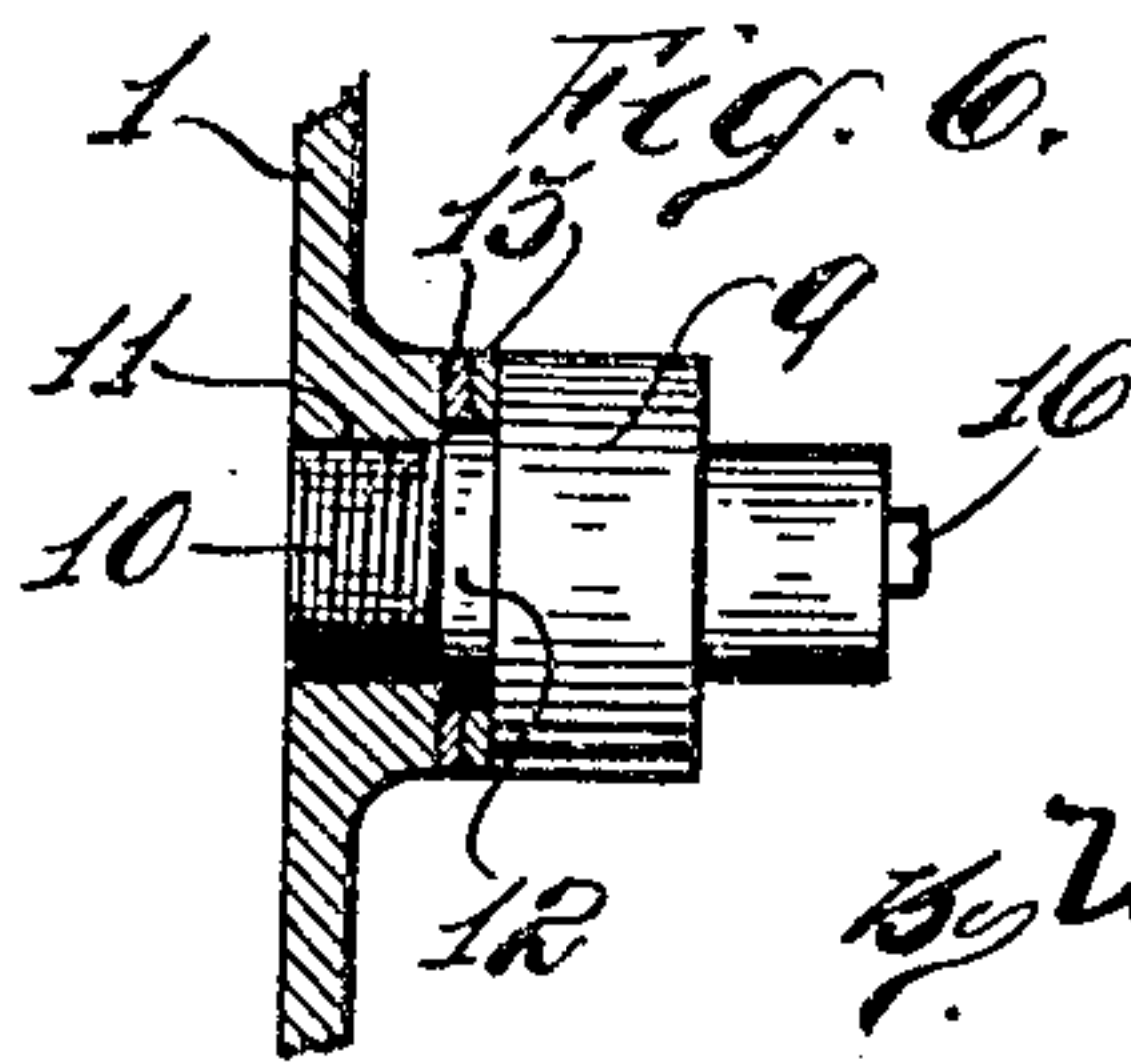
