July 15, 1941. V. NAFTALI ET AL 2,249,253

METHOD OF AND MACHINE FOR MAKING NECKTIES OR SIMILAR ARTICLES

Filed March 5, 1935 3 Sheets-Sheet 1

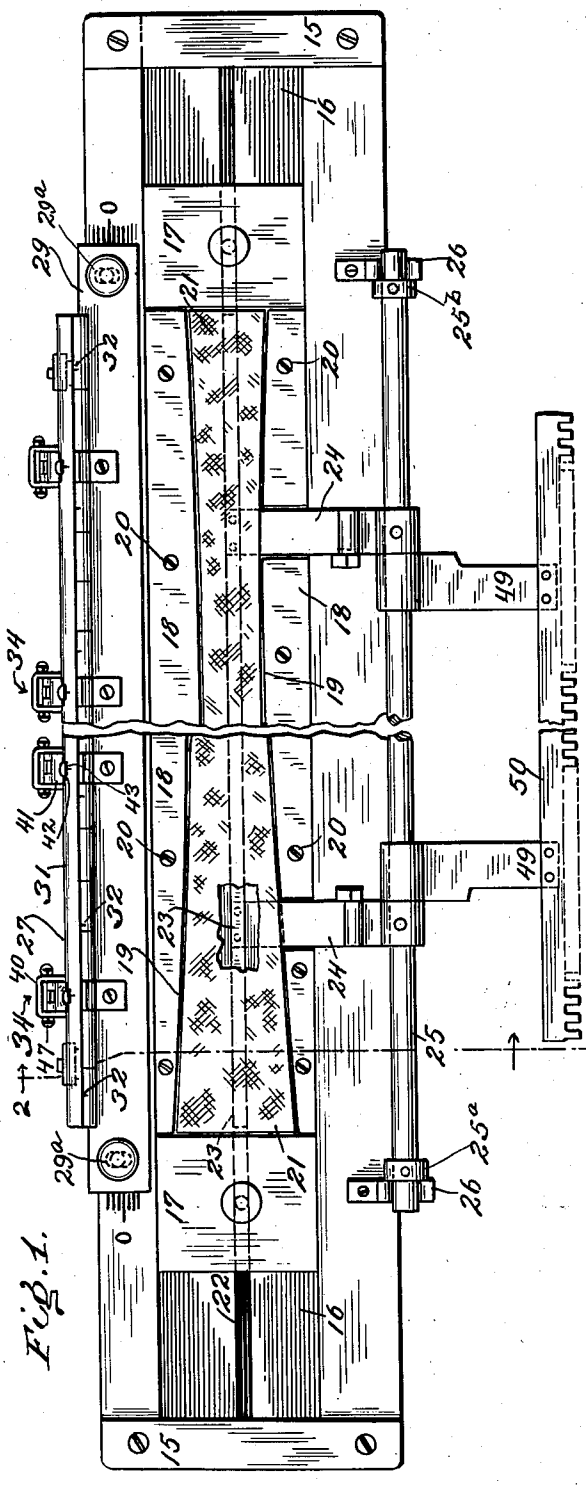


Fig. 1.

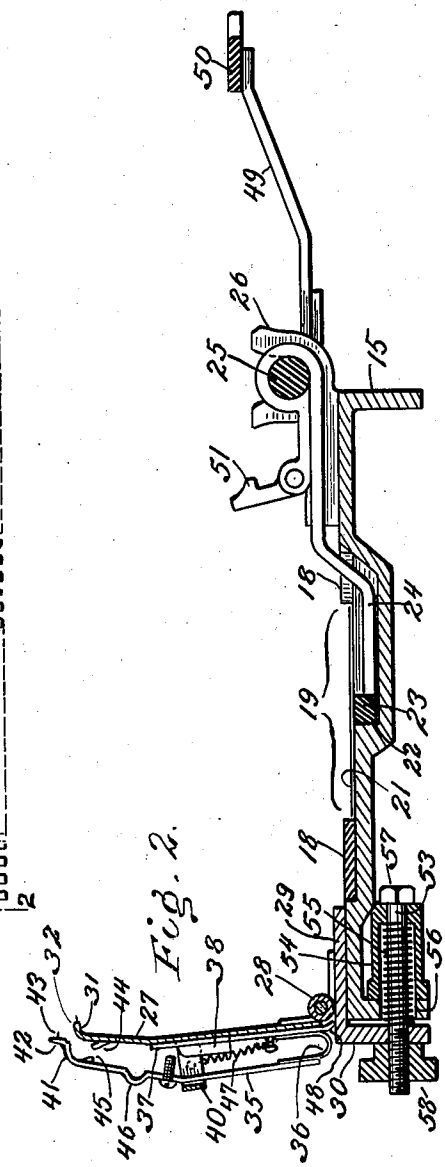


Fig. 2.

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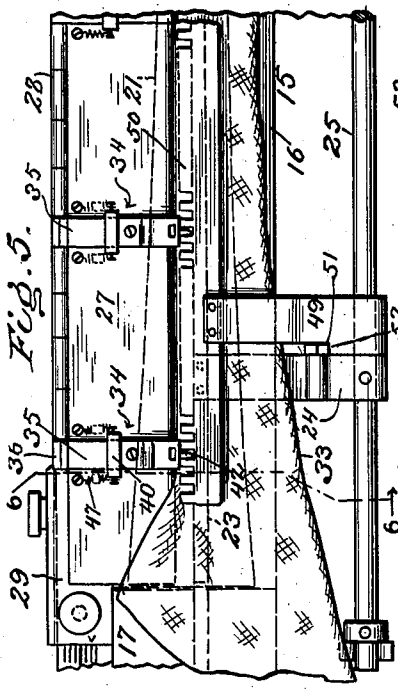


Fig. 5.

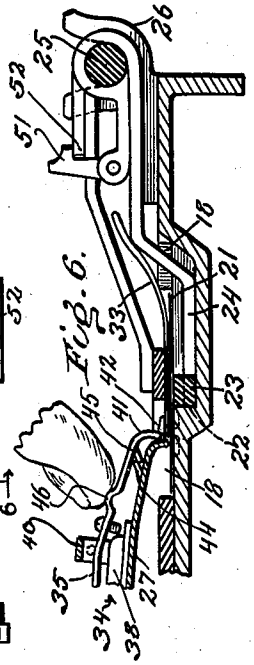


Fig. 6.

