

S. McCLOUD.
ELASTIC HORSESHOE.

(Application filed Nov. 18, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

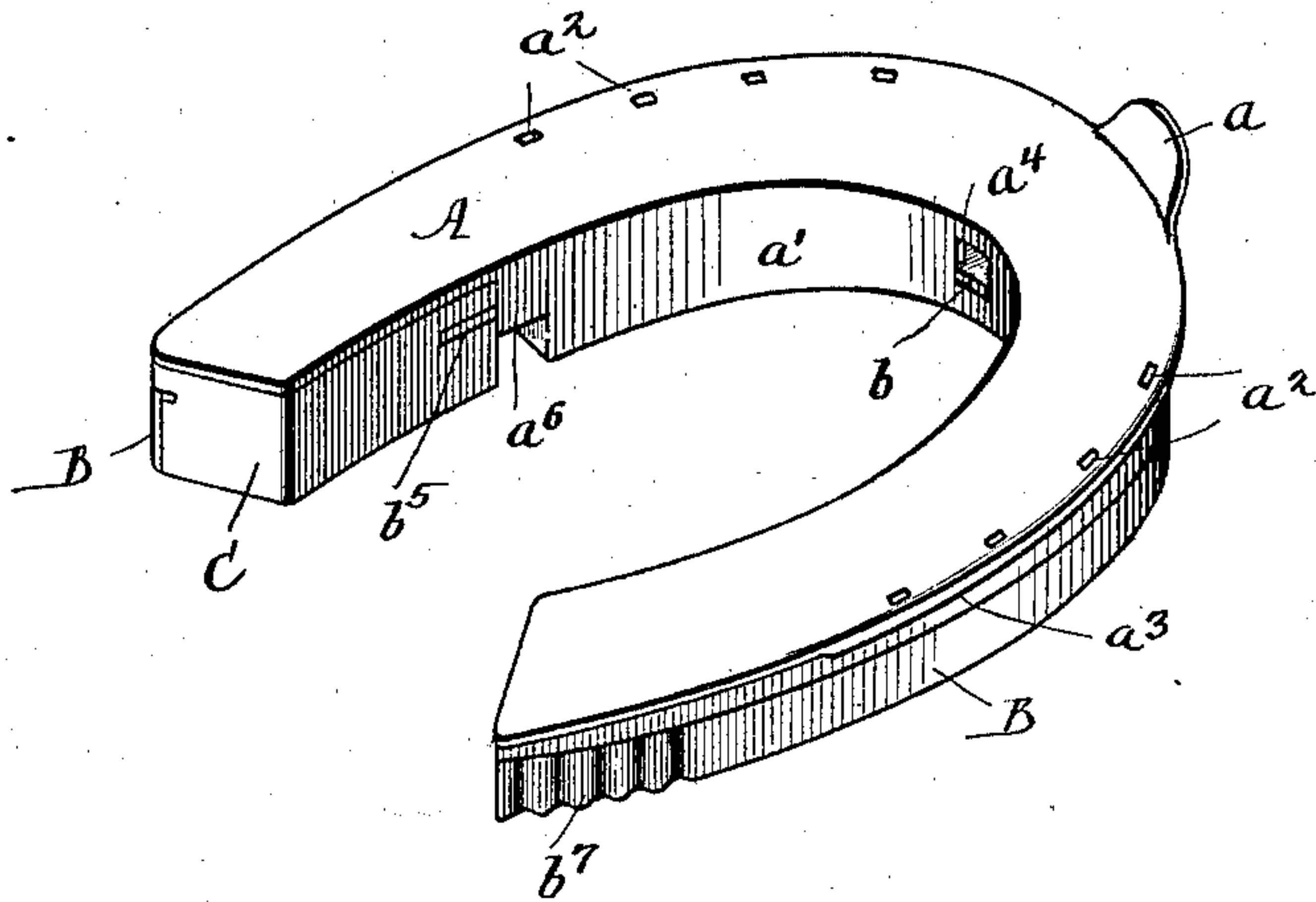


Fig. 2.

