

(No Model.)

J. E. BINGHAM.

HORSESHOE.

No. 349,081.

Patented Sept. 14, 1886.

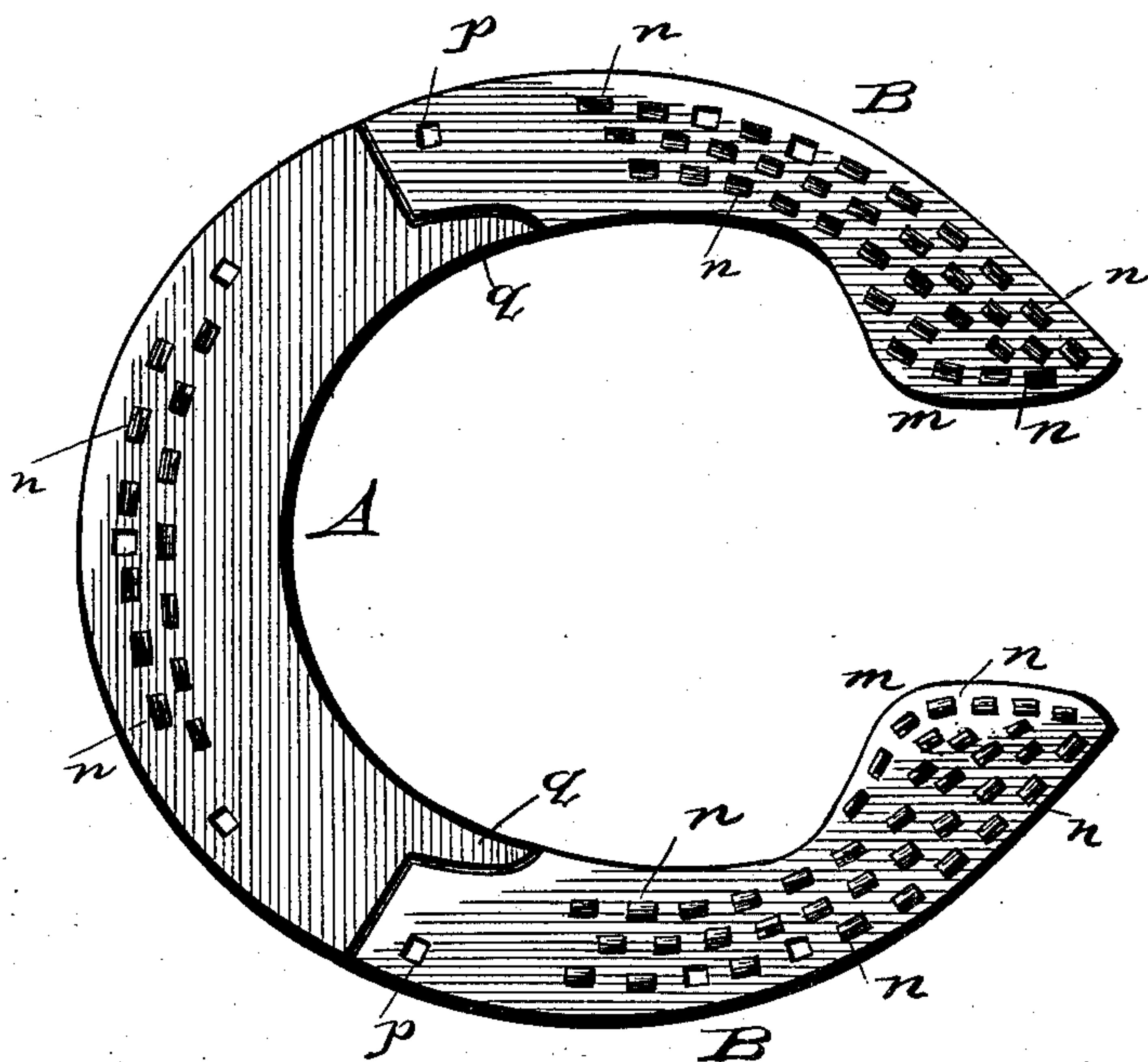


Fig. 1.