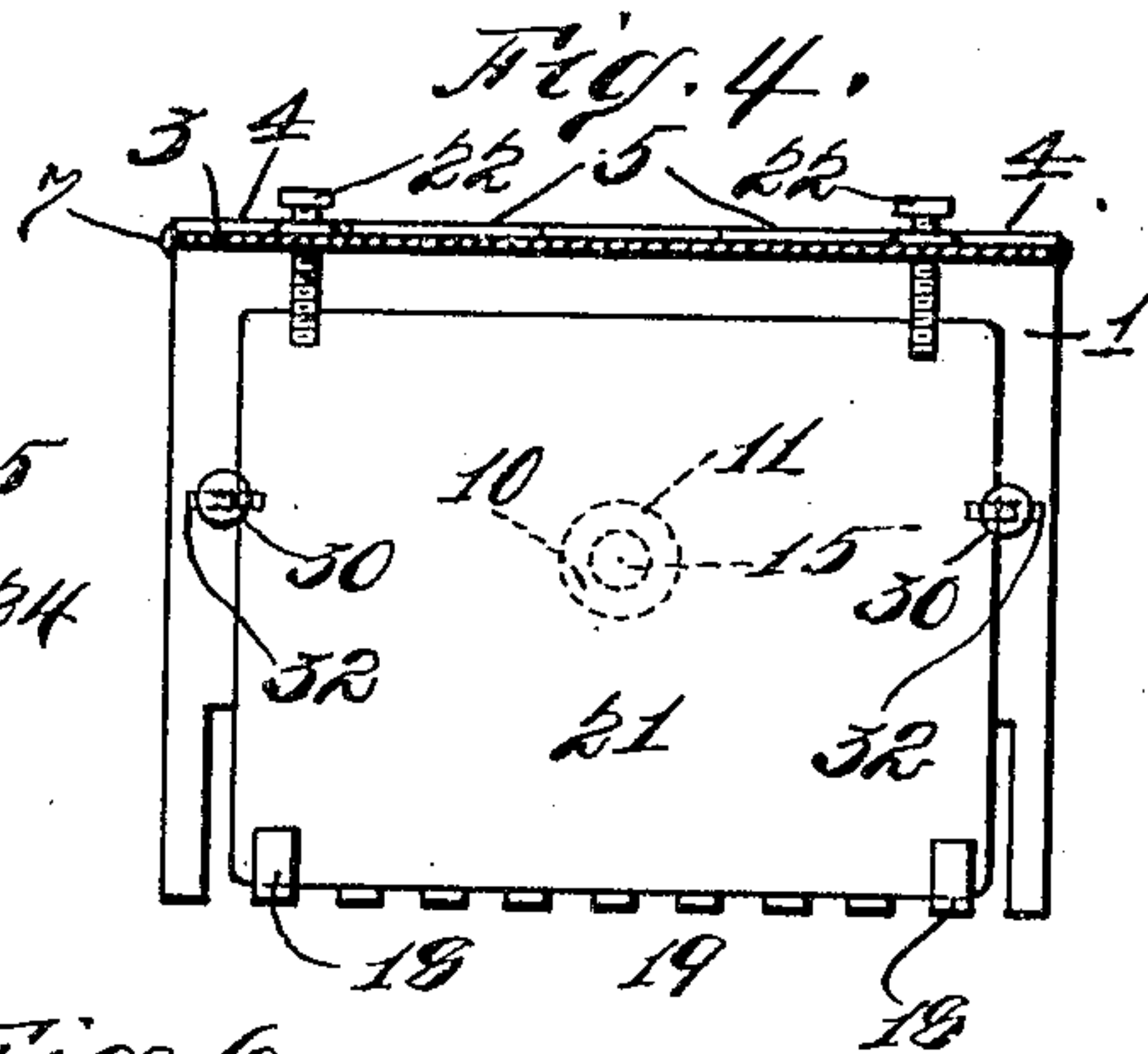
