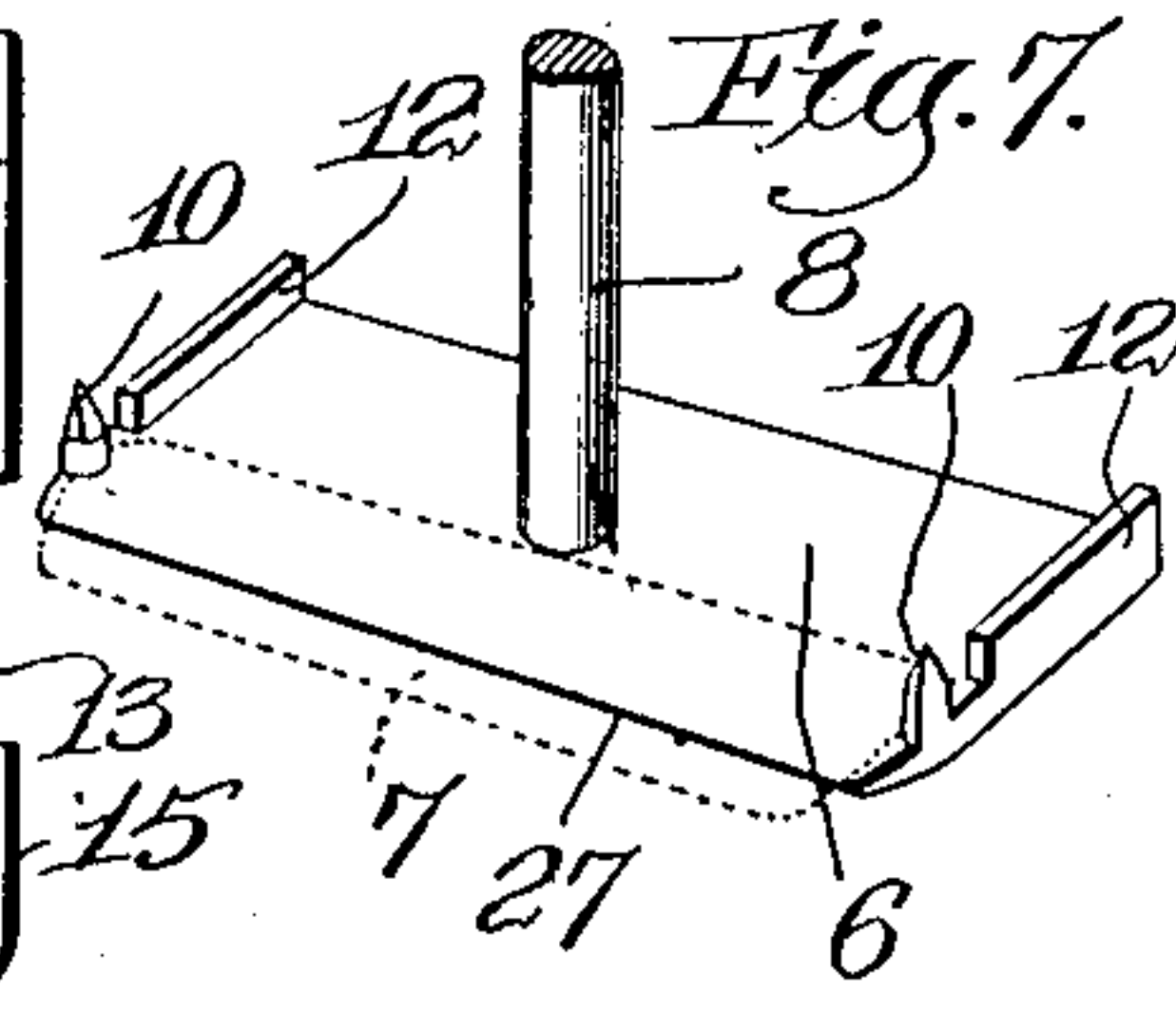
