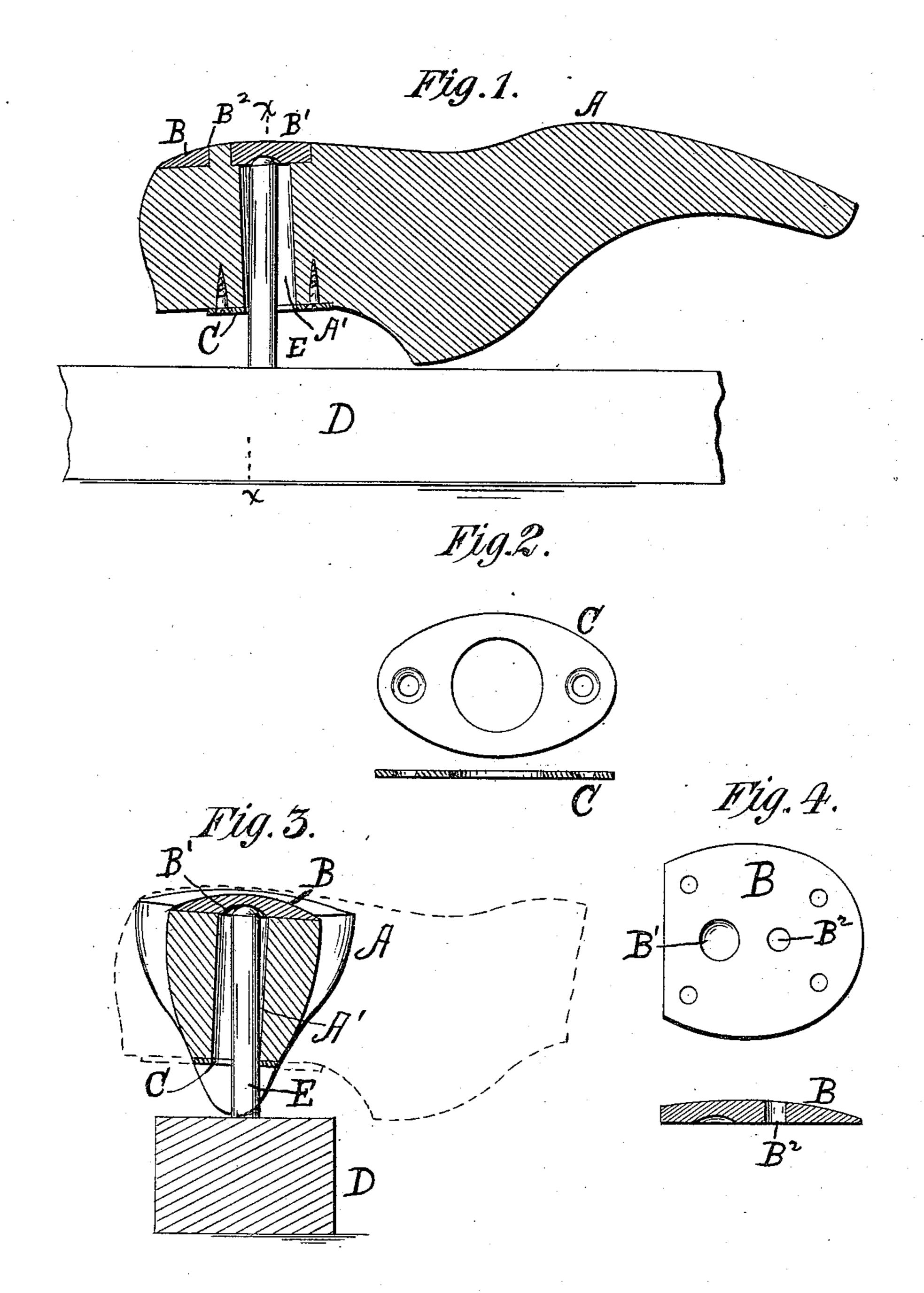
A. W. COX.
LAST.

No. 316,246.

Patented Apr. 21, 1885.



Witnesses Samp Turner P.B. Furpin,

Inventor Arthur W. Cox By R.S. V. A. Lacey Attiss

## United States Patent Office.

ARTHUR W. COX, OF NEWARK, NEW JERSEY.

## LAST.

SPECIFICATION forming part of Letters Patent No. 316,246, dated April 21, 1885.

Application filed February 4, 1885. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR W. Cox, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Lasts; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to lasts, and has for its object to provide a simple, efficient, and easily-manipulated form of last; and it consists in certain improvements, which will be hereinafter fully described, and pointed out in the claims

claims.

