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DRYING AND STORING FRAME FOR KNIT GOODS

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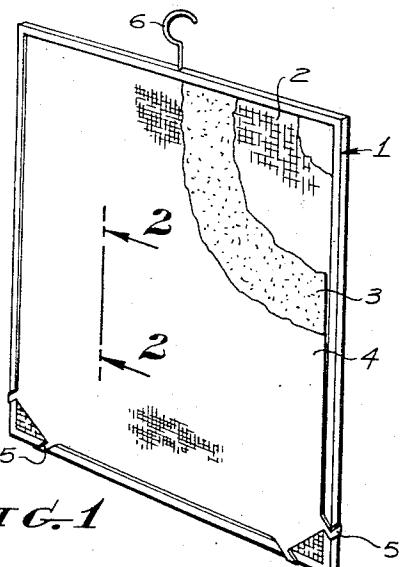


FIG. 1

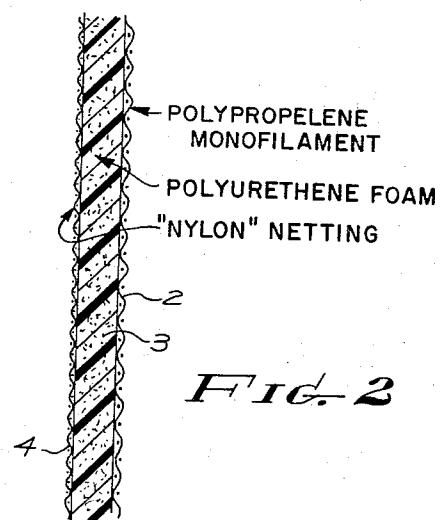


FIG. 2

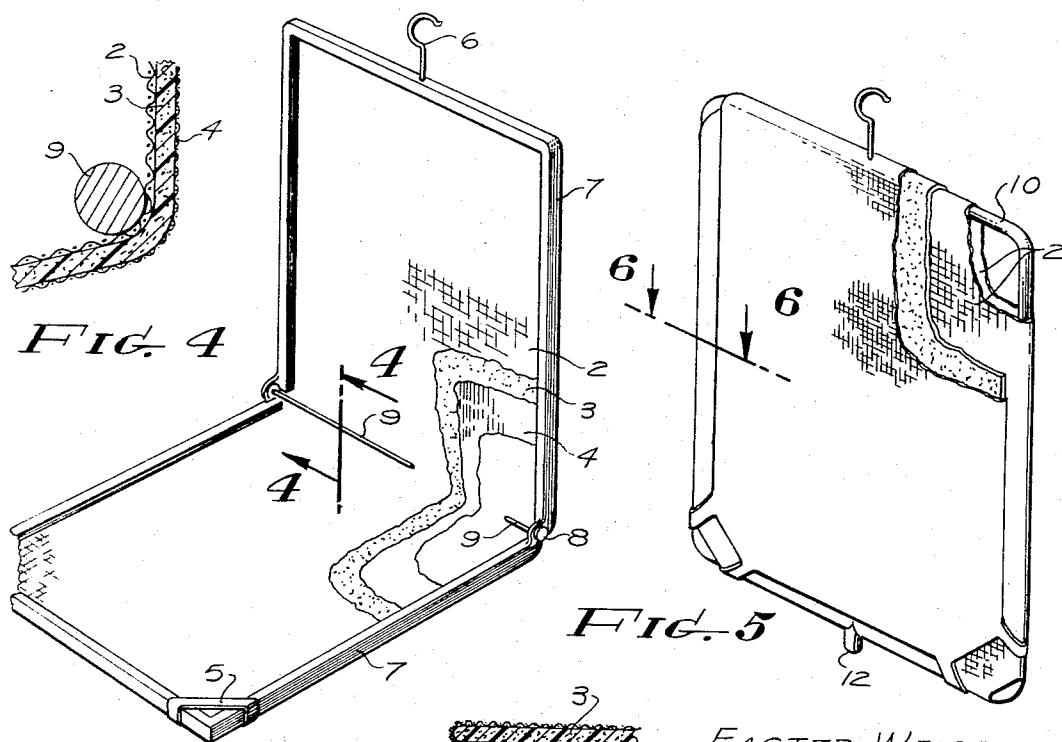


FIG. 3

FIG. 4

FIG. 5

FIG. 6

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DRYING AND STORING FRAME FOR KNIT GOODS

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ABSTRACT OF THE DISCLOSURE

A drying and storing means for knit goods in which a framed foraminous backing member supports a garment while being placed thereon and a flexible blanket of foamed porous elastomeric plastic material is secured to one margin of the backing member frame so that it may be rolled and stretched thereover without disturbing the placement of the garment, and its extended end is secured to the opposite margin of the backing member frame; the blanket having a surface having a high coefficient of friction especially when in contact with yarn fibers so that the garment clings or adheres to the blanket so that the drying and storing means may be hung in a vertical position.

