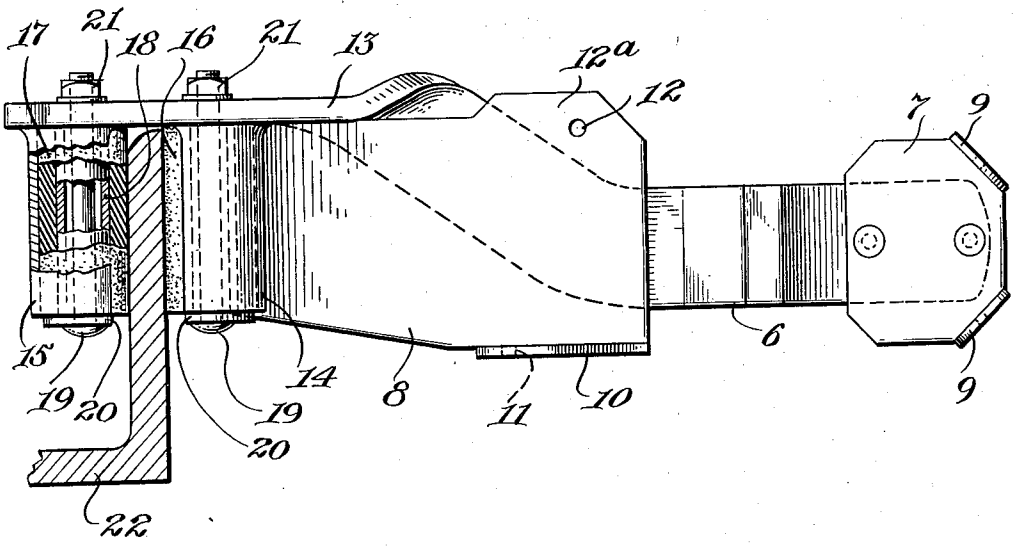
June 1, 1937. H. E. SHAW ET AL 2,082,553

POLE CLIMBER

Filed Feb. 1, 1937

Fig. 1.



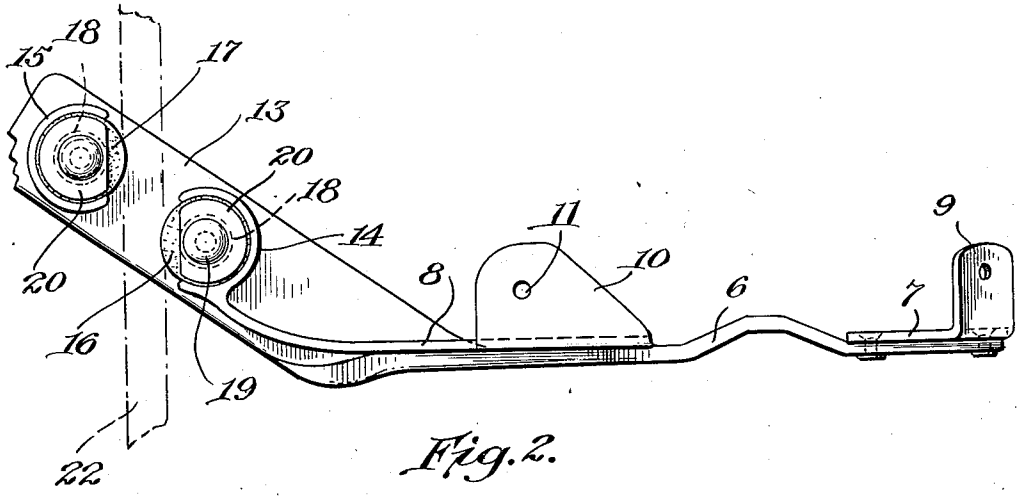


Fig. 2.

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POLE CLIMBER

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7 Claims. (Cl. 227—26)

This invention relates to climbers, such as are used in climbing metal columns or beams, being strapped to the feet of a man to enable him to climb such shapes as flanged metal columns such as I-beams or the like, without danger of slipping.

The object of the present invention is to provide an improved gripping surface of relatively soft material, such as rubber or similar material, of such construction as to give a wide gripping surface with a large friction area, with a correspondingly increased safety factor.

A further object of the invention is to provide such an improved gripping surface in the form for example of a circular rubber block supported by a metal core or tube and held by a bolt, so that when one part of the gripping surface becomes worn the block or tube can be turned to present a new surface at the gripping point.