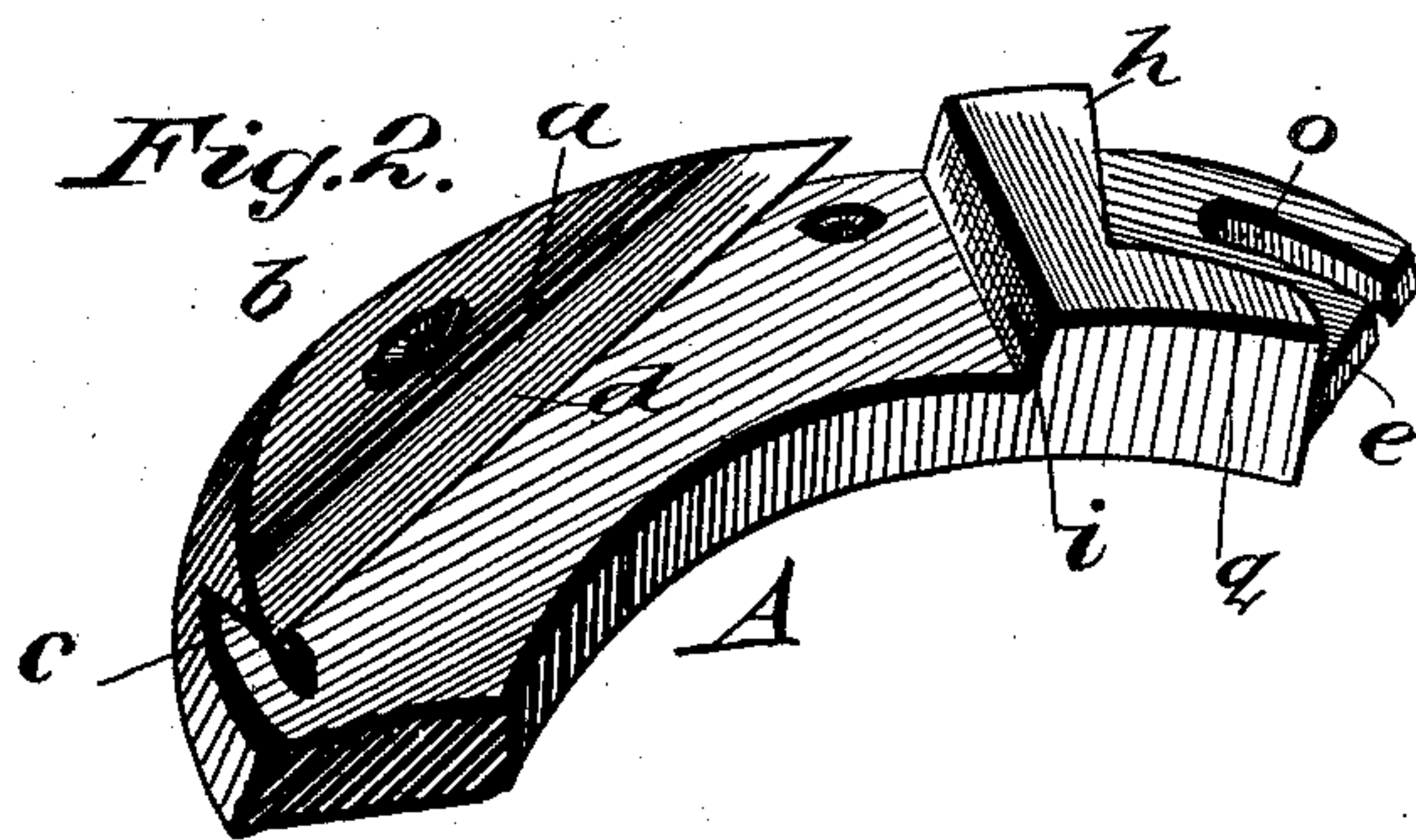


Fig. 2.

