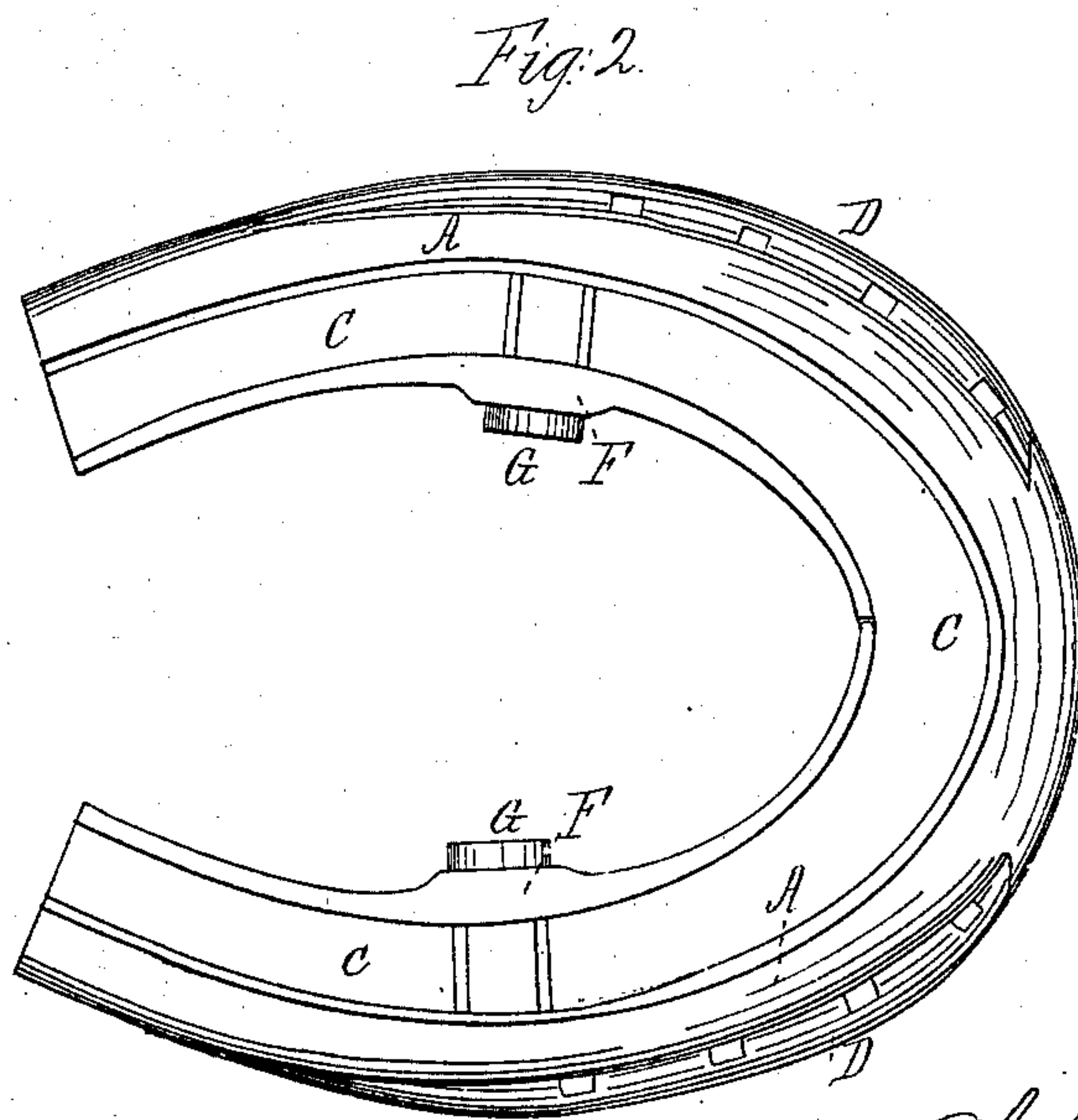
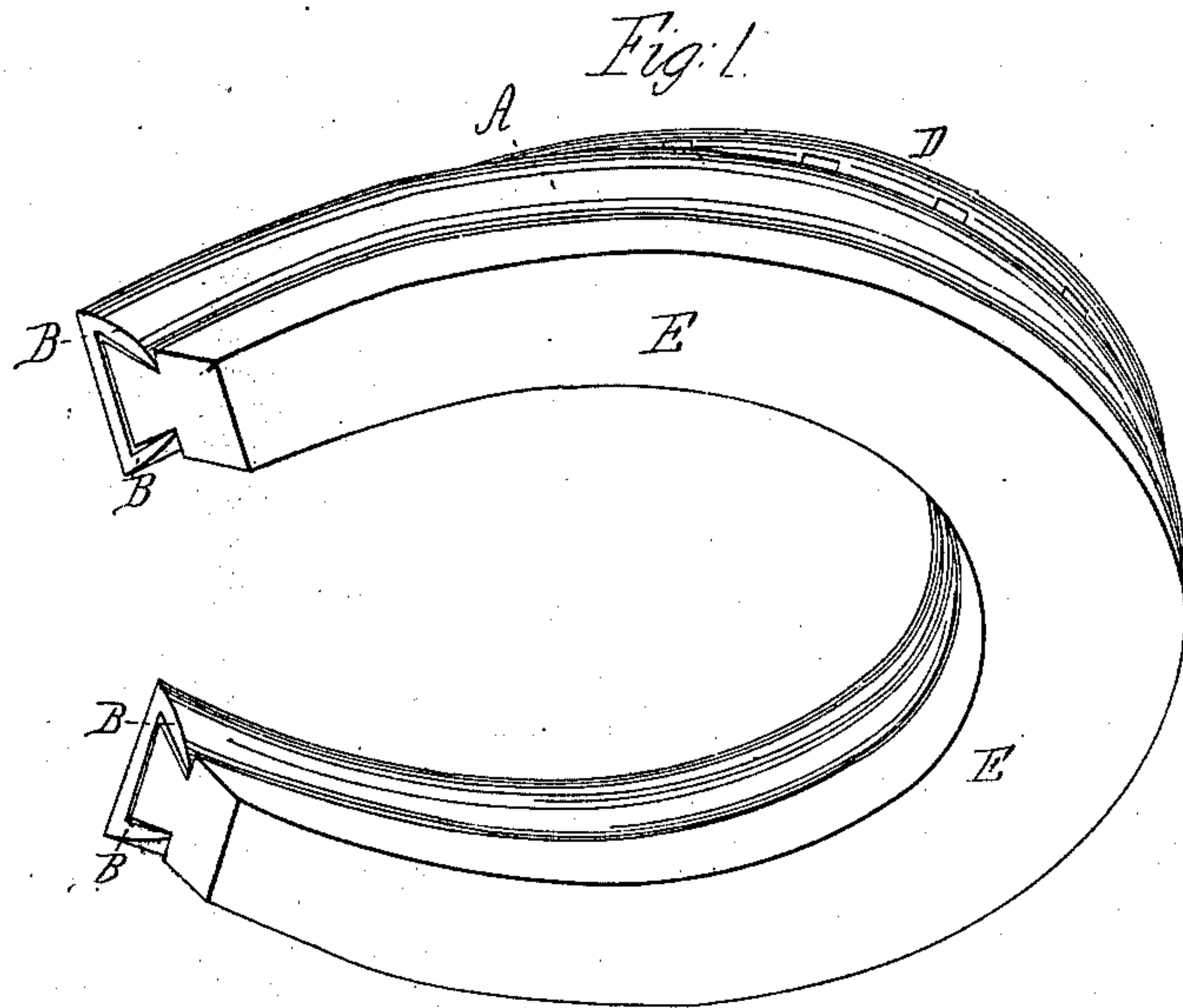


