

April 10, 1951

J. VOLLMAN ET AL
LABEL SEWING MACHINE

2,548,692

Filed July 13, 1949

4 Sheets-Sheet 1

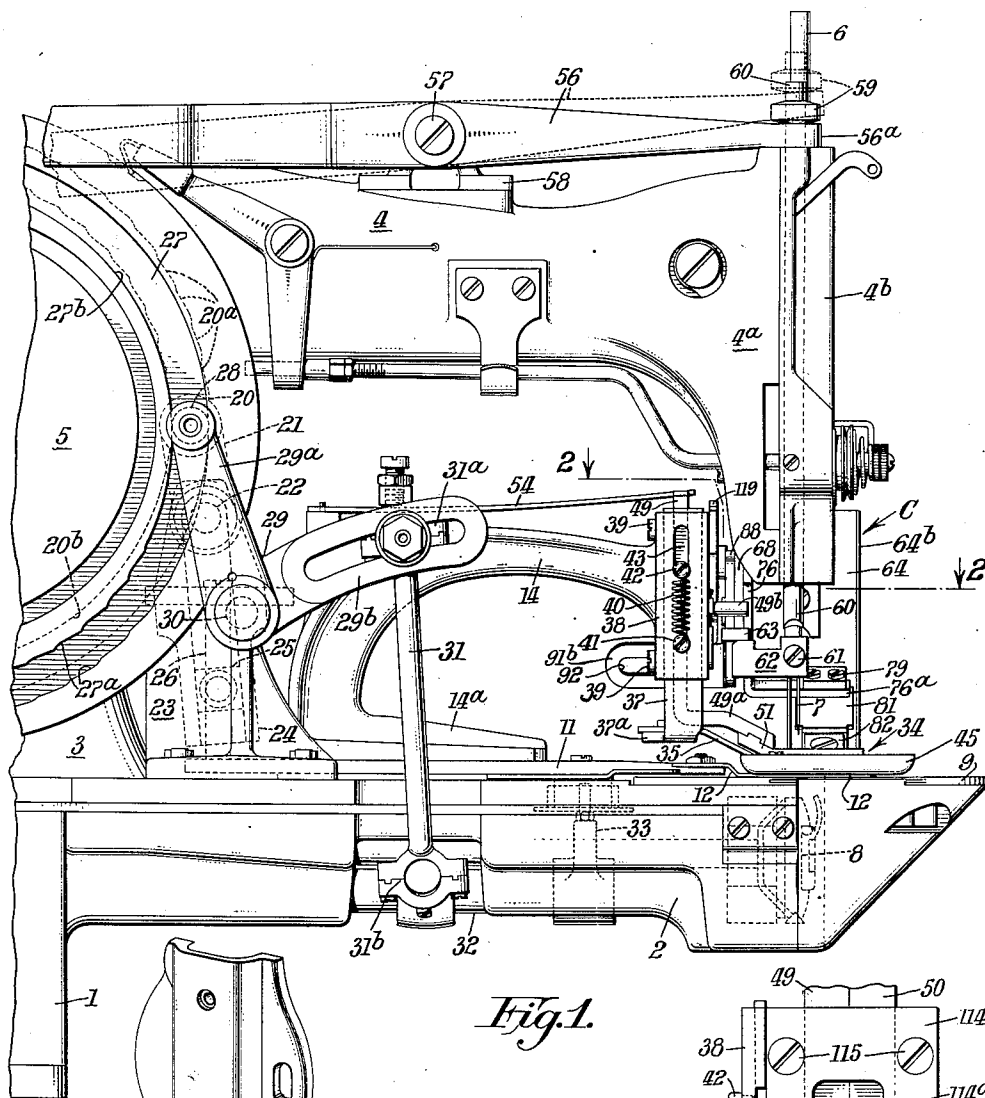


Fig. 1.

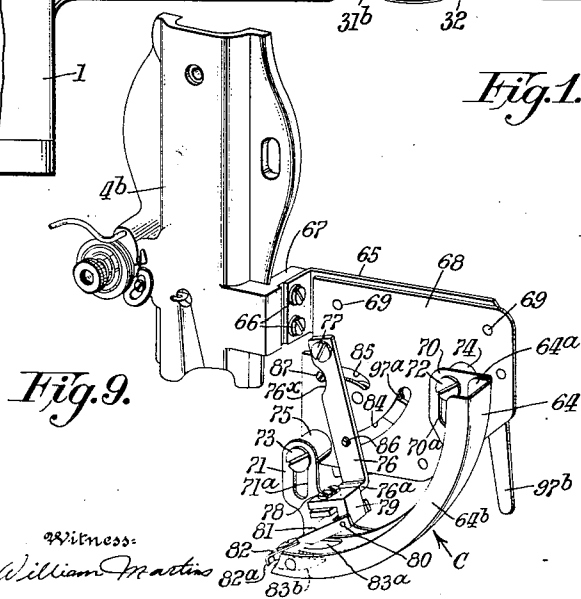


Fig. 9.

