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GARMENT FINISHING MACHINE

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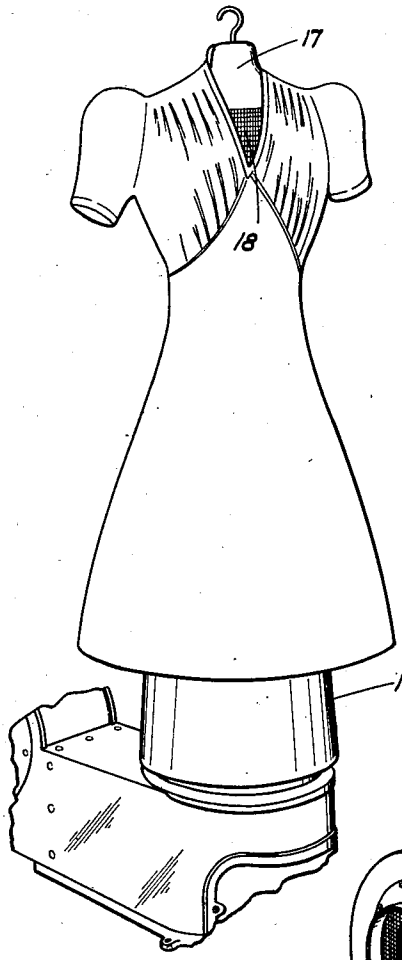


