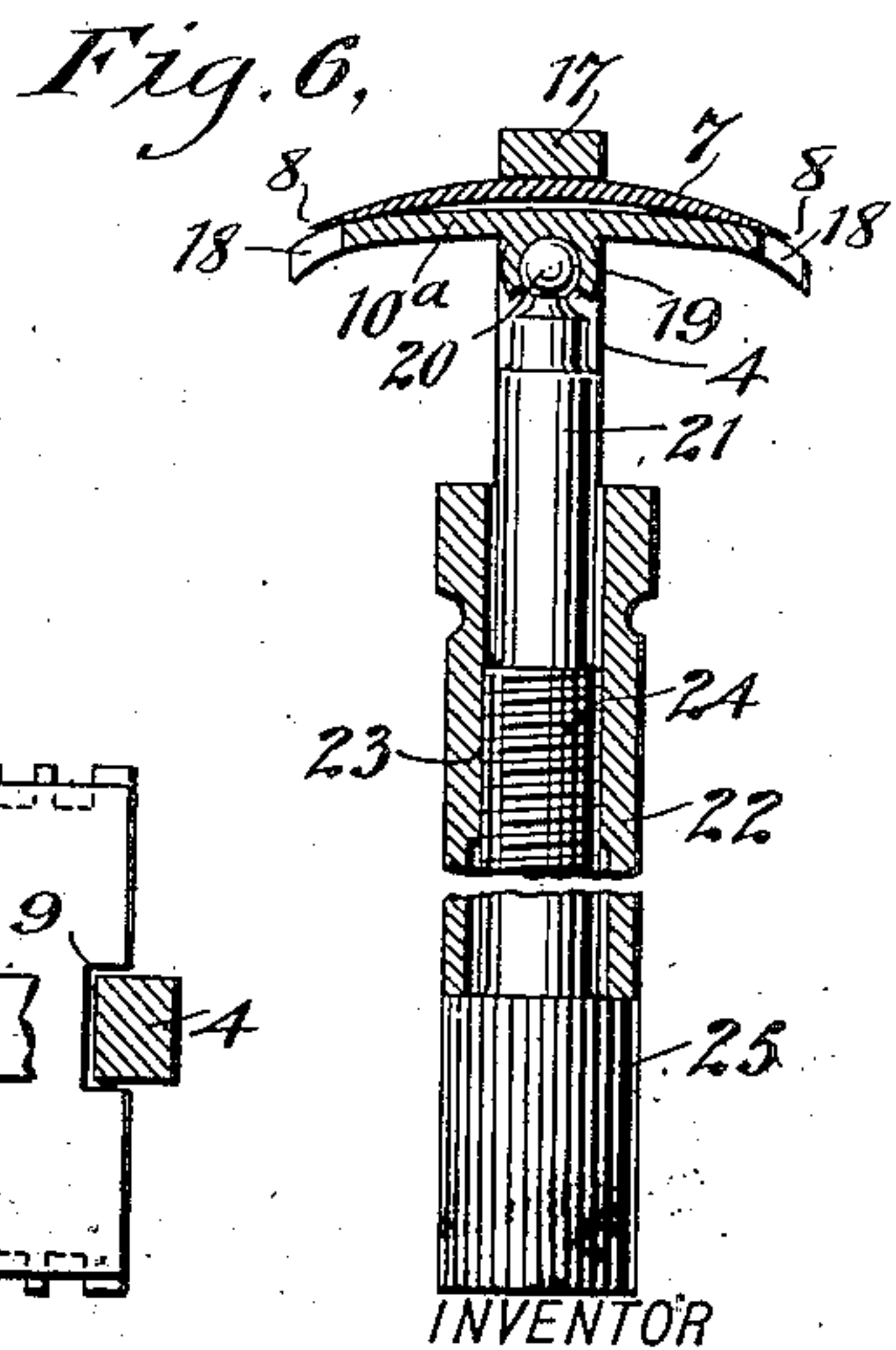
