

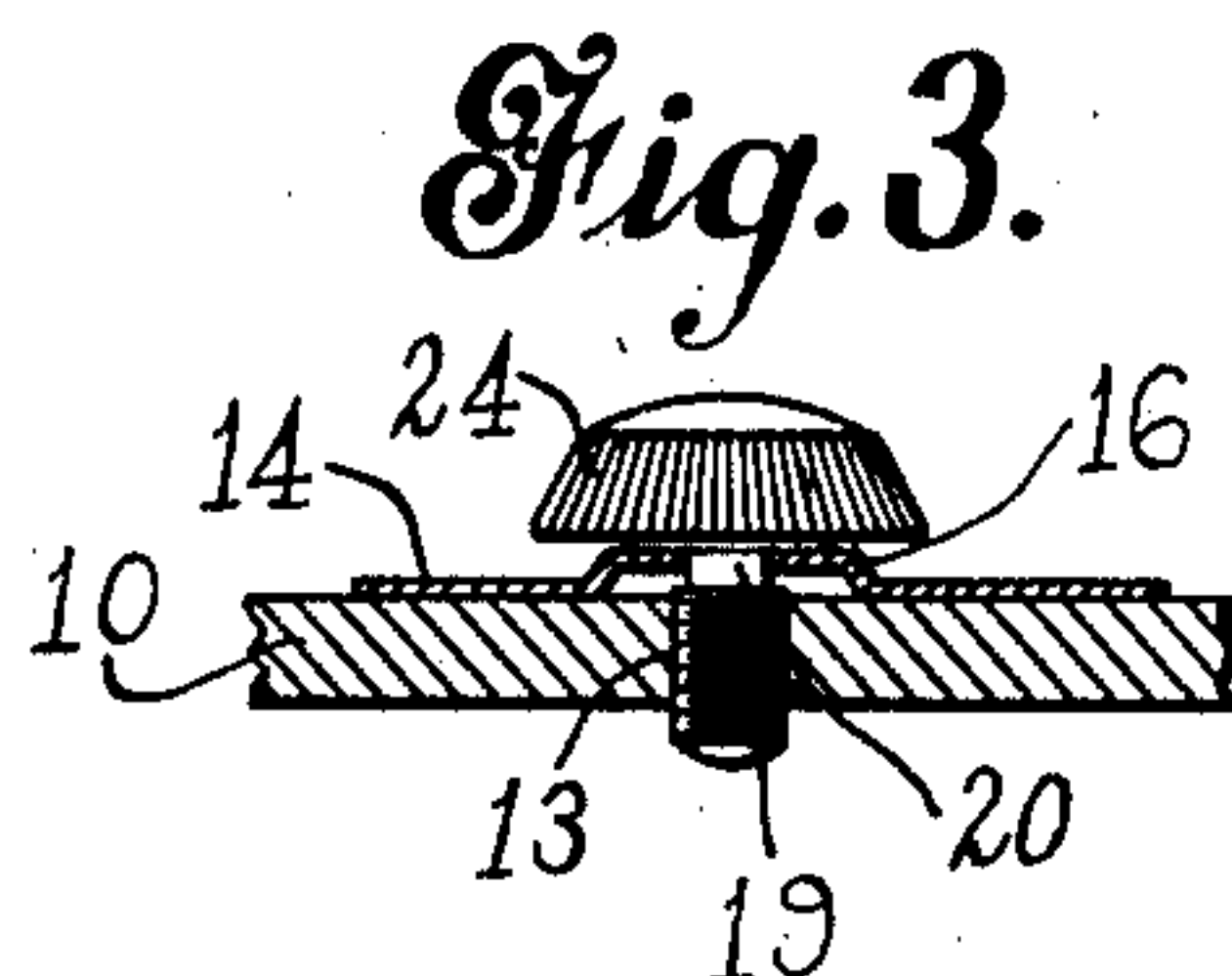
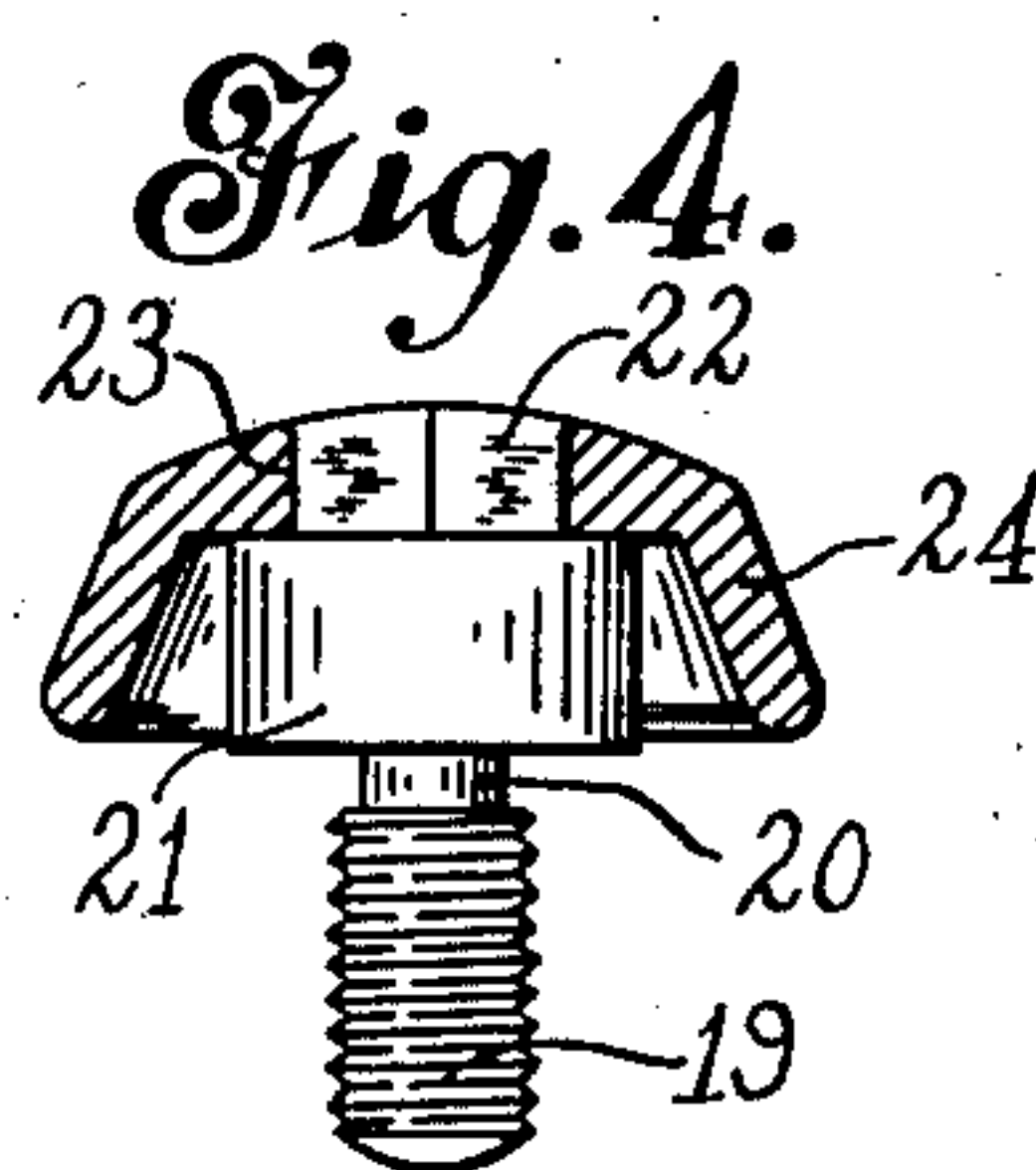
