

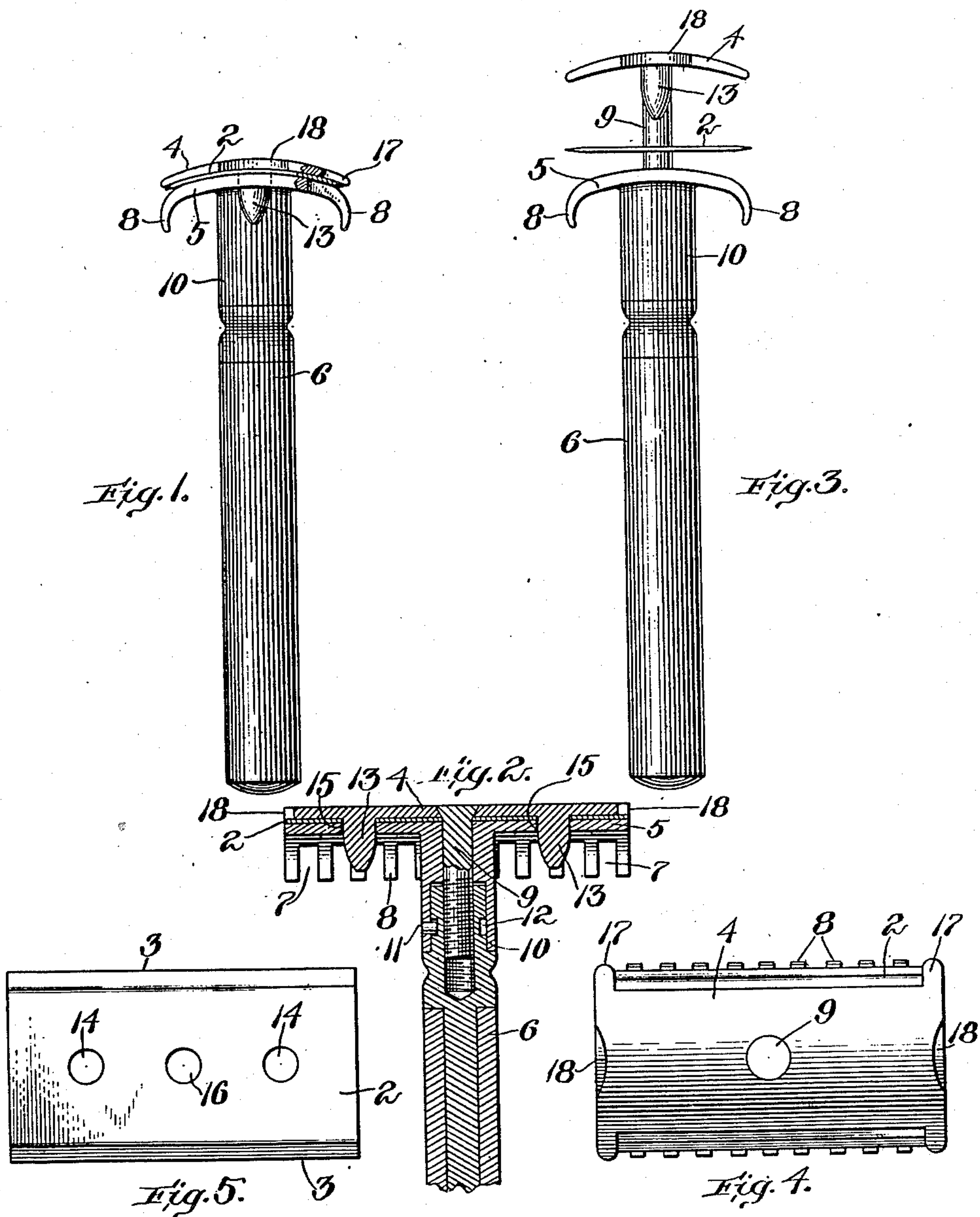
No. 775,135.

PATENTED NOV. 15, 1904.

K. C. GILLETTE.  
RAZOR.

APPLICATION FILED MAY 24, 1904.

NO MODEL.



Witnesses:

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# UNITED STATES PATENT OFFICE.