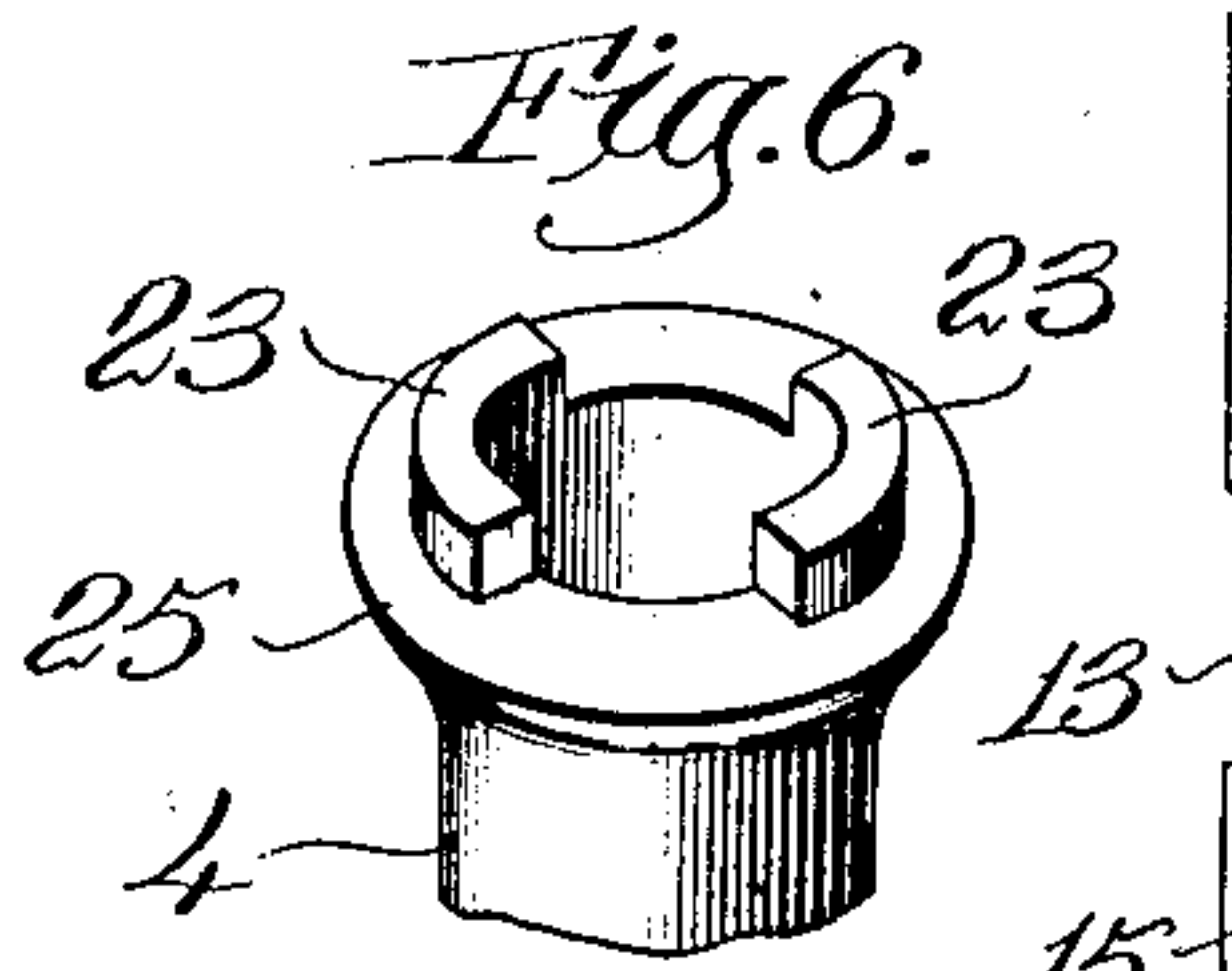
