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2,609,129 9/1952 Goldberg..... 223/38
 3,143,091 8/1964 Arbter..... 112/121.15
 3,216,380 11/1965 Bond..... 112/121.12
 3,483,834 12/1969 Bennison..... 112/121.15

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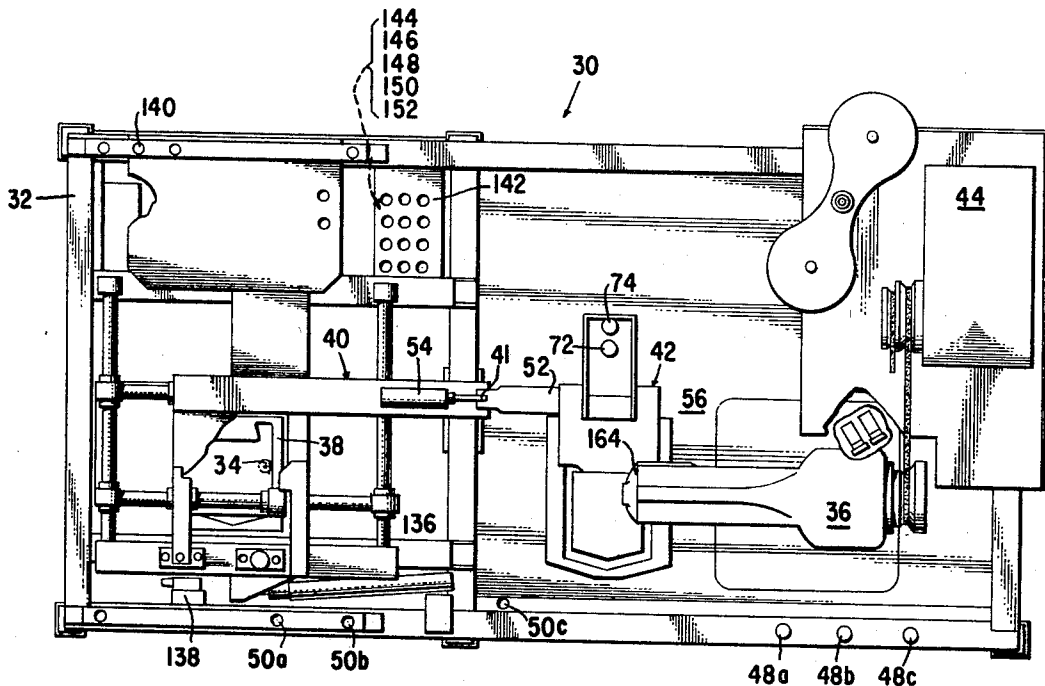
[54] **AUTOMATIC SETTING AND SEWING OF POCKET
 PIECES TO GARMENTS**
10 Claims, 23 Drawing Figs.

[52] U.S. Cl.....**112/121.15,**
223/38
 [51] Int. Cl.....**D05b 21/00**
 [50] Field of Search.....**112/121.15,**
121.12, 121.11, 121.29, 147; 223/38; 2/247

[56] **References Cited**
UNITED STATES PATENTS

1,979,872 11/1934 Dixon..... 223/38
 2,453,623 11/1948 Gilbert et al..... 223/38

ABSTRACT: This disclosure relates to a method and apparatus for automatically setting and sewing a pocket piece to a garment wherein the pocket is loaded into a clamp of a fixture in which the pocket shape is set and a sewing margin established in a shape corresponding to a template connected to the frame carrying the fixture. Pneumatic controls permit the fixture to be operated in a step fashion permitting the pocket piece to be set and subsequently sewn to the garment along the margin. If the fabric and pocket piece are patterned, the pneumatic controls can be operated to permit alignment of the garment with respect to the pocket piece. In addition, a dart guide is provided to prevent flagging at the corners of the pocket.



