No. 864,246. PATENTED AUG. 27, 1907.

J. D. KELLEHER.

HORSESHOE CALK.

APPLICATION FILED FEB. 18, 1907.

Fig. 1.

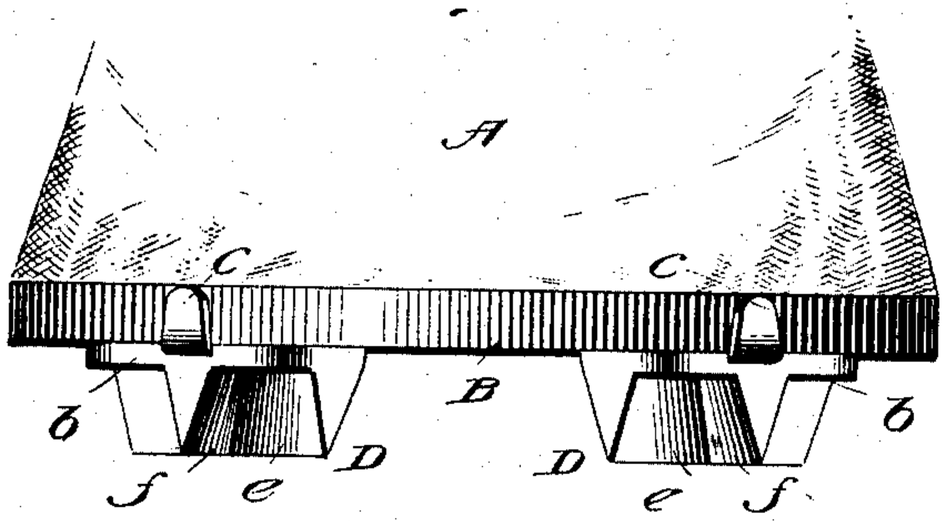


Fig. 3.

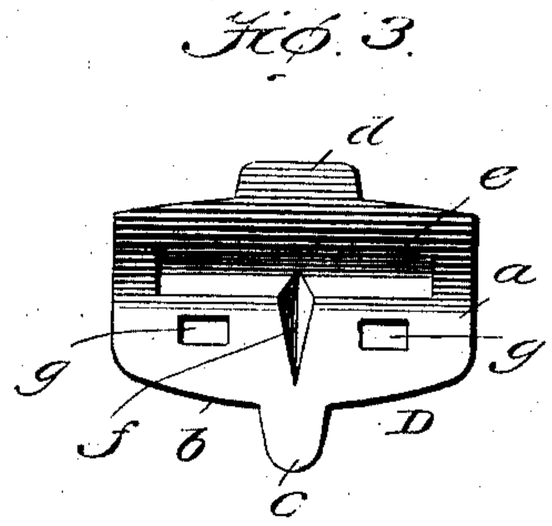


Fig. 2.