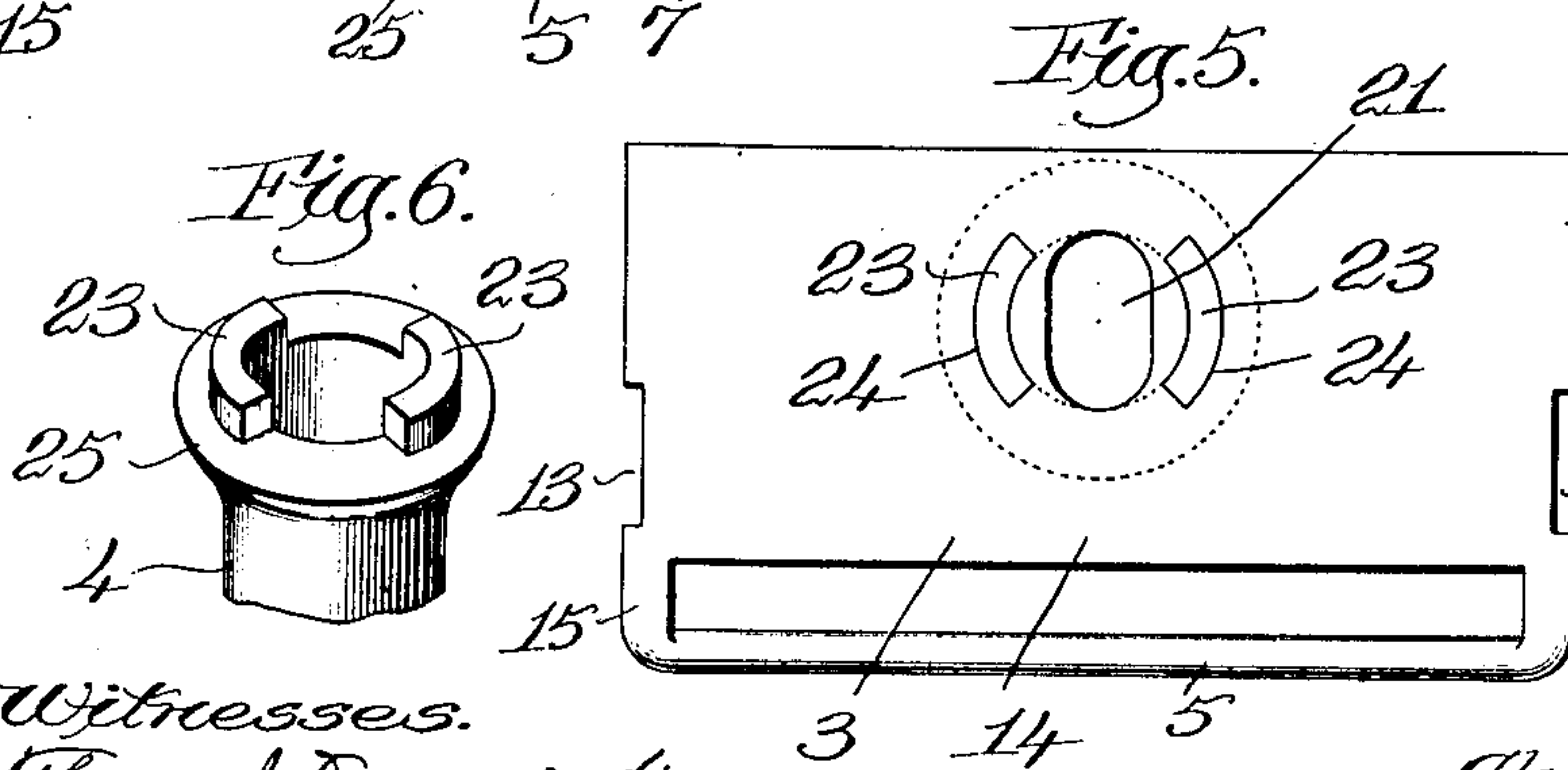
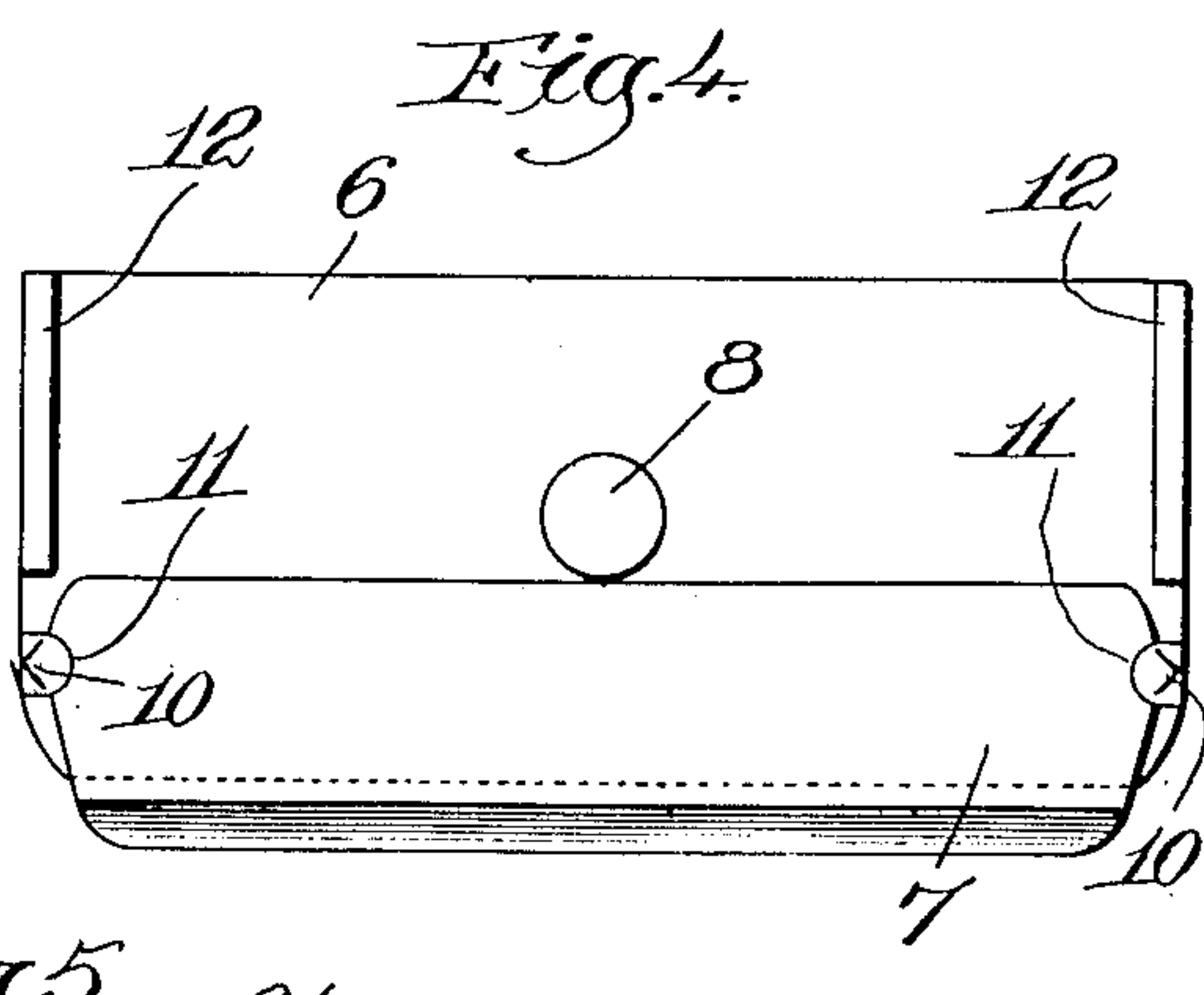
