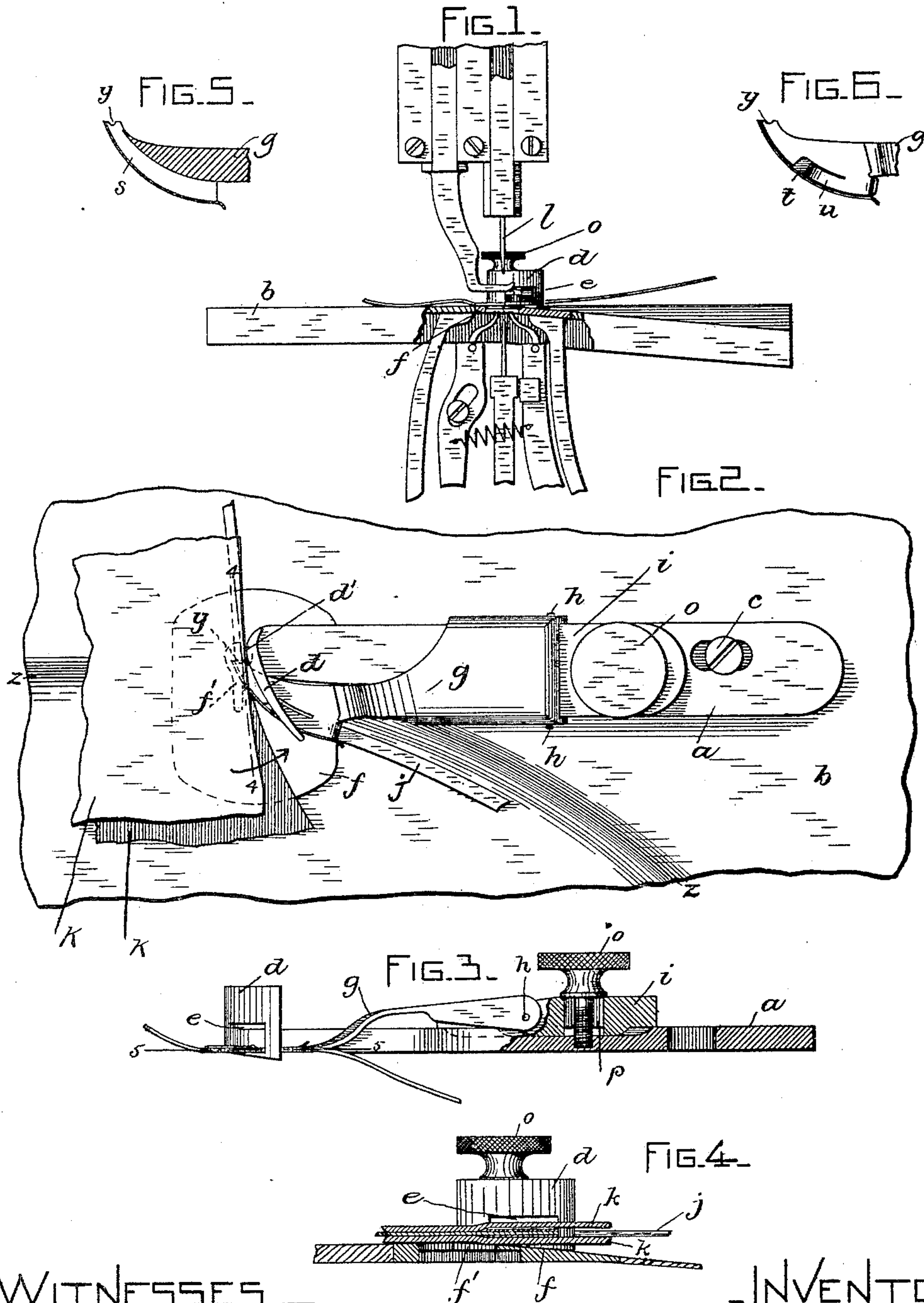


(No Model.)

C. HATCH, Jr.
WELT GUIDE FOR SEWING MACHINES.

No. 460,776.

Patented Oct. 6, 1891.



WITNESSES
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WELT-GUIDE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 460,776, dated October 6, 1891.

Application filed January 26, 1891. Serial No. 379,046. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HATCH, JR., of Revere, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Welt-Guides for Sewing-Machines, of which the following is a specification.

This invention relates to devices for guiding the thin strips, known as "welts," which are interposed between two parts of a boot or shoe upper or other article and are secured to said parts by the stitches, which unite one part to the other, the welt being thus incorporated in the boot or shoe upper, with one edge presented at the exterior thereof.

