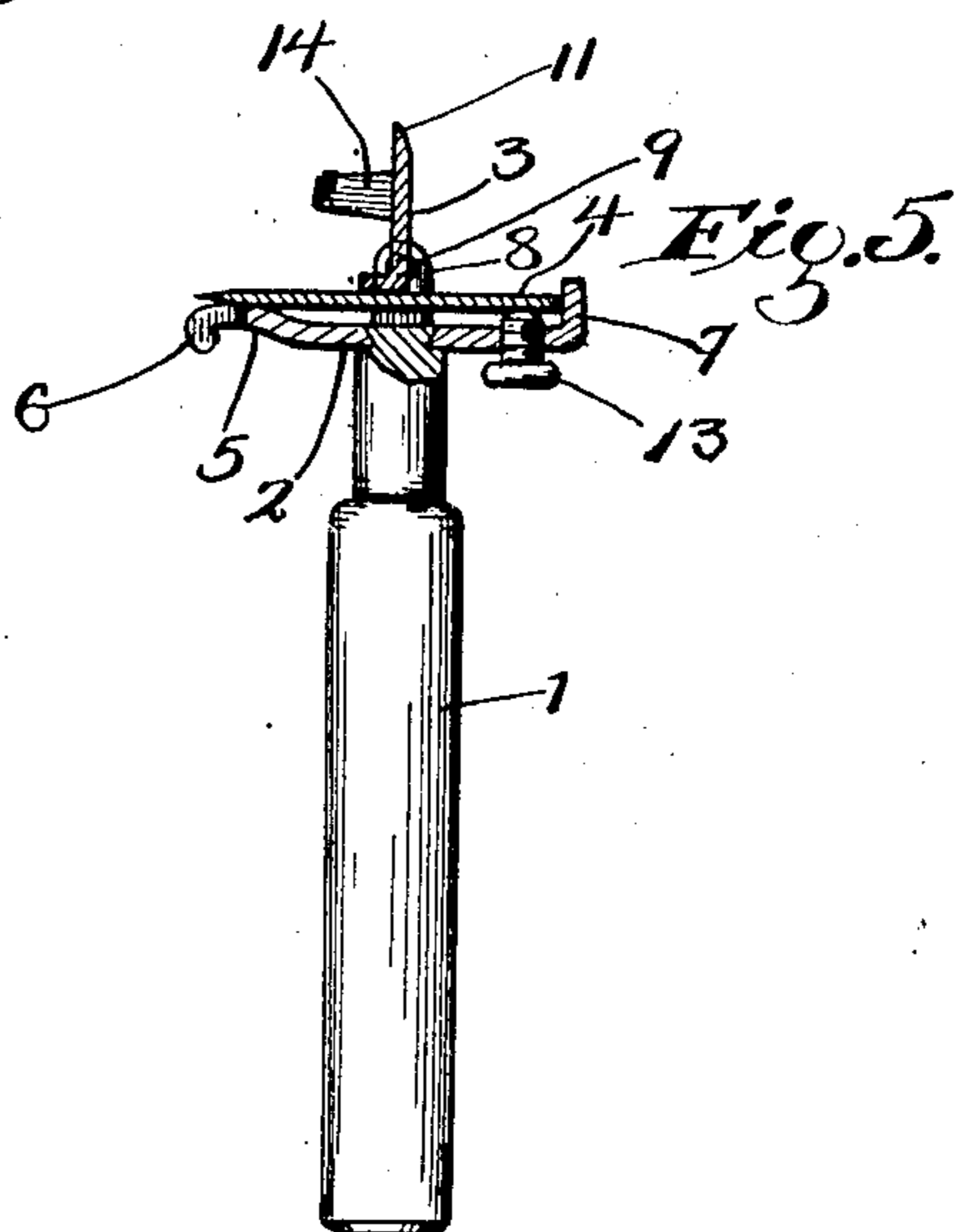
