

No. 666,758.

Patented Jan. 29, 1901.

F. A. JOHNSON.

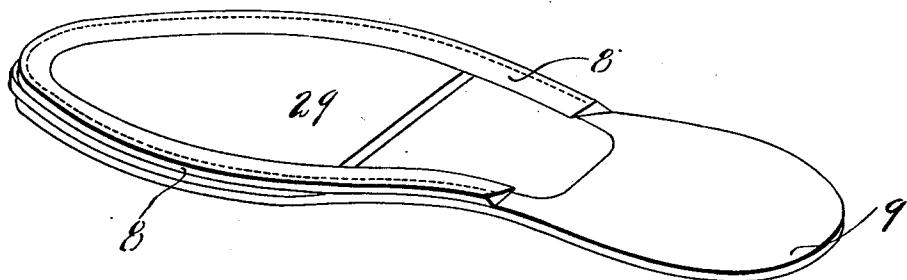
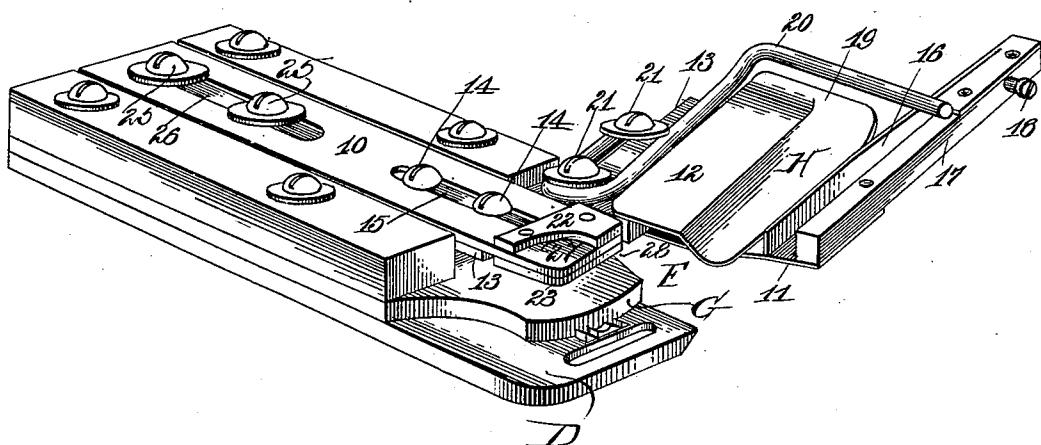
WELT GUIDE.

(No Model.)

(Application filed Oct. 5, 1899.)

3 Sheets—Sheet 1.

*Fig. 1.*



*Fig. 2.*

Witnesses:

Wm. H. Varnum.

Sydney E. Taft.

Inventor:

Frederick A. Johnson

by his Attorney

Charles N. Gooding

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3 Sheets—Sheet 2.

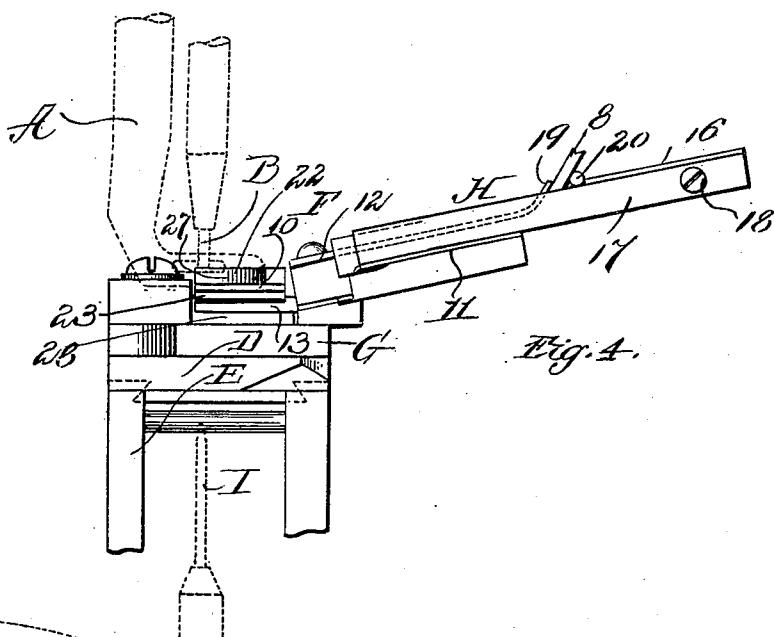


Fig. 4.

