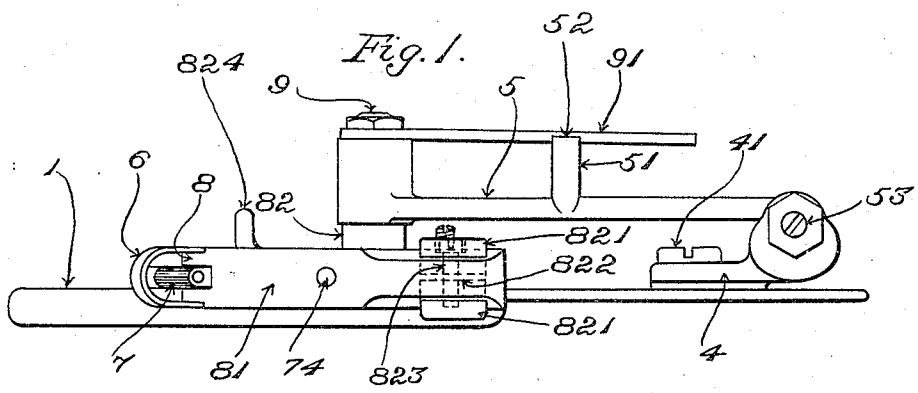
No. 792,116. PATENTED JUNE 13, 1905.

O. E. BROWN.

GUIDE FOR INTRODUCING CORDED WELTS INTO STITCHED SEAMS.

APPLICATION FILED DEC. 19, 1903.

Fig. 1.



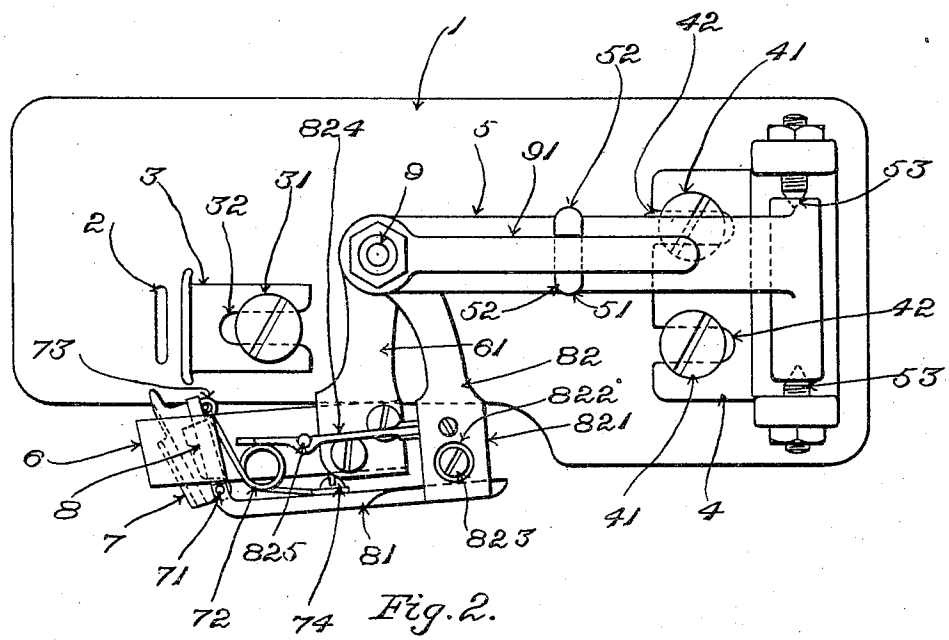


Fig. 2.

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No. 792,116. Patented June 13, 1905.

UNITED STATES PATENT OFFICE.

OTIS E. BROWN, OF BROCKTON, MASSACHUSETTS.

GUIDE FOR INTRODUCING CORDED WELTS INTO STITCHED SEAMS.

SPECIFICATION forming part of Letters Patent No. 792,116, dated June 13, 1905.

Application filed December 19, 1903. Serial No. 185,863.

