

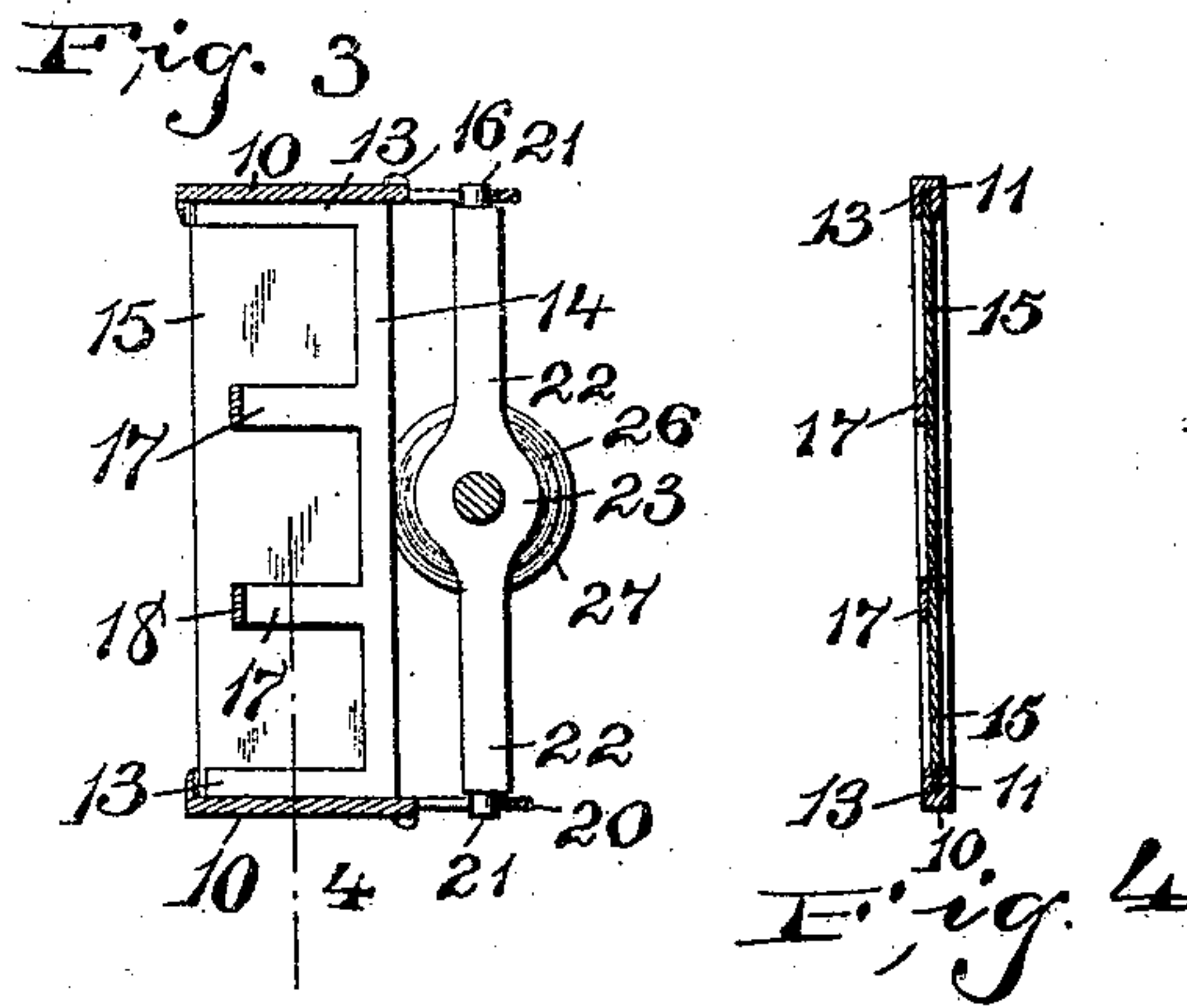
