Sept. 25, 1923. 1,468,800

J. S. CANTELO

RACK FOR BOOTS, SHOES, AND THE LIKE

Original Filed Feb. 11, 1916

Fig. 1.

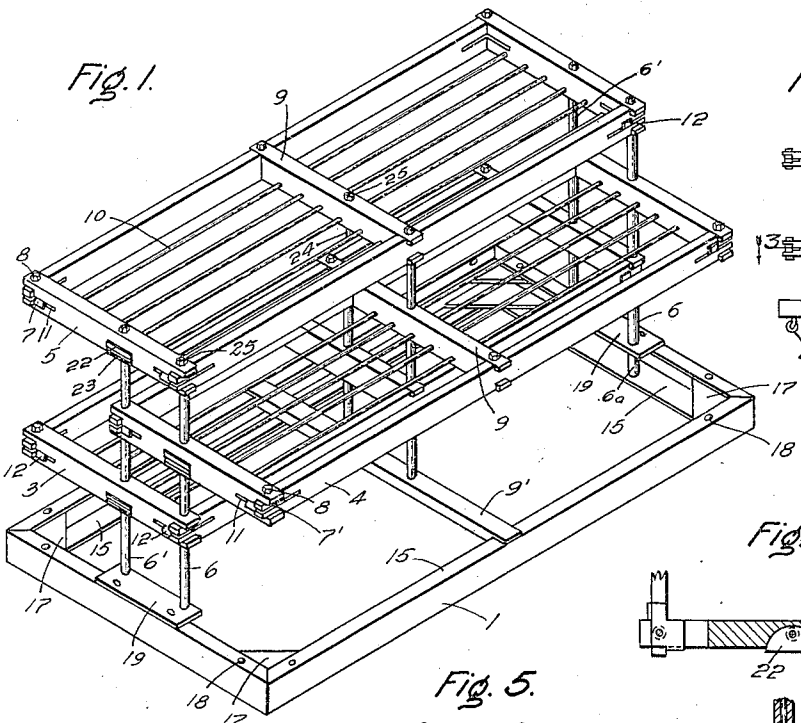


Fig. 2.

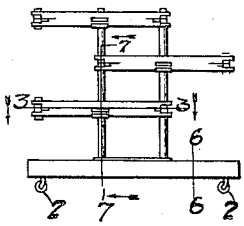


Fig. 3.

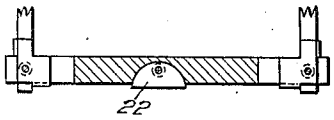


Fig. 5.

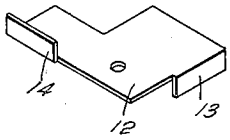


Fig. 4.

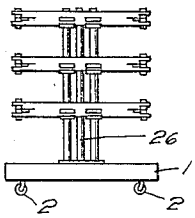


Fig. 6.

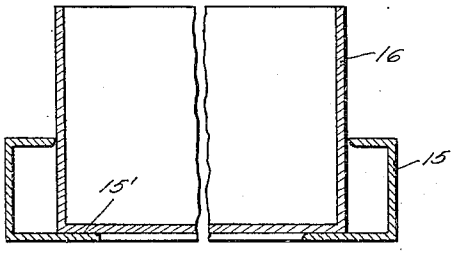
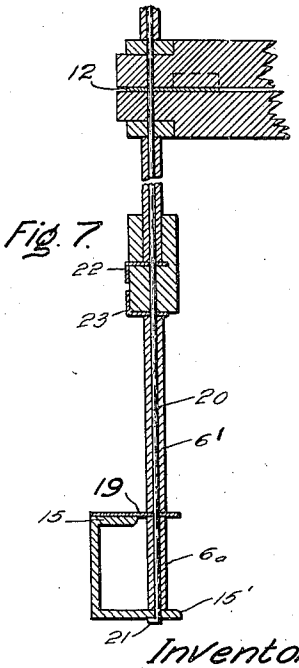


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN S. CANTELO, OF BOSTON, MASSACHUSETTS.

RACK FOR BOOTS, SHOES, AND THE LIKE.

