

No. 886,568.

W. WILSON.

PATENTED MAY 5, 1908.

ANGLE SEWING ATTACHMENT FOR SEWING MACHINES.

APPLICATION FILED MAR. 17, 1906.

2 SHEETS—SHEET 1.

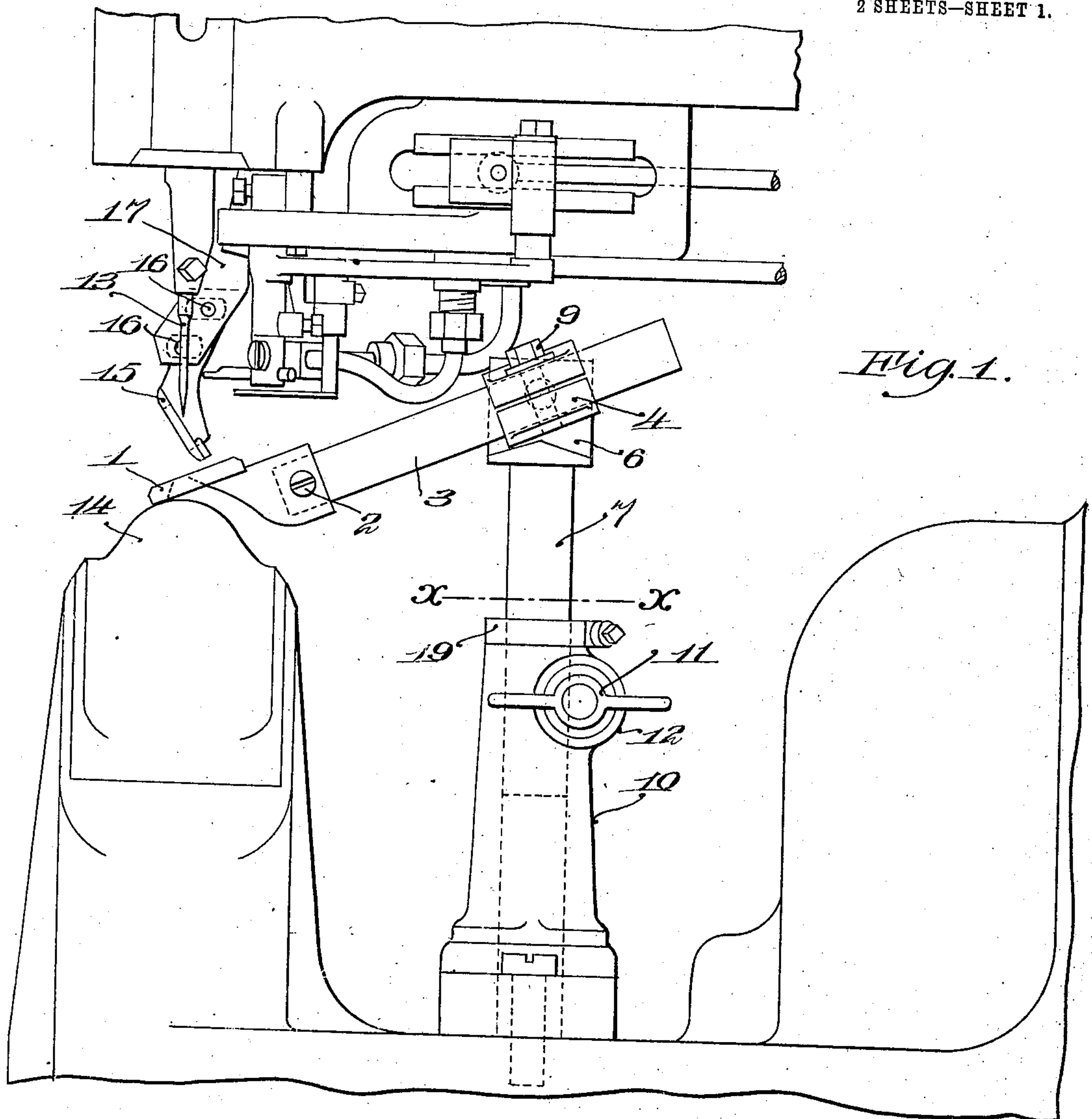


Fig. 1.

