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GARMENT STORAGE RAILS

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1 Claim. (Cl. 104—110)

This invention relates generally to the conveyor art, and more particularly to a new and useful garment storage and conveyor rail for use in clothing and allied industries.

Conveyor rails heretofore used for storing and conveying garment hangers comprise lengths of pipe supported at spaced points therealong as for example by hook-like brackets suspended from the ceiling.

While the pipe itself is relatively cheap, it requires a relatively large number of brackets and hangers which, together with the labor of installing them add greatly to the cost of such installations making them relatively expensive. In addition, such arrangements are relatively inconvenient.

Accordingly, a primary object of this invention is to provide a storage and conveyor rail section for garment hangers and the like which requires substantially fewer support brackets and is easier and less expensive to install, and which is in other ways more convenient and desirable than conventional pipe installations.

A garment storage and conveyor rail section constructed in accord with this invention is characterized, in one aspect thereof, by a single piece of sheet material formed to comprise an elongated member having substantially flat, generally parallel top and bottom wall portions joined by intermediate wall means, the bottom wall portion terminating at one side edge in an upright wall portion, and the upright wall portion terminating short of the top wall portion in a laterally projecting lip of concave cross-sectional form to receive garment hangers and the like for movement therealong, the height of the member being greater than its width.

The foregoing and other objects, advantages and characterizing features of a garment storage and conveyor rail of the invention will become readily apparent from the ensuing detailed description of two presently preferred embodiments thereof, taken in conjunction with the accompanying drawing illustrating such embodiments wherein like reference numerals denote like parts throughout the various views and wherein:

Fig. 1 is a perspective view of one form of garment storage and conveyor rail section constructed in accord with this invention;

Fig. 2 is a corresponding perspective view of another form thereof;

Fig. 3 is a transverse sectional view of the rail section of Fig. 1, illustrating one support arrangement therefor;

Fig. 4 is a fragmentary front elevational view taken about on line IV—IV of Fig. 3; and

Fig. 5 is a transverse sectional view corresponding to Fig. 3, but illustrating a support arrangement for the rail section of Fig. 2.

Referring now to the embodiment of Figs. 1, 3 and 4, the rail section of the invention shown therein comprises a single piece of sheet material such as, for example, coiled flat steel stock, either hot or cold rolled of, for example 14 gauge, formed as by roll forming tech-

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niques to comprise a normally generally horizontal and substantially flat top wall portion 1 terminating along its forward side edge in a downturned flange 2 reversely bent as indicated at 3. The rail section is further formed to provide intermediate wall means comprising a normally substantially vertical rear wall portion 4 depending from the rear side edge of top wall portion 1 and leading to the rear side edge of a generally flat bottom wall portion 5 normally substantially parallel to top wall portion 1. At its forward side edge, bottom wall portion 5 leads to an upstanding front wall portion 6, substantially normal thereto, which terminates along its upper edge in an inturned lip 7 of convex curvature in transverse section.

In practice, a number of elongated rail sections as thus described are secured together in end-to-end relation, and then to a fixed support 9 as by a support bracket which can comprise a back wall 8, a bottom wall 11 and a top wall 12, all adapted to bear against the corresponding rear, bottom and top wall portions of the garment rail section as illustrated in Fig. 3. A lug 10 or like member is secured to the back wall 8 of the support bracket to project therefrom into fixed support 9 for fastening thereto in any desired manner as by extending through the fixed support and terminating in a threaded portion adapted to receive a locking nut or the like. Thus, the garment rail rests on the bracket bottom wall 11, and is locked in position and further supported as by a J-shaped, hook part 13 engaging beneath the return bent flange 2, 3 and secured to the bracket top wall 12, to depend therefrom, as by a threaded stud 14 fastened to hook part 13 and extending through the bracket top wall 12 to receive a nut 15.

Of course, if desired the rail sections can be fastened directly to an overhead support through the top wall portion 1, or they can be supported in other ways as will occur to those skilled in the art. A garment hanger hook, indicated at 16 (Fig. 3), is adapted to engage over the convex lip 7 and to slide therealong, and a much better sliding surface is provided by the rail section of this invention than by pipe. In this way, the conveying of garments by sliding their hangers therealong is greatly facilitated.