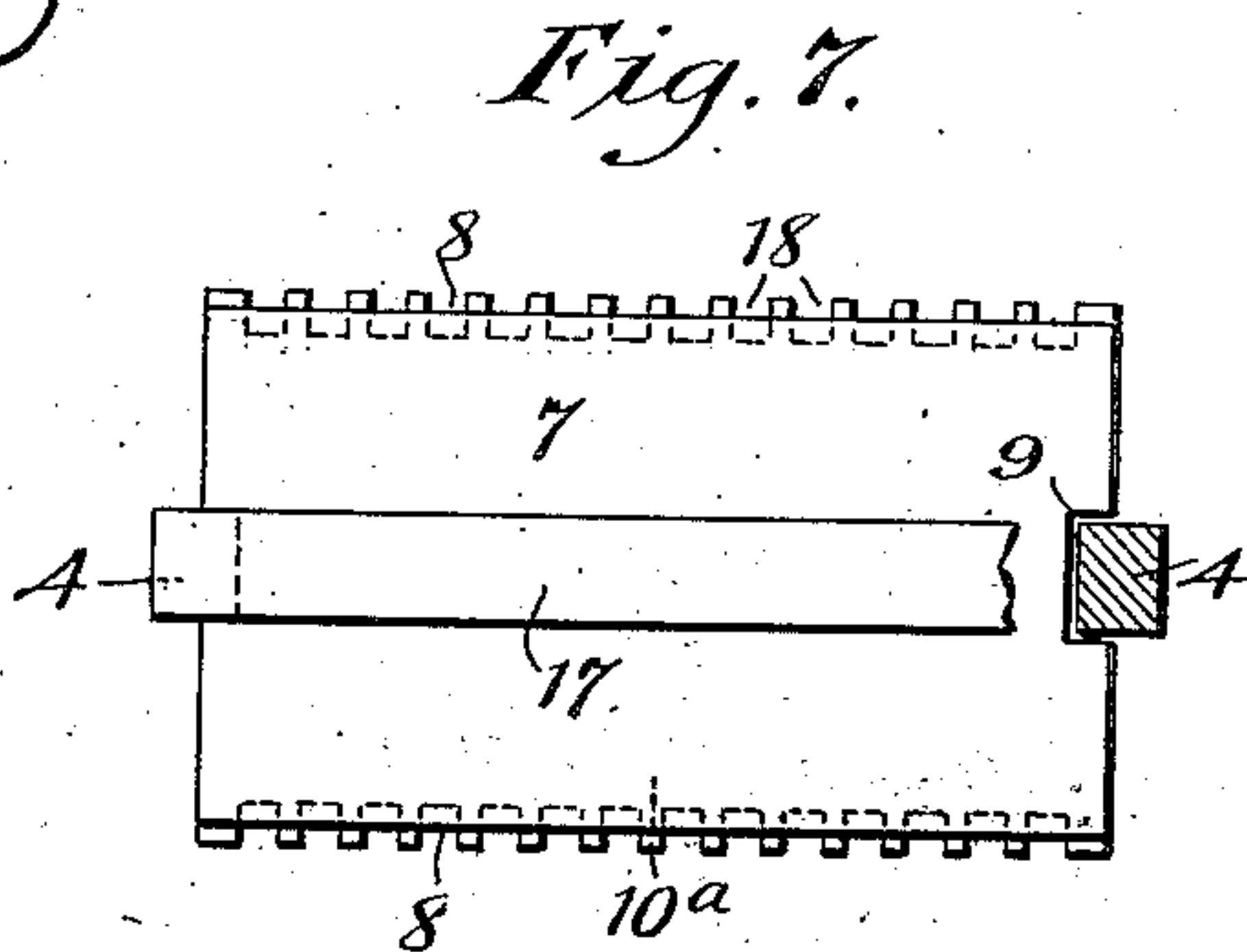
