

[54] METHOD AND APPARATUS FOR CUTTING AND HEMMING CLOTH LENGTHS

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[22] Filed: June 5, 1970
[21] Appl. No.: 43,756

[52] U.S. CL.....112/121.29, 271/74, 270/69, 112/147, 112/DIG. 2
[51] Int. Cl.....D05b 33/00, D05b 35/08
[58] Field of Search112/121.29, 121.11, 121.12, 112/121.15, 10, 203, 262, 147, 141; 270/69, 61, 66, 86; 271/74; 214/1 AB, 1 BB, 1 BC, 1 BD, 1 BT, 1 BV, 1 BE; 93/84; 156/443, 444, 204

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[57] ABSTRACT

A method and apparatus for cutting and hemming cloth lengths wherein a continuous supply of cloth is fed along a first path to a cutting and transfer station, a predetermined length of cloth is cut from the supply and transferred to a second path extending approximately at a right angle to the first path, a first cut end of the cloth length is hemmed, the cloth length is folded across its length so that its second cut end overlaps the hemmed end, and the second cut end is hemmed.

10 Claims, 3 Drawing Figures

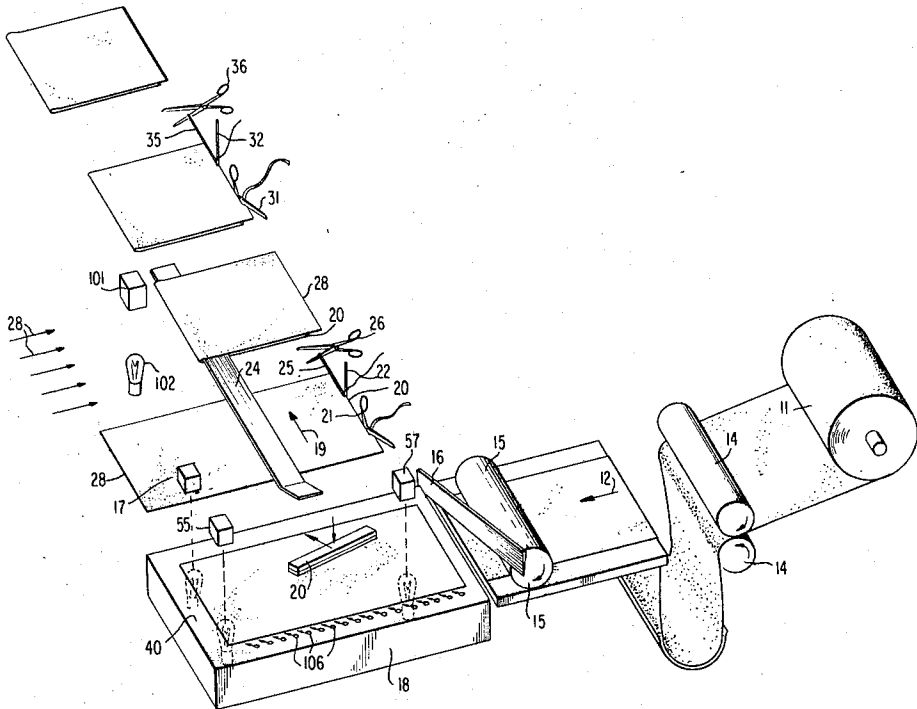
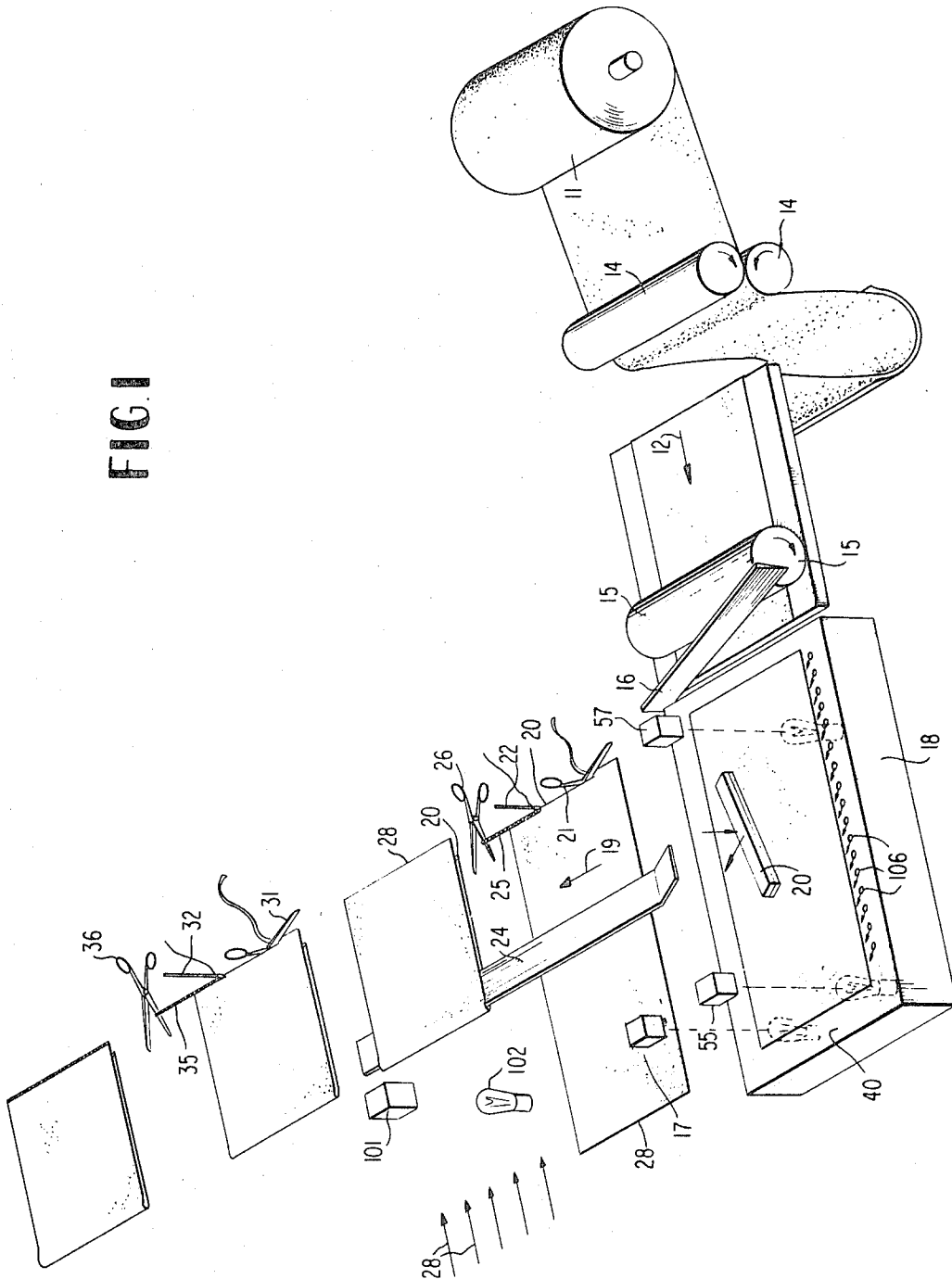


