R. IMBRIANI.

SHOE RACK.

APPLICATION FILED MAR. 23, 1917.

1,273,494.

Patented July 23, 1918.

3 SHEETS—SHEET 1.

Fig. 1.

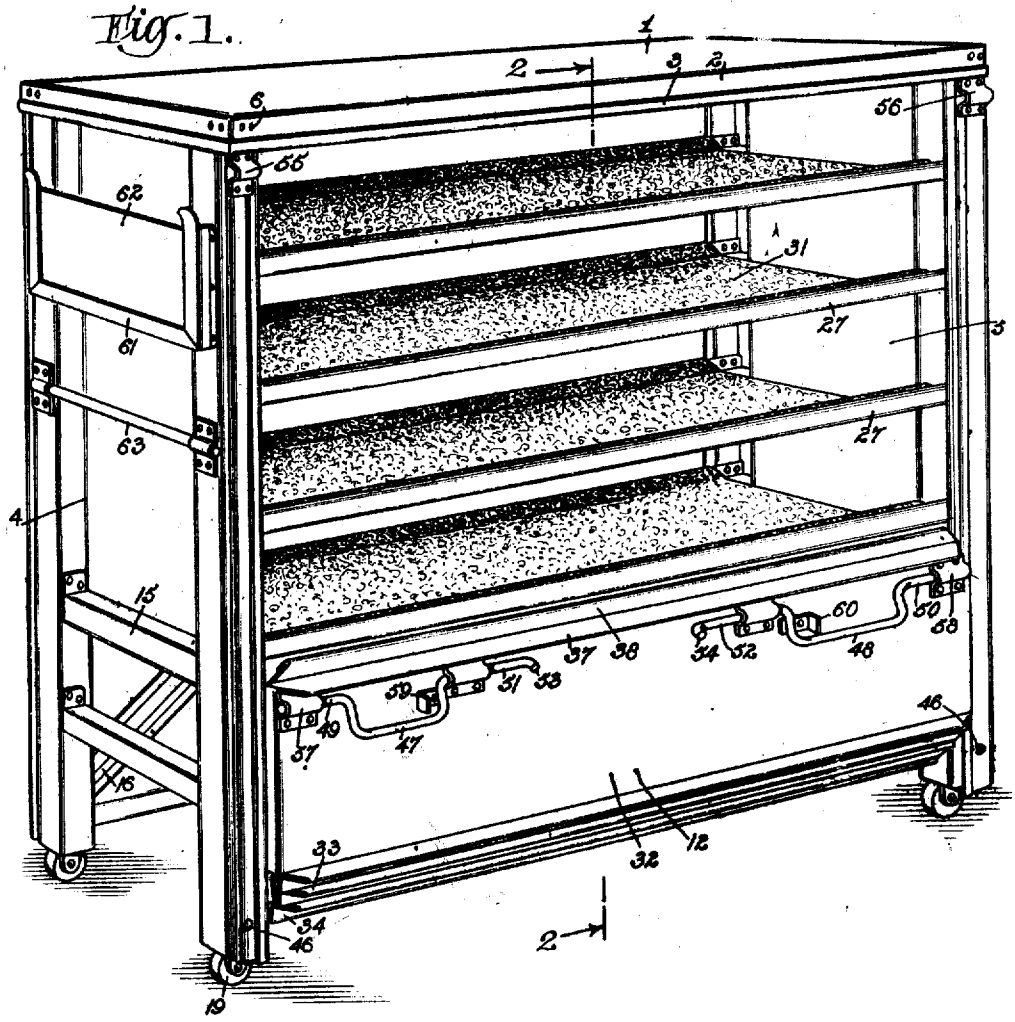
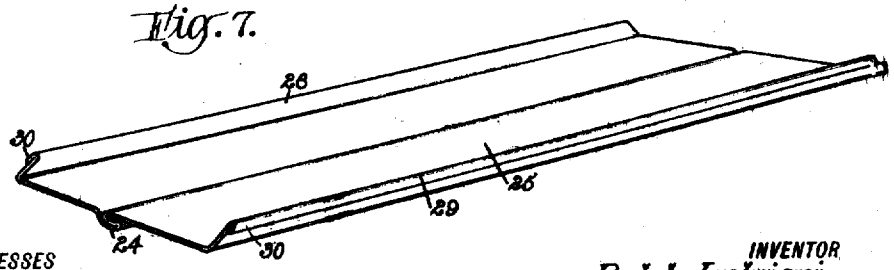


Fig. 7.



