No. 724,122. PATENTED MAR. 31, 1903.

T. C. OCTIGAN & W. PEACOCK.

HORSESHOE.

APPLICATION FILED FEB. 8, 1902.

NO MODEL.

Fig 1

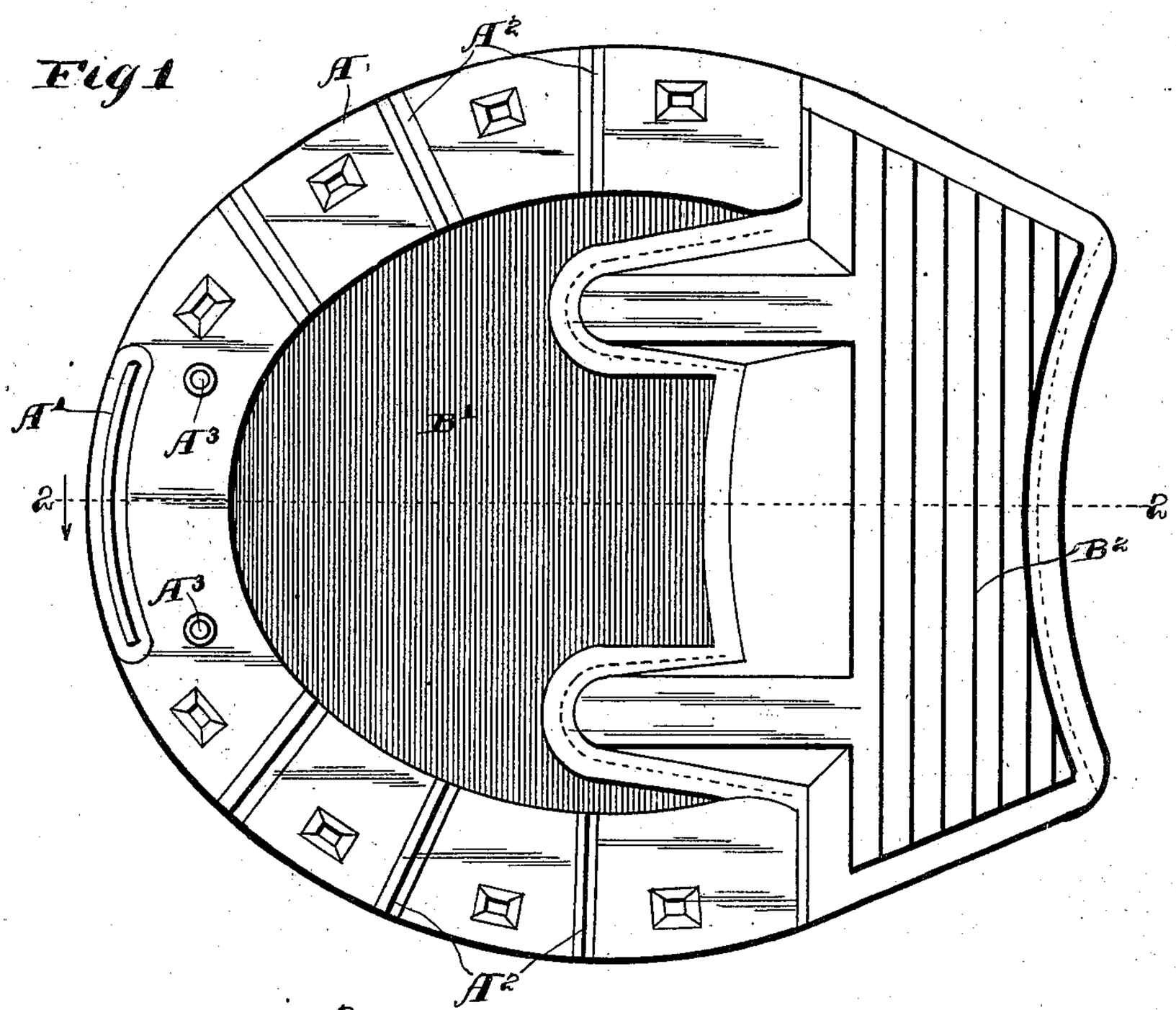


Fig 2

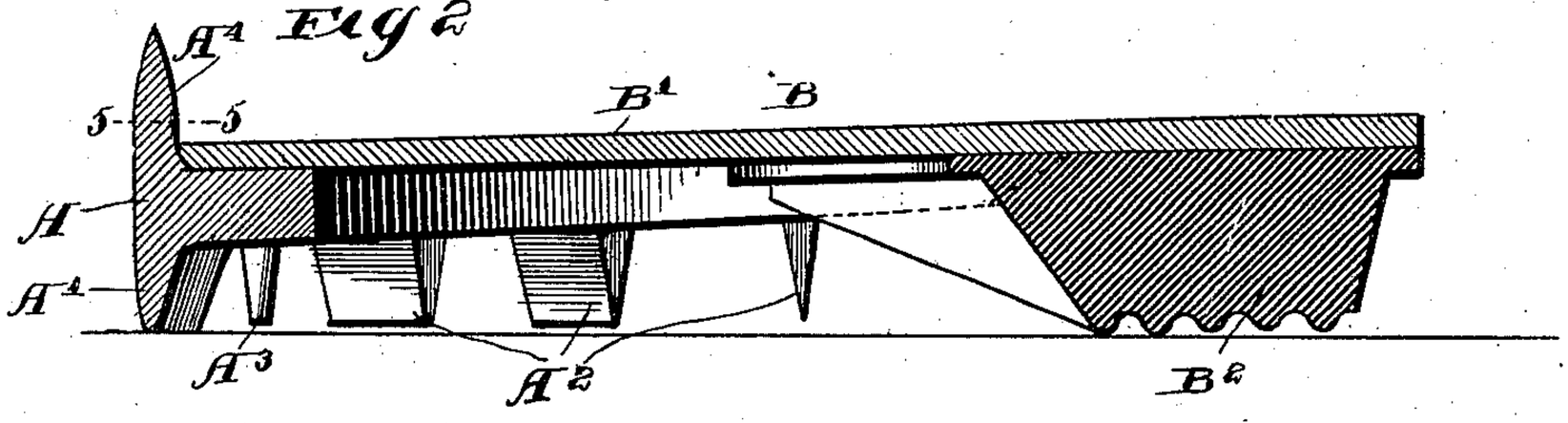


Fig 3

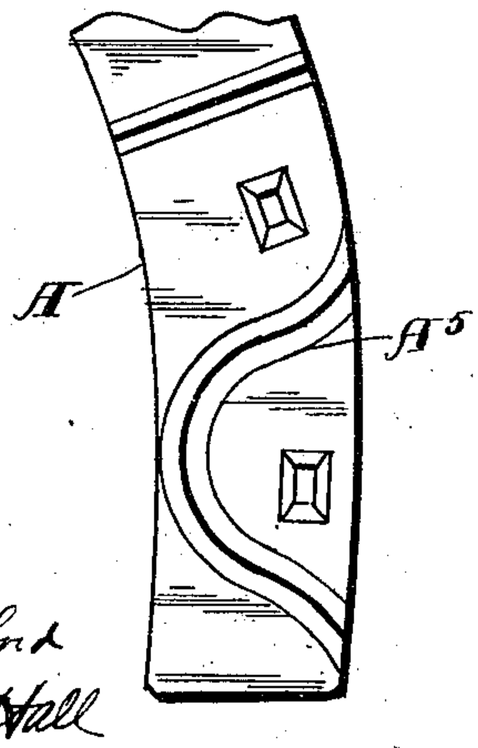


Fig 5

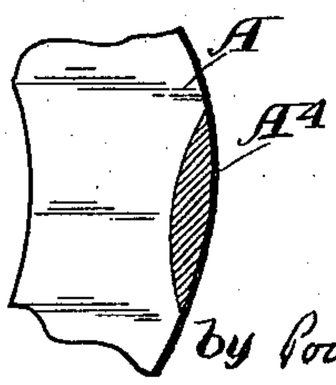
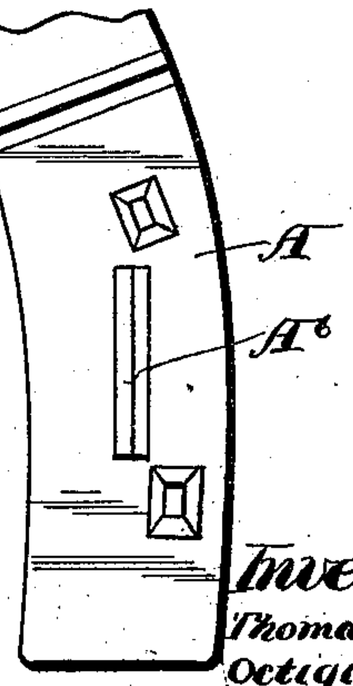


Fig 4



Witnesses:
Carl S. Crawford
William H. Hall

Inventors
Thomas C. Octigan
William Peacock
by Poole & Brown their Attorneys

UNITED STATES PATENT OFFICE.

THOMAS C. OCTIGAN AND WILLIAM PEACOCK, OF CHICAGO, ILLINOIS.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 724,122, dated March 31, 1903.

Application filed February 8, 1902. Serial No. 93,125. (No model.)

To all whom it may concern:

Be it known that we, THOMAS C. OCTIGAN and WILLIAM PEACOCK, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Horseshoes and Combined Horseshoes and Pads; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in combined horseshoes and pads of that class commonly known as a "tip" or "three-quarter" shoe which is fitted to a pad, the shoe receiving the weight brought upon the toe or front part of the horse's foot and the pad being located beneath and protecting the tender part of the foot. The invention relates also to a novel form of shoe or tip for use with pads.

Among the objects of our invention is to provide a combined horseshoe and pad wherein the shoe is provided with a plurality of calks so arranged that the forwardmost calk or calks of the series and the yielding or active portion of the pad first come into contact with the roadway in the beginning of the use of the shoe and receive the first wear brought thereon and the other calks in rear of the forwardmost calk or calks are brought successively into active relation with respect to the roadway as the calk or calks in advance thereof are worn away. As a result of this construction the life of the shoe is greatly prolonged over that of a shoe having a like number of calks which are adapted to be brought simultaneously into active relation with respect to the roadway when the shoe is first used. In the latter construction the life of the shoe is but little greater than the effective life of a single calk, while in our construction the action of the series of calks is cumulative and the period of effective use of the shoe is therefore greatly prolonged.

In the drawings, Figure 1 is a bottom plan view of a combined shoe and pad containing the improvements constituting our invention. Fig. 2 is a longitudinal section on line 2 2 of Fig. 1. Fig. 3 is a bottom plan view of a fragment of one of the rear ends of the shoe, showing a modification. Fig. 4 is a similar view showing a further modification. Fig. 5 is a transverse section on line 5 5 of Fig. 2.

As shown in the drawings, A designates the body of the shoe, and B the pad, the latter consisting of a leather base B′, shaped to fit the foot of a horse, and a formed mass of rubber B^2, attached to the under surface of the leather base by stitches in the manner shown and constituting the active portion of the pad.