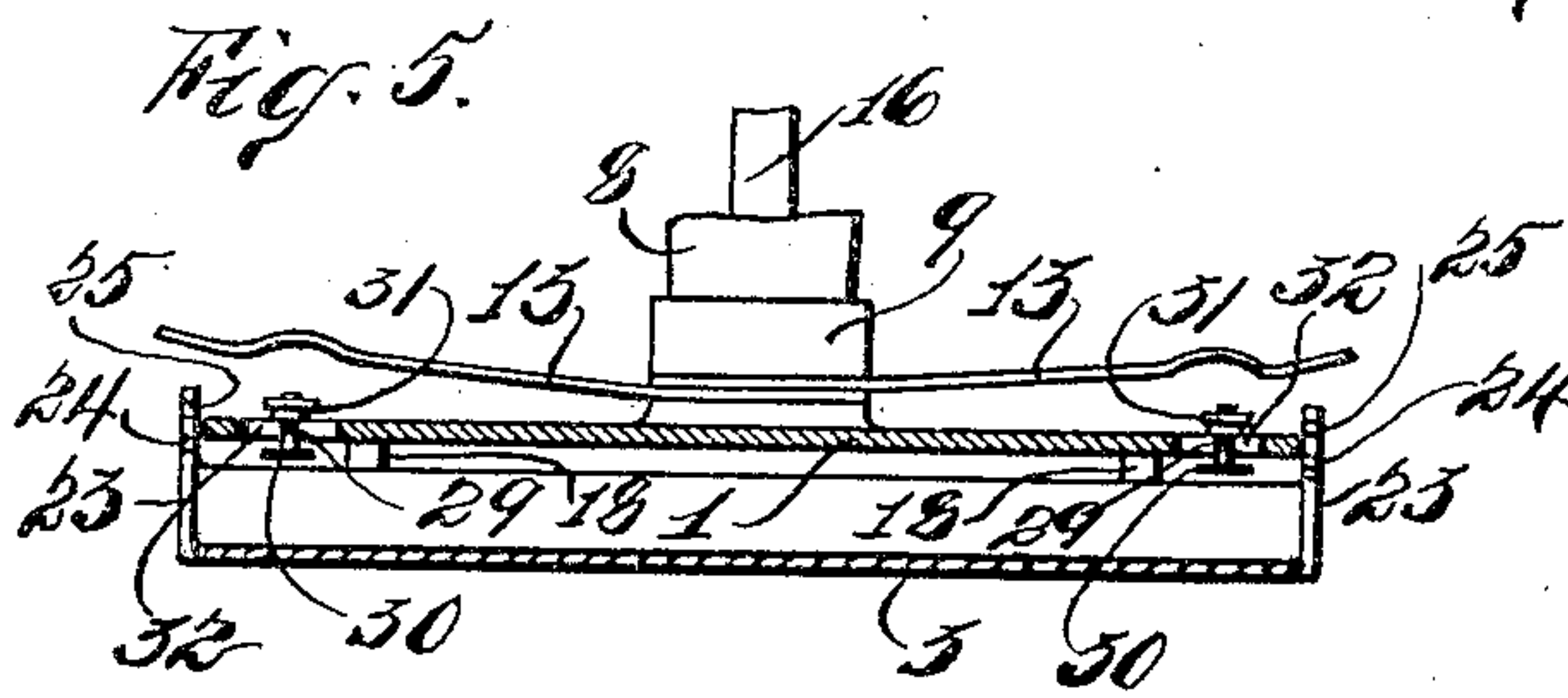
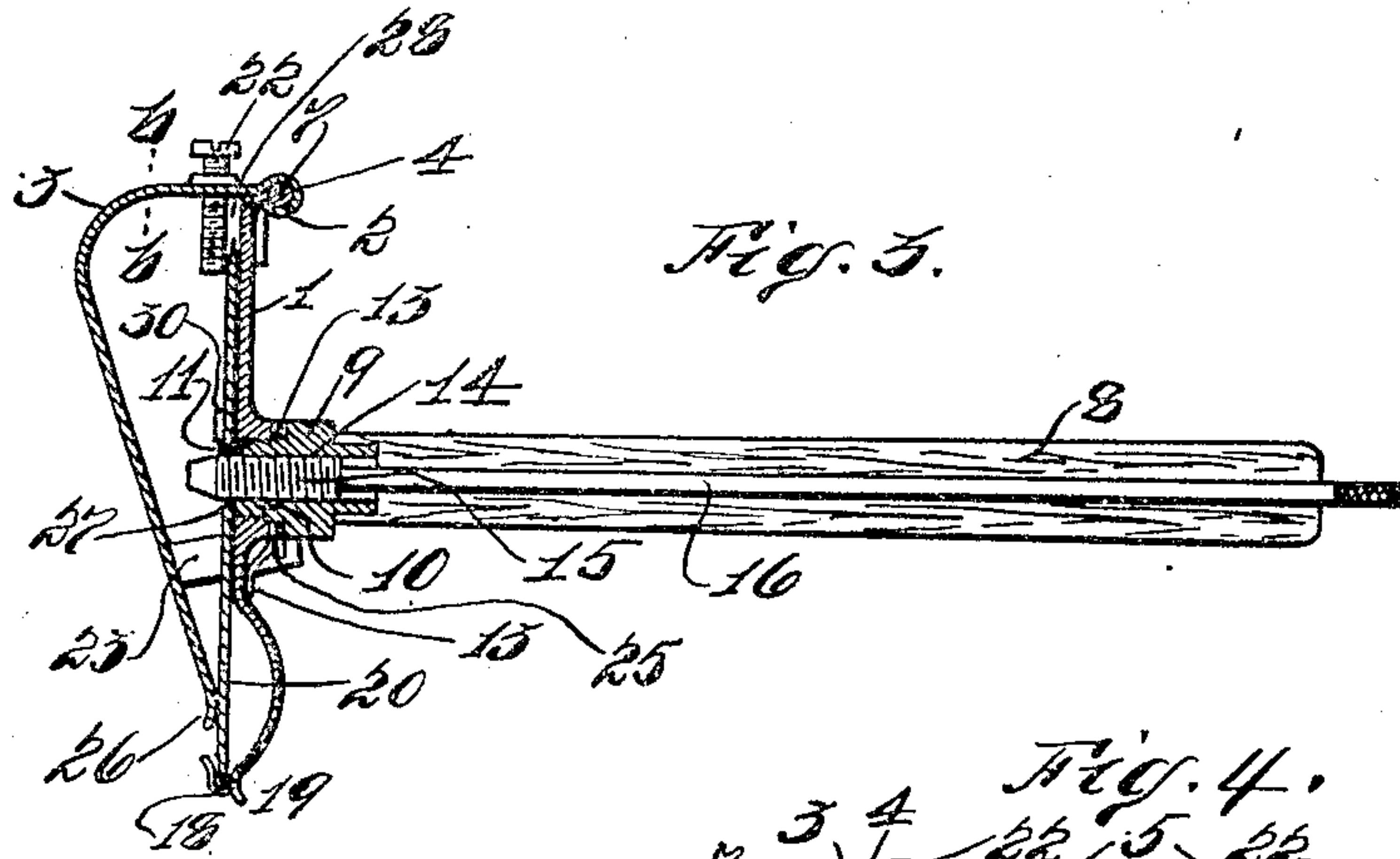
