K. C. GILLETTE.

SAFETY RAZOR.

APPLICATION FILED JAN. 23, 1911.

1,158,481.

Patented Nov. 2, 1915.

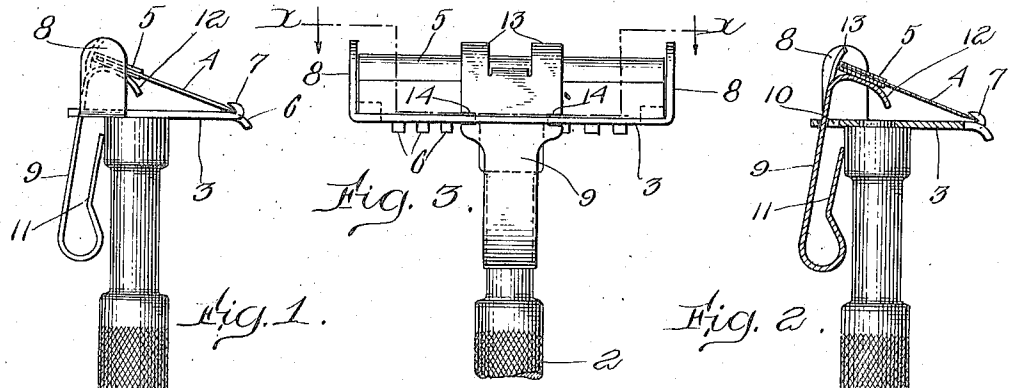


Fig. 1.

Fig. 3.

Fig. 2.

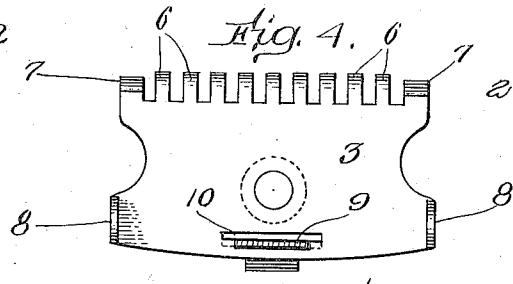


Fig. 4.

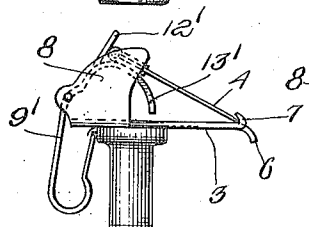


Fig. 5.

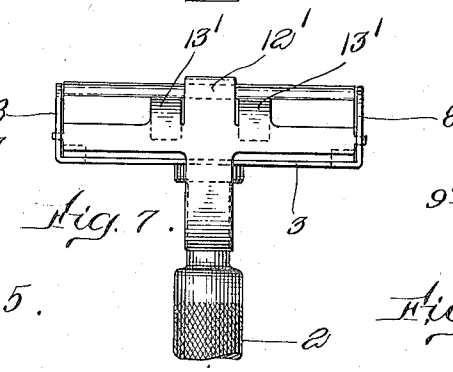


Fig. 7.

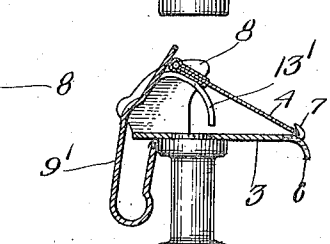


Fig. 6.

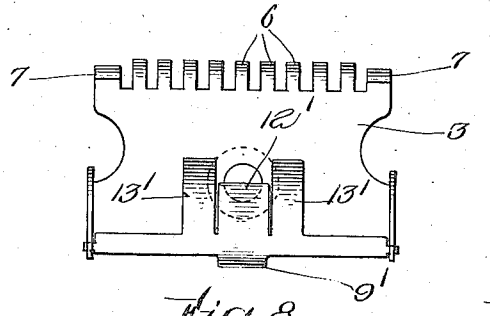


Fig. 8.

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UNITED STATES PATENT OFFICE.

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SAFETY-RAZOR.

1,158,481. Specification of Letters Patent. Patented Nov. 2, 1915.

Application filed January 23, 1911. Serial No. 604,073.

To all whom it may concern:

Be it known that I, KING C. GILLETTE, a citizen of the United States, and a resident of Brookline, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Safety-Razors, of which the following is a specification.

This invention relates to safety razors of the detachable-blade type, and resides in certain features of construction and arrangement which are hereinafter set forth and which have to do more particularly with the parts which compose the blade-holding and handle portion of the razor.

In the accompanying drawings, Figure 1 is a side elevation of a razor embodying my improvements, as preferably constructed; Fig. 2 is a similar view, showing the head of the razor in central section from front to back; Fig. 3 is a rear elevation of the head of the razor; Fig. 4 is a sectional plan view of the same, following the line *x*—*x* in Fig. 3; Figs. 5, 6 and 7 are views similar to Figs. 1, 2 and 3 respectively, illustrating a modification; and Fig. 8 is a top plan view of the parts shown in Fig. 7.

