

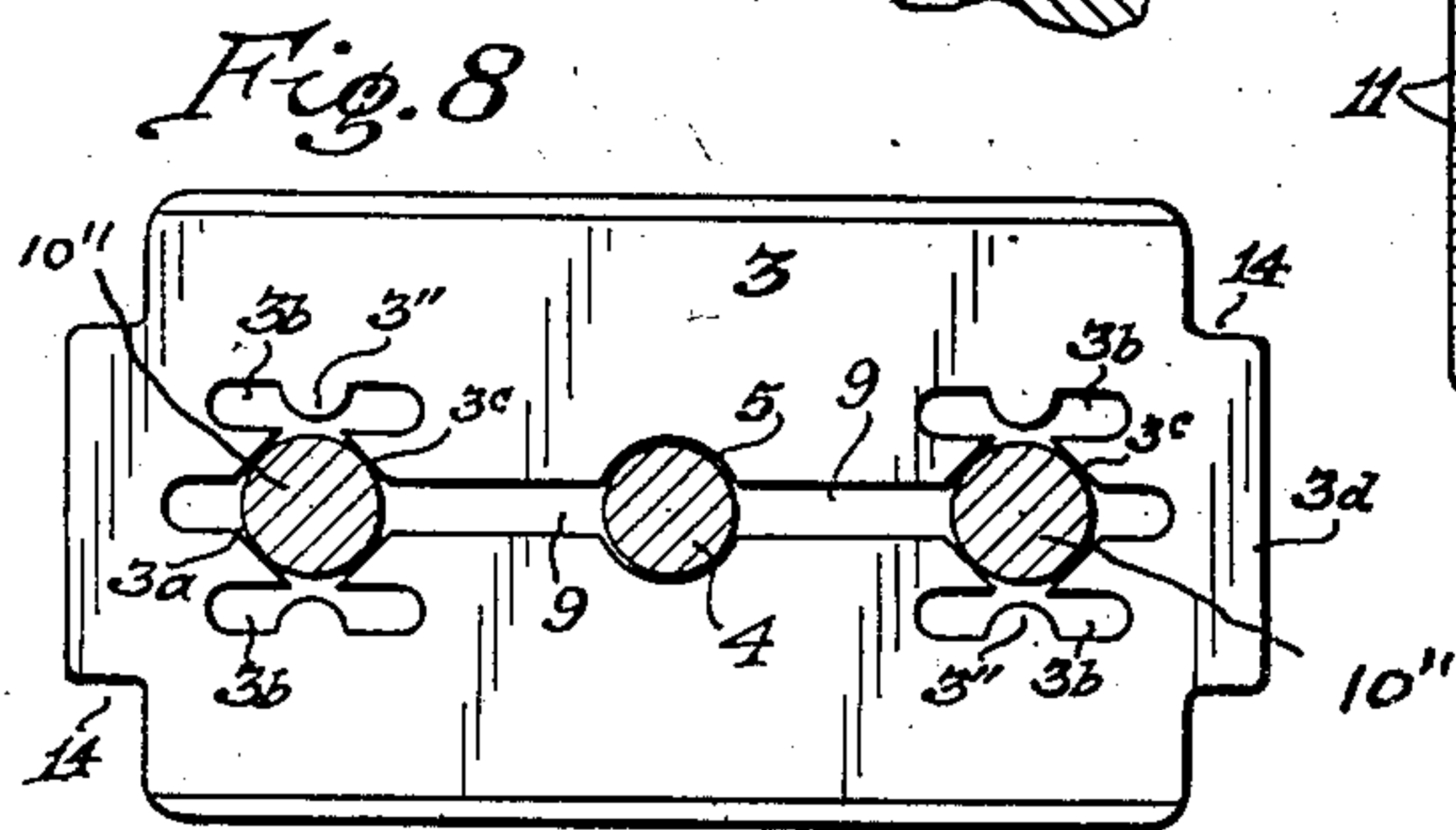
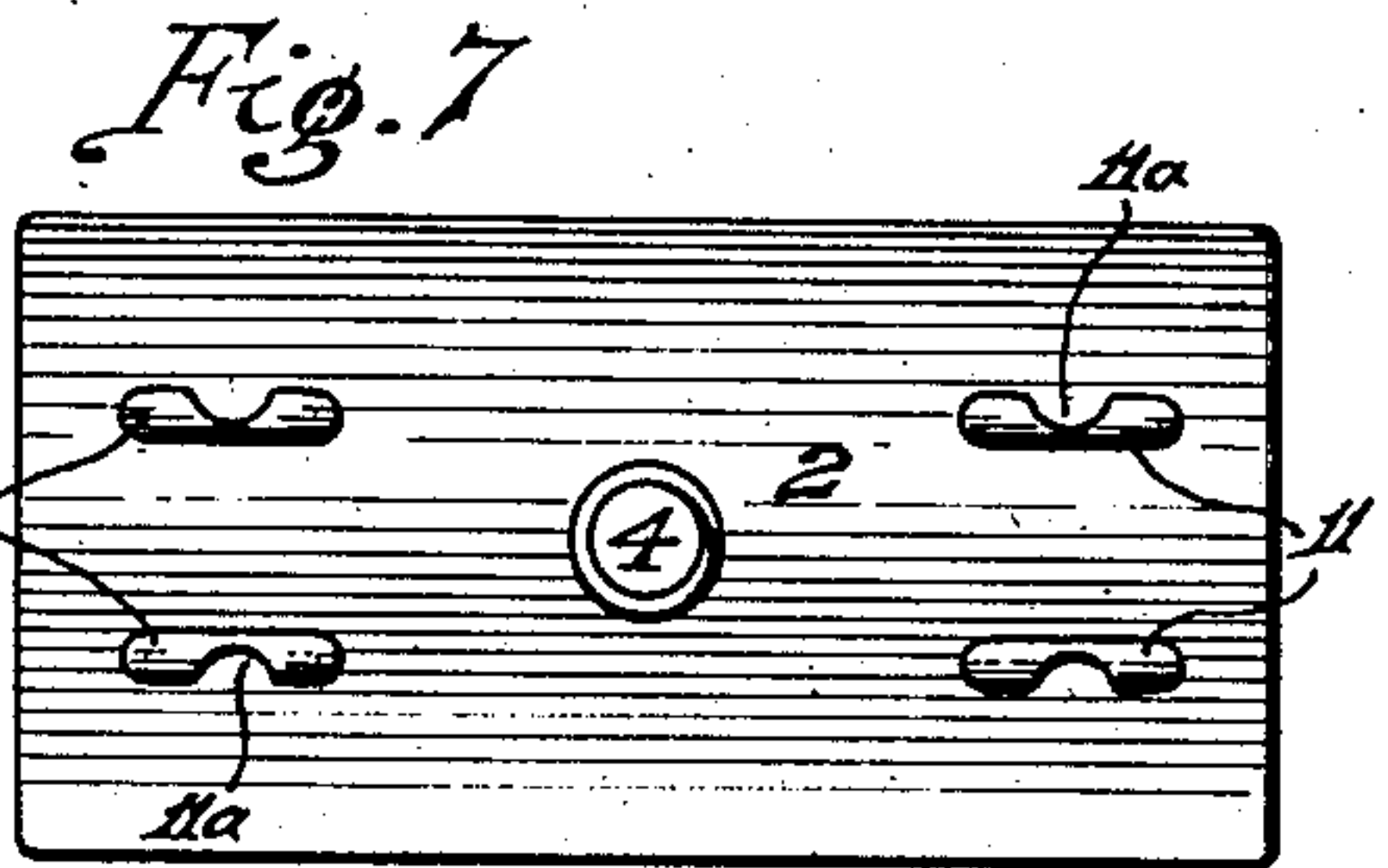