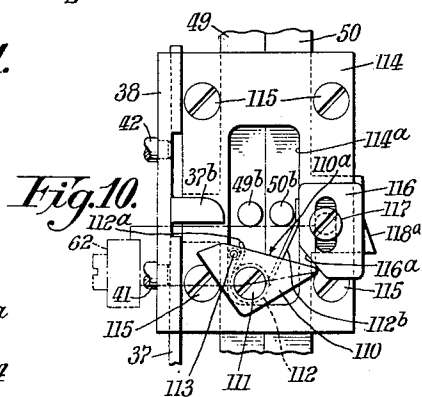


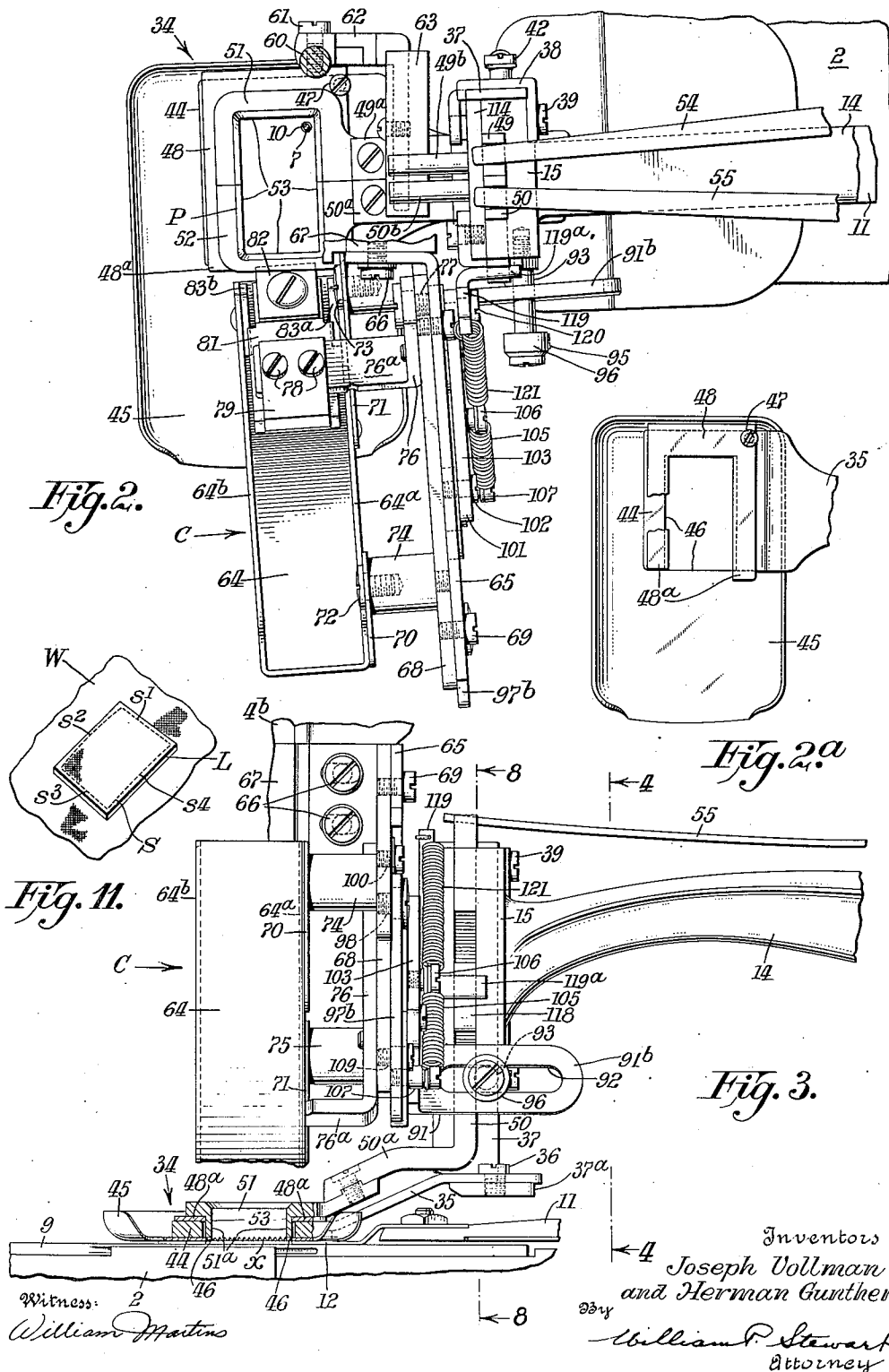
Fig. 10.

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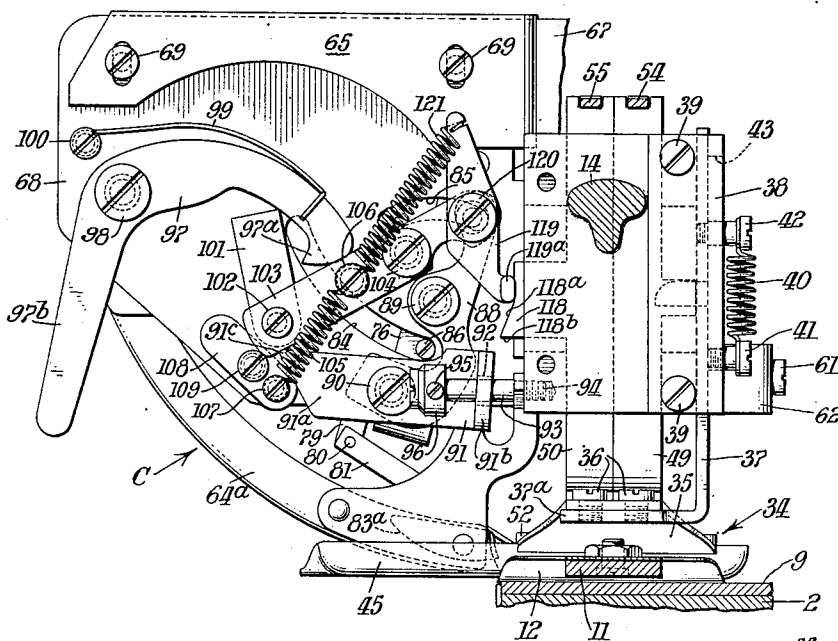


Fig. 4.

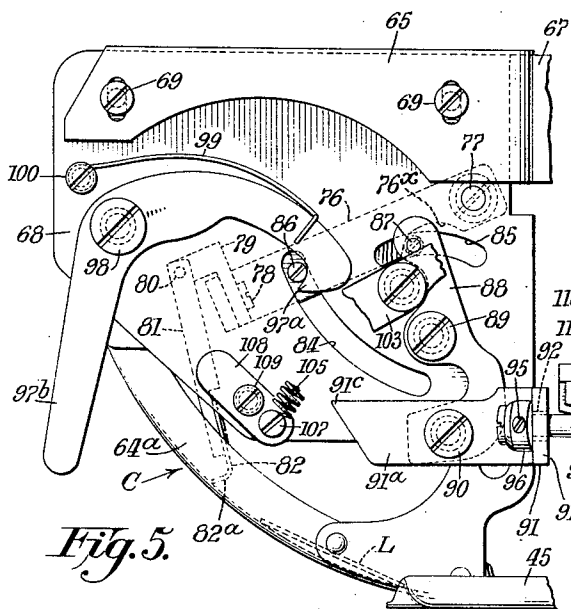


Fig. 5.