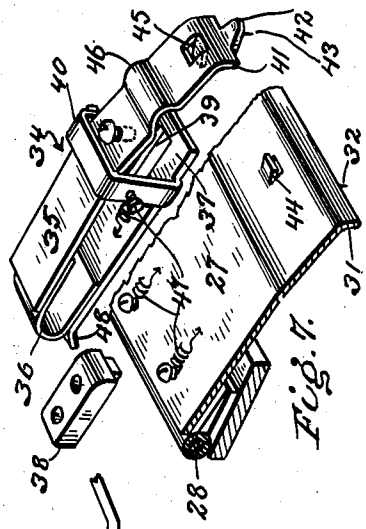


Fig. 7.

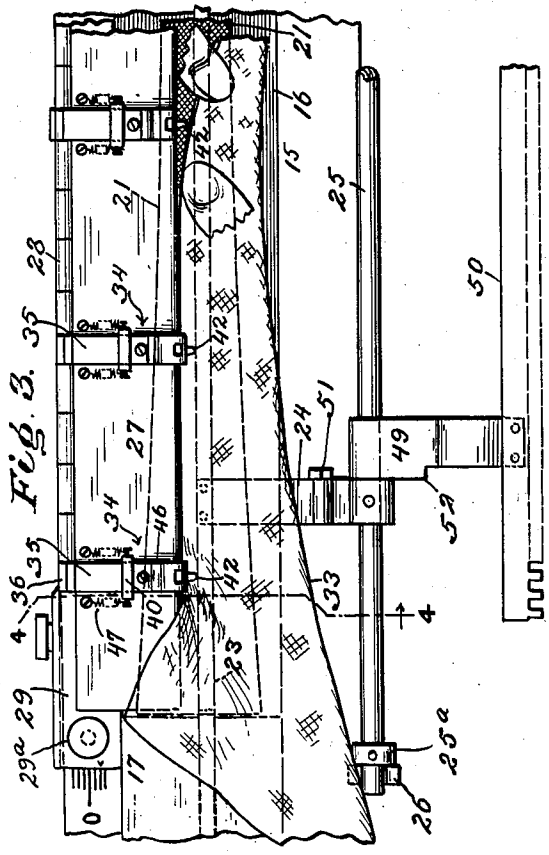


Fig. 3.

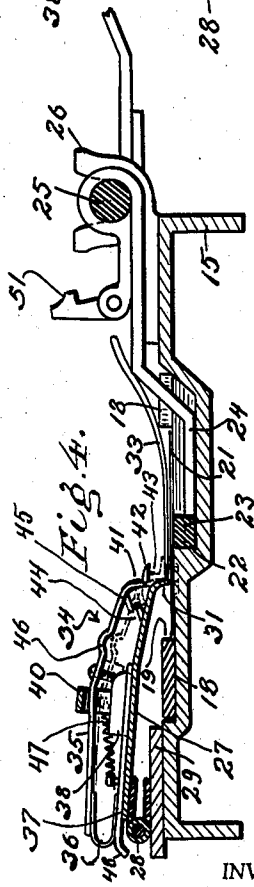


Fig. 4.

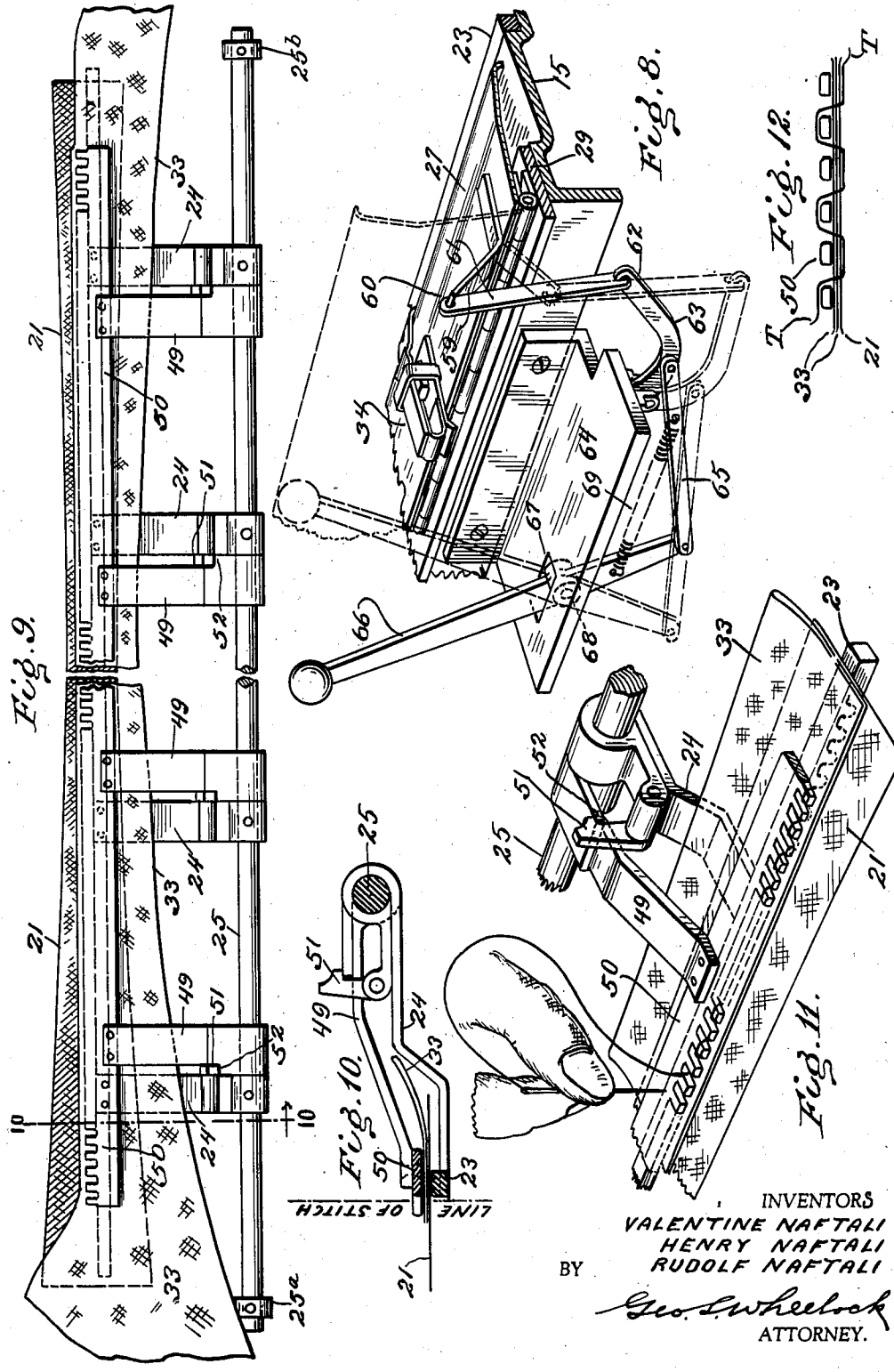
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2,249,253

