

(No Model.)

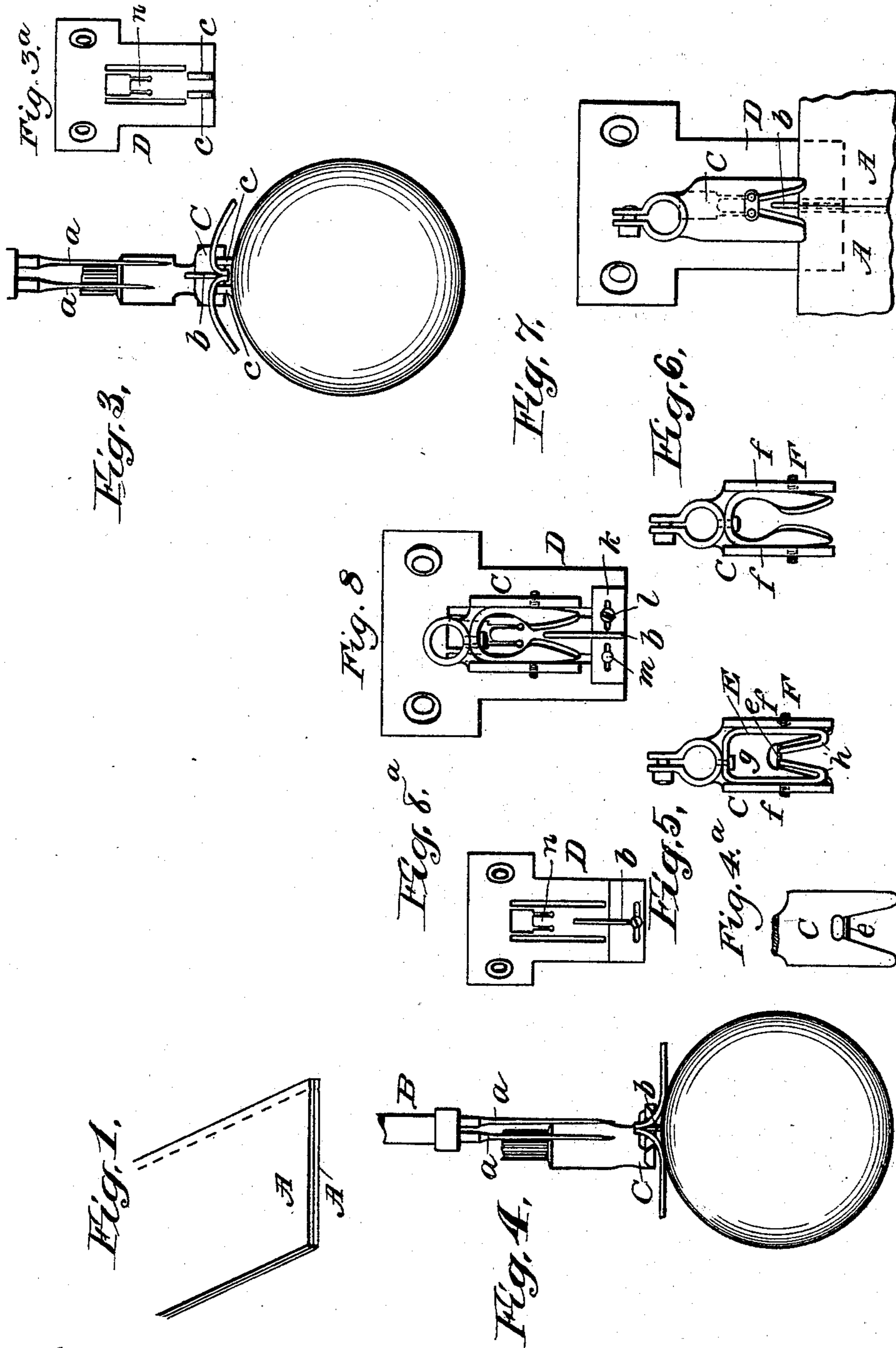
2 Sheets—Sheet 1.

C. McNEIL.

PRESSER FOOT AND THROAT PLATE FOR SEWING MACHINES.

