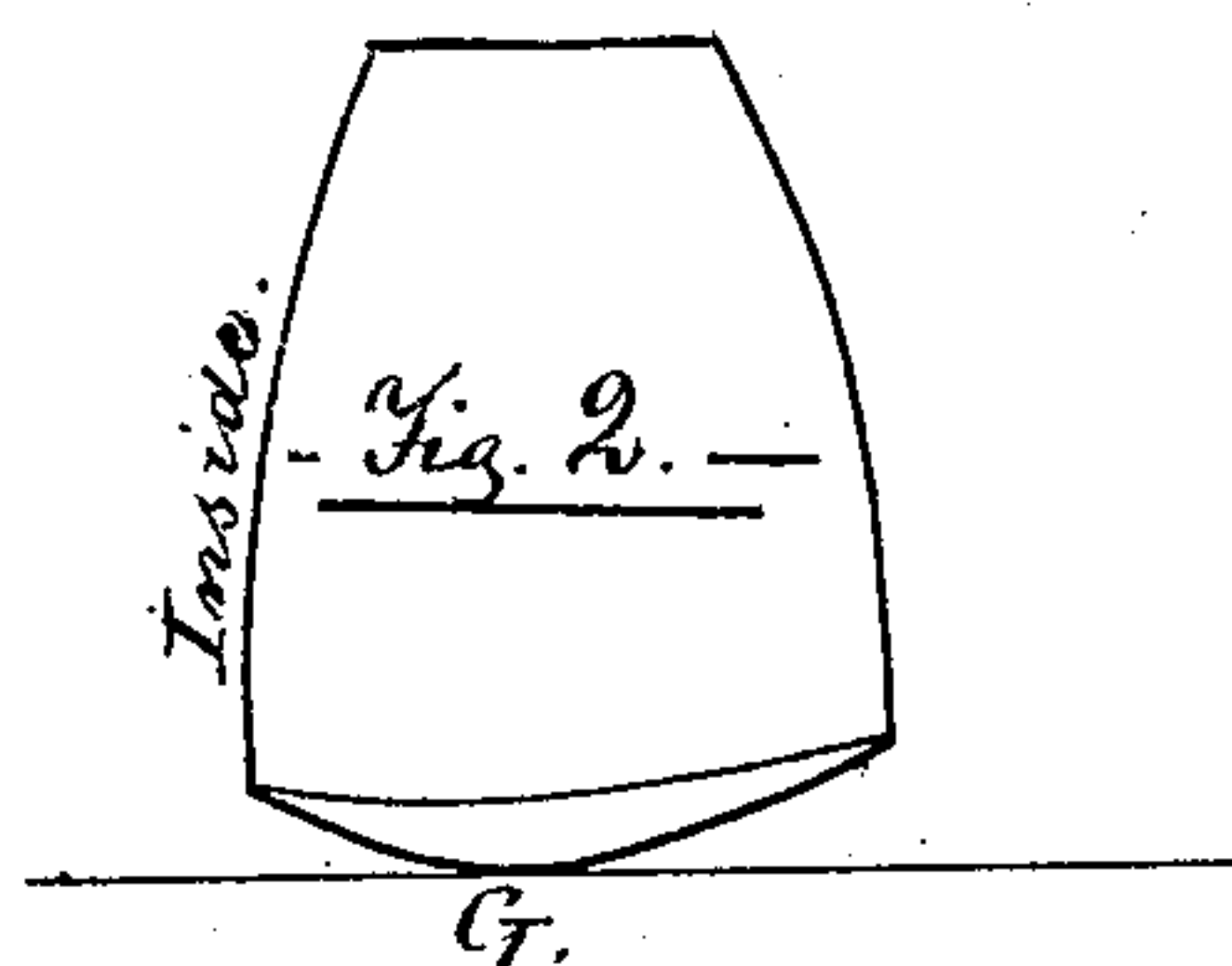
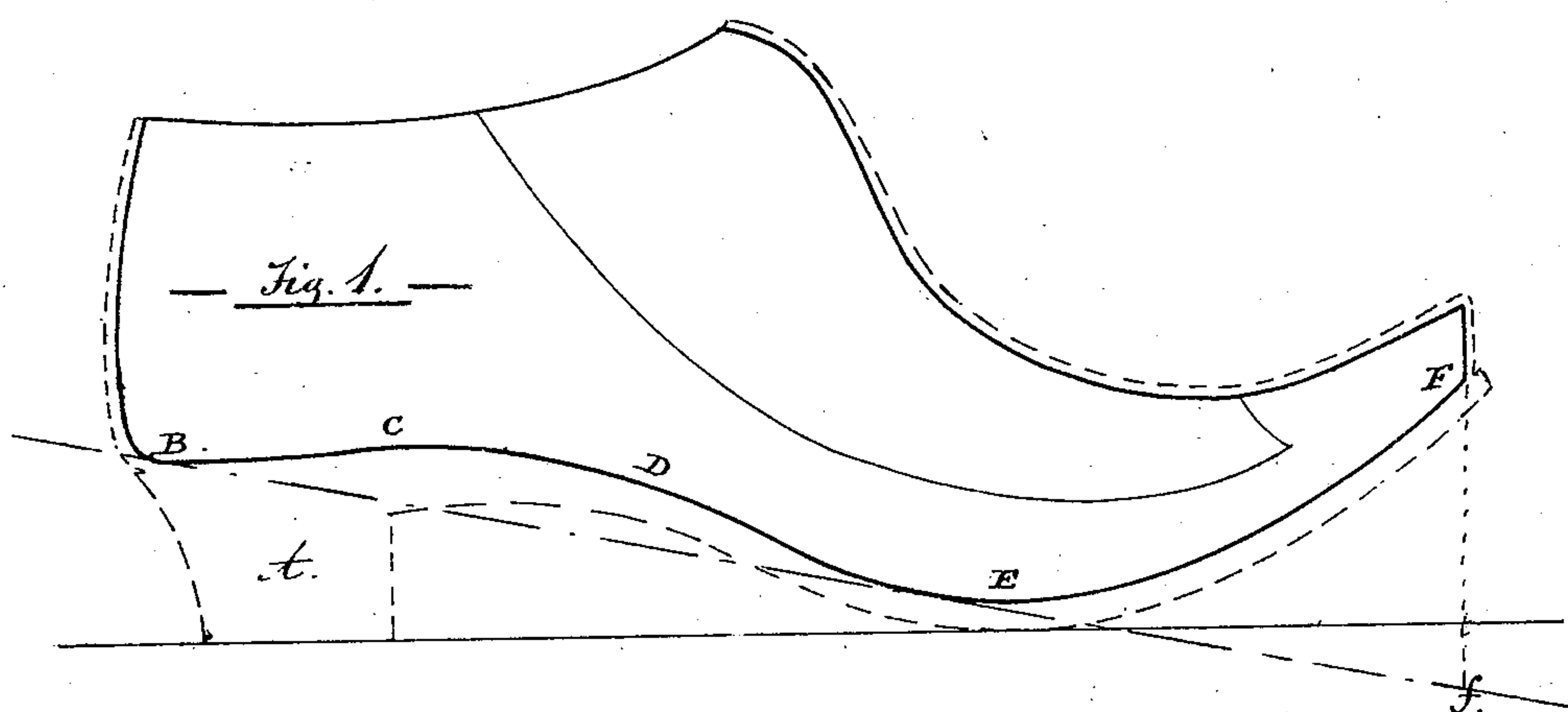


