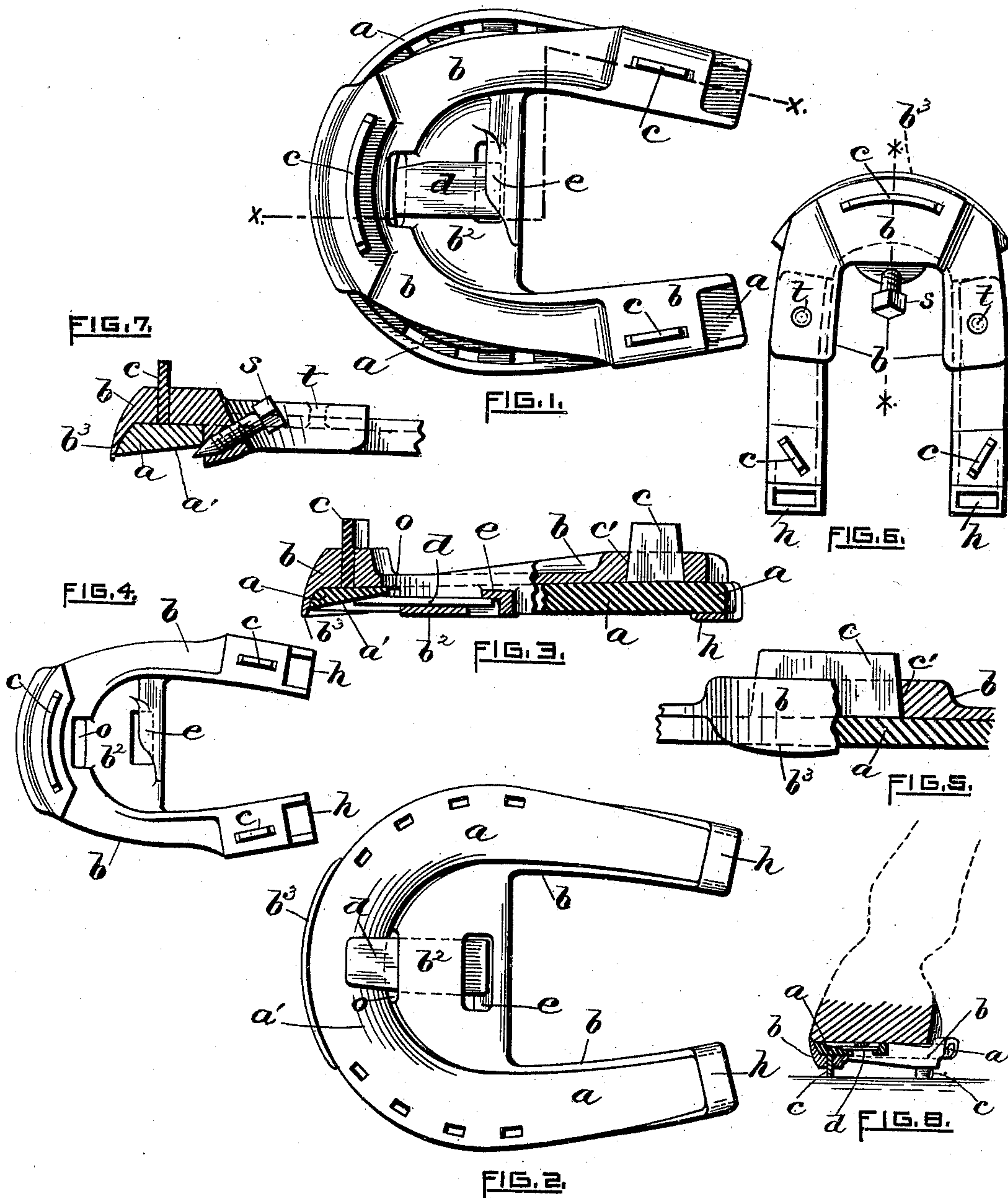


(No Model.)

S. BUDLONG.
REMOVABLE HORSESHOE CALK.

No. 466,884.

Patented Jan. 12, 1892.



WITNESSES.

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UNITED STATES PATENT OFFICE.

SIMEON BUDLONG, OF CUMBERLAND HILL, RHODE ISLAND.

REMOVABLE HORSESHOE-CALK.

SPECIFICATION forming part of Letters Patent No. 466,884, dated January 12, 1892.

Application filed August 3, 1891. Serial No. 401,520. (No model.)

To all whom it may concern:

Be it known that I, SIMEON BUDLONG, a citizen of the United States, residing at Cumberland Hill, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Removable Horseshoe-Calks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to improved devices for attaching calks to horseshoes.

My improvement is more particularly adapted to be employed during cold or freezing weather. In applying my device I prefer to have the horse first shod with smooth horseshoes—i. e., shoes without calks—or the device may be applied to the old shoes after they have become smooth, such shoes in any case not being removed from the hoofs of the horse for the purpose of attaching the calks forming the subject of my present invention, the latter consisting, essentially, of an auxiliary shoe or frame provided with removable calks or holding-plates, the said frame being adapted to hook over the heel portion of the permanent shoe and at the same time arranged to be secured to the toe portion thereof, all as will be more fully hereinafter set forth and claimed.