No. 605,449.

Patented June 7, 1898.



Witnesses.
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(No Model.)

2 Sheets—Sheet 2.

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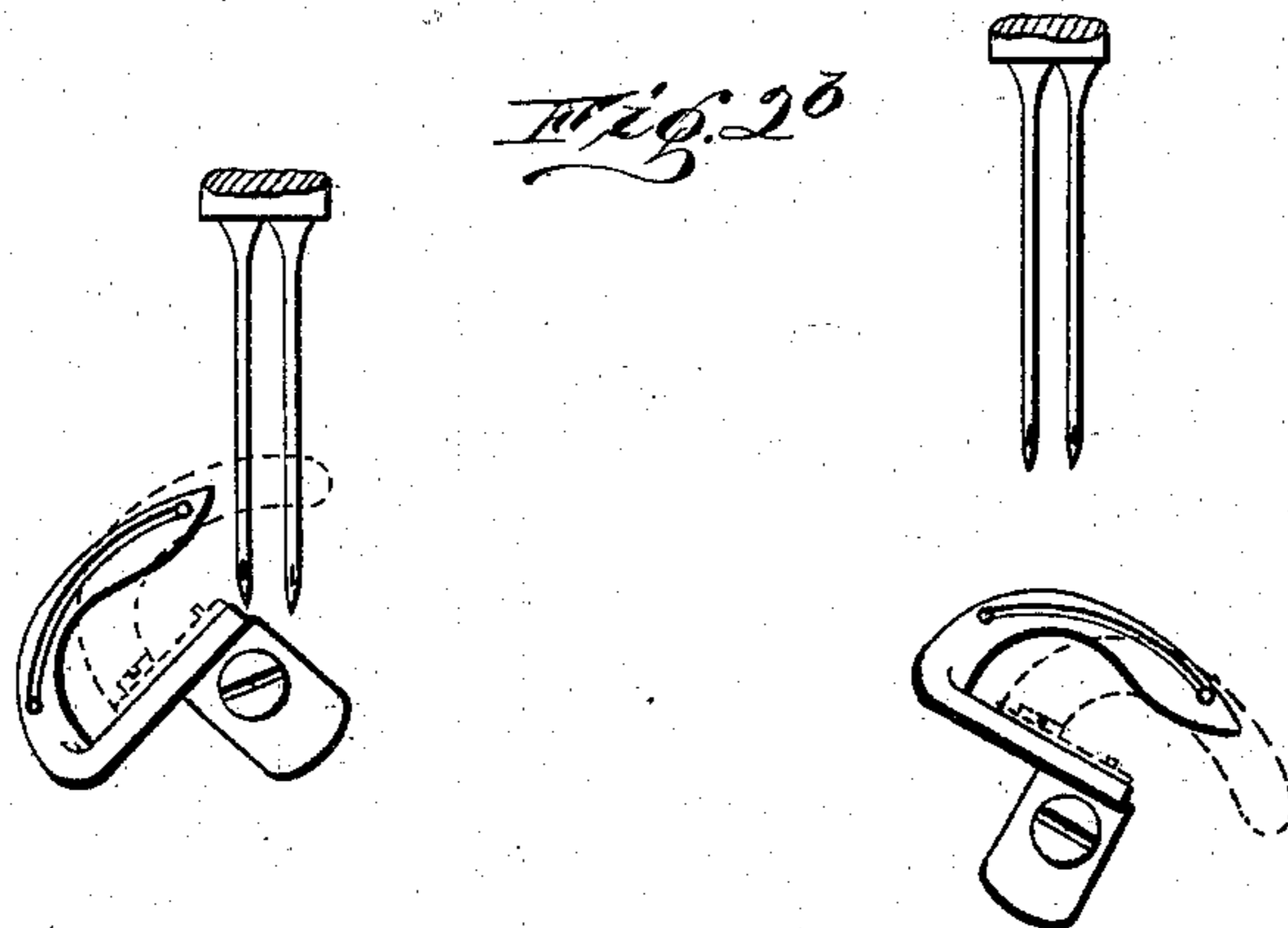
