

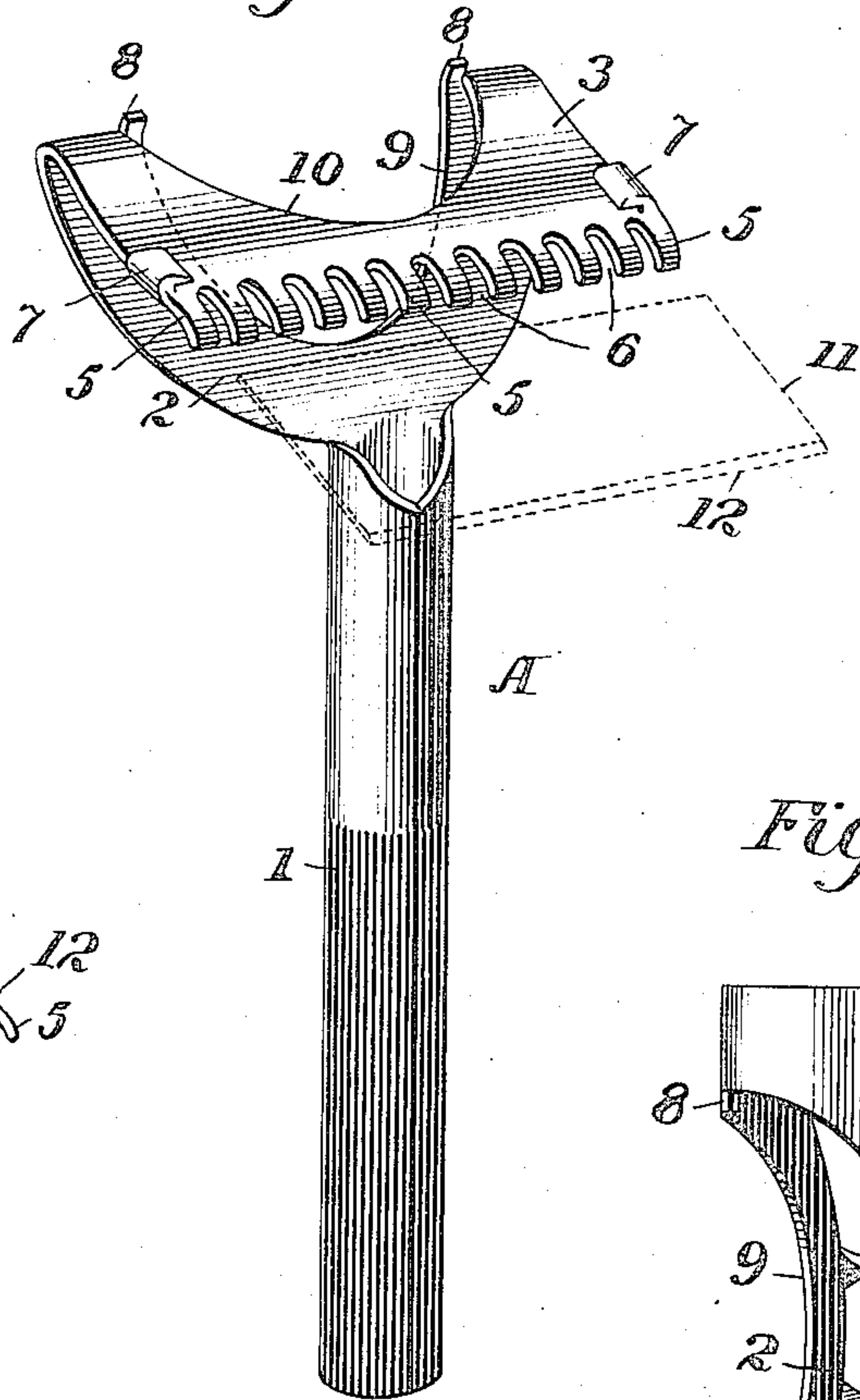
No. 855,608.

PATENTED JUNE 4, 1907.