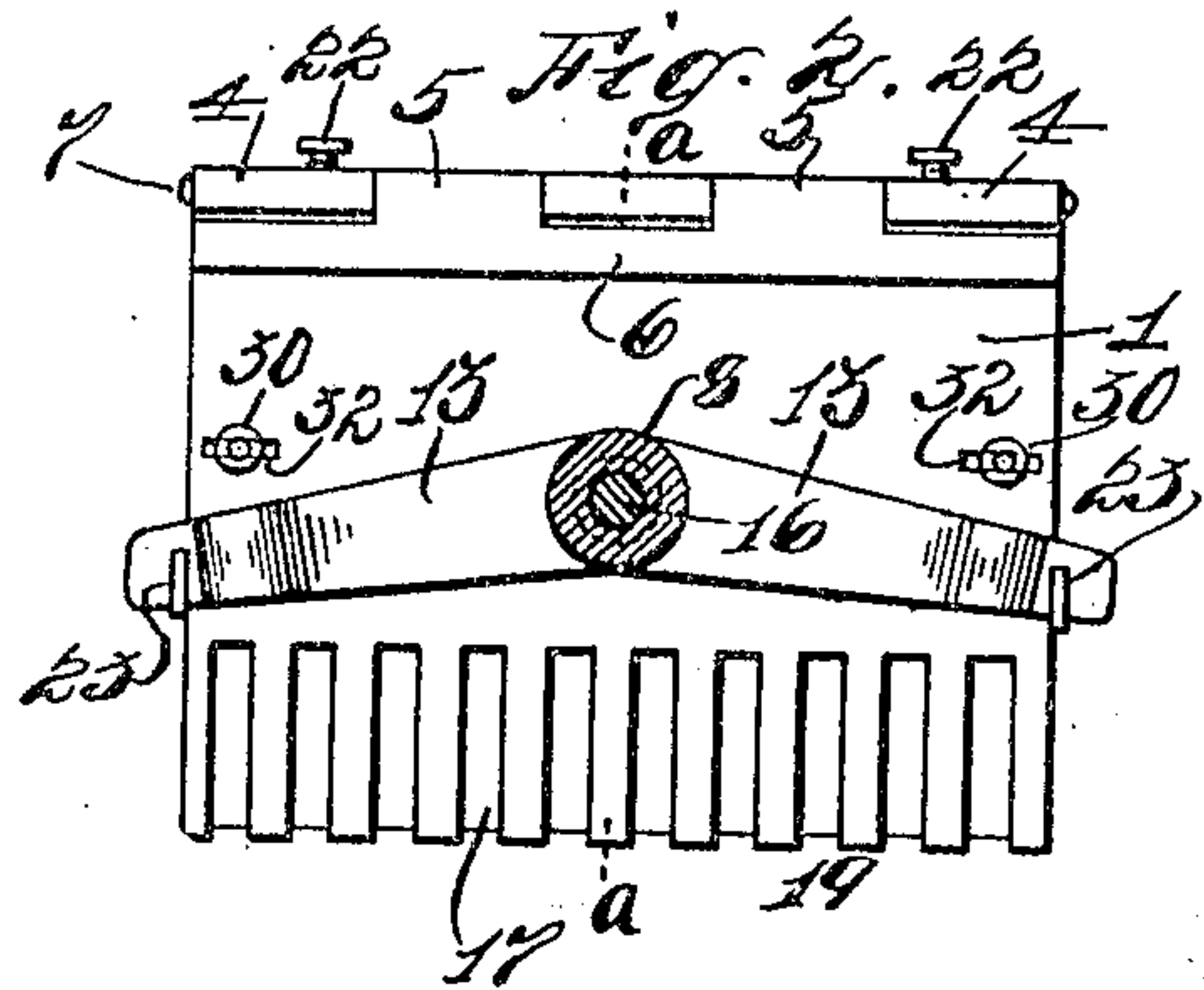