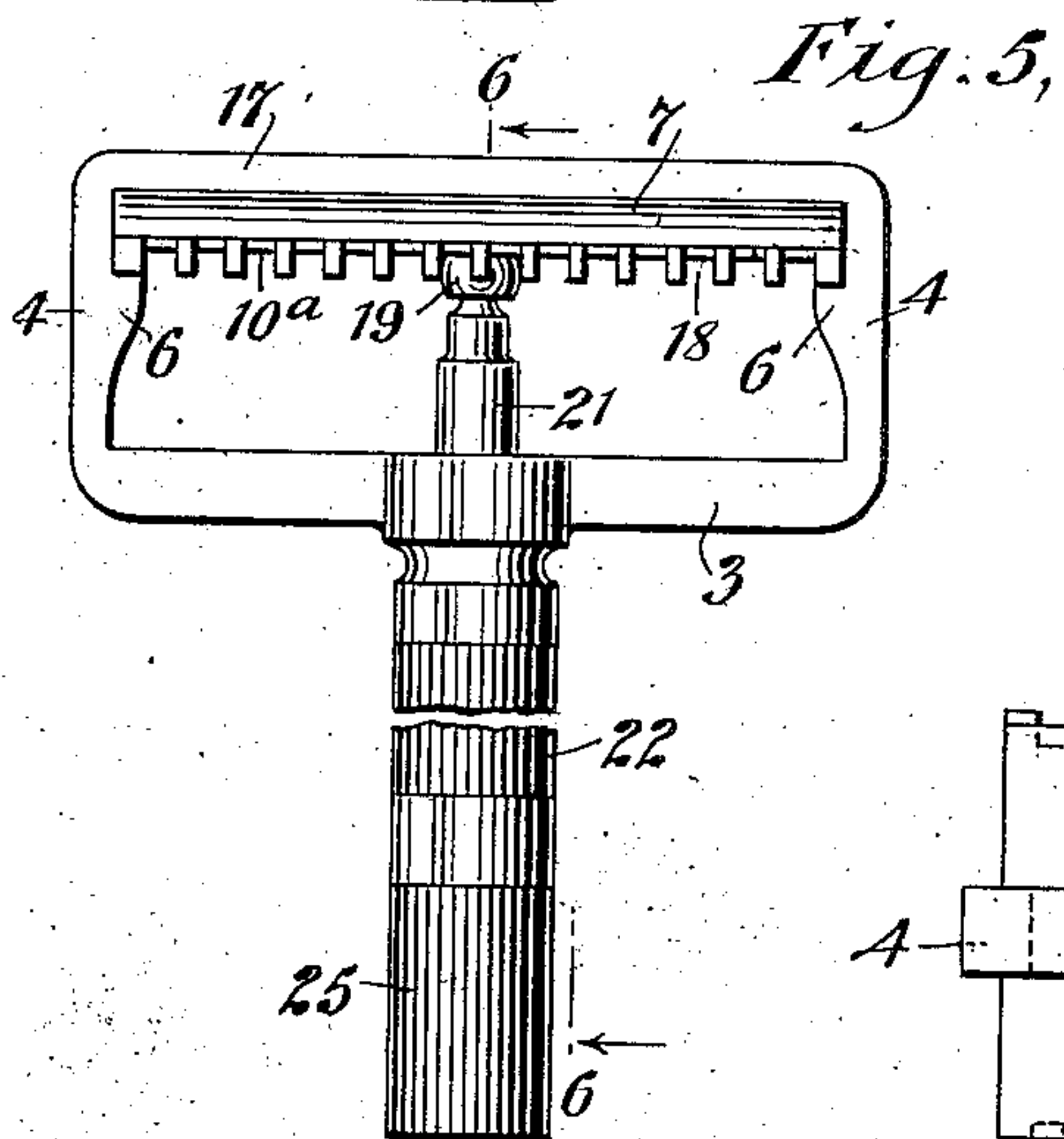
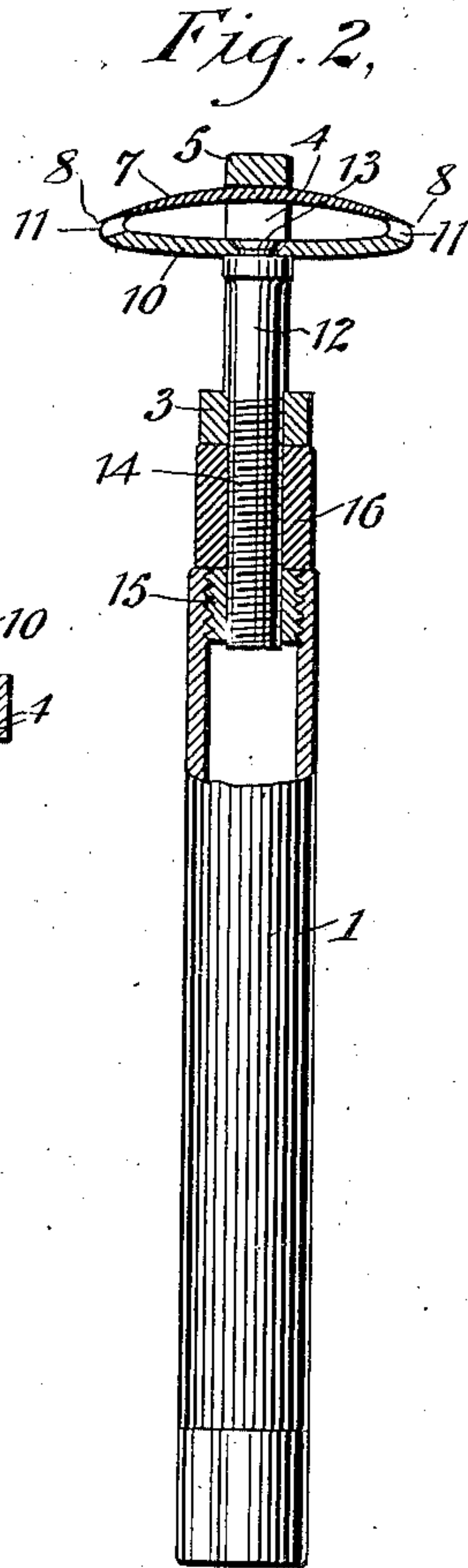