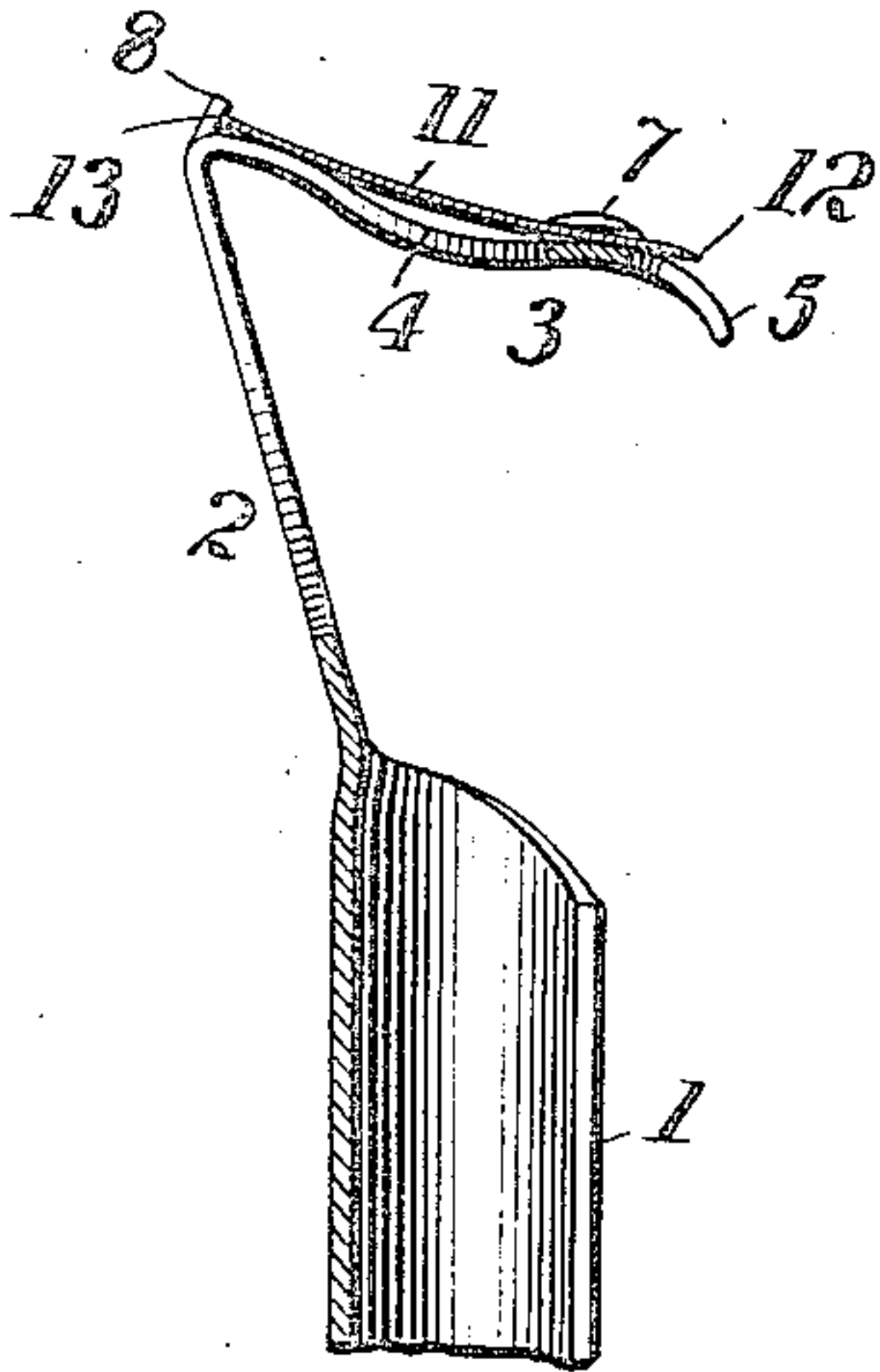
C. BALLREICH.  
SAFETY RAZOR.

