

No. 652,014.

Patented June 19, 1900.

A. BERGSTROM.
WELT GUIDE FOR SEWING MACHINES.

(Application filed Sept. 25, 1899.)

(No Model.)

2 Sheets—Sheet 1.

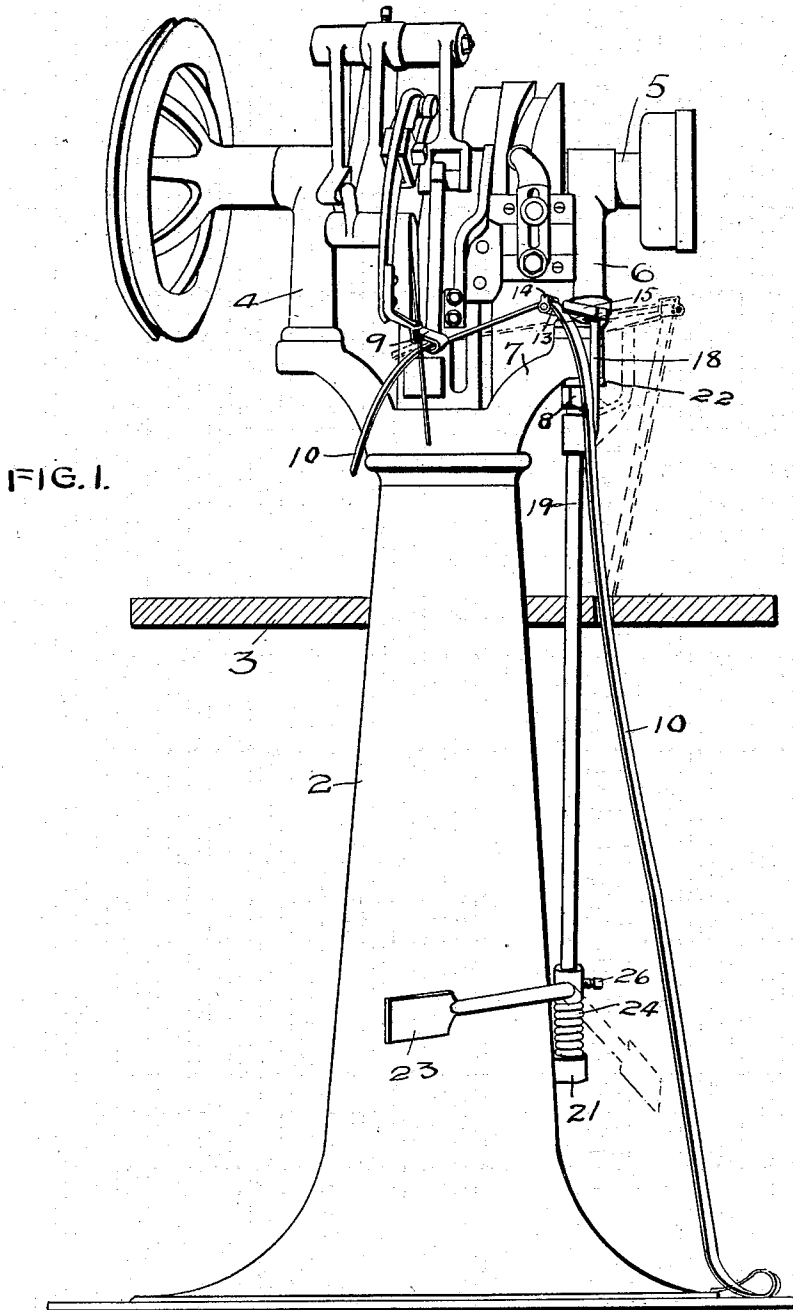


FIG. 1.