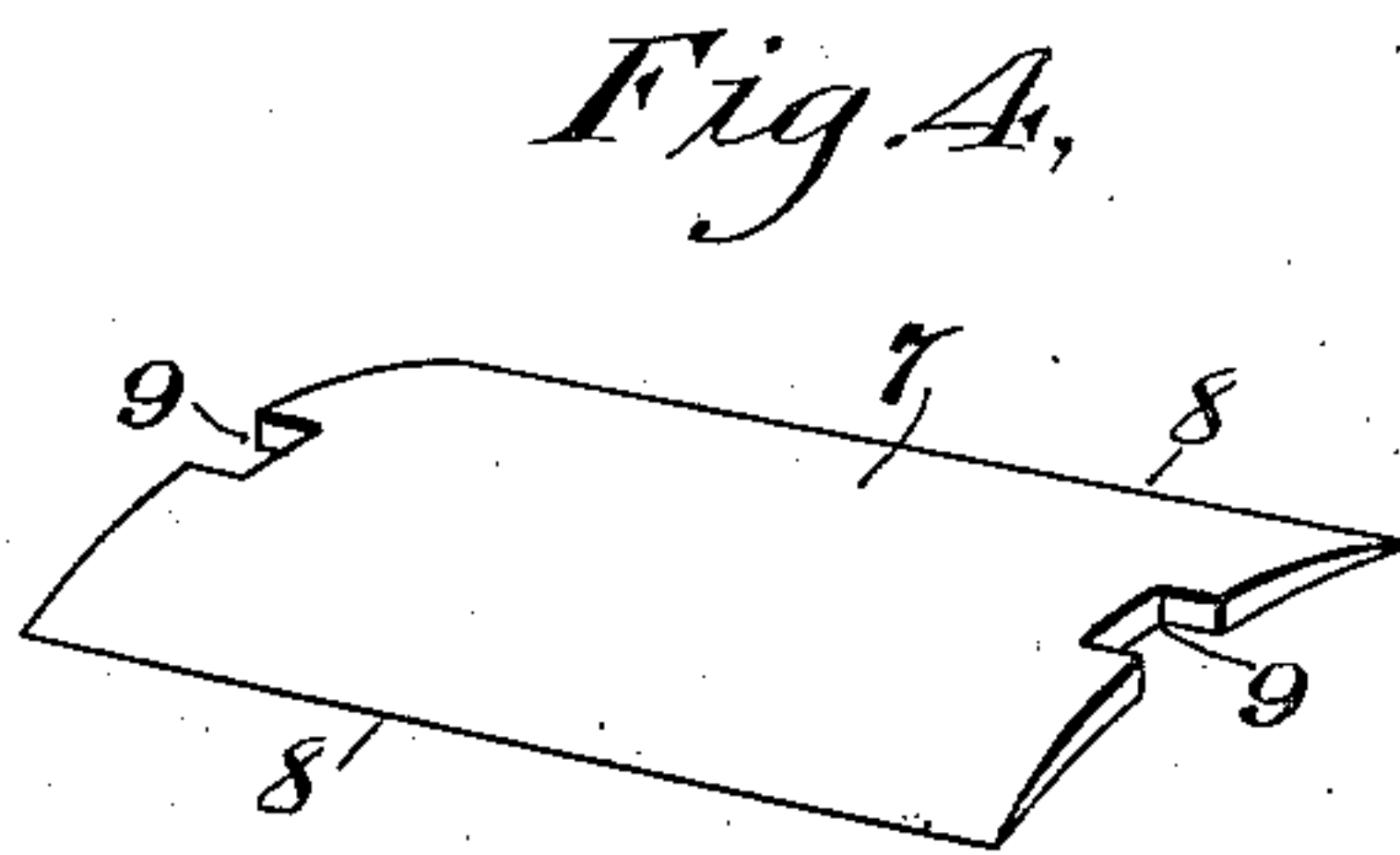