Also, far fewer support brackets are needed than with a pipe rail, because of the beam strength provided by the rail section of this invention. It will be noted that the rail section has substantial depth, comprising the distance between wall portions 1 and 5, preferably exceeding its width, and the greatly increased depth of this rail section, as compared to pipe rail, provides a much greater beam strength which permits the employment of for example approximately only one-third the number of support brackets that normally would be required in a comparable pipe rail installation. This reduces the amount of labor required, as well as the amount of material, and thereby makes the total installation both more convenient and less expensive than when using pipe rail.

Another significant feature of this invention is that the garment hangers must be placed on the rail in the proper direction, thereby automatically avoiding interference with the supporting bracket. With pipe rail, there is nothing to prevent the garment hangers from being placed on the rail to depend from either side thereof, whereby as they are slid along the rail those on the wrong side will abut the support bracket and interfere with further movement of hangers therealong. However, with the instant invention the hanger must be suspended from the rail lip 7 in the direction illustrated in Fig. 3, thereby avoiding such interference without any added effort on the part of the operator.

The embodiment illustrated in Figs. 2 and 5 also com-

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prises a single piece of sheet material, and is formed by suitable means to provide a top wall portion 17 terminating at its rear side edge in a downwardly curved flange 18 and at its other side edge leading to intermediate wall means comprising a diagonally extending wall portion 19 in turn leading to a normally generally vertically upright rear wall portion 20. Wall portion 20 in turn leads to a bottom wall portion 21 substantially normal thereto and substantially parallel to top wall portion 17 and bottom wall portion 21 in turn leads to an upstanding front wall 22 substantially normal thereto at the forward side edge thereof. Wall portions 17, 19, 20, 21 and 22 are generally flat, and the latter terminates at its upper edge in an inwardly directed lip 23 of convex curvature in cross section. The lip 23, like lip 7 in Fig. 1, is adapted to receive a garment hanger 16 for hanging thereon and sliding therealong. The rail section of Fig. 2, like that of Fig. 1, can be secured directly to an overhead support. Also, it can be supported by brackets in turn attached to a fixed support, such as illustrated in Fig. 5 wherein there is shown a bracket having a normally generally vertical rear wall 25 adapted to fit against the rail section rear wall portion 20 and a bottom wall 26 adapted to bear against the rail section bottom wall portion 21 to support the rail. The bracket also is provided with a normally generally horizontal top wall 27 adapted to overlie the rail section top wall portion 17, with the rail being locked in place in the bracket as by an angle member having a part 28 secured to the bracket top wall 27 as by bolt 30 and nut 31 and a downwardly inclined portion 29 adapted to bear against the diagonal wall part 19 of the rail section.

As in the rail section of Fig. 1, that of Fig. 2 is provided with a bottom wall portion terminating short of vertical alinement with the forward side edge of the top unit, whereby a compact unit of substantial depth is provided.

The rail sections of Figs. 2 and 5 possesses the same advantages over the pipe rails of the prior art, as set forth above in connection with the rail section of Figs. 1, 3 and 4. However, whereas the rail section of Fig. 1 is adapted to support, in addition to garment hangers, conveyor trolleys and the like from which hangers are suspended, the embodiment of Figs. 2 and 5 is generally confined to directly supporting the hangers 16 because of the more limited height of free space available above lip 23.

Also, while the respective rail sections have substan-

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tial mechanical strength as discussed above, being reinforced by flanges 2, 3 and 18 and by lips 7 and 23, each of them can be further strengthened as by reinforcement beading 24 formed in the top and bottom wall portions 1, 5 and 17, 21 to extend lengthwise thereof, as illustrated at 24 in the embodiment of Figs. 2 and 5.

Accordingly, it is seen that my invention fully accomplishes the aforesaid objects. While I have shown only two forms of my invention, it will be appreciated that modifications thereof and variations therein will occur to those skilled in the art without departing from the spirit of the invention and the scope of the appended claim.

Having fully disclosed my invention and completely described its mode of operation, what I claim as new is:

An elongated storage and conveyor rail section of unitary construction for garments and the like comprising, a single piece of sheet material formed to provide substantially parallel top and bottom wall portions joined by intermediate wall means comprising a generally flat diagonal wall portion extending from the front side of said top wall portion to a generally flat rear wall portion extending from the rear side of said bottom wall portion at substantially a right angle thereto, said top wall portion terminating at its rear side in a downturned flange, and said bottom wall portion terminating at its front side short of vertical alinement with said front side of said top wall portion in a front wall portion extending toward said top wall portion, said front wall portion terminating along its upper edge in an intumed lip of arcuate form in cross section for receiving garment hangers and the like for movement therealong.

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