Jan. 12, 1960 R. P. ROYER 2,920,765

HOSIERY PAIRING RACK

Filed June 22, 1956 2 Sheets-Sheet 1

FIG. 1

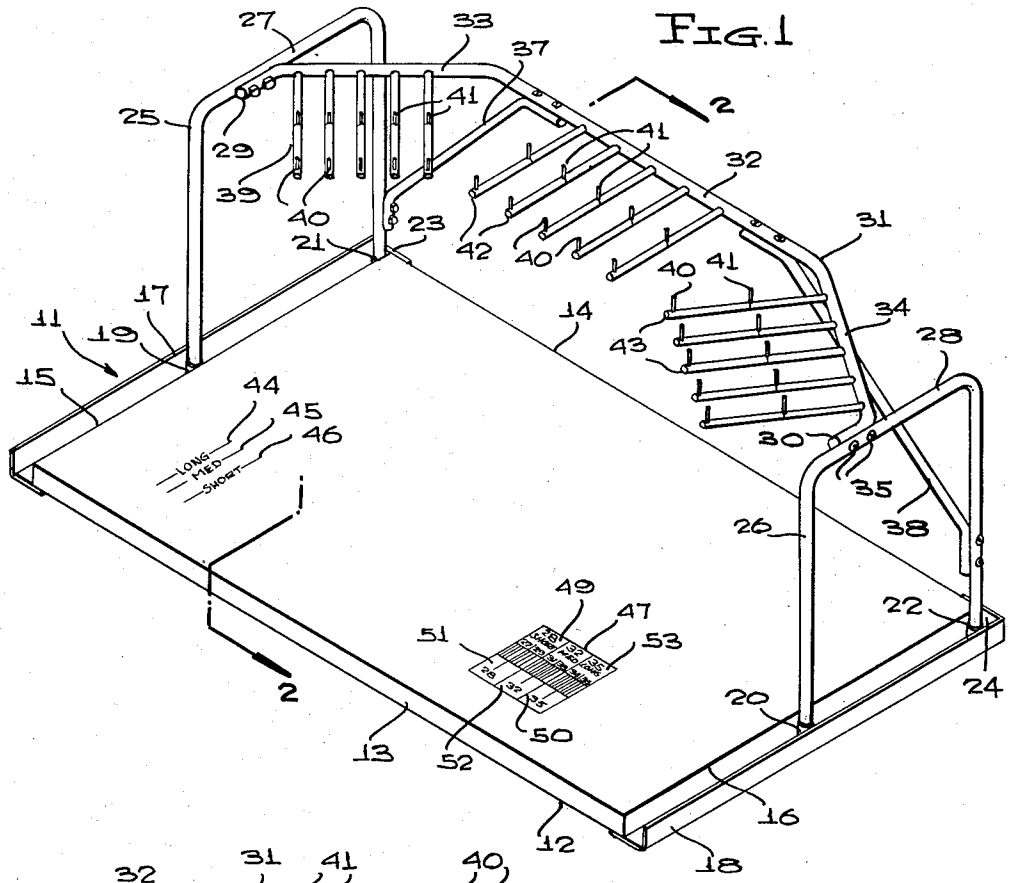
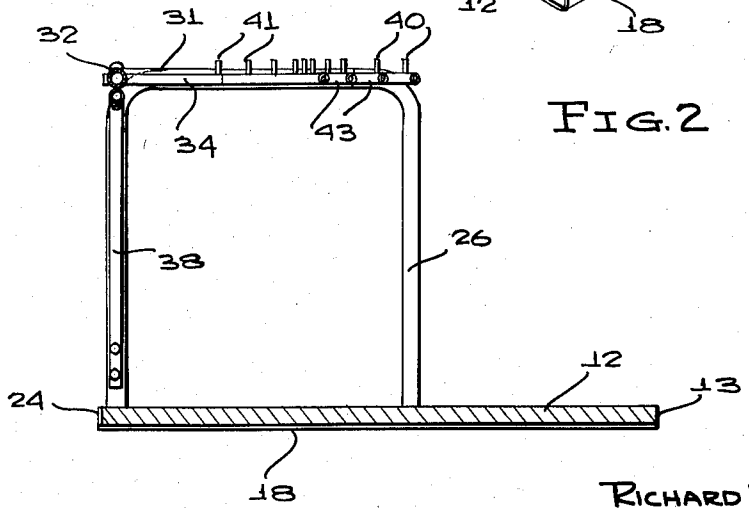