UNITED STATES PATENT OFFICE

2,249,253

METHOD OF AND MACHINE FOR MAKING NECKTIES OR SIMILAR ARTICLES

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Application March 5, 1935, Serial No. 9,398

19 Claims. (Cl. 223—110)

The present invention, while it relates to a method of and means for making neck-ties or similar articles, it relates especially to improvements in the art of making neck-ties which enable the ties proper and the linings of four-in-hand neck-ties or scarfs to be assembled together in proper and definite relation to an ultimate line of predetermined stitching, so that when the assembled pieces of fabric are ultimately sewn together along such predetermined line of stitching, the pieces will be in their proper relation to each other, and, if the pieces are to constitute a resilient neck-tie or a tie with a resilient lining, the stitch may be of the type known as "loose-stitching" for slip-stitch neck-ties, simulating hand-made neck-ties. In fact, the improvements of the present invention greatly facilitate the sewing in of a loose-stitch thread even by hand at the predetermined line of stitching, but the improvements are more particularly useful, from the standpoint of bulk of production of neck-ties, when they supplement or are accessory to such a type of sewing machine as is disclosed by U. S. Letters Patent 1,931,447, dated October 17, 1933, such type of machine being provided with a carriage or traveling platform adapted to carry the assembled tie proper and lining along the line of stitching of the sewing needle thereof, parts of the present improvements being adapted to be mounted upon such carriage while the tie proper and the lining are assembled thereby in proper relation to each other and to the line of stitching which is obtained by the sewing machine. Hence the ultimate object of the present invention may be attained by resorting to producting the loose-stitching by hand sewing or by stitching the assembled pieces together in a sewing machine.

Among the preferred objects of the present invention is the attainment of certain method steps in the making of neck-ties or similar articles, as obviously the invention is useful in other special connections than in producing neck-ties, such method steps being possible of accomplishment by hand manipulation or by the organized operative elements of a suitable assembly machine. In carrying out such objects two pieces of suitable fabric, for a tie proper and its lining or the like, are imposed one on the other in definite relation to a predetermined line of stitching, stitching the two pieces together along such line by passing a thread therethrough, and then causing the thread to produce loose loop stitches at the outer surface of one of the pieces and stitches close to the outer surface of the other piece of fabric to provide a loose-stitch. However, it is to be understood that in some aspects the present improvements are not alone adapted for enabling the production of a loose-stitch inasmuch as they are useful in facilitating sewing by any suitable sewing machine along a predetermined line of stitching whereby to promote the sewing of two pieces of material together along such line.

When the present improvements are to be used for producing loose-stitching, it is preferred that there be imposed on one of the pieces of fabric and along the predetermined line of stitching, a series of stitch-length regulators which are adapted to define the loose loop stitches at the outer surface of one of the pieces.

The apparatus or machine of the present invention preferably includes a base provided with means for positioning thereon a tie lining, securing means for engaging along one edge portion of the lining for maintaining the lining in position relatively to a predetermined line of stitching so as to leave a free portion of the lining, means for securing together opposed edges of a folded tie proper so as to leave free the folded portion of the tie proper, such tie securing means being so positioned as to hold the tie proper in definite relation to such predetermined line of stitching, and means for grasping the free portions of the tie and lining when so positioned and for holding the tie and lining in their predetermined relation when the edge portions thereof are released from their securing means for ultimately sewing together the tie proper and lining.

With relation to the manufacture of neck-ties of the kind referred to through the medium of the present improvements, the pieces of fabric are preferably arranged on the bias with respect to the weave of the fabric as is customary in making resilient neck-ties, the material of the tie proper being folded wrong-side out and assembled in proper relation with the lining, and when the stitching has been completed the tie proper is turned right-side out so as to dispose the lining within it.

These being among the preferred objects of the present invention, the same consists in certain steps in the improved method and the construction of the parts of the machine or apparatus to be hereinafter described in detail and then claimed with reference to the accompanying drawings forming a part thereof and whereof

Fig. 1 is a plan of the machine showing a tie lining positioned therein, the movable parts of the machine being shown as moved out away from the area at which the lining is positioned, and the central portion broken away;

Fig. 2 is a section on the line 2—2, Fig. 1, parts being in elevation;

Fig. 3 is a plan of a fragmental portion of the machine sufficient to show the manner in which the lining is secured and the folded tie proper is adjusted relatively to the lining and secured relatively to the predetermined line of stitching;

Fig. 4 is a transverse section on the line 4—4, Fig. 3, parts being in elevation, and showing certain members of the tie securing means in both full line and dotted line position;

Fig. 5 is a plan similar to Fig. 3 except that the preferred comb embodying the stitch-length regulators is shown as moved into contact with the folded tie proper;

Fig. 6 is an enlarged detail section on the line 6—6, Fig. 5;

Fig. 7 is an exploded perspective view to more clearly disclose details of construction of the lining securing member and one of the adjustable holding or retaining elements for the meeting edges of the folded tie proper;

Fig. 8 is a perspective view of a portion of the machine to show means for lowering and raising the securing member for the lining and the tie retaining elements which are mounted thereon;

Fig. 9 is an enlarged plan of the members which grasp the properly assembled tie and lining to hold them in their predetermined relation after they have been removed from the assembling machine;

Fig. 10 is a section on line 10—10, Fig. 9, the same indicating the predetermined line of stitch;

Fig. 11 is a perspective view of the grasping members shown in Fig. 9, the view being fragmentary but being sufficient to show that the predetermined line of stitching may be followed by hand sewing; and

Fig. 12 is a simple diagram to show how slip stitching may be produced to sew together the tie and lining.

