

F. W. BACON & S. DIKE.
SOLE PLATE FOR BOOTS OR SHOES.

No. 43,469.

Patented July 12, 1864.

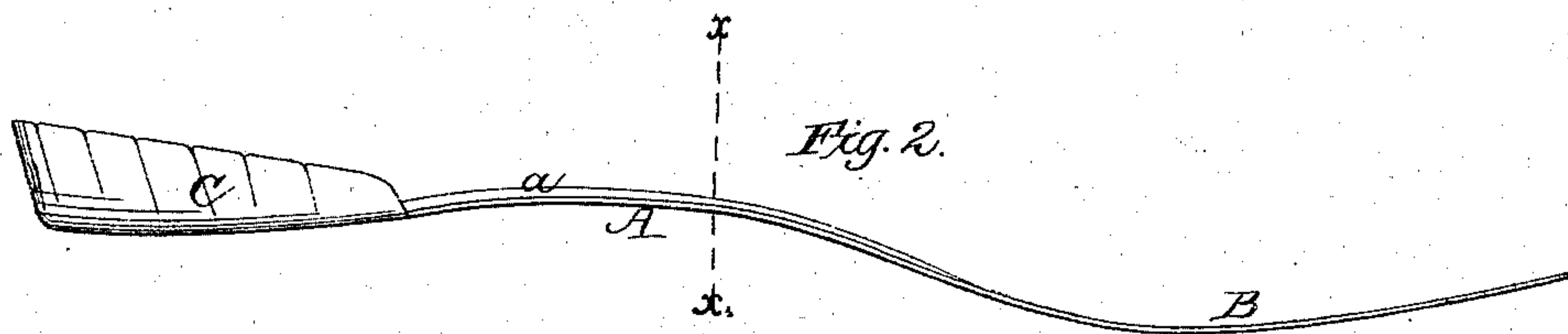
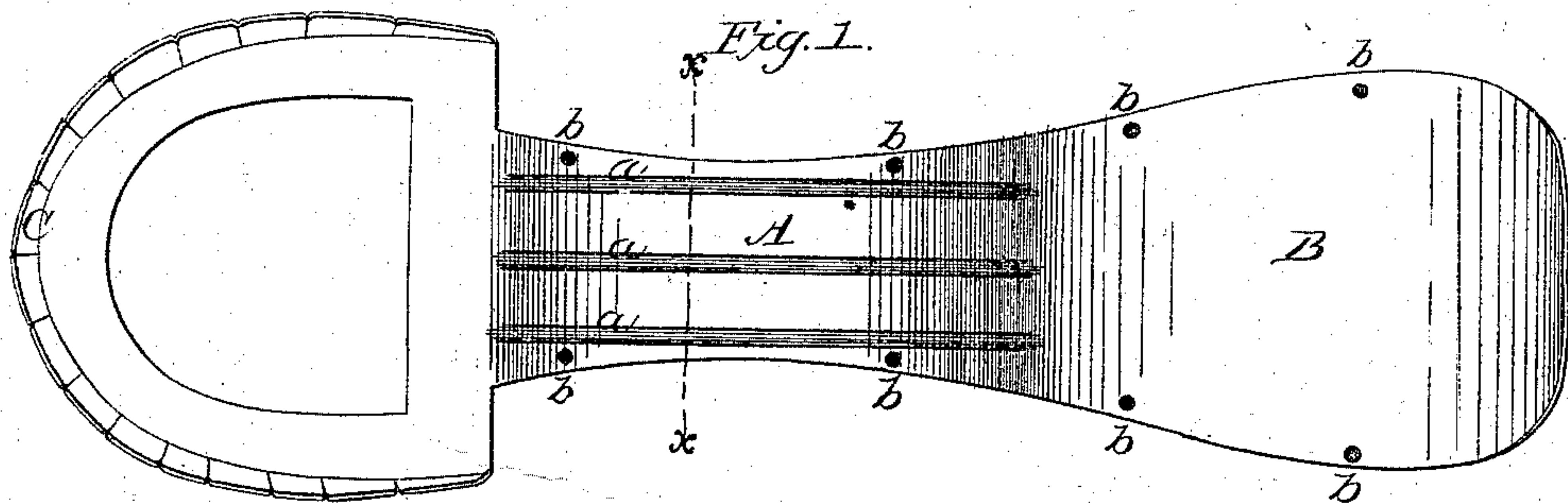


Fig. 3.



