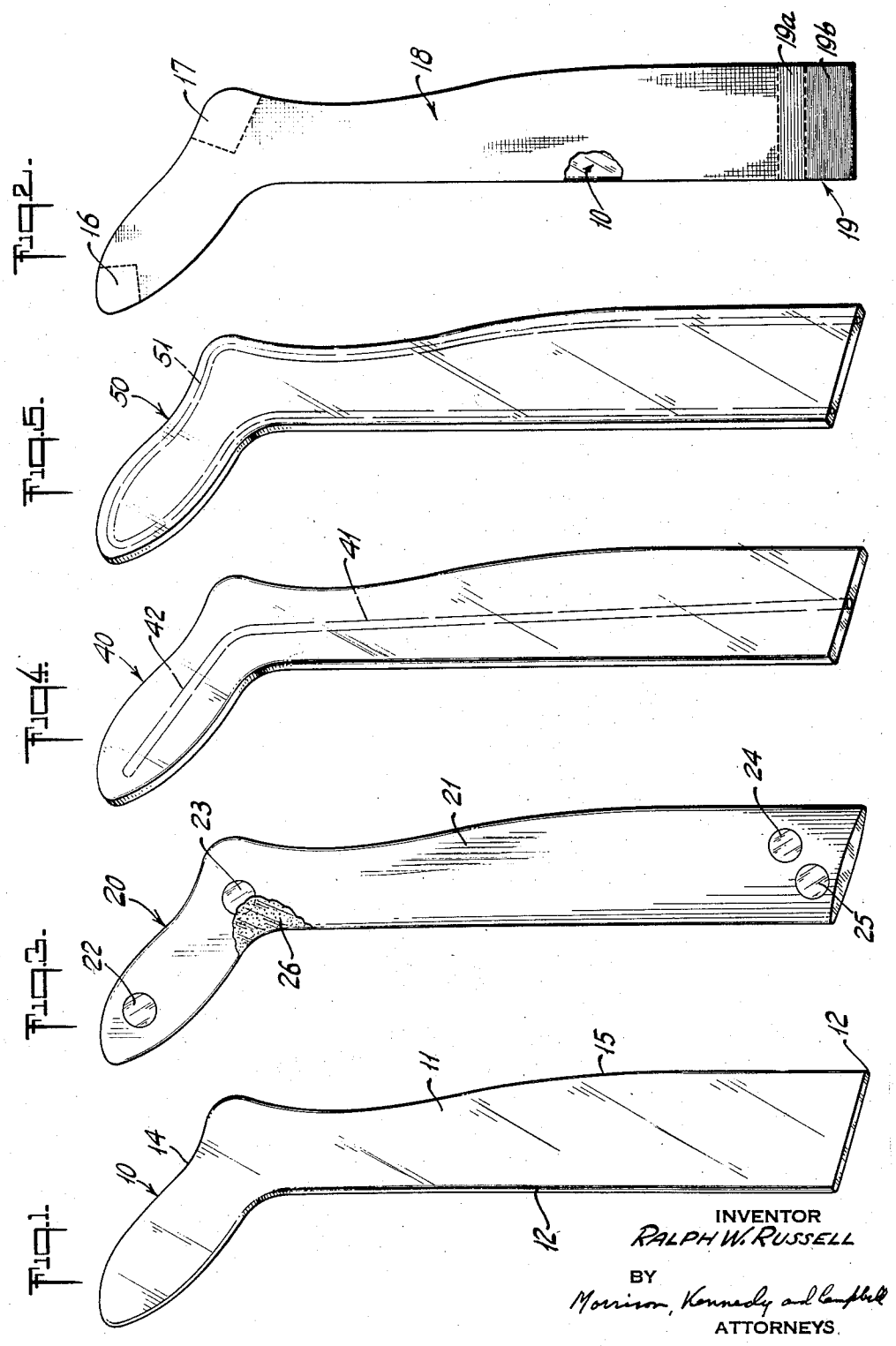
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HOSIERY BOARDING FORM

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HOSIERY BOARDING FORM

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The invention relates to apparatus for boarding hosiery and to hosiery-boarding forms, and particularly to forms adapted for utilization in the boarding of hosiery embodying nylon and like yarns.

In the production of hosiery containing yarns formed from long-chain polymeric amide material (nylon), condensation products of dimethyl terephthalate and ethylene glycol (e.g., Dacron), and other thermoplastic yarns, it is frequently customary to first knit the same in rough approximation of the desired shape and then to more accurately shape the same under heat on molds or forms. In the production of nylon stockings, for example, the knitted stockings are placed on a shaped form and subjected to live steam. In any such pressing or "boarding" operation, it is highly important that the knit goods be accurately positioned on the form. This is an important requirement in various types of boarding procedures used with various types of natural and synthetic yarns, but is particularly important when subjecting fabrics of nylon and similar synthetic yarns now in use or still to be introduced to live steam during a boarding operation. Examples of such operations are preboarding before dyeing, where the hosiery is subjected to steam pressure of 18 to 25 pounds for up to three minutes with a maximum temperature of 260° F., and putting the press in hosiery after dyeing where the hosiery is subjected to steam pressure of 15 to 18 pounds for up to 45 seconds with a maximum temperature of 245° F. The accurate positioning of the stocking on the form, is, however, beset with difficulties, which are especially present in the boarding of seamless hosiery. At present an operator has to feel at the back of the form with her fingers to straighten the position on the form of the reinforced heel and toe portions and other parts of the stocking.

