

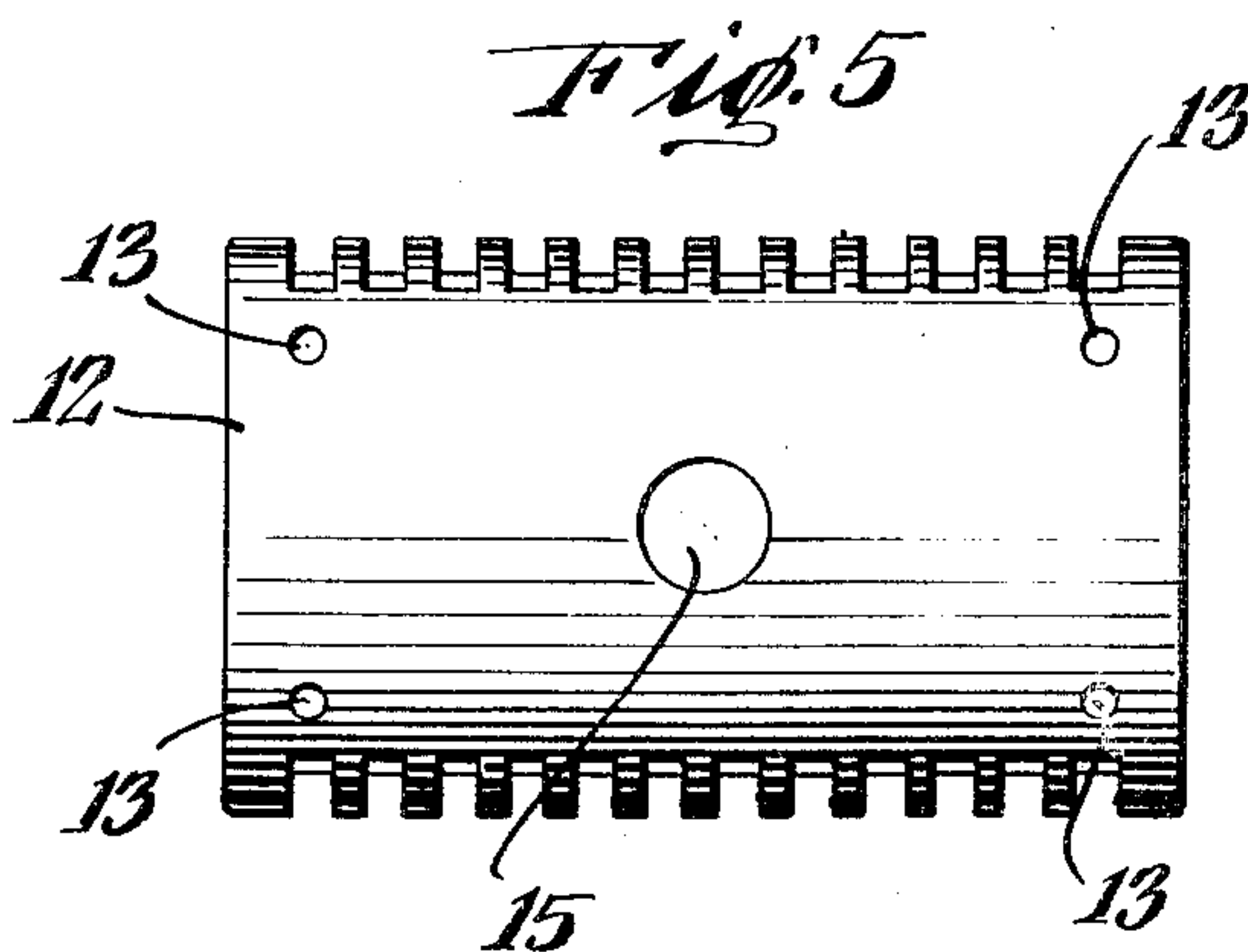
