April 5, 1927. 1,623,244

J. E. HOOPER

SHOE RACK

Original Filed Jan. 22, 1925 2 Sheets-Sheet 1

Fig. 1.

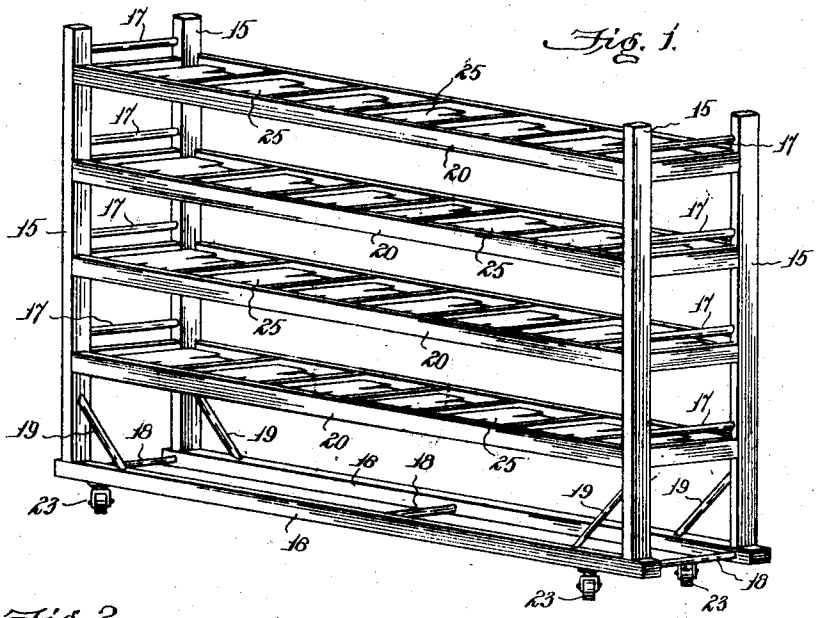


Fig. 2.

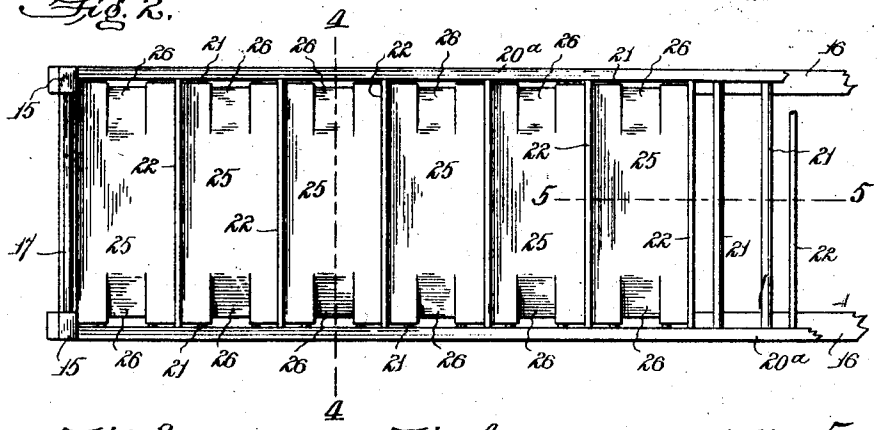


Fig. 3.

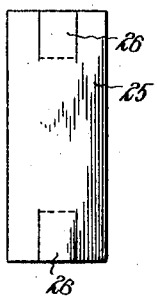


Fig. 4.

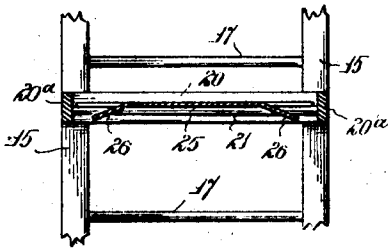
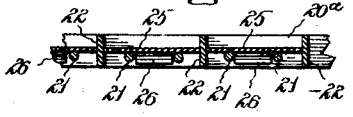


Fig. 5.



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Fig. 6.

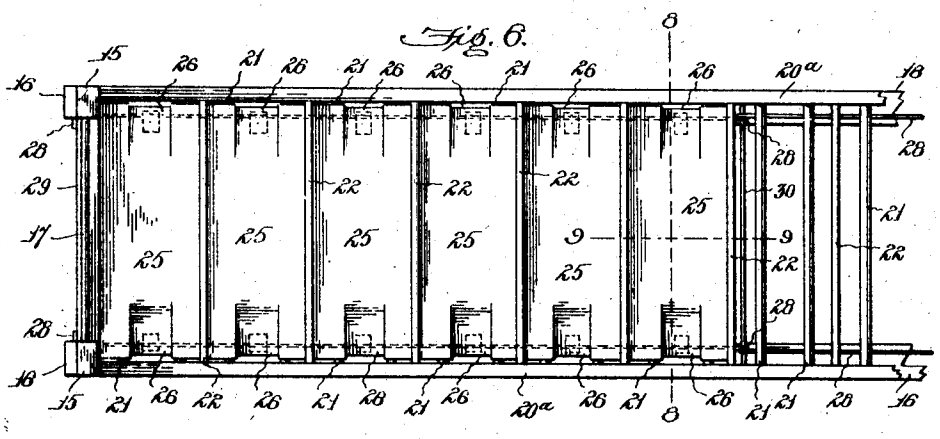


Fig. 7.

