

A. S. Mann,

Metallic Heel.

No. 110,768.

Patented Jan. 3, 1871.

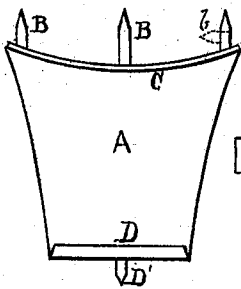


FIG: 1.

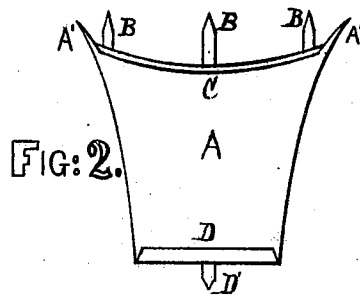


FIG: 2.

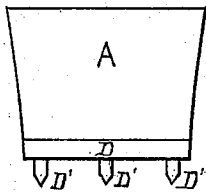


FIG: 3.

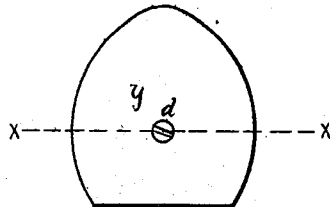


FIG: 4.

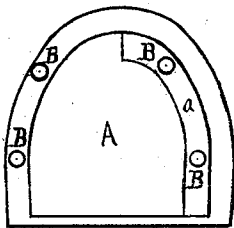


FIG: 6.

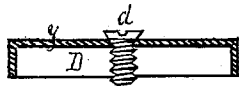


FIG: 5.

WITNESSES.

Edwin James

Alfred Holmead Jr

INVENTOR.

Austin S Mann.

per J. E. Holmead

Attorney.

# United States Patent Office.

AUSTIN S. MANN, OF ST. LOUIS, MISSOURI.

Letters Patent No. 110,768, dated January 3, 1871.

## IMPROVEMENT IN METALLIC HEELS.

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, AUSTIN S. MANN, of St. Louis, in the county of St. Louis and State of Missouri, have invented certain new and useful Improvements in Metallic Heels; 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 front view of the heel without the projecting flange.

Figure 2 is a front view of the heel with the projecting flange.

Figure 3 is a front view of the lower section of the heel, formed without a recessed seat for the pad.

Figure 4 is a bottom view of the heel, formed with a recessed seat for the pad.

Figure 5 is a vertical sectional view on the line *x x*, fig. 4.

Figure 6 is a top view of the heel, one-half with the shoulder, and the other half without.

The object of my invention is to so construct a hollow metallic heel, or what is known as the shell-heel, that it can be attached to the boot or shoe without using the screw, as is now the universal custom.

To accomplish this, and in this my invention chiefly consists, I firmly imbed in the metallic heel, during the process of casting, or otherwise secure thereto, a series of pins constructed of any suitable malleable metal, and which, when the heel is to be secured to the boot or shoe, are to be driven through the heel-portion of the sole, and clinched or riveted on its inner face. These pins may be secured on an inner shoulder or flange cast within the recess of the heel, or directly on the wall of the same.

The great advantage of this feature of my invention is found in the fact that it leaves the hollow or cavity formed within and by the wall of the metal heel entirely unobstructed, allowing the leather heel to settle therein as it conforms to the contour of the foot. This is impossible in the metallic heels now used, as the center and other screws by which they are attached prevent it, their tendency being to constantly force the leather of the heel up at their point of bearing, thus not only preventing this settling of the heel, but, on the contrary, rendering the boot exceedingly uncomfortable by the button-shaped projections formed by the pressure of the screws on the inner face of the sole.

Another great difficulty with the metallic heels heretofore used, and which is entirely avoided in my invention, is, that these heels could never be rendered water-tight, owing to their being attached by the screw, but always admitted more or less dampness or moisture, which was not only most objectionable in itself, but which soon rusted the screw, which in turn rotted

the leather with which it came in contact, and thus rendered the heel loose. To overcome this loosening of the heel, you have to be constantly tightening the screw, which will soon drive its point through the sole and in direct contact with the foot.