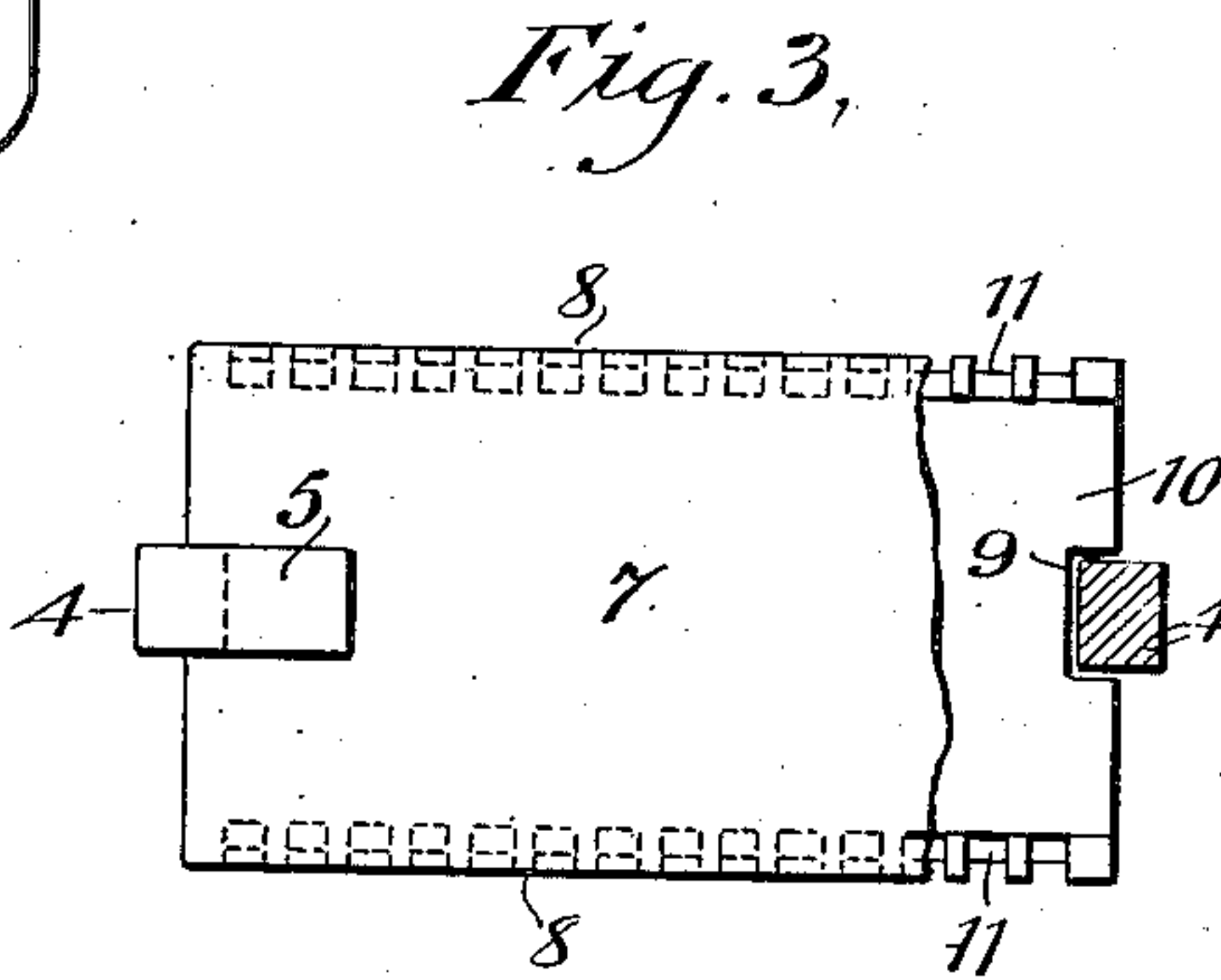