KING CAMP GILLETTE, OF LONDON, ENGLAND, ASSIGNOR, BY MESNE ASSIGNMENTS, TO FEDERAL TRUST COMPANY, OF BOSTON, MASSACHUSETTS.

## RAZOR.

SPECIFICATION forming part of Letters Patent No. 775,135, dated November 15, 1904.

Original application filed December 3, 1901, Serial No. 84,552. Divided and this application filed May 24, 1904. Serial No. 209,435. (No model.)

*To all whom it may concern:*

Be it known that I, KING CAMP GILLETTE, a citizen of the United States, and a resident of London, England, have invented new and useful Improvements in Razors, of which the following is a specification.

My invention relates to safety-razors of that type in which the blade is provided with perforations or equivalent openings and is held between a backing and a guard-piece, with respect to which it is positioned by means of pins or the like passing through the perforations in the blade, such a razor being described and claimed in my application for United States Letters Patent, Serial No. 84,552, filed December 3, 1901, of which application this present application is a division.

The razor specifically shown and described in my said prior application has a thin flexible blade provided with two opposite cutting edges, and the two sides of the holder are made alike, the handle being symmetrically disposed midway between them, so that either edge of the blade can be used without altering its position in the holder; and my present improvements are herein shown and described as embodied in a razor having the same general characteristics—that is to say, a double-edged flexible blade, a double guard, and a symmetrically-disposed handle; but it is to be understood that this particular construction and arrangement of these parts is not essential to the main features of my present invention.

Figure 1 is an end elevation, partly in section, of the complete razor, showing the parts in position ready for use. Fig. 2 is a central longitudinal section through the same. Fig. 3 is a view similar to Fig. 1, but showing the parts of the razor partly separated. Fig. 4 is a plan view of the outer face of the head of the razor, and Fig. 5 is a plan view of the razor-blade.

Referring to the drawings, 2 indicates the blade of the razor, which is usually made of sheet-steel having a uniform thickness of about six one-thousandths of an inch and pro-

vided with two opposite cutting edges 3. The holder comprises a backing 4, a guard-piece 5, a handle 6, carried by the guard, and means for moving the guard and backing toward or from each other. In the present instance the backing 4 is of the same length as but slightly narrower than the blade 2, being thus adapted to support the blade near its cutting edges and impart the necessary rigidity thereto when the blade is secured in place. The longitudinal edges of the guard 5 are of the same length as the cutting edges of the blade and are provided with notches 7, forming guard-teeth 8, so proportioned and arranged as to project beyond said cutting edges in the usual manner, and thus protect the skin of the user from being cut during the operation of shaving.

For securing the backing and the guard together I provide a pin or bolt 9, carried by the backing and having its free end threaded to engage the internally-threaded hollow end of the handle 6, which is preferably located within a sleeve or socket 10, secured to or formed integral with the guard, and is held to turn in said sleeve by means of a pin 11, passing through the wall of the sleeve and entering an annular groove 12, cut in the handle.

When the parts are assembled, the blade 2 is located between the guard and the backing, and in order to position the blade the backing is provided with pins or lugs 13, adapted to pass snugly through openings or perforations 14, formed at the proper points in the blade. The guard is preferably positioned by means of the same pins, which are made long enough to pass through perforations 15, formed in the guard, and registering with the perforations 14 in the blade when the parts are in proper relation.

When the blade and guard are double-edged, as shown, the sleeve 10 is located at the center of the guard and extends at right angles thereto, and the blade is centrally perforated, as at 16, to receive the bolt 9; the pins 13 and the registering perforations 14 and 15 in the blade and guard being also located midway



between the edges of the holder and at equal distances from the central bolt 9, so that the blade and the guard may be turned end for end with respect to the backing or with respect to each other without affecting their operative relation when assembled. Thus no particular care is required in arranging the parts when assembling them, and the symmetrical arrangement of the handle permits either edge of the razor to be used with equal facility.

