Dec. 3, 1946. E. L. PETTIT 2,412,172

GARMENT FINISHER

Filed Aug. 13, 1945 2 Sheets-Sheet 1

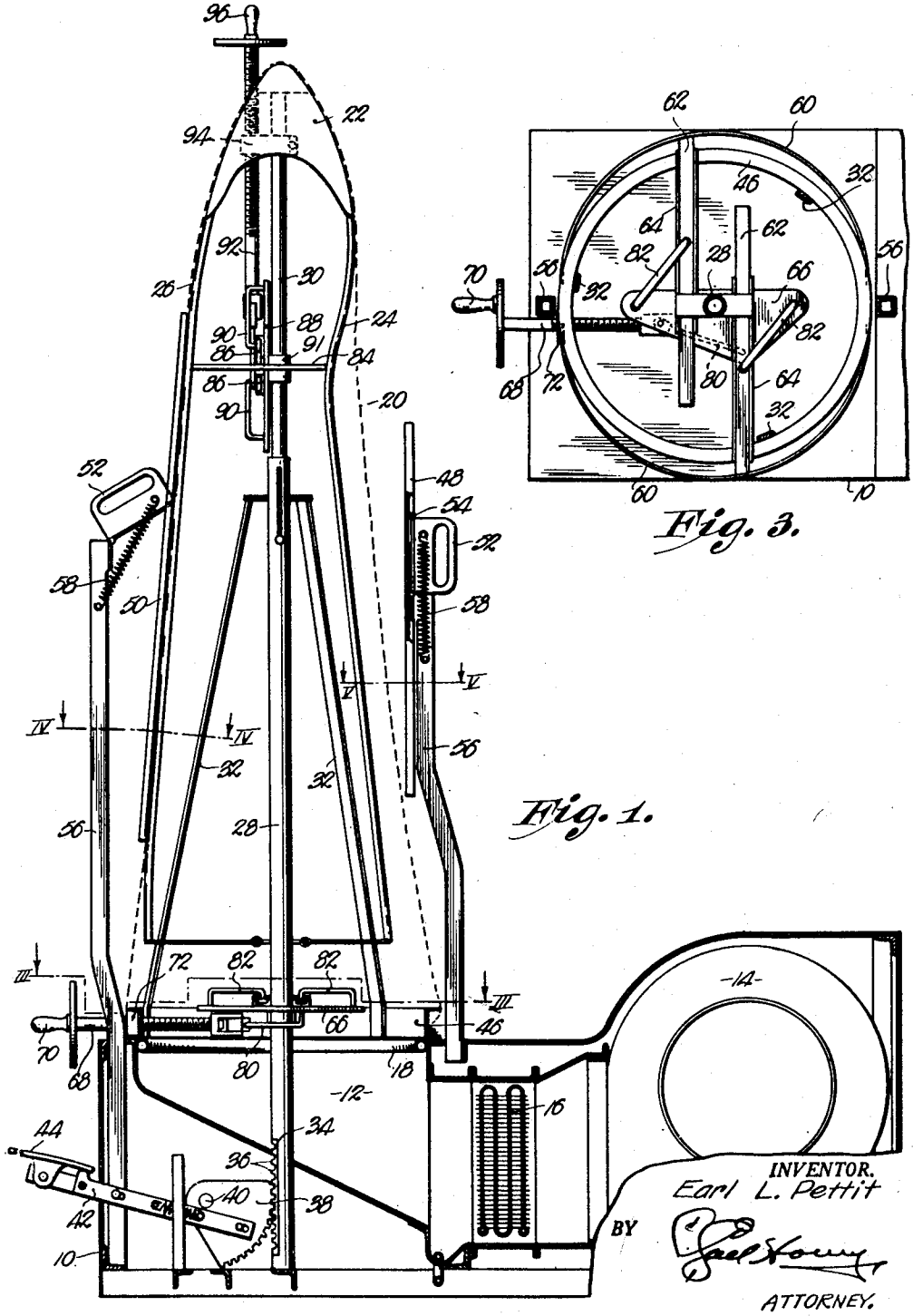


Fig. 1.