R. A. Miller,

Last.

No. 104297.

Patented Apr. 26, 1870.



Witnesses: —

Alban Andrieu

John Swolander

Inventor: —

Robert A. Miller

United States Patent Office.

ROBERT A. MILLER, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF
AND JOSEPH C. SKINNER, OF SAME PLACE.

Letters Patent No. 102,297, dated April 26, 1870.

IMPROVEMENT IN BOOTS AND SHOES.

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, ROBERT A. MILLER, of the city of Boston, county of Suffolk and State of Massachusetts, have invented a new and useful Improvement on Boots and Shoes; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the annexed drawing making a part of this specification, in which—

Figure 1 is a side view of my improved boot, with the last marked thereon in full lines.

Figure 2 is the rear end of a right-hand last for the same.

It is necessary for comfortable and easy walking to have heels of certain proportions put on our boots or shoes; also to have the curvature of the sole and the resting-place for the heel so arranged that the foot is easily kept in its proper place.

The latter requirements have too often been disregarded by common manufacturers of boots and shoes, and the results are the pressing forward of the foot toward the toes, soreness of the feet, and unsteady and uneasy walking, and the unequal wearing of the different parts of a boot or shoe.

To avoid these evils I have made a boot of the following construction:

I make the seat for the heel of the foot horizontal, as shown at B C, fig. 1, whereby I obtain a steady support for the heel of about two inches horizontal length.

In combination with this horizontal plane I furthermore make the forward and under side of this boot with a double spring, as shown by D, E, and F.

The curvature from E to F naturally keeps the foot from crowding too much forward toward the toes, and, in combination with the horizontal plane B C, keeps

the foot in an easy and graceful position, thereby avoiding the enlargement of the big-toe joint. But to make this double spring effectual for the above-named purpose, I find it necessary to make the height of F *f* more than one and one-half inch and up to three inches.

Another complaint that also is very frequent with common boots and shoes is that no precaution is taken to prevent the foot from sliding sideways. Almost every person finds that he or she treads outward, that is, the foot will slide outward, whereby the counters are quickly worn and the disarrangement of the whole shoe will soon follow; besides, a painful ankle is too often the consequence.

To avoid the latter complaints, I make the deepest curvature for the heel on one side of the center, as shown, G, fig. 2, and nearest to the inside of the boot, thereby obtaining a natural tendency for the foot to keep inward, and prevent the sliding out sideways of the foot during walking.

Boots generally present an inclined plane from the heel to the toes, causing a strong pressure toward the toes, and also a sliding sideways of the foot.

To avoid the above-named objections is the purpose of my invention; and

What I claim is—

The combination of the double spring D E F with the horizontal hollow seat B C, having the deepest part, G, between the middle and the inside of a boot or shoe, as fully set forth and described.

ROBERT A. MILLER.

Witnesses:

ALBAN ANDREW,
JOHN SWALANDER.