

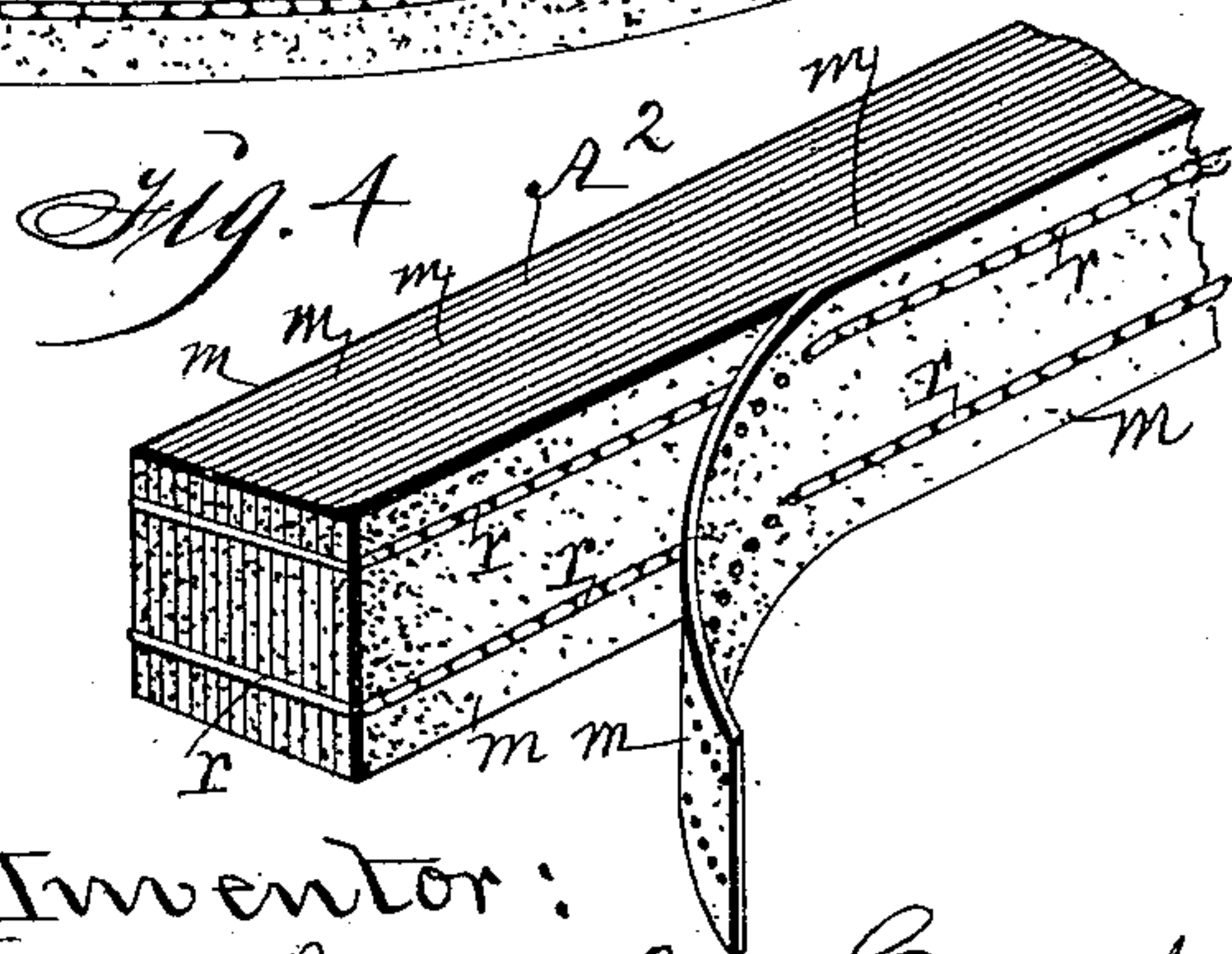