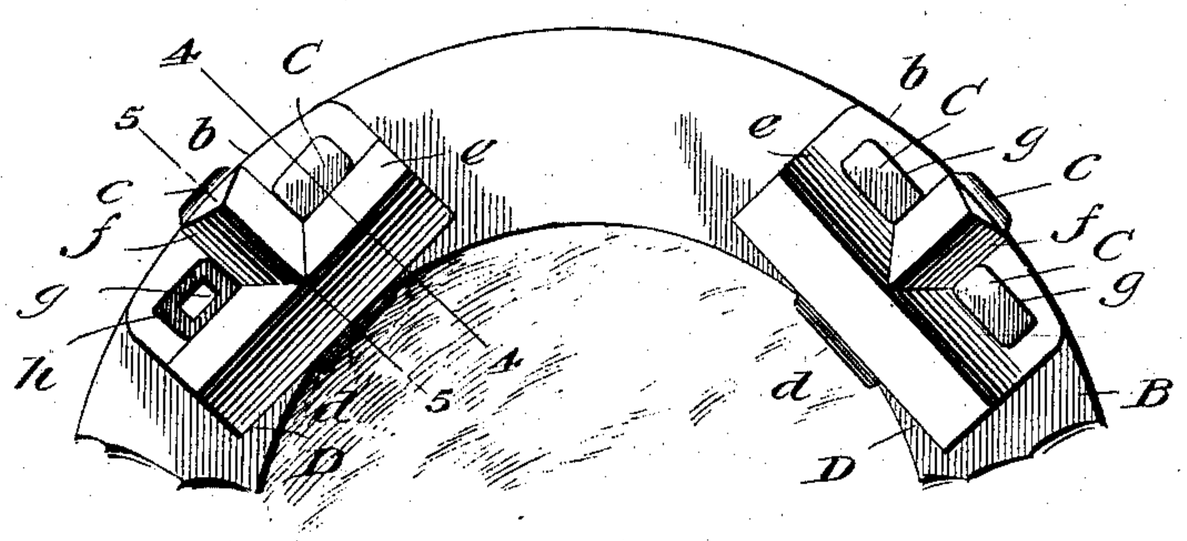


Fig. 4.

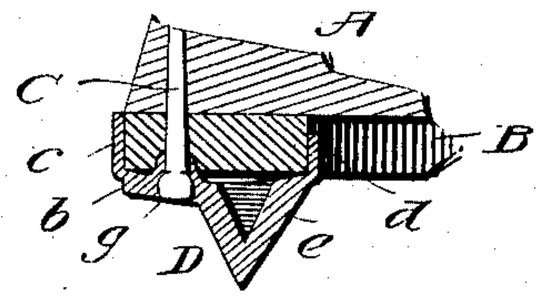
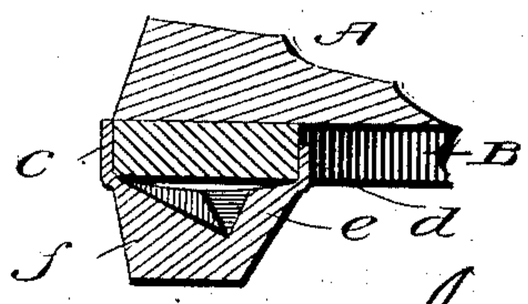


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPH D. KELLEHER, OF PHILADELPHIA, PENNSYLVANIA.

HORSESHOE-CALK.

No. 864,246. Specification of Letters Patent. Patented Aug. 27, 1907.

Application filed February 18, 1907. Serial No. 358,088.

To all whom it may concern:

Be it known that I, JOSEPH D. KELLEHER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Horseshoe-Calks, of which the following is a specification.

My invention has relation to horseshoes; and it contemplates the provision of a calk adapted to be expeditiously and easily connected to a horseshoe through the medium of nails employed to fasten the shoe on a horse's hoof, with a view of enabling the horse to secure a good foothold on slippery pavements.

The invention also contemplates the provision of a horseshoe calk which by reason of its construction is self-sharpening—*i. e.*, is calculated as it wears to form sharp edges such as will cut into snow or ice and in that way preclude slipping of a horse while enabling it to obtain considerable purchase in drawing a heavy load.

Other advantageous characteristics of my invention will be fully appreciated from the following description and claims when the same are read in connection with the accompanying drawings, forming part of this specification, in which;

Figure 1 is a view illustrating in front elevation a portion of a horse's hoof and a shoe equipped with two of my novel calks. Fig. 2 is an inverted plan view of the same. Fig. 3 is a top plan view of one of the calks, removed. Figs. 4 and 5 are sections taken in the planes indicated by the lines 4—4 and 5—5, respectively, of Fig. 2.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which:

A is the horses hoof; B, the shoe; C, the ordinary nails employed in fastening the shoe to the hoof; and D D, the calks constituting the present and preferred embodiment of my invention.

