March 1, 1932. H. J. REITER 1,847,224

HOOK TAPE GUIDING ATTACHMENT FOR SEWING MACHINES

Filed Jan. 23, 1929

Fig. 1.

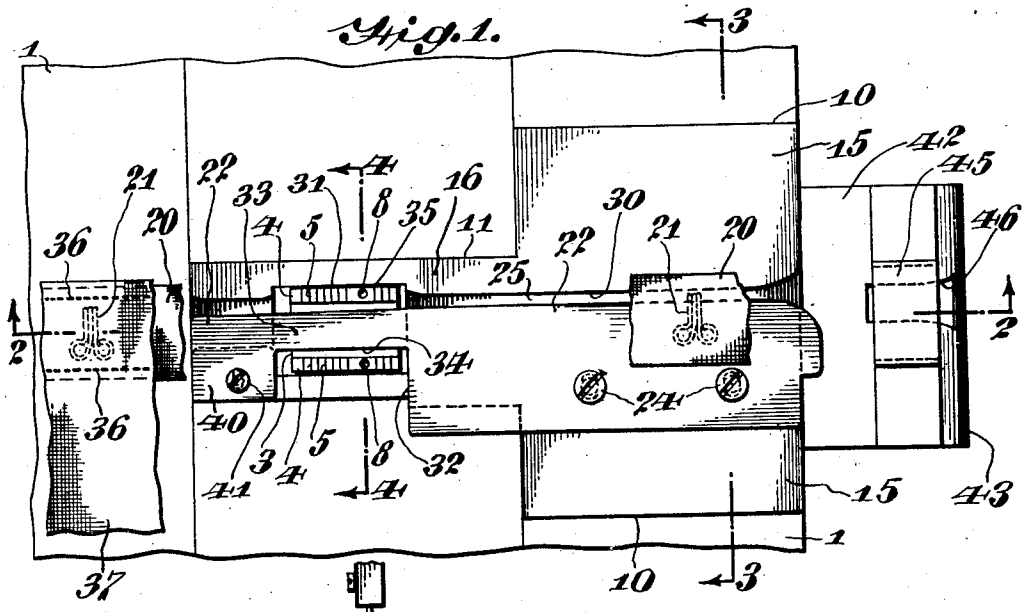


Fig. 2.

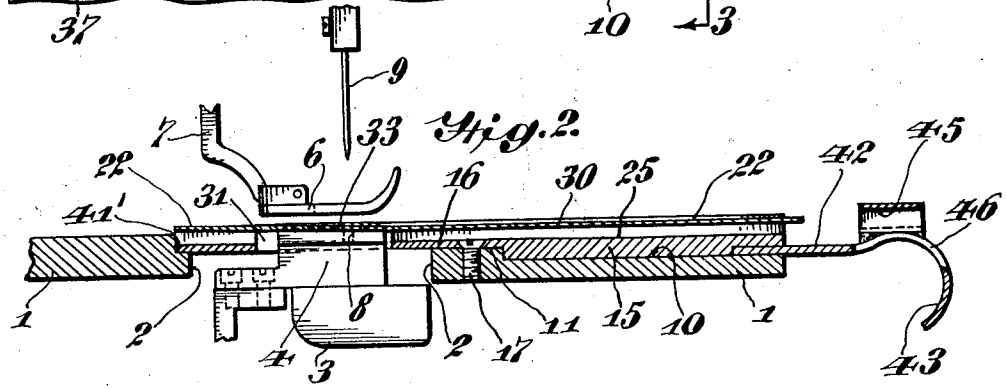


Fig. 3.

