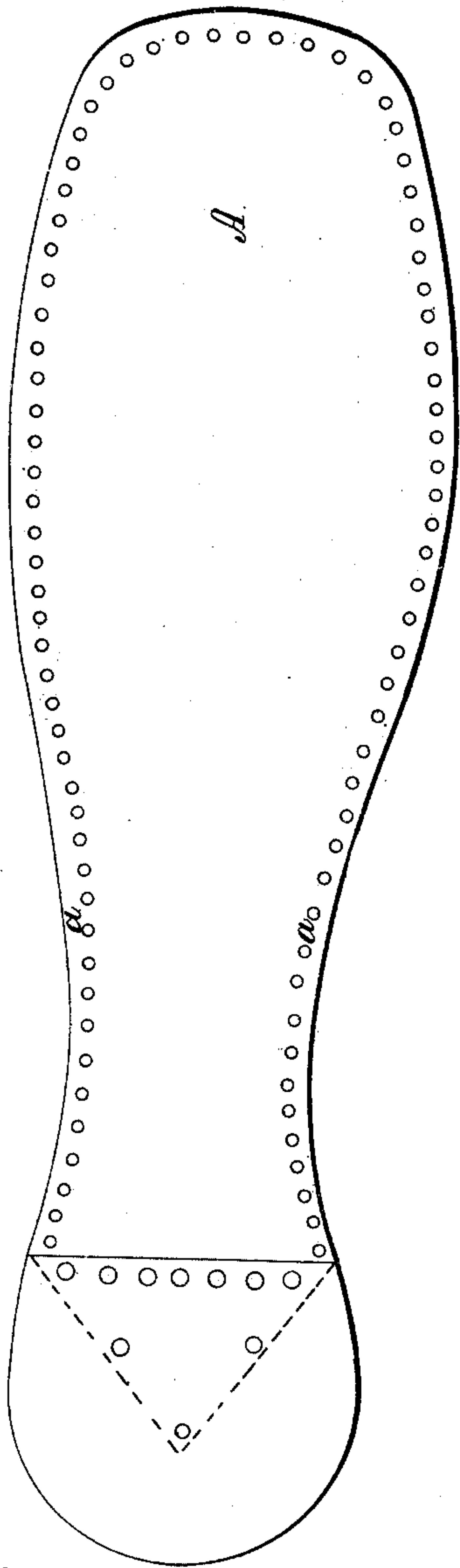


J. B. HAYDEN.  
SOLE FOR BOOTS AND SHOES.

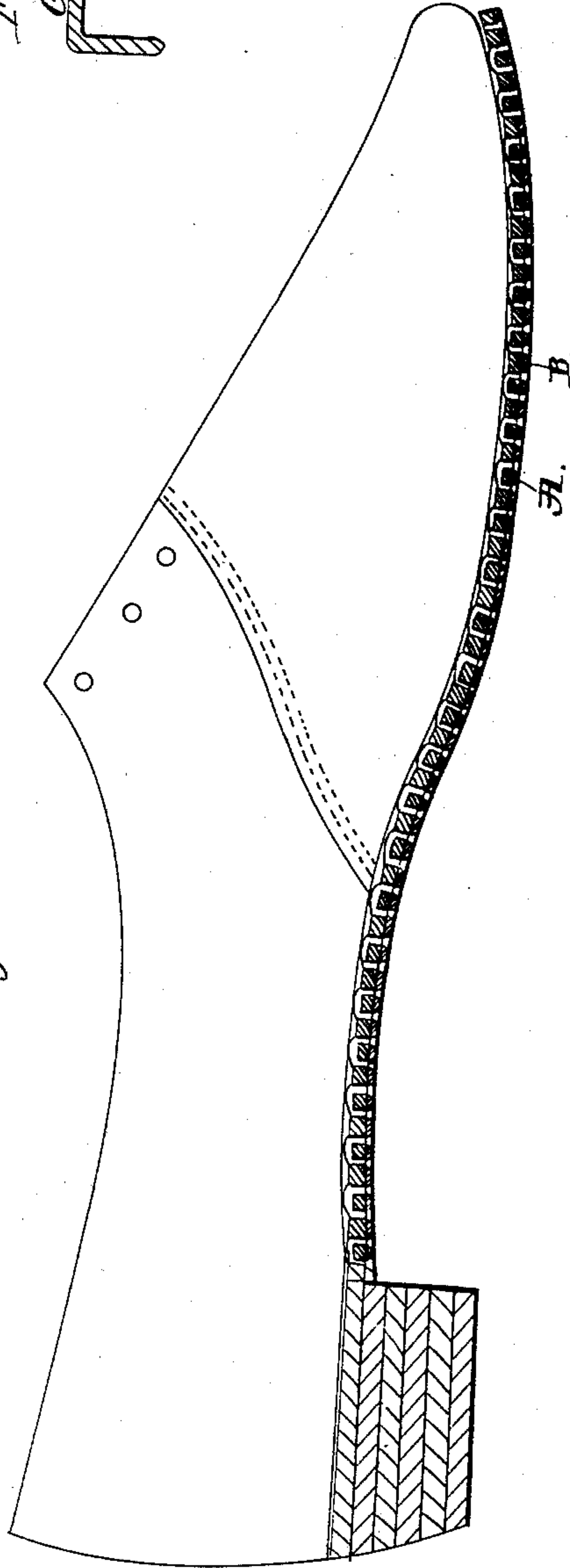
No. 26,903.