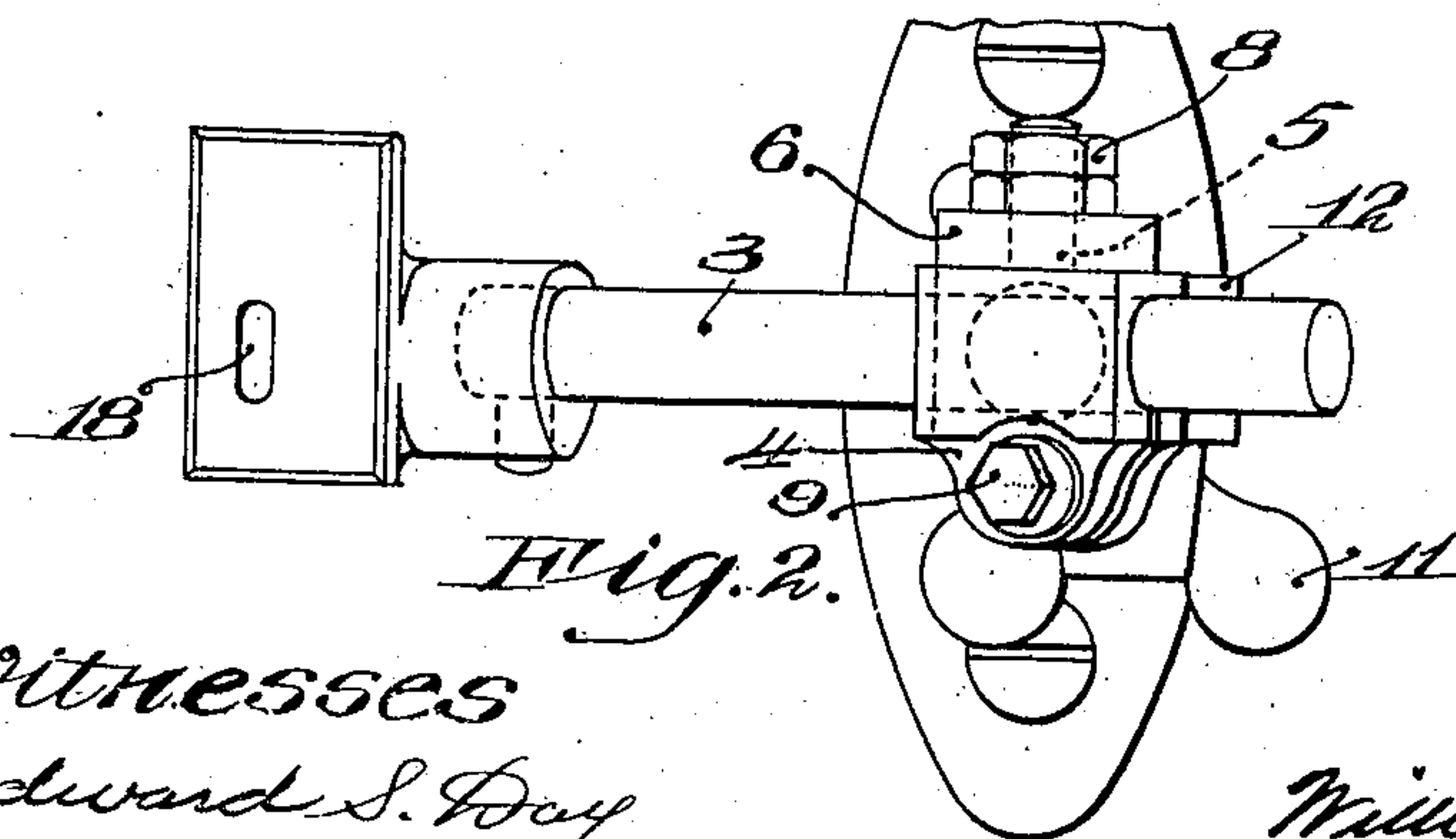


Fig. 2.