Application filed February 11, 1916, Serial No. 77,657. Renewed July 13, 1920. Serial No. 395,995.

To all whom it may concern:

Be it known that I, JOHN S. CANTELO, a citizen of the United States, residing in Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Racks for Boots, Shoes, and the like, of which the following is a specification.

The present invention relates to improvements in racks for boots, shoes and the like. In racks as heretofore used great difficulty has been experienced due to the wear and tear to which a rack is subjected in moving from place to place in the shoe factory. There is no provision made for compensating for changes in effects due to changes in temperature or in atmospheric conditions generally, or due to the natural shrinkage of the materal employed in the rack construction. These changes in the rack parts and the shrinkage of the wood or other material of which the rack is made cause the rack to become rickety, annoying and comparatively short-lived, which renders it expensive, as it necessitates replacement of the rack upon comparatively short life of the latter.

The object of my invention, therefore, is to provide a shoe rack which shall compensate for changes therein due to changes in atmospheric conditions and for any looseness due to shrinkage of the rack trays or supports, thus saving in wear and tear on the racks, and the consequent annoyance due to ricketiness, and to cheapen rack maintenance by increasing the length of life of the same. In the more simple forms of rack, that is, wherein no means is provided for compensating for effects due to changes in atmospheric conditions, etc., I approximate, as nearly as it is possible to do in such primitive rack construction, the results heretofore set forth, by providing a central support or central posts between the trays. These posts or supports are located between the respective trays, substantially in the center of the rack and midway of the length thereof. This feature in the construction of racks as made by me is novel to the best of my knowledge, and it has been a very effective one; and while not disclaiming the invention thereof in its broad form to the application of rack construction generally, I prefer to embody it in my improved form, or specific type of rack construction, that is illustrated and described herein.

Another object of my invention is to provide a structure which shall eliminate the possibility of marring the shoes by striking them against the tray supporting members and also to prevent locking of the racks together while being moved past each other, a difficulty which is sometimes experienced with racks as heretofore made. The manner in which the above objects are accomplished will be more specifically illustrated and described in the accompanying specification and drawing in which Fig. 1 is an isometric view of my improved shoe rack showing the embodiment of the invention in a "staggered" tray type; Fig. 2 is an end elevation of the same on a reduced scale; Fig. 3 is an enlarged section on the line 3—3 of Fig. 2; Fig. 4 is an end elevation of my invention as applied to an "unstaggered" rack; Fig. 5 is a perspective view of one of the corner reenforcing pieces; Fig. 6 is an enlarged section through the line 6—6 of Fig. 2 showing overhung channel irons, and the dotted lines indicate a box supported thereby, and Fig. 7 is an enlarged section through the line 7—7 of Fig. 2 showing a reenforcing piece and the manner of fastening the tie-rods.

Referring more specifically to the drawings, 1, Fig. 1, represents a standard or truck which may be provided with castors 2, as in Fig. 4 for moving the rack from place to place; 3, 4 and 5 represent rack trays supported by the standard or truck. It will be understood that while I have illustrated only three trays, any number of trays may be provided consistent with the height of which it is desired to make the rack. It will be seen that in this figure I have chosen for the purpose of illustration a specific form of rack in which the trays are "staggered" with respect to each other. By arranging a rack in this way it is possible to eliminate the likelihood met with in other forms of rack of striking the shoes against the supporting members between the trays and also of locking together of the racks while they are being moved past each other. Another advantage is that it is possible to obtain with this type of rack a minimum of height of rack for a given shoe capacity; and this is a

substantial advantage in a shoe factory, as the lower the racks the easier it is for the foreman and others to see over their tops. However, I disclaim the "staggered" rack per se as my invention, but have elected to represent it as the preferred form in which to embody my invention, and I do claim the specific construction of "staggered" rack whereby it is possible to eliminate corner posts, against which the shoes might be struck and marred as a consequence. I support the trays above referred to by means of the posts 6, 6'. The trays are made of any substantial wood, and the posts 6, 6' also, can be made of either wood or metal, and they are hollow. The trays 3, 4 and 5 are made with substantial frames having mortise and tenon joints at their corners, as at 7, 7', having bolts 8 passing therethrough. The trays are reenforced by means of a cross-piece 9 extending the width of the tray and being located midway of the length thereof, or substantially so. Extending between the ends of the trays and passing through the cross-piece 9 are rounds 10 which form a bottom for the tray upon which the shoes are placed. The ends of the trays are bifurcated at the joint in order that the sides may be inserted therein in mortise and tenon fashion, and the bifurcation extends into slits 11 into which slits are inserted the corner reenforcing pieces 12 provided with flaps 13 and 14, Fig. 5, one of which flaps may be turned up at one corner and the other turned down at its corresponding corner.