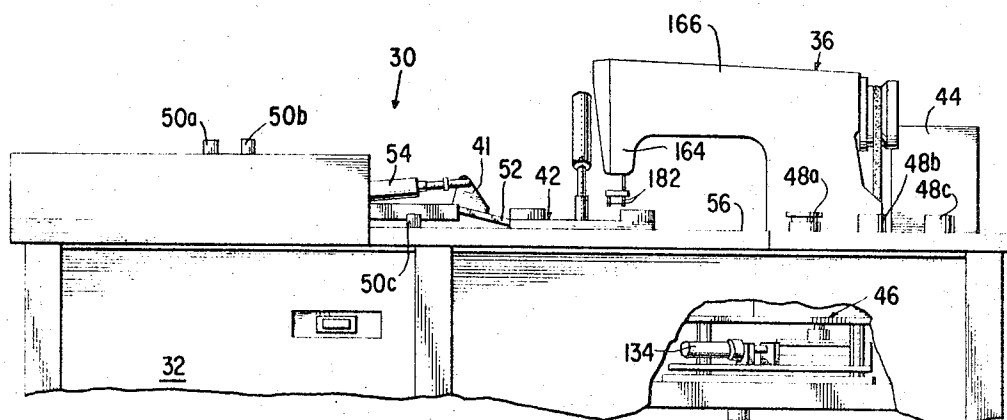


Fig. 1

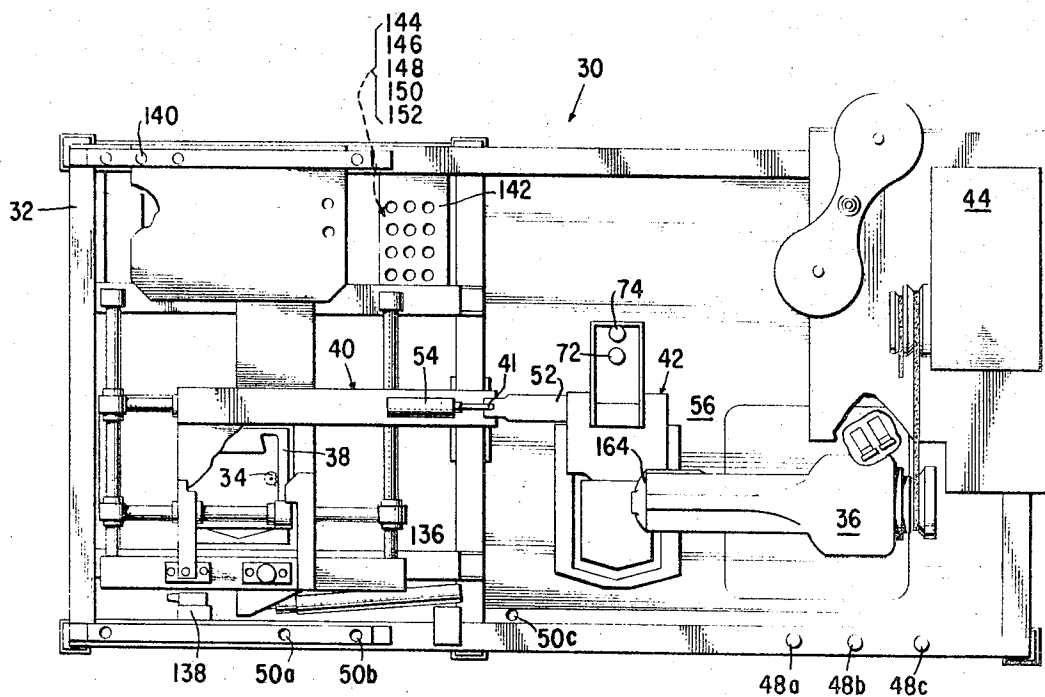


Fig. 2

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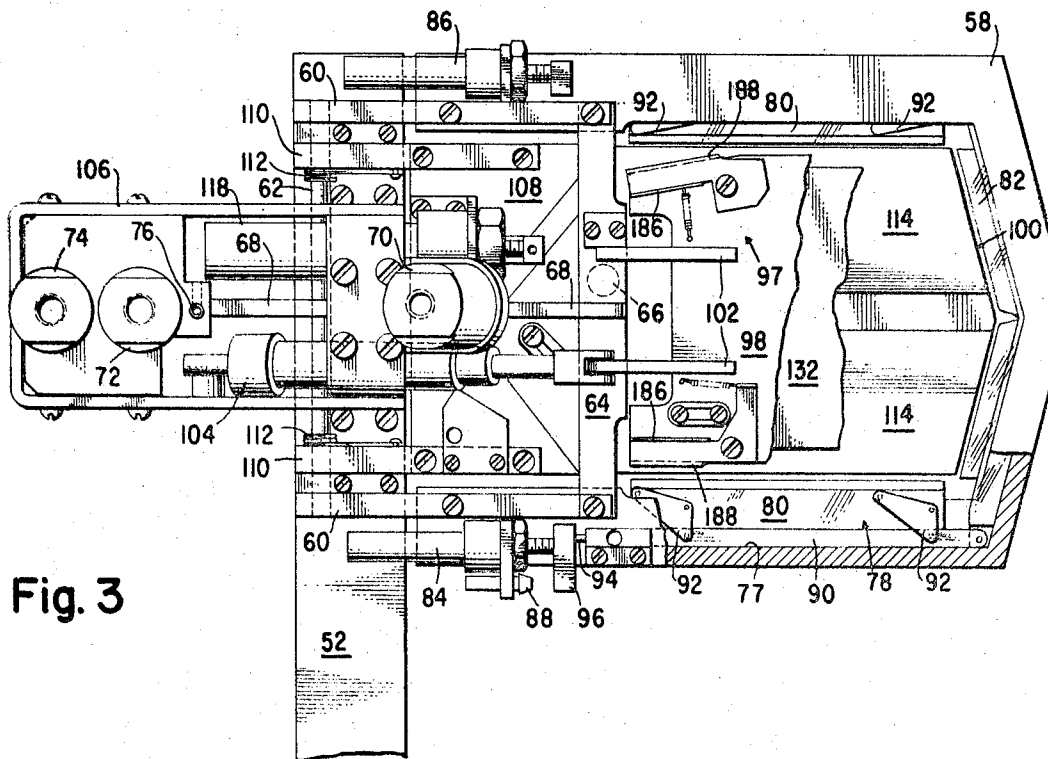


Fig. 3

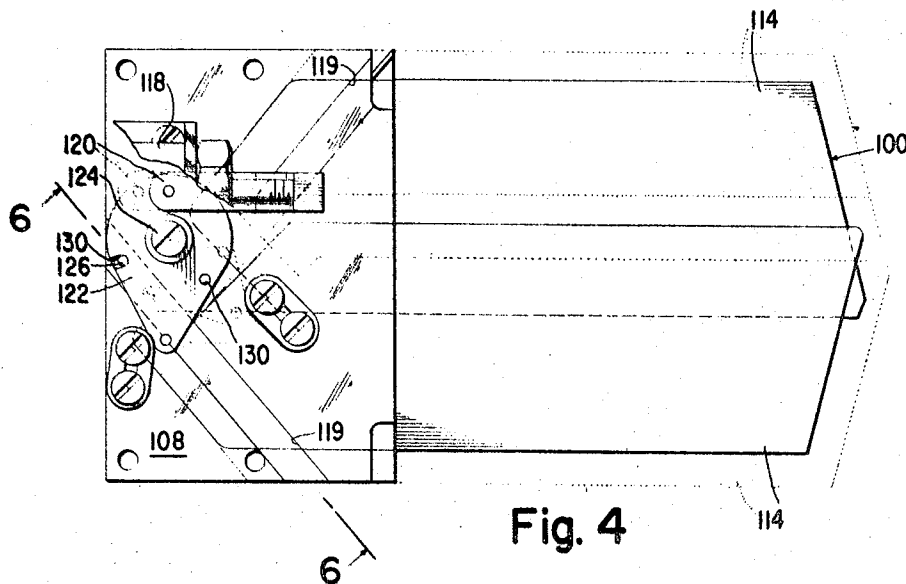


Fig. 4

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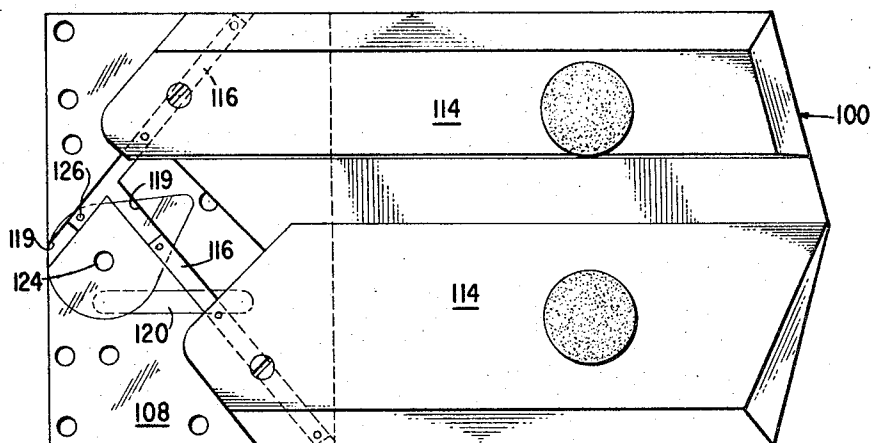


