

Aug. 1, 1967

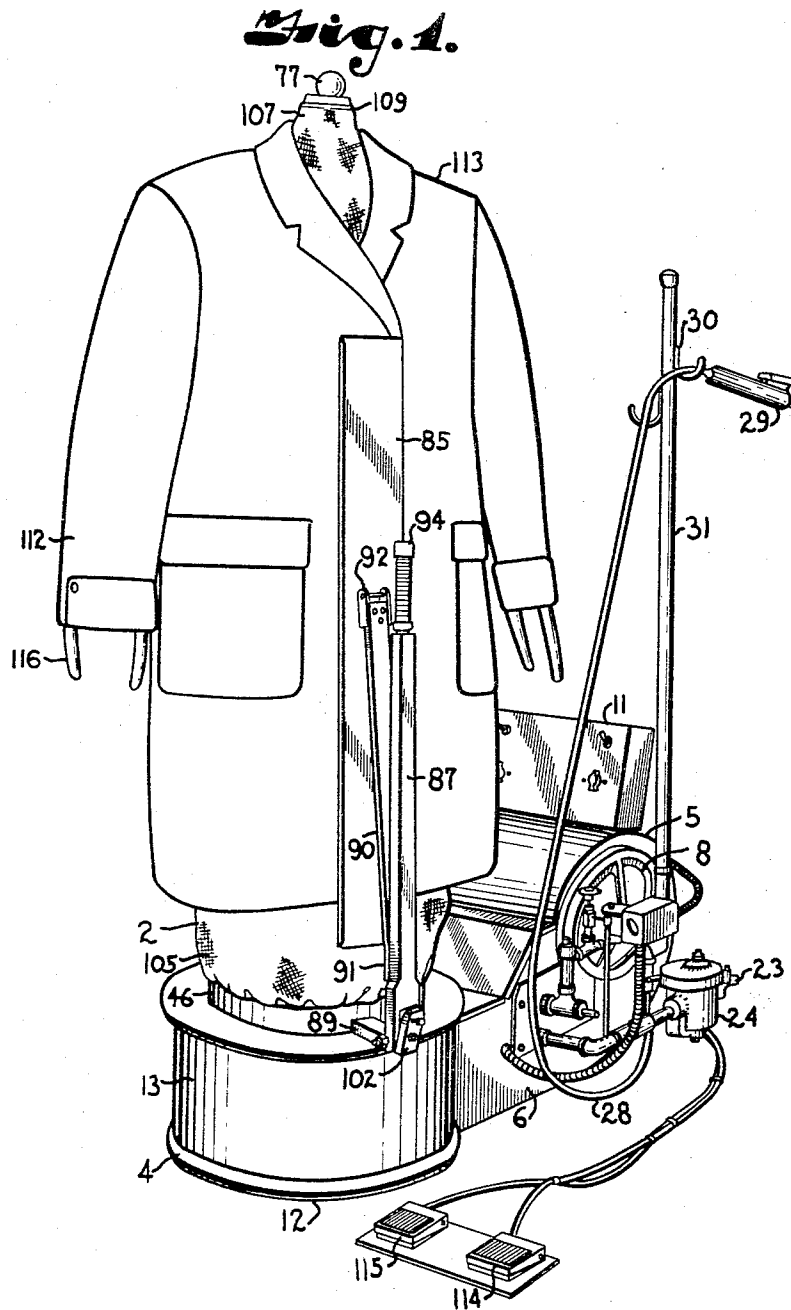
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3,333,747