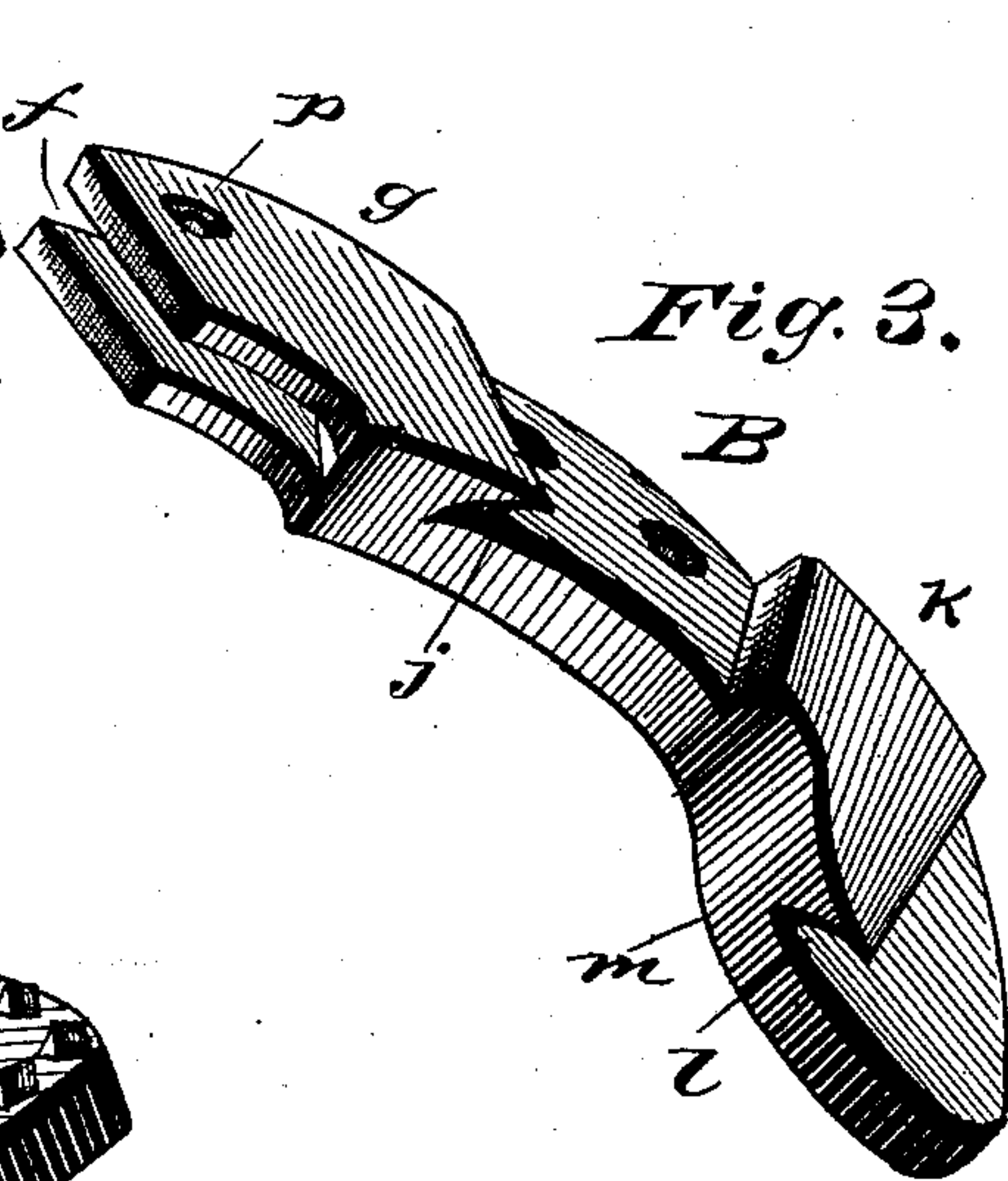


Fig. 3.