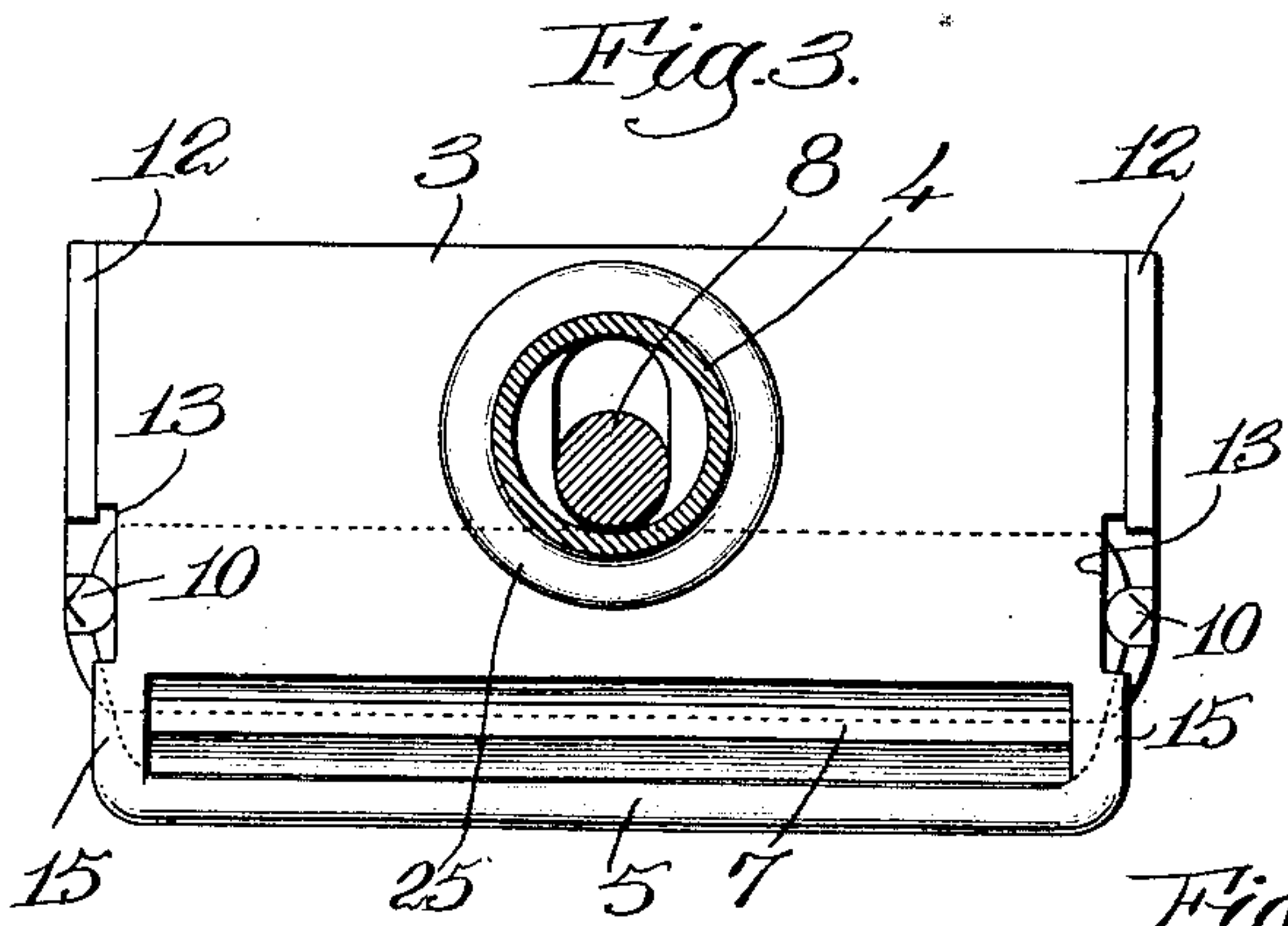