GARMENT FINISHING APPARATUS

Filed April 19, 1965

3 Sheets-Sheet 1



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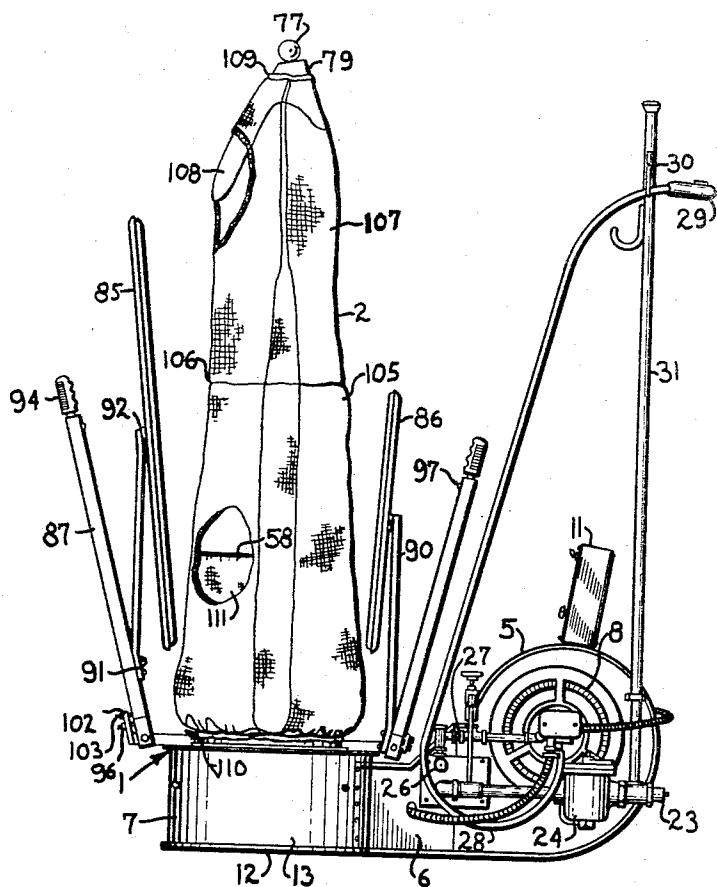
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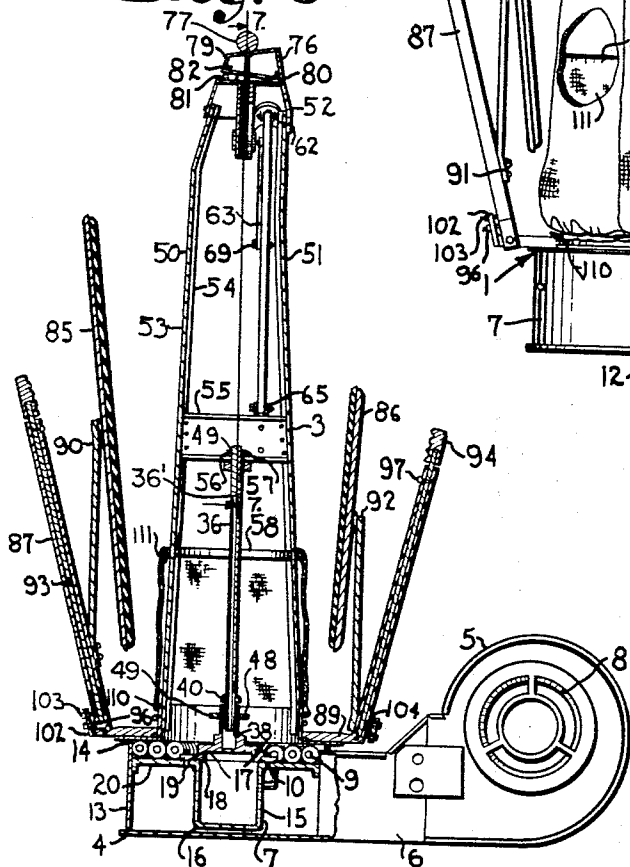
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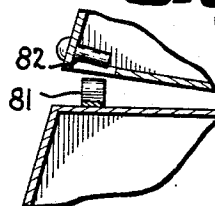
*Fig. 2.*



*Fig. 3*



*Fig. 4.*



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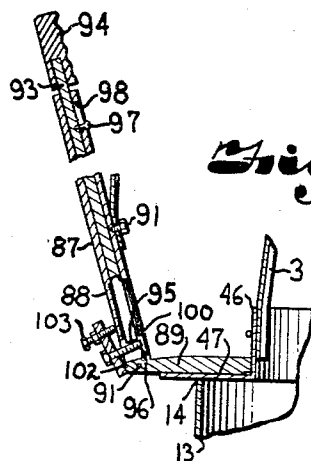
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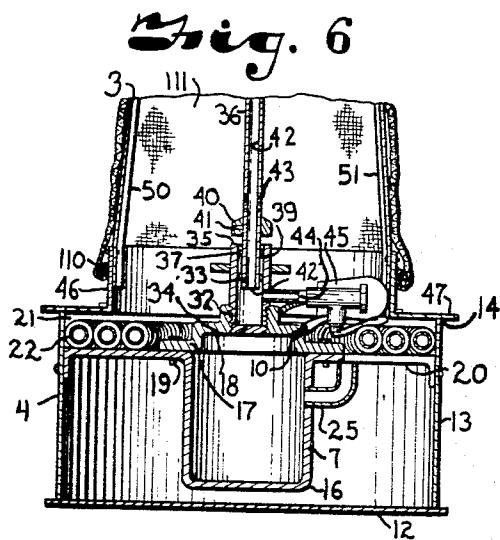
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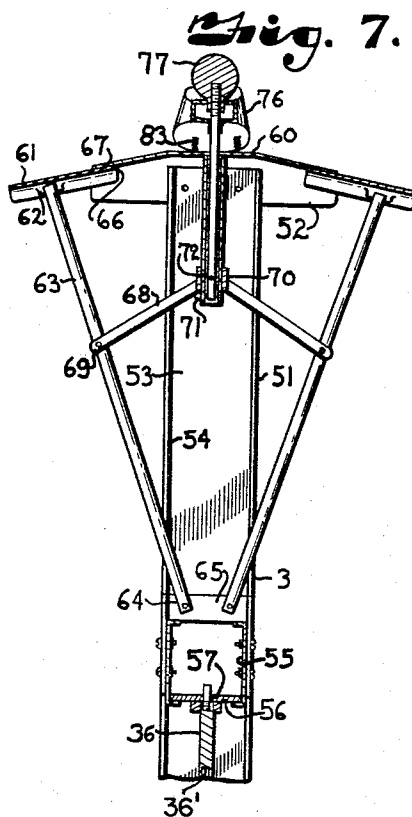
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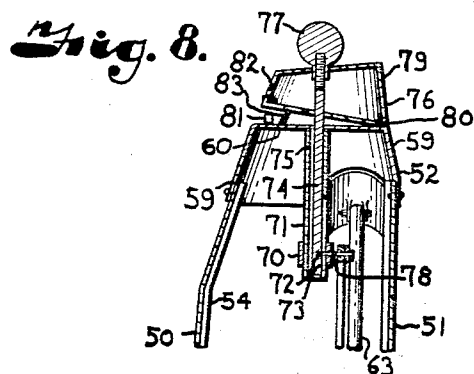
*Fig. 5.*