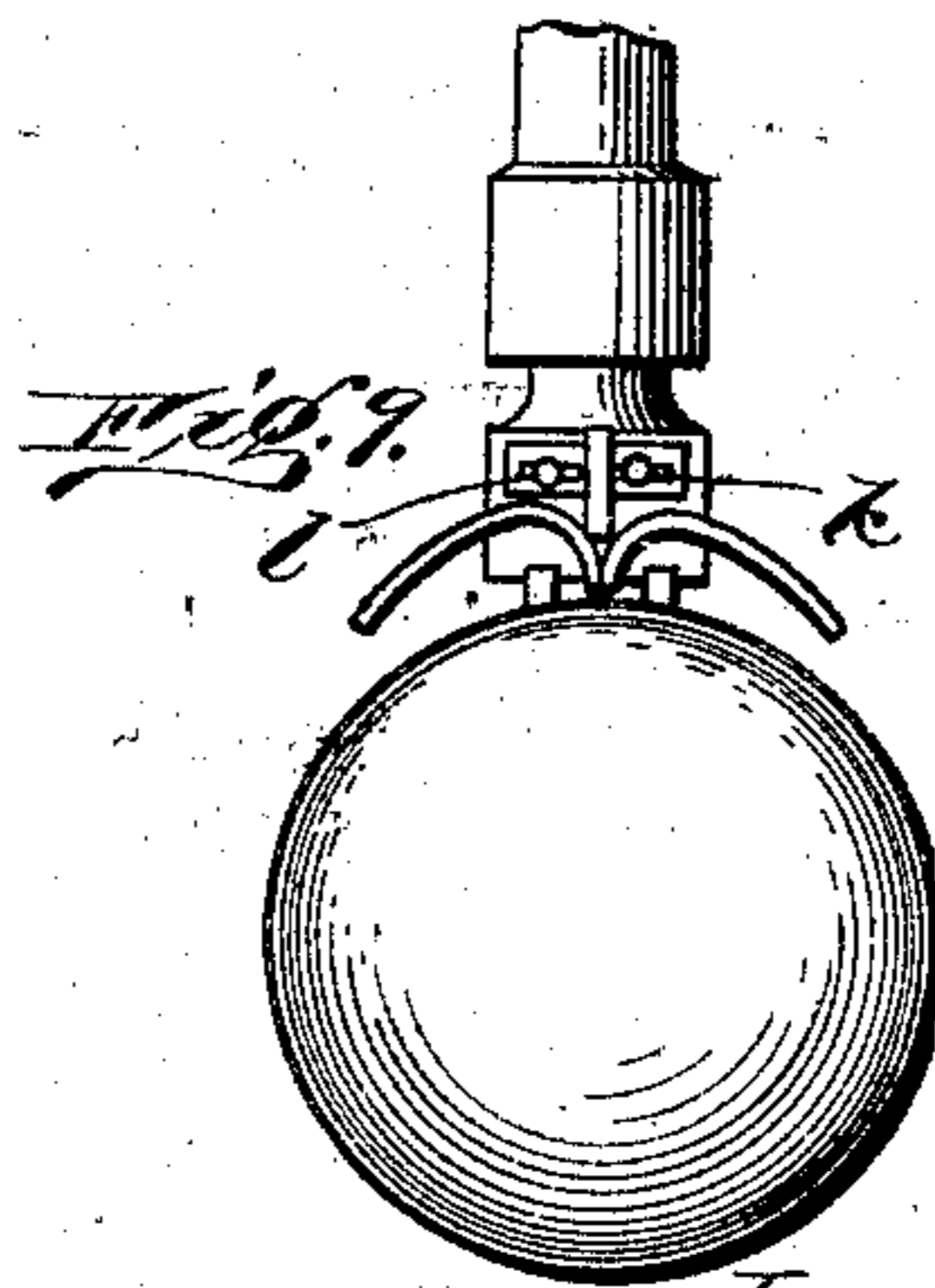
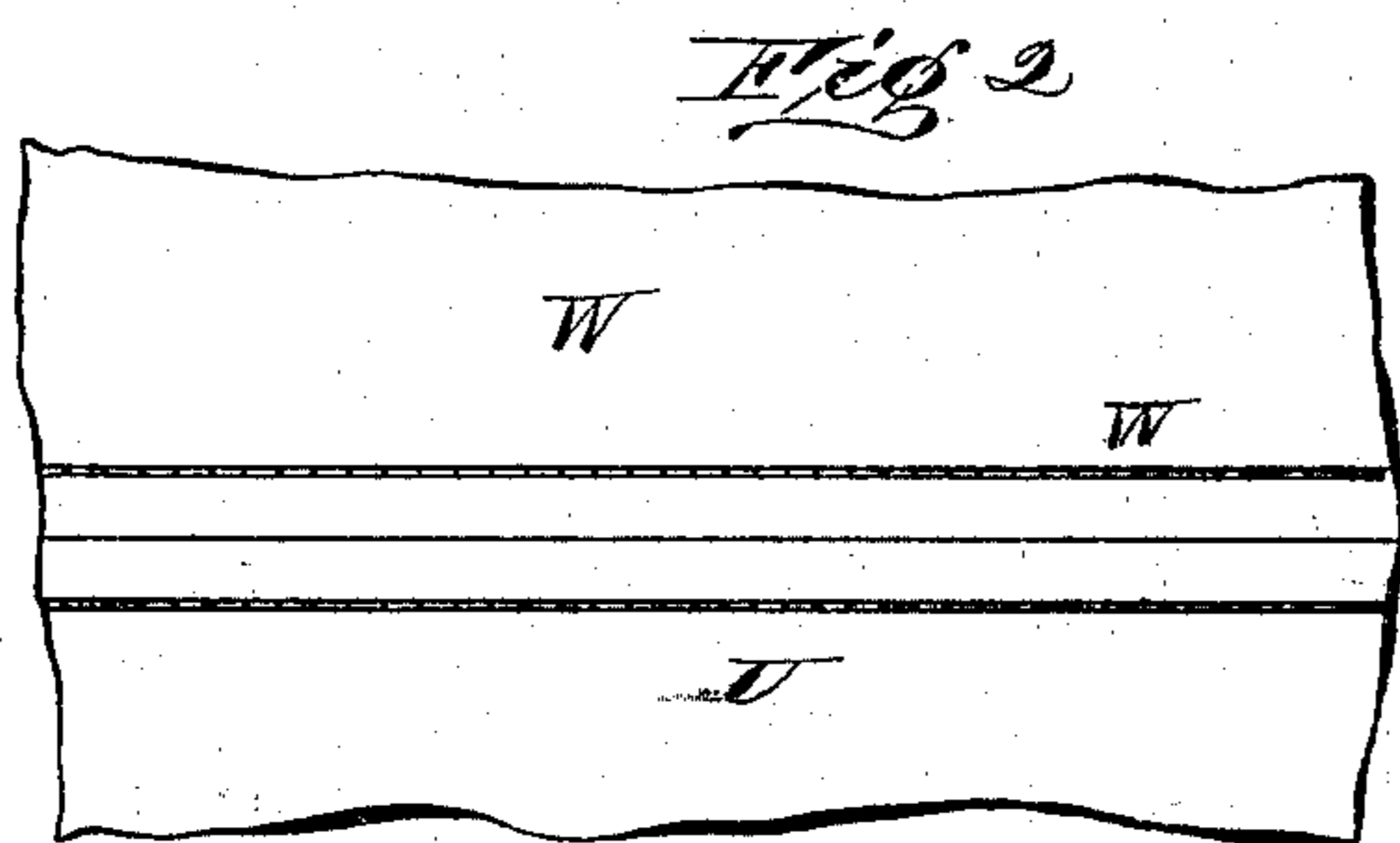