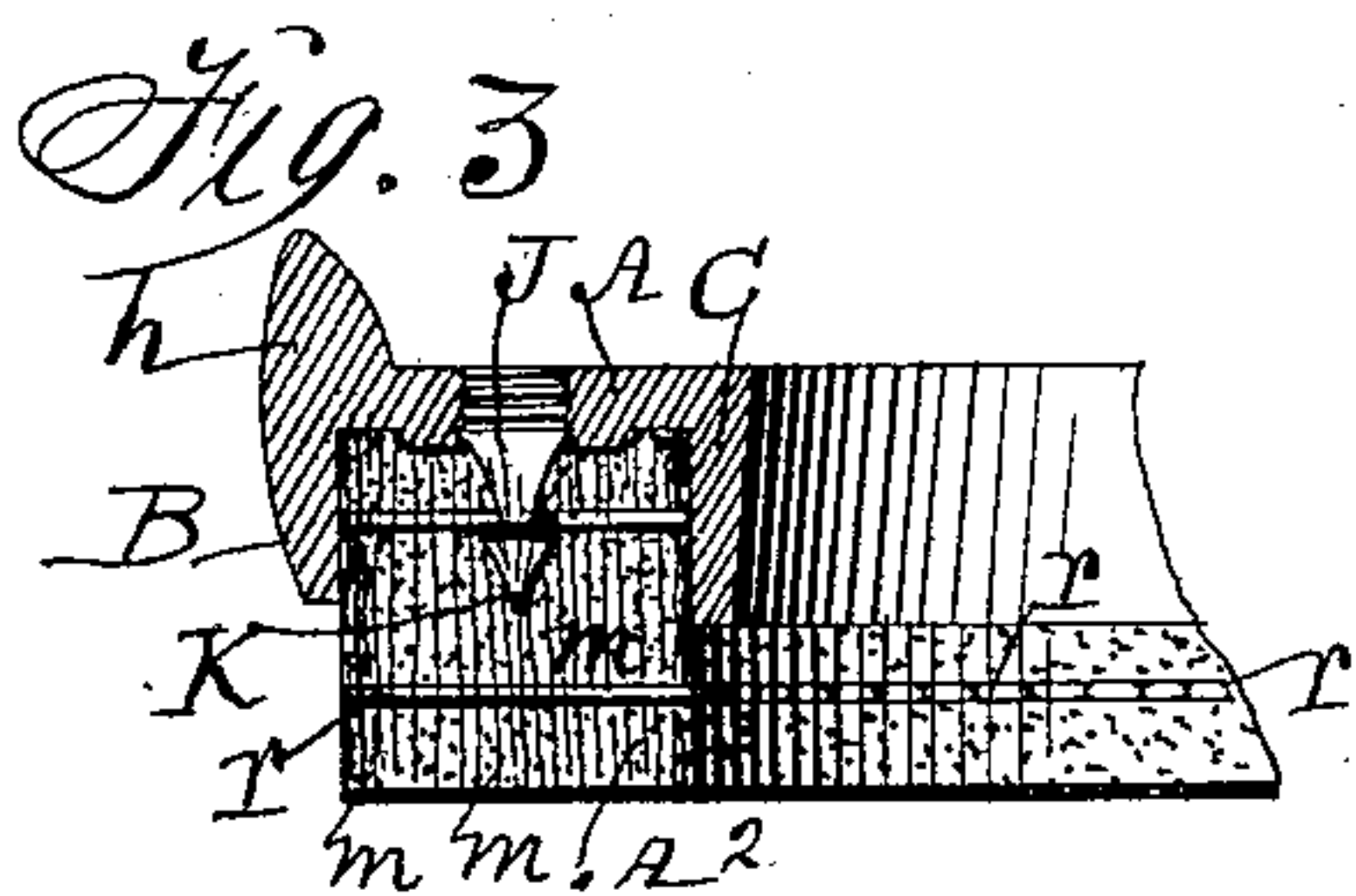
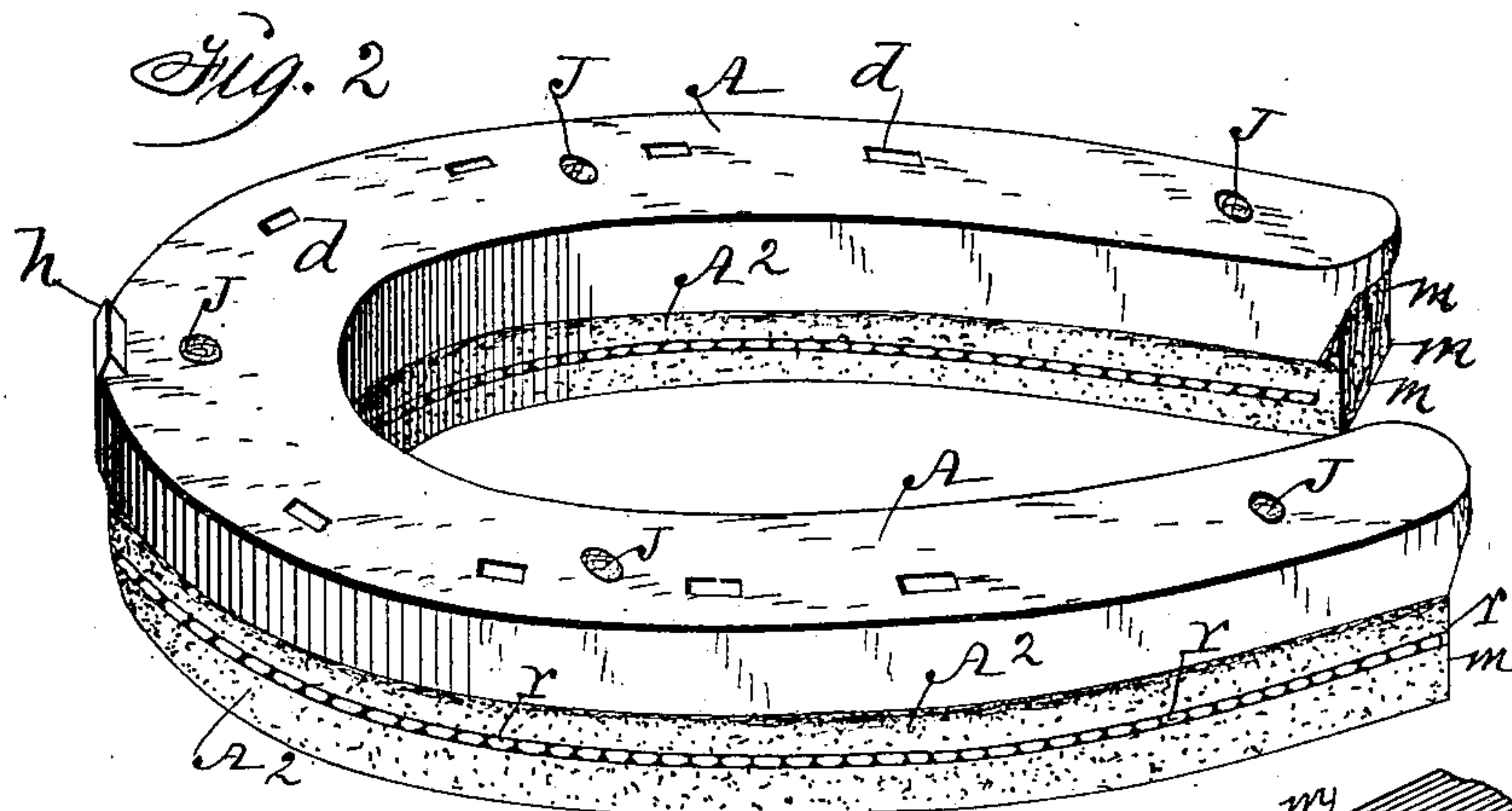