*Fig. 6.*



*Fig. 7.*



*Fig. 8.*

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## GARMENT FINISHING APPARATUS

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11 Claims. (Cl. 223—70)

This invention relates to garment finishing apparatus, and more particularly to an apparatus wherein air, steam and air and steam are discharged inside of a garment in the shaping and forming of the garment.

The principal objects of the present invention are to provide an apparatus with a support over which a garment is draped with a distributor positioned therein for delivery and distribution of fluid pressure within the garment to form and shape same by said fluid; to provide such a structure in the form of a machine having a skeleton frame upon which a flexible bag or form is mounted wherein said bag is substantially non-expandible with areas of different permeability whereby fluid discharged therein is selectively distributed in a garment draped thereover; to provide such a structure wherein the skeleton frame is rotatably mounted on a base having a high volume fluid supply for discharging upwardly from the base into the bag on the frame; to provide such a structure with heating means located in the base below the frame for heating the fluid as it passes therethrough; to provide such a structure wherein the fluid is air and the heating means is by finned steam coils; to provide such a structure with a steam separator-receiver and delivery nozzle selectively connected thereto for directing substantially condensation-free steam upwardly and outwardly from a central location adjacent the lower end of the bag whereby the steam induces a flow of air for mixing therewith; to provide such an apparatus with easily actuated positive garment clamps and backing members for holding the front and back of a garment being finished; to provide such an apparatus with a collar form adapted to apply pressure rearwardly on the collar or neck portion of the garment being finished; and to provide a garment finishing apparatus that is economical to manufacture, efficient in operation for garments of various sizes and shapes wherein the forming and shaping is performed by fluid pressure, heat and steam.

Other objects and advantages of this invention will become apparent from the following description taken in connection with the accompanying drawings wherein are set forth by way of illustration and example certain embodiments of this invention.

FIG. 1 is a perspective view of a garment finishing apparatus embodying the features of the present invention and having a garment positioned thereon.

FIG. 2 is a side elevational view of a garment finishing apparatus, the bag thereon, with portions broken away to illustrate structure under the bag.

FIG. 3 is a side elevational view of the apparatus as shown in FIG. 2, parts being broken away and in section to reveal details of construction.

FIG. 4 is an enlarged detail section through the latch of the collar support.

FIG. 5 is an enlarged detail sectional view through a garment clamp operating arm.

FIG. 6 is an enlarged sectional view through the lower portion of the apparatus showing the heating coils and steam delivery structure.

FIG. 7 is an enlarged vertical sectional view through the upper portion of the skeleton frame taken on the line 7—7, FIG. 3, and particularly illustrating the adjustable shoulder support structure.

FIG. 8 is an enlarged sectional view through the upper portion of the frame and collar support.

Referring more in detail to the drawings:

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The reference numeral 1 generally designates a garment finishing apparatus which includes a fluid distributor 2 surrounding a skeleton frame 3 rotatably supported on a base 4. The base 4 preferably is a hollow structure that includes a blower housing 5 which communicates through a discharge duct 6 with one side of a chamber portion 7 located below the frame 3. The blower (not shown) within the housing 5 is so disposed as to draw air through an inlet 8 and direct said air into the duct 6 and interior of the portion 7 and through a suitable apparatus 9 for heating the air as it moves upwardly through an outlet opening 10 in the top of the base portion 7. A suitable control panel 11 is preferably mounted on the housing 5 in connection with electrical controls, as later described. The duct 6 and base portion 7 have a bottom wall 12 on which is suitably secured an upstanding wall 13 of the base portion 7, said wall having its upper end terminating in a circular peripheral edge 14.

A steam separator-receiver 15 is mounted in the base portion 7 substantially centrally relative to the wall 13. The separator-receiver is a tank-like structure which, in the illustrated structure, has walls defining a cup-like member 16 having an outwardly directed flange 17 at the upper end with the opening at said end closed by a cover 18 secured thereon by suitable fastening devices 19. Arms 20 extend radially outwardly from the flange 17 and are secured to the wall 13 to support the separator-receiver in the base portion 7.

The space between the periphery of the flange 17 and the wall 13 forms an air passage 21 and located in said passage is the heating apparatus 9 which, in the illustrated structure, is a finned coil 22 arranged in a spiral about the flange 17 of the steam separator and in a single plane whereby air passing through the passage 21 moves between the fins of the coil. In the structure illustrated, steam is directed to the coil 22 and separator-receiver 15 from a suitable source (not shown) by a supply pipe 23 which may include a trap 24, the pipe 23 entering the base and having communication with the coil 22 for flow of steam therethrough. Also, there is delivery of steam as through a connection 25 to the body or cup portion 16 of the separator-receiver 15. A return line 26 from the coil and separator-receiver extends outwardly of the base and is connected through a valved line 27 to a hose 28 which may lead to a steam gun 29 shown supported in FIG. 2 on a hanger 30 on the upper end of a post 31 and at one side of and adjacent the blower housing 5.