Referring to the drawings, the frame or base 15 of the machine may be of any suitable construction so that the lining and the tie proper may be laid out flat thereon. There is a long depression 16 in the top of the base in which are mounted adjustable spacers 17 in the shape of plates fitted in the depression so that they may be adjusted and set at different distances apart as required.

As shown more clearly in Figs. 1 and 2 there are arranged in the depression and between the spacers 17 side templets 18 extending or preferably of a length to agree with the adjusted distance between the spacers 17. The adjacent edges of the templets 18 and the inner edges of the spacers 17 provide a profiled or patterned recess 19 and the templets are fixed in position by counter-sunk set-screws 20 which pass therethrough and are screwed into the base 15. Preferably the upper surfaces of the templets and the screws 20 are flush for reasons which will appear obvious herefrom. It is intended preferably that the templets be removable so that they may be displaced by other templets of different pattern, so that the profile of the recess may be made to conform with the lining 21 which is to be received in recess 19.

When the lining 21 is disposed in the patterned recess 19 it will lie in a predetermined position relatively to the other parts of the machine to be described later on so that both tie proper and lining can be assembled relatively to a predetermined line of stitching. In this connection members of the preferred means for grasping the properly assembled tie and lining will first be described because before the lining 21 is positioned, a groove 22 in the base 15 preferably receives an elongated bar 23 which is fitted fairly snugly thereon but easily removable therefrom. The groove 22 and the bar 23 extend longitudinally with the patterned recess 19, the predetermined line of stitching extending close to and parallel with one edge of the bar 23. The bar 23 is removable through the medium of arms 24 which extend laterally of the bar and are preferably rigid therewith, such arms being received in suitable lateral recesses of the base and being carried by a rod or shaft 25 which may constitute a pivot shaft for reasons hereinafter explained. The ends of the rod 25 are adapted to be received in open bearings of brackets 26 supported by the base 15, the rod being thus adapted to be set removably into the brackets 26. This rod 25 extends parallel with the bar 23. It will be seen that when bar 23 is positioned in the groove 22 its upper surface will be substantially flush with the bottom surface of the profiled recess 19 and that when the lining 21 is positioned in such recess it will be located over the bar 23, so that as the bar is removable it is adapted to raise the lining with it.

Means are provided for engaging and securing the lining 21 in the patterned recess 19. Such means include a movable securing member 27 preferably in the form of a plate which extends parallel with the recess 19, it being pivoted along one edge thereof by means of hinges 28 connecting the member 27 with the base 15, the pivots of the hinges extending parallel with the removable bar 23. These parts are shown clearly in Figs. 1 to 6 inclusive, although in Figs. 1 and 2 the lining securing member 27 is in raised position or moved away from the profiled recess 19. Movable member 27 is in reality mounted directly on an angle bar 29, 30 instead of directly on the base of the machine. This angle bar is provided with a flange 29 which overlaps and rests upon the top surface of the base, at one side of the recess 19, and its other flange 30 extends down to one side of the base for reasons to be explained later on inasmuch as it is preferred that the bar 29, 30 be adjustable laterally.

The lining securing member 27 is preferably of a length slightly shorter than the length of the profiled recess 19 so that when such member is moved down from its raised position shown in Figs. 1 and 2 to the position shown in Figs. 3 and 4, for example, a lip 31 on the free edge of the member 27 is positioned in the recess 19 along a line close to and parallel with the predetermined line of stitching which is between such lip 31 and the bar 23, although preferably closer to the bar 23 than to the lip 31. Lip 31 is provided with a series of prods 32 which when the member 27 is in the position shown in Fig. 4 will penetrate the lining 21, thereby positively holding the lining in the profiled recess 19. These prods may be only large enough to slightly penetrate the lining, they being like the sharp ends of pins, to pin the lining in place, by securing it along one portion of the lining, so as to leave free that portion of the lining which extends over the bar 23.

The tie proper 33 is shown as folded longitudinally, it being wrong-side out with the fold there-

in located away from the lip 31. The tie proper is to be placed upon the lining 21 and secured by its free edges, that is the edges opposite the fold, in a definite and predetermined relation to the lining and of course to the predetermined line of stitching, to which end the lip 31 is adapted to constitute a gauge for the free edges of the tie proper, the gauge being in proper position when the lining 21 is held by the prods 32.

Means for securing the tie proper relatively to the gauge are preferably spring tensioned, such means including a series 34 of tie holding elements, each of which extends transversely of the lining securing member 27. Each tie holding element includes a finger 35 which is attached by means of a U-shaped leaf spring 36 as clearly shown in Figs. 2, 4 and 7 to a slide 37 mounted on the member 27 so as to be longitudinally movable thereon. For each slide 37 the member or plate 27 is provided with a guiding rib 38 which is T-shaped and fits into a longer slot 39 in the slide 37, the head thereof being positioned above the slide 37 so that the slide is held down for sliding upon the member 27. A keeper 40 of U-shape is fixed by its opposite legs to each slide 37 and extends over or bridges the finger or adjustable retaining member 35, so that thereby the retaining member is held down, yet by reason of the spring connection 36 is adapted to yield downwardly when pressure is exerted thereon.

The finger or retaining member 35 is provided with a lip 41 at its free end which extends towards the movable lining securing plate 27. The edge of the lip 41 is provided with an outward foot 42 which upon the inner face thereof has a series of prods 43 which extend in the same direction as the prods 32. The object of the prods 43 is to penetrate more or less the free edges of the tie proper 33 which are opposite to the fold thereof, after the prods 32 have engaged with the lining 21. In Fig. 4 the retaining member 34 is shown in a full line position and in a dotted line position. In the full line position the retaining member is free from the lining securing means or plate 27, that is, the spring 36 has forced the retaining member against the keeper 40, while in the dotted line position the retaining member acts to engage or penetrate the tie 33. When the tie is so engaged a catch 44 is engaged by a detent 45 on the retaining member. The catch 44 and the detent 45 may be struck out as illustrated in Fig. 7 from the metal of the respective parts, so that the catch 44 projects outwardly from the outer surface of plate 27, while the detent 45 projects inwardly from the retaining member 35, these two engageable elements being located preferably at points adjacent to the prods 32 and 43. There is a series of the catches 44 on the plate 27 corresponding in number with the number of detents 45 on the retaining elements or fingers 35, each of the latter being operable independently of the other fingers.

