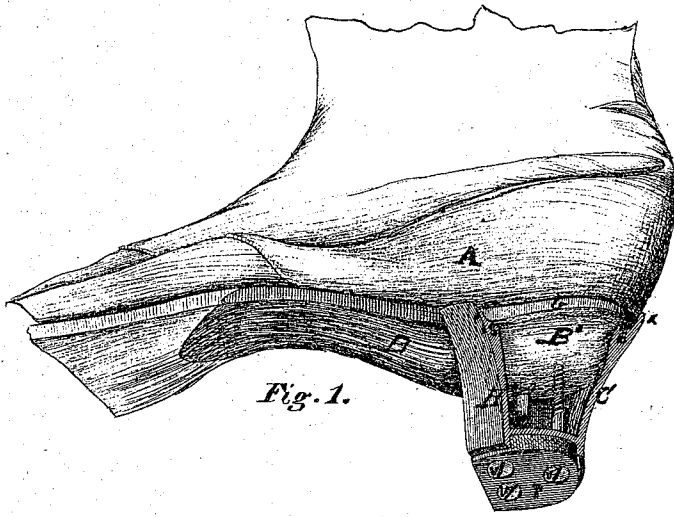


*E. T. Miller,*

*Boat & Shoe Heel.*

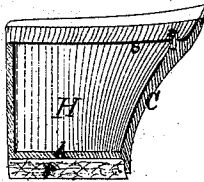
*No. 106,186.*

*Patented Aug. 9, 1870.*

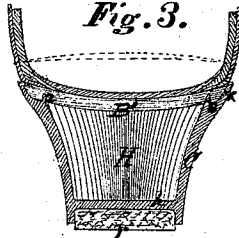


*Fig. 1.*

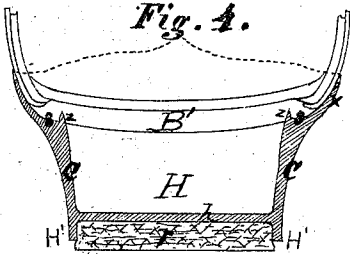
*Fig. 2.*



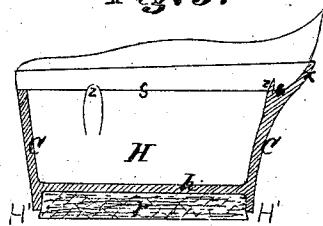
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



*Witnesses* { *Robert Hillman* *Inventor.*  
*Alex. Bell* *Edgar J. Miller*

# United States Patent Office.

EDGAR T. MILLER, OF ALBANY, NEW YORK, ASSIGNOR TO HIMSELF AND JOHN HEWITT, OF SAME PLACE.

Letters Patent No. 106,186, dated August 9, 1870.

## IMPROVEMENT IN METALLIC HEELS 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, EDGAR T. MILLER, of the city and county of Albany, and State of New York, have invented certain new and useful Improvements in Metallic Heels for Boots and Shoes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon, making part of this specification, in which—

Figure 1 is a perspective view of a shoe with a heel embodying my invention, a part of the heel being broken away in order to show the improvements.

Figure 2 is a side elevation of the heel embodying my invention.

Figure 3 is a cross-section of the same.

Figure 4 is a cross-section through a heel intended to be applied to a boot, and embodying my improvements.

Figure 5 is a side elevation of the same.

My invention does not belong to that class of metallic heels which have their entire bearing on the under portion of the sole, but is so constructed as to encircle the heel portion of the same, the face of its flanged rim meeting and uniting with the upper-leather of the boot or gaiter. This heel, for many reasons, is preferable to the old-style metallic heel, which has its entire bearing on the under surface of the sole. It not only saves the labor, and, consequently, the expense incident to fitting the heel formerly used, but it is much neater, and can be more readily and securely attached.

The nature of my invention consists in casting a metallic-shell heel in one piece, so formed that its upper section shall be flaring or bell-mouthed, to encircle the heel portion of the sole, and its lower section recessed, to form a socket for a rubber or other elastic pad. This shell is cast with an interior spurred shoulder or rim, which furnishes a seat or support for the heel of the boot, the spurs preventing the same from slipping or turning in the shell after it has been attached. The plate which furnishes the floor or base of the recess in which the rubber pad is secured, is also cast with the shell, and is provided with one or more holes to receive the screws which permanently fasten the shell heel to the boot.

To enable others skilled in the art to make and use

my invention, I will now proceed to describe its construction and operation.

H is a metallic heel, the shell C of which is cast or otherwise formed in one piece, and out of any suitable metal.

This heel is of the usual form, with the exception of its upper section or flange, *x*, of the shell C, which is made positively flaring or bell-mouthed, so that, when the heel portion B' of the sole B is seated on the shoulder or rim *s*, it will be encircled or incased by the flange *x*, the latter extending to and meeting the upper-leather A. of the boot, as clearly shown in fig. 1.

*s* is an interior shoulder or flange cast with the shell C, and serves as a seat or support for the heel portion of the sole.

This shoulder *s* is provided with a series of spurs, *z z*, which, becoming imbedded in the leather, will prevent any slipping or turning of the heel on the sole, while the screws *v v* keep the heel firmly in contact with it.

*h* is a plate cast within the shell C, and a short distance above its lower surface. This plate, with the flange H', forms a recess or socket, in which is secured the rubber pad *r*.

This plate *h* is also provided with one or more holes or openings, through which pass the screws *v v*. These screws not only fasten the shell to the boot, but also secure the rubber in the recess, as clearly shown in fig. 1.

It will be observed that, while this style of heel requires but little more metal to manufacture, it saves all the labor of trimming and polishing the leather at *b*, which, with the old heel, in order to render the attachment neat and perfect, is considerable, requiring not only time, but the greatest care.

Having thus fully described my invention,

What I claim therein as new, and desire to secure by Letters Patent of the United States, is—

A metallic heel, consisting of the spurred shoulder *s* and flared mouthed flange *x*, plate *h* and flange H', when the same are cast or otherwise formed in one piece, substantially as described, as and for the purpose specified.

Witnesses: EDGAR T. MILLER.

ROBERT HILLSEN,  
ALEX. SELKIRK.