The cover 18 of the separator-receiver 15 has a socket 32 in which is mouned a steam nozzle 33 for directing steam upwardly and outwardly in the lower part of the distributor 2. The nozzle illustrated includes an upstanding hollow member 34 having a closed lower end 34' and an open upper end 35. In the structure illustrated, the nozzle member 34 is threaded into a socket 32 of the cover 18 and in heat transfer relation thereto whereby said nozzle is heated by the separator-receiver 15. An upstanding nozzle tube 36 smaller than the bore of the hollow member 34 is mounted therein and extends upwardly therefrom in coaxial relation thereto. Spacer lugs 37 are spaced around the lower end portion of the tube 36 and engage the inner surface 38 of the member 34 to hold the walls thereof in spaced relation and provide a passage 39 for steam from within the member 34 to move by the tube and spacers 39 for discharge upwardly from an open upper end of the hollow member 34. In the structure illustrated, a collar 40 is slidable on the tube 36 and is secured in selected spaced relation from the open end 35 of the member 34 by suitable fasteners such as a set screw 41, said collar serving as a deflector for the steam issuing through the open end 35 so as to direct said steam outwardly and upwardly as later described. The tube 36 has a bore 42 that extends upwardly from an open lower end

42' to substantially beyond the collar 40 with a plurality of spaced apertures 43 being arranged above the collar for directing some steam radially from said tube member 36. The upper end of the tube member 36 terminates as at 36' with the upper end of the bore 42 being closed so any steam in the bore 42 must issue through the apertures 43. Steam from the separator-receiver 15 is delivered by a line 44 from the upper part of said receiver 15 to the lower part of the hollow member 34, flow through said line 44 being controlled by a valve 45 preferably a solenoid or electric operated valve. The line 44 is short and it and the valve are adjacent to and heated by the steam coil 22 so as to reduce or prevent condensation of steam delivered to the nozzle 33.

The skeleton frame 3 includes an annular band 46 provided at its lower edge with an outwardly extending annular flange 47 that substantially rests on the edge 14 of the wall 13 of the base. The band 46 is provided with a transverse brace bar 48 that has ends secured to the band and has an axial bore 49 that rotatably receives the hollow member 34 when the frame 3 is positioned on the base. Diametrically opposed generally upright members 50 and 51 have their lower ends secured to the band 46 in circumferentially spaced relation to the bar 48, the upper ends of said frame members 50 and 51 each being fixed to a shoulder member or piece 52 that is sufficiently above the band 46 as to accommodate the length of any garment to be finished on the apparatus. In the structure illustrated, the frame strips 50 and 51 preferably are formed of sheet metal presenting substantially flat faces 53 outwardly thereof and having side flanges 54 extending inwardly to provide stiffness for said members. The frame members 50 and 51 are connected substantially midway the height thereof by channel-shaped transverse braces 55 with a bar member 56 secured to the lower portion of said braces and having a bore 57 forming a bearing engaging the upper end portion of the tube 36 to cooperate with the bar 48 and the mounting of the flange 47 relative to the edge 14 of the base to rotatably support the frame 3. Below the brace structure 55, a generally circular brace ring 58 is secured to the frame members 50 and 51 to add further rigidity to the structure.

The shoulder piece 52 has opposed walls 59 extending downwardly from a top wall 60, said opposed walls being secured to the upper ends of the members 50 and 51 whereby the shoulder piece extends laterally outwardly therefrom to form central shoulder portions that carry a pair of opposed shoulder extensions 61 connected as at 62 to the upper ends of arms 63, the lower ends of said arms being pivotally mounted as at 64 of a bracket 65 that is secured to the transverse brace members 55. The inner end portions of the extensions 61 are slidably mounted as at 66 under the walls 59 and the top wall portion 60 that slope outwardly and laterally from the central portion as at 67 whereby the shoulder extensions may be moved inwardly and outwardly by suitable control mechanism. In the illustrated structure, the control mechanism consists of a pair of links 68 pivotally connected to the arms 63 midway the length thereof as at 69 with the inner ends of said links connected to a slide 70 mounted on a tubular member 71 that has its upper end fixed to the shoulder piece top wall 60 and depends therefrom. The slide is provided with a pin or bolt 72 that extends through a slot 73 in the tube and is connected to the lower end of the rod 74 that extends upwardly through a bore 75 in the top wall 67 and through a neck or collar support 76 to present an upper end for grasping in actuating the rod. A handle or knob 77 is mounted on the upper end of the rod for moving said rod vertically with downward movement causing the links 68 to force the arms 63 outwardly and move the shoulder extensions 61 outwardly as shown in FIG. 7, upward movement of the rod and knob swinging the arms 63 inwardly to retract the shoulder extensions 61. A resilient member 78 is preferably interposed between the links 68 and the slides 70 to hold the slide against the tube 71 and provide

a friction that tends to hold the mechanism and the shoulder extensions 61 in selected position.

