This invention relates to the finishing of knit fabrics containing yarns of organic derivatives of cellulose and relates more particularly to the finishing of knit hosiery containing such yarns whereby wrinkling, creasing and distortion of the hosiery is avoided.

An object of the present invention is to treat knit hosiery or stockings containing yarns of organic derivatives of cellulose under such conditions that the stockings do not become wrinkled, creased or distorted. Other objects of the invention will appear from the following detailed description.

As is well known, after the knitting operation in the manufacture of stockings, the stockings are subjected to a finishing treatment which may comprise, broadly, delusterizing, dyeing and drying the stockings. In the methods of finishing hosiery, as heretofore commonly practiced, it was exceedingly difficult if not impossible to finish stockings containing yarns of organic derivatives of cellulose without leaving wrinkles and creases in the fabric.

One of the usual methods of effecting the final operation of drying and forming stockings is to board the stockings after the dyeing step, from which the stockings come in a substantially dry state, and then pass the boarded stockings through the drying chamber of the boarding machine where a temperature of 220° F. is maintained. However, when stockings containing yarns of organic derivatives of cellulose are subjected to this treatment, there is grave danger of producing an unsaleable product full of wrinkles and creases. I have made the surprising discovery that by subjecting stockings containing yarns of organic derivatives of cellulose to higher temperatures while they are in a wet condition, or by subjecting such stockings in the presence of oils to lower temperatures, satisfactory products free from wrinkles and creases may be produced.

In accordance with one form of my invention, I prepare stockings containing yarns of organic derivatives of cellulose free from wrinkles and creases by boarding the stockings, after they have been dyed, on a suitable hosiery dryer. I then wet the stockings on the boards in any suitable manner and pass them through the drying chamber of the hosiery dryer in which chamber a temperature exceeding about 220° F., preferably about 260° F., is maintained. If the stockings are placed on those parts that are heated internally, lower temperatures, say 160 to 200° F. may be employed. The stockings are then removed from the boards free from wrinkles and creases. In another form of my invention, the stockings are subjected to heat on suitable forms, while having an oil applied thereto.

Stockings made from yarns of any suitable organic derivatives of cellulose such as organic esters of cellulose and cellulose ethers, may be treated in accordance with the foregoing method in order to produce a product free from wrinkles and creases. Examples of organic esters of cellulose are cellulose acetate, cellulose formate, cellulose propionate and cellulose butyrate while examples of cellulose ethers are methyl cellulose, ethyl cellulose and benzyl cellulose. Stockings which do not consist wholly of yarns of the organic derivatives of cellulose but also contain yarns of other fibres, such as silk, cotton, wool, reconstituted cellulose, etc. may also be freed of wrinkles and creases by subjecting the stockings to the above outlined treatment.

Referring more particularly to one method of carrying out my invention, stockings containing yarns of organic derivatives of cellulose, which stockings come from the dyeing operation in a substantially dry condition, are boarded, that is, each stocking is drawn onto an individual board on a hosiery drying machine, the board being somewhat flattened in cross-section and shaped to conform to the shape of the stocking. The boards are made of any suitable rust-resisting metal. After the stockings are boarded, they are wetted with water in any suitable manner as by spraying or sponging, and are then passed through the drying chamber of the hosiery dryer. The temperature of the drying chamber is maintained at 260° F.

In another form of carrying out my invention, the dried stockings containing yarns of organic derivatives of cellulose are boarded and instead of being wetted with water are sprayed or sponged with an aqueous emulsion of oils, containing from 10 to 100 c. c., and preferably from 50 to 100 c. c., per litre of olive oil, or other oil such as castor oil, cotonseed oil, Turkey red oil, mineral oils, or other oils, or mixtures of two or more of such oils. The stockings are then passed through the drying chamber of a hosiery dryer. An important feature of this method is that the use of higher temperatures is avoided, the drying chamber being maintained at an operating temperature of 200 to 230° F. This method also produces stockings free from wrinkles and creases. If after application of the oil emulsion, the stockings are placed on forms or boards that are individually heated, such as by steam passing through
the interior thereof, lower temperatures, such as 120 to 180° F. may be employed. A further method of freeing dyed stockings containing yarns of organic derivatives of cellulose from wrinkles and creases comprises boarding the stockings in a substantially dry condition on steam boards or boards heated by any other suitable means, sponging or spraying the stockings with water and permitting the same to dry on the boards which are heated internally by steam or other heating fluid. The stockings with the wrinkles and creases completely removed are then stripped from the boards. While good results are obtained when such boards are heated 15 to 120° F., the best results are obtained when the boards are maintained at a temperature of from 160 to 180° F.

It is to be understood that the foregoing detailed description is given merely by way of illustration and that many variations may be made therein without departing from the spirit of my invention.

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

1. Method of finishing hosiery containing organic derivatives of cellulose such as cellulose acetate to avoid creases and wrinkles, which comprises drawing the hosiery onto individual forms, then, after boarding said hosiery, wetting said hosiery with an oil emulsion at a temperature insufficient to cause delustering and drying the same while on the forms.

2. Method of finishing hosiery containing organic derivatives of cellulose such as cellulose acetate to avoid creases and wrinkles, which comprises drawing the hosiery onto individual forms, wetting said hosiery with an emulsion containing olive oil in the proportion of 10 to 100 c.c. per litre at a temperature insufficient to cause delustering and drying the same while on the forms.

3. Method of finishing hosiery containing organic derivatives of cellulose such as cellulose acetate to avoid creases and wrinkles, which comprises drawing the hosiery onto individual forms, wetting said hosiery with an emulsion containing olive oil in the proportion of 50 to 100 c.c. per litre at a temperature insufficient to cause delustering and drying the same while on the forms.

4. Method of finishing hosiery containing organic derivatives of cellulose such as cellulose acetate to avoid creases and wrinkles, which comprises drawing the hosiery onto individual forms heated to a temperature of from 120 to 180° F., then, after boarding said hosiery, wetting said hosiery with an aqueous emulsion of oil at a temperature insufficient to cause delustering and drying the same while on the forms.

5. Method of finishing hosiery containing organic derivatives of cellulose such as cellulose acetate to avoid creases and wrinkles, which comprises drawing the hosiery onto individual forms heated to a temperature of from 160 to 180° F., then, after boarding said hosiery, wetting said hosiery with an aqueous emulsion of oil at a temperature insufficient to cause delustering and drying the same while on the forms.

6. Method of finishing hosiery containing organic derivatives of cellulose such as cellulose acetate to avoid creases and wrinkles, which comprises drawing the hosiery onto individual forms heated to a temperature of from 120 to 180° F., then, after boarding said hosiery, wetting said hosiery with a vegetable oil emulsion at a temperature insufficient to cause delustering and drying the same while on the forms.

7. Method of finishing hosiery containing organic derivatives of cellulose such as cellulose acetate to avoid creases and wrinkles, which comprises drawing the hosiery onto individual forms heated to a temperature of from 120 to 180° F., then, after boarding said hosiery, wetting said hosiery with an aqueous emulsion of a vegetable oil at a temperature insufficient to cause delustering and drying the same while on the forms.

8. Method of finishing hosiery containing organic derivatives of cellulose such as cellulose acetate to avoid creases and wrinkles, which comprises drawing the hosiery onto individual forms heated to a temperature of from 160 to 180° F., then, after boarding said hosiery, wetting said hosiery with an aqueous emulsion of a vegetable oil at a temperature insufficient to cause delustering and drying the same while on the forms.

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