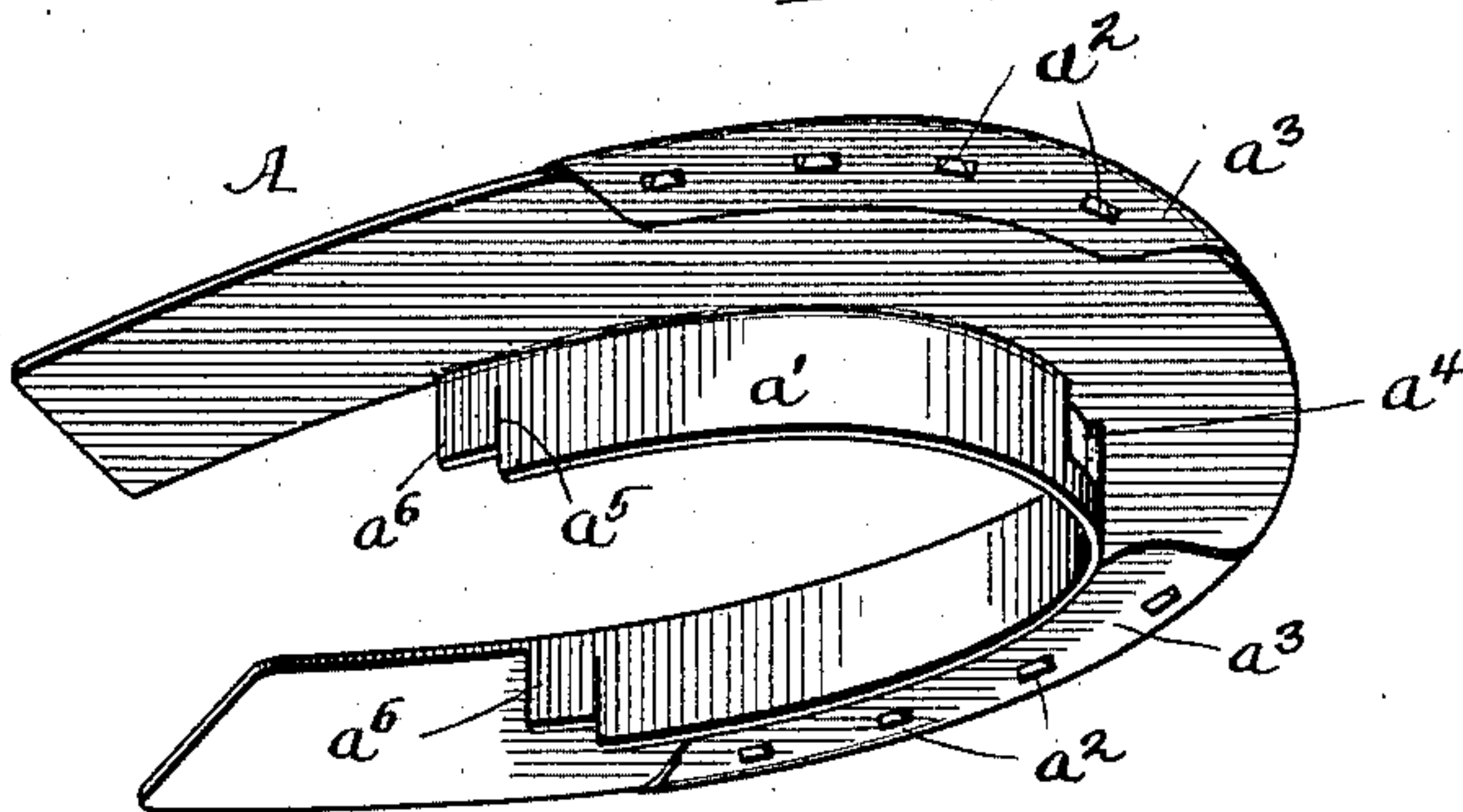
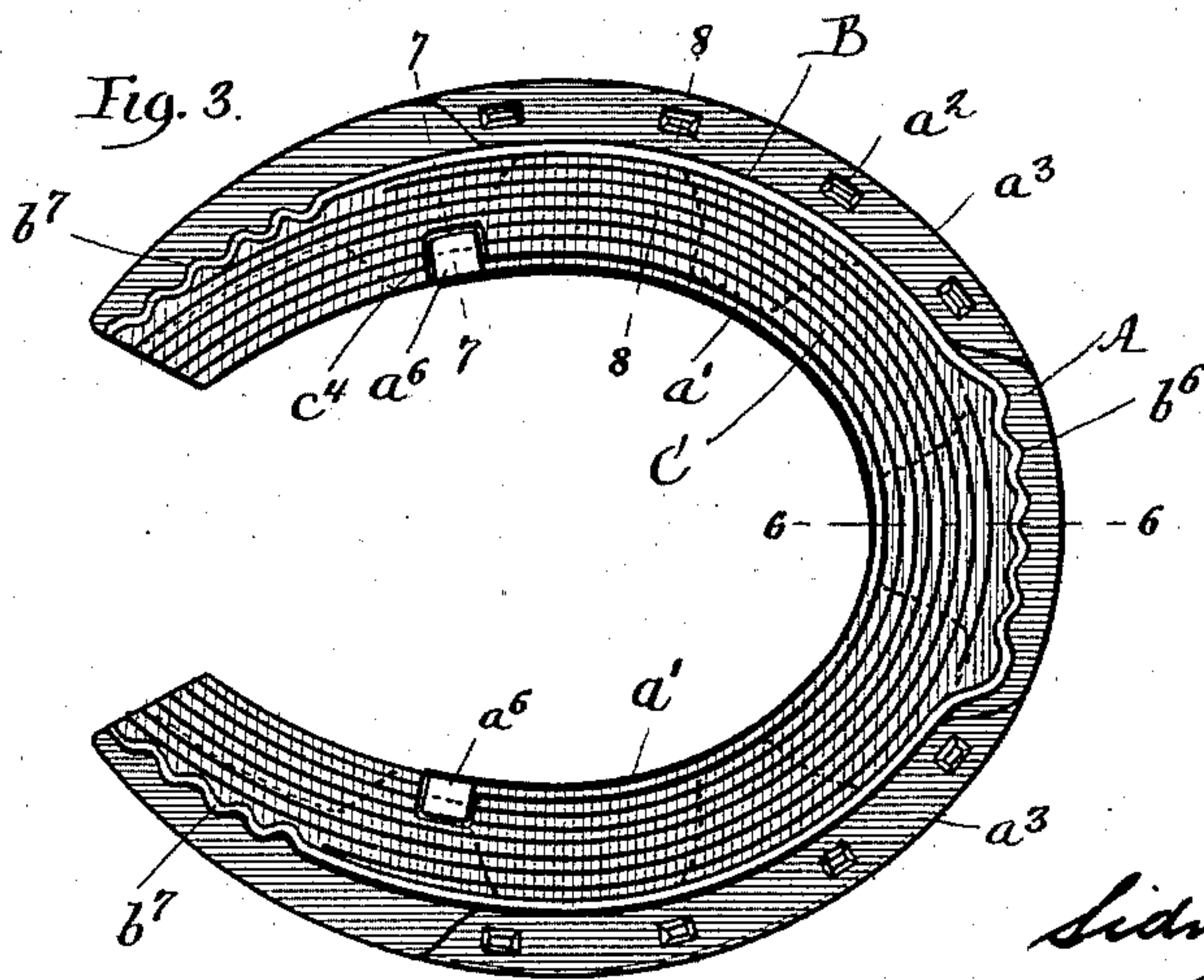