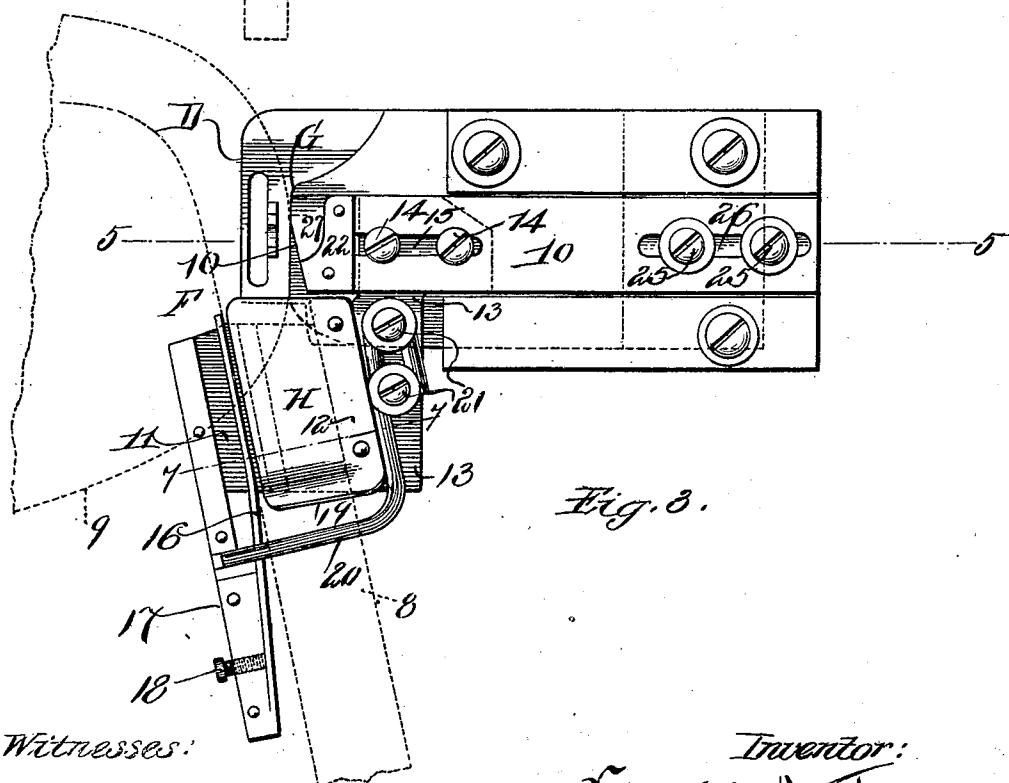


Fig. 5.

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3 Sheets—Sheet 3.

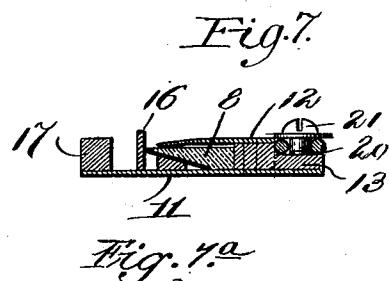
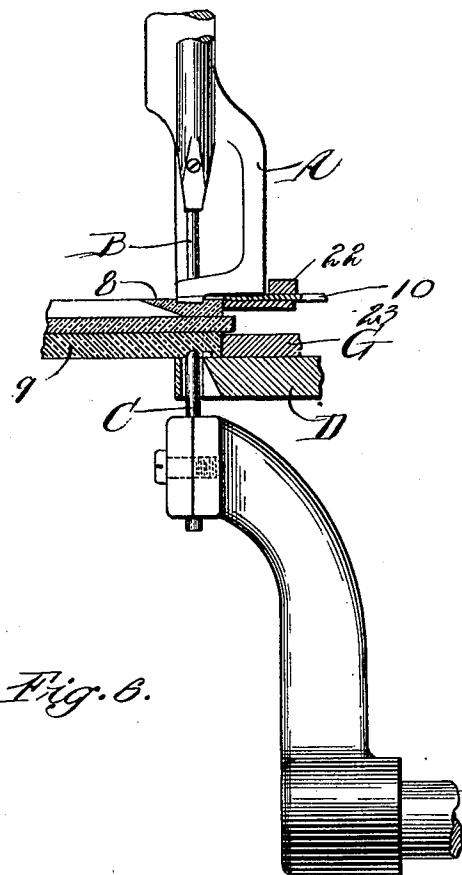
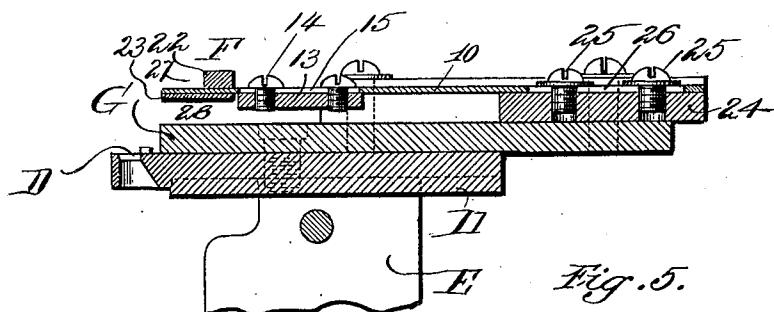
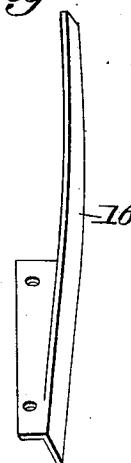