FIG. 1



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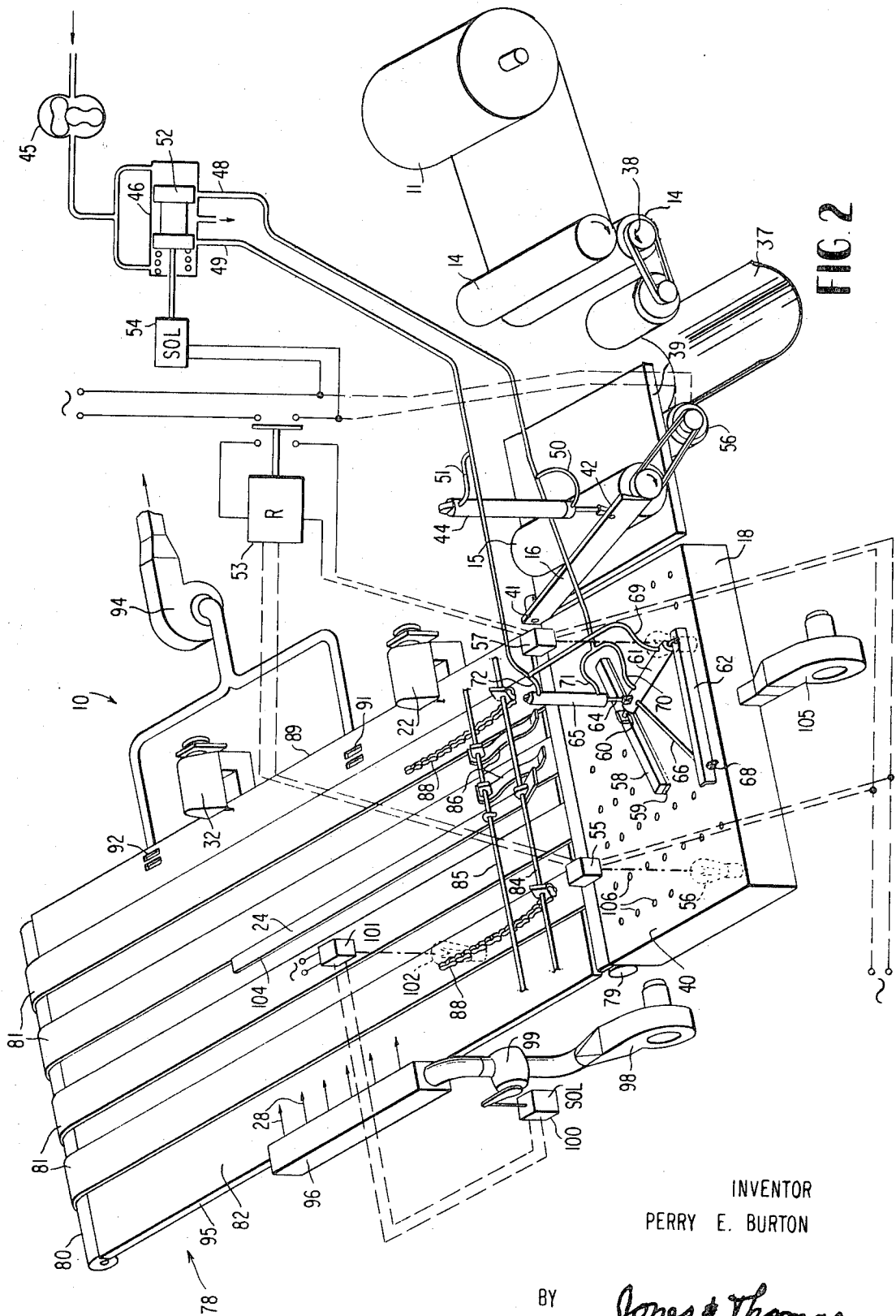
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PATENTED FEB 8 1972

