

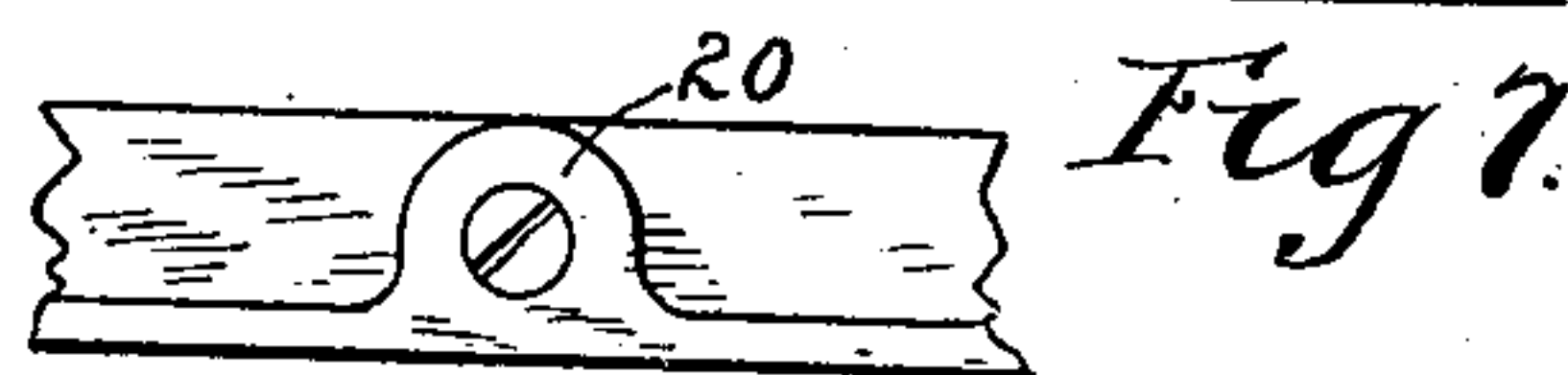
