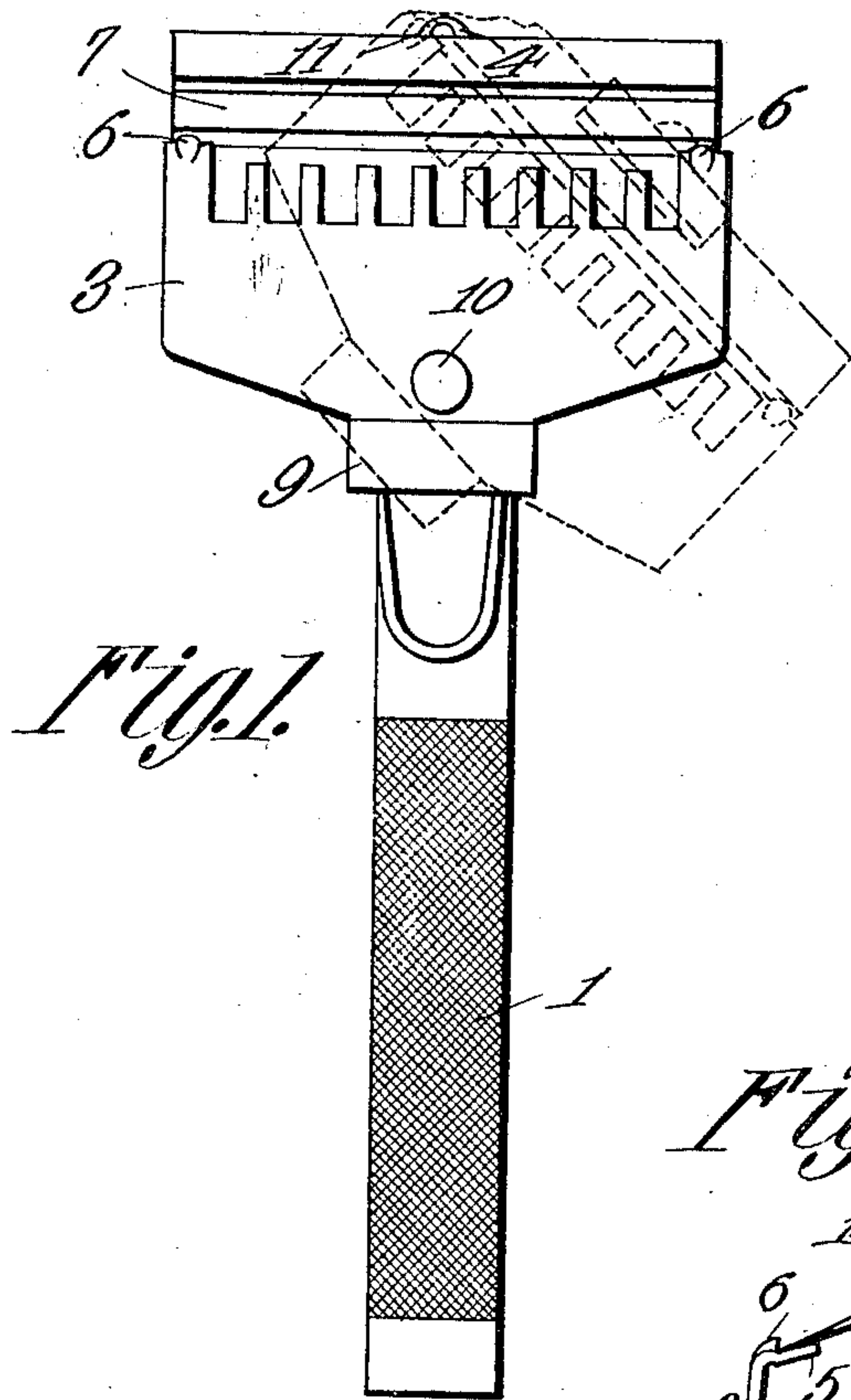


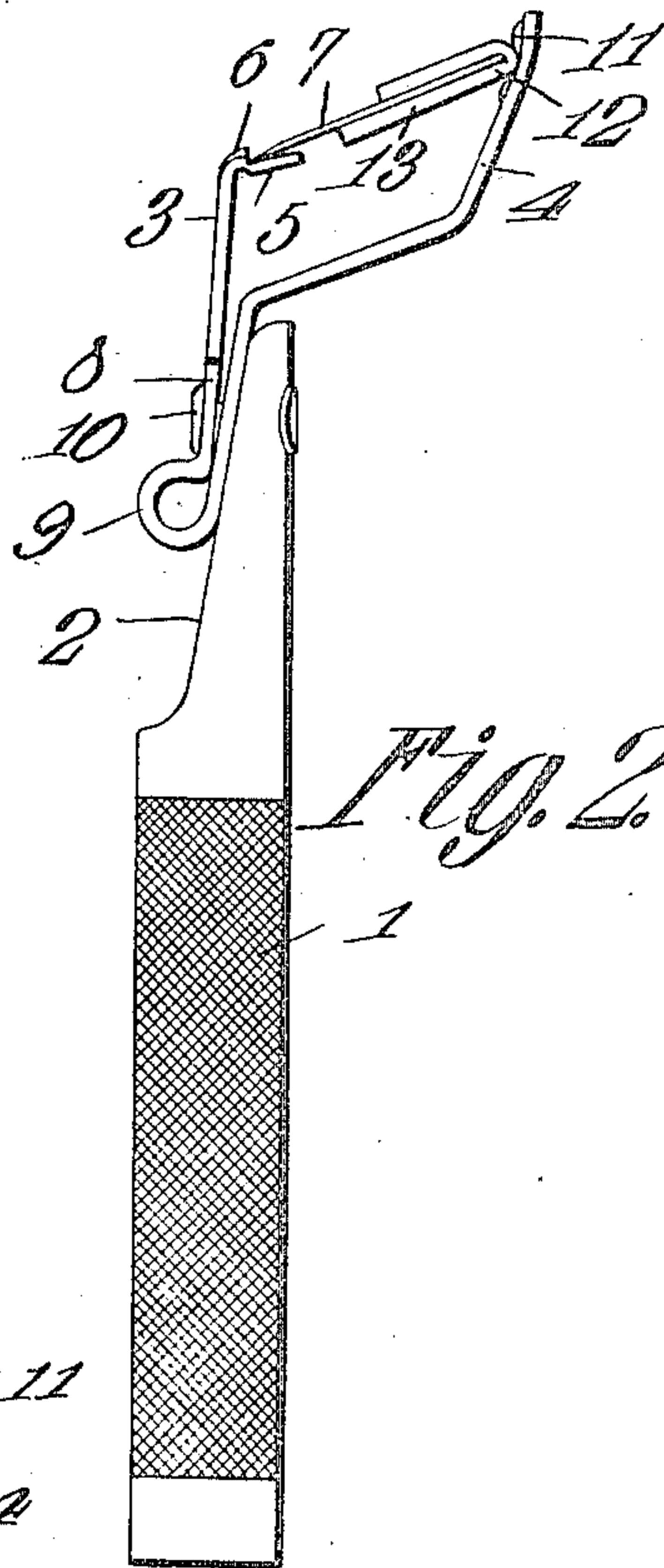
G. & A. H. FRANK.  
 RAZOR.  
 APPLICATION FILED SEPT. 30, 1908.

952,034.

Patented Mar. 15, 1910.