Fig. 7.



Witnesses:

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Inventor:

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by his Attorney Charles S. Gooding.

# UNITED STATES PATENT OFFICE.

FREDERICK A. JOHNSON, OF MARLBOROUGH, MASSACHUSETTS, ASSIGNOR  
TO CHARLES F. BRIGHAM, OF SAME PLACE.

## WELT-GUIDE.

SPECIFICATION forming part of Letters Patent No. 666,758, dated January 29, 1901.

Application filed October 5, 1899. Serial No. 732,700. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK A. JOHNSON, a citizen of the United States, residing at Marlborough, in the county of Middlesex and 5 State of Massachusetts, have invented new and useful Improvements in Welt-Guides, of which the following is a specification.

The object of this invention is to produce a welt-guide for sewing-machines for sewing 10 a welt to the slip-tap and outer sole of a boot or shoe in one operation.

The invention consists in a guide-channel for the welt attached to the back gage for said welt, both guide-channel and back gage 15 being flexible or spring-supported in a vertical plane.

The invention further consists in certain combinations and arrangement of parts, fully set forth in the following specification and 20 pointed out in the claims thereof.

Referring to the drawings, Figure 1 is a perspective view of my improved welt-guide, showing the same attached to the outer-sole back gage and throat-plate of a sewing-machine. Fig. 2 is a perspective view of the outer sole of a boot or shoe with the slip-tap and welt attached thereto. Fig. 3 is a plan view of my improved welt-guide, showing the same attached to the back gage and throat- 25 plate of a sewing-machine, the sole and welt of a shoe being shown in their relative position to said welt-guide in dotted lines. Fig. 4 is a front elevation of the welt-guide, showing the same attached to the throat-plate of 30 a sewing-machine, the presser-foot, awl, needle, throat-plate, and throat-plate support of said sewing-machine being shown in their relative location thereto, the presser-foot, awl, and needle being shown in dotted lines. Fig. 35 40 45

5 is a vertical longitudinal section on line 5 5, Fig. 3. Fig. 6 is a vertical section similar to Fig. 5, showing the presser-foot, feed-awl, shoe-sole, welt, and slip-tap in their proper location relatively to the welt-guide. Fig. 7 is a vertical transverse section taken on line 7 7, Fig. 3. Fig. 7<sup>a</sup> is a perspective view of the flat spring-guide 16 detached.

Like numerals and letters refer to like parts throughout these several views of the drawings.

50 In the drawings, A is the presser-foot, B the awl, C the needle, D the feed-dog, E

the throat-plate, and F the throat-plate-supporting frame, of a sewing-machine.