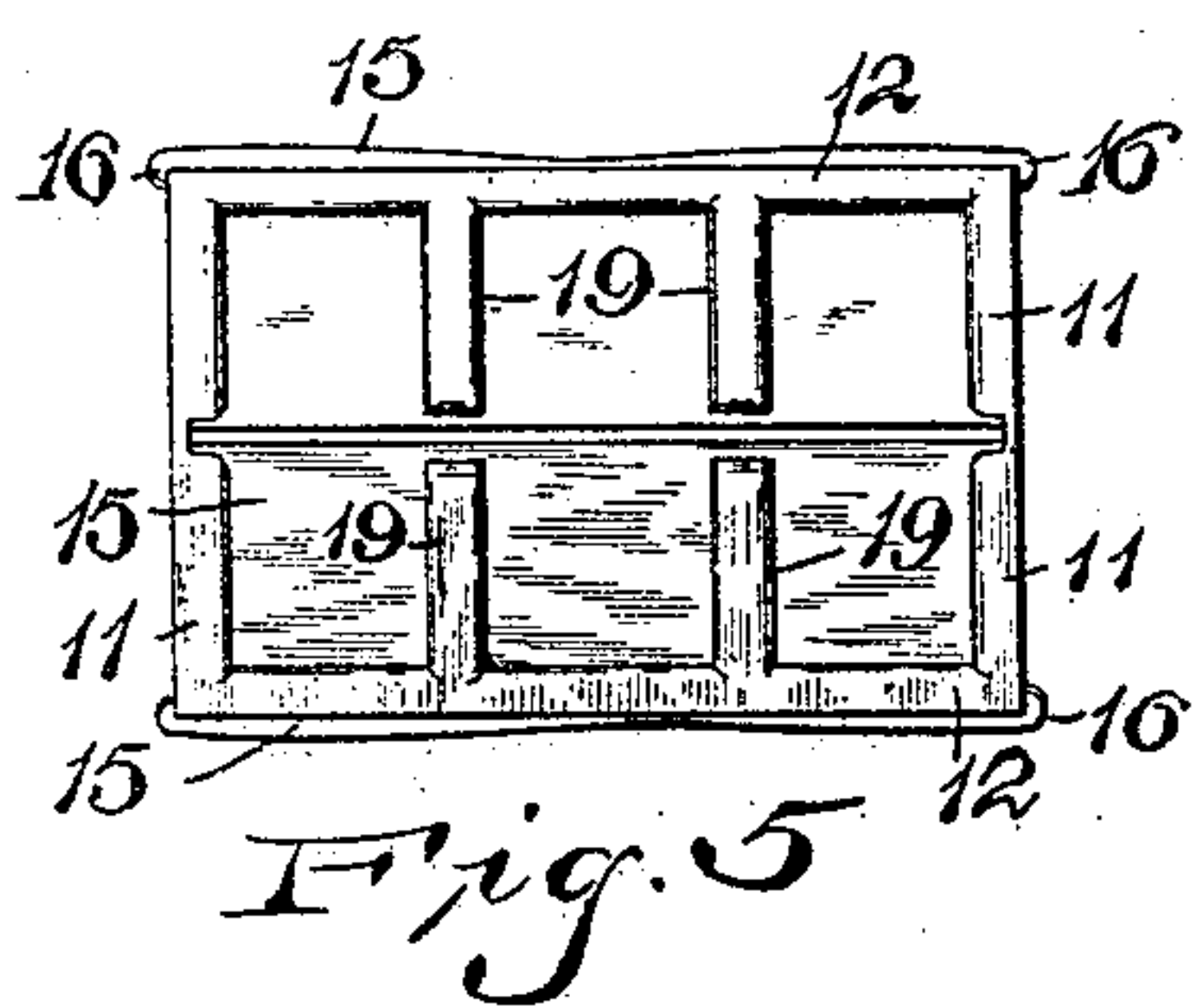
