

No. 626,091.

Patented May 30, 1899.

W. H. PETER & H. A. KEIGWIN.
SOFT TREAD HORSESHOE.

(Application filed Nov. 5, 1898.)

(No Model.)

Fig. 1.

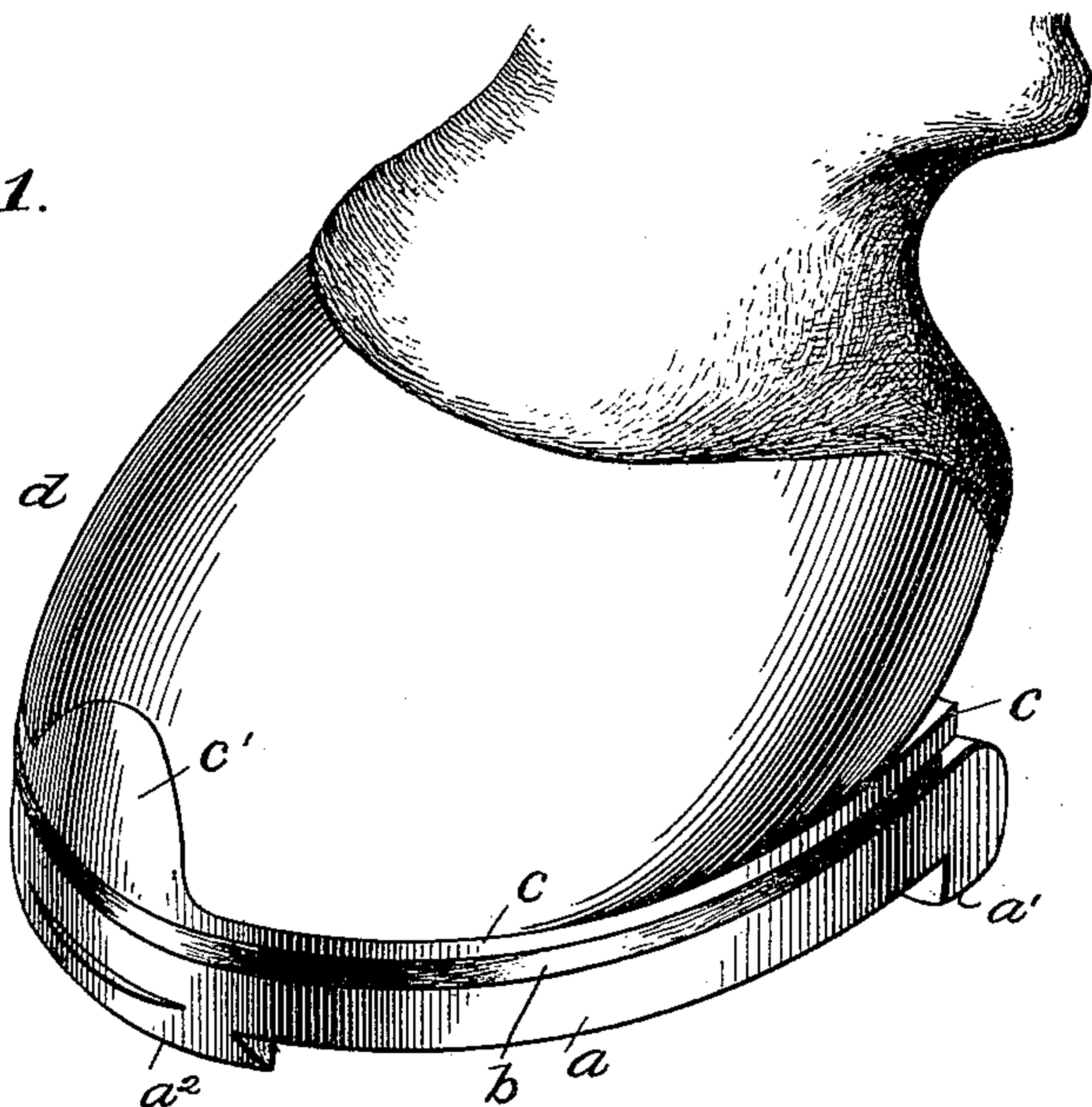


Fig. 2.