In the drawings, Figure 1 is a longitudinal section of my last on a suitable support. Fig. 2 shows a wear ring or plate. Fig. 3 is a section on line x x, Fig. 1; and Fig. 4 shows the heel-plate, all of which will be described.

In the manipulation of lasts it is desirable that the point of the jack-spindle should rest close to the bottom or sole portion of the heel.

My invention, while also applicable to metallic lasts, is especially adapted for use on wooden lasts.

In carrying out my invention I form the last-body A (usually of wood) with a socket, A', through its rear portion, which latter is cut away or adapted on its sole or under side 35 to receive the heel-plate B. The socket A' is extended entirely through the body of the last, as shown in Figs. 1 and 3, and may be provided around its upper or open end with a wear plate or ring, C. The plate B is fitted 40 on the heel portion of the last-body over the socket A', and secured by screws or in other proper manner. The outer side of this plate is conformed to the desired curvature of the heel, and it is provided on its inner side with 45 a depression or indentation or seat, B', concentric with the socket A', as shown. I prefer to employ this indentation B' because it serves as a seat for the point of the spindle, and prevents such point from bearing against the 50 walls of the socket A', and throws all the

damage, strain, and wear onto the metallic heel-plate, which, when worn out, may be renewed at small cost. It is usually desirable to form this plate B with a centrally-disposed opening, B<sup>2</sup>, into which to fit a wooden plug 55 to receive a peg for fastening the boot or shoe onto the last.

The jack D has a spindle, E, on which the last is supported in the manner shown in Figs. 1 and 3, the spindle entering the socket 60 A'. It will be noticed that the socket is made of greater diameter than the spindle, in order to permit the tilting of the last to various inclinations, as may be desired, though it will be understood that where this tilting is not decired the spindle may be snugly fitted to the socket in the last.

By reason of the hammering and hard pressing required to properly secure a heel to a boot or shoe, lasts as now made are soon 70 pounded to pieces. By providing the removable metallic heel-plate all wear and damage is transferred thereto, and it may be renewed at slight cost.

This metallicheel-plate also renders practi- 75 cal the arrangement of the bearing for the spindle close to the under side of a wooden last. By my invention it will also be seen there is a continuous metallic support against which to hammer and press the heel, the meson tallic heel-plate resting directly against the spindle.

I prefer in practice to employ the wear ring or plate C in connection with the metallic heelplate, having a bearing for the point of the 85 spindle, because by such construction a metallic bearing is provided for both the side and point of the spindle. These bearings not only prevent wear to the body of the last, but also render its tilting and adjustments easier by 90 reason of the reduction of friction.

That part of my device which relates to the tilting of the last upon a loosely-fitting spindle is advantageous principally when pressure is applied to the boot or shoe heel; but 95 when pounding is done, as in some classes of work, the spindle may fit closer and its top end made flat instead of pointed. In this case the inner surface of the metallic heel-plate would be made flat or free from indentation. There-

fore I do not confine myself to the rounded or pointed spindle end resting in a socket in the inner surface of the heel-plate.

Having thus described my invention, what I 5 claim, and desire to secure by Letters Patent, 1S---

1. The combination, in a last, with a wooden body having a spindle-socket formed through it near its rear end, of the metallic heel-plate to secured on the body over the inner end of the spindle socket, said plate being provided with a bearing for the point of the spindle, and with a perforation eccentric to such bearing and fitted to receive a wooden plug, substan-15 tially as set forth.

2. As a new and improved article of manufacture, a heel-plate for lasts, having one side conformed in curvature to the shape of the heel portion of a last, and provided in its 2c other or inner side with an indentation forming a seat for the spindle of the jack, substantially as set forth.

3. A last heel-plate having one or its outer side conformed in curvature to the shape of

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the heel portion of a last, and provided in its 25 inner side with an indentation, forming a seat for the jack-spindle, and having a perforation eccentric to said indentation and fitted to receive a plug, substantially as set forth.

4. A last substantially as herein described, 30 consisting of a wooden body having a socket, A', formed through it near its rear end, a metallic wear-plate, C, secured to the last around the upper end of the socket A', and having an opening registering with such socket, and a 35 heel-plate, B, secured on the heel portion of the last over the inner end of the socket A', and having in its inner face an indentation, B', registering with such socket, and forming a seat for the jack-spindle, and having a perfo- 40 ration, B2, eccentric to the indentation B', substantially as set forth.

In testimony whereof I affix my signature in

presence of two witnesses.

ARTHUR W. COX.

Witnesses:

GEO. K. COLEMAN, JOHN MURRAY.

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