Oct. 21, 1924. 1,512,207

G. G. FLOYD

RAZOR

Filed June 13, 1923

Fig. 1.

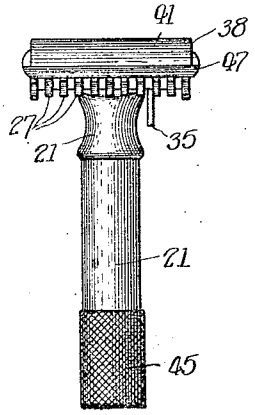


Fig. 2.

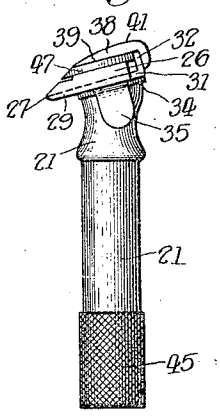


Fig. 3.

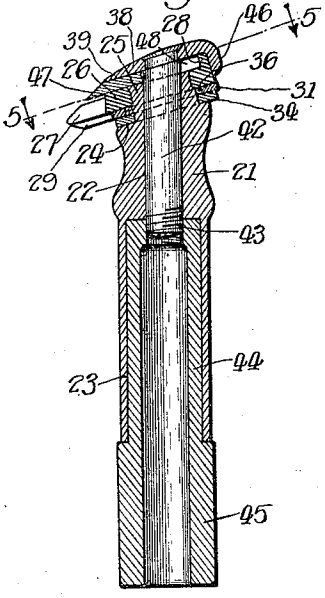


Fig. 4.

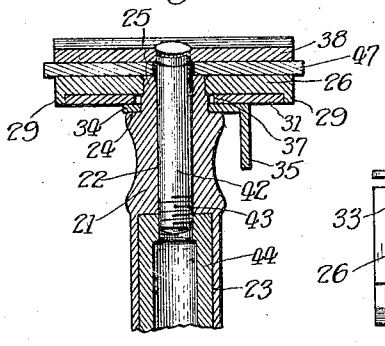


Fig. 5.

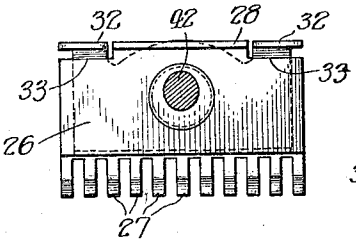


Fig. 6.

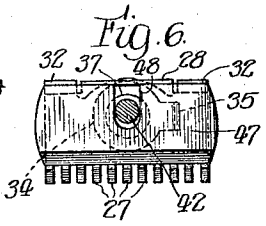


Fig. 7.

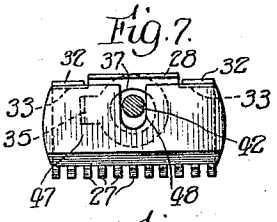


Fig. 10.

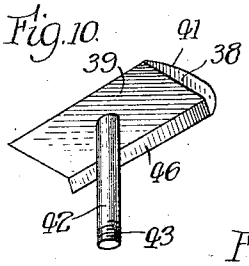


Fig. 8.

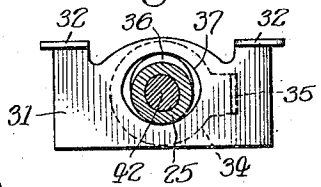


Fig. 11.

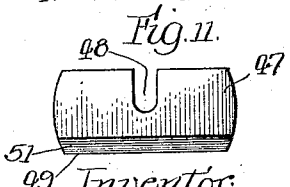
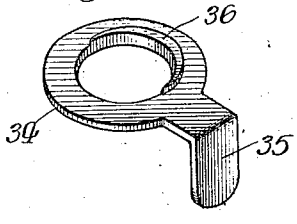


Fig. 9.



Witness:
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Inventor:
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Patented Oct. 21, 1924. 1,512,207

UNITED STATES PATENT OFFICE.

GEORGE G. FLOYD, OF RIVERSIDE, ILLINOIS.

RAZOR.

Application filed June 13, 1923. Serial No. 645,054.

To all whom it may concern:

Be it known that I, GEORGE G. FLOYD, a citizen of the United States, residing at Riverside, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Razors, of which the following is a specification.

My invention concerns razors or similar appliances, and pertains more particularly to razors of the single, sharp-edge type.

One object of the invention is the provision of a razor having a blade which may be especially easily removed therefrom and replaced therein.

A further purpose of the invention resides in supplying adjustment means for the blade to secure the desired cutting or shaving action, such adjustment being toward and from the toothed guard usually employed on such razors adjacent to the sharp edge of the blade.

In order that those skilled in this art may have a full and complete understanding of the invention and its several structural and functional advantages, in the accompanying drawing forming a part of this specification, I have illustrated a desirable and preferred embodiment of the invention, and throughout the several views of such drawing like reference characters have been applied to the same parts.