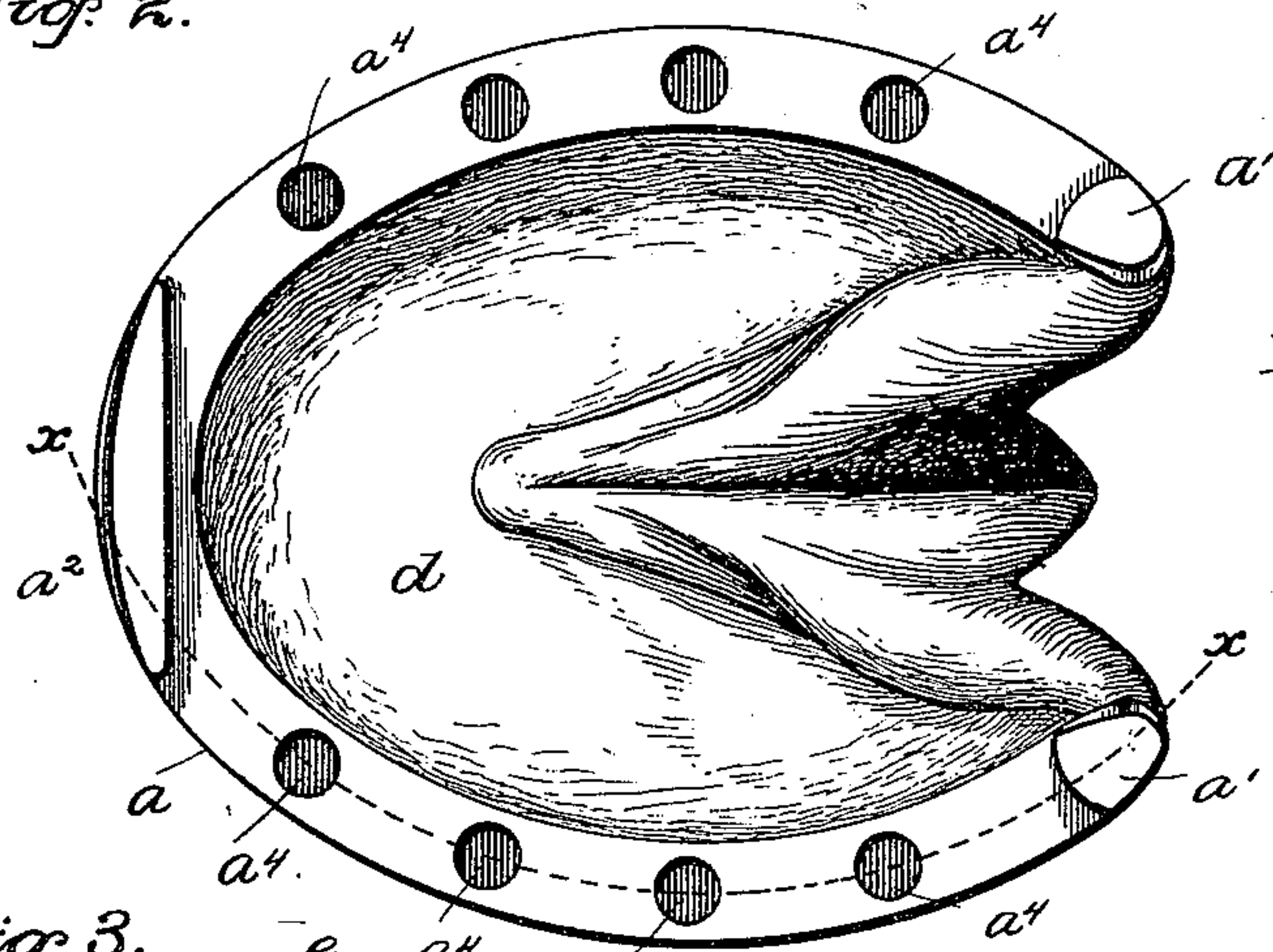


Fig. 3.