WITNESSES

E. Staudt
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INVENTOR

ALFRED BERGSTROM

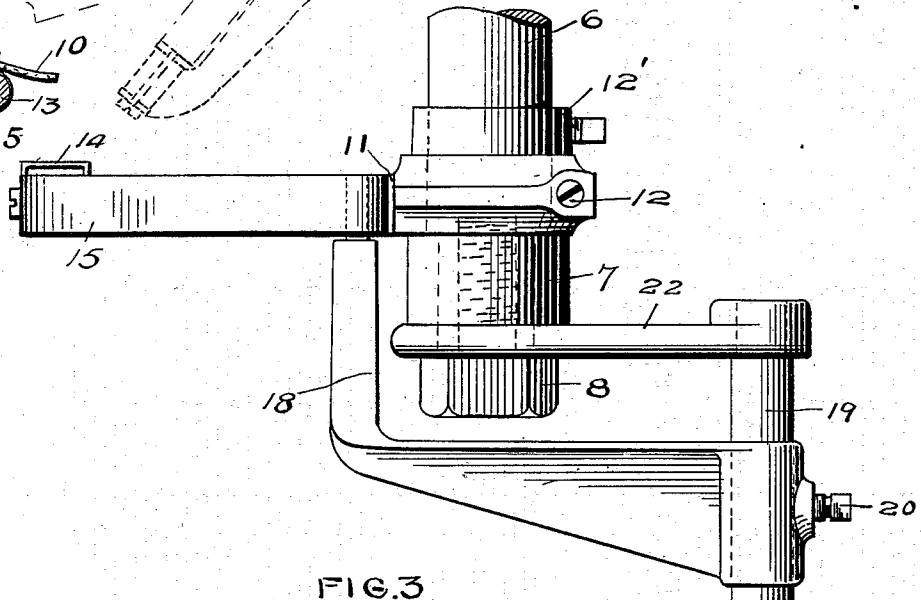
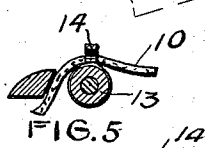
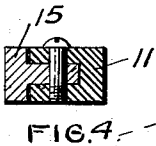
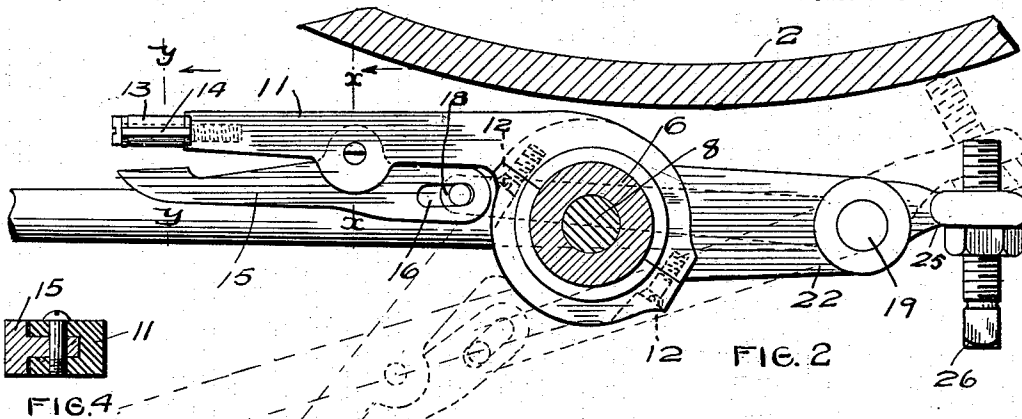
BY *Paul & Hawley*
HIS ATTORNEYS

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2 Sheets—Sheet 2.



WITNESSES.
Edw. Staude
Richard Paul

INVENTOR
 ALFRED BERGSTROM
 BY *Paul & Hawley*
 HIS ATTORNEYS.

UNITED STATES PATENT OFFICE.

ALFRED BERGSTROM, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR OF TWO-THIRDS TO WILLIAM W. HEFFELFINGER, ALFRED S. HEFFELFINGER, AND FERDINAND A. WIESIEKE, OF SAME PLACE.

WELT-GUIDE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 652,014, dated June 19, 1900.

Application filed September 25, 1899. Serial No. 731,562. (No modrl.)

To all whom it may concern:

Be it known that I, ALFRED BERGSTROM, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Welt-Sewing Machines, of which the following is a specification.

My invention relates to machines used for sewing a narrow strip of leather, called a "welt," to the upper and sole of a shoe or

boot. The object of the invention is to provide improved means for adjusting the loose or free end of the welt after one shoe has been sewed and preparatory to sewing a second, to the end that the operator is not obliged to go through so many motions during the interval between the completion of one shoe and the beginning of another, and thus be able to turn out a greater amount of work in a given time.

The invention consists generally in providing a mechanism within the control of the operator for drawing back the free end of the welt to the proper position to begin sewing again after it has been cut from a shoe while the operator is laying down a completed shoe and picking up another.

Further, the invention consists in various constructions and combinations, all as hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of a welt-sewing machine embodying my invention. Fig. 2 is a detail plan view of the clamp for holding the welt. Fig. 3 is a similar view looking at the side of the machine. Fig. 4 is a sectional view on the line *xx* of Fig. 2. Fig. 5 is a sectional view on the line *yy* of Fig. 2.

In the drawings, 2 represents the base or standard of a welt-sewing machine of the usual style, having a table or shelf 3, whereon shoes are placed within reach of the operator, and an arm or bracket 4, supporting one end of the shaft 5, its opposite end being supported in a bearing in a standard 6, whose lower end fits within a socket in the arm or bracket 7 and is held securely therein by a screw 8, as shown in Fig. 3. On the front of

the machine, facing the operator and near the stitching mechanism, is arranged a guide 9 for the narrow leather strip or welt 10, that passes up through an opening in the table from beneath.