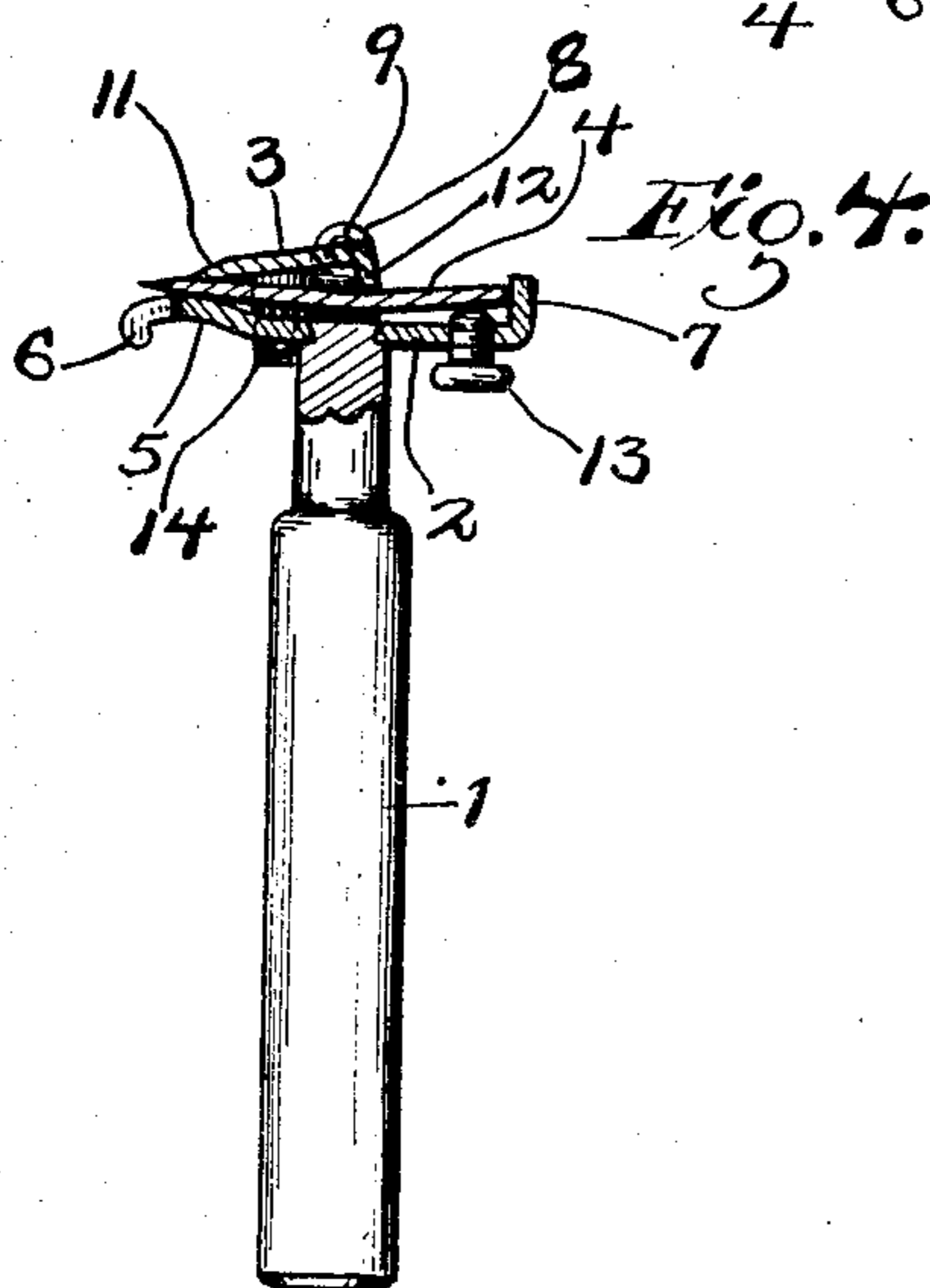
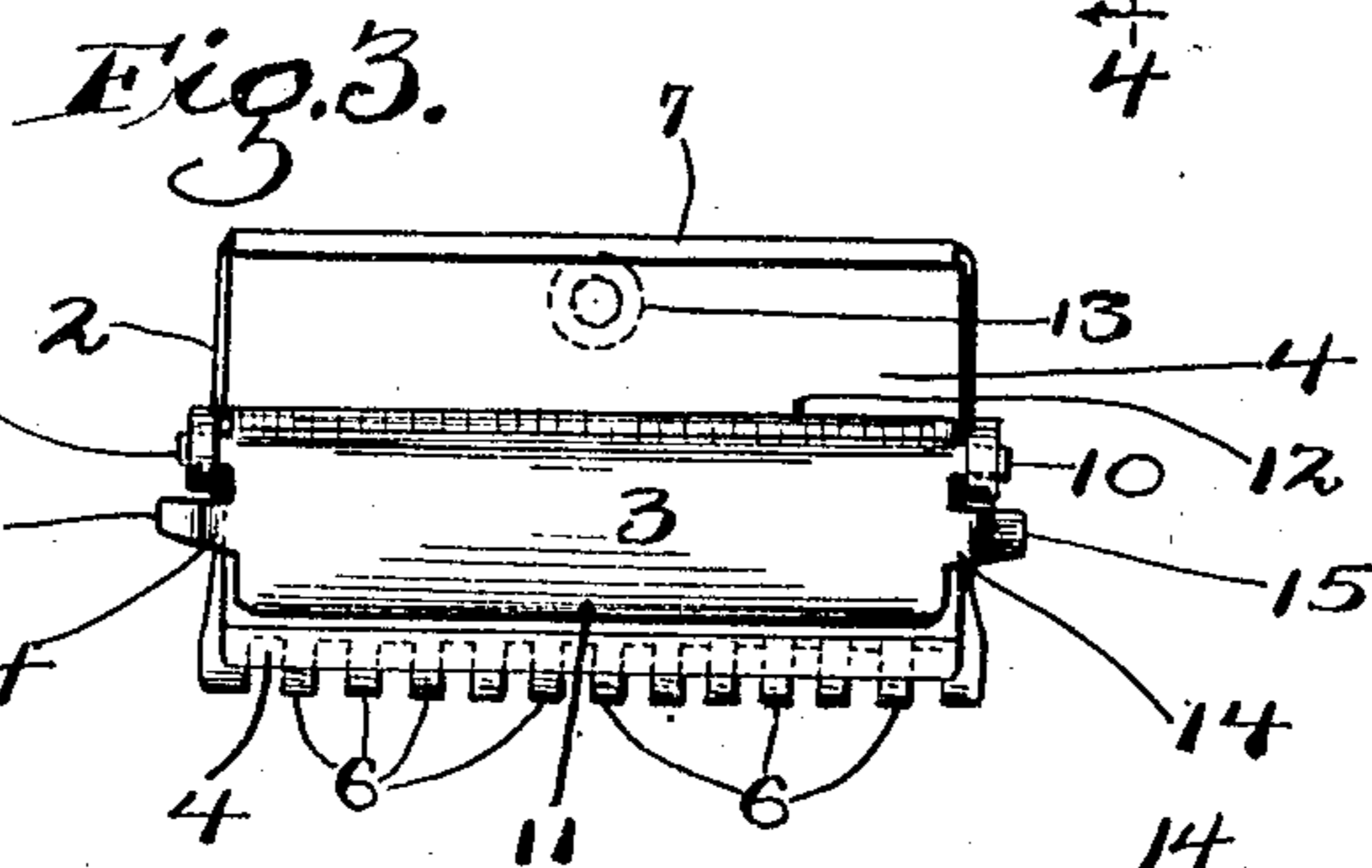
