

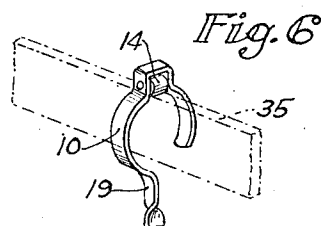
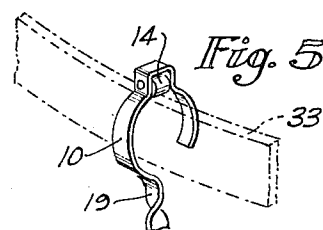
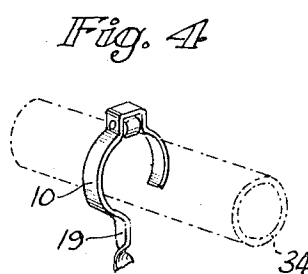
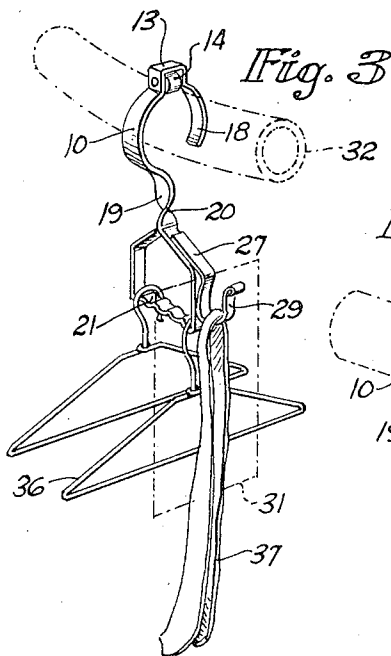
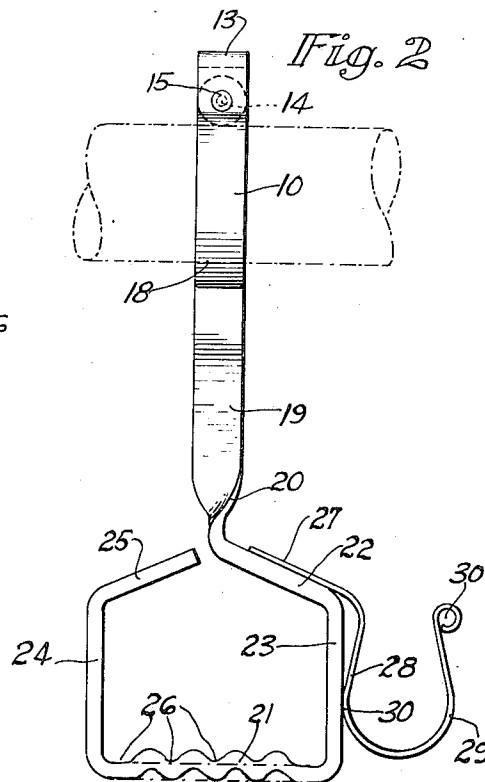
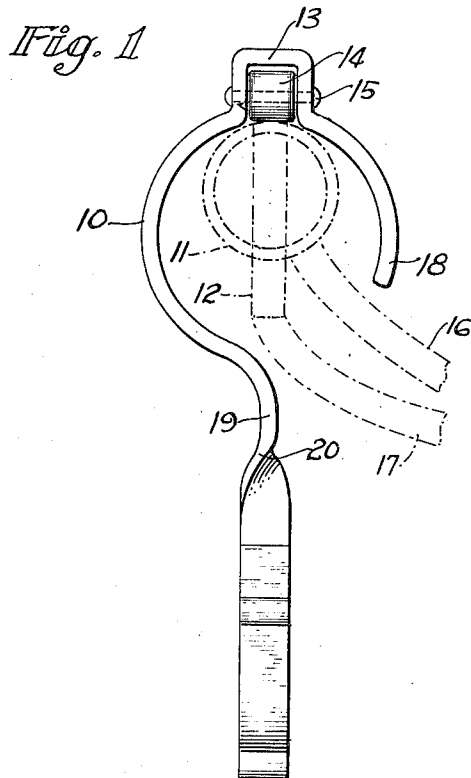
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SORTING REEL HOOK

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SORTING REEL HOOK

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1

This invention relates to assembly sorting reel hooks for use in dry cleaning and other plants where it may be desirable to sort and assemble from a quantity of cleaned and inspected garments or articles the particular items called for by individual orders (including invoices or other lists) together with the orders therefor, and to be able readily to move or shift the hook with or without its load intact along a supporting rail.

An object of the invention, therefore, is to produce such a hook to be suspended from a suitable rail and readily movable therealong and having provision for receiving and carrying the garments, ties, belts, etc., called for by an order and the order itself, whereby all things relating to an order may be sorted and assembled on the hook and moved intact as a unit along the rail.