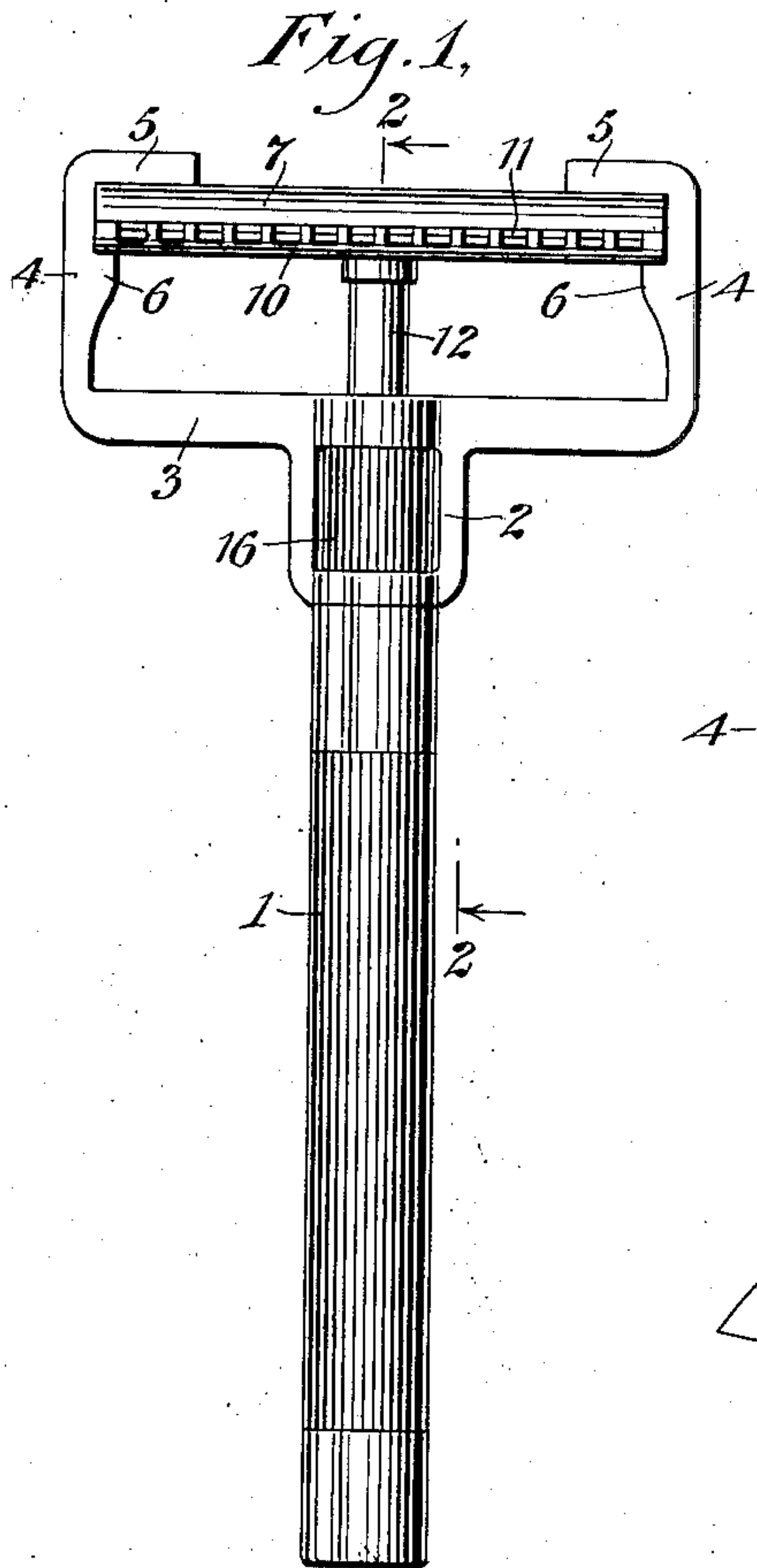