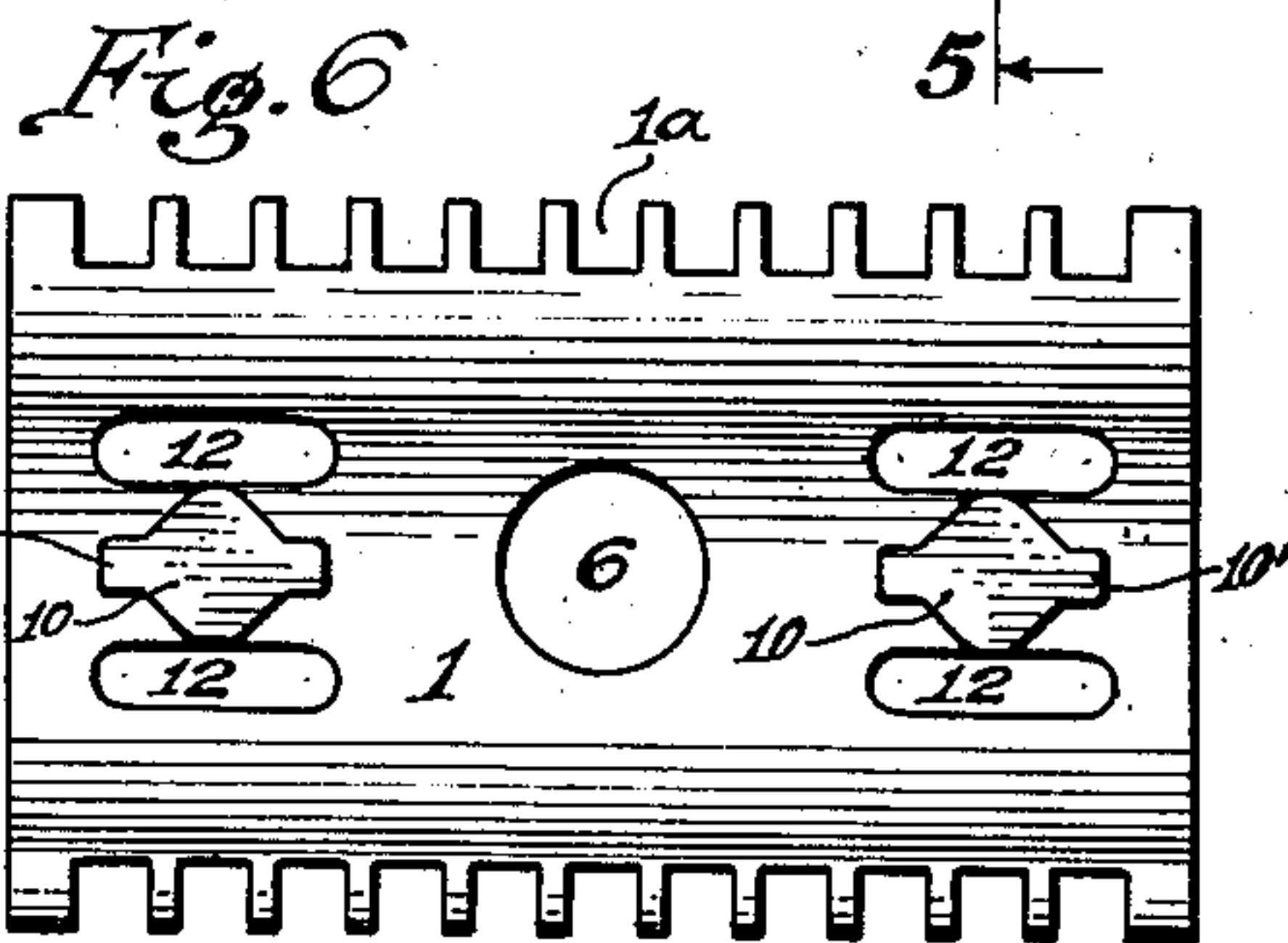