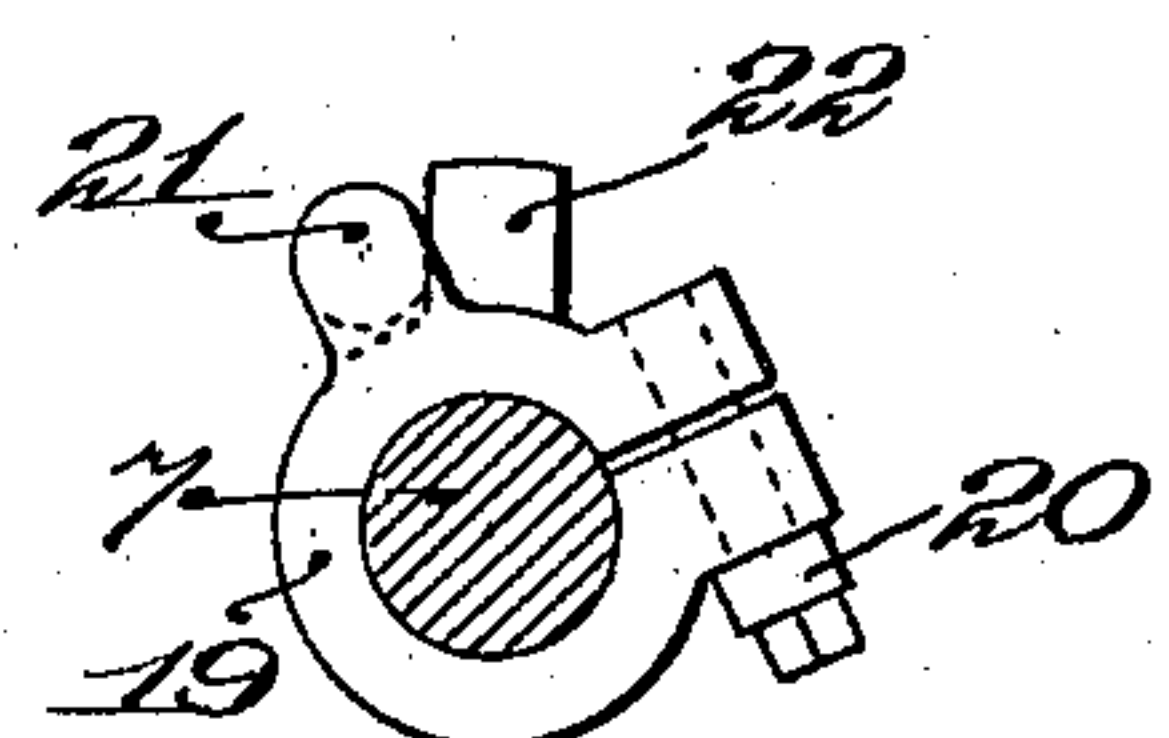


Fig. 3.

Witnesses

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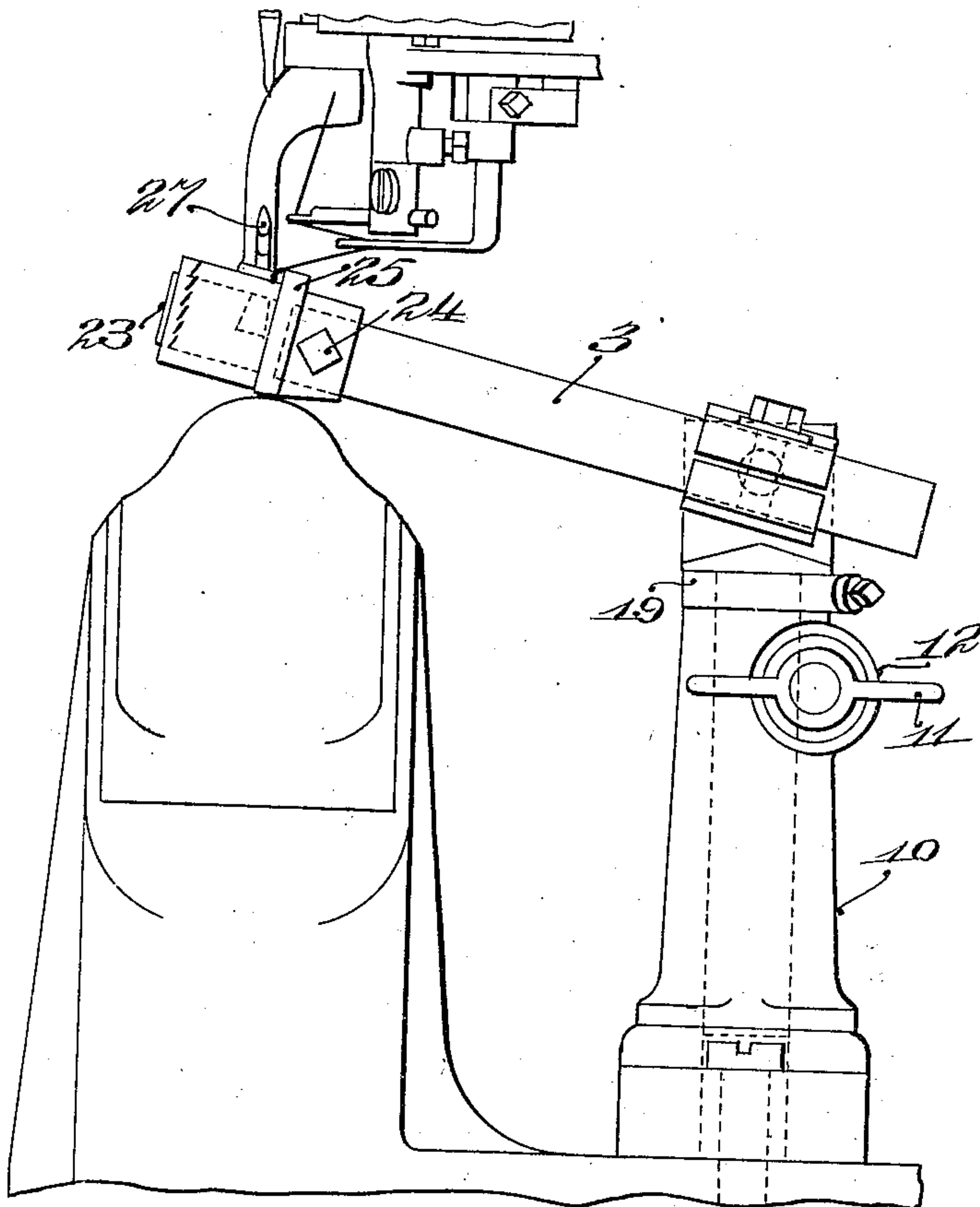


Fig. 4.