APPLICATION FILED MAR. 31, 1906.

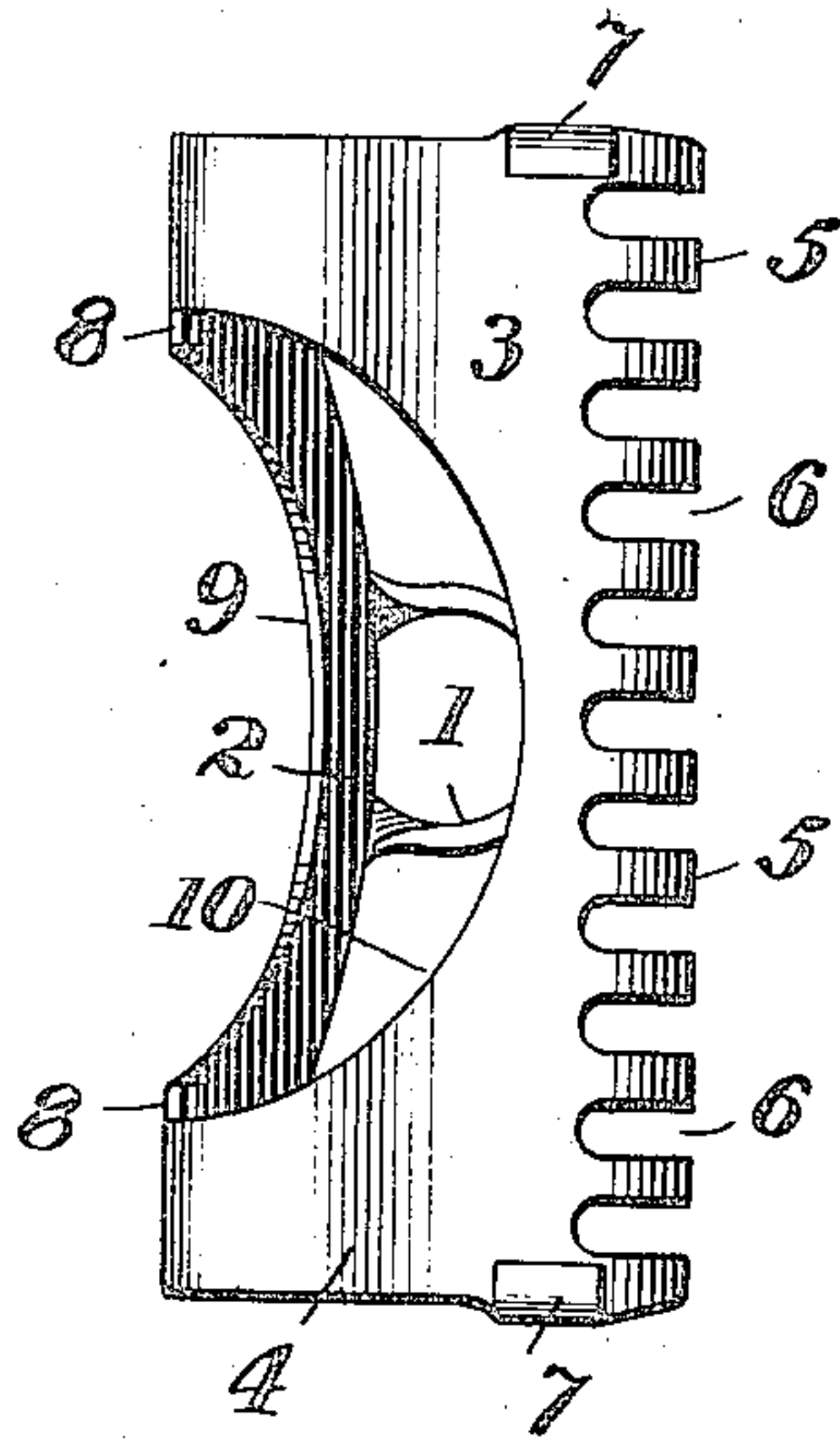
*Fig. 1.*



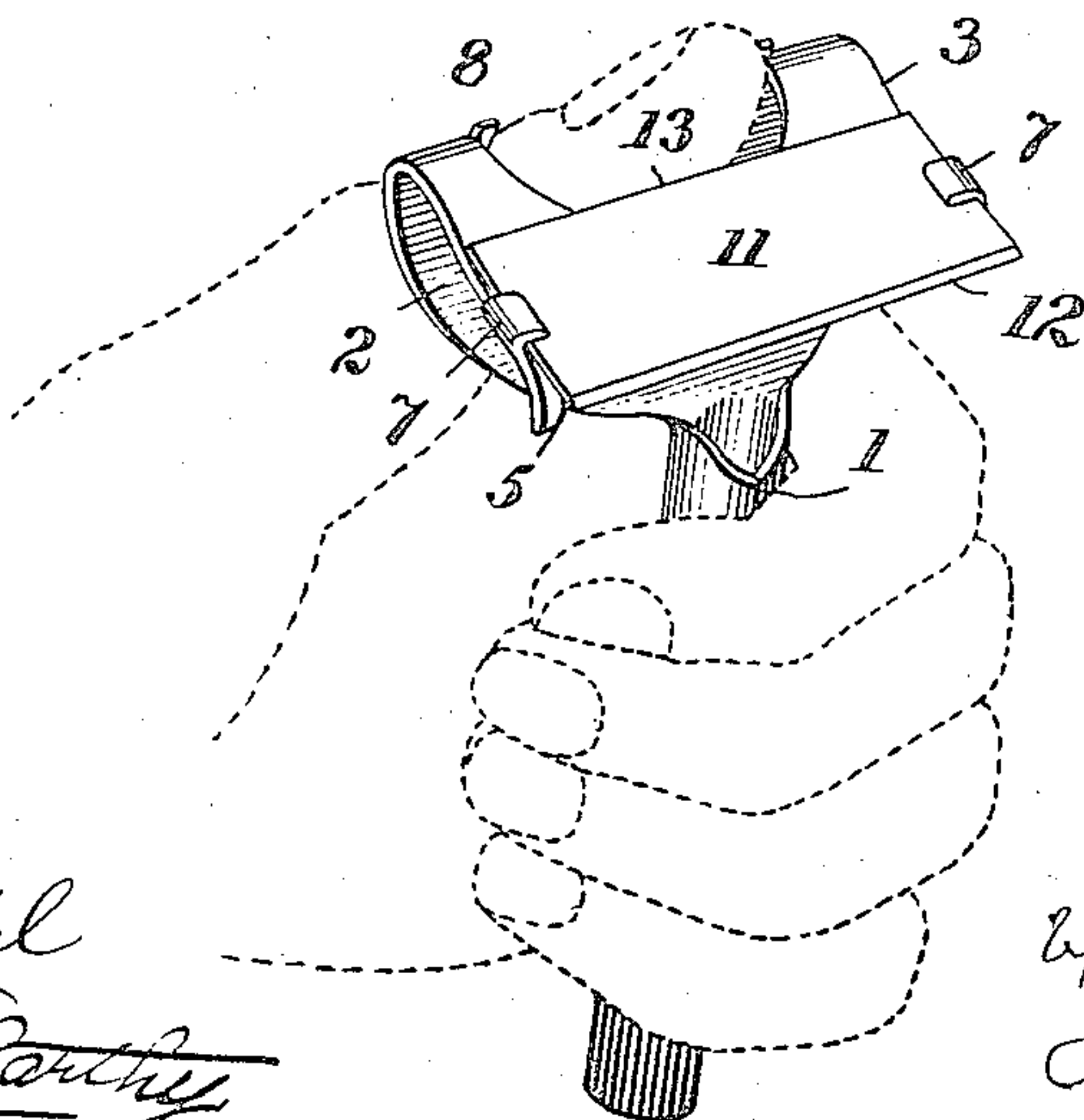
*Fig. 3.*



*Fig. 2.*



*Fig. 4.*



Witnesses  
*J. J. Stink*  
*J. J. McCarthy*

Inventor  
*Charles Ballreich*  
by *John Freeman & Watson*  
Attorneys



# UNITED STATES PATENT OFFICE.

CHARLES BALLREICH, OF PUEBLO, COLORADO.