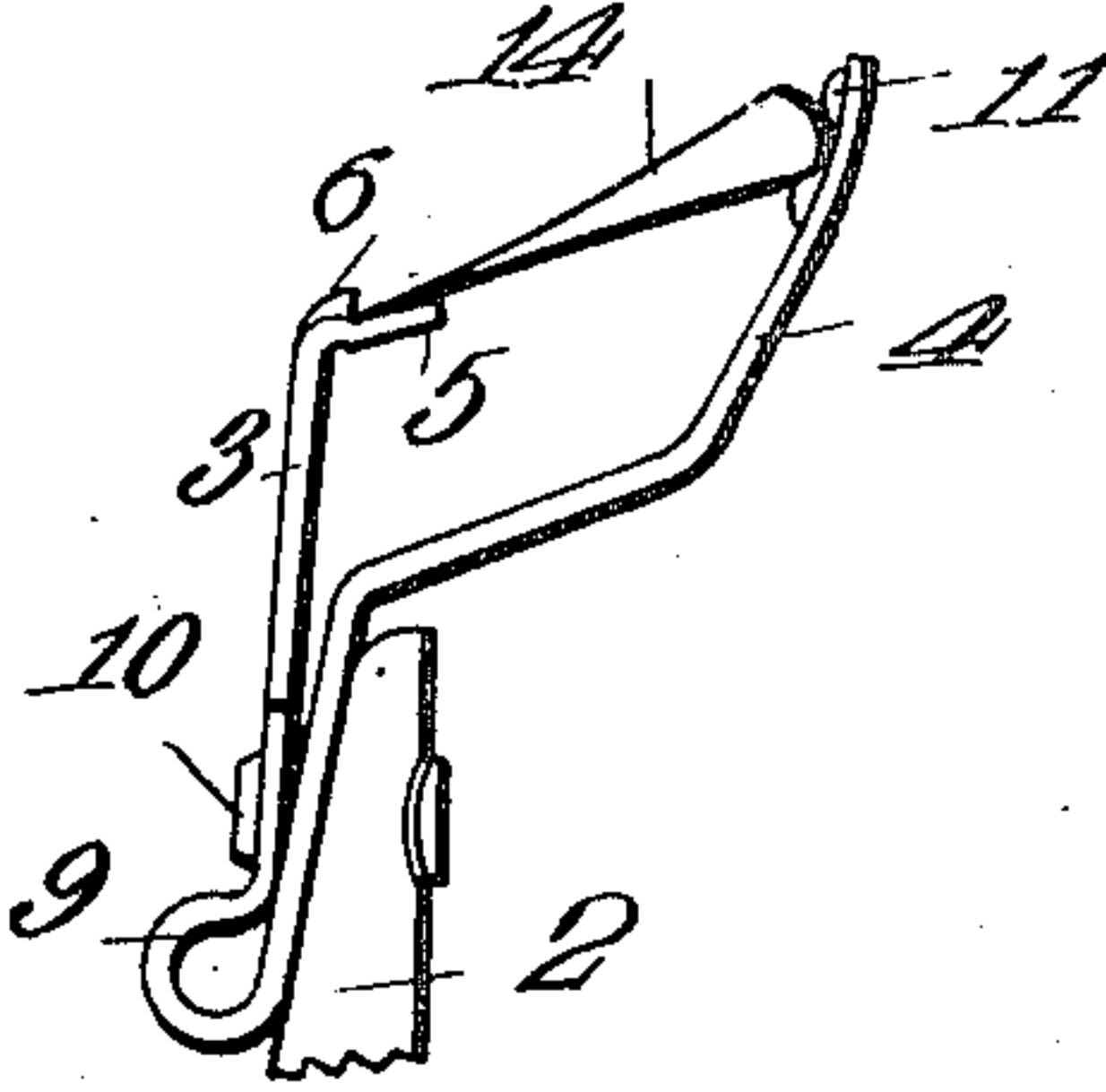


*Fig. 1.*

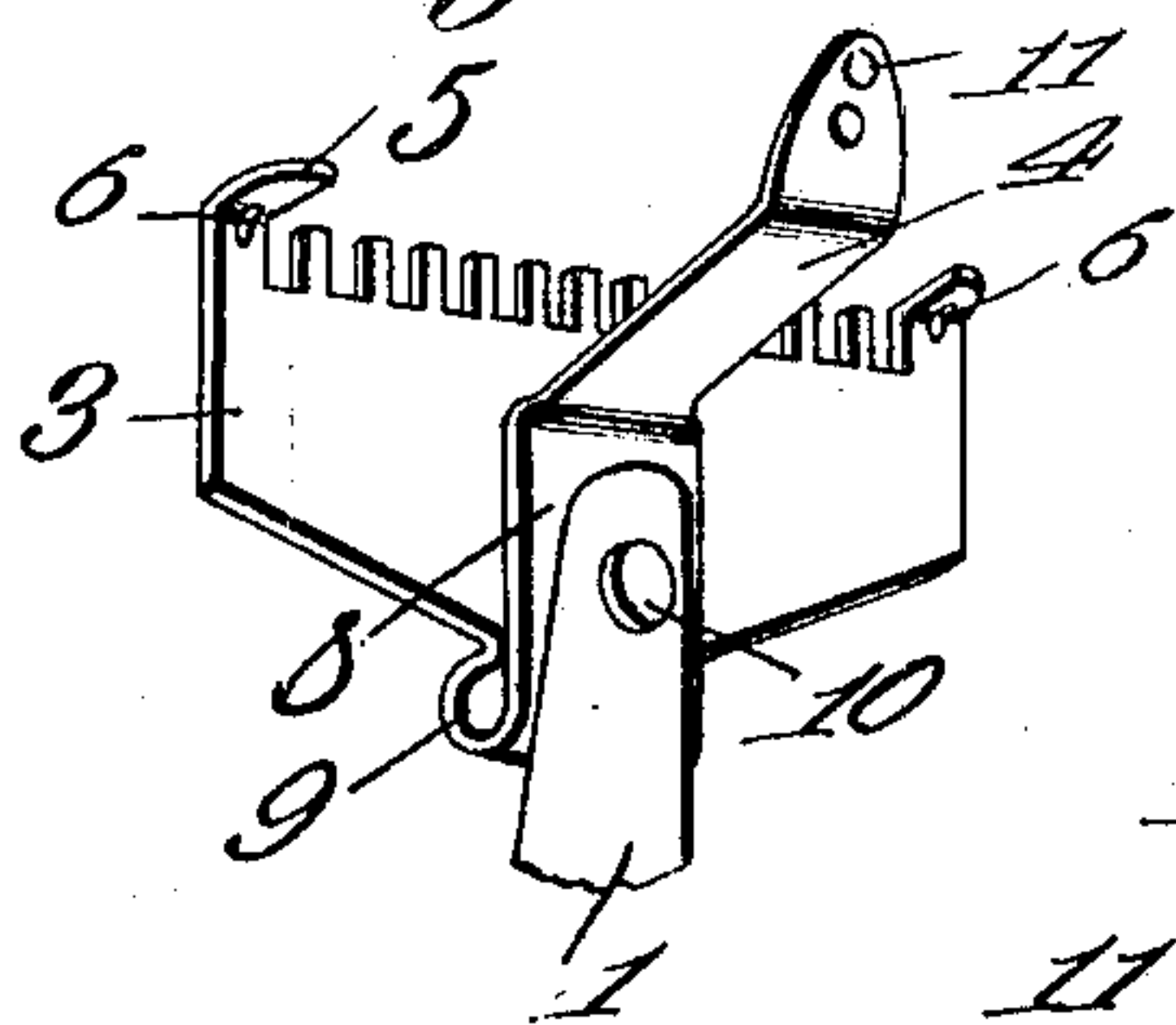


*Fig. 2.*

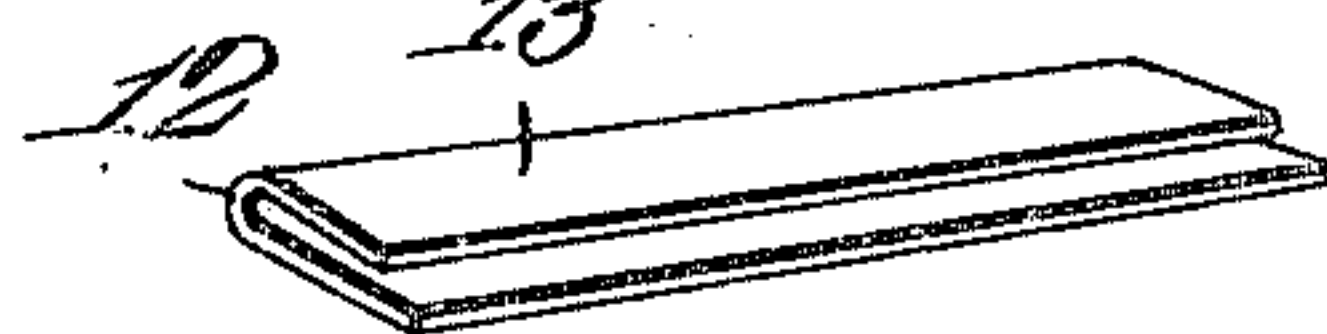
*Fig. 6.*



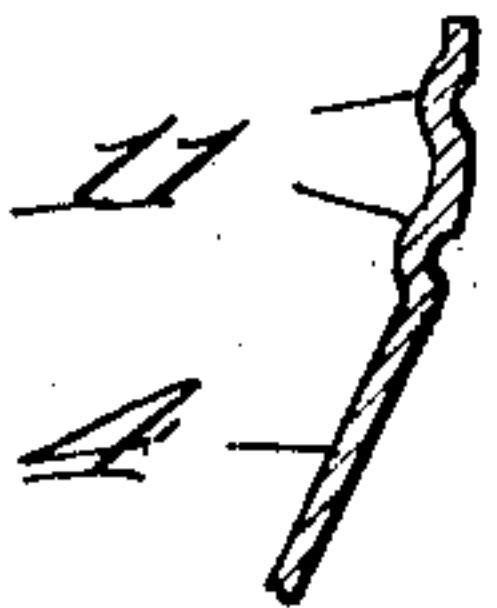
*Fig. 3.*



*Fig. 4.*



*Fig. 5. George Frank  
 Albert H. Frank  
 Inventors.*



Witnesses:

*E. M. ...  
 R. M. Elliott*

By

*C. M. ...  
 Attorneys.*



# UNITED STATES PATENT OFFICE.

GEORGE FRANK AND ALBERT H. FRANK, OF FREMONT, OHIO.

## RAZOR.

952,034.

Specification of Letters Patent. Patented Mar. 15, 1910.

Application filed September 30, 1908. Serial No. 455,393.

*To all whom it may concern:*

Be it known that we, GEORGE FRANK and ALBERT H. FRANK, citizens of the United States, residing at Fremont, in the county of Sandusky and State of Ohio, have invented a new and useful Razor, of which the following is a specification.

This invention relates to safety razors.

The object of the invention is to provide a razor of this character having a novel form of blade holder, the same being so constructed as, when pivotally connected with a handle, to operate as a brake or holding means for retaining the holder at any desired angle relatively to the longitudinal axis of the handle, whereby to permit of the razor edge being held at any desired angle to the face of the user, to effect either a draw or a shear cut, as may be preferred.

In the accompanying drawings forming a part of this specification and in which like characters of reference indicate corresponding parts:—Figure 1 is a view in front elevation of a safety razor constructed in accordance with the present invention, the position of the holder for securing a draw cut being indicated by full lines, and for securing a shear cut by dotted lines. Fig. 2 is a view in side elevation. Fig. 3 is a perspective view of the blade holder taken from the rear. Fig. 4 is a perspective view of the razor blade carrier used in connection with the invention. Fig. 5 is a fragmentary detail view in section of a portion of the blade clamp. Fig. 6 is a view in side elevation of the blade holder, showing an ordinary form of razor blade positioned therein.