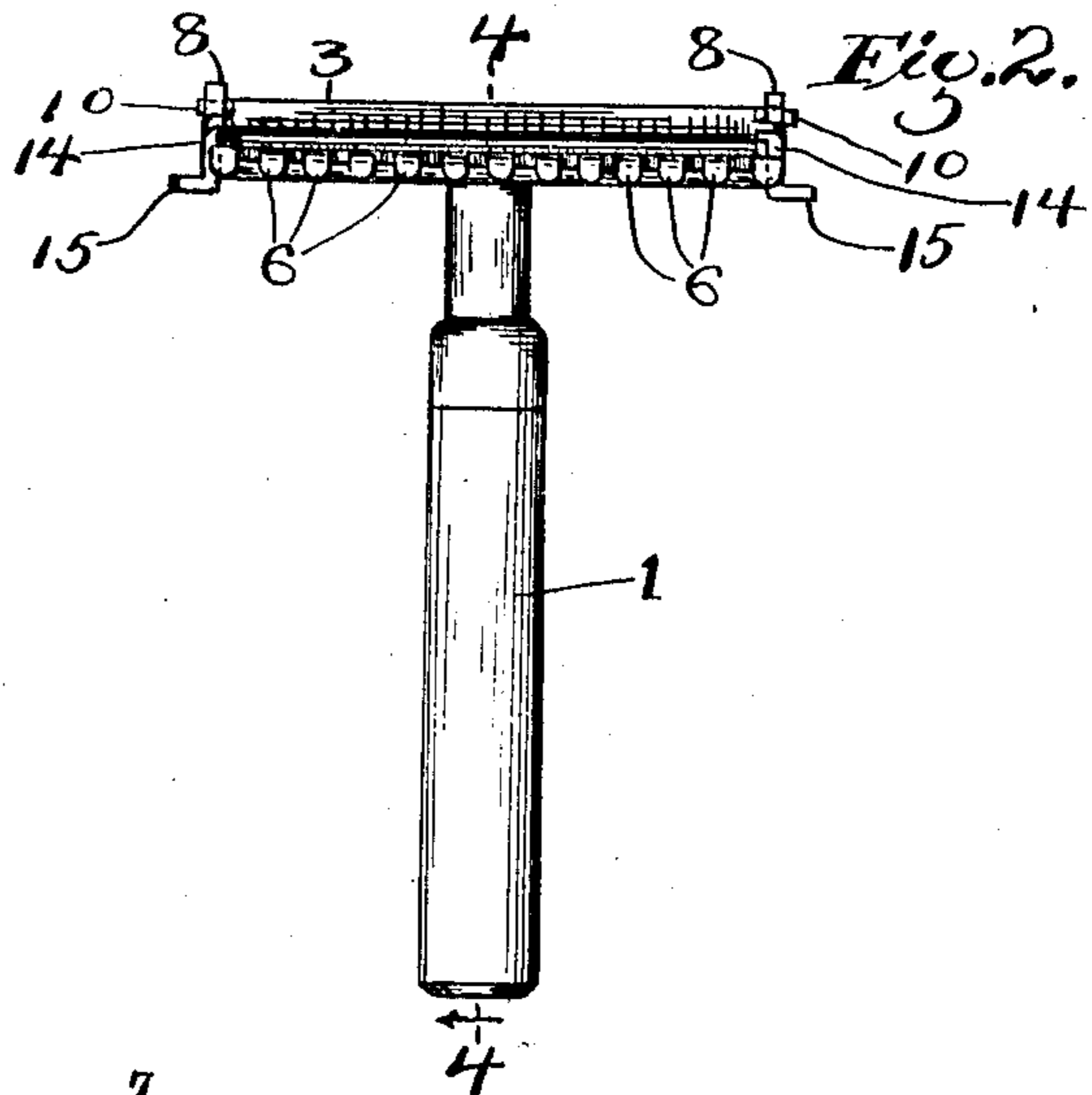
