

No. 697,172.

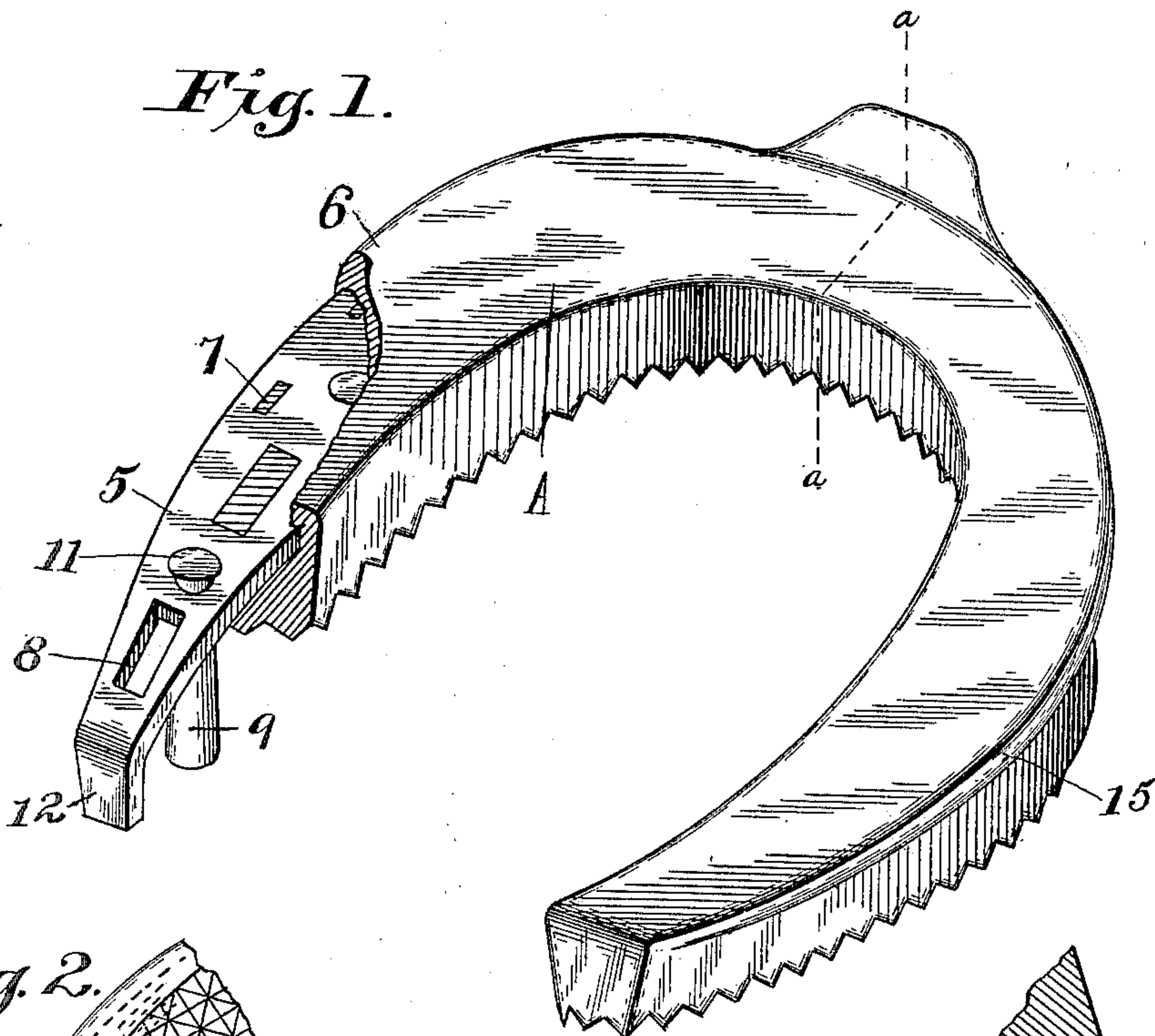
Patented Apr. 8, 1902.