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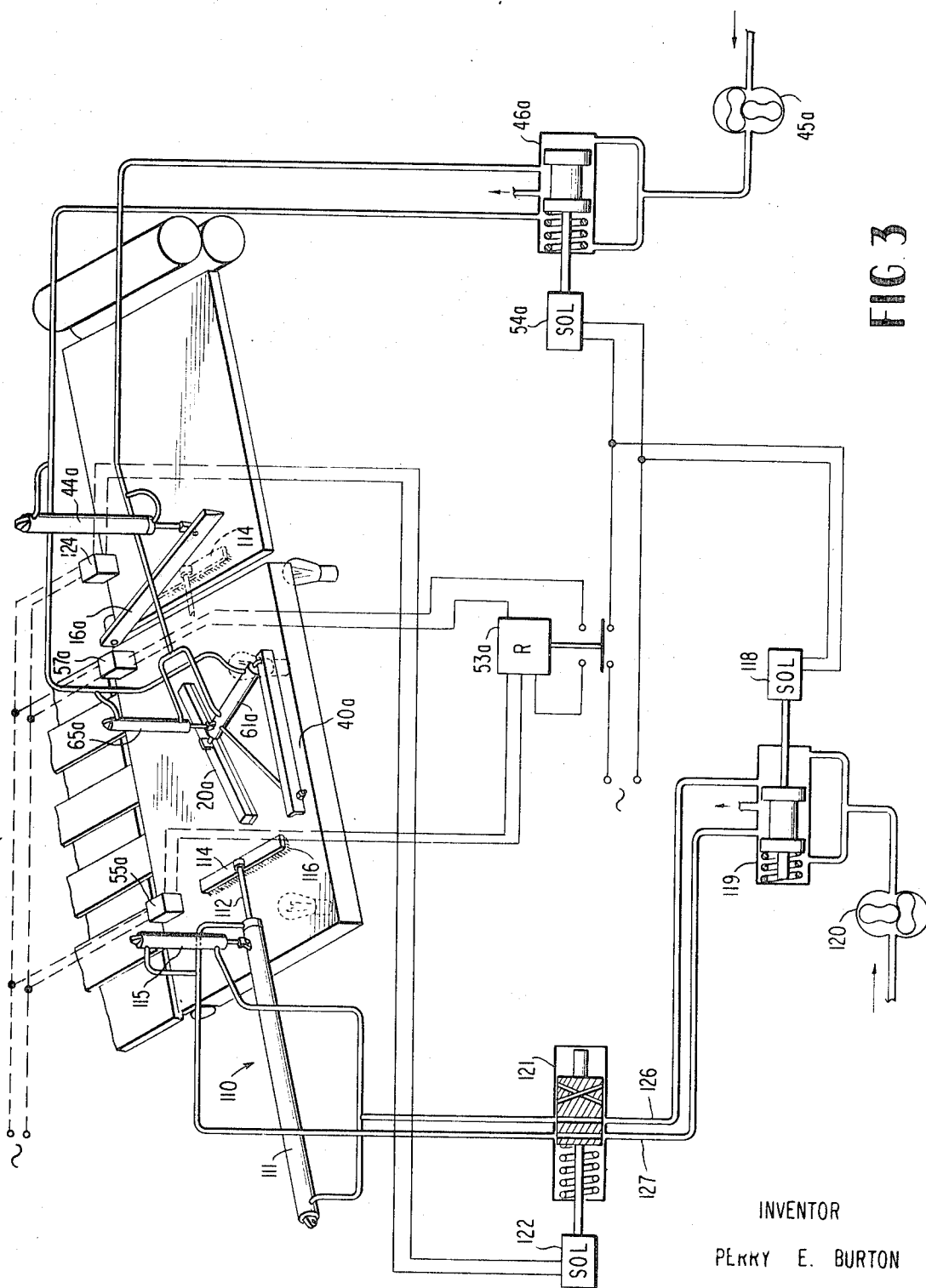
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METHOD AND APPARATUS FOR CUTTING AND HEMMING CLOTH LENGTHS

BACKGROUND OF THE INVENTION

In the manufacture of cloth lengths, such as towels, diapers, wiping rags, etc., the cloth lengths are usually manufactured by cutting lengths of cloth from a substantially continuous supply of the cloth and the cut ends of the cloth lengths are hemmed to prevent the ends from raveling. In the past, the cloth lengths were processed through a sewing machine by hand with the operator guiding the cut ends of the cloth lengths through the machine. While some automated machinery has been developed to relieve the machine operators from continuous and close observation and control of the machines used for hemming the cloth lengths, it has usually been necessary for the cut lengths of cloth to be cut, accumulated in a stack, and then fed into a sewing machine in separate steps, which requires the manual handling of the cloth lengths between and during the separate steps.