I have found that these difficulties can be minimized by the provision of a boarding form which is formed of transparent material at least throughout the major portions thereof. The provision of such a form permits the operator to readily aline the near and far sides of the reinforced toe portion, the near and far sides of the reinforced heel portion, and other parts of the stocking. Where tendencies toward warping may be present, one or more narrow reinforcing strips are employed in a form otherwise composed of a transparent plastic, and I have found that the use of such reinforcing strips is desirable in certain instances. Again, a form which is otherwise opaque may have windows formed at significant portions, as where the toe, heel, and top of a stocking join the body thereof.

With the foregoing and other considerations in view, the present invention in various of its aspects contemplates the provision of a thin solid generally-flat form which is transparent at least at significant portions thereof, the provision of a form of this nature the edge of which is shaped to the contours of an article of hosiery and which is capable of withstanding temperatures in the neighborhood of 260° F., the provision of a transparent boarding form composed of glass, the provision of transparent boarding forms composed of steam-resistant transparent plastics, the provision of windows of steam-resistant transparent material in a boarding form; the provision of a boarding form composed of transparent plastic reinforced by narrow longitudinal reinforcing means, the provision of such reinforcing means within the surface of the form, and to correlated inventions and discoveries appertaining thereto.

The invention accordingly comprises the features of construction, combinations of elements, and arrangement of parts, all of which will be exemplified hereinafter and the scope of the application of which will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawings in which:

Figure 1 is a perspective view of one type of form embodying the invention and adapted to be used in carrying out the same;

Fig. 2 is a side view, partly broken away, showing a stocking fitted on the form;

Fig. 3 is a perspective view, with the surface film mainly broken away, of a modified type of form;

Fig. 4 is a similar view of another modified type of form; and

Fig. 5 is a similar view of a further modified type of form.

There is exemplified in Fig. 1 one type of boarding form embodying the invention and adapted to be used therein. The form **10** comprises a transparent member formed of glass or of transparent plastic adapted to withstand steam at temperatures in the neighborhood of 260° F. for up to three minutes, or, in other instances, in the neighborhood of 245° F. for 45 seconds, among which are certain transparent polyethylene terephthalate resins. The form has parallel sides one of which is shown at **11**, a thickness of about one quarter of an inch, and rounded corners **12** at the edges; and is shaped to the desired configuration of a stocking to provide a foot portion **14** and a leg portion **15**.

Because of the transparency of the form **10**, the reinforced toe portion **16**, the heel portion **17** of the stocking **18** may be alined symmetrically on the foot portion **14** of the form, as shown in Fig. 2; and the other parts of the stocking, including the top **19** having a lower part **19***a* and an upper part **19***b*, may likewise be effectively alined.

In Fig. 3 there is shown another type of transparent form **20**. This form has convex side portions which converge at the longitudinal edges and diverge toward a centrally disposed longitudinal line. The body **21** of this form is composed of aluminum, or other suitable opaque material, but has windows therein of transparent material of the character above indicated, and which may be of heat-resistant glass. In the present instance there is provided a window **22** which is adapted to lie between opposite portions of the stocking where the toe portion **16** joins the body portion **18**, a window **23** which is adapted to lie between opposite portions of the stocking where the heel portion **17** joins the body portion **18**, a window **24** which is adapted to lie between opposite portions of the stocking where the top **19** of the stocking joins the body portion **18** thereof, and a window **25** at a point where the uppermost part **19***a* of the stocking joins the lower part **19***b* of the top **19** of the stocking. In the present instance, the windows are formed of glass, and they and the aluminum body **21** are covered with a solidified transparent plastic film **26** which will withstand steam at temperatures in the neighborhood of 260° F.

In Fig. 4 there is shown a form **40** similar to the form **10** except that it includes a reinforcing means in the

form of a steel rod 41 comprising a bent portion 42 within the foot portion, and extending longitudinally intermediate the lateral edges of both the foot and leg portions of the form, and disposed within the surface of the form. If formed of a polyester resin, as above indicated, for instance, this resin would be the only material in contact with the stocking; and the temperature at the surface of the form, and the steam-resistant characteristics of the form, would be substantially uniform.

In Fig. 5 there is shown a type of form 50 which is similar to that of Fig. 4 except that, instead of a central wire rod, a marginal reinforcing wire 51 is embodied within the form near to and within the edges of the form.

Since certain changes in the constructions set forth, which embody the invention, may be made without departing from its scope, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. A form for steam setting hosiery comprising a thin generally-flat solid form shaped to the contours of an article of hosiery having leg and foot portions, said form comprising metal extending substantially thruout its length and being composed of transparent material at least at those parts thereof over which a plurality of position-indicating parts of the hosiery will lie, substantially the entire surface of said form being composed of a transparent solidified plastic, said transparent portions and the solidified plastic at the surface being capable of withstanding steam at a temperature in the neighborhood of 260° F.

2. A form for steam setting hosiery comprising a thin, generally-flat, solid form shaped to the contours of an article of hosiery having leg and foot portions, and comprising opaque material with at least one window of transparent material at those portions thereof over which a plurality of position-indicating portions of the hosiery will lie and being capable of withstanding steam at temperatures in the neighborhood of 260° F.

3. A form as in claim 2 wherein said opaque material is metal and wherein the form is surfaced with a transparent plastic.

4. A form as in claim 2 which comprises transparent windows at the toe and heel portions thereof.

5. A form as set forth in claim 2 and having slightly convex side surfaces gradually diverging from a longitudinal central portion of the form.

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