To facilitate the operation of each retaining member or finger 35, each finger may be provided with a hump 46 which may be engaged by a finger of an operator of the machine for the purpose of pressing the finger 35 away from the keeper 40 by placing tension on the spring 36, which causes an element of the finger type guided over a rounded surface of the rib 38 and the finger to move slightly forward as well as towards the plate 27 to the dotted line position shown in Fig. 4, so that the detent 45 may be engaged under the catch 44 and the retaining member or finger thus held in a latched position. In this position the lips 31 and 41 will overlap, the lip 41 being engaged over the outward surface of the lip 31. When detent 45 is disengaged from the catch 44, the retaining member or finger 35 will be caused to fly out against the keeper 40 under the action of the tension spring 36 in the full line position shown in Fig. 4. The action of the spring 36 is augmented by the pulling action of helical pull-back springs 47, each of which is anchored at one end to the plate 27, while the other ends are connected with the keeper 40, there being a pair of such springs 47 attached to each keeper. A kick-off lug 48 projects out from the slide 37 so that when the plate 27 is moved from the position shown in Fig. 4 to the position shown in Fig. 2 it will be brought to bear upon the member 29 of the base 15, so that thereby a positive release of the detent 45 from the catch 44 is effectuated, the springs 47 being thereby distended to permit such release. However, when the parts referred to are moved from the position shown in Fig. 2 to the position shown in Fig. 4, the lug 48 is removed from its engagement with the member 29 and the springs 47 at the same time act to pull the retaining member 35 back to the full line position shown in Fig. 4 inasmuch as they are then pulling on the slide 37.

Bar 23, arms 24 and rod or shaft 25 have been previously referred to herein, it having been explained that the bar 23 is positioned in the groove 22 when the parts of the machine are in inoperative position, as shown in Figs. 1 and 2. As shown in these figures and also in most of the remaining figures arms 49 are mounted upon the rod 25 so that they may be swung upon the said rod, these arms at their free ends being rigidly attached to a comb or toothed member 50, so that the comb extends parallel with the rod 25 and hence with the bar 23. The teeth of comb or member 50 are intended to regulate the length of the ultimate stitches which are to sew the lining and the tie together. When the act of sewing is to be performed, the bar 23 and the comb or toothed member 50 serve to grasp the tie and the lining between them, and to permit the teeth to serve as stitch length regulators, and in that position they project more or less beyond the bar 23, the members 23 and 50 then serving as grasping jaws as shown in Fig. 10.

Means are provided for enabling the comb 50 to be opened up away from bar 23 and to permit the two such members to be locked together, to which end latches 51 are pivoted on the arms 24, so that when the parts are in the position shown in Figs. 9, 10 and 11 the latches 51 may be engaged with shoulders 52 of the arms 49, thus locking the related parts together. In other words, the construction and operation in these respects is such that when the rod or shaft 25 is positioned in the open bearings or brackets 26, the members carried by the rod are positioned on the machine for proper operation and coordination with the other operative parts and the latches 51 may be caused to lock the bar 23 and the toothed member 50 together so as to grasp and hold the tie proper and lining, and, while such members are so locked together, they may be bodily removed from the machine, together with the rod or shaft 25 as a unit. As such unit as will appear more clearly later on it may serve as an instrument to facilitate sewing by hand to produce loose-stitch-

ing in a neck-tie or other article or the unit may be mounted upon a suitable sewing machine such, for example, as the one disclosed by U. S. Letters Patent No. 1,931,447, in which case the stitch regulating unit may be removably mounted upon the carriage or traveling platform thereof to be used in the manner which is set forth in an application co-pending herewith.

The operation of the machine or apparatus with respect to sewing neck-ties and their linings together will only now be described, and it will be obvious therefrom that the machine may be resorted to for sewing together any two pieces of fabric which may either be provided with loose-stitching or not, as may be desired, for the particular work in hand.

The movable parts of the machine are first opened up to the position shown in Figs. 1 and 2 so that the lining recess 19 is exposed to permit the placing therein of the lining 21. The lining will then extend between the lining securing plate 27 and the pivot shaft 25, the bar 23 being positioned in the machine so that the lining will extend over it, while the comb or toothed member 50 is thrown back. The ultimate line of stitching through the lining will be approximately as indicated in Fig. 10, that is, slightly in advance of the bar 23 when that is positioned in the machine as shown in Fig. 2. Having now registered the lining 21 in the patterned recess 19 of the approximate contour of the lining, the securing plate or member 27 and the parts carried thereby, may be lowered from the position shown in Figs. 1 and 2 to the position shown in Figs. 3 and 4, from which it will be seen that the lip 31 has been brought down upon the lining, to one side of the line of stitching, which is between such lip and the bar 23, when the prods 32 on such lip will stick into the lining, thereby securing and holding the inner edge portion of the lining so that that portion which extends over the bar 23 is free. The prods 32 and the lip 31 then hold the lining in proper position relatively to the ultimate line of stitching, and the tie proper 33 may now be placed upon the lining, and if desired it is obvious that the usual tape used in neck-ties may be placed between the longitudinal intermediate portion of the lining and the edges of the tie proper which are to be secured thereto.