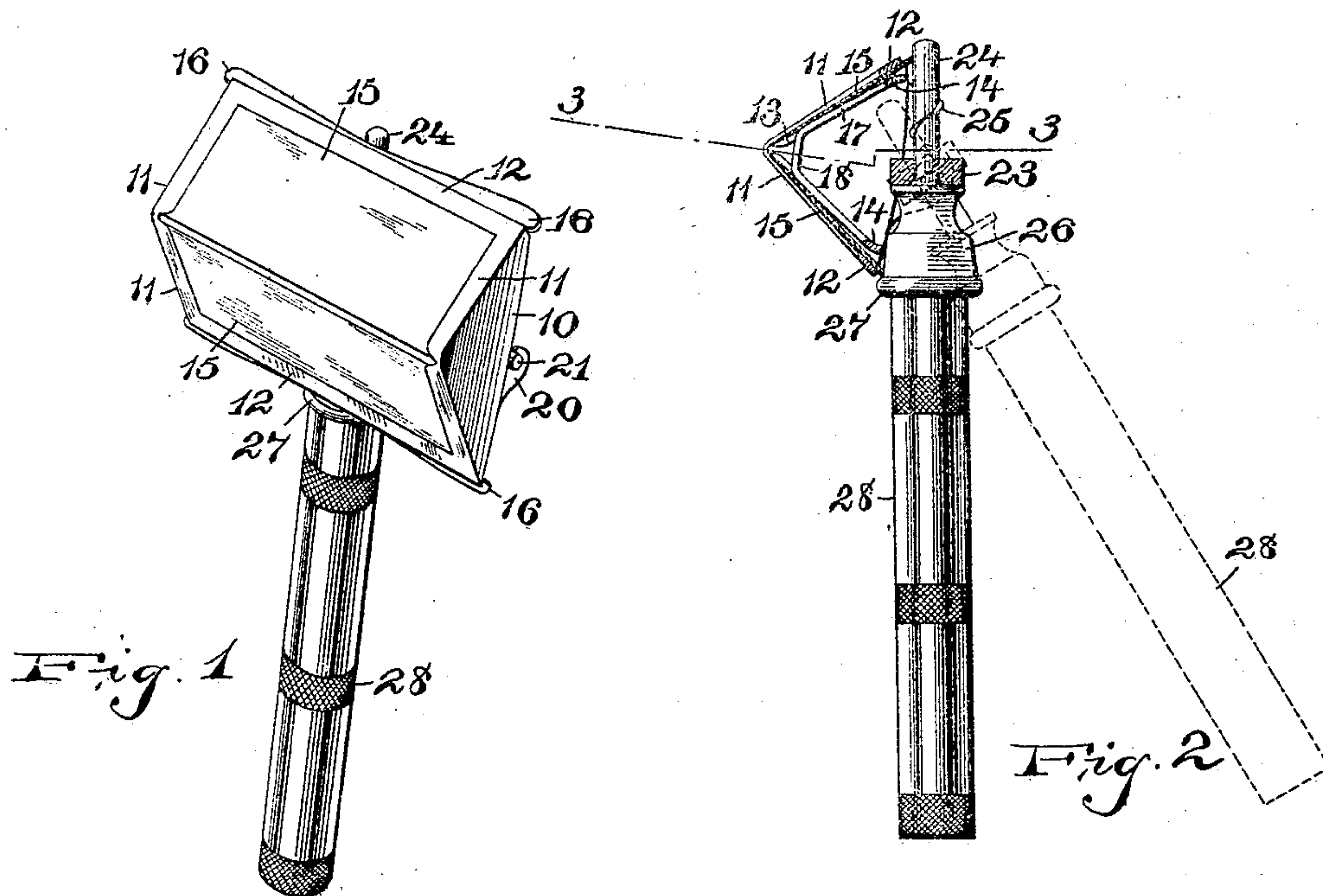
No. 869,748.

