

(No Model.)

W. R. PARSONS.

BINDER AND HEMMER ATTACHMENT FOR SEWING MACHINES.

No. 290,797.

Patented Dec. 25, 1883.

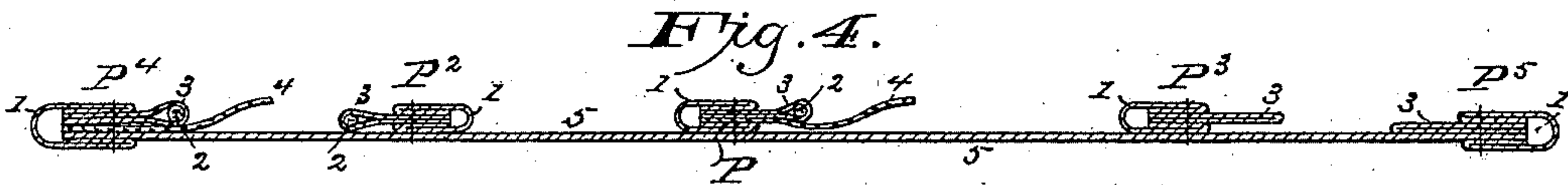
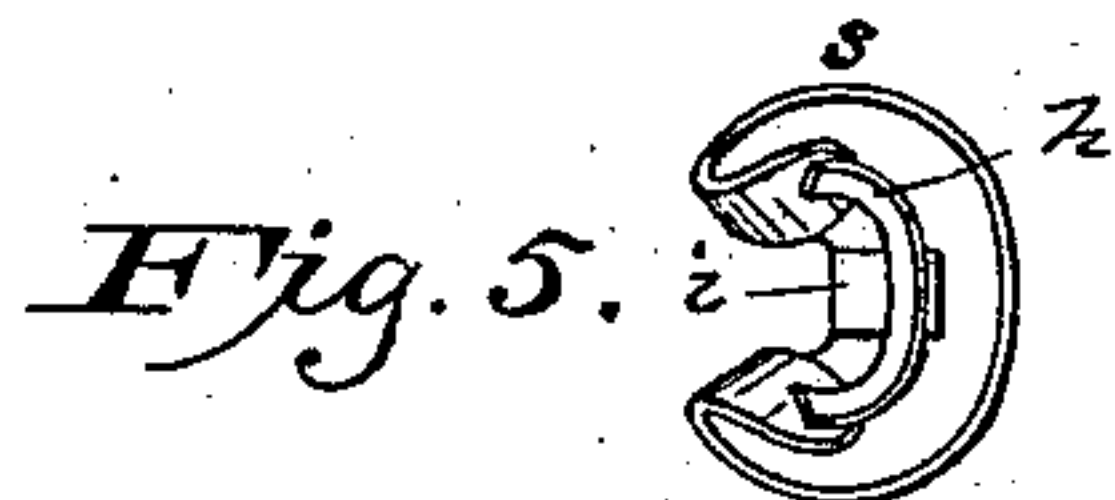
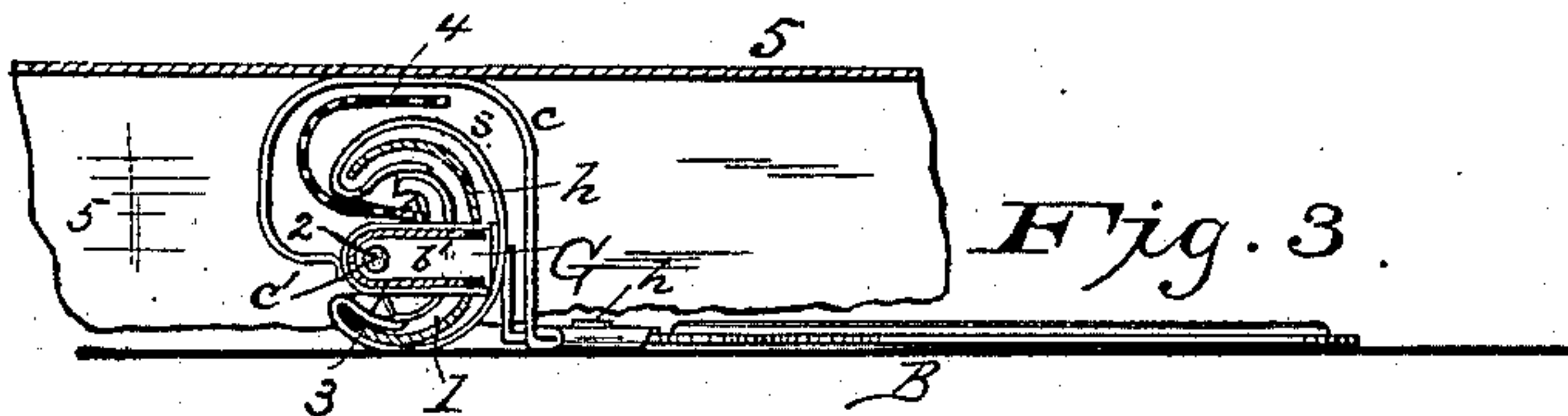
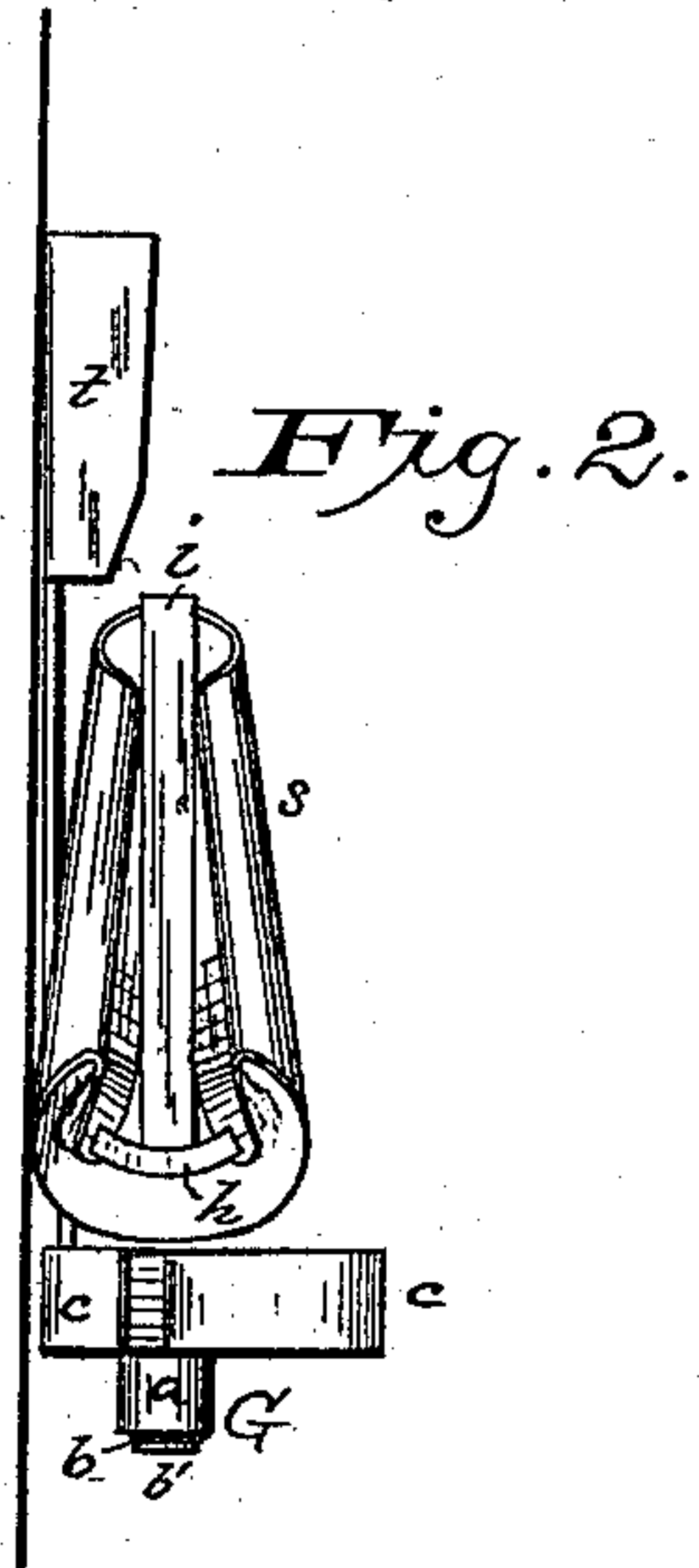
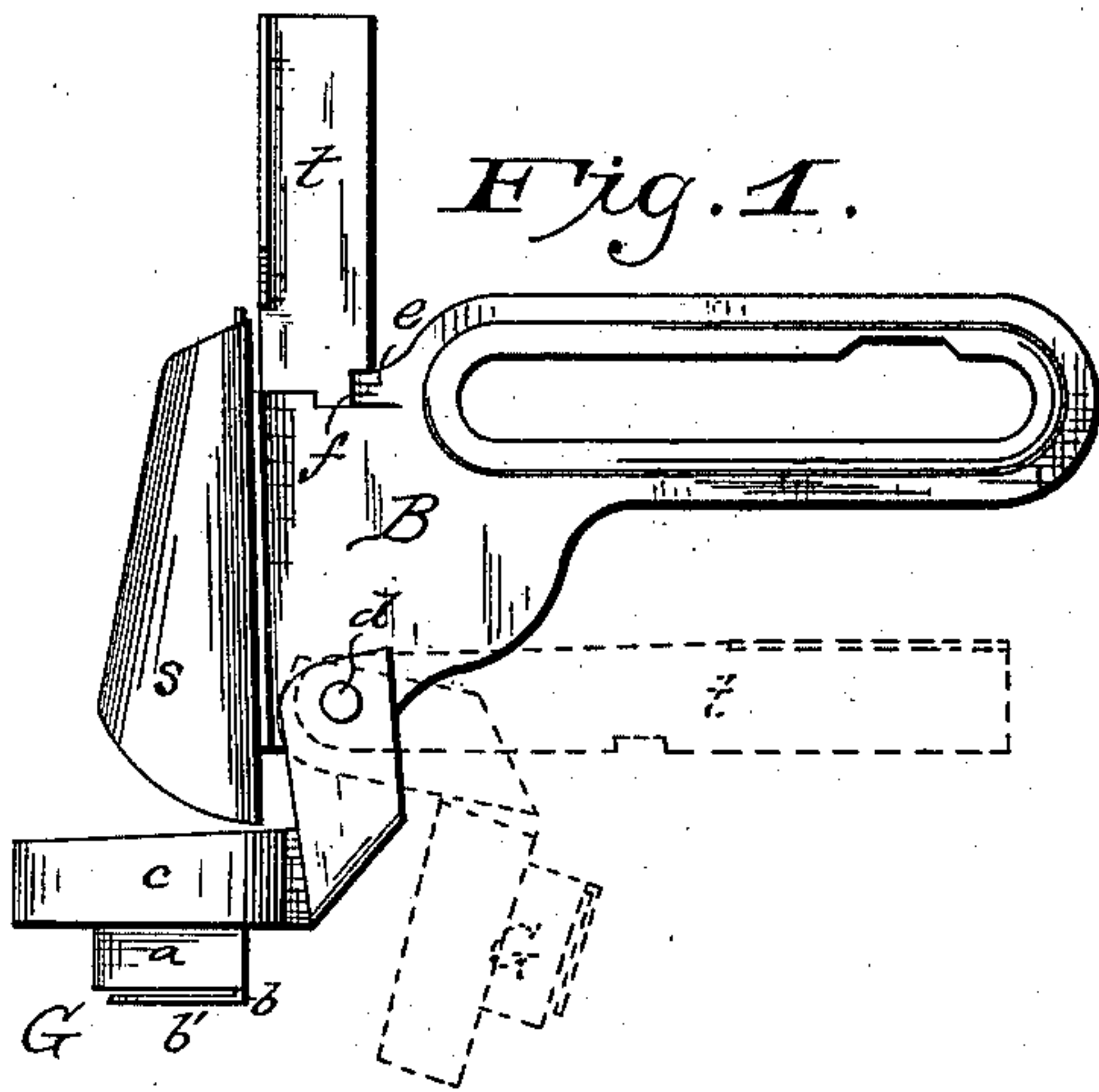


