

(No Model.)

2 Sheets—Sheet 1.

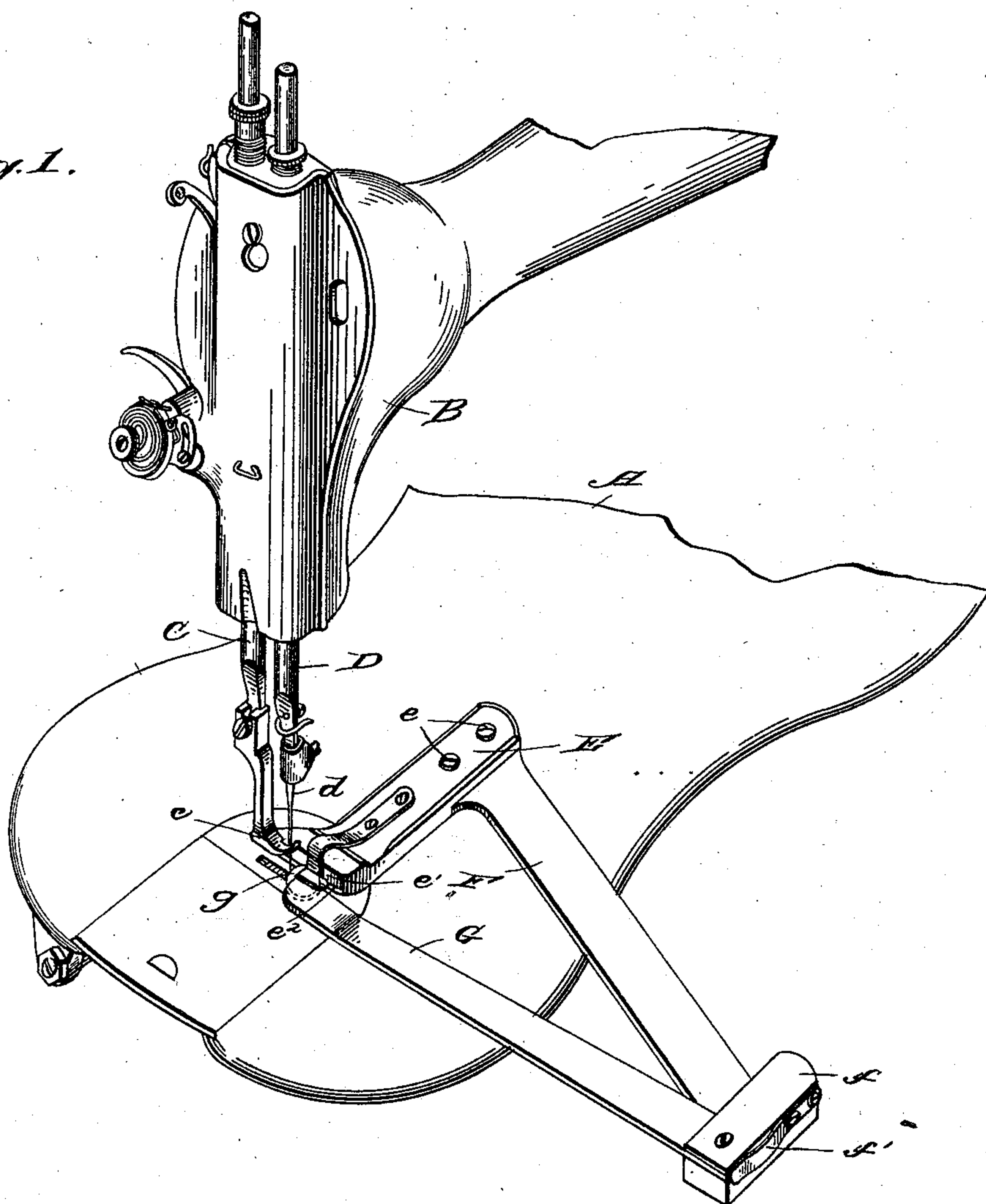
J. DOUGLAS.

GUIDING DEVICE FOR SEWING MACHINES.

No. 507,489.

Patented Oct. 24, 1893.

Fig. 1.



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(No Model.)