In welt-sewing machines as usually used when the machine is ready for operation the loose end of the welt is in the position, with reference to the guide 9, indicated by dotted lines in Fig. 1, and the operator, placing the end of the welt in its proper position on the shoe, starts the machine, and as the stitching mechanism secures the welt he turns the shoe until it has made a complete revolution and the welt has been carried entirely around the sole of the shoe from one side of the heel to the other. At this point the operator cuts off the welt close to the shoe, leaving a long end extending beyond the guide, as indicated by full lines in Fig. 1, and before beginning to sew the welt to another shoe it is necessary for him to draw back the loose end, and this operation necessitates his grasping the welt and pulling the end back through the guide, requiring an additional movement of the hands. As it is necessary to draw back the loose end after sewing the welt on each shoe, it follows that in the course of a day considerable time is lost and less work turned out by the operator in consequence. To obviate this additional movement and permit the operator to save time in running his machine, I provide a device for drawing back the loose end of the welt after sewing each shoe, which consists in a swinging arm 11, secured on the standard 6 by a clamp, and screws 12, provided at one end of said arm between the top of the bracket 7 and a clamp 12' on said standard above said arm. At its outer end said arm 11 is provided with a roller 13, having a loop 14, between which and said roller the leather welt is adapted to pass. At an immediate point on said arm 11 a finger 15 is pivoted, having a jaw-face at its outer end to engage said roller and the welt passing over the same and at its inner end provided with a slot 16 to receive the upper end of an arm 18, whose opposite end is secured to an upright rock shaft or rod 19 by a set-screw 20. Said rock-shaft is supported at its lower end in a

lug 21 on the standard 2 and at its upper end fits within a socket in a horizontal arm 22, that is rigidly secured to the standard 6 by the screw 8. At a point on the rock-shaft 19, convenient to the knee of the operator, I arrange a knee-lever 23, and beneath the same on said shaft I provide a coil-spring 24, having one end connected to said knee-lever and its other to the lug whereon the lower end of said shaft is supported, said spring normally holding said knee-lever to the left, as indicated by full lines in Fig. 1. A lug or extension 25 is provided on the knee-lever 23, carrying a set-screw 26, whose end engages the frame of the machine and limits the travel of said knee-lever, and consequently the distance which the welt may be drawn back by the movement of the clamp. This set-screw being adjustable permits the operator to regulate the throw of the jaws at will.

In operation, the welt having been sewed to a shoe, the operator cuts the welt and lays the completed shoe on the table and picks up another to which the welt is to be sewed. During this movement he throws the knee-lever to the right, and the jaws of the clamp engaging the welt draws back the loose end through the guide to the proper position to begin sewing again.

In various ways the details of this mechanism may be modified, and I therefore do not wish to be confined to the particular construction which I have herein shown and described.

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

1. The combination, with a welt-sewing machine, of a mechanism within the control of the operator for first gripping the welt and then drawing back its loose or free end, for the purpose specified.

2. The combination, with a welt-sewing machine, of a guide through which the welt passes, and means within control of the operator for first clamping the welt and then drawing back its loose or free end, substantially as described.

3. The combination, with a welt-sewing machine, of a swinging clamp mechanism within the control of the operator for engaging the welt and drawing back its loose end after the sewing of a shoe has been completed, substantially as described.

4. The combination, with a welt-sewing machine, of a swinging clamp mechanism secured thereon, said mechanism having jaws between which the leather strip or welt passes, and means for operating said mechanism to clamp the welt and draw back its end, substantially as described.

5. The combination, with a welt-sewing machine, of a swinging arm supported thereon, a pivoted finger carried by said arm and having a jaw between which and said arm the welt passes, and means within the control of the operator for moving said finger to clamp the welt and swinging said arm to draw back the end of the welt, substantially as described.

6. The combination, with a welt-sewing machine, of a swinging clamp supported thereon, a rock-shaft, an arm carried thereby and engaging one shank or leg of said clamp, and means within the control of the operator for rocking said shaft to first close the jaws of said clamp to grip the welt and then swinging the clamp to draw back the welt, substantially as described.

7. The combination, with a welt-sewing machine, of a swinging arm supported thereon, a finger pivoted on said arm and between which and said arm the welt passes, a rock-shaft, an arm mounted thereon and connected with said finger, a knee-lever mounted on said rock-shaft and a spring device for normally holding said knee-lever and rock-shaft at the limit of their stroke in one direction, substantially as described.

8. In a welt-sewing machine, a movable gripping or clamping device to engage the welt, and a knee-operated mechanism for moving said gripping device and drawing back the loose or free end of the welt.

9. The combination, with a movable guide-arm through which the welt passes, of means within control of the operator for first clamping the welt and then moving said arm to draw back the loose or free end of the welt, substantially as described.

10. The combination, with a movable guide-arm and a finger pivoted thereon to grip the welt, and means for moving said finger and arm to engage the welt and draw back its loose end, substantially as described.

11. The combination, with a welt-sewing machine, of a swinging grip device, and means within the control of the operator for first operating the grip device to clamp the welt and then swinging said device to draw back the loose or free end of the welt.

12. The combination, with a welt-sewing machine, of a combined guide and clamp device through which the welt passes, and means within control of the operator for moving said device to draw back the loose or free end of the welt, for the purpose specified.

In witness whereof I have hereunto set my hand this 20th day of September, 1899.

ALFRED BERGSTROM.

In presence of—
RICHARD PAUL,
A. F. HOLMES.