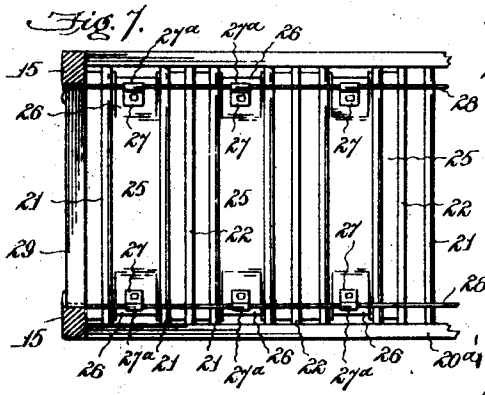


Fig. 8.

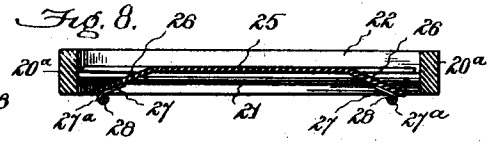


Fig. 9.

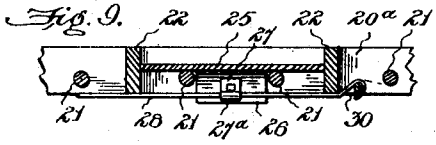


Fig. 10.

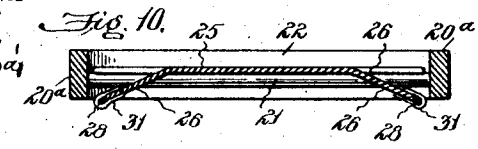


Fig. 11.

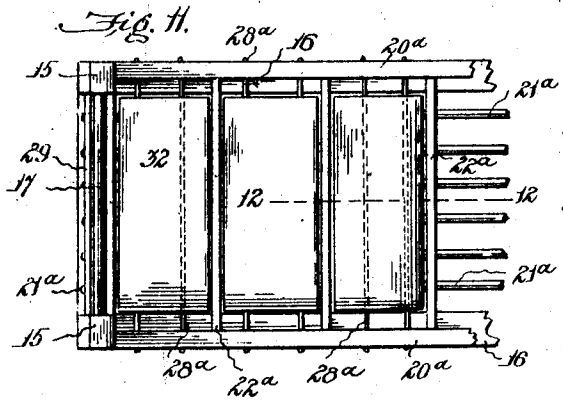


Fig. 12.

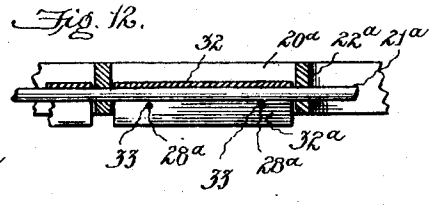
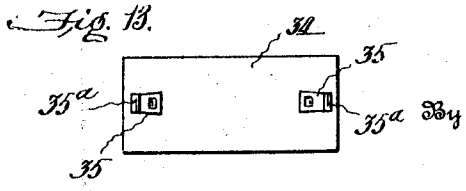


Fig. 13.



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UNITED STATES PATENT OFFICE.

JOHN E. HOOPER, OF MILFORD, MASSACHUSETTS.

SHOE RACK.

Application filed January 22, 1925, Serial No. 4,106. Renewed August 25, 1926.

My invention is an improvement in shoe-racks or work-supporting trucks of the type commonly used in shoe factories for transporting shoes from one department of the factory to another in the process of manufacturing the same.

It is customary in the manufacture of boots and shoes to employ a portable rack or wheeled truck for transporting the shoes from one department to another during the course of manufacture, and these shoe-racks or trucks are usually constructed to have several trays or shelves disposed one above another so that a large number of shoes may be carried, the arrangement being such as to facilitate the removal and replacement of the shoes by the operators who are required to perform some part of the work, and in some instances the trays or shelves have partitions separating the shoes to prevent their coming into contact with each other as well as facilitate the handling of the same by the operators. In the ordinary type of rack the shoes are supported on cross-bars between the partitions, and in such instance they are liable to become stained by water or injured by metal, as tacks, falling through the trays or shelves above, and, furthermore, the wet outer-sole of an unfinished shoe is likely to be marred or indented where said outer-sole comes in contact with the cross-bars inasmuch as the weight of the shoe is increased by the shaping-last within the same. In those instances where the trays or shelves are provided with covers to remove or obviate some of the aforementioned difficulties they are not adequate to meet all the requirements for the safe handling of shoes during the process of manufacture for the purposes aforesaid.