Fig. 3.



Witnesses:
Fred Guland
Alberta Adamick

Inventor
Sidney McCLOUD
By *Rein. Fisher*
his Attorney.

S. McCLOUD.
ELASTIC HORSESHOE.

(Application filed Nov. 16, 1900.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 4.

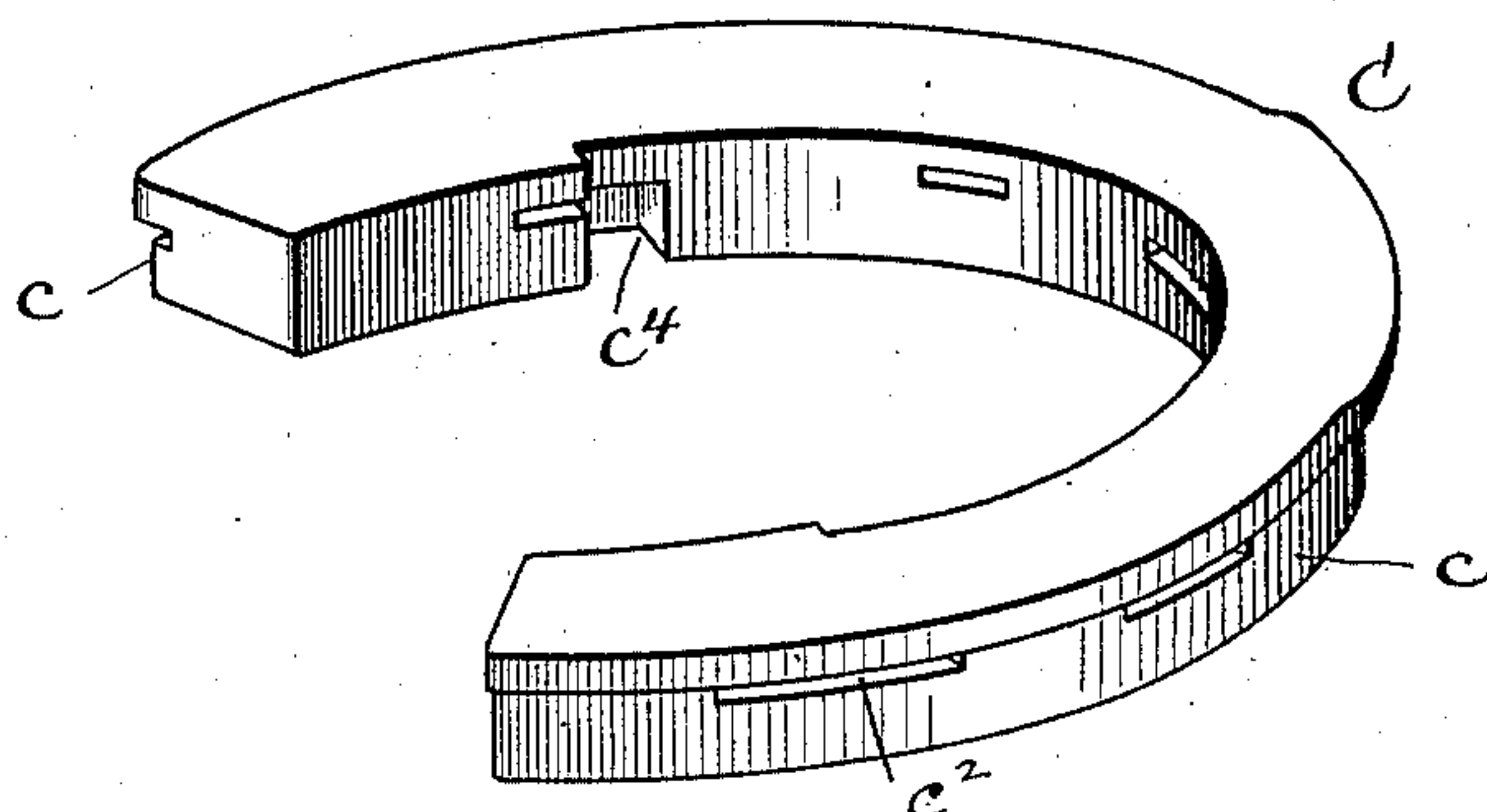


Fig. 5.