WITNESSES

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3 SHEETS—SHEET 2.

Fig. 2.

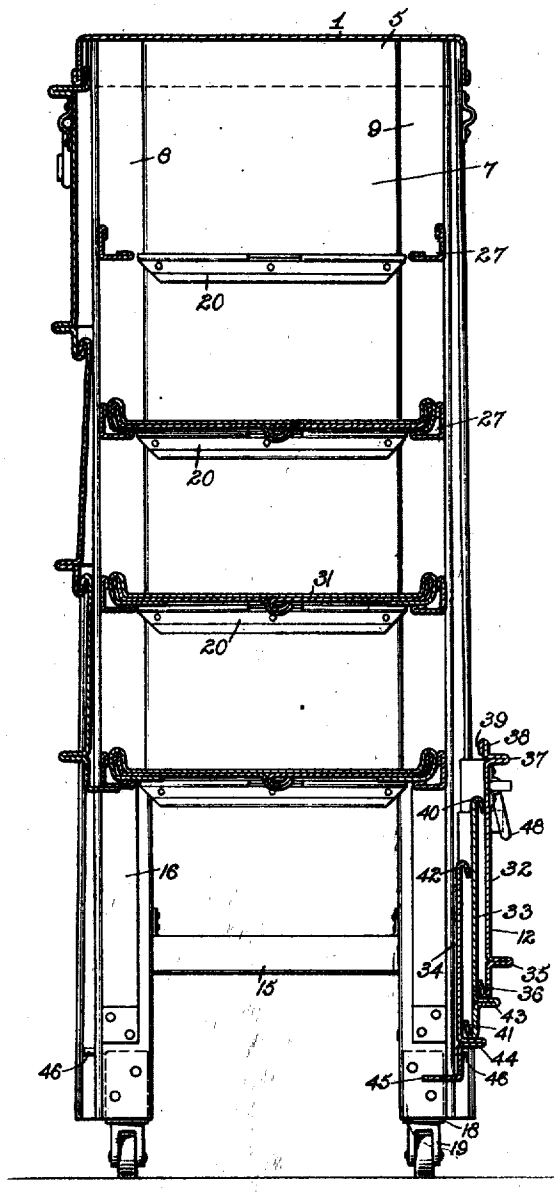
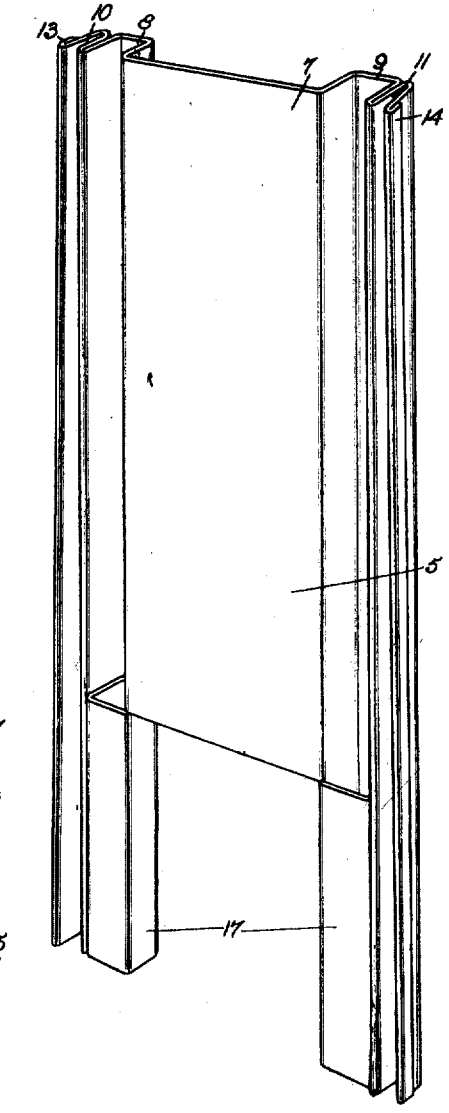


Fig. 3.



