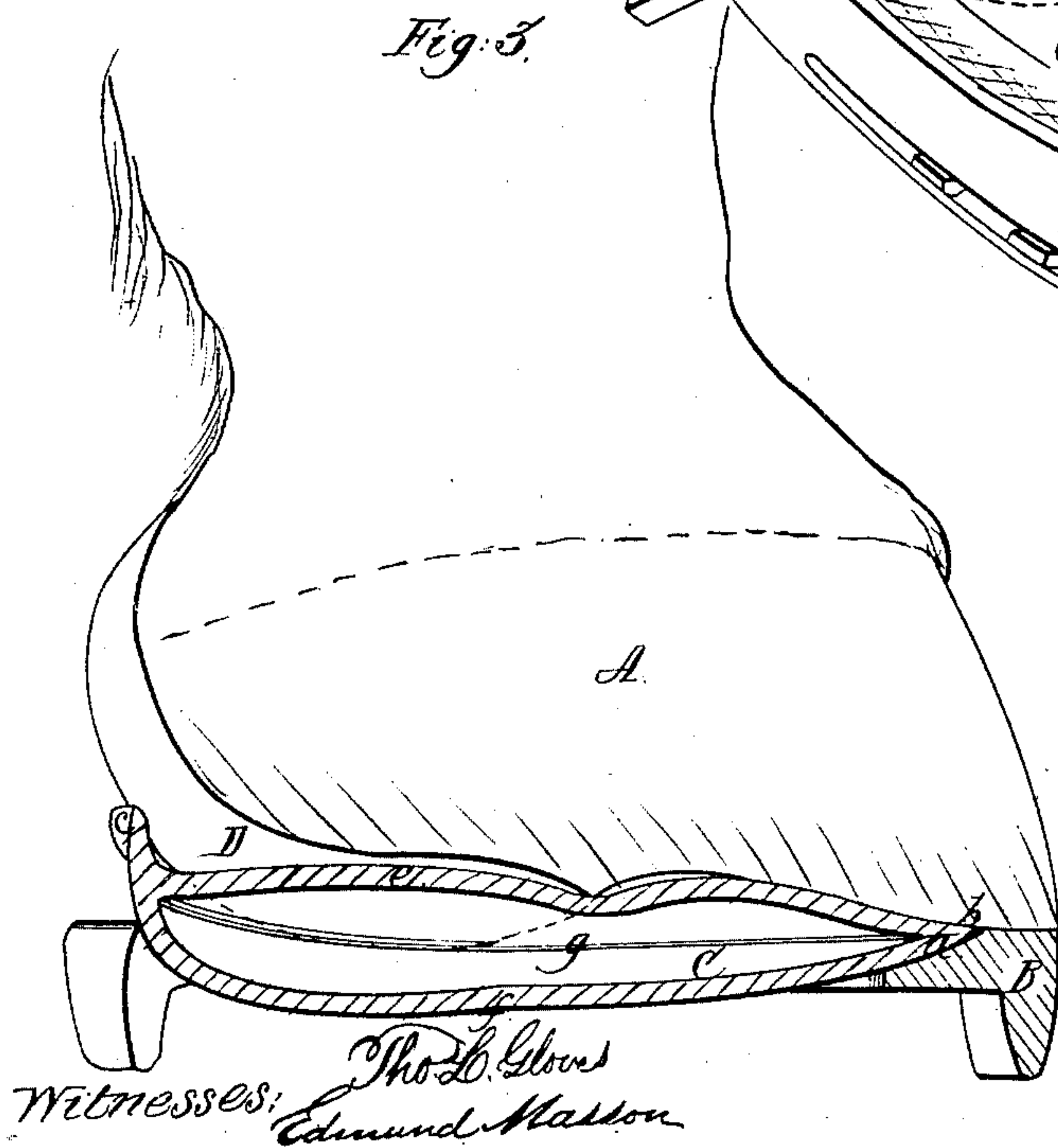