The handle 1 of the razor is constructed from a length of metallic tubing, of any preferred character, the upper end of which is beveled or cut away at 2, for a purpose that will presently appear.

The blade holder is constructed from a single piece of resilient metal bent upon itself and formed into a toothed guard 3 and a blade clamp 4. The guard has its two terminal teeth longer and wider than the remaining ones, and bent at approximately right angles to the rear face of the guard to provide blade rests 5, each rest at its bend being provided with an up struck lug or teat 6 against which the extreme corners cutting edge of the blade 7 will bear, and will thus be held firmly in operative position.

As shown in Fig. 3, the blade clamp 4 is

a tongue-like extension and forms in conjunction with the guard 3 a neck 8 to which it is connected by an approximately circular bend 9. The members of the neck, when unrestrained, will flex away from each other, and this feature is utilized when the blade holder and handle are assembled to secure a braking action between the blade clamp and the inclined wall 2 of the handle that will operate to retain the holder at any angle at which it may be adjusted relative to the handle, and also to compensate for any wear of the heads of the rivet or bolt 10 that holds the parts assembled. The rivet or bolt 10 is double headed, and by reason of the outward flexing of the neck members above referred to, the latter will firmly hold the heads against one face of the handle and the outer face of the guard. By this arrangement it will be seen that as the heads wear, the outward spring of the neck will serve to take up any lost motion, so that a sufficient frictional contact between the inclined wall 2 of the handle and the neck 8 will always be maintained to hold the blade carrier in proper position to secure the desired cut, whether it be a draw cut, as will result when the holder is in a position shown by the full lines in Fig. 1, or in a shear cut, as when the holder is in a position shown by the dotted lines, in the said figure.

The upper outer face of the blade clamp 4 is provided with two spaced up struck teats or lugs 11, between which is adapted to fit the rear wall 12 of the blade carrier 13, which latter is constructed from a piece of sheet metal folded upon itself, and between the two members of which the blade 7 is held when it is combined with the holder. This carrier will operate to brace the blade and prevent it from flexing from the pressure imparted to it by the blade clamp.

The object of providing the inclined wall 2 is to throw the cutting edge of the blade back a sufficient distance from the front of the handle as to prevent any interference of the latter in the use of the razor. A further object of providing the handle 1 with the beveled end 2 is that when the axis of the handle is swung at an acute angle to the cutting edge of the blade 14, a thicker part of the said handle 1 is turned about the axis of the bolt 10 over the inner portions of the guard 3 and the clamp 4 which has a tendency to force the guard and clamp toward



each other and more securely hold the blade in position. This will prevent the blade from having any longitudinal movement in the holder when in use. Also the additional friction established between the holder and the handle will maintain the said parts in their proper desired relation while the razor is being used.

It will be seen that the blade clamp performs a double function, namely the one its name implies and the further one of retaining the holder at any desired angle of adjustment.

As will be seen by reference to Fig. 6, the blade holder is adapted for use in connection with an ordinary razor blade 14, such as is employed with the "Star" safety razor.

The feature of pivoting the blade carrier to the handle is one of importance, inasmuch as it will enable the razor to meet all requirements that might arise from its use,

and in fact permits of the razor being used as a safety razor, or as one of the old style.

We claim:—

A safety-razor comprising a blade holder formed from a single piece of resilient metal bent back upon itself to provide an opposed guard and blade clamp, a handle having a beveled end, and a bolt passing transversely through the beveled end of the handle and the opposed intermediate portion of the blade holder and serving as a pivotal connection between the handle and the blade holder.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

GEORGE FRANK.

ALBERT H. FRANK.

Witnesses:

S. J. FLYNN,

M. W. FUCHS.