Fig. 6.

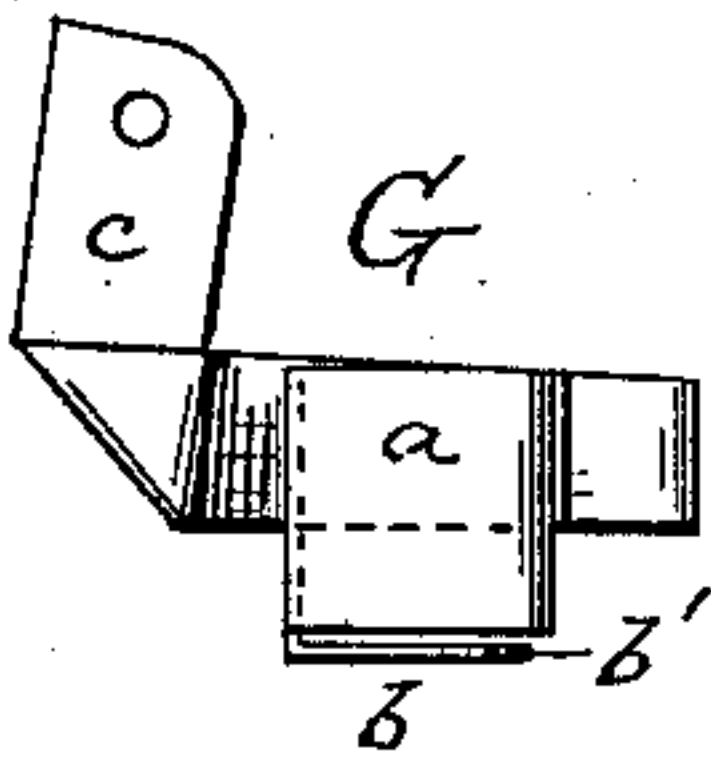


Fig. 8.