Fig. 3.

INVENTOR.
Earl L. Pettit
BY
ATTORNEY.

Dec. 3, 1946. E. L. PETTIT 2,412,172

GARMENT FINISHER

Filed Aug. 13, 1945 2 Sheets-Sheet 2

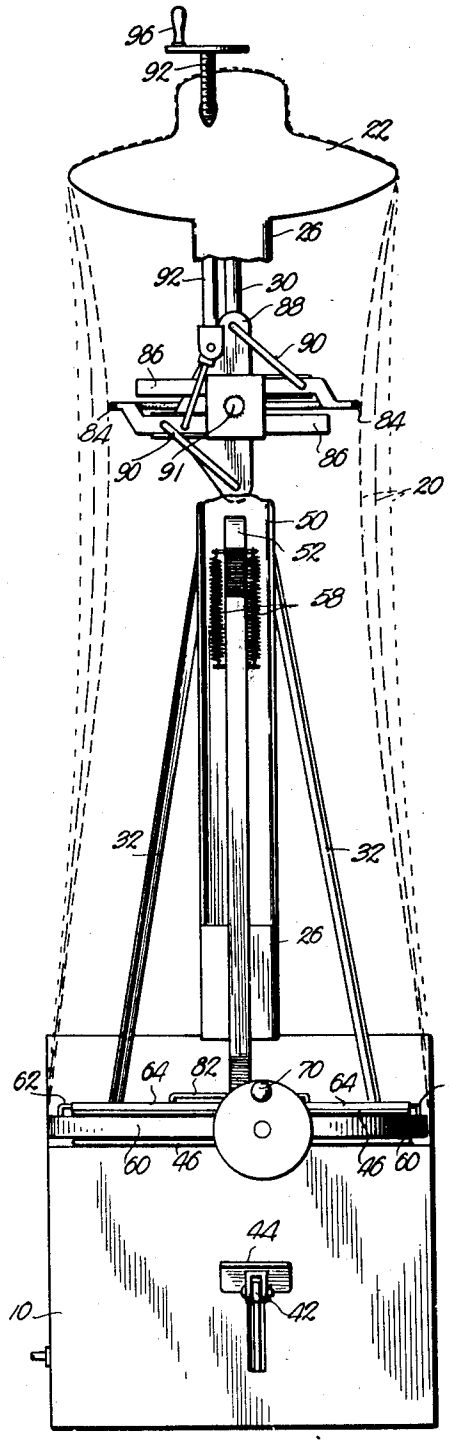


Fig. 2.

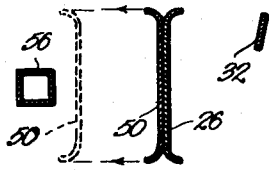


Fig. 4.

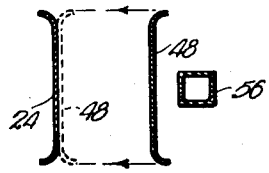


Fig. 5.

INVENTOR.
Earl L. Pettit
BY
ATTORNEY.

Patented Dec. 3, 1946 2,412,172

UNITED STATES PATENT OFFICE

2,412,172

GARMENT FINISHER

Earl L. Pettit, Winfield, Kans.

Application August 13, 1945, Serial No. 610,602

9 Claims. (Cl. 223—68)

1

This invention relates to the garment finishing art and particularly to equipment used in the conditioning of clothing such as coats and the like after they have been passed through cleaning machines and the primary aim of my invention is the provision of a garment finisher capable of removing wrinkles from the treated piece of wearing apparel and rendering the same ready for use.

One of the important objects of the instant invention is to provide a garment finisher that is efficient in its operation, quickly adjustable to garments of various sizes and capable of holding the garments in proper position as a blast of hot air and steam is directed outwardly through the fabric from which the garments are constructed.

