Feb. 3, 1959 J. H. COOPER ET AL 2,871,583

CAST ALUMINUM HEEL WITH PLASTIC FILLER

Filed Feb. 21, 1958

FIG. 1.

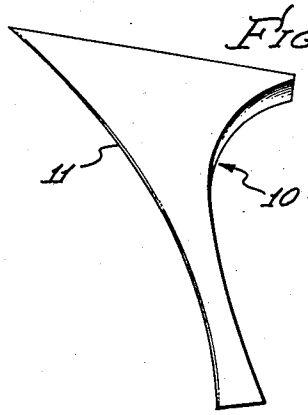


FIG. 2.

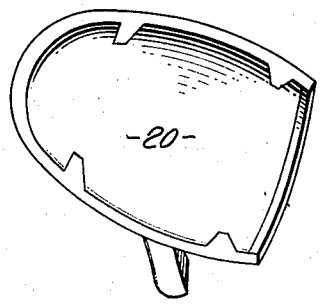


FIG. 3.

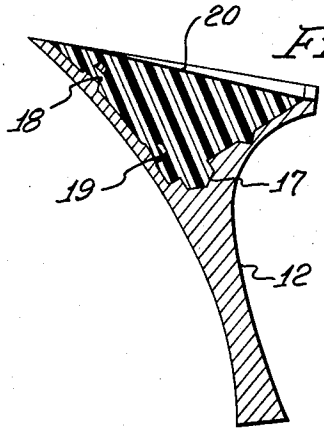
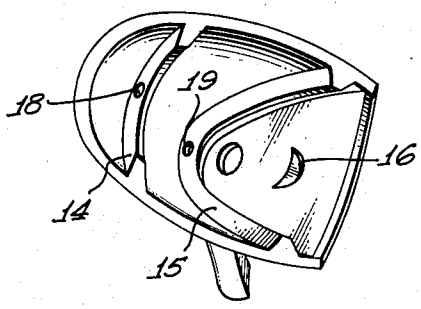


FIG. 4.



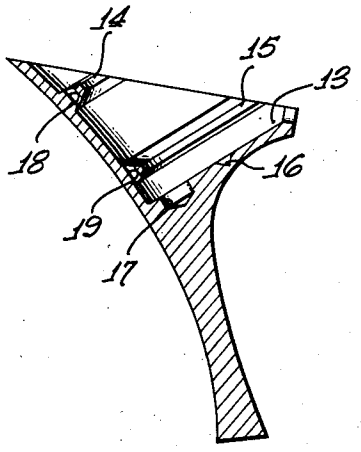


FIG. 5.

JACK H. COOPER
THEODORE FREISTAT
INVENTORS.

BY Lyon & Lyon
ATTORNEYS.

United States Patent Office

2,871,583

Patented Feb. 3, 1959

2,871,583

CAST ALUMINUM HEEL WITH PLASTIC FILLER

Jack H. Cooper and Theodore Freistat, Los Angeles, Calif., assignors to Great Western Heel Co., Inc., Los Angeles, Calif., a corporation of California

Application February 21, 1958, Serial No. 716,796

3 Claims. (Cl. 36—40)

This invention relates to a heel construction, and more particularly to the art of heels for ladies' high heel shoes of the extremely highly styled type.

It has become fashionable to provide for ladies' shoes high heels which are extremely narrow to the point in which they have been designated as "spike" heels. This has, of course, caused a problem of providing sufficient strength in the heel to prevent breakage. Accordingly it has been heretofore suggested that the body of the heel should be formed of metal and in particular of aluminum. However, this itself raises problems of how to attach the body of the shoe itself to the heel seat without involving undue costs and unduly complicated construction.

It is accordingly one object of this invention to provide a heel which avoids the aforementioned difficulties.

It is another object of this invention to provide a heel, the body of which is formed of aluminum, the heel seat of which is formed of a plastic which upon curing forms a firm, nail receiving and holding seat.