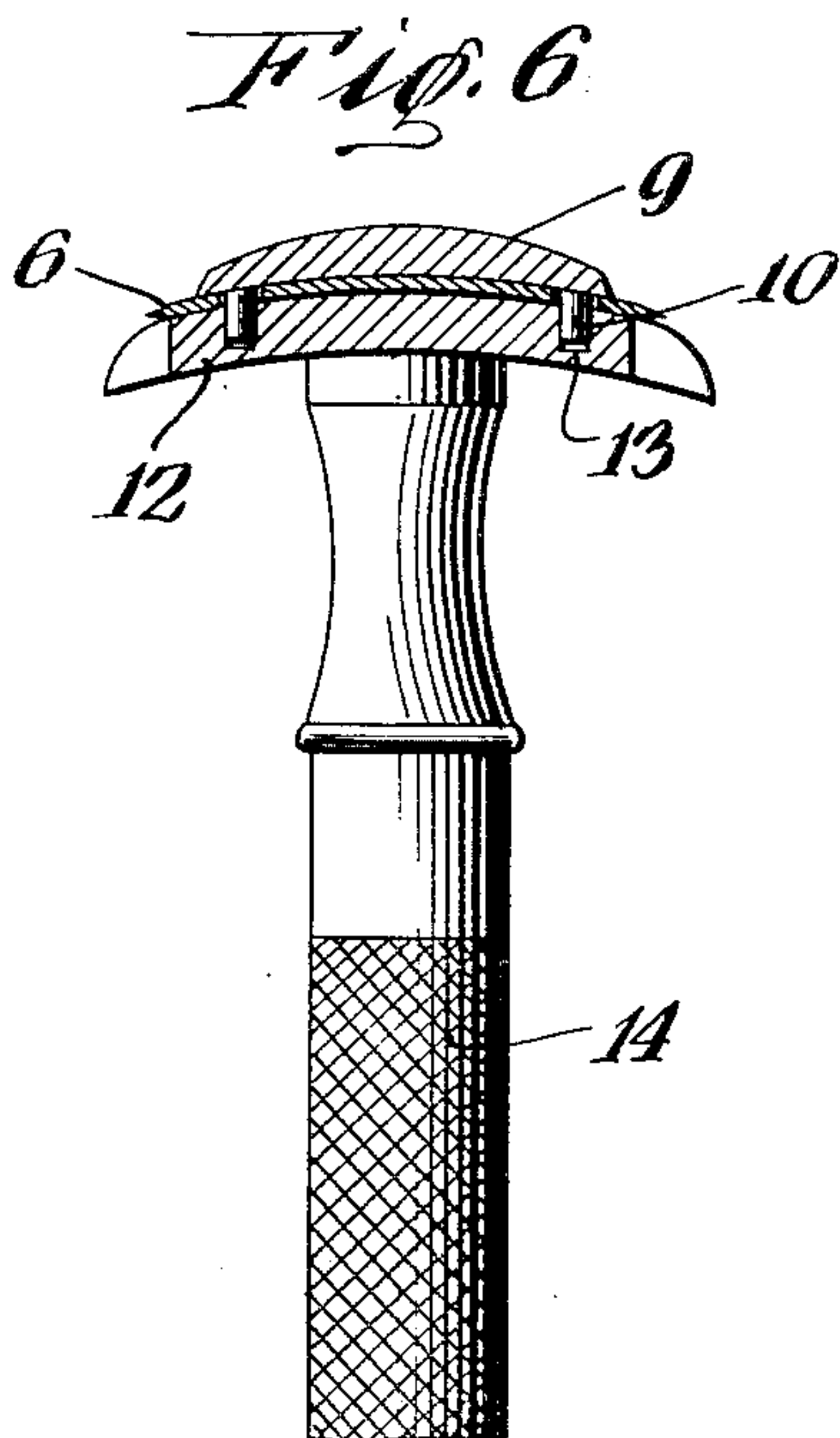
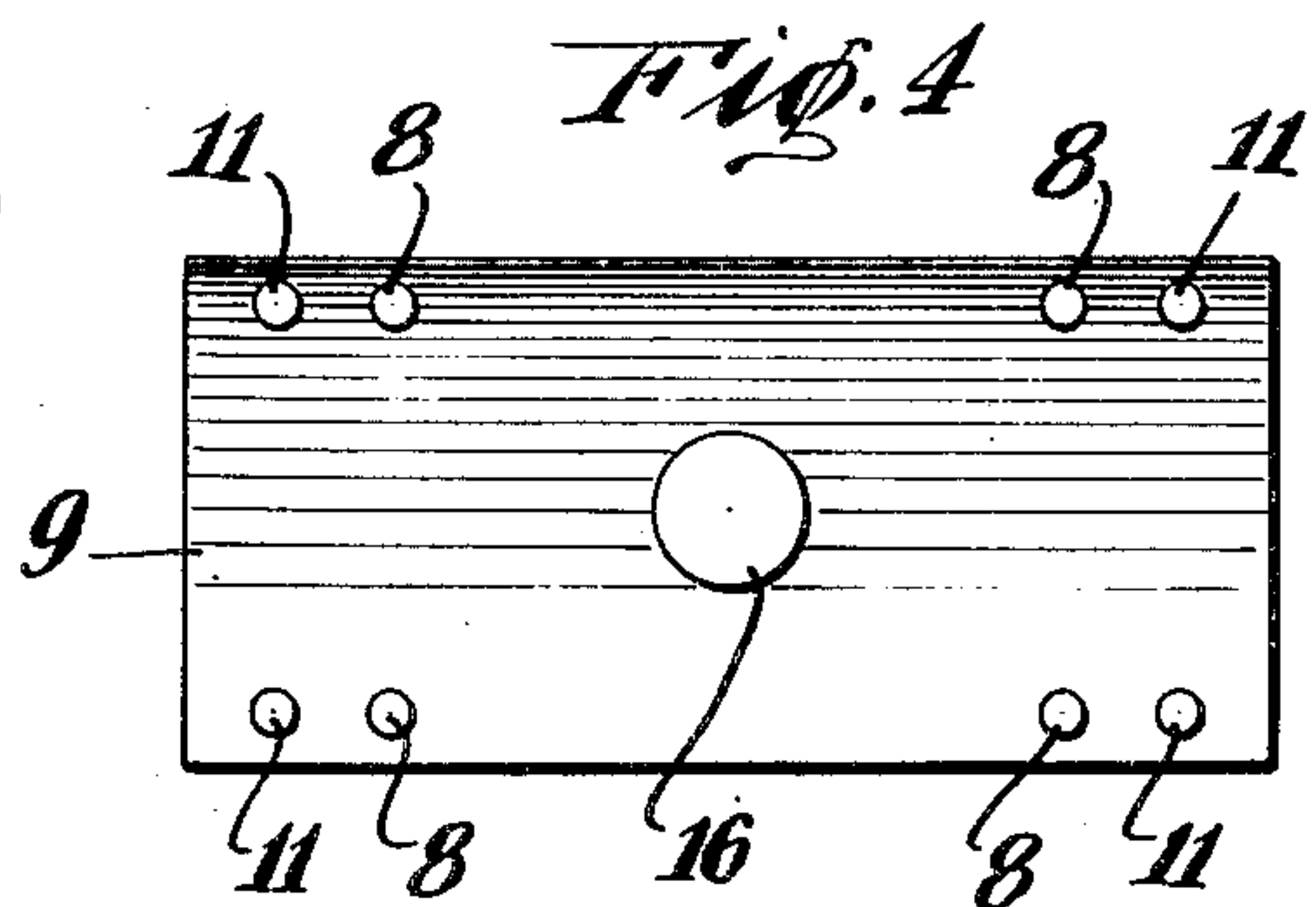