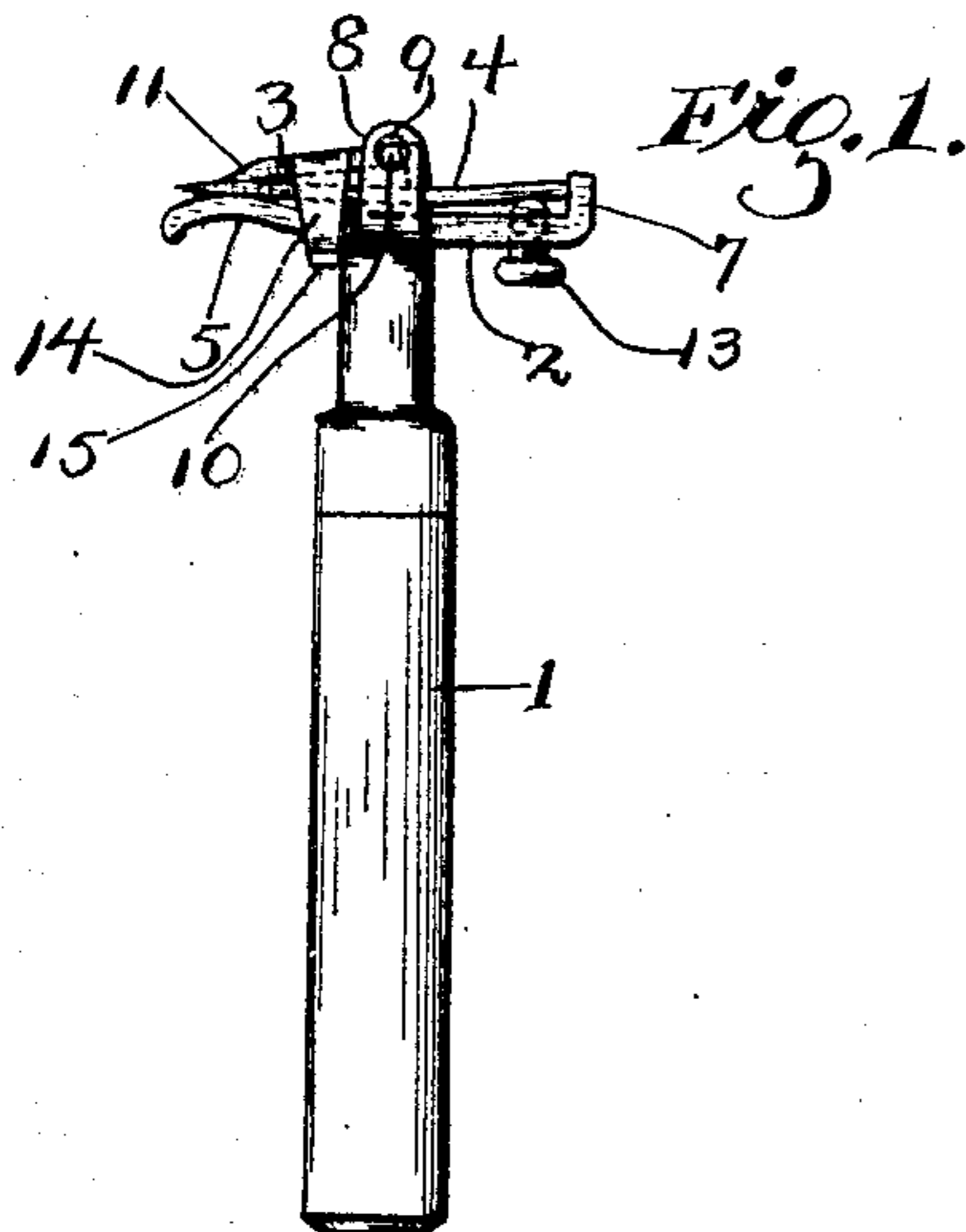