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3 SHEETS—SHEET 3.

Fig. 4.

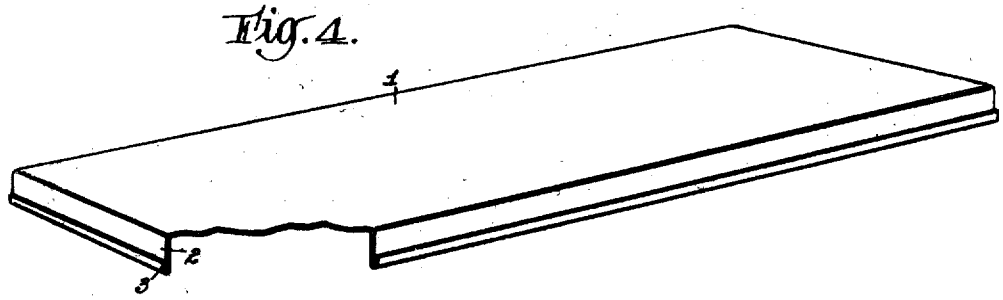


Fig. 5.

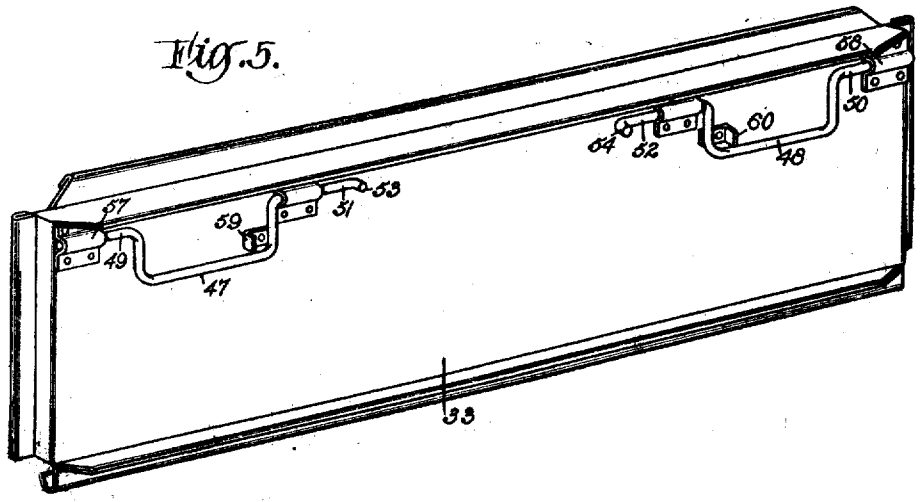
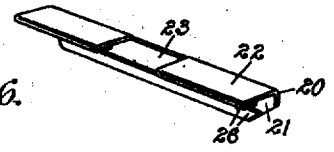


Fig. 6.



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UNITED STATES PATENT OFFICE.

RALPH IMBRIANI, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO NEWTON CYPHER, OF NEW YORK, N. Y.

SHOE-RACK.

1,273,494. Specification of Letters Patent. Patented July 23, 1918.

Application filed March 23, 1917. Serial No. 156,861.

To all whom it may concern:

Be it known that I, RALPH IMBRIANI, a subject of the King of Italy, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Shoe-Rack, of which the following is a full, clear, and exact description.

This invention relates to shoe racks designed to be used in shoe factories and to be moved from place to place during the manufacture of shoes, and has for an object the provision of an improved construction which will properly hold the shoes ready for the workman while providing a safe container after the day's work is over.

Another object in view is to provide a rack which is fireproof and which at the same time may be sealed against the entrance of dust and rodents.

A still further object, more specifically, is to provide a rack in which the trays are removably positioned in the body of the rack and collapsible sides are produced, whereby the parts may be rearranged as desired and the sides raised or lowered as preferred to accommodate the rack to all the uses to which it may be subjected.

In the accompanying drawings:—

Figure 1 is a perspective view of a rack embodying the invention, one of the side covers being shown in a collapsed or contracted position.

Fig. 2 is a cross sectional view through Fig. 1 on line 2—2.

Fig. 3 is a perspective view of one of the end members of the rack.

