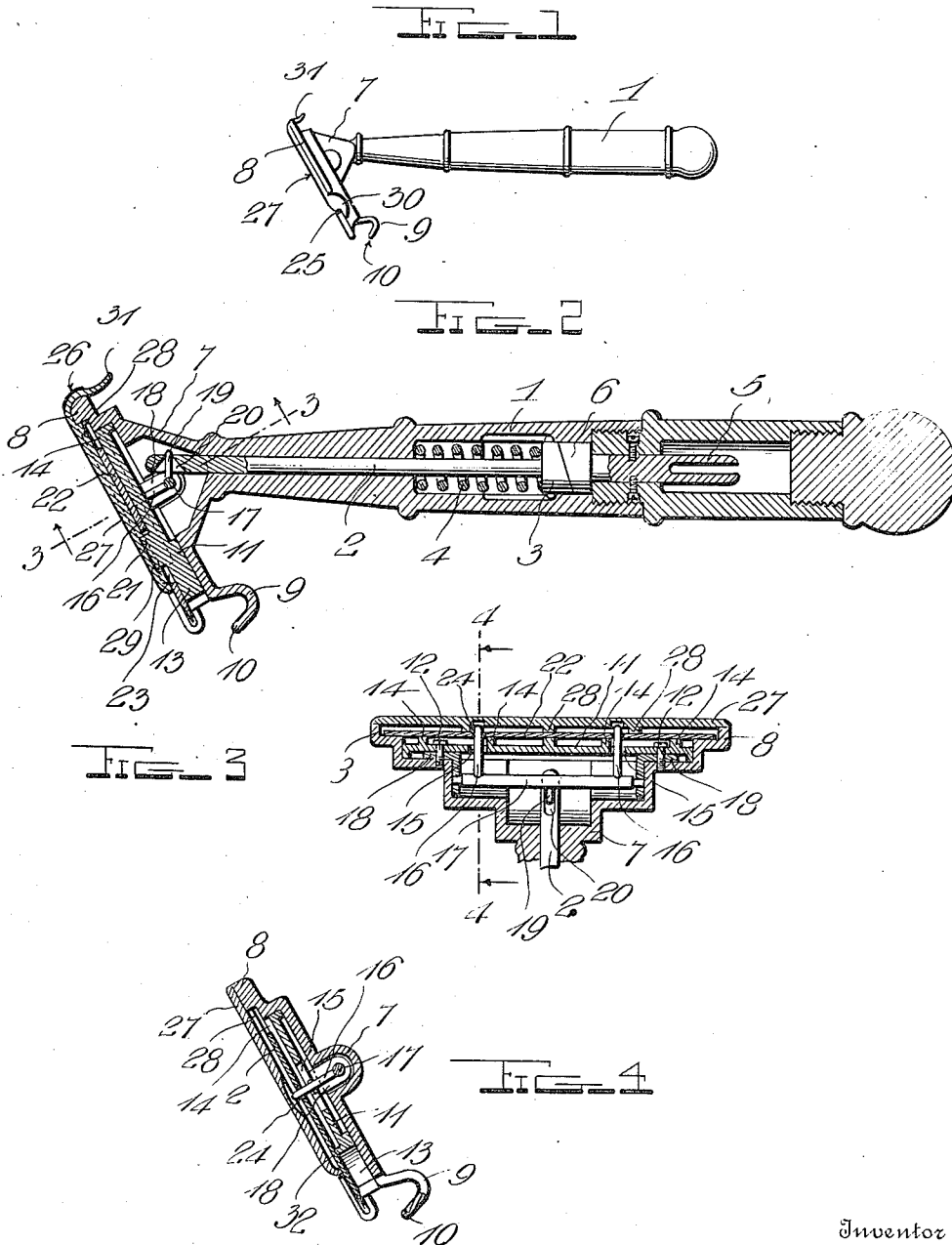


G. H. TUTTLE.
SAFETY RAZOR.
APPLICATION FILED MAR. 12, 1912.

1,059,648.

Patented Apr. 22, 1913.

2 SHEETS—SHEET 1.



Witnesses

E. E. E. E. E.

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2 SHEETS—SHEET 2.