Fig. 5

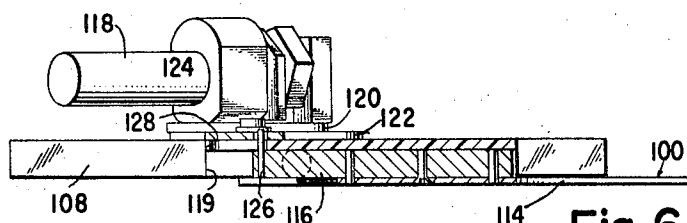


Fig. 6

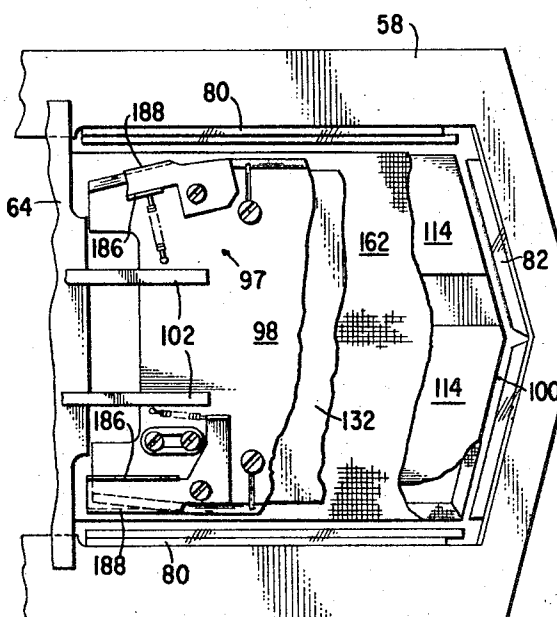


Fig. 7

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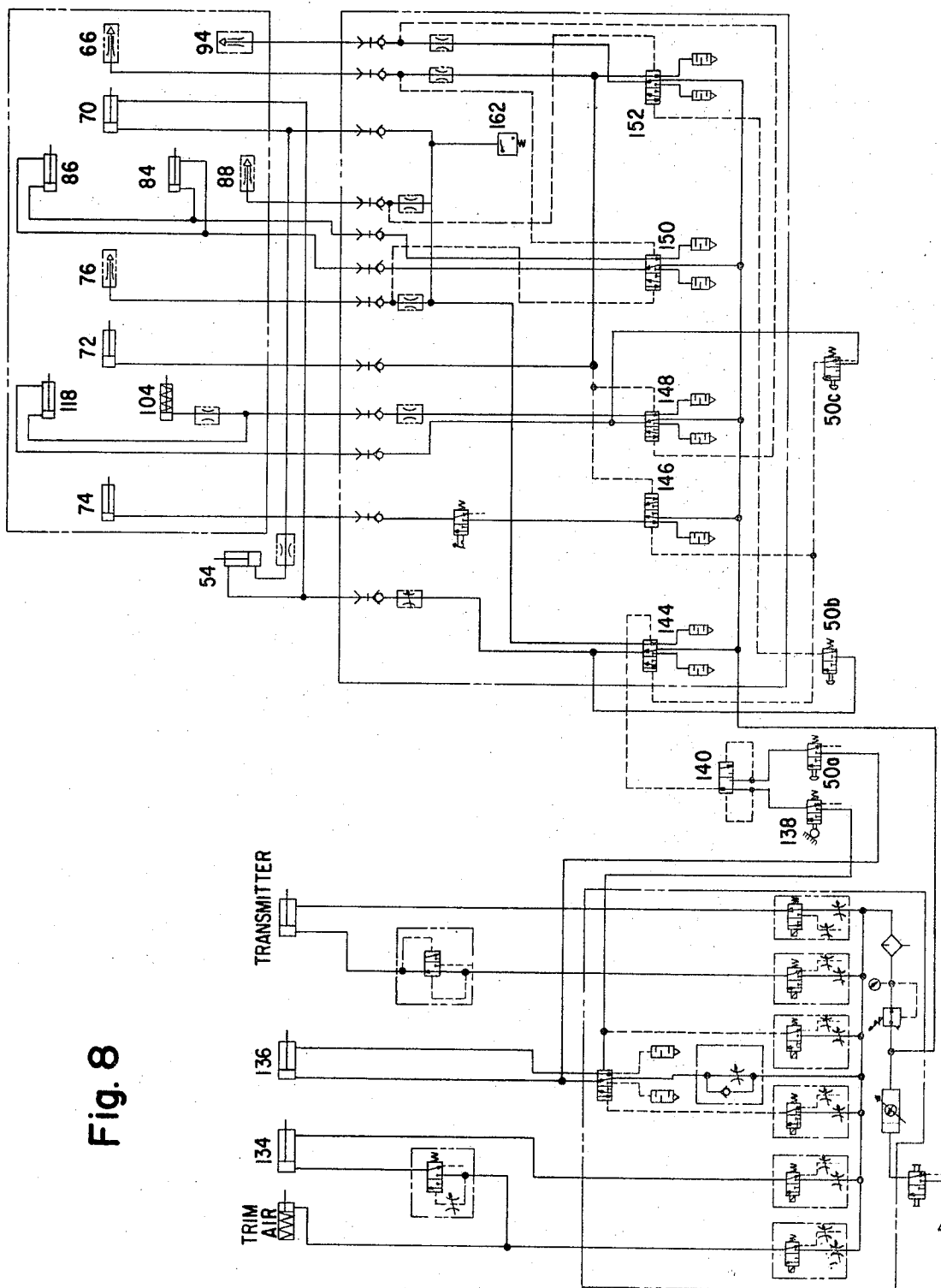
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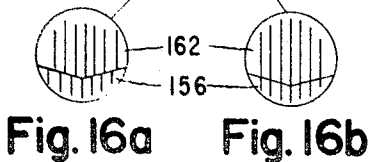
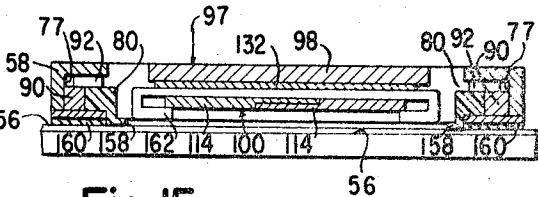
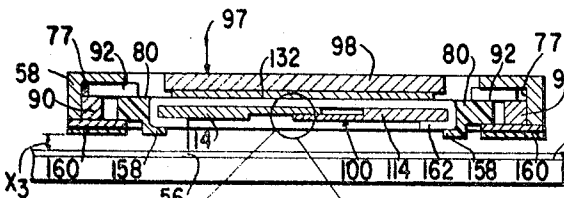
