March 11, 1958 R. S. PHILLIPS, JR 2,826,158

ATTACHMENT FOR SEWING POCKETS

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Fig. 1

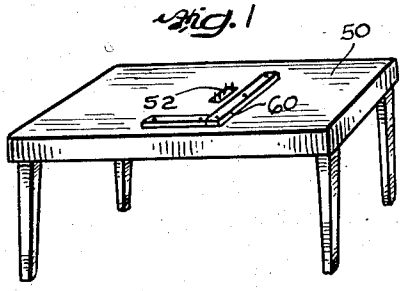


Fig. 2

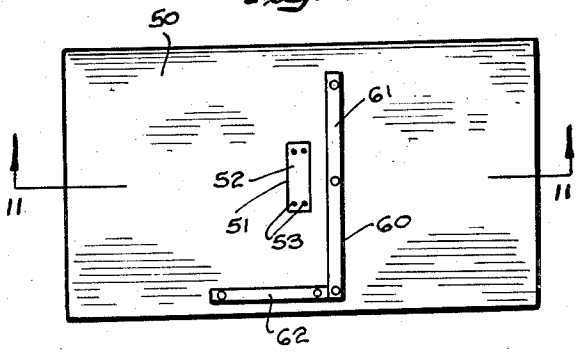


Fig. 3

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Fig. 4

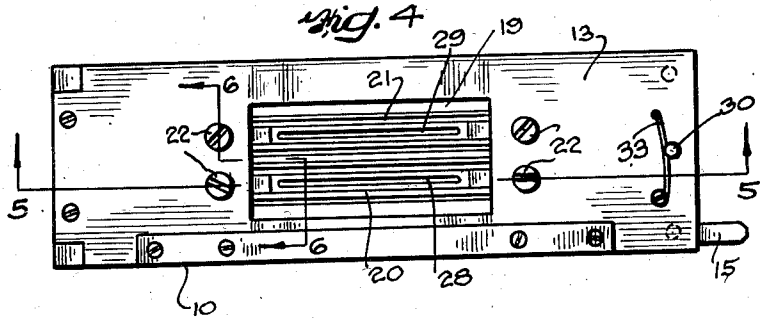


Fig. 5

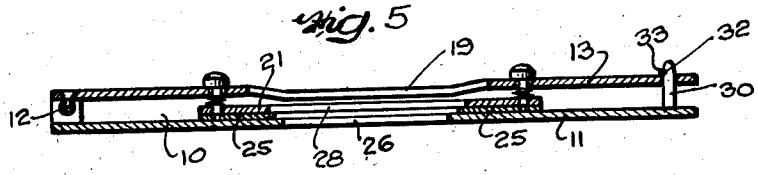


Fig. 6

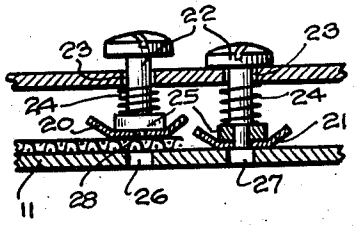


Fig. 7

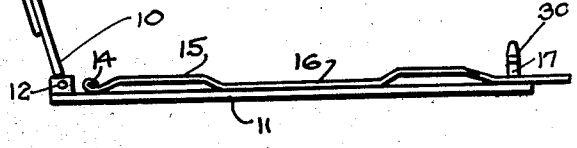


Fig. 8

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Fig. 9

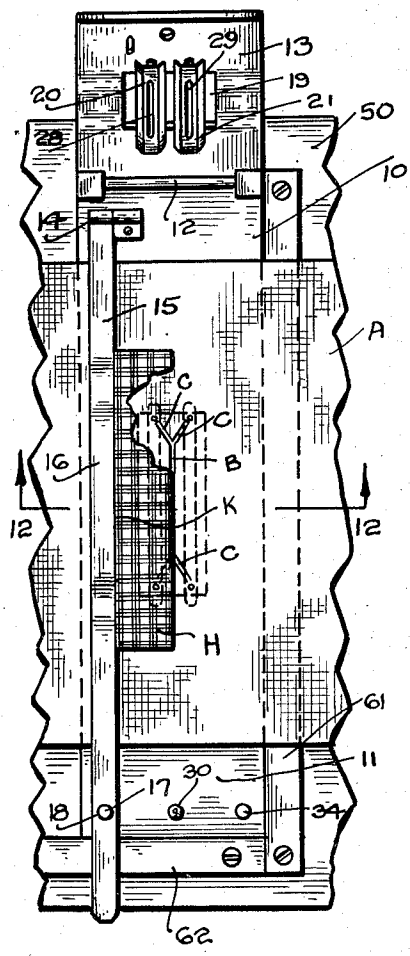


Fig. 10

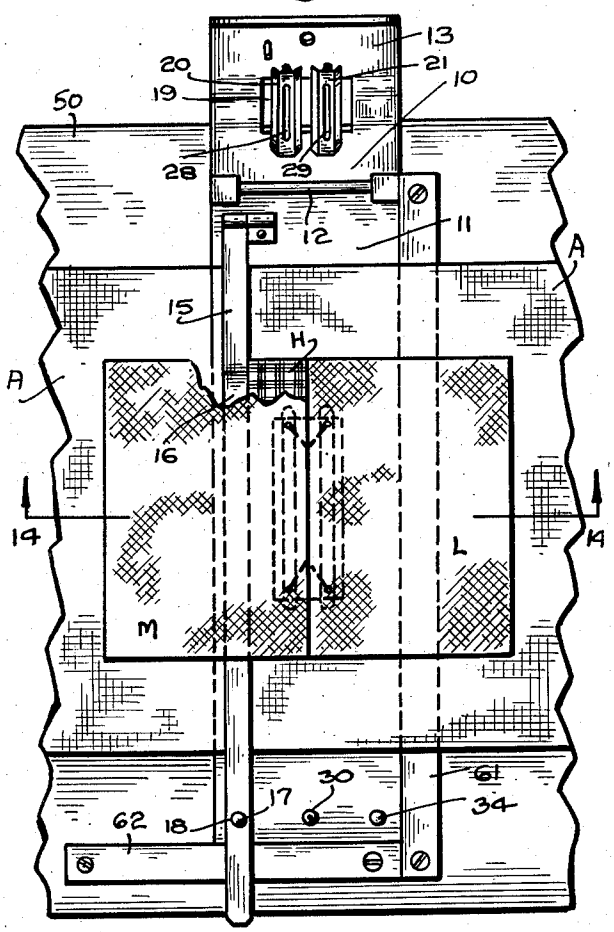
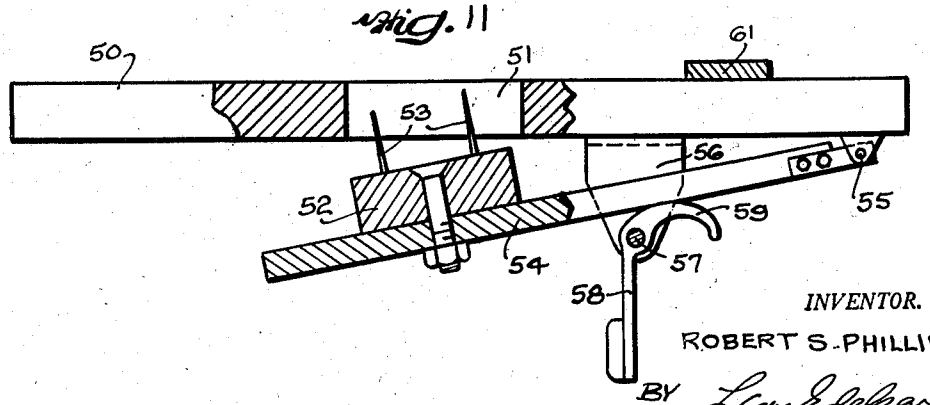