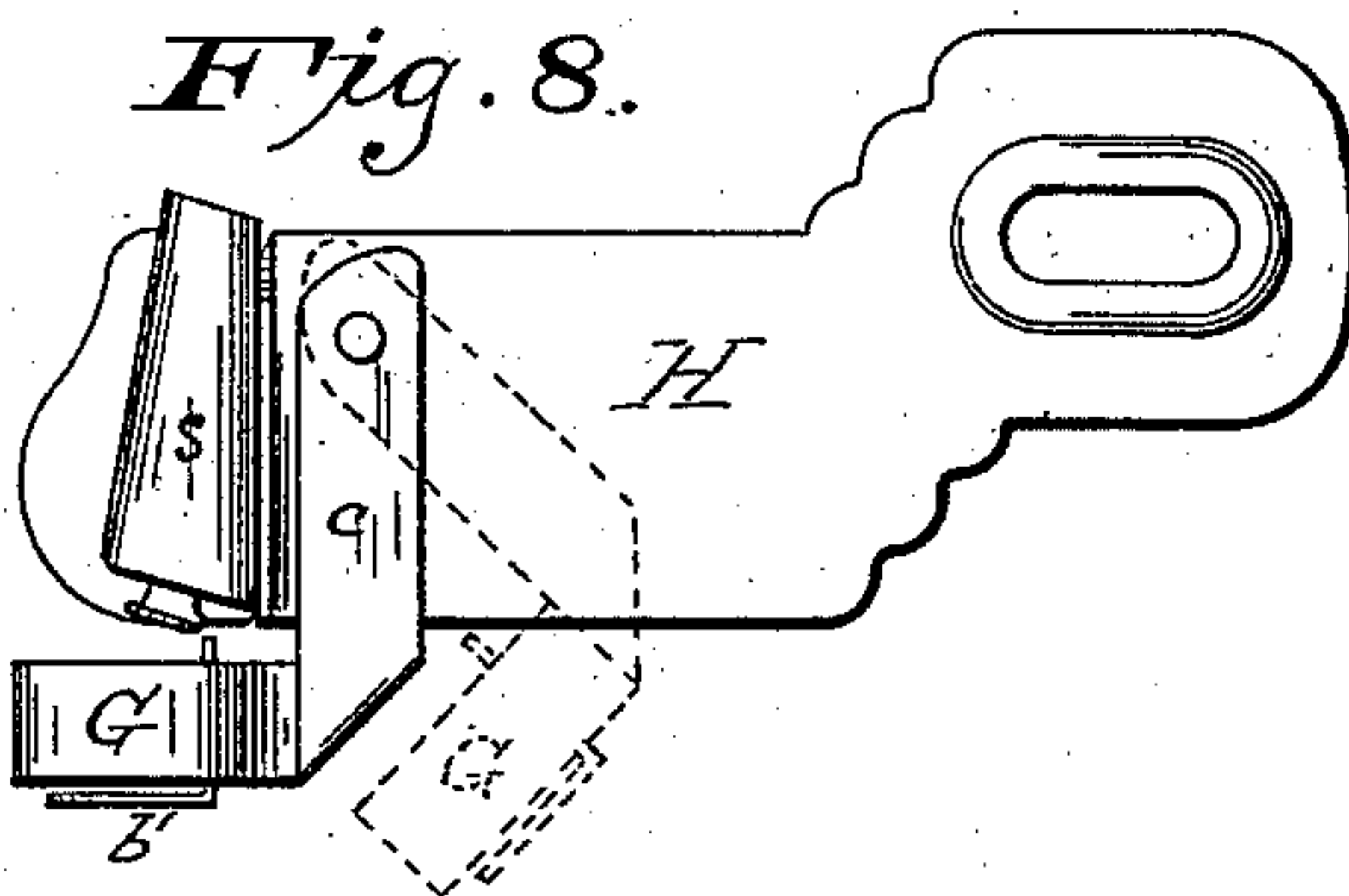
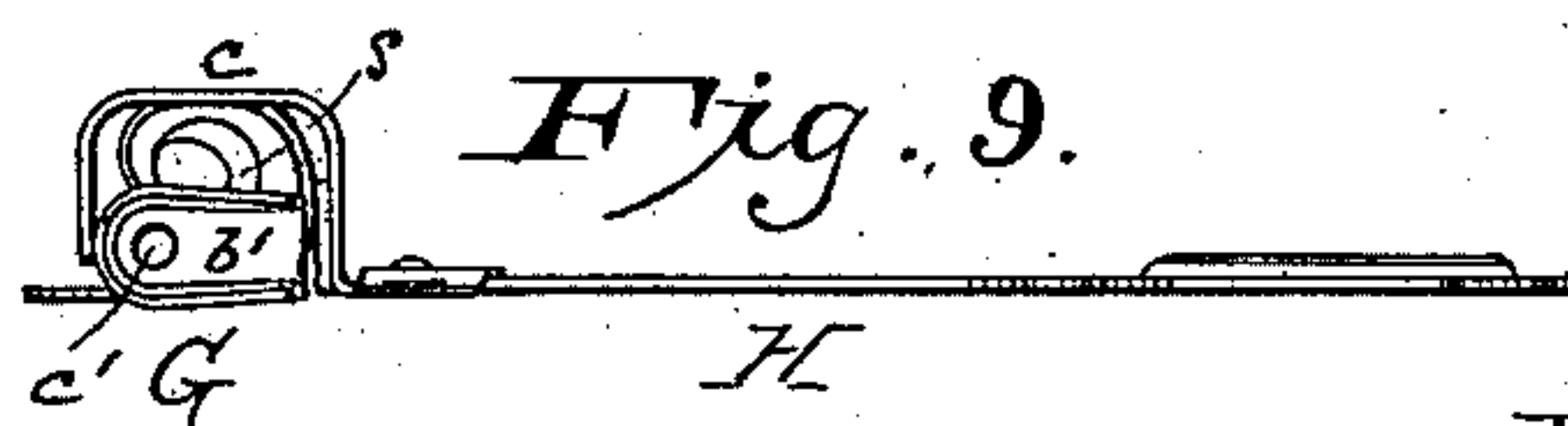
