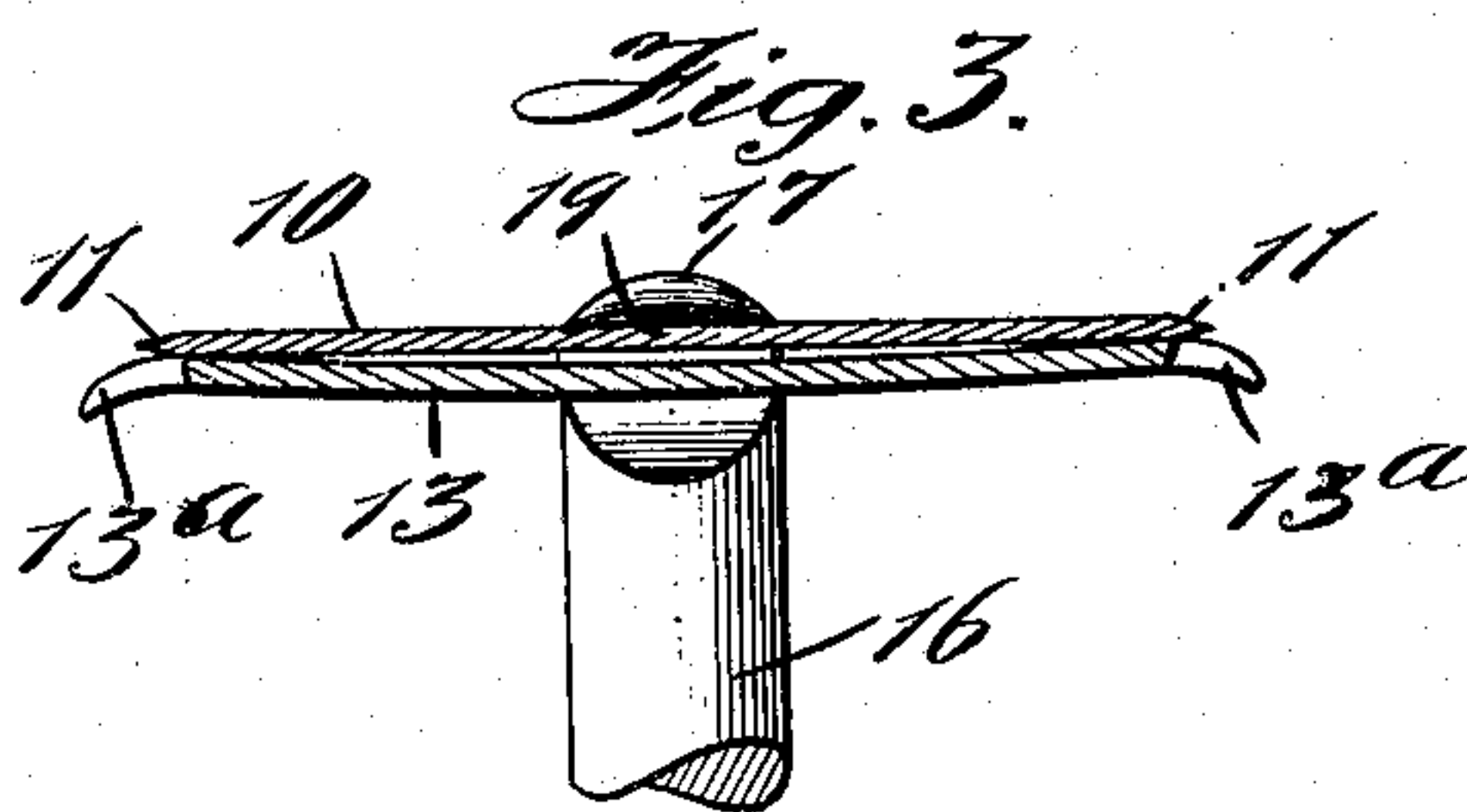