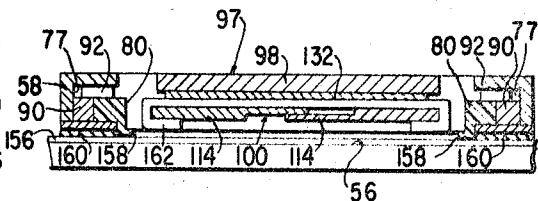
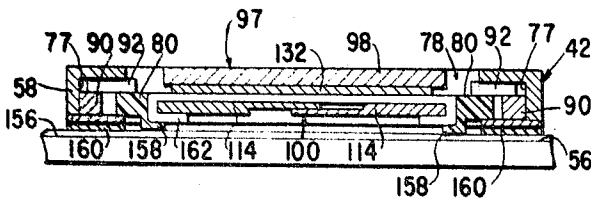
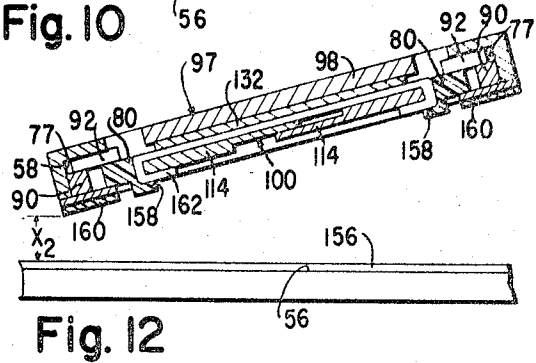
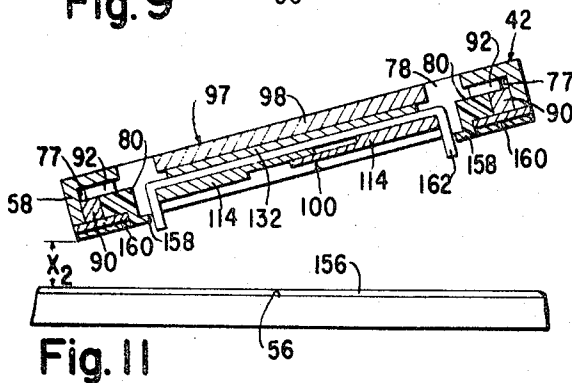
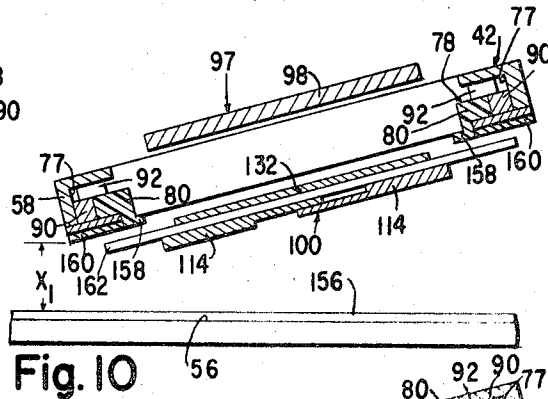
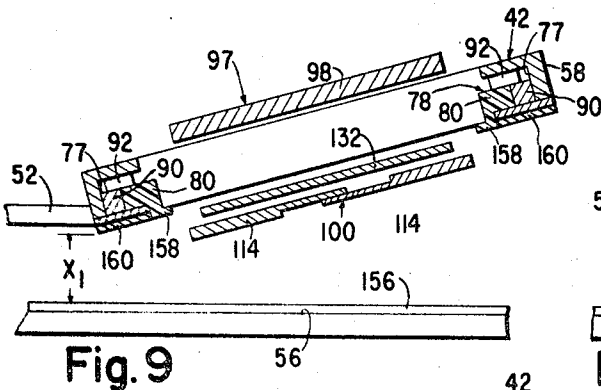
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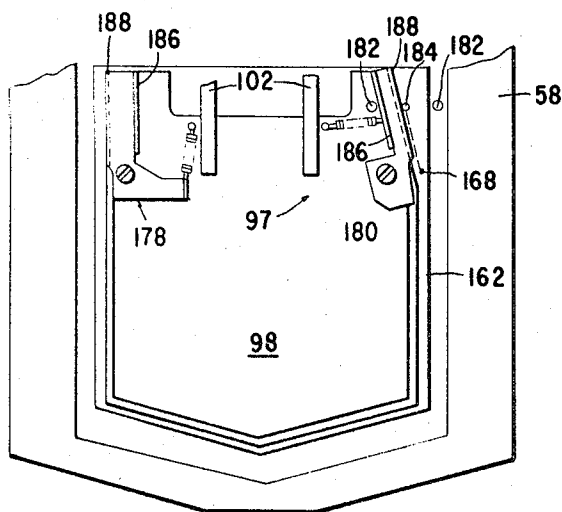