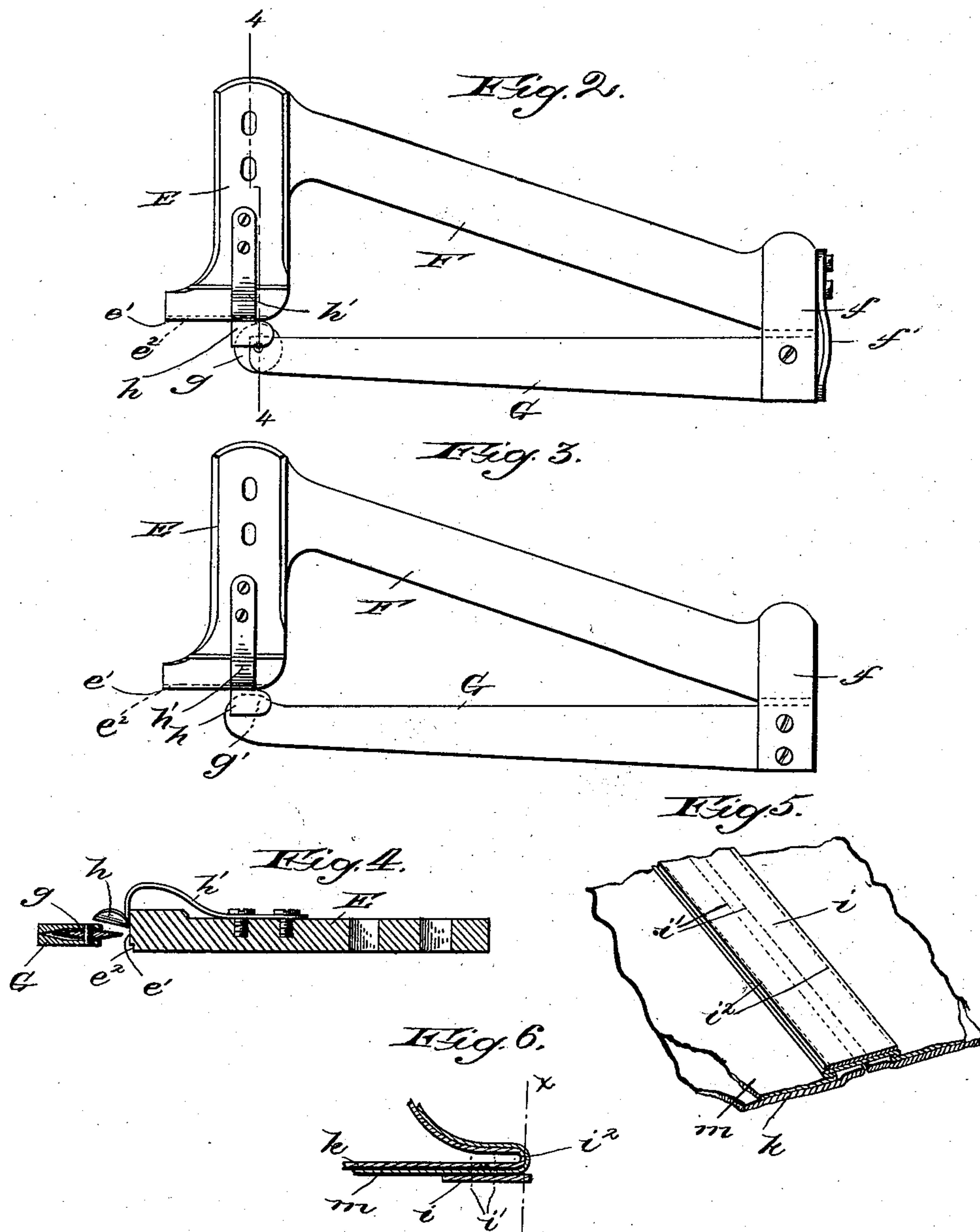
2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

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GUIDING DEVICE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 507,489, dated October 24, 1893.

Application filed February 10, 1893. Serial No. 461,716. (No model.)

To all whom it may concern:

Be it known that I, JOHN DOUGLAS, a citizen of the United States, residing at Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Sewing-Machine Guides, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improved guide for use in forming seams for felling down the edges of stay-strips used for covering seams like the back-seams of the uppers of boots and shoes, these stay-strips being on the insides of the boots and shoes and it being therefore desirable to fell down their edges by what may be termed "blind-stitch" seams, the stitches of which will not show in the outside or "fair" side of the work.

To this end my invention, in its preferred form, comprises a stationary guide for the edge of the work (which latter is to be folded on the line of the edge of the stay-strip to be felled down) in combination with a horizontally movable guide or guiding arm raised slightly above the work-plate of the machine and the forward or operative end of which is to extend between the folded parts of the work and hold the folded edge (preferably with a yielding pressure) against the said stationary guide, the lower edge of the latter being preferably grooved or "gained" to form a recess to receive the edge of the stay-strip. An auxiliary presser, arranged in front of the needle is also preferably provided to hold down the work passing above the movable guide. The operative end of the yielding or movable guide is preferably furnished with a horizontal roller which assists in the easy passage of the work.

In the drawings, Figure 1 is a perspective view showing my improved guide operatively mounted on a sewing machine. Fig. 2 is a detail plan view thereof. Fig. 3 is a similar view of a slight modification. Fig. 4 is a section on line 4—4 of Fig. 2. Fig. 5 is a detail perspective view to illustrate the finished work with the edges of the stay-strip felled down, and Fig. 6 is a detail section of the folded work to illustrate the manner of forming the blind-stitch seam.