FIG. 2



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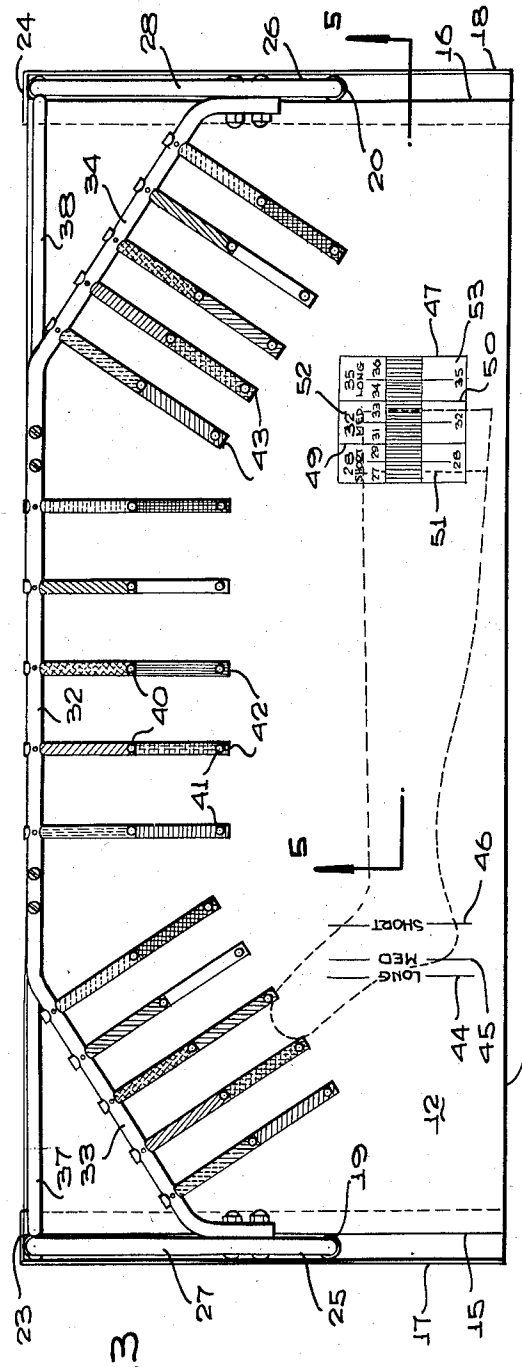

FIG. 3

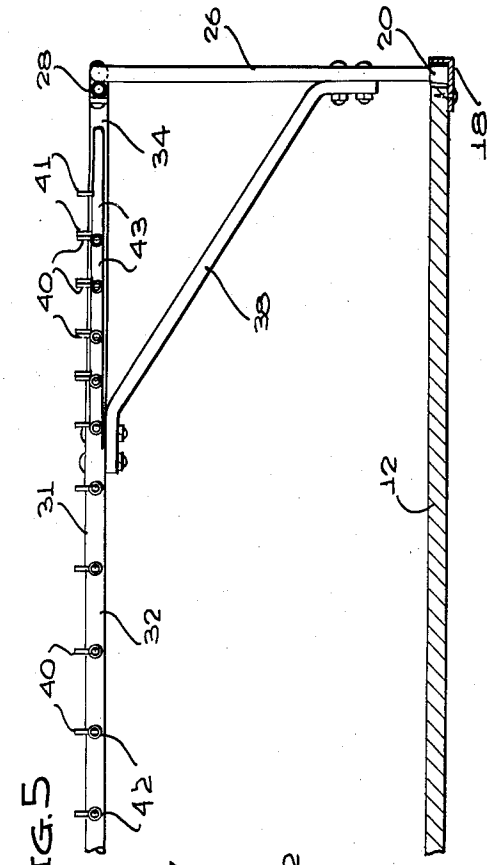

FIG. 5

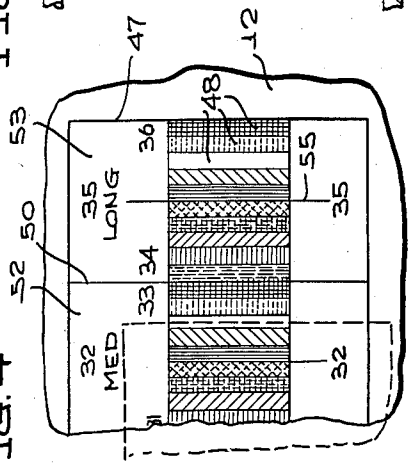

FIG. 4

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HOSIERY PAIRING RACK

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1 Claim. (Cl. 211—10)

This invention relates to sorting apparatus, and more particularly to an apparatus for measuring, separating, and grading hosiery.

A main object of the invention is to provide a novel and improved sorting apparatus for separating stockings and classifying the stockings according to size, so that the stockings may be arranged in pairs of like size, the apparatus being simple in construction, being relatively compact in size, and providing an easy and rapid means of sorting stockings into groups of like size characteristics.