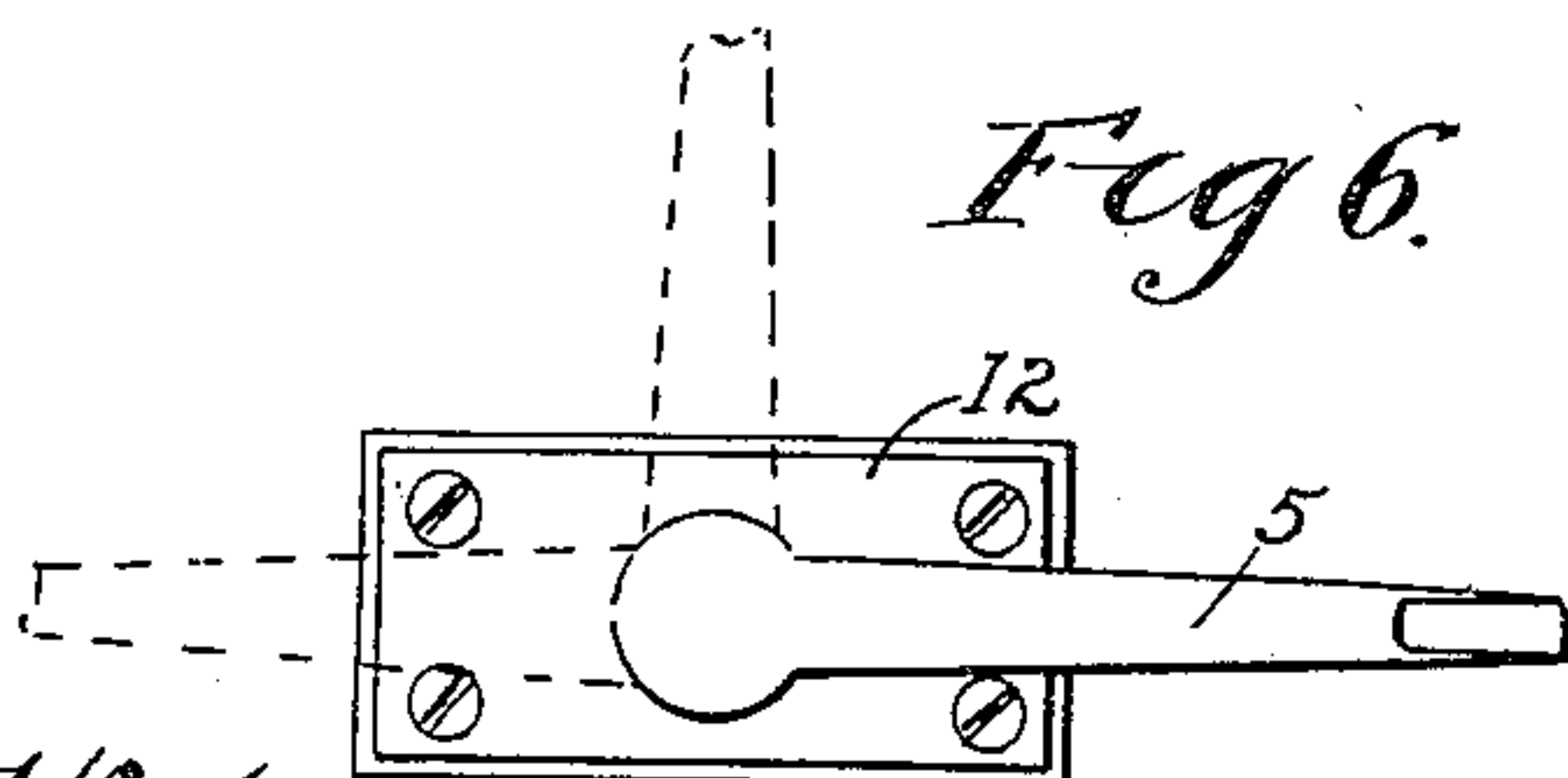