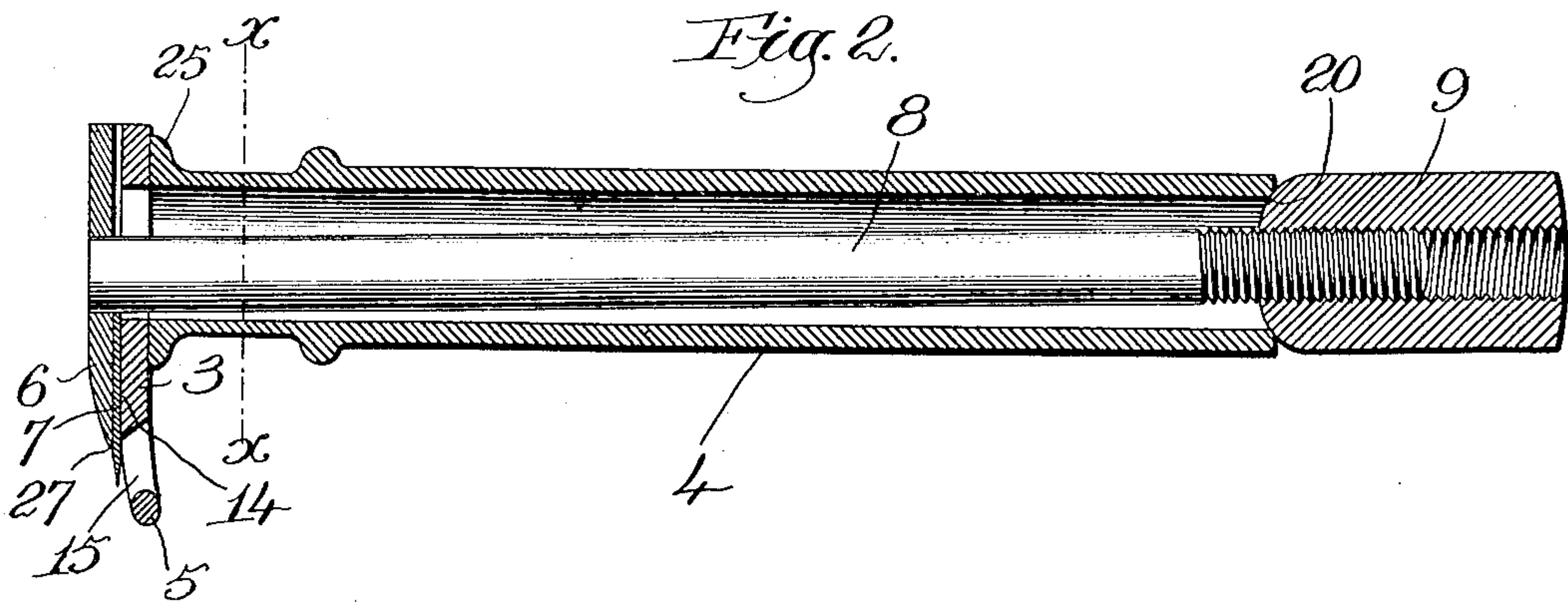