The collar support 76 preferably is a hollow member that presents a wall 79 with a contour or outer rear surface that would simulate the contour of the neck of a person. The lower rear of the collar support 76 is pivotally mounted as by hinge members 80 to the top wall 60 of the shoulder piece and may be secured in a forward position by means of a suitable latch such as a spring member 81 with rollers 82 engaged therewith at the forward end of the shoulder piece and collar support, as illustrated in FIG. 8. Resilient means such as springs 83 between the shoulder piece 52 and collar support 76 urge the collar support in a hinging movement upwardly and rearwardly when the latch is released. In the forward position, the rear surface of the wall 79 inclines forwardly and, when released, the collar support hinges rearwardly to apply pressure to the collar to support same in its natural position.

A pair of lamps 85 and 86 are mounted for swinging movement toward and away from the frame strips 50 and 51 respectively. A lever 87 with clamping means 88 is swingably mounted on a bracket 89 fixed to and radially of the band 46 and flange 47. The lever 87 has a leaf spring 90 with its lower end secured as at 91 to the lever and its upper end secured to the clamp means 85 as at 92 whereby the clamp member is swingably and resiliently connected to the lever and is movable thereby. The lever 87 is hollow and slidably mounted therein is a rod 93 having a hand grip 94 at the upper end and a detent or abutment portion 95 at the lower end, said detent being adapted to engage a stop 96 adjustably mounted on the bracket 89 when the lever is swung inwardly to position the clamp member 85 in clamping position. Longitudinal movement of the rod 93 is limited by a stop pin 97 in said rod and extending in a slot 98 in the lever. The rod may be urged downwardly by a spring or the like; however, the weight of the rod is usually sufficient to urge same downwardly to engage movement limiting members. In the illustrated structure, the stop 96 is the end of a screw 100 threadedly mounted in an extension 102 arranged on the bracket 89. Also mounted thereon is an adjustable abutment or screw 103 for limiting outward swinging movement of the lever. When the clamp member is swung outwardly, the weight thereof tends to hold it outwardly until it is manually moved inwardly to clamping position. A similar construction is provided for mounting the clamp 86 except only that the mounting bracket therefor comparable to the bracket 89 and designated 104 is in diametrically opposed relation to the bracket 89.

The bag distributor 2 encloses the skeleton frame 3 and is preferably formed of a flexible fabric with the lower or skirt portion 105 of suitable fabric such as closely woven nylon to have limited permeability. Connected to the skirt approximately at the waist portion as at 106 is an upper portion 107 of the bag preferably formed of an open mesh flexible cloth to present little resistance to flow of fluid therethrough. The bag distributor is preferably non-expandable and is not inflated to form the garment. Such forming is performed by fluid pressure and flow through the distributor into the upper portion of the garment and then some flow down between the garment and skirt portion of the bag. Arranged over the shoulder piece 52 under the mesh portion 107 of the bag is a saddle like cloth member 108 of little or no permeability. The member 108 is positioned over the shoulder piece and then the bag 2 is arranged over the frame 3 and shoulder piece 52 with the upper or open end of said bag provided with a portion 109 engaging around the collar support. The bag hangs down from the shoulder piece and has its lower end secured as by a drawstring 110 to the band 46. It is preferred that fabric such as a strip 111 of toweling be secured to the ring 58 and extend downwardly therefrom within the lower portion of the bag to the part thereof secured to the band 46, said toweling strip tending to catch

water or condensation, if any, from the steam that might be discharged from the orifices of the nozzle 33 therefor.

In using a garment finishing apparatus constructed as described and supplied with steam, a garment, for example a coat 112, is positioned over the bag with the shoulders 113 supported on the lateral portions of the shoulder piece 52. The knob 77 is grasped and forced downwardly to swing the shoulder extensions 61 outwardly to a desired position for adequate support of the garment. With the garment properly positioned, the walls of the bag, both the mesh and the skirt portion, do not contact the garment except in that portion between the garment and the shoulder piece 52 and shoulder extensions 61. The clamp 86 is then moved into engagement with the rear portion of the garment to clamp same against the frame member 51. The lever 87 is manipulated by swinging same toward the garment to move the clamping member 85 into position to clamp the forward or fly portion of the garment against the frame member 50, the lever being moved until the detent or lower end 95 moves to the end of and is engaged with the stop 96 whereby the pressure of the clamp member 85 on the garment holds the lever in position. Suitable electrical circuitry and controls are arranged in a control panel 11 and foot pedals 114 and 115 are connected in the circuitry to control the blower and also the supply of steam and thereby control the application of fluid pressure to the interior of the bag distributor 2. With the garment in position, the operator may depress the pedal 114 which closes the circuit to the blower energizing the motor thereof whereby air is delivered by the blower into the base portion 7 and then passes up inside of the bag 2 with a small quantity of the air passing out through the skirt portion 105 of the bag 2. The air moves up in the bag and passes out through the mesh portion 107 into the interior of the garment ballooning same outwardly with some of the air passing through the fabric of the garment and the remainder passing downwardly between the skirt of the garment and the skirt portion 105 of the bag 2 so as to hold the garment in outwardly inflated position. It is preferred that conventional spreaders 116 be used in the sleeves of the garment to shape same and also substantially close the lower ends so only a small portion of the air will pass therethrough.