In the form of razor shown in Figs. 1 to 4 inclusive, the holder comprises a handle 2, a head 3 attached to one end of the handle, and a detachable blade 4 which preferably has but a single cutting edge and is provided along its opposite edge with a reinforcing strip 5. The front edge of the head is provided with a guard such as a line of teeth 6 of suitable form, and with stops preferably consisting of upwardly-projecting lugs 7 located at the opposite ends of the line of guard-teeth 6 for engaging the cutting edge of the blade at its ends and holding said edge in operative position, at the same time covering the corners thereof. The blade 4 is positioned in an endwise direction by means of lugs 8 extending upward from the head 3 and located at such a distance apart that the adjacent portion of the blade will drop freely between them, and said blade is supported at its rear edge and also pressed forward against the stops 7 by means of a combined support and back clamp located at or near the rear edge of the head and mounted to have a rocking movement by virtue of which it may be operated to release the blade or caused to engage the same and hold it in operative relation with the head 3. This back clamp, as illustrated in Figs. 1 to 4 inclusive, is formed from a strip of metal 9 passing through a slot 10 in the head 3 and mounted to rock therein, the lower portion of said strip being bent upon itself to provide an actuating spring 11 which bears at its upper end against the handle 2 and tends to throw the upper end of the strip forward. At its upper end said strip 9 is provided with prongs bent to form jaws which receive the rear edge of the blade 4 between them and provide a support therefor as well as a clamp for pressing the blade forward and holding its cutting edge against the stops 7. The prongs above referred to are preferably three in number, and according to the arrangement shown in Figs. 2 and 3 the middle prong 12 is bent forward and downward to support the rear edge of the blade at its center, while the other two prongs 13 extend slightly above the rear edge of the blade, in position to press downward as well as forward thereon and thus hold the blade upon the supporting prong 12.

The strip 9 is held in place and permitted to rock in the head 3 by virtue of notches 14 provided at its edges, the slot 10 having a shorter extension at its rear which receives the strip 9 between the inner ends of the notches 14 somewhat loosely. This position of the strip is maintained by means of the spring 11, which presses the strip rearward, the upper portion of said strip being held in fixed position by the engagement of the prongs 13 with the blade 4 when the latter is inserted and by the engagement of the free end of the prong 12 with the top of the head 3 when the blade is removed. These parts are so proportioned that when the blade is in position in the holder the prong 12 will be lifted slightly out of contact with the top of the head 3, so that the prongs 13 must necessarily press upon the rear edge of the blade. The slot 10 is made large enough to permit the doubled lower portion of the strip 9 to be inserted through it from the upper side of the head 3 until the free end of the spring 11 passes below the head and the notches 14 are brought opposite the rear extension of said slot, whereupon the strip will spring into the position above described.

In the modification shown in Figs. 5 to 8 inclusive, the combined support and back-clamp for the blade is of slightly different shape and comprises a transversely-extend-

ing bar 9′ which is pivoted at its ends in the upstanding lugs 8 and thus provides for the rocking movements above described. This form of the combined support and back-clamp, like the one first described, is preferably made of sheet metal and operates in the same way. It is shown in Figs. 6 and 7 as having its middle prong 12′ extending upward and forward to press upon the rear edge of the blade, its other two prongs 13′ being bent downward to support the rear edge of the blade and form stops to limit the rocking movement of the clamp when the blade is removed, but the number, arrangement and relative location of the prongs may be varied, if desired. Either of the arrangements above described, however, has the advantage that the engagement of the front edge of the blade at its ends and the rear edge of the blade at its center or thereabouts provides a three-point bearing for the blade, so that said blade is firmly held in exact position without possibility of rocking or remaining out of contact with any of the blade-engaging devices.

The lower portion of the back clamp, being located near the upper end of the handle and in the rear of the same, is in convenient position to be engaged and pressed upon by the thumb of the user for lifting the upwardly-extending clamping prong or prongs to permit the insertion or removal of a blade, and the construction above described is also advantageous for the reason that it enables the holder to be produced at slight expense, since each part of the holder except the handle may be made from a single piece of sheet metal and quickly and easily assembled with the other parts, while the handle may be made from a metal rod and readily produced by automatic machines of a well-known type. Furthermore, the parts of the head 3 are of open construction and therefore easily kept clean, while the fact that the holder has but one movable part and no adjustments makes it very durable and not likely to get out of order. The described construction also provides for inserting the blade without having to slide it under overlying parts or otherwise moving it in any manner which might cause its cutting edge to be dulled by contact with any part of the holder; all of which advantages contribute to the practical utility of the razor, as will be evident.

I claim as my invention:—

1. In a safety razor, a holder comprising a handle, a head having a guard and stops for positioning the cutting edge of the blade with respect to the same, a spring-actuated blade-clamping device constituting a separate member from the head and mounted to rock toward and away from said stops, said device being provided above the head with means for pressing forwardly against the rear edge of the blade to hold the latter against the stops and also with means arranged to extend beneath and support the rear portion of the blade when unclamped, leaving said blade free to be lifted upward from the head, and lugs for positioning the ends of the blade and providing an upwardly-unobstructed space for the reception and removal of the same.

2. In a safety razor, a holder comprising a handle, a head having a guard and stops for positioning the cutting edge of the blade with respect to the same, said head being provided at its rear portion with a transversely-extending slot having a wider and a narrower portion, and a combined blade support and back clamp of such width as to pass through the wider portion of the slot and notched to enter and take a pivotal bearing in the narrower portion of said slot.

In testimony whereof, I have hereunto subscribed my name this twentieth day of January, 1911.

KING C. GILLETTE.

Witnesses:
E. D. CHADWICK,
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