J. S. TOAN.
HORSESHOE.

No. 80,033.

Patented July 14, 1868.



Witnesses:

Thos. Connolly
J. S. Brown,

Inventor:

John S. Toan
By his atty
R. D. O'Connell
451 Seventh St

UNITED STATES PATENT OFFICE.

JOHN S. TOAN, OF KING'S FERRY, NEW YORK.

IMPROVEMENT IN HORSESHOES.

Specification forming part of Letters Patent No. 80,033, dated July 14, 1868.

To all whom it may concern:

Be it known that I, JOHN S. TOAN, of King's Ferry, in the county of Cayuga and State of New York, have invented a new and useful Improvement in Horseshoes; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being made to the accompanying drawings, in which—

Figure 1 is a perspective view of one of my shoes complete. Fig. 2 is a plan view of one of my shoes, differently constructed, incomplete.

The nature of my invention consists in providing an elastic and adhesive sole for a horseshoe, which shall relieve the horse's foot of the shock experienced in traveling upon pavements, and shall also render the foot less liable to slip upon a smooth pavement.

That others may understand the construction and operation of my invention, I will particularly describe it.

A is the iron shoe, similar in form to those ordinarily used. Instead, however, of being forged in a solid bar of the required shape, my shoe is a mere shell of thin iron, and may be constructed of malleable cast-iron or other suitable metal. The sides or edges of this shoe are turned up and inclined toward each other, so as to form a recess, C, or groove having a dovetailed section, as shown at B B, Fig. 1. This recess runs from one end of the shoe to the other, as shown in Fig. 2.

Along the outer edge of the base of the shoe, and toward the toe, are the flanges D D, through which are holes for the nails by which the shoe is to be attached to the horse's foot.

The sole E is made of any suitable material, self-vulcanized rubber being preferred. It should be molded into the groove C before being vulcanized, so that said groove will be perfectly filled; and it will be an advantage if that portion of the sole which is inclosed within the walls of the groove is made of hard rubber, as giving a firmer hold and better security against accidental displacement.

In order to permit the sole E to be removed and replaced without difficulty, for the pur-

pose of renewing when worn out, and without removing the shell from the horse's foot, I sometimes make the inner wall of the groove removable, as shown at F, Fig. 2, securing those removable parts by screws G G. When these screws are removed the pieces F may be displaced, and the sole E taken away and another put in its place, and the whole secured as before, and this without removing the shell A from the horse's foot.

That part of the sole which is at the toe should be made broader than the other parts, as it is most exposed to wear.

Any person who has observed the evident relief experienced by a horse when he leaves the hard pavement and steps upon the natural soil of a dirt-road, or has witnessed the constant struggle to maintain a sure footing upon the smooth pavement of a much-traversed street, cannot be insensible of the benefit to be derived from an elastic shoe which shall interpose between the hoof and the pavement, and, above all, of the relief that a shoe which will not slip upon a smooth pavement will give to muscles which are otherwise constantly strained to preserve a footing.

India-rubber possesses the qualities required in an eminent degree. It is elastic, and in the process of vulcanizing can be so modified as to give it any required degree of elasticity. Its elasticity enables it to resist abrasion; and it possesses the quality of adhesiveness, which will prevent the foot shod with it from slipping on the smoothest pavement.

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

1. A horseshoe provided with a nail-flange, D, and an india-rubber sole, substantially as described.

2. The clamps F F, for the purpose of readily securing and removing the india-rubber sole E, substantially as described.

JOHN S. TOAN.

Witnesses:

R. D. O. SMITH,
ANDREW WHITELEY.