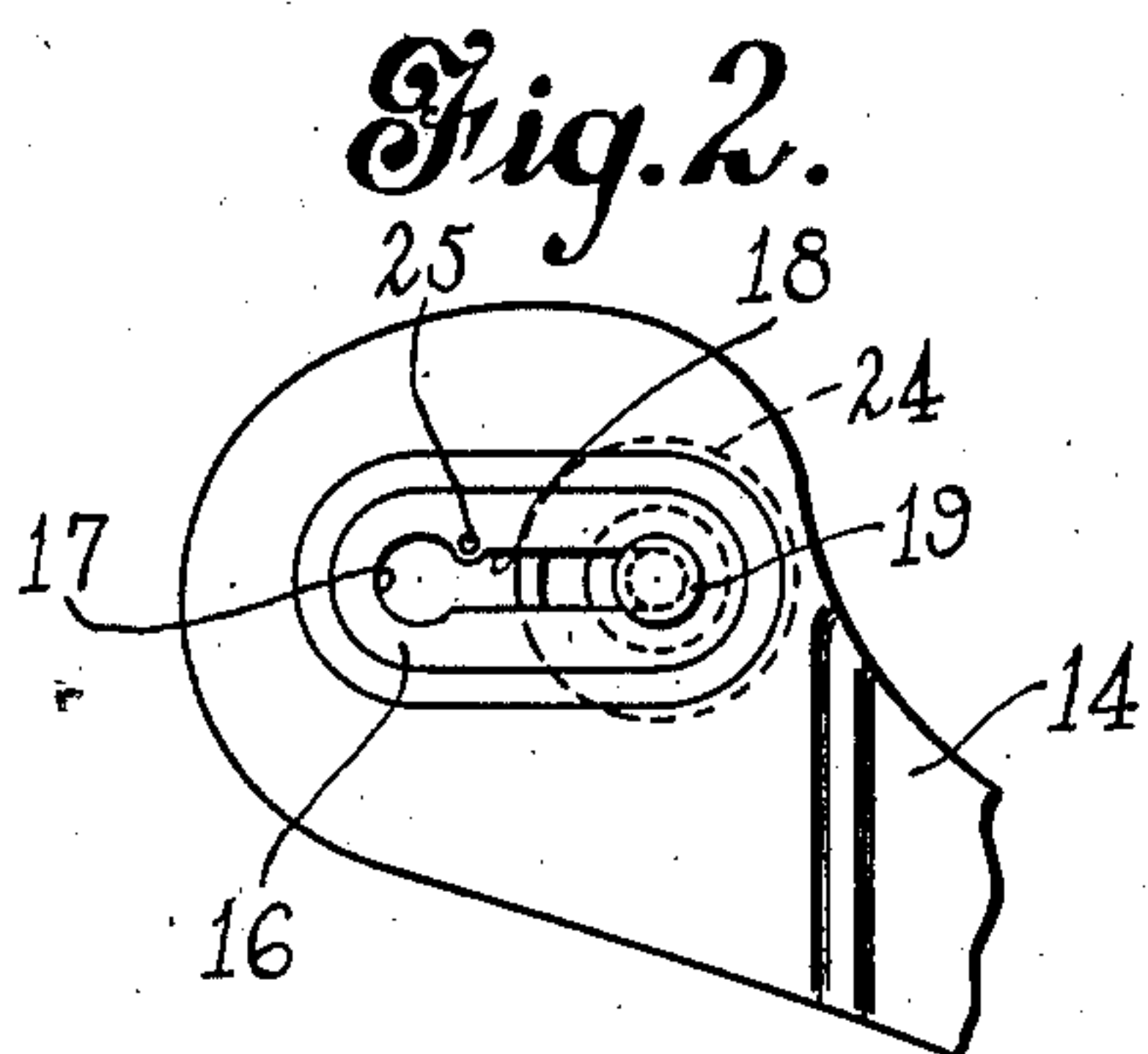