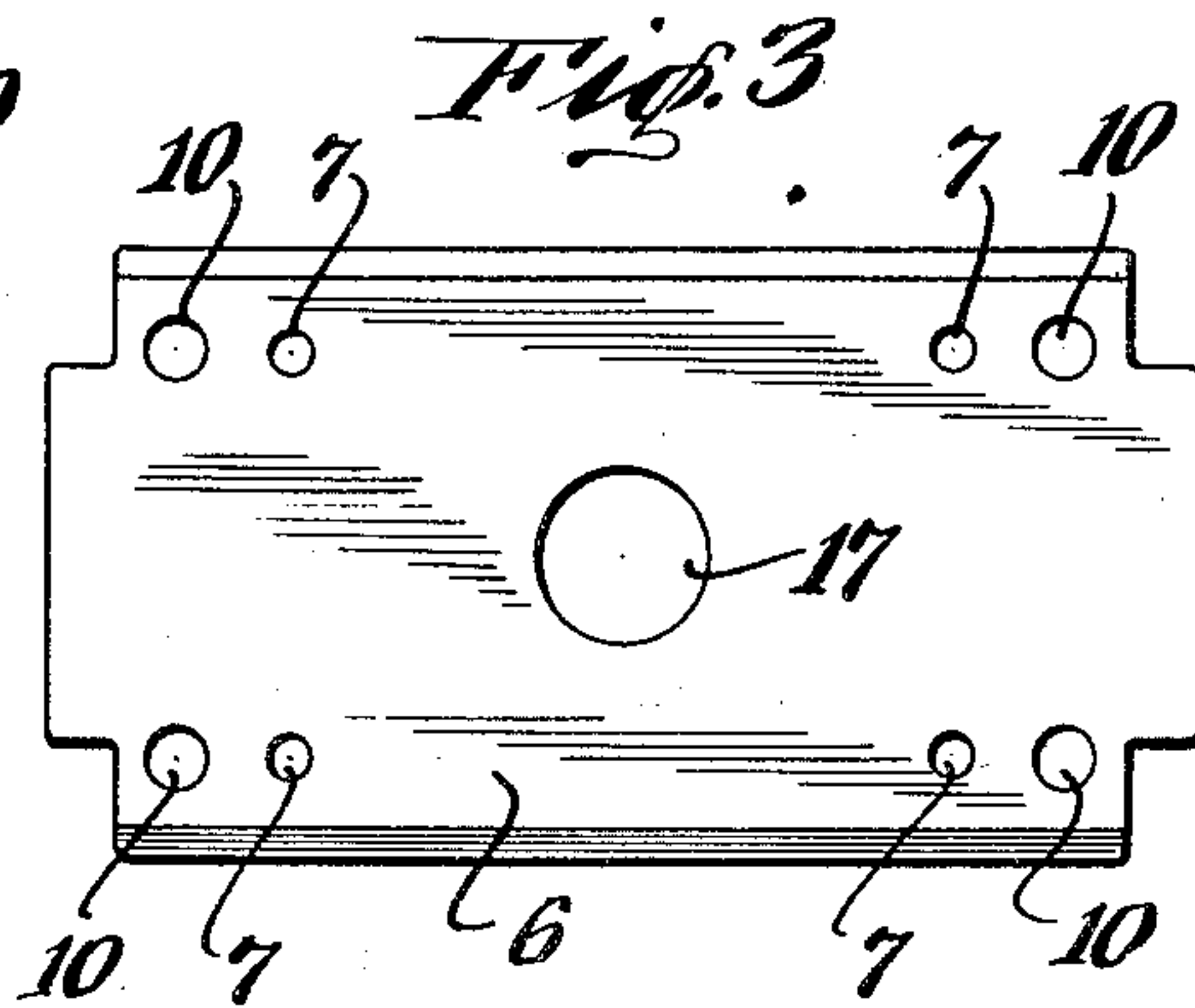