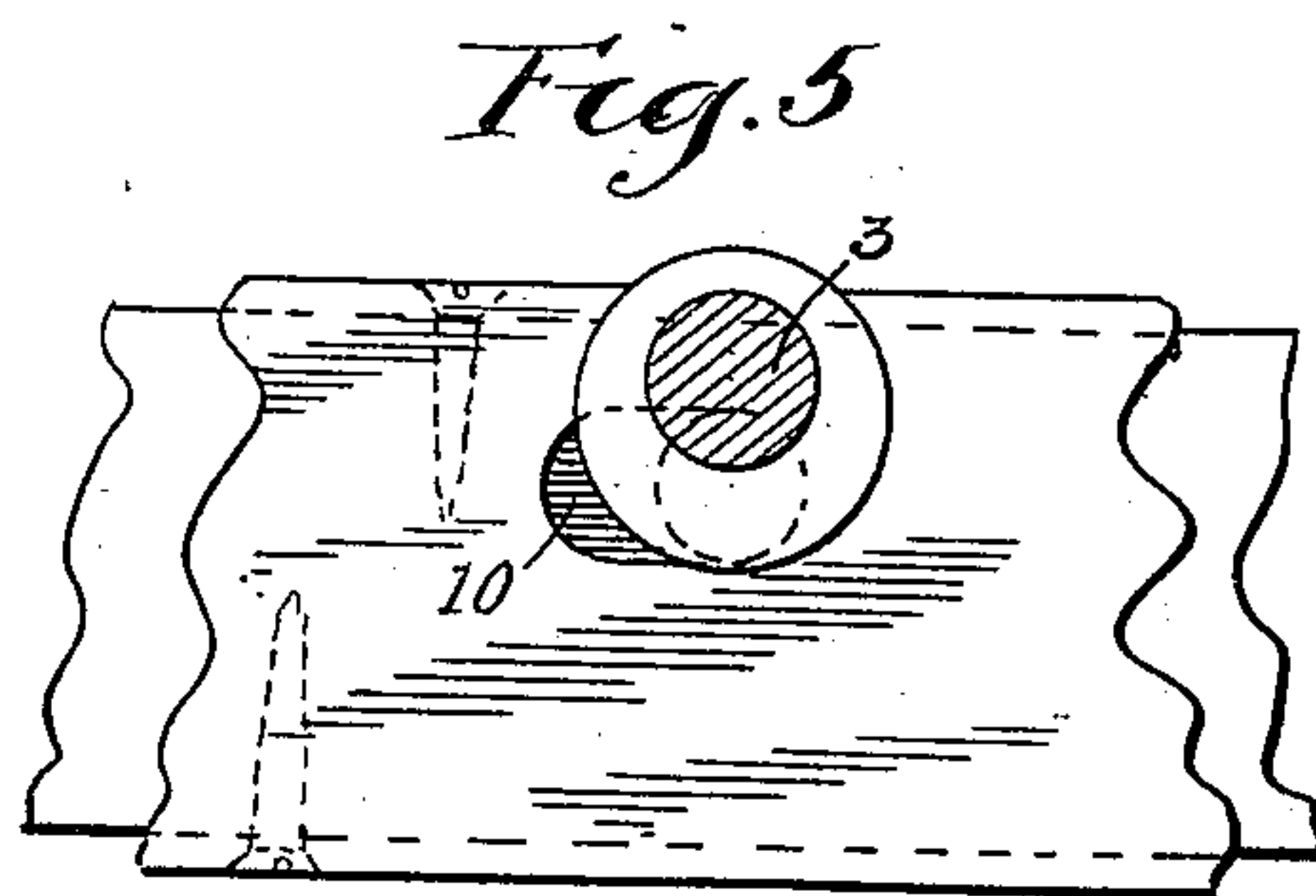
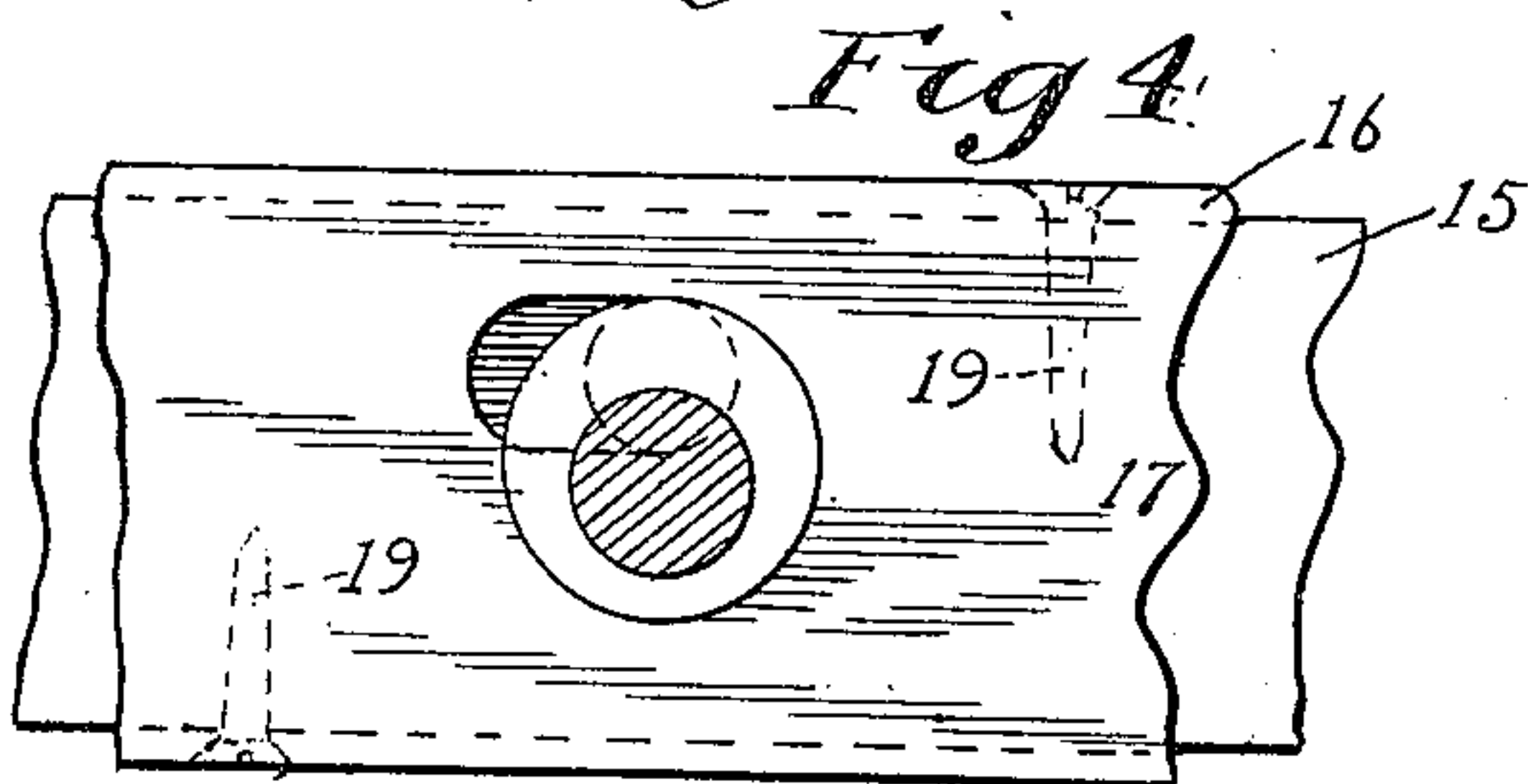