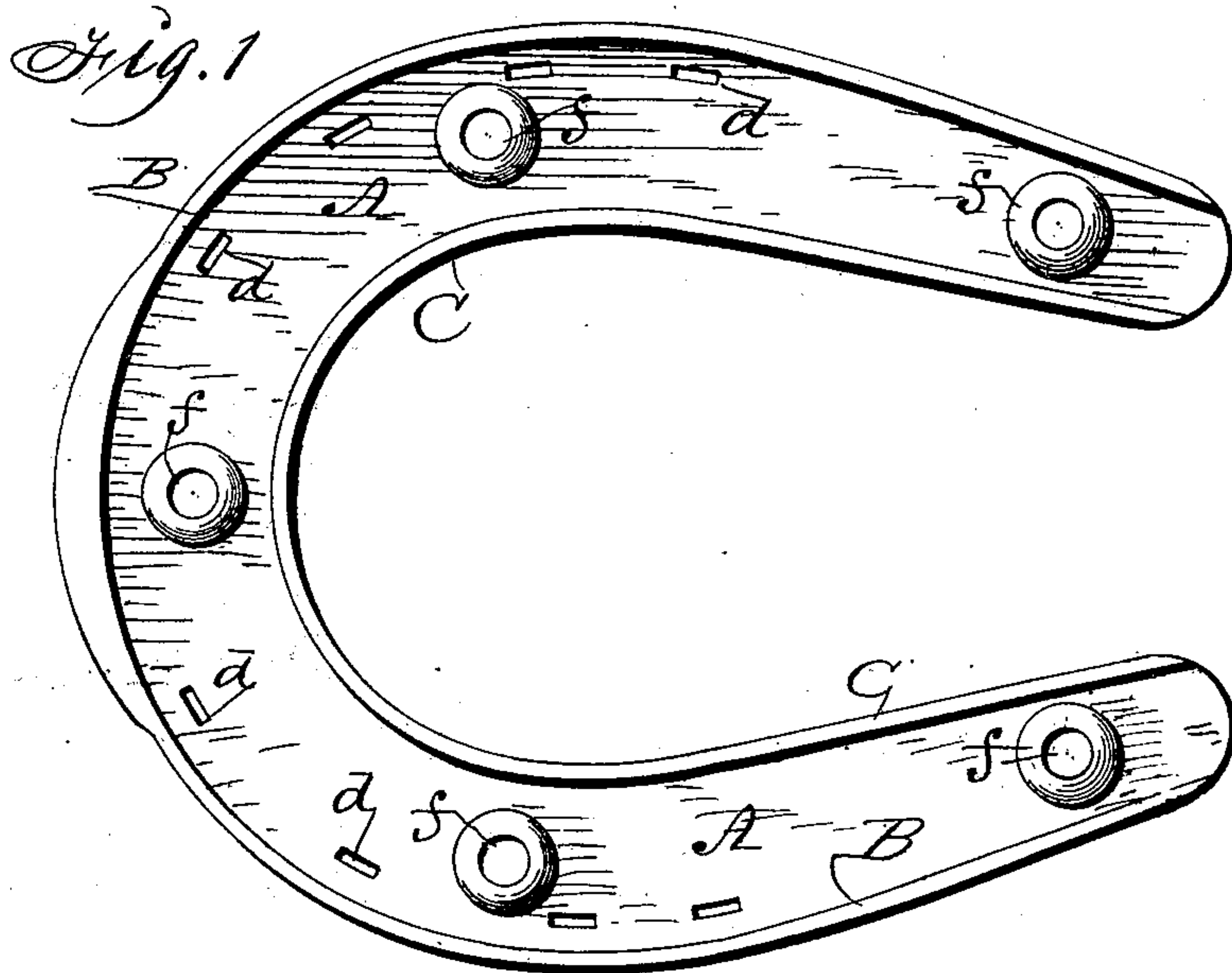
No. 646,534.

