

T. S. Engledow's Boot Heel.

75137 *Fig. 1.*
PATENTED
MAR 3 1868

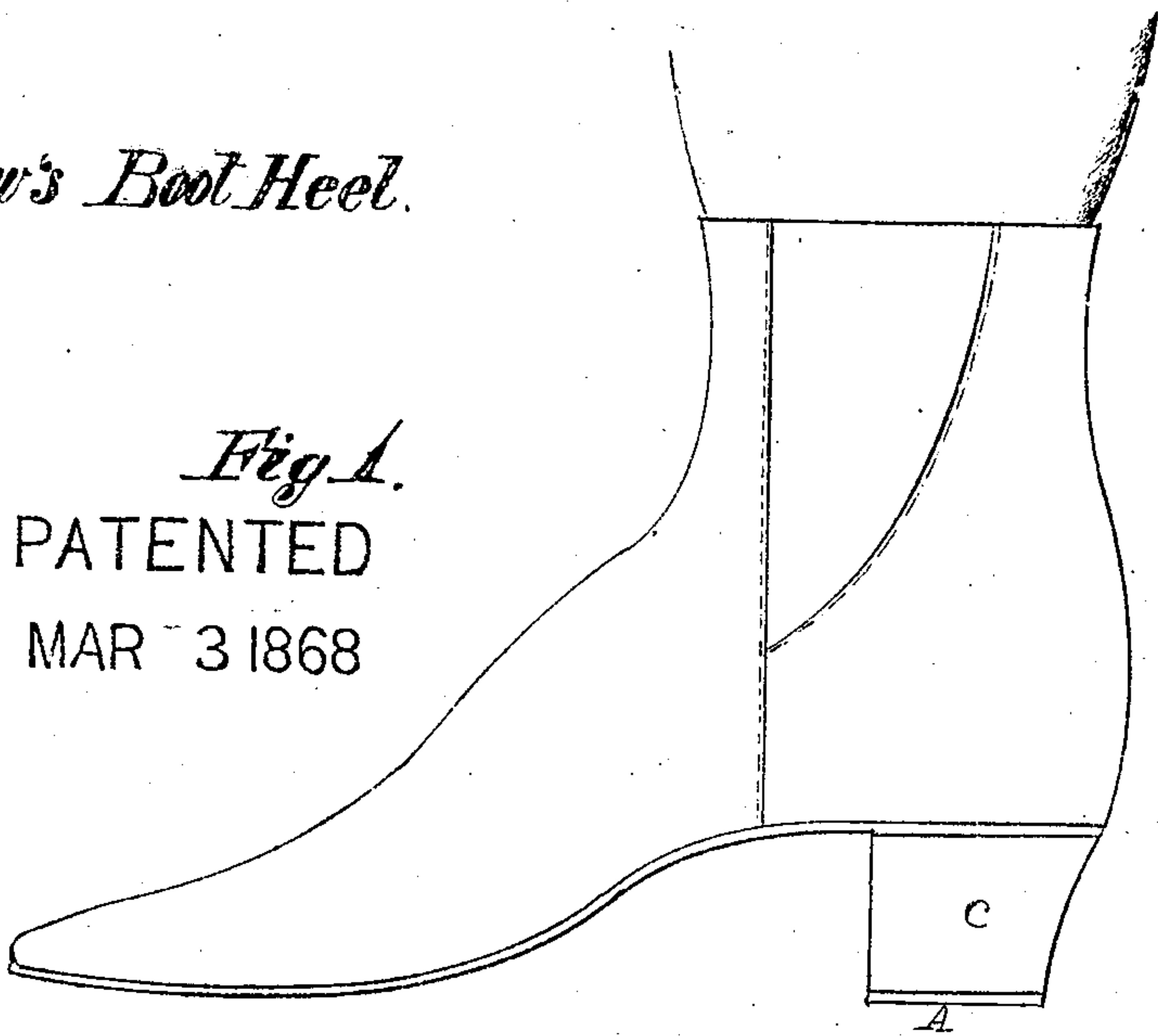


Fig. 2