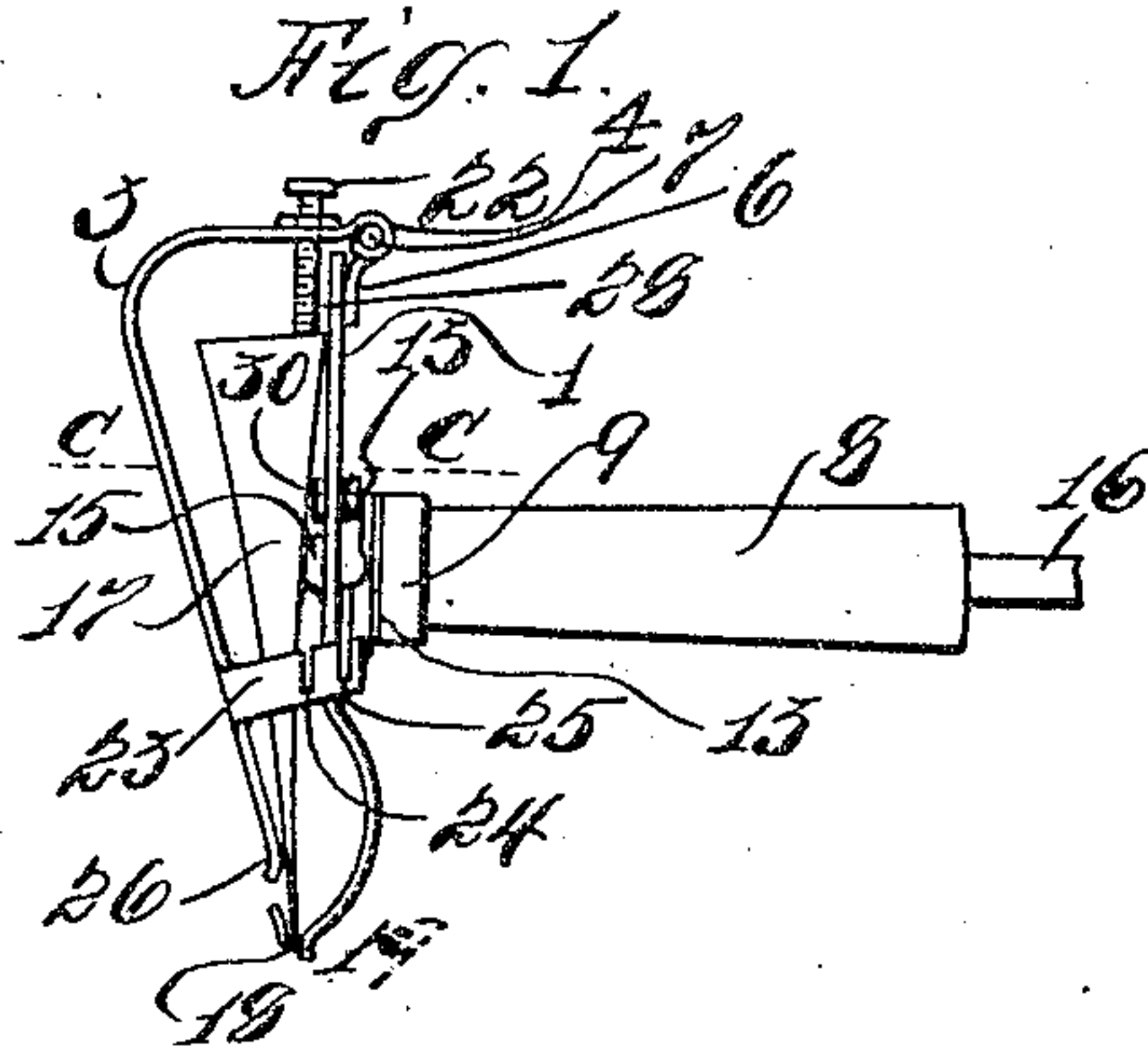


