

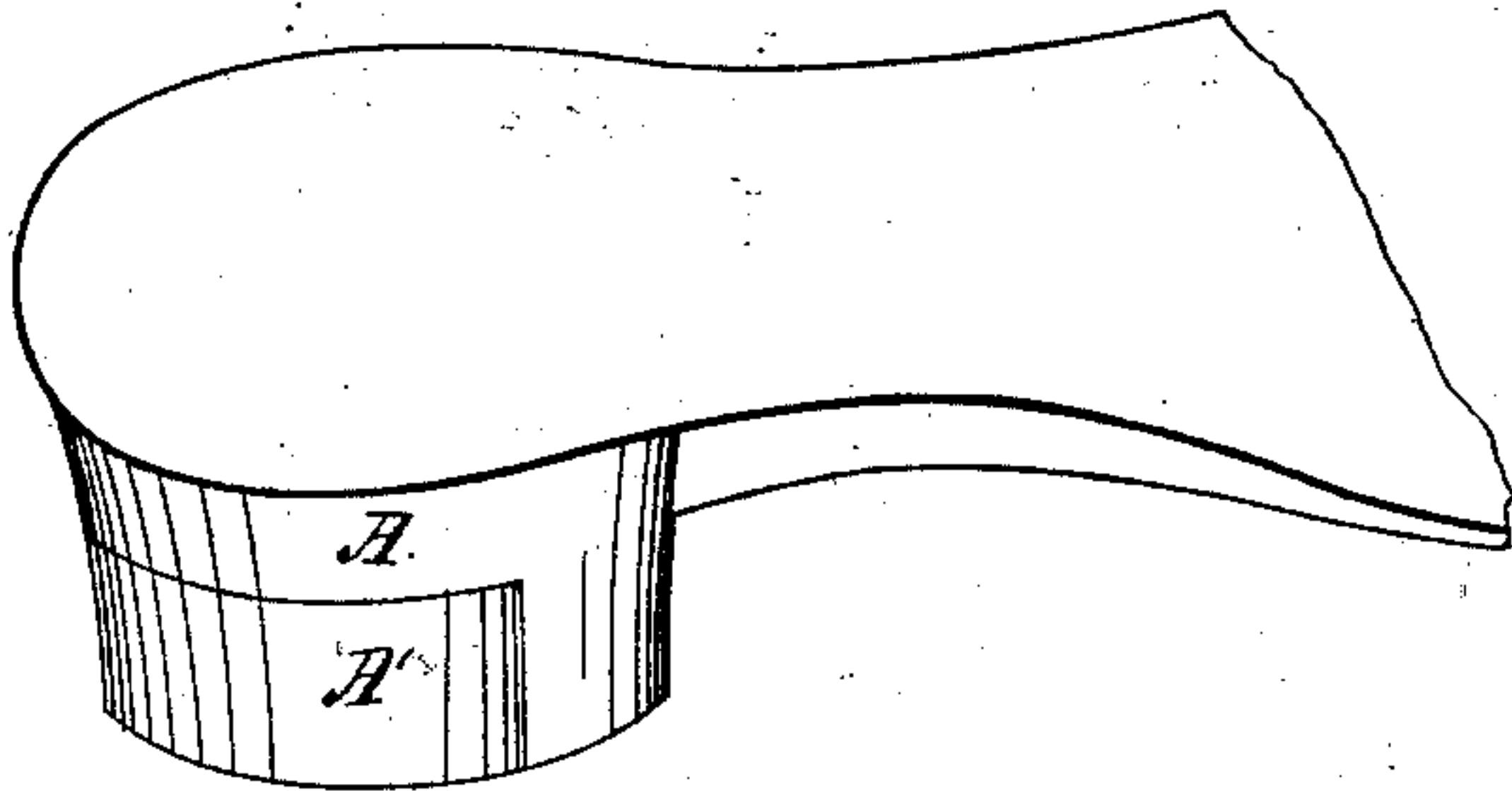
*F. Cross,*

*Revolving Shoe and Boot Heel.*

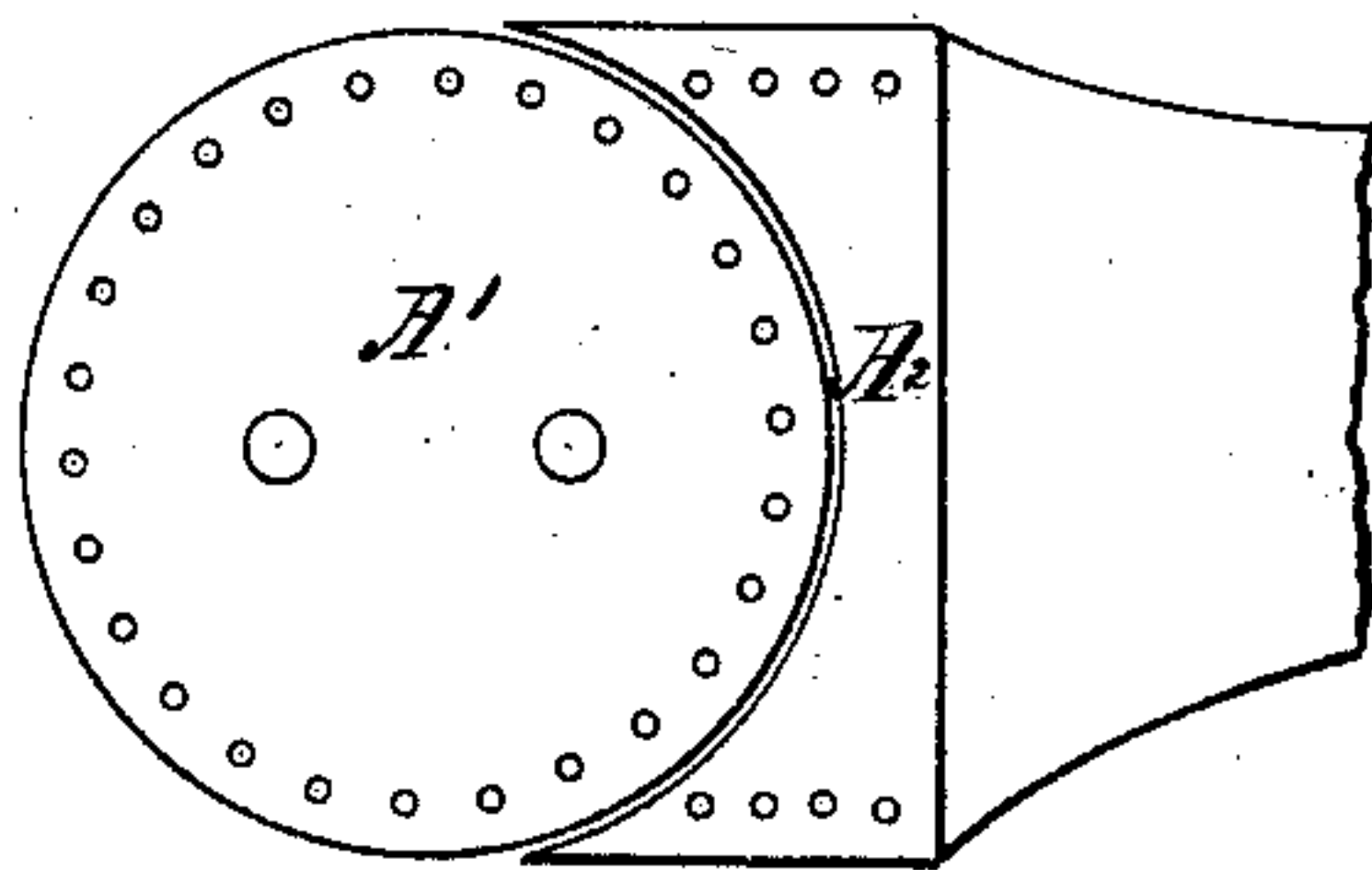
*N<sup>o</sup> 58,067.*

*Patented Sep. 18, 1866.*

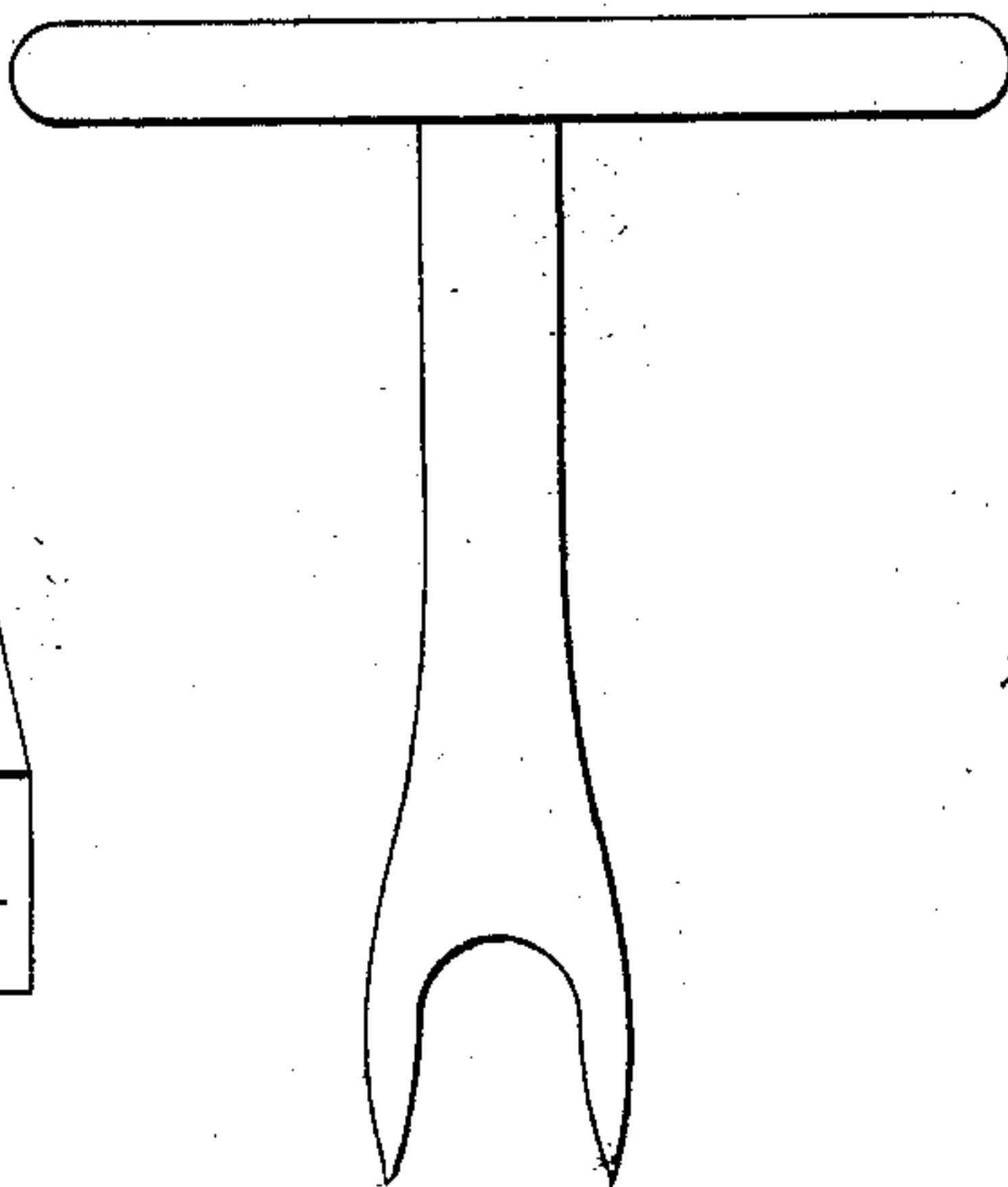
*Fig. 1.*



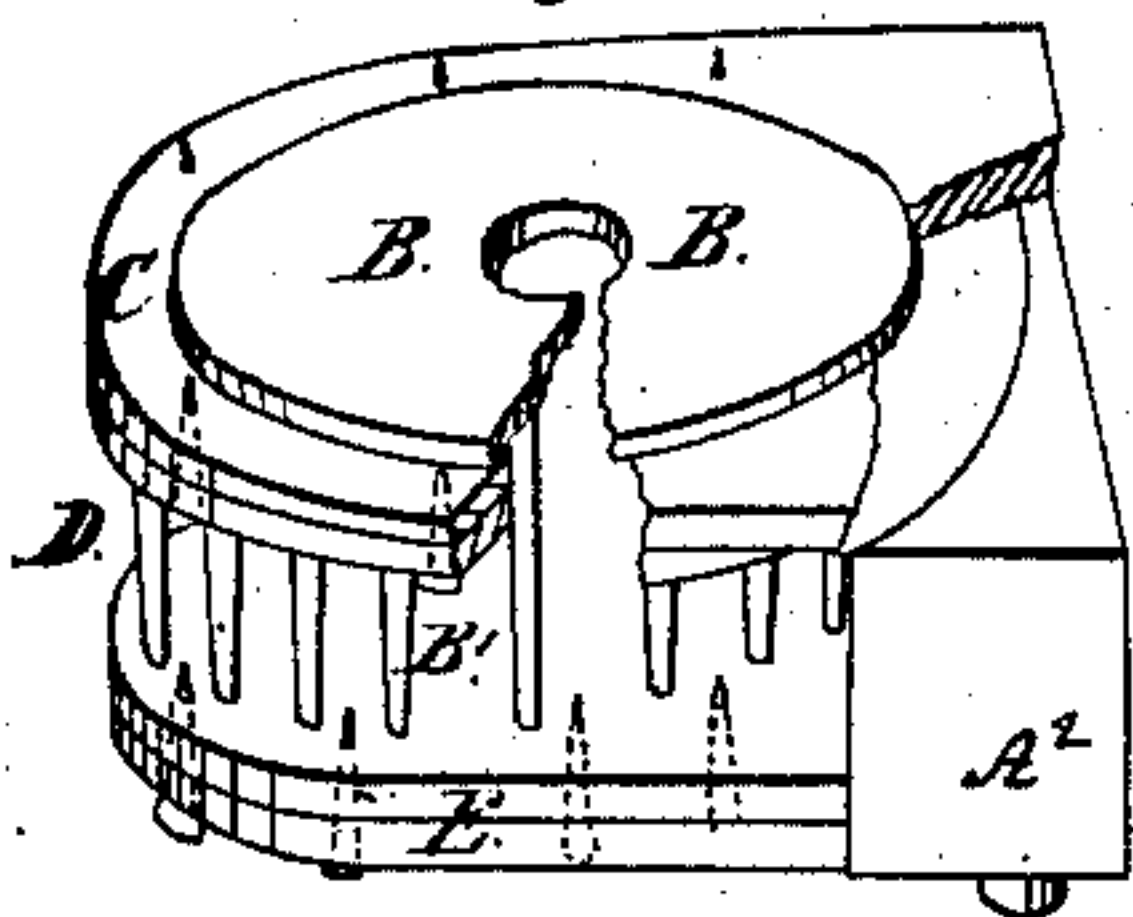
*Fig. 2.*



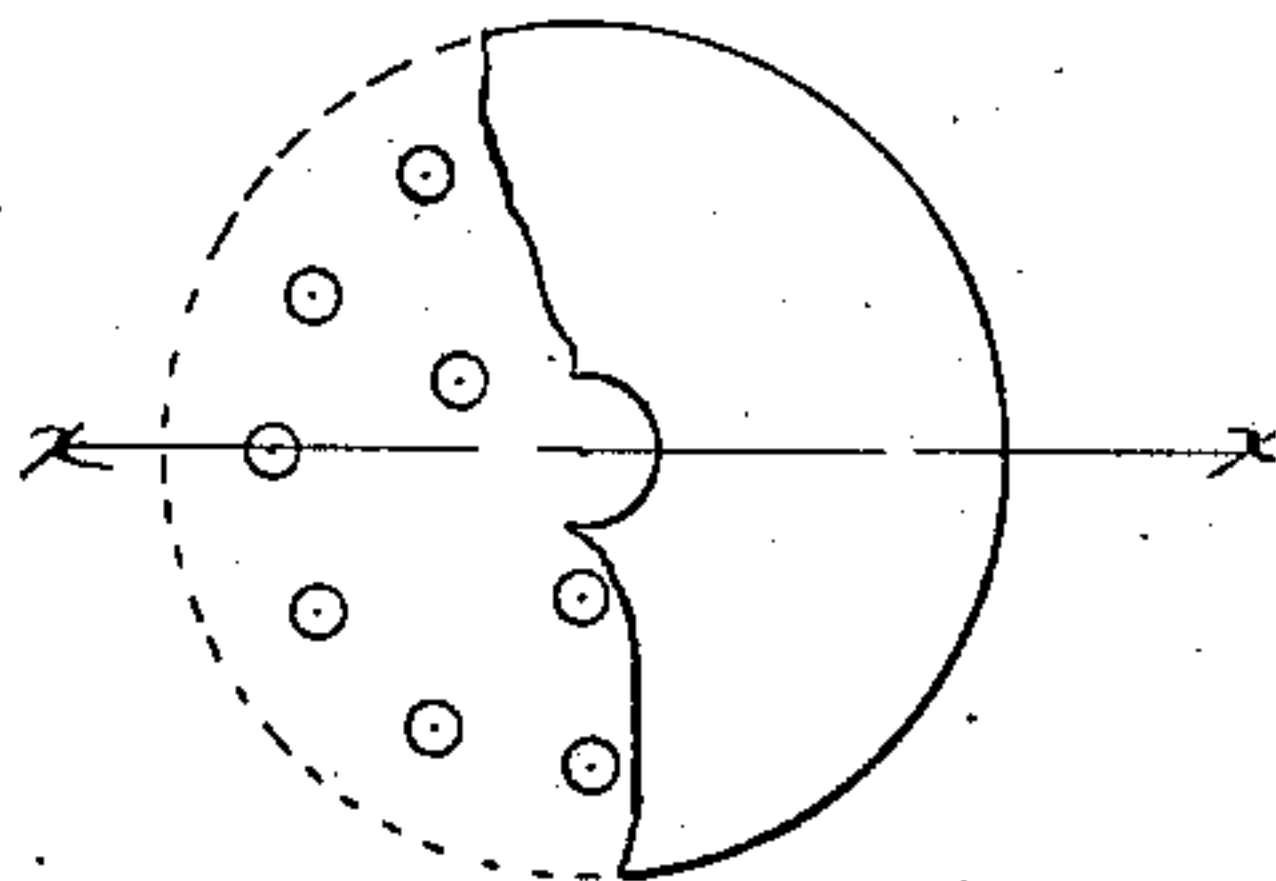
*Fig. 7.*



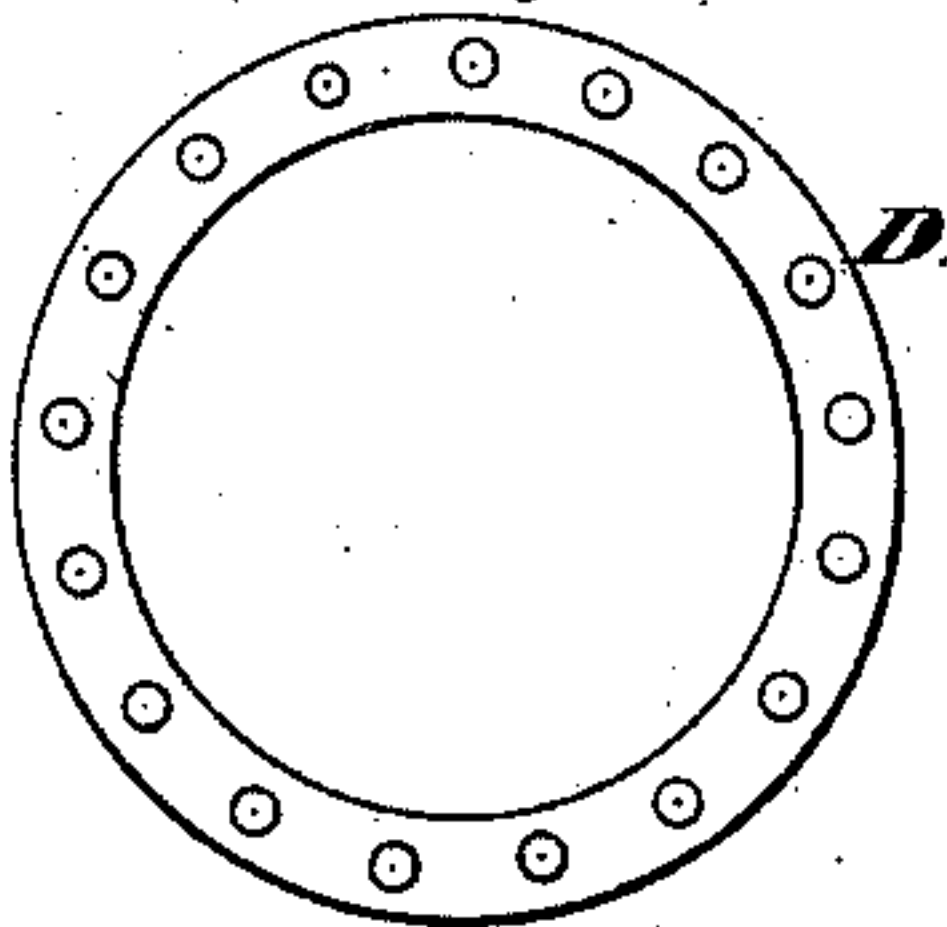
*Fig. 3.*



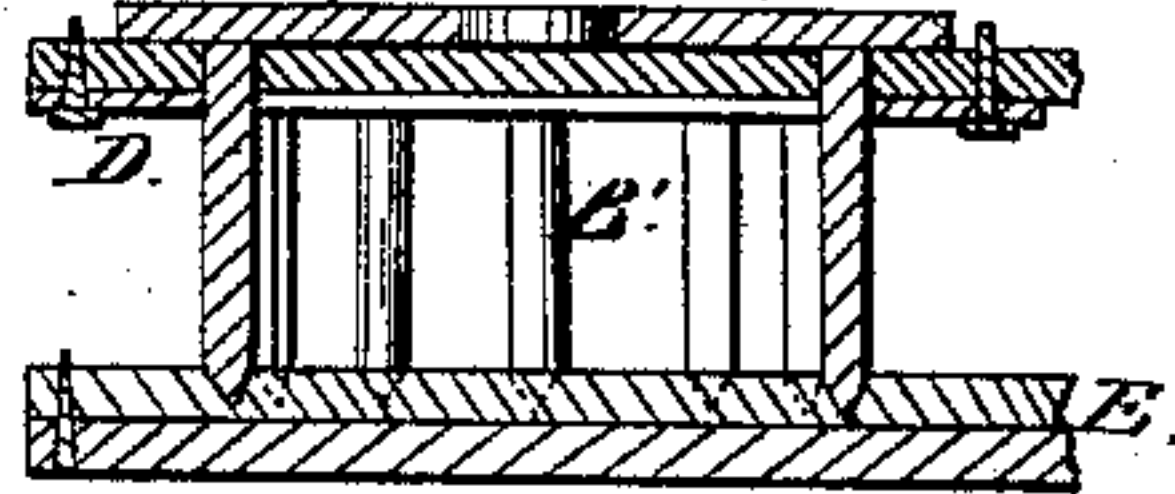
*Fig. 4.*



*Fig. 5.*



*Fig. 6. B.*



*Witnesses:*

*W. H. Laufen*  
*L. A. Murphy*

*Inventor:*

*Frederick Cross*  