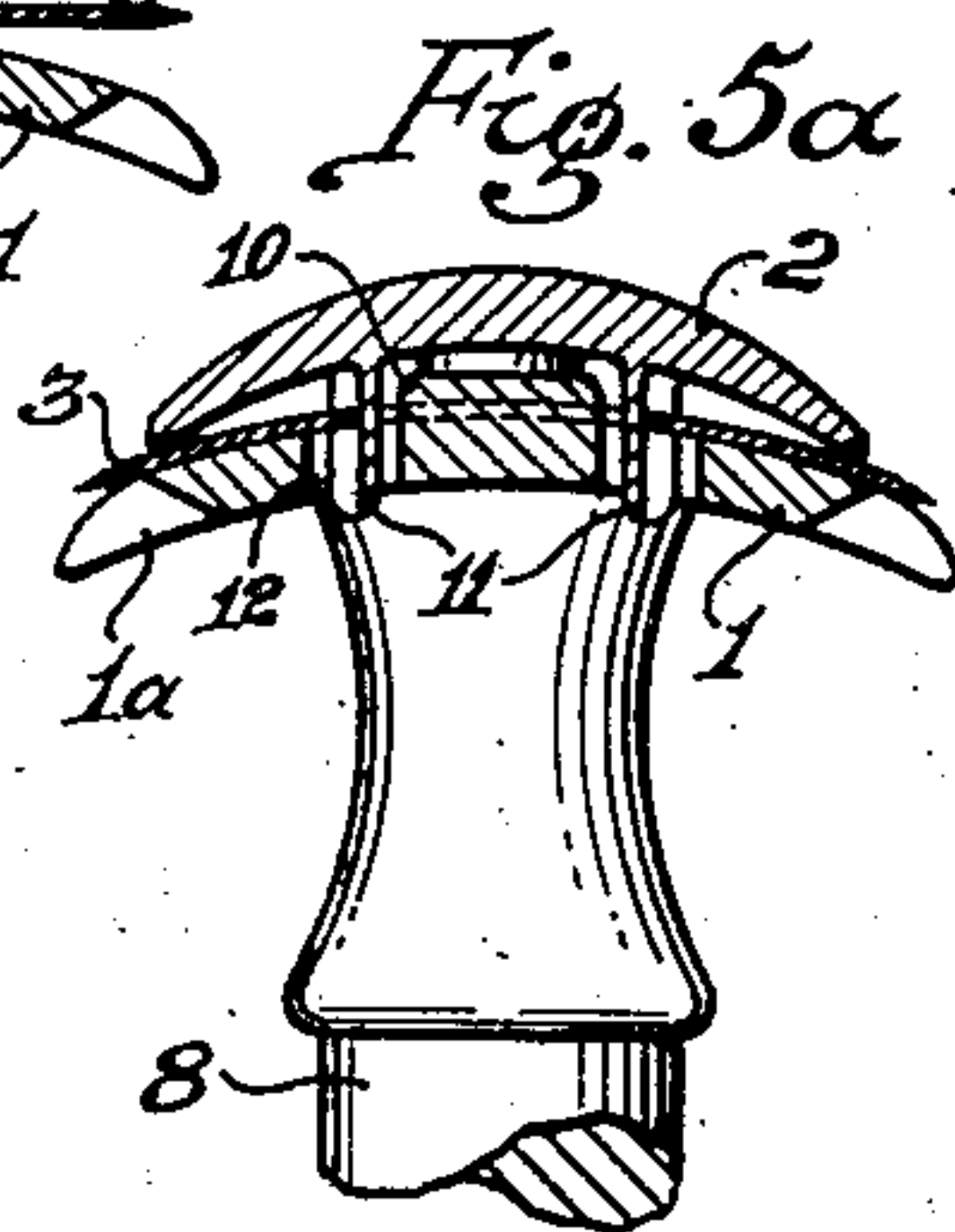
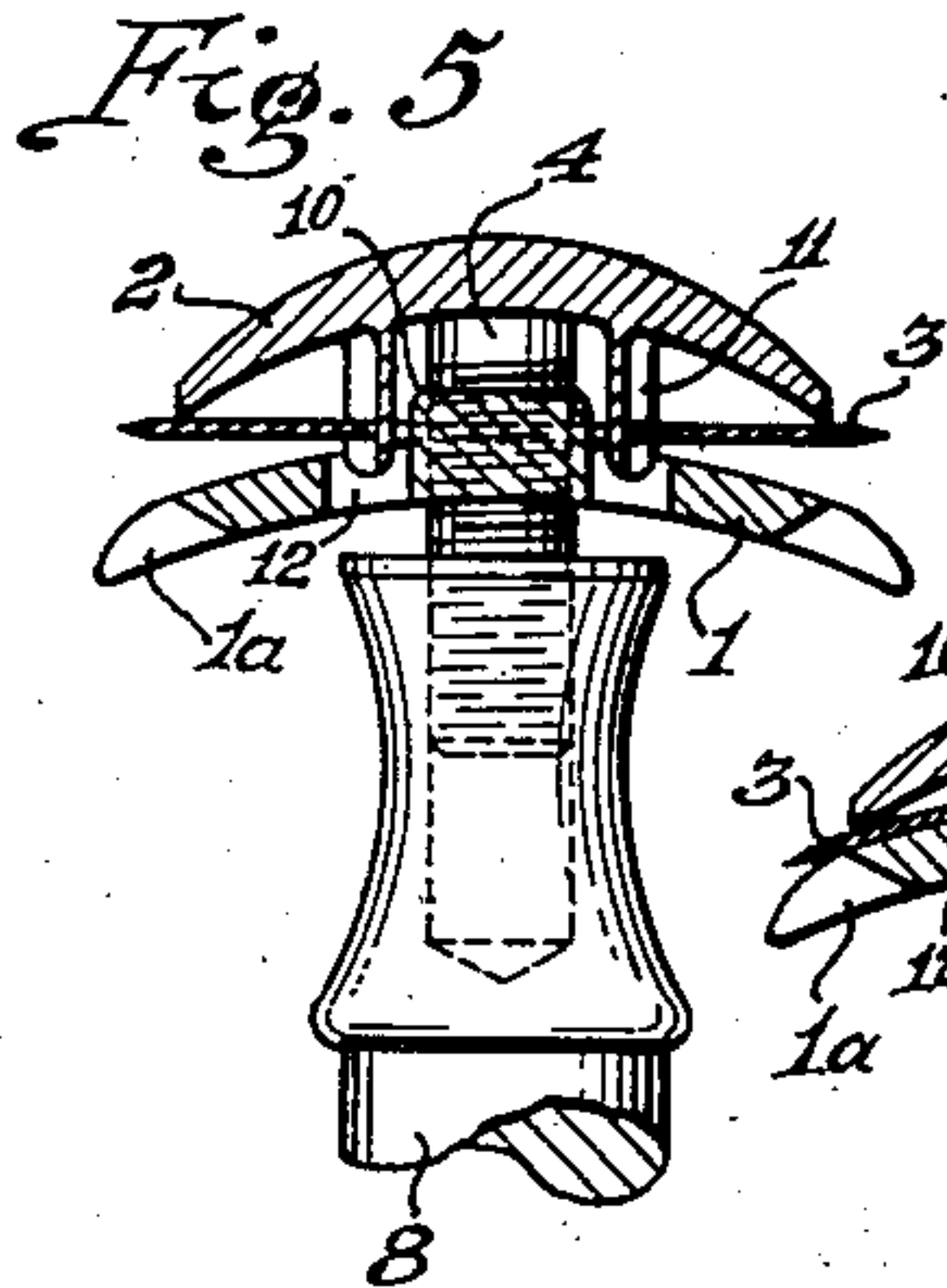
