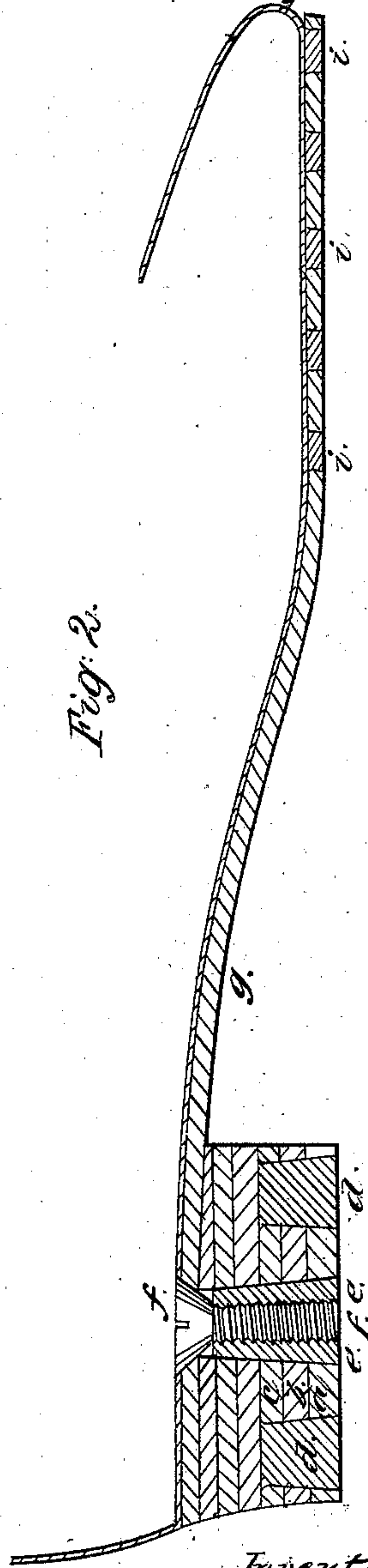
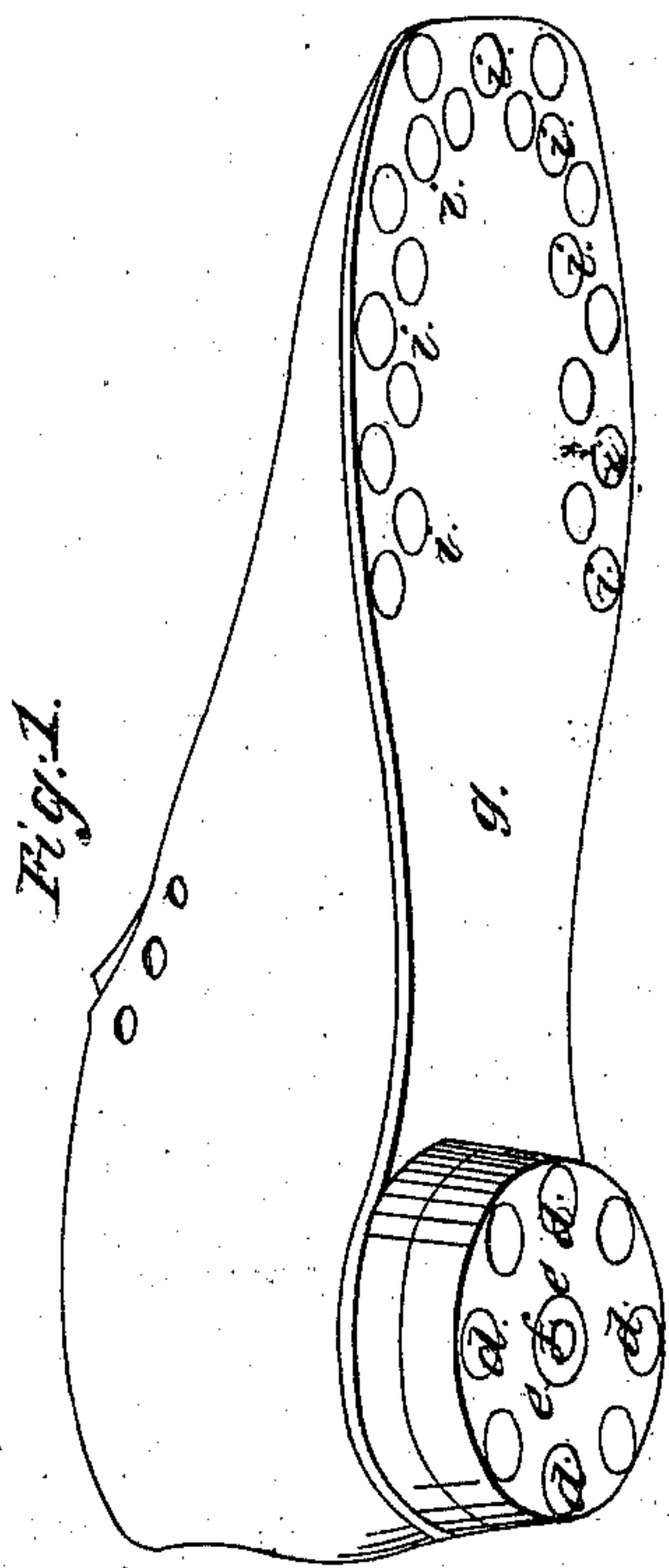