Patented Apr. 3, 1900.

J. M. CAMP.
CUSHIONED HORSESHOE.

(Application filed June 26, 1899.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JAMES M. CAMP, OF DES MOINES, IOWA.

CUSHIONED HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 646,534, dated April 3, 1900.

Application filed June 26, 1899. Serial No. 721,803. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. CAMP, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Cushioned Horseshoe, of which the following is a specification.

My object is to provide a cushioned horseshoe composed of a metal form that is adapted for perpetual use and also adapted for detachably connecting therewith an elastic portion that will cushion the metal, as required to prevent concussion and damage to a horse and the annoyance of noise incident to the striking of a metal shoe upon hard substances as a horse is advancing over a paved street.

My invention consists in the construction and combination of a metal shoe and an elastic cushion, as hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a bottom view of the metal portion of the shoe, adapted to be nailed to a hoof in a common way and also adapted for fixing a cushion to the underside of the metal. Fig. 2 is a perspective view showing the metal and elastic cushion combined as required for practical use when fixed to the hoof of a horse. Fig. 3 is a transverse sectional view of the toe portion of the shoe, showing how studs and cushioning materials are detachably connected with the metal. Fig. 4 is a perspective view of a piece of the elastic cushioning material adapted to be securely fastened to the metal shoe by means of the metal studs.

