F. SOLEY & E. STACKHOUSE.

RACK.

APPLICATION FILED JAN. 12, 1915.

1,219,785.

Patented Mar. 20, 1917.

3 SHEETS—SHEET 1.

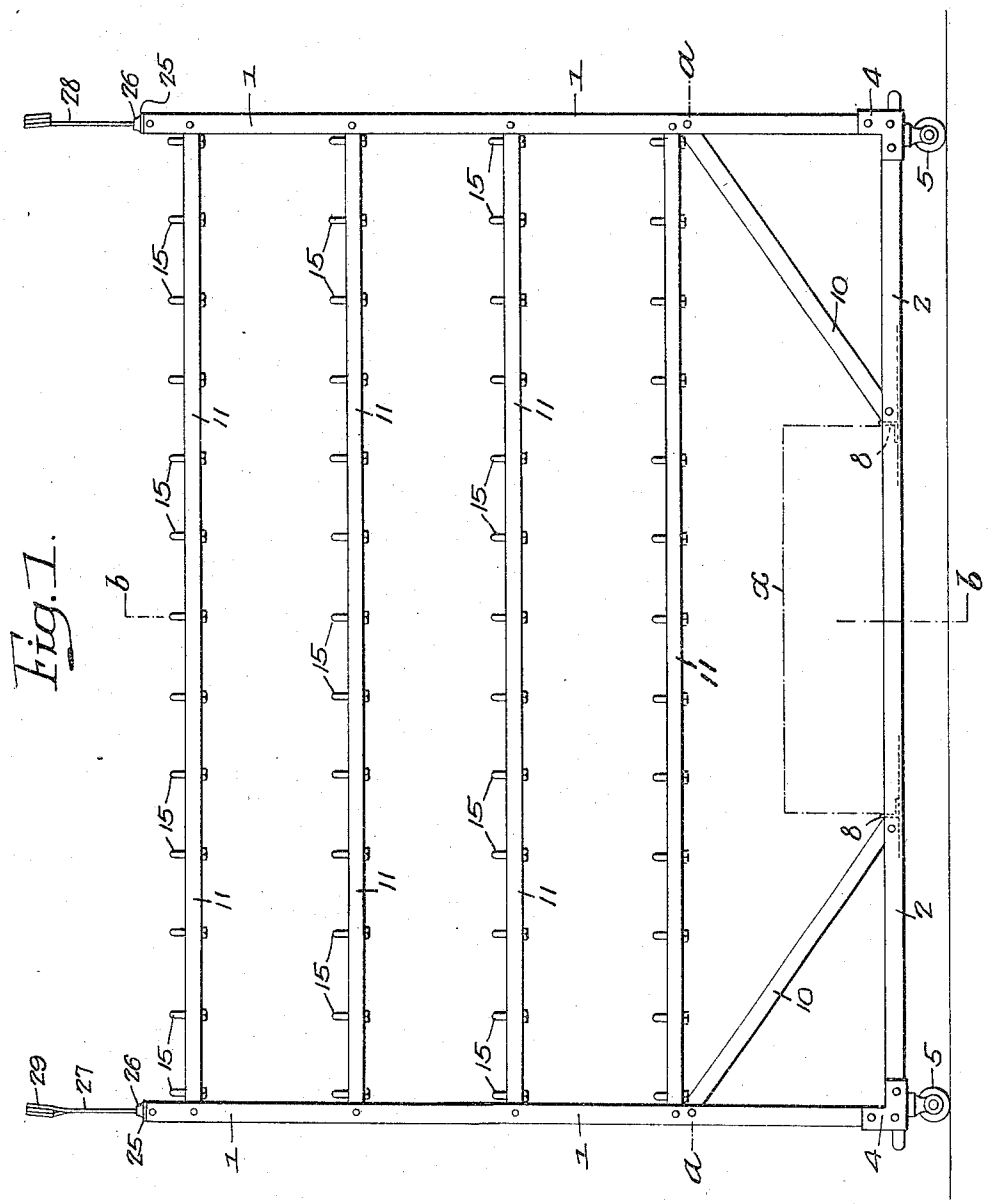


Fig. 1.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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3 SHEETS—SHEET 2.

Fig. 2.

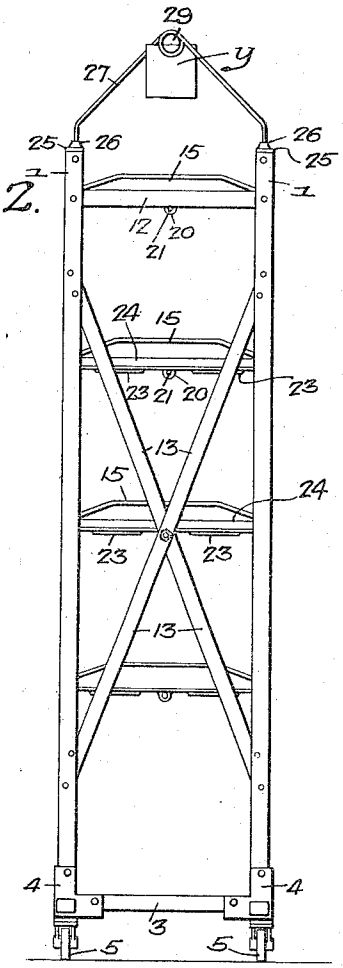


Fig. 4.