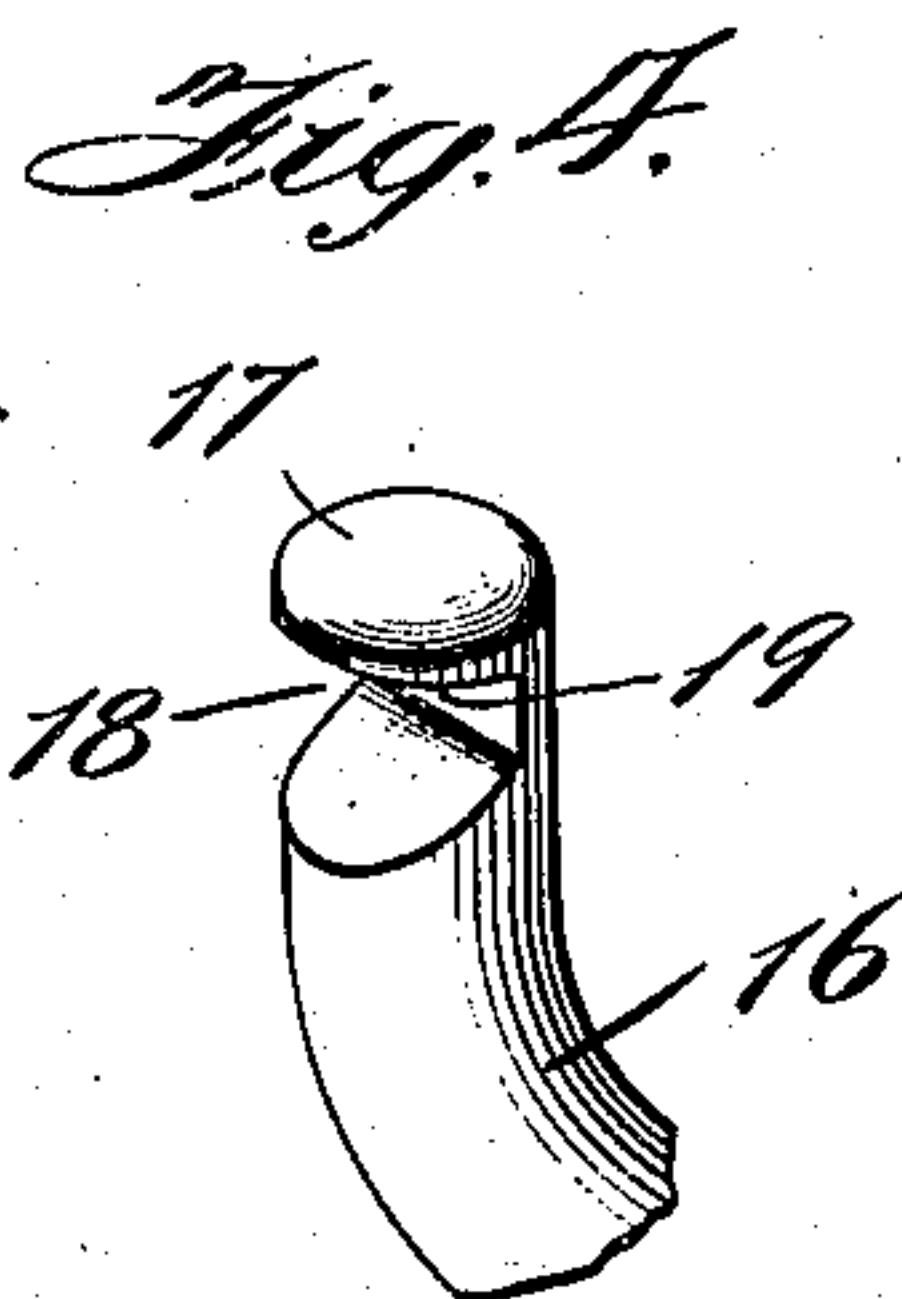