SUMMARY OF THE INVENTION

Briefly described the present invention comprises a method and apparatus for cutting and hemming lengths of cloth from a substantially continuous supply of cloth in a continuous unbroken mechanical process without requiring the manual handling of the cloth lengths between the steps of cutting and hemming. The cloth lengths are cut from the continuous supply of cloth and moved at a right angle with respect to the length of the continuous supply without changing the attitude of the cloth lengths so that the cloth lengths move in a path parallel to the cut ends. This direction of movement facilitates the step of hemming the cut ends as they are continuously moved through this path. Moreover, in order that only "right handed" hemming machines be utilized to hem both cut ends of the cloth lengths, one cut end is hemmed as the cloth lengths move through their path, the other cut end is folded across the hemmed end, and the other cut end is hemmed by the second machine which is a duplicate of the first machine.

Thus, it is an object of this invention to provide a method and apparatus for cutting and hemming the cut ends of lengths of cloth in a continuous process.

Another object of this invention is to provide an inexpensive, durable and versatile apparatus for rapidly and accurately cutting and hemming the cut ends of cloth lengths.

Other objects, features and advantages of the present invention will become apparent upon reading the following specification, when taken into conjunction with the accompanying drawing.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a schematic illustration of the process of cutting and hemming lengths of cloth from a continuous supply of cloth.

FIG. 2 is a schematic representation of the apparatus utilized in the process of cutting and hemming the cut ends of lengths of cloth from a continuous supply of cloth.

FIG. 3 is a schematic representation of an alternate form of the apparatus shown in FIG. 2.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now in more detail to the drawing, in which like numerals indicate like parts throughout the several views, FIG. 2 shows cloth cutting and hemming apparatus 10 which is to perform the process disclosed in FIG. 1. As is illustrated in FIG. 1, a continuous supply of cloth is taken from a supply source such as a large reel 11 and moved through a first path 12 by pull rollers 14 and by feed roller 15 beneath cutting means, such as shear knife 16, onto a cutting table or transfer table 18. The lengths of cloth fed to transfer table 18 are cut by shear knife 16 and moved toward a second path of travel 19 by transfer means, such as transfer arm 20, onto a conveyor without changing the attitude of the cloth lengths. As the cloth

lengths 17 are moved along the second path 19, a first cut end or edge 20 of the cloth length is trimmed by a first trimming means 21 which is a part of a sewing machine 22, and hemmed by the first sewing machine 22. In the meantime, the center portions of the cloth lengths 17 pass beneath folding rod 24.

As the cloth lengths 17 leave sewing machine 22, the chain of stitching 25 extending back from end 20 is cut by chain cutting means 26. Also, a stream of air intermittently blows across path 19 and flips the other cut end 28 of the lengths of cloth 17 over folding rod 24. The spacing of folding rod 24 with respect to the path 19 and the cloth lengths is such that the cut ends 28 will be moved beyond their cut ends 20 in an overlapping relationship and will be exposed for trimming and hemming. The cloth lengths 17 move off the end of folding rod 24 and are trimmed and hemmed by second trimming means 31 and second sewing machine 32. The chain stitching 35 is cut by chain cutting means 36.

As is illustrated in FIG. 2, pull rollers 14 grip the continuous supply of cloth extending from reel 11 and rotate in the direction indicated by arrows 38 to move the continuous supply of cloth around pivotable J-shaped feed tray 37 and onto feed table 39. Feed roller 15 continues the movement of the continuous supply of cloth across the table 39 and onto the transfer platform 40 of transfer table 18. As the supply of cloth passes from feed roller 15 to transfer platform 40, it passes beneath the blade of shear knife 16 which is pivotally held at one end 41 by a fulcrum and is driven at its other end 42 by means of pneumatic cutting ram 44.

A source of pressurized air 45 communicates with pneumatic cutting ram 44 through control valve 46 and conduits 48, 49, 50 and 51. When valve spool 52 is moved to the left (FIG. 2), the source of pressurized air 45 flows through conduits 48 and 50 to retract pneumatic cutting ram 44 and shear knife 16, while conduits 51 and 49 are opened to the atmosphere through the valve housing. When the valve spool 52 is shifted in the other direction, the source of pressurized air 45 communicates through conduits 49 and 51 to extend pneumatic cutting ram 44 and move shear knife 16 in a downward direction to cut a length of cloth, while conduits 50 and 48 are opened to the atmosphere through the valve housing.

Valve 46 is controlled by solenoid 54 and solenoid 54 is controlled by electric eyes 55 and 57 which respond to the presence or absence of light. Electric eyes 55 and 57 are spaced above or below the surface of transfer platform 40 while the light sources are placed on the opposite side of the platform from the electric eyes. Transfer platform 40 is translucent and can be fabricated from various glass or plastic substances, such as plexiglass, to allow the light emanated from the light sources to be received in electric eyes 55 and 57 so that the electric eyes function to control the movements of the apparatus as will be more fully described hereinafter.