A further object of the invention is to provide an improved hosiery pairing rack device which is inexpensive to fabricate, which is durable in construction, and which is arranged so that an operator may rapidly sort out a quantity of stockings of randomly varying sizes and may collect the stockings of like size in a neat and efficient manner so that said stockings may be paired, the apparatus requiring no special training on the part of the operator and greatly speeding up the process of sorting stockings into size classifications after they leave the knitting machines on which they are formed.

Further objects and advantages of the invention will become apparent from the following description and claim, and from the accompanying drawings, wherein:

Figure 1 is a perspective view of an improved hosiery pairing rack constructed in accordance with the present invention.

Figure 2 is a transverse vertical cross sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a top plan view of the hosiery pairing rack of Figures 1 and 2.

Figure 4 is an enlarged fragmentary plan view of a portion of the table element of the rack of Figures 1 to 3, showing the color-size scale thereon.

Figure 5 is a vertical cross sectional detail view taken on the line 5—5 of Figure 3.

Referring to the drawings, the improved hosiery pairing rack is designated generally at 11 and comprises a table portion 12 consisting of a generally rectangular rigid flat board having the longitudinal side edges 13 and 14 and the transverse end edges 15 and 16. The board 12 may be mounted on any suitable support, for example, on a simple supporting frame having legs, so that the board is supported at a suitable height permitting an operator to work adjacent the board.

Secured to the opposite end marginal portions of the board 12 are the respective angle bars 17 and 18 having their vertical flanges spaced outwardly from the transverse end edges 15 and 16 of board 12, as shown in Figure 1. Secured to the intermediate portions of the vertical flanges of the angle bars are the respective cylindrical socket elements 19 and 20, and secured to the end portions of the flanges adjacent the rear corners of board 12 are additional socket elements 21 and 22. The angle bars 17 and 18 are provided with end flanges 23 and 24 overlapping the rear longitudinal edge 14 of board 12 and being located adjacent the respective socket elements 21 and 22.

Designated at 25 and 26 are respective inverted U-shaped supports of tubular metal, or similar material, the supports having the lower ends of their vertical leg portions received respectively in the sockets 19 and 21 and in the sockets 20 and 22. The supports 25 and 26 have horizontally extending bight portions, shown at 27 and 28, and connected to the forward portions of the bight elements 27 and 28 are the respective ends 29 and 30 of a rigid tubular top member 31.

As is clearly shown in Figures 1 and 3, the top member 31 comprises a horizontal, longitudinally extending intermediate portion 32, a horizontal, inclined end portion 33 having the transversely extending short connecting element 29 which is fastened to the horizontal bight member 27, and the opposite inclined horizontal end member 34 having the transversely extending, relatively short portion 30 secured to the transversely extending bight member 28. The elements 29 and 30 are rigidly secured to the bight members 27 and 28 in any suitable manner, as by a pair of spaced bolts 35, so that the top member 31 is rigidly held on the supports 25 and 26 in a position facing forwardly of the board 12, as is clearly illustrated in Figures 1 and 3. The member 31 is further braced to increase its rigidity by means of a pair of inclined struts 37 and 38 connecting the rear legs of the supporting members 25 and 26 to the respective opposite end portions of the intermediate section 32 of top member 31.

Rigidly secured to the inclined member 33 of the top element 31 are a plurality of evenly spaced rod members 39 extending forwardly and perpendicular to the element 33 and being arranged in a common horizontal plane. The rod members 39 are identical in length and have secured to their forward end portions the upstanding pin elements 40 and have secured to their intermediate portions the upstanding pin elements 41. Rigidly secured to the straight intermediate section 32 of the top member 31 are a plurality of evenly spaced, forwardly extending horizontal, parallel rod members 42 identical to the rod members 39 and being similarly provided with the forward upstanding pins 40 and the intermediate upstanding pins 41. Rigidly secured to the inclined end section 34 of top member 31 are a plurality of additional horizontal, parallel, evenly spaced rod members 43 identical to the rod members 39 and 42 and being similarly provided at their forward ends with the upstanding pin elements 40 and at their intermediate portions with the upstanding pin elements 41.

As will be presently explained, each rod element 39, 42 or 43 is divided into two sections, comprising the spaces thereon on opposite sides of the intermediate pin elements 41, each section being adapted to receive stockings of a given size, whereby a number of classifications of stocking sizes are provided by each group of rod elements 39, 42 or 43. The rod elements 39 mounted on the inclined top section 33 may be employed to receive the various sizes in the general classification of "short" sizes, the rod elements 42 on the longitudinally extending intermediate section of top member 31 may be arranged to receive the various sizes in the general classification of "medium" size stockings, and the rod elements 43 on the inclined section 34 may be arranged to receive the various sizes in the "long" classification of stocking sizes. Obviously, the distribution of the classifications may be reversed, and, if so desired, the rod elements 39 may be employed to receive the "long" sizes and the rod elements 43 may be employed to receive the "short" sizes.