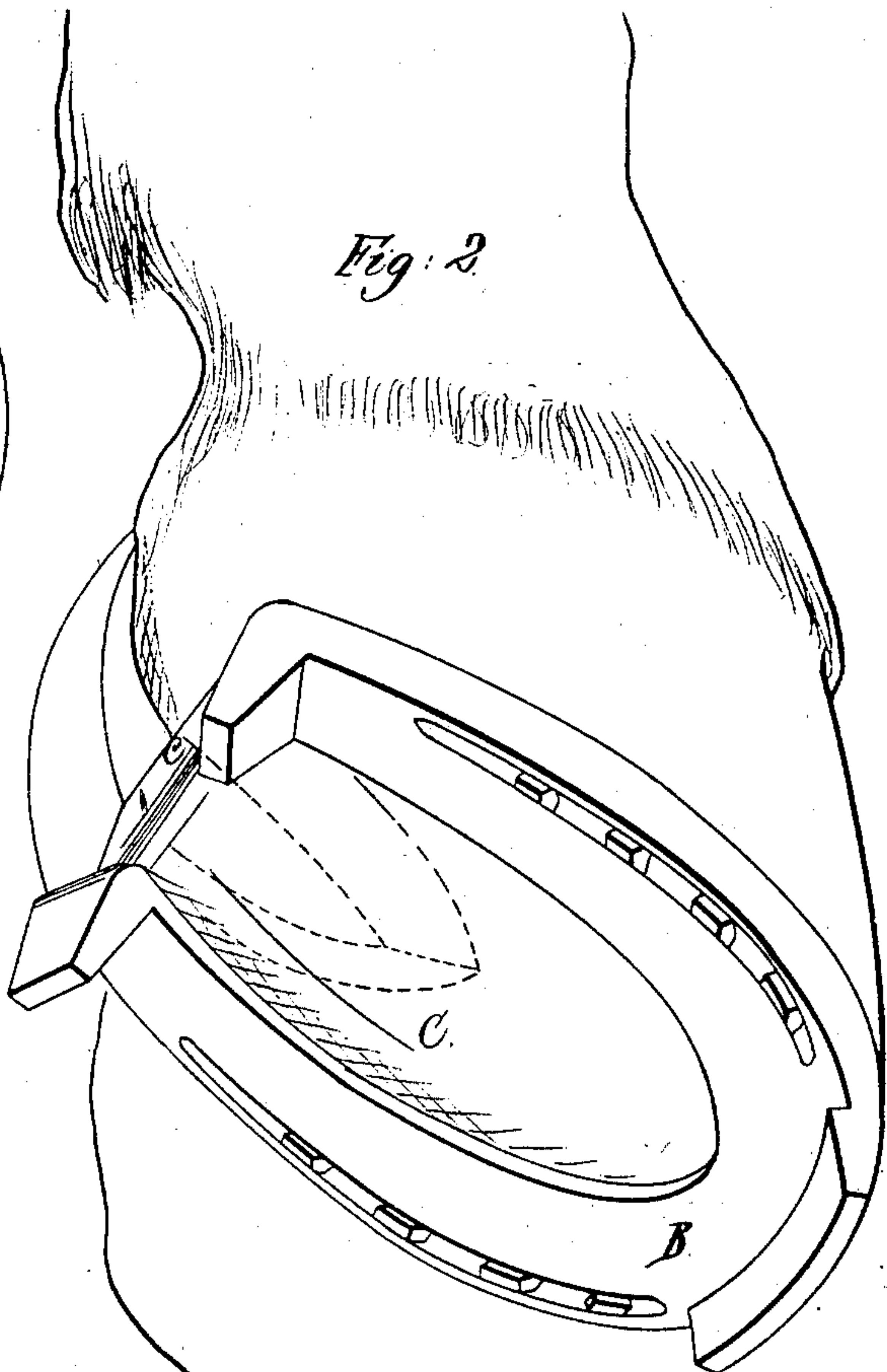