Fig. 11



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Fig. 12

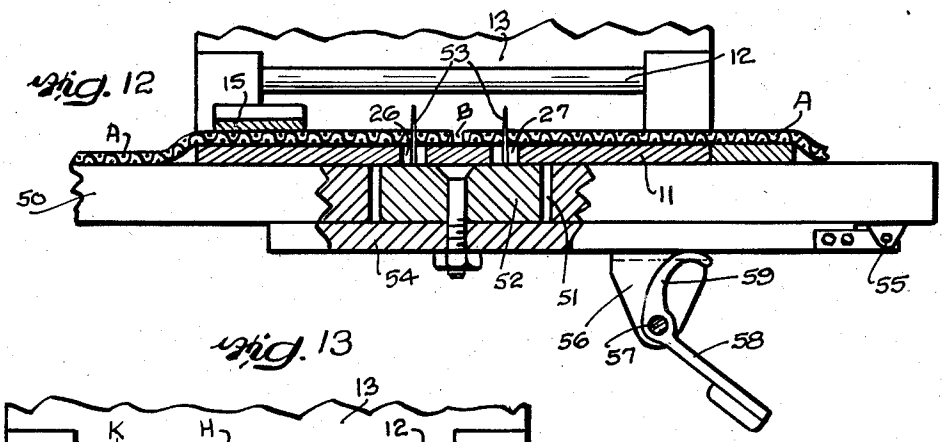


Fig. 13

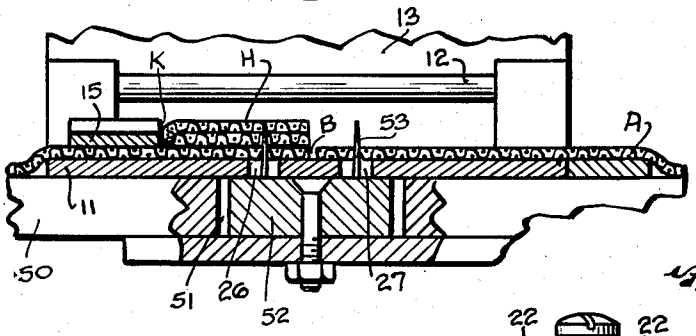


Fig. 14

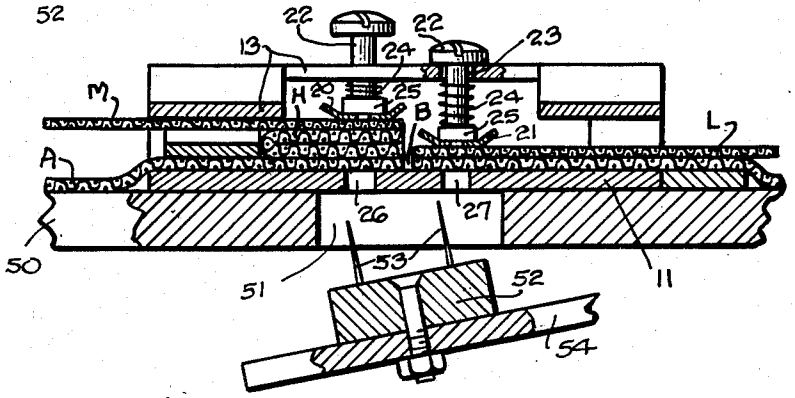


Fig. 15

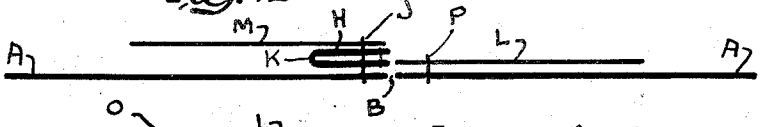
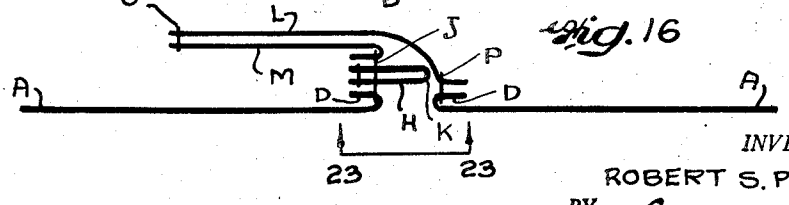