Having more especially in view the difficulties hereinbefore stated the principal object of my invention is to provide a cover which may be adapted for any of the conventional types of shoe-racks, and in which the particular construction of said cover will not only form flat surfaces in the compartments on which the shoes may safely rest but will also provide for thoroughly protecting them against anything falling thereon from the trays or shelves above by directing the dripping water or falling metal particles away from the shoes; all as hereinafter fully described and more specifically set forth in the appended claims.

In the accompanying drawings, forming a part hereof:

Figure 1 is a perspective view of a shoe-rack illustrating the preferred form of my improved cover.

Fig. 2 is a plan view of a portion of the shoe-rack.

Fig. 3 is a detail plan view of one of the covers.

Fig. 4 is a sectional view through one of the trays or shelves on the line 4—4 of Fig. 2.

Fig. 5 is a similar view on the line 5—5, Fig. 2.

Fig. 6 is a plan view of a portion of one of the trays illustrating the means employed for retaining the covers in place.

Fig. 7 is an inverted plan view thereof.

Figs. 8 and 9 are sectional views, enlarged, on the lines 8—8 and 9—9, respectively, in Fig. 6.

Fig. 10 is a sectional view illustrating a modification of that part of the retaining means carried by the cover.

Fig. 11 is a plan view illustrating modifications in the tray and cover.

Fig. 12 is a sectional view on the line 12—12 of Fig. 11, and

Fig. 13 is a bottom view of a plain or flat cover with attaching members.

Like numerals of reference indicate like parts in all the figures of the drawings.

In carrying out my invention the covers, hereinafter particularly described, are applied to a shoe-rack or transporting truck of a conventional type, such for instance in which the framework is composed of opposite spaced apart uprights 15 15 rising from the ends of longitudinal base pieces 16 16, with brace-bars or rungs 17 and 18 between said uprights and base pieces respectively, the frame being usually further braced or strengthened by diagonal truss-rods 19 and by the trays or shelves 20 which are horizontally disposed one above the other between the uprights to which they are secured. The trays or shelves are also of substantially ordinary construction, comprising the longitudinal side pieces 20^a with transverse cross-bars 21 to support the shoes and partitions 22 for separating them one from another, the cross-bars in the present instance being spaced apart from the center of each compartment for cooperation with the covers, as hereinafter explained. The shoe-rack or truck is supported on rollers 23, as usual,

for moving the same from one department of the factory to another.

The covers which I have devised are made rectangular in form to fit within the compartments of the trays or shelves and in each instance are provided with depending flaps or wings by means of which water or metal particles falling from said cover will be directed away from the shoe-rack so as not to fall on the shoes below, and I propose in some instances to provide means for retaining the covers securely in place in the compartments or on the trays of the shoe-rack.

In the embodiment of my invention in its preferred form, as illustrated in Figs. 1 to 10, inclusive, the cover 25 is rectangular in shape with the end portions provided with depending flaps or wings 26 which may be and preferably are formed in the manner shown, that is to say by forming slits in the cover longitudinally and a slight distance from each side thereof so that said flaps or wings will depend from the center of both end portions and leave parts of the cover at opposite sides of the flaps or wings on a plane with the body portion of the cover to rest on the cross-bars of the tray or shelf, it being noted that the width of the flaps or wings 26 correspond approximately with the space between the cross-bars in the compartment to depend between the same. The covers may be made of any material suitable for the purpose of their use in connection with a shoe-rack, and I find that heavy cardboard is satisfactory on account of presenting a desirable surface for the shoe to rest upon, as well as economy in construction; but of course any other material may be used to suit the fancy or requirements of the manufacturer.

The covers are of a size to fit within the compartments of the trays or shelves of the shoe-rack and in use are supported in said compartments on the cross-bars with the end flaps or wings depending at an angle between the latter, and not only provide an ample support for the shoe to rest upon but open spaces at the ends—formed by the depressed flaps or wings—through which water may drip or metal particles fall from the cover beyond the sides of the shoe-rack or trays below.