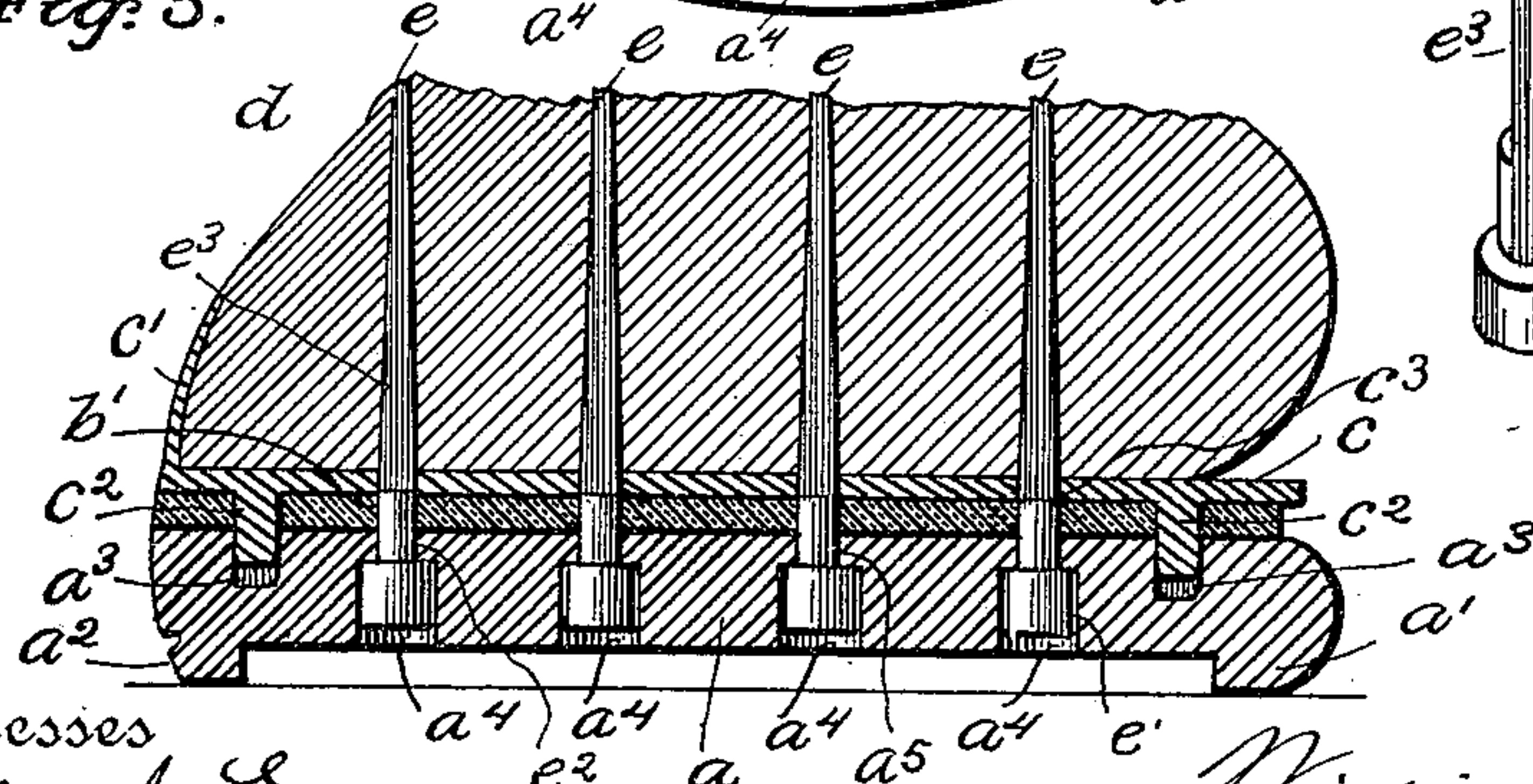


Fig. 4.