Fig. 16



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Fig. 17

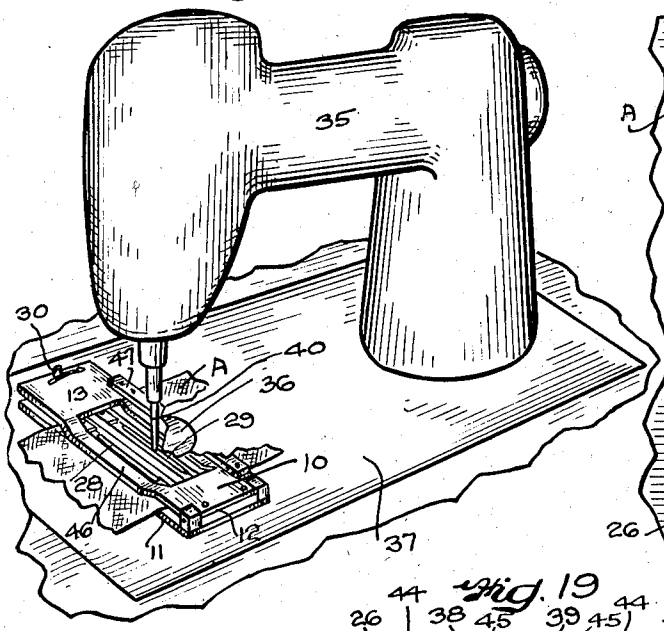


Fig. 18

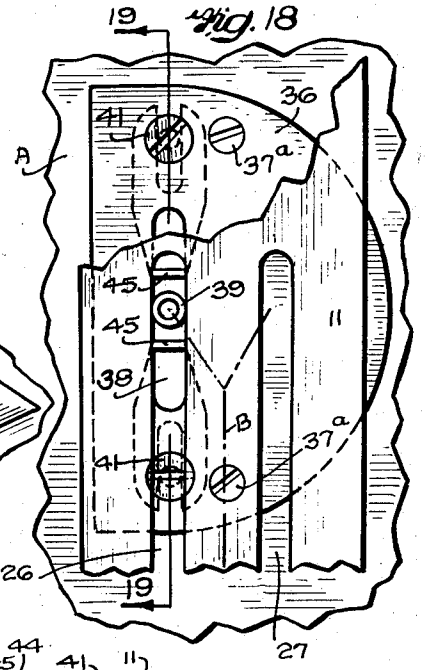


Fig. 19

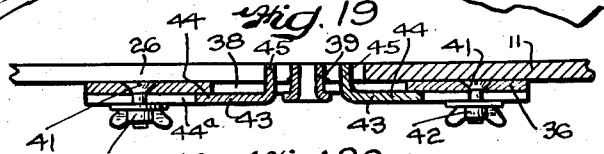


Fig. 20

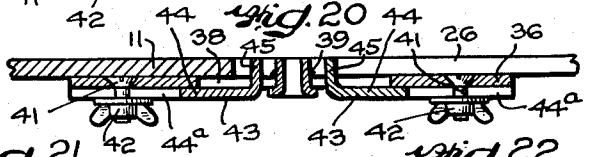


Fig. 21

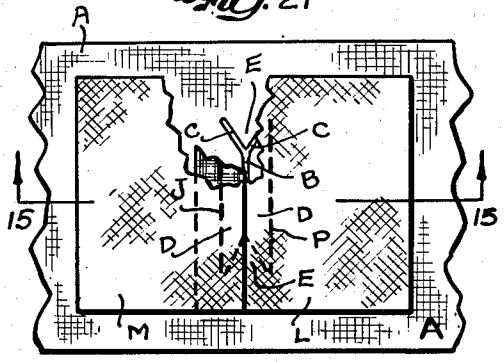


Fig. 22

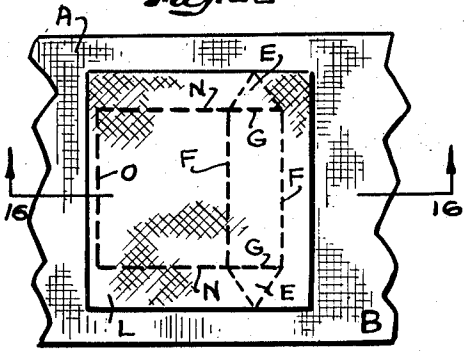
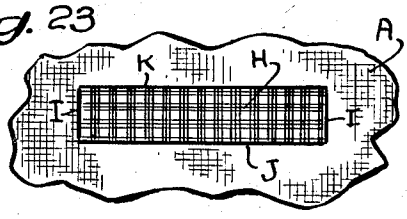


Fig. 23



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Fig. 27

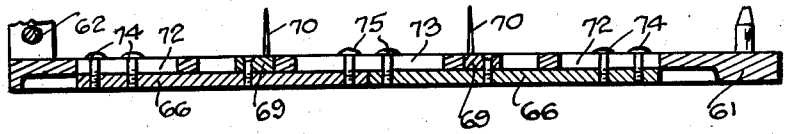


Fig. 26

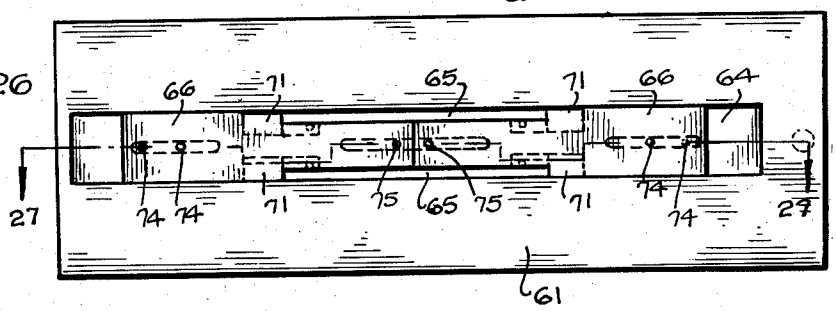


Fig. 25

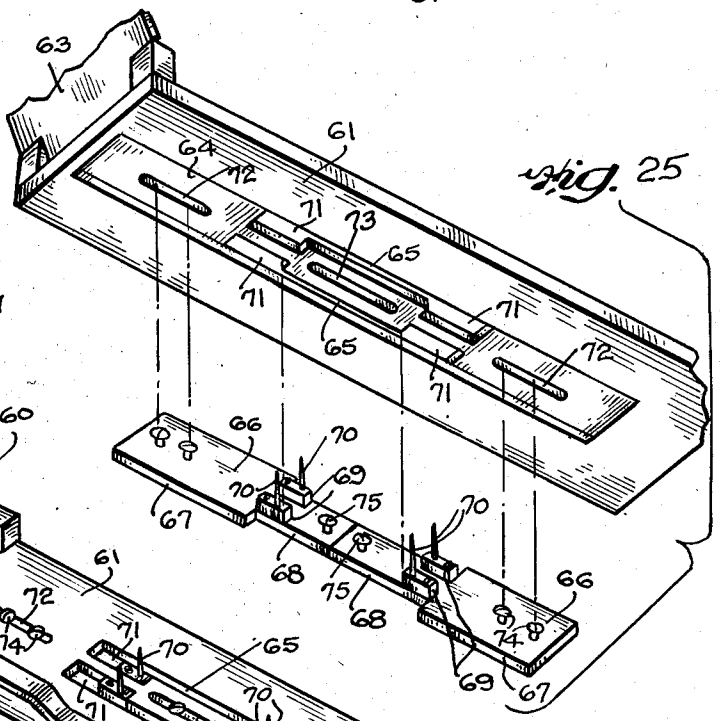


Fig. 24

Fig. 28

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United States Patent Office 2,826,158 Patented Mar. 11, 1958

2,826,158

ATTACHMENT FOR SEWING POCKETS

Robert S. Phillips, Jr., Phoenixville, Pa., assignor, by mesne assignments, to The Reece Corporation, Waltham, Mass., a corporation of Massachusetts

Application December 30, 1953, Serial No. 401,181

17 Claims. (Cl. 112—2)

This invention relates generally to the production of welt pockets in garments and more particularly to improved means for and method of inserting and securing in position the fabric strip which is normally employed to form the welt along the edge which defines the opening into the pocket.

Among the principal objects of the present invention is to provide a means for accurately disposing the several pocket-forming parts in their proper superimposed relation preliminarily to sewing them together and for insuring that the welt and other parts which make up the pocket are secured to the main body fabric of the garment by lines of stitching which are truly parallel, are properly spaced apart and are of the requisite length to produce a welt pocket free of all such irregularities as are incidental to the conventional manufacture of welt pockets.

A further object is to facilitate and render more economical the manufacture of welt pockets, to render unnecessary the employment of highly skilled labor in the production of such pockets, and to improve and render more uniform the construction and appearance of welt pockets.

Other objects of the invention will appear more fully hereinafter, it being understood that the present invention consists substantially in the combination, construction, location and relative arrangement of the parts of the welt-forming apparatus, as well as in the method of laying in and forming the welt as an integral part of the pocket, all as will be described more fully hereinafter, as shown in the accompanying drawings and as finally pointed out in the appended claims.

In the accompanying drawings which show certain preferred embodiments of the present invention and are illustrative of the principles thereof:

Figure 1 is a perspective view of a table adapted to receive the apparatus which is utilized to form the pocket welt in accordance with the present invention;

Figure 2 is a top plan view of said table;

Figure 3 is a perspective view of the device in the nature of a combination clamp and guide for holding the welt and pocket forming materials in position preliminarily to their being sewed together to form the finished welt pocket;

Figure 4 is a top plan view of the device shown in Figure 3;

Figure 5 is a longitudinal sectional view taken along the line **5—5** of Figure 4;

Figure 6 is a transverse sectional view taken along the line **6—6** of Figure 4;

Figure 7 is a side elevational view of the combination clamp and guide, showing the same opened;

Figure 8 is a perspective view of the combination clamp and guide, also showing the same in its opened condition;

Figures 9 and 10 are similar plan views each showing the combination clamp and guide mounted upon the work table, but respectively showing its condition relative to the pocket-forming materials during different

stages of its use in connection with the formation of a welt pocket;

Figure 11 is a sectional view of the table as taken along the line **11—11** of Figure 2;

Figure 12 is a transverse sectional view taken along the line **12—12** of Figure 9 but without the welt strip in place;

Figure 13 is a transverse sectional view also taken along the line **12—12** of Figure 9 but showing the welt strip in place;

Figure 14 is a transverse sectional view as taken along the line **14—14** of Figure 10;

Figures 15 and 16 are sectional views, taken respectively on line **15—15** of Figure 21 and line **16—16** of Figure 22, of the pocket-portion of the garment illustrating, respectively, the welt pocket in the process of being formed and the welt pocket completed;