A further object of the invention is to provide such a hook to engage transversely over a rail so as to be suspended therefrom and having an anti-friction bearing thereon to permit its ready movement therealong even when loaded, said hook having a depending portion in a plane substantially perpendicular to the plane of the hook and horizontally disposed to receive the suspending hooks of a plurality of spaced-apart garment hangers so that the garments thereon may hang transversely of the rail, said main hook also having an auxiliary hook apart from the said horizontal portion, for the ties, belts and small articles listed on the order and a spring clip or other holder for receiving and holding the order itself in a convenient visible position.

Such hooks may be used advantageously in connection with sorting and assembly reels having plain rails, sometimes referred to as express rails, on which slidable section markers are used whereby both markers and hooks may be slid completely or partially around the reel and the sections can be expanded to any size desired.

They may also be advantageously used on so-called express or speed tracks or rails extending about a plant from station to station and usually having straight and curved portions of track, and where ultimately all the items on the separate orders and the corresponding orders themselves are gathered together into separate groups and sent as a unit to the final bagging or delivery position.

Still further features, advantages and objects will appear from the description and claims to follow, in connection with the accompanying drawing, which illustrates, by way of example

2

but not of limitation, an embodiment of the invention, and in which

Figs. 1 and 2 are elevational views of the hook showing, respectively, two side views of the same; Figs. 3 and 4 are perspective views showing the hook applied to a round or pipe form of circular or straight rail; and

Figs. 5 and 6 are similar views showing the hook applied to a circular or to a straight rail of the flat type.

Thus, referring particularly to Figs. 1 and 2, the hook is mainly formed, preferably, from a single narrow metal strip of relatively thick material having its upper end bent to form a suspending hook portion 10 adapted to hook over a rail which may be round in cross-section and a pipe or tube 11 as indicated in dotted lines in Fig. 1, or it may be in the form of a flat rail 12, as also indicated in dotted lines in said figure.

The upper part of this hook 10 is preferably bent up, as at 13, to encompass and form a place or holder for a roller 14 which is rotatable on the pin 15 as an axle, which pin may be riveted over at its ends, as shown, or otherwise secured in place. The roller thus runs on the top of the rail 11 or 12 and carries the main load imposed on the hook and reduces the friction between hook and rail when the hook is moved along the rail, so that the hook may be readily moved even when heavily loaded.

The rails 11 and 12 are of that type supported by arms 16 or spokes 17 (if the reel form be used) preferably welded to the lower part or corner edge of the rail and slanted downwardly and laterally, and themselves are fixed to some suitable support, whereby the hook is not interfered with by the rail supports in its movement along the rail or in its position on the rail.

The end portion 18 of the hook 10, while extending preferably below the center of the hook portion, may terminate far enough from the lower part of the hook to afford room for the passage of either form of rail therethrough.

The stem or body portion 19 of the hook below the upper portion 10, which depends vertically therefrom, is given a 90° twist in the vertical plane, as indicated, so that the lower portion of the hook on which garments are adapted to be hung may extend lengthwise of the rail and the garments thereon may hang transversely to the rail. Thus, the strip forming the hook is twisted, as at 20, through an angle of 90° and the lower part is bent to provide a substantially horizontal portion 21 of sufficient length on which to hang the hooks of several garment hangers.

This lower portion of the hook is preferably in the form of an open loop which may be generally rectangular in form and symmetrical with respect to the vertical axis of stem 19 and top hook 10. It may consist of the upper side member 22, the end member 23, the lower horizontal member 21 on which the garments are adapted to be hung, the other end member 24, and the top member 25, thus forming the loop by so bending the strip from which the hook is mainly made. The members 24 and 25 of the loop, as shown, serve to complete the loop, tend properly to guide the hooks of the garment hangers into place when hanging the same thereon and to prevent same from being dislodged from the bar 21, and prevent garments from catching on the projecting end of bar 21 in case the same were not extended into the sides 24 and 25 or similarly. Then, of course, the free end of side 25 may be closed against the opposed strip 19 or 22 and welded thereto if supporting strength is desired of sides 24 and 25.

The lower garment-hanging portion 21 is preferably formed with a roughened or transversely grooved upper surface instead of smooth or straight as shown in the dotted lines to prevent the tendency of the garment-hanging hooks to bunch together at the ends or other part or parts of the portion, and said portion is preferably straight instead of downwardly curved, for similar reasons. As shown, it may be made by slightly crinkling or reversely bending the same transversely to form the depressions 26 in the upper surface thereof while maintaining its general straight or horizontal form. When, therefore, the garments are hung thereon, their hooks will tend to remain in their spaced relation as hung.

An auxiliary or special hook for ties, belts or other small accessories may be provided by attaching, preferably by spot welding, a thin strip of metal 27 to the side 22 of the loop and which is bent downwardly, as at 28, and then curved outwardly and upwardly, as at 29, and terminating in a protective bead 30 at the end. This provides a convenient hook for ties, belts and the like which may be called for by the invoice or order covering the articles to be assembled on the hook, as indicated in Fig. 3.