The shoe as herein shown is provided on its under side with seven holding-calks, one, A′, at the toe of the shoe centrally thereof and three, A^2, on each side, the calks at the sides being arranged in three opposite pairs between the toe-calk and the pad. The calk at the front of the shoe is shown as curved to conform to the curvature of the toe and located adjacent to the edge of the shoe, while the calks in rear of the front calk, as shown in Fig. 1, are arranged transversely of the body of the shoe. The body of the shoe is desirably made thickest at the toe of the shoe and tapers from the thickest part to its rear end, where it is joined to the pad. The calks are made of gradually-increasing depth from the front to the rear calks, said rear calks being the longest and the toe-calk shortest. The length of the several calks is shown as so proportioned, however, with respect to their location on the tapered body of the shoe that the depth of the shoe as a whole is the same in all parts thereof. When the shoe is fitted to the pad, the depth of the pad is such as to cause the shoe when resting on a supporting-surface to be supported on the pad and on the front or toe calk. When pressure is brought to bear upon the shoe, as by the weight of a horse, the calks next in rear of the toe-calk may have contact with the supporting-surface to give lateral stability to the shoe; but no considerable weight is transmitted thereto until the front calk has partially worn away, at which time the said calks next in rear of the toe-calk are brought into action. The several pairs of calks are in this manner made to assume operative relation to the roadway until all the calks have been brought into action.

Desirably the calks are made gradually thinner from the front to the rear of the shoe, whereby the calks which are the last to be

brought into action are made of such width that they will be at all times equivalent to sharp calks even when worn down considerably. Moreover, the thickening of the front calk or calks, which receive the greatest wear in the life of the shoe, serves to increase the durability of the shoe. Furthermore, the thickening of the body of the shoe at the toe thereof strengthens the shoe where it is subject to the severest strains and at the same time serves to properly balance the shoe without adding undue weight thereto. A further advantage of thickening the shoe at the toe thereof and making the calks of gradually-increasing depth from front to rear of the series is that, in addition to the strengthening of the shoe at the toe and the proportioning of the metal so as to properly balance the shoe, the life of the rear calks, which are the last to be brought into use, is thereby prolonged, and as the shoe is effective so long as the rear calks are active the life of the shoe as a whole is thereby greatly prolonged. Obviously if the body of the shoe be made of the same thickness throughout the rear calks, or those in rear of the toe-calk, would need to be made more shallow, thereby shortening their effective life and the life of the shoe.

Desirably the front calk is reinforced by two calks A^3, located in rear of the same and at the ends thereof. Said calks are shown as circular in cross-section and taper from their bases to their outer or bearing ends, but may be made of other form. The auxiliary calks A^3 serve to relieve the front calk A′, upon which the severest wear and strain are brought, and thereby lengthen the life of said front calk. Moreover, said auxiliary calks A^3 being made sharper than the front calk aid to hold the toe of the shoe from slipping after the front or toe calk is considerably worn.

The clip A^4 of the shoe is horizontally rounded or convex on its inner surface, as indicated in Fig. 5. The purpose of so forming said clip is to enable the same to be set more closely into the notch of the foot cut therein by the farrier's knife when the shoe is being fitted. In practice such notch so made in the hoof is concave, and the convex inner face of said clip fits the concave notch more perfectly than a clip having a square or flat inner surface.

In Fig. 3 the rearmost calk A^5 is shown as made of curved or corrugated form and extending generally longitudinally of the body of the shoe. Said calk begins at or near the second nail-hole from the rear of the shoe and extends past the rearmost hole and is curved around said rearmost nail-hole to permit ample room for driving the rear nail. In Fig. 4 the rearmost calk A^6 is made straight and disposed longitudinally of the end of the body of the shoe. Both forms of the rear calks (shown in Figs. 3 and 4) will be made somewhat deeper at their rear than at their front ends to bring the edges thereof generally parallel with the lower or holding edges of the calks in front of the same. Said longitudinally-arranged calks A^5 and A^6 act when brought into use to prevent slipping of the shoe sidewise, and the form of the calk A^5 serves also to prevent slipping of the shoe from front to rear.

Other changes in the structural details herein illustrated may be made without departing from the spirit of our invention, and we do not wish to be limited to such details except as hereinafter made the subject of specific claims.