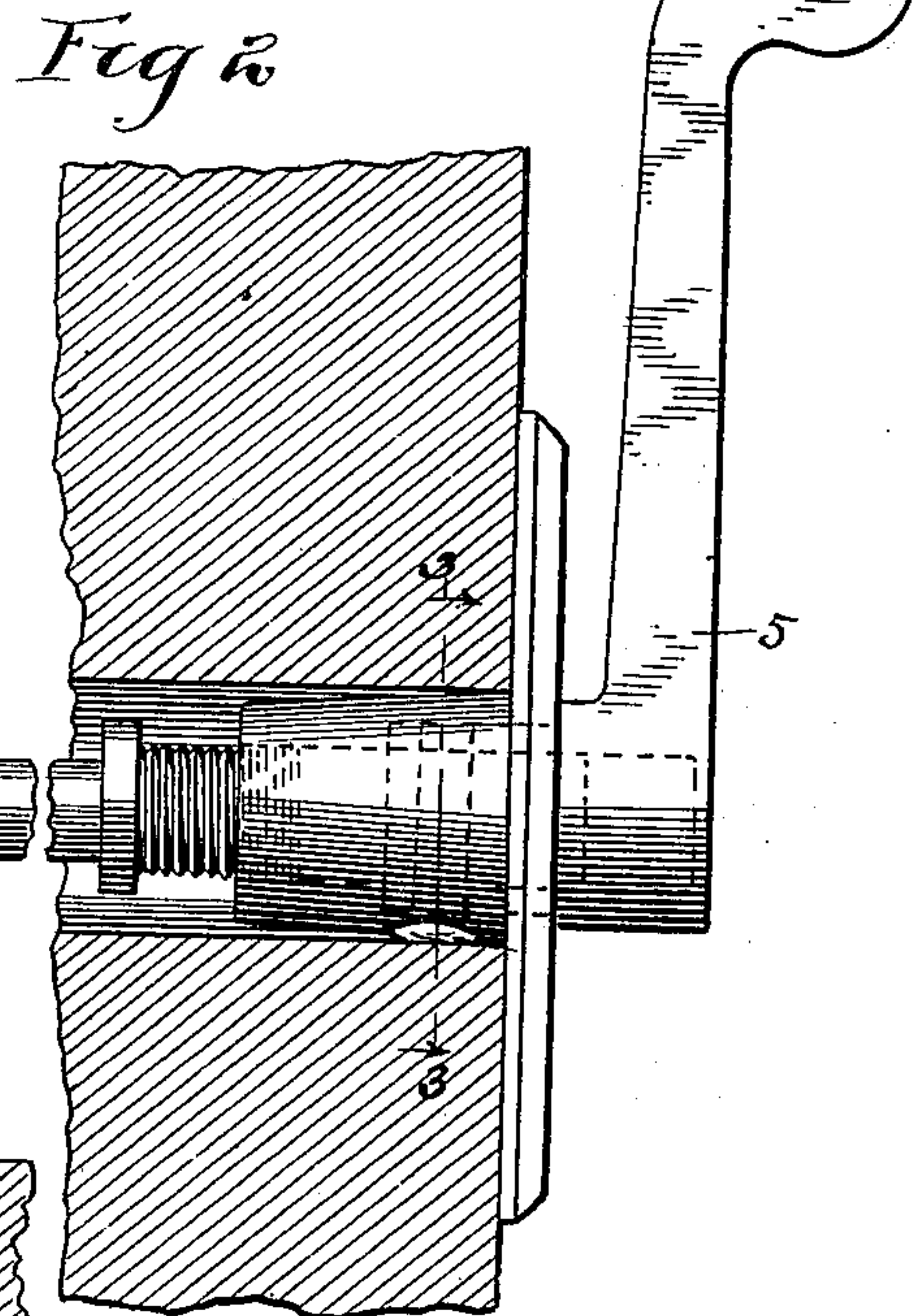