It will be seen from Fig. 4 that the retaining members or fingers 35 are in a position shown in full lines, the springs 47 having acted to pull the retaining members back to that position. In such position the foot 42 of each of the raised retaining members will be in the position shown in Fig. 4, with the lip 41 removed from overlapping engagement with the lip 31. The folded tie proper 33 may now be placed in proper position over the lining 21, as shown in Figs. 3 and 4, the fold of the tie being remote from the plate 27 and the parts mounted thereon, and the free edges of the folded tie being opposed to each other. Inasmuch as there is a series of retaining members 35, the end one of the series is first operated, then the next and so on. Before actuating them care is taken that the free edges of the tie proper are brought together as shown in Fig. 3, so that they will meet at the lip 31 which constitutes a gauge for determining the position of the tie proper relative to the ultimate line of stitching and to the lining, and then the first retaining member 35 (to the left in Fig. 3) is depressed to move it from the full line position to the dotted line position, shown in Fig. 4, the said retaining member being brought forward far enough by the operator so that the detent 45 will pass the catch 44, and instantly that the retaining member is released by the operator, the detent 45 snaps under the catch 44, thereby holding the lip 41 in an overlapping relation to the lip 31, while the foot 42 will be in contact with the tie proper and the prod 43 will stick into the unfolded edges of the same at a point close to the point of penertation of the lining by the prod 32. When the first retaining member 35 has been operated to secure and hold its respective portion of the tie, the next retaining member 35 is now operated to secure the adjacent portions of the tie in the same manner as the first one did. The securement of the free edges of the tie proper are in like manner proceeded with, care being taken to keep the free edges opposed to each other in the manner graphically illustrated in Fig. 3, until the desired lengths of the free edges have been so secured in mutually opposed relation along, close to and parallel with the gauge or lip 31.

After the lining 21 and the folded tie proper 33 have been secured by the prods 43 of the retaining members, the rest of the tie proper will be free, that is, its folded portion will be free, and will lie over the free portion of the lining 21, as shown in Fig. 4 and also in Fig. 6. The lining and the tie proper being now secured at appropriate portions thereof so that they have a predetermined position relative to the ultimate line of stitching to be produced, the comb or toothed jaw member is moved from the position shown in Figs. 2 and 3 to the position shown in Figs. 5 and 6 in which position the toothed member 50 is brought down upon the tie proper, so that the lining 21 and the tie proper 33 are directly between and engaged by the bar or jaw 23 and the comb or jaw-member 50. Now the tie and the lining may be grasped between the bar 23 and the toothed member 50, they acting as jaws, the same being locked together by the manual operation of the latches 51 which are caused to engage portions of the arms 49. The tie and the lining will thus be held by the grasping jaws in exactly the same position relatively to the ultimate line of stitching as that to which they had been adjusted and set by the lining and tie securing means, so that the latter may then be released from the tie and lining.

To release the securing means for the lining and for the tie forming pieces, the plate or member 27 with the parts mounted thereon are raised away from the tie and lining, the same swinging on the pivotal connection thereof with the base 15 of the machine, such movement resulting in bringing the lugs 48 into abutment with portions of the base, thereby disengaging the detents 45 from the catches 44, as shown in Fig. 2, and when the said parts are swung down again upon the base, the tension of the springs 47 will move the tie retaining members back to the position shown in Fig. 4. Now that the plate or member 27 and the parts carried thereby have been released from the tie and lining and moved to the position shown in Fig. 2, the grasping unit comprising the parts 23, 25 and 50 may now be removed from the machine by releasing the pivot shaft 25 from the open bearings 26 of the machine, the bar or jaw 23 being at the same time released from the groove 22 in the base of the machine, so that the tie proper and

the lining will be grasped and held in their predetermined relation, the parts 23, 25 and 50 being adapted to be handled as a unit which may be moved as such to any place desired. The grasping unit is shown as such in Figs. 9, 10 and 11, and it will be noted from Fig. 11 that a seamstress or other operator can take a threaded needle and expeditiously sew the tie proper and the lining together by means of loose-stitching, it being obvious that the length of the stitches at one of the surfaces of the two pieces is regulated by the stitch-length regulators formed by the teeth of the toothed member 50, as the thread is formed in loops extending over alternate teeth to form loop-like stitches at those points while the stitches at the opposite sides of the two pieces will lie close to the lining, thereby producing loose-stitching through the desired length of the two pieces and along substantially the predetermined line of stitching, which line was determined by the operative parts of the machine. When the stitching has been completed, the latches 51 are disengaged from the arms 49 so that the jaws formed by the bar 23 and the toothed member 50 may be opened away from each other. In this connection it is obvious that the seamstress or other operator can now take hold of one end of the loose-stitch connected tie and lining and strip the same from the teeth with facility. When the tie and lining have been stitched together either with a loose-stitch as preferred or without it, the tie may be turned right-side out in the usual way so as to dispose the lining within the tie, previously to such finishing operations as ironing or pressing the tie in suitable shape to wear. When loose-stitching is produced in the described manner it will appear as shown in Fig. 12 with reference to the teeth of the comb or toothed member 50, the thread T passing through the lining 21 and the tie proper 33.

It may sometimes be desirable to adjust and set the members carried by the angle bar 29, 30, shown in Fig. 2, so as to vary the distance of the prods 32 and 43 and their concomitants more or less away from the position of the bar 23, which adjustment may be found to be desirable when the pattern of the templets 18 is changed by the substitution of templets of different pattern than those which were previously in the machine. To this end a pin 53 passes freely through an ear 30 at each end of bar 29, the ears preferably forming the aforesaid downward flange of bar 29. Each pin also passes through an adjacent flange of the base 15 and through a housing 54 fixed to the base. Such housing 54 encloses a helical tension spring 55 which surrounds the pin 53 and at one end bears on the closed end of the housing 54, the opposite end of the spring passing through the enlarged hole 56 in the base 15 and bearing upon the inner surface of the flange 30. The head 57 at the inner end of each pin 53 is in bearing relation with the housing 54, so that the outward end of each spring acting outwardly upon the adjusting angle member 29, 30 will force the latter against each of nuts 58 which are screw-threaded onto the outer ends of the pins 53. Thus it will be seen that by screwing the nuts 58 in one direction or the other, the springs 55 will act to hold the adjusting member 29, 30 to the position that has been determined by the set position of the nuts 58.

For the certainty of obtaining the transverse guidance of the adjusting member 29, 30, pin-and-slot connections 29a are provided between it and the top of base 15, and visual index means such as O may be provided on said base, and relatively to which the member 29, 30 may be adjusted so as to obtain the certainty of the adjusted position.

The grasping or like unit for the properly assembled pieces of material preferably embodies fixed abutments 25a, 25b on the rod or shaft 25 which constitute indicators which determine the position of the unit upon the base 15 as well as upon a suitable sewing machine.