This first operation in finishing a garment in place on the apparatus is to depress a pedal 115 to complete a circuit and energize a solenoid valve 45 in the short steam line 44 that extends from the top of the chamber in the separator-receiver 15 to the interior of the hollow member 34 below the lower end of the tube 36. With this arrangement, the heat from the heating coil and the steam tends to maintain the separator-receiver hot at all times and thereby prevent condensation of the steam therein. If any condensation should collect, it would be at the bottom of the chamber so that substantially dry steam passes into the line 44 controlled by the valve 45. Also, the valve and this duct are positioned so that any condensation collecting therein would drain back into the separator, and they are also maintained in heated condition by the heating coils 22 so as to eliminate condensation therein. Also, the member 34 being mounted on the separator is maintained in heated condition whereby steam directed therein is not readily condensed, thereby the steam is discharged through the nozzle 33 and orifices with a substantial absence of water from condensation. With the valve 45 open, steam is discharged from the open end 35 of member 34 and directed outwardly and upwardly in the bag 2 and some steam is discharged through the apertures 43. However, the majority of the steam is discharged in such a manner and such velocity in the inclined upwardly direction that it induces a flow of air through the stationary blower and base and upwardly

into the bag whereby the quantity of air and steam are such that while the steam is steaming the garment it is also ballooned outwardly to its natural shape by the fluid pressure inside of the garment and exteriorly of the bag, the bag serving as a distributor to assure the fluid being discharged therefrom in the proper positions of the garment to keep same distended.

After steaming of the garment, the steam valve solenoid is de-energized so that said valve 45 closes, shutting off the steam to the nozzle 33. Then the pedal 114 is pressed or the blower otherwise energized to again blow air by the heated coils 22 to heat said air to continue the distention of the garment while drying same. This shapes the garment to its natural size and after completion of the operation the blower is stopped, the hand grips 94 raised to release the levers 87 and the clamping members 85 and 86 whereby they can be swung outwardly and then the garment is removed from the apparatus.

It is not necessary to blow out the bag distributor 3 and adjust same so on distention it will not stretch the garment thereon. The bag distributor is always smaller than the garment and pressure of fluid in the bag does not expand same into shaping engagement with the garment. The fluid pressure alone shapes the garment. Therefore, instead of using air to blow out the bag for fitting the garment, the garment is placed on the apparatus and then steam is applied. Also, the upward flow of the steam increases the flow volume by inducing flow of air into the bag and this mixture of the air at ambient temperatures improves the quality of the steam for dissolving more wrinkles due to humidity increase. Also, the upward directional flow of the steam prevents steam from backing up and condensing in the base and blower.

It is to be understood that any suitable controls for the blower and steam valve including sequential controls could be utilized instead of individual manual controls.

It is to be understood that while I have illustrated and described one form of my invention, it is not to be limited to the specific form or arrangement of parts herein described and shown except insofar as such limitations are included in the claims.

What I claim and desire to secure by Letters Patent is:

1. In a garment finisher,
  - (a) a hollow base with a top opening forming an air passage,
  - (b) a frame mounted on said base and extending upwardly therefrom and adapted to have a garment draped thereover,
  - (c) a fabric bag surrounding said frame for receiving a garment thereover, said bag of non-expandable material and having a waist portion with said bag above said waist portion being of a fabric mesh to present substantially little resistance to fluid flow therethrough and the walls of the bag portion below the waist being a closely woven fabric having low fluid permeability,
  - (d) a blower means having communication with the base and operative to deliver air under pressure therethrough and upwardly into the bag and through the fabric mesh into a garment thereover for downward flow between the garment and the bag below the waist to balloon and shape the garment, said blower means having an open inlet with an absence of valves thereby permitting air movement through said blower means when non-operating,
  - (e) a steam nozzle within the lower portion of said bag and operative to discharge steam in upwardly inclined relation in the bag portion having low fluid permeability whereby said steam discharge in said bag portion induces a flow of air through the blower and base for mixture with the steam moving up in the bag.