Fig. 4 is a perspective view of the top removed with certain parts broken away for better illustrating the construction.

Fig. 5 is a detail perspective view of the upper section of one of the sides showing the construction of the locking parts and the construction of the lock for the cover.

Fig. 6 is a detail sectional view of one of the transverse tray supporting cleats.

Fig. 7 is a perspective view of one of the trays.

Referring to the accompany drawings by numerals, 1 indicates the top of a rack which is formed preferably of one piece of sheet metal or a plurality of pieces, as preferred, but in the construction is provided with a downwardly extending flange 2 which merges into a turned over reinforcing edge 3 producing a stiffening bead. The top 1 may be connected to the ends 4 and 5 in any suitable manner, but preferably by rivets 6. The ends 4 and 5 are made identical so a description of one will apply to both. In Fig. 3 it will be seen that the end 5 is formed of a single piece of metal bent so as to produce a central body 7, posts 8 and 9 and grooves 10 and 11. The grooves 10 and 11 taper from the top to the bottom, being wider at the bottom than at the top so as to accommodate the side covers 12 as shown at the right in Fig. 2. The extreme edges of the metal of which the end 5 is made are turned over for providing beads 13 and 14 designed to reinforce and stiffen these parts. In fact, the entire shape of the various parts of the end result in producing a stiff, strong construction. To assist in reinforcing and stiffening these parts braces 15 (Fig. 1) may be used if desired, and also lateral braces 16 may be used for bracing the lower part of the legs 17. It will be noted that the lower part of the section 7 is cut-away and bent around for producing a square leg, as shown in Fig. 3, so as to provide a strong, stiff construction and one that will receive the filling block 18 of wood or other material to which the respective casters 19 are secured.

Interiorly of the ends 4 and 5 cleats 20 are positioned, said cleats being riveted or otherwise rigidly secured to the section 7. These cleats are formed as shown in detail in Fig. 6, namely, with a depending section 21 and a horizontal section 22, said horizontal section having a cut-away central portion 23 for accommodating the reinforcing web 24 of the tray 25. Each edge of the cleat 20 is provided with a turned-over portion 26 for reinforcing purposes. There are provided an equal number of cleats 20 on each of the ends 4 and 5, and connecting the ends are also a number of side cleats or rails 27 constructed similarly to the cleats 20 except that there is no central cutaway portion and the members 27 are much longer. These cleats or rails 27 are arranged as shown particularly in Fig. 2 and co-act with the end cleats 20 for supporting the various trays 25 loosely though preventing an accidental side or longitudinal movement.

Each tray 25 is preferably made from a single piece of metal bent so as to have a central reinforcing web 24 and side flanges 28 and 29, said side flanges being beveled at

the ends. Each flange is provided with a turned-over portion 30 for producing a reinforcing and stiffening member. Preferably each of the trays 25 is provided with a covering strip 31 of cloth of some kind so that the shoes will not be scarred or injured in any way when being placed upon the trays. It will be noted that the trays may be removed at any time for cleaning or for any other purpose and again substituted. It will also be noted that all the parts are made from metal bent in a certain way so that a comparatively thin sheet metal may be used and yet a strong, stiff structure produced. The use of metal and of rivets or other similar securing means for holding the parts in position causes the entire construction to be fire-proof. In order to complete the fire-proof structure and to prevent dirt or other matter entering into the space adjacent the trays, the side covers 12 are provided, there being one covering structure on each side, said structures being identical so that a description of one will apply to both.

The side covers 12 may be made from sections 32, 33 and 34 or may be made from a larger or less number as desired, but it is preferable to make the same in such number that all of the sections may be nested at a position below the lowermost tray, as shown in Fig. 1. All of the sections 32, 33 and 34 are independent yet operate together by reason of their particular construction. Each section is formed from an independent strip of metal, section 32 having a reinforcing bead 35 bent up therefrom and a hook edge 36 at the lower portion. At the upper part of the section 32 a reinforcing bead 37 is pressed out from the body of the section and an upwardly extending web 38 formed with a reinforcing section 39 designed to pass beneath the flange 2 of top 1, as shown at the left in Fig. 2. Section 33 is provided with a bent-over portion 40 at the upper edge for interlocking with the hook portion 36 of section 32, and a hook section 41 at the lower edge for interlocking with the hook portion 42 of the upper edge of section 34. A reinforcing bead 43 is bent up from section 32, said reinforcing bead also acting as a support for the lower edge of section 32. Section 34 is provided with a reinforcing bead 44 which stiffens the section and acts as a support for the section 33. The lower edge of the section 34 instead of being provided with a hook is provided with a laterally extending shelf 45 for engaging the lowermost rail or cleat 27 and thereby limiting the upward movement of the covering member 12. The downward movement of the section 34 and associated parts is limited by the bolt, screw or rivet 46. It will of course be understood that the various sections are made of the proper size to fit, as shown at the left in Fig. 2, when in an elevated position.