Transfer arm 20 comprises an upper rigid arm 58 and a lower resilient strip or insert 59. Insert 59 can be fabricated from various pliable and flexible materials such as neoprene, sponge rubber, hard rubber, or the various other rubber and plastic substances. Transfer arm 20 is connected to the rod 60 of transfer ram 61. Transfer ram 61 is connected at its base end to rigid support member 62 in such a manner that it is free to move, at least to a limited extent, horizontally across and transfer platform 40 and toward and away from transfer platform 40. The other end of transfer ram 61 is supported and moved upwardly and downwardly by the rod 64 of engaging ram 65. Adjusting arm 66 forms a triangle between rigid support member 62 and transfer ram 61 and the adjusting nuts 68 are effective to alter the length of adjusting arm 66 so as to pivot transfer ram 61 about its base end and adjust the direction of movement of its rod 60 and transfer arm 20 across transfer platform 40. Normally, transfer ram 61 will be adjusted to move transfer arm 20 in a direction which is approximately 60° from the direction of movement of the cloth in path 12.

Transfer ram 61 and engaging ram 65 are connected by means of conduits 69 and 70 and 71 and 72 to conduits 48 and

49 of valve 46. When valve spool 52 is moved by means of solenoid 54 to the left, (FIG. 2), the source of air pressure 45 flows through conduits 48, 70 and 71 to lift and retract transfer arm 19. In the meantime, conduits 49, 69 and 72 are opened to the atmosphere through valve housing 46. When solenoid 54 is deenergized the spring in valve housing 46 shifts valve spool 56 to the right (FIG. 2) so that the source of air pressure 45 communicates through conduits 49, 69, and 72 to move transfer arm 20 down into engagement with transfer platform 40 and to extend the transfer arm which causes it to move across transfer platform 40.

Solenoid 54 and valve spool 52 function in response to electric eyes 55 and 57. As the leading end of the continuous supply of cloth is fed from reel 11 onto transfer platform 40, the cloth first blocks the light to electric eye 57 and subsequently blocks the light to electric eye 55. When electric eye 57 is first blocked, its circuit to relay 53 is open, so that it does not cause a function in the system. When the light to electric eye 55 is subsequently blocked, it energizes relay 53 to open the circuit made to feed roll motor 56 and solenoid 54. This terminates the operation of motor 56 and causes solenoid 54 to shift valve spool 52 to the left (FIG. 2), so that shear knife 16 functions to cut the cloth and transfer arm 20 moves down into engagement with the cut length of cloth and moves the cut length across transfer platform 40. When the contact of relay 53 is lifted, it closes the circuit between electric eye 57 and relay 53 to form a holding circuit. When transfer arm 20 moves the cut length of cloth across transfer platform 40, electric eye 55 will again be exposed to light, so that its circuit to relay 53 is opened; however, the holding circuit made through electric eye 57 with relay 53 keeps the relay contact open to motor 56 and solenoid 54 until transfer arm 20 moves the cloth far enough to expose electric eye 57 to its light source. When electric eye 57 is exposed in this manner, its circuit to relay 53 is opened which allows the relay contact to drop and close the circuit to motor 56 and solenoid 54, which starts the motor and shifts valve 46 to retract shear knife 16 and transfer arm 20.

The positions of electric eyes 55 and 57 are adjustable so that the length of the cloth fed from shear knife 16 across transfer platform 40 can be varied, and so that the distance of the positive lateral movement or transfer of the cloth across transfer platform 40 can be varied and the feed and cutting of the apparatus will begin during the next cycle of the apparatus only after electric eye 57 has been cleared.

Conveyor 78 is arranged to move the cloth lengths in the path 29 which is at right angle to path 12, and comprises a pair of rollers 79 and 80 which are arranged to move a plurality of conveyor belts 81 across work table 82. A pair of support bars 84 and 85 are suspended above work table 82 at a position close to transfer table 18, and a plurality of cloth length guides 86 and 88 are suspended from support bars 84 and 85. Cloth length guides 86 comprise rigid straps that are pivotally supported by support bar 85 and extended back toward transfer table 18 and allowed to pivot down into engagement with the conveyor belts. The ends of the guides 86 are turned upwardly so that the cloth lengths being moved from transfer table 18 onto conveyor 78 tend to move beneath guides 86 and are gently urged into positive contact with the conveyor belts 81. Guides 88 are connected to support bar 84 and comprise roller chains having enlarged rollers that are allowed to contact conveyor belts 81. The arrangement is such that the cloth lengths will naturally tend to pass between guides 88 and their corresponding conveyor belts 81, and the cloth lengths will also be gently urged into positive contact with the conveyor belts. Thus, guides 86 and 88 function to cause conveyor belts 81 to gently but positively grip the cloth lengths as they are moved from transfer table 18.

First and second sewing machines 22 and 32 are located at the right edge 89 of work table 82, with sewing machine 32 being displaced behind sewing machine 22. Sewing machines 22 and 32 also include first and second trimming means 21 and 31 (not shown in FIG. 2).

