Dec. 27, 1938. H. COENEN 2,141,345

PROTECTIVE MEANS FOR SHOES

Filed Nov. 22, 1937

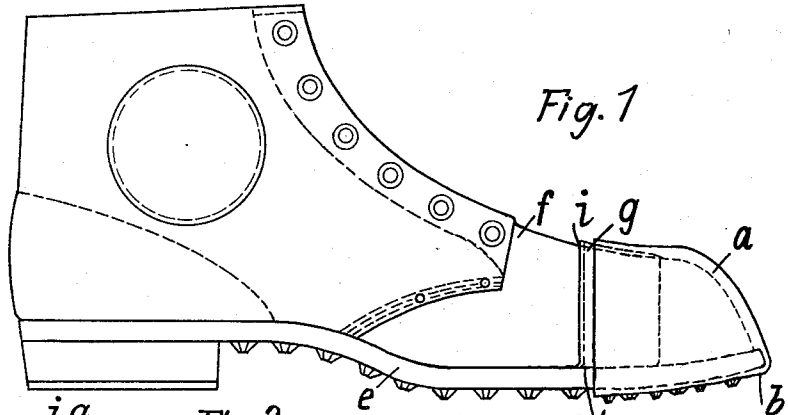


Fig. 1

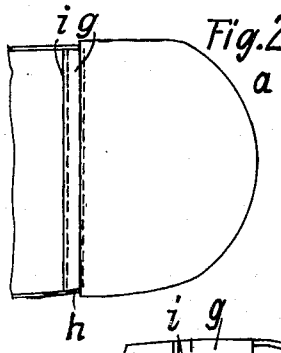


Fig. 2

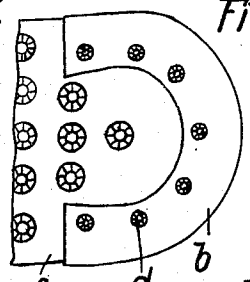


Fig. 3

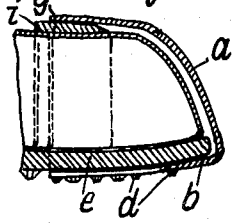


Fig. 4

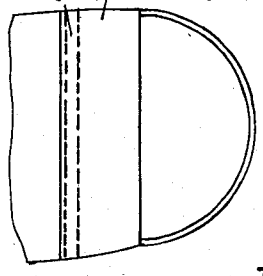


Fig. 5

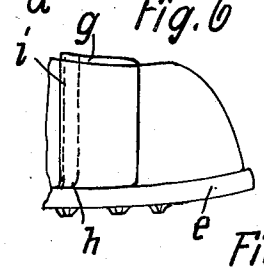


Fig. 6

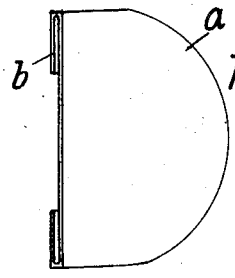


Fig. 7

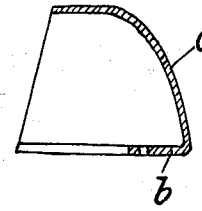


Fig. 8

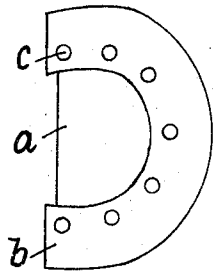


Fig. 9

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UNITED STATES PATENT OFFICE

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PROTECTIVE MEANS FOR SHOES

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Application November 22, 1937, Serial No. 175,911
In Germany December 22, 1936

1 Claim. (Cl. 36—2.5)

This invention relates to protective means for attachment to the front portion of shoes and it has for its object to provide a good protection of the toes of miners or other workmen against falling coals, ores, stones, heavy objects, and the like.

In the accompanying drawing I have illustrated one preferred embodiment of my invention.

In the drawing—

Fig. 1 is a side view of a shoe with the protective device embodying my invention;

Fig. 2 is a top plan view of the front portion of the shoe with the protective device;

Fig. 3 is a view of the front portion of the shoe with the protective device from below;

Fig. 4 is a vertical longitudinal sectional view of the front portion of the shoe with the protective device;

Fig. 5 is a top plan view of the front portion of the shoe showing the bridge of the protective device, the protective cap being omitted;

Fig. 6 is a side view of the front portion of the shoe showing the bridge of the protective device, the protective cap being omitted;

Fig. 7 is a top plan view of the protective cap;

Fig. 8 is a vertical longitudinal sectional view of the protective cap and

Fig. 9 is a view of the protective cap from below.

a is a strong hollow protective cap of metal extending over the whole front cap of the upper portion *f* of the shoe. The whole-cap *a* is provided at its lower end with a flange *b* directed to the interior and extending over the edge portions of the outer sole *e* of the shoe. The flange *b* has holes *c* for receiving nails *d* for fastening the protective cap *a* to the outer sole *e* of the shoe. Preferably the cap is produced of sheet-steel of 2 mm. by pressing.

A bridge *g* of a strap of strong leather is arranged between the protective cap *a* and the front upper portion of the shoe. This bridge *g* is fastened by stitching its ends *h* to the bottom of the shoe and its rear edge *i* to the overleather of the shoe. The bridge *g* is sharpened at its front edge.

According to a further embodiment of the invention the protective cap is produced of a pressed material made of synthetic resins, fibres and fabrics.

As the protective cap will not be deformed by heavy objects, there is obtained a complete protection of the toes of the workman against falling coals, ores, stones and other heavy objects.

The protective cap and the front upper portion of the shoe are further strengthened by the leather bridge *g*. At the same time this bridge obviates entering of small particles as stones or the like between the protective cap *a* and the front upper portion *f* of the shoe. Furthermore this leather-bridge protects the overleather of the shoe against wear and tear by the edges of the protective cap *a*.

What I claim as new and desire to secure by Letters Patent of the United States is:

A shoe provided with a reinforcing and protecting cap, comprising a metallic section formed to embrace the sides, end and upper portion of the toe part of the shoe, the interior dimensions of the cap being somewhat greater than the similar dimensions of the shoe part, the bottom of the cap having inturned flanges to underlie the sole of the shoe, securing means for said flanges engaging the sole of the shoe and maintaining the cap in proper spaced relation to the shoe, and a strip of leather interposed between the rear edge of the cap and the material of the shoe, said strip projecting rearwardly beyond the edge of the cap and extending forwardly of such edge for a sufficient distance to act as a cushion and substantially fill the space between the rear portion of the cap and the shoe, said strip being independently secured to the material of the shoe and free of any connection with the cap.

HEINRICH COENEN.