Figure 17 is a perspective view showing a sewing machine in association with the combination clamp and guide for holding the pocket-forming material in proper relation to be sewed together;

Figure 18 is a fragmentary plan view showing that portion of the bed of the sewing machine which immediately underlies the stitching needle and also the lower slotted plate of the combination clamp and guide;

Figure 19 is a sectional view taken along the line **19—19** of Figure 18 showing the stop means effective for limiting movement of the combination clamp and guide forwardly with respect to the axis of reciprocation of the sewing machine needle;

Figure 20 is a view similar to Figure 19 but showing the stop means effective for limiting movement of the combination clamp and guide rearwardly with respect to the sewing machine needle;

Figure 21 is a plan view of the pocket-forming fabrics secured together as shown in Figure 15;

Figure 22 is a view showing the inner face of the completed welt pocket;

Figure 23 is a fragmentary view showing the outer face of the welt pocket, particularly the welt portion thereof, as viewed from the line **23—23** of Figure 16;

Figure 24 is a perspective view similar to Figure 8 showing a modified construction of the combination clamp and guide unit;

Figure 25 is a perspective view showing in separated relation the base plate of the modified unit and the means associated therewith for locating the die-cut fabric in its proper relation to the needle guide slots;

Figure 26 is a bottom plan view of the base plate of the modified unit;

Figure 27 is a longitudinal sectional view as taken along the line **27—27** of Figure 26; and

Figure 28 is a fragmentary top plan view of the base plate, showing the fabric-locating means associated therewith secured in an adjusted position different from that illustrated in Figures 24 to 27.

In the conventional production of inset pockets having welts, the customary procedure is to die-cut the garment fabric A in which the pocket is to be formed to provide the slit for the pocket opening. Such slit is of the form best shown in Figures 3, 9, 18 and 21 and consists of a horizontally extending slitted portion B terminating at opposite ends in divergent portions C—C to provide in the garment fabric A a pair of trapezoidal-shaped flaps D—D and a pair of triangular-shaped flaps E—E, all of which may be folded back against the inner surface of the fabric A to form a rectangular opening of approximately the shape and size defined by the dotted lines F—F and G—G of Figure 22. It is this rectangular opening which is subsequently fitted with the welt H (see Figure 23) which finishes off the pocket, the welt H being secured to the garment fabric A only along the

vertical lines I—I and the horizontal line J, thereby leaving the upper edge K free of the garment fabric to provide an entrance opening into the pocket.

The pocket per se is formed of overlapping pocket liners L and M, which respectively depend from the garment fabric A and from the welt H, these pocket liners being marginally secured together as along the dotted lines N—N—O to complete the inset pocket. This pocket construction is diagrammatically shown in Figures 15 and 16 wherein it will be observed that the pocket liner L which depends from the garment fabric A overlies the inner face of the pocket liner M which is secured to and depends from the welt H. The opposite ends of the welt H, which respectively overlie the inturned flaps E—E, are secured to the pocket liners L and M by the lines of stitching I—I which respectively extend along the fold lines of the inturned flaps E—E. These lines of stitching I—I may be and usually are coincident with the pocket-closing lines of stitching N—N. It will be noted further that the pocket liner M is secured to the welt H by the same line of stitching J which secures the lower edge of the welt to the garment fabric A, this stitching J being coincident with the fold line of the lower flap D of the die-cut fabric A and that the pocket liner L is secured to the garment fabric A by a horizontal line of stitching P coincident with the fold line of the upper flap D of the die-cut fabric A.

It will be understood that the die-cutting of the fabric A, the preparation of the welt H and the pocket liners L and M, and their relative assembly as above described to form the completed welt pocket is in accordance with conventional procedure and that the present invention resides not only in the means hereinafter described for facilitating accurate and expeditious placement of the welt and pocket liners upon and securement thereof to the die-cut garment fabric A but also in the method of handling the several pocket-forming parts in the making up of the completed pocket.

Referring now to the drawings and more particularly to Figures 4 to 7 thereof, it will be observed that the present invention provides a combination clamp and guide device, designated generally by the reference numeral **10**, which includes a rectangular base plate **11** to which is hinged, as at **12**, a top plate **13** which is adapted to be swung from its open position shown in Figures 7 and 8 into a closed position (Figure 5) in which latter condition the device **10** serves not only as a clamp to hold the several pocket-forming parts, including the welt H, in proper assembled relation during the operation of stitching them together, but also as a guide for accurately feeding the assembled parts through the stitching head of a sewing machine along pre-determinedly fixed parallel stitching lines.

Hingedly secured to the base plate **11**, as at **14**, is a strap **15** of flat spring metal, which strap, of relatively narrow width, is disposed adjacent one longitudinal edge of the base plate **11** as most clearly appears in Figure 8. The strap **15** is reversely bent as shown to provide a depressed central portion **16** which is adapted to resiliently press flatwise against the base plate when the strap is swung into its operative fabric-holding position shown in Figures 7 and 8. To secure the holding strap in its operative position, the base plate **11** is provided with a vertically projecting latch pin **17** which frictionally engages the edge of a suitable aperture **18** formed in the free end of the strap **15**, whereby the latter is quick-releasably retained in its operative position.

The hinged top plate **13** of the device **10** is centrally provided with a rectangular opening **19**, across the length of which are disposed a pair of relatively closely spaced, parallel guide members **20—21** for the reciprocating needle of a sewing machine. These members **20—21** are each resiliently supported upon the under side of the top plate **13** by the means and in the manner best shown in Figures 6 and 7, wherein it will be observed that the

opposite ends of each of the members **20—21** is provided with a headed bolt **22** the shank of which projects loosely through a suitable aperture **23** in the plate **13** and is fitted with a coiled compression spring **24** disposed between the plate **13** and the guide member. It will be apparent that the compression springs **24** operate to resiliently press the guide members **20—21** away from their supporting plate **13**, in consequence of which said guide members are spring-pressed into engagement with and thus securely hold in position the pocket-forming parts clamped between the base plate **11** and the top plate **13** of the device **10**. To facilitate detachable assembly of the spring-pressed guide members **20—21** with the top plate **13**, the opposite ends of each guide member have welded thereto boss elements **25** which are suitably tapped to receive the threaded ends of the bolts **22**.

The base plate **11** is provided with a pair of elongated narrow slots **26—27**, which slots are disposed in parallel relation and are of such length and so spaced as to register with the rectangular opening **19** of the top plate when the latter is swung into its closed, clamping position. Preferably, the slots **26—27** which are of equal length, are slightly shorter than the length of the opening **19** and are symmetrically spaced to either side of the longitudinal center line of said opening **19**.

The spring-pressed guide members **20—21** are respectively provided with elongated narrow slots **28—29** in registry with the base plate slots **26—27**. At this point it will be noted that the base plate slots **26—27** and their registering top plate slots **28—29** are each of a length slightly greater than the length of the parallel stitch lines J and P of Figures 15, 16 and 21. Also, it is important to observe that the registering pair of slots **26—28** are so laterally spaced from the flexible strap **15** and from the registering pair of slots **27—29** that when the welt H is initially disposed with its finished outer edge coincident with the inner edge of the strap **15**, the unfinished inner edge of the welt H is disposed between the paired slots **26—28** and the paired slots **27—29**. To this end, the distance between the inner edge of the strap **15** and the longitudinal center line of the paired slots **26—28** equals that between the longitudinal center lines of the laterally spaced paired slots **26—28** and **27—29**.