It is a further object of this invention to provide such a combination of aluminum or other metal body and plastic seat in which means are provided for securely lodging the plastic seat and retaining the same against displacement or loosening.

This and other objects, features and advantages of the invention will be apparent from the annexed specification in which:

Figure 1 is a side view of a heel manufactured in accordance with the present invention.

Figgure 2 is a perspective elevation of same.

Figure 3 is a section through the median line of the heel shown in Figure 1.

Figure 4 is a view similar to Figure 3 with the plastic heel seat removed.

Figure 5 is a section through the median line of Figure 4.

Referring now more particularly to the drawings, the heel is indicated generally by the numeral **10**, and includes an aluminum casting **11** forming the exterior or body portion of the heel.

The casting **11** is preferably solid in the thin lift portion **12** to provide strength but has an upwardly facing open shell **13** formed in the top thereof. A pair of ribs **14** and **15** are cast in the shell as indicated particularly in Figures 4 and 5 extending transversely across the shell and being somewhat arcuate in shape. A crescent shaped niche **16** may be formed in the shell, as well as a hole **17** adjacent the bottom of the shell. Also one or more holes **18** and **19** may be formed in the ribs **14** and **15** as indicated.

In manufacturing the completed heel, the aluminum

body **11** is first cast and then trimmed and polished. The shell is then filled with a suitable plastic material which upon curing will form a rigid heel seat **20** capable of receiving and holding a shoe-affixing nail. Many of the thermosetting and other plastics are suitable for this purpose, specifically including the acetates, butyrates, and polyethylenes.

It will be noted particularly from Figure 3 that the plastic material enters the niche **16**, surrounds the ribs **14** and **15**, fills the hole **17**, as well as the holes **18** and **19**. This forms a positive lock which assures the plastic material remaining in place despite the forces to which it is subject in wear.

From the foregoing it will be obvious that it has been provided by the present invention a heel which has all of the strength provided by the metal casting and yet which may be treated by the shoemaker identically as a leather or wooden heel in that he may, without any change in his practice, directly nail the body of the shoe to the heel.

While there has been described what is at present considered a preferred embodiment of the present invention, it will be apparent to those skilled in the art that various changes and modifications can be made therein without departing from the essence of the invention, and it is intended herein to cover all such changes and modifications as come within the true spirit and scope of the appended claims.

We claim:

1. A heel for attachment to a shoe comprising an aluminum casting forming a hollow shell; a plurality of ribs cast in said shell extending across said shell and upstanding from the bottom of said shell; a filler in said shell to form a heel seat; said filler being a plastic which upon curing is capable of receiving and holding nails for securing said heel to a shoe.

2. A heel for attachment to a shoe comprising an aluminum casting forming a hollow shell; a plurality of ribs cast in said shell extending across said shell and upstanding from the bottom of said shell; a filler in said shell to form a heel seat; said filler being a plastic which upon curing is capable of receiving and holding nails for securing said heel to a shoe; said casting having a hole in the bottom of said shell adapted to be filled by said plastic and form key means which together with said ribs prevent dislodgment of said plastic from said shell.

3. A heel for attachment to a shoe comprising an aluminum casting forming a hollow shell; a plurality of ribs case in said shell extending across said shell and upstanding from the bottom of said shell; a filler in said shell to form a heel seat; said filler being a plastic which upon curing is capable of receiving and holding nails for securing said heel to a shoe; said casting having a hole in the bottom of said shell adapted to be filled by said plastic and form key means and said ribs being pierced to provide additional key means, which together with said ribs prevent dislodgment of said plastic from said shell.

References Cited in the file of this patent

UNITED STATES PATENTS

1,314,319	Formanack	Aug. 26, 1919
1,395,740	Schlosser	Nov. 1, 1921
1,398,662	Windsor	Nov. 29, 1921
1,579,114	Kaplan	Mar. 30, 1926
1,816,200	Simon	July 28, 1931