The letter A designates the metal portion of my shoe. It is cast in a mold and may vary in size, as required to suit the hoofs of horses that differ in size. It has an integral flange B at its outer edge and a corresponding flange C at its inner edge, extending downward. It is provided with nail-holes *d*, through which nails may be driven, as required to fasten the shoe to a hoof in a common way. It has a plurality of screw-seats *f*, adapted for detachably connecting studs thereto. The metal on an annular space around the screw-seats is preferably thicker than the remainder of the shoe, as indicated by circular lines in Fig. 1, to aid in securely fastening the studs and also to aid in compressing cushioning material compactly around the studs. The toe portion of the outer flange B is thicker and

heavier than the remainder of the flange, and *h* is an integral vertical projection adapted to overlie the front of a hoof in a common way. Studs J have screws at their bottoms adapted to be fixed in the screw-seats *f*, and heads K of larger diameter at their tops, that are pointed and adapted to penetrate a cushioning material and have flat bottoms that serve as annular shoulders to engage the cushions. It is obvious, however, that the studs may be formed integral with the metal shoe by placing them in the mold before the mold is filled with molten metal or otherwise rigidly fixed in their places.

The flexible elastic cushion A² consists of a plurality of laminae *m*, composed of flexible woven fabrics cemented together with rubber and cut in strips of suitable width and length and then stitched together with suitable twine or wire by machinery in such a manner that pieces can be readily fitted to a horseshoe and securely fastened thereto by means of the studs J and the flanges B and C projecting from the shoe, as shown in Fig. 3, so that all the overlying parts *m* will extend vertically relative to the shoe and the bottom edges of all of them come into contact simultaneously with the hard surface upon which the horse treads, and consequently all be subject to wear at the same time and uniformly at their bottom edges only, while all the remaining part is retained intact. The layers of flexible material thus connected and positioned relative to a horseshoe will cause the cushioning material to be more effective in practical use and will wear off slower, and consequently last much longer, than when in a horizontal position and subject to wearing off singly in succession. The stitches *r*, consisting of thread or wire, produce continuous lines in different planes that are more compact and harder than the remaining portions of the cushion and aid materially in retaining the overlaying parts *m* firmly united and also serve as a means of securely fastening the cushion A² to the metal A by overlaying the flat bottoms of the heads K of the studs J, as shown in Fig. 3.

In the practical use of the shoe thus constructed the metal portion A is fitted and fixed to a horse's hoof in a common way and the cushion A² then detachably and securely

fixed to the metal by simply pressing it between the flanges B and C and forcing the pointed heads K of the studs J into the cushion A² and into position relative to the flanges and studs, as shown in Fig. 3.

Having thus described the construction and combination of the different parts of my invention, its application, operation, and utility will be understood by persons familiar with the art to which it pertains, and

What I therefore claim as new, and desire to secure by Letters Patent, is—

1. In a cushioned horseshoe, a metal portion having flanges at its inner and outer edges projecting downward and a plurality of annular enlargements between the flanges and screw-seats extended through said enlarged plates for detachably fixing studs thereto in the manner set forth for the purposes stated.

2. A flanged metal horseshoe having flanges extending downward from its outer and inner edges and a plurality of studs having pointed heads that are larger in diameter than the adjacent parts of the studs fixed to the shoe to project downward between the flanges in the manner set forth for the purposes stated.

3. A metal horseshoe having flanges B and C at its edges, a plurality of nail-holes *d* and a plurality of screw-seats *f* and an annular space around the seats increased in thickness between the flanges and studs J, having screws at their bottom ends and enlarged pointed heads K at their other ends adapted

to penetrate and fasten a cushioning material in the manner set forth for the purposes stated.

4. In a horseshoe, an elastic cushioning material consisting of a plurality of laminæ composed of flexible sheet material cemented together, in combination with a metal shoe having fixed studs provided with pointed heads that have flat bottoms adapted to serve as annular shoulders in engaging the cushioning material in the manner set forth.

5. An elastic cushioning material composed of overlaying strips of flexible woven fabric cemented together with an elastic cement and also stitched together as shown and described for the purposes stated, in combination with a metal horseshoe having fixed studs provided with enlarged pointed ends or heads adapted to be engaged by the stitches to aid in fastening the cushion to the metal in the manner set forth for the purpose stated.

6. A cushioned horseshoe comprising a metal portion having flanges at its edges and under side and studs between the flanges and the studs provided with pointed heads that have flat bottoms adapted to serve as annular shoulders and a cushion fitted between the flanges and fixed to the studs in the manner set forth, for the purposes stated.

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