Any suitable means may be employed to quick-releasably lock the top plate **13** in clamped relation to the base plate **11**. For this purpose the base plate may be provided with a vertically projecting short post **30** which is adapted to project through an aperture **31** suitably provided in the hinged top plate **13**, the projecting portion of the post being grooved, as at **32**, to receive a spring wire retainer **33** which is suitably fixed to the upper surface of the top plate **13** to extend chordally across the aperture **31**. Thus, when the top plate is swung into its closed clamping position shown in Figures 4 and 5, the spring wire retainer **33** snaps into the groove **32** of the post and quick-releasably locks the top plate **13** to the base plate **11**. In order to limit downward movement of the top plate relatively to the base plate and so maintain them substantially parallel when the work to be operated on is clamped therebetween, the base plate **11** may be provided with an upstanding stop **34** upon which the free end of the hinged top plate **13** is adapted to rest.

The combination clamp and guide device **10** is designed, of course, to hold the several pocket-forming parts in proper assembled relation during the operations of sewing them together along the stitching lines J and P hereinbefore mentioned (see Figures 15, 16 and 23), which operations are performed, as shown in Figure 17, by feeding the clamped work through the needle head of a sewing machine **35**.

This sewing machine, which may be of any conventional form, is modified by removing therefrom the presser foot and the feed dogs which are normally present in the machine and by replacing the normal needle plate with a special needle plate such as that designated **36** in Figures

17 to 20. As clearly appears in these figures, the needle plate **36** is secured to the sewing machine bed **37** by screws **37a—37a** so that the top surface of the needle plate is flush with that of the bed **37** over which the clamped work is manually shifted. The needle plate is provided with an elongated slot **38** in the center of which is suitably fixed a tubular needle guide **39** through which the threaded eye of the needle **40** may reciprocate for stitching of the pocket parts together. It will be understood, of course, that the stitch-forming mechanisms (not shown) disposed beneath the needle plate **36** and which coact with the needle to perform the desired stitching are conventional and in themselves constitute no part of the present invention.

Secured to the needle plate **36**, as by the bolts **41** and their wing nuts **42**, are a pair of stops **43—43** which are individually adjustable lengthwise of the needle plate slot **38** to limit the movement of the clamped work (i. e. the loaded device **10**) relatively to the needle **40** to thereby limit the length of the lines of stitching J and P. It will be noted that the stops **43—43** are each in the form of a member **44** (slotted as at **44a**) adapted to be secured flatwise against the bottom surface of the needle plate **36** and having an upturned extremity **45** which projects into the needle plate slot **38**. The upper edge of the extremity **45** of each stop **43** projects above the top surface of the needle plate, as does the upper edge of the needle guide **39**.

As most clearly appears in Figures 18 to 20, the needle guide **39** and the upwardly projecting extremities **45—45** of the stops **43—43** are adapted to fit into one or the other of the guide slots **26—27** in the base plate **11** of the clamp and guide device **10** when the latter is positioned flatwise over the bed **37** (and needle plate **36**) of the sewing machine. Upon so positioning the device **10** relatively to the needle guide **39** and the stops **43—43**, it will be apparent that as the device **10** is horizontally shifted relatively to the reciprocating axis of the needle **40**, the guide **39** and the stop extremities **45—45** ride in the selected base plate slot **26** (or **27**) and insure that the line of stitching produced by the machine is truly rectilinear and exactly in coincidence with the predetermined line of stitching J (or P). During this stitching operation, the needle **40** reciprocates vertically through the vertically coincident slots **26—28** (for the line of stitching J) or through the vertically coincident slots **27—29** (for the line of stitching P).

By positional adjustment of the stops **43—43** relatively to the needle guide **39**, the extent of travel of the device **10** may be accurately controlled as desired to thereby obtain a predetermined length of stitching line. By removing the stops **43—43** completely, the full length of slot **26** (or **27**) may be employed to obtain a line of stitching of maximum length. When, however, the stops **43—43** are employed, they each may be positionally adjusted more or less away from the tubular needle guide **39** to change the starting and stopping points along the line of stitching J (or P) and so change as desired the effective length of the stitching line. The extent of adjustment of the stops **43—43** is determined, of course, by the length of their slots **44a**. In certain instances it may be desirable to eliminate the use of the stops **43—43**, in which case the needle plate **36** would be provided simply with a needle guide **39** which would serve to engage opposite ends of the base plate slot **26** (or **27**) as the device **10** is shifted from one to the other of its extreme positions relatively to the reciprocating axis of the sewing machine needle **40**.

To facilitate disposition of the loaded device **10** into stitching position below the needle head of the sewing machine, the top plate **13** is marginally indented, as at **46—46**, to reduce the overall thickness of the device along the region traversed by the sewing machine needle and so permit it to be laterally shifted into position beneath the needle when the latter is raised into its uppermost position. If desired, one of the indented edges of the top plate **13** may be fitted with a reinforcing bar **47**, in which case the non-reinforced edge of the plate **13** would be that which is inserted laterally across the reciprocating axis of the needle for registry of one or the other of the slots **26—27** with the needle guide **39** and the stop elements **45—45**.

In order to accurately dispose the garment fabric A with its die-cut slit B in proper relation to the needle slots in the combined clamp and guide device **10**, loading of the latter with the pocket-forming parts is effected upon a work-assembling table **50** as shown in Figures 1, 2 and 9 to 14, inclusive. This table is provided with a rectangular opening **51** in the top thereof which is generally complemented in size and shape with the opening **19** in the top plate **13** of the device **10**. Fitted in the table top opening **51** is a movable insert **52** fitted with a plurality of upwardly presenting sharply pointed pins **53**, one for each terminal end of the divergent portions C of the die-cut slit B of the main body fabric A of the pocket to be formed. It will be noted that the insert mounts four pins and that the latter are relatively disposed in respective coincidence with the four corners of the rectangular opening in the fabric A which is to be fitted with the welt H and which opening is defined by the dotted lines F—F and G—G of Figure 22.

The insert **52** is itself mounted upon the free end of a relatively long beam **54** hinged as at **55** to the under side of the table top **50**. The beam **54** extends between a pair of brackes **56** which depend from the table top and which support therebetween a pivot shaft **57** spaced well below the under side of the table top. Pivoted upon this shaft **57** is a lever **58**, one arm **59** of which is adapted to be swung into engagement with the beam **54** to force it upwardly into its horizontal position shown in Figures 12 and 13, in which raised position the pins **53** project freely above the top of the table **50**. Upon reverse operation of the lever **58** to free the arm from supporting engagement with the beam, the latter is free to drop into its lowered position shown in Figures 11 and 14, in which latter disposition of the insert **52** the pointed ends of the pins **53** are below the top surface of the table **50**.

To effect accurate placement of the device **10** upon the table top and insure proper registry of the pins **53** with the slots **26—27** in the base plate **11** of the device **10**, the table top is fitted with a fence **60** having right-angularly related portions **61—62** against which are respectively positioned the corresponding edge portions of the device **10**, as is best shown in Figures 9 and 10. When the device **10** is positioned against the fence **60** as shown in Figures 9 and 10, the opposite ends of the slots **26—27** in the base plate **11** of the device will be disposed in position to respectively accommodate the upwardly projecting pins **53** of the table top insert **52** when the latter is swung upwardly into its operative position shown in Figures 12 and 13. In this operative position the pointed ends of the pins **53** are respectively disposed for projection through the terminals of the divergent portions C—C of the die-cut slit B in the main body fabric A.