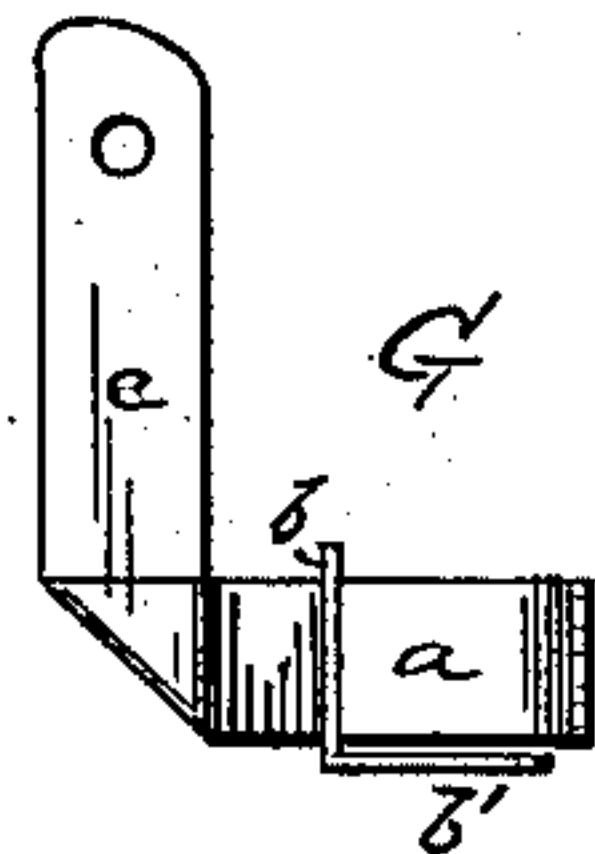