To all whom it may concern:

Be it known that I, OTIS E. BROWN, a citizen of the United States, residing at Brockton, in the county of Plymouth, State of Massachusetts, have invented a certain new and useful Improvement in Guides for Introducing Corded Welts into Stitched Seams, of which the following is a specification, reference being had therein to the accompanying drawings.

I will describe my invention with the aid of the drawings, in which latter I have shown an embodiment thereof.

In the drawings, Figure 1 shows in elevation portion of the work-support of a sewing-machine having applied thereto the said embodiment of the invention. Fig. 2 represents in plan the parts which are shown in Fig. 1.

My device is provided with a welt-guide that is adapted to double the welt upon itself lengthwise and conduct the same between the two pieces of material which are being stitched together and with a cord-guide that is adapted to conduct a cord into the bend of the doubled welt between the two sides of the latter. The cord-guide in its normal or working position is located within the inclosure of the welt-guide, the two portions of the welt passing, respectively, above and below the cord-guide.

Having reference to the drawings, the top portion of the work-support of a sewing-machine is represented at 1.

2 is the opening or throat through which the needle of the sewing-machine operates.

3 is a work-gage of usual character placed upon the work-support 1 and against which the edges of the pieces of material which are to be stitched together are caused to bear to determine the distance of the line of stitching from the said edges. The said gage is secured to the work-support, with its working edge at the required distance to one side of the throat 2, by means of the clamping-screw 31, the stem of which latter passes through the slot 32 of the plate of the said work-gage and enters a screw-threaded hole that is tapped into the work-support 1.

The attaching-stand of my device is designated 4. It is mounted upon the top of the work-support 1 and is secured in place thereon by clamping-screws 41 41. The stems of the said screws pass through slots 42 42, that are formed in the stand 4, and enter screw-threaded holes that are tapped in the work-support 1. The slots 42 42 provide for adjustment of the attaching-stand and the parts which are connected therewith transversely with reference to the needle and needle-throat of the sewing-machine. The attaching-stand 4 is provided with an arm 5, which projects therefrom toward the position of the needle and the needle-throat. To the said supporting-arm 5 the carriers, hereinafter described, of the guiding members are connected.

The main portion or body of the welt-guide is designated 6, and the cord-guide is designated 7. The said main portion or body 6 of the welt-guide is secured to a carrier, which is designated 61. The welt is passed through the said main portion or body. The latter operates to fold or double the welt upon itself longitudinally as the welt is drawn through the interior space thereof, and hence constitutes the turning member of the welt-guide. The welt-guide is furnished with an edge-guiding member 8, which acts against the edges of the two side portions of the doubled welt. This edge-guiding member is constituted by one end of a bar 81, the said end being bent forward and inclined toward the closed end of the body portion 6 of the welt-guide, so that its acting surface converges toward the said closed end of the body portion 6. The bar 81 is mounted upon the carrier 82. For the purpose of enabling the welt-guide to be adapted to the width of the welt which is being operated upon provision is made for effecting the adjustment of the edge-guide 8 thereof in a direction toward and from the closed end of the body portion of the welt-guide. To this end the bar 81 is connected with the carrier 82 in a manner permitting the bar to be adjusted in the direction of its length upon the said carrier. The means of effecting the adjustment may be varied in practice. In the drawings I have shown the carrier 82 formed with a

clamp to receive the bar 81, the clamp and bar being constructed to enable the bar to be shifted into different positions within the grasp of the clamp. The clamp is formed by providing projections 821 821 at the top and bottom of the end of the carrier 82 to engage with the upper and lower edges of the bar and by slotting the carrier horizontally for a short distance inward from its free extremity, as at 822, producing thereby a split clamp, a screw 823 being provided, in connection with the upper and lower portions of the said clamp, for the purpose of enabling the said portions to be tightened upon the bar. To assist in holding the bar 81 securely and steadily in the required position, the edges of the portion of the said bar which is engaged by the clamp and the jaws of the clamp themselves are dovetailed to fit one another.

