Feb. 23, 1943. F. H. TOBEY 2,312,008

HEELS FOR SHOES

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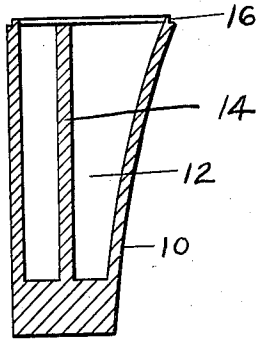


Fig. 1

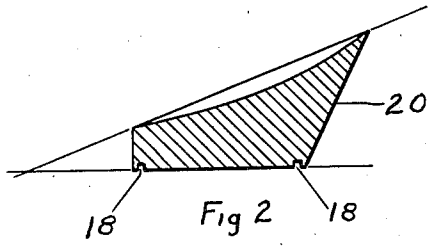


Fig 2

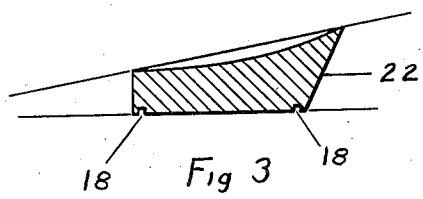


Fig 3

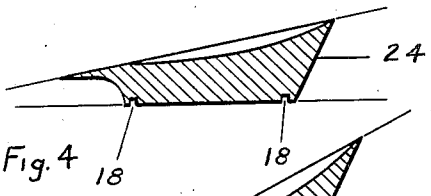


Fig. 4

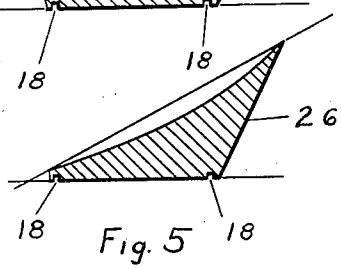


Fig. 5

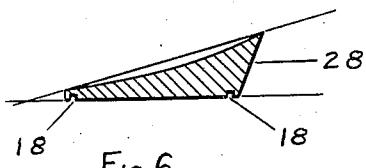


Fig. 6

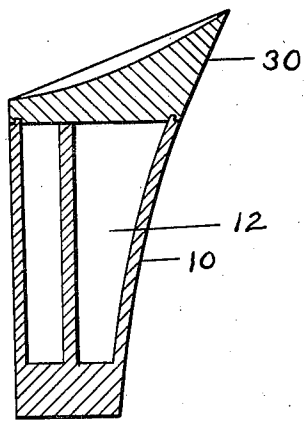


Fig. 7

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HEEL FOR SHOES

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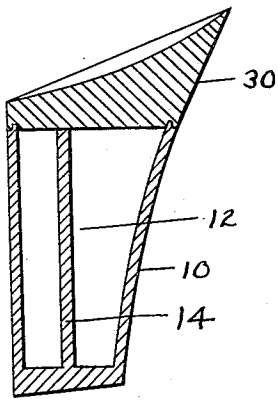


Fig. 8

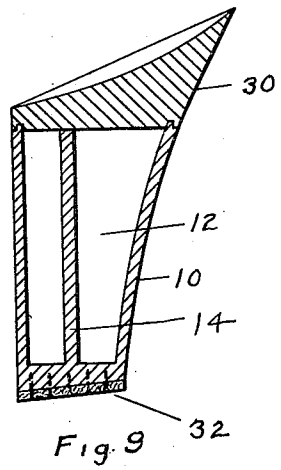


Fig. 9

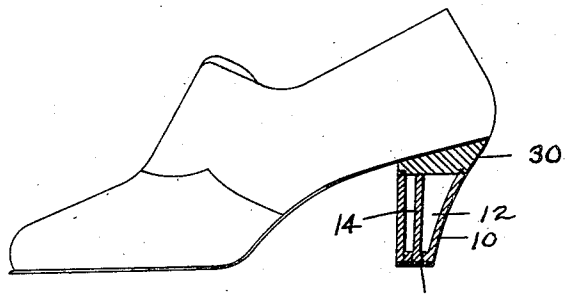


Fig. 10

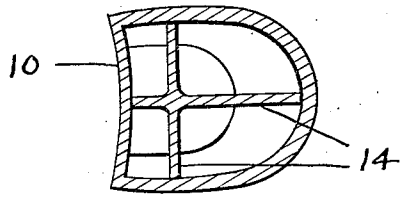


Fig. 11

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HEEL FOR SHOES

Frank H. Tobey, St. Louis, Mo.

Application January 25, 1941, Serial No. 375,881

10 Claims. (Cl. 12—147)

This invention relates to improvements in heels for shoes. More particularly, the invention relates to heels that are made of plastic material.

It is an object of the invention to provide an improved heel that is made of plastic material.