This invention relates to drying and storing frames for knit goods and included in the objects of this invention are:

First, to provide a drying and storing frame wherein a knit garment may be spread out and "blocked" while laying on a first porous membrane then covered by a second porous membrane, one of the membranes having a surface which is mechanically adherent to yarn so that the garment is gently, but firmly held in place to permit the frame to be suspended vertically without disturbing the garment, thus permitting a cleaned but damp garment to be hung from a clothes line for drying, and when dry, to be suspended from a clothes rod in a closet.

Second, to provide a drying and storing frame, one embodiment of which is adapted to receive long garments such as full dresses and which may be folded with the garment therein for either drying or storing purposes.

Third, to provide a drying and storing frame, an embodiment of which includes two sets of spaced porous membranes and a frame member perforated so that air may be supplied from a blower, such as the blower of a hair dryer, to expedite drying of a garment or pair of garments.

With the above and other objects in view as may appear hereinafter, reference is directed to the accompanying drawings in which:

FIGURE 1 is a perspective view with portions broken away showing one embodiment of the drying and storing frame for knit goods.

FIGURE 2 is an enlarged fragmentary substantially diagrammatic sectional view thereof taken through 2—2 of FIGURE 1.

FIGURE 3 is a perspective view showing a modified form of the drying and storing frame.

FIGURE 4 is an enlarged fragmentary substantially diagrammatical view taken through 4—4 of FIGURE 2.

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FIGURE 5 is a perspective view showing a further modified form of the drying and storing frame.

FIGURE 6 is an enlarged fragmentary sectional view taken through 6—6 of FIGURE 5.

Reference is first directed to FIGURES 1 and 2. In the construction here shown, the drying and storing frame includes a rigid frame member 1, preferably of rectangular form and formed of light-weight metal or plastic material. Secured within and covering the frame 1 is a foraminous back membrane 2 in the form of a netting of relatively strong plastic material, for example, the back membrane may be formed of polypropylene monofilament. A netting having a mesh of approximately 16 strands per inch has been found satisfactory.

Suitably secured to one side of the frame 1 is a porous sheet or blanket 3 formed of a foamed elastomer. The sheet 3 covers the back membrane 2 and in turn, is provided with a cover membrane 4.

The cover membrane is foraminous. A nylon netting having a mesh of about 26 strands per inch has been found satisfactory. The sheet 3 and membrane 4 are substantially coextensive with the back membrane 2. The margins of the membrane 4 are preferably folded over the margins of the sheet 3 so as to form a protection therefor and is secured with the sheet 3 to one side of the frame member 1. The opposite or free end of the sheet 3 and membrane 4 is provided at its lateral extremities, with a pair of elastic retaining strips 5 which may be hooked over the corresponding corners of the frame member 1.

The side of the frame member 1 to which the sheet 3 and membrane 4 are attached is provided with a supporting hook 6. The sheet 3 is preferably about $\frac{1}{8}$ of an inch thick and is porous. It is preferably formed of foamed polyurethane, but may be, as is also the case with regard to the membranes 2 and 4, of other plastic materials. In the selection of the plastic material comprising the sheet 3, it is essential that its surface have a high coefficient of friction, especially when in contact with yarn fibers so that the sheet 3 tends to cling or adhere to knitted garments.

The tendency for the foamed material to cling or adhere to the garment seems to reside in the fact that the walls of the plastic defining the pores of the material are relatively thin, irregular and tend to penetrate superficially between the fibers of the yarn. The amount of adherence, however, is well below that which would be injurious to the yarn or would in any way tend to separate the fibers of the yarn.

50 The drying and storing frame is employed as follows:

The frame is placed on a flat surface, the sheet 3 and membrane 4 are folded free of the back membrane 2. The knitted garment is placed on the back membrane and spread out or blocked in the desired shape. This is done 55 while the garment is wet after having been cleaned. When the garment is in its proper shape on the back member, the sheet 3 is carefully laid over the garment starting at one edge and essentially rolling the sheet over the garment so that the position and arrangement of the garment is not disturbed. The retaining strips 5 are then extended over the corners of the frame. After this is accomplished, the frame may be hung on a clothes line or otherwise handled without disturbing the initial position of the knitted garment.

By reason of the porous material of the membranes 2 and 4 and the sheet 3, the moisture contained in the garment readily evaporates.

It is preferred that the pores provided in the sheet 3 be relatively small so that there is a tendency for capillary action to occur with the result that there is minimum drainage or accumulation of excess moisture at the bottom of the garment or at the bottom of the frame, but instead, the garment and the enclosing membranes and sheet tend to dry uniformly.

The membranes and sheet are preferably colored so that harmful light rays do not penetrate to the knitted garment, thus permitting the frame to be hung in the sunlight.

After the garment has dried, the frame and garment may be hung in a clothes closet until the garment is ready for use. If it is desired, the garment may be stored in the frame between uses.

Reference is now directed to FIGURES 3 and 4. This construction also employs a back membrane 2, a porous sheet of foamed elastomer and a cover membrane 4.

In this case, however, two U-frames 7 are provided which are joined by hinges 8 connected by a cross rod 9 so that the two frames may be folded, one on top of the other, or arranged in a common plane.