No. 892,709.

PATENTED JULY 7, 1908.

H. S. BUCKLAND.
SAFETY RAZOR.

APPLICATION FILED MAR. 4, 1907.



WITNESSES:

Daniel E. Aaly.
Victor C. Lynch.

INVENTOR

Horace S. Buckland

BY

Lynch & Aorer

his ATTORNEYS

UNITED STATES PATENT OFFICE

HORACE S. BUCKLAND, OF FREMONT, OHIO.

SAFETY-RAZOR.

No. 892,709.

Specification of Letters Patent.

Patented July 7, 1908.

Application filed March 4, 1907. Serial No. 360,483.

To all whom it may concern:

Be it known that I, HORACE S. BUCKLAND, a citizen of the United States of America, residing at Fremont, in the county of Sandusky and State of Ohio, have invented certain new and useful Improvements in Safety-Razors; and I hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to safety razors, and has for its object to so construct the guard plate and clamp as to firmly retain the blade in place and to accommodate blades the backs whereof are of varying thickness; to provide a construction wherein a clamp of the general form of a cam lever may be utilized in such manner as to grip the blade between itself and the corresponding portions of the guard plate without displacing the blades; to provide means whereby the combined clamp and cam lever may be conveniently operated to permit of the clamping of a blade in position and the ready removal of the blade from the receptacle formed between the guard plate and clamp.

A further object of the invention is to provide a construction for accomplishing the above results which shall comprise a minimum number of parts, enabling the guard and clamp to be readily cleaned.

Generally speaking, the invention may be defined as consisting of the combinations of elements embodied in the claims hereto annexed.

In the drawings forming a part hereof, Figure 1 represents a side elevation of a razor constructed in accordance with my invention; Fig. 2 represents a front elevation of the same; Fig. 3 a top plan view thereof; and Figs. 4 and 5 transverse sectional views of said razor showing the cam lever which forms the clamp in locking and unlocking positions respectively, the handle being shown mainly in elevation.