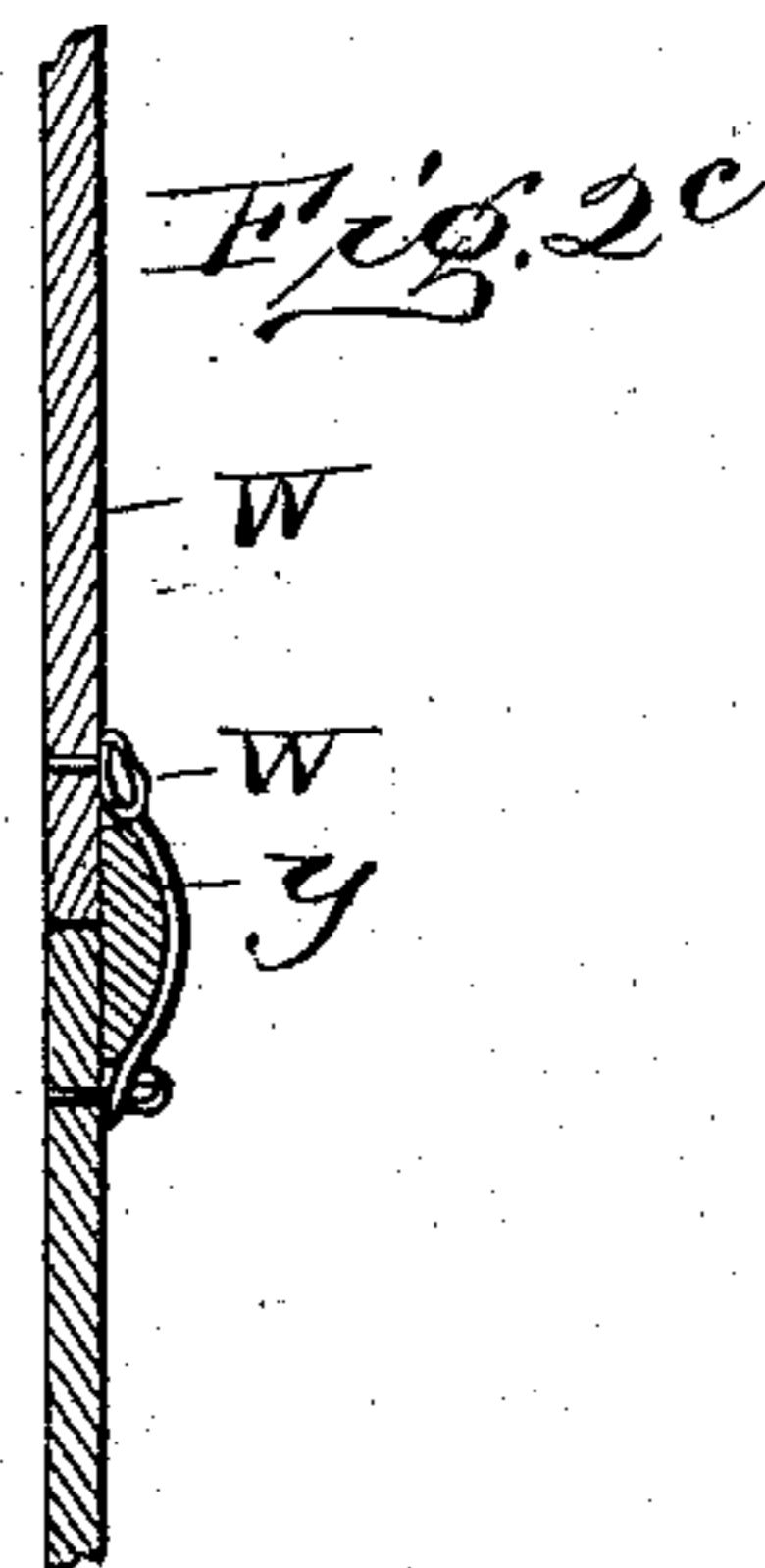
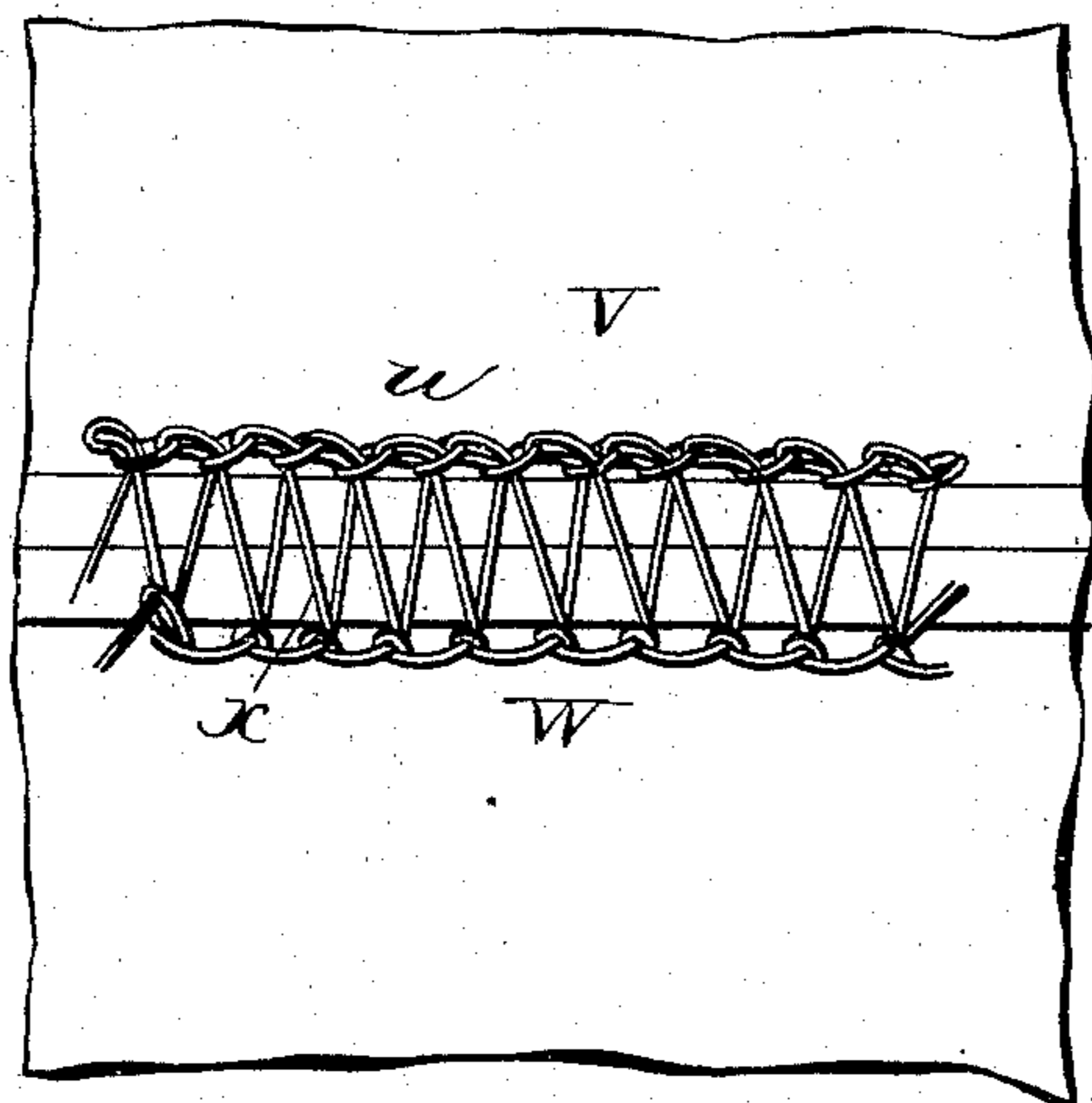