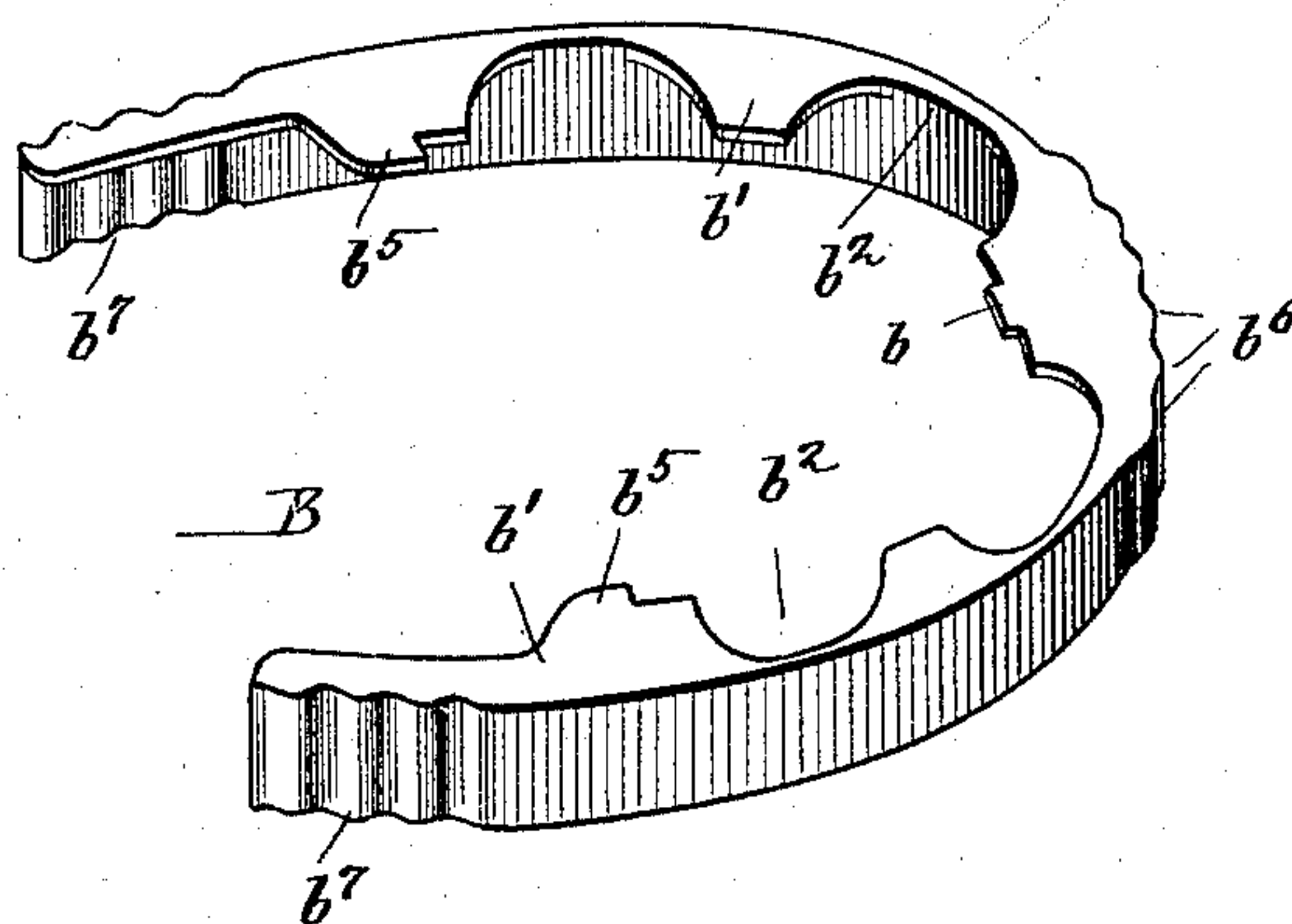


Fig. 6.