2. In a garment finisher,

- (a) a hollow base with a top opening forming an air passage,
  - (b) a frame mounted on said base and extending upwardly therefrom and adapted to have a garment draped thereover,
  - (c) a fabric bag surrounding said frame for receiving a garment thereover, said bag being of non-expandible material and having a waist portion with said bag above said waist portion being of a fabric mesh to present substantially little resistance to fluid flow therethrough and the walls of the bag portion below the waist being a closely woven fabric having low fluid permeability,
  - (d) a blower means having communication with the base and operative to deliver air under pressure therethrough and upwardly into the bag and through the fabric mesh thereof into a garment thereover for downward flow between the garment and the bag below the waist to balloon and shape the garment,
  - (e) said frame having upstanding opposed backing members,
  - (f) a bracket at the lower portion of the frame,
  - (g) a lever pivotally mounted on said bracket,
  - (h) a clamp member swingably and resiliently carried by said lever and movable thereby into clamping relation relative to the frame backing member,
  - (i) a rod movable longitudinally of said lever and resiliently urged toward said bracket,
  - (j) and means on said bracket engageable by said rod when the lever is in clamping position to retain said lever against retractive movement.
3. In a garment finisher,
- (a) a hollow base with a top opening forming an air passage,
  - (b) a frame mounted on said base and extending upwardly therefrom,
  - (c) an open bottom fabric bag surrounding said frame for receiving a garment thereover, said bag having a waist portion being such as to present substantially little resistance to fluid flow therethrough and the bag portion below the waist having low permeability, said open bottom having communication with said base top opening,
  - (d) a blower means having communication with the base and operative to deliver air under pressure therethrough and into the bag and upwardly therein and through the bag portion above the waist into the garment thereover for flow between said garment and bag, said blower means having an open inlet with an absence of valves thereby permitting air movement therethrough when nonoperating,
  - (e) heating means in the base adjacent said top opening and in the path of the air passing therethrough whereby said air moves in heat transfer relation to said heating means,
  - (f) a steam separator-receiver in said base adjacent said heating means,
  - (g) a steam nozzle extending into the lower portion of said bag and operating to discharge steam in upwardly inclined relation thereto whereby said steam discharge in said bag portion induces a flow of air through the blower and base and heating means which air mixes with the steam moving up in the bag,
  - (h) and a valve controlled conduit connecting the upper portion of the steam separator-receiver to said nozzle for flow of steam from said upper portion to said nozzle.
4. In a garment finisher,
- (a) a hollow base with a top opening forming an air passage,
  - (b) a frame mounted on said base and extending upwardly therefrom,
  - (c) an open bottom fabric bag surrounding said frame for receiving a garment thereover, said bag being of substantially non-expandible material and having a waist with said bag above said waist portion being

- of a fabric mesh to present substantially little resistance to fluid flow therethrough and the bag portion below the waist being a closely woven fabric having low permeability, said open bottom having communication with said base top opening,
  - (d) a blower means having communication with the base and operative to deliver air under pressure therethrough and into the bag and upwardly therein and through the bag portion above the waist into the garment thereover for flow between said garment and bag, said blower means having an open inlet with an absence of valves thereby permitting air movement therethrough when nonoperating,
  - (e) heating means in the base adjacent said opening and in the path of air passing therethrough whereby said air moves in heat transfer relation to said heating means,
  - (f) a steam separator-receiver in said base adjacent said heating means,
  - (g) a steam nozzle extending into the lower portion of said bag and operating to discharge steam in upwardly inclined relation thereto whereby said steam discharge in said bag portion induces a flow of air through the blower and base and heating means which air mixes with the steam moving up in the bag,
  - (h) and a valve controlled conduit connecting the upper portion of the steam separator-receiver to said nozzle for flow of steam from said upper portion to said nozzle, said valve controlled conduit being positioned adjacent said heating means to receive heat therefrom.
5. In a garment finisher as set forth in claim 4 wherein the heating means is a finned steam coil surrounding and extending outwardly from said steam separator in the path of air moving therearound and said valve and steam conduit being positioned above said coil in the path of the heated air.
6. In a garment finisher,
- (a) a hollow base with a top opening forming an air passage,
  - (b) a frame mounted on said base and extending upwardly therefrom,
  - (c) an open bottom fabric bag surrounding said frame for receiving a garment thereover, said bag being of substantially non-expandible material and having a waist portion with said bag above said waist portion being of a fabric mesh to present substantially little resistance to fluid flow therethrough and the bag portion below the waist being a closely woven fabric having low permeability, said open bottom having communication with said base top opening,
  - (d) a blower means having communication with the base and operative to deliver air under pressure therethrough and into the bag and through said bag portion above the waist for distribution into a garment thereover,
  - (e) heating means in the base whereby the air passing therethrough whereby said air moves in heat transfer relation to said heating means,
  - (f) a steam separator-receiver in said base adjacent said heating means,
  - (g) a steam nozzle mounted on said separator-receiver and extending upwardly therefrom into said bag to direct steam upwardly therein, the upward flow of steam drawing air through the base and blower means for mixture with said steam,
  - (h) a valve controlled conduit for flow of steam from the upper portion of the steam separator-receiver to said nozzle and positioned adjacent said heating means to receive heat therefrom,
  - (i) said frame having upstanding opposed backing members,
  - (j) means rotatably mounting the frame on said base,
  - (k) a bracket extending radially from and fixed to the lower portion of said frame,