The complete razor comprises a handle 1, guard plate 2, clamp 3, and blade 4. Between the point of connection with the handle and the front edge thereof, the guard plate is bent upwardly at 5 to form a seat or bearing for the blade 4. Beyond and in front of portion 5, the guard plate is provided with teeth 6. The guard plate projects considerably to the rear of the point of connection therewith of the handle and is provided

at the rear edge thereof with an integral up-turned retaining flange 7, the distance between said flange and the front edge of the guard plate being sufficient to accommodate therebetween a razor blade of the desired or standard width, flange 7 constituting a stop or positioning device adapted to engage the rear of the blade and hold the edge thereof in proper relation to the teeth 6.

The guard plate is provided at opposite sides thereof and preferably in line with the point of connection of the handle therewith with upwardly projecting ears 8, each of said ears being provided with a circular perforation 9 adapted to form bearings for the pivots 10 of the cam lever or clamp 3. These pivots project from opposite sides of the clamp or lever intermediate the front and rear ends thereof and preferably closely adjacent to the rear end of the clamp or lever. Clamp 3 extends forwardly from the pivots a sufficient distance to enable the front edge portion 11 thereof to engage the blade 4 at a short distance behind the edge thereof and to clamp such portion of the blade firmly between itself and the subjacent portion 5 of the guard plate. At a short distance to the rear of the pivots 10, the plate of which the clamp 3 is formed is bent at substantially right angles to the body thereof to form a flange 12 which is adapted to engage the upper surface of the razor blade and assist in forming a firm retaining means for said blade. This flange is formed at the rear of and closely adjacent to pivots 10. The length of said flange is somewhat greater than the normal distance between the upper surface of the razor blade and the apertures 9 in the ears 8 whereby, on swinging the clamp downwardly from the position shown in Fig. 5 to the locking position shown in Fig. 4, the end of flange 12 will engage the upper surface of the blade, the rear end portion of said blade being normally supported by the upper end of the screw 13. For convenience of operation, clamp 3 is provided with a pair of downwardly extending ears 14, projecting from opposite sides thereof and provided at their lower ends with angular extensions 15 adapted to be grasped by the operator. The ears 14 extend on opposite sides of the blade 4 and the guard plate 2.

With the parts arranged and constructed as above described, it will be apparent that I have produced a safety razor wherein blades

having varying thickness of backs may be accommodated, such accommodation being rendered possible by the adjustment of the screw 13. With blades having thin backs, screw 13 will be adjusted to support such blades in the position shown in Fig. 5. With blades having thicker backs, screw 13 may be withdrawn a sufficient distance to accommodate the backs of said blades and still retain the blade in proper angular adjustment with respect to the front edge of the guard plate. On swinging the clamp from the position shown in Fig. 5 to that shown in Fig. 4, the frictional engagement of flange 12 with the upper surface of the blade will tend to move the latter rearwardly, but such movement is resisted and prevented by flange 7. When the clamp is swung down to bring the front portion 11 thereof into operative relation to the blade, the lower end of flange 12 has swung beyond (to the rear of) the pivotal connection of the clamp with the ears 8, and the blade is firmly held by front edge 14 of the clamp and subjacent portion of the guard and by screw 13 and flange 7. The location of the pivots 10 in front of flange 12 makes the cam lever or clamp form a firm engagement with the upper surface of the blade at two points and automatically holds or locks the clamp in such engagement without liability to the release of the blade through accidentally raising the clamp, it being necessary to apply considerable force to the clamp through the operating extensions 15 of ears 14 before the clamp can be disengaged from the blade. Owing to the simplicity of construction, there being but three parts to the razor clamping means (guard plate 2, clamp 3, screw 13) the parts are easily cleaned.

I claim:

1. In a safety razor, the combination of a guard plate having at one edge thereof a plurality of teeth and at the opposite edge an integral upwardly projecting flange, and a clamp cooperating with said guard plate, said clamp comprising a cam lever pivotally associated with said plate and having thereon two spaced surfaces adapted to engage a razor blade, substantially as specified.

2. In a safety razor, the combination of a guard plate having at one edge thereof a plurality of teeth, and a clamp cooperating with said guard plate, said clamp comprising a cam lever pivotally associated with said plate and having thereon two spaced surfaces for engaging a razor blade, substantially as specified.