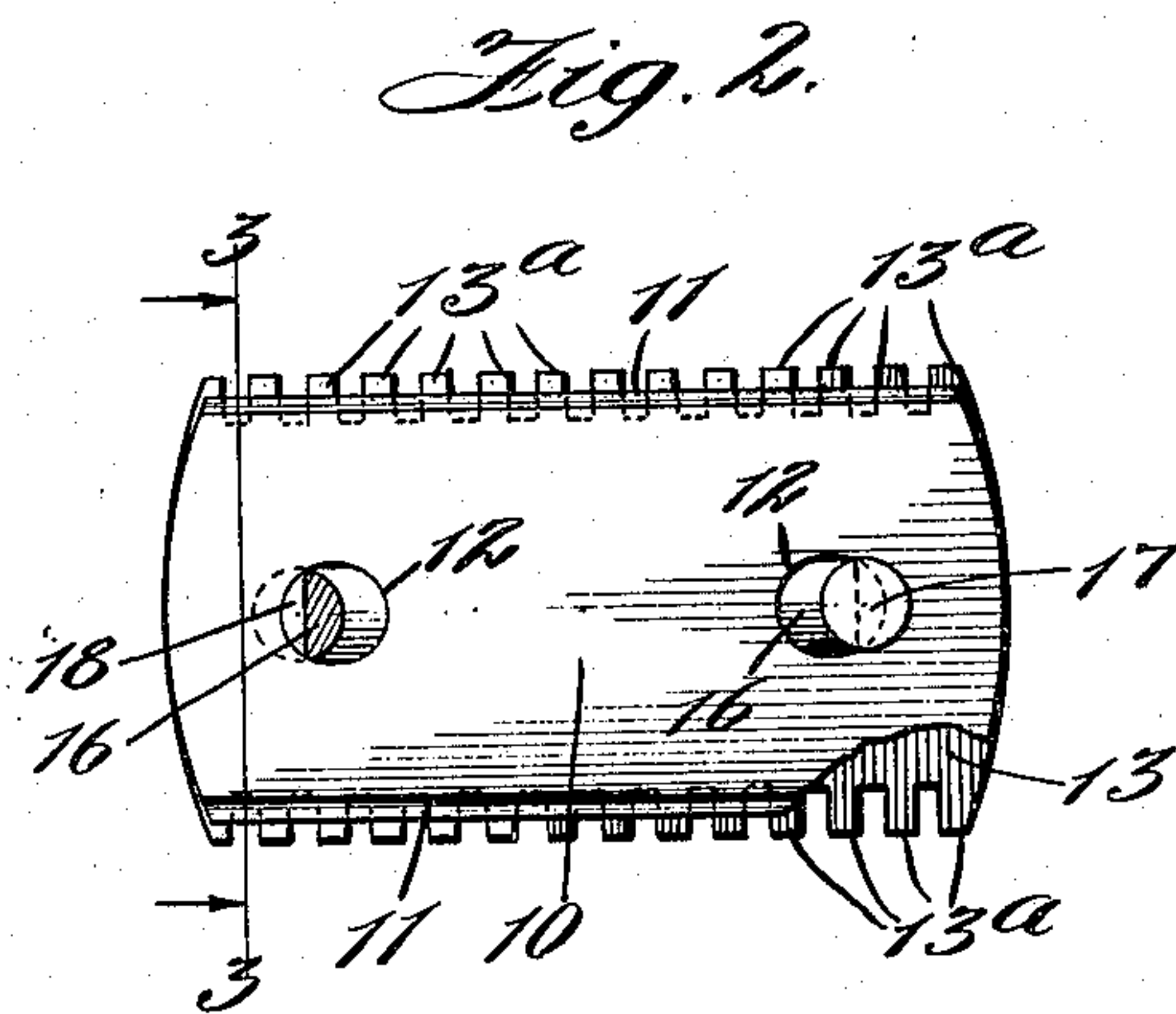