In the use of the apparatus of the present invention, the first step is to place the device **10** in its opened condition shown in Figures 3 and 8 upon the table **50** and against the fence **60** so that the extremities of the slots **26—27** of the base plate **11** are respectively in registry with the pins **53** of the table top insert **52**, the latter, of course, being locked in its elevated position by means of the locking lever **58** operating on the beam **54** as shown in Figure 12. The flexible strap **15** is swung upwardly out of its position shown in Figures 7 and 8, following which the main body fabric A, which has been preliminarily die-cut to form the slit B, is placed over the base plate **11** with its outer surface facing up. The fabric A is disposed so that the terminals of the divergent portions C—C of the die-cut slit are respectively in exact registry with the pins **53** which project upwardly through the

fabric (see Figures 3 and 12). Thereupon the strap **15** is swung into its position shown in Figure 3 to clamp the fabric A in fixed position upon the base plate **11**, whereupon the pins **53** are retracted from the fabric by releasing the lever **58** to permit lowering of the beam **54** and the table insert **52** carried thereby.

Next, the welt H is laid upon the fabric A with the finished edge of the welt in contact with the inner edge of the strap **15**. This welt H may be of any desired form and material and is usually prepared by folding a strip of material upon itself to provide it with a finished edge along its fold line, the opposite unfinished edges of the welt strip being suitably stitched together as along the line H*a* (Figure 3). The welt H is of a length somewhat longer than the overall length of the die-cut slit B in the main body fabric A, and it is so disposed upon the fabric A as to have its opposite ends project equidistantly beyond the corresponding ends of the die-cut slit B. The next step in the operation is to place the pocket liner M upon the welt with the inner edge of the lining M coincident with the unfinished inner edge of the welt strip H, the pocket liner M being so disposed that its main body portion overlies the strap **15** and that portion of the body fabric A which extends outwardly from said strap. Preferably, the welt strip H is of a width such that its unfinished inner edge is more or less coincident with the line of the die-cut slit B. However, the coincident inner edges of the welt strip H and of the pocket liner M need not coincide exactly with the die-cut slit B, so long as such coincident edges are disposed between the slots **26—27** of the base plate **11** of the device **10**.

The next step in the operation is to place the pocket liner L upon the fabric A with the inner edge of such pocket liner more or less coincident with the line of the die-cut slit B and with its main body portion overlying the garment fabric A and extending outwardly from the die-cut slit B in the direction away from the pocket liner M. As in the case of the pocket liner M, the inner edge of the pocket liner L need not be disposed exactly coincident with the die-cut slit B, it being only necessary that it be disposed between the slots **26—27**. However, it is important to note that the inner edges of the welt strip H, the pocket liner M and the pocket liner L should all be exactly parallel to the line of the die-cut slit B.

Following placement of the welt strip H and the pocket parts M and L upon the garment fabric so that they respectively assume their relative positions shown most clearly in Figures 3 and 15, the top plate **13** of the device **10** is swung into its closed position and locked to securely clamp the several pocket forming parts in their properly assembled relation.

Thereupon, the device **10**, with the several pocket forming parts clamped therein, is transferred from the table **50** to the sewing machine **35** to carry out the requisite sewing operations. To this end, the clamp is shifted laterally across the axis of the reciprocating needle **40** of the sewing machine so as to position the needle guide **39** (and the stops **43—43** when the latter are employed) in registry with one or the other of the slots **26—27** in the base plate of the device **11**. Assuming that it is the slot **26** which is first brought into registry with the needle guide **39**, it will be apparent that upon operation of the sewing machine and movement of the device **10** relatively to the needle axis, a line of stitching will be obtained which is coextensive in length with the effective length of the slot **26**. This line of stitching is that designated J in Figures 15 and 21 and secures together the main body fabric A, the welt strip H and the pocket liner M along a line which is closely adjacent to and parallels the die-cut slot B.

Upon completion of this line of stitching J, the device **10** with the work still clamped therein is laterally shifted so as to present the adjoining slot **27** in the base plate **11** in registry with the needle guide **39** (and with the stops **43—43**, should the same be employed), whereupon upon

shifting of the clamped work relatively to the reciprocating needle **40** of the sewing machine, a second line of stitching is obtained, this line being that designated P in Figures 15 and 21 to secure the pocket liner L to the fabric A. It will be noted that the line of stitching P closely adjoins and is parallel to the die-cut slit B, this line of stitching P being disposed, however, to one side of the die-cut slit B opposite that of the welt-securing stitch line J.

It will be apparent that by proper adjustment of the stops **43—43** relatively to the needle guide **39**, the effective length of the stitch lines J and P may be varied as desired. Thus, by increasing the distance between each stop **43** and the needle guide **39**, the length of travel of the device **10** relatively to the needle will be decreased, thus shortening the effective length of the stitch lines J and P. Of course, the stops **43—43** would be adjusted relatively to the needle guide **39** to provide for a length of stitch line which is coextensive with the overall length of the die-cut slit B formed in the fabric A.

If desired, the sewing machine may be of the type having a pair of vertically reciprocating needles so spaced as to simultaneously form the stitch lines J and P. In such case, the two needles of the sewing machine would respectively project through the slots **26—27** of the device, which slots, of course, would be laterally spaced apart in correspondence with the spacing of the dual needles of the sewing machine. It will be understood, of course, that the spring pressed members **20—21** of the top plate **13** of the device **10** operate to resiliently press together the overlying pocket-forming parts which are to be secured together along the stitch lines J and P and the needle **40** operates through the slots **28—29** of the spring pressed members **20—21**, which last mentioned slots are in registry with the base plate slots **26—27**.

Upon completion of the stitching operations to form the stitch lines J and P, the clamped work is then removed from the sewing machine, following which the clamp is opened and the sewed work removed therefrom. Thereupon the pocket is completed in accordance with conventional procedure as follows. The pocket part M is drawn through the slit B and reversely turned, as shown in Figure 16, to present it in overlying relation to the inner or wrong side of the garment fabric A, at the same time presenting the welt H in proper relation to the welt opening defined by the dotted lines F—F and G—G of Figure 22. The pocket part L is similarly drawn through the slit B to present it in overlying relation to the welt H and its depending pocket part M, following which opposite end portions of the welt and the pocket liner L are respectively stitched, as at I—I, to the fabric A along the fold lines G—G of the reversely turned triangular tabs E—E. Finally, the overlying pocket liners L and M are marginally secured together by the lines of stitching N—N and O, the stitch lines N—N being preferably coincident with the stitching I—I at opposite ends of the welt H. The pocket thus completed is of the general form shown in Figures 16 and 23 and is provided with a welt H which is inset into the garment fabric A and is secured thereto by the lines of stitching I—I and J, its upper finished edge K being free of the fabric A to provide an opening affording access to the pocket formed between the pocket liners L and M.

Figures 24 to 28 inclusive show a modified construction of the combination clamp and guide unit of the present invention. In this modified construction, the unit **60** is provided as in the previously described arrangement with a main base plate **61** to which is hingedly secured, as by the hinge shaft **62**, a top cover plate **63**. The bottom surface of the base plate **61** is longitudinally milled out to provide a shallow undercut **64** of uniform depth and of a uniform width at least equal to the distance between the outer edges of the needle guide slots **65—65**. The length of the undercut is substantially

greater than that of the guide slots 65—65, the undercut being extended equidistantly beyond the opposite ends of the slots. Preferably, the depth of the undercut 64 is about one half the thickness of the base plate 61.

Fitted in the undercut 64 are a pair of flat insert plates 66—66, each of the configuration most clearly shown in Figure 25 to provide a wide part 67 having a relatively narrow extension 68. The wide part 67 is of a width adapting it to fit snugly within the undercut 64, while the extension part 68 is a width equal to the distance between the proximate inner edges of the guide slots 65—65. The plates 66—66 are each of a thickness equal to the depth of the undercut 64 in which they are fitted so that the bottom surfaces thereof are disposed flush with that of the base plate 61 when the parts are assembled as shown in Figures 26 and 27.