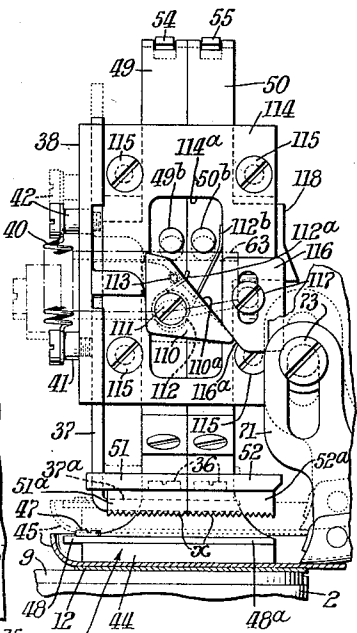


Fig. 6.

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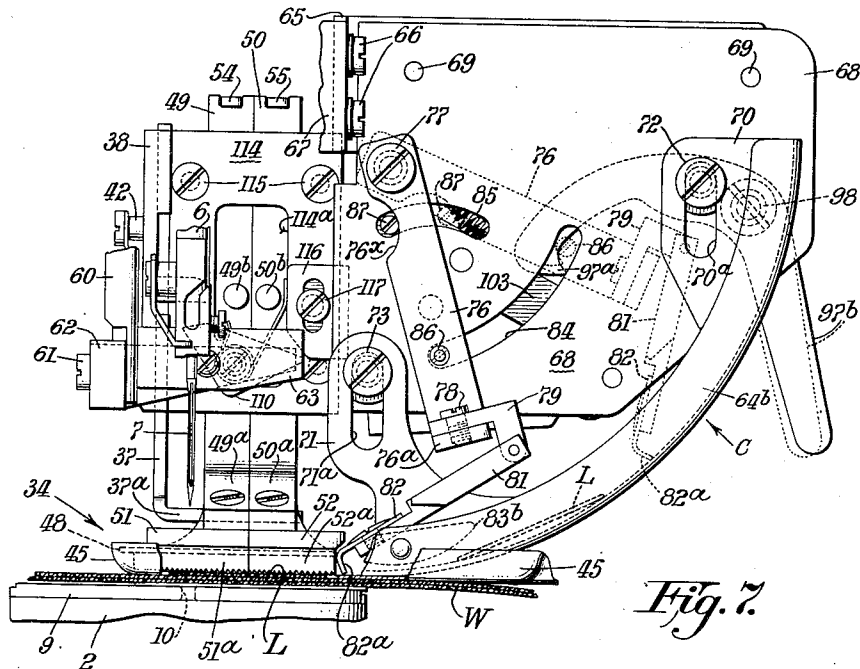


Fig. 7

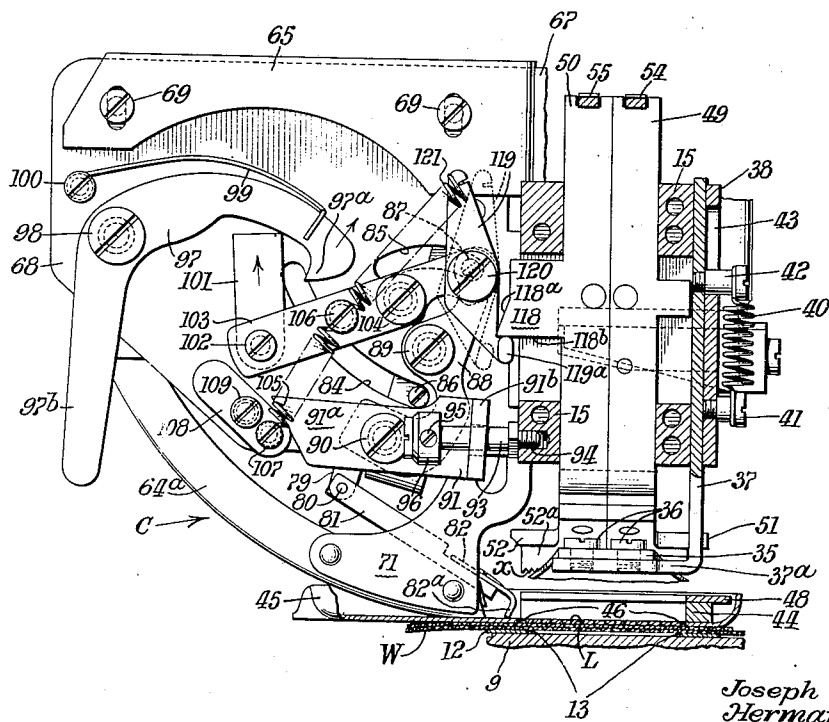


Fig. 8

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UNITED STATES PATENT OFFICE

2,548,692

LABEL SEWING MACHINE

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Application July 13, 1949, Serial No. 104,488

14 Claims. (Cl. 112—104)

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This invention relates to group stitch sewing machines and more particularly to machines adapted to sew labels to garments and other workpieces.

The invention has as its primary object to provide a label sewing machine having an improved work- and label-holding clamp and improved means for placing labels into the clamp.

Another object of this invention is to improve the label-sewing machine disclosed in the pending United States patent application of George J. Plopper, Serial No. 85,192, filed April 2, 1949. In that application there is disclosed a label sewing machine having a label-clamp, means for moving the clamp in a predetermined path, and a manually controlled label-feeding means carried by the label-clamp for placing labels into the clamp.

It is an object of this invention to relieve the clamp-feeding mechanism of the load imposed thereon by the weight of the label-feeding mechanism. This has been accomplished by supporting the label-feeding mechanism independently of the label-clamp on a stationary part of the machine and in such position that it will register with the label-clamp when the machine is in "stop" position.

Another object of the invention is to provide means associated with the clamp lifting and lowering mechanism for automatically feeding into the label-clamp a label which the operator has previously placed in the automatic label-feeding mechanism.