Fig. 2a



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UNITED STATES PATENT OFFICE.

CHESTER MCNEIL, OF ROGERS PARK, ILLINOIS, ASSIGNOR TO THE UNION SPECIAL SEWING MACHINE COMPANY, OF CHICAGO, ILLINOIS.

PRESSER-FOOT AND THROAT-PLATE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 605,449, dated June 7, 1898.

Application filed August 9, 1894. Serial No. 519,844. (No model.)

To all whom it may concern:

Be it known that I, CHESTER MCNEIL, a citizen of the United States, residing at Rogers Park, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a description, reference being had to the accompanying drawings and to the letters of reference marked thereon.

My invention relates to an improvement in sewing-machines; and my object is to provide an attachment for use on machines when it is desired to cover seams on knit goods or to unite the edges thereof.

The invention consists in the matters hereinafter described, and referred to in the appended claims.

In the accompanying drawings, which illustrate my invention, Figure 1 is a plan view illustrating a seam to be covered, the edges being superposed. Fig. 2 is a top plan view showing the seam after the two rows of stitches have been passed down through the fabric by the two needles. Fig. 2^a is a bottom plan view showing the raw edges of the fabric covered by the looper-thread, which passes back and forth between the rows of loops on the under surface of the fabric. Fig. 2^b shows in detail the looper and needles. Fig. 2^c is a sectional view of the seam shown in Fig. 2^a.

Fig. 3 represents an end view of a machine, showing the presser-foot with the fin and the guide on the cloth-plate. Fig. 3^a is a view of the throat-plate of Fig. 3 detached. Fig. 4 is a similar view showing an equivalent but reverse construction. Fig. 4^a is a view of the presser-foot of Fig. 4 detached. Fig. 5 is a plan view of a presser-foot having a slot in which the seam to be covered is guided and having means for varying the width of said slot to accommodate varying widths of seams, and Fig. 6 is a modification in which the entire body portion of the presser-foot is of spring material. Fig. 7 shows my presser-foot and throat-plate when two pieces of fabric are to be abutted and their edges then united. Fig. 8 is a plan view of my invention in the form used when a selvage and a

raw edge are to be united. Fig. 8^a is a detail view showing a modification of the means shown in Fig. 8 for adjusting the fin on the throat-plate. Fig. 9 is a view showing the adjustable fin on the presser-foot, whereby the same may be shifted laterally, this adjustment being accomplished by means of the plate and screw *k l*, and with this construction it will be understood that the slot in which the downwardly-turned raw edges of the fabric fit may be varied in width by means similar to those by which the width of the presser-foot slot is varied.

In the drawings, A represents two pieces of fabric whose edges are superposed and united by a single seam, as shown in Fig. 1, while in Figs. 2 and 2^a the top and bottom of the seam after being covered is shown. In order to make a finished and neat job of covering these seams, it is necessary to provide means for guiding those portions of the fabrics turned at an angle to the body portion thereof. I accomplish this object in several different ways.

As shown in Fig. 3, B represents the needle-bar, *a* the needles, and C the presser-foot, having openings for the passage of said needles and having a fin *b* of well-known construction projecting from the lower side thereof.

D is the throat-plate, of suitable construction, herein shown as having two upward projections *c*, between which the projecting edges of the seam to be covered are guided. In this form of my invention the fabric seamed is fed into the machine with the rough side of the seam between the guides *c* and with the fin *b* fitting the groove or fold of the seam. (See *d* in Fig. 2.)

In Fig. 4 a reverse of Fig. 3 is shown, in which the fin is on the throat-plate D, and the presser-foot C is slotted, as shown, to guide the rough side of the seam, the seam being crowded down beneath the presser-foot by the cross bar or wire *e* across the rear end of the slot, and in the use of this construction mechanism for making a cross-stitch to cover up the seam would have to be provided to co-

operate with the needles. Any form of cross-stitch mechanism might be used, comprising either a vibrating needle or thread-carriers reciprocating back and forth across the line
5 of the seam and held down by the needle-threads. There are many forms of these cross-stitching devices.

I have shown in Fig. 7 an arrangement of my invention in which the edges of the two
10 pieces of fabric are abutted and then united by any suitable cross-stitch mechanism. In this event the presser-foot is slotted at its forward end, and a fin on the throat-plate projects upward therethrough or perhaps part
15 way into it, and the edges of the goods are placed against the fin and fed forward to the sewing mechanism, which may be of any suitable character, the stitches being laid across a tongue on the throat-plate, or the presser
20 may have the fin extending into a slot in the throat-plate.