PATENTED OCT. 29, 1907.

J. J. STEINHARTER.

SAFETY RAZOR.

APPLICATION FILED MAR. 9, 1907.



WITNESSES:  
E. A. Pell.  
S. A. Rogers.

INVENTOR  
Joseph J. Steinharter,  
BY  
W. H. Campfield,  
ATTORNEY



# UNITED STATES PATENT OFFICE.

JOSEPH J. STEINHARTER, OF NEWARK, NEW JERSEY, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE NEWARK SAFETY RAZOR COMPANY, OF NEWARK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

## SAFETY-RAZOR.

No. 869,748.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed March 9, 1907. Serial No. 361,536.

*To all whom it may concern:*

Be it known that I, JOSEPH J. STEINHARTER, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Safety-Razors; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to a safety razor, and is designed to provide a razor that has a pair of blades arranged in a casing, these blades being arranged at an angle, with their cutting edges adjoining and forming preferably a slight space between them, whereby when either of the blades is being used, the other blade will act as a guard so that the blade that is being used will not accidentally cut the operator.

The invention is further designed to provide a locking means for securely fastening the blades in a casing, the locking means being reversible, whereby one or the other of the blades can be used, and this handle acting as a locking means when locking the blades, also secures the casing of the blades to the handle.

This invention is also designed to provide a razor, of this kind, that has no fine teeth or guards which are adapted to catch the lather or the fine hairs, and thus become filled, making the razor hard to manipulate.

The invention is illustrated in the accompanying drawings, in which

Figure 1 is a perspective view of the razor, and Fig. 2 is a section of the same, showing the handle in elevation. Fig. 3 is a section on line 3, 3, in Fig. 2, and Fig. 4 is a section on line 4, in Fig. 3. Fig. 5 is a front view of a casing of a modified form.

The casing of the razor is made with the end plates 10 which are preferably triangular or approximately so, and the side strips 11 project inward to hold the outside edge of the blade, and these edge strips 11 are joined by the top and bottom strips 12, these strips covering the edges of the razor, except the cutting edge. Underneath the razor blade are the strips 13 which are connected with the inside top and bottom strips 14, these top and bottom strips 14, as shown in Fig. 2, being slightly curved to form an easy entrance for the blade. Between these strips on the inside and outside of each of the triangular end pieces, are slid the blades 15 with their cutting edges in close proximity and at an angle, as shown in Figs. 1 and 2, so that when one blade is used, the other blade acts as a guard for it to prevent cutting, except to a certain depth, that is the blade that is being used to shave with will take off the hair, but

will be guarded against entering the flesh of the operator. The inside strips 14 have projecting therefrom and underneath the blades, the strengthening strips 17, and these strips are designed to have a tie or bar 18 join them a slight distance back from the cutting edge of the blades. This is done rather than have the strips 17 run up close under the cutting edges of the blades, because there is thus no chance for the accumulation, directly under the cutting edges, of lather or fine hairs to affect the efficiency of the razor.

If desired, I may make the casing as shown in Fig. 5, in which case I add the outside guards 19 which terminate short of the cutting edges of the razor blades so as not to interfere with the cutting. These strips 19 are used if extremely thin blades are placed in the casing. The blades are prevented from approaching too close together by having the wings 16 on the ends of the back edge of each blade, these wings engaging the edge of the casing to limit the movement of the blades toward one another. On each side piece 10 is a hook 20 which forms a bearing for the ends 21 of the bar 22. In the center of this bar is an enlarged portion 23 with a screw-threaded recess. Into this screw-threaded recess is screwed the shaft 24 of the handle, this shaft 24 having a thread 25 to work in the nut 23 so that when it is screwed up tight, the upper edge of the shaft 24 will engage the back edge of one blade of the razor. The handle is provided, below the shaft 24, with an enlarged portion 26 slightly tapered, and which has a flange 27. When the end of the shaft 24 engages the back of one razor blade, this flange 27 engages the edge of the other and the blades are thus securely locked against any displacement, and are held firmly in place so that a rigid structure is in the hands of the person who is doing the shaving. The tapered portion 26, bearing on one razor blade, throws that edge of the casing out and it gives the casing and the blades the proper pitch for comfortable manipulation.