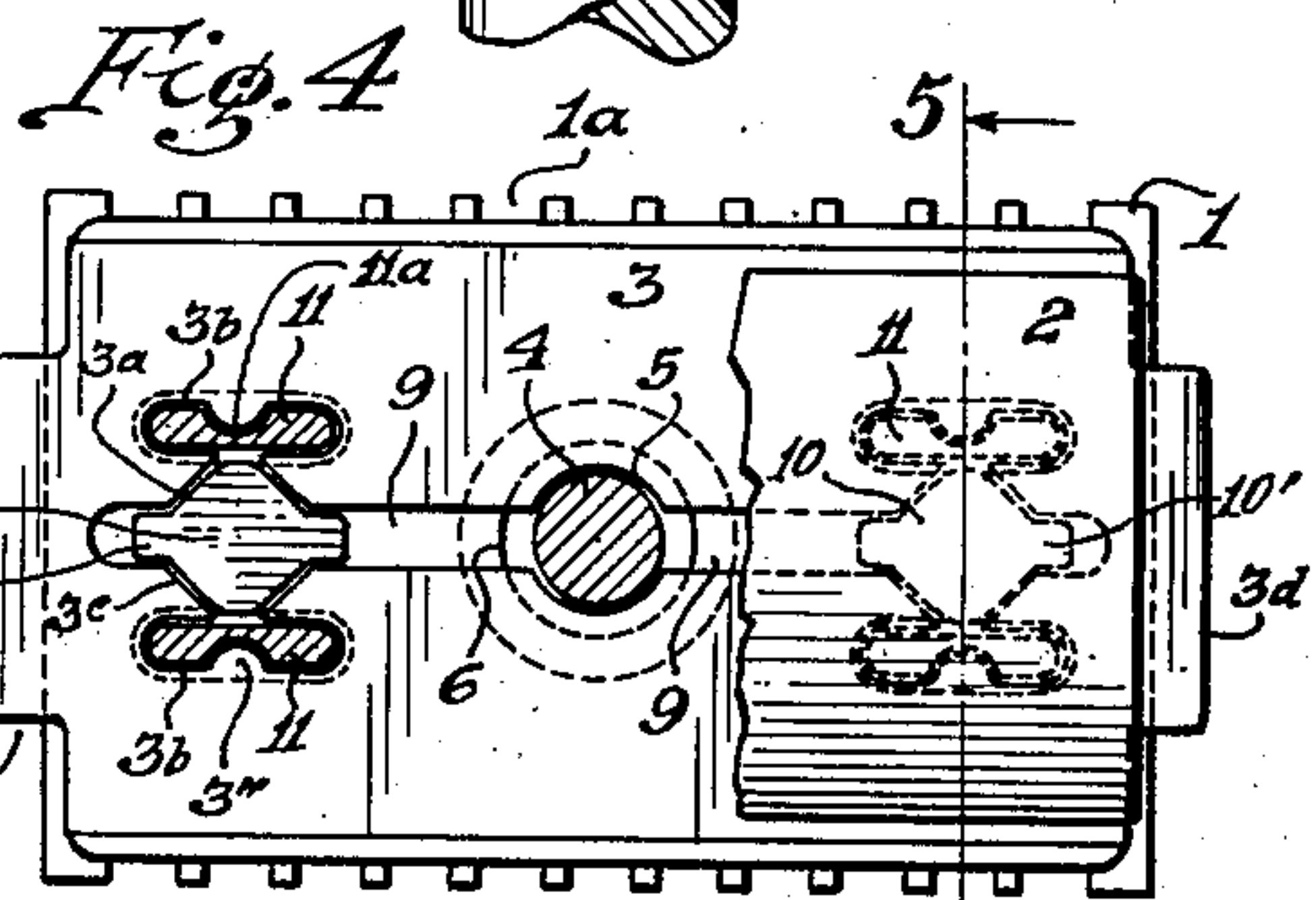
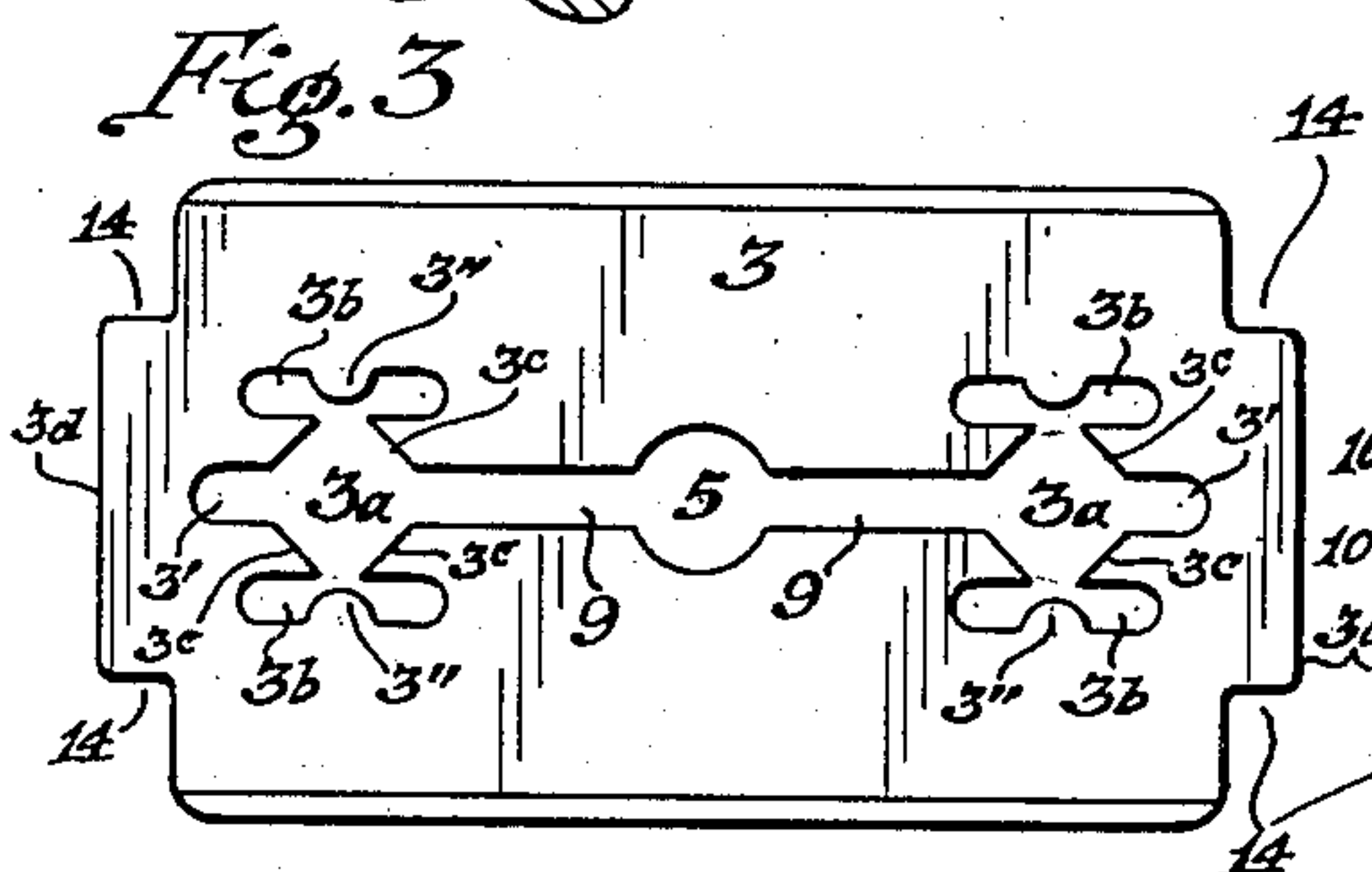