Other aims of the invention include the provision of an unique frame for operably supporting a bag where the garment may be drawn therearound; means for clamping the front and rear portions of the garment securely in place prior to the introduction of a blast of steam or hot air; means for expanding the lowermost portion of the bag to "size" the same and structure for expanding the bag at a point near the waist line of the garment being treated.

This invention has for further aims to provide unique means for adjusting not only the height of the bag onto which the garment being finished is wrapped but the circumference thereof at at least two points along the length of the bag to maintain the latter in an extended position where the air and steam will readily pass therethrough to treat the surrounding fabric.

Because of the operating and manipulative advantages arising from this invention, one of the most important objects is the provision of a garment finisher having as a component part thereof, a bag and supporting frame, which frame is adjustable both laterally and longitudinally for the purpose of adapting the bag to garments of a wide range of sizes. The frame is unique in its ability to maintain the bag in a taut condition longitudinally while the transverse dimensions of the bag are substantially the same as the garment being treated, due to the employment of a number of laterally shiftable parts manually movable by the operator as the garment being finished is introduced to the finisher.

Another important object of the invention is the provision of a garment finisher, wherein is incorporated a flexible, porous bag and a frame, the nature of said frame being such as to permit

2

sizing the bag laterally to the garment being finished, and thereafter manipulating other parts of the frame to insure a longitudinal, taut condition, irrespective of the position of adjustment of the aforesaid laterally shiftable parts, all for the purpose of preventing objectionable flaring at the bottom of the garment.

A further object of my invention is to provide a garment finisher wherein is incorporated, an unique frame having separate parts for accommodating garments of different sizes, which parts are separately manipulable for meeting the cross sectional dimensions of the garment and for holding the bag of the finisher in a longitudinally taut condition throughout the limit of the range of adjustment of said parts.

Other objects of the invention are of vital importance and will appear during the course of the following specification referring to the accompanying drawings, wherein:

Fig. 1 is a side elevational view of the garment finisher made in accordance with the present invention but showing the lower portion or base thereof in section.

Fig. 2 is a front elevational view of the garment finisher with parts broken away for clearness of illustration.

Fig. 3 is a transverse irregular cross sectional view taken along line III—III of Fig. 1.

Fig. 4 is a fragmentary detailed sectional view taken on line IV—IV of Fig. 1, and

Fig. 5 is a fragmentary sectional view taken along line V—V of Fig. 1.

The parts constructed pursuant to my invention are mounted upon a base generally designated by the numeral 10 and comprising a steam chamber 12, a blower 14, a radiator 16 and a steam pipe 18, all of known characteristics. These parts within base 10 are designed and disposed to project a blast of hot air and steam upwardly into a fabric bag 20 of loose and flowing nature which is draped over a frame work comprising a neck and shoulder form 22, a rear strip 24, a front strip 26 and a supporting column consisting of a tubular section 28 and a vertically reciprocable bar 30. Tubular section 28 of the column is rigid and held against lateral displacement by braces 32 extending upwardly from base 10, as clearly illustrated in Fig. 1.

Bar 30 is exposed near its lower end by cutting away a portion of tubular section 28 to present an opening 34 and to present teeth 36 to a segment 38. These teeth 36 are in the nature of a rack and segment 38 has teeth in the arcuate face thereof in mesh with teeth 36 of bar 30.

Segment 38 is pivotally mounted as at 40 and is movable about its pivotal point by a foot lever 42, the nature whereof is well known in the art. As downward pressure is exerted upon pedal 44, lever 42 is moved to rotate segment 38 and raise bar 30 to lift the neck and shoulder form 22 and the front and rear strips 26 and 24 respectively.

Bag 20 is closed at its top and hangs downwardly from neck and shoulder form 22 to be engaged by the bag holding ring 46 mounted upon the top of base 10. Bag 20 is secured to ring 46 by a clamping ring or any other suitable means, for precluding accidental displacement. Thus the bottom of bag 20 is placed into direct communication with steam chamber 12.