The standard 1 is made of channel iron 15, the lower portion 15' of which extends inwardly to form a shelf or support for a box or other receptacle 16, Fig. 6. The channel iron may be mitre joined at the ends and be reenforced by end pieces 17 suitably riveted or spot welded to the channel iron section, as at 18. It is to be understood that there are other end reenforcing pieces beneath the pieces 17 at the lower end of the channel iron section, but these do not show in the drawings. As previously stated, the trays 3, 4, 5, are supported by means of hollow posts 6, 6', and there are a pair of posts between each tray and the trays above and below it. Suitably fastened to the channel iron 15 is an inwardly projecting plate 19 which forms a support for the posts between it and the lowermost tray of the rack. Beneath this support and the inwardly protruding portion 15' of the channel iron are short posts 6^a, as best illustrated in Fig. 7. Extending continuously through all the trays and through the hollow supporting posts are tie rods 20 terminating in hooks 21, Fig. 7. Each end piece of each tray is provided with additional angle-iron reenforcements 22, 23, preferably of metal, as best illustrated in Figs. 3 and 7. Wherever these are provided, the ends of the adjoining posts seat thereon, the upper post on the top angle-iron 22 and the lower one on the bottom angle-iron 23, as illustrated in Fig. 7. This construction serves to provide a certain automatic adjustment for any looseness which may develop in the rack parts, as it will be noticed that these angle-irons, being in separate pieces, are free to automatically adjust themselves.

In addition to the crosspiece 9 provided for the trays, it may be remarked that I provide an additional crosspiece 9' for the standard or truck which acts as a receiving piece or strut for the lower middle posts in the construction illustrated in Fig. 1. Another advantage of the crosspiece 9 in the construction is that it affords an opportunity for introducing an additional central support 24, the tie-rod extending through which terminates in an adjusting nut 25. In fact, each of the tie-rods of the rack terminates in such a nut.

In Fig. 4 I have illustrated an "unstaggered" form of rack provided with the supporting and adjusting means of my invention, which particularly enables a central reenforcement or support 26 to be used, whose function is similar to that of the support 24 in the construction, Fig. 1.

Assuming that, during the use and wear and tear to which a rack is subjected, any looseness in the rack parts is developed, it is only necessary to tighten up the bolts 25, when the rack again becomes solid and rigid for a long period, and thus the rack is not allowed to deteriorate and become rickety and necessitate frequent replacement. The substantial means of rigid support which I provide also enables full advantage to be taken of the "staggering" feature of rack construction, giving a clear vision above the racks on the factory floor without loss in rack capacity, and by my specific manner of eliminating corner supports or obstructions, eliminating the possibility of damage or marring of the shoes when they are inserted or taken out of the racks.

I do not wish to be confined to the details of construction herein shown and described, but aim in the appended claims to cover all modifications within the spirit and scope of my invention.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A rack for boots, shoes and the like comprising a truck base, a plurality of shoe holding trays of wood, and means for supporting said trays in spaced apart relation above said base consisting in series of tie rods extending from said base up through all of said trays with spacing sleeves fitted on said rods and engaging adjacent trays from above and beneath respectively, said trays having metallic inserts in the wood thereof for engagement by said sleeves and clamping nuts engaged with said rods adapted to

draw up and clamp said trays in rigidly assembled relation on said base.

2. A tray for boots, shoes and the like comprising an oblong rectangular frame of wood with mortise and tenon joints at its corners and with said corners reinforced by metallic plates imbedded therein, each of said plates having projecting flap portions turned transversely to engage the respective sides of the tray frame.

