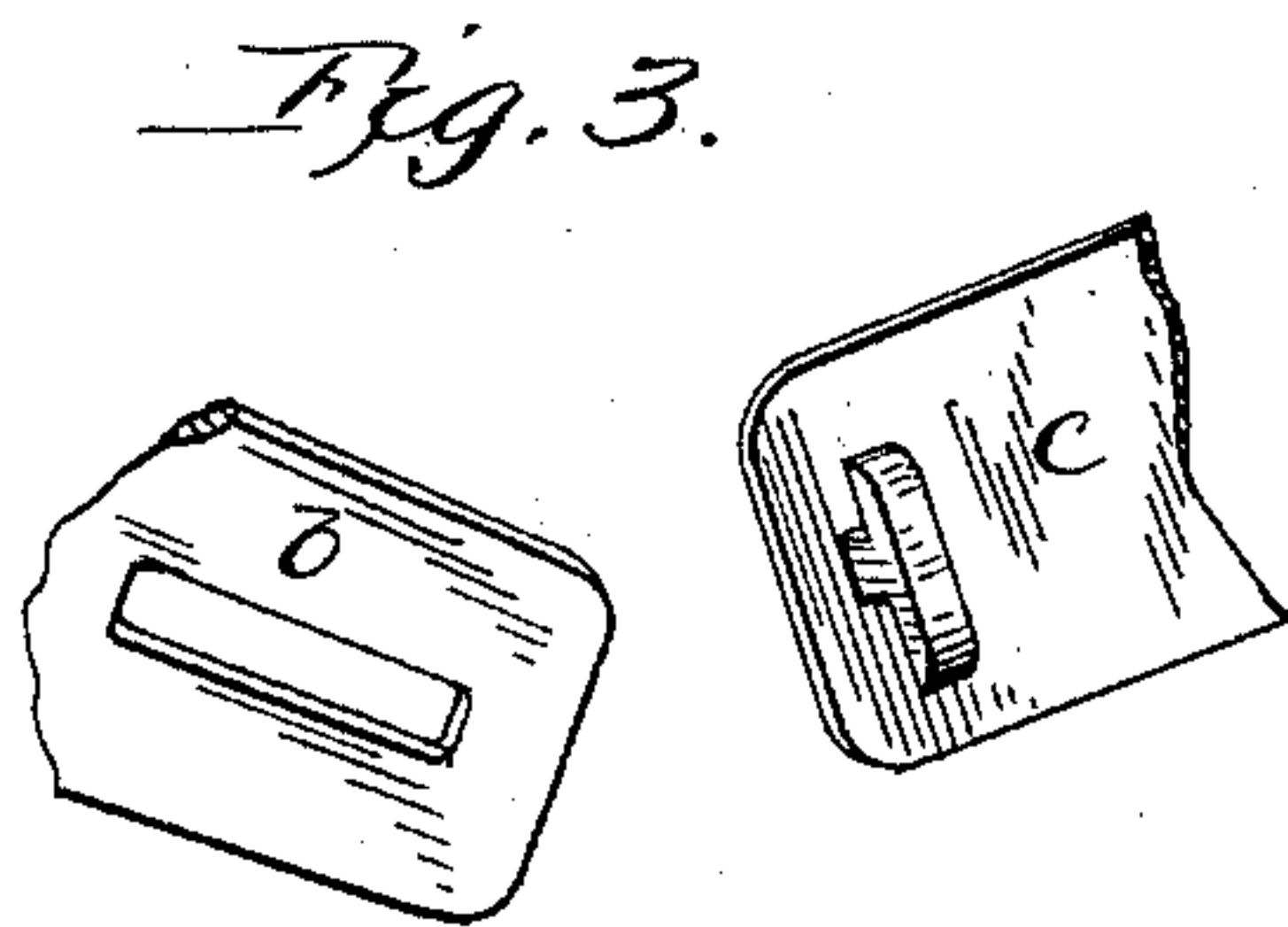