In Fig. 8 there are illustrated means for operating the plate or member 27 with the parts carried thereby to move them readily from the position in full lines in the figure to the position shown in broken lines, that is, from the position shown in Figs. 4 and 6 to the position shown in Fig. 2, or vice versa, which means preferably comprise a lever-arm 59 which at one end is rigidly mounted on the plate 27 so that the other end of the lever arm projects away from the pivotal connection afforded by the hinge 28 with the adjusting angle member 29, 30. The outer end of the lever arm 59 is connected by means of a loose joint 60 with a link 61 which extends downwardly across the flange 30, its lower end being connected by loose joint 62 with an arm 63 which is pivotally mounted upon a shelf or support 64 that extends from the flange 30. One end of a link 65 is pivotally connected with an intermediate portion of the pivoted arm 63 and the other end thereof is pivotally connected with the lower end of a hand lever 66 which passes through a slot 67 in the shelf 64 and is mounted on the self by means of pivot 68. It is obvious that by moving the hand lever 66 in one direction or the other that the plate 27 and the members supported thereby will be swung from one position to the other as shown by the full line and dotted line positions respectively, the link 61 and the ball-and-socket joints 60, 62 constituting a universal joint connection between the lever arm 59 and the arm 63.

A helical spring 69 connects the link 65 with the lower end of the hand lever 66, and, while the spring is placed under tension when the plate or member 27 is down, in the full-line position in Fig. 8, it does not raise the plate from that position inasmuch as the weight and leverage of the plate holds the spring distended. A slight positive movement of the hand lever towards dotted-line position permits the spring to function so as to raise the plate or member 27 away from the pieces of material which had previously been held upon the base or table 15.

It will be obvious to those skilled in the art that the invention as disclosed hereby is susceptible to more or less modification without departing from the scope of the claims involved.

What we claim as new is—

1. A machine for making ties or similar articles, including in combination a base provided with a profiled recess and a groove at the bottom of the recess which extends along the recess, templates forming the sides of the recess, means for holding two pieces of fabric together relatively to a predetermined line of stitching, such means serving to locate one piece in the recess, and a member positioned removably in the groove for lifting the one piece from the recess with the other piece.

2. A machine for making ties or similar articles, including in combination a base provided with a profiled recess and a groove at the bottom

of the recess which extends along the recess, templates forming the sides of the recess, means for holding two pieces of fabric together relatively to a predetermined line of stitching, such means serving to locate one piece in the recess, and a member positioned removably in the groove for lifting the one piece from the recess with the other piece, together with a member opposing the removable member for grasping the two pieces.

3. A machine for making ties or similar articles, including in combination a base, provided with an elongated recess, means at one side of the recess, for holding two pieces of fabric together, with one piece positioned in the recess, relatively to a predetermined line of stitching, so as to leave free portions of the pieces opposed, and means at the other side of the recess for grasping the free portions while in such predetermined relation and for removing such one piece from the recess together with the other piece.

4. A machine for making ties or similar articles, including in combination a base, movable holding means for securing a piece of fabric on the base, such means engaging a portion of such piece so as to leave a free portion, holding means movable relatively to the first holding means for engaging a portion of a second piece of fabric so as to leave a free portion of the second piece opposed to the free portion of the first said piece, both holding means positioning the pieces relatively to a predetermined line of stitching, and means for grasping the free portions of the pieces and holding the pieces in their predetermined relation, such grasping means adapted for removal from the base when both holding means are released from the pieces, the holding means for the second piece comprising a series of independently adjustable retaining elements.

5. A machine for making neck-ties, including the combination of means for positioning one on the other, a folded tie proper and a lining in a definite relation, relatively to a predetermined line of stitching, movable means to one side of such line for securing an edge portion of the lining and opposed edges of the tie proper, so as to leave free a portion of the lining and the folded portion of the tie, and means for grasping such free portions to maintain the tie and lining in their related positions when the securing means are released from such edge portions, the grasping means comprising two clamping members, one of which is provided with a series of teeth forming stitch-length regulators along such predetermined line of stitching.

6. In combination, holding members for two pieces of material to be stitched together, one of the members including a gauge for gauging one of the pieces relatively to a predetermined line of stitching through the two pieces and another of the members having a series of stitch-length regulators adapted to define loose loop stitches at the outer surface of one of the pieces.

7. In communication, holding members for two pieces of material to be stitched together, one of the members including a gauge for gauging one of the pieces relatively to a predetermined line of stitching through the two pieces and another of the members being in the form of a comb providing a series of stitch-length regulators adapted to define loose loop stitches at the outer surface of one of the pieces.

8. In combination, a base, a gauge and a toothed member on the base, parallel with each other, the gauge providing means for holding one piece of material on the base and for gauging another piece of material placed on the first piece relatively to a predetermined line of stitching through the two pieces, and the toothed member being adapted to hold such other piece in said predetermined position on said first piece, and means for removing the toothed member together with said pieces from said base, whereby, in stitching, the teeth of the toothed member are adapted to regulate the length of loose loop stitches passed over the teeth and through the pieces.

9. A device for making neck-ties comprising a base having means for positioning thereon a tie lining in predetermined position on the base, means for holding a longitudinal portion of the tie lining, adjacent a longitudinal edge thereof, against said base, means removably mounted on said base for clamping to said lining a folded neck-tie proper superimposed thereon, said tie lining holding means being movable away from said lining to release the latter from said base whereby said clamping means with the clamped lining and tie proper may be removed from said base.

10. A machine for making neck-ties including, in combination, a base provided with means for positioning thereon a tie lining, a tie gauge pivoted to said base having means for engaging the lining adjacent a longitudinal edge thereof for maintaining the lining on said base so as to leave a free portion, said tie gauge having a surface to serve as a guide for aligning the meeting edges of a folded neck-tie proper superimposed on the lining and to be stitched thereto, means mounted on said base for grasping the free portions of the folded tie and lining for holding the tie proper and lining in their predetermined relation, said gauge being movable away from the lining to release the latter from the base, said grasping means being adapted to hold the tie and lining in their predetermined relation when the lining is freed from said base, and being removable from said base to permit said tie and lining to be placed on a stitching machine for a stitching operation.

