No. 840,505. PATENTED JAN. 8, 1907.

R. MERRICK, Jr. & O. E. MILLER.

HEEL PLATE.

APPLICATION FILED DEC. 22, 1905.

Fig. 1.

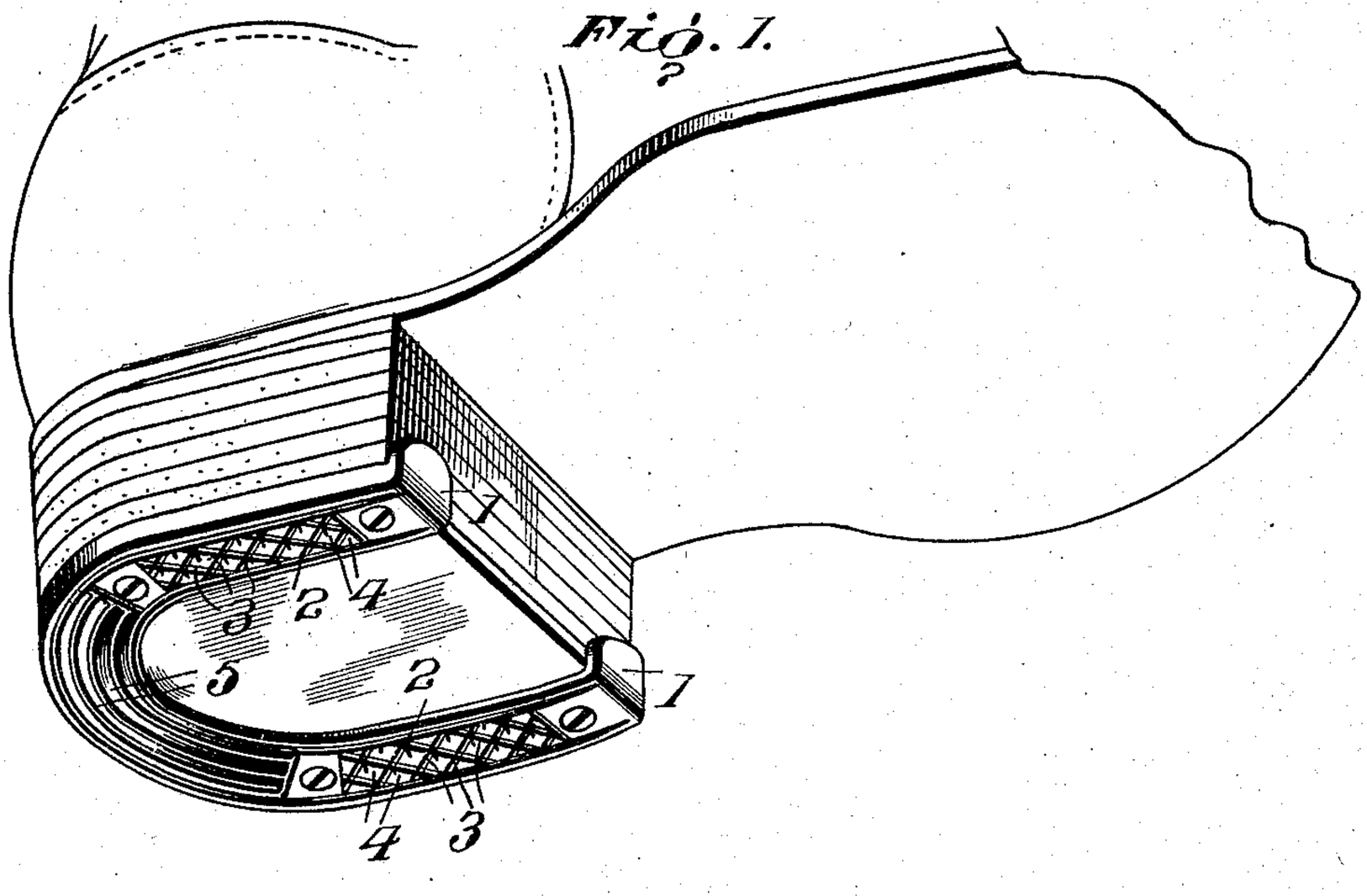

Fig. 2.

