

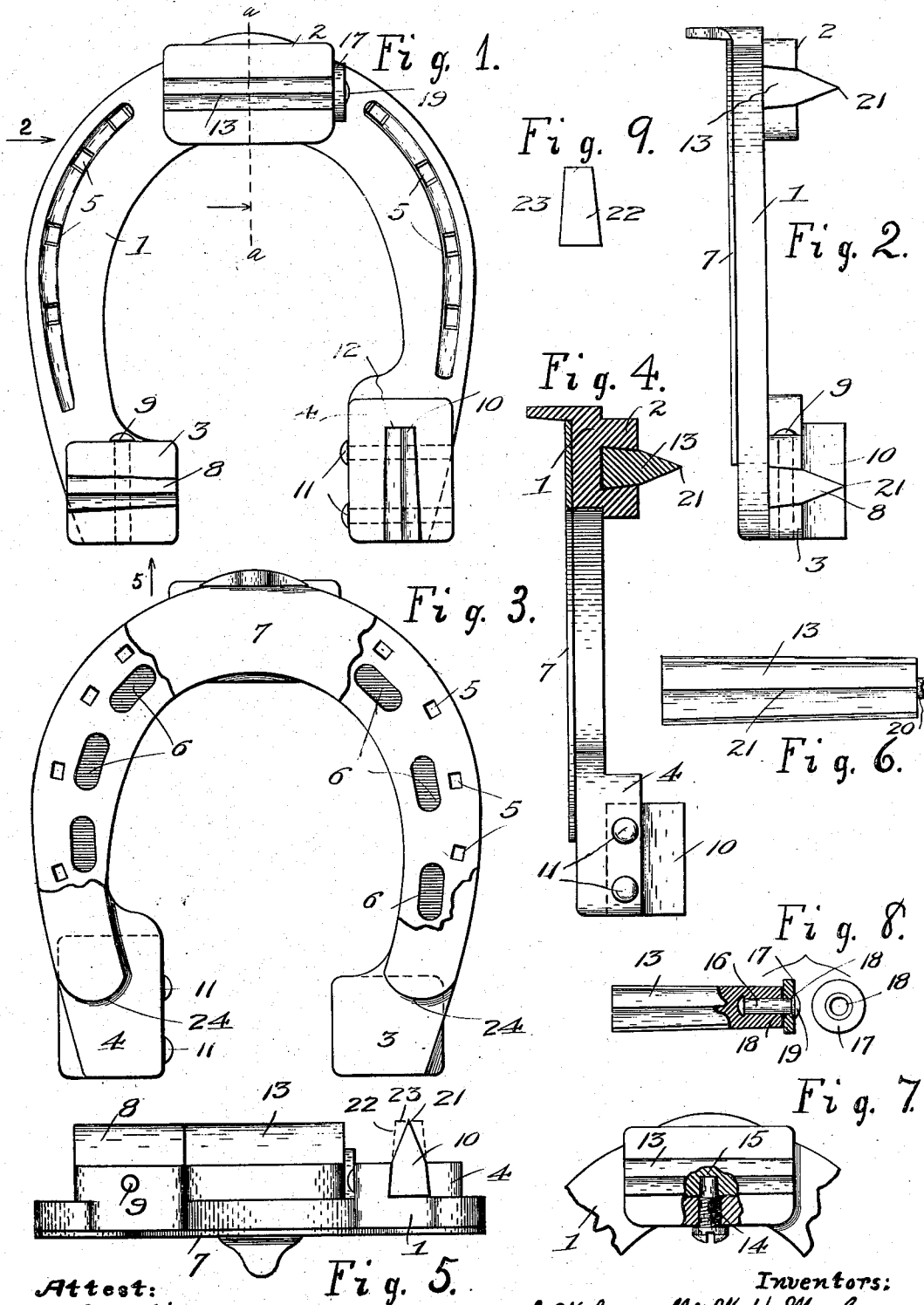
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HORSESHOE.

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939,473.



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UNITED STATES PATENT OFFICE.

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HORSESHOE.

939,473.

Specification of Letters Patent.

Patented Nov. 9, 1909.

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To all whom it may concern:

Be it known that we, GEORGE W. COGSWELL and WILLIAM H. MACCRONE, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Horseshoes, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

This invention relates to certain new and useful improvements in horseshoes and more particularly to that class of shoes in which the calks are made removable.

The present invention has for one of its objects to provide a simplified and improved construction whereby old and worn out calks may be easily removed and replaced by new ones.

A further object is to provide novel means for holding in position a pad.

We aim further to provide means in the details of construction whereby a most efficient form of shoe is provided.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be particularly pointed out in the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a bottom plan view of our improved shoe showing the calks in position. Fig. 2 is an edge view of the same seen as indicated by arrow 2 in Fig. 1. Fig. 3 is a top plan of the shoe with portions of the pad broken away. Fig. 4 is a longitudinal vertical section of the shoe on the dotted line *a* in Fig. 1 looking in the direction of the arrow. Fig. 5 is a rear end view of the shoe seen as indicated by arrow 5 in Fig. 1. Fig. 6 is an enlarged detail of one of the calks detached. Fig. 7 is a plan of a portion of the shoe at the toe with parts broken away to show the transverse holding means for the calk. Fig. 8 is a detail view of one of the calks with a portion broken away and parts in section showing another method of holding the calk in its seat, the associated parts being also therein illustrated. Fig. 9 is an end view of a form of calk adapted for summer use.