Witnesses

R. D. Osmitt
C. M. T. C. C.

Inventor

Francis W. Bacon
Solon Dike

By Solon Dike Attorney

UNITED STATES PATENT OFFICE.

FRANCIS W. BACON, OF JERSEY CITY, NEW JERSEY, AND SOLON DIKE, OF NEW YORK, N. Y.

METALLIC SOLE-PLATE FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. 43,469, dated July 12, 1864.

To all whom it may concern:

Be it known that we, FRANCIS W. BACON, of Jersey City, in the county of Hudson and State of New Jersey, and SOLON DIKE, of the city, county, and State of New York, have invented a new and useful Improvement in Boots and Shoes; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan or top view of our invention; Fig. 2, a side or edge view of the same; Fig 3, a transverse vertical section of the same, taken in the line *x x*, Fig. 1.

Similar letters of reference indicate like parts.

This invention relates to a new and useful improvement in metallic shanks and plates for the soles and counters of boots and shoes, the same being designed for the prevention of the breaking down of the shank of the sole and for retaining the whole of the sole in a proper relative position with the boot or shoe, and at the same time preventing the counter from "running over" toward one side.

Metallic shanks and plates have been heretofore invented for the purpose above specified; but they have been constructed in an expensive manner, requiring either to be forged by hand or to be rolled in proper form by expensive machinery. This expense in constructing the plates and shanks hitherto devised is due to the unequal thickness of the plate and shank, the latter requiring to be sufficiently thick and stiff to prevent the sole under the instep from breaking down, while the plate extending from the shank to the ball of the foot requires to be thinner and sufficiently elastic to yield or spring under the movement of the foot. By our improvement we obtain these results and still have the shank and plate as well as the heel-piece of an equal thickness throughout, so that they all may be cut at one operation, and swaged in proper form out of a plate of steel, no hand-work or after-manipulation whatever being required.

A represents the shank; B, the plate which extends from the shank to the ball or broad

part of the sole of the boot or shoe; and C is the heel-piece.

The above parts are all in one piece and are cut out of a piece of sheet-steel of uniform thickness and swaged in proper form at a single operation.

The sheet-steel, it will be understood, may be purchased of the requisite thickness, so that no extra expense will attend the obtaining of the proper stock, as they are manufactured or rolled into plates of various thicknesses. The steel is sufficiently thin to admit of the plate B having the requisite degree of elasticity to yield or give to the motions of the foot, and the shank A, which is of the same thickness as B, would, if due provision were not made against such a contingency, bend or break down. This we avoid by having the shank A corrugated, as shown at *a*, which may be done at the same time the parts are cut out and swaged. These corrugations, of which there may be any number, have a longitudinal position with the shank and extend the whole length of the same. (See more particularly Fig. 1.) The heel-piece or counter C is a flange or rim turned up around the edge of the heel. The central part is cut away, as represented in Fig. 1, to allow the insole and outsole to be firmly attached in the ordinary manner. The heel-piece C is designed to aid in retaining the shank in proper position, and also to prevent the counter of the boot or shoe from running or falling over at the side. The edge of the shank A and plate B is provided with several perforations, *b b*, by means of which it is securely fastened to the insole in such a way that it cannot be moved sidewise or out of position in any direction.

Thus it will be seen that by this simple improvement we can manufacture the plate and shank at a comparatively small cost, no forging, rolling, or manipulation of any kind being required to give the requisite stiffness to the shank and elasticity to the plate. The parts, after being cut out and swaged in proper form, are properly tempered, and the device is ready for use, and we would remark that in consequence of having the parts of an equal thickness they may be more perfectly tempered than hitherto, as the parts, when of an unequal thickness, are liable to be tempered

rather too hard or too soft, breaking, in the former case, across the plate, and in the latter case becoming "set" at the plate portion.

We do not claim a metallic sole-plate extending from the heel to the toe in combination with a metallic counter; but

What we do claim as new is—

A corrugated steel or metal shank and plate

with a counter turned up around the heel at any desirable height and all from the same piece of metal, as shown in Figs. 1 and 2.

F. W. BACON.

SOLON DIKE.

Witnesses:

JAMES P. HALL,

M. M. LIVINGSTON.