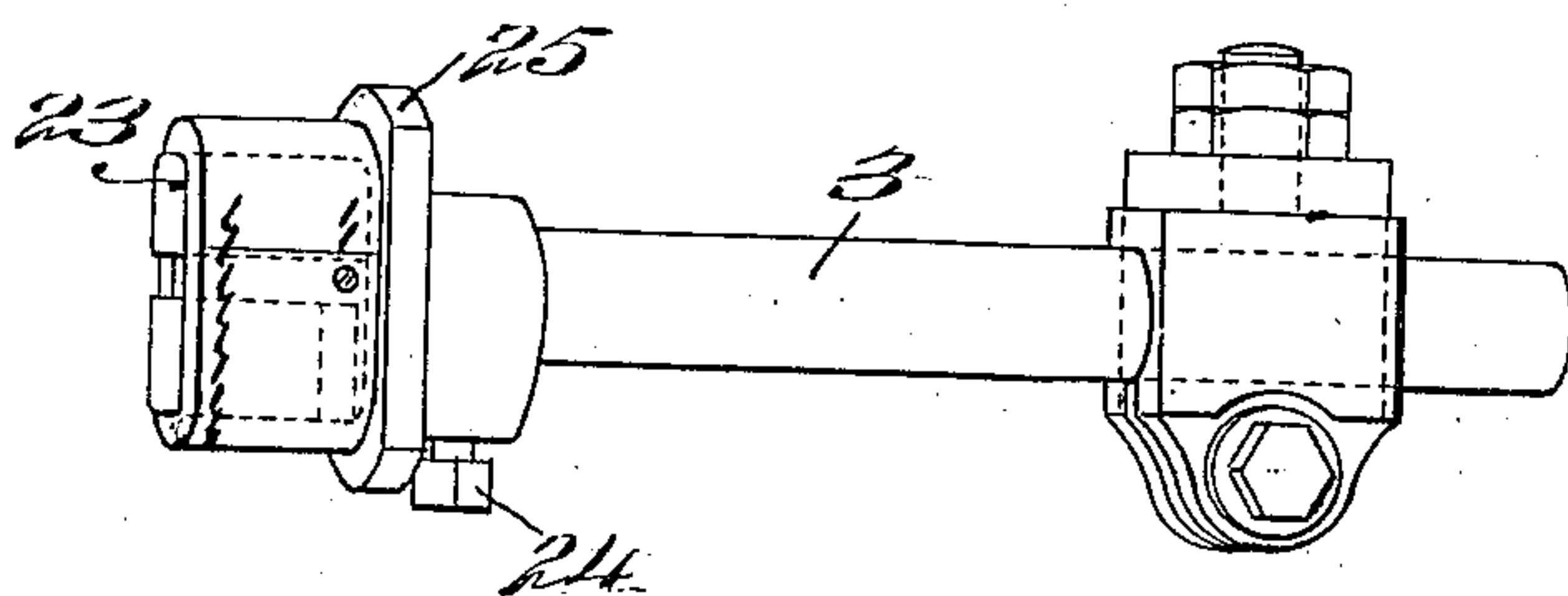


Fig. 5.