The calks D are identical in construction and therefore a detailed description of the one illustrated in Figs. 3 to 5 will suffice to impart a definite understanding of both. Said calk D, Figs. 3—5 is suitably formed of one piece of steel or other material compatible with the purpose of the invention; and it comprises a body *a*, the upper side of which is slightly concave in cross-section, Figs. 4 and 5, in order to better fit the underside of a worn shoe, and the outer edge of which is slightly curved, as indicated by *b*, to conform to and rest flush with the outer edge of the shoe, a lip *c* reaching from the center of the outer edge of the body *a* and adapted to be clenched against the outer edge of the shoe B as shown in Fig. 1, a lip *d* reaching from the center of the inner edge of body *a* and designed to be clenched against the inner edge of the shoe, a longitudinal, hollow protuberance *e*, of approximate V-form in cross-section, depending from the rear portion of body *a* and extending throughout the length thereof, and a hollow, V-shaped, depending protuberance *f* extending outward at a right angle from the middle of the protuberance *e* to a point flush with the outer edge of the body *a*. The body *a* is provided in the spaces between the protuberances *e* and *f* with nail-holes *g* and these nail holes are preferably countersunk as indicated by *h* for a purpose which will be presently set forth.

In the practice of my invention, when it is desired to connect two of the novel calks to a shoe on a horse's hoof, four of the nails C are drawn, and then after the calks are properly positioned on the shoe, Figs. 1 and 3, the drawn nails or other nails are driven through the nail-holes *g* of the calks, and the nail-holes of the shoe and into the hoof so as to serve the two-fold function of connecting the calks and assisting in the connection of the shoe to the hoof. At this point it will be manifest that by reason of the countersinks *h* in the calk bodies *a*, the portions of the bodies adjacent to the nail holes *g* are comparatively thin, and hence when the nails C are driven home they serve to carry some of the thin metal upward, when such metal will form flanges adjacent to the nails, Fig. 4, and in that way lessen the liability of the nails being cut in the event of the calks working loose and casually moving parallel to the underside of the shoe B. After the calks are connected through the medium of the nails C in the manner stated, the lips of the calks are clenched against the edges of the shoe, in order to enable the said calks to lessen the strain imposed on the nails and to assist in holding the calks in proper position relative to the shoe.

As will be readily understood, the V-shaped protuberances *e* and *f* of my novel calks will enable a horse to secure a safe foothold on ice-covered and other slippery pavements or roadways; and it will also be apparent that by virtue of said protuberances being hollow as shown and described they will wear sharp—that is to say, when the apices of the angles formed by the V-shaped protuberances are worn off, said protuberances will present the edges of their walls to the pavements and such edges will effectually prevent slipping of a horse and at the same time enable the animal to exert considerable purchase as is desirable when a heavy load is being hauled up grade.

It will be gathered from the foregoing that in the event of a snow storm or a storm of sleet, my model calks may be quickly connected to the shoes on a horse's hoofs with the expenditure of but little time and effort.

While I prefer to employ but two of my novel calks to a shoe, it is obvious that when desired four may be used; the additional calks being positioned adjacent to the heel ends of the shoe.

I would also have it understood that my novel calks may be variously shaped, and that changes in the form, construction and relative arrangement of the parts thereof may in practice be made within the scope of the appended claims without involving a departure from the scope of my invention.

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

1. A horseshoe calk having hollow, depending protuberances of V-shape in cross-section disposed at right angles to each other; and also having nail-holes in the spaces between the two protuberances, for the purposes set forth.

2. A horseshoe calk having an upper side concave in cross-section, and hollow, depending protuberances of V-shape in cross-section disposed at right angles to each other, and also having nail-holes between the protuberances; the said nail holes being countersunk.

3. A horseshoe calk having a longitudinal depending protuberance of V-shape in cross-section, and a depending protuberance of V-shape in cross-section extending at right angles from the longitudinal protuberance to one of its edges, and also having nail holes in the spaces between the protuberances.

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

JOSEPH D. KELLEHER.

Witnesses:

JOHN E. MARKHAM,

ARTHUR L. MATTHEWS.