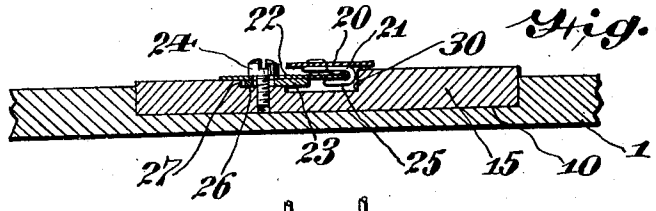
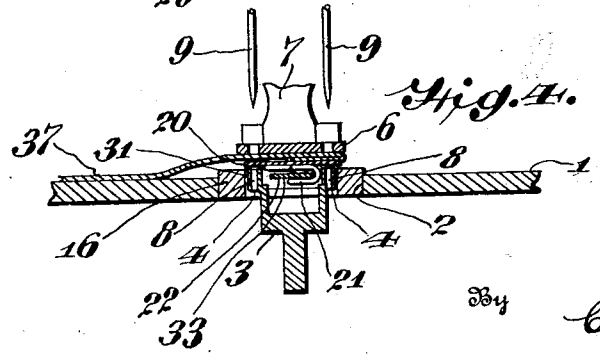


Fig. 4.



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Patented Mar. 1, 1932 1,847,224

UNITED STATES PATENT OFFICE

HENRY J. REITER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE DE LONG HOOK AND EYE COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA

HOOK TAPE GUIDING ATTACHMENT FOR SEWING MACHINES

Application filed January 23, 1929. Serial No. 334,376.

My invention relates to attachments which are adapted to be mounted upon the table of a sewing machine in co-operative relation to the sewing mechanism thereof for guiding one of the tapes upon which separable garment fastening means are mounted; for example, hook and eye tape garment fastening means, to the said sewing mechanism.

More specifically the invention relates to an attachment which is adapted for guiding the hook tape of hook and eye tape garment fastening means to the sewing mechanism, and it has for its general object to provide means for positively supporting and guiding such a tape in proper relation to the sewing mechanism and to permit its assembly with the edge portion of a garment to which it is to be attached, preferably by two rows of thread stitching.

It also is an object of the invention to provide an attachment for supporting and guiding the hook tape of a hook and eye tape garment fastening means to the sewing mechanism of a sewing machine comprising means which is adapted to enter and occupy the space underneath the bills of the hooks mounted upon the said tape and to thereby support and guide the hooks together with the tape which is secured thereto.

To the foregoing and other ends the invention comprehends the construction as hereinafter described in detail, particularly pointed out in the claims and illustrated in the drawing wherein I have illustrated a mechanical embodiment of the invention in the form at present preferred by me. However, it should be understood that the invention may be embodied in forms of construction other than that illustrated, and that various changes in the details of construction may be made within the scope of the claims without departing from the invention or the principle thereof.

In the drawings:

Fig. 1 is a view in top plan of a fragmentary portion of the table of a sewing machine and also showing in top plan the attachment embodying the invention, a fragmentary portion of a hook tape being supported and guided thereby, a top plan of the feed dog of the machine and also a top plan of a fragmentary portion of a fabric to which the tape has been secured;

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 1; and

Fig. 4 is a transverse sectional view taken on the line 4—4 of Fig. 1.

In the drawings I have shown at 1 the table of a sewing machine having an opening 2 therein below which is located a four-motion work feed dog 3 supported and operated in known manner. The said feed dog is slotted upon its upper side to provide spaced portions 4 the upper or top sides of which are serrated, as indicated at 5, for engagement with the under side of the work and for co-operation with the presser foot 6 to feed the work. The presser foot is supported upon the lower end of a supporting bar 7. The opposite side portions of the feed dog are provided with openings, as indicated at 8, into which the needles 9 are adapted to extend in the sewing operation. The table 1 of the machine is provided on the upper side of its front edge portion with a slot or cut away portion 10 from which extends a cut away portion or groove 11 of less width and depth than the portion 10. The base of the attachment comprises a portion 15 of a width to fit the cut away portion 10 in the table and with an extended tongue-like portion 16 of a width to fit the cut away or groove portion 11 previously referred to. In the construction as illustrated the base portion of the attachment comprising the parts 15 and 16 referred to is of a thickness such that its top surface is located in a plane a short distance above the plane of the top surface of the table 1 but such relationship is not essential to my invention. The portions 15 and 16 may be integral as shown or may consist of separate members fastened in any suitable manner in position upon the table. In the construction as illustrated the attachment is secured to and held upon the table by means of a holding or binding screw 17. For the purpose of supporting and guiding the hook tape 20 having hooks 21 mounted thereon at