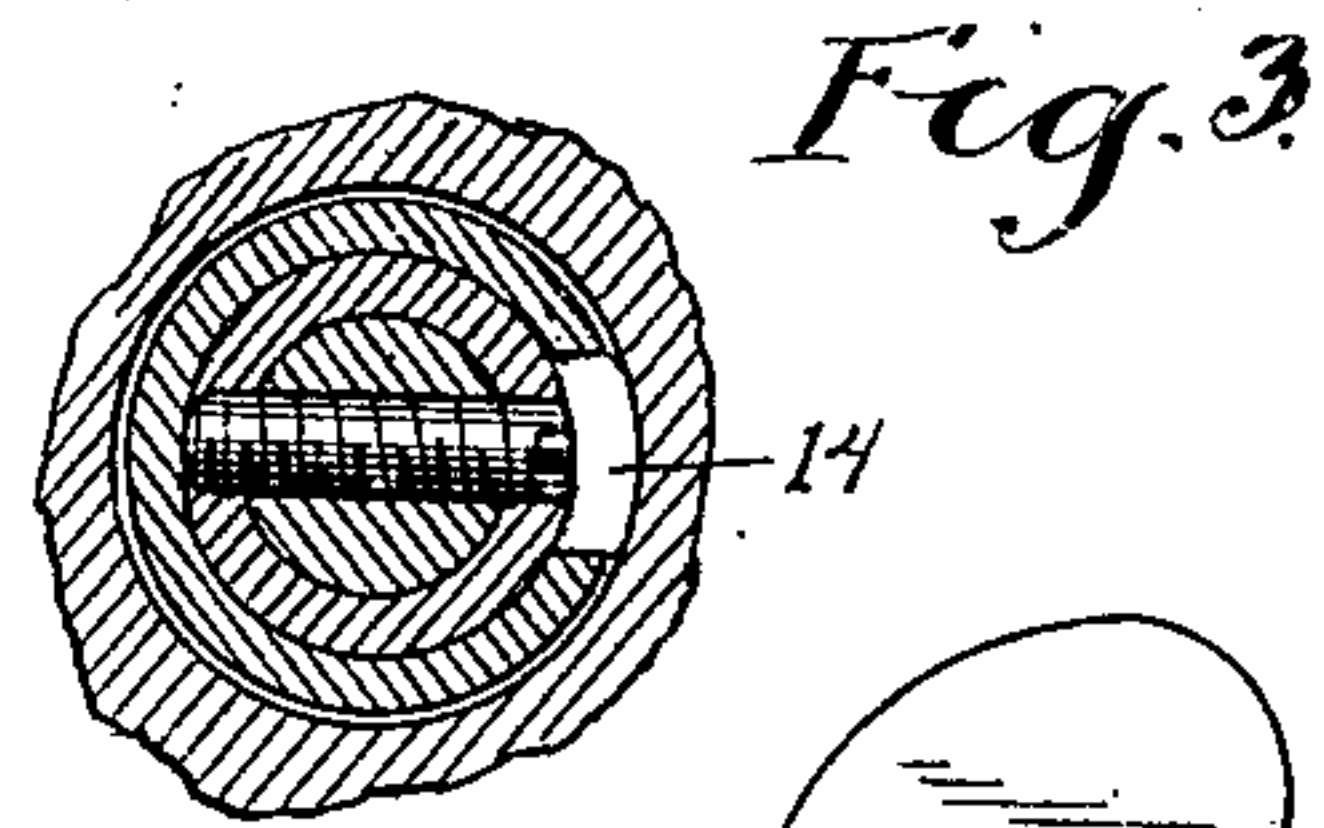
