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LADDER FOOT

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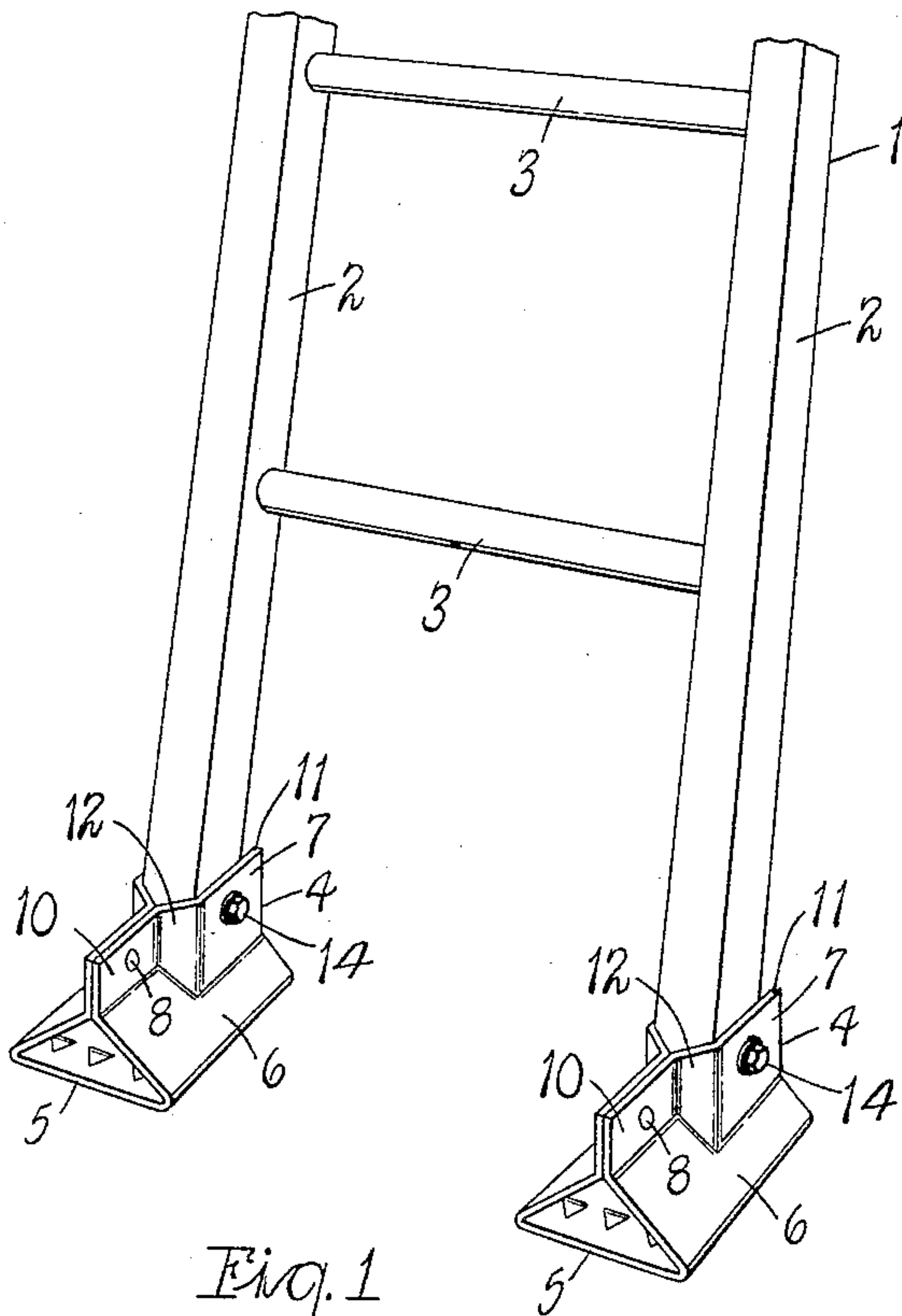