The cord-guide 7 is mounted upon the outer end of the bar 81 and extends forward through the opening of the body 6 of the welt-guide, its delivery end or nose projecting forwardly beyond the said body toward the needle and being located in proximity to one end of the needle-throat 2. As thus supported the cord-guide occupies a position between the upper and lower sides of the doubled welt as the latter is drawn through the welt-guide and operates to conduct the cord into the bend of the welt. For the purpose of causing the cord to be pressed fully home into the said bend the cord-guide 7 is mounted with capacity for independent movement with relation to the closed side of the body portion of the welt-guide and is actuated with yielding force to press the same toward the said closed side. The said capacity for independent movement with relation to the closed side of the welt-guide is secured by movably connecting the cord-guide with the bar 81. In the present instance the cord-guide is connected pivotally with the said bar at its forward end, as at 71. The yielding action is secured by means of the spring 72, one extremity of which is engaged with the laterally-projecting lugs 73 of the cord-guide, while the other extremity thereof is secured to the bar 81 by means of a clamping-screw 74. The cord-guide occupies a horizontally-inclined or oblique position with respect to the line of feed, so that the cord may be delivered from the discharging end of the passage therethrough home into the bend or bight of the longitudinally-doubled welt on its way to the needle. In order to insure that the cord shall be pressed fully home into the said bend or bight, as well as to hold the same there in close proximity to the needle, the nose portion of the cord-guide is extended some distance beyond the said discharging end of the passage through the cord-guide toward the needle. Thus the cord is held in place with certainty until secured by the stitches which are formed by the needle. For convenience in threading a cord through the cord-guide 7 whenever such operation becomes necessary and also in inserting the welt into position within the welt-guide I mount the cord-guide with capacity for movement bodily into and away from the body of the welt-guide, so as to enable the same when required to be withdrawn from within the inclosure of the body portion of the welt-guide and out from between the upper and lower sides of the doubled welt into a position in which it is exposed and fully accessible to the operator and in which it is somewhat widely removed from the said body. The withdrawal is by a movement backward from the needle toward the operator and also laterally away from the line of the seam in a plane parallel with the upper surface of the work-support. The capacity for movement in such plane enables the cord-guide to be moved readily into position again between the two sides of a doubled welt occupying the body of the welt-guide. The manner and means of mounting the cord-guide may vary in practice. In the present embodiment of the invention the edge-guide 8 of the welt-guide also is arranged to be withdrawn backwardly and laterally, so as to render the inclosing portion or body of the welt-guide wholly unobstructed and entirely open at one side, whereby it is rendered more convenient for the operator to insert a welt into the body of the welt-guide and it also is rendered possible for the said welt to be passed in doubled form by hand transversely into the said body, if desired. In the said embodiment, in which the cord-guide and the edge-guide 8 have a support in common, which I prefer, the said support being constituted by the bar 81 aforesaid, the carrier 82 for the said bar is movably connected with the supporting-arm 5 by means of a vertical pivotal pin 9. The said carrier may be swung in a horizontal plane around the axis of the said pivotal pin from the working position of the parts, which is shown in Fig. 1, into an inoperative position, in which the cord-guide and edge-guide are withdrawn from the body of the welt-guide toward the right-hand side in the drawings. A suitable latching device is provided for holding the carrier and parts which are mounted thereon in their working position with relation to the body portion of the welt-guide, the said latching device consisting in the present instance of an elastic arm 824, which is notched to engage with a fixed pin 825, rising from the horizontal extension of the body portion 6 of the welt-guide.