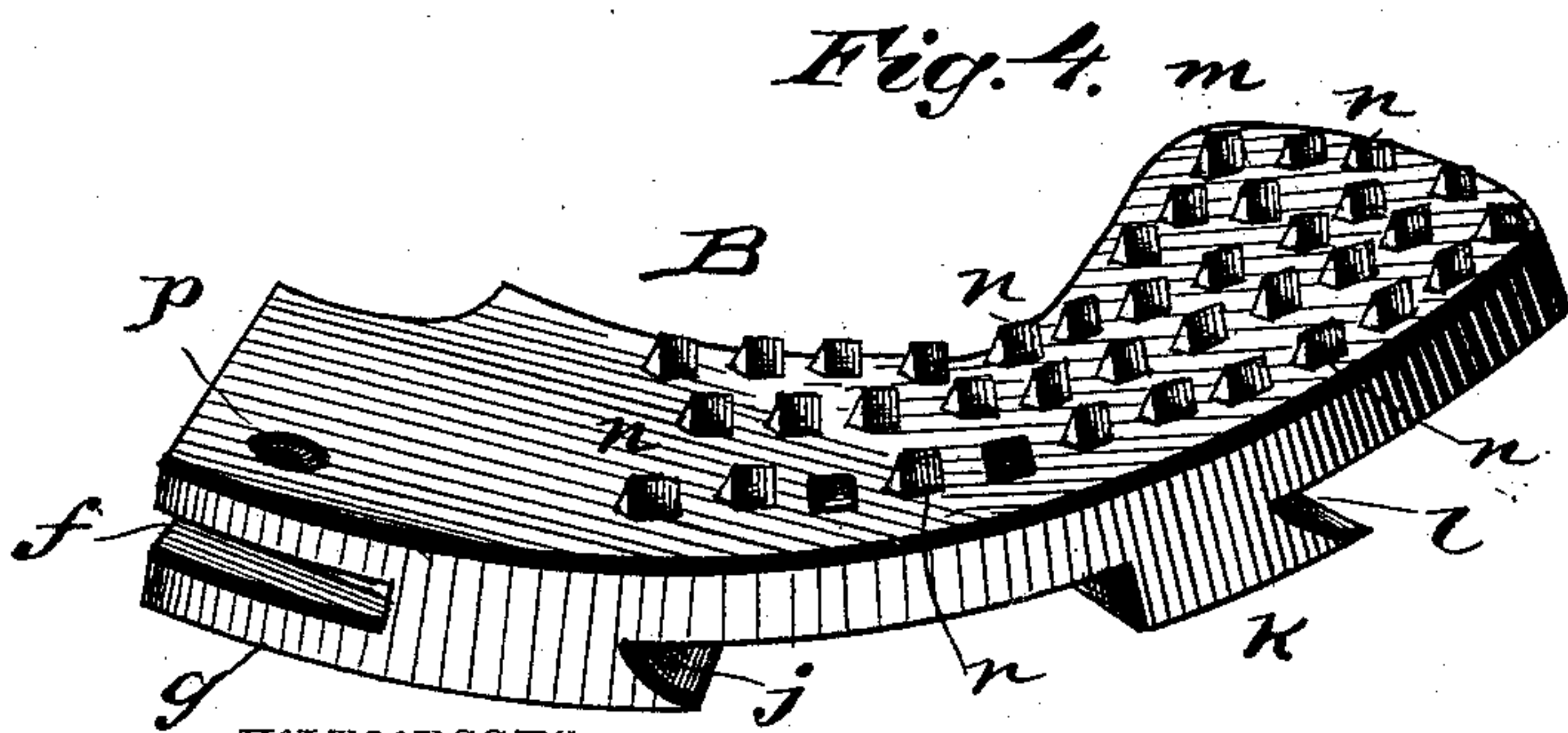


Fig. 4.

