

No. 639,651.

Patented Dec. 19, 1899.

J. BECK.
FLEXIBLE SOLE FOR SHOES.

(Application filed Nov. 3, 1898.)

(No Model.)

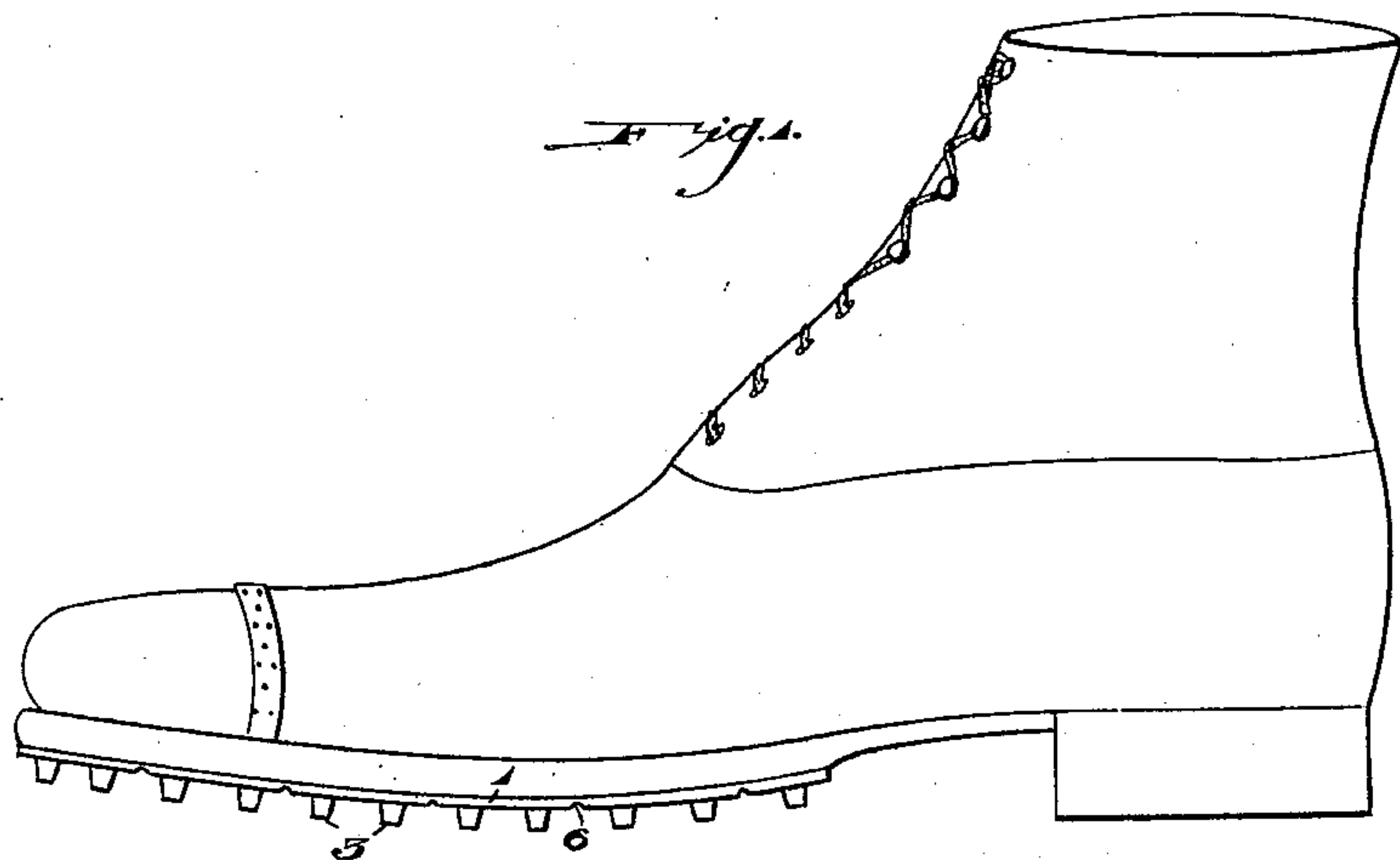


Fig. 1.