The invention has for its object to provide a simple and efficient welt-guide adapted to conform to the varying thickness of the parts between which the welt is inserted; and it consists in the improved construction, which I will now proceed to describe.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents an end view of my improved welt-guide, showing its position with relation to the throat-plate and stitch-forming devices of a sewing-machine. Fig. 2 represents a top view of the same. Fig. 3 represents a side view of the welt-guide detached from the machine. Fig. 4 represents a section on line 4 4, Fig. 2. Fig. 5 represents a section on line 5 5, Fig. 3. Fig. 6 represents a top view of a portion of the welt-guide.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents a plate or shank, which is formed to rest on the bed-plate *b* of a sewing-machine and is attached thereto by screw *c*. On one end of said plate is formed a curved flange or work-gage *d*, having in its lower portion a slot *e*. Said flange is formed to present an abrupt salient curve at *d'*, Fig. 2, which is adjacent to the point where the needle passes through the needle-hole *f'* in the throat-plate *f*, the form of the flange being such that the work can turn horizontally on the curve *d'* in either direction.

g represents an arm, which is connected at one end by pivots *h h* with an adjustable

slide *i* on the plate *a*. The other end of said arm projects through the slot *e* in the flange *d*, and is adapted to rise and fall in said slot, so that it can approach or recede from the throat-plate *f*. The swinging end of the arm *g* is constructed to guide the welt *j* between the edges of the two parts *k k* of the boot or shoe upper at the point where the needle *l* penetrates said parts. To this end the swinging end of the arm *g* is provided with a curved welt-receiving slot or way *s*, Fig. 5, one end of which is at the rear side of the flange or work-gage *d*, while the other is at the opposite side of the said work-gage and close to the path of the needle, the last-mentioned end being preferably provided with a recess *y* to partially receive the needle. Said slot or way is curved, so that it gives the welt a gradual curvature and presents it to the work in the proper position, as shown in Fig. 2. The portion of the arm *g* which contains the slot *s* is composed of very thin plates or pieces of metal, so that the thickness of the slotted or welt-guiding end of the arm is reduced to the minimum to permit the easy insertion of said end between the pieces *k k*. The plate composing the upper side of the slot is preferably cut away at *t*, Fig. 6, to form a spring-tongue *u*, bearing with a yielding pressure on the welt to prevent its too easy movement through the slot *s*, said cut enabling a pin or other pointed instrument to be inserted in the slot *s* to facilitate the original insertion of the welt therein.

It will be seen that the pivotal connection of the arm *g* to its support and the arm-receiving slot *e* in the work-gage *d* enable the welt to rise and fall, and thus accommodate itself to the thickness of the piece *k* between it and the throat-plate. This provision for the vertical movement or adjustment of the welt is an important feature of my invention, because it enables the welt to automatically conform to the thickness of the pieces to which it is attached.

The arm *g* is shown as pivotally attached to a slide *i*, which is adjustably secured to the plate *a* by means of a screw *o* passing through a slot *p* in said slide. The arm *g* is thus enabled to be adjusted so as to project more or

less from the outer side of the gage *d* and thus insert the welt more or less deeply between the edges of the pieces *k k*.

To facilitate the insertion of the welt between the two pieces *k k* and to prevent the bottom piece *k* from standing at such an elevation between the needle and the front of the machine as to be in the way of the welt-guide, I bevel or incline the throat-plate from the needle-hole to the forward edge of the throat-plate and correspondingly bevel the bed *b* from the same point to its forward edge, so that both the throat-plate and the bed present a downward inclination from the needle-hole forward, as shown in Figs. 1 and 4. This form of the throat-plate and bed enables the under piece *k* to incline downwardly, so that the portion of said piece forward of the needle-hole does not bear on nor in any way obstruct the welt-guide and welt. This is a feature of some importance, particularly when the work is turned in the direction indicated by the arrow in Fig. 2. In this event, if the portion of the under piece forward of the needle-hole were as high as it is at the point where the stitches are formed the said under piece would obstruct or be in the way of the welt-guide.

The rear limit of the beveled portion of the bed is preferably along the line *z*, Fig. 2, all parts of the bed between said line and the front edge of the bed being inclined inwardly.

I claim—

1. In a welt-guide, a supporting-plate

adapted to be attached to the bed of a sewing-machine and provided with a work-gage *d*, having a slot *e*, combined with an arm connected at one end with said supporting-plate, so that its other end can swing vertically, said swinging end having a curved welt-guiding slot or way *s* and extending through the slot *e*, as set forth.

2. In a welt-guide, the combination of a supporting-plate adapted to be attached to the bed of a sewing-machine and provided with a slotted work-gage *d*, a slide *i*, adjustably secured to said plate, and an arm pivoted at one end to said slide and having at its other end a welt-guiding slot or way, said arm passing through the slot in the work-gage, as set forth.

3. The combination of the throat-plate and bed-plate inclined downwardly from the needle-hole toward the front of the bed-plate, and the welt-guide comprising a supporting-plate attached to the bed and provided with a slotted work-gage, and a pivoted welt-guiding arm projecting through the slotted work-gage over the inclined portion of the throat-plate, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 23 day of January, A. D. 1891.

CHARLES HATCH, JR.

Witnesses:

A. D. HARRISON,
EWING W. HAMLEN.