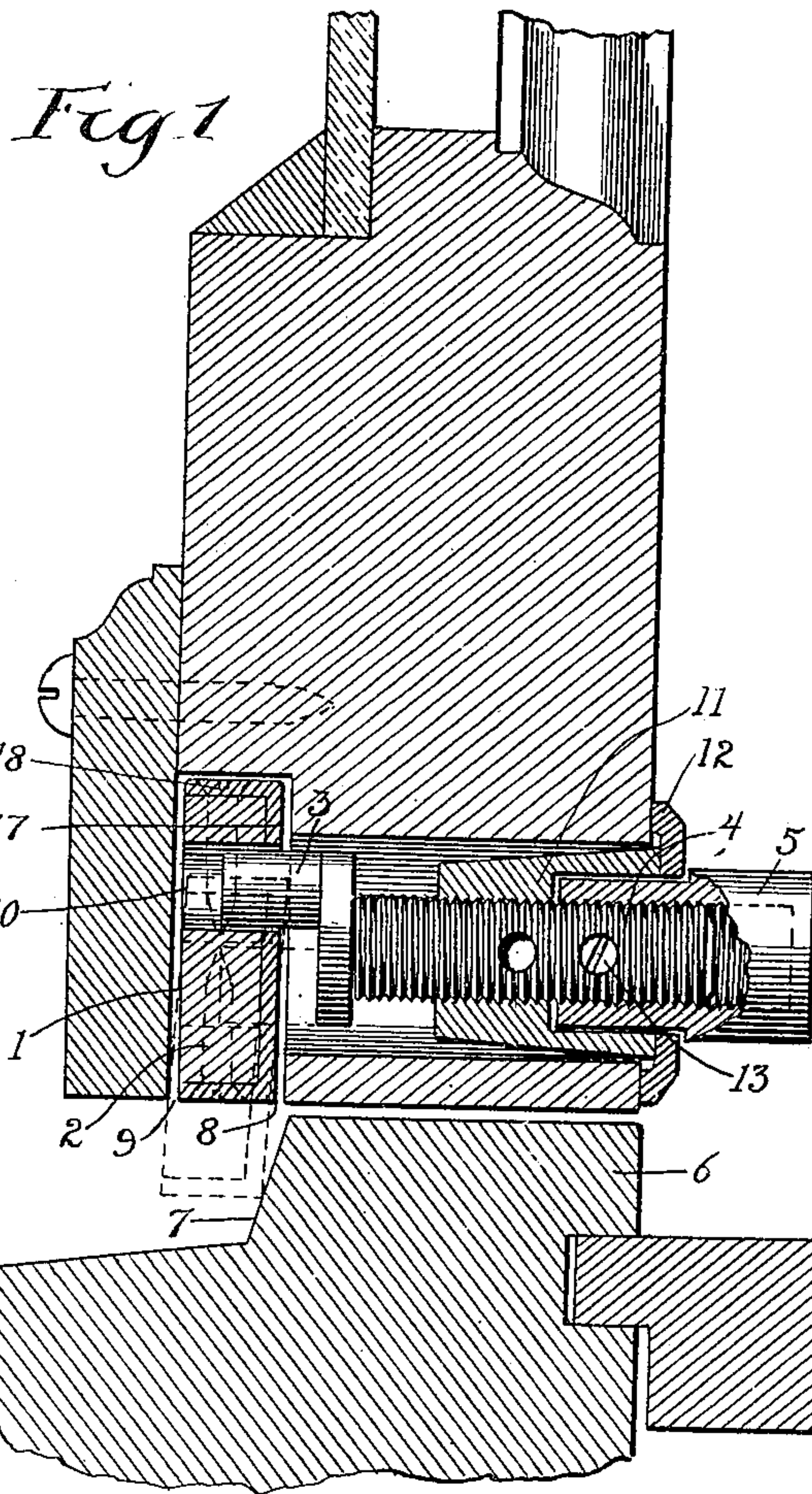
No. 666,356.