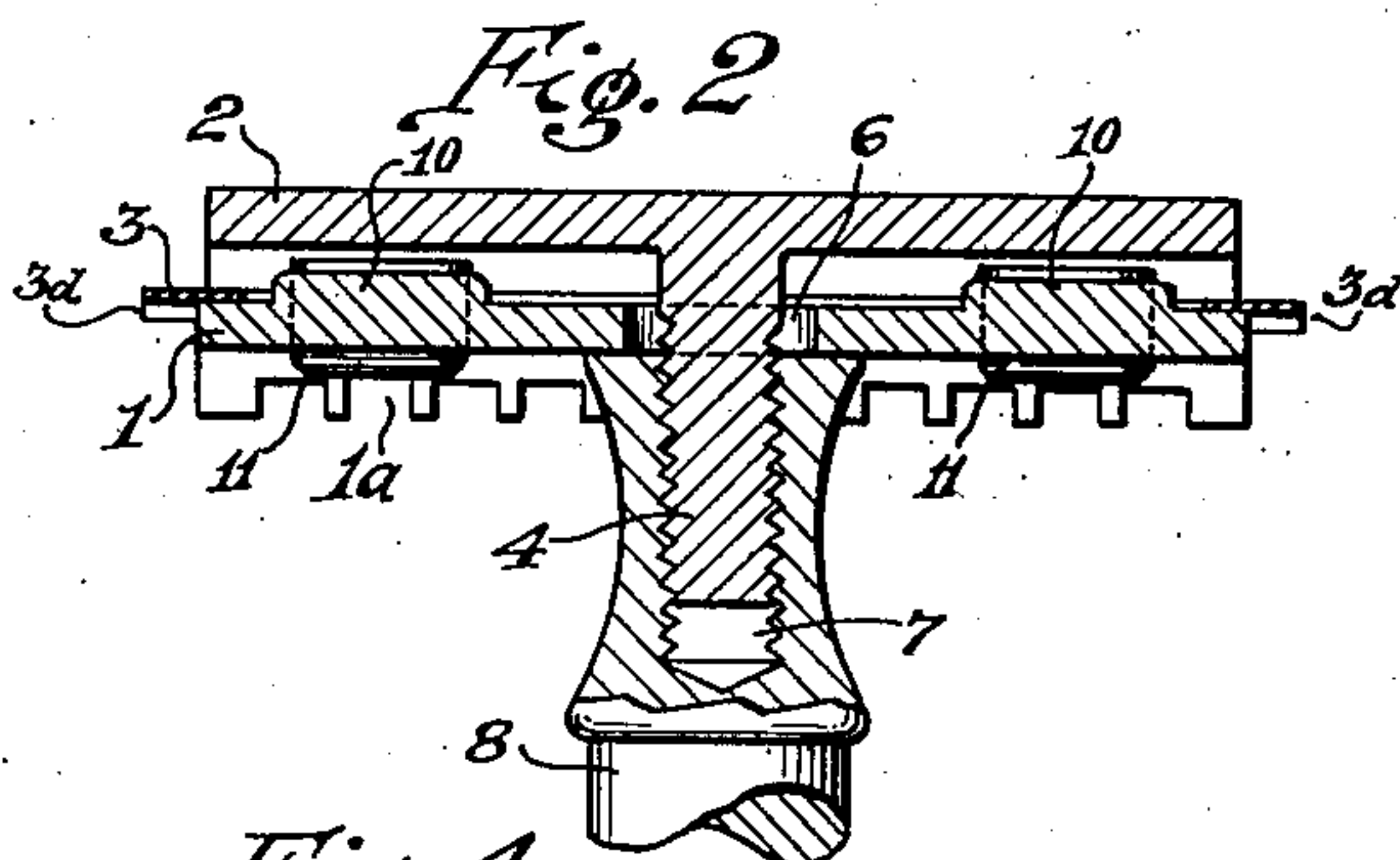
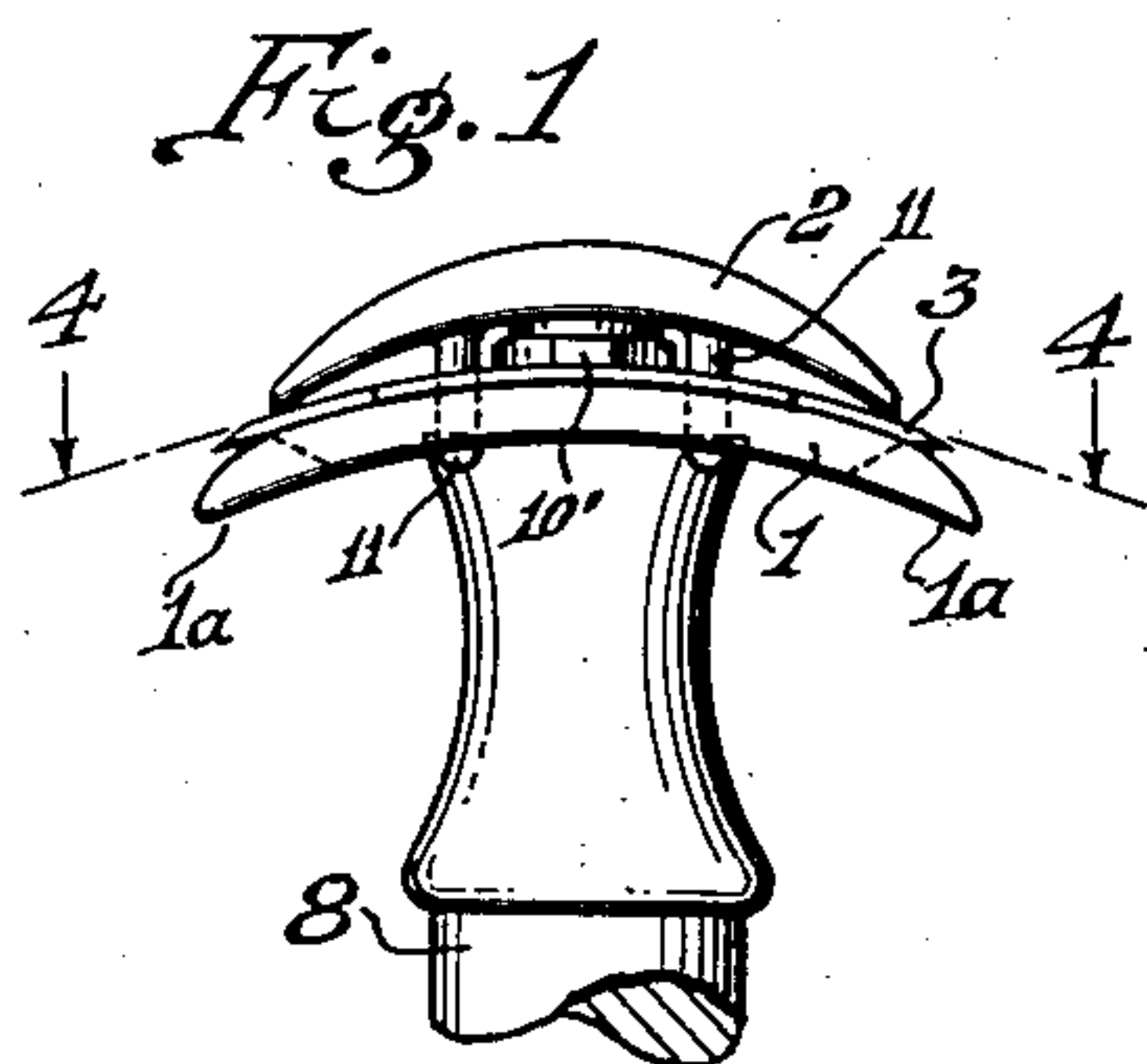
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N. R. MAAS