With the above and other objects in view, as will hereinafter appear, the invention comprises the devices, combinations and arrangements of parts hereinafter set forth and illustrated in the accompanying drawings of a preferred embodiment of the invention, from which the several features of the invention and the advantages attained thereby will be readily understood by those skilled in the art.

In the drawings:

Fig. 1 is a left side view of a portion of a conventional group stitching machine embodying the present invention.

Fig. 2 is a horizontal section taken substantially on the line 2—2 of Fig. 1 showing, in plan view, the label-feeding mechanism and a portion of the label-holding clamp.

Fig. 2a is a detail plan view of a label-positioning means hereinafter described.

Fig. 3 is a right side elevation, partly in section, of a portion of the label-holding clamp and the label-feeding mechanism.

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Fig. 4 is a vertical section taken substantially on the line 4—4 of Fig. 3 with a label-feeding arm, later to be described, in advanced position.

Fig. 5 is a fragmentary view similar to Fig. 4 but with the label-feeding arm latched in retracted position.

Fig. 6 is a front end view, partly in section, of the label-holding clamp and showing a portion of the label-feeding means associated therewith.

Fig. 7 is a view looking from the front end of the machine and showing the label-feeding means and the label-holding clamp, a portion of the latter being broken away.

Fig. 8 is a vertical section taken substantially on the line 8—8 of Fig. 3.

Fig. 9 is a perspective view showing the label-feeding means secured to and supported by the face-plate of the sewing machine.

Fig. 10 is a fragmentary view similar to a portion of Fig. 6, but with the parts in a different position.

Fig. 11 is a perspective view showing a portion of a workpiece and a label attached thereto as by the present machine.

Referring more specifically to the drawings, this invention is disclosed as embodied in a cyclically operated group stitching machine, commercially well known. This machine is generally similar to the machine disclosed in the United States patent of C. M. Horton, No. 1,051,998, February 4, 1913, to which reference may be had for a more complete disclosure of the stitch-forming, thread-cutting and start-and-stop mechanisms, the specific details of which form no part of the present invention. The clamp-actuating mechanism of the present machine is substantially the same as in the above mentioned tacking machine and differs from that disclosed in the Horton patent mainly in the contour of the cam grooves which give to the work-clamp its lengthwise and crosswise movements. In the present machine, the work-clamp and the work carried thereby are so moved as to cause the stitch-forming mechanism to sew a seam of substantially rectangular pattern, thereby sewing about the marginal portion of a rectangular label, instead of making cross stitches as in the Horton construction.

As shown in the drawings, the machine comprises a frame including a base 1 having a horizontal work-supporting arm 2 extending laterally therefrom, a standard 3 and an overhanging bracket-arm 4 supported by the standard. A rotary main shaft (not shown) is journaled lengthwise within the bracket-arm and is geared to turn a cam wheel 5 as shown in said Horton patent.

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The machine is provided with stitch-forming mechanism including a reciprocating needle-bar 6, mounted in the head 4^a of the bracket-arm and carrying an eye-pointed thread-carrying needle 7, and a cooperating oscillating shuttle mechanism 8 located within the work-supporting arm 2. These elements are actuated from the main shaft by connections common to this type of sewing machine. The bracket-arm head 4^a is hollow and is closed by a face-plate 4^b, shown in Figs. 1 and 9. Although the face-plate 4^b is removable from the bracket-arm head 4^a it is normally fixed thereto and therefore is, in effect, a portion of the stationary sewing machine frame.

Secured upon the upper surface of the work-arm 2, at the forward end thereof, is a throat-plate 9 provided with a hole 10 for the passage of the needle. A bar 11 is slidably mounted on the arm 2 and carries, at its forward end, a work-supporting plate 12 formed with a rectangular sewing opening 13 (Fig. 8), within which the substantially rectangular label-attaching seam is sewed.

Mounted upon the bar 11 is the foot 14^a of a clamp frame 14 formed, at its forward end, with a vertically disposed head 15 which carries label-holding means hereinafter described.

The bar 11, frame 14 and the parts carried thereby are periodically shifted lengthwise of the arm 2 and crosswise thereof in a predetermined sequence to cause the stitch-forming mechanism to sew a seam S around the marginal portion of a rectangular label L to attach the label to a workpiece W as shown in Fig. 11.

The means for giving the parts their movements lengthwise of the arm 2 comprise a cam groove 20 (Fig. 1) formed in that face of the cam wheel 5 adjacent the standard 3 and the arm 4. This cam groove is entered by a stud carried by an arm 21 secured upon one end of a rock-shaft 22 journaled horizontally in the upper end of a bracket 23 secured upon the upper face of the work-supporting arm 2. The other end of the rock-shaft 22 carries a depending arm 24 which, in turn, carries a block 25 adjustably mounted on an upright pin 26 carried by the rear end of the bar 11. The cam groove 20 is formed with alternate stepped portions 20^a and concentric portions 20^b which portions act through the parts 21, 22, 23, 24 and 25 successively to shift the work-clamp step-by-step lengthwise of the arm 2 and then to hold it against endwise movement while it is shifted transversely of the arm about the axis of the pin 26 by means now to be described.

Transverse movement of the work-clamp is effected from a cam groove 27 formed in the outer face of the cam wheel 5. This cam groove is formed with alternate stepped portions 27^a and concentric portions 27^b. A stud 28, carried by the upper arm 29^a of a bell-crank lever 29, tracks the cam groove 27 and oscillates the lever about the axis of a stud 30 by means of which the lever is fulcrumed to a mid-portion of the bracket 23. The other arm 29^b of the lever 29 is of arcuate form and has adjustably secured to it one end 31^a of a link 31, the other end 31^b of which is connected to an arm carried by a rock-shaft 32 journaled in the arm 2. The shaft 32 is connected, by a member 33, to the clamp-bar 11. The connections between the bell-crank lever 29 and the clamp bar 11 are shown more in detail in the above mentioned Horton Patent No. 1,051,998. Thus the cam groove 27 effects, through the elements 29, 31, 32 and 33 transverse

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movements of the work-clamp about the axis of the pin 26. The cam grooves 20 and 27 are so related that the stepped portion of one is disposed adjacent the concentric portion of the other. Therefore as the clamp is shifted lengthwise it is held against transverse movement and when it is shifted transversely of the arm 2 it is held against endwise movement. The work and the label carried by the clamp are therefore so moved relative to the stitch-forming mechanism as to cause the sewing of a substantially rectangular seam as shown in Fig. 11.