J. RILEY.  
HORSESHOE.

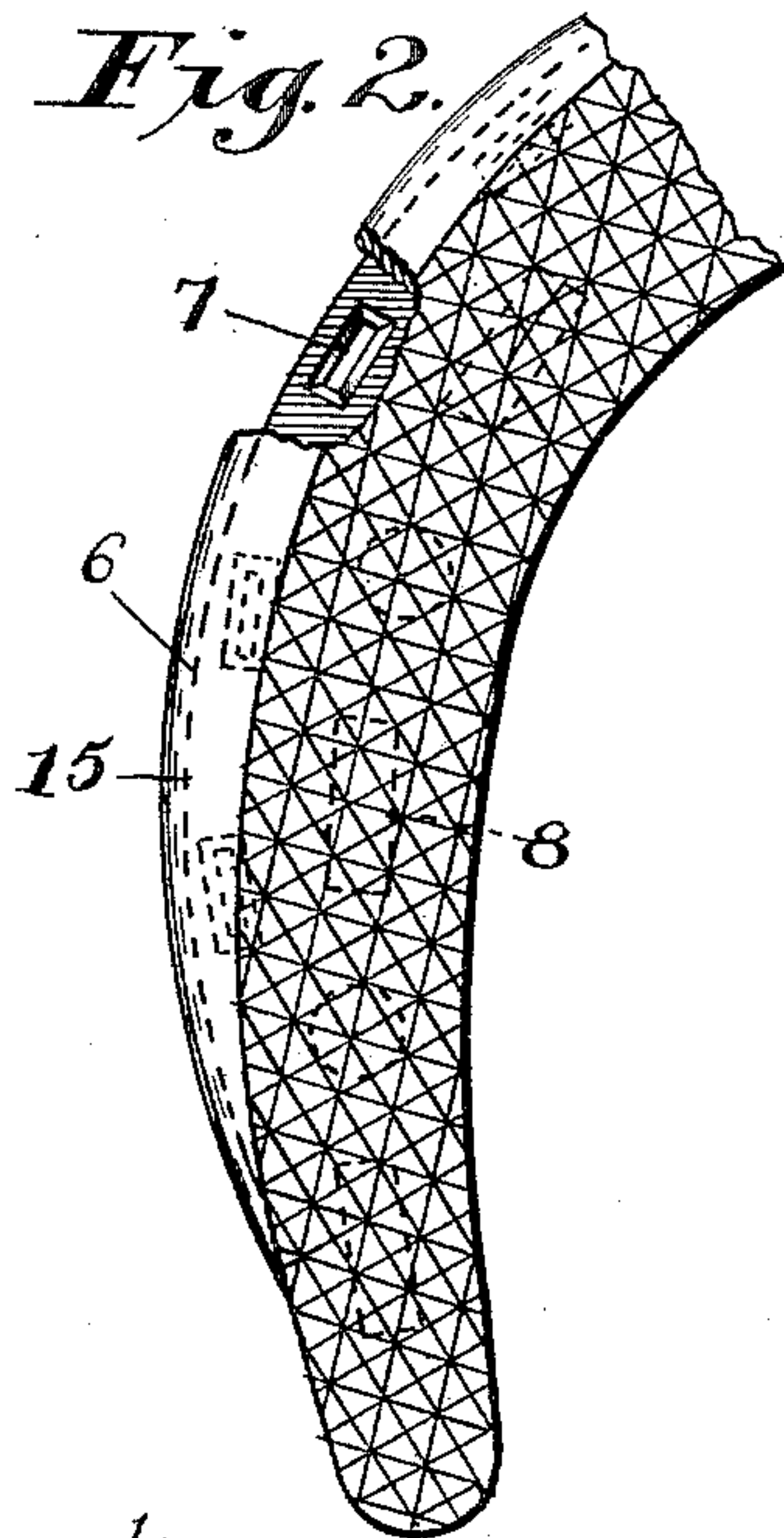
(Application filed Nov. 16, 1901.)

(No Model.)