It will be noticed that in Fig. 2^b I have shown a single under-thread-carrying looper which coöperates with the loops brought down
25 by both needles to weave the thread back and forth between the lines of stitching, thus covering the seam. It will be understood, however, that any suitable stitch mechanism may be provided and that the guiding fin and slot
30 arranged in either the throat-plate or the presser-foot may be of great utility when used with other forms of sewing mechanism, and, furthermore, I do not wish to confine myself to the use of the looper carrying a single un-
35 der thread, as it will be obvious more may be used.

As a further and special improvement I have provided a special construction of presser-foot slotted to receive the seam to be
40 covered and provided with means for adjusting the width of the slot to accommodate fabrics of varying gages.

In the form of presser-foot illustrated in Fig. 5 the presser-foot has a bifurcated forward end, the slot tapering toward the rear
45 and then enlarged for the passage of the needles and provided with the cross-bar *e*. It has the vertical side pieces *f*, and a spring *E* of the form shown is attached by the screw *g*
50 to the presser-foot shank and is bent around to form two forks *h*, with the slot between. Screws *F*, passing through the vertical side pieces *f*, bear upon the ends of the spring, and by tightening or loosening them the ends
55 are brought nearer together or farther apart, thus varying the width of the slot between them.

In Fig. 6 the side pieces *f* are rigidly attached to the shank, and the body portion is
60 of spring metal, the screws *F* bearing directly on the forks of the foot, whereby the latter may be properly adjusted.

It is sometimes desirable in uniting fabrics—as, for instance, where a selvage edge
65 and a raw edge are to be joined—to pass the

zigzag needle down through only a short distance inside the selvage edge, but a much longer distance inside the raw edge. To provide for this, I have devised the arrangement shown in Fig. 8, in which, in addition to the
70 adjustment of the foot, I make the fin on the throat-plate adjustable by attaching it to a plate *k*, adjustable on the throat-plate by the set-screw *l* and the guiding-pin *m*. In Fig. 8^a the adjusting-slot and screw are shown in
75 advance of the fin. In this event, as in Fig. 7, the two pieces of fabric would be arranged with their edges against the guiding-fin on the throat-plate (or presser-foot, as the case might be) and the stitches formed over the
80 tongue *n* on the throat-plate, though of course the presser-foot may have a tongue as well as the throat-plate.

It will be understood that in Fig. 4 the upwardly-projecting pieces on the throat-plate
85 might be made adjustable to and from each other by means similar to those shown Fig. 8 to accommodate fabrics of varying gages, the keel remaining on the presser-foot, this being an equivalent construction to the adjustment
90 of the presser-foot.

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

1. In a sewing-machine, the combination
95 with mechanism for passing a plurality of rows of loops through the fabric of a presser-foot and work-plate, a guiding-fin on one of said elements arranged in the line of the seam, the other element being provided with a slot
100 with which said fin is in alignment, and means for varying the width of said slot; substantially as described.

2. In a sewing-machine, the combination
105 with mechanism for making a plurality of rows of stitching, of a presser-foot and work-plate, a guiding-fin on one of said elements arranged in a line between the rows of stitching, the other element being provided with a slot with which said fin is in alignment, means
110 for varying the width of said slot, and means also for adjusting the guiding-fin; substantially as described.

3. In a sewing-machine making two parallel rows of stitching the combination with a
115 presser-foot having a longitudinal slot of a throat-plate provided with a longitudinal guiding-fin registering with said slot and arranged in a line between the rows of stitching and means for varying the width of said
120 slot; substantially as described.

4. The combination with a presser-foot having a longitudinal slot of a throat-plate provided with a longitudinal guiding-fin adapted to register with said slot, means for adjust-
125 ing the walls of, and thus varying the width of said slot, and for adjusting the guiding-fin; substantially as described.

5. The herein-described presser-foot having the bifurcated forward end, the rigid side
130

pieces and the removable spring-plate secured to the presser-foot and conforming at the front to the shape of the foot, and adjusting-screws for regulating the distance apart of the ends
5 of said spring; substantially as described.

6. The combination with a presser-foot and throat-plate, one of said elements being provided with a longitudinal slot and the other element having a fin adapted to register with

said slot, with means for adjusting said parts; substantially as described.

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

CHESTER McNEIL.

Witnesses:

W. L. SWIFT,
M. McNEIL.