Fig. 17

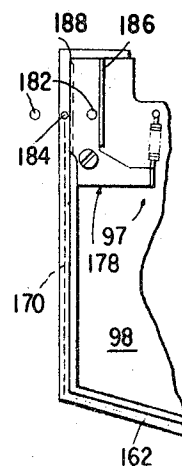


Fig. 19

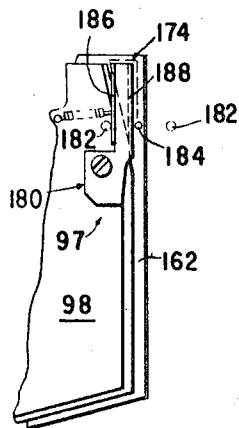


Fig. 18

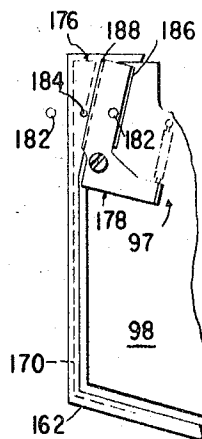


Fig. 20

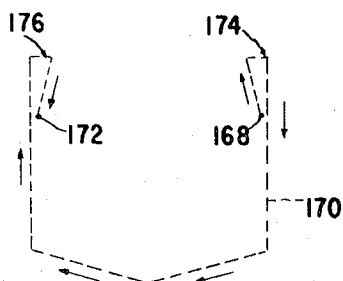


Fig. 21

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AUTOMATIC SETTING AND SEWING OF POCKET PIECES TO GARMENTS

BACKGROUND OF THE INVENTION

Heretofore, skilled operators were required to sew pockets onto garments. Attempts at automating this process have been numerous but the mechanisms have had certain shortcomings. For example, they might require auxiliary equipment such as pressers and creasers. If the pocket were to be formed in a clamp having a shaping member, the complete removal of the shaping member from the pocket piece was required, which might disturb the desired pocket shape or the sewing margin.

SUMMARY OF THE INVENTION

In accordance with the present invention, a mechanism and method has been provided whereby a pocket piece is sewn to a garment. A fixture carrying the pocket piece is connected to a motor-driven template frame and positioned adjacent the sewing machine to follow a path prescribed by the template. The pocket piece is placed in a clamp of the fixture above the garment. The clamp has an upper setting plate and a lower setting plate. The upper setting plate defines the marginal edge for sewing the pocket piece to the garment. The lower setting plate is split and movable between an expanded position extending outwardly of the marginal edge and a retracted position lying inwardly thereof. A bracket is connected to the fixture and carries retractable edge-holding means therein. The folding means are actuated to fold the edges of the pocket piece under the expanded lower plate so that the clamp can be shifted toward the garment, and the folding means and lower plate retracted prior to sewing the pocket piece to the garment along the marginal edge.

It is therefore an object of the present invention to provide improved setting and sewing of pocket pieces to garments which avoids the prior art disadvantages; which is automatic in operation; which is simple, economical and reliable; which includes a dart guide to avoid flagging at the pocket corners; which permits the pocket piece to be set in a clamp capable of establishing a sewing margin therein; which includes window means to permit alignment of the garment to the pocket piece to match the respective patterns thereof; which uses a stepped pneumatic control to facilitate operation thereof; and, which uses a foldable lower setting plate capable of assuming an expanded position during pocket setting and a retracted position thereafter.

Other objects and advantages will be apparent from the following description of the invention and the novel features will be particularly pointed out hereinafter in the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

This invention is illustrated in the accompanying drawings in which:

FIG. 1 is a front elevational view partly broken away of an automatic assembly including the present invention.

FIG. 2 is a top plan view of FIG. 1;

FIG. 3 is a top plan view, partly in section, of a fixture of the present invention including a bracket and clamp which will interact to set the pocket in folded position therein;

FIG. 4 is a top plan view of the lower setting plate in the retracted position with the expanded position shown in phantom;

FIG. 5 is a bottom plan view of the lower setting plate in expanded position;

FIG. 6 is a view, partly in section, taken along line 6-6 of FIG. 5;

FIG. 7 is a top plan view of the portion of the fixture having the bracket and clamp with the pocket piece set in the clamp;

FIG. 8 is a schematic of the pneumatic controls of the present invention in which those controlling with the fixture have been identified;

FIGS. 9 through 15 are schematic representations of the steps of operation showing the fixture in sectional view as follows: FIG. 9 shows the fixture in raised position with the

bracket and open clamp nonaligned; FIG. 10 shows the pocket piece loaded in the clamp; FIG. 11 shows the clamp closed and in alignment with the bracket; FIG. 12 shows the edge folder operative to set the pocket about the lower setting plate of the clamp; FIG. 13 shows the fixture placed upon the fabric resting on the work-supporting surface; FIG. 14 shows the edge folder retracted; FIG. 15 shows the lower setting plate retracted;

FIG. 16 shows the fixture in a position similar to that of FIG. 12 but slightly lower to permit alignment of the pattern; FIG. 16a indicates a stripped pattern of the pocket piece and garment in misalignment; and FIG. 16b shows the garment slightly moved to align the pattern to permit subsequent positioning of the fixture upon the garment as shown in FIGS. 13, 14 and 15;

FIG. 17 is a top plan view of the clamp showing the right and left dart guides;

FIG. 18 is a partial top plan view of the right dart guide and the actuating pin urging it in straight sewing position;

FIG. 19 is a partial top plan view of the left dart guide in straight sewing position;

FIG. 20 is a top plan view of the front dart guide and actuating pin urging said guide in inclined sewing position; and

FIG. 21 is a schematic representation of the stitch pattern indicating the start and stop position thereof.

DESCRIPTION OF THE INVENTION

In the illustrated embodiment of the invention the novel setting and sewing device, designated generally as 30, is shown in FIGS. 1 and 2. The device 30 is mounted on a frame 32, one side of which carries a drive mechanism (not shown) represented by a drive pinion 34, and the other side having a sewing machine assembly 36 mounted thereon. The drive pinion 34 drives a template 38 which is connected to a driven frame 40 movable in the X-Y planes and to which is pivotally connected at 41 on the sewing machine side thereof a fixture 42, which fixture will transcribe a pattern corresponding to that of the template 38 upon operation of the drive pinion 34.

Suitable biasing means, such as a magnetic force will hold the drive pinion 34 to the template 38 to permit the pinion to engage and drive the template 38 in the prescribed path thereof.

