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E. C. BUNNELL

2,090,181

RAZOR AND RAZOR BLADE

Filed April 16, 1935

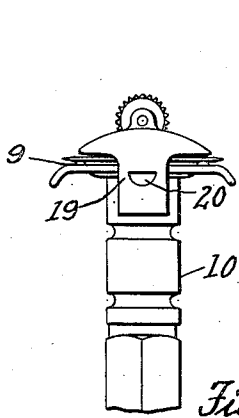


Fig. 2.

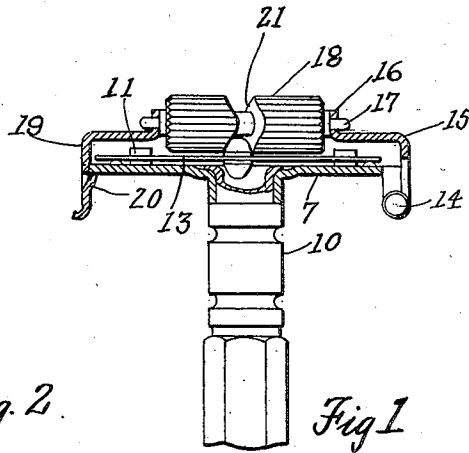


Fig. 1.

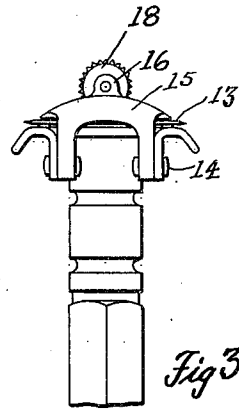


Fig. 3.

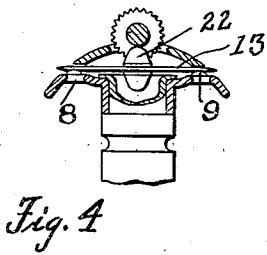


Fig. 4.

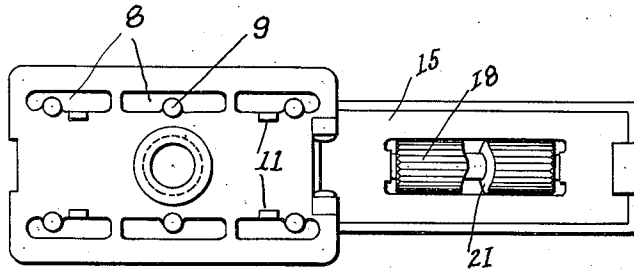


Fig. 5.

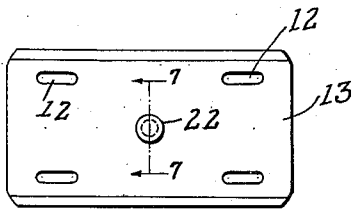


Fig. 6.

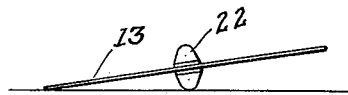


Fig. 8.

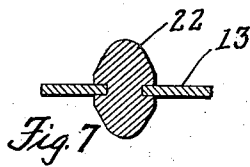


Fig. 7.

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2,090,181

RAZOR AND RAZOR BLADE

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Application April 16, 1935, Serial No. 16,552

4 Claims. (Cl. 30-46)

This invention relates to safety razors, and more particularly to a safety razor of the type wherein the blade is reciprocated longitudinally during the cutting operation.

5 In U. S. Letters Patent No. 1,890,733, there is disclosed a safety razor of the type herein considered in which there is provided a slidable saddle having a pin engaging a cam roller and also reciprocating a blade. Such a structure has
10 been found objectionable in that the slidable saddle must be accurately mounted with relation to the cam roller, and the cost of assembling the parts of the razor is relatively large. Also, the saddle necessitates raising of the cam roller,
15 which prevents convenient shaving on the upper lip and around the nose.

It is, therefore, an object of this invention to provide a safety razor of the reciprocating blade type in which the use of a saddle is eliminated, thereby materially reducing the cost of man-
20 ufacture of the razor, and enabling easy and convenient shaving of all portions of the face.

A further object is the provision of a safety razor of the reciprocating blade type employing
25 a blade provided with a centrally positioned pin or protuberance engageable with a cam roller, thus eliminating the necessity of saddles or other intermediate instrumentalities for effecting the reciprocation of the blade.