3. In a rack for boots, shoes and the like, the combination with a plurality of trays, a truck for the rack made of channel iron having an inner protruding flange to act as a support for a box or other receptacle, spacing members between the trays and truck, suitable means for securing the trays and truck rigidly together, and supplementary adjustable means cooperating with the first mentioned means to compensate for wear or shrinkage of the parts developed during use in order to maintain a rigid rack structure.

4. A rack for boots and shoes, comprising a truck, a plurality of shoe holding trays with end bars and center bars mounted thereon, in combination with dividing posts vertically located between the end bars and center bars of said trays, said dividing posts being in combination with rods passing vertically through said bars and through said dividing posts thus uniting said truck and plurality of trays in reinforced relation with each other, said rods being provided with means for the adjustment of shrinkage of the plurality of said cross bars.

5. A rack for boots and shoes, comprising a plurality of shoe holding trays mounted on a portable base frame, the corners of said trays being slitted horizontally, said slits receiving metallic reinforce plates and also being for more yieldable adjustment, and adjusting rods passing vertically through said slitted corners and having in combination therewith dividing members fitted thereon and located between the trays and between the lowermost tray and the portable base, said rods having means cooperative therewith for taking up of vertical looseness which may be caused by shrinkage of the wood and also for rigidly bridging and uniting the combined structure together.

6. A rack for boots and shoes, comprising a base frame, a plurality of shoe holding trays mounted thereon in combination with dividing posts holding said trays spread from one another and from the base frame, with adjustable rods extending from top to bottom of the rack for taking up shrinkage, also for bridging the combined structure and to hold the same rigidly together, said trays mounted on said base alternately overlapping one over the other.

7. A rack for boots and shoes, comprising a base frame, a plurality of shoe holding trays, said trays having end bars and transverse cross bars substantially midway of the length thereof with a plurality of dowels passing through the lower edges of said cross bars and terminating in the end bars of said trays, vertical dividing posts located between said cross bars, and clamping rods passing vertically through said cross bars and vertical dividing posts and terminating at the under side of said base frame, said rods equipped with means of adjusting for shrinkage and also for bridging the central portion of the trays and holding the same in rigidly assembled relation with said posts and said truck, and for the purpose of preventing sagging of the trays.

8. A rack for boots and shoes, comprising a base frame, a plurality of shoe holding trays in combination with dividing posts and clamping rods holding said trays in spaced apart relation with each other, the corners of the trays being reinforced with metallic plates inserted therein on a plane with the trays, said plates projecting over the end and sides of the corners of said trays, said projections being turned against the respective ends and sides for the purpose of holding the ends and sides in rigid relation with each other.

9. A rack for boots and shoes, comprising a base frame, a plurality of shoe holding trays mounted over each other in alternate and overlapping relation with one another, said trays being held apart from each other and from said truck by spacing posts, the combination being held in position by adjustable clamping rods, the outside corners of said trays being provided with fastening means passing vertically through the same for the purpose of reinforcing said corners and adjusting shrinkage.

10. A rack for boots and shoes, comprising a truck frame, a plurality of shoe holding trays mounted thereon in combination with dividing posts holding said trays spread from one another and from the truck frame, said dividing posts being located approximately transversely central of the ends of the trays and near the corners of each alternate tray, said plurality of tray ends and spacing posts being provided with rods passing vertically therethrough and terminating at the bottom of the truck frame, said rods being provided with means for drawing together the combined structure and for the purpose of holding down and preventing the sagging of the overhang of the alternate trays.

11. A portable rack for boot and shoe carrying, comprising a truck base as described made of channel iron the openings of said channel facing each other, said truck being mounted with a plurality of shoe holding trays, said trays being mortised and

tenoned at their corners, in combination with reinforced plates and horizontal slits as shown wherein the plates are inserted, said slits being extended from the mortise for the purpose of more yieldable adjustment when drawing the upper and lower sides of said mortise against said tenon and re-inforced plate, in case of shrinkage, said shrinkage being adjusted by combination of clamping rods dividing posts as described.

In testimony whereof I have affixed my signature.

JOHN S. CANTELO.