intervals to the sewing mechanism of the sewing machine I have provided a thin plate 22 the inner edge of which is adapted to engage the hooks between the bill and shank portions thereof, the bills of the hooks facing downwardly as indicated. For the purpose of stiffening the relatively thin plate 22 I prefer to associate therewith a relatively thick plate 23 which is narrower than the said plate 22 so that the inner edge of the latter may be located a substantial distance outwardly from the inner edge of the former. The plates 22 and 23 may be secured permanently together or else the plate 22 may be laid loosely upon and held tightly against the plate 23 by means of the binding screws 24 by which the plates 22 and 23 are secured upon the upper side of the base portion comprising the parts 15 and 16 of the attachment. The inner edge portions of the plates 22 and 23 extend inwardly over a groove or channel 25 which extends lengthwise of the base portion of the attachment. The top side of one edge portion of the base adjoining the groove or channel 25 is cut away to form a relatively shallow cut away portion 26 which provides a shoulder 27 of a height corresponding to the thickness of the plate 23 and against which the outer edge of the said plate is adapted to contact. The outer edge portion of the plate 22 overlies the portion of the base of the attachment in adjoining relation to the shoulder 27. For facilitating the engagement of the inner edge of the plate 22 with the hooks 21 in the manner indicated in Fig. 3 of the drawing I have beveled or cut away the corner at the inner edge of the front end of the said plate 22. For the purpose of retaining the hooks 21 in engagement with the inner edge of the plate 22 I have provided means for contacting with the front or bill ends of the hooks as they move rearwardly upon the inner edge of the plate 22 toward the sewing mechanism. The retaining means in the construction illustrated comprises a shoulder 30 which in the construction illustrated constitutes one side of the groove or channel 25. However, any other means may be employed for contacting with the front or bill ends of the hooks 21 to retain them upon and in engagement with the inner edge of the plate 22.

For the purpose of permitting projection of the feed dog upwardly to engage the work which overlies the attachment I have provided the rearwardly projecting tongue-like portion 16 of the base of the attachment with an opening 31 of substantially rectangular shape as shown. The plate 23 referred to and the outer portion of the plate 22 terminate at 32 along a line substantially coincident with the front end of the opening 31 provided in the portion 16 of the base of the attachment. The inner portion of the plate 22 extends rearwardly, as indicated at 33, over the opening 31. The said portion 33 is located lengthwise of and centrally of the opening 31 and is of a width substantially less than the width of the said opening so that openings 34 and 35 are provided in adjoining relation to the opposite edges of the portion 33 to permit the opposite serrated edge portions 5 of the feed dog 4 to engage the under side of the work and in co-operation with the presser foot 6 feed the same past the sewing mechanism by which the thread stitches 36 are formed. By these stitches the tape 20 is secured to the edge portion of a fabric 37 which may be a part of a garment of wearing apparel. The outer edge of the rear end portion of the relatively narrow extension 33 is provided with an outwardly extending projection 40 which is secured by means of a screw 41 to the rear end of the rearwardly extending portion 16 of the base of the attachment. The rear end of the extension 33 is spaced a short distance above the adjoining upper edge portion 41′ of the opening 2 in the table 1 so as to support the bill portions of the hooks above the said edge portion 41′ and thereby facilitate the delivery of the hooks from the rear end of the said portion 33 onto the upper or top side of the said table 1. It will be noted that the tape and the fabric to which the tape is being secured are supported upon the portion of the extension 33 which spans the opening 31 and are held down thereon by the presser foot 6. The openings through the projection 40 and through the plates 22 and 23 are elongated transversely of the said projection and plates so that the said plate 22 may be adjusted transversely of the attachment so as to properly position the inner edge of the plate 22 with respect to the sewing mechanism to support and guide the tape with its opposite edges properly positioned with respect to the needles and the openings 8 through the opposite sides of the upper edge portions of the feed member of the sewing mechanism.