In this drawing,—

Fig. 1 is a face view of the novel and improved razor;

Fig. 2 is a side view of the same;

Fig. 3 is an enlarged, central, vertical or longitudinal section through the razor;

Fig. 4 is a fragmentary, lengthwise, central section at right angles to that of Fig. 3;

Fig. 5 is a section on the inclined plane 5—5 of Fig. 3;

Fig. 6 is a similar section, on a smaller scale, showing the blade in place;

Fig. 7 is a view similar to that of Fig. 6, illustrating the blade with a different adjustment;

Fig. 8 is a detail view of the blade adjusting mechanism;

Fig. 9 is a perspective view of the cam employed for adjusting the blade;

Fig. 10 is a perspective view of the clamp or face-plate for holding the blade in the razor; and

Fig. 11 is a face view of the blade.

Referring to these several views of the drawing, it will be perceived that the main round body of the razor comprises a hollow or longitudinally-apertured member 21 having a round hole 22 through the upper portion thereof which communicates with a larger, cylindrical cavity or bearing 23 in the lower portion of such element, the top annular face 24 of the member 21 being somewhat inclined or at an oblique angle to the longitudinal axis of the body, as is clearly indicated in Fig. 3.

Extending outwardly from the face 24, the part 21 is equipped with a cylindrical, shouldered, apertured boss 25 and an inclined or slightly oblique member 26 having along one edge the usual or customary spaced guard teeth 27 of slightly less thickness than the part 26, is securely and rigidly fastened on the outer or upper portion of the stud 25 bearing at its inner face on the slight shoulder of the stud, the outer portion of which is headed over slightly in the countersunk central hole of the part 26 to center and affix the latter rigidly in position.

Along the central portion of the rear or back edge of this inclined or oblique blade-support 26, it is fitted with an upstanding marginal flange or rib 28, and projecting downwardly from its opposite ends there are a pair of cross or transverse, marginal, spaced flanges or ribs 29, 29, shown most clearly in the section of Fig. 4.

A plate 31 is positioned beneath the blade-support 26, between its two flanges 29, 29, which act as retaining guides therefor during the lateral adjustment movement of the part 31, the latter having two, upstanding lugs or ears 32, 32, extending up through cut-away corner portions 33, 33, of the member 26, as is perhaps most apparent from the illustration presented in Fig. 5.

A round, apertured disk 34, bearing on the surface 24 and carrying a depending, manipulating or adjusting finger or lug 35, is mounted on and revoluble or capable of turning on the lower or inner part of the hollow stud 25, and such disk is equipped on its top or upper face with a curved or arcuate cam 36 received in an elongated opening or aperture 37 in the blade adjustment plate (Figs. 8 and 9), whereby turning or rocking of the member 34 by its handle 35 shifts or adjusts the lugs 32, 32, toward and from the toothed edge 27 of the guard.

Owing to the slightly elongated shape of the hole, disposed with its longer axis

lengthwise the part 31, this plate 31 has no endwise movement occasioned by the turning of the cam, but it is guided in its crosswise or lateral motion by the flanges or marginal ribs 29, 29, with which its ends coact.

A face plate 38, having a plane upper surface 39 and an outer, slightly-curved or convex face 41, is supplied with a threaded stem or shank 42 designed to be removably received in the aperture 22 which extends through the stud referred to, and to project into the threaded inner end 43 of a hollow, tubular member 44 fitting and revoluble in the bearing or cavity 23, and supplied with an exposed, enlarged, preferably knurled or ribbed head or terminal part 45, by which it may be turned to draw the clamp plate 38 down firmly against the blade to hold the latter fixedly in position.

The member 38 has a downwardly-extended flange 46 which lies to the rear of the flange or rib 28 and the lugs 32, 32, whereby turning or rotation of the clamping-plate is prevented when it is being tightened by the threaded construction described.

The flat blade 47 is designedly of substantial thickness, for example, one-sixteenth inch thick, and it has a recess or slot 48 extended forwardly from the center of its rear edge to accommodate the rod or shank 42 which centers the blade and prevents lengthwise shifting thereof.

The ends of the blade are desirably rounded or slightly convex, as shown in Fig. 11, to avoid unnecessary sharp corners or edges, and the longitudinal cutting edge 49 is formed at the junction of the bottom plane face of the blade and a bevel surface 51 at a substantial angle thereto, for instance, in some cases this may be approximately thirty degrees, which has heretofore been considered altogether too blunt an edge for shaving purposes.

To insert the blade in the razor, the handle 45 is given a slight turn, and thereupon the blade is pushed entirely into place, the slot 48 receiving the stem 42, and the rear edge of the blade bearing against the front faces of the two shoulders 32. Then the handle is given a small turn to draw the clamp-plate 38 down into gripping and holding action on the blade, the latter now being held firmly and fixedly in position.

It will be observed that to insert a blade, or to remove one by a reversal of the operation specified, it is not necessary to separate any parts of the razor, a mere loosening of them being sufficient for the purpose.