FIG. 5

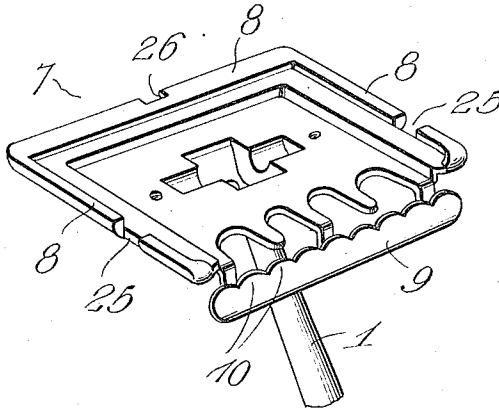


FIG. 6

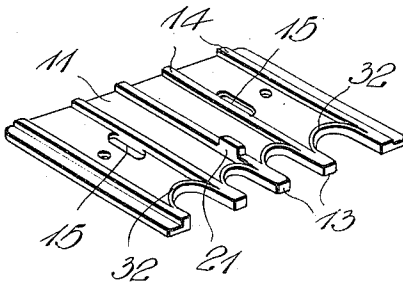


FIG. 7

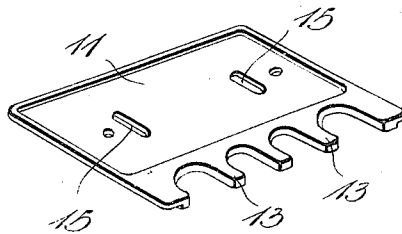


FIG. 8

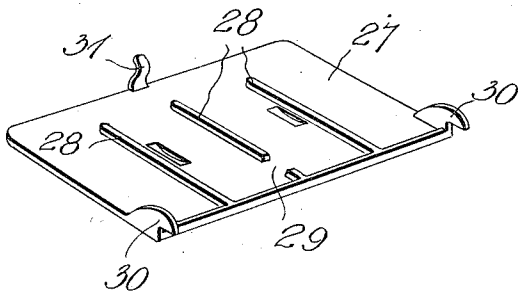
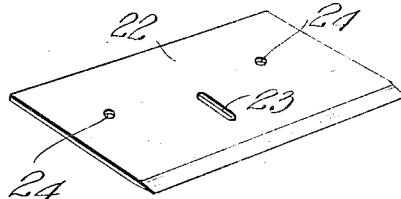


FIG. 9



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE H. TUTTLE, OF LINCOLN, NEBRASKA, ASSIGNOR OF FORTY-NINE ONE-HUNDREDTHS TO FENTON B. FLEMING AND TWENTY-FIVE ONE-HUNDREDTHS TO WILLIAM VAN MATRE, BOTH OF LINCOLN, NEBRASKA.

SAFETY-RAZOR.

1,059,648.

Specification of Letters Patent.

Patented Apr. 22, 1913.

Application filed March 12, 1912. Serial No. 683,276.

To all whom it may concern:

Be it known that I, GEORGE H. TUTTLE, a citizen of the United States, residing at Lincoln, in the county of Lancaster and State of Nebraska, have invented certain new and useful Improvements in Safety-Razors, of which the following is a specification.

This invention has relation to safety razors, and has for its object to provide in a head within which the blade of the razor is located guards positioned at the opposite sides of the blade and having spaced edges whereby the edge of the blade may operate upon the hair when the razor is in use.

It is also the object to provide means for guiding the blade when the same is subjected to reciprocatory action in the head. In the present instance this means consists of a lug which is mounted upon a fixed part of the head and which is slidably received in a slot with which the blade is provided.

The subject matter of the present invention is an improvement over that shown and described in my prior application for vibratory safety razor, filed September 19, 1911, in which a blade is shown mounted for reciprocation. The same means may be employed in connection with the present device for vibrating the device or any other means answering the same purpose may be substituted in its stead.

With the above and other objects in view the structure includes a head which is provided with a permanently fixed guard portion and in which is detachably mounted a plate having a guard end which extends around the cutting edge of the blade. A flat blade is slidably mounted upon the plate and means as above specified is provided for directing the movement of the blade. A plate having a spring catch is adapted to engage the head and when in position constitutes a portion of the same for inclosing the blade.

For a full understanding of the invention reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side elevation. Fig. 2 is a central-vertical, longitudinal section. Fig. 3 is a horizontal section on line 3-3 of Fig. 2. Fig. 4 is a detail vertical section on line 4-4 of Fig. 3. Fig. 5 is a detail per-

spective view of the head. Figs. 6 and 7 are detail perspective views of the ribbed spacing plate. Fig. 8 is a perspective view of the cover plate. Fig. 9 is a similar view of the blade.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

As illustrated in the accompanying drawings the razor consists of a handle 1 which is hollow and in which is located a shaft 2 mounted for reciprocatory movement. A cam head 3 is attached to the inner end of the shaft 2 and a spring 4 is interposed between the said cam head and a fixed portion of the handle 1 and is under tension with a tendency to hold the shaft 2 in retracted position in the handle. A shaft 5 is journaled for rotation in the handle and is provided with a cam head 6 which bears against the cam head 3. Any suitable means may be provided for rotating the shaft 5, but as these features form no part of the present invention and are included in my earlier application, further description of the same will not be made here. It is necessary only to say that by rotating the shaft 5 the cam heads 6 and 3 cooperate, whereby a reciprocatory movement is transmitted to the shaft 2.

