

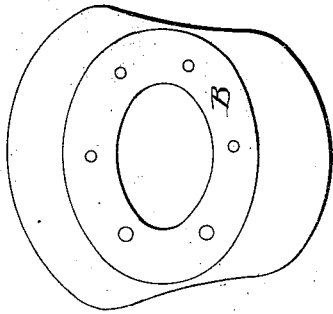
*Warner, Hodgkins & Travers,*

*Shoe Heel,*

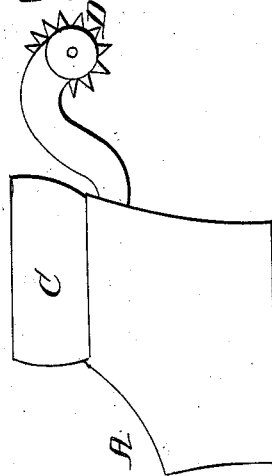
*N<sup>o</sup> 1,665.*

*Patented July 1, 1840.*

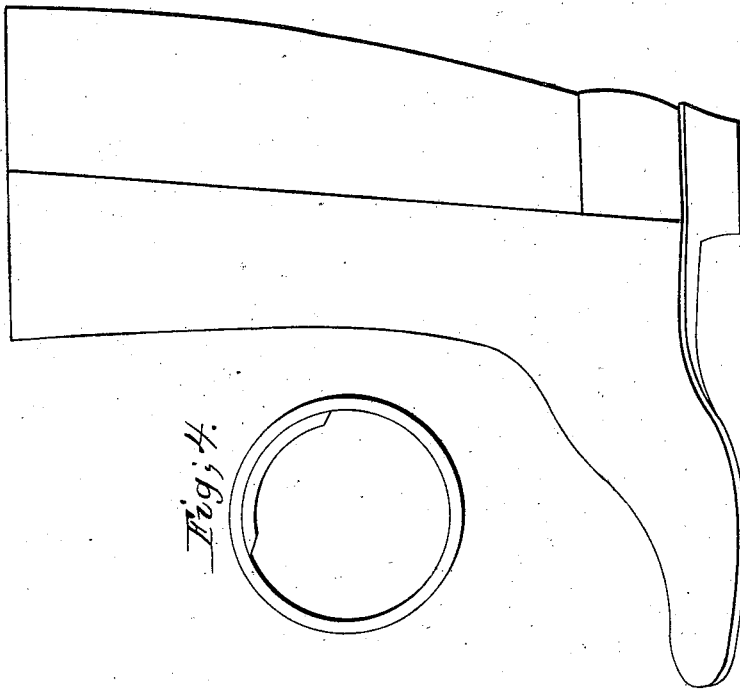
*Fig; 2.*



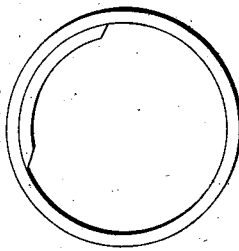
*Fig; 1.*



*Fig; 3.*



*Fig; 4.*



# UNITED STATES PATENT OFFICE.

SAMUEL WARNER, OF LOWELL, AND J. HODGKIN, OF WESTFIELD, VERMONT, AND WM. E. TRAVER, OF WATERVLIET, NEW YORK.

## MODE OF CONSTRUCTING THE HEELS OF BOOTS AND SHOES.

Specification of Letters Patent No. 1,665, dated July 1, 1840.

*To all whom it may concern:*

Be it known that we, SAMUEL WARNER, of Lowell, JERE HODGKIN, of Westfield, both in the county of Orleans and State of Vermont, and WILLIAM E. TRAVER, of Water-  
vliet, in the county of Albany and State of New York, have by our joint study and contrivance invented a new, useful, and improved method of manufacturing and attaching heels to boots and shoes and of combining with or attaching to the heels of boots a spur when necessary, to be composed in part of any kind of metal or suitable metallic substance or of horn, bone, or ivory or of any other material of sufficient strength and hardness and in part of india-rubber, cork, or leather; and we do hereby declare the following to be a full and exact description.

Our invention consists in providing a metallic, horn, bone or ivory shell or heel case of suitable shape and size to be attached in place of the common heels to boots and shoes, and the hollow part or inside of said shell to be filled up with india rubber or any other elastic substance or with cork or leather or any other material that will answer the purpose designed, thereby lessening the expense of manufacturing heels to boots and shoes and at the same time producing a more convenient and durable article.

To enable others skilled in the art to use our invention we will proceed to describe its construction and use.

We construct our shells or heel cases in any of the known forms in which the heels of boots and shoes are or have heretofore been constructed or in any form that fancy or convenience may suggest of any kind of metal or composition of metal or metallic substance of sufficient strength and hardness to answer the purpose intended or of horn, bone or ivory. We have commonly made use of German silver and bronze. When we make our shells or heel cases of a fusible material we cast them in molds or in sand in the usual method. When made of a malleable substance we either work the plates to a pattern and solder together in the proper shape or shape them by a swage or by turning in a lathe or in any other con-

venient mode and finish up and polish the external surface by turning or any of the known methods of finishing.

We make our shells or cases from one sixteenth to one eighth of an inch thick except the outer and hinder part. At the bottom, as seen at No. 4 in the drawing, we make them near one fourth of an inch thick, that being the part subject to the greatest wear.

In the accompanying drawings A, No. 1, represents a side view of the largest size of heels now in use for fine boots, with a slope or scallop in front to receive the shank of the boot B. No. 2 shows a flange cast or soldered upon the inside of the shell or heel case and horizontal to the breast or lower part of the shell, by which flange the heel is firmly attached to the leathers composing the bottom of the boot by means of screws or nails, and the hollow part below the flange we fill up with india rubber, cork or leather or any other suitable substance. When we use india rubber we have it project about one fourth of an inch below the bottom of the shell, which effectually prevents a clicking noise in walking.

C, No. 1, is a counter guard which we use chiefly on military boots and is a mere extension of the plate of the hinder part of the shell upward upon the counter of the boot to any given height required.

D, No. 1, represents a spur to be combined with the heel case or separate and attached by a screw or latch spring.

No. 3 is the outline of a boot with the shell or heel attached somewhat varying in shape from those seen at Nos. 1-2.

What we claim as our invention and desire to secure by Letters Patent is—

The manufacturing and attaching metallic, horn, bone or ivory heel cases to the hollow part below the flange to be filled up with india rubber, cork or leather or any other suitable material and combining therewith or attaching thereto a spur when necessary as hereinbefore set forth.

SAMUEL WARNER.  
JERE HODGKIN.  
WILLIAM E. TRAVER.

Witnesses:

JOHN HASTINGS,  
WM. HOLLANDS.