Fig. 3

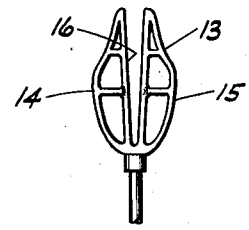


Fig. 2

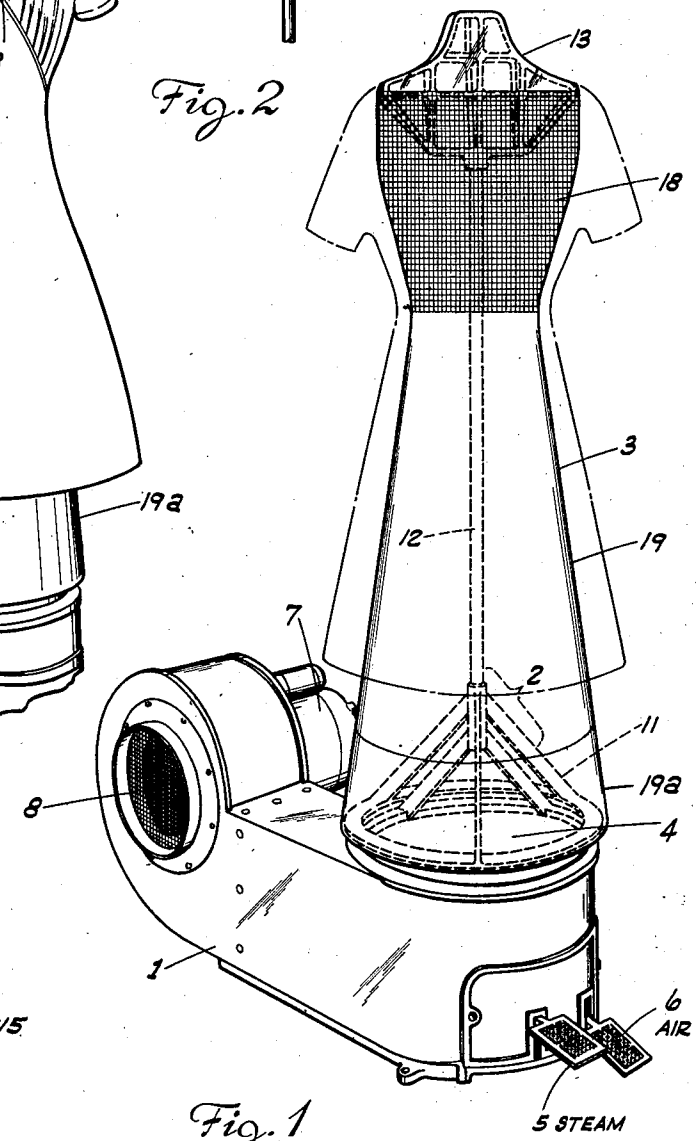


Fig. 1

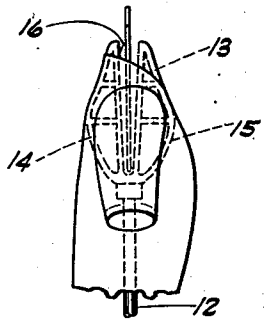


Fig. 4

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GARMENT FINISHING MACHINE

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1 Claim. (Cl. 223—70)

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This invention relates to garment finishing machines in which a garment on a form is subject to steam and hot air for shaping and removing wrinkles in the fabric.

It is an object of the present invention to provide a garment finishing form in which steam and hot air are distributed to the simple and complicated portions of the garment for finishing the same substantially proportional to the requirements thereof.

Another object is the provision of a garment finishing form which allows a moderate ballooning of the garment slight enough to avoid stretching of the fabric.

These and other objects of the invention will be apparent upon consideration of the following description taken in connection with the accompanying drawings illustrating a preferred embodiment of the invention by way of example, and wherein:

Figure 1 is a perspective view of a unit illustrating an embodiment of the invention having a dress clothed thereon and indicated by broken lines;

Figure 2 is a side elevational view of a support for a fixed fabric form and a dress shown principally by broken lines at the top of Fig. 1;

Figure 3 is a perspective view showing a fragment of the machine with a dress ballooned thereon as it appears under treatment;

Figure 4 is a side elevation showing a part of a waist on a clothes hanger lodged on the support shown in Fig. 2.

The garment finisher illustrated in the drawing, comprises a base 1, a rotatable upright garment support designated generally as 2 mounted on the base, and a novel form designed by characters 3, 17 and 18 mounted on the garment support. These elements of the form will be referred to herein, respectively, as "skirt portion," "shoulder portion" and "torso," while the upper and lower members of the dress under treatment will be designated, respectively, as "waist" and "skirt." The base is enclosed in a casing or housing provided with an opening 4 through which conditioning fluids are admitted into the interior of the form. A foot pedal 5 controls the amount of steam admitted through opening 4 into the form from a suitable source of supply, and another foot pedal 6 controls the heated air under pressure admitted through opening 4. This air is supplied by a blower driven by an electric motor 7 which draws air through opening 8 and passes it through an air heater (not shown) then through opening 4 into the form. The garment support 2 comprises a bottom frame or spider 11 of open work construction which extends around the mouth of the fluid delivery opening 4 and is rotatably mounted on the base in any suitable manner. This frame carries a column or post 12 extending upwardly therefrom and a cleft garment hanger 13 in the form of the openwork frame shaped to provide a back and chest portions 14, 15 respectively and a cleft 16 therebetween adapted to receive a wire clothes hanger.

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The form which is employed in the practice of the present invention, is in the general shape of a slender dress that must be materially smaller laterally than the dress under treatment. A shoulder portion 17, which drapes over the hanger and has the part received in the cleft constructed of finely woven cloth or other material substantially non-pervious or only slightly pervious to steam or low pressure air. A torso portion 18 extends from the shoulder portion to the waist portion and is made of relatively open woven fabric, such as netting having about 24 openings per lineal inch. The skirt portion extends downwardly from the lower part of the waist where it is attached to the torso portion. This skirt portion being made of finely woven textile material substantially impervious or only slightly pervious to steam and/or air under pressure. However, if desired, the skirt portion may be made of sheet metal. When the form is draped over the cleft hanger the web of the shoulder portion folds double in the hanger receiving slot 16 to minimize egress of treating fluid. The form is fastened at the bottom to the base 1 by a drawstring (not shown). The form is thus drawn taut from the hanger 13 to the base 1, thusly the back and chest portions of the form are filled out. The skirt portion of the form may be made in two sections 19, 19a in order to provide facilities for increasing production such as in manufacture of many dresses of uniform size or in the conditioning of dresses of abnormal length.