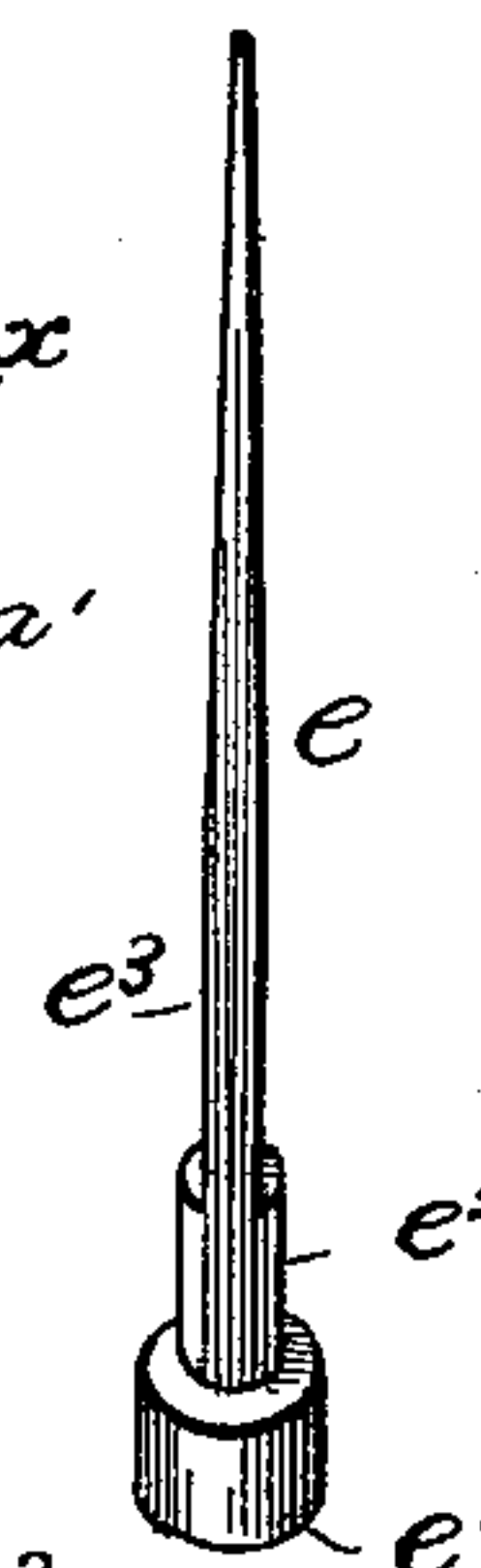
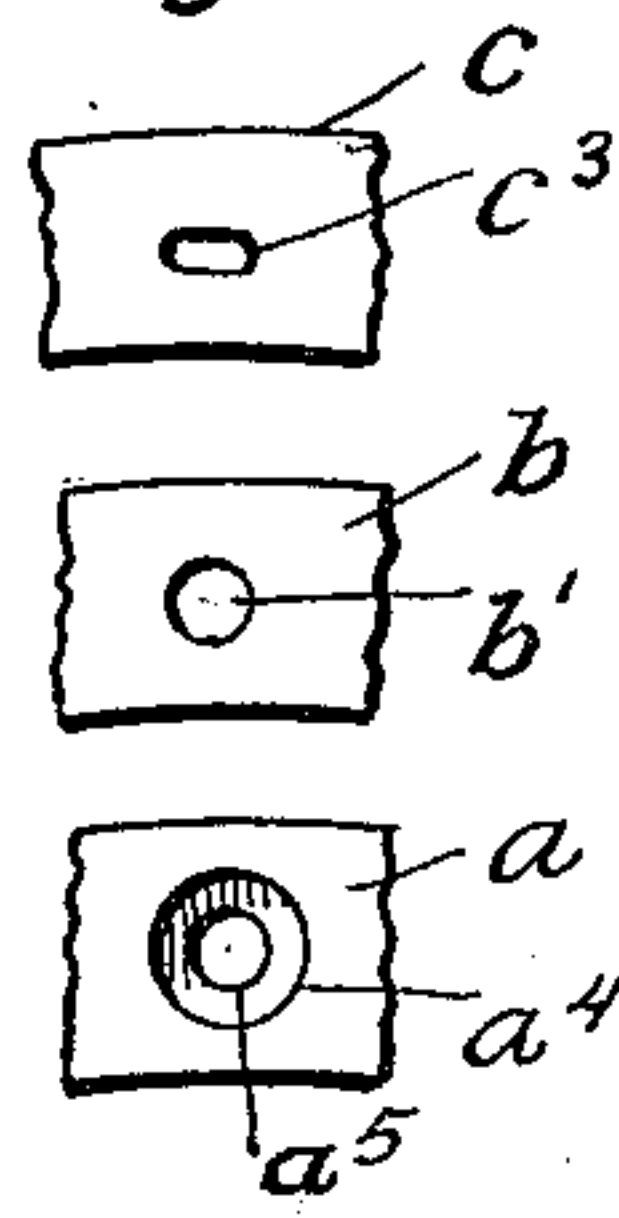


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM H. PETER AND HARRY A. KEIGWIN, OF WASHINGTON, DISTRICT
OF COLUMBIA.

SOFT-TREAD HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 626,091, dated May 30, 1899.

Application filed November 5, 1898. Serial No. 695,563. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM H. PETER and HARRY A. KEIGWIN, citizens of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Horseshoes; and we hereby declare the following to be a full, clear, and exact description thereof, such as will enable others skilled in the art to construct and use the same.

This invention relates to that class of horseshoes in which a "soft tread" is provided for the purpose of relieving the jarring to the horse when traveling on hard roads. Heretofore in this character of shoe the full yielding property of the elastic or cushion part of the shoe has been either restricted in great measure by the nails and a perfect soft tread made impossible thereby, or where to overcome this interference of the nails with the yielding properties of the shoe the several plates of the shoe are held together by means other than the nails and independent thereof the attachment of the shoe to the hoof is therefore by nails driven through and holding only on the upper plate, from which method of fastening there arises not only insecurity of attachment, but the necessity of using an unduly heavy upper plate in order to obtain at all any serviceable degree of security in attachment, while the wearing or lower plate is proportionately lighter and its full limit of wearing therefore sacrificed, or else an overweight and clumsy shoe is produced.