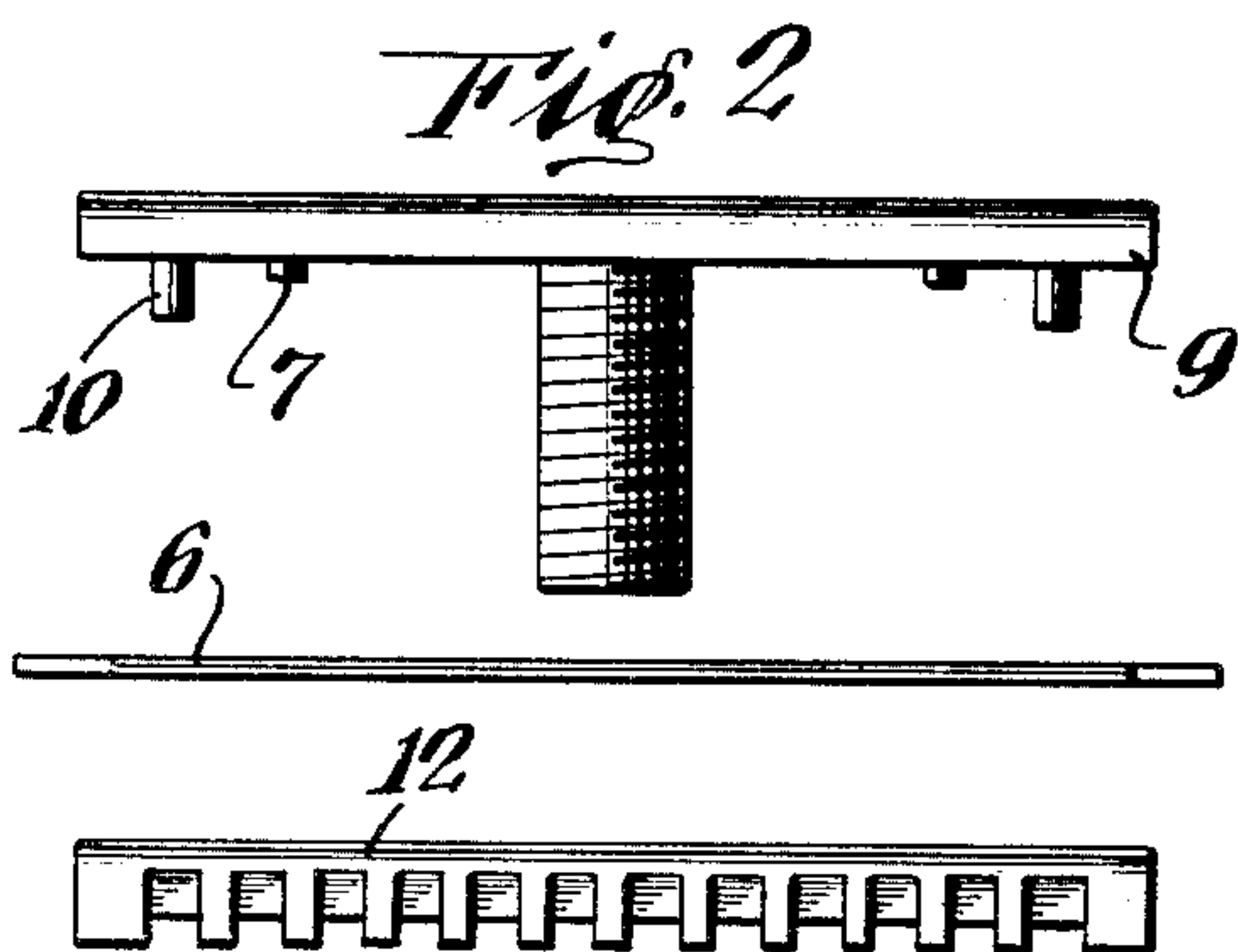