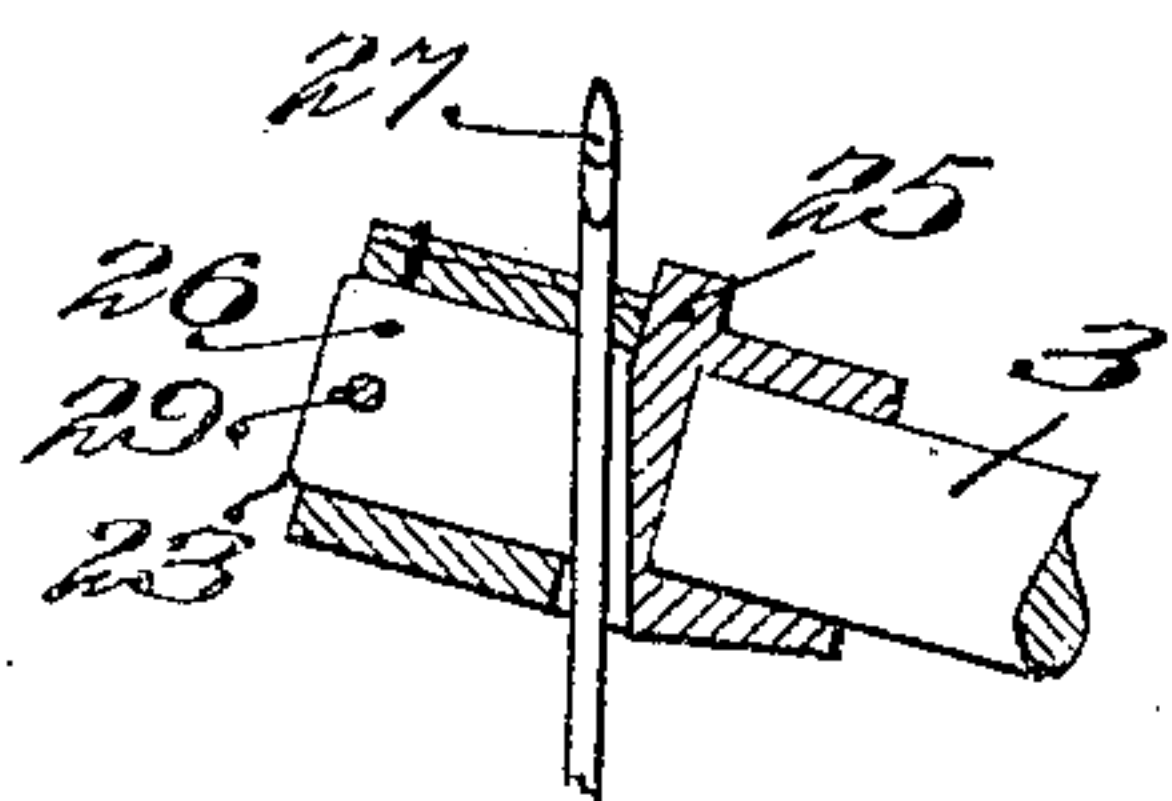


Fig. 6.

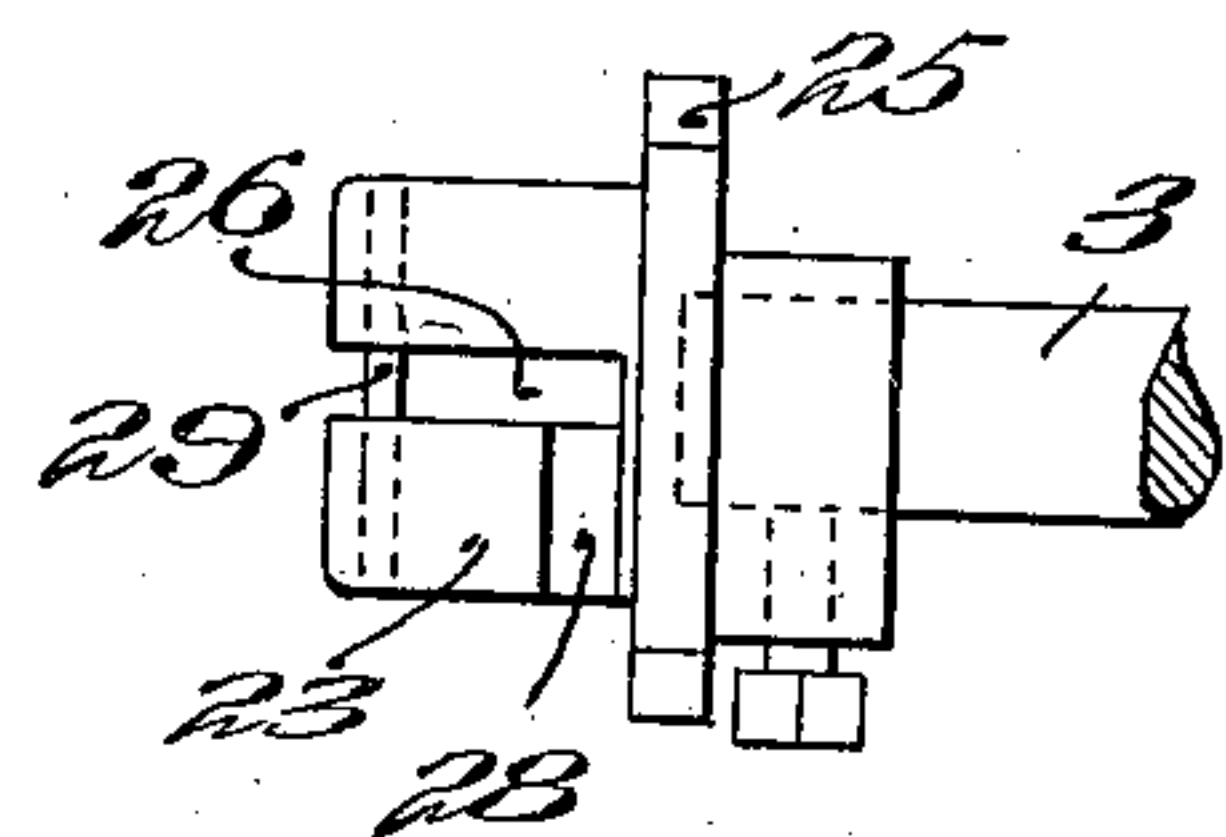


Fig. 7.