B. KIAM.
SAFETY RAZOR.
APPLICATION FILED NOV. 2, 1907.

914,957.

Patented Mar. 9, 1909.



WITNESSES

Edward Thorpe
John K. Brachvogel

INVENTOR

Benjamin Kiam
BY
Attorneys

UNITED STATES PATENT OFFICE.

BENJAMIN KIAM, OF NEW ORLEANS, LOUISIANA.

SAFETY-RAZOR.

No. 914,957.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed November 2, 1907. Serial No. 400,361.

To all whom it may concern:

Be it known that I, BENJAMIN KIAM, a citizen of the United States, and a resident of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and Improved Safety-Razor, of which the following is a full, clear, and exact description.

An object of the invention is to provide a simple, inexpensive and efficient safety razor, employing a detachable, stiff or a flexible blade and provided with two cutting edges, and co-acting with a guard to prevent the user of the razor from cutting or otherwise injuring himself.

A further object of the invention is to provide a safety razor having a curved, flexible, detachable blade and a guard to co-act with the blade, and arranged to be clamped against the latter to straighten the same and thereby provide it with sufficient rigidity, and to permit its adjustment with respect to the guard.

A still further object of the invention is to provide a safety razor having a curved blade, and co-acting therewith an oppositely curved guard, whereby a space is provided between the blade and the guard to permit the escape of lather and the like there-through.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is an elevation showing the preferred form of my safety razor; Fig. 2 is a longitudinal section of the device on the line 2—2 of Fig. 1; Fig. 3 is a plan view showing a part broken away and a part in cross-section; Fig. 4 is a perspective view showing a blade of the type used in connection with my razor; Fig. 5 is an elevation showing a razor of modified form and having a part broken away; Fig. 6 is a longitudinal section on the line 6—6 of Fig. 5; and Fig. 7 is a plan view of a modified form showing a part broken away and a part in cross-section.

Before proceeding to a more detailed explanation of my invention, it should be understood that I can use a stiff or a flexible blade in connection therewith. It has been found that the use of a thin, flexible blade,

preferably having two cutting edges, permits great saving in time and expense over the ordinary form of safety razor blade, as the flexible blade requires less steel or other material in its manufacture, and consequently can be made at a comparatively low cost, thereby permitting it to be thrown away when dull. Furthermore, the flexible blade when used in combination with a guard, can be bent by the latter so that it adjusts itself more or less closely with respect to the guard, and in consequence, it permits the regulation of the shaving operation in regard to the closeness of the removal of the beard. The blade which I prefer to use in connection with my safety razor differs essentially from other flexible blades now in use, in that it is normally curved and is straightened or bent into a form of flatter curvature by the engagement therewith of the guard.

Referring more particularly to the drawings, the preferred form of my invention as shown in Figs. 1 to 3 includes a handle 1 which may be of any suitable form, though preferably consisting of a hollow cylindrical shank which can be conveniently grasped by the hand of the user. At one end, the handle 1 has a head 2 mounted in position by means of a threaded portion 15 secured within the correspondingly threaded end of the handle. The head 2 has an opening therethrough for a purpose which will appear hereinafter. The head 2 rigidly carries a cross-bar 3. The latter has rigid side-bars 4, preferably formed integral therewith and constituting, with the cross-bar, the blade and guard holder. The side bars 4 at the upper ends have inwardly disposed fingers 5. Near the fingers 5 the side bars have inward projections 6 so formed that the distance between the projections is less than the corresponding distance between the side bars near the cross-bar 3.

I prefer to employ a concave, transversely flexible, and detachable blade 7 fashioned from steel or other suitable material, and decreasing in thickness from the center toward the opposite longitudinal cutting edges 8. The blade, owing to its curvature, of course possesses greater flexibility longitudinally thereof, but bends easily transversely of its length. At the opposite end edges, the blade is provided with recesses 9 preferably rectangular in form. Owing to the greater thickness of the blade at the middle, the flexibility resides primarily in the cutting edge portions of the same.

The length of the blade 7 is such that it permits the insertion of the blade between the side bars 4 below the inward projections 6 of the latter. Thus the blade can be placed between the side bars and when it is moved upward along the same the projections are received by the recesses 9, which thus serve to hold the blade in position between the side bars with the upper face resting against the under sides of the fingers 5. In the preferred form of my invention I employ a guard 10, having a curvature the converse of the curvature of the blade, and provided with laterally extended serrations 11 at the opposite longitudinal edges. The guard edges engage the blade near the cutting edges of the latter in the usual manner. By employing a blade and a guard of opposite curvature, a space is formed between the blade and the guard which permits the lather, moisture, and severed bristles to escape freely along the cutting edge of the blade, into the space between the blade and the guard. This construction prevents the collecting of lather or other material at the cutting edge of the blade, to impede the operation of the same.

A stem 12 is rigidly secured by means of a rivet 13, or in any other convenient manner, near the middle of the guard 10, and has the lower portion 14 threaded. The stem 12 extends through an opening of the cross-bar 3 and the head portion 15. A correspondingly threaded, manually operable burred nut 16 is arranged upon the stem 14 within the opening of the head 2, and by means of the same the stem can be moved longitudinally of the handle to adjust the guard with respect to the blade. By forcing the guard against the blade the latter is bent transversely, and is straightened to a degree corresponding to the pressure of the guard against the blade. Thus, by bending the blade, the cutting edges of the latter can be adjusted to lie more or less closely adjacent to the guard edges, so that the closeness of the shaving cut of which the blade is capable can be easily and accurately regulated.