1,897,653

SAFETY RAZOR

Filed Dec. 26, 1929



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SAFETY RAZOR

Application filed December 26, 1929. Serial No. 416,364.

My invention relates to improvements in the class of safety razors in which a blade is held for shaving between two clamping members, including a guard member and a backing member for the blade.

An object of my invention is to provide a safety razor blade having a stud receiving aperture or opening comprising a slot having enlargements extending in a longitudinal direction with respect to the cutting edges of the blade in such a way as to increase the flexibility of the blade not only along its longitudinal axis but at opposite sides thereof.

Another object of my invention is to provide blade clamping members with studs to enter the aperture of the blade, the studs on one clamping member entering the blade aperture located substantially centrally with respect to the central longitudinal axis of the blade and studs on the other member entering openings or enlargements of the slot on opposite sides of the first mentioned aperture or slot in the central portion of the blade, whereby the blade and the said members will be retained in shaving position, and the blade will readily bend when clamped between said members.

My invention comprises novel details of improvement that will be more fully hereinafter set forth and then pointed out in the claims.

Reference is to be had to the accompanying drawing, wherein

Fig. 1 is an edge view of my improved razor in condition for use; Fig. 2 is a longitudinal section of Fig. 1; Fig. 3 is a plan view of the blade; Fig. 4 is a plan view of the assembled parts, partly in section on line 4, 4 in Fig. 1; Fig. 5 is a section on line 5, 5 in Fig. 4, showing the parts in position for clamping; Fig. 5a is a similar view showing the parts clamped together for use; Fig. 6 is a plan view of the guard member; Fig. 7 is an inverted plan view of the backing member, and Fig. 8 is a plan view of the blade showing cylindrical studs in section.

Similar numerals indicate corresponding parts in the several views.

Blade clamping members are indicated at 1 and 2 to clamp a blade 3 therebetween for shaving. The member 1 is a guard member,

having guards 1a, and the member 2 is a backing member for the blade. Suitable means may be provided for retaining the members 1 and 2 clamped against the blade. I have shown the member 2 provided with a threaded stud 4 adapted to pass through a central portion of a slot 5 in the blade and through a hole 6 in member 1, to enter a threaded recess 7 in a handle 8, for clamping the parts together, in a well known way.