Chain cutting means 26 and 36 (FIG. 1) are located beneath slots 91 and 92 in work table 82, and the cutting mechanisms (not shown) tend to cut the chainstitching that drops into the slots. In order to induce the chainstitching to drop into the slots, the slots are connected to the inlet of a fan, such as fan 94. Slots 91 and 92 are sized, positioned, and shaped to receive the chainstitching and to reject the cloth lengths. The cutting mechanism utilized beneath slots 91 and 92 can be of various different conventional constructions such as a high-speed rotary blade mounted on a rotatable drum that cuts by impact or by scissors action. The chainstitching cut by the cutting mechanism will be induced to flow through slots 91 and 92 and toward blower 94, where this material is accumulated and periodically discharged by means of a collecting bag (not shown).

Blower header 96 is positioned along left edge 95 of work table 82 and defines an opening or a plurality of openings directed across work table 82. Fan 98 is connected to header 96 through valve 99 and valve 99 is controlled by solenoid 100. Solenoid 100 functions in response to electric eye 101 and light source 102. When electric eye 101 detects the presence of a cloth length on conveyor 78 by the blockage of light from light source 102, solenoid 100 is energized to open the valve 99 and allow fan 98 to pressurize header 96. This results in a stream or flow of air 28 from header 96 across work table 82.

Folding rod 24 is mounted generally centrally of the width of work table 82 and is supported in cantilever fashion by support bars 84 and 85 so that it is suspended above work table 82 and extends along path 19. The cloth lengths moving along path 19 will pass beneath folding rod 24 and the airstream 28 from header 96 will tend to flip the end of the cloth lengths between header 96 and folding rod 24 over folding rod 24. The position of folding rod 24 will be carefully maintained so that its edge 104 is positioned slightly to the right of the center of the cloth lengths, so that the flipping or folding movement created by airstream 28 and folding rod 24 will result in the cut ends 28 of the cloth lengths being positioned beyond the cut ends 20. With this arrangement, cut ends 20 will be passed through first sewing machine 22 and cut ends 28 will be passed through second sewing machine 32 which is displaced behind sewing machine 22. Thus, second sewing machine 32 will function to hem cut ends 28 without making contact with cut ends 20.

Transfer table 18 includes an air plenum chamber beneath transfer platform 40 and fan 105 tends to pressurize the plenum chamber. A plurality of spaced openings 106 are defined in transfer platform 40. Spaced openings 106 are angled or sloped in the direction of path 12, which is generally away from feed roller 15 and shear knife 16 and at right angles to path 19 of conveyor 78. The angle of openings 106 is approximately 30° from the vertical and the air from the plenum chamber of transfer table 18 is moved gently through openings 106 in a direction that tends to lift the cloth from transfer platform 40 and move the cloth in the direction of path 12, thus tending to stretch the cloth away from feed roller 15 along path 12. This causes the leading end of the cloth to move along path 12 from feed roller 15 beneath shear knife 16 and over transfer table 18 toward electric eye 55, in spite of the absence of any positive drive mechanisms beyond feed roller 15. Thus, the cloth will move properly along path 12 between each cycle of shear knife 16 and transfer arm 20.

While electric eyes 55 and 57 have been disclosed as being in control of the movement of transfer arm 20, shear knife 16 and feed roller 15, it should be obvious that individual electric eyes can be utilized to control the functions of each of the various components. Moreover, while a single air pressure source 45 has been disclosed as communicating through a single valve 46 to control all of the rams 44, 61 and 65, various other flow arrangements can be utilized so that these rams are independently controlled with respect to each other. Also, while motor 56 is disclosed as a belt drive mechanism controlling the movements of feed roller 15, obviously similar

drive mechanisms can be utilized for pull rollers 14 and the drive mechanisms can be driven in response to other control means, such as by a weight pan for pull rollers 14 and by a measuring wheel or other device for feed roller 15. Moreover, while electric eyes 55, 57 and 101 have been disclosed as the sensing means for determining the presence or absence of a cloth length on transfer table 18 and on conveyor 78, it will be obvious to those skilled in the art that various other sensing mechanisms can be utilized, such as microswitches, airflow detectors, measuring wheels, etc. Also, while a single header 96 has been disclosed to create the desired airstream 28 that flips or folds the cloth lengths, various other and different airflow arrangements can be utilized as may be desired.

While FIG. 2 discloses feeding the cloth lengths onto transfer table 18 with feed roller 15 and with the use of the air streams flowing through the openings 106 in the transfer platform 40, FIG. 3 discloses an alternate feeding mechanism. Feed brush 110 includes pneumatic cylinder 111, brush rod 112 and brush 114. Brush rod 112 and pneumatic cylinder 111 are long enough so that brush 114 can reach from its retracted full-line position to the extended position shown in dashed lines, which is just beyond shear knife 16a. Transfer platform 40a is constructed without the air openings shown in FIG. 2 so that a smooth top surface is presented for brush 114 and the cloth to slide over. While pneumatic cylinder 111 functions as a transfer ram, upright pneumatic cylinder functions as an engaging ram so that the movement of brush 114 with respect to transfer platform 40a is somewhat similar to the movement of transfer arm 20a, previously described. Brush 114 is maintained out of engagement with transfer platform 40a by engaging ram 115 as the brush is extended toward its dashed-line position. When the brush reaches its dashed-line position, engaging ram 115 lowers the brush so that its bristles 116 impale and otherwise engage the leading edge of the continuous length of cloth, and transfer ram 111 reverses and begins to pull brush 114 across transfer platform 40a. The bristles 116 of brush 114 will normally be angled so as to extend from the brush generally in a downward direction and inclined in the direction extending back toward transfer ram 111 so as to tightly grasp the continuous length of cloth at its leading edge. When brush 114 reaches its retracted position, transfer ram 111 will terminate its movement and engaging ram 115 will lift brush 114 out of engagement with the cloth.