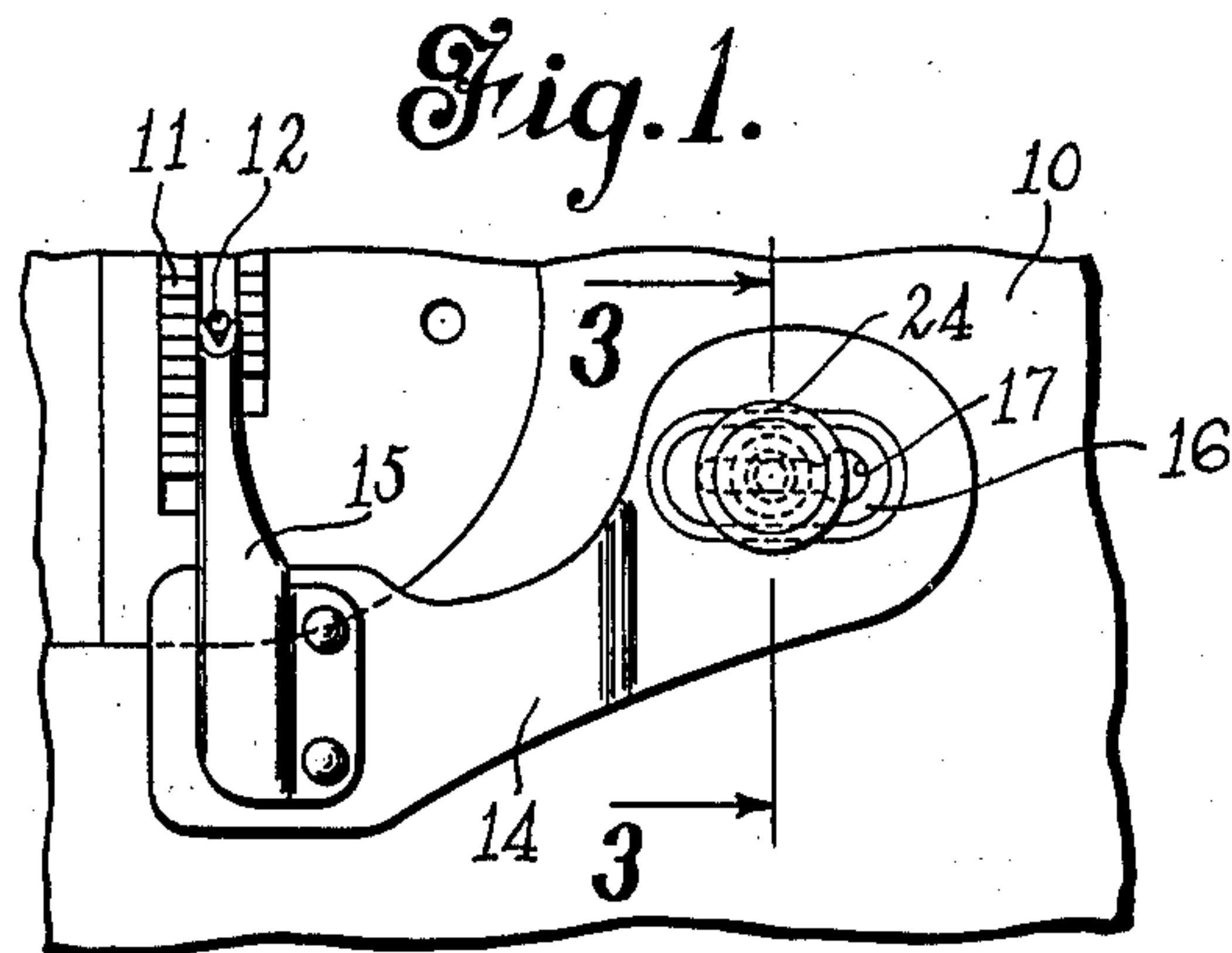
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ADJUSTABLE BEDPLATE ATTACHMENT FOR SEWING MACHINES

