

June 30, 1925.

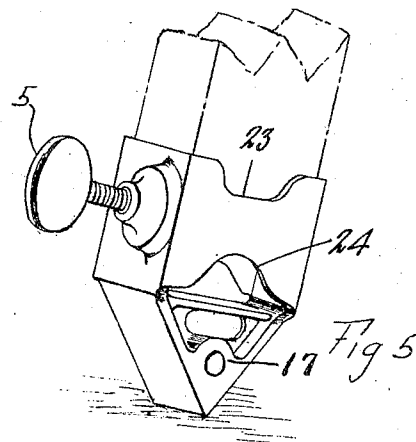
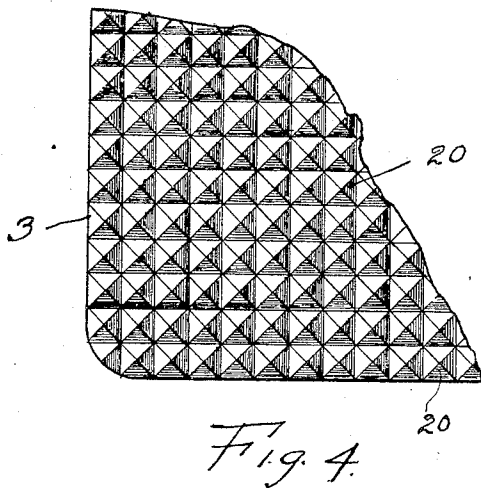
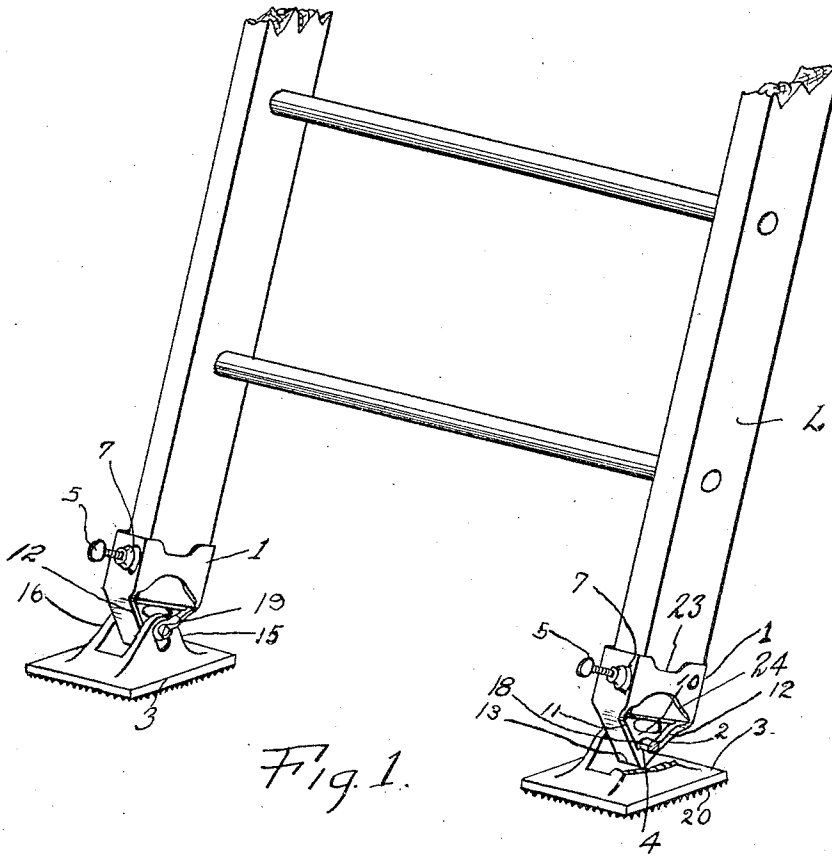
1,543,723