The means for holding a label in sewing position comprises a horizontally disposed label-positioning member designated generally as 34, carried by a shank 35 secured, by screws 36, to the foot portion 37^a of an L-shaped supporting member 37. This member 37 is slidably mounted on one side of the clamp-frame head 15 and is held in place thereon by an angular retainer member 38 (Figs. 1 and 2) which is secured to the head 15 by screws 39 and embraces the vertical portion of the supporting member 37. A coil spring 40, connected at its lower end to a screw 41 threaded into the stationary retainer member 38 and at its upper end to a screw 42 passing through a slot 43 in the member 38 and threaded into the supporting member 37, normally urges the member 37 and the parts carried thereby downwardly relative to the clamp frame head 15 but permits them to be raised by means hereinafter described.

The label positioning member 34 comprises a horizontally disposed plate 44 carried by the shank 35 and a horizontally disposed pan-like member 45 which is riveted or otherwise secured to the under side of the plate 44. The plate 44 and member 45 are provided with a rectangular label-receiving aperture 46 which overlies and is substantially coextensive with the opening 13 in the work-supporting plate 12. The pan-like member 45 also serves as a presser-foot to hold the workpiece W down on the work-supporting plate 12 as shown most clearly in Figs. 7 and 8. Secured upon the upper surface of the plate 44 by a screw 47 is a relatively thin U-shaped member 48 (see Fig. 2^a) the legs 48^a of which overhang slightly the side walls of the aperture 46 in the plate 44 and thus serve to prevent accidental upward displacement of a label when placed in the aperture 46.

Cooperating with the plate 44 in holding a label in sewing position is a pair of label presser members comprising vertically disposed shanks 49 and 50 which are slidably mounted in a guide-way formed in the clamp frame head 15. The shanks 49 and 50 are formed at their lower ends with offset portions 49^a and 50^a, respectively, to which are secured label-holding presser-feet 51 and 52. These presser-feet are of opposed U-shape and together form a composite presser member P (Fig. 2) of substantially rectangular form having a rectangular opening 53 of substantially the same size as the underlying opening 13 in the work-supporting plate 12. The presser-feet 51 and 52 are provided with downwardly projecting ribs 51^a and 52^a, respectively, each having a serrated lower edge x adapted to grip the label when the presser-feet are lowered thereon.

The shanks 49, 50 and the presser-feet secured thereto are normally depressed by leaf springs 54 and 55, respectively, carried by the clamp frame 14. When the machine is in "stop" position, as at the end of a sewing cycle, the presser-

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feet may be lifted, in opposition to the springs, by manipulation of a manually operated lever 56 (Fig. 1) fulcrumed at 57 on a bracket 58 secured upon the arm 4. The forward end 56^a of the lever 56 engages beneath a collar 59 secured upon a spring-depressed bar 60 mounted for endwise movement in the bracket-arm head 4^a. At its lower end, the bar 60 has secured to it, by a screw 61, an angle bracket 62 to which is secured a plate 63 which, in the "stop" position of the machine, underlies pins 49^b and 50^b which are carried by and project horizontally from the presser-foot shanks 49 and 50, respectively.

The machine is provided, in addition to the clamp shifting mechanism above described, with conventional start-and-stop mechanism, not shown. Thus the machine may be started, the work-clamp shifted to cause the stitch-forming mechanism to sew a seam of substantially rectangular contour around the marginal portion of a label held in the label-holder, and the machine automatically brought to rest at the completion of the stitching cycle. As above stated, this start-and-stop mechanism may be of the type disclosed in the Horton Patent No. 1,051,998.

This invention is concerned largely with the provision of semi-automatic means for inserting a label into the label-holder when the label presser-feet are elevated. This means comprises an arcuate label chute C consisting of a curved metal plate 64 having inner and outer upturned side flanges 64^a and 64^b, respectively. This chute and the means cooperating therewith to feed labels into the label-holder are supported independently of the work- and label-holding clamp which is required to be shifted relative to the stitch forming mechanism, thereby relieving the clamp-shifting mechanism of the burden of also shifting the label-feeding mechanism. This is preferably effected by supporting substantially the entire label feeding mechanism upon a stationary part of the machine frame, as, for example, upon the face-plate 4^b.

As shown most clearly in Fig. 9, the label feeding mechanism is supported upon a bracket 65 adjustably secured, by screws 66, to a lug 67 formed on the face-plate 4^b. The movable elements of the label-feeding mechanism are mounted upon a vertically disposed supporting plate 68 adjustably secured, by screws 69, to the bracket 65. To the rear flange 64^a of the chute C there are secured upper and lower upstanding ears 70 and 71 slotted as at 70^a, 71^a respectively, to slide upon shoulders formed on screws 72 and 73 threaded into bosses 74 and 75 projecting laterally from the supporting plate 68. The chute C normally gravitates on the screws 72, 73 until the delivery end thereof rests upon the upper surface of the pan-like work-holding presser-foot 45. Thus, the chute C is free to be moved upwardly and downwardly with the member 45.

Labels L, either folded or plain, are placed, by the operator, in the chute C, substantially in the position illustrated in dotted lines in Figs 5 and 7. Feeding of the label from that position is effected by the downward swinging motion of a gravity-actuated label-feeding arm 76 pivoted, at 77, upon the supporting plate 68. The arm 76 has, at its lower end, a horizontally offset portion 76^a upon which is secured, by screws 78, an inverted L-shaped bracket 79. Pivotally attached, at 80, to the bracket 79 is a gravity-actuated foot 81 to the lower end of which is secured a sheet metal shoe member 82, the free end 82^a of which is turned downwardly and slides

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upon the upper surface of the curved metal plate 64 of the label chute C. In its downward movement from the position illustrated in dotted lines in Fig. 7 to the position shown in full lines in the same figure, the downturned end 82^a engages the upper edge of the label and shifts the label into the cavity in the plate 44. In its passage out of the delivery end of the chute, the opposite side edges of the label pass beneath the curved lower edges of guide blocks 83^a and 83^b secured, respectively, to the side walls 64^a and 64^b of the chute C. These guide blocks insure that the edges of the labels will be directed beneath the overhanging edges of the legs 48^a of the member 48 and beneath the downwardly projecting ribs 51^a, 52^a of the presser feet 51, 52.