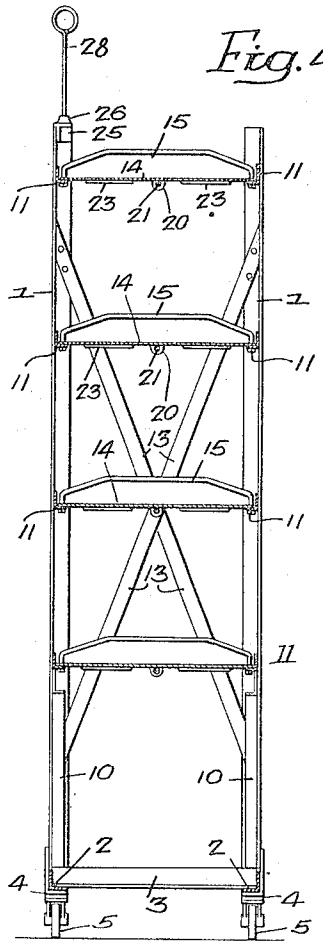
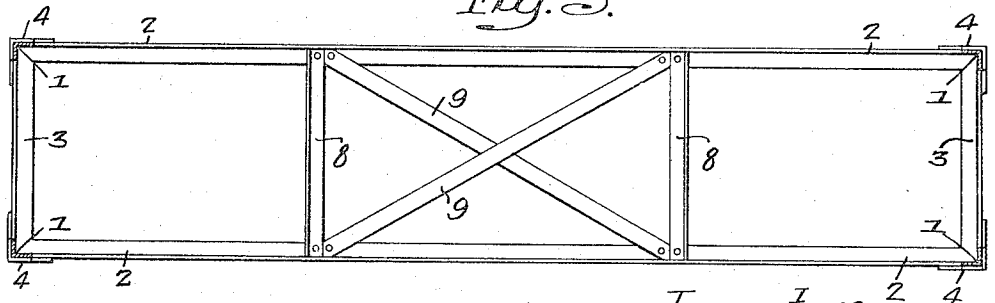


Fig. 3.



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3 SHEETS—SHEET 3.

Fig. 5.

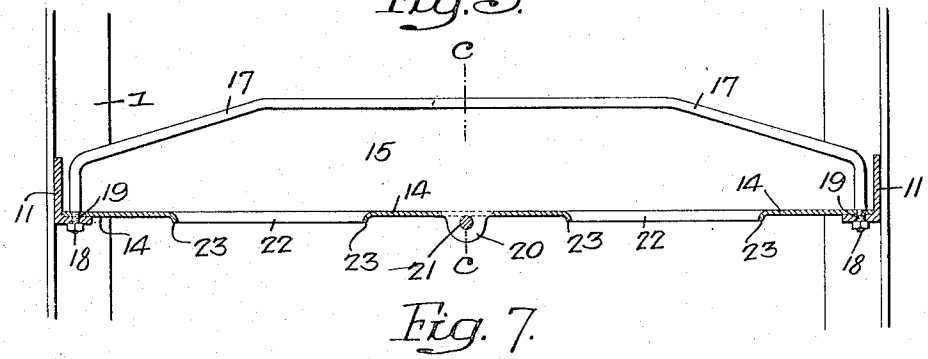


Fig. 7.