Patented Jan. 22, 1901.

O. C. RIXSON.  
WEATHER STRIP.

(Application filed June 3, 1899.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

OSCAR C. RIXSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE OSCAR C. RIXSON COMPANY, OF SAME PLACE.

## WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 666,356, dated January 22, 1901.

Application filed June 3, 1899. Serial No. 719,170. (No model.)

*To all whom it may concern:*

Be it known that I, OSCAR C. RIXSON, a citizen of the United States, residing in Chicago, Cook county, Illinois, have invented a certain new and useful Improvement in Weather-Strips, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to devices such as are employed on hinged or pivoted windows for the purpose of making said windows tight against the elements.

Generally speaking, my invention has for its object the provision of a device of the class specified which will be cheap to construct, easy to apply, easy to operate, not liable to get out of order or bind, and capable of adjustment for different thicknesses of sash without the need of supplying various sizes of parts.

In the practice of my invention I provide the edge of the sash or frame which is to be protected with a rabbet or channel extending longitudinally thereof. In said channel I arrange a strip, made preferably of wood, incased or bound in a novel manner, which will be hereinafter more particularly described, said strip being constructed to be reciprocated transversely within said channel, so as to be projected outwardly therefrom or retracted thereinto by means controllable from without the sash or frame. The means which I prefer to use for operating the strip comprises, essentially, a shaft having an eccentric-pin engaging said strip and an operating-handle connected to the other end. Co-operating with the strip I arrange an inclined or beveled surface, being so disposed as to cause the strip to be thrown slightly out of its line of movement or projected or tilted in such a manner as to make a perfectly-tight joint not only with the beveled face, but also with the opposite outer edge of the channel within which the strip moves.

Another object of my invention is the combination with a wooden movable strip of the class described provided with a metal binding or covering arranged with flanges or ears upon opposite edges designed to receive retaining-screws, whereby the wood of the strip is secured against undue or undesirable wear

from the operation thereon of the eccentric-pin or other means employed in moving the strip, and whereby also in case the screws work loose the projection of the heads will not interfere with the freedom of movement of the strip itself.

Another object of my invention is the construction of a weather-strip in such a manner and with such operating devices coacting therewith as will avoid the necessity of having the groove within which it operates a very close fit, by which provision I am enabled to avoid any difficulty in the operation of my device, due to shrinking or warping of any of the parts, such as would be encountered with devices of a kind which require the close fit of a movable strip within its channel or groove.

The above, as well as such other objects as may hereinafter appear, I attain by means of a construction which I have shown in preferred form in the accompanying drawings, in which—

Figure 1 is a section showing the lower part of a sash or frame to which my invention has been applied. Fig. 2 is another view taken on the same plane as Fig. 1, showing some of the parts in full lines which are shown in Fig. 1 in section and showing also a different position of the operating handle or lever. Fig. 3 is a section taken on the line 3 3 of Fig. 2. Fig. 4 is a partial view showing my improved construction of strip with the eccentric engaging the same for moving it. Fig. 5 is another view showing the strip in a different position. Fig. 6 indicates three different positions of the operating lever or handle, and Fig. 7 shows a modified construction of the strip itself.

Referring now more particularly to Fig. 1, it will be seen that within the lower outer part of a window-frame I have provided a channel or groove 1, containing therein a movable strip 2, which extends lengthwise of the edge of the window-frame and has free movement within the groove, whereby it may be projected downwardly or retracted again into the groove by means of an eccentric-pin 3, carried upon a shaft 4, to the inner end of which is secured an operating-handle 5. Below the edge of the frame the sill or ledge 6



is provided with an inclined or beveled face 7, against which the corner 8 of the strip strikes when the strip is projected into the position indicated by the dotted lines. In such position the face of the strip which is opposite the inclined face 7 will be thrown to the left until it bears against the corner 9 of the channel. By this means a perfectly-tight joint is made not only on the face 7, but also at the point 9, and any leakage past this strip into the building is avoided.

If preferred, the strip itself could be provided with an inclined face adapted to cooperate with a corner along the sill, and such a construction, which is a mere reversal of that shown in my drawings, I desire to be understood as including within the scope of my claims.