B. GALLINEK.
SAFETY RAZOR FRAME.
APPLICATION FILED JAN. 9, 1908.

904,861.

Patented Nov. 24, 1908.



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UNITED STATES PATENT OFFICE.

BENNO GALLINEK, OF NEW YORK, N. Y.

SAFETY-RAZOR FRAME.

No. 904,861.

Specification of Letters Patent.

Patented Nov. 24, 1908.

Application filed January 9, 1908. Serial No. 409,897.

To all whom it may concern:

Be it known that I, BENNO GALLINEK, a subject of the Emperor of Germany, residing at New York city, Manhattan borough, county and State of New York, have invented certain new and useful Improvements in Safety-Razor Frames, of which the following is a clear, full, and exact description.

This invention relates to safety razors, but more particularly to the blade-carrying frames, the object being to provide an adjustable frame which can be cheaply manufactured and yet be adapted to firmly hold any cutting blade peculiar to this form of razor, both concave and flat.

To these and other ends which will hereinafter appear, my invention comprises the novel features of improvement and combination and arrangement of parts, which I will now proceed to describe and finally claim, reference being had to the accompanying drawing, wherein—

Figure 1 illustrates a side elevation of my improved safety-razor frame, the handle being broken off; Fig. 2 is a rear view of my improved device; Fig. 3 is an enlarged longitudinal sectional view of my improved device, the section being taken on a line *a—a* in Fig. 2; Fig. 4 is a front view of the back plate of my improved safety-razor frame, on a reduced scale, the front plate being broken away on a line *b—b* in Fig. 3, to show another form of thin cutting blade; Fig. 5 is an enlarged sectional top plan view of my improved device, the section being taken on a line *C—C* in Fig. 1; and Fig. 6 is an enlarged fragmentary detail view of a portion of the back-plate, showing the threaded coupling, at the front end of the handle, and manner of pivotally supporting the inner ends of the spring latches.

Referring to the drawing, particularly to Fig. 3, the numeral 1 indicates the back, or supporting plate of my improved frame, to which is pivotally attached, as at 2, a front plate 3. The pivotal connection 2 comprises the eyes 4 which are integral with the front plate 3, and the eyes 5, which are carried by a plate 6 suitably attached to the back-plate 1 (see Fig. 2). A rod 7 serves to secure the back-plate 1 and front-plate 3 together.