WITNESSES
Phil Dieterich.
Curtis Lammond

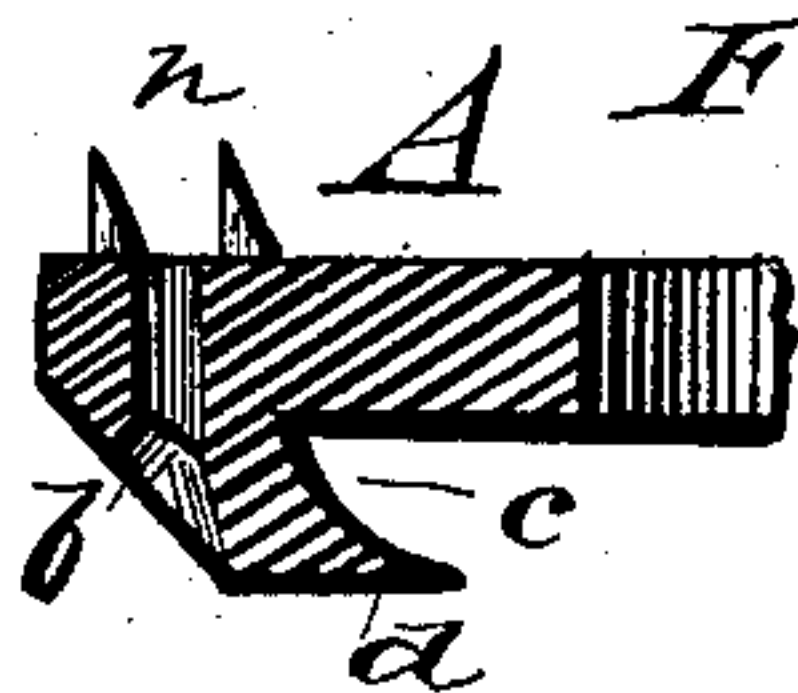


Fig. 5.

John E. Bingham
INVENTOR
By
E. Everett Ellis
his Attorney

UNITED STATES PATENT OFFICE.

JOHN E. BINGHAM, OF WALLA WALLA, WASHINGTON TERRITORY.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 349,081, dated September 14, 1886.

Application filed April 29, 1886. Serial No. 200,588. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. BINGHAM, a citizen of the United States of America, residing at Walla Walla, in the county of Walla Walla and Territory of Washington, have invented certain new and useful Improvements in Horseshoes, of which the following is a specification, reference being had therein to the accompanying drawings.

15 This invention relates to certain new and useful improvements in horseshoes; and it consists substantially in the same as constructed, and in such other details as will hereinafter be distinctly described and pointed out in the claims.

20 The general objects of the invention are the same as have been fully set forth in my former application No. 191,056; but the present invention is designed to accomplish such objects in a better or superior manner, and has additional objects in itself, all as will be clearly understood from the description hereinafter following.

Referring to the accompanying drawings, 25 Figure 1 represents a plan view of the hoof surface of a horseshoe embodying my invention. Fig. 2 represents a view in perspective of a portion of the toe-piece, the same clearly indicating the construction thereof on the under or ground surface. Fig. 3 represents a perspective view of one of the side pieces, the same also showing the construction of the under surface thereof; and Fig. 4 is a similar view of one of the side pieces, in which is 30 illustrated the construction of the upper side or hoof surface. Fig. 5 is a sectional detail view.

It may be here stated that while I have herein described a construction which I deem 40 most valuable in a sectional shoe, it will be apparent that such construction is applicable also to shoes of different construction, the kind of shoe adopted by me being only selected by preference.

45 Reference being had to the several parts by letters marked thereon, A represents the toe-piece, and B B designate the side pieces, the said toe-piece being formed on its bottom or under side, across the toe, with a calk, *a*, whose 50 front or forward edge is rounded off toward the toe, as seen at *b*, and its rear or inner edge

concaved or inclined inwardly, as shown at *c*, the said calk being also formed with a flat bearing or ground surface, *d*. The joints between the toe and side pieces are formed by a tenon-like projection, *e*, on the ends of the toe-piece, 55 which fits into a corresponding recess, *f*, in the end of the side pieces, which recess is formed between the upper or hoof surface of the side piece and a projection, *g*, on the under or ground surface thereof, the said projections *g* fitting or interlocking with a projection, *h*, on the corresponding side of the toe-piece. These projections *g* and *h* constitute, when the sections of the shoe are united, 65 a calk whose front or forward edge is straight or vertical, as shown at *i*, and whose rear or back edge is concaved or inclined, as at *j*, similarly as the rear or inner edge of the calk *a* of the toe piece. 70

k k represent hind calks formed near the ends of the side pieces at the rear of the hoof, the same having their forward edge straight or vertical and the corners thereof square, while the rear or back edge is formed the 75 same as the corresponding edges of the other calks described, and which is clearly indicated by the letter *l*. These hind calks, *k k*, come immediately or directly over the "bars" of the hoof, and at this point of the latter the 80 shoe is widened inwardly, as indicated by the letter *m*, the object of which is to better secure the side piece to the foot. The bars are peculiar horny spurs connecting the frog with the sides of the foot, and are situate about 85 one inch forward of the heels, and by widening the shoe inwardly, as indicated, these bars are made to sustain part of the pressure of the shoe upon the foot, preventing the side pieces of the shoe from turning inwardly in 90 traveling, and give opportunity to secure the side pieces to these bars by means of the raised projections on the hoof surface of the shoe, which are to be hereinafter described.

