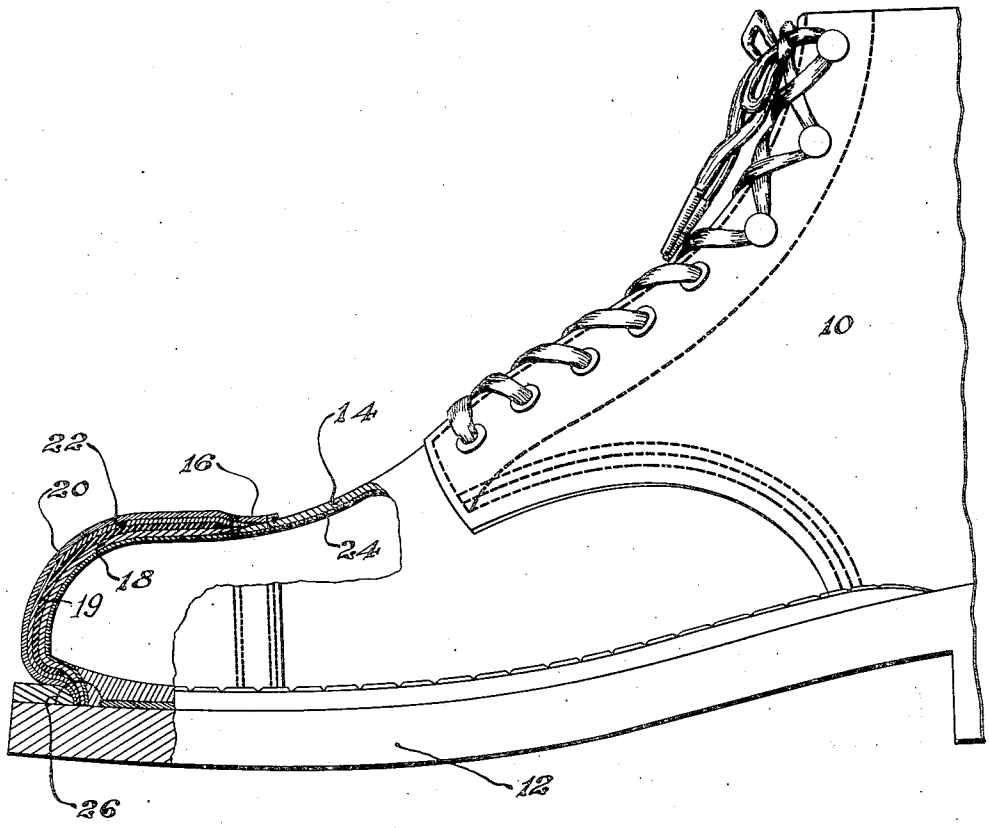
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BOOT AND SHOE

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Witness

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BOOT AND SHOE

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11 Claims. (Cl. 36—77)

The present invention relates to boots and shoes suitable for workmen and others requiring an armored or protected toe, and in particular relates to the type of shoe disclosed in my Patent No. 1,823,924, dated September 22, 1931. With the construction shown in this patent, a metallic box is engaged and held in a pocket formed by the toe portion of the upper and the seam connecting the upper to the shoe sole.

The present invention has for its object a construction which not only improves the appearance and wearing qualities of boots and shoes provided with the reinforced toe, but in addition permits the incorporation of this feature in shoes of relatively lighter and more flexible construction.

With this object primarily in view, it is proposed to engage the metallic protecting box at one side with a formed, stiffened box of non-metallic construction capable of connection to the shoe upper through the usual stitched seam, and to the shoe sole if so desired. This non-metallic box is normally lasted into the shoe in a flexible or pliable condition to cause it to conform closely to the shape of the inflexible metallic box, and to virtually embed the latter therein in the course of the lasting operation. Preferably the non-metallic, formed box is located beneath the metallic box, and may be connected to the upper prior to lasting, and is then formed to the metallic box during the lasting operation, the outer portion of the upper being pulled thereover in a taut condition. In addition, it is desirable to provide a cushion between the opposite side of the metallic box and the upper, which may be in the nature of an intermediate cap of yielding material, or a second pliable formed box if so desired. Obviously, the desirability of such a cushion will depend to some extent on the character and thickness of the toe portion of the upper, and is less desirable and necessary with a relatively thick and heavy toe cap than with a toe cap of thinner and more flexible material. In either event, however, the cushion tends to obliterate the edge of the metallic toe cap, and provide a smooth exterior inasmuch as the toe cap is shorter than the pocket in which it is received, and the rear edge is slightly advanced from the toe seam extending across the top of the shoe.

In actual practice I have found that a short vamp terminating at the junction of the toe cap and connected by a stitched seam to a separate toe cap, a pliable cap portion, and a second cap of cushion material, works satisfactorily, the connected parts of the upper being assembled upon the last with the pliable toe in temper, the metallic box inserted, and the whole lasted in the usual manner, the lasting operation molding the pliable box to the exact contour of the metallic box, and the latter embedding itself in the outer and surrounding cushion as the toe cap is drawn tautly over the entire assembly, producing a shoe with a smooth, unbroken exterior and interior, and with the metallic cap properly located and unable to become displaced in the ordinary usage of the boot or shoe.