We claim as our invention—

1. In a combined horseshoe and pad, the combination with the shoe proper, of holding-calks on the under side of said shoe comprising a toe-calk and a plurality of oppositely-arranged side pairs of calks between the toe-calk and the active portion of the pad, and calks extending below the level of the body of the shoe and said pad extending continuously from one side of the heel of the shoe to the other.

2. In a combined horseshoe and pad, the combination with the shoe proper, of holding-calks on the under side of said shoe, the pad being made deeper than the calks next in advance of the same, and the parts being arranged to bring the first wear upon the toe calk or calks and to successively bring the calks in rear thereof into action as the calk or calks in advance of the same are worn away.

3. In a combined horseshoe and pad, the combination with the shoe proper, of holding-calks on the under side of said shoe, comprising a toe-calk and oppositely-arranged side pairs of calks between the toe-calk and the active portion of the pad, each pair of said side calks being adapted to be held out of action until the calk or calks in advance of the same are worn away.

4. In a combined horseshoe and pad, the combination with the shoe proper, said shoe being made thickest at its toe portion and tapering toward the heel, of calks on the under side of said shoe, of which the toe-calk is adapted to be first brought into action and the calks in rear thereof to be brought successively into action as the calk or calks in advance of the same are worn away.

5. In a combined horseshoe and pad, the combination with the shoe proper, said shoe being made thickest at its toe portion and tapering toward the heel, of calks on the under side of said shoe, of which the toe-calk is adapted to be first brought into action, said calks being made of gradually-increasing depth from the front to the rear of the series and adapted to be successively brought into action as the calk or calks in advance of the same are worn away.

6. In a combined horseshoe and pad, the combination with the shoe proper, of holding-calks on the lower side of the shoe, the parts being arranged to bring the first wear upon the toe calk or calks, and to successively bring the calks in rear thereof into action as the calk or calks in advance of the same are worn away, the rearmost calks being made nar-

rower than the front calk or calks so as to present sharp holding-surfaces during substantially the life of said rearmost calks.

7. In a combined horseshoe and pad, the combination with the shoe proper, of holding-calks on the lower side of said shoe, comprising a toe-calk extending transversely across the toe and oppositely-arranged side pairs of calks between the toe-calk and the active portion of the pad, and sharp holding prongs or calks arranged in rear of the toe-calk, one near each end of the toe-calk.

8. In a combined horseshoe and pad, the combination with the shoe proper, of a toe-calk and a corrugated calk or calks between the toe-calk and the pad, said corrugated calks being adapted to be brought first into action only after the toe-calk has been worn away.

9. In a combined horseshoe and pad, the combination with the shoe proper, of holding-calks on the under side of said shoe, embracing a transverse toe-calk and oppositely-arranged side pairs of calks between said toe-calk and the active portion of the pad, certain of said side calks having corrugated form, and the pairs of side calks being adapted to be brought successively into action as the calk or calks in advance of the same are worn away.

10. As a new article of manufacture, a three-quarter shoe or tip, the body of which is thickest at its toe portion and tapers toward its heel portion, and calks on the under side of the shoe, said calks being made of gradually-increasing depth and decreasing thickness from front to rear thereof.

11. As a new article of manufacture a three-quarter shoe or tip, and calks on the under side thereof, the calks in rear of the toe-calk being successively brought into action as the calks in advance of the same are worn away, and said rear calks being made thinner than the toe-calk.

12. As a new article of manufacture, a three-quarter shoe or tip, the body of which is provided on its under side with a transverse calk and oppositely-arranged side pairs of calks between said toe-calk and the active portion of the pad, certain of said side calks having corrugated form.

In testimony that we claim the foregoing as our invention we affix our signatures, in presence of two witnesses, this 6th day of February, A. D. 1902.

THOMAS C. OCTIGAN.
WILLIAM PEACOCK.

Witnesses:
WILLIAM L. HALL,
GERTRUDE BRYCE.