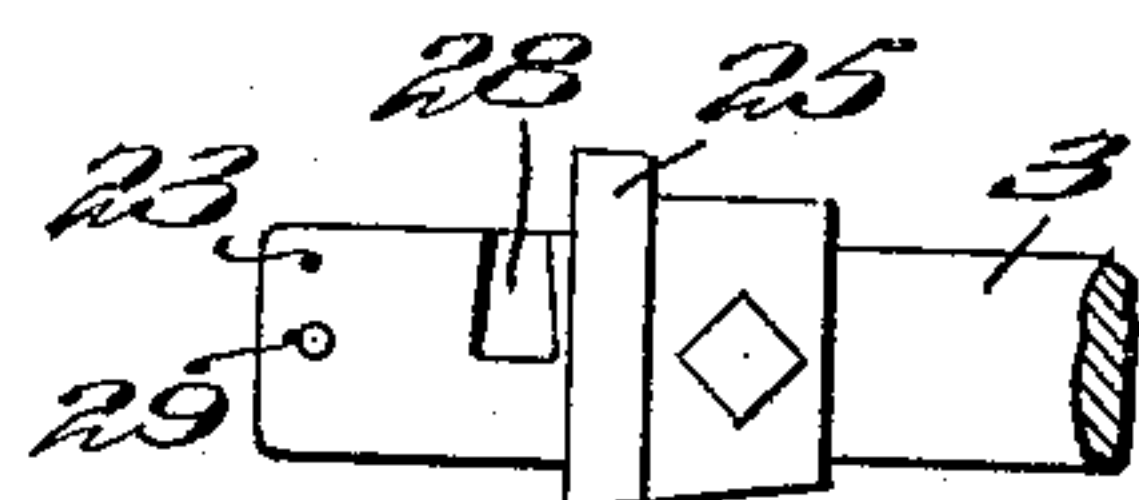


Fig. 8.

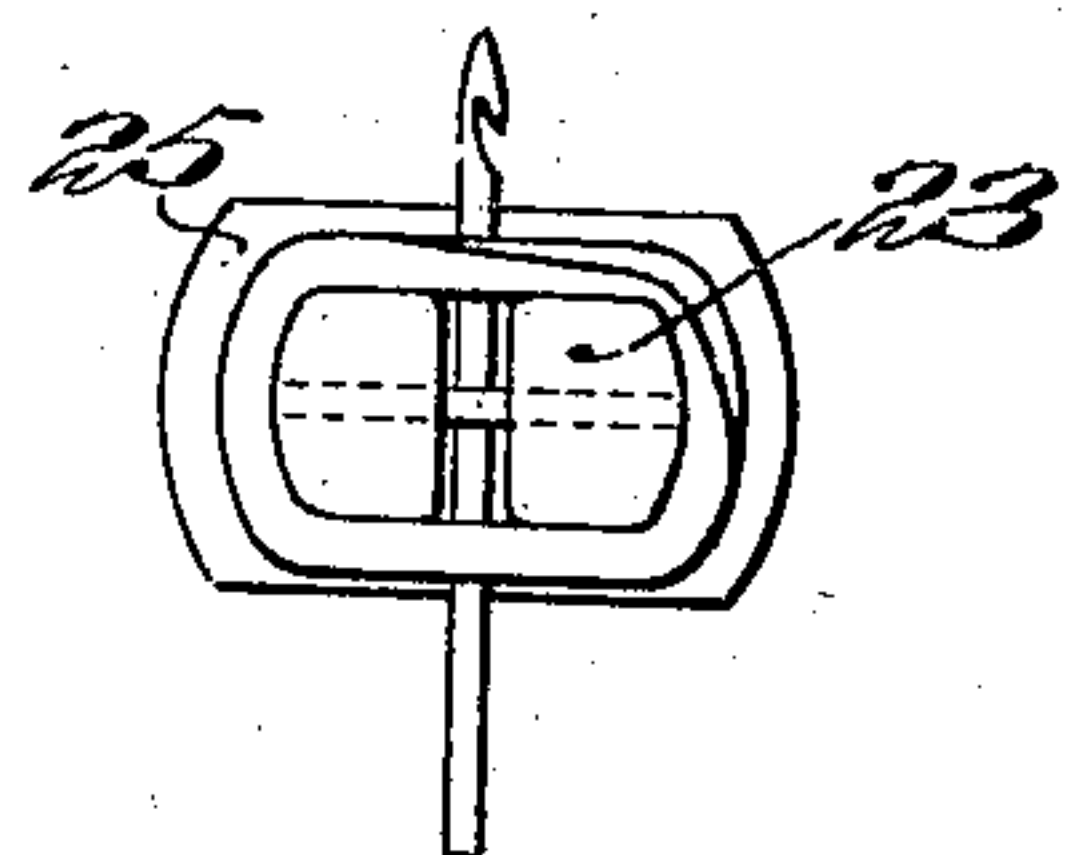


Fig. 9.

Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIAM WILSON, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO CAMPBELL-BOSWORTH MACHINERY COMPANY, OF PORTLAND, MAINE, A CORPORATION OF MAINE.

## ANGLE-SEWING ATTACHMENT FOR SEWING-MACHINES.

No. 886,568.

Specification of Letters Patent.

Patented May 5, 1908

Application filed March 17, 1906. Serial No. 306,548.

*To all whom it may concern:*

Be it known that I, WILLIAM WILSON, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Angle-Sewing Attachments for Sewing-Machines, and 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.

This invention relates to improvements in angle-sewing attachments for sewing machines.

In the manufacture of various articles of leather it is necessary to secure pieces of leather together by a seam passing at an angle through the material, as, for example, in sewing the corners of a dress-suit case.

One object of the present invention is to produce an attachment for a sewing machine by which such operations are facilitated, the attachment being adapted to support the work at the correct angle for the reception of the seam and having provisions for adjustments by which the angle at which the work is held, and the distance of the seam from the edge of the work, may be varied to suit the requirements of the work.

Another object of the invention is to produce an improved angle-sewing attachment for use in sewing harness loops, the attachment being adapted to hold a loop at such an angle that the sewing instrumentalities engage only one margin of the loop, whereby a seam parallel to the margin of the loop may be sewed on a sewing machine of ordinary form.

The invention consists in the improved angle-sewing attachment hereinafter described, as defined in the claims.

In the drawings, Figure 1 is a side elevation of an angle-sewing attachment embodying the present invention, together with portions of a sewing machine in connection with which it is used. Fig. 2 is a plan view of the attachment; and Fig. 3 is a detail plan view on line  $x-x$ , Fig. 1. Fig. 4 is a side elevation of a modified form of the attachment, for use in sewing harness loops. Fig. 5 is a plan view of the same form. Figs. 6, 7, 8 and 9 are, respectively, a vertical section, a plan, a side elevation, and a front view, of the loop support.

The illustrated embodiment of the invention is constructed as follows:—

In the form shown in Figs. 1, 2 and 3 the work rests upon a work table or throat-plate 1 which is provided with a socket and a set screw 2 by which it is removably secured to a round arm 3. The arm 3 is held in a clamp 4 which is provided with a stud 5 by which it is pivotally secured to a bracket 6 on the upper end of a vertical stem 7. Nuts 8 on the stud 5 hold the clamp in adjusted position on the bracket 6, and a screw 9 causes the clamp 4 to hold the arm 3 in adjusted position. The stem 7 is adjustably fixed in a vertical recess in a post or support 10 mounted on the frame of the machine, the stem being fixed in the post 10 by means of a thumb screw 11 which engages the ears 12 on the upper extremity to the post and draws them together so as to clamp the stem in the recess.

The sewing machine illustrated is the familiar Campbell wax thread machine, the awl 13, shuttle race 14 and other parts shown being of the usual form, with the exception of the presser foot 15 which is arranged with its working surface at an angle to the surface of the work table or throat-plate 1, and is secured to the supporting and actuating mechanism therefor by adjustable means comprising screws 16 passing through slots, shown in dotted lines in Fig. 1, in the shank of the presser foot and threaded into an extension 17 from the presser-foot bar of the sewing machine. This arrangement permits adjustment of both the angle of the face of the presser foot and also the horizontal position of the presser foot with respect to the needle. By moving the presser foot toward and from the front of the machine the distance of the seam from the edge of the work may be adjusted. The several adjustments provided in the supporting means for the work table or throat-plate 1 permit the angle of the work table to be changed without moving the work table laterally, so that the needle and awl may always register properly with the opening or throat 18 in the work table or throat-plate. To change the angle of the work table, the screw 9 and nuts 8 are loosened and also the thumb screw 11, and the stem 7 is then moved up and down until the right angle is obtained, the arm 3 being at the same time moved longitudinally in the clamp 4 so as to maintain the proper relative posi-



tion of the work table or throat-plate and the needle and awl.