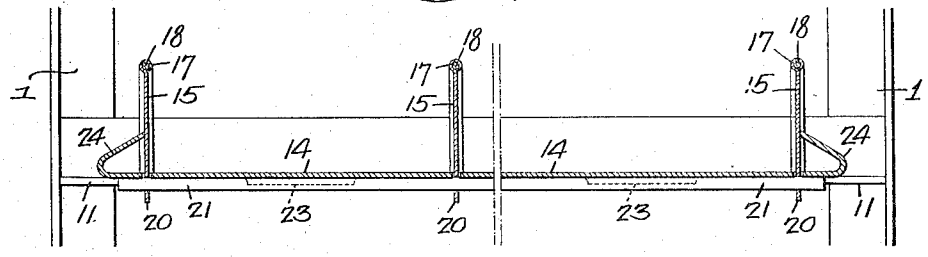


Fig. 6

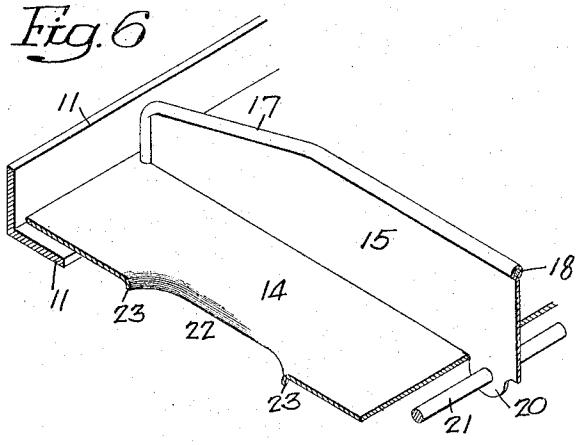


Fig. 8.

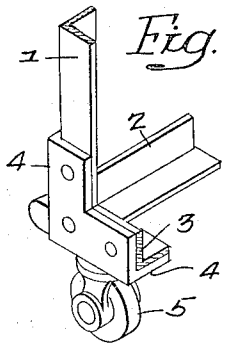


Fig. 11.

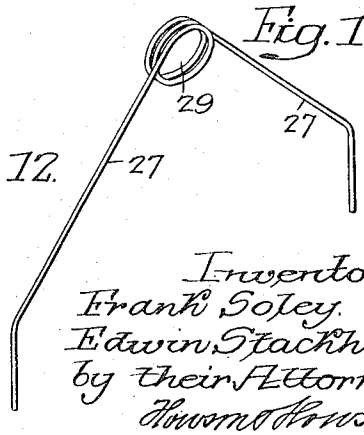


Fig. 10.

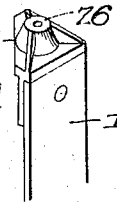


Fig. 12.

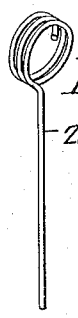
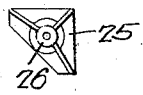


Fig. 9.



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UNITED STATES PATENT OFFICE.

FRANK SOLEY AND EDWIN STACKHOUSE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO MILLER LOCK CO., OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

RACK.

1,219,785. Specification of Letters Patent. Patented Mar. 20, 1917.

Application filed January 12, 1915. Serial No. 1,785.

To all whom it may concern:

Be it known that we, FRANK SOLEY and EDWIN STACKHOUSE, citizens of the United States, and residents of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented certain Improvements in Racks, of which the following is a specification.

One object of this invention is to improve the construction of racks for holding shoes and like articles. These racks are used in factories during the process of manufacture so that the shoes, as they are finished in one department, can be transferred to another department and can be separated and held in proper position in order that they may be easily handled without the liability of the shoes being rubbed or otherwise scarred in the transfer.

A further object of the invention is to make the racks of metallic angle shapes and plates so that they will be substantial yet light in weight.

Heretofore, it has been common practice to use wooden racks, but the undesirability of wooden racks resides in the fact that they are cumbersome, as well as inflammable. Thousands of these racks are used in shoe factories, therefore it is not only desirable, but imperative, that they be light in weight and as nearly fire proof as it is possible to make them.

In the accompanying drawings:

Figure 1 is a view in front elevation, illustrating this improved shoe rack;

Fig. 2 is an end view;

Fig. 3 is a sectional plan view on the line *a*—*a*, Fig. 1;

Fig. 4 is a vertical sectional view on the line *b*—*b*, Fig. 1;

Fig. 5 is an enlarged transverse sectional view through one of the shelves of the rack;

Fig. 6 is a detached perspective view illustrating one of the bottom plates and a division plate located on one of the longitudinal bars;

Fig. 7 is an enlarged longitudinal sectional view on the line *c*—*c*, Fig. 5;

Fig. 8 is an enlarged sectional perspective view of one of the lower corners of the rack;

Fig. 9 is a plan view of one of the posts;

Fig. 10 is a perspective view of one of the posts;

Fig. 11 is a perspective view of a card holder at one end of the rack; and

Fig. 12 is a perspective view of a card holder at the opposite end of the rack.

Referring to the drawings, 1, 1 are the corner posts of the rack spaced a given distance apart and made of merchant angle bars. 2, 2 are angle bars located at the bottom of the rack and extending from one end thereof to the other. 3, 3 are short angle bars at each end of the rack forming, with the side bars, a quadrangular frame, as shown in Fig. 3. 4, 4 are sockets made either of cast or wrought metal to receive the ends of the three angle bars 1, 2 and 3, which also form a bearing for the caster 5, which may be of any suitable type. 11, 11 are longitudinal bars extending from one end of the rack to the other and these are also made of merchant angle bars, as shown. *x* is a box located as shown by dotted lines, Fig. 1, in which are placed the shoe findings. This box rests on transverse angle bars 8 extending from one side bar 2 to the other and this lower frame is braced by straps 9, as shown in Fig. 3. The frame is also braced by diagonally arranged straps 10, as shown in Fig. 1.