A handle portion 28 is suitably attached, and when one blade is worn, or for any other reason it is desired to use the other, the handle 28 is twisted to unscrew the shaft 24 from the nut 23, and the handle can be swung over, the ends 21 of the bar 22 turning in the hooks 20, the handle being partially turned in Fig. 2, where it is shown in dotted outline.

It will be evident that the handle can be entirely turned over and again screwed up, this reversing the casing on the handle, and presenting a new blade.

This razor can be operated both by pulling it downward, by means of the handle, or by pushing it upward on the side of the face, which is not possible with razors as heretofore made, and strokes only in one direction, acting to shave.



Having thus described my invention, what I claim is:—

1. A safety razor comprising a casing, and blades in the casing arranged at an angle to one another with their cutting edges adjacent, each blade being adapted to act as a guard to the other.
2. A safety razor comprising a casing, a pair of blades arranged at an angle in the casing with their cutting edges adjoining, and a handle secured to the casing, the handle locking the blades in the casing.
3. A safety razor comprising a casing, channels in the casing to receive a pair of blades, the blades being disposed at an angle to each other and with a slight space between their cutting edges, means for limiting the entrance of the blades in the casing to insure a space between their cutting edges, and a handle attached to the casing.
4. A safety razor comprising a casing, blades arranged in the casing at an angle to each other and with their cutting edges adjoining, and each blade being adapted to act as a guard for the other, and means for limiting the entrance of the blades in the casing.
5. A safety razor comprising a casing having end pieces, channels in the end pieces, strips connecting the end pieces at the top and bottom, blades arranged in the channels and disposed at an angle to each other, and a handle secured to the casing and engaging the back ends of the blades to lock the blades in the casing.
6. A safety razor comprising a casing, a pair of blades in the casing disposed at an angle to each other, their cutting edges adjoining, a handle secured to the casing and when so secured, engaging the back edges of the razor blades to secure the blades in the casing.
7. A safety razor comprising a casing having end plates, top and bottom strips connecting the plates, blades secured in the plates at an angle to each other, and guard strips secured to the casing and engaging the under sides of the blades to stiffen them.

8. A safety razor comprising a casing having end plates, top and bottom strips connecting the end plates, a pair of blades secured in the casing, guard strips underneath the blades and secured to the casing, ties connecting the guard strips at a distance from the cutting edge of the blades, and a handle secured to the casing and when so secured, engaging the back edges of the blades to lock the blades in the casing.

9. A safety razor comprising a casing having a pair of blades disposed at an angle to each other, a handle pivoted to the casing and rotatable thereon, the handle being reversible, and the handle when secured to the casing engaging the back edges of the blades to lock the blades in the casing.

10. A razor blade comprising a casing having end plates, end strips on the plates, top and bottom strips connecting the end strips, blades underneath the strips and arranged at an angle to each other and having their cutting edges adjoining, wings on the blades to limit their entrance into the casing, hooks on the back edge of the side plates, a bar arranged to rotate in the hooks, a screw-threaded shank passing through the bar and engaging the back edge of one blade, an enlarged portion engaging the back edge of the other blade, and a handle secured thereto for its manual manipulation.

11. A safety razor comprising a casing comprising end plates, edge strips on the end plates, top and bottom strips connecting the edge strips on the outside, inside top and bottom plates connecting the side pieces, guards or fingers projecting from the inside and the outside top and bottom strips, and blades secured between the fingers and being disposed at an angle to each other.

In testimony, that I claim the foregoing, I have hereunto set my hand this 28th day of February 1907.

JOSEPH J. STEINHARTER.

Witnesses:

WM. H. CAMFIELD,  
E. A. PELL.