*A. O. Crane,  
Boot Heel,*

*N<sup>o</sup> 32,122.*

*Patented Apr. 23, 1861.*



*Witnesses:*

*E. Cohen  
Adams Hirth*

*Inventor:*

*Albert O. Crane  
By his atty. J. B. Stoughton*

# UNITED STATES PATENT OFFICE.

ALBERT O. CRANE, OF HOBOKEN, NEW JERSEY.

## IMPROVEMENT IN BOOTS AND SHOES.

Specification forming part of Letters Patent No. 32,122, dated April 23, 1861.

*To all whom it may concern:*

Be it known that I, ALBERT O. CRANE, of Hoboken, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in the Construction of Boots and Shoes; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of a shoe made after my plan, and Fig. 2 represents, on an enlarged plan, a longitudinal vertical section through the sole and heel of a shoe constructed and held together as proposed by me.

I am aware that a turning heel on a boot or shoe is not in itself new.

I am aware, also, that a heel has been held to a boot or shoe by a screw and nut. This I lay no claim to, independently of the manner in which I effect my purpose and object by such a fastening.

My invention consists in holding the "risers" that form the heel together by means of conical rivets, with or without heads, so that while the lower ends of the rivets protect the heel from wearing away they will not by even wearing away themselves allow the risers to separate, but continue to clamp them together; and my invention further consists in securing the heel to the shoe by means of a conical nut in the heel and a screw passing into it from the inside of the shoe, so that the heel may be loosened and turned around to prevent it from wearing away entirely on one side and fastened again in a new position.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

In Fig. 2, *a b c* represent three risers that form a portion of the heel. These risers are riveted together with conical rivets *d*. These rivets are made conical, so that they will continue to hold the risers of which the heel is composed firmly clamped together until all

are worn away. When headed nails are used for this purpose, as soon as the heads are worn off, the risers are not clamped to each other, and hence I use conical rivets without pegs, nails, or other fastening to hold the risers together.

To fasten the heel to the boot or shoe, I use a conical nut *e*, which is inserted from and through the heel, and run a screw *f* from the inside of the shoe down into said nut, which holds it firmly to the boot or shoe. This makes a cheap and strong fastening and enables the wearer of the boot or shoe to turn the heel around to make it wear evenly by simply loosening the screw *f*, adjusting the heel, and tightening it up again. The conical nut *e*, like the conical rivets *d*, aids in protecting the heel as well as holding the risers together.

In Fig. 1 I have shown three "lifts" or risers between the portion of the heel that is held on by the screw and conical nut and the sole *g*. Of course they may all be united into one and form a heel of the whole of the lifts or risers. The soles of boots or shoes, when composed of two or more layers or pieces, may also be held together by conical rivets, as shown at *i*, and such heels and soles may be made and sold as articles of commerce to be used by boot and shoe manufacturers.

Having thus fully described the nature and object of my invention, what I claim is—

1. A boot or shoe heel composed of two, three, or more lifts or risers and clamped and held together by conical rivets, which serve the double purpose of protecting the heel from wearing away and of holding the lifts or risers tightly clamped together, as described.

2. The holding of a heel to a boot or shoe by means of a conical nut *e* and a screw *f*, for the purpose and in the manner herein set forth and described.

A. O. CRANE.

Witnesses:

A. B. STOUGHTON,  
JULIUS HIRSH.