30 These and other objects are attained by the novel construction, combination and arrangement of parts hereinafter described and shown in the accompanying drawing, constituting a material part of this disclosure, and in which:

35 Fig. 1 is a side elevational view, partly in section, of a razor embodying my invention.

Fig. 2 is an elevational view of one end of the razor.

40 Fig. 3 is an elevational view of the other end of the razor.

Fig. 4 is an end elevational view of the razor partly in section.

Fig. 5 is a plan view of the razor with the retaining plate raised and extended.

45 Fig. 6 is a plan view of a blade embodying my invention.

Fig. 7 is a sectional view taken on line 7-7 of Fig. 6.

50 Fig. 8 is a side elevational view of the blade shown in Fig. 6.

Referring to the drawing, the razor is shown to include a blade supporting plate 7, having a plurality of apertures 8 through which excess lather and water, etc., may drain so that the ac-
55 tion of the blade will not be impeded. The plate

7 is provided with a plurality of protuberances 9 upon which the blade rests; and attached to the center of the plate is a handle 10.

Projecting upwardly from the plate 7 are four lugs 11, arranged in a rectangle, the lugs passing
5 through similarly arranged slots 12 in a razor blade 13 for guiding the blade during its reciprocatory movements.

At one end thereof, the supporting plate 7 is hinged by means of a hinge pin 14 to a blade
10 retaining plate 15, which has its central portion cut away, and is provided with upstanding ears 16, in which is journalled a shaft 17, upon which is mounted a roller 18, having a knurled surface and provided intermediate its length with a cam
15 slot 21 arranged to engage a pin 22 or similar protuberance projecting from the blade 13. The pin 22 projects from each side of the blade so that both sides of the blade can be used.

The retaining plate 15 has its free end turned
20 downwardly at 19 and provided with an inwardly struck lip 20 which is adapted to engage the supporting plate 7 to firmly hold the retaining plate on the supporting plate.

In operation, the blade 13 is placed on the sup-
25 porting plate 7, with underside of the pin 22 projecting downwardly into the handle 10, which is hollow. The retaining plate 15 is then moved to its closed position, (see Fig. 1) and maintained
30 in such position by the lip 20 engaging the supporting plate 7.

When the retaining plate 15 is moved to the closed position, the pin 22 will be positioned in the cam slot 21, and rotation of the roller 18
35 will cause reciprocation of the blade 13, which is guided during its reciprocatory movements by the guide lugs 11.

From the above description it will be seen that there has been provided a safety razor of the reciprocating blade type which is of extremely simple structure, thus enabling the manufacture of
40 the razor at a very low cost, and eliminating the necessity of providing a slidable saddle which must be accurately and carefully mounted for proper operation. It will be noted that the blade
45 is directly reciprocated by the cam roller without employing intermediate instrumentalities. This arrangement considerably lightens the weight of the moving parts and consequently enables easy
50 operation. By eliminating a slidable saddle, the cam roller can be considerably lowered so that all parts of the face, including the upper lip and beneath the nose, can be conveniently shaved.

The foregoing disclosure is to be regarded as
55 descriptive and illustrative only, and not as re-

strictive or limitative of the invention, of which obviously an embodiment may be constructed including modifications without departing from the general scope herein indicated and denoted
5 in the appended claims.

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

1. In a safety razor, a razor blade support, a
10 plate for retaining a blade on the support, a razor blade having parallel cutting edges slidably mounted on the support and having an integral upwardly projecting pin centrally positioned at right angles to the blade, and cam means rotat-
15 ably mounted on the plate and cooperating with the pin to reciprocate the blade.

2. In a safety razor, a razor blade having parallel cutting edges having a centrally positioned integral pin projecting from each side of the

blade said pin being at right angles to the plane of the blade.

3. In a safety razor, a razor blade support, a plate for retaining a blade on the support, a razor blade having parallel cutting edges slidably
5 mounted on the support and having an integral centrally positioned protuberance at right angles to the plane of the blade, and cam means rotatably mounted on the plate and cooperating with the pin to reciprocate the blade.
10

4. In a safety razor, a razor blade support, a plate for retaining a blade on the support, a razor blade slidably mounted on the support and having an integral centrally positioned pin
15 projecting from each side thereof, and cam means rotatably mounted on the plate and cooperating with the pin to reciprocate the blade.

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