## SAFETY-RAZOR.

No. 855,608.

Specification of Letters Patent.

Patented June 4, 1907.

Application filed March 31, 1906. Serial No. 309,102.

*To all whom it may concern:*

Be it known that I, CHARLES BALLREICH, a citizen of the United States, residing at Pueblo, Pueblo county, and State of Colorado, have invented certain new and useful Improvements in Safety-Razors, of which the following is a specification.

My invention relates to safety razors, and has for its object to provide an exceedingly simple, cheap, and effective safety razor, and to these ends it consists in the various features of construction and arrangement of parts adapted to co-operate in the manner substantially as hereinafter pointed out.

Referring to the accompanying drawings, wherein I have illustrated the preferred embodiment of my invention,—Figure 1 is a perspective view of the handle, showing the blade in dotted lines in position to be inserted therein; Fig. 2 is a plan view of the handle showing more particularly the supporting and clamping plate portion thereof; Fig. 3 is a vertical longitudinal section; Fig. 4 is a perspective showing a way of detaching the blade from the handle.

One of the objects of my invention is to make a complete safety razor which shall comprise only two parts, that is a holder for the blade and a separable razor blade, and these shall be adapted and co-related to each other so that the blade may be easily placed and held in operative position on the holder and be detached therefrom, and when assembled the parts will be in the best position for practical use. Furthermore, I provide novel and exceedingly simple means for retaining the two parts of the razor in operative position.

The holder A, which is preferably made of a single piece of material, may be said to comprise a handle portion 1, which is shown as of a tubular form and having the lower portion roughened or milled for convenience of grasping, and a yoke or plate portion extending therefrom. This yoke and plate portion may, broadly speaking, be said to be in the form of a plate having a central opening and the plate bent or partially doubled near its center, thereby forming what may be termed the yoke portion 2 and the plate portion 3. The plate portion preferably extends at an angle something less than ninety degrees with relation to the yoke portion, as best indicated in Fig. 3. The plate portion, which may be conveniently defined as a supporting and clamping plate

for the blade, is formed with a concaved face portion 4, and its free edge is preferably formed with a comb guard comprising a series of teeth 5, with intervening notches 6, and these are preferably curved or bent toward the handle portion, as best indicated in Fig. 3. What may be properly termed the ends of this plate portion 3, are provided with clamping lugs 7, 7, forming recesses between their faces and the face of the plate portion to receive the blade. These lugs are preferably arranged adjacent the front edge of the plate portion near the bases of the teeth 5. Also formed on the supporting and clamping plate are guide stops 8, 8, which project slightly beyond the front plane of the plate and serve to determine the relative position of the cutting edge of the blade and comb teeth. Both the yoke and clamping plate portions are recessed or cut away near their centers, as indicated at 9 and 10, for a purpose hereinafter described.

The blade 11 is rectangular in shape, of relatively thin material having a cutting edge 12 on what may be termed its front side, and it is more or less flexible so that when in position in the holder it will present a slightly curved cross section as shown in Fig. 3, and by the tension thus exerted holds itself in place.