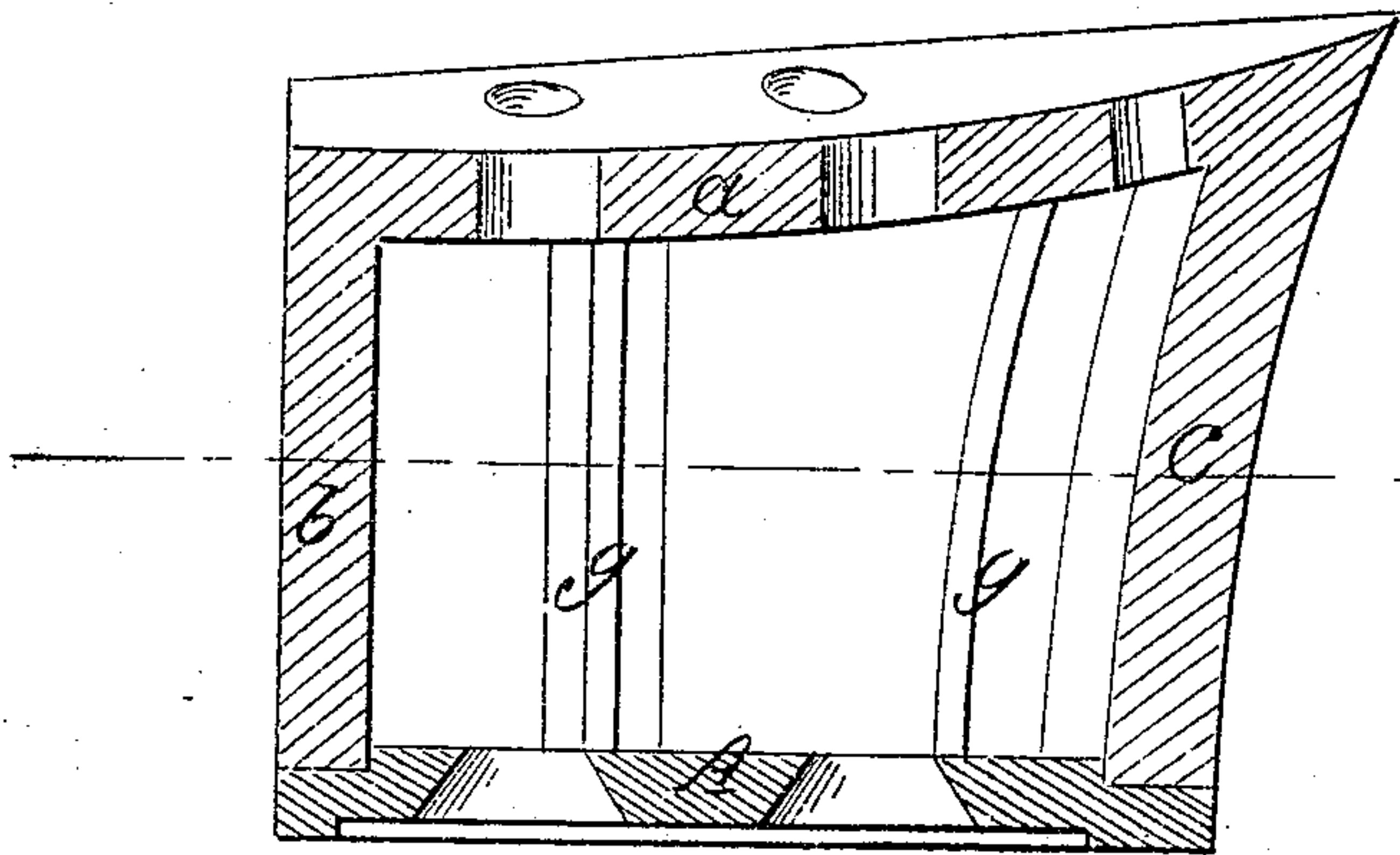
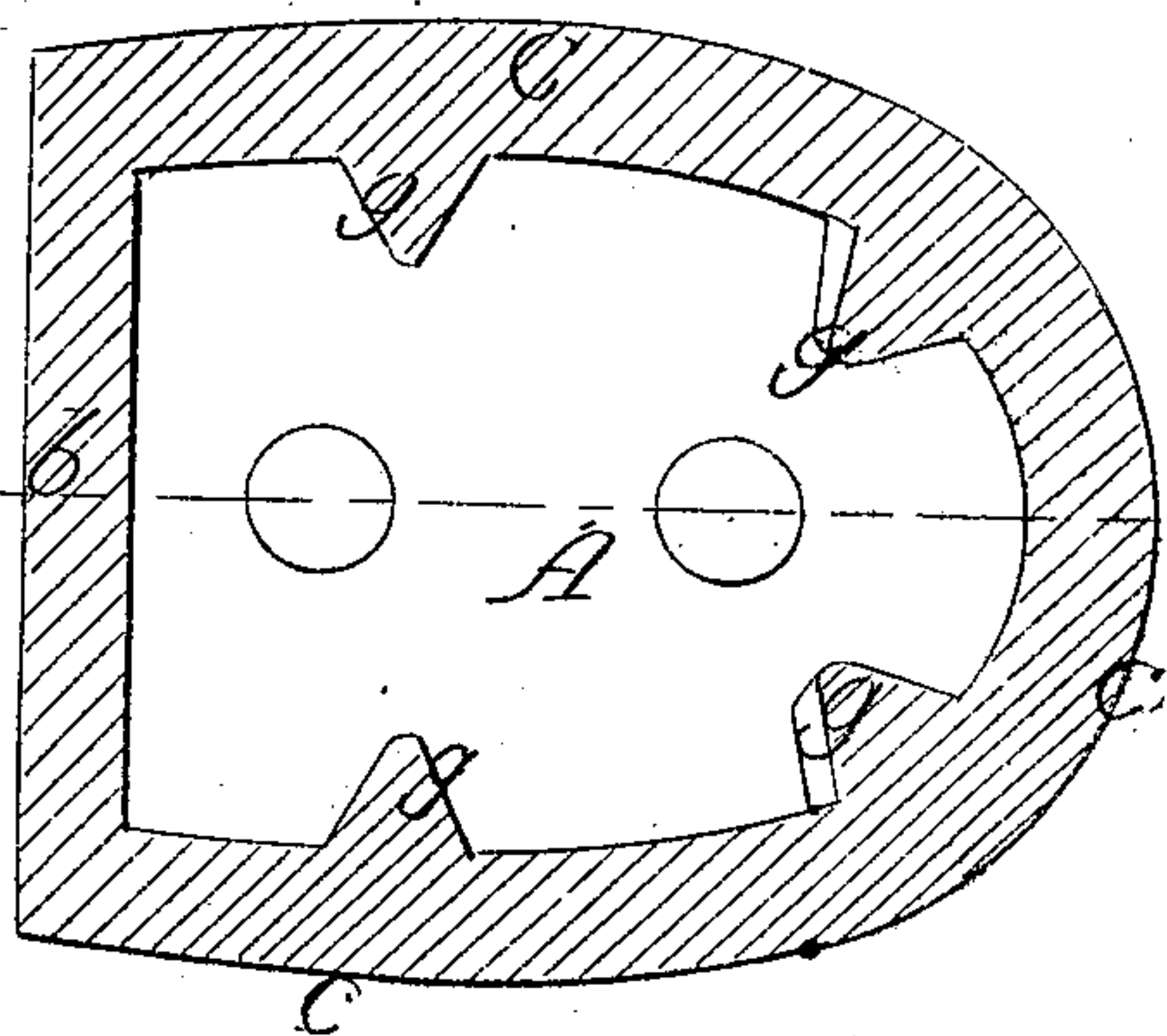