The series of longitudinal bars 11, are spaced apart a sufficient distance for the reception of shoes which are placed upon trays carried by these bars. 12, 12 are bars located at each end of the frame, as shown in Fig. 2. 13, 13 are diagonal braces, which stiffen the ends of the frame. The angle bars 11 have one flange turned inward and the other flange elevated and the sheet metal bottom plate 14 rests on the bottom flanges of each set of bars and are prevented from moving laterally by the vertical flanges of the bars, as clearly shown in Figs. 5 and 6.

In order to separate the shoes on the trays, a series of transverse partitions is provided, each consisting of a sheet metal plate 15, shaped as shown in Figs. 5 and 6, and having a beaded edge 17 in which is a rod 18 for stiffening the partition and the ends 19 of the rod extend through holes in the sheet metal bottom plate 14 and through the hori-

zontal flange of the angle bar. The ends may be threaded to receive nuts, as shown in Fig. 5, or they may be headed by riveting to retain the partition in position.

Each partition plate 15 has a perforated lug 20 at the center which passes through an aperture in the plate 14 and through which passes a longitudinal rod 21, which acts as a locking means to secure the partition and also as a means for supporting the bottom plates 14. These bottom plates are perforated at 22 and the edges of the openings are turned down, as at 23, so as to make them round and to avoid any sharp corners. This not only lightens the frame, but allows any dust which may accumulate on the bottom plate to pass through the openings. The bottom plates 14 are turned up at each end 24 so as to present a rounded end at each end of the rack and these upturned ends bear against the first partition, as clearly shown in Fig. 7.

The upper end of each corner post has a cast metal cap 25 secured thereto by rivets, Figs. 9 and 10. This cap is preferably triangular in shape and has a raised central portion 26 in which is a hole for the reception of the wires 27 and 28, shown in Figs. 11 and 12. When the wires are in place they are merely bent out to a straight line and this retains them in position. In the present instance, the wire 27 is located at one end of the rack and has two ends, one end of the wire being mounted in one cap and the other end being mounted in the other cap. The wire is coiled, as at 29, so as to form a clamp for the reception of a card, such as *y*, Fig. 2. At the opposite end of the rack, the wire is shaped as shown in Fig. 12, the end of which is mounted in one of the caps and the opposite end is coiled to form a card clamp as shown in Fig. 4. These card clamps are used to designate the size or style of the shoe, or the number of the operator, according to the rule enforced in the factory where these racks are used.

From the above description, it will be seen that a rack of this character is both substantial and light and will hold a large number of shoes and has the additional advantage of being readily removed from one portion of the factory to another.

While the invention has been described as a shoe rack, it will be understood that it can be used for other purposes without departing from the essential features of the invention.

We claim:

1. The combination in a rack, of corner posts made of angle bars; a series of tray supports extending from one end of the rack to the other and also made of angle bars with the lower flanges turned inward; bottom plates mounted on the inturned flanges; and transverse vertical partition plates mounted above the bottom plates and secured thereto and to the frame.

2. The combination of a rack having corner posts; a series of horizontally arranged angle bars spaced apart and having their lower flanges turned inward; a bottom plate mounted on each tier of angle bars; transverse plates projecting vertically above each bottom plate and spaced apart, each partition plate having an upper beaded edge; a wire in the beaded edge, said wire extending through the bottom plate and the supporting flange at each side of the rack and forming a means for securing the parts together.

3. The combination of a rack having vertical posts; a series of spaced horizontally arranged angle bars with their lower flanges turned inward; a bottom plate resting on the bottom flanges of each tier, the bottom plate being perforated and the edge of the perforation being turned down; and a series of vertically arranged partitions extending transversely of the rack above each bottom plate and means for uniting said angle bars, plates and partitions.

4. The combination in a rack, of corner posts; horizontal angle bars having inturned lower flanges; a bottom plate resting on the lower flanges and having the ends turned inward; and a series of vertical transverse partitions, the end partitions being arranged close to the inturned edges of the bottom plate.

5. The combination in a rack, of corner posts; two longitudinal angle bars having inturned lower flanges; a bottom plate mounted on the flanges; a series of transverse partition plates; means for securing the said partition plates to the bottom plate and the flanges of the angle bars, the bottom plate being perforated at intervals; partition plates having perforated lugs extending through the perforations in the bottom plate; and a longitudinal rod extending through the several perforations and under the bottom plate.

In testimony whereof, we have signed our names to this specification, in the presence of two subscribing witnesses.

FRANK SOLEY.
EDWIN STACKHOUSE.

Witnesses:
WM. E. SHUPE,
WM. A. BARR.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."