Such being the preferred construction of the two parts constituting my complete razor, it will be seen that they are not only very simple and cheap of construction, but that they can be readily taken apart and assembled, and when assembled are maintained in proper relations to each other. Thus, when the parts are to be separated, all it is necessary to do is to grasp the handle in the hand and with the thumb extending over the rear edge of the blade, it can be forced forward as indicated in Fig. 4, where it is readily grasped with the fingers of the other hand and the separation is complete. In this movement the blade may be said to be removed sidewise from the holder with its edge in front and by pressure upon its rear edge. When the parts are to be assembled, the blade 11 may be grasped between the thumb and finger of one hand and its rear edge 13 is placed over the comb guard and between the lugs 7 and plate 3 and pushed in position a certain degree when the rear edge 13 can be grasped by the thumb and finger extending in the recesses 9, 10, and the blade drawn into position until its rear edge abuts



against the guide stops 8. In doing this, owing to the concaved face of the rigid plate, the blade, being thin and flexible, will conform to the plate and also be concaved, as shown in Fig. 3. The two will be held together in position by the spring or tension exerted by the blade. As it is clamped between the lug 7 and plate 3, as above indicated, the stops 8 will insure the blade being maintained in the proper relation to the holder. In thus assembling the parts, the blade may be said to be movable sidewise with its cutting edge to the rear during such movement, and it will be seen that by the aid of the cut-away portions 9 and 10 in the yoke and supporting and clamping plate, the blade cannot only be readily displaced from its proper position in removing the blade but can be drawn into its proper position after being once started, or placed between the lugs 7 and plate 3. This can be done without cutting or injuring the hands of the operator.

It will thus be seen that my device comprises a holder in one piece, embodying the handle and clamping plate with a concaved front adapted to receive a thin, flexible blade and with clamping lugs and guide stops for insuring its retaining the proper position; the blade being held in position by the tension it exerts through the medium of the curved or concaved face of the clamping plate and the lugs.

What I claim is—

1. In a safety razor, the combination with a flexible blade, of a holder comprising a handle portion and a supporting plate, said plate having a concaved face whereby two bearing surfaces are provided for the blade in its unflexed state, and lugs on said plate between which and the face of the plate said blade is adapted to be clamped, the bearing faces of said lugs being arranged between the said two bearing surfaces of the plate and closer to the face of said plate than the outer surface of said blade in its unflexed state.

2. In a safety razor, the combination with a flexible blade, of a holder comprising a handle portion and a supporting plate, said plate having a concaved face whereby two bearing surfaces are provided for the blade in its unflexed state, lugs on said plate between which and the face of the plate said blade is adapted to be clamped, the bearing faces of said lugs being arranged between the said two bearing

surfaces of the plate and closer to the surface of said plate than the outer surface of said blade in its unflexed state, and guide stops on the rear of said plate.

3. In a safety razor, the combination with a flexible blade, of a holder comprising a handle portion and a supporting plate, said plate having guide stops on its rear end, a portion of the plate cut away between the guide stops and said plate having a concaved face whereby two bearing surfaces are provided for the blade in its unflexed state, and lugs on said plate between which and the face of the plate said blade is adapted to be clamped, the bearing faces of said lugs being arranged between the said two bearing surfaces of the plate and closer to the face of said plate than the outer surface of said blade in its unflexed state.

4. In a safety razor, the combination with a flexible blade, of a supporting plate therefor having a face concaved relative to said blade whereby two bearing surfaces are provided for said blade in its unflexed state, and lugs on said plate having bearing faces between said bearing surfaces and closer to the plate than the outer surface of said blade in its unflexed state.

5. In a safety razor, a holder having a handle portion and a yoke or plate portion, said plate portion having a concaved face providing bearing surfaces, a flexible blade, and lugs arranged at the ends of said plate portion between the bearing surfaces and clamping said blade against the concaved face.

6. A safety razor comprising a holder having a handle portion and a supporting and clamping plate concaved on its supporting face providing bearing surfaces and having clamping lugs at its ends between the bearing surfaces, and guide stops on its rear, and its rear portion being cut away between the guide stops, and a flexible blade, whereby the parts are arranged to flex and hold the blade in place on the concaved face of the plate and to permit the blade being pushed from the rear and removed with its cutting edge to the front.

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

CHARLES BALLREICH.

Witnesses:

HARVEY M. ABBOTT,  
C. H. CAMBRON.