The accompanying drawing illustrates the preferred form of my boot or shoe in elevation, partially broken away to show the toe portion in longitudinal section.

The shoe shown in the illustrated embodiment of the invention, except for the improved toe construction, is otherwise of conventional character and may be made as a welt shoe or otherwise according to the circumstances. This shoe is provided with an upper portion indicated generally at 10 and including vamp and toe portions, and a sole 12. The upper portion is provided with a short vamp 14 terminating at the rear edge of the toe cap, and has connected thereto through the seam 16 a pliable box 18, a toe cap 20 and an interposed cushion 22 of material generally softer and more yielding than the toe cap. In addition, a lining 24 is connected to the upper back of the toe cap seam, and is intended to underlie the molded toe cap in the finished shoe. As will be particularly evident, the advanced portion of the vamp connected to the toe is beveled or skived, and projects beneath the pliable box to avoid the formation of an abrupt seam or shoulder within the shoe. The inflexible metallic box 19 is located between the pliable box 18 and the cushion. The metalic box is not connected to the toe cap seam, but is retained within the pocket formed by the opposing materials. It will be noted that the toe portion of the upper materials are connected at their base about the toe through a conventional seam 26.

Obviously the above-described construction may be altered within the scope of the invention, which is essentially concerned with the provision of a non-metallic formed box underlying the metallic box, the metallic box being virtually received in a pocket formed of the toe of the shoe, whether this pocket be constituted in part by the non-metallic box or by the upper and lining materials which may and preferably do encompass both boxes at opposite sides. In certain cases the metallic box may be engaged at its upper side by

a layer of flexible or pliable cushioning material.

What is claimed is:

1. A boot or shoe comprising an upper, an inflexible metallic box located at the toe and underlying the toe portion of the upper, and a non-metallic formed box engaging with the metallic box and molded into close contour therewith.

2. A boot or shoe comprising an upper having a toe portion, a metallic box underlying the toe portion of the upper, a non-metallic formed box underlying the metallic box and molded closely to the contour of the metallic box, and a lining within the shoe and underlying the upper and formed box at the toe.

3. A boot or shoe comprising an upper having a toe portion, a metallic box underlying the toe portion of the upper, and a non-metallic box molded closely to the contour of the metallic box and engaging therewith, the non-metallic box being connected with the upper at the rear of the metallic box to provide a connection between the metallic box and the upper material.

4. A boot or shoe comprising an upper having a toe portion, a metallic box located within the toe portion of the upper, a non-metallic and molded box engaging with the metallic box and molded thereto, and a layer of cushioning material engaging with the metallic box at the side opposite from the non-metallic box.

5. A boot or shoe comprising an upper having a toe portion, a metallic box located within the toe portion of the upper, a non-metallic box molded to the contour of the metallic box, and a cap portion of cushioning material, the cap portion and non-metallic box being connected rearwardly of the metallic box to the upper and engaging with opposite sides of the metallic box.

6. A boot or shoe comprising an upper having a vamp portion and a toe cap portion separately connected thereto, a metallic box underlying the toe cap, a non-metallic box engaging with the metallic box and molded to the contour of the metallic box, and a seam connecting the non-metallic box, toe cap and vamp portion of the upper together rearwardly of the metallic box.

7. A boot or shoe comprising an upper having a vamp portion and a toe cap portion separately connected thereto, a metallic box underlying the toe cap, a non-metallic box engaging with the metallic box and molded to the contour of the metallic box, and a seam connecting the non-metallic box, toe cap and vamp portion of the upper together rearwardly of the metallic box, with a portion of the vamp projecting forwardly beneath the rearwardly projecting and connected edge of the formed box.

8. A boot or shoe comprising an upper having a vamp portion and a toe cap portion separately connected thereto, a metallic box underlying the toe cap, a non-metallic box engaging with the metallic box and molded to the contour of the metallic box, and a seam connecting the non-metallic box, toe cap and vamp portion of the upper together rearwardly of the metallic box, with a beveled and reduced edge of the vamp projecting forwardly beneath the connected edge of the non-metallic box.

9. A boot or shoe comprising an upper having a vamp portion and a toe cap portion separately connected thereto, a metallic box underlying the toe cap, a non-metallic box engaging with the metallic box and molded to the contour of the metallic box, a seam connecting the non-metallic box, toe cap and vamp portion of the upper together rearwardly of the metallic box, with a beveled and reduced edge of the vamp projecting forwardly beneath the connected edge of the non-metallic box, and a lining connected to the upper and underlying the vamp portion and non-metallic molded box.

10. A boot or shoe comprising an upper, an inflexible metallic box located at the toe and underlying the toe portion of the upper, and a non-metallic formed box underlying the metallic box and molded into contour therewith, the non-metallic box being connected to the upper at its rear portion behind the metallic box.

11. A boot or shoe comprising an upper having toe and vamp portions, a metallic box underlying the upper at the toe portion, a non-metallic formed box underlying the metallic box and molded to the contour of the metallic box and connected to the upper at the rear of the metallic box to provide a pocket therefor, and a lining within the shoe and underlying the upper and formed box at the toe.

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