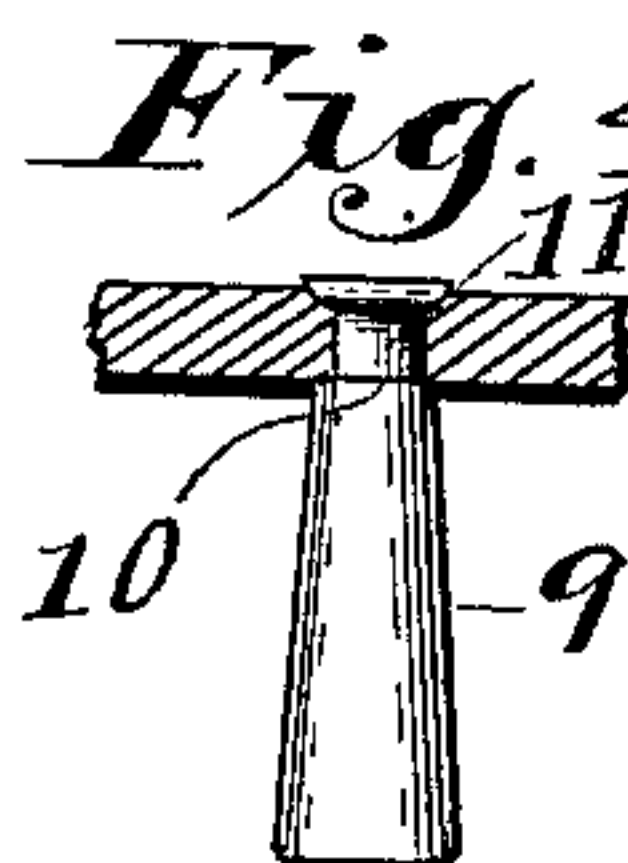
*Fig. 1.*



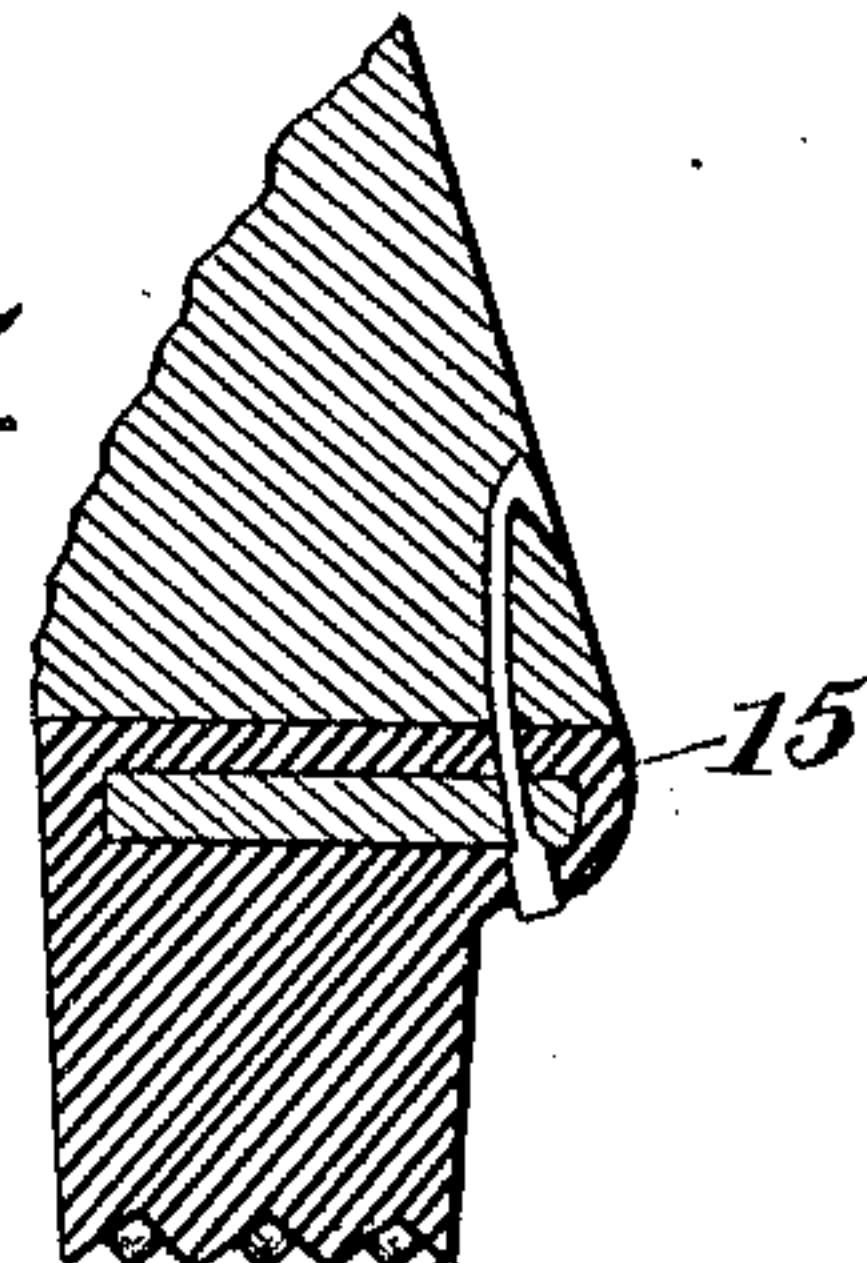
*Fig. 2.*



*Fig. 4.*



*Fig. 5.*



*Fig. 3.*



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN RILEY, OF NEW YORK, N. Y.

## HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 697,172, dated April 8, 1902.

Application filed November 16, 1901. Serial No. 82,519. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN RILEY, a citizen of the United States, residing in New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Horseshoes, of which the following is a specification.

This invention relates to improvements in horseshoes of that type in which yielding material is applied to and held in shape by a metal shoe or frame.

The object of the invention is to provide a shoe of this character of durability and efficiency, wherein the yielding portion is securely and firmly held upon and shaped by a rigid portion.

Another object of the invention is to provide a shoe wherein the elastic or yielding portions are securely applied to the top and bottom of the shoe or frame.

Another object of the invention is to provide a shoe of this character wherein it is possible to cold shape it upon an anvil without injury to the structure.

Another object of the invention is to provide a shoe wherein the heads of the nails securing the shoe to the hoof are maintained out of contact with the ground when the shoe is being worn.

In carrying out my invention I employ a metal frame to give shape to the shoe, which frame is completely covered with some yielding material, suitable openings being provided at intervals in the metal frame to permit the outer material to run through and produce bonds between the tread portion and the sole portion or hoof-pad of the shoe.

By my invention a shoe is produced having a soft or yielding tread and a soft or yielding hoof-pad between the hoof and the metal shoe. By the use of pillars or posts which project from the metal portion of the shoe and by means of bonds and by means of calks at the toe and heel the yielding material is so securely held upon the metal portion that it is possible, if the metal portion be made of the proper material, to cold-bend the shoe upon an anvil without distorting the yielding material from the frame or injuring the same in such a manner as to shorten the life of the structure. By providing a ledge which projects beyond the tread portion of

the shoe for the nail-holes it is possible when the shoe is in use to maintain the heads of the nails from contact with the pavement or ground, and by such means the shoe will be constantly and securely held in place on the hoof, because when ordinarily a yielding pad is placed between a hoof and a metal shoe the heads of the nails are so located that they will have contact with the ground or pavement upon the tread of the horse and the yielding pad will compress, permitting the shoe to yield and the nails to protrude. The weight of the horse will then push the nails upward, having a tendency to loosen and unclench them; but by my invention the heads of the nails are kept from such injurious contact, and consequently the nails will remain in place and retain the shoe for a much longer time than the devices heretofore employed by others, and by having the edges of the shoe covered by an elastic material the injurious effects of interfering will be minimized.