To manipulate the frame and blade thereby retained, I employ a handle 8 which, at its forward end, carries a coupling 9, which in turn is provided with a threaded

lug 10, the said lug being adapted to engage a threaded opening 11 in the back-plate 1. Adjacent to the lug 10 I form a shoulder 12 which limits the inward movement of the coupling 9, and upon the said shoulder 12 I pivotally mount the inner end of each of the resilient or spring latches 13. The combined thickness of the two latches 13 is slightly less than the width of the shoulder 12; hence the said latches are always free to be rotated regardless of the extent of the pressure upon the back-plate on the part of the shoulder 12. The coupling 9 is provided with a threaded bore 14 within which a threaded plug 15 is adapted to work. A spindle 16 extends from the plug 15 throughout the length and beyond the back end of the handle 8. The end of the spindle 16 is knurled to form a roughened surface in order that the plug 15 can be rotated to cause it to extend from or to be drawn into the bore 14 of the coupling 9 for reasons to be hereinafter explained.

Fig. 1 illustrates my improved frame as supporting, or retaining, a concave blade 17 which is well known in the art. Each end of the bottom edge of the said blade 17 rests in a fork 18 integral with the lower end 19 of the back-plate 1, the said forks limiting the downward movement of the blade 17 as well as the downward movement of the thin blades 20, 21 shown in Figs. 3 and 4, in the event of the said thin blades being used. To firmly press the blade 17 against the forks 18 I have employed, in this instance, adjusting screws 22 which serve to lock the blade 17 against backward movement. It will be seen that the screws 22 are positioned, in the front-plate 3, adjacent to the back-plate 1, the object of which will hereinafter appear. To prevent the blade 17 from jarring, and to keep it firmly pressed against the back-plate 1 at the lower end thereof, I provide the front plate 3 with rearwardly extending wings 23 which pass over the ends of the back-plate 1 and extend rearwardly beyond the same. In the said wings 23 I form notches 24 and 25 (Figs. 1 and 5) which are adapted to receive the outer ends of the spring latches 13, as shown. The object of the two sets of notches is to adapt the front-plate 3, and latches 13, for blades of different thickness.

In Fig. 1, the plug 15 is shown in contact with the back of the blade 17. While it is not absolutely necessary to use the said plug

as a pressure exerting element upon a concaved blade, under ordinary circumstances, it might be advantageous in the event of shaving a stiff beard. The function of the said plug 15, however, illustrated in said Fig. 1.

The manner of securing the blade 17 in position will now be explained: Supposing the front-plate 3 to be free to be opened, the latches 13 being out of engagement with the notches 25 as shown in Fig. 5; the blade 17 is placed in position on the back-plate 1. The screws 22 are then caused to press upon the heel of the blade and to force it firmly against the forks 18. To cause the blade to lie firmly against the said back-plate I close the front-plate 3, the lower end 26 resting against the front of the blade 17. I then swing the latches 13 downwardly and spring them inwardly and force the outer ends thereof into the notches 25. The tension of the latches 13 is stiff; hence, when in position, the latches exert considerable pressure upon the blade 17, which holds it firmly against the back-plate 1, the function of the screws 22 being obvious.

For holding thin blades a somewhat different combination of the elements, which go to make up my improved frame, is utilized. As there are various styles of thin blades on the market, some having a central opening and others not any, and as the said thin blades are not easily prevented from moving or chattering, I have employed a plurality of cooperating securing elements in conjunction with the wings 23 and latches 13 hereinbefore referred to. Fig. 3, illustrates the frame as holding a thin blade 20 of the variety having a central opening 27. The object of placing the adjusting screws 22 adjacent to the back-plate 1 will be apparent, as the space 28, between the screws 22 and back-plate 1, is utilized as a jaw to receive the upper edge of the said blade 20, the screws 22 act as clamps when a blade, such as 21. (Fig. 4), is held by the frame, which will hereinafter be explained.