A head 7 is mounted at the end of the handle 1 and is bounded around three sides by a flange 8. At the other side the head 7 is provided with a guard portion 9, the said portion being curved and having at its edge serrations or teeth 10. A plate 11 is detachably secured to the head 7 by means of screws 12 or equivalent securing devices. The said plate 11 is provided at one edge with a series of teeth 13 and upon its outer face is provided with a series of ribs 14 which extend transversely across the plate and traverse the lengths of the teeth 13. The plate 11 is provided with elongated slots 15 which receive the branches 16 of a shaft 17 which is journaled in brackets 18 secured to the said plate and the head by means of the screws 12. The shaft 17 is provided with an arm 19 which is received within an opening 20 provided in the shaft 2. Therefore as the shaft 2 reciprocates as above described, the arm 19 is swung so that the shaft 17 is partially rotated alternately

in opposite directions which in turn swings the branches 16 along the slots 15. The plate 11 is provided at a point between its ends and preferably upon one of the ribs 14 with a lug 21. A blade 22 is mounted against the side of the plate 11 and is arranged to reciprocate along the ribs 14 thereof. The said blade 22 is provided with an elongated slot 23 which receives the lug 21 and the said blade is also provided with openings 24 which receive the branches 16. Therefore as the said branches swing in the manner as above indicated the blade 22 is reciprocated and the lug 21 together with the slot 23 serve as means for guiding the blade in its reciprocatory movement. The blade 22 is held in position against the plate 11 by a detachable plate which will now be described.

The flanges 8 at the ends of the head 7 are provided with notches 25 and the flange 8 at the back of the head 7 is provided with a notch 26. A detachable plate 27 is provided upon its inner side with ribs 28 which are adapted to bear against the outer side of the blade 22 and the intermediate rib of the set of ribs 28 is provided with a recess 29 which receives the end of the lug 21. The plate 27 is provided at its ends with hooks 30 which enter the notches 25 and engage under the side portions thereof, and the plate 27 is provided at its rear edge with a resilient catch 31 which is adapted to enter the notch 26 and engage the edge thereof, whereby the said plate is held in closed position against the blade as above described. Therefore it will be seen that during the reciprocatory movement of the blade 22 the ribs 28 upon the inner face of the plate 27 serve as means for guiding the blade in conjunction with the ribs upon the detachable plate 11 hereinbefore described. The furrows between the teeth 13 of the detachable plate 11 are bounded by flanges 32 which fit snugly against the side of the blade and prevent the entrance of lather or other material between the said plate and the blade and also prevents the entrance of lather to the shaft 17 which is journaled in the brackets 18. At the same time the blade is supported and does not bear at its opposite sides against plane surfaces. By reason of the fact that the lug 21 enters the recess 29 of the intermediate rib of the set of ribs 28 the

detachable plate 27 is guided into its proper position upon the head when the parts are assembled.

By reason of the fact that the catch 31 is resilient and springs into engagement with the edge of the notch 26 it is apparent that the plate 27 may be readily removed by pressing the catch 31 out of engagement with the edge of the notch 26 and lifting the plate 27 so that the hooks 30 disengage the notches 25. After this has been done the blade 22 may be lifted off of the plate 11 and the parts of the razor may be cleaned or a new blade substituted and the parts replaced.

Having thus described the invention, what is claimed as new is:

1. In a razor, the combination of a head, having a depressed portion surrounded on three sides by a flange, a plate disposed against said depressed portion of the head and having teeth at its forward edge and transverse ribs which extend to the ends of the teeth and also having ribs which extend between the first named ribs and immediately behind the interdental spaces, a second plate detachably connected with the head and bearing against the face of the head flange and having transverse ribs and a blade mounted for reciprocatory movement between the ribs of the plates.

2. In a razor, the combination of a head having a depressed portion surrounded on three sides by a flange, and a guard portion, and also having notches in the side portions of the flange and a notch in the back portion thereof; a plate disposed in the head and on the depressed portion thereof and having teeth and also having transverse ribs on its outer side; a plate disposed against the face of the head flange and having transverse ribs on its inner side and also having hooks removably arranged in the notches in the side portions of the head flange and a spring catch removably arranged in the notch in the back portion of the head flange; and a blade disposed and movable edgewise between the ribbed sides of the plates.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE H. TUTTLE.

Witnesses:

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C. H. DEARDOFF.