Fig. 1

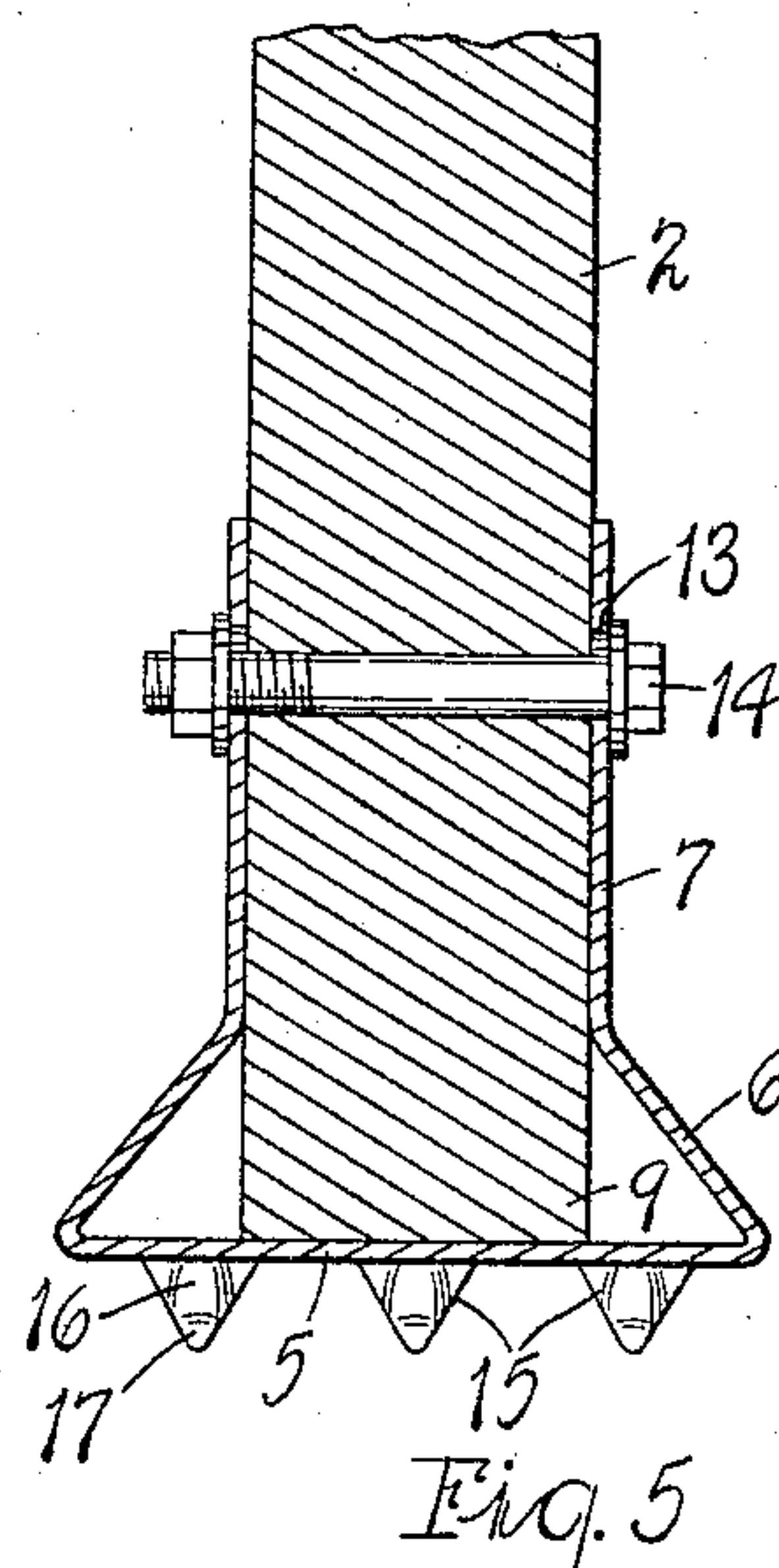


Fig. 5

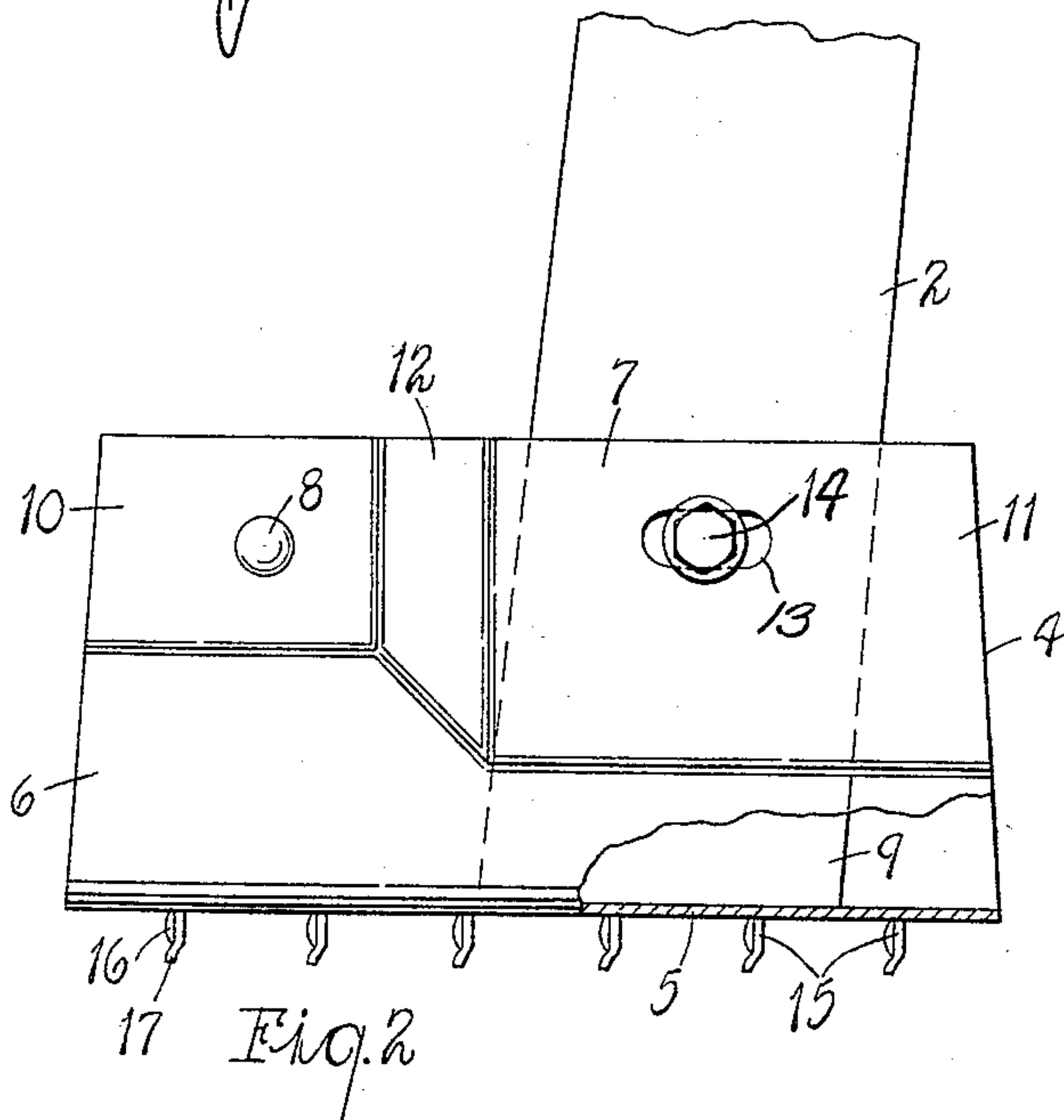


Fig. 2

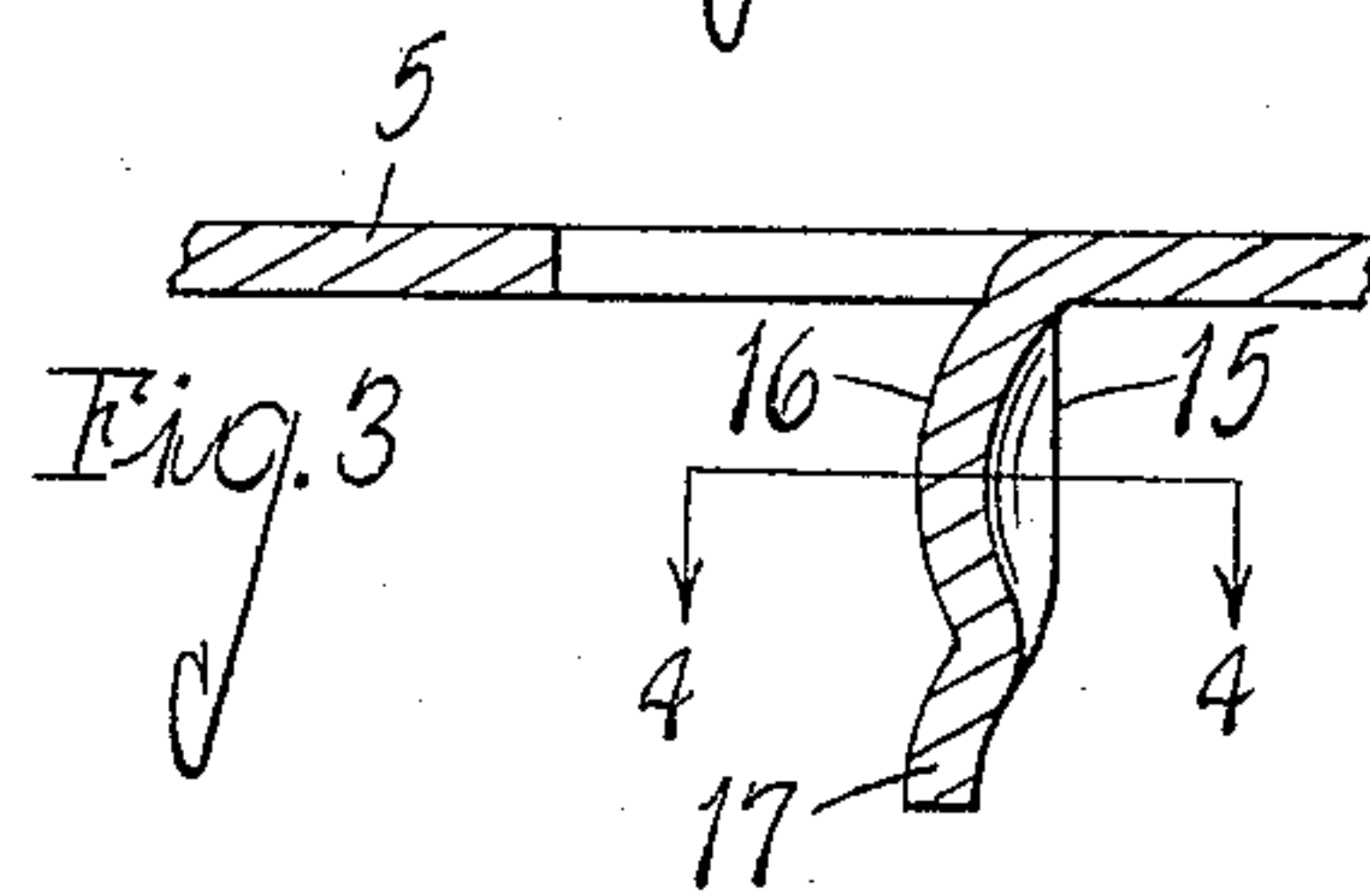


Fig. 3

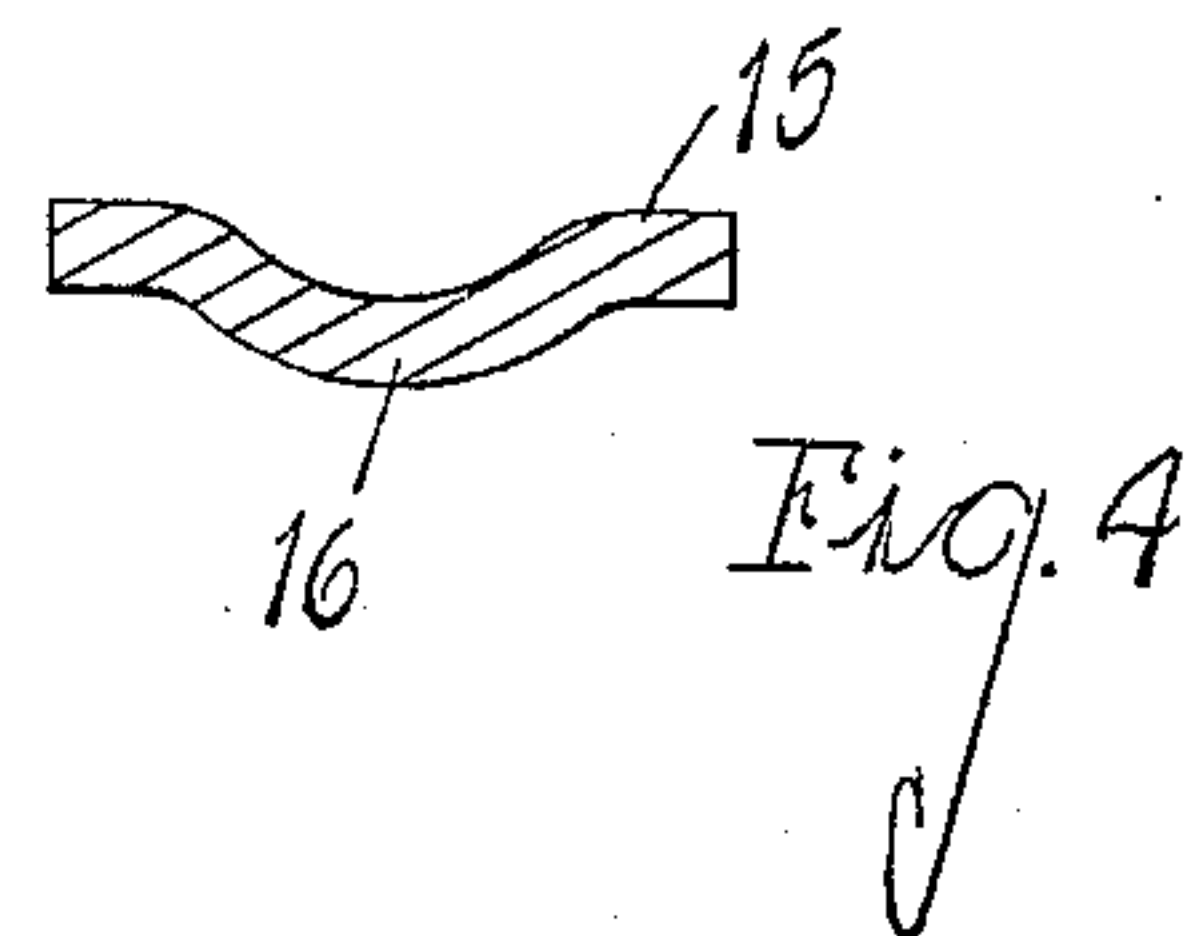


Fig. 4

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## UNITED STATES PATENT OFFICE

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## LADDER FOOT

Application filed December 14, 1931. Serial No. 580,831.

The main object of my invention is to provide an improved foot or base for ladders.

Another object is to provide a ladder foot or base which permits the ladder to be tilted without affecting the ground gripping action of the shoes.