*by*  
*D. P. Holloway & Co.*  
*his attys*

# UNITED STATES PATENT OFFICE.

FREDERICK CLOSS, OF NEW HAVEN, CONNECTICUT.

## IMPROVEMENT IN BOOT-HEELS.

Specification forming part of Letters Patent No. 58,067, dated September 18, 1866.

*To all whom it may concern:*

Be it known that I, FREDERICK CLOSS, of New Haven, county of New Haven, State of Connecticut, have invented a new and useful Improvement consisting in the Construction of Heels of Boots or Shoes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a perspective view of a heel completed. Fig. 2 is a plan of the bottom. Fig. 3 is a perspective view, showing a partly-completed heel. Figs. 4 and 5 are views of parts. Fig. 6 is a section on the line  $x x$  in Fig. 4; Fig. 7, a view of a wrench for turning the heel.

The same letters refer to identical parts.

The nature of my improvement consists in so constructing the heels of shoes or boots that the portion exposed to unequal wear in use may be made to revolve, and thus the heel be made, by alternately exposing different parts, to wear equally.

The heel is constructed when completed of two parts, A and A'. The upper portion of the heel is attached to the upper of the boot or shoe in the ordinary manner.

The front part of the heel (represented at  $a^2$  in Fig. 3) may be made of leather, or of brass, or other metals, or with brass tips protecting the sharp edges, the rest being leather.

When as many thicknesses of sole-leather have been built on as may be desired the structure of A' is commenced. This is a wheel, the

top of which is the plate B, which rests upon the last layer of leather, and on which it turns. It has projecting spikes B' on its under face. The first course of leather, C, below the plate is extended to the front of the heel and does not revolve. It has a circular piece cut out of it, sufficient to allow the projecting spikes B' to turn freely within it. Under the piece C is a ring of metal, D, attached to and giving it firmness. The succeeding circular pieces have the spikes B' driven through them, to which the finishing-pieces E on the bottom of the heel are secured by nails, as in the ordinary manner.

The part A' thus formed and attached may be turned by the wrench represented in Fig. 7.

Having fully explained the construction and operation of my improved heel for boots and shoes, what I claim as my invention, and seek to secure by Letters Patent, is—

A revolving heel for boots and shoes, when the same is constructed with a metallic piece, B, and ring D, said parts being respectively formed, combined with the other portions of the heel, and arranged for use as and for the purpose set forth.

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

FREDERICK CLOSS.

Witnesses:

L. SCHAEFER,  
W. CLOSS.