When a garment such as an overcoat, housecoat or similar piece of wearing apparel is draped upon the neck and shoulder form 22 and brought together along its open front, clamps 48 and 50 are moved toward strips 24 and 26 respectively to secure the garment and its under-lying bag 20 in a position where the said garment will not accidentally open under the influence of the air, steam and blast force exerted by blower 14. Clamps 48 and 50 are identical in nature and are arranged to be swung toward and from the operative position against their respective strips by the operator who manually manipulates the handles provided for the purpose. Clamp 48 has a handle 52 to which said clamp 48 is attached by a hinge 54. Handle 52 is hinged directly to the rigid support 56 and a spring 58 serves to yieldably maintain the clamp 48 and associated handle 52 in either the inoperative position shown in Fig. 1 or the operative position where clamp 48 is against strip 24. Clamp 50 is of a similar character to that just described with respect to clamp 48 and while the length of said clamp 50 is slightly longer than the length of clamp 48, the function of both of said clamps 48 and 50 is the same and the garment is held in closed condition against the strips 24 and 26 when the blast of air and steam is being directed upwardly through the bag 20 and out therethrough to the fabric of the garment being finished. Without these clamps the garment being finished would part at the front and rear openings and flare outwardly at the bottom to present an objectionable distorted condition. The bag 20 is, of course, long enough to accommodate any garment that is to be finished on the apparatus and the vertical adjustment through the use of foot lever 42 will not disturb the possibility of positioning clamps 48 and 50 against their respective strips 24 and 26.

The mechanism for expanding the bag laterally at the lowermost part of the frame and near where bag 20 is attached to ring 46, is clearly shown in Fig. 3. The bag should be held against the inside of the garment being steamed and, therefore, is expanded outwardly near the bottom by a pair of jaws 60, segmental in character, and each mounted on a stem 62 for radical or lateral movement with respect to the vertical axis of the frame. Each stem 62 is slidably cradled in a channel 64, rigid to ring 46 and a plate 66 is rotatably mounted on column 28 to be moved about the axis of said column when threaded shaft 68 is rotated by the operator through the medium of handle 70. An internally threaded block 72 is in screw-threaded engagement with shaft 68 and the inner end of the shaft is attached to plate 66 through the medium of a link 80, as shown in Figs. 1 and 3. Links 82 join plate 66 and the stems 62 and when shaft 68 is rotated in one direction, jaws 60 will be moved outwardly against bag 20. When shaft 68 is rotated in the opposite direction, jaws 60 will move inwardly and therefore, allow the bag to be lengthened through the medium of foot lever 42 and its associated parts.

Expanding structure for the bag 20 is disposed between strips 24 and 26 and within the frame which they produce to move the bag 20 laterally at the point where a pair of segments 84 are disposed. These segments are mounted upon stems 86 and joined to a plate 88 by links 90 in much the same fashion as described with respect to the bag expanding mechanism just detailed. Plate 88 is rotatable about a trunnion 91 carried by bar 30 and as this plate is turned about the axis of trunnion 91 in one direction, segments 84 will move outwardly to expand bag 20. As the plate 88 is rotated about trunnion 91 in the opposite direction segments 84 will be moved inwardly. Means for expanding and contracting the segments 84 is provided at the top of the frame and comprises a screw-threaded shaft 92 passing through block 94 mounted on bar 30. This block 94 is internally threaded and is operatively engaged by the screw-threaded portion of shaft 92. Handle 96 is within easy reach of the operator and quick adjustment is permitted when the garment is placed about bag 20 for the purpose of smoothing the wrinkles therefrom. After the garment has been fitted over bag 20 and the latter is in a smooth condition due to the function of clamps 48 and 50 and bag expanding mechanism at the bottom of the bag, as well as the mechanism just described, steam and hot air is forced outwardly through the bag and the garment to positively eliminate such wrinkles as might have been present therein. Conventional sleeve forms are used and an opening in the bag 20 (not here shown) allows the escape of steam into the sleeve forms simultaneously with the forcing of steam outwardly through the body of the garment. Through the employment of such structure as has been detailed above, bag 20 is expanded to its fullest heighth when the expanding mechanism and expanding structure at the bottom and waist line respectively, are withdrawn to their minimum size. When the bag is expanded laterally to its fullest extent by the said expanding mechanism and expanding structure, it is in its shortest condition. During the operation when the coat being treated is in place, handles 70 and 96 are manipulated to "size" the bag at the waist and bottom. Then the foot lever 42 is pressed to draw the bag in a taut condition and the steam and hot air is injected upwardly through the open bottom of the bag.