The sewing machine assembly 36 includes a needle positioner 44 and an underbed trimmer 46. The needle positioner 44 and the underbed trimmer 46 are each of the type shown in U.S. Pat. Nos. 3,400,677 and 2,938,477, respectively, with the modifications necessary to perform the operative functions of the present assembly.

Operator actuated controls illustrated in FIGS. 1 and 2 are mounted atop the frame 32 as at 48a, 48b and 48c, with additional operator controls at 50a, 50b, and 50c. The controls 48a, b and c, and 50a, b and c are connected to effect control of suitable electric or pneumatic control circuits, some of which will be more fully described hereinafter, which circuits will act, separately or in combination, to operate the device as more fully set forth hereinafter.

The fixture 42 as shown in FIGS. 2 and 3 has a main arm 52, one end being pivoted at 41 responsive to actuation of an air cylinder 54 to shift the fixture toward or away from the support surface 56 of the sewing assembly 36. The other end of the main arm 52 carries a bracket 58 pivotally connected by spaced straps 60 to pivot about a fixed shaft 62 carried by the arm 52. A transverse strap 64 carries a pneumatic sensor 66 adjacent to an actuating arm 68, the angular position of which is controlled by air cylinder 70 as limited by rearwardly mounted air cylinders 72 and 74. A pneumatic sensor 76 is closed in superposition to the actuating arm 68 adjacent air cylinder 72.

Carried along the inner periphery of bracket 58 in a recess 77 thereof, is an edge folder mechanism 78 having side folders 80 and bottom folder 82 pneumatically actuated by air cylinders 84 and 86, with a sensor 88 mounted adjacent air cylinder

84. Each cylinder 84 and 86 is connected through a lever 90 to the bottom folder 82, and by pivotal links 92 to the side folders 80, as best seen in the broken away portion of FIG. 3. When the air cylinders 84 and 86 are in extended position, the side folders 80 and bottom folders 82 will be housed within the recess 77 of the bracket 58. However, when the cylinders 84 and 86 are retracted, the bottom folder 82 will be pulled in the direction of main arm 52 and the side folder will be pivoted toward each other. A pneumatic sensor 94 is placed on the opposite side of sensing block 96 from that of sensor 88 whereby it will sense the extended position of block 96 while sensor 88 will sense the retracted position thereof.

A clamp assembly 97 illustrated in FIGS. 3 and 7 has an upper setting plate 98 and a lower setting plate 100 each mounted within the confines of bracket 58. The upper setting plate has a pair of pivotal arms 102, one of which is connected to be crank actuated by an air cylinder 104 mounted upon the frame 106, which frame also carries air cylinders 70, 74 and 76. The lower setting plate 100 is slide connected to a clear plastic plate 108 having fixed straps 110 pivotally mounted to shaft 162 and biased by springs 112 in the direction of the upper setting plate. The forward end of the plastic plate 108 extends under the transverse strap 64 which will engage the same upon actuation of air cylinder 70.

The lower setting plate 100 as shown in FIGS. 3 and 4 is longitudinally split to form a pair of lower plates 114 each of which is pin connected as shown in FIGS. 5 and 6 to a slide pin 116, disposed in inclined recesses 119 formed to trap the pin by its open bottom circular shape. The recess 119 are set in the plate 108 at an angle of approximately 45° to the longitudinal split in the lower setting plate 100. The lower setting plate 100 is slidable between an expanded position shown in FIG. 5 and a retracted position shown in full line in FIG. 4, with the expanded position shown in phantom. The slide movement is responsive to an air cylinder 118 actuating a crank arm 120 to turn a crank plate 122 about a pivot 124 connecting the plate 122 to the plastic plate 108 which also carries the air cylinder 118. Each slide pin 116 has a rod 126 shown best in FIG. 6, affixed therein to extend through a slot 128 formed above the recess 119 to permit the rod to extend into slots 130 of the crank plate 122 whereby on actuation of the air cylinder 118 the rods 126 will be shifted to cause the slide pin 116 and connected plate portions 114 to shift accordingly to cause the lower setting plate 100 to be retracted or expanded.

The lower setting plate 100 has a cover plate 132 disposed thereover which is fixedly connected to the plastic plate 108 so as to be slightly spaced from the lower setting plate 100 to permit the operator to place the pocket piece therebetween.

The underbed trimmer 46 has two air cylinders one of which is shown in FIG. 1 as air cylinder 134. FIG. 2 shows air cylinder 136, operative to position the fixture 42 toward or away from the sewing machine assembly 36. The following pneumatic valves are also represented, with the operation thereof to be described in connection with the pneumatic schematic of FIG. 8; valve 138, valve 140, and carried on the underside of mounting bracket 142 are valves 144, 146, 148, 150 and 152 (not shown except in FIG. 8).

Turning now to FIG. 8 the pneumatic sequence of operation will now be described. If the device 30 had previously been operated the button actuated reset fixture 50b will be manually operated to switch valve 152 so as to simultaneously supply air to sensor 66, actuate air cylinder 72 to engage actuating arms 68 to urge the same into a folding level stop, supply air to valves 148 and to cut the air supply to sensor 94. The fixture 42 as shown in FIG. 9 will be positioned a predetermined distance, designated generally as X_1 , from the support surface 56 upon which has been placed the garment 156 to lie beneath the fixture 42. The clamp assembly 97 is an open position with the lower setting plate 100 thereof extended so that the sides thereof are disposed outwardly of the outer edge of the upper setting plate 98, which edge defines the margin about which the pocket piece 162 will be sewn to

the garment 156 by the sewing machine. The folding device 78 is housed in retracted position with the side folders 80 shown disposed within the recess 77 with the folding lip 158 in abutment with a frictional resilient pad 160.

The operator will manually load the pocket piece 162 into the opened clamp assembly 97 between the lower setting plate 100 and the cover member thereof 132 so as to assure its proper positioning, as shown in FIG. 10. The fixture 42 remains above the support surface by the distance X_1 .