In the accompanying sheet of drawings which I have prepared to illustrate my invention, Figure 1 is a plan view of the device secured to an ordinary horseshoe. Fig. 2 is an inverted plan view of the same. Fig. 3 is a vertical sectional view taken on line x of Fig. 1. Fig. 4 is a plan view, in reduced scale, of my improved calk-carrying auxiliary shoe detached from the main or permanent shoe. Fig. 5 is a side elevation, in partial section, taken through the toe portion of the shoe, &c. Fig. 6 is a plan view showing a divided frame, thereby rendering it adjustable. Fig. 7 is a sectional view taken on line $x x$ of Fig. 6, showing a manner of securing the parts together; and Fig. 8 is a side sectional elevation showing the proper relation of the parts when in use.

I would state that for convenience the several side views or sections represent the device inverted—that is, the upper surface or plane as drawn is when in use the face of the shoe adapted to bear upon the ground or ice, substantially as indicated in Fig. 8.

In carrying out my invention the auxiliary horseshoe or frame portion b I preferably make of malleable iron or cast-steel and the insertible holding plates or calks c of hardened steel or other suitable metal, the parts being so made that they may be used in the “rough.” The form of the frame b is approximately like that of the shoe proper. The face of the frame is provided at the toe or front and at the rear or heel portion with openings having undercut or beveled ends to receive the steel calks or plates c , the latter being likewise beveled, as clearly shown. The two ends of the frame b are each provided with an opening to receive the corresponding ends of the main shoe a , thus forming hooks h , which in use serve to keep the parts in close contact. The toe portion of the frame is provided with a depressed web or tie b^2 , uniting the two sides, and having an elongated central opening o formed at the front to receive a key or wedge d , the opposite end of the latter being adapted to snugly engage a lip or projection e .

In applying my improvement or auxiliary horseshoe it is to be assumed that the permanent shoe a is already secured to the horse's hoof, Fig. 8, such shoe a , however, being practically smooth or without calks. Now the shoer or person who is to attach the device selects a frame or holder b . He next heats and bends it, if necessary, so as to practically fit the toe and heel portions of the shoe, after which he inserts the several calks c into the respective openings, followed by placing the whole in position and hooking it over the rear ends or heel of the shoe a , when finally the key d is introduced through the opening o and driven home by lateral pressure, the front end then snugly engaging the beveled surface a' usually present in shoes a , the opposite end at the same time being borne by the lip e , thereby quickly and rigidly securing the parts together. (See Figs. 2, 3, &c.) It will be seen that by this arrangement the calks themselves bear firmly against the face of the

main shoe, thereby in conjunction with the beveled ends preventing them from dropping out when in use.

By means of my invention a horse provided with the auxiliary shoes *b* may be readily sharpened at any time by first removing the calk-carrying frame from the shoe *a* and taking therefrom the worn calks and replacing them by new ones, after which the frame, &c., is secured to the shoe by means of the key or wedge, as before described.

Sometimes in order to more readily adapt the frame *b* to shoes *a* varying in size, it may be desirable to make the heel portion or legs separate from the toe portion. In such case, after the proper length and adjustment of the parts have been effected, they may be drilled and riveted together, as at *t*, Figs. 6 and 7, after which the whole can be applied to the shoe *a*, as hereinbefore set forth. In lieu of the key or wedge *d* a screw *s*, having a cone-shaped end, may be employed for the purpose of securing or keying the frame *b* to the shoe *a*, as in Fig. 7.

I do not claim a horseshoe provided with removable or insertible calks; nor do I claim, broadly, a permanent horseshoe in combination with an auxiliary shoe; but

What I do claim is—

1. As an improved article of manufacture, the auxiliary horseshoe hereinbefore described, the same consisting of the bent frame *b*, provided at the toe and heel with elongated openings extending transversely through the frame, sheet-metal calks fitting said openings

and having the frame further provided with integrally-formed hooks *h*, arranged to receive the heel ends of the permanent shoe, and a movable key or wedge mounted in the toe portion of said frame, substantially as described, and for the purpose set forth.

2. The improved auxiliary horseshoe, consisting of the bent toe portion, having removable calks mounted therein and having a movable key or wedge arranged to engage with the permanent shoe, and further consisting of the two rearwardly-extending calk-holding heel portions arranged to be secured to the said toe portion and having the outer or free end of each heel provided with a hook *h* to receive the corresponding ends of the permanent shoe, substantially as hereinbefore described.

3. The combination, with a permanent horseshoe *a*, unprovided with calks, of the detachable auxiliary shoe *b*, the latter being provided with removable sheet-metal calks *c*, hooks *h*, having the rear ends of the permanent shoe held therein, and a movable wedge or key mounted in the toe portion of the shoe *b*, engaging the shoe *a* and locking the two together, substantially as hereinbefore described.

In testimony whereof I have affixed my signature in presence of two witnesses.

SIMEON BUDLONG.

Witnesses.

CHARLES HANNIGAN,
WM. R. DUTEMPLE.