To facilitate the replacement of the adjustment in working position after it has been removed from the sewing machine or temporarily thrown out of operation the stem 7 is provided with a stop collar 19, which is split and is drawn together by a screw 20 so that it may be clamped upon the stem. The stop collar is provided with a downwardly-projecting stop 21 which engages a lug 22 at the upper end of the post 10. To throw the work table temporarily out of operation the thumb screw 11 is loosened and the work table or throat-plate may then be swung away from working position, the stem 7 turning in the post while the stop collar 19 prevents it falling therein. When the work table or throat-plate is swung back to working position the stop 21 engages the lug 22 so as to stop the work table or throat-plate in the proper position without attention or readjustment on the part of the operator. The adjustment may also be removed as a whole by withdrawing the stem 7 from the post 10 and may then be replaced in proper position without any readjustment.

The form of the invention shown in Fig. 4 and the subsequent figures is particularly adapted for sewing harness loops, being adapted to hold a harness loop at such an angle that the needle and awl may engage one margin only of the loop so as to form a seam parallel with the edge of the strip of leather of which the loop is made and thus secure together the scarfed ends of the leather. The loop holder comprises a body portion 23 provided with a socket and a set screw 24 by which it may be fixed to the arm 3 in place of the work table 1; the means for supporting the loop holder being the same as those by which the work table above described is supported. The body 23 of the loop holder is of such size and form as to distend and substantially fill the harness loop, so that if a strip of leather with its ends suitably scarfed be wrapped about the body 23 its ends will overlap to the right extent to make the loop of the desired dimensions. The loop holder is provided with an edge gage 25 against which the operator holds the inner edge of the loop. The body of the loop holder is slotted at 26 for the passage of the needle 27 of the sewing machine, and is tipped at such an angle, as shown in Figs. 4, 5, and 6, that the needle when rising clears the lower side of the loop but penetrates the margin of the upper side of the loop so as to form a seam therein.

The upper side of the body of the loop holder is slotted at 28 to permit the awl to penetrate the work and make the necessary feeding movement. A pin 29 prevents the shuttle thread of the sewing machine from falling out of the slot 26 when the work is re-

moved and the thread cut. After one side of the loop has been sewn the loop may be turned around and the other side sewn. By substituting loop holders of different sizes loops of different diameters may be sewn, while loops of different widths may be sewn on the same loop holder.

Having now described the invention, what is claimed is:

1. An angle-sewing attachment for sewing machines having, in combination, a work table or throat-plate, an arm on which it is mounted, a support for the arm, and connections between the arm and the support permitting both longitudinal and angular adjustment of the arm, substantially as described.

2. An angle-sewing attachment for sewing machines having, in combination, a work table or throat-plate, an arm on which it is mounted, a vertically adjustable support for the arm, and connections between the support and the arm permitting both longitudinal and angular adjustment so that the inclination of the work table or throat-plate may be changed without lateral displacement of the work table or throat-plate, substantially as described.

3. An angle-sewing attachment for sewing machines having, in combination, a support, and a loop-holder mounted thereon at an angle with the needle of the sewing machine so that the needle will engage one margin only of the loop, substantially as described.

4. An angle-sewing attachment for sewing machines having, in combination, a body portion for distending and substantially filling the loop, and an edge gage, the body portion being mounted at an angle with the needle of the sewing machine so that one margin only of the loop is engaged by the needle, substantially as described.

5. An angle-sewing attachment for sewing machines having, in combination, a work table or throat-plate and a presser foot angularly and independently adjustable with respect to the sewing instrumentalities to the work at different angles thereto, substantially as described.

6. An angle-sewing attachment for sewing machines, having, in combination, work-guiding instrumentalities constructed and arranged to engage two pieces of material arranged at an angle and to present the work angularly with respect to the needle of the sewing machine, supports for said guiding instrumentalities, and adjustable connections between said instrumentalities and supports to permit change in the angle at which the work is presented to the sewing instrumentalities, substantially as described.

7. An angle-sewing attachment for sewing machines having, in combination, a work table or throat-plate, an arm on which it is mounted, a support for the arm, and connec-



tions between the arm and the support permitting both longitudinal and angular adjustment of the arm, and a presser foot constituting the sole means for holding the work on the work table or throat-plate, substantially as described.

8. An angle-sewing attachment for sewing machines having, in combination, a work table or throat-plate, an arm on which it is mounted, a vertically adjustable support for the arm, and connections between the support and the arm permitting both longitudinal and angular adjustment so that the inclination of the work table or throat-plate may be changed without lateral displacement of the work table or throat-plate, and a presser foot constituting the sole means for holding the work against the work table or throat-plate.

9. An angle-sewing attachment for sewing machines having, in combination, a work table or throat-plate, a presser foot constituting the sole means for holding the work against the work table or throat-plate, independent means for supporting the work table or throat-plate and the presser foot having provision for independent angular adjustment with respect to the sewing instrumentalities so as to hold the work at different angles thereto, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM WILSON

Witnesses:

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