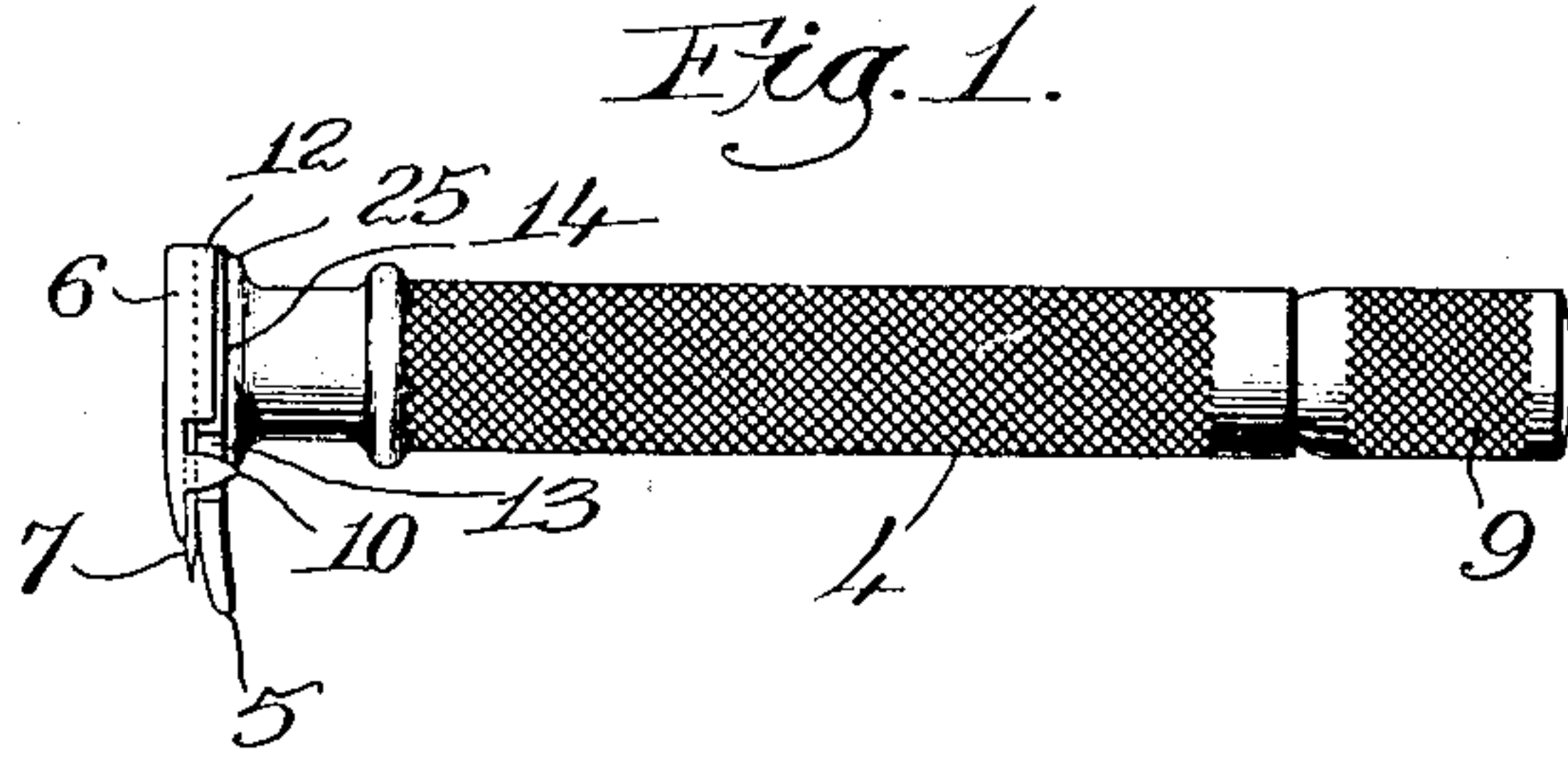