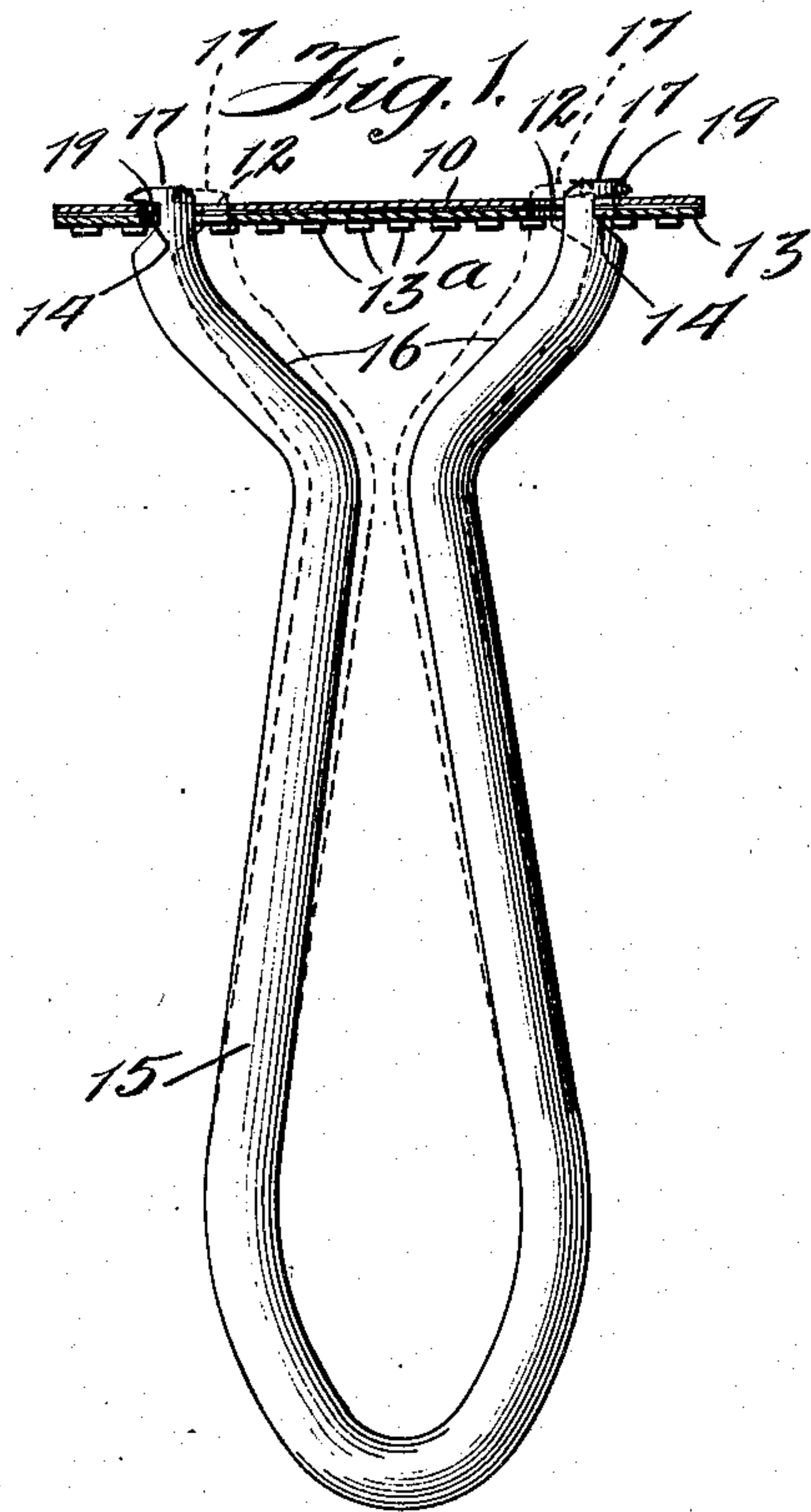


