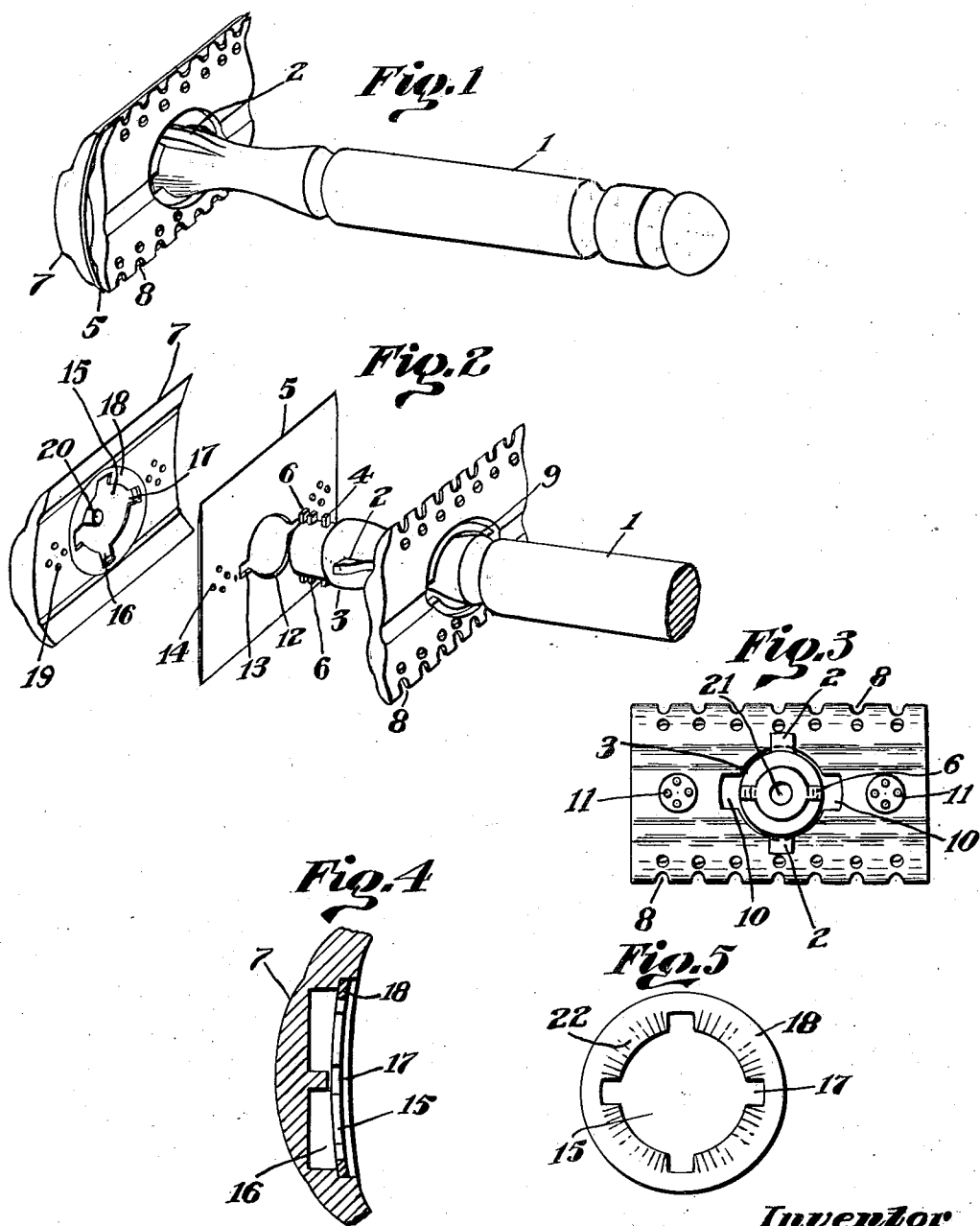
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A. F. THOMPSON

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SAFETY RAZOR

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Inventor
Andrew F. Thompson

By *W. S. Spaulding*
Attorney

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SAFETY RAZOR

Andrew F. Thompson, Dorchester, Mass.

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4 Claims. (Cl. 30—12)

My invention relates to an improvement in safety razors. Safety razors have become increasingly popular and the many types and variations now on the market indicate the efforts made to produce a razor that will be inexpensive and yet do away with existing difficulties.