F is the welt-guide as a whole, and G the back gage or guide for the outer sole. The 55 welt-guide F consists, essentially, of two parts—an entrance-channel H for guiding the welts to the slip-tap 29 and outer sole 9, and a spring back gage 10 for holding said welt in proper relation to said outer sole when being sewed thereto. The entrance-channel H consists of a plate 11, which forms the guide for the under side of the welt, and a spring-plate 12, which forms a flexible guide for the upper side of the welt, both plates 11 and 12 60 65 being fast to a support 13, which projects under the spring back gage 10 and is adjustably fastened thereto by screws 14 14, which pass through a slot 15 in said gage 10. The support 13 forms a guide for the outer edge 70 of the welt 8, the beveled edge of said welt being guided by a flat spring 16, fast to a block 17, said block being fixed to the plate 11 and having a screw 18 tapped therein, which bears against the spring 16 and adjusts said spring laterally with relation to the 75 welt. It will be noted that the vertical portion of the spring 16 against which the screw 18 bears is severed from the horizontal portion for almost the entire length of said horizontal portion, as seen in Fig. 7<sup>a</sup>, so that the vertical portion can be pushed away from the horizontal portion by said screw and brought to bear against the beveled edge of the welt. The guide-plate 12 is turned up at 19, forming 80 85 one side of the entrance to the guide-channel H, a wire 20, fastened by screws 21 to the support 13, forming the other side of said entrance.

The spring back gage 10 has a plate 22 riveted to the upper side and a plate 23 to the lower side thereof at its front end in order to present a broad surface to the welt, so that for varying thicknesses and conditions the outer edge of the welt will always be 90 95 guided by said back gage.

The spring back gage 10 is adjustably fastened by screws 25 to a plate 24, fast to the outer-sole back gage G, said spring back gage 10 being rendered adjustable longitudinally 100 upon said plate 24 and back gage G by means of the slot 26.

The plate 22 is cut out at 27 to make room for the presser-foot A. The outer-sole back gage G is fast to the throat-plate D, said throat-plate in turn being fast to the throat-plate support E, said throat-plate support being supported upon the frame of the machine.

It is evident that the welt back gage 10 is adjustable longitudinally with reference to the outer-sole back gage G, that the entrance guide-channel H is adjustable upon the spring back gage 10, and that both the back gage 10 and the entrance guide-channel H are spring-supported and move together as one piece, thus always maintaining the same relative position with relation to each other in the operation of the machine. It will also be seen that there is a space 28 between the spring back gage 10 and the outer-sole back gage G to make room for the edge of the slip-tap 29, which often projects beyond the outer sole, not being always of exactly the same contour as said outer sole.

The operation of the device is as follows: The slip-tap is first fastened to the outer sole by two or three tacks or nails to temporarily hold it in position thereon. The outer sole is then placed with its edge against the back gage G, the welt is carried down through the entrance guide-channel H and along the front of the spring back gage 10, and the presser-foot A descends, Fig. 7, and clamps the welt, slip-tap, and outer sole to the throat-plate D, at the same time pressing down the welt-gage 10. The stitch is then taken, and after the needle has passed out of the stock the said stock is fed forward by the awl B and feed-dog C, all in a well-known manner. It will be understood that when the presser-foot moves up the spring welt-gage 10 will follow it for a distance sufficient to cover any variation in thickness of the welt, slip-tap, and outer sole, and when said presser-foot descends the lower surface of said presser-foot will bear against the upper surface of

the spring back gage 10, depressing it until it is on a level with the upper surface of the welt, independent of the thickness of said welt, slip-tap, and outer sole, so that said spring back gage will always be brought to the same relative position with relation to the welt by the presser-foot, and, as hereinbefore described, the guide-channel being fast to the welt back gage will be depressed and will rise with it, always maintaining the same relative position thereto. 45 50 55

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

1. A welt-guide having an entrance guide-channel for the welt, a welt back gage to which said welt-guide is fastened, an outsole back gage located beneath said welt back gage, and a spring, supporting said welt back gage in such a manner that said welt back gage bears a yielding relation to said outsole back gage, and said outsole back gage and welt back gage form together a guide-channel for the slip-tap. 60 65

2. A welt-guide having an entrance guide-channel for the welt, a welt back gage to which said welt-guide is fastened and to which it bears a fixed relation, an outsole back gage located beneath said welt back gage, and a flat spring, one end supported by said outsole back gage, the other end supporting said welt back gage and welt-guide in such a manner that said welt back gage and welt-guide bear a yielding relation to said outsole back gage, and said outsole back gage and welt back gage form together a guide-channel for the slip-tap. 70 75 80

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FREDERICK A. JOHNSON.

Witnesses:

EDWARD L. TUCKER,  
JAMES F. J. OTTERSON.