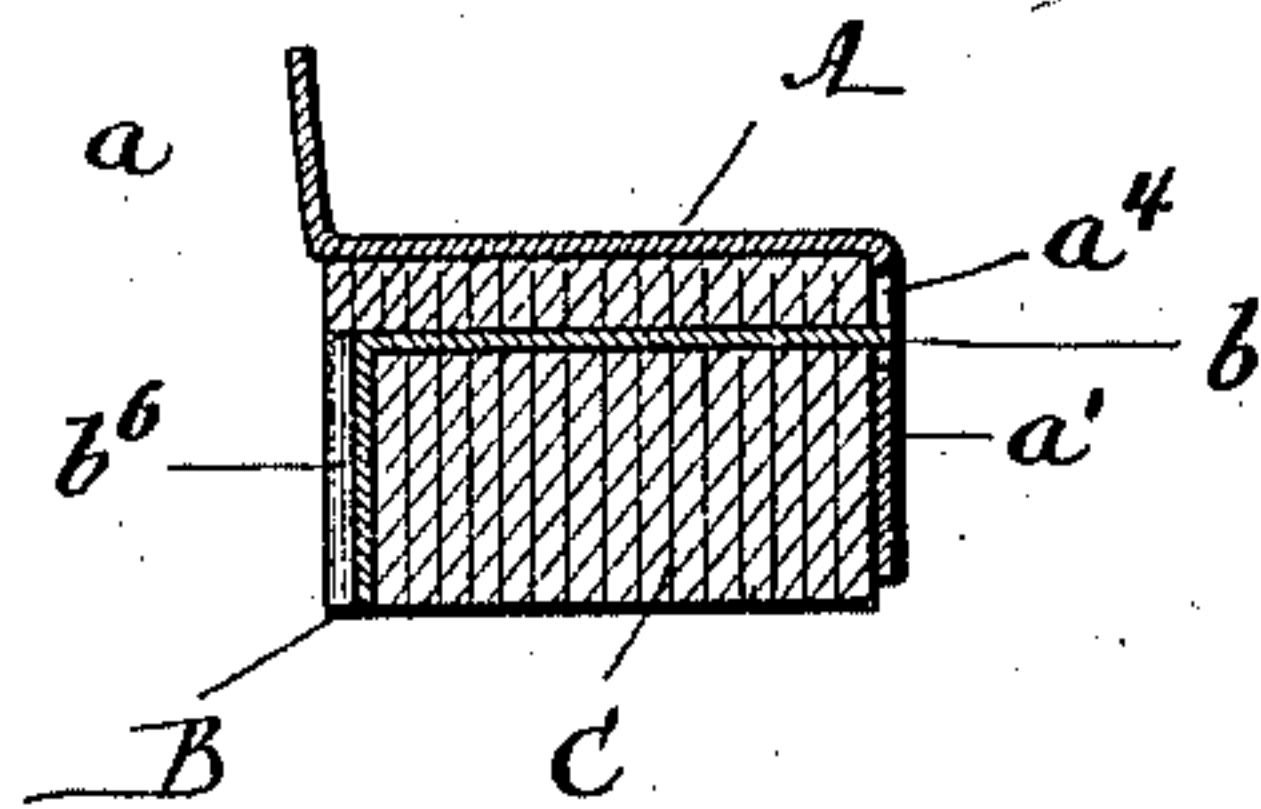


Fig. 7.