Fig. 7.



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UNITED STATES PATENT OFFICE.

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BINDER AND HEMMER ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 290,797, dated December 25, 1883.

Application filed June 21, 1883. (No model.)

To all whom it may concern:

Be it known that I, WINSLOW R. PARSONS, a citizen of the United States, residing at Waterloo, in the State of Iowa, have invented a new and useful Improvement in Binder and Hemmer Attachments for Sewing-Machines, of which the following is a specification.

My present invention relates, primarily, to means for producing upon sewing-machines certain kinds of sewed trimmings and simultaneously attaching the same to the main fabric or "cloth" in making articles of wearing apparel for ladies or children.


It relates, further, to improvements in binders or binder attachments for sewing-machines, one of which forms the basis of my present combination attachment in its preferred or most complete form.

This invention consists in certain novel combinations of parts and features of construction hereinafter described, and claimed, having respectively the following objects, namely: first, to fold a strip of suitable trimming fabric and guide the same, with its raw edges one above the other, beneath the upper edge of a binding or the fold of a hem, so that the said raw edges shall be completely enveloped and the fold sewed in place with little difficulty; secondly, to guide a cord within a fold so formed and guided; thirdly, to provide for guiding above said fold a strip or edging of lace or the like; fourthly, to so attach a cord welt or fold guide to a binder or wide hemmer for the purposes above stated that said guide can be readily turned out of the path of the binder or hemmer scroll, so that the latter may be used for plain work; fifthly, to provide for sewing double folds at any desired point or in any desired location upon the face of the main fabric, and to so do this that such double folds can be attached as trimming to very thin or flimsy goods which could not heretofore be so trimmed; sixthly, to so attach a corded double fold; seventhly, to so attach a double fold with an edging of lace; eighthly, to so attach a corded double fold with an edging of lace; ninthly, to provide for using a supplemental guide or tail-piece upon a binder provided with a cord welt or fold guide according to this invention without interfering with the operation last stated; tenthly, in the operation of forming trimmings with the aid of binders on sewing-

machines, to prevent the escape of a fold-strip from or any wrinkling thereof within the binder-scroll, and to insure uniformity in width of fold at the sewing-point, notwithstanding the use of strips of thin fabrics with cross-seams therein, as hereinafter more fully set forth.

A sheet of drawings accompanies this specification as part hereof. Figure 1 of these drawings is a top view of my combined binder and cord welt or fold guide, showing the latter and the said supplemental guide or tail-piece in their respective positions by full and dotted lines. Fig. 2 is an edge view of the same as seen in full lines in Fig. 1. Fig. 3 is a front view thereof, showing a piece of goods, two fold-strips, a cord, and an edging of lace in cross-section in their respective positions for forming a corded double fold and attaching the same with an edging of lace to a piece of goods by means of this attachment. Fig. 4 represents a cross-section of a piece of goods furnished with several styles of trimming by means of this attachment. Fig. 5 is an end view of the binder-scroll. Fig. 6 is a bottom view of the cord welt or fold guide detached and reversed. Fig. 7 is a bottom view of another cord welt or fold guide detached, illustrating modifications. Fig. 8 is a top view of a wide hemmer provided with the cord welt or fold guide last named, showing the same in its respective positions by full and dotted lines; and Fig. 9 is a front view of said wide hemmer and cord welt and fold guide, as seen in full lines in Fig. 8, corresponding parts being indicated by like letters in all the figures.

My said cord welt or fold guide G, in either of its forms as I construct it, is composed of two parts, *a b*, of sheet metal. Said part *a* consists of a rectangular piece of metal bent into U shape. Said part *b* is a narrower strip, contracted in width, and rounded at one end, and bent into L shape, so that by attaching its wider end to the extremities of said part *a* its rounded end, hereinafter termed the "tongue," *b'*, coincides with the interior of the curved end of the part *a* as bent, and forms a central core within or immediately in front of the front end of said part *a*, sufficient space being left around the same to receive a strip of fabric for forming a "welt" or fold, and is provided near its extremity with an aperture, *c'*, forming a cord-guide. In that form shown

in Figs. 1 to 3, inclusive, and Fig. 6, the wider end of said part *b* is soldered between the longitudinal edges of said part *a*, while in that part shown in Figs. 7 to 9, inclusive, said part *b* is attached to said edges of said part *a* by a butt-joint. Otherwise, except in immaterial differences of proportion, the two forms of the guide are alike, being substantially of inverted and elongated D () shape in end view or cross-section. For attaching this guide to a binder, B, or wide hemmer H, I employ a support, *c*, composed of a narrow strip of sheet metal soldered to the rounded end of the guide, and curved so as to form an arch above the latter, extending downward past the opposite square edge of the guide to the plane of the base-plate of said binder or hemmer, and in this plane bent at right angles, or substantially at right angles, to form an arm substantially parallel to the axis of the scroll *s* of said binder or hemmer, and of suitable length for supporting said guide in front of said scroll in the effective position of the former, as seen in full lines in Figs. 1 and 8. In this position of the guide, its square end, which guides the raw edges of the fold-strip passing therethrough, is to the right, as shown, and in line with the feed and with the space below the upper lip of the binder or hemmer scroll, so as to guide said raw edges beneath the edge intumed by said scroll-lip, the latter being, as it customarily is, at the left of the effective part of the binder or hemmer scroll. For the purposes of this invention it is essential that said guide *G* should be thus reversed with reference to the folding-scroll *s* of the binder or hemmer. The construction of said guide as regards mechanical details is considered immaterial. To provide for turning away the guide to expose the front end of the binder or hemmer scroll, so that the latter may be used for plain work, said arm of the support *c* is attached to said base-plate of the binder or hemmer by a pivotal rivet, *d*. (The guide and its support are shown so retracted in dotted lines in Figs. 1 and 8.) The proportions of said guide-support *c* are immaterial so long as it is adapted to operate as above stated or to perform its functions properly, and within this limit it may vary considerably, as illustrated by the two forms of said cord welt or fold guide shown in the drawings.