My invention also consists in inserting a thin rubber plate or washer between the shoulder or wall of the metallic heel and the leather to which it is attached. This not only serves as a packing, forming a tight joint at the point of union between the heels, but also furnishes an elastic bearing, as it were, for the foot.

My invention also consists in securing the rubber, leather, or other material now used to render the heel noiseless, by pins projecting from the lower face of the heel, or by a screw passing through the base-plate thereof, the countersunk recess for the head of the screw being within the hollow of the heel.

To enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

A is a metallic heel, which is cast hollow, and externally of the ordinary shell style.

This heel may be cast with a projecting flange, A', as shown in fig. 2, which gives the upper section of the heel a flaring form, and enables it to receive and encircle the heel-portion of the sole. But while I deem, for many reasons the use of this flange preferable, if desired it may be dispensed with, and the shell formed without it, as clearly shown in fig. 1.

*a* is a shoulder or flange, which is cast around the inner wall and near the upper surface of the shell A.

B B are a series of malleable pins. These are permanently secured to the shoulder *a*, or, if preferred, the shoulder *a* may be dispensed with, and the pins B B inserted or imbedded directly in the wall of the shell A. These pins may be constructed of any desired metal, provided, always, that the same is not brittle, but malleable. This is essential, as the pins B B are to be riveted or bent down for the purpose of clinching the same on the inner face of the sole.

These pins B B may be attached by any suitable means. The most convenient, however, is to insert them at proper intervals in the core or form around which the shell of the heel is cast, as by this means, during the process of casting, they become firmly imbedded in the heel, forming, as it were, a permanent part thereof.

C is a thin plate of rubber or other elastic material, that is passed over the pins B B, and firmly held thereby. This rubber plate may be made sufficiently large to cover the entire inner surface of the heel, or a simple ring or washer may be used. The object of this rubber plate or washer is, that it serves as a packing, forming a close and tight joint between the metallic heel and the portion of the sole to which it

is secured; besides, it furnishes an elastic bearing for the tread of the foot.

D is a pad of leather, rubber, or other suitable material, such as is ordinarily used on metallic heels to render the same in use comparatively noiseless. Instead of securing these pads as is now the universal practice, by screwing them onto the bottom plate or lower face of the shell, I secure them by screws, *d*, which have their bearing on the inner face *y* of the bottom plate of the shell, as clearly shown in figs. 4 and 5. The plate is countersunk at its center to receive the head of the screw, which, in connection with a rubber washer, forms an exceedingly tight joint, excluding all dampness and moisture.

Instead of securing the pad D by a screw, it may be fastened by pins D' D', formed on the base of the shell, as are the pins B B on the shoulder *a*. The pad when thus attached is driven over the pins, and they are turned down and clinched on the outer face of the same. By this means the pad can be readily attached either in the cup-shaped recess formed by a partial or continuous flange, or on the simple base-plate of the heel formed without a flange.

The metallic heel is attached as follows:

The pad D is first driven onto the sole, the pins B B passing entirely through the leather, when they are turned over, as shown in dotted lines at *b*, fig. 1, and then hammered down until their ends, being at right

angles to their main shanks, are imbedded in the upper face of the sole.

I am aware that hollow heels have heretofore been manufactured with spurs or pins, but these spurs or pins have invariably been of the same metal as the heel, which rendered it impossible for the spurs or pins to be used as are the malleable pins in my heel, as cast spurs, owing to their necessary brittle character, would break off the moment an attempt was made to turn them down, as in my invention. And besides, these spurs have never been designed to fasten the heel. This is always done by a screw, and the spurs are used simply to prevent any slipping or turning of the heel on the sole.

Having thus fully described my invention,

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

As a new article of manufacture, the metallic hollow heel A, when provided, at or near its upper face, with malleable pins B B, for securing the heel on the boot, and with like pins D' D' at the base, to retain the pad, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

Witnesses:

EDWIN JAMES,

JAS. T. K. PLANT.

AUSTIN S. MANN.