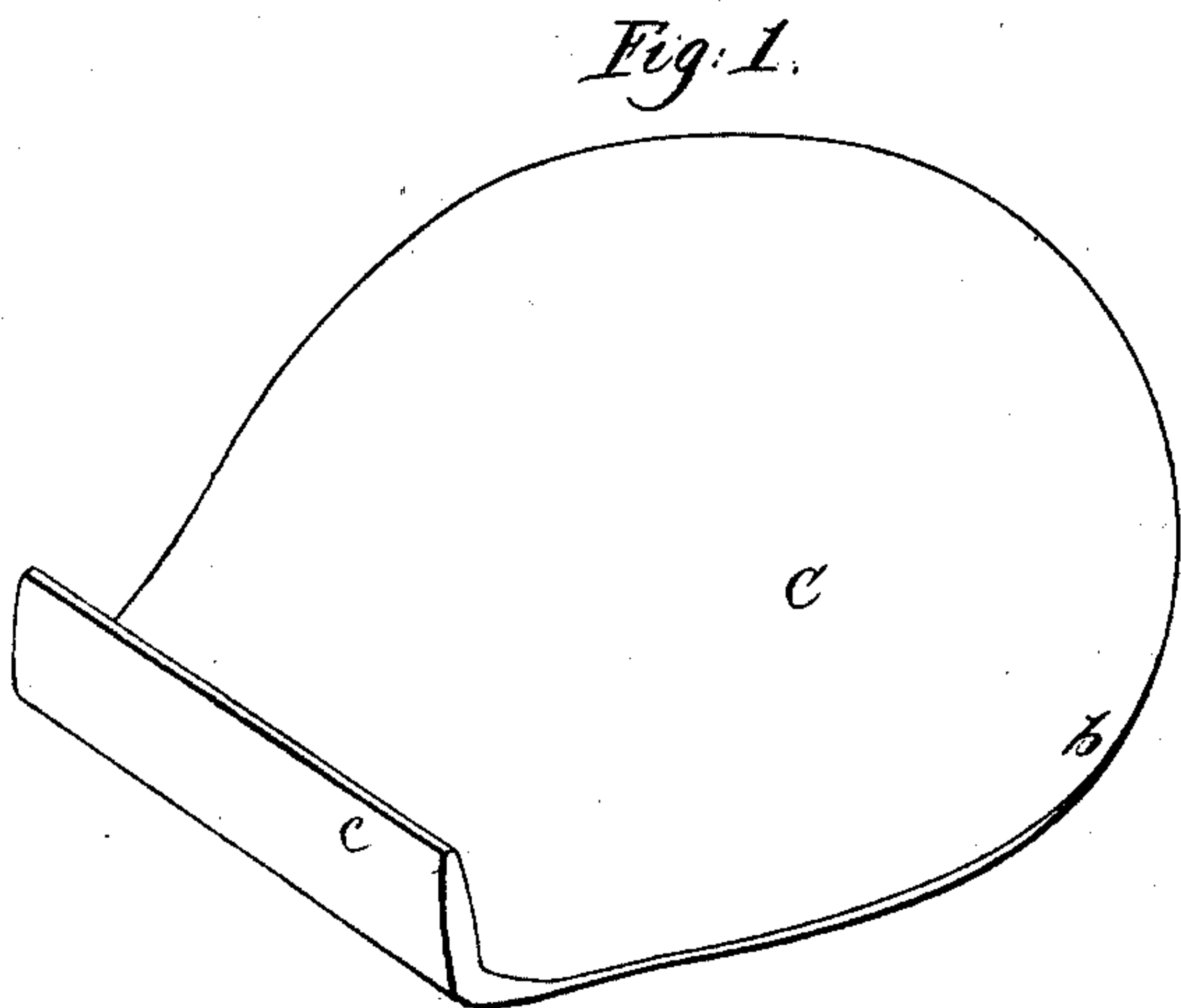