Fig. 3



Witnesses
R. M. Campbell
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T. S. ENGLEADOW, OF CEDAR FALLS, IOWA.

Letters Patent No. 75,137, dated March 3, 1868.

IMPROVED HEEL FOR BOOTS AND SHOES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, T. S. ENGLEADOW, of Cedar Falls, in the county of Black Hawk, and State of Iowa, have invented a new and improved Heel for Boots and Shoes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side view of a gaiter-boot having the improved heel applied to it.

Figure 2 is an enlarged longitudinal section taken in a vertical plane through the centre of the heel.

Figure 3 is a horizontal section of the heel.

Similar letters of reference indicate corresponding parts in the three figures.

This invention relates to a new and improved mode of manufacturing hollow heels for boots and shoes, whereby all the vertical stiffness and strength can be secured which may be required, without materially increasing the weight of the heel, and the amount of material composing it, and the heels are made to present a neat and finished appearance externally, and are rendered very durable and substantial.

The nature of my invention consists in constructing or moulding hollow heels of hardened rubber or other similar yielding suitable substance, with ribs or projections upon their vertical interior surfaces, in such manner as to afford great strength laterally as well as vertically to the heels, and prevent them from being crushed or broken under ordinary usage, in combination with a rigid metallic plate or cap of hard rubber, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

The hollow heel which I shall describe may be made of hardened rubber, gutta percha, horn, or other similar yielding material. I prefer, however, to make or mould the heels of black vulcanized rubber, which substance will present a very neat appearance as long as the boots or shoes, to which heels made of it are applied, remain fit for wear. Such heels also are yielding between the bottom of the shoe and the metal plate, which is on the bottom of the heel, and thus greater comfort and ease to the wearer of the boots or shoes to which these heels are applied are secured or afforded. The heels of course are to be sufficiently stiff to prevent breaking down, but not so stiff as to throw all the concussive action between them and the stone pavement against the heel of the wearer of the boots or shoes.

The heel represented in the drawings is made hollow, so as to leave a thin shell, consisting of the concave portion *a*, vertical front portion *b*, and the rounded and vertically-curved portion *c*. This shell will be very light when constructed hollow, as described, but it requires to be strengthened in such manner that it will resist, without cracking or breaking, all the strain which may be brought upon it. For this purpose, I form ribs *g g*, upon the inner surface of the wall *c*, which ribs may be disposed as shown in fig. 3. They extend from the concave seat-piece *a*, nearly to the bottom edge of the wall *c*, and terminate in flat shoulders, which abut against the upper surface of a metal plate, *A*, as shown in fig. 2. The plate *A* is of a shape horizontally corresponding to the shape of the bottom of the hollow heel, and its upper surface is made so as to fit snugly into the heel, as shown in fig. 2. The bottom surface of this plate, *A*, has a recess made into it, which leaves a rib surrounding it that forms the tread. These plates, which are used to cover the bottoms of the heels, may be made of any suitable metal, or they may be made of vulcanized rubber; and, if desirable, the ribs of the plates may be serrated or roughened, in such manner as to prevent the heels from slipping on frozen ground or on ice. Instead of having a plate cover the entire lower end of the heel, the hollow space in the heel may be filled with cork, or some other light substance, and a small U-shaped plate secured upon the heel, so as to protect it from rapid wear. Through the concave wall *a*, a number of holes are made, through which screws or nails are driven for securing the heel to the sole of the boot or shoe. This is done previously to fastening on the guard-plate *A*, which may be effected by means of long screws entering the wall *c*, the heads of which screws may be counter-sunk into the plate *A*.

It will be seen from the above description that I am enabled to make a very light heel, and at the same time to strengthen it and support it against the shocks and strain to which it will be subjected whilst in use. I also render the heels very durable by the use of plates upon their lower ends, which can be removed when too much worn, and others substituted in their stead.

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

The hollow-hard rubber, gutta-percha, horn, or other similar heel *a b c*, with strengthening-ribs *g g*, on its interior, and with removable base-plates or pieces *A*, in the manner as herein described.

T. S. ENGLEADOW.

Witnesses:

S. H. PACKARD,
CHAS. P. BROWN.