It is desirable to secure the covers in place within the compartments, and of course any means suitable for the purpose may be employed but the arrangement herein shown will be found convenient in cooperating with this particular form of cover. Consequently in carrying out this part of my invention I attach to the underside of each flap or wing near the outer end thereof a metal clip 27 comprising an attaching plate with an open-ended eye 27^a for the engagement therewith of a retaining wire 28—the open-ended eye permitting a cover to be readily removed for cleaning it or replacing it with a new one—and the retaining wire is secured at one end to the end piece 29 of the tray and at the other to a cross-wire 30 extending between the side pieces 20^a, said retaining wire being bent or looped over the cross-wire. The retaining wires pass under the partitions 22 against the lower edges thereof at each side of the tray to hold the covers at opposite ends thereof, and as will be noted in Fig. 6 two pairs of retaining wires are employed which extend from the ends of the tray to the center thereof where the cross-wire is located. Instead of the metal clips 27 shown in Figs. 6 to 9, inclusive, I may use any other form of clip that will answer the purpose, as an ordinary wire clip, 31 (Fig. 10), or a loop of any suitable material may be attached to the flap.

By reference to the modification shown in Figs. 11 and 12 it will be seen that in this form of my invention the cover 32 is provided with end flaps, 32^a, which extend the full width of the cover, the material of which the cover is formed being simply bent downward near each end thereof to provide flaps or members with which the holding means, as cross-wires 28^a engage, passing through holes 33 in said flaps or members. This form of cover is particularly adapted for shoe-racks of that type in which the cross-bars, 21^a, for supporting the shoes extend longitudinally from one end of the tray to the other below or through transverse partitions 22^a, and provides the desired openings at the ends of the compartments to permit water and particles to pass out of the compartments and away from the shoes below, for which purpose the flat portion of the cover at each end is a short distance from the said pieces of the tray. In somewhat a similar manner I may employ a plain or flat cover 34 (see Fig. 13) with depending members 35 for the engagement of the holding means, as wires, and of course these members may be in the form of a clip with an open-ended eye, 35^a, or a loop, &c., so that the wires will hold the cover in place with its ends properly spaced from the side pieces of the tray.

From the foregoing description, in connection with the accompanying drawings the construction, operation, and important advantages of my improved cover for shoe-racks will be readily understood, providing as it does a form of cover that will fully protect the shoes carried in the rack and serve the purpose in a more effective manner than covers heretofore used, as well as being more economical on account of less wear than is the case with the conventional form of covers used which extend over the partitions, and of course this latter form of cover also reduces the size or width of the compartments.

Furthermore, separate covers in addition to being more economical can be readily applied and removed, and when formed in accordance with my invention and secured in place by retaining wires they are particularly effective and can be easily removed for cleaning or sustitution of a new cover by simply springing the retaining wires out of engagement with the clips—when the form of clip having an open-ended eye is used. However, I do not wish to be limited to any particular form of clip or engaging member for the retaining wires, for in this respect, as well as others—shape of cover and material for same, use of cords for wire as the cooperating retaining means—obvious or desired changes may be made within the spirit and scope of my claims.

I claim:—

1. A cover for the trays of shoe-racks comprising a body portion to rest upon the bottom of the tray, and flaps depending from said body portion to guide anything falling from the cover away from the shoes in the trays below.

2. A cover for the trays of shoe-racks comprising a body portion to rest upon the bottom of the tray, and flaps formed from a part of the end portions of said body portion and bent downward to guide anything falling from the cover away from the shoes in the trays below.

3. A cover for the trays of shoe-racks comprising a body portion to rest upon the bottom of the tray, and flaps formed at the ends of said body portion by slits, said flaps being bent downwardly to guide anything falling from the cover away from the shoes in the trays below.

4. A cover for the trays of shoe-racks comprising a body portion to rest upon the bottom of the tray and having flaps depending from said body portion, and means extending under the tray engaging the flaps for retaining the covers in place on the tray.

5. A cover for the trays of shoe-racks comprising a body portion to rest upon the bottom of the tray, flaps depending from the ends of said body portion, a clip attached to the flap at each end of the cover, and retaining wires attached to the tray and engaging said clips.

6. A cover for the trays of shoe-racks comprising a body portion to rest upon the bottom of the tray, flaps depending from the ends of said body portion, a clip attached to the underside of the flap at each end of the cover and having an open-ended eye, and retaining wires attached to the tray and engaging the open-ended eyes of the clips to retain the covers in place on the trays.

7. In combination with a shoe-rack having trays with partitions and spaced apart cross-bars between the partitions forming compartments for the shoes, of covers for the bottom of the compartments each comprising a body portion resting on the cross-bars, and flaps formed from the end portions of said body portion to incline downwardly between the cross-bars; together with wires extending under the trays, and means on the flaps with which the wires engage to retain the covers in place.

JOHN E. HOOPER.