

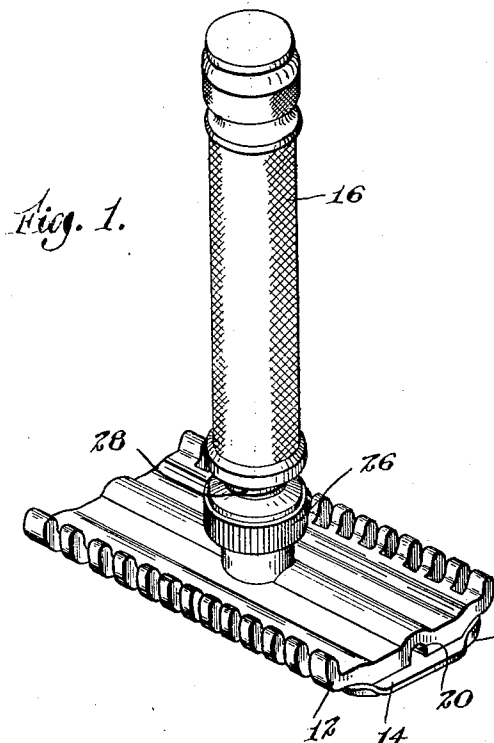
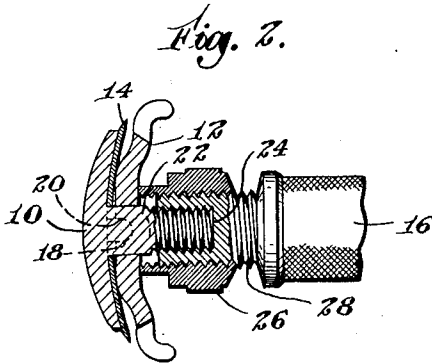
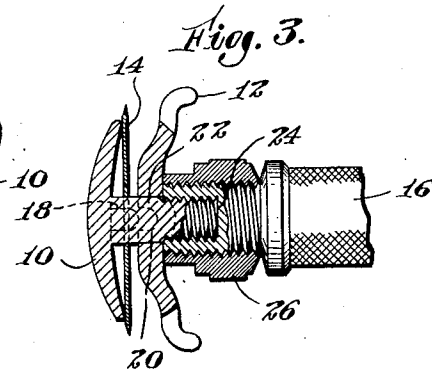
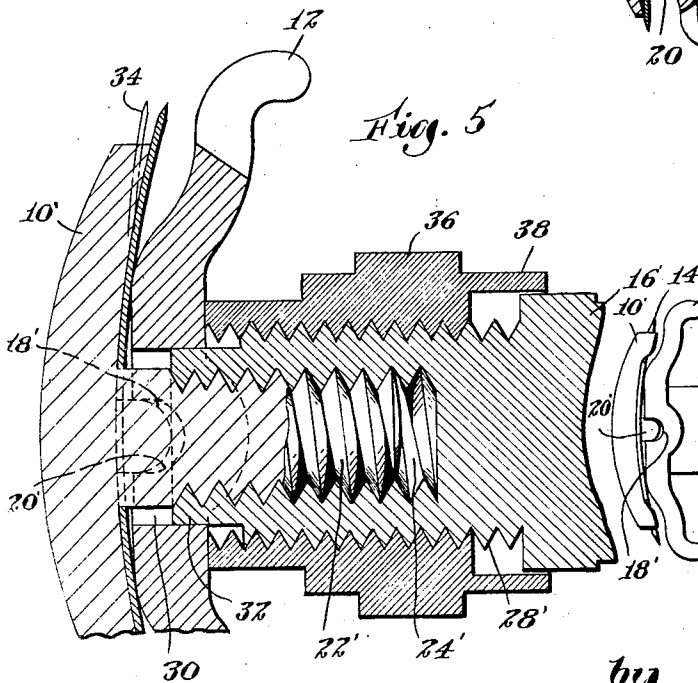
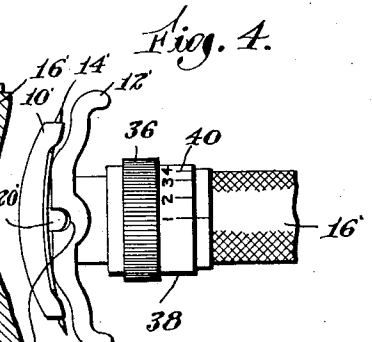
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SAFETY RAZOR

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SAFETY RAZOR

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This invention relates to safety razors, and more particularly to a novel construction whereby the blade can be released and adjusted from its maximum clamped position without affecting the connection between the razor and its handle. Heretofore in razors of the type wherein a blade is held on locating studs and clamped between cap and guard members by a handle in screw threaded connection with one of said members, any releasing of the handle for adjusting the blade or for other purposes has caused a looseness at its threaded connection with the razor. This looseness has permitted both rotation and chatter of the razor on the handle and is very objectionable in manipulating the razor. The primary object of my invention is to provide a safety razor of the type stated, wherein the blade is clamped and released by means other than the handle and which permits the said adjustment without affecting the connection between the handle and razor.

My invention particularly embodies a safety razor of the type above stated, wherein a handle is adapted to be firmly tightened into screw threaded connection with a central threaded stem on the cap, which stem projects through a hole in the razor guard. Threadedly mounted on the handle adjacent to its razor end and in position to engage the guard about the said hole is a sleeve. The clamping and releasing of the blade between the cap and guard are entirely controlled by adjustment of this sleeve and such adjustment in no manner affects the handle connection to the razor. The production of a new and improved razor of this nature comprises a further object of my invention.