Heels for shoes are made in a number of ways. The simplest way is that used in the manufacture of wooden heels. The wooden heel blank is placed in a cutting machine of the follower type, a template is placed in proximity to the guiding mechanism of the cutting machine, and the machine is actuated. The guiding mechanism of the cutting machine follows the contours of the template and enables the cutters to make a heel that is the duplicate of the template. If the manufacturer desires to make a different type of heel or a different size heel, he need only insert a different template in the cutting machine. By doing so, he can make an entirely different type of heel. This way of manufacturing heels for shoes is quite simple and cheap. Some forms of material, however, cannot be made into heels in this manner. Materials that are generally denoted as plastics, are typical examples of materials that cannot be made into heels in this manner. Plastics must be manufactured in molds under pressure. In molding plastic heels, a set of dies and molds has heretofore been necessary for each type of heel or each size heel. Such a requirement can be a considerable item of expense because there are over a hundred different types of heels, and an average of eight different size heels in each type. To prepare to manufacture these different sizes and types of heels would require the expenditure of a tremendous sum. For this reason the manufacturers of plastic heels have been restricted to a limited number of types and sizes. This is objectionable since it limits the market open to plastic heel manufacturers. The invention obviates this objection by providing an improved form of plastic heel. This heel consists of one of a plurality of body portions and one of a plurality of cup portions that are formed separately and cemented together. The cups and body portions are made in different sizes and types, and are preferably interchangeable. Such an arrangement permits the manufacturer to fabricate a number of different sizes and types of heels with a limited number of dies and molds. It is, therefore, an object of the present invention to provide an improved heel of plastic material that consists of one of a plurality of body portions to which one of a plurality of different cups may be secured.

Where one body portion is used with one of a number of different cups, the bottom of the body portion may not be coplanar with the sole of the shoe on which the heel is used. In such a case, the heel does not "tread" properly. Such a condition is quite objectionable. The invention obviates this objection by providing a body portion that may be cut to make it coplanar with the sole of the shoe. It is, therefore, an object of the present invention to provide a plastic heel having a bottom that may be cut to permit proper treading of the shoe to which the heel is secured.

Other objects and advantages of the invention will appear from the drawings and accompanying description.

In the drawings and accompanying description, a preferred embodiment of the invention is shown and described, but it is to be understood that the drawings and accompanying description do not limit the invention, and the invention will be defined by the appended claims.

In the drawings,

Fig. 1 is a cross-sectional view of a body portion of a heel made in accordance with the principles of the invention.

Fig. 2 is a cross-sectional view of one form of cup that may be used with the body portion shown in Fig. 1.

Fig. 3 is a cross-sectional view of a second form of cup that may be used with the body portion shown in Fig. 1.

Fig. 4 is a cross-sectional view of a third form of cup that may be used with the body portion shown in Fig. 1.

Fig. 5 is a cross-sectional view of a fourth form of cup that may be used with the body portion shown in Fig. 1.

Fig. 6 is a cross-sectional view of a fifth form of cup that may be made with the body portion shown in Fig. 1.

Fig. 7 is a cross-sectional view of an assembled cup and body portion.

Fig. 8 is a cross-sectional view of an assembled cup and body portion that has been cut in preparation for the attaching of a top lift.

Fig. 9 is a cross-sectional view of the assembled cup and body portion in Fig. 7 after a top lift has been attached to the body portion, and

Fig. 10 is a view of a shoe that is made with the heel shown in Fig. 8.

Fig. 11 is a plan view of the body portion shown in Fig. 1.

Referring to the drawings in detail, a body portion of a heel is denoted by the numeral 10.

This body portion is preferably made of plastic material and has a hollow section 12. This hollow body section 12 is provided with a web 14. The web 14 is formed integrally with the body portion 10. The web 14 enables the manufacturer to make a very slight but very strong heel. In addition to reinforcing the sides of the body portion, the web reinforces the bottom of the body portion. The web may also be formed to engage the bottom of the cup portion used with the body portion. Such a construction provides additional support for the cup portion. Although a web is useful, its use is not an essential part of the invention. A plastic heel can be made quite strong without a web by increasing the thickness of the walls of the heel. The upper part of the body portion 10 may be provided with a groove 16. The groove 16 on the upper part of the body portion 10 is substantially the complement of a recess 18 in the various cups 20, 22, 24, 26, 28, and 30. These cups are designed for use with the same body portion 10, but with different types of shoes. For instance, cup 24 is used with one type of shoe and cup 26 is used with a different type. Cup 24 may be combined with body portion 10 to form a Louis heel, and cup 26 may be combined with body portion 10 to form a Cuban heel. The heels thus formed are quite different and fit different shoes. Different cups may be used on the same type of shoe where a different height heel is desired. This is illustrated in the case of cups 20 and 22. If a shoe is made that uses a cup similar to cup 20, the manufacturer will cement cup 20 to body portion 10. If a shoe is made that uses a cup similar to cup 22, the manufacturer will cement cup 22 to body portion 10. By using one body portion and a number of cups with the one body portion, the manufacturer can reduce the number of dies and molds