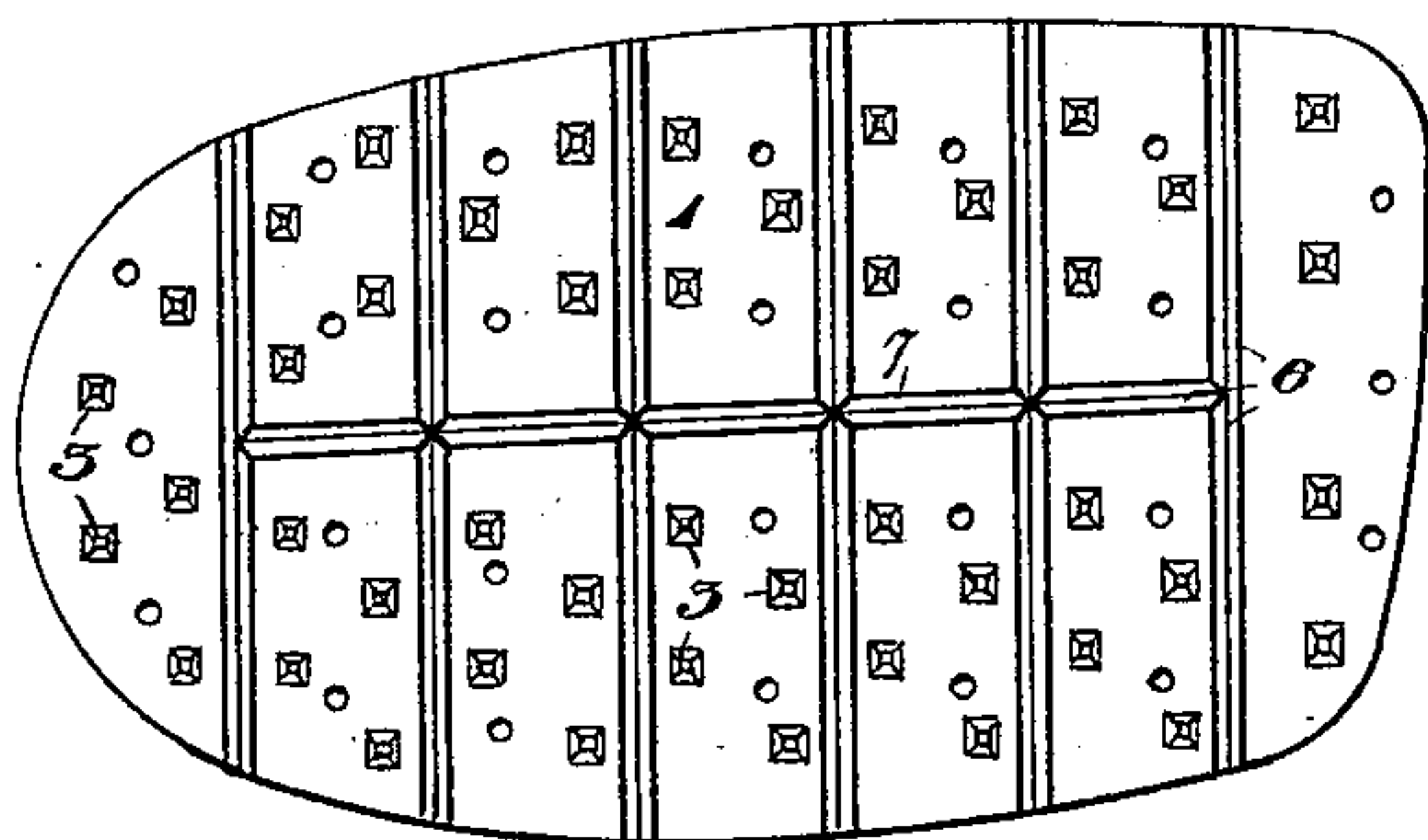


Fig. 2.

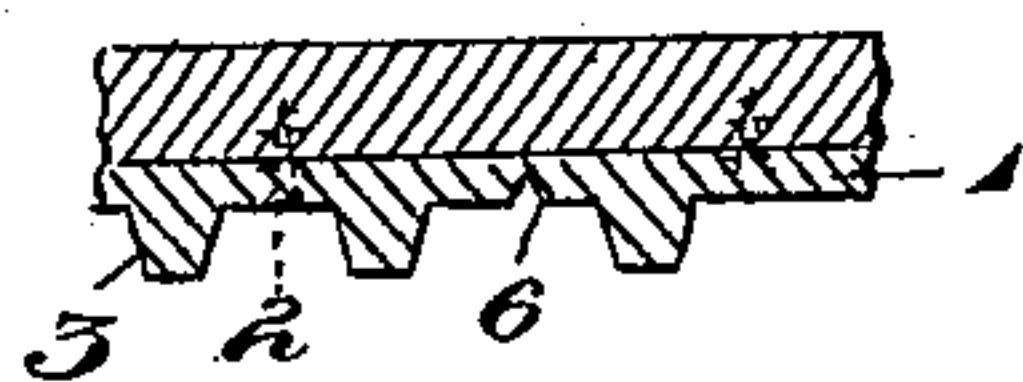


Fig. 3.