It has therefore been the especial object of this invention to construct a soft-tread shoe which will be perfect in its yielding property, readily and firmly secured to the hoof by nails which shall form the means of holding the several plates of the shoe together, permitting the metal parts thereof to be reheated and shaped by the shoer with equal facility as in the use of the single-plate shoe, and, on the whole, produce a shoe of this character of extraordinary efficiency, durability, and compactness.

To these ends the invention consists in a shoe comprising an upper plate for contact with the hoof, a lower plate adapted to receive the wear, and an interposed rubber or cushioning plate, each of which plates have

registering openings of a size and conformation to receive a nail having a double-shouldered head adapted to be countersunk in and loosely fit the holes of the lower plate and engage a shoulder therein, while permitting an extension portion of said nail-head to pass through the opening of the lower plate and intermediate elastic plate and shoulder against the upper plate, whereby a firm attachment of the shoe is effected, the parts thereof assembled and held together against the severe strain incident thereto, and this without interference with the function of the elastic in receiving the entire jar of the foot.

The invention further consists in certain other novel features in the construction and arrangement of parts, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view showing the improved shoe applied to the hoof; Fig. 2, a bottom view of a hoof with the shoe applied thereto; Fig. 3, a sectional view taken on the line $x x$ of Fig. 2; Fig. 4, a perspective view of the nail used in applying the shoe, and Fig. 5 a detail view showing the nail-openings in the several plates.

Referring to the drawings, a indicates the lower or wearing plate of the shoe, which in form is that of the single shoe, being provided with calks a' a^2 and of substantially the same thickness, as one of the essential features of the present invention is the construction which permits a durable wearing shoe to be employed. The plate b , of rubber or other yielding material, is fitted upon and conforms to the upper surface of the plate a and receives the upper plate c , which offers the contact to the hoof d . This upper plate, on account of the fact that it is not designed as the one alone to receive the nails and form a resistance thereto, is comparatively light in weight and thin and is provided with the usual clip c' , and for the purpose of reinforcing said plate on the lower plate and to prevent the horizontal displacement of these plates relative to each other without impeding the yielding of plate b the said plate c is provided with downward projections or pin-tles c^2 , cast or otherwise secured thereon and adapted to work in corresponding and regis-

tering recesses a^3 , formed in the upper surface of the plate a and of sufficient depth to permit the full yielding of the elastic plate without offering a vertical resistance to the
5 said projections.

The nails e , of which there are preferably four on each side, form the sole means of attaching the shoe and holding together the several plates in yielding relation. This nail
10 has a cylindric head of two parts $e' e^2$, one being larger than the other, the outer part e' being designed to loosely fit within recesses a^4 of the lower plate, countersinking therein and shouldering against the roof of the recess,
15 while the part e^2 is designed to enter through an opening a^5 in the roof of said recess a^4 and an opening b' in the elastic, both of a size to permit the easy movement of the nail therein and to shoulder against the upper plate.
20 The driven portion e^3 of the nail is of the tapering form of the nail commonly used and is designed to wedge securely in the opening c^3 of the upper plate, which corresponds to the cross-section of the nail immediately
25 above the upper shoulder.

It will therefore be seen that the nail and the upper plate are rigid with the hoof at all times, while the lower plate is adapted to have an upward movement relative to the
30 nails, which while having their heads working within said lower plate are still normally shouldered thereon, offering a firm resistance thereto and binding all parts of the shoe securely to the hoof.

35 It is not essential to the efficiency of the

shoe that it be provided with the calks, as shown, as the lower plate may be worn even past the countersunk head of the nail, which being of softer metal would wear more rapidly than the plate and be kept within the
40 surface of the plate.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is--

1. In a horseshoe the combination of an upper and a lower plate and an interposed elastic body, all having registering openings therein, with a nail having a head adapted to loosely fit the opening therefor in the lower plate and shoulder against said plate, and a
45 portion adapted to extend through the elastic body and shoulder against the upper plate, substantially as described.

2. In a horseshoe the combination of an upper plate having pintles or projections, a lower plate having recesses to receive said
50 pintles or projections, and an interposed elastic body, said plates being provided with registering openings to receive the nails for holding them together on the hoof, substantially
60 as described.

In testimony whereof we affix our signatures, in presence of two witnesses, this 28th day of October, 1898.

WILLIAM H. PETER.
HARRY A. KEIGWIN.

Witnesses:

HUGH M. STERLING,
FRANK MONTGOMERY.