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ADJUSTABLE BEDPLATE ATTACHMENT FOR SEWING MACHINES

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This invention relates to sewing machine attachments, and more particularly to a so-called bed plate attachment, or one which is adapted to be secured to the bed plate of a sewing machine as distinguished from an attachment, for example, designed to be secured to the presser bar or some other part of the machine.

As certain attachments are designed to be secured to the bed plate of a sewing machine, means are provided in the bed plate of machines of various makes for securing such attachments thereto. Generally such means comprises a threaded opening provided in the bed plate, which is adapted to receive a screw passing through a part of the attachment. As most attachments are designed to feed material to the sewing machine needle to be stitched thereby, it is, of course, necessary to have the feeding means correctly aligned with the needle. The distance of the threaded opening in the bed plate, referred to above, from the needle has not been standardized, and this distance varies with different makes of machines. In order, therefore, that such an attachment be usable with various makes of machines, it is necessary that it be so constructed that it is adjustable with respect to the attaching screw, as the threaded opening in the bed plate fixes the position of this screw. It has been more or less common practice to provide the attachment with an attaching plate or the like having an elongated slot through which the screw extends, the attachment being adjustable throughout the range permitted by the length of the slot.

In such a case the attaching screw is separable from the attachment itself and is very apt to be mislaid or lost or become separated from the attachment with which it is adapted to be employed.

One object of the present invention is the provision of a bed plate attachment for sewing machines having an attaching screw permanently associated therewith but at the same time adjustable and rotatable with respect thereto.

A further object of the invention is the provision of a bed plate attachment for sewing machines having an arm or plate provided with an elongated slot in which an attaching screw is rotatable and slidable, and which screw is at the same time permanently connected with the plate so that it cannot become separated therefrom.

A still further object of the invention is the provision of a novel method of securing an at-

taching screw to the plate or body portion of a bed plate attachment for sewing machines, so that, while the screw will be permanently associated with the attachment, it will also be rotatable and slidably adjustable with respect thereto.

To these and other ends the invention consists in the novel features and combinations of parts to be hereinafter described and claimed.

In the accompanying drawing:

Fig. 1 is a top plan view of a sewing machine attachment embodying our invention;

Fig. 2 is a plan view of a portion of the attachment showing the reverse side thereof;

Fig. 3 is a sectional view on line 3—3 of Fig. 1; and

Fig. 4 is a sectional view of the attaching screw.

To illustrate a preferred embodiment of our invention, we have shown in Fig. 1 a portion of the bed plate of a sewing machine designated by the numeral 10, and provided with the usual feeding means 11 and needle opening 12.

Associated with the bed plate is an attachment designed to be adjustably connected thereto, the bed plate being provided with a threaded opening 13, shown more especially in Fig. 3, for this purpose. The particular attachment shown is what is known as an underbraider, although it will be understood that this particular device is chosen only for purposes of illustration, and that the present improvements are applicable to bed plate attachments of any type, such as a bed plate hemmer or shirrer, for example.

The attachment comprises an attaching arm or plate 14 having secured at one end thereof the braid guide 15 designed to guide the braid to the needle. At the end of the arm or plate 14 opposite the guide 15, the plate is provided with a slightly raised portion 16 within which is formed an elongated slot of keyhole shape, this slot having an enlarged end portion 17 and an elongated portion 18 of lesser width, the elongated portion 18 being adapted to overlie and register with the screw opening 13.

An attaching screw, shown in Fig. 4, is adapted to be attached to the plate 14 in such a manner that it is permanently connected to the plate, while at the same time it is slidable within the slot portion 18 so that the screw may be threaded into the opening 13 and secure the attachment to the bed of the sewing machine in proper position regardless of the precise distance of the threaded opening 13 from the sewing machine needle. The particular form of screw illustrated in Fig. 4 comprises a threaded end 19 having a restricted

portion 20 above the threads, and an enlargement 21 above this restricted portion. Above the enlargement 21 the screw body is reduced in size and provided with a non-circular end 22 adapted to be received in a non-circular opening 23 in a knurled head 24 by which the screw may be turned by the fingers. It will be understood that after the end 22 of the screw is inserted in the opening 23 of the head, it is riveted over slightly to secure the head 24 permanently to the screw.