The adjustability of the garment finisher is of prime importance and the means whereby such adjustment may be accomplished must of necessity, be easily operated and quickly manipulated by the attendant. The vertical movement on the part of elements 22, 24 and 26 is independent of clamps 48 and 50, but strips 24 and 26 are always present to cooperate with said clamps regardless of the length of the garment.

Operation

The equipment detailed in the specification just above set down and illustrated in the drawings, is versatile to such an extent that coat type garments of widely varying sizes may be effectively finished if the operator avails himself of the

full advantages emanating from the structure defined.

When a coat of relatively small size is introduced to the bag, jaws **60** and segments **84** are moved laterally to points where the inside dimensions of the garment being finished are met and the bag **20** is held thereagainst.

Due to the size of bag **20** and its ability to accommodate coats of a wide range of sizes, it becomes necessary to hold the fabric bag **20** in a taut condition longitudinally regardless of the position of jaws **60** and segments **84**. Foot lever **42** is always manipulated to draw the material of bag **20** in a taut condition, therefore, prior to the introduction of fluid through chamber **12**. No flaring at the bottom of bag **20** is possible and since clamps **48** and **50** hold the garment as well as the bag **20** against strips **24** and **26**, no undue lateral stretching can occur.

It will be obvious that when a small size coat is being finished, some gathering will be present, so far as the material from which bag **20** is made, is concerned. These lines of fold or gatherings will extend longitudinally of bag **20** however, and no "fullness" between the upper and lower ends of the bag **20** will be present to allow an accidental lengthening of the bag when the hot fluid is introduced. If such lengthening were permitted, the bag would enlarge radially and where not secured in place, a distortion would occur and a flaring of the garment being treated would undoubtedly result. Since the frame of the garment finisher is such as to allow for all necessary adjustment which ends in a definite tightening of the bag **20** longitudinally, no objectionable occurrence of the character just mentioned will present itself.

Garment finishers having physical characteristics different from those described and illustrated may be made without departing from the spirit of the invention or scope of the appended claims.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. A garment finisher of the character described comprising a frame having a front and a back vertical strip, and a neck and shoulder form; a support for the frame; an open bottom bag of flexible, porous material over the frame; a base, having hot air and steam generating equipment therein, in communication with the bag at the bottom thereof; a clamp disposed to cooperate with each strip respectively for holding a garment against the said bag along the said strips; and means for raising and lowering the frame independently of the clamps.

2. A garment finisher of the character described comprising a frame having a front and a back vertical strip, and a neck and shoulder form; a support for the frame; an open bottom bag of flexible, porous material over the frame; a base, having hot air and steam generating equipment therein, in communication with the bag at the bottom thereof; a clamp disposed to cooperate with each strip respectively for holding a garment against the said bag along the said strips; means for securing the bag to the base at the open bottom of the former; and means for raising and lowering the frame independently of the base to lengthen or shorten the bag.

3. A garment finisher of the character described comprising a frame having a front and a back vertical strip, and a neck and shoulder form; a support for the frame; an open bottom bag of flexible, porous material over the frame; a base, having hot air and steam generating equipment therein, in communication with the bag at the bottom thereof; a clamp disposed to cooperate with each strip respectively for holding a garment against the said bag along the said strips; means for raising and lowering the frame independently of the clamps; means for securing the bag to the base at the open bottom of the former; and mechanism near the bottom of the bag for expanding the bag laterally between said strips and above its line of securement to the base.