If adjustment of the blade crosswise is desired to modify its cutting action by shifting the blade-edge with relation to the toothed guard 27, the handle 45 is turned slightly to free the pressure on the blade, and then the cam 36 is manipulated by a turning of the handle 35 to move the lugs 32 forwardly or rearwardly the desired amount, the blade being correspondingly shifted, whereupon the handle 45 is again turned to clamp the blade down immovably in place.

It will be seen that the adjustment of the blade is easily and readily accomplished, and when it is desired to remove the blade, the handle 45 is turned only very slightly, whereupon the blade can be taken out forwardly by grasping its opposite rounded ends between the thumb and finger.

So far as I know, I am the first person who has provided an adjustment of this kind, whereby the blade may be moved crosswise or laterally to bring it into proper position, and I also believe that I am the first one to supply a razor of this type wherein the blade may be removed or another one inserted by a very small turning of the handle and without complete release of any other element.

It will be noted that the handle or lug 35 is up under the head of the razor, so that it is not conspicious, and is not at all in the way, and yet it is in a convenient position for ready manipulation when required.

In this application I have presented only one embodiment of the invention, but the latter is susceptible of a variety of embodiments differing from one another more or less radically in mechanical features, but all incorporating the fundamental principles underlying the invention.

The razor-blade disclosed in this patent forms the subject-matter of a divisional pending patent application, Serial Number 725,816, filed July 14, 1924.

I claim:

1. In a razor, the combination of a hollow handle having an outstanding hollow stud, a threaded member in said handle having an external portion by which it may be turned, a blade-support on said stud having a blade-guard along its front edge and an outstanding flange along its rear edge, a clamp adapted to bear on the outer face of a blade on said support, said clamp having threaded engagement with said member whereby the clamp may be tightened and loosened and having a guiding-flange cooperating with said support-flange, an apertured gauge-plate on the side of said support opposite that adapted to accommodate the blade and having a gauge-lug against which the rear edge of the blade is designed to bear, a cam in the aperture of said gauge-plate mounted for turning on said stud, a handle for said cam by which it may be turned to adjust the gauge-plate and blade transversely of said support, and cooperating means between said support and gauge-plate to guide the latter in its transverse adjustment movements.

2. In a razor, the combination of a handle,

a blade-support on said handle having a blade-guard on its front edge and an outstanding flange along its rear edge, a clamp adapted to bear on the outer face of a blade on said support and having a guiding flange cooperating with said support flange, means to tighten and loosen said clamp, an apertured gauge-plate on the side of said blade-support opposite that adapted to accommodate the blade and having a gauge-lug against which the rear edge of the blade is adapted to bear, a cam in the aperture of said gauge-plate mounted for turning on said handle, a handle for said cam by which it may be turned to adjust the gauge-plate and blade transversely of said support, and cooperating means between said support and gauge-plate to guide the latter in its transverse adjustment movements.

3. In a razor, the combination of a handle, a blade-support on said handle having a blade-guard along its front edge, a clamp adapted to bear on the outer face of a blade on said support, means to tighten and loosen said clamp, an apertured gauge-plate on the side of said support opposite that adapted to accommodate the blade and having a gauge-lug against which the rear edge of the blade is adapted to bear, a cam in the aperture of said gauge-plate mounted for turning on said handle, means by which said cam may be turned to adjust the gauge-plate and blade transversely of said support, and means on said support to guide the gauge-plate in its transverse adjustment movements.

4. In a razor, the combination of a handle, a blade-support on said handle having a blade-guard along its front edge, a clamp adapted to bear on the outer edge of a blade on said support, means to tighten and loosen said clamp, an apertured gauge-plate having a gauge-lug against which the rear edge of the blade is adapted to bear, a cam in the aperture of said gauge-plate mounted for turning on the handle, means by which said cam may be turned to adjust the gauge-plate and blade transversely of said support, and means to guide said gauge-plate in its movements.

5. In a razor, the combination of a handle, a blade-support on said handle having a blade-guard along its front edge, a clamp adapted to bear on the outer face of a blade on said support, means to tighten and loosen said clamp, a gauge-plate on the side of said support opposite that adapted to accommodate the blade and having a gauge-lug against which the rear edge of the blade is adapted to bear, a cam cooperating with the gauge-plate to adjust the position of the latter, means to turn said cam to adjust the gauge-plate and blade transversely of the support, and means to guide said gauge-plate in its movements.

6. In a razor, the combination of a blade-support having a handle, a clamp adapted to bear on the outer face of a blade on said support, means to tighten and loosen said clamp, a gauge-plate transversely slidably mounted on said blade-support and having a gauge-lug overlapping the rear edge of a blade on said support, a cam at the base of said handle turnable to adjust the transverse position of said gauge-plate, lug and blade, and means by which said cam may be turned.

In witness whereof I have hereunto set my hand and seal.

GEORGE G. FLOYD. [L. S.]