On arriving close to the end of the seam which is required to be produced it is necessary in practice to cut the welt and cord, then withdraw the welt-guide and cord-guide and complete the remaining portion of the seam after the withdrawal, so that the end of the welt, with its inclosed cord, may be sewed

properly into the seam. In order to effect the withdrawal of the welt-guide and cord-guide, I mount these parts so as to render them movable in unison into and out of working position in a plane parallel with that of the work-support—*i. e.*, in substantially the plane of the material which is being operated upon. To this end the carrier 61 is made movable about the axis of the pivotal pin 9, like the carrier 82. In the present instance the said pivotal pin is formed upon or fixed to the carrier 61, the carrier 82 having an eye or bearing which is fitted to a portion of the pivotal pin immediately adjacent the carrier 61, the pivotal pin also fitting a bearing with which the supporting-arm 5 is provided. For the purpose of holding the carrier 61 locked in the working position an arm 91 is fitted upon the upper end of the pivotal pin 9, so as to turn in unison with the latter, and a projection or lug 51, rising from the supporting-arm 5, is formed or provided with opposite projections 52 52, having intermediate them a depression or notch which receives the said arm 91 in the said normal position of the carrier 61. Thereby the carrier 61 is held latched in the working position, and by means of the latching device by which the carrier 82 is latched to the welt-guide the parts that are mounted upon the two carriers are retained in their proper relative position. Upon springing the latching-arm 91 upward out of the notch between the projections 52 52 the two carriers may be swung in unison, so as to retract the welt-guide and cord-guide from their working position in proximity to the needle-throat 2.

In order that the cord-guide and welt-guide may be swung entirely out of the way when the use of the device in its entirety is to be temporarily discontinued, the supporting-arm 5 is connected pivotally, as at 53 53, with the attaching-stand 4. This enables the said arm and the parts which are carried thereby to be thrown back out of the way by movement in a vertical plane.

I claim as my invention—

1. In a guide for introducing corded welts into stitched seams, the combination with a supporting-stand, of the body portion by which the welt is doubled longitudinally, a carrier for the said body portion in connection with the said supporting-stand, the edge-guide acting against the edges of the longitudinally-doubled welt as it passes through the said body portion, a cord-guide, and a pivoted carrier for said edge-guide and cord-guide located at the same side of the line of the seam as the carrier for the body portion, and by the movement whereof both of the latter may be withdrawn completely from within the inclosure of the said body portion into a position in which the said body portion is left entirely clear and the cord-guide is fully exposed.

2. In a guide for introducing corded welts into stitched seams, the combination with a supporting-stand, of the body portion by which the welt is doubled longitudinally, a carrier for the said body portion in connection with the said supporting-stand, the edge-guide acting against the edges of the longitudinally-doubled welt as it passes through the said body portion, the spring-actuated cord-guide independently movable with relation to said edge-guide, and a carrier for the said edge-guide and cord-guide located at the same side of the line of the seam as the carrier for the body portion, and movable to withdraw the edge-guide and cord-guide from within the inclosure of the said body portion and expose the cord-guide clear of the body portion.

3. The combination with a supporting-stand, of the body portion by which the welt is doubled longitudinally, a carrier for the said body portion in connection with the said supporting-stand the edge-guide for the edges of the longitudinally-doubled welt, normally occupying a position within the inclosure of the said body portion, and independent of said body portion, and the pivoted carrier for said edge-guide located at the same side of the line of the seam as the carrier for the body portion, and by the movement whereof the edge-guide may be swung out from within the said inclosure.

4. The combination with a supporting-stand, of the body portion by which the welt is doubled longitudinally, a carrier for said body portion in connection with said supporting-stand the tubular cord-guide normally occupying a position within the inclosure of the said body portion, and the carrier for the said cord-guide, movably connected with the supporting-stand at the same side of the line of the seam as the carrier for the body portion and by the movement whereof the cord-guide may be withdrawn completely from within the said inclosure and swung into a position clear of the said body portion to facilitate threading the welt into the open body portion and the cord into the exposed cord-guide.

5. In a guide for introducing corded welts into stitched seams, the combination with a supporting-stand, a welt-guide by which the welt is doubled longitudinally, and a cord-guide which delivers a cord between the sides of the said longitudinally-doubled welt, of swinging independent supports for the said welt-guide and cord-guide respectively, having the pivotal centers thereof at the same side of the line of the seam, and separately movable in a plane approximately parallel with that of the said stand and enabling the said welt-guide and cord-guide to be withdrawn on such side from the working positions thereof separately or in unison, as desired.