The supporting plate 68 is provided with two arcuate slots 84 and 85, through which project pins 86 and 87, carried, respectively, by the label-feeding arm 76 and the upper end of an arm-resetting lever 88 (later to be described) fulcrumed on a screw 89 at the rear side of the plate 68. The lower end of the lever 88 is pivotally connected by a screw 90, to one arm 91^a of an angle lever 91. The other arm 91^b of the lever 91 is formed with a slot 92 through which loosely passes a stud 93, one end of which is threaded into the head 15 of the clamp frame, as at 94 (Fig. 8). Adjustably secured on the stud 93, as by set screw 95, is a collar 96, which, during the sewing operation, is designed to engage the arm 91^b of the lever 91 to shift that lever horizontally and thereby turn the arm-resetting lever 88 about the fulcrum screw 89.

After a workpiece has been placed beneath the work-holder 45, a label has been inserted into the label-holder and the presser-feet 51 and 52 have been lowered, the parts are in the position shown in full lines in Fig. 7. The machine is then started and the work-clamp, the label carried thereby, and the workpiece are shifted relative to the stitch-forming mechanism step-by-step toward the left as seen in Fig. 1. This causes the stitch-forming mechanism to sew the portion s¹ of the seam S as shown in Fig. 11. Next the clamp is shifted step-by-step laterally toward the left as viewed in Fig. 7, thereby causing the stitch-forming mechanism to sew that portion of the seam S designated as s². The clamp is then shifted step-by-step to the right (Fig. 1) and the stitch-forming mechanism sews the portion s³ of the seam S. Finally the clamp is shifted laterally to the right (Fig. 7) to cause the stitch-forming mechanism to sew the portion s⁴ of the seam S and to bring the clamp back to its original position, where it is held stationary while the needle is reciprocated several times in the same position to produce tying stitches. It is during the final lateral movement of the clamp that the collar 96 on the stud 93 is drawn into contact with and shifts the angle-lever 91 to the right as seen in Fig. 8. This movement of the angle-lever swings the resetting lever 88 counterclockwise about the fulcrum screw 89 (Fig. 8). This causes the pin 87 carried by the upper end of the lever 88 to act on the curved surface 76^a of the lever 76 (Fig. 7) and swings the lever counterclockwise from the advanced position shown in Fig. 7 to the retracted position indicated in dotted lines in that figure. As the lever 76 approaches its uppermost position the pin 86 carried thereby engages and passes beyond the under side of the curved end 97^a of one arm of a latch-lever 97 fulcrumed upon a shoulder screw 98 threaded into

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the plate 68. The latch-lever 97 is normally biased in a clockwise direction, as seen in Figs. 4, 5 and 8, by a spring 99 having one end secured beneath the head of a screw 100 threaded into the plate 68 and its other end bent outwardly and downwardly to engage the latch-lever. The latch-lever is also formed with a depending finger-piece, or handle, 97^b by means of which the latch-lever may be turned, in opposition to the spring 99, should it be desired to release the latch manually. Downward movement of the latch-lever, under the influence of the spring 99, is limited by its contact with the upper end of a trip arm 101 secured, by a screw 102, to one end of a trip-lever 103. This lever is fulcrumed on a shoulder screw 104 threaded into the plate 68 and is normally held in the position illustrated in Fig. 4, i. e. with the lever in contact with the upper corner 91^c of the arm 91^a of the angle lever 91, by a coil spring 105. This spring is connected, at one end, to a screw 106 carried by the lever and at its opposite end to a stud 107 carried by an arm 108 secured by a screw 109 to the plate 68.

This invention also provides means for automatically releasing the latch 97 from the pin 86 to permit the arm 76 to swing downwardly by gravity to inject a label into the label holder as hereinbefore described. This means is controlled by and in synchronism with the raising and lowering movements of the presser-feet 51, 52.

As hereinbefore stated, the presser shanks 49 and 50 and the presser-feet 51 and 52 carried thereby may be lifted by the manual manipulation of the lever 56, acting through the bar 60, bracket 62, plate 63 and pins 49^b and 50^b. After the completion of a label-attaching operation initial upward movement of the shanks 49 and 50 also effect upward movement of the label-positioning member 34 and the work-holding presser-foot 45 carried thereby. This is effected (see Figs. 6 and 10) by a latch 110 pivotally mounted, by a screw 111, on the shank 49 and normally biased in a counterclockwise direction (Figs. 6 and 10) by a spring 112 coiled about the shank of the screw 111. The spring 112 has two offset arms, one 112^a bearing against a pin 113 carried by the latch and the other 112^b, bearing against the side wall of a clearance aperture 114^a formed in a face plate 114 secured to the clamp frame head 15 by screws 115. As the shank 49 and the parts carried thereby are moved upwardly from the position shown in Fig. 10 to the position illustrated in dotted lines in Fig. 6, the upper end of the latch 110 engages the under side of a finger 37^b carried by the label-holder supporting member 37, and lifts that member and the label-holder 34 and the work-holding presser-foot 45, in opposition to the spring 40. This permits the workpiece and its attached label to be removed from the machine and a new workpiece to be placed on the work-supporting plate 12 beneath the presser-foot 45. This initial upward movement of the presser-feet carries the side face 110^a of the latch 110 into contact with the cam face 116^a of a cam block 116 adjustably secured on the face-plate 114 by a screw 117, as shown in Fig. 6. Further upward movement of the shank 49 from the position illustrated in dotted lines in Fig. 6 to the position shown in full lines, causes the cam surface 116^a to act upon the latch 110 to turn it clockwise (Fig. 6) in opposition to the spring 112, and remove the nose of the latch from beneath the finger 37^b on the shank 37 of the label-holder and work presser-foot. There-

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upon the spring 40 draws the shank 37 and the members 34 and 45 downwardly to cause the presser-foot 45 to bear upon the new workpiece.