In the accompanying drawings I have shown one specific embodiment of my invention but it will be understood that the invention can be otherwise embodied and that the drawings are not to be construed as defining or limiting the scope of the invention, the claims appended hereto being relied upon for that purpose.

Fig. 1 is a perspective view of a razor embodying my invention;

Fig. 2 is a longitudinal sectional view through the razor in clamped position;

Fig. 3 is a like view showing the razor in unclamped position;

Fig. 4 is a view of a slightly modified form of the razor in elevation; and

Fig. 5 is an enlarged and fragmentary sectional view of the razor shown in Fig. 4.

I have preferred to herein illustrate and describe my invention as applied to a safety razor of the Gillette type, it being understood, however, that the same is by no means limited thereto. This type of razor uses a double edged blade which is clamped into shaving position between cap and guard members. In the well-known Gillette razor, these members are clamped together by means of the handle which is threaded to a stem on the cap member and projecting through the guard member. As the handle is tightened, the blade is gripped between the cap and guard and is flexed to a transversely curved position wherein its two cutting edges are drawn down to a position closely adjacent to the guard. When the handle is fully tightened, these edges are most closely adjacent to the guard and are said to have the least amount of exposure. If more exposure is desired or if for any other reason it is desired to release or partially release the clamping action on the blade, it can be done only by unscrewing the handle and such action causes the objectionable looseness in the handle above referred to. My invention, which will now be described in connection with the accompanying drawings, embodies means other than this handle connection for clamping and releasing the blade.

The razor illustrated comprises a cap 10, a guard 12, a blade 14 therebetween and a handle 16. The blade is centrally slotted to fit over a centrally disposed rib 18 on the cap and into a groove 20 in the guard, and a centrally disposed and threaded stud 22 on the cap is adapted to project through the blade and through a hole in the guard. As shown in Figs. 2 and 3, this hole is of a size to closely receive the stud 22. The threaded socket 24 in the end of the handle is of a depth to permit the stud to firmly engage the bottom

thereof when the handle is tightened, whereby the handle forms a secure connection with the stud and cap.

Clamping and adjusting of the razor is performed by a sleeve 26 threaded to the handle at 28. As shown in Fig. 2, the sleeve is fully tightened against the guard and thus holds the blade in its maximum clamped position between the cap and guard. In Fig. 3, the sleeve is shown as fully unscrewed and thus permitting the guard to back away from the cap and blade. It will be noted that the blade is normally flat, as shown in Fig. 3, and that the clamping action flexes the same to the curved position of Fig. 2. The handle is firmly connected to the cap in both Figs. 2 and 3 and rotation of the sleeve in either direction in no manner releases or affects this connection at 22—24.

The form of my invention illustrated in Fig. 5 is substantially the same as above described except that the hole 30 through the guard is somewhat larger than the threaded stud 22' and rides on a smooth cylindrical bearing portion 32 of the handle. In this construction the stud 22' does not extend to the bottom of the threaded socket 24' but when the handle is firmly tightened to the cap the end of the bearing portion 32 engages against the rib 18' on the cap. The handle is thereby brought into a firm and secure engagement with the cap stud along the threads thereof. Incidentally the bearing portion 32 spaces the hole in the guard concentrically with respect to the stud 22'. The remaining parts of this construction are substantially the same in Figs. 2 and 3 and are designated by the same reference characters primed. The operation of this form of the invention is also the same as above described in reference to Figs. 2 and 3, the clamping and releasing of the blade being done entirely by means of the sleeve.

The razor is shown in its fully clamped position in Fig. 5. If it is desired to increase the blade edge exposure for the purpose of securing a closer shave, the sleeve 36 is backed off slightly and the effect of this action on the blade is shown in broken lines at 34. It will be seen that upon being released the blade straightens out with the result that its edges move to a position more remote from the guard and, therefore, present a greater shaving exposure. The sleeve 36 of this razor is preferably provided with a rearwardly extending apron 38 on which are graduations 40 whereby the blade can be repeatedly brought to the same desired exposure. Thus in accordance with my invention, the sleeve can be slightly adjusted to vary the blade edge exposure or fully backed off, as shown in Fig. 3, and none of these operations in any manner affect the tight and secure connection maintained between the handle and cap.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A safety razor comprising a cap member and a rigid guard member shaped to clamp a flexible blade between them, the cap having a threaded shank, a handle releasably connected thereto and having a bearing portion upon which the guard member is mounted to move freely toward and from the cap, and an adjustable sleeve on the handle arranged to bear against the guard.

2. A safety razor comprising a cap member having a threaded stud, a cooperating guard loose on said stud, a handle having an internally threaded socket shaped to bottom upon said stud when the handle is screwed fully thereon, and a sleeve threaded upon the handle and bearing upon the guard.

3. A safety razor comprising a cap having a threaded stud, a handle connected thereto and having a smooth cylindrical end portion, a guard member arranged to slide thereupon in spaced relation to said stud, and a sleeve adjustable on the handle and arranged to advance the guard toward the cap.

4. A safety razor having a cap with a central stud and a longitudinal blade-locating rib, a handle threaded upon the stud arranged to bear upon said rib when fully screwed thereon, and having a smooth bearing portion, a guard slidable thereon, and an adjustable sleeve in end engagement with said guard.

JOHN SKINNER ISDALE.