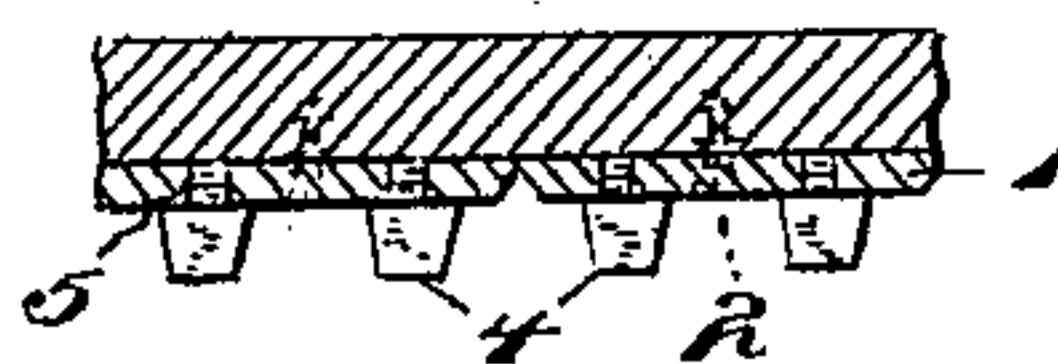
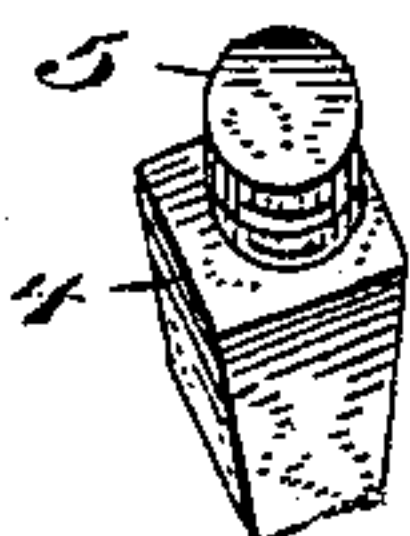


Fig. 4.

WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN BECK, OF CARNEGIE, PENNSYLVANIA.

FLEXIBLE SOLE FOR SHOES.

SPECIFICATION forming part of Letters Patent No. 639,651, dated December 19, 1899.

Application filed November 3, 1898. Serial No. 695,342. (No model.)

To all whom it may concern:

Be it known that I, JOHN BECK, a citizen of the United States of America, residing at Carnegie, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Flexible Soles for Shoes, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain new and useful improvements in flexible soles for shoes.

The object of my invention is to construct a sole of this character which is adapted for use in foundries, quarries, and like places where the wear of the soles of boots and shoes is excessive.

A further object of my invention is to construct a flexible metallic sole which will give on the bend of the foot in the same manner as in an ordinary leather sole.

Briefly described, my invention consists of a metallic plate or sole having a series of V-shaped grooves formed on its underneath face and also a series of studs or projections formed integral or secured to the underneath face of the plate or sole.

My invention finally consists in the novel combination and arrangement of parts hereinafter more fully described, and particularly pointed out in the claim hereunto appended.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like numerals of reference indicate the corresponding parts throughout the several views thereof, and in which—

Figure 1 is a side view of a shoe with my improved sole attached thereto. Fig. 2 is an underneath plan view of my improved metallic flexible sole. Fig. 3 is a vertical sectional view of a portion of the metallic plate or sole, showing the studs formed integral therewith. Fig. 4 is a vertical sectional view of a portion of the plate or sole, showing a modified form of studs and means for attaching the same to the plate. Fig. 5 is a perspective view of the form of stud as shown in Fig. 4.

Referring to the drawings by reference-numerals, 1 indicates the metallic plate or sole, which is secured to the sole of the shoe by having a series of perforations formed therein to receive the suitable fastening means, as at 2.

3 indicates a series of studs or projections which are formed integral with the underneath face of the plate or may be formed separately, as at 4, having a screw-threaded end 5, which is adapted to be secured in the plate, as shown in Fig. 4.

Formed on the underneath face of the plate 1 is a series of transversely-extending V-shaped grooves 6, and a horizontally-extending V-shaped groove 7 is arranged centrally of the plate and intersects with each of the grooves 6. These grooves are almost through the plate, as shown, just enough of the metal being left to hold the plate together before it is attached to the shoe, and owing to this thin connecting part of the plate when the sole is attached to the shoe on bending the same a portion of the metal will break, which will allow the sole to give with the shoe while walking. By this means a flexible metallic sole is obtained which will not be of any inconvenience to the wearer, and owing to these grooves the sole is formed of a series of plates after it has been attached to the bottom of the shoe.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

As a new article of manufacture a metallic sole for shoes comprising in its construction a metallic plate provided with a series of apertures to receive screws for securing the same to the sole of a shoe, the said plate further provided with a centrally-arranged longitudinal V-shaped groove which does not extend the entire length of the plate, and the said plate also provided with a series of transverse V-shaped grooves extending the entire width of the plate which intersect with the longitudinal grooves, the said transverse grooves being of such depth that when the shoe is bent the plate will readily break at the groove portions, substantially as set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

JOHN BECK.

Witnesses:

JOHN NOLAND,
H. H. PATTERSON.