In the drawings accompanying and forming part of this specification, Figure 1 is a perspective view of a form of shoe embodying my invention, portions of the yielding material being broken away. Fig. 2 is a bottom view of one side thereof, showing parts broken away. Fig. 3 is a section on the line *a a* of Fig. 1. Fig. 4 is a detail of a securing-pillar, and Fig. 5 is a fragmentary cross-section of the hoof and shoe, showing position of nail-heads.

The shoe (designated in a general way by A) embodies a rigid portion 5 for framing and giving shape to the shoe, which portion is covered by a coating 6 of yielding material. The portion 5 may be provided with suitable nail-holes 7 and slots 8 and tapered pillars 9, projecting downwardly, which pillars are shown as having shoulders 10 and being riveted in place, and may also have slight upward projections 11, and, if desired, such metal portion may be provided at the heel with clips 12 after the analogy of calks and at the toe with clips 13 after the analogy of calks and an upwardly-projecting clip 14. The yielding material may be molded upon the metal portion, completely enveloping it and the calks and pillars and running through the slots, forming bonds between the lower and upper portions of such material, which por-



tions constitute the tread and the hoof-pad, respectively.

For the purpose of giving shape to the toe of the tread portion the front of the clip or calk 13 may be made transverse to the plane of the tread and may continue upward in a toe-clip 14, having its front running in the same general plane as the calk, both of which are to be covered with the yielding material. The clips or calks 12 and 13 maintain the yielding material between them in position, preventing displacement thereof.

After the shoe has been made the nail-holes may be cut open or the nail may be driven through, forcing out the covering material as it passes through. As the tread portion wears away the calks and pillars will come to the surface and will wear away with the tread, so that the sole will constantly remain true. The pillars may be made tapering, the smallest end being secured to the metal portion, by which means there will be a constant binding of the tread, even if it should become loosened from its hold upon the frame. The top or riveted ends 11 of the pillars may project slightly above the upper surface of the metal frame, so as to form upwardly-projecting stays to hold the yielding material against any side thrusts and prevent it from being drawn in that way from the frame.

The yielding material covers the sides of the metal portion at the quarters, forming pads 15, which will prevent any injurious results of interfering.

The inner wall of the coating material from the top of the hoof-pad to the bottom of the tread may be made out of the perpendicular or slanting, so that viewed from the under side or tread the shoe will be flaring, the inner cavity having larger cross-section at the tread than at the sole. This construction enables the shoe to purge itself of all foreign substances seeking to find lodgment therein.

I have found in practice that a steel frame covered with rubber will produce a shoe giving the desired efficiency, but do not limit myself to these materials nor to details of structure, as other materials may be employed and changes made in the mechanical

features of the parts without departing from the scope or spirit of my invention.

Having described my invention, I claim—

1. A horseshoe, comprising a metal frame, having slots and holes therethrough; depending tapered pillars, riveted through the holes in the frame, and projecting above the upper face thereof; an elastic material completely surrounding the frame and engaging the depending and projecting portions of the pillars and binding the portions above and below the frame with integral binders passing through the slots.

2. In a horseshoe, the combination of a metal frame, having clips at the heel and toe, and a yielding material completely surrounding the frame and embodying a tread portion located between the clips.

3. In a horseshoe, the combination of a metal frame, having at the toe a clip or calk depending therefrom, the front of which is in a plane substantially transverse to the plane of the frame; a toe-clip above said calk, having its front face in the same plane as the front of the calk; and rubber completely surrounding said frame and clips.

4. A horseshoe, comprising a metal portion having openings therethrough, tapered pillars attached by their small ends to the metal portion, an elastic material entirely surrounding said metal portion and pillars, bonds integral with and uniting the elastic material on the upper and lower sides of the metal portion, and passing through the openings in the metal portion.

5. A horseshoe, comprising a metal portion, having upwardly-projecting stays, an elastic material secured upon its upper portion and surrounding the stays.

6. A horseshoe, provided with a metal portion, having upwardly-projecting stays and slots; and a hoof-pad applied to such upper portion, enveloping the stays and entering the slots.

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Witnesses:

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