A denotes the work-plate and B the arm of a "Singer" sewing machine having the usual presser-bar C carrying the presser-foot *c* and the needle-bar D carrying the needle *d*. Secured to the work-plate A by the screws *e* is the stationary block or guide E the outer or guiding end *e'* of which is preferably undercut at its lower side forming the groove *e''*. Rigid with the block or guide E is the arm F provided at its outer end with a block *f* in which is pivoted the guide or arm G the operative or forward end of which is preferably provided with the horizontal roller *g*. To the block *f* is attached the spring *f'* which bears against the outer end of the arm G and thus serves to hold the forward or operative end of said arm (or the roller *g* carried thereby) yieldingly against the work which is to pass between said operative end or roller and the guide E. The arm G is raised slightly above the work-plate A of the machine to permit the folded work to lie beneath as well as above it, so that the guiding presser-roller *g* will be in the crease of the fold when the felling seams are being formed. To assist in the smooth and accurate guiding of the work I prefer to employ the auxiliary presser *h* carried by the spring *h'* attached to the block or guide E, said auxiliary presser being arranged to bear on the work in front of the machine presser-foot *c*.

Fig. 3 shows a slightly modified form of my invention in which the horizontal roller *g* is omitted from the guiding arm G, the operative forward end of said arm being slightly swelled out at *g'* to assist in guiding the work. In this modified form of my invention the arm G is shown as being rigidly attached to the block *f*, instead of being pivotally secured thereto, as in the preferred form of my invention which latter permits the forward end of said arm to adjust itself to different thicknesses of work, while the rigid construction shown in Fig. 3, while working well with some kinds of work, is not so well adapted for all kinds.

In attaching the stay-strips, as *i*, to the articles having seams to be covered it is customary to secure said strips in place by two seams or rows of stitches *i'* which, if the stay-strips be wide, are more or less distant from

the edges of said strips, and it is, of course, desirable to have said edges felled down. It is also desirable that the felling seams or rows of stitches i^2 should not show on the outside of the work. In the use of my invention in forming these felling seams the work is folded, inside out, on the line of one edge of the stay-strip, and the felled work is then adjusted to the sewing machine by swinging the arm G outward or to the left (Fig. 1) against the stress of the spring f' so as to insert the forward end of said arm, or the roller g carried thereby, in the crease of the fold, the folded work thus lying both above and below said arm and being, when said arm is in normal position, yieldingly held against the guiding face e' of the guide or block E, with the extreme edge of the stay-strip in the groove e^2 of said guide and the edge of the fold against the face e' of said guide, so that as the work is fed forward to the needle the latter will penetrate the fold inside of what is to be the outside of the material (as denoted by the line x , Fig. 6), and the stitches thus made, and which pass through the edge of the stay-strip, will join the said edge to the body of the work by a blind stitch seam. The leather boot or shoe piece k is usually provided with a cloth lining m , and the stitches of the felling seams will have a secure hold on the said lining even if they do not penetrate the leather at all.

Thus by the use of my invention the blind stitch felling seams referred to may be rapidly and easily made without the exercise of any great skill or care on the part of the operator. It will, of course, be understood that my invention may be utilized for other classes of work for which it may be adapted as well as for use in felling down the edges of stay-strips of boots and shoes.

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

1. In a sewing machine guiding apparatus, the combination with a guide, as E, to be attached to the work plate of the machine and provided with an outwardly extending rigid arm, as F, carrying at its outer end the block

or support f , and the arm G attached at its outer end to the said block or support f , and provided at its inner end, which is adjacent to the guiding face of the guide E, with a guide or guiding portion which is supported slightly above the work plate of the machine.

2. A sewing machine guiding apparatus consisting of the combination with the stationary block or guide, as E, having a groove, as e^2 , at the lower edge of its outer or guiding face e' , of the arm F rigidly attached to the said block or guide E and provided at its outer end with the block or support f , the guide arm G attached at its outer end to the said support or block f and having at its inner end, which is adjacent to the guiding face of the said guide E, a guide or guiding portion supported slightly above the work plate of the machine.

3. The combination with the stationary guide or block E, of the arm F attached thereto and provided with the block f , the guide-arm G pivoted to said block f , and the spring f' pressing against said arm G to yieldingly hold the forward end of the latter toward the face e' of the said guide E.

4. The combination with the stationary guide or block E, of the arm F attached thereto and provided with the block f , the guide-arm G pivoted to said block f and provided at its forward end with the horizontal guiding roller g , and the spring f' pressing against said arm G to yieldingly hold the said roller toward the face e' of the said guide E.

5. The combination with the guide or block E having the groove e^2 at the lower edge of its guiding face, of the arm F having the block f , the latter provided with the spring f' , the pivoted arm G pressed upon by said spring and provided at its forward end with the horizontal roller g , and the presser h carried by the spring h' .

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

JOHN DOUGLAS.

Witnesses:

HENRY CALVER,
J. G. COLEMAN.