3. In a safety razor, the combination of a guard plate having at the front edge thereof a plurality of teeth and means engaging the under surface of the rear portion of a razor blade, and a clamp cooperating with said guard plate and having a front portion adapted to engage a razor blade and another por-

tion adapted to engage said blade between the front portion of the guard plate and the blade-engaging means of said guard plate, substantially as specified.

4. In a safety razor, the combination of a guard plate having the front edge thereof provided with a plurality of teeth and having the rear portion thereof depressed below the plane of the front portion, an adjustable support carried by the rear portion of said plate and adapted to engage the lower surface of a razor blade, and a clamp pivotally associated with said guard plate and adapted to be moved into engagement with the upper surface of said blade adjacent the edge thereof and between the clamp pivots and the adjustable support, substantially as specified.

5. In a safety razor, the combination of a guard plate, a clamp pivotally connected with said guard plate intermediate of the front and rear thereof, said clamp having two portions or surfaces adapted to engage a razor blade inserted between itself and the guard plate, one of said portions being adjacent the front edge of said clamp and the other being located rearwardly of the pivotal connection of said clamp with said plate, substantially as specified.

6. In a safety razor, the combination of a guard plate having teeth at one edge thereof and a clamp pivotally supported adjacent to said guard plate, said clamp having two portions adapted to engage a razor blade, one portion being adapted to engage the blade adjacent to the edge thereof and the other portion adapted to engage the blade at the rear of the pivotal connection, substantially as specified.

7. In a safety razor, the combination of a guard plate having at one edge thereof a plurality of teeth, and a clamp associated with said guard plate and having pivots intermediate of the front and rear thereof, said clamp having a downwardly extending flange at the rear of said pivots and having adjacent to the front edge thereof a portion adapted to engage the front edge portion of a razor blade, substantially as specified.

8. In a safety razor, the combination of a guard plate having at one edge thereof a plurality of teeth, a clamp associated with said guard plate and having pivots intermediate of the front and rear thereof, said clamp having a downwardly extending flange at the rear of said pivots and having adjacent to the front edge thereof a portion adapted to engage the front edge portion of a razor blade, and means adapted to engage the blade and prevent displacement thereof by the movement of the clamp in a direction to engage the blade, substantially as specified.

9. In a safety razor, the combination of a guard plate having teeth adjacent to the front edge thereof and an upwardly projecting flange at the rear edge thereof, lugs or

ears projecting upwardly from said guard plate, and a clamp pivoted to said lugs or ears intermediate of the ends thereof, said clamp having a front portion adapted to engage the edge portion of a razor blade and a downwardly extending flange at the rear adapted to engage the upper surface of a razor blade, substantially as specified.

10. In a safety razor, the combination of a guard plate having teeth adjacent to the front edge thereof and an upwardly projecting flange at the rear edge thereof, lugs or ears projecting upwardly from said guard plate, a clamp pivoted to said lugs or ears intermediate of the ends thereof, said clamp having a front portion adapted to engage the edge portion of a razor blade and a downwardly extending flange at the rear adapted to engage the upper surface of a razor blade, and a screw threaded through the rear portion of said plate, substantially as specified.

11. In a safety razor, the combination of a guard plate having a plurality of teeth at the front edge thereof and having upwardly extending ears carried by opposite sides thereof, and a clamp pivoted to said ears, said clamp comprising a cam lever one end of

which is adapted to engage a razor blade at the rear of the pivots of said lever and the other end adapted to engage the edge portion of the razor blade, said clamp having one or more operating lugs projecting therefrom, substantially as specified.

12. In a safety razor, the combination of a guard plate having a plurality of teeth at the front edge thereof and having upwardly extending ears carried by opposite sides thereof, and a clamp pivoted to said ears, said clamp comprising a cam lever one end of which is adapted to engage a razor blade at the rear of the pivots of said lever and the other end adapted to engage the edge portion of a razor blade, said clamp having downwardly extending operating ears projecting from either side thereof, each of said ears having an angular extension, substantially as specified.

In testimony whereof, I sign the foregoing specification, in the presence of two witnesses.

HORACE S. BUCKLAND.

Witnesses:

S. C. GARVER,
CHAS. H. GRAVES.