E. H. McINTIRE.  
SAFETY RAZOR.  
APPLICATION FILED DEC. 18, 1907.

936,654.

Patented Oct. 12, 1909.



Witnesses:  
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Attys



# UNITED STATES PATENT OFFICE.

EDGAR H. McINTIRE, OF CHICAGO, ILLINOIS.

## SAFETY-RAZOR.

936,654.

Specification of Letters Patent.

Patented Oct. 12, 1909.

Application filed December 18, 1907. Serial No. 406,991.

*To all whom it may concern:*

Be it known that I, EDGAR H. McINTIRE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Safety-Razors, of which the following is a specification.

This invention relates to improvements in safety razors and more particularly to that type employing a detachable and reversible blade, and the primary object of the invention is to provide an improved handle for the blade, and improved means for securing the blade to the handle.

A further object is to provide an improved holder comprising a guard plate and a detachable handle adapted to secure the parts together.

A further object is to provide an improved holder comprising two separable members adapted to be readily detached for compactly packing the holder and which may as readily be secured together for use, one of the members comprising an elastic handle, the elasticity of which serves to secure the blade to the other member and in position for use.

A further object is to provide improved means for securing the blade to the holder whereby the blade may be stropped without removing it from the holder.

A further object is to provide an improved device of this character which will be simple, durable and cheap in construction and effective and efficient in operation.

To the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists in the features of novelty in the construction, combination and arrangement of the several parts hereinafter more fully described and claimed and shown in the accompanying drawing, illustrating an exemplification of the invention, and in which—

Figure 1 is an elevation, partly in section, of an improved device of this character constructed in accordance with the principles of this invention. Fig. 2 is a top plan view of Fig. 1 partly in section and partly broken away. Fig. 3 is a detail sectional view on line 3—3 of Fig. 2. Fig. 4 is a detail perspective view of one of the extremities of the elastic handle.

Referring more particularly to the drawing and in the present exemplification of the invention, the numeral 10 designates the razor blade, which may be constructed of

any suitable flexible material, such as thin sheet steel having a uniform thickness and provided with two opposite longitudinal cutting edges 11. The blade is preferably provided with spaced apertures 12 in its body portion located between the cutting edges 11 and adjacent the extremities of the blade.

The numeral 13 designates the guard which is preferably concave, as shown more clearly in Fig. 3 of the drawing, and this guard is of substantially the same width as the width of the razor blade and is provided with spaced teeth 13<sup>a</sup> along its longitudinal edges, which project beyond the respective cutting edges of the blade in the usual manner to protect the skin of the user from being cut during the operation of shaving. The longitudinal edges of the guard are preferably the same length as the cutting edges 11 of the blade and the guard is provided with spaced apertures 14 located at substantially the longitudinal center thereof and adjacent the extremities of the guard and these apertures are adapted to respectively register with the apertures 12 in the blade 10 when the blade and guard are placed together.

The handle 15 is preferably constructed from a single piece of elastic material, such as metal or the like, bent into a suitable shape to form spaced arms 16, the extremities 17 of which are provided on their outer faces with wedge-shaped notches 18 to form an inclined or beveled face 19. The elasticity of the material from which the handle is formed serves to hold the extremities 19 of the arms 16 spaced from each other a distance slightly greater than the distance between the apertures 14 in the guard and the apertures 12 in the blade, so that when the blade 10 is placed upon the guard 13 in such a position that the respective apertures therein will register, the extremity of the handle must be compressed to the position shown in dotted lines in Fig. 1 of the drawing to permit the extremities to be inserted into the registering apertures. After being inserted the extremities of the handle are released and the elasticity of the handle will tend to separate the arms 16 and while the arms are being separated, the resiliently mounted wedges having the inclined faces 19 will draw the blade 10 into close contact with the guard 13, causing the blade to conform to the contour of the adjacent face of the guard, thereby locking the blade and guard se-



curely together, the notches 18 serving also to prevent the blade and guard from being displaced with relation to the handle.

When it is desired to remove the blade, the end of the handle adjacent the guard may be compressed to the position shown in dotted lines in Fig. 1 to relieve the guard and blade of the strain exerted by the tension of the handle thereon and to move the inclined faces 19 out of engagement with the blade, so that the extremities 17 of the handle may be drawn through the apertures.

It will be apparent that a razor of this construction may be readily collapsed for cleaning and for any other purpose and when so collapsed may be packed compactly in a minimum space.

Any suitable material may be used for the guard and handle and by constructing the handle so as to serve the double function of a handle and the means for securing the guard and blade together, it will be apparent that a very simple device is produced and one which may be manufactured at an extremely low cost.

The extremities 17 of the arms 16 are rounded, as shown, and project for only a slight distance beyond the outer face of the blade, which presents a substantially flat surface, thereby permitting the side of the blade to be held in any desired position and in close contact with the face of the user.

It will be apparent that with this improved construction the blade may be readily stopped without being removed from the handle, as the extremities 17 of the handle do not project a sufficient distance beyond the outer face of the blade, being the one which is in contact with the stop, to interfere with the successful stopping of the razor.