In using said cord welt or fold guide in combination with a binder-scroll, *s*, to form a double fold and guide the same for attachment to the face of a piece of goods at any desired distance from its edge, it becomes necessary to invert the piece of goods or cloth, or, in other words, to introduce the latter wrong side up above said guide and binder-scroll, the double fold being attached to its lower surface. At the same time it is necessary or desirable, in order to adapt the binder for sewing around curves, to combine therewith a supplemental guide or tail-piece, *t*, whereby the binding is held upon or against the edge of the cloth in sewing around curves; other-

wise, unless great care is taken, the binding will escape from beneath the needle at such points and form bad seams. I construct said tail-piece *t* as a distinct part, with an extension beneath the base-plate of the binder to said pivotal rivet *d*, whereby it is so attached that it can readily be turned into the position in which it is shown in dotted lines in Fig. 1 during said operation of forming and sewing double folds, so as not to interfere with the latter, which it would otherwise render impossible. It is supported in effective position, as seen in full lines in Fig. 1 and as shown in Fig. 2, by means of a stop, *e*, formed on said base-plate of the binder. The rear or right-hand edge of the tail-piece is notched in the example, as shown at *f*, to receive said stop *e*; but this is not essential if the tail-piece is made of the proper width in the first place, or if the base-plate of the binder will accommodate a stop at a greater distance from its scroll-edge.

In binders or binder attachments as commonly made it is only by the most skillful manipulation of the binding-strip or binding that its escape from the binder-scroll can be prevented; and it is still more difficult to so feed the binding-strip or binding through the scroll as to insure its uniform attachment, or, in other words, to keep it from wrinkling and forming an uneven seam or edge. To remedy these defects in ordinary binders, as is essential in order to provide for the effective use of a binder-scroll by unskillful persons as well as by skilled operators in producing trimming by means of my preferred combination attachment, as illustrated by Figs. 1 to 6, inclusive, I provide said binder-scroll *s*, in the first place, with a bridge-piece, *h*, consisting of a narrow curved strip of thin metal soldered at its respective ends to the lips of the binder-scroll near their front extremities; and, in the second place, I attach to this bridge-piece, before applying the latter, a tongue, *i*, of spring-steel—such as watch-spring steel of suitable width—said tongue extending from said bridge-piece at the front end of the binder-scroll to or slightly beyond its rear extremity or small end, as best seen in Fig. 2. A spring-tongue of this description is practically frictionless, yielding readily to the seams in the trimming-strips as they reach it, while it serves not only to prevent wrinkling, but to insure uniformity of width of fold at the sewing-point, owing to its extension completely through the binder-scroll, which is an essential feature thereof. Apart from said bridge-piece *h* and spring-tongue *i*, the binder to which my cord welt or fold guide is attached may be of any approved description; and said guide may, in fact, be used in connection with ordinary binders, but with inferior results.

I propose to use any ordinary wide hemmer as the basis of my hem-trimming attachment. H, Figs. 8 and 9, may consequently represent an ordinary wide hemmer of any approved make. My said cord welt or fold guide *G* may,

furthermore, be attached to the cloth-plate of the machine in the described relation to a separate binder or wide hemmer; but I prefer to unite the same with the binder or hemmer, as above specified. When cord-welts are to be sewed in, a presser-foot having a grooved sole should be used, as in other cording operations; otherwise any ordinary presser-foot will answer.

Preparatory to providing a piece of goods with a corded double fold and an edging of lace at one operation by means of my said preferred attachment, as illustrated in Fig. 3, the guide *G* is turned aside into the position in which it is shown in dotted lines in Fig. 1, so as to expose the front end of the binder-scroll *s*, and a suitable fold-strip, 1, is inserted into the scroll between the bridge-piece *h* and its outer or main wall, and by means of a pin or the like is drawn through behind the tongue *i* to the needle. A cord, 2, is next introduced through the aperture *c'* of the tongue *b'* and drawn through to the needle, followed by a second fold strip, 3, introduced between said tongue *b'* and the outer part, *a*, of the guide. The edging or lace 4 is next introduced within the arch of the guide-support *c* and drawn through to the needle, and, finally, the piece of goods or the cloth is inserted, wrong side up, above the guide-support, to and beneath the presser-foot and needle, the parts 1 2 3, which make up the corded double fold, being properly adjusted, together with the edging 4, beneath the needle. The presser-foot may now be lowered and the sewing proceed. The product is shown at *P* in Fig. 4. By simply omitting the edging of lace the product will be made to appear as shown at *P*², Fig. 4, and by omitting the lace and cord I produce a plain double fold, *P*³, Fig. 4. To bind the cloth and insert a cord-welt and edging beneath the upper edge of the binding, as shown at *P*⁴, Fig. 4, the several parts 1 2 3 4 are introduced, as illustrated in Fig. 3, the edge of the cloth 5 being inserted below the guide *G* within the binder-scroll *s*, in customary manner. By omitting the edging the binding will be provided with the cord-welt alone, as is obvious, and by omitting the cord and edging both a combined binding and piping will be formed, as shown at *P*⁵, Fig. 4. It will be obvious that a piping or cord-welt or cord-welt and edging may in like manner be guided so as to be sewed beneath the fold of a hem as produced by means of the hemmer *H*; and other varieties of trimming may be made and applied by the aid of these attachments.