One fundamental requirement of any razor is that it must be of simple construction, one that will permit of rapid assemblage and the equally rapid taking apart of the razor.

Another requirement is that it must be so constructed that the blade may be easily and safely washed and dried because only in this way may the maximum use of the blades be enjoyed.

A closely associated problem is to produce a structure that will not become rusted in the interior.

Razors have long been made to be taken apart and the problem has been recognized as to the desirability of exposing the blade for cleaning purposes and several attempts have been made to permit the blade to be cleaned without taking the razor apart. Such attempts resulted in more complicated structures which would not permit the razor to be taken apart easily.

I provide a razor that is an improvement on the types of safety razors now on the market or those previously suggested in that it may be assembled and taken apart more rapidly and safely than any other razor. At the same time the razor is so constructed that the blade may be exposed and handled without the risk of dropping it or of receiving any cuts in handling it and all parts may be thoroughly cleansed and dried.

My razor may be made to be detachably assembled by a bayonet joint which compressibly unites all the parts together. Thus, I am able to do away with telescoping and screw threaded constructions.

A further feature of my invention is that by a simple operation, the partial rotation of the handle, the guard and the clamping plate may be removed, leaving the blade on the handle in which position it may be safely cleaned.

In the drawing I have shown and in the specification described an embodiment of my invention. Throughout the specification and drawing like reference numerals indicate the corresponding parts, and in the drawing:

Fig. 1 is a view of my razor assembled.

Fig. 2 is a fragmentary view of my razor separated, the parts being in aligned position.

Fig. 3 is a front view of the guard mounted on the handle.

Fig. 4 is a fragmentary sectional view of the

clamp member and view of a modified form of interlock to be used with the clamp member, and

Fig. 5 is a face view of the clamping disc removed.

For my razor I provide a handle 1 which may be shaped and designed as desired. At 2 there are provided a pair of stops which position the guard on the handle. Forwardly of the shoulder 3 I provide my handle with a series of lugs or keys which are axially at right angles to the stops 2. These lugs I number in order of their purpose. The lug 4 serves with the shoulder 3 to define the notch in which the blade 5 is placed. The lugs at 6 are designed to hold detachably the backing plate or clamp member 7 which with the guard form the head. The lugs 6 may be formed as a single lug and shaped as desired or may be formed separately as shown in Fig. 2 to give an increased interlocking compression. In Fig. 2, the lug 4 is spaced away from the shoulder 3 to show more clearly the blade receiving notch. In practice, this notch is merely the thickness of the blade.

The guard 8 is provided with an aperture 9 of size sufficient to permit the passage of the member 8 over the handle 1. The aperture 9 is shaped with slots 10 to correspond to the stops 2. Thus, unless the slots 10 and the stops 2 coincide, the guard 8 will be effectively seated. The guard 8 is provided with projections 11.

The blade 5 is of the usual wafer type and is provided with an aperture shaped similarly to the aperture 9 of the guard 8. Thus, there is the main aperture 12 and the slots 13. This aperture or opening is of handle size forwardly of the shoulder 3. The blade 5 is also provided with a series of relatively small perforations 14 through which the projections 11 pass to retain the blade and guard in proper position relative to each other.

Because of the fact that the stop 2 and the lugs 4 and 6 are axially at right angles it results that if the stop 2 and the slots 10 coincide the lug 4 will retain the blade 5.

The backing or clamping member 7 is formed to receive the lugs or keys 6. The clamping member 7 and the lugs 6 may be formed to have interengaging cam surfaces. A satisfactory and convenient construction is to provide a recess 16 and fit therein a washer-like member or disc 18 having a smaller aperture or opening 15 with slots or keyways 17 extending substantially quarterly therefrom with two of said slots being so positioned that when the slots 10 of the guard

8 are aligned with the stops 2 the lugs 6 will be aligned therewith.

The member 18 is tightly fitted and is seated to prevent the lug 4 and the clamping member 7 fitting closely to the blade 5 when the razor is assembled and as shown in Fig. 5 it may be provided with serrations 22 on its inner surface which will provide a cam like interlock with the lugs 6 on the handle 1.

The clamping member is provided with a centrally located pin 20 adapted to enter an opening 21 of the handle 1.

I have found that it is not necessary to form the interlock of the handle 1 and the clamping member 7 by a cam or the like for the guard 8 and the clamping member 7 are shaped to curve the blade 5 as shown in Fig. 1. Because of the resiliency of the blade 5, the blade 5 when so curved serves as a spring to interlock the members securely.