In the construction illustrated the adjacent surfaces of the guard and backing conform in area and contour, or substantially so, thus providing rigid supporting-surfaces for the blade throughout practically the entire area of the latter when clamped between said parts, and in order to utilize the flexibility and elasticity of the thin blade for the purpose of obtaining an adjustment of its cutting edges toward and from the edges of the guard these conforming surfaces of the guard and backing are somewhat curved transversely, so that the blade is bent transversely and its cutting edges are caused to approach closer and closer to the notched edges of the guard as the guard and backing are drawn together or permitted to spring away from said notched edges as the guard and backing are separated. In Fig. 4 the backing 4 is shown as provided at each corner with a lateral projection 17, adapted to extend slightly beyond the edge of the corresponding corner of the blade and lie close against the same, thus covering the rear side thereof. This feature, as well as an arrangement similar to that above described for adjusting the cutting edges of the blade, is described and claimed in my prior application, Serial No. 84,552, above referred to, and is included herein in order to illustrate the preferred embodiment of my present improvements.

In order that the blade may be readily grasped by its ends when it is desired to remove it from the holder, I prefer to construct these parts in such manner that the ends of the blade at and near its longitudinal center will project slightly beyond the ends of the backing at the corresponding points, which may be done by forming a suitable recess 18 at each end of the backing, as shown in Fig. 4.

It is one of the features of my present improvements that after the guard and handle have been detached from the backing the blade may still be held in place on the backing by means of the positioning-pins and may be grasped by its ends and readily applied or removed without having to be slid laterally between the sides of a supporting-framework, as has been the practice heretofore.

I claim as my invention—

1. In a razor, the combination with a perforated blade, of a holder comprising a handle, a backing provided with positioning-pins

arranged to pass through the perforations in the blade, a guard, and means for clamping said blade between the backing and the guard.

2. In a razor, the combination with a perforated flexible blade, of a holder comprising a handle, a rigid backing forming a support for said blade and provided with positioning-pins arranged to pass through the perforations therein, a guard, and means for clamping said blade between the backing and the guard.

3. In a razor, the combination with a perforated blade, of a holder therefor comprising a backing having positioning-pins secured thereto and adapted to pass through the perforations in the blade, a screw-threaded bolt secured to said backing and passing through a perforation in the blade, a guard arranged to engage the opposite side of the blade and having perforations adapted to receive said pins and bolt, and a handle having one end internally screw-threaded to receive said bolt.

4. In a razor, the combination of a transversely-curved rigid backing provided with inwardly-pointing positioning-pins and a central screw-threaded bolt, a guard curved transversely to correspond with said backing and having its opposite longitudinal edges notched, a flexible blade having two opposite cutting edges and provided with perforations arranged to receive the bolt and positioning-pins, and a handle having its inner end internally screw-threaded to receive said bolt.

5. In a razor, the combination with a perforated blade of a holder comprising a guard, a handle, a backing, and clamping means passing through the blade, said blade and backing being so formed that the ends of the former project beyond the ends of the latter.

6. In a razor, the combination with a perforated blade having two opposite cutting edges, of a holder comprising a double guard having perforations corresponding to those in the blade, a backing provided with positioning-pins passing through the blade and guard, a handle, and means for detachably clamping the blade between said backing and guard.

7. In a razor, a holder comprising a backing provided with positioning-pins and with a central screw-threaded bolt, a double guard provided with perforations adapted to receive said positioning-pins and bolt, and a handle provided with an internally-screw-threaded nut adapted to receive said bolt.

8. In a razor, a holder comprising a transversely-curved, rigid backing provided with positioning-pins and with a screw-threaded bolt, a guard curved transversely to correspond with said backing and perforated to receive said positioning-pins and bolt, and a handle provided with an internally-screw-threaded nut adapted to receive said bolt.

9. A safety-razor comprising a back plate,



a clamping-plate, a handle projecting from said plates at substantially a right angle, a sleeve connected to said clamping-plate and mounted on the handle, and means for adjusting said plates toward and from each other.

5 10. A safety-razor comprising a back plate having lugs, a blade, a guard, both the blade and guard having openings for said lugs, and

means for securing the plate, blade and guard together.

In testimony whereof I have hereunto subscribed my name this 10th day of May, 1904.

KING CAMP GILLETTE.

Witnesses:

H. D. JAMESON,  
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