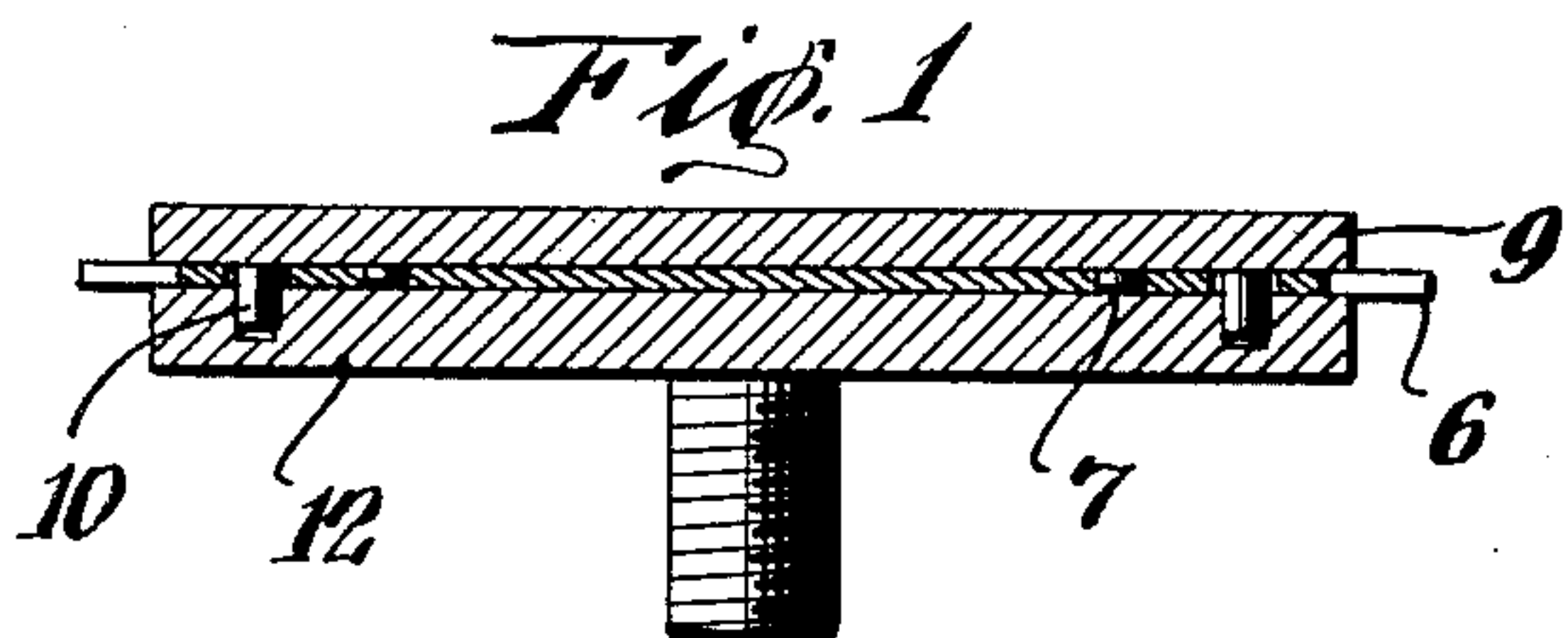
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R. E. THOMPSON