In the modified form of my invention shown in Figs. 5 and 6 I employ a cross-piece 17 in place of the fingers 5. The cross-piece extends from one side bar to the opposite side bar and engages the blade along the entire length thereof at the middle. With this form of the device I employ a guard 10^a having a curvature similar to the curvature of the blade though of flatter curvature than the normal form of the blade. The serrated edges 18 of the guard 10^a extend beyond the opposite cutting edges of the blade as is shown most clearly in Fig. 6. By forcing the guard 10^a against the blade, the latter is straightened and the distance between the cutting edges and the edges of the guard is adjusted thereby. The guard 10^a has near the center, a socket 19 in which is movably

arranged a ball or head 20 of a stem 21. The handle 22 of the modified form has a longitudinal bore or opening through which the stem 21 extends. The latter has a threaded portion 24, co-acting with a correspondingly threaded portion 23 of the handle, to permit the adjustment of the stem longitudinally of the handle. At the lower end the stem has a laterally extended burred head 25, by means of which the stem can be manipulated. As the guard in the modified form has a movable connection with the stem, the guard adjusts itself closely and automatically with respect to the blade when it is forced thereagainst by means of the stem. At the same time the guard is prevented from becoming detached when it is loosened to permit the insertion or removal of a blade.

As the flexible blades which I employ in connection with my safety razor are of greater thickness near the center than at the cutting edges, they have sufficient rigidity and require little support. Thus, the finger 5 of the preferred form will securely hold the blade against pressure of the guard. In the modified form the cross-piece however, provides a back or brace for the blade along the entire length thereof, and consequently, with this form of the invention the blades can be made thinner. It will be understood that if so desired, I can use stiff blades with my razor, provided they are suitably formed for the purpose.

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

1. In a safety razor, in combination, a concave blade and a convex guard, whereby a space is formed between said blade and said guard.

2. In a safety razor, in combination, a concave flexible blade, and a convex guard, arranged with an edge of the guard in engagement at the cutting edge of the blade whereby a space is formed between said blade and said guard.

3. In a safety razor, a curved, flexible blade, and a curved guard adapted to engage said blade, said blade and said guard being oppositely curved whereby a space is formed between said blade and said guard.

4. In a safety razor, a concave, flexible blade having two opposite cutting edges, and a convex guard adapted to engage said blade and having serrated edges adapted to be arranged adjacent to the cutting edges of said blade, whereby a space is formed between said blade and said guard intermediate said cutting edges.

5. In a safety razor, an imperforate normally curved blade having two flexible cutting edge portions, said blade tapering from the middle to said edge portions, means engaging at the ends of said blade to hold the

same, and a guard arranged adjacent to said blade and curved oppositely thereto whereby a space between said guard and said blade is formed.

5 6. In a safety razor, a holder, a blade, said holder having side bars spaced apart at the ends thereof and formed to engage at the extremities of said blade to hold the latter in position whereby said blade is held at the
10 extremities only, a guard adapted to be positioned against said blade, and means for clamping said guard against said blade.

7. In a safety razor, a holder comprising a cross-bar and side bars, said side bars having inwardly disposed fingers, a flexible blade adapted to be arranged between said side bars against said fingers, a guard adapted to be arranged adjacent to said blade, and means for clamping said guard against said
15 blade.

8. In a safety razor, a holder comprising a cross-bar and side bars, said side bars having inwardly disposed fingers at the ends remote from said cross-bar, said side bars
20 being inwardly extended adjacent to said fingers, a blade having end recesses adapted to receive the inwardly extended portions of said side bars, a guard adapted to engage said blade and having end recesses adapted

to receive the inwardly extended portions of said side bars, and means for clamping said guard against said blade, said fingers serving to hold said blade in position. 30

9. In a safety razor, a holder, a blade, said holder having sides formed to engage at the ends of said blade to hold the same in position, a guard adapted to be positioned against said blade and having a socket, and an adjustable stem movably engaging said socket and serving to clamp said guard
35 against said blade. 40

10. In a safety razor, a holder having a handle, a blade, said holder having sides formed to engage at the ends of said blade to hold the same in position, a guard having a socket and adapted to be positioned against said blade, and a screw stem adjustably carried by said holder and having a ball portion engaging said socket, said stem serving to clamp said guard against said blade. 45

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 50

BENJAMIN KIAM.

Witnesses:

EVERARD B. MARSHALL,
F. W. HANAFORD.