The arrangement shown in FIGURES 3 and 4 is particularly adapted for dresses or full length garments. The arrangement shown in FIGURES 1 and 2 may be adapted for full length garments by folding the garment upon itself; however, in this case, it is preferable to interpose a second porous sheet of foamed elastomer between the two layers of the garment.

Reference is now directed to FIGURES 5 and 6. In this construction, a rectangular tubular frame 10 is provided having inwardly directed perforations 11. At one side, a fitting 12 is provided for connection to a source of air, for example, the frame may be connected to the output duct of a hair dryer. In place of a single membrane, two membranes 2 are provided which wrap around the sides of the tubular frame and form therewith a plenum 13. Each of the two back membranes receive a porous sheet of foamed elastomer and a cover membrane 4. In this case, two garments may be dried simultaneously and the drying is accelerated by the flow of warm air into the plenum and outwardly through the membranes 2 and 4 and the sheet 3.

If desired, a single sheet 3 and cover membrane 4 may be employed twice the length of the frame. In this case, they are arranged so as to wrap around one side of the frame so that the frame may accommodate a full size 50 knitted dress or the like.

It should be noted that the membranes 2 and 4 are capable of being tensioned so that when the membrane 4 is secured by the straps 5, pressure is exerted against the sheet 3 so that a slight amount of clamping pressure is applied to the garment positioned between the membrane 2 and the sheet 3. In order that the tension may be maintained, it is preferred that the filaments forming the membrane be resistant to excessive stretching.

While particular embodiments of this invention have been shown and described, it is not intended to limit the same to the details of the constructions set forth, but instead, the invention embraces such changes, modifications and equivalents of the various parts and their relationships as come within the purview of the appended claims.

We claim:

1. A drying and storing frame for knit goods, comprising:

- (a) a rigid frame member formed of a perforated tube and including means for connection to an air supply;
- (b) a foraminous back membrane covering both sides of said frame and secured thereto under tension to form a plenum;
- (c) and a sheet of porous foamed elastomer having a

surface which superficially interlocks with fibers of yarn covering both of said back membranes thereby to secure against displacement a knitted garment placed between said membrane and sheet.

2. A drying and storing frame for knit goods, comprising:

- (a) a rigid frame member;
- (b) a foraminous back membrane covering said frame and secured thereto under tension;
- (c) a sheet of porous foamed elastomer having a surface which superficially interlocks with fibers of yarn covering said back membrane;
- (d) and means for pressing said sheet toward said back membrane to secure a knitted garment interposed therebetween.

3. A drying and storing frame for knit goods, comprising:

- (a) a rigid frame member formed of a perforated tube and including means for connection to an air supply;
- (b) a foraminous back membrane covering both sides of said frame and secured thereto under tension to form a plenum;
- (c) a sheet of porous foamed elastomer having a surface which superficially interlocks with fibers of yarn covering both of said back membrane;
- (d) a front foraminous, relatively non-stretchable, membrane covering said sheet to limit stretching of said sheet;
- (e) and means for securing said front membrane and sheet to said frame with said front membrane under tension thereby to apply a clamping force to a garment interposed between the back membrane and sheet.

4. A drying and storing frame for knit goods, comprising:

- (a) a rectangular frame;
- (b) a membrane of foraminous material covering said frame;
- (c) a porous rollable sheet joined by one margin to a side of said frame and including tension straps at the corners of its extended margin for removable attachment to the opposite margin of said frame, whereby said sheet is unrolled over said membrane and is securable thereto by said tension straps;
- (d) the surface of said sheet having a high coefficient of friction and tending to interlock with the yarn fibers of a knitted garment whereby a garment once in contact with said sheet tends to remain fixed relative thereto.

5. A drying and storing frame for knit goods according to claim 4, wherein:

- (a) the remaining two sides of said frame are hinged intermediate their ends and are joined by a cross bar whereby said frame is foldable with said membrane and sheet passing over said bar.

6. A drying and storing frame for knit goods according to claim 4, wherein:

- (a) said frame is tubular and perforated inwardly from its margins, and means is provided for connection to an air supply;
- (b) a pair of membranes cover said frame to form therebetween and within said frame a plenum for distribution of air throughout said membranes;
- (c) and a porous sheet covers each membrane.

7. A drying and storing device for knit goods, comprising:

- (a) a rigid rectangular frame;
- (b) a foraminous back membrane covering said frame;
- (c) a blanket of flexible porous foamed elastomer secured by one margin to a side of said frame, said blanket being progressively rollable over a knitted garment placed on said back member and said

blanket having a surface having a high coefficient of friction which superficially interlocks with fibers of the yarn comprising said garment, thereby to hold said garment in place on said back membrane;
 (d) and means at the extended margin of said blanket 5 adapted for connection to said frame and for securing said blanket under tension, thereby to secure said garment in place and permit disposition of said frame in a vertical position.

8. A device, as defined in claim 7, wherein:

(a) the side of said blanket opposite from the side contacted by said garment is covered with a front membrane of foraminous flexible but relatively non-stretchable material to limit stretching of said blanket.
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