The button actuated valve 50c is operated to close the fixture and as shown in FIG. 8 will supply air to valve 144 to simultaneously supply air to sensor 76, sensor 88, a pneumatic switch 162, to one side of the air cylinder 70 while removing it from the other side thereof so as to urge the fixture down, and to one side of air cylinder 54 to urge the main arm 52 to pivot down to place the fixture 42 to closer to the support surface 56 and space therefrom by a distance X_2 as shown in FIG. 11. The supply of air to valve 144 also acts to remove air from the other side of the air cylinder 54, and removes air from the fixture reset valve 50b. The actuation of air cylinder 70 moves the bracket 58 downwardly to engage the plastic plate 108 and mechanically close the sensor 66.

Following the pneumatic lines shown in FIG. 8, the act of closing sensor 66 will operate to switch valve 150 so as to remove air from one side of both air cylinders 84 and 86, which were in the extended position, and to supply air to the other side thereof so as to place air cylinders 84 and 86 in the retracted position. Retracting the air cylinders 84 and 86 operates the folder device 78 as illustrated in FIG. 12 whereby the lips 158 will engage and set the edges of the pocket piece 162 underneath the expanded lower setting plate 100. Retracting the air cylinder 84 moves the sensor block 96 into position to close the sensor 88.

FIG. 8 shows that the closing of sensor 88 will operate to switch valve 152 to remove air from sensor 66, air cylinder 72, and valves 148 and 146. The switching of valve 152 will supply air to sensor 94. Assuming that the pocket piece 162 and the garment 156 are not patterned and therefore do not require alignment the act of removing air from air cylinder 72 will remove the folding level stop of actuator arm 68 and permit air cylinder 70 to urge the bracket to assume the position shown in FIG. 13 so as to come to rest upon the garment 156 and support surface 56, bringing with it the remainder of the fixture 42. The pads 160 provide a light frictional engagement whereby movement of the fixture 42 will be accompanied by a like movement of the garment 156. Upon actuation of the arm 68 to bring the fixture 42 into contact with the support surface 56 the sensor 76 will be closed.

The closing of sensor 76 as illustrated in FIG. 8 supplies signal air to valve 150 to switch the same and remove air from one end of air cylinders 84 and 86, while supplying air to the other end thereof. This acts to move the air cylinders 84 and 86 from a retracted position to an extended position wherein the folding device 78 will be retracted as shown in FIG. 14. Also, extending air cylinder 84 will move the sensor block 96 into locking contact with sensor 94 as shown in FIG. 3.

The act of closing sensor 94 will, as shown in FIG. 8, supply signal air to valve 148 to switch the same and remove air from 50c and remove air from one side of air cylinder 118 and supply air to the other side thereof so as to change the lower setting plate 100 from an extended position to a retracted position, as shown in FIG. 15. Valve 148 will also supply air to air cylinder 104 to close the upper setting plate 98, though this could be done at any time after the pocket has been loaded in the clamping assembly 97.

In the event that a pattern is to be matched between the pocket piece 162 and the garment 156 an air cylinder 74 will be operated to set the actuating arm 68 to a matching level as shown in FIG. 16 to set the fixture 42 above the garment 156 by a distance X_3 which is smaller than the distance X_2 and permits the operator to move the garment from a misaligned position represented by FIG. 16b. The alignment is facilitated by

6. The combination claimed in claim 5 including:
- a. a spring means connected to one of the dart guides to bias it toward the adjacent inclined edge; and
 - b. a spring means connected to the other dart guide means to bias it away from the adjacent inclined edge.
7. The combination claimed in claim 4 wherein:
- a. the lower setting plate is split longitudinally to form two overlapping segments;
 - b. a pair of slide pins slidably mounted in the clamp and one of which is connected to each of the plate segments; and
 - c. each of the slide pins is shiftable responsive to the crank member to slide along an inclined line with respect to the longitudinal split.
8. The combination claimed in claim 7 wherein:
- a. said split in the lower setting plate extends centrally longitudinally thereof; and
 - b. the slide pins are slideably disposed in the clamp each to slide along an oppositely inclined line forming an angle of 45° with respect to the longitudinal split.
9. In a device for automatically setting and sewing a pocket piece to a garment, a motor driven template frame, a sewing machine, a fixture connected to be driven by the frame adjacent the sewing machine in a path prescribed by the template comprising:
- a. a clamp carried at the free end of the fixture to be shifted toward and away from the garment;
 - b. an upper setting plate on the clamp defining a marginal edge for sewing the pocket piece to the garment;
 - c. the upper setting plate has inwardly inclined edges ad-

- jacent the marginal edge of initial and final sewing;
 - d. a dart guide yieldably mounted on the upper plate adjacent each of the inclined edges;
 - e. a lower setting plate on the clamp to interact with the upper setting plate to receive the pocket therebetween;
 - f. the lower setting plate having an expanded position extending outwardly of the marginal edge and a retracted position lying inwardly of the marginal edge;
 - g. a bracket connected to the fixture and spaced a predetermined distance outwardly of the upper and lower setting plates;
 - h. edge-folding means retractably mounted in the bracket selectively to fold the edges of the pocket piece under the expanded lower plate whereby the clamp can be shifted toward the garment, and the folding means and lower plate retracted prior to sewing the pocket piece to the garment along the marginal edge; and
 - i. an actuator pin fixedly mounted to the sewing machine to contact the dart guide and urge the same toward or away from the inclined edge to prevent flagging of the pocket piece during the dart sewing operation.
10. The combination claimed in claim 9 including:
- a. a spring means connected to one of the dart guides to bias it toward the adjacent inclined edge; and
 - b. a spring means connected to the other dart guide means to bias it away from the adjacent inclined edge.

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having the side folders 80 and bottom folder 82 made of clear plastic material. Once this has been done the operator will manually push the actuating button for the fixture closed valve 50c the operation of which acts to switch valve 146 to remove air from air cylinder 74 to permit the actuating arm 68 to completely descend thus causing the fixture 42 to come to a position shown in FIG. 13 wherein it will be in contact with the garment 156 and the support surface 56. Thereafter, the steps shown in FIG. 14 and 15 will be accomplished to place the pocket piece in ready-to-sew position in which the template driven frame 40 will control the motion of the fixture 42 in relation to the sewing machine assembly 36, in a known manner. After sewing has been completed the fixture 42 may be raised so as to remove air from sensor 76 and deactivate air cylinders 54 and 70 and switch valve 144. Subsequently, the cycle can be repeated and the fixture 42 reset.