The shank 50 of the label-holding presser-foot 52 is provided on one edge with an extension 118 (Figs. 4 and 8) having a cam face 118^a and a lower horizontal surface 118^b. In the upward movement of the shank 50 the cam face 118^a engages and wipes past the outwardly projecting end 119^a of a latch-lever 119 fulcrumed on a shoulder screw 120 threaded into the upper end of the trip-lever 103, hereinbefore mentioned, thus idly swinging the latch-lever clockwise to the position indicated in dotted lines in Fig. 8. The latch-lever 119 is normally biased in counterclockwise direction, as seen in Figs. 4 and 8, by a coil spring 121 connected at one end to the upper end of the latch-lever and at its other end to the screw 106 to which the spring 105 also is connected. When the under surface 118^a of the extension 118 has been moved above the upper surface of the projecting end 119^a of the latch-lever, the lever is turned counterclockwise about its fulcrum 120 by the spring 121 and the end 119^a is placed beneath the extension 118 as shown in full lines in Fig. 8.

With a new workpiece held beneath the presser member 45; with the label-feeding arm 76 held in retracted position by the latch 97, as shown in Fig. 5; with a new label L placed in the label chute C in advance of the shoe 82 as indicated in Fig. 5; and with the rear end of the lifting lever 56 depressed as indicated in dotted lines in Fig. 1 and the presser-feet 51 and 52 in elevated position as shown in Fig. 6, the machine is in condition for reloading preparatory to the next label sewing operation.

The operator releases the pressure on the rear end of the lever 56 whereupon the spring-depressed bar 6 and the members 62 and 63 carried thereby and the presser-foot shanks 49 and 50 are moved downwardly. The initial downward movement of the shank 50 causes the extension 118 to pull downwardly on the latch-lever 119 which, in turn, pulls downwardly on that end of the trip-lever 103 to which the latch-lever 119 is connected. This turns the trip lever 103 clockwise about its fulcrum 104 (Fig. 8) and lifts the trip arm 101. This movement of the trip arm turns the latch lever 97 counterclockwise about its fulcrum 98 thereby removing the curved end 97^a of the latch-lever out of the path of movement of the stud 86 carried by the label-feeding arm 76. With the stud thus released, the label-feeding arm swings downwardly by gravity about its pivot 77, thereby causing the shoe 82 to feed the label down the chute C and into the label holder and beneath the lifted presser-feet, as hereinbefore explained. This automatic release of the arm 76 and the resulting feeding of the label into the label-holder is effected almost instantaneously and before the presser-feet 51, 52 have been completely lowered. Final lowering of the presser-feet causes them to bear upon the newly injected label and to hold it in sewing position on the workpiece. The machine is then started and attaches the new label to the new workpiece as above described. During the subsequent sewing operation, the work-clamp will move laterally away from the stationary member 68, and thus the extension 118 will pull away from the element 119^a thereby to release the latter so that the arm-resetting lever 88 may function to swing the label-feeding arm to its upper position as hereinabove described.

Having thus set forth the nature of the invention, what we claim herein is:

1. The combination with a group stitching machine having a work-support and stitch-forming mechanism; of a clamp device, including a vertically movable presser member, constructed and arranged to hold a workpiece on said work-support and to hold a label in position to be attached to said work-piece by said stitch-forming mechanism; means including a pivotally mounted arm movable from a retracted position to an advanced position for feeding a label into sewing position in said clamp device; manually actuated means for raising said presser member; and means actuated by downward movement of said presser member for rendering said arm effective to feed a label into said clamp device.

2. The combination with a group stitching machine having a bracket-arm head, a work-support and stitch-forming mechanism; of a clamp device, including a vertically movable presser member, constructed and arranged to hold a workpiece on said work-support and having a label-receiving aperture adapted to hold a label in position to be attached to said workpiece by said stitch-forming mechanism; means supported by the bracket-arm head and including a label-guiding chute and a gravity actuated arm having a portion movable through said chute for feeding a label into said label-receiving aperture in said clamp device; latch means supported by said bracket-arm head for normally holding said arm in a retracted position; and means supported by said bracket-arm head and actuated by a movement of said presser member for releasing said latch means.

3. The combination with a group stitching machine having a main frame, a work-support and stitch-forming mechanism; of a clamp device, including a vertically movable presser member, constructed and arranged to hold a workpiece on said work-support and having a label-receiving aperture adapted to hold a label in position to be attached to said workpiece by said stitch-forming mechanism; label-feeding means including an arcuate label-guiding chute aligned with said label-receiving aperture; a supporting plate mounted on said main frame; a gravity actuated arm pivotally mounted on said plate substantially coaxial with said chute and having a portion movable in said chute for feeding a label into said label-receiving aperture in said clamp device; latch means for normally holding said arm in a retracted elevated position; and means actuated by the downward movement of said presser member for releasing said latch means.

4. The combination with a group stitching machine having a main frame including a base, an overhanging bracket-arm terminating in a head, a face-plate secured to said head, a work-supporting arm, stitch-forming mechanism and clamp-shifting means; of a work-clamp, including a vertically movable presser member mounted on said work-supporting arm and connected to said clamp-shifting means; label-holding means provided by said work-clamp; a label-feeding means carried by said face-plate and including a supporting plate; a label-feeding arm pivotally mounted on said supporting plate; retaining means carried by said supporting plate for normally holding said arm in a retracted position; and means actuated by a movement of said presser member for releasing said retaining means to permit said arm to be moved to feed a label into said label-holding means.