In the construction just described it is obvious that it is not necessary to have the strip project down to the lower end of the face 7, so that if ice collects below it it will not interfere with its operation, and also that the channel or groove 1 can be made, as it is, in fact, shown, of a width somewhat greater than the thickness of the strip, so that if the strip should warp, swell, or twist a little there would not be any interference with its freedom of movement or with its making a tight joint in the manner described.

As a means of moving this strip I provide a shaft 4 with an eccentric-pin 3, engaging a slot-opening 10 within the strip, and the shaft 4 is preferably made with a screw-threaded engagement in a socket 11, which is held in position by and may be made to constitute a part of the flange 12. By adjusting the relative position between the socket 11 and the shaft 4 it is obvious that the apparatus may be changed to suit various thicknesses of sash, thus avoiding the necessity for carrying a large number of different sizes in stock. The handle 5 is threaded to engage the inner end of the shaft 4 and when it is adjusted to the right position is secured in place by means of a screw or pin 13, which for convenience may be inserted through an opening 14, preferably made in a position such that the head of the pin or screw will not come opposite to it when the device is in normal position, so that the pin may not work loose.

The strip 2 I prefer to construct with a core or center part 15 of wood, bound by a metal channel 16, comprising, essentially, a web 17 and a couple of flanges 18. The eccentric-pin 3 engaging a slot-opening in this metal covering or channel prevents undue wear upon the wood of the strip. In order to stiffen the strip, the channel is extended outwardly from the center line of the eccentric for some distance each side, depending, of course, upon the length of the window. If the window be very wide, I prefer to use a couple of strips. The overlapping flanges 18 of the channel upon the top and bottom edge of the wooden strip prevent any danger of breaking the strip and

also permit the insertion of the retaining or holding screws 19 in such a way that they are not as apt to work out of place as they would be if they were inserted through the web 17 of the channel, and even if they do work loose a little they will not interfere with the free movement of the strip under the action of the eccentric, as they would interfere with them inserted through the web and caused to work loose by the constant movement of the parts. While I have preferred to use a metal channel having continuous flanges, it is obvious that the screws might be inserted through flanged ears at intervals along the upper and lower edges of the strip—such as shown, for example, at 20 in Fig. 7.

It is to be observed that by the threaded engagement between the shaft 4 and the socket 11 I secure a cheap and easy means of obtaining an accurate fit of the two parts capable of free motion rotatable, but not, except as to the progression of the thread, longitudinal of each other. This avoids the necessity for using any collar or pin fastenings around the shaft 4, such as would otherwise have to be provided.

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

1. The combination with a sash or frame, of a channel formed therein, a transversely-movable strip within said channel, means for projecting the strip outwardly from the channel, and a beveled or inclined face whereby said strip is caused to bear against the side of the said channel opposite said inclined face, the lower edge of said strip being free from contact with the sill when the strip is projected, whereby it may close tightly against the elements without interference from ice or other obstructing matter which may lodge between the sill and strip, substantially as described.

2. A movable weather-strip operating within a channel or groove, said strip having an inner part or core, and a binding or outer part of metal or other suitable material, having flanges or ears embracing said core on its top and bottom edges, and securing screws or devices passing through said flanges or ears into the edges of said strip, substantially as described.

3. The combination with a sash or frame, of a channel therein, a transversely-movable strip within said channel, an elongated aperture in said strip, a shaft carrying an eccentric-pin engaging said aperture, and means for rotating said shaft, whereby to project the strip outwardly from the channel, substantially as described.

4. The combination with a weather-strip, of means for moving the same, having a threaded shaft, a threaded socket upon said shaft, a handle screw-threaded upon the end of said shaft, and having a shank projecting within said socket, and a screw or pin securing said handle against rotation relative to said shaft,



and an opening in said socket through which said pin may be inserted, said opening being arranged in position so that when the handle stands at its normal place the head of the pin 5 will not be opposite the opening.

5. A weather-strip comprising a channel, 1; a strip, 2, therein; a shaft, 4; a socket, 11; a handle, 5, having a shank projecting within said socket; a screw or pin, 13, and a connec-

tion between said strip and shaft whereby rotation of the latter will project the former into position, substantially as and for the purpose described.

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