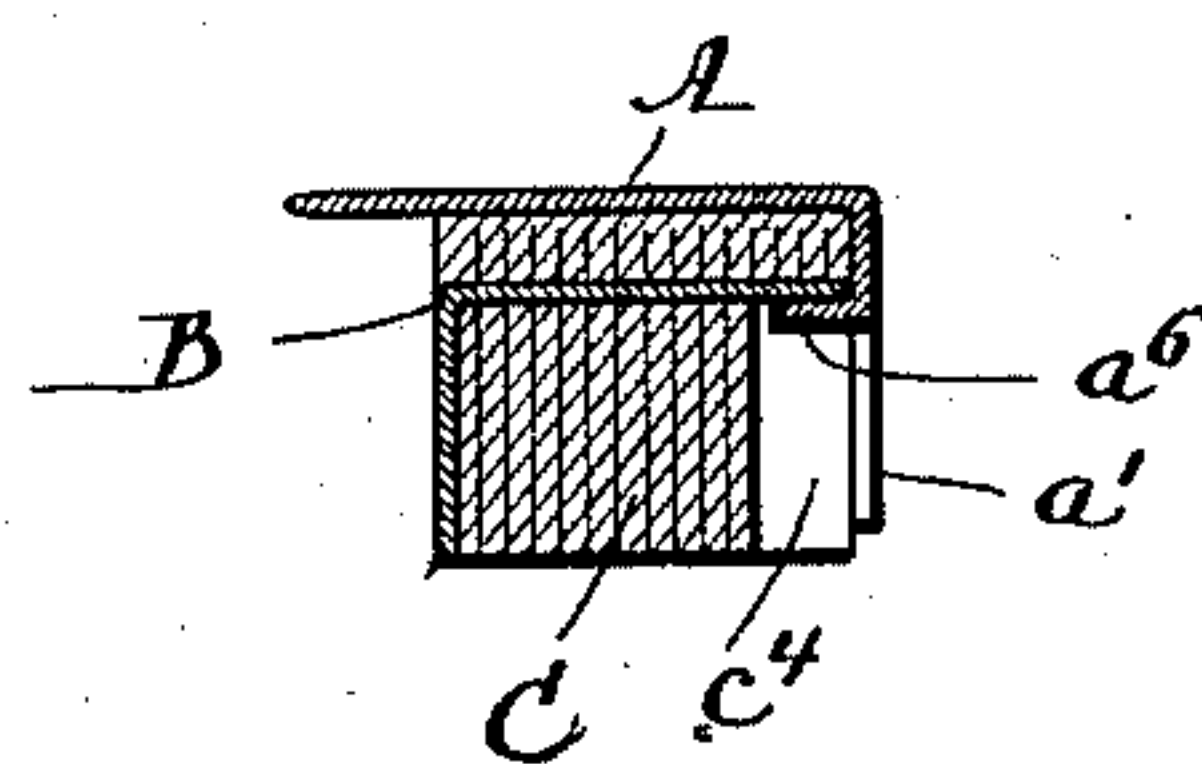
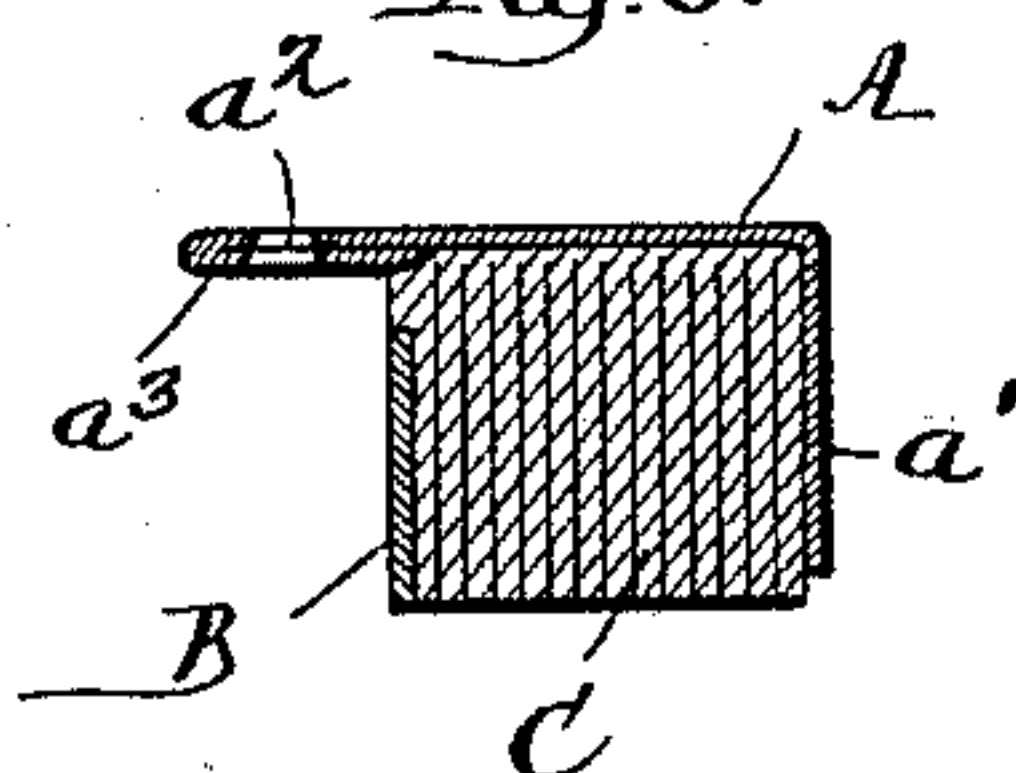


Fig. 8.



Witnesses:
Fred Guland
Alberta Adamick

Inventor:
Sidney M. Cloud
By *Paul Fisher*
his Attorneys.

UNITED STATES PATENT OFFICE.

SIDNEY McCLOUD, OF CHICAGO, ILLINOIS.

ELASTIC HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 683,318, dated September 24, 1901.

Application filed November 16, 1900. Serial No. 36,658. (No model.)

To all whom it may concern:

Be it known that I, SIDNEY McCLOUD, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Elastic Horseshoes, of which the following is a full, clear, and exact description.

This invention has relation more particularly to that class of horseshoes commonly known as "elastic" horseshoes, and the invention is characterized by the novel features hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the claims at the end of this specification. I wish it understood, however, that while I have described herein what I regard as the preferred embodiment of my invention the details of construction hereinafter set forth may be varied by the skilled mechanic within wide limits and features of the invention may be employed without its adoption as an entirety.

Figure 1 is a perspective view of a horseshoe embodying my invention. Fig. 2 is a perspective view of the upper plate or section. Fig. 3 is an inverted plan view of the complete shoe. Fig. 4 is a detail perspective view of the pad. Fig. 5 is a detail perspective view of the lower plate or section. Figs. 6, 7, and 8 are detail views in cross-section, respectively, on lines 6-6, 7-7, and 8-8 of Fig. 3.

My improved horseshoe comprises upper and lower metal sections and an intermediate pad of some suitable elastic material, rubber being preferably employed for this purpose. As shown, the upper section A consists of a metal plate provided at its front with the usual toe-clip a , and the inner edge of this plate A is provided with a depending flange a' . Preferably the flange a' extends around the toe and quarters of the plate or section A, but is cut away adjacent the heel portion of the plate. In practice I prefer (although it is not essential) to form the plate or section A from sheet-iron or mild steel, as this enables the plate to be made very light and at small cost. When the plate is thus made of sheet metal, I prefer to revert or fold back the outer edge of the plate or section A opposite the points at which will be formed the holes a^2 , that receive the usual nails, whereby the shoe will be attached to the horse's hoof. This reverted portion a^3 of the plate or section serves to give great strength

to the parts at the point at which such strength is required and avoids the necessity of using greater thickness of metal throughout the portions of the plate which do not require it. While features of my invention may be employed without forming the plate or section A of sheet metal, I deem this construction preferable, and so far as I am aware this invention presents the first instance of a horseshoe in which the outer edge is reverted or folded onto itself at the points where the nail-holes are to be formed.