As a holding-down element for the thin blades the adjusting screws 22 are, as herein illustrated, useless. For that reason I have provided a coupling 9 with the longitudinally adjustable plug 15 which can be caused, by rotating the spindle 16, to enter the opening 27 in the blade 20, whereby the said blade is prevented from moving rearwardly. To hold the blade against the back-plate 1, the latches 13 are employed in a manner hereinbefore explained.

As a firm pressure is required to hold the blade 20 in position, and also to prevent the blades from moving sidewise, I have provided auxiliary binding elements, (see Fig. 5), comprising the threaded spindle 29 carried by a head 30, a thumb nut 31 serving to adjust the spindle and cause the head 30

thereon to bind the blade 20 against the back-plate 1. To permit the binding elements to be adjusted longitudinally of the back-plate 1, I provide the said back-plate with elongated slots, or openings, 32 through which the spindles 29 pass. Through the agency of the said slots blades of various lengths can be gripped by the said auxiliary binding elements. It is obvious that the combined action of the spring latches 13 and binding elements will cause thin blades, such as 20 and 21 to be firmly held in position, the plug 15 acting to prevent a backward movement of the said blades.

The manner of holding the thin blades 21 (Fig. 4) will now be explained. The blade 21 is illustrative of the class which have no openings. When a blade, such as 21, is to be held by the frame, I cause the plug 15 to go back into the bore 14, in the coupling 9, by rotating the spindle 16. I then slide for instance, the said blade in from one end of the frame, having first opened the front-plate 3. The blade will then rest in the forks 18, and after having closed the front-plate 3, the upper end of said blade 21 will rest in the space 28, the said space being approximately in width, equal to the thickness of a thin blade. I then spring a latch 13 into its adjacent notch 24, whereby the front-plate is firmly held against the blade 21. After having completed the above mentioned operations I cause the plug 15 to exert pressure upon the back of the blade, by rotating the spindle 16, whereby the said blade is pushed firmly, at the top thereof, against the screws 22 and against the front-plate 3. In other words, when the spindle 16 is rotated in the proper direction the plug 15 will contact the back of the blade 17 and prevent it from chattering, the said blade being held firmly against the forks 18 by the screws 22.

It is quite obvious that the object of the two sets of notches 24 and 25 is to adapt the front-plate 3 for blades of different thicknesses without detracting from the tension of the spring latches 13.

It is also obvious that, by means of the adjustable plug 15, I can materially aid in the operation of securing thin blades in the frame without disturbing the handle 8; in other words the handle 8 does not have any function as far as securing the blades is concerned, but the handle does act to hold the latches 13 in position. I have chosen to hold the latches in this manner for the purposes of economy. If desirable, the latches can be separately riveted, or secured in any desired manner to the back-plate 1. They can also be in one piece, the notches 24 and 25 being formed in the opposite sides of the wings 23.

Having described my invention what I claim and desire to secure by Letters Patent is:

1. A safety-razor frame, comprising a

back-plate, a movable front-plate carried thereby, a locking element carried by said front-plate, and pivotal spring latches secured to said back-plate adapted to cooperate with said locking element.

2. A safety-razor frame, comprising a back-plate, a front-plate, adapted for adjustment toward the back-plate, carried thereby, wings carried by said front-plate, and a plurality of pivotally mounted spring latches secured to said back-plate adapted to engage the wings on said front-plate.

3. A safety-razor frame, comprising a back-plate, a front-plate adapted for adjustment toward the back-plate, carried thereby, wings carried by said front-plate provided with a plurality of notches; and a locking means secured to said back-plate adapted to engage the notches in said wings.

4. A safety-razor frame, comprising a back-plate, a front-plate adapted for adjust-

ment toward the back-plate, carried thereby, wings carried by said front-plate provided with a plurality of notches and a plurality of pivotally mounted spring latches secured to said back-plate adapted to engage the notches in said wings.

5. A safety-razor frame, comprising a back-plate, a front-plate adapted for adjustment toward the back-plate, carried thereby, wings carried by said front-plate provided with a plurality of notches, a locking means secured to said back-plate adapted to engage the notches in said wings, and auxiliary binding elements carried by said back-plate.

Signed at New York city, this 7 day of January 1908.

BENNO GALLINEK.

Witnesses:

EDWARD A. JARVIS,
ABRAM SHLIVEK.