C. S. RIVITZ

LADDER SHOE

Filed Sept. 2, 1924

2 Sheets-Sheet 1



Inventor
Charles S Rivitz

By Bates, Machlin, Goldnick &
Teare
Attorneys

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2 Sheets-Sheet 2

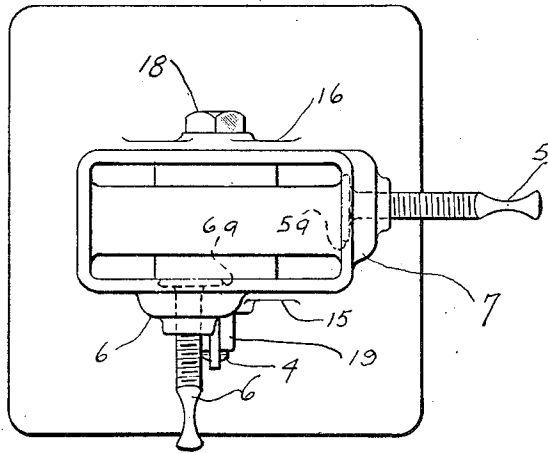


Fig. 2

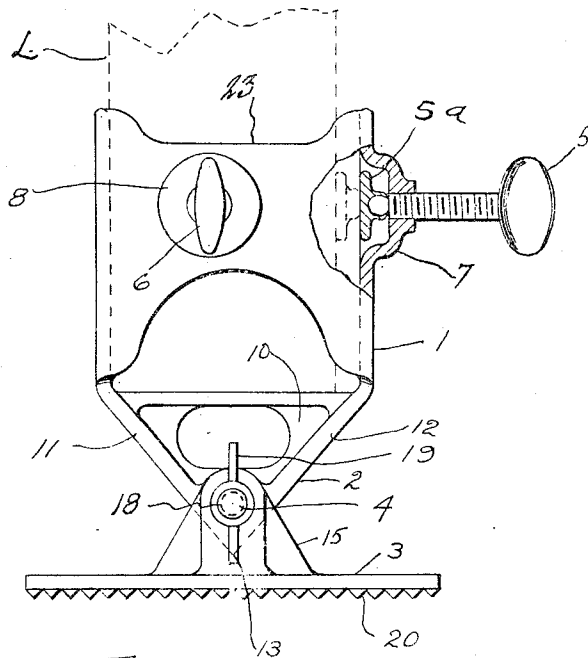


Fig. 3

Inventor

Charles S. Rivitz

By Bates, Macklin, Salenduck & Tene
Attorneys

UNITED STATES PATENT OFFICE.

CHARLES S. RIVITZ, OF CLEVELAND, OHIO.

LADDER SHOE

Application filed September 2, 1924. Serial No. 735,291.

To all whom it may concern:

Be it known that I, CHARLES S. RIVITZ, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in a Ladder Shoe, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to a ladder construction and is particularly concerned with providing a universal foot for a ladder to prevent slippage of the base of the ladder when in use. More particularly, the object is to provide a ladder foot which shall have a single wedge-shaped point adapted to be secured to each leg of the ladder, which point shall also serve as a pivot bearing for an easily detachable and substantially flat ground-engaging shoe.

I have shown my invention adapted to be used with a ladder having rectangularly formed side bars or legs and have provided for mounting a socket having a substantially rectangular opening at the bottom end of each leg of the ladder in such a way that a certain size of socket will serve to receive a number of rectilinear shapes of ladder legs. The lower end of the socket I prefer to shape into a wedge which may engage the ground at a single line parallel to the rungs of the ladder or at a plurality of shorter lines by reason of having the wedge cut away in places along its engaging point. In its preferred construction, the wedge-shaped end has an opening parallel to the ground-engaging line for receiving an attaching bolt or pivot pin for a substantially flat shoe. The shoe is shown as having upwardly extending ears which engage the ends of the pivot pin. The pivot pin may be of any sort adapted to be easily and quickly removed and the securing means for the pin may be a wing nut as shown.

Other forms of ladder foot of this general character are easily suggested by this construction, such for instance as a pivoted reversible member having a wedge or points at one end and a substantially flat foot at the other end which may be held against pivotal movement when the wedge or pointed end engages the ground, or allowed to freely pivot when the flat foot is down. I consider such a construction within the spirit and scope of my invention. Other objects and features will become apparent in

the further description which pertains to the accompanying drawings. The essential novel characteristics will be summarized in the claims.