6. In a guide for introducing corded welts into stitched seams, the combination with an attaching-stand, of the welt-guide by which the welt is doubled lengthwise, a cord-guide which delivers a cord between the sides of the longitudinally-doubled welt, separate carriers for said welt-guide and cord-guide movable in unison and also movable independently to enable the cord-guide to be withdrawn from the inclosure of the said welt-guide, and a latch to engage the carriers with each other to lock them in proper relative positions.

7. The combination with an attaching-stand, of the body portion of a welt-guide by which the welt is doubled lengthwise, an edge-guide for the edges of the longitudinally-doubled welt, separate carriers for said body portion and said edge-guide movable in unison to enable the latter to be moved jointly into working position and retracted therefrom, and movable independently to enable the edge-guide to be withdrawn from the said body portion, and a latch to engage the carriers with each other to lock them in proper relative position.

8. In a guide for introducing corded welts into stitched seams, the combination with an attaching-stand, of the welt-guide by which the welt is doubled lengthwise, a cord-guide delivering a cord between the sides of the longitudinally-doubled welt, separate swinging carriers for the welt-guide and cord-guide, respectively, movable in unison to enable the said guides to be swung together away from their working position, and also movable independently to enable the cord-guide to be swung separately out of its working relations with the welt-guide, and a latch to engage the said swinging carriers with each other to lock them in proper relative position.

9. The combination with an attaching-stand, of the body portion of the welt-guide by which the welt is doubled lengthwise, the edge-guide for the edges of the longitudinally-doubled welt, separate swinging carriers for the body portion and edge-guide, respectively, movable in unison to enable the said body portion and edge-guide to be swung together away from their working position, and also movable independently to enable the edge-guide to be swung separately out from the inclosure of the body portion, and a latch to engage the swinging carriers with each other to lock them in proper relative position.

10. In a guide for introducing corded welts into stitched seams, the combination with an attaching-stand, of the body portion of the welt-guide, the edge-guide coöperating with the said body portion and engaging with the edges of the longitudinally-doubled welt, the cord-guide delivering a cord between the sides of the said longitudinally-doubled welt, a swinging carrier for the said body portion, a separate swinging carrier for the said edge-guide and cord-guide, capable of being swung in unison with the carrier first mentioned and also independently thereof, and a latch to engage the two swinging carriers with each other to lock them in proper relative position.

11. In a guide for introducing corded welts into stitched seams, the combination with an attaching-stand, the body portion of a welt-guide, a carrier for said body portion, an edge-guide for the welt, a cord-guide which delivers a cord between the sides of the longitudinally-doubled welt, and a carrier for the said edge-guide and cord-guide movable relative to that for the said body portion, of means to attach the respective carriers to the supporting means therefor, and a latch to engage the carriers with each other and lock them in proper relative position.

12. The combination with the body portion of a welt-guide, a carrier therefor, an edge-guide for the welt, and a carrier therefor, of a support for the said carriers in common on which they are independently movable to enable the parts to be placed in and out of working position, and a latch to engage the carriers with each other and thereby separably lock them in proper relative position.

13. The combination with the body portion of a welt-guide, a carrier therefor, the edge-guide, the carrier therefor, means for latching the carriers with each other, a support for said carriers in common on which they are movably mounted to enable the parts to be placed in and out of working position, and means to latch the carriers in position relative to the support.

14. The combination with the body portion of a welt-guide, a carrier therefor, the edge-guide, the carrier therefor, the cord-guide supported by the said edge-guide and adapted to deliver a cord between the sides of a longitudinally-doubled welt, means for latching said carriers with each other, and a support for said carriers in common on which they are movably mounted to enable the guides to be placed in and out of working position.

15. In a guide for introducing corded welts into stitched seams, the combination with the body portion of a welt-guide, a carrier therefor, the edge-guide, the cord-guide adapted to deliver a cord between the sides of a longitudinally-doubled welt, a carrier for the said edge-guide and cord-guide, and a latch to engage the said carriers with each other, of a support for the said carriers on which they are movably mounted to enable the guides to be placed in and out of working position, and a latch to lock the carriers in working position.