The blade 3 is shown provided with a centrally disposed stud-receiving aperture or slot 3a. The aperture or slot 3a, including the portions 9, are shown located in the central longitudinal axis of the blade with respect to the cutting edges of the latter. The aperture 3a is shown extending toward the corresponding end of the blade at 3', serving in effect as an extension of the slot-like portions 9. At opposite sides of the aperture the blade is provided with spaced stud-receiving enlargements 3b, that are elongated and extend substantially parallel with the cutting edges of the blade in longitudinal planes on opposite sides of said axis and spaced therefrom. The adjacent portions of the slots 3a and 3b communicate, providing the material of the blade with ears having longitudinally projecting stud-engaging edges 3c. The edges 3c are shown extending diagonally with respect to the longitudinal axis of the blade. The enlargements 3a are shown as non-cylindrical, adapted to receive non-cylindrical studs 10, that are shown projecting from the member 1. The edges 3c are so related that the aperture 3a also will receive cylindrical studs from a blade clamping member, to engage said edges, as shown at 10'' in Fig. 8. The inner surface of member 2 is suitably curved or hollow to receive the studs 10, when the parts are clamped together, (Fig. 5a). The studs 10 are shown provided with lateral extensions 10' adapted to enter the open portions 9 and 3' of the blade. Said studs serve to position the blade upon the member 1 and retain the cutting edges of the blade in shaving relation to the guards 1a, preventing lateral and longitudinal movement of the blade upon member 1.

The member 2 is provided with spaced studs or projections 11 that are adapted to enter the enlargements 3b of the blade, and to enter opposing openings 12 in the member 1, (Figs. 5 and 5a). The studs all are spaced apart on opposite sides of the longitudinal axis of member 2 and are elongated in parallel relation to said axis to correspond with the location of the blade apertures 3b, said studs being in longitudinal planes on opposite sides of the said axis, (Fig. 4). The outer edges of the apertures 3b of the blade are shown provided with inwardly extending projections 3'', and the studs 11 are shown provided along their outer surfaces with inwardly extending recesses 11a to receive said projections, (Fig. 4). The studs 11, by entering the apertures 3b of the blade, retain the backing member 2 in proper relation to the cutting edges of the blade. The ends of the blade are shown reduced at 14, providing projecting end portions of the blade at 3d, whereby the blade will have the desired overall length and the cutting edges will not extend beyond the guards 1a.

When the parts are assembled, as shown in Fig. 5, the studs 10 will enter the blade slot enlargements 3a and will retain the cutting edges of the blade in shaving relation to the guards 1a, and the projections 11 by entering the blade slot enlargements 3b will retain the backing member 2 in proper position upon the blade, when the parts are clamped together. The effect of the relation of the parts is substantially similar to that set forth in Letters Patent to Henry J. Gaisman No. 1,633,739, issued June 28, 1927, in that the blade is retained on the guard member and the blade retains the backing member in shaving relation. My improved blade is rendered exceeding flexible along its longitudinal axis by reason of the open portions 3a, 9, and 3', and the side portions of the blade material between said open portions and the cutting edges are made flexible by reason of the longitudinally extending slot enlargements 3b that are located between said open portions and the cutting edges, so that danger of breaking the blade when clamped between the members 1 and 2 is reduced.

Having now described my invention what I claim is:

1. A safety razor comprising a head and a handle, said head including cap and guard members and a blade, said cap and guard members having opposed blade flexing and supporting portions, co-acting means on the cap and handle to secure the razor parts together and hold the blade in flexed position for shaving, said blade having an elongated slot provided with recesses or openings in the edge of its slot, some of said recesses terminating in longitudinal enlargements, said enlargements defining, in combination with

said slot and recesses, ears which extend longitudinally of the blade, means on the guard to engage the slotted portion of the blade to align the guard and blade, and means on the cap in engagement with the ears aforesaid to align the cap and blade.

2. A safety razor comprising a head and a handle, said head including cap and guard members and a blade, said cap and guard members having opposed blade flexing and supporting portions, co-acting means on the cap and handle to secure the razor parts together and hold the blade in flexed position for shaving, said blade having an elongated slot providing with recesses or openings in the edge of said slot terminating in longitudinal enlargements, said enlargements defining, in combination with said slot and recesses, ears which extend longitudinally of the blade, means on the guard to engage the slotted portion of the blade to align the guard and blade, and means on the cap passing through the longitudinal enlargements aforesaid to align the cap and blade.

3. A safety razor as set forth in claim 2 in which the slot in the blade and the enlargements thereof are parallel to each other.

4. A safety razor as set forth in claim 2 in which the slot in the blade and the enlargements thereof are parallel to each other and to the cutting edges of the blade.

5. In a safety razor comprising a head and a handle, the head including a blade having a cutting edge, blade flexing and supporting cap and guard members, co-acting means on the handle and cap to secure the razor parts together in position for shaving, co-acting means on the guard and blade to locate and maintain said blade and guard in position of alignment, said blade having interior openings within its peripheral outline, means on said cap engaging said openings within the blade for aligning the blade and cap, said blade being provided with a slot at least as long as the cutting edge, whereby the small areas at the ends of the slot are located beyond the cutting edge portions and the openings.

6. A thin flexible blade of oblong contour having parallel cutting edges, said blade having a slot in its central zone, said slot having recesses or openings in the edge portions thereof terminating in enlargements on each side of said slot, said enlargements in combination with said slot and the recesses thereof defining ears which extend longitudinally of the blade, the slot in the blade being at least as long as the cutting edges whereby the small areas of the blade at the ends of the slot are located beyond the cutting edges and the enlargements.

7. A thin flexible blade of oblong contour having parallel cutting edges, said blade having a slot in its central zone, said slot having recesses or openings in the edge portions

thereof terminating in enlargements on each side of said slot, said enlargements in combination with said slot and the recesses thereof defining ears which extend longitudinally of the blade, the slot and the enlargements thereof being parallel to each other and also to the blade edges.

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