The depending flange a' of the section or plate A is formed with a slot or seat a^4 , preferably at a point opposite the toe of the shoe, the purpose of this slot being to receive a lug b , that projects inwardly from the lower plate or section B of the shoe. This plate or section B comprises a flat horizontal portion b' , having at its outer edge a vertical depending flange. As shown, the horizontal portion b' is formed with cut-away or open spaces b^2 between the portions of the flange, the purpose of which is to permit the pad C to project therethrough. This pad C, which is of rubber or like elastic material, extends around the depending flange a' in the upper plate or section A and beneath the heel portions of said section, and, as shown, the pad C extends over the plate or section B, and consequently between it and the upper plate or section A. The pad C is held in place by the lower plate or section B. The toe of the plate or section B is connected to the depending flange a' of the plate or section A by the lug or tongue b entering the slot or seat a^4 , and preferably the heel portions of the plate B are connected to the plate or section A at such points by bending outwardly the heel portions a^6 of the depending flange a' , the flange being formed with slits or cuts a^5 for this purpose. It will be observed that the slot or seat a^4 of the flange a' is somewhat deeper than the thickness of the lug or tongue b , the purpose of this being to allow a slight vertical movement of the plate B with respect to the upper plate or section A. So, also, it will be seen that while the inwardly-turned heel portions a^6 serve to hold the lower section B against downward movement they still permit a vertical movement of the lower section with respect to the upper one. The pad C preferably has its outer edge formed with a groove or rabbet c to receive a vertical portion of

the plate or section B and with grooves or seats c^2 to receive the horizontal portion b' of this plate. Preferably, also, the pad C is cut away, as at c^4 , to permit the heel portions a^6 of the flange a' to be folded outward in order to retain the parts securely together.

By reference to Fig. 3 of the drawings it will be seen that when the plate or section B is set in position about the depending flange a' of the section A the inward extensions b^5 at the heel portions of the section B will project behind the ends of the depending flange a' of the section A, and thus aid in more securely locking the parts against displacement.

In practice I prefer to secure the sections A and B and the elastic pad C in the position shown by Fig. 1 before the shoes are shipped to the trade. To do this, the pad C will be set within the section B, the horizontal portions b' of the section B setting within the corresponding slots c^2 , formed in the pad. The section B and the pad C will then be placed over the depending flange a' of the plate or section A, the lug or tongue b being first inserted in the slot or seat a^4 . The heel portions a^6 of the flange will then be bent outwardly until they overlap the heel portions b^5 of the flange of the plate B. When the parts are thus put together, the finished shoe will have the appearance shown in Fig. 1. In some instances, however, it is desirable to ship the parts of the shoe separate, as this enables the blacksmith who is to set the shoes to modify the precise shape of the shoes in keeping with any peculiarities of the hoofs of the horses to be shod. The shape and construction of the sections A and B of my improved shoe are particularly advantageous not only because they enable the shoe to be formed with great strength and lightness, but also because the metal sections of the shoe can be readily modified by the ordinary blacksmith to conform to any peculiarity of horses' hoofs to which the shoes are to be applied. One marked advantage of my invention is the ease and readiness with which the parts can be put together.

In order to give increased strength to the shoe at the toe portion and without materially increasing its weight, I prefer to form the vertical wall of the toe portion of the plate B with vertical corrugations b^6 , and, if desired, also the heel portions of the plate B may also be corrugated, as at b^7 . In order to give a better gripping action to the pad, I prefer to embed therein in the process of molding it strips of canvas or threads of like fibrous material arranged vertically, so that as the rubber wears the ends of the threads will continue to be exposed.

From the foregoing description it will be seen that with the parts assembled as shown a portion of the pad C is interposed between the sections A and B of the shoe, while a portion of the pad extends below the horizontal flange of the section B. Inasmuch as the section B is susceptible of a slight vertical move-

ment, it follows that when the weight of the horse is thrown upon the shoe it compresses that portion of the pad C between the upper and lower sections A and B. The elastic action thus obtained will save the horse from shocks incident to the use of ordinary solid shoes, while at the same time the lower face of the pad C, being pressed downward under the horse's weight, will form a tread that will prevent the slipping of the horse upon snow or ice and will also avoid the noise incident to the striking of the shoes against the pavements.

It is obvious that without departing from the spirit of the invention the sections A and B may be connected in any suitable manner that will allow of a vertical movement of the section B. Thus, for example, instead of forming a slot in the flange a' of the section A and a tongue on the section B the toe portion of the flange a' may be slitted and turned outwardly, so as to overlap the flange of the section B, thus connecting the parts in the same manner as the heel portions of the sections are connected.

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

1. A horseshoe comprising an upper horizontal plate or section, a lower horizontal plate or section yieldingly interlocked with said upper plate or section, flexible material secured in place between said horizontal plates or sections to act as a cushion, and flexible material secured in place directly beneath said lower horizontal plate or section to act as a non-slipping tread.