An invoice holder is provided for the main hook so that the same may be more conveniently associated and kept with the articles called for thereby, and when all the articles are assembled on the hook, the unit is complete, invoice and all, and the same may be sent at once to the bagging or delivery station. This invoice holder or clip may be conveniently provided, in this instance by making the auxiliary hook strip 27 of spring material and tensioned to bear at about the point 30 against the flat outside face of the side or end 23 of the garment-holding loop. This spring strip and the loop member thus form a spring clamp into which the invoice 31 (Fig. 3) may be slipped edgewise and be held thereby. If desired, the clamp may be opened slightly by pulling outwardly on the auxiliary hook, though due to the curvature of the spring at the point of its contact with the side 23 and the smoothness of the latter, this is not usually necessary with the average invoice, and the invoice may be withdrawn from the clip by a downward pull thereon, though again the hook may be manually raised to free the invoice if desired.

In Fig. 3 the curved form of pipe rail 32 is shown in dotted lines and in Fig. 5 the curved form of the flat rail 33 is indicated, also in dotted

lines. These may be the circular rims of sorting and assembling reels or other curved rails in the plant.

Figs. 4 and 6 similarly illustrate the use of the hook on a straight tubular or rounded rail 34 or on a straight flat rail 35.

Fig. 3 is intended also to indicate the loaded hook, the invoice 31 being in dotted lines, the garments represented by their usual wire hangers 36, and the ties 37 hanging on the auxiliary or special hook and representative of belts and other accessories as well.

The construction and operation of the device itself will be clear from the foregoing. Its specific manner of use depends largely upon the plant, the equipment thereof and the ideas of those running it. As explained, the hook fits into most any and all situations to simplify and expedite the work of sorting and assembling, to make it easier and to prevent errors and losses of articles. The relatively large amount of space devoted to this phase of the business of sorting and assembling in the average plant speaks eloquently of its importance. One wonders where, in the plant, the other work is done. The "wools" come down one line; the "linens," another; "silks" and others on still other lines; and yet out of the vast maze all eventually must find their way into individual bundles composed, perhaps, of one or two articles of each kind and, what is most important, of the same identical articles that the drivers picked up at the homes, or there is real trouble.

Without further elaboration, the foregoing will so fully explain the gist of the invention that others may, by applying current knowledge, readily adapt the same for use under varying conditions of service, without eliminating certain features which may properly be said to constitute the essential items of novelty involved, which items are intended to be defined and secured by the following claims.

I claim:

1. A sorting and assembling hook of the class described comprising a bar bent to form a hook at its upper end to engage over a supporting rail, a roller rotatably mounted in the hook to engage and run on the upper side of the rail, the lower end of the said bar being bent to form a loop, the lower part of the loop being substantially horizontal and forming a suspension rod on which to hang in spaced relation a number of garments, and a spring strip secured to said bar and together with an edge portion of said loop forming a spring clamp for receiving and holding an order, a portion of said strip being bent to form a belt and tie hook, whereby the order and the articles called for thereby may all be assembled on the hook and moved along the supporting rail.

2. A sorting and assembling hook of the class described comprising a bar bent at its upper end to form a hook to engage over a supporting rail, the lower end of the bar being bent into a loop having a side edge and a lower member, the latter forming a supporting rod for the suspension of relatively heavy articles, and an auxiliary hook secured to said bar for the suspension of lighter articles, said auxiliary hook being of spring material and bent to form with the adjacent side edge of the loop a spring clamp adapted to receive and hold an order sheet.

3. A sorting and assembling hook of the class described comprising a bar bent at its upper end into a circular-like hook adapted to be hung over a flat or rounded supporting rail, said hook being

5

bent upwardly at its top portion to encompass a bearing roller, a rotatably mounted roller in said upwardly bent portion and adapted to supportingly travel on said rail, said bar being bent below the hook into a loop the plane of which is substantially at right angles to the plane of said upper hook, the lower member of said loop being substantially horizontal and forming a rod for the suspension of garments in planes transverse thereto, the upper side of said rod having transverse depressions therein to space the hooks of said suspended garments, and a spring strip secured to one side of said loop and bent and tensioned to form with the outer face of the loop a spring clamp adapted to hold an order sheet, an end of said strip being formed into a suspension hook for ties, belts or the like, whereby the order and the items listed thereon may be conveniently assembled on the first named hook and be movable as a unit therewith.

4. A sorting and assembling hook of the class described having a supporting hook portion to engage over a supporting rail and adapted to travel therealong, said hook having a horizontal portion for receiving the hooks of garment hang-

6

ers for the suspension of relatively heavy garments therefrom, an auxiliary hook portion connected to said hook and laterally displaced from said horizontal portion and faced oppositely for the suspension of ties, belts, etc., therefrom and forming with said hook a holder portion for receiving and holding the order relating to said articles to be suspended from the said portions and hook.

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