C. A. O'NEILL.  
SAFETY RAZOR.

APPLICATION FILED MAY 10, 1909.

927,588.

Patented July 13, 1909.



Witnesses.  
Thomas J. Drummond,  
Joseph M. Ward.

Inventor.  
Charles A. O'Neill,  
by Lewis Gregory, atty.



# UNITED STATES PATENT OFFICE.

CHARLES A. O'NEILL, OF REVERE, MASSACHUSETTS.

## SAFETY-RAZOR.

No. 927,588.

Specification of Letters Patent.

Patented July 13, 1909.

Application filed May 10, 1909. Serial No. 495,002.

*To all whom it may concern:*

Be it known that I, CHARLES A. O'NEILL, a citizen of the United States, residing at Revere, county of Suffolk, and State of Massachusetts, have invented an improvement in Safety-Razors, of which the following description, in connection with the accompanying drawing, is a specification, like numerals on the drawing representing like parts.

This invention relates to a safety razor and has for its object to provide a razor having a simple construction, and one in which the blade can be readily and accurately adjusted.

The features wherein my invention resides will be more fully hereinafter described and then pointed out in the appended claims.

Referring to the drawings wherein I have illustrated one embodiment of my invention, Figure 1 is a side view of a razor embodying the invention; Fig. 2 is an enlarged longitudinal central section; Fig. 3 is a section on the line  $x-x$ , Fig. 2; Fig. 4 is a view of the clamping member showing the blade applied thereto; Fig. 5 is a top plan view of the head; Fig. 6 is a perspective view of the portion of the handle before it is secured to the head; Fig. 7 is a perspective view of the clamping member.

My improved razor comprises in its construction a head 3 provided with a handle 4 and shaped at one side to present a guard 5, a clamping member 6 and a blade 7 which is clamped to the head by the clamping member. For this purpose the handle 4 is made tubular, and the clamping member 6 has extending therefrom a stem 8 which is screw-threaded at its end and has screw-threaded engagement with a clamping nut 9 so that by tightening the nut the blade is clamped firmly between the clamping member and the head.

My invention relates particularly to the construction which permits the blade to be readily and accurately adjusted into positions nearer to or farther from the guard 5. The clamping member 6 is provided with the two blade-positioning projections 10 and the blade 7 is formed with the recesses 11 adapted to receive the projections. These projections serve to maintain the blade 7 in a fixed position relative to the clamping member 6. Said clamping member is also provided with the two flanges or wings 12,

one at each end thereof, between which the head 3 is received, said flanges fitting the edges of the head and preventing lateral movement of the head relative to the clamping member. The head is also provided at each end with the flat-bottomed recess or notch 13 which receives the positioning projection 10 on the clamping member.

The guard 5 is shown as connected to the head by two arms 15 which have a slight angular relation to the surface 14 of the head 3 on which the blade 7 rests, so that said guard 5 occupies a position a slight distance from the plane of the blade 7.