The object of rounding off the toe-calk at 95 its forward edge is to prevent stumbling, and in addition thereto the pressure is brought more under the foot than would otherwise be the case; and the object of making the rear edges of each of the calks concave is that 100 they may always wear sharp and continue to give a secure hold upon the ground, and by

forming the forward edge of the remaining calks with a straight or vertical face having square corners prevents any forward slipping.

The upper or hoof surface of the shoe (see Fig. 1) is formed with a number of irregularly-arranged raised chisel-shaped projections, *n*, or projections having one side perpendicular and the other side tapering or beveled, which are integral with the shoe, and are designed to penetrate the sole and bars of the foot when the shoes are attached. These projections are from about one-sixteenth to one-eighth of an inch in height, according to the size of the shoe; and I have found in practice that the best results are obtained by arranging the straight or vertical sides of the projections to face the peripheral border or side of the shoe; but when many of the projections are employed such side or edge thereof may be made to face the inner edge of the shoe.

I have found that in shoes of the present character it is the tendency of the side pieces to twist or slip outwardly, the securing-nails for the shoe to the hoof having much less holding power in this direction than in the opposite, and by facing the vertical side of the projections outwardly they keep the piece from slipping in that direction and tearing out the nails, while the nails securely hold the shoe against the hoof, the same remarks being also intended with respect to the toe-piece.

The tongues *e* of the toe-piece are formed with a slot, *o*, cut out parallel with the outer edge or periphery of the shoe, which registers with a nail-hole, *n*, through the shoe proper and projection *g* of the corresponding end of the side piece, while the hoof surface of the toe-piece is provided with a shoulder, *q*, which rests in a corresponding projection on the same side of the side piece, thus forming a bearing for the parts against each other, the projections on the under side constituting the calk at the joint, having their interlocking edges formed of a corresponding contour.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As an article of manufacture, a horseshoe provided with a toe-calk having its front edge rounded off and its back or rear edge inclined

inwardly or concave, substantially as shown and described.

2. As an article of manufacture, a horseshoe constructed of three pieces, and provided with a toe-calk having its front edge rounded off and its rear edge inclined inwardly, each of said pieces having on the upper or hoof surface a series of raised projections having one side beveled and the other perpendicular to the top of the shoe, substantially as described.

3. As an article of manufacture, a horseshoe provided with a toe-calk, *a*, having its front edge rounded off and its rear edge concave, and provided with a flat bearing or ground surface, *d*, substantially as shown and described.

4. The combination, in a horseshoe, of the toe-piece having calk *a*, and formed with projections *h*, with the side pieces having projections *g*, and hind calks, *k*, the said projections *g* and *h* constituting a calk, which calk as well as the calk *k* have their forward edges straight or vertical and their rear edges inclined or concave, substantially as shown and described.

5. As an article of manufacture, a horseshoe constructed of three pieces, and provided with a toe-calk having its front edge rounded off and its rear edge inclined inwardly, each of said pieces being provided with a series of raised projections having one side beveled and the other perpendicular to the top of the shoe, and the ends of the side pieces being widened inwardly at the bars of the hoof, substantially as described.

6. In a horseshoe, the combination, with the toe-piece, of the two side pieces joined thereto by a mortise or tenon joint constituted by the slotted tongue of the toe-piece fitting in a corresponding recess of the side pieces and registering with a nail-hole therein, each of said pieces being formed on their upper surface with raised projections, while their under surfaces are formed with calk *a*, projections *g* and *h*, and calk *k*, respectively, substantially as shown and described.

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

JOHN E. BINGHAM.

Witnesses:

GEO. T. THOMPSON,
B. J. TALLMAN.