In order that the invention might be fully understood by those skilled in the art, the details of the foregoing embodiment thereof have been thus specifically described; but

What I claim as new and desire to secure by Letters Patent is—

1. In a razor, the combination with a blade and a guard therefor, said blade and guard being constructed of resilient material contacting along opposite edges and provided with non-conforming lateral surfaces intermediate of said contacting edges, and a resilient handle one end of which is provided with wedges engaging the outer surfaces of said blade and guard to force the contiguous surfaces thereof into close contact.

2. In a razor, the combination with a blade and a guard therefor, of resilient material, said blade and guard being in contact along opposite edges and provided with non-conforming lateral surfaces intermediate thereto, and a resilient handle one end of which is provided with oppositely mounted

wedges for engaging the outer surfaces of said blade and guard to force the contiguous surfaces thereof into close contact.

3. In a razor, the combination of a blade provided with spaced apertures, and a handle, one end of which comprises spaced yielding members adapted to be inserted into the apertures, each of said members being provided with a recess in its outer face adjacent the extremity thereof and adapted to receive the edge of the respective aperture, and said apertures being arranged to exert a tension on the members to secure the parts together, the extremities of the said members beyond the recess being rounded and terminating substantially flush with the outer face of the blade.

4. In a razor, the combination with a blade and a guard therefor, said blade and guard being constructed of resilient material contacting along opposite edges and having non-conforming lateral surfaces intermediate to said edges, and an integral handle of resilient material, said handle being provided with adjacent and oppositely disposed wedges engaging the outer surfaces of said blade and guard to force the contiguous surfaces of said blade and guard into close contact.

5. In a razor, the combination with a resilient blade and a resilient guard therefor, said blade and guard being formed with non-conforming lateral surfaces, and an integral handle of resilient material having adjacently disposed extremities, said extremities being provided with wedge shaped notches for engaging the outer lateral surfaces of said blade and guard to force the contiguous surfaces of the same into close contact.

6. In a razor, the combination of a blade provided with an aperture, a guard also provided with an aperture adapted to register with the aperture in the blade when the two are placed together, and a handle, one extremity of which is adapted to be inserted in the registering apertures and engage one face of each of the members for securing the parts together.

7. In a razor, the combination of a blade provided with spaced apertures, a guard also provided with spaced apertures adapted to register with the apertures in the blade when the two are placed together, and a handle, one end of which comprises spaced yielding extremities adapted to be inserted into the registering apertures for securing the parts together, the apertures being spaced to exert a tension upon the said yielding extremities.

8. In a razor, the combination of a blade provided with spaced apertures, a guard also provided with spaced apertures adapted to register with the apertures in the blade when the two are placed together, and a handle, one end of which comprises spaced



yielding extremities adapted to be inserted into the registering apertures for securing the parts together, a portion of the said extremities being adapted to engage one face 5 of each of the members and said apertures being spaced to exert a tension upon the said yielding extremities.

9. In a razor, the combination of a blade provided with spaced apertures, a guard also 10 provided with spaced apertures adapted to register with the apertures in the blade when the two are placed together, a handle, one end of which comprises spaced yielding extremities, each of which is provided with a 15 notch having an inclined face, said notches being adapted to receive the edges of the blade and guard adjacent the respective apertures and said apertures being spaced to exert a tension on the extremities of the handle 20 to cause the inclined faces to engage one of the members and clamp the same against the other member to secure the parts together.

10. In a razor, the combination of a blade,

a guard for the blade, one of said elements being concaved, an elastic handle detachably 25 engaging both of the elements, and means whereby the handle will secure the parts together by engagement therewith and the elasticity of the handle will cause one of the elements to conform to the contour of the 30 other element.

11. In a safety razor, a blade having one or both of its longitudinal edges sharpened and provided with apertures, a guard provided with corresponding apertures, and a 35 handle of resilient material having ends adapted to engage the edges of the apertures in the guard and blade.

In testimony whereof I have signed my name to this specification, in the presence 40 of two subscribing witnesses, on this 16th day of December A. D. 1907.

E. H. McINTIRE.

Witnesses:

FRANCIS A. HOPKINS,  
M. W. CANTWELL.