The schematic electrical and pneumatic illustration of FIG. 3 illustrates that the same basic circuitry and flow arrangement is utilized to operate pneumatic cutting ram 44a and the rams 61a and 65a of transfer arm 20a. The motor or clutch mechanism and feed roll of FIG. 2 are replaced with feed brush 110 of FIG. 3, and solenoid 118 is placed in the circuitry so as to be responsive electric eyes 55a and 57a. Solenoid 118 operates air control valve 119 which regulates the flow of air from air source 120. Reversing valve 121 is controlled by its solenoid 122 which is responsive to electric eye 124 which is placed closely adjacent shear knife 16a. Electric eye 124 senses the presence of brush 114 as it moves beneath shear blade 16a, and continues in its sensing function as the brush draws the cloth across transfer platform 40a until shear knife 16a cuts the cloth.

The arrangement of the circuitry and flow system of FIG. 3 is such that when electric eyes 55a and 57a and 124 see light, relay 53a closes its switch and energizes solenoids 54a and 118. Solenoid 54a shifts its valve 46a so that air from source 45a flows to the bottom of cutting ram 44a, to the bottom of engaging ram 65a, and to the front of transfer ram 61a. This causes shear knife 16a and transfer arm 20a to be retracted.

Solenoid 118 causes its valve 119 to shift so that the flow of air from source 120 will pass through conduit 126 and reversing valve 121 to the rear of transfer ram 111 and to the lower end of engaging ram 115. The system will stay in this configuration until electric eye 124 is blocked from its light source by the presence of brush 114 reaching beneath shear knife 16a, whereupon solenoid 122 functions to shift reversing valve 121. This causes the air from source 120 and valve 119

to be diverted to the upper end of engaging ram 115 and to the forward end of transfer ram 111, which causes brush 114 to move down into engagement with the cloth and begin to drag the cloth across transfer platform 40a. When brush 114 moves the cloth in this manner, the cloth will continue to block the light from electric eye 124 so that the movement of brush 114 will continue. If the brush 114 should fail to properly engage the cloth, electric eye 124 will again be exposed and operate its solenoid 122 and shift reversing valve 121 to reverse the movements of engaging ram 115 and transfer ram 111 to attempt to obtain a better grip of the cloth.

As brush 114 carries the cloth across transfer platform 40a the electric eye 57a will be blocked from its light source; however, the blocking of electric eye 57a will have no effect in the system since the contact of relay 53a is down and maintains the circuit from electric eye 57a open. As brush 114 reaches electric eye 55a, relay 53a will be operated to lift its contact from the circuits made to solenoids 54a and 118, which deactivates these solenoids, and to close the circuit from electric eye 57a. When solenoid 54a is deenergized, the spring of control valve 46a functions to shift the valve so that the air flowing from source 45a functions to actuate cutting ram 44a, engaging ram 65a and transfer ram 61a. Thus, shear knife 16a functions to cut a length of cloth from the continuous supply of cloth and transfer arm 20a is moved down into engagement with the cut length of cloth and pushes the cloth onto the conveyor. Since the initial movement of transfer arm of 20a will tend to uncover electric eye 55a, the circuit from electric eye 55a to relay 53a will be open; however, the circuit from electric eye 57a functions as a holding circuit to maintain the contact of relay 53a in its upper position until the cloth length is moved substantially off transfer platform 40a whereupon electric eye 57a is again exposed and functions to drop relay 53a and reenergize solenoids 54a and 118 to begin the next cycle of operation. In the meantime, however, when solenoid 118 is deenergized by the operation of relay 53a, valve 119 is shifted so that the air source 120 still communicate with conduit 127. Since reversing valve 121 had already been reversed by the blockage of light to electric eye 124, the air would tend to flow to the rear of transfer ram 111 and to the lower end of engaging ram 115, to begin the next cycle of feed brush 110; however, when shear knife 16a makes its cut, electric eye 124 is almost immediately exposed to its light source, which causes reversing valve 121 to shift back to the position as illustrated, so that the air flowing from source 120 communicates with the forward end of transfer ram 111 and the lower end of engaging ram 115 to maintain brush 114 elevated and retracted, and waiting for the cloth to be transferred off of transfer platform 40a. Of course, when the cloth is removed from transfer platform 40a to expose electric eye 57a, relay 53a will be dropped to start the next cycle of operation.