A further object is to provide a ladder foot having these advantages that is simple and rugged in construction yet economical to manufacture and efficient in operation.

Objects relating to details and economies of my invention will appear from the description to follow. The invention is defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is illustrated in the accompanying drawing, in which:

Fig. 1 is a fragmentary perspective view of a ladder provided with feet, embodying my invention.

Fig. 2 is an enlarged fragmentary side elevation partially in vertical section.

Fig. 3 is an enlarged fragmentary detail section through the base of the foot.

Fig. 4 is a horizontal section taken on line 4-4 of Fig. 3, and

Fig. 5 is a fragmentary vertical section illustrating the connection between the foot and the risers of the ladder.

Referring to the drawing, numeral 1 in general indicates a ladder of conventional construction consisting of side rails 2 which are connected by rungs 3. The risers 2 are provided with sheet metal feet 4 embodying my invention which are adapted to prevent the side rails from penetrating into the supporting surface and/or slipping over the surface thereof when the ladder 1 is in use.

The shoes 4 are identical and only one will be explained in detail. The shoe 4 consists of a sheet metal stamping which is shaped and folded to provide a sole or base 5 and upwardly and inwardly inclined sides 6 which terminate in vertical flanges 7, the front or toe ends of which are secured in metal-to-metal relation by the rivet 8 and the rear end or heel ends of which are spaced apart to provide a socket for receiving

the butt end 9 of the side rail 2 of the ladder. The toe 10 and the heel 11 formed by the flanges 7 are connected by the inclined portions 12 as illustrated.