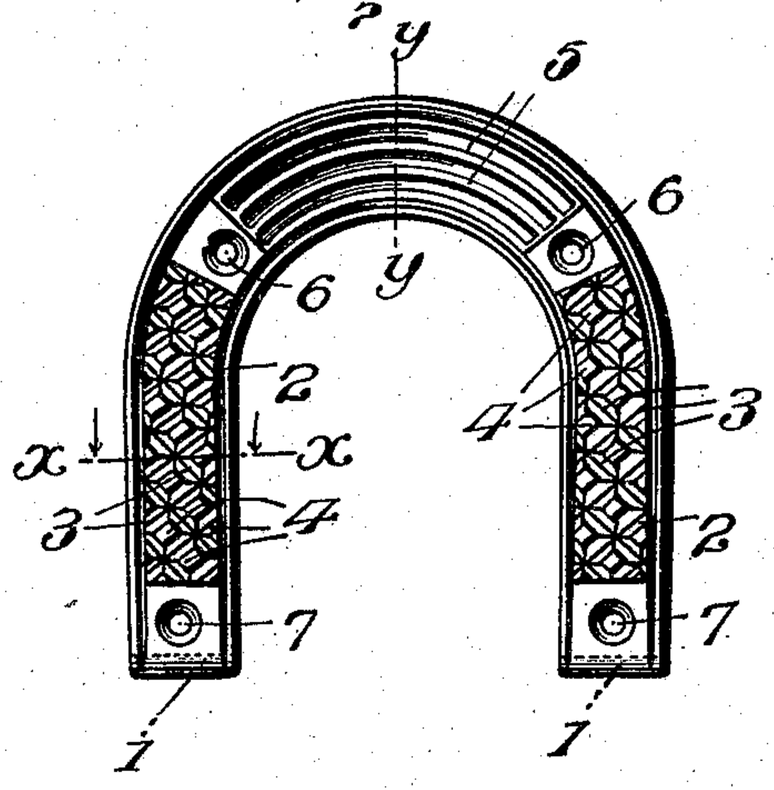

Fig. 3.

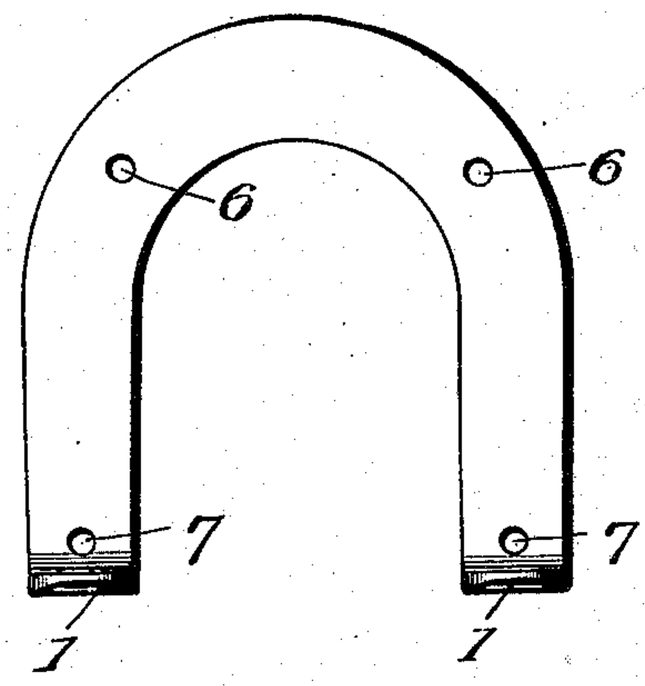

Fig. 4.

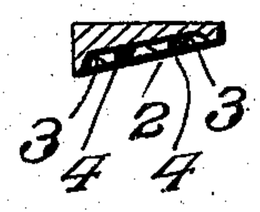

Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

ROBERT MERRICK, JR., AND OTTIS E. MILLER, OF HOPEDALE, OHIO.

HEEL-PLATE.

No. 840,505. Specification of Letters Patent. Patented Jan. 8, 1907.

Application filed December 22, 1905. Serial No. 292,997.

To all whom it may concern:

Be it known that we, ROBERT MERRICK, Jr., and OTTIS E. MILLER, citizens of the United States, residing at Hopedale, in the county of Harrison and State of Ohio, have invented certain new and useful Improvements in Heel-Plates, of which the following is a specification.