L. HALE.
CUSHION FOR HORSES' FEET.

No. 28,473.

Patented May 29, 1860.



Inventor:
Loren Hale
by his attorney
Samuel Cooper
pr Roach

Witnesses:
Thos L. Glens
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UNITED STATES PATENT OFFICE.

LOREN HALE, OF MILFORD, MASSACHUSETTS.

IMPROVED CUSHION FOR HORSES' FEET.

Specification forming part of Letters Patent No. 28,473, dated May 29, 1860.

To all whom it may concern:

Be it known that I, LOREN HALE, of Milford, in the county of Worcester and State of Massachusetts, have invented an Improved Elastic Air-Cushion for Protecting Horses' Feet, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a view of my improved pad; Fig. 2, a view of a horse's foot with my pad applied; Fig. 3, a longitudinal vertical section through the same.

Many plans have been suggested for protecting horses' feet from bruises on the sole (within the circle of the shoe) to which they are liable, and also to exclude loose stones, mud, and snow; but none of them with which I am acquainted have thus far answered the desired end. For this purpose a sheet of leather or rubber cloth has been secured between the shoe and the hoof, (the nails passing through it;) but this is objectionable, as it tends to loosen the shoe from the foot, and cannot be removed to clean the foot without taking off the shoe. Besides, it does not fill the concave of the sole, but leaves a space in which the dirt and mud which enter at the back part of the foot may collect. A flat elastic sole has been used which was made removable by springing it out of the shoe; but this also had the last-named objection.

These difficulties I have overcome by my present invention, which consists in a hollow elastic air-cushion for this purpose.

That others skilled in the art may understand and use my invention, I will describe the manner in which I have carried out the same.

In the said drawings, A is the hoof; B, the shoe, which is beveled off at *a* from the point where the shoe is seated on the hoof to its inner edge.

C is the hollow elastic pad or cushion, (shown detached in Fig. 1,) which is thicker in the middle, and is brought down to a thin edge at *b*, and is turned up at *c* at the rear end, where it presses against the back part of the frog of the foot, as in Figs. 2 and 3. When the cushion C is to be inserted, (after the shoe is nailed to the foot,) it is compressed or folded up by the hand, and is placed within the shoe, where it is retained by its elasticity, the edge *b* of the cushion fitting between the bevel *a* of the shoe and the sole of

the foot, and as the heel of the shoe is narrower than the wide part of the cushion immediately in front of it the cushion is prevented from slipping out at the hind part of the shoe. The form of the cushion and its elasticity enable it to fill the hollow of the foot, the frog D of the foot embedding itself in the cushion, as shown by the dotted lines, Figs. 2 and 3, the cushion entirely protecting the sole and frog, and excluding dirt and snow from the foot.

The lip *c* clings to the back of the foot, and not only assists in excluding the dirt which might otherwise work in alongside of the frog, but also protects the back of the frog from being bruised by the toe of the hind foot when the horse "overreaches."

When it is desired to remove the cushion C to clean the hoof, or for any other purpose, it may be pulled out from the shoe with the hand, or a suitable hook made for the purpose.

Another advantage I may mention is that the air-space *g* protects the foot from cold when the horse is standing in an exposed position.

The elastic cushion C above spoken of is constructed in the following manner: Two sheets or pieces of vulcanizable india-rubber are placed in a suitable mold, which will give the desired form, where the article is vulcanized, producing the cushion C, the edge *b* and the lip *c* of which are solid, while over the rest of the cushion the sheets *e f*, Fig. 3, are arched, leaving a space, *g*, filled with air. This space, however, is not inflated after the article is made, and the cushion will retain its form, even if one of the sides should be perforated or cut through.

The rubber may be vulcanized on canvas or without, as is preferred.

A cushion of similar form could be made from the article known as "sponge-rubber," which I would consider the equivalent of my invention, the air-space *g* being minutely divided; but that first described is the article which I prefer.

What I claim as my invention, and desire to secure by Letters Patent, is—

An elastic air-cushion for protecting horses' feet, substantially as specified.

LOREN HALE.

In presence of—

GEO. G. PARKER,
LEWIS FALES.