- (l) a lever pivotally mounted on said bracket and movable with said frame,
- (m) a clamp member swingably and resiliently carried by said lever and movable thereby into clamping relation relative to a frame backing member, 5
- (n) a rod movable longitudinally of said lever and resiliently urged toward said bracket,
- (o) and adjustable means on said bracket engageable by said rod when the lever is in clamping position to retain said lever against retractive movement and vary the clamping pressure. 10
- 7. In a garment finisher,
  - (a) a hollow base with a top opening forming an air passage,
  - (b) a frame mounted on said base and extending upwardly therefrom and adapted to have a garment draped thereover, 15
  - (c) said frame including a shoulder piece having a top wall,
  - (d) a collar support on said top wall,
  - (e) means hingedly connecting the collar support to said top wall for upward and outward swinging movement relative thereto, 20
  - (f) resilient means urging said collar support away from said top wall to apply pressure on a collar of a garment mounted on the frame, 25
  - (g) a fabric bag surrounding said frame for receiving a garment thereover, said bag being of non-expandable material and having a waist portion with said bag above said waist portion being of a fabric mesh to present substantially little resistance to fluid flow therethrough and the walls of the bag portion below the waist being a closely woven fabric having low fluid permeability, 30
  - (h) and a blower means having communication with the base and operative to deliver air under pressure therethrough and upwardly into the bag and through the fabric mesh thereof into a garment thereover for downward flow between the garment and the bag below the waist to balloon and shape the garment. 35
- 8. A garment finisher as set forth in claim 7 and including, 40
  - (a) latch means on the collar support and top wall engageable for retaining the collar support against swinging movement relative to said top wall. 45
- 9. In a garment finisher,
  - (a) a hollow base with a top opening forming an air passage,
  - (b) a frame mounted on said base and extending upwardly therefrom, 50
  - (c) said frame including a shoulder piece having a top wall,
  - (d) a collar support on said top wall,
  - (e) means hingedly connecting the collar support to said top wall for upward and outward swinging movement relative thereto, 55
  - (f) resilient means urging said collar support away from said top wall to apply pressure on a collar of a garment mounted on the frame,
  - (g) means on the collar support and top wall engageable for retaining the collar support against swinging movement relative to said top wall, 60
  - (h) an open bottom fabric bag surrounding said frame for receiving a garment thereover, said bag being of substantially non-expandable material and having a waist portion with said bag above said waist portion being of a fabric mesh to present substantially little resistance to fluid flow therethrough and the bag portion below the waist being a closely woven fabric having low permeability, said open bottom having communication with said base top opening, 65
  - (i) a blower means having communication with the base and operative to deliver air under pressure therethrough and into the bag and through said bag 70

- portion above the waist for distribution into a garment thereover,
- (j) heating means in the base whereby the air passing therethrough whereby said air moves in heat transfer relation to said heating means,
- (k) a steam separator-receiver in said base adjacent said heating means,
- (l) a steam nozzle mounted on said separator-receiver and extending upwardly therefrom into said bag to direct steam upwardly therein, the upward flow of steam drawing air through the base and blower means for mixture with said steam,
- (m) and a valve controlled conduit for flow of steam from the upper portion of the steam separator-receiver to said nozzle and positioned adjacent said heating means to receive heat therefrom.
- 10. In a garment finisher,
  - (a) a hollow base with a top opening forming an air passage,
  - (b) a frame mounted on said base and extending upwardly therefrom,
  - (c) said frame including a shoulder piece having a top wall and shoulder extensions movably mounted relative thereto,
  - (d) means supporting the extensions and operable to move same between extending and retracted position,
  - (e) a collar support on said top wall,
  - (f) means hingedly connecting the collar support to said top wall for upward and outward swinging movement relative thereto,
  - (g) resilient means urging said collar support away from said top wall to apply pressure on a collar of a garment mounted on the frame,
  - (h) latch means on the collar support and top wall engageable for retaining the collar support against swinging movement relative to said top wall,
  - (i) an open bottom fabric bag surrounding said frame for receiving a garment thereover, said bag being of substantially non-expandable material and having a waist portion with said bag above said waist portion being of a fabric mesh to present substantially little resistance to fluid flow therethrough and the bag portion below the waist being a closely woven fabric having low permeability, said open bottom having communication with said base top opening,
  - (j) a blower means having communication with the base and operative to deliver air under pressure therethrough and into the bag and through said bag portion above the waist for distribution into a garment thereover,
  - (k) heating means in the base whereby the air passing therethrough whereby said air moves in heat transfer relation to said heating means,
  - (l) a steam separator-receiver in said base adjacent said heating means,
  - (m) a steam nozzle mounted on said separator-receiver and extending upwardly therefrom into said bag to direct steam upwardly therein, the upward flow of steam drawing air through the base and blower means for mixture with said steam,
  - (n) and a valve controlled conduit for flow of steam from the upper portion of the steam separator-receiver to said nozzle and positioned adjacent said heating means to receive heat therefrom.
- 11. In a garment finisher,
  - (a) a hollow base having an inlet and an upward opening air passage,
  - (b) a frame mounted on said base above said passage for supporting a fluid pressure distributing bag in communication with said passage, said bag having a portion of low permeability extending upwardly from adjacent said base,
  - (c) a steam separator-receiver in said base and having

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- a source of superheated steam, said separator-receiver having a top cover closing the chamber in said receiver,
- (d) nozzle means mounted on said top cover and extending upwardly through said passage, 5
- (e) a steam flow pipe communicating the upper portion of the separator-receiver chamber with said nozzle,
- (f) valve means above said separator-receiver and in said flow pipe for controlling the delivery of steam from the separator-receiver to said nozzle, 10
- (g) and means on said nozzle directing a portion of the steam delivered thereby circumferentially inclined outwardly and upwardly in said bag and cooperating with the low permeability portion thereof to induce a flow of air from said base inlet through said passage for increased fluid volume distributed by the bag into a garment thereover. 15

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