The present construction also has the advantage that it will not mar the finish or paint surface of the steel beam or other structure on which it is used, and the metal parts have been considerably simplified, one feature being the absence of any projections downwardly from the bottom of the foot plate so that there is less discomfort in walking on the ground. Also, the steel or other metal core in conjunction with an outer metal retainer extending partly around the rubber allows for compression of the rubber or other contact material while at the same time preventing too much distortion thereof. The climber can be made in sizes to fit any size or shape of column.

Other objects and advantages will appear from the following description and the accompanying drawing in which:—

Fig. 1 is a top plan view of one of the devices.

Fig. 2 is a side elevation.

Referring specifically to the drawing, 6 indicates a foot plate or bar to which is riveted a heel plate 7 having flanges 9 to which a heel strap may be attached in the ordinary manner. A sole plate 8 is welded or otherwise securely fastened upon the front part of the bar 6, and is provided with a side flange 10 and holes 11 and 12 to which a toe strap may be attached, the hole 12 being located in an extension 12*a* at the side of the plate.

At one side the plate 6 is flanged upwardly as indicated at 13, the flange extending forwardly at a proper angle to support the gripping members now to be described, and a pair of curved or arcuate retainers 14 and 15 are welded to the inner face of the flange or bar 13, in position to retain or surround the gripping members 16 and 17, except that part thereof exposed to allow the gripping members to engage the flange of the beam on which the climbers are used.

Each gripping member comprises a perforated or tubular block or cylinder of rubber or other similar gripping material fitting closely around a tubular core 18, to which the rubber may be vulcanized or otherwise securely attached, and this gripping member is held in place by a bolt 19 and washer 20, the bolt extending through the tube and through a hole in the bar 13, and held by a nut 21 on the outside of the bar.

These gripping members are located one slightly above the other at a proper angle to receive between them the flange indicated at 22 of a beam or column, and to grip said flange when pressure is applied to the foot plate.

The metal parts, that is, the parts 6 and 8 and the retainers 14 and 15 are, preferably welded together as by arc welding, so as to give a safe and strong connection, without inconvenient weight.

It will be noticed that the retainers 14 and 15 enclose the rubber blocks mounted on the tubes 18, so that the blocks are confined between these parts, to prevent undue compression or objectionable distortion, sufficient gripping surface however being exposed to give wide or extensive friction bearing of the respective blocks against opposite sides of the flange. When the exposed gripping surfaces become worn, the blocks can be turned to present new surfaces by loosening the bolts 19. Or, when worn out, the blocks can be readily renewed.

The structure will be found very efficient for the intended purpose, and the manner of use is obvious from the description, the climbers being made in pairs, right and left, and strapped to the feet of the user. The bottoms of the climbers are practically flat, so that the workman can walk on the ground, without discomfort, when the climbers are in place.

The invention is not limited to the exact form or structure shown, but may be modified within the scope of the following claims.

We claim:

1. A climber comprising a foot plate provided with a forwardly extending bar and hollow retaining members projecting laterally from the bar, compressible friction members partly enclosed in said retaining members, and means to fasten the friction members within said retaining members.

2. A climber, as in claim 1, the retaining members and the friction members being curved

on their contacting surfaces, whereby the latter may be turned in the former, to expose new gripping surfaces.

3. A climber, as in claim 1, the friction members having internal reinforcing tubes, and bolts extending through said tubes and said bar.

4. A climber comprising a sole plate, a foot plate welded thereto and having a forwardly projecting flange, hollow arcuate retaining members projecting laterally from the flange, circular resilient friction blocks partly enclosed in said retaining members, and means extending through the blocks to fasten the same to the said flange.

5. A climber as in claim 4, the blocks having metal tubes extending through the same, and the means to fasten the blocks to the flange including bolts extending through the tubes.

6. A climber comprising a foot plate provided with a forwardly extending arm, and oppositely presented compressible friction gripping members projecting from and secured to the side of said arm, said members being cylindrical and capable of being turned to present new gripping surfaces, said gripping members each having an internal reinforcing tube.

7. A climber comprising a foot plate provided with a forwardly extending arm, and oppositely presented compressible friction gripping members projecting from and secured to the side of said arm, said members being cylindrical and capable of being turned to present new gripping surfaces, said gripping members each having an internal metal tube and secured to the arm by a bolt extending through said tube.

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