4. A garment finisher of the character described comprising a frame having a front and a back vertical strip, and a neck and shoulder form; a support for the frame; an open bottom bag of flexible, porous material over the frame; a base, having hot air and steam generating equipment therein, in communication with the bag at the bottom thereof; a clamp disposed to cooperate with each strip respectively for holding a garment against the said bag along the said strips; means for raising and lowering the frame independently of the clamps; means for securing the bag to the base at the open bottom of the former; means for raising and lowering the frame independently of the base to lengthen or shorten the bag; and structure carried by the frame for expanding the bag laterally between the said strips of the frame at substantially the waist line of the garment being finished.

5. A garment finisher of the character described comprising a frame having a front and a back vertical strip, and a neck and shoulder form; a support for the frame; an open bottom bag of flexible, porous material over the frame; a base, having hot air and steam generating equipment therein, in communication with the bag at the bottom thereof; a clamp disposed to cooperate with each strip respectively for holding a garment against the said bag along the said strips; means for raising and lowering the frame independently of the clamps; means for securing the bag to the base at the open bottom of the former; means for raising and lowering the frame independently of the base to lengthen or shorten the bag; structure carried by the frame for expanding the bag laterally between the said strips of the frame at substantially the waist line of the garment being finished; and mechanism near the bottom of the bag for expanding the bag laterally between the said strips and above its line of securement to the base.

6. A garment finisher of the character described comprising a frame having a front and a back vertical strip, and a neck and shoulder form; a support for the frame; an open bottom bag of flexible, porous material over the frame; a base, having hot air and steam generating equipment therein, in communication with the bag at the bottom thereof; a clamp disposed to cooperate with each strip respectively for holding a garment against the said bag along the said strips; and means for raising and lowering the frame independently of the clamps, said clamps each comprising a support rigid to the base, an elongated head coextensive in length with a portion of the strips, and releasable, manually operable elements for holding the head against the adjacent strip with the bag and garment being finished therebetween.

7. A garment finisher of the character described comprising a frame having a front and a back vertical strip, and a neck and shoulder form; a support for the frame; an open bottom bag of flexible, porous material over the frame;

a base, having hot air and steam generating equipment therein, in communication with the bag at the bottom thereof; a clamp disposed to cooperate with each strip respectively for holding a garment against the said bag along the said strips; and means for raising and lowering the frame independently of the clamps, said means for raising and lowering the frame comprising a vertically shiftable bar, and a foot operated lever operably connected to the bar for reciprocating the same longitudinally.

8. A garment finisher of the character described comprising a frame having a front and a back vertical strip, and a neck and shoulder form; a support for the frame; an open bottom bag of flexible, porous material over the frame; a base, having hot air and steam generating equipment therein, in communication with the bag at the bottom thereof; a clamp disposed to cooperate with each strip respectively for holding a garment against the said bag along the said strips; means for raising and lowering the frame independently of the clamps; means for securing the bag to the base at the open bottom of the former; and mechanism near the bottom of the bag for expanding the bag laterally between said strips and above its line of securement to the base, said expanding mechanism comprising a plurality of arcuate segments radially movable toward and from the vertical axis

of the frame, and manually operable parts for shifting the said segments.

9. A garment finisher of the character described comprising a frame having a front and a back vertical strip, and a neck and shoulder form; a support for the frame; an open bottom bag of flexible, porous material over the frame; a base, having hot air and steam generating equipment therein, in communication with the bag at the bottom thereof; a clamp disposed to cooperate with each strip respectively for holding a garment against the said bag along the said strips; means for raising and lowering the frame independently of the clamps; means for securing the bag to the base at the open bottom of the former; means for raising and lowering the frame independently of the base to lengthen or shorten the bag; and structure carried by the frame for expanding the bag laterally between the said strips of the frame at substantially the waist line of the garment being finished, said expanding structure comprising a plurality of segments radially movable toward and from the vertical axis of the frame, and manually operable linkage for simultaneously shifting all of said segments to alter the circumference of the bag between the parts thereof confined between the said strips and their cooperating clamps.

EARL L. PETTTT.