Suitably secured to or formed upon the upper surface of the narrow extensions of each insert plate 66 are a pair of laterally spaced rectangular blocks 69—69. Preferably, these blocks are secured in position by screws, but they may be formed as integral parts of the insert plate. Mounted upon each of the blocks 69—69 is an upwardly presenting more or less sharply pointed pin 70.

It will be noted that the guide slots 65—65 are each provided at their opposite ends with widened portions 71—71 and that these widened slot portions are respectively offset inwardly of the slots of which they are parts. It also will be noted that the blocks 69—69 project upwardly through the widened portions 71—71 of the needle guide slots and are so respectively disposed therein that the outer edge of each block 69 is coincident with the inner edge of the central portion of its associated guide slot 65. The pin 70 carried by each block 69 is so located thereon as to present it in tangential relation to the inner edge of the central portion of its associated guide slot 65.

The widened end slots 71—71 are approximately twice the length of the blocks 69—69 disposed therein, in consequence of which the latter may be shifted longitudinally in the end slots 71—71 to vary the position of the pins 70—70 lengthwise of said slots. Of course, to effect such change in position of pins 70—70 as from their positions shown in Figures 24 to 27 into their positions shown in Figure 28, the insert plates 66—66 are positionally adjusted lengthwise of their accommodating undercut 64.

In order to permit positional adjustment of the insert plates 66—66 relatively to the base plate 61, the latter is longitudinally slotted in the undercut portions thereof which extend beyond the opposite ends of the guide slots 65—65, as at 72—72, and in the central portion of said undercut, as at 73. These slots 72—72—73 are all in longitudinal alinement and respectively permit the projection therethrough of screws 74—74 threaded into the outer end portions of the underlying insert plates 66—66 and of screws 75—75 similarly threaded into the inner end portions of said insert plates. These screws, when tightened, secure the insert plates in any desired adjusted position within the limits of permissible movement of the pin-carrying blocks 69—69 lengthwise of their accommodating slots 71—71.

As most clearly appears in Figure 24, the spring-pressed needle guide members 76—76 of the top plate 63 are respectively notched out, as at 77—77, in correspondence with the notched out portions 71—71 of the needle guide slots in the base member 61, so that when the top cover plate is clamped in its closed position, the pins 70—70 may upwardly project freely through the slots of the spring-pressed guide members 76—76 of said top plate.

It will be apparent that in use of the modified construction of the combined clamp and guide just described, the necessity for employing a special table with a fence and retractable pin-carrying insert, such as is shown in Figures 1 and 2, is completely dispensed with. The modified device is employed in the same manner as that hereinbefore described, it being necessary only to positionally adjust the pins 70—70 lengthwise of the guide slots 65—65 prior to clamping the work in the unit so that the four pins are spaced in correspondence with the relative spacing of the terminals of the divergent portions C—C of the die-cut slit of the body fabric A. It will be noted that the pins 70—70 are all disposed inwardly of the guide slots 65—65 and so interpose no interference to free movement of the clamped work relatively to the needle along the full lengths of the stitch lines J and P (see Figure 21). Also, it will be apparent that the pins 70—70 pierce the welt H and the pocket liner parts L and M when the same are superposed upon the main fabric A as hereinbefore described and thus securely maintain the several parts in their proper assembled relation not only while the same are being clamped together between the base plate 61 and the top cover plate 63, but also after they have been clamped and are being stitched together by the sewing machine operation.

While in the device as illustrated, the needle guide slots in the base member extend rectilinearly along parallel lines coincident with those of the stitch lines J and P (Figure 21), it will be understood that said guide slots (and their registering slots in the spring-pressed members 20—21 of the top plate) may be of any desired curvilinear form to produce stitch lines (such as J and P) which are of corresponding curvilinear form. It will be understood, also, that the lateral spacing of the slots traversed by the sewing machine needle may be varied as desired depending upon variation in width of the welt H incorporated into the pocket, and that in certain instances it may be desired to employ only one set of vertically spaced registering slots to be traversed by the sewing machine needle. Further, the spring-pressed slotted members 20—21, which respectively function to exert substantially equal clamping pressure upon the material superimposed upon the fabric A and located to either side of its die-cut slit B, may be dispensed with in certain instances, as where the material to be clamped is of uniform thickness on opposite sides of the die-cut slit B. Indeed, it is contemplated that in certain cases the top plate may be longitudinally split along a line coincident with the line of placement of the die-cut slit of the fabric A upon the slotted base member to thereby provide a pair of upper clamping members which respectively coact with the base plate to separately clamp in secured position the material disposed to either side of the die-cut slit B.

It will be understood, of course, that the present invention is susceptible to various other changes and modifications which may be made from time to time without departing from the general principles or real spirit of the invention, and it is accordingly intended to claim the same broadly, as well as specifically, as indicated in the appended claims.

What is claimed as new and useful is:

1. In an apparatus of the character described for use in the production of a garment pocket having a welted trim along the upper edge thereof and which pocket is made of a plurality of separate fabric pieces, one of which is slitted to form a pocket opening immediately above said welted trim, a base member adapted to receive thereon the several pocket-forming parts to be sewed together along predetermined spaced lines of stitching disposed to either side of said pocket opening slit, said member being provided with a pair of laterally spaced elongated slots, means for anchoring the slitted fabric in position with its slit centered between the laterally spaced slots and with its opposite extremities disposed within the end limits of said slots, means for locating the pocket welt over said slitted fabric in a predeterminedly fixed position said means being spaced to one side of and being parallel to said laterally spaced slots, means for clamping additional pocket parts in superposed relation to said slitted

fabric and said pocket welt respectively on opposite sides of the slit in the former, and means for guiding the clamped work through the operating head of a sewing machine having a reciprocating needle along stitch lines respectively coincident with the longitudinal center lines of said laterally spaced slots.

2. In an apparatus of the character described for use in the production of a garment pocket having a welted trim along the upper edge thereof and which pocket is made of a plurality of separate fabric pieces, one of which is slitted to form a pocket opening immediately above said welted trim, a base member adapted to receive thereon the several pocket-forming parts to be sewed together along predetermined spaced lines of stitching disposed to either side of said pocket opening slit, said member being provided with a pair of laterally spaced elongated slots, means for anchoring the slitted fabric in position with its slit centered between the laterally spaced slots and with its opposite extremities disposed within the end limits of said slots, means for locating the pocket welt over said slitted fabric in a predeterminedly fixed position, said means being spaced to one side of and being parallel to said laterally spaced slots, means for clamping additional pocket parts in superposed relation to said slitted fabric and said pocket welt, and means for guiding the clamped work through the operating head of a sewing machine having a reciprocating needle along stitch lines respectively coincident with the longitudinal center lines of said laterally spaced slots, said pocket welt locating means being in the form of a substantially flat strap having a longitudinally extending inner edge parallel to the slots aforesaid and spaced laterally from the center line of the proximate slot a distance substantially equal to the spacing between the center lines of said pair of slots.

3. In an apparatus of the character described for use in the production of a garment pocket having a welted trim made of a plurality of separate fabric pieces, including the garment main body fabric, which is slitted to form a pocket opening immediately above said welted trim, a base member having formed therein a pair of elongated stitching guide slots, a top member operatively associated with said base member for clamping said pocket-forming parts in predetermined superposed relation, said top member having formed therein an opening adapted to overlie the slots in the base member, spring-pressed pressure shoes carried by said top member and extending across the opening therein for exerting a yielding pressure against the parts clamped between said base member and top member, said pressure shoes being respectively provided with elongated slots adapted for registry with the guide slots in the base member, a welt locating member mounted upon said base member in laterally spaced, parallel relation to the guide slots in said base member, and means adapted to engage the opposite ends of the pocket opening slit formed in the main body fabric to center said slit between the guide slots with its opposite extremities disposed within the end limits of said slots.