When the guard 8, the blade 5, and the clamping member 7 are aligned or when the guard 8 is positioned on the stops 2, the parts may be compressed together and a slight rotation of the handle 1 in either direction will interlock the various members and the razor will be ready for use. So long as the lugs 6 and the recess 16 in the clamping member 7 fit tightly enough to hold the blade compressed between the guard and clamp, the spring action of the blade 5 provides an adequate interlock.

To secure the blade 5 in proper position, the clamping member 7 is provided with indentations 19. The projections 11 of the guard 8 pass through the perforations 14 of the blade 5 and enter those indentations 19. The projections 11, the perforations 14, and the indentations 19 may be shaped as desired.

When it is desired to clean the razor blade or to insert a new blade the handle 1 is twisted sufficiently to permit the withdrawal of the guard 8 over the stops 2. When so positioned, the clamping member 7 may also be withdrawn because the quarterly slots 17 are shaped to align with the lug 6 when the guard is in position to be withdrawn, leaving the blade on the handle so that it may be safely cleaned. A further rotation of the handle 1 in relation to the blade 5 will permit the blade 5 to be removed.

Certain changes may obviously be made in the structure shown without departing from the spirit of my invention if within the limits of the appended claims.

What I therefore claim and desire to secure by Letters Patent is:

1. A safety razor including a resilient blade, a head comprising a clamp and a guard having coacting faces disposed to maintain flexation of said blade when interposed therebetween, said blade, clamp and guard having aligned assembly apertures, and a handle adapted to pass through said apertures and having guard retaining members, blade retaining members and clamp retaining members, said retaining members being so disposed radially of said handle and said aligned apertures so formed as to permit an interlock of each of said blade, guard and clamp with its respective retaining members on said handle on suitable rotation thereof, and so that on further rotation of said handle said guard and clamp

may be released therefrom, while said blade remains locked on said handle.

2. A safety razor including a resilient blade, a head comprising a clamp and a guard having coacting faces disposed to maintain flexation of said blade when interposed therebetween, said blade, clamp and guard having aligned assembly apertures, and a handle adapted to pass through said apertures, said handle having a main portion and a reduced portion providing a shoulder, a pair of opposite radially extending guard retaining stops on said main portion, said guard having slots extending laterally from its said aperture to permit passage of said stops there-through, a lug on said reduced portion of said handle spaced from said shoulder and at right angles to said guard stops to hold said blade on said handle independently of said guard, said blade having slots extending from its said aperture to permit passage of said lug there-through, clamp engaging members on said handle aligned with said blade lug and adapted to effect a cam engagement with the aperture edges of said clamp, said clamp having slots extending from its said aperture in alignment with said blade slots and other slots in alignment with said guard slots, and of a size to permit the passage there-through of said clamp engaging members on said handle, a partial rotation of said handle in said apertures causing simultaneous interlocking of said guard, blade and clamp with their respective stops, lug, and engaging members, and a further rotation of said handle bringing said guard and clamp members into alignment with the respective slots in the guard and clamp whereupon the guard and clamp may be removed from said handle while said blade remains locked thereon by said blade retaining lug and shoulder.

3. A safety razor including a resilient blade, a head comprising a clamp and a guard having coacting faces disposed to maintain flexation of said blade when interposed therebetween, said blade, clamp and guard having aligned assembly apertures, and a handle adapted to pass through said apertures, said handle having spaced protuberances adapted on partial rotation of said handle to positively position said blade, guard and clamp independently on said handle, said blade, guard and clamp being suitably slotted to permit the passage of said protuberances therethrough, said protuberances being so positioned relative to the axis of the handle and said slots so positioned in said guard, blade and clamp, that on further predetermined movement of said handle, said protuberances and slots in said guard and clamp will register and said guard and clamp may be removed from the handle while said blade remains locked thereon.

4. A safety razor comprising a blade, a head including guard and clamp members, said blade and said members having aligned assembly apertures and a handle to enter said apertures, aligned means on said handle adapted to hold separately said blade and said clamp, members on said handle to retain said guard when not in alignment with said guard aperture, said clamp aperture being also formed to disengage said means on alignment of said guard retaining members with said guard apertures, whereby said head members may be removed to expose said blade.

ANDREW F. THOMPSON.