As illustrated by Fig. 5, the flanges at the heel are provided with horizontally alined slots 13 for the reception of the cross bolt 14 securing the side rails 2 of the ladder in assembled relation with the foot. The bolt slots 13 in the side walls of the shoe are purposely made large enough compared to the size of the bolt 14 to permit the side rails 2 and the shoe to be inclined relative to each other, as illustrated by Figs. 1 and 2, and to rest on the base rather than on the bolt. This provision is particularly desirable where the ground or other supporting surface is uneven; in this case the shoes assume their proper positions automatically when a burden is placed upon the ladder 1 or when the ladder itself is of sufficient weight for the purpose.

The sole or base 5 of the shoe 4 is provided with a plurality of rows of spaced integral lugs 15 of V shape which are punched therefrom and bent downwardly to form ground gripping pins or cleats. The lugs 15, as illustrated by Figs. 3 and 4, are filleted to increase their strength and in general are of concavo-convex shape, the convex surfaces 16 of the lugs being arranged to face in the direction of possible sliding movement of the foot. The tips 17 of the teeth or lugs are bent forward slightly to assist in gripping the supporting surface and for increasing the strength of the individual teeth.

My improved ladder foot being made of sheet metal is highly economical to manufacture, but this in no wise affects its efficiency as an anti-skid device for preventing the lower ends of the ladder from sinking into and/or slipping on the supporting medium.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiments of my invention without departing from the spirit thereof, such changes and modifications be-



ing restricted only by the scope of the following claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A shoe of the class described, comprising a stamping shaped and folded to provide a substantially flat base having integral V-shaped lugs bent downwardly therefrom, upwardly and inwardly inclined side walls terminating in vertical flanges which are in contact at the toe of the shoe and in spaced relation at the heel for the reception of the end of a ladder side rail, and means securing the side walls together at the toe, said side walls at the heel having alined bolt slots for loosely supporting a bolt extending through the butt end of the ladder side rail.

2. A shoe of the class described, comprising a stamping shaped and folded to provide a substantially flat base having integral V-shaped lugs bent downwardly therefrom, upwardly and inwardly inclined side walls terminating in vertical flanges which are in contact at the toe of the shoe and in spaced relation at the heel for the reception of the end of a ladder side rail, and means securing the side walls together at the toe.

3. A shoe of the class described, comprising a metal sheet shaped and folded to provide a substantially flat base having integral concavo-convex V-shaped lugs bent downwardly therefrom, upwardly and inwardly inclined side walls terminating in vertical flanges which are in contact at the toe of the shoe and in spaced relation at the heel for the reception of the end of a ladder side rail, and a rivet securing the side walls together at the toe, said side walls at the heel having alined bolt slots for loosely receiving a bolt.

4. A shoe of the class described, comprising a metal sheet shaped and folded to provide a substantially flat base having integral lugs bent downwardly therefrom, upwardly and inwardly inclined side walls terminating in vertical flanges which are in contact at the toe of the shoe and in spaced relation at the heel for the reception of the end of a ladder side rail, and a rivet securing the side walls together at the toe.

5. A shoe of the class described, comprising a metal sheet shaped and folded to provide a substantially flat base having integral lugs bent downwardly therefrom, and upwardly and inwardly inclined side walls terminating in vertical flanges which are in contact at the toe of the shoe and in spaced relation at the heel for the reception of the end of a ladder side rail.

6. A shoe of the class described, comprising a substantially flat base having integral anti-skid lugs, upwardly and in-

wardly inclined side walls terminating in vertical flanges which are in contact at the toe of the shoe and in spaced relation at the heel, and means securing the side walls together at the toe.

7. A shoe of the class described, comprising a substantially flat base having integral anti-skid lugs, and upwardly and inwardly inclined side walls terminating in vertical flanges which are in contact at the toe of the shoe and in spaced relation at the heel.

8. A shoe of the class described, comprising a substantially flat base having integral concavo-convex V-shaped anti-skid lugs, and upwardly and inwardly inclined side walls terminating in vertical flanges which are in contact at the toe of the shoe and in spaced relation at the heel.

In witness whereof I have hereunto set my hand.

GEORGE H. GREENE.