11. A machine for making neck-ties including, in combination, a base provided with means for positioning thereon a tie lining, a tie gauge pivoted to said base having means for engaging the lining adjacent a longitudinal edge thereof for maintaining the lining on said base so as to leave a free portion, said tie gauge having a surface to serve as a guide for aligning the meeting edges of a folded neck-tie proper superimposed on the lining and to be stitched thereto, means mounted on said base for grasping the free portions of the folded tie and lining for holding the tie proper and lining in their predetermined relation, said gauge being movable away from the lining to release the latter from the base, said grasping means being adapted to hold the tie and lining in their predetermined relation when the lining is freed from said base, and being removable from said base to permit said tie and lining to be placed on a stitching machine for a stitching operation, said grasping means including a pair of pivotally connected members engaging the under surface of the lining and the top of the tie proper, respectively.

12. In a machine for making neckties or similar articles, the combination of a base, means on said base for positioning a tie lining thereon in relation to a predetermined line of stitching, means

for temporarily securing only one longitudinal edge portion of the said lining to said base, gauge means for superimposing a longitudinally folded tie-proper on said lining with respect to said predetermined line of stitching, means for temporarily securing opposed edges only of said longitudinally folded tie-proper to said lining, and means on said base for clamping together the unsecured portions of the tie and lining, said last named means being removable from said base with the clamped together lining and tie only after the said temporary securing means have been rendered ineffective.

13. In a machine for making neckties or similar articles, the combination of a base, means on said base for positioning a tie lining thereon in relation to a predetermined line of stitching, means including a tie gauge for releasably securing only one longitudinal edge portion of the said lining to said base, said gauge being adapted to position a folded tie-proper on said lining in relation to said predetermined line of stitching, means for releasably securing together at such gauge opposed edges of said folded tie-proper, and means cooperating with the unsecured portions of the tie and lining for holding in assembled relationship said tie and lining when the secured edge portions thereof are released.

14. A method of making neckties or similar articles, including imposing a piece of fabric to be used as a tie lining on a surface with respect to a gauge member, temporarily securing one longitudinal edge of the lining to said surface, imposing another piece of fabric consisting of a longitudinally folded tie material on the unsecured portion of the lining, temporarily holding the adjacently disposed longitudinal edges of the folded tie material in a predetermined spaced relationship with respect to the said temporarily secured lining edge, contacting and clamping the unsecured portions of said relatively imposed unfolded lining and folded fabric throughout the length of an ultimate line of stitching, releasing the aforesaid temporarily secured longitudinal edges of the tie material and of the lining and stitching together the clamped fabric and lining along said ultimate line of stitching by a line of loose stitching.

15. A machine for making neckties, comprising a supporting surface, means for gauging a longitudinal edge of a lining disposed on said surface in a predetermined position relative to an ultimate longitudinal line of stitching, separate means for gauging a longitudinal edge of a relatively superimposed longitudinally folded tie fabric in a predetermined position relative to said ultimate line of stitching, and means on said surface for grasping the lining and the tie fabric while so gauged along points to one side and throughout the length of such ultimate line, such grasping means being removable with the tie fabric and lining from the supporting surface while they are so grasped and gauged so as to leave free the portion of the said tie fabric adjacent to the lining along such ultimate line for thereafter stitching the said portion of the said tie fabric and the lining together along such ultimate line.

16. In a machine for making neckties or similar articles, the combination of means for gauging a lining in predetermined position relative to an ultimate line of stitching, means to hold said gauged lining so as to leave a free portion thereof, said last named means including a tie fabric gauge for locating a folded tie fabric, superposed on said lining, in predetermined position relative to said ultimate line of stitching, means for holding said folded tie fabric with its opposed edges substantially aligned with said gauge, whereby the major folded portion of the tie fabric is left free and in opposed relation to the free portion of the lining, and means for grasping said free portions throughout the length of said ultimate line of stitching while the tie fabric and lining are so positioned and held, said last named means including means for holding said free portions in such assembled relation when the tie fabric and lining are disengaged from said positioning and holding means, whereby the said tie fabric and lining may be sewed together along said predetermined line of stitching to prevent distortion of the tie fabric and lining during stitching.

17. In a machine for making neckties, the combination of gauging means for locating a folded tie proper and a lining, superposed one upon the other, in relation to an ultimate line of stitching with dissimilarly shaped longitudinal edges in spaced relationship, releasable means for securing in said superimposed relationship an edge portion of the lining and opposed edges of the folded tie proper so as to leave free a portion of the lining and the folded portion of the tie, and means for grasping such free portions, said grasping means being adapted to maintain the tie and lining in their related positions when the securing means are released from the edge portions of said lining and tie proper, said last named means including a stitch length regulator located throughout the length of said ultimate line of stitching.

18. In a machine for making neckties or similar articles, the combination of a base, means on said base for positioning thereon a tie lining in relation to an ultimate line of stitching, means including a gripping member for securing only one longitudinal edge portion of the lining to said base in said last named position, means for contacting and clamping said lining and a relatively superimposed folded tie fabric throughout the length of said ultimate line of stitching with the longitudinal edges of said tie fabric and said tie lining in spaced relationship and a longitudinal edge of said tie fabric in predetermined position in relation to said ultimate line of stitching, said last named means comprising a second gripping member on said base movable toward and away from said first gripping member, said second gripping member having a plurality of spaced teeth disposed across said line of stitching.

19. A machine for making ties or similar articles, including in combination a base, movable holding means for securing a piece of fabric on the base in definite relationship to an ultimate line of stitching, said means engaging a portion of such piece so as to leave a free portion, holding means movable relatively to the first holding means for engaging a portion of a second piece of fabric in definite relationship to said ultimate line of stitching and so as to leave a free portion of the second piece opposed to the free portion of said first piece, and means for grasping the free portions of the said pieces adjacent said ultimate line of stitching and holding said pieces in their predetermined relationship, such grasping means being removable from the base when both holding means are released from the said pieces.

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CERTIFICATE OF CORRECTION.

Patent No. 2,249,253. July 15, 1941.

VALENTINE NAFTALI, ET AL.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 6, first column, line 65, claim 7, for the word "communication" read --combination--; page 7, second column, lines 20, 26, and 32, claim 17, for "proper" read --fabric--; lines 28 and 30, same claim, after the word "tie" insert --fabric--; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 9th day of September, A. D. 1941.

Henry Van Arsdale,
Acting Commissioner of Patents.

(Seal)