In order to hold the sections in an elevated position legs are provided, said legs being formed from substantially U-shaped bars 47 and 48, said bars having locking extensions 49 and 50 and rearwardly extending portions 51 and 52 merging into stops 53 and 54. When in a lowered position and while moving to an upper position the members 47 and 48 are as shown in Fig. 5, but when moved completely to the top the central parts of the members 47 and 48 are moved so as to extend at right angles to the section 33 and are then moved longitudinally of section 33 until the locking sections 49 and 50 are thrust through the socket members 55 and 56, said members being guided by the socket members 57 and 58. Return stops 59 and 60 are provided for preventing the return of the locking members 47 and 48, as shown in Fig. 5, said return being prevented until the bars 47 and 48 have been swung to a horizontal position.

In operation the parts may be arranged as shown in Fig. 1, with one covering member 12 in a lowered position and the other elevated, or both covering members 12 may be lowered. The first operator places shoes on the various trays 25 after he has completed his part of the work. After the first workman has filled all the trays the entire rack is moved over to the next workman, and after the second workman has completed his part of the work the rack is moved over to the third workman, and so on, until the shoes have gone through all the stages of manufacture. A suitable card rack 61 is provided at one end of the rack for receiving the card 62 on which any desired information may be placed indicating certain requirements, as for instance, a statement that the shoes in the rack are to be rushed. A handle or bar 63 is arranged at one or both ends of the rack so that the rack may be easily pulled or pushed. At night when the factory is closed, both of the covering sides 12 are raised and locked in the position shown at the left in Fig. 2. This will prevent the entrance of any considerable dirt and also prevent the entrance of rodents as well as prevent a small fire injuring the shoes in the rack.

What I claim is:

1. A rack for shoes comprising a metallic frame work including closed ends, each of said ends being formed from sheet metal bent to form posts having grooves arranged on one edge, said grooves extending from near the top of said posts to near the bottom, trays arranged on said rack, and collapsible sides formed of independent plates with parts extending into said grooves, said plates having overlapping hook members so that each plate may be independent, but

connected with the next adjacent plate, so that when the top plate is moved upwardly the other plates will be successively brought into position.

2. A shoe rack of the character described, comprising end members, each of said end members being formed from sheet metal bent so as to form a central body, and a pair of substantially square-shaped posts that act as stiffening members for the body, each of said posts having a bent section forming a guiding groove, means for connecting said end members, a tray arranged on the means for connecting the end members, a top extending from one end member to the other, and sides formed in a plurality of sections adapted to collapse and be nested at the lower part of the rack, said sections having extensions projecting into said grooves.

3. A shoe rack of the character described, comprising a body formed with shelf supporting members and a tray for each of said shelf supporting members, each of said trays comprising sheet metal bent with a reinforcing web centrally thereof on the under face, a pair of upstanding sides and bent-over edges for reinforcing the sides.

4. A shoe rack of the character described comprising end members, each of said end members being formed from sheet metal bent to form a central body, and a pair of posts that act as stiffening members for the body, each of said posts having a bent section forming a guide, means for connecting said end members, a tray arranged on the means for connecting the end members, a top extending from one end member to the other, and side members slidingly positioned in said guides.

5. In a rack proof against rodents, a body formed with end members, each of said end members being pressed from a single piece of material and constructed during the pressing into a panel and a pair of posts, a solid top connected with said end members, a plurality of angle bars connecting said posts and extending parallel with said top, supporting trays arranged on said angle bars, and a plurality of means on each side acting as closure means.

RALPH IMBRIANI.