The sewing margin of the pocket piece 162 is automatically obtained by the fixture 42, which fixture frictionally clamps upon the garment 156, then moves under the sewing head 164 of the sewing machine assembly 36. The fixture 42 is driven by the template frame 40 which automatically traces the pattern of the template 38 during the sewing operation. Accordingly, the pocket piece 162 will be sewn onto the garment 156 along the marginal edge corresponding to the template pattern as shown in FIG. 21 from an initial start position at 168 in the direction indicated by the arrows along a stitching path 170 represented by the dashed lines to a stop position 172. The needle positioner 44 will automatically signal the actuation of the underbed trimmer to effect trimming of the thread at the stop position 172 thereafter the template returns to the start position and the fixture 42 is also moved to an unloading position wherein the finished pocket is removed from the clamp assembly 97 and the next pocket piece may be loaded therein.

There are darts 174 and 176 sewn in the starting and stopping corners, respectively, of the pocket. To prevent flagging of the corners of the pocket piece 162 during the dart sewing operation, a pair of dart guides are pivotally connected adjacent the inclined corners of the upper setting plate 98 as represented in FIG. 17 as a left dart guide 178 and a right dart guide 180. Dart guide actuating pins 182 are shown in FIG. 1 as being mounted to the head 164 of the sewing machine 166. There are two pins 182, one to actuate the right dart guide 180, one to actuate the left dart guide 178. As shown in FIGS. 17, 18, 19 and 20 the pins 182 are spaced on either side of the needle 184.

The right dart guide 180 is spring biased against the inclined right edge of the upper setting plate, while the left dart guide 178 is spring biased away from the inclined right upper edge thereof in alignment with the vertical edge. Each of the dart guides 178 and 180 has an upturned edge 186 on the inner side thereof and a downturned edge 188 on the outer edge thereof. The pin 182 engages the upturned edge 186, while the downturned edge engages the pocket piece 162 to prevent flagging during the sewing of the darts 174 and 176.

The sewing will start at 168, as illustrated in FIG. 17, and will proceed along the marginal incline with the guide 180 in its normal biased position. However, upon reaching the vertical leg of the dart 174 the pin 182 will engage the upturned edge 186 to urge the right dart guide 180 outwardly to likewise assume a vertical position whereby the downturned edge 188 will engage the corner of the pocket piece 162 and prevent flagging thereof during the completion of the dart 174. The sewing will continue around the marginal edge of the upper setting plate 98 as shown in FIG. 19 to complete the vertical leg of the dart 176. On reaching the inclined portion of dart 176 the opposite pin 182 will engage the upturned edge 186 of the left dart guide 178 and urge the same against the inclined edge of the upper setting plate 98 to permit the sewing to be completed along the downwardly extending inclined portion of the dart 176 until the stopping point 172 is reached.

It will be understood that various changes in the details, materials, arrangements of parts and operating conditions which have been herein described and illustrated in order to

explain the nature of the invention may be made by those skilled in the art within the principles and scope of the invention.

We claim:

1. A method of automatically setting and sewing a pocket piece to a garment lying flat on a work support comprising the steps of:

- a. placing the pocket piece in a clamp raised above the garment and having a split expandable and retractable margin forming plate in expanded position;
- b. folding the edges of the pocket piece downwardly about the expanded margin forming plate by a retractable folding means;
- c. lowering the folded pocket piece within the clamp closely adjacent and substantially parallel to the garment for the purpose of aligning the pattern between said pocket piece and said garment;
- d. placing the folded pocket piece within the clamp upon the garment with the folded edges adjacent said garment;
- e. retracting the folding means;
- f. establishing a sewing margin in said clamp by retracting the margin forming plate; and
- g. sewing the pocket piece to the garment along the sewing margin thereof.

2. The method claimed in claim 1 wherein the retractable folding means includes a window means for the additional step of viewing the workpiece through the window means to assist in aligning the patterns between said pocket piece and said garment.

3. The method claimed in claim 1 wherein a pair of darts are sewn in the pocket piece and garment at the first and last corners thereof including the step of guiding the pocket piece at each of the darts by a yieldable guide biased in one of two positions to prevent flapping of the pocket piece while the dart is being sewn.

4. In a device for automatically setting and sewing a pocket piece to a garment, a motor driven template frame, a sewing machine, a fixture connected to be driven by the frame adjacent the sewing machine in a path prescribed by the template comprising:

- a. a clamp carried at the free end of the fixture to be shifted toward and away from the garment;
- b. an upper setting plate on the clamp defining a marginal edge for sewing the pocket piece to the garment;
- c. a split lower setting plate on the clamp to interact with the upper setting plate to receive the pocket therebetween;
- d. the split lower setting plate having an expanded position extending outwardly of the marginal edge and a retracted position lying inwardly of the marginal edge;
- e. slide pins connected to the lower setting plate;
- f. a crank member mounted on the clamp to engage the slide pins;
- g. a pneumatic actuator connected to the crank member to effect a cranking motion therewith and selectively to shift the slide pins whereby the lower setting plate will be urged into an expanded or retracted position;
- h. a bracket connected to the fixture and spaced a predetermined distance outwardly of the upper and lower setting plates; and
- i. edge folding means retractably mounted in the bracket selectively to fold the edges of the pocket piece under the expanded lower plate whereby the clamp can be shifted toward the garment, and the folding means and lower plate are retracted prior to sewing the pocket piece to the garment along the marginal edge.

5. The combination claimed in claim 4 wherein:

- a. the upper setting plate has inwardly inclined edges adjacent the marginal edge of initial and final sewing and
- b. a dart guide is yieldably mounted on the upper plate adjacent each of the inclined edges,
- c. an actuator pin fixedly mounted to the sewing machine to contact the dart guide and urge the same toward or away from the inclined edge to prevent flagging of the pocket piece during the dart sewing operation.

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,552,336 Dated January 5, 1971

Inventor(s) Robert C. Brandriff and Walter F. Chapman

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 4, line 74, after "misaligned" insert --position represented by Fig. 16a to a matched and aligned-- .

Signed and sealed this 14th day of September 1971.

(SEAL)
Attest:

EDWARD M. FLETCHER, JR.
Attesting Officer

ROBERT GOTTSCHALK
Acting Commissioner of Patent