1,897,656

SAFETY RAZOR

Filed Nov. 17, 1930



Inventor  
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## UNITED STATES PATENT OFFICE

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DELAWARE

## SAFETY RAZOR

Application filed November 17, 1930. Serial No. 496,171.

This invention relates to safety razors, and relates more particularly to safety razors of the Gillette type in which a transversely flexible blade is clamped between the cap and guard members of a razor.

In the ordinary safety razor of this type, the cap member is provided with positioning studs which extend into apertures in the blade and also into apertures in the guard member, thus serving not only to position the blade, but also to position the guard member to the cap member.

An object of this invention is to provide a safety razor with means for positioning the cap and guard members together, and separate means for positioning the blade. In this way I am enabled to locate the cap and guard members accurately and reliably by means that are not subject to wear by the hardened blades in their repeated removals and replacements.

In one embodiment of this invention, the cap member is provided with two sets of positioning pins. One set of positioning pins extends through openings having excessive clearance in the blade, and into close fitting openings in the guard member. This set of pins serves to position the cap and guard members together. The other set of pins extends into close fitting openings in the blade and serves to position the blade.

The invention will now be explained with reference to the drawing, of which:

Fig. 1 is a side view in section of a safety razor cap, blade, and guard in assembled relation;

Fig. 2 is a side, exploded view of a cap, blade, and guard;

Fig. 3 is a plan view of a blade;

Fig. 4 is a plan view of the side of the cap member which contacts with the blade when the razor is assembled;

Fig. 5 is a plan view of a guard member, and

Fig. 6 is an end view partially in section of an assembled razor.

The blade 6 is provided with the four small positioning or locating openings 7, into which the four short positioning pins 8 on the cap member 9 extend, and which are a close fit for

these positioning pins. The blade is also provided with the four larger openings 10, through which the positioning pins 11 of the cap member 9 are adapted to pass with excessive clearance. The guard member 12 is provided with the four small positioning openings 13, into which the positioning pins 11 of the cap member 9 extend, when the razor is assembled.

When the razor is assembled, the blade is placed on the cap member so that the blade positioning pins 8 contact closely with the sides of the openings 7 and position the blade accurately upon the cap member. The positioning pins 11 on the cap member, which are longer than the positioning pins 8, pass through the openings 10 in the blade with excessive clearance, since the openings 10 have much larger diameters than the pins 11. The blade and cap member, positioned together, are then placed on the guard 12, the lower portions of the positioning pins 11 passing into close contact with the sides of the openings 13 in the guard. The threaded stud 17 of the cap member passes through the central opening 15 of the guard, the central opening 16 of the blade, and is screwed into the handle to clamp the blade between the cap and guard members.

In this embodiment of the invention, the blade is seen to be positioned on the cap member and the cap member positioned to the guard member by separate positioning pins.

Whereas in the embodiment of the invention illustrated the positioning pins have been shown as forming a part of the cap member, it should be understood that the positioning pins could be formed on or a part of the guard member with positioning openings in the cap member.

Whereas one embodiment of the invention has been described for the purpose of illustration, it should be understood that the invention is not limited to the exact details described, as many departures may be made by those skilled in the art without departing from the spirit of the invention.

What is claimed is:

1. A safety razor blade having a central aperture and in addition thereto a pair of



small internal positioning apertures and a pair of large clearance apertures immediately adjacent a shaving edge, the distance between the large apertures being greater than  
5 the distance between the small apertures.

2. A safety razor comprising, in combination, a transversely flexible razor blade having a small locating aperture and a large clearance aperture adjacent a shaving edge,  
10 clamping members between which said blade is flexed, a pair of positioning pins on one of said members, one of said pins being adapted to be positioned in said larger aperture in said blade with clearance, and the other of said  
15 pins being adapted to fit into said small locating aperture in said blade, and an aperture in the other of said members into which said pin, which passes through said larger aperture, fits, and thereby accurately locates said mem-  
20 bers with respect to each other.

3. A safety razor comprising, in combination, a transversely flexible blade having a small positioning aperture and a large clearance aperture, clamping members between  
25 which said blade is flexed, a long and a short positioning pin in one of said members, said long pin being adapted to pass through said larger aperture in said blade to fit into a smaller aperture in the other of said members to  
30 position said members together, and said short pin being adapted to fit into said small aperture in said blade to position said blade between said members.

4. A safety razor comprising cap and guard  
35 members having co-operating pins and slots for accurately determining their relative position, means for clamping the two members together, a blade internally perforated to receive said pins with clearance thereby elimi-  
40 nating wear thereon and having also blade-locating apertures therein, and separate studs on one of said members arranged to co-operate with said apertures in locating the blade.

5. A safety razor blade having corner re-  
45 cesses which define an elongated intermediate unsharpened portion and longitudinal sharpened edges terminated by said recesses, a relatively large hole adjacent to the inner corner of each recess and a smaller hole spaced in-  
50 wardly therefrom, the larger holes being clearance holes and the smaller holes serving to locate the blade.

Signed at Boston, Massachusetts, this 15th day of November, 1930.

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RALPH E. THOMPSON.

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