In adjusting the blade so as to obtain a more or less close shave, the blade is moved back and forth on the face 14 of the head so as to cause the edge of the blade to project a greater or less distance from the guard and edge of the clamping member. The adjusting of the blade is accomplished by moving the clamping member relative to the head, for since the blade is held in its position on the clamping member by the positioning projections 10, it will be apparent that any movement of the clamping member will carry the blade with it. The wings or flanges 12 prevent the clamping member from twisting and maintain said member in a right line during its adjusting movement. As a result, the cutting edge of the blade will always stand parallel to the guard member in any adjusted position of the blade. In order to permit this adjusting movement of the clamping member, I propose to make the handle 4 with an interior bore considerably larger than the screw-threaded stem 8, as clearly seen in Fig. 2, and to make the clamping nut 9 with the rounded end 20 so that it will have a firm bearing on the end of the handle 4 in any adjusted position of the clamping member and its stem.

The head is shown as provided with the slot 21 through which the stem 8 passes, said slot being of a width equal to the diameter of the stem, but of a length sufficiently long to permit all necessary adjustments of the clamping member and blade. The slot 21 together with the flanges 12 and positioning projections 10 serve to prevent any lateral or twisting of the head and the clamping member and insure that the cutting edges of the blade will always be parallel to the guard in every adjusted position of the blade.

The handle 4 may be secured to the head in any appropriate way, and I have herein



shown said handle as provided with the two parti-circular extensions 23 which extend through similarly-shaped openings 24 in the head. The handle is also shown as having a collar 25 against which the head rests. The handle may be brazed or secured to the head in any appropriate way.

In order to insert the blade in the razor, the clamping nut 9 is removed so that the clamping member with its stem can be withdrawn from the handle. The blade is then placed in position on the clamping member with the positioning projections 10 occupying the recesses 11 and the parts may be assembled and the clamping nut tightened. In order to adjust the blade according to the requirements of the person using the razor the clamping nut is loosened a partial turn when the clamping member may be moved relative to the head to carry the edge of the blade farther from or closer to the guard as desired. A partial turn of the clamping nut 9 will clamp the parts tightly and rigidly together.

The parts are so constructed that the clamping pressure of the clamping member 6 is applied to the blade principally by the nose 27 of the clamping member.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a safety razor, the combination with a head having a guard associated therewith, of a tubular handle extending from the head, a clamping member having a stem extending through the handle, a blade clamped between the clamping member and head, and a clamping nut on the end of the stem, the interior bore of said handle being larger than the stem so as to permit the clamping member and blade to be adjusted toward and from the guard.

2. In a safety razor, the combination with a head having a guard associated therewith, of a tubular handle extending from the head, a clamping member having a stem extending through said tubular handle and provided with blade-positioning means, a blade retained by said positioning means, and a clamping nut having screw-threaded engagement with the stem, the bore of the tubular handle being sufficiently larger than the

stem to permit the clamping member and blade to be adjusted toward and from the guard.

3. In a safety razor, the combination with a head having a guard associated therewith, of a tubular handle extending from the head, a clamping member having a stem extending through said tubular handle and provided with blade-positioning means, a blade retained by said positioning means, and a clamping nut having screw-threaded engagement with the stem, the bore of the tubular handle being sufficiently larger than the stem to permit the clamping member and blade to be adjusted toward and from the guard, said head and clamping member having inter-engaging parts to guide the clamping member in its movement.

4. In a safety razor, the combination with a head having a slot, of a tubular handle secured to the head, a guard associated with the head, a clamping member provided with a stem extending through said slot and through the tubular handle, said clamping member having guiding flanges engaging the edges of the head, and also having positioning lugs, a blade positioned between the head and clamping member by said lugs, and a clamping nut secured to the end of the stem, said slot permitting the clamping member and blade to be adjusted toward and from the guard.

5. In a safety razor, the combination with a head having a guard associated therewith, of a tubular handle extending from the head, a clamping member having a stem extending through the handle, a blade clamped between the clamping member and head, and a clamping nut on the end of the stem having a rounded face bearing against the end of the handle, the interior bore of said handle being larger than the stem so as to permit the clamping member and blade to be adjusted toward and from the guard.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

CHARLES A. O'NEILL.

Witnesses:

LOUIS C. SMITH,  
THOMAS J. DRUMMOND.