Inscribed on the forward portion of the top surface of the board 13 adjacent one end thereof are the respective transversely extending reference lines 44, 45 and 46, spaced in the manner illustrated in Figures 1 and

3, and carrying identifying indicia, whereby the line 44 is identified as the reference line for "long" stockings, the line 45 is identified as the reference line for "medium" size stockings, and the line 46 is identified as the reference line for "short" sizes of stockings. Provided on the board 13 opposite the group of lines 44, 45 and 46, and spaced substantially the same distance from front edge 13 of the board is a table 47 comprising transversely extending, evenly spaced lines 48 defining a size table with respect to the reference lines 44, 45 and 46, the groups of calibrations 48 being divided by the lines 49 and 50 on table 47 into three sections 51, 52 and 53, corresponding to the "short," the "medium," and the "long" groups of stocking sizes. Suitable identifying numerical indicia are provided on table 47 to numerically designate the respective stocking sizes defined by the lines 48. Thus, the sections 51, 52 and 53 are each provided with a scale wherein the lines 48 define ten spaces, said spaces representing different stocking sizes, and a numerical reference line 55 is provided at the median boundary between the fifth and sixth space, at which line is inscribed a number numerically identifying said median line in terms of a size number with respect to the reference lines 44, 45 or 46.

Each of the ten spaces defined in each section 51, 52 and 53 between the successive lines 48 is filled in with a specific color, the color groupings for the three sections 51, 52 and 53 being identical, but each of the successive spaces between the lines 48 having a characteristic color. As shown, there are ten groups in each section 51, 52 and 53. Similarly, there are five rods 39, 42 and 43, divided into ten spaces by their upstanding pins 41, and the sections on the rods defined on opposite sides of the pins 41 are each painted or otherwise suitably colored, corresponding to a specific color between the lines 48 of the respective sections 51, 52 and 53. Thus, the ten rod sections defined on the rod 39 are successively colored in the same manner as the ten spaces between the lines 48 on the table section 51. Similarly, the ten rod sections of the rod are successively colored in the same manner as the spaces between the lines 48 on the section 52. The ten spaces defined on the rods 43 are successively colored in the same manner as the ten successive spaces between the lines 48 on the table section 53.

From the above, it will be apparent that by the arrangement now described, the rods 39 would be employed for the "short" sizes, the rods 42 would be employed for the "medium" sizes and the rods 43 would be employed for the "long" sizes.

In using the apparatus, the operator places the stockings to be classified on the table and measures each stocking by holding the edge of the heel of the stocking against one of the lines 44, 45 or 46 and arranging the stocking so that the edge of the hem falls on the table

47. The selection of the lines 44, 45 or 46 depends upon whether the stocking is observed to be "short," "medium," or "long." With the edge of the heel placed adjacent a selected line 44, 45 or 46, the operator notes the color strip at the edge of the stocking hem, and then places the stocking on the similarly colored rod section, of rods 39, 42 or 43, corresponding to the classification of the stocking. Thus, for a stocking which is observed to be "long," the operator would employ the reference line 44 and would determine the specific size by observing the color of the strip on table section 53 at which the stocking hem is positioned. The operator would then place the stocking on the colored section of rod 43 corresponding to said color strip. In this way, each stocking is quickly and accurately classified and the stockings will be arranged on the respective rack rods 39, 42 or 43 in sorted groups of similar size, whereby the sorted stockings may be rapidly paired or otherwise matched together.

While a specific embodiment of an improved hosiery pairing rack has been disclosed in the foregoing description, it will be understood that various modifications within the spirit of the invention may occur to those skilled in the art. Therefore, it is intended that no limitations be placed on the invention except as defined by the scope of the appended claim.

What is claimed is:

A hosiery sorting rack comprising a board, a pair of spaced upstanding supports on said board, a substantially horizontal bar element connected to the top portions of the upstanding supports and overlying the board, said bar element comprising inclined end portions and a straight intermediate portion connecting said inclined end portions, said end portions diverging forwardly from the respective ends of said straight intermediate portions, a group of spaced parallel, forwardly extending horizontal rods secured to each of said inclined end portions and said intermediate portion of the bar element perpendicular thereto and defining forwardly convergent groups of parallel hosiery rack elements, said rods overlying the board and being of sufficient length to support a pair of hose spaced thereon and folded thereover, the rods of each group being each distinctively colored, and upstanding pin members on the intermediate and forward portions of the rods defining spaces on the opposite sides of the intermediate pin members for pairs of hosiery.

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