By the removal of the plates 22 and 23 the screw 17 may be removed whereupon the attachment may be removed from the table. For conveniently removing the said attachment I have provided the front end of the latter with a handle 42 the front end of which is of hook shape, as indicated at 43. Upon the upper side of the front end portion of the handle I have provided a guiding means of loop shape 45 through which the tape is guided to the attachment. Preferably the portion of the handle underneath the top of the loop shaped guide 45 is cut away, as indicated at 46, to form an opening although such opening is not necessary. The guide 45 may be located at any other suitable point either in front of or below the guiding attachment, its only purpose being to properly present the tape to the front end portion of the said attachment.

It will be seen that by my invention I have

provided means which is adapted to enter the spaces between the bill and shank portions of the hooks which are located at intervals upon the hook tape of a hook and eye tape garment fastening means to support and guide the hooks and the tape on which they are mounted to the sewing mechanism of a sewing machine; and also that by the provision of means for retaining the hooks in engagement with the said means the said tape is supported and held positively and guided in predetermined relation to the said sewing mechanism.

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

1. An attachment for guiding the hook tape of hook and eye tape garment fastening means to the sewing mechanism of a sewing machine comprising a base member having a groove therein, a sheet metal plate mounted on said member and having one edge portion thereof extending inwardly over the said groove and being spaced from the bottom theerof so as to maintain the hooks out of contact with the bottom wall of the groove, the edge of said plate being adapted to engage between the bill and shank portions of the hooks on said tape for supporting and guiding the said hooks with the tape secured thereto to the said sewing mechanism, and means carried by said base member for retaining the said hooks upon the inner edge of the said sheet metal plate.

2. In combination, the table of a sewing machine having an opening therein, a feed member mounted underneath the said opening and adapted to be projected thereinto, a base member mounted upon the front edge portion of the said table and extending rearwardly across the opening in the said table, the rear end portion of said base member having an opening therein, a member mounted upon the said base member and having a thin inner edge portion which is supported in spaced relation to the adjoining portion of the said base member, the said inner edge portion extending lengthwise of the said base member and terminating at the rear end thereof beyond the opening therethrough whereby relatively narrow openings are provided in adjoining relation to the opposite edges of the said inner edge portion, through which openings portions of the said feed member are adapted to project, and the said inner edge portion adapted to enter the spaces between the bill and shank portions of the hooks upon a tape to support and guide the same, together with the tape, to the feed member, means co-operating with the said feed member for effecting feeding of the tape past the sewing mechanism of the sewing machine, and means for retaining the said hooks in engagement with the inner edge portion of the supporting and guiding member.

3. In combination, the base member of an attachment for guiding the hook tape of hook and eye tape garment fastening means to the sewing mechanism of a sewing machine secured to the table of the said machine, the said base member having an opening therethrough, a member mounted upon the said base member and having a thin inner edge portion which extends lengthwise of the said member and in spaced relation thereto, the outer edge portion of the said member terminating in advance of the inner edge portion thereof so that an extension of the latter spans the opening through the said base member, the said spanning portion of the said extension being of less width than the width of the said opening so as to provide openings upon the opposite sides thereof, a work feed member having work engaging portions which are adapted to be projected through the last named openings, and the said inner edge portion of the second named member adapted to engage the hooks upon the hook tape to support and guide the same, together with the tape to which the said hooks are fastened, to the sewing mechanism, means for retaining the said hooks upon the supporting and guiding edge portion of the said member, and a presser foot operating to hold the tape against the portion of the said extension which spans the opening in the first named member.

In testimony that I claim the foregoing as my invention I have hereunto signed my name this 22nd day of January, A. D. 1929.

HENRY J. REITER.