The object of our invention is to provide an improved heel-plate for boots and shoes especially designed for the use of miners or other laborers working in slippery places and so constructed, as hereinafter fully set forth, that it will always present a sufficiently sharp edge to the surface over which the boot or shoe is worn even after the heel-plate has become considerably worn and relatively thin by use.

The invention consists, essentially, of a device of this character which is designed to be attached to the heel of a leather or rubber boot or to a shoe, said plate being roughened on its outer surface and being uniformly thinner at its inner edge than at its upper edge, so that no matter how worn it becomes it will present a sufficiently sharp surface to the ground to prevent slipping.

For a full descripiton of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view of a portion of a boot or shoe to the heel of which one of our improved plates is attached. Fig. 2 is an outside face view of the heel-plate. Fig. 3 is an inner face view thereof. Figs. 4 and 5 are cross-sectional views on the lines X X and Y Y, respectively, of Fig. 2.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Our improved heel-plate may be constructed of any sufficiently hard metal or material to withstand a reasonable amount of wear and to produce a sufficiently sharp outer surface when completed, and it is preferably constructed of substantially U shape, as shown in the accompanying drawings. It is designed to be attached to the heel of a rubber boot or leather boot or shoe and is preferably provided at its ends with laterally-extending portions 1, designed to take over the front edge of a heel, as shown. The outer edge of the plate is roughened. In the present instance the roughened surface comprises two end portions 2, that are formed with oblique intersecting grooves 3, forming a plurality of serrations or knob-like protuberances 4, which produce comparatively sharp edges. Intermediate of the two end roughened portions 2—that is, at the rear of the heel-plate—the same is also preferably provided on its outer surface with a plurality of corrugations 5, and preferably the corrugated intermediate portions and the two end serrated portions are spaced from each other by comparatively small smooth surfaces which are when in use in a higher plane than the roughened portions of the outer surface of the plate, and in these smooth portions are located apertures 6, intended, with end apertures 7, to receive nails or screws or similar fastening means, so that the plate may be readily attached to the heel.

It is to be particularly noted, as shown best in the cross-sectional views, that our improved heel-plate is transversely tapered, the wider portion thereof being at the outer edge and being gradually reduced therefrom to the inner edge. By means of this construction when the smooth inner surface of the plate is laid against the outer face of the heel the outer roughened face of the heel-plate will taper in an inwardly direction from the outer edge of the heel. Hence in operation or practical use the outer edge of the roughened surface will receive the initial wear and as the heel-plate becomes more and more worn there will always be presented to the surface of the ground a sufficiently sharp edge to prevent slipping until the roughened portions shall have become successively worn smooth from the outer edge to the inner edge of the heel-plate.

From the foregoing description in connection with the accompanying drawings it will be seen that our improved heel-plate will not only always present a sharp portion to the ground, but will wear a considerable time, as the entire roughened surface is not presented to the ground at the same time, but only successive portions thereof, commencing first at the outer edge and ending at the inner edge.

It is to be understood that our improved heel-plate may be made of any metal or material or of any design of construction so long as it possesses an outer roughened surface

and the tapered formation before described and that it may be applied to boots or shoes of various sizes and construction, and if it is desired to attach it to a leather shoe one or more lifts of the heel may be detached, if desired, and the heel-plate substituted therefor instead of raising the heel to an undesirable degree.

Having thus described the invention, what is claimed as new is—

As an improved article of manufacture the herein-described heel-plate comprising a U-shaped structure designed to cover the margin of the entire heel except the front edge, with the curve of the plate at the rear of the heel, said plate being tapered on its outer face from its outer edge toward its inner edge throughout the length thereof; the two side portions of said plate being formed on their outer faces with oblique intersecting grooves producing a plurality of knob-like protuberances, and an intermediate portion at the rear being formed on its outer face with a series of transversely-curved corrugations each in operative position in a higher plane than the next preceding it in the rear.

In testimony whereof we affix our signatures in presence of two witnesses.

ROBERT MERRICK, Jr. [L. S.]
OTTIS E. MILLER. [L. S.]

Witnesses:
J. B. Mansfield,
Harry Mansfield.