5. The combination with a group stitching machine having a frame including a work-supporting arm, a bracket-arm, a plate carried by said bracket-arm, stitch-forming mechanism and clamp-shifting means; of a vertically movable work-clamp mounted on said work-supporting arm and connected to said clamp-shifting means; label-holding means provided by said work-clamp; a label-feeding means carried by said plate and including an arcuate chute mounted for vertical movement with said work-clamp; a label-feeding arm pivotally mounted substantially coaxial with said chute, a label-engaging shoe carried by said arm and yieldingly engaging said chute; retaining means for normally holding said arm in a retracted position; and means actuated by a vertical movement of a portion of said work-clamp for releasing said retaining means to permit said arm to be moved to cause said shoe to feed a label into said label-holding means.

6. The combination with a group stitching machine having a head, a work-supporting arm, stitch-forming mechanism and clamp-shifting means; of a work-clamp movably mounted on said work-supporting arm and connected to said clamp-shifting means for movement relative to the stitch-forming mechanism; label-holding means provided by said work-clamp and including a vertically movable presser member; label-feeding means carried by said head comprising an arcuate label-guiding chute and a gravity actuated label-feeding arm mounted substantially coaxial with said chute and having a portion yieldingly engaging the chute; retaining means for normally holding said arm in an elevated retracted position; means including a lever actuated by a vertical movement of said presser member for releasing said retaining means to permit said arm to be moved by gravity to feed a label into said label-holding means; and arm-resetting means actuated by the movement of said work-clamp relative to said label-feeding means to shift said arm to its retracted position and to re-engage it with said retaining means.

7. The combination with a group stitching machine having a frame, stitch-forming mechanism and clamp-shifting means; of a work-clamp mounted on said frame and connected to said clamp-shifting means for movement relative to said stitch-forming mechanism; label-holding means provided by said work-clamp; a label-feeding means carried by said frame, independently of said work-clamp, and including a supporting plate; a label-feeding arm pivotally mounted on said supporting plate; retaining means for normally holding said arm in a retracted position; means for releasing said retaining means to permit said arm to be moved to feed a label into said label-holding means; and means for returning said arm to its retracted position including a stud carried by said clamp; an arm-resetting lever pivotally mounted on said supporting plate and engaging said arm; and means connecting said stud with said lever to cause the stud to shift the lever by relative movement between the work-clamp and said label-feeding means thereby to effect resetting of said label-feeding arm.

8. In a group stitching machine, in combination, a frame including a work supporting arm and an overhanging bracket-arm terminating in a head; a vertically movable work-holder supported on said work-supporting arm and having a label-receiving cavity; label-feeding means carried by said bracket-arm head and including

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a label-guiding chute a portion of which overlies said work-holder and is movable vertically therewith, the delivery end of said chute being aligned with said label-receiving cavity; and a label-feeding arm having a portion movable in said chute for feeding a label into said cavity.

9. In a group stitching machine, in combination, a frame including a work-supporting arm and an overhanging bracket-arm terminating in a head; a vertically movable work-holder supported on said work-supporting arm and having a label-receiving cavity; a supporting plate carried by said bracket-arm head; label-feeding means carried by said supporting plate and including a slidably mounted label-guiding chute a portion of which overlies said work-holder and is movable vertically therewith, the delivery end of said chute being aligned with said cavity; and a label-feeding arm pivotally mounted on said supporting plate and having a pivoted label-engaging portion movable in said chute for feeding a label into said cavity.

10. In a group stitching machine, in combination, a frame including a work-supporting arm; an overhanging bracket-arm terminating in a head; and a face-plate secured to said head; a supporting plate secured to said face-plate; a work-holder carried by said work-supporting arm and having a vertically movable work-pressing member having a label-receiving cavity; vertically movable label-feeding means including a label-guiding chute mounted on said supporting plate and having its delivery end aligned with said cavity, said delivery end overlying said work-pressing member and movable vertically therewith; a gravity actuated label-feeding arm pivotally mounted on said supporting plate and having a pivoted foot slidably engaging the inner surface of said chute and a label therein; latch means engaging said label-feeding arm to hold it in a retracted position; and means actuated by a movement of a portion of said work-holder to trip said latch means to permit said label-feeding arm to swing downwardly to inject a label into said cavity.

11. A group stitching machine as set forth in claim 10 in which means is provided for automatically raising said label-feeding arm during a label sewing operation and engaging it with said latch to cause the latch to retain the arm in a retracted elevated position.

12. In a label sewing machine, in combination, a work-supporting member; a spring-depressed work-presser member having a shank and a foot portion overlying a workpiece on said work-supporting member and provided with a label-receiving cavity; a vertically movable spring-depressed label-presser member having a shank and a foot

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portion overlying a label in said cavity; means for raising said label-presser member; a latch carried by the shank of said label-presser member; a finger carried by the shank of said work-presser member; means normally biasing said latch to a position in which a portion thereof lies beneath said finger; means to raise said label-presser member to cause said latch to engage said finger and raise said work-presser member simultaneously therewith; and a cam engaging said latch in its upward movement to shift said latch from beneath said finger to permit said work-presser member to descend independently of said label-presser member.

13. In a label sewing machine, in combination, a work-holder having a label-receiving cavity; a label feeding means including a label-guiding chute and a pivoted label-feeding arm having a portion movable in said chute; latch means for holding said label-feeding arm in a retracted position; a vertically movable label presser-foot; and means actuated by the downward movement of said label presser-foot for tripping said latch to permit said label-feeding arm to move to an advanced position to inject a label into said label-receiving cavity.

14. In a label sewing machine having a frame, in combination, a work-holder; a label-holder associated therewith and including a label-receiving cavity and a vertically movable label presser foot; means for feeding a label into said label-holder, comprising a vertically disposed supporting plate carried by said frame; a label-guiding chute mounted for vertical movement on one face of said plate and normally aligned with said label-holder; a label-feeding arm pivotally mounted on said plate at that face thereof adjacent said chute and having a portion movable through said chute to inject a label into said label-holder; means actuated during a label sewing operation to shift said label-feeding arm to a retracted elevated position; a spring latch engaging said arm to hold it in said retracted position; and means actuated by a movement of said label presser foot preparatory to the next sewing operation to release said latch to permit said arm to move about its pivot to inject a label into said label holder.

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REFERENCES CITED

The following references are of record in the file of this patent:

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