Patented Jan. 24, 1860.

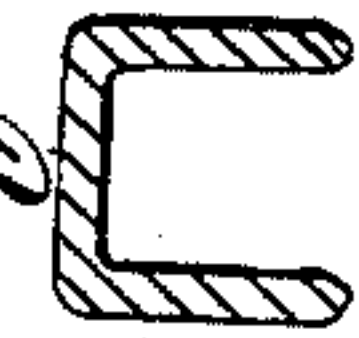
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses.

*Edw. F. Brown.*

*S. B. Woodruff*

Inventor.

*J. B. Hayden*

# UNITED STATES PATENT OFFICE.

JOEL B. HAYDEN, OF EASTON, NEW YORK.

BOOT AND SHOE SOLE.

Specification of Letters Patent No. 26,903, dated January 24, 1860.

*To all whom it may concern:*

Be it known that I, JOEL B. HAYDEN, of Easton, county of Washington, State of New York, have invented a new and useful  
5 Improvement in Soles for Boots and Shoes and the Method of Securing Them to the Upper-Leather, and declare the following is a clear and exact description, reference being had to the accompanying drawings,  
10 and the letters of reference thereon, making a part of this specification.

The nature of my invention consists in making the entire outer soles for boots and shoes of sheet steel formed and tempered so  
15 as to possess all the yielding qualities necessary for ease in wearing. Also the method of securing the tempered steel to the welt or upper leather by staple rivets as hereinafter described.

20 To enable others skilled in the art to make and use my invention I will describe it in detail.

Figure 1 shows the bottom of a shoe, or steel sole formed and drilled or punched  
25 and the holes countersunk for riveting on. Fig. 2 is a side elevation of a shoe showing the edge of the steel sole and welt and the staple rivets cut in sections. Fig. 3 represents one of the staple rivets on a large scale.

30 The sole (A) as seen in Fig. 1 is made of rolled spring or cast steel of suitable thickness cut out with dies to suit the various sizes of boots and shoes made, and brought to their proper form or shape by swaging.  
35 Around the edge of the steel sole (A,) at a

convenient distance are holes drilled or punched and countersunk so as to form a funnel shaped hole from the outside to admit of the staple rivets (C,) as seen in Fig. 2, to upset in riveting and fill the hole the  
40 thickness of the steel sole which will hold them firmly to the welt or upper leather until they are worn through.

In Fig. 2, B, is the welt and may be put on to the upper in any of the usual modes.  
45 Fig. 2 is a section through the sole, welt, and rivet, and fully shows the manner of securing the steel sole to the boot or shoe.

The rivets (a) as seen in Fig. 3, are made of copper wire in the form of a staple  
50 and by their being a double rivet enables them to clasp the welt so as to compress it firmly to the steel sole, and obviates all danger of the rivets drawing through the leather.  
55

Among the advantages derived from my invention the following may be enumerated. They may be made thin, light, and durable, keep the bottom of the feet dry, and being  
60 spring temper, are elastic and assist the muscles of the foot in walking.

Having thus fully described my invention what I claim as new, and desire to secure by Letters Patent is—

The application of tempered steel for the  
65 outer soles of boots and shoes, as described.

JOEL B. HAYDEN.

Witnesses:

EDW. F. BROWN,  
I. B. WOODRUFF.