4. In an apparatus as defined in claim 3 wherein said last-mentioned means includes a plurality of upwardly presenting pins adapted to project above the base member and through the slots in the pressure shoes of said top plate.

5. In an apparatus as defined in claim 3 wherein said last-mentioned means includes a plurality of upwardly presenting pins adapted to project above the base member and through the slots in the pressure shoes of said top plate, said pins being completely separable from said base member.

6. In an apparatus as defined in claim 3 wherein said last-mentioned means includes a plurality of upwardly presenting pins adapted to project above the base member and through the slots in the pressure shoes of said top plate, said pins being positionally adjustable longitudinally within the lengths of the guide slots whereby their spacing longitudinally of the guide slots may be varied in accordance with variations in the overall length of the slit in said main body fabric.

7. In an apparatus of the character described for use in the production of a garment pocket having a welted trim made of a plurality of separate fabric pieces, including the garment main body fabric, which is slitted to form a pocket opening immediately above said welted trim, a base member having formed therein a pair of elongated stitching guide slots, a top member operatively associated with said base member for clamping said pocket-forming parts in predetermined superposed relation, said top member having formed therein an opening adapted to overlie the slots in the base member, spring-pressed pressure shoes carried by said top member and extending across the opening therein for exerting a yielding pressure against the parts clamped between said base member and top member, said pressure shoes being respectively provided with elongated slots adapted for registry with the guide slots in the base member, a welt locating member mounted upon said base member in laterally spaced, parallel relation to the guide slots in said base member, means adapted to engage the opposite ends of the pocket opening slit formed in the main body fabric to center said slit between the guide slots with its opposite extremities disposed within the end limits of said slots, and means for guiding the clamped work through the operating head of a sewing machine having a reciprocating needle along stitch lines respectively coincident with the longitudinal center lines of said guide slots in the base member.

8. In an apparatus as defined in claim 7 wherein said last-mentioned means is in the form of a positionally fixed tubular element coaxial with the sewing machine needle to permit free reciprocation thereof through the clamped work, said element being disposed for projection upwardly into one of said guide slots to guide the work relatively to the needle along a prescribed line of stitching.

9. In an apparatus of the character described for use in the production of a garment pocket having a welted trim made of a plurality of separate fabric pieces, including the garment main body fabric, which is slitted to form a pocket opening immediately above said welted trim, a base member having formed therein a pair of elongated stitching guide slots, a top member operatively associated with said base member for clamping said pocket-forming parts in predetermined superposed relation, said top member having formed therein an opening adapted to overlie the slots in the base member, spring-pressed pressure shoes carried by said top member and extending across the opening therein for exerting a yielding pressure against the parts clamped between said base member and top member, said pressure shoes being respectively provided with elongated slots adapted for registry with the guide slots in the base member, a welt locating member mounted upon said base member in laterally spaced, parallel relation to the guide slots in said base member, means adapted to engage the opposite ends of the pocket opening slit formed in the main body fabric to center said slit between the guide slots with its opposite extremities disposed within the end limits of said slots, and means for varying the effective lengths of the guide slots in said base member.

10. In a clamping device for maintaining a plurality of layers of fabric in superposed relation for a stitching operation, a base member having formed therein an elongated guide slot for projection therethrough of a reciprocable sewing machine needle, a top member operatively associated with said base and adapted to overlie said base, said top member having formed therein a needle slot coextensive in length and adapted for registry with the slot in the base member, and means mounted on said top member and depending from the bottom thereof to yieldingly clamp layers of fabric against said base.

11. In a clamping device for maintaining a plurality of layers of fabric in superposed relation for a stitching operation, a base member having formed therein an elon-

gated guide slot for projection therethrough of a reciprocable sewing machine needle, a top member operatively associated with said base and adapted to overlie said base, said top member having formed therein a needle slot coextensive in length and adapted for registry with the slot in the base member, means mounted on said top member and depending from the bottom thereof to yieldingly clamp layers of fabric against said base, and means for locating the layers of fabric in predetermined fixed relation relative to said slots.

12. In a clamping device for maintaining a plurality of layers of fabric in superposed relation for a stitching operation, a base member having formed therein an elongated guide slot for projection therethrough of a vertically reciprocable sewing machine needle, a top member operatively associated with said base and adapted to overlie said base, said top member having formed therein a needle slot coextensive in length and adapted for registry with the slot in the base member, and means mounted on said top member and depending from the bottom thereof to yieldingly clamp layers of fabric against said base, said means comprising an elongated member having a slot therein coextensive with and in registry with the slot in said base member and resilient means securing the ends of said member to said top member.

13. In a clamping device for maintaining a plurality of layers of fabric in superposed relation for a stitching operation, a base member having formed therein an elongated guide slot for projection therethrough of a vertically reciprocable sewing machine needle, a top member operatively associated with said base and adapted to overlie said base, said top member having formed therein a needle slot coextensive in length and adapted for registry with the slot in the base member, means mounted on said top member and depending from the bottom thereof to yielding clamp layers of fabric against said base, and means for locating the layers of fabric in predetermined fixed relation relative to said slots, said last named means comprising pin means operatively associated with said clamping members and located adjacent opposite ends of the needle guide slot.

14. The combination of claim 13 wherein said pin means are completely separable from said clamping members.

15. The combination of claim 13 wherein said pin means are respectively shiftable into adjusted position lengthwise of the needle guide slot to vary the spacing therebetween in correspondence with variation in the desired length of stitching.

16. In an apparatus of the character described for use in the production of garment pockets made of a plurality of separate pieces of fabric one of which is slitted to form a pocket opening, a pair of members adapted to be secured together to clamp therebetween the

pocket-forming parts to be sewed together along a predetermined line of stitching extending parallel to the pocket opening slit in said one fabric piece, said members being respectively provided with registering elongated slots of a length at least equal to the length of said line of stitching and said slots being adapted to permit the vertical projection therethrough of the reciprocating needle of a sewing machine upon shifting of said slots relatively to the reciprocating axis of the needle, and pin means operatively associated with said clamping members and respectively located adjacent opposite ends of the needle guide slot for registry with opposite extremities of the pocket opening slit in said one fabric piece, said pins being completely separable from said clamping members and operative to locate said slitted fabric piece in position with the slit thereof parallel to the line of stitching aforesaid.

17. In an apparatus of the character described for use in the production of garment pockets made of a plurality of separate pieces of fabric one of which is slitted to form a pocket opening, a pair of members adapted to be secured together to clamp therebetween the pocket-forming parts to be sewed together along a predetermined line of stitching extending parallel to the pocket opening slit in said one fabric piece, said members being respectively provided with registering elongated slots of a length at least equal to the length of said line of stitching and said slots being adapted to permit the vertical projection therethrough of the reciprocating needle of a sewing machine upon shifting of said slots relatively to the reciprocating axis of the needle, and pin means operatively associated with said clamping members and respectively located adjacent opposite ends of the needle guide slot for registry with opposite extremities of the pocket opening slit in said one fabric piece, said pins being respectively shiftable into adjusted positions lengthwise of the needle guide slot to vary the spacing therebetween in correspondence with variations in the length of the pocket opening slit aforesaid and operative to locate said slitted fabric piece in position with the slit thereof parallel to the line of stitching aforesaid.

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