Like numerals of reference indicate like parts throughout the several views.

Referring to the drawings 1 designates the shoe proper which is by preference of a

light steel casting, formed at the toe with a downwardly projecting thickened portion 2 and at the heel portion with the downwardly projecting thickened parts 3 and 4 which are shown as substantially rectangular in form, see Fig. 1. In grooves in these enlarged portions the calks are designed to be removably fitted and held.

The body portion of the shoe is provided with openings 5 for the passage of the nails which are employed for securing the shoe to the hoof in the ordinary manner. The upper face of the shoe, that is, the part which goes adjacent the hoof in use, is provided with a plurality of depressions or indentations 6 which may be of greater or less depth, and upon this face of the shoe and over these indentations or depressions is placed a pad 7 of some suitable yielding or fibrous material designed to make a more easy fit for the shoe upon the horse's hoof. The pad in use is held against lateral motion by small portions thereof being pressed into the indentations, and is further held by the nails which secure the shoe to the hoof.

The calks may be held in position in a variety of ways. As seen in Figs. 1 and 2, the rear transverse calk 8 is seated in a groove in the enlarged portion 3 and is held in position by a pin 9 piercing the said thickened part and the calk transversely of the latter. As shown, this calk is disposed transversely of the central longitudinal line through the shoe from front to rear.

The calk 10 upon the other side of the rear or heel of the shoe is seated in a groove in the enlarged portion 4 and is held in place by the two pins 11 piercing the thickened portion 4 and the calk and extending transversely of the latter. It is to be noted that this calk 10 is disposed at a right angle to the calk 8 and that it is inserted from the rear end of the shoe to abut against a wall or portion 12 at the rear end of the slot in which it is seated. By this arrangement, when the horse is pulling ahead, the tendency is to crowd the calk against said wall or shoulder 12.

The calk 13 in the thickened portion 2 at the toe of the shoe is shown as held to place within its groove in the said thickened portion by a short threaded stud 14, see Fig. 7, with its reduced tapered end 15 slightly piercing the rear side of the calk, as shown clearly in said Fig. 7. This calk may also

be held by means of a longitudinal pin 16, as shown in Fig. 8, one end of which is embedded in the substance of the calk and projects longitudinally beyond the smaller end thereof. Upon this projecting end is a washer 17 which is countersunk upon both sides, as shown at 18 in Fig. 8, and the projecting end of said stud is riveted down to form a head, as shown at 19 in Figs. 1 and 8. The projecting stud may be formed integral with the calk and project a sufficient distance therebeyond, as seen at 20 in Fig. 6, the projecting portion being of sufficient length to pierce the washer and to be riveted down or headed on the outside thereof, the same as in the form shown in Fig. 8.

The various calks, as shown in the figures, are brought to an edge 21 to touch the ground for use during the winter season, or when the roads are slippery. In forming these sharp edged calks, each side of each calk comprises two plane faces forming obtuse dihedral angles, one of the slant faces on each side terminating in the sharp exposed edge, and the other slant face meeting the slant side of the opening or groove in which the calk is inserted. The grooves or recesses in which the calks are inserted are slightly tapered longitudinally, as shown, and are trapezoidal in cross section, as seen best in Fig. 4, so that the calks cannot become detached from the shoe except by longitudinal movement thereof.

For summer wear, we employ a different form of calk which is illustrated at 22 in Fig. 9 and by dotted lines in Fig. 5. This form of calk has but one slant face on each side, leaving the wearing face 23 broad. In forming these summer calks, the slant of the bearing surfaces in the holding seats or grooves is continued from the base to the

outer exposed edge, as will be best understood by the dotted line construction illustrated in Fig. 5, which also shows, in connection with the sharpened calk there illustrated in full lines, the difference in construction between the calks designed for winter use and those to be employed in the summer, or when the ground is not slippery.

It is to be understood that when the calks have the extended studs at the smaller ends, as in the forms illustrated in Figs. 6 and 8, no lateral or transverse openings therein are required and no transverse fastening means are employed.

Upon reference to Fig. 3, it will be noted that the thickened projections 3 and 4 extend the one laterally and the other longitudinally and that both project beyond the rounded ends 24 of the heel portion proper of the shoe so as to give an extended bearing for the calks upon the ground.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What is claimed as new is:—

A horseshoe having at its toe and heel thickened portions, those at the heel projecting the one laterally and the other longitudinally beyond the heel portions of the shoe proper, and detachable calks seated in grooves extending longitudinally of said thickened portions.

In witness whereof, we have hereunto set our hands this 14th day of December, 1908, in the presence of two subscribing witnesses.

GEORGE W. COGSWELL.
WILLIAM H. MACCRONE.

Witnesses:

ENOS B. WHITMORE,
A. M. WHITMORE.