I am aware that binders and hemmers have before been provided with what may be termed "fold-guides" in front of their folding-scrolls and edge-turners; but these, so far as I am informed, have only been adapted to give the cloth a preliminary fold to aid in forming the binding or wide hem, and have in no case been reversed with reference to a distinct folding-scroll, complete in itself for binding or hem-

ming, as hereinbefore set forth, which is essential in my attachments.

Furthermore, I am aware that supplemental guides of various forms have been pivoted so as to be turned laterally to facilitate the introduction of the goods into the main guide or beneath the presser-foot. In my attachments the guide *G* is pivoted for the purpose, primarily, of permitting or facilitating the sewing on of plain bindings or of fold-strips in the shape of bindings without passing them through said guide *G*; and the said supplemental guide or tail-piece *t* is so pivoted for the purpose of permitting the passage of the cloth beneath the presser-foot in inverted position, for the attachment of trimmings to its face at any desired distance from its edges, as hereinbefore set forth, and at the same time to provide for supporting the binding or the fold-strip to be attached as a binding, so that the same may be perfectly sewed around bends and corners and securely fastened by the seam.

I am also aware that binder-scrolls have been provided with internal supports for the binding. My spring-tongue *i* and its support are adapted for attachment to ordinary binder-scrolls, and to be made so as to be frictionless, adapting them for guiding the fold-strips of thin fabrics, for the folding of which my attachments are specially designed, and in these respects are believed to be peculiar.

Having thus described my said combination attachment for sewing-machines, I claim as my invention—

1. In a sewing-machine attachment, the combination, substantially as herein described, of a fold-guide and a folding-scroll, the former arranged in front of and reversed with reference to the latter, for delivering the raw edges of a folded strip below an inturned edge superposed by said folding-scroll, in the manner set forth.

2. In a sewing-machine attachment, the combination, substantially as herein described, of a folding-scroll and a fold-guide provided with a cord-guide, said fold-guide arranged in front of and reversed with reference to said folding-scroll for delivering the raw edges of a cord-welt below an inturned edge superposed by said folding-scroll, in the manner set forth.

3. The combination, in a sewing-machine attachment, of a fold-guide, a folding-scroll, and an arched support for the former, constructed and arranged substantially as shown, to form a guiding-space for lace, delivering the lace between the fold and the inturned edge superposed by said folding-scroll, in the manner set forth.

4. In combination with a folding-scroll and its support and a fold-guide arranged in front of and reversed with reference to the former, a support for said fold-guide attached to the support of said scroll by a vertical pivot, substantially as herein specified, for the purposes set forth.

5. In combination with a binder, *B*, a fold-

guide supported in front of and reversed with reference to the scroll of said binder, for delivering a fold of fabric with its raw edges between the inturned edges of a strip as folded by said binder-scroll, substantially as herein specified.

6. In combination with a binder, B, a fold-guide provided with a cord-guide supported in front of and reversed with reference to the scroll of said binder, for delivering a cord-welt with its raw edges between the inturned edges of a strip as folded by said binder-scroll, substantially as herein specified.

7. In combination with a binder, B, a fold-guide arranged in front of and reversed with reference to the scroll of said binder, and an arched support for said fold-guide, for delivering a fold of fabric with its raw edges between the inturned edges of a strip as folded by said binder-scroll, and at the same time guiding an edging of lace above said fold and between said inturned edges, substantially as herein specified.

8. In combination with a binder, B, a fold-guide provided with a cord-guide, and an

arched support for said fold-guide, arranged in front of and reversed with reference to the scroll of said binder, for delivering a cord-welt and an edging of lace with their seam-edges between the inturned edges of a strip as folded by said binder-scroll, substantially as herein specified.

9. In a sewing-machine attachment having a binder-scroll, s, in combination with a preliminary fold-guide, the supplemental guide or tail-piece t, with its pivot and stop, substantially as shown, for the purpose set forth.

10. In a sewing-machine attachment having a binder-scroll, s, in combination with a preliminary fold-guide for making trimmings, the spring-tongue i, supported at one end by a bridge-piece attached to the respective lips of said binder-scroll at or near its larger end, and extending therefrom longitudinally completely through the binder-scroll, substantially as shown and described, for the purposes set forth.

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Witnesses:

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