The threaded portion 19 of the screw is adapted to make a close fit in the enlarged portion 17 of the keyhole slot in the plate 14, but is of such a size that it may be passed through this portion of the slot. When this threaded portion has been passed through the opening 17 and the restricted neck 20 lies opposite the edges of the opening, the screw may then be moved into the portion 18 of the opening, which is of constant width.

The screw may now be permanently attached to the plate or arm 14 in a convenient manner by merely peening out a portion of the edge of the slot 18 adjacent the junction of the slot with the enlarged opening 17, as shown at 25. This operation, it will be seen, pushes out the metal of the edge of the slot 18 at one point adjacent the enlarged opening 17, so that at this point the opening is too narrow to permit even the restricted portion of the screw to pass. It will, therefore, be impossible for the screw to be moved into the enlarged portion 17 of the keyhole slot and therefore it cannot become separated from the attachment. It will, of course, be obvious that other means may be used to accomplish this result, but the present arrangement has been found entirely satisfactory and a construction which may be provided economically, and one which will give a considerable range of adjustment so that the attachment may be employed with practically any make of sewing machine.

While we have shown and described a preferred embodiment of our invention, it will be understood that it is not to be limited to all of the details shown, but is capable of modification and variation within the spirit of the invention and within the scope of the appended claims.

What we claim is:

1. In a sewing machine attachment having an attaching plate provided with a slot, an attaching screw having a restricted portion slidably and rotatably received in said slot, said screw being of relatively larger size above and below said restricted portion, and said slot being of a width only slightly greater than the diameter of said restricted portion whereby said screw is retained in the slot.

2. In a sewing machine attachment having an attaching plate provided with a slot, an attaching screw having an intermediate portion thereof slidably mounted in said slot, said screw having a threaded portion below and a head portion above said intermediate portion, and said intermediate portion being of smaller diameter than said threaded and head portions, and the diameter of said threaded and head portions being greater than the width of the slot.

3. In a sewing machine attachment having an attaching plate provided with a slot of keyhole shape, said slot having an elongated portion and an end portion of larger size than said elongated portion, an attaching screw having a threaded portion, a head, and a restricted neck between the threaded portion and head, the threaded portion of said screw being adapted to be passed through the larger portion of said keyhole slot, whereby the restricted portion of said screw may be received in the elongated portion of said slot, and means for retaining the restricted portion of said screw in the elongated portion of the slot.

4. In a sewing machine attachment having an attaching plate provided with a slot of keyhole shape, said slot having an elongated portion and an end portion of larger size than said elongated portion, an attaching screw having a threaded portion, a head, and a restricted neck between the threaded portion and head, the threaded portion of said screw being adapted to be passed through the larger portion of said keyhole slot, whereby the restricted portion of said screw may be received in the elongated portion of said slots, and the elongated portion of said slot being restricted in width at a point adjacent its junction with the enlarged slot portion to prevent the restricted portion of said screw entering the enlarged portion of the slot.

5. In a sewing machine attachment having an attaching plate provided with a slot of keyhole shape, said slot having an enlarged end portion and an elongated narrower portion communicating with said enlarged end portion, a screw having a restricted intermediate portion and relatively larger end portions, said screw being inserted through the enlarged end of said slot and its restricted portion moved into the elongated portion of the slot, and the edge of said slot being thereafter displaced inwardly adjacent the enlarged end portion to retain the screw in the elongated slot portion.

6. In a sewing machine attachment having an attaching plate provided with an elongated slot, a member slidably and rotatably mounted in said slot, said member having an enlarged threaded end below the plate, and an enlarged head above the plate whereby said member is retained within the slot by its enlarged portions above and below the plate and thereby permanently connected with the plate.

7. In a sewing machine attachment having an attaching plate provided with an elongated slot, a member slidably and rotatably mounted in said slot, said member having an enlarged threaded end below the plate, and an enlarged head above the plate whereby said member is retained within the slot by its enlarged portions above and below the plate and thereby permanently connected with the plate, said slot being provided with an opening at one end to permit reception of said member therein, and said opening being thereafter reduced in size to prevent removal of the member.

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