In operation, a dress on a wire hanger is applied over the finishing apparatus by holding the hanger in the right hand, and grasping the hem of the skirt with the left hand, the hem is slipped over the garment support and the dress is pulled down over the form, allowing the wire hanger to fall into the cleft or slot 16. The garment then is draped over the support to present as nearly as possible its shape when being worn. The shoulders are squared, any slide fasteners on the garment are closed, and open front gar-

ments are buttoned or pinned closed. Steam now is admitted into the form 3 through opening 4 by depressing left pedal 5. The skirt portion is substantially impervious to steam so that very little, if any, steam passes through this part of the form although the form is heated and moistened by the steam. The torso portion 18, which is made of open netting, as stated above, allows steam to pass therethrough freely as a blast. The shoulder and waist portions of the garment have seams, pleats and folds of cloth; consequently, as the blast of steam is admitted thereto, these parts receive direct heat and moisture while convection currents serve to carry steam to the shoulder and sleeve members. The steam billows or rolls downwardly between the inside of the dress skirt and outside of the skirt portion of the form, and in so doing heats and moistens the skirt of the dress. Obviously, a part of the steam penetrates and passes through the fabric thereof. Wrinkles are smoothed out by brushing lightly with a whisk broom, and the operator arranges frills, collars, pockets and the like into their natural positions with the hands. The skirt and hem may be pulled or stretched gently against the heated moist form to remove wrinkles, while cuffs of sleeves are arranged and pulled taut to remove wrinkles.

The steam pedal 5 now is released and the air pedal 6 is depressed to allow hot air under pressure to enter through opening 4. The swirling motion given to the air as it enters the form (by means not shown) causes the form, garment support and garment to be rotated clockwise thereby imparting to the garment a smooth flared drape while the garment is drying. Because the form is drawn taut on the support, and the dress being materially larger than the form it will be blown out therefrom by the air and will be gently stretched and smoothed thereby. The high pressure air is allowed to flow long enough to remove surplus moisture and set the garment into its natural shape, while the rotation of the garment facilitates inspection. The open mesh torso portion permits the blast of air to pass through at this part where the most drying action is required, and at the same time allows sufficient heated air to pass down between the skirt of the dress and the skirt portion of the form to accomplish the drying of the skirt, the sleeves and shoulders concurrently. The garment then is removed from the machine with the wire hanger.

In the appended claim the term "rigid garment-supporting walls" as applied to the walls of the torso and skirt portions of the garment-supporting form is used to indicate that the walls of these portions serve to support the garment while in a flaccid state and the walls remain substantially fixed during the finishing operation and are not appreciably deflected outwardly by the blast of finishing fluid which, however, does produce ballooning of the garment laterally thereof.

I claim as my invention:

In a finishing apparatus of the character described having a hollow garment-supporting form comprising torso and skirt portions over which a waist and skirt type garment may be draped to be finished in response to a blast of fluid in the form of steam or air introduced into the interior of the form substantially adjacent the bottom of the skirt portion thereof; the improvement wherein the torso portion of the form is formed of rigid garment-supporting walls which are sufficiently foraminous to pass substantially the entire said blast of fluid directly into the waist of said garment, and the skirt portion of the form is formed of rigid garment-supporting walls substantially impervious to the said blast whereby, upon finishing a garment which is laterally larger than said form, the lateral portions of the garment will remain out of contact therewith in ballooned form in response to the said blast while it is passing from said torso directly into the waist portion of the garment with portions of the blast flowing through the pores of the waist, out of the neck portion thereof, and the residue of the said blast flowing downwardly via the space between the skirt of the garment and the outside of the skirt portion of the form into and through the pores in the skirt of the garment and through the open bottom of the skirt of the garment into the ambient atmosphere.

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