16. In a guide for introducing corded welts into stitched seams, the combination with

the body portion of the welt-guide, the edge-guide for the welt, the separate carriers for the two guides, the arm by which the two carriers are supported and on which they are capable of movement transversely into and out of working position, the carrier for the edge-guide being in addition movable relative to that for the body portion to enable the edge-guide to be withdrawn from the inclosure of the body portion, and an attaching-stand to which the said arm is hung and on which it is capable of being swung in a vertical direction to enable the guides and their supports to be thrown back out of the way.

17. In a guide for introducing corded welts into stitched seams, the combination with the body portion of the welt-guide, the edge-guide for the welt, the cord-guide to deliver a cord between the sides of a longitudinally-doubled welt, the carrier for the said body portion, the carrier for the edge-guide and cord-guide, the arm by which the two carriers are supported and on which they are capable of movement transversely into and out of working position, the carrier for the edge-guide and cord-guide being in addition movable relative to that for the body portion to enable the edge-guide and cord-guide to be withdrawn from the inclosure of the body portion, and an attaching-stand to which the said arm is hung and on which it is capable of being swung in a vertical direction to enable the guides and their supports to be thrown back out of the way.

18. In a guide for introducing corded welts into stitched seams, the combination with the body portion operating to double a welt longitudinally upon itself, of a movably-mounted cord-guide having a tubular passage for the cord and a nose extending forward beyond the discharging end of the said passage toward the position of the needle, the said cord-guide being spring-actuated to deliver the cord into the bend or bight of the doubled welt and hold the cord there by means of said nose in close proximity to the needle until secured by stitching.

19. In a guide for introducing corded welts into stitched seams, the combination with a supporting-stand, a welt-guide, and a cord-guide which delivers a cord between the sides of the longitudinally-doubled welt, of independent supports for the said welt-guide and cord-guide, respectively, located at the same side of the line of the seam and separately movable to enable the said welt-guide and cord-guide to be withdrawn on such side from the working positions thereof separately or in unison, as desired, and an arm hung to the said supporting-stand, having the said supports movably connected therewith, and itself movable to enable the welt-guide and cord-guide and their supports to be thrown back out of the way.

20. In a guide for introducing corded welts into stitched seams, the combination with a supporting-stand, of the body portion by which the welt is doubled longitudinally, the edge-guide acting against the edges of the longitudinally-doubled welt as it passes through the said body portion, a cord-guide, a carrier for said edge-guide and cord-guide movably connected with the said supporting-stand and by movement whereof the said edge-guide and cord-guide may be withdrawn in unison completely from within the inclosure of the said body portion into a position in which the said body portion is left entirely clear and the cord-guide is fully exposed, and means to adjust the edge-guide upon the said carrier.

21. In a guide for introducing corded welts into stitched seams, the combination with a supporting-stand, of the body portion by which the welt is doubled longitudinally, the edge-guide acting against the edges of the longitudinally-doubled welt as it passes through the said body portion, a cord-guide, a carrier for said edge-guide and cord-guide, movably connected with the said supporting-stand and by movement whereof the said edge-guide and cord-guide may be withdrawn in unison completely from within the inclosure of the said body portion into a position in which the said body portion is left entirely clear and the cord-guide is fully exposed, means to latch the said carrier in the normal working position thereof, and means to adjust the edge-guide upon the said carrier.

22. In a guide for introducing corded welts into stitched seams, the combination with a supporting-stand, of the body portion by which the welt is doubled longitudinally, the edge-guide acting against the edges of the longitudinally-doubled welt as it passes through the said body portion, a cord-guide, a pivoted carrier for said edge-guide and cord-guide by movement whereof both of the latter may be withdrawn completely from within the inclosure of the said body portion into a position in which the said body portion is left entirely clear and the cord-guide is fully exposed, and means to adjust the edge-guide upon the said carrier.

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

OTIS E. BROWN.

Witnesses:

CHAS. F. RANDALL,

WILLIAM A. COPELAND.