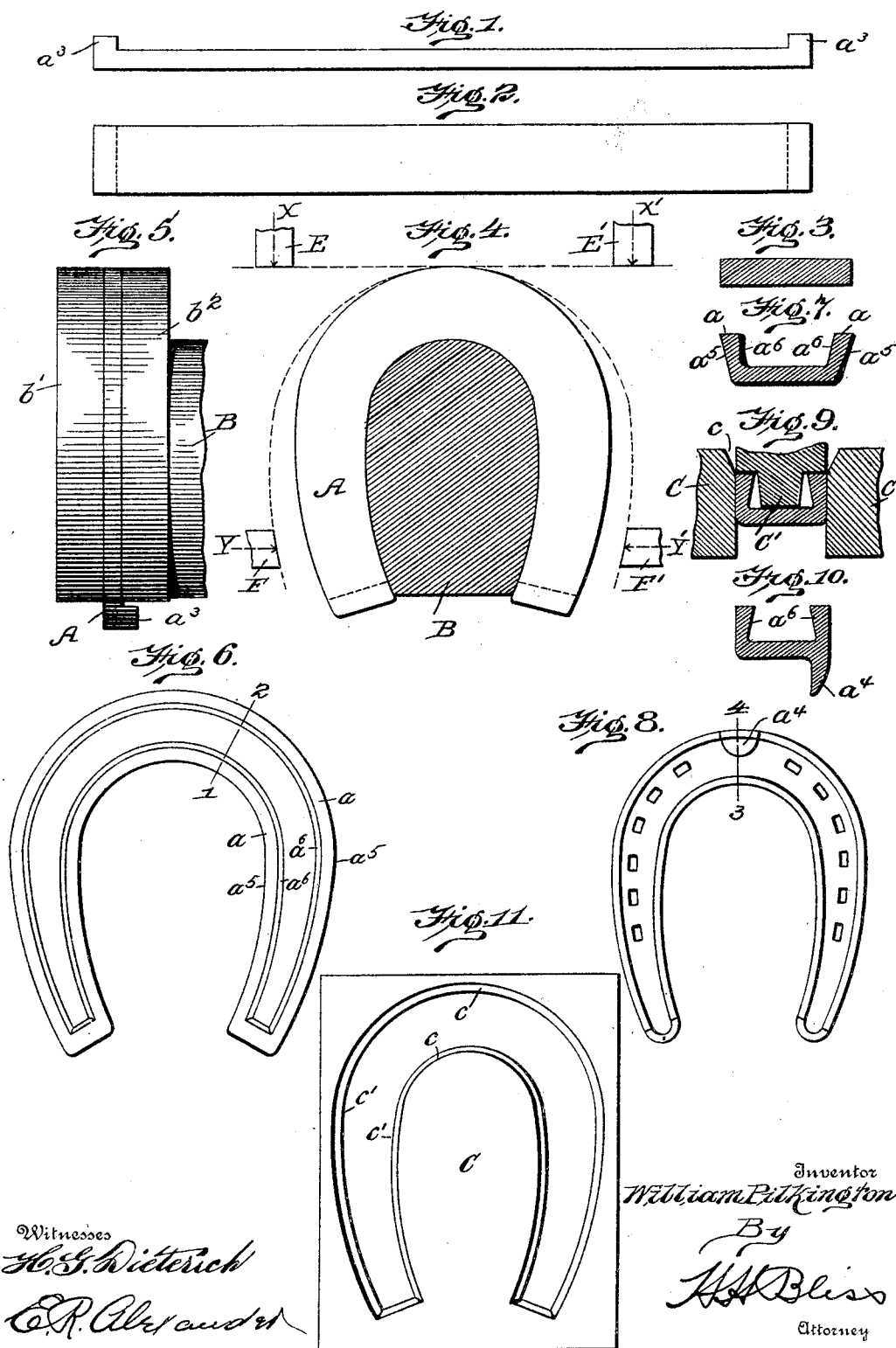


W. PILKINGTON.
MANUFACTURE OF HORSESHOES.
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MANUFACTURE OF HORSESHOES.

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To all whom it may concern:

Be it known that I, WILLIAM PILKINGTON, engineer, a subject of the King of Great Britain, and a resident of Sandfields, Erdington, in the county of Warwick, England, have invented new and useful Improvements in the Manufacture of Horseshoes, of which the following is a specification.

This invention relates to improvements in the manufacture of horseshoes, and refers particularly to those of channel-section, the object of the invention being to manufacture such articles from metal in bar form in a cheap and expeditious manner and so as to obviate the loss of metal from scrap, while at the same time the channel is dovetail-shaped in section for the purpose of retaining the cushion or stuffing material more securely in position.

In order that my invention may be clearly understood and more easily carried into practice, I have appended hereunto a sheet of drawings upon which I have fully illustrated the nature of my said improvements.

In the drawings, Figure 1 is a side elevation or edge view of the bar from which the shoe is formed. Fig. 2 is a front elevation of the same. Fig. 3 is an enlarged cross-section of the middle portion of the same. Fig. 4 is a diagram elevation, partly in cross-section, of the tool for bending the bar into the required horseshoe shape. Fig. 5 is a side elevation of same. Fig. 6 is an elevation of the blank after the first process of stamping. Fig. 7 is an enlarged section through same on the line 1 2. Fig. 8 is an elevation of the shoe complete. Fig. 9 is a sectional view showing the pressing of the shoe, previously of the shape indicated in Figs. 6 and 7, through a perforated tool. Fig. 10 is an enlarged section through Fig. 8 on the line 3 4. Fig. 11 is a plan view of a perforated tool or die for performing one of the steps of my process.

In carrying this invention into effect the shoe is formed from the bar of metal bent to the required shape, which may be effected by bending the bar around the shaped mandrel B between the plates b' b^2 , such bending being effected by plungers E E' simultaneously

pressing against the bar A at the points indicated by arrows X X', immediately after which additional plungers F F' simultaneously press in the ends from the points indicated by arrows Y Y', after which the mandrel is withdrawn and the blank A is free to drop from between the plates. The shaped plate is placed in dies and stamped to a channel-section having the inner and outer flanges a , Figs. 6 and 7, each of which flanges has outer inclined sides a^5 and inner less inclined sides a^6 . The blank is then trimmed and then pressed through a perforated tool or tools, such as indicated in Figs. 9 and 11 at C, having an entering flare or bend c and opposing walls c' , so as to force inward the walls a^5 and give the walls a^6 an inward inclination, thus forming the channel-section with dovetail sides a^6 , as shown by Fig. 10.

Projections a^3 may be provided on the bar A to form projecting guards at a^3 when so required, and the grips a^4 may be pressed out when forming the shoe. The nail-holes may be partially punched out when stamping the section shown by Fig. 7.

A portion of a pressing means coöperating with the tool C is shown at C' in Fig. 9.

It will be understood that my invention is independent of any particular apparatus for carrying it into effect, and other appliances than those illustrated may be employed.

What I claim is—

The herein-described process for the manufacture of horseshoes with cushion cavities, which consists in bending a bar to a horseshoe shape, forming laterally - projecting flanges along the edges of the bar, shaping the said flanges to be thicker along their outer edges than their inner, and bending the said flanges to have their inner walls converge outwardly by pressing the bar through a perforated tool, substantially as set forth.

In witness whereof I have set my hand in the presence of two witnesses.

WILLIAM PILKINGTON.

Witnesses:

WALTER H. E. BARTLAM,
HERBERT W. J. GREGORY.