The embodiment of the invention shown in FIG. 3 is arranged so that tension is applied to the cloth as it is moved onto transfer platform 40a and any creases or folds that extend transversely across the length of cloth will be stretched open, and a true length of the cloth will be measured from shear knife 16 to the point where electric eye 55a is blocked. By contrast, the embodiment of the invention illustrated in FIG. 2 allows the lateral creases of the cloth to be generally undisturbed by the feeding of the cloth across the transfer platform.

As is set forth with respect to FIG. 2, it will be understood that the various electric eyes, the electrical circuitry and pneumatic flow arrangement can be altered and the identical or similar function can be achieved.

While the inventions are disclosed as functioning to hem the ends of cut lengths of cloth, it should be understood that various other edge-treating means can be utilized for treating the cut ends. For instance, the cut ends can be coated with a liquid substance, such as a thermosetting liquid, solvent liquid nylon, a resin, or any suitable liquid which has properties compatible with the use to which the cloth lengths are to be used. Moreover, any conventional liquid applicator means can be

used to apply the liquid to the cut ends of the cloth lengths, such as rotatable grooved wiping wheels, spray devices, etc., which would be substituted for the sewing machines 22 and 32.

While this invention has been described in detail with particular reference to preferred embodiments thereof, it will be understood that variations and modifications can be effected within the spirit and scope of the invention as described hereinbefore and as defined in the appended claims.

I claim:

1. Apparatus for fabricating lengths of cloth from a continuous supply of cloth comprising a transfer platform, feed means for feeding the end of the continuous supply of cloth in a first direction onto said transfer platform, sensing means for determining when a predetermined length of cloth has been fed onto said transfer platform, cutting means responsive to said sensing means for cutting the length of cloth on said transfer platform from the supply of cloth, conveyor means for moving the length of cloth in a second direction generally normal to the first direction, transfer means responsive to said sensing means for engaging the cut length of cloth and urging the cut length of cloth from said transfer platform toward said conveyor means, first edge-treating means positioned adjacent one side of said conveyor means for treating one cut edge of the cut length of cloth as the cut length of cloth moves in the second direction, folding means for folding the other cut edge of the cut length of cloth across the length of the cut length of cloth as the cut length of cloth continues to move the second direction, and second edge-treating means positioned adjacent said one side of said conveyor means for treating the other cut edge of the cut length of cloth as the cut length of cloth continues to move in the second direction.

2. The apparatus of claim 1 and wherein said transfer platform defines a plurality of spaced openings through its surface and means for flowing air upwardly through said openings.

3 The apparatus of claim 1 and wherein said transfer means comprises a cloth-engaging member, first pneumatic cylinder means for moving said cloth-engaging member in a downward direction toward said transfer platform into engagement with a length of cloth on said transfer platform, second pneumatic cylinder means for urging said cloth-engaging means across said transfer platform toward said conveyor means, and means for adjusting the position of said second pneumatic cylinder means with respect to said platform.

4. The apparatus of claim 1 and wherein said folding means comprises a folding rod supported in a cantilever arrangement with its free end extending above and in the direction of movement of said conveyor means, and an air blower arranged to blow air generally across said conveyor means and flip the

other cut edge of the cloth across said folding rod.

5. The apparatus of claim 1 and wherein said first and second edge-treating means comprise hemming means constructed and arranged to form a thread chain between the edges of the cut length of cloth, and further comprising cutting means along the said one side of said conveyor means for cutting the thread chains.

6. A method of hemming or otherwise treating cut ends of cloth lengths comprising moving flat unfolded cloth lengths in series through a horizontal path with the cut ends of the cloth lengths extending along the direction of the path, sequentially treating one cut end of each cloth length as it moves along its path, folding more than one-half the length of each cloth length across its length to position its untreated cut end beyond the treated cut end, and treating the other cut end of each cloth length.

7. The method of claim 6 and wherein the step of folding the cloth lengths comprises passing the cloth length beneath a cantilever folding rod, urging the other cut end of the cloth length over the folding rod with a flow of air, and passing the length of cloth off the end of the folding bar.

8. A continuous method of fabricating lengths of cloth from a continuous supply of cloth comprising feeding a generally continuous length of cloth from a supply along a first path, continually cutting predetermined lengths of the cloth away from the continuous length of cloth as the cloth moves along the first path, moving the cut lengths of cloth along a second path approximately normal to the first path without changing the attitude of the lengths of cloth, hemming one of the cut ends of each length of cloth as each length of cloth moves along the second path, folding each length of cloth so that its other cut end extends beyond its hemmed end, and hemming the second cut end of each length of cloth.

9. The method of claim 8 and wherein the step of feeding the generally continuous length of cloth from a supply along a first path comprises feeding the leading end of the continuous length of cloth past a cutting device until a predetermined length of the cloth has been moved past the cutting device, and terminating the feeding of the continuous length of cloth until the step of cutting the cloth has occurred and the step of moving the predetermined length of cloth along the second path has begun.

10. The method of claim 8 and wherein the step of moving each length of cloth along a second path is initiated by engaging the top surface of each length of cloth with a cloth-engaging member and urging the lengths of cloth in a direction transverse with respect to the direction of movement of the first path.

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