2. A horseshoe comprising an upper horizontal plate or section, a lower horizontal plate or section yieldingly interlocked with said upper horizontal plate or section, a pad of flexible material secured in position with a portion thereof interposed between said horizontal plates or sections to act as a cushion and a portion extending directly beneath said lower horizontal plate to act as a non-slipping tread.

3. A horseshoe comprising an upper horizontal plate or section, a lower horizontal plate or section yieldingly interlocked with said upper plate or section, flexible material secured in place between said horizontal plates or sections to act as a cushion, and flexible material secured in place directly beneath said lower horizontal plate or section to act as a non-slipping tread, one of said plates or sections being provided with a vertical, depending flange for supporting and protecting said cushion and said tread.

4. A horseshoe comprising a pair of yieldingly-interlocked horizontal plates, a pair of vertical, depending flanges, and flexible material interposed as a cushion between said plates and interposed as a non-slipping tread between said depending flanges and directly beneath the lower horizontal plate.

5. A horseshoe comprising an upper plate

or section, a lower horizontal plate or section movably secured thereto, and a flexible pad grooved or recessed lengthwise to engage both the upper and lower surface of said lower plate or section, whereby a portion of said pad is located as a cushion between said plates or sections and a portion is exposed as a non-slipping tread beneath said lower plate or section.

6. A horseshoe comprising an upper horizontal plate or section provided at its inner edge with a depending flange, a lower horizontal plate or section movably connected thereto, and a flexible pad extending about and outside of said depending flange and connected to said lower plate or section, a portion of said pad being located between said upper and lower plates or sections to form a cushion and a portion extending beneath said lower plate or section to form a non-slipping tread.

7. A horseshoe comprising an upper horizontal plate or section provided at its inner edge with a depending flange, a lower horizontal plate or section having projections engaging said flange with cut-away portions between said projections, and a flexible pad extending about and outside of said depending flange and above and below said lower horizontal plate through said cut-away portions.

8. A horseshoe comprising an upper plate or section, a lower section movably connected thereto, and an elastic pad connected to said lower section to form a cushioned and non-slipping tread, said lower section comprising a depending vertical flange extending about and outside of said pad.

9. A horseshoe comprising an upper plate or section, a lower section, and a flexible pad forming a cushioned and non-slipping tread, said lower section comprising a depending vertical flange extending about and outside of said pad, said vertical flange being vertically corrugated at its toe portion.

10. A horseshoe comprising an upper horizontal plate or section provided with a depending flange, a lower horizontal plate or section provided with a depending flange, and flexible material interposed as a cushion between said horizontal plates or sections and interposed as a non-slipping tread between said depending flanges and beneath said lower horizontal plate or section.

11. A horseshoe comprising an upper horizontal plate or section provided with a depending flange, a lower horizontal plate or section provided with a depending flange, and a pad of flexible material having a groove engaging said lower horizontal plate, a portion of said pad interposed between said horizontal plates or sections to act as a cushion and a portion extending beneath said lower plate or section and between said depending flanges to act as a non-slipping tread.

12. A horseshoe comprising an upper horizontal plate or section provided with a de-

pending flange, a lower horizontal plate or section provided with a depending flange and horizontal projections engaging the depending flange of the upper section with cut-away portions between said projections, and a pad of flexible material interposed between said depending flanges and extending above and below said lower horizontal plate through said cut-away portions.

13. A horseshoe comprising an upper plate or section, a lower plate or section arranged to movably interlock with said upper plate or section, each of said plates or sections being angular in cross-section, and a pad of flexible material arranged with a portion thereof intermediate the horizontal parts of said plates or sections to act as a cushion and with a portion between the vertical parts of said plates or sections and beneath the horizontal part of said lower plate to act as a non-slipping tread.

14. A horseshoe comprising an upper plate or section having its inner edge formed with a depending flange, a lower plate or section, and an intermediate elastic pad, one of said plates or sections being formed at its toe with a tongue or part adapted to engage the other of said sections, said upper section having its heel portions provided with flexible lugs or flanges adapted to be bent outwardly to secure the heel portions of the sections together.

15. A horseshoe comprising an upper plate or section, the toe portion whereof is provided with a depending flange having a slot or seat therein and the heel portion whereof is provided with depending lugs or flanges adapted to be folded outwardly, a lower plate or section provided at its toe with a tongue to enter the slot or seat of the upper section and provided at its heel portions with parts to be engaged by said outwardly-folded lugs, and an elastic pad extending between said upper and lower plates or sections.

16. A horseshoe comprising upper and lower plates or sections suitably connected together, and an intermediate elastic pad, the upper plate or section having its outer edge reverted upon itself and provided at such points with nail-holes.

17. A horseshoe comprising an upper plate or section having its inner edge provided with a depending flange, a lower plate or section provided with a vertical flange having horizontal projections extending inwardly therefrom, and an elastic pad arranged between said upper and lower sections and provided with slots or seats to receive the projections of the lower section, said pad extending beneath said lower section to form the tread of the shoe.

SIDNEY McCLOUD.

Witnesses:

GEORGE P. FISHER, Jr.,
ALBERTA ADAMICK.