In the drawings, Fig. 1 is a perspective of the lower portion of a ladder showing the preferred embodiment of my invention attached thereto; Fig. 2 is a plan view of the complete device; Fig. 3 is a side elevation thereof; Fig. 4 is a bottom plan of a portion of one of the pivoted feet and Fig. 5 is a perspective of one of the feet adapted to engage loose earth, gravel, etc.

In general, my invention consists of a socket member 1, having a reduced extension 2, projecting from its lower end and preferably formed integrally therewith. To this extension I preferably attach a substantially flat pedestal member 3 removably pivoted at 4. The aperture for receiving the end of a ladder side or leg L is shown in Fig. 2 as being substantially rectangular, the side walls forming the opening being cut away to eliminate unnecessary weight and being provided with a plurality of clamping screws 5 and 6. I have found that a convenient arrangement for these screws is that shown in Figs. 2 and 3 and consists in locating a single screw 5 on one of the walls of the socket about midway between the top and bottom of the aperture and another screw on one of the adjacent sides.

As shown in Fig. 2, each of the screws 5 and 6 are placed off center with reference to the opening. This arrangement provides for using a socket of the proportions indicated by the drawings in connection with a considerably smaller ladder leg than would fit the socket, yet which smaller leg would be adequately clamped by reason of the off center screw arrangement. For example, in case of a very thin leg, the screw 6 would push the leg to the opposite side of the socket where it would be directly engaged by the foot 5 of the screw 5.

The screws are preferably located in cupped embossed portions of the sockets 7 and 8. Each screw is provided with swiveled feet 5^a and 6^a which may be entirely withdrawn into the cups as shown in Fig. 3 to allow the use of the sockets with ladder legs which substantially fill them. The extension 2 is formed of inwardly converging members 11 and 12 having substantially flat exterior surfaces meeting at 13 in a line point. The point of convergence is strength-

ened by the addition of material at 17 which is provided with an opening for the shoe attaching pin or bolt, as shown. Additional reinforcing for the converging members is had by a web 10 having a horizontal flat upper surface which may also serve as a rest for the bottom of the ladder leg. The construction is still much lightened without sacrificing strength by cutting the socket member away at 23 and 24.

The foot 3 has upwardly extending ears 15 and 16, each having aligned openings through which a bolt 18 may extend to secure the shoe to the extension as shown. I prefer to employ a wing nut 19 to secure the bolt in place to facilitate the rapid removal and replacement of the shoe when it is desired. The bottom face of the shoe, I have shown as faceted to provide a great number of points 20 projecting from the general plane of the lower surface at the foot which I have found forms the best sort of a surface for engaging concrete, brick and the like, while by simply removing the shoes entirely the ladder may be rested upon the wedge-shaped points 13 which forms the best engaging surface for a wooden floor, gravel or earth.

Having described my invention, I claim:—

1. A ladder foot comprising in combination a substantially rectangular socket member, a plurality of clamping screws each provided with a swiveled clamping member, the axis of each being offset from the center of the socket, said screws projecting within the socket member from two directions, one set of screws being perpendicularly placed relative to the other set, and a wedge-shaped extension projecting from the lower end of the socket member capable of engaging the

ground and of independently supporting the ladder and preventing slippage.

2. A ladder foot comprising in combination a substantially rectangular socket member, a plurality of ladder leg clamping screws supported by recessed projections on said socket member, each screw having a swiveled clamping foot adapted to be withdrawn into the recess formed in the respective projection, converging members unitarily joined and extending downwardly from two sides of said socket member for engaging the ground.

3. A ladder foot comprising in combination a substantially rectangular socket member, a plurality of clamping screws carried thereby, the axis of each being offset from the center of the socket, said screws projecting within the socket member from two directions, one set of screws being disposed at an angle to the other set, and a wedge-shaped extension projecting from the lower end of the socket member capable of engaging the ground and of independently supporting the ladder and preventing slippage.

4. A ladder foot comprising in combination a hollow member for receiving a ladder leg, means carried by the member and extending inwardly from two directions for clamping the leg, said hollow member having openings at the base on opposite sides, inwardly and downwardly converging members integrally joined to the hollow member and to each other and a web having a flat upper surface extending across the hollow member in the region of the openings for reinforcing the foot and providing a base support for the ladder leg.

In testimony whereof, I hereunto affix my signature.

CHARLES S. RIVITZ.