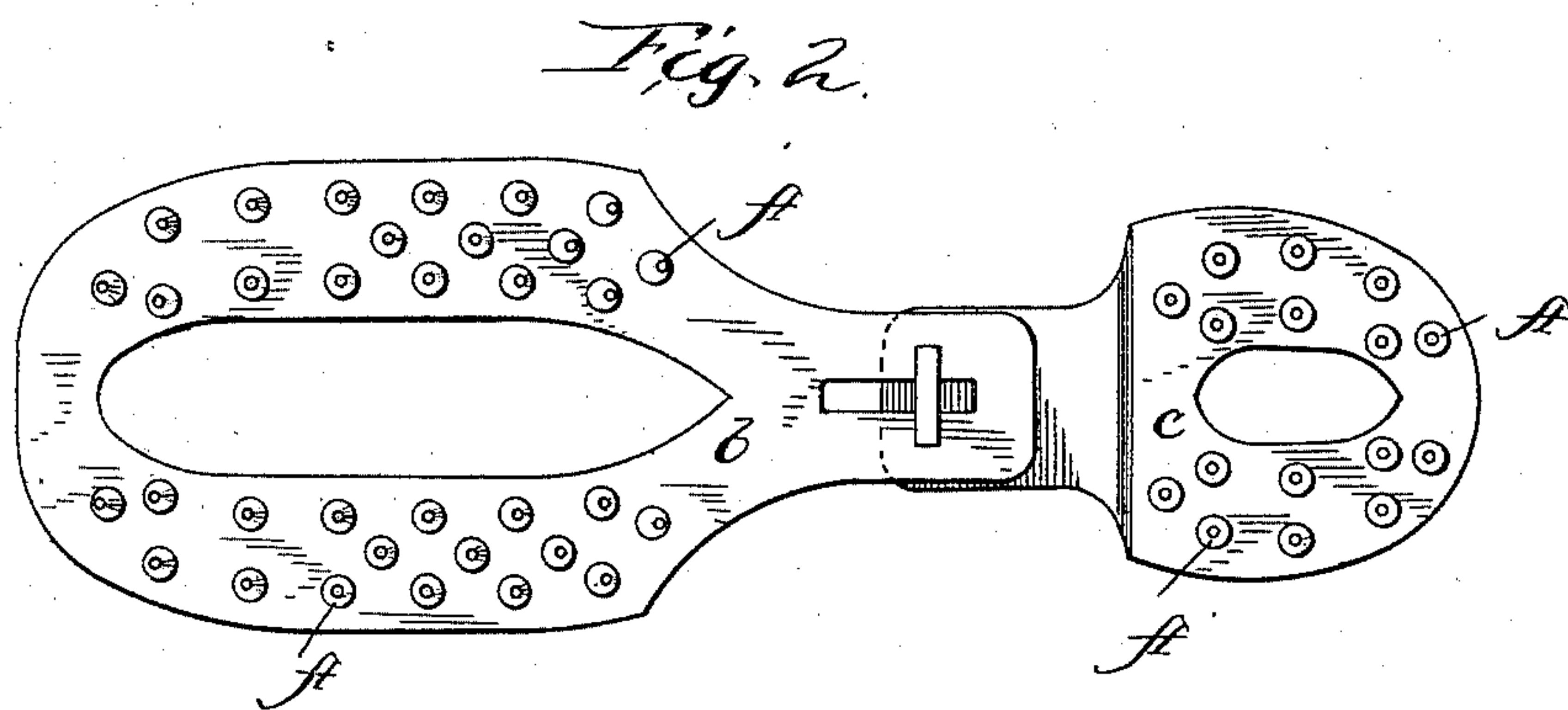
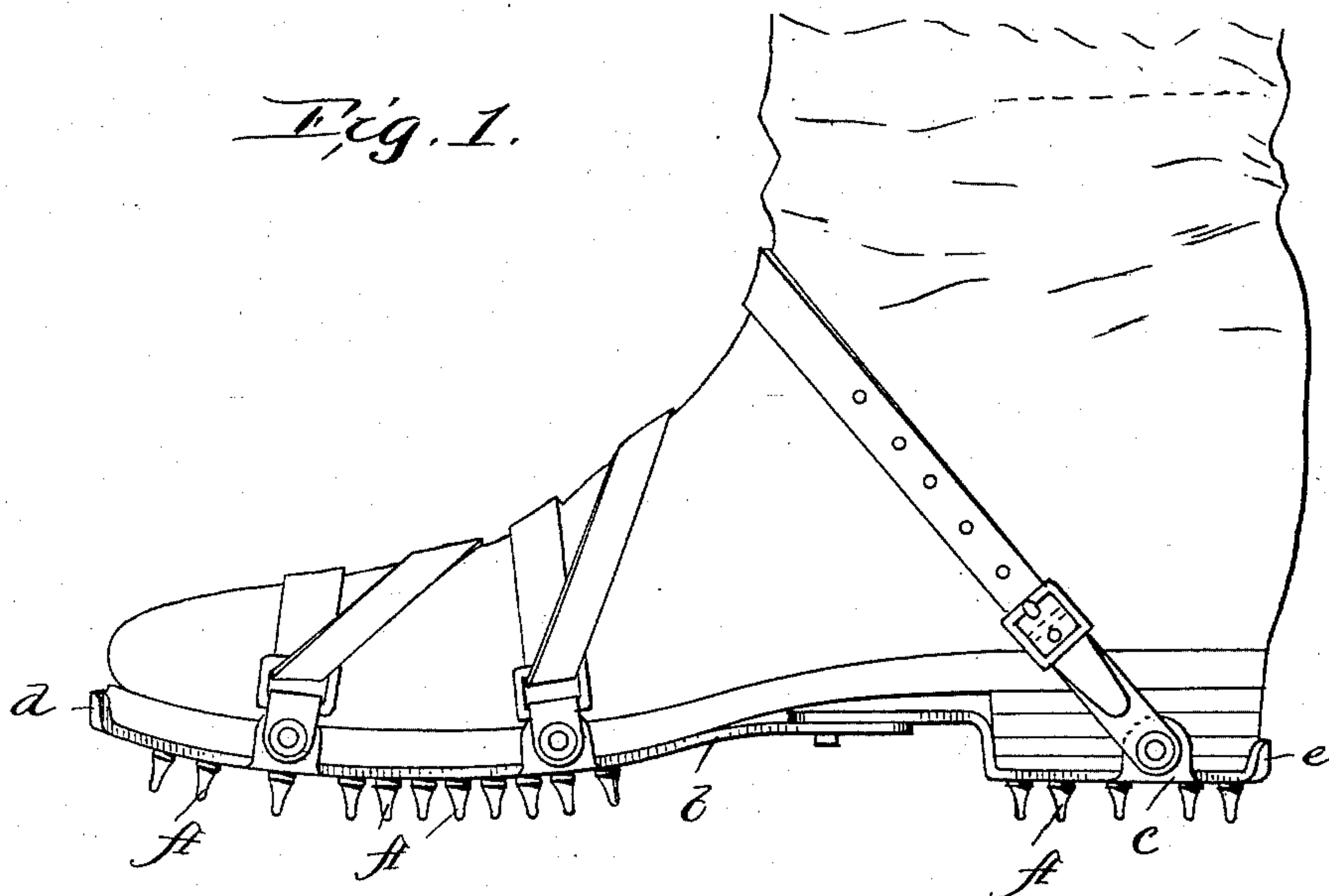


(No Model.)

A. J. ARMSTRONG.  
BOOT CALK.

No. 442,003.

Patented Dec. 2, 1890.



Witnesses -  
W. F. Keene.  
James McPherson

Inventor  
A. J. Armstrong.  
by Eli S. Mar Atty.



# UNITED STATES PATENT OFFICE.

ALBERT J. ARMSTRONG, OF CORONADO, CALIFORNIA.

## BOOT-CALK.

SPECIFICATION forming part of Letters Patent No. 442,003, dated December 2, 1890.

Application filed May 5, 1890. Serial No. 350,629. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT J. ARMSTRONG, of Coronado, in the county of San Diego and State of California, have invented a new and  
5 useful Improvement in Attachments for the Use of Lumbermen; and I do hereby declare that the following is a full, clear, and exact description of the same.

The object of my invention is to provide an  
10 attachment for the use of loggers and lumbermen to be applied to the soles of the boots, so as to enable them to pursue their vocations in safety and without fear of danger from misstep.

15 Heretofore it has been customary for men engaged in these vocations to wear boots provided with a series of calks driven through the soles, but this prevents the use of the boots when not engaged in their occupations,  
20 as the projections interfere with the comfortable movement of the feet, as they gather up dirt and require that the feet be lifted clear of the surface, so that the projections will not come in contact with it. Further  
25 than this, when in use the leather of the boots becomes soaked with water and the projections are apt to become loosened and offer an insecure hold. By my attachment, however,  
30 I provide an absolutely secure support for the projections and enable the wearer to lay them off at will.

In the accompanying drawings, Figure 1 represents the invention as applied to the sole of a boot. Fig. 2 is a plan view, and Fig.  
35 3 shows the pieces of the calk-plate separated.

In the drawings, A represents a series of pointed calks which are secured to a two-part calk-plate, the toe part being shown at *b* and the heel part at *c*. The part *b* is in the shape  
40 of the sole of the foot, with a projecting lip *d* at the toe to prevent the movement of the foot forward independent of the plate. The center is cut out, so as to lessen the weight of the metal. The two pieces of the calk-  
45 plate are composed of steel, though any suitable material may be used instead, except that it must be able to withstand the action of the water. The calks are pointed, and are provided with shanks which pass through  
50 openings in the plate *b*, and these shanks are headed down on the upper face of the plate. This forms a firm support for the calks, and this support is not at all loosened by the ac-

tion of the water. The calks are arranged in like manner on the heel part of the calk- 55 plate. The heel part is provided with a loop *e*, extending upward from its rear part, and this prevents displacement of the heel of the boot. At the forward part of the heel-plate the metal is bent vertically at right angles 60 and then bent again to a horizontal position, thus fitting the shape of the boot beneath the instep. The sole and heel plates *b c* are connected adjustably and detachably. The forward part of the heel-plate is provided with 65 a T-shaped projection, which is of less width in one direction than the slot in the end of the sole-plate, and in placing the two parts together the heel-plate is brought around at right angles to the line of the sole-plate, in 70 which position the T-shaped fastening-lug passes through the slot in the sole-plate, and a quarter-turn causes the arms of the T to pass beneath the under face of the sole-plate and this secures the parts together, while at 75 the same time they have sliding movement in the direction of their movement in relation to each other, and thus can be adjusted to fit different lengths of shoes. Both the sole and heel plates are provided with metal 80 lugs pivoted by rivets to projections from the plates, and these support buckles or other fastening means, and straps are used in connection with these buckles to fasten the at- 85 tachment to the soles of the boots. By using metal lugs and connecting the straps above the line of the sole the connections are free from the injurious effects of the water, snow, and ice.

What I claim is— 90

An attachment for the soles of boots and shoes, consisting of sole and heel plates, each provided with a series of projecting calks, a freely sliding and detachable connection between the two, projections extending up- 95 wardly at right angles to the line of the sole and heel plates, and lugs pivoted thereto, said lugs carrying buckles adapted to receive securing-straps, substantially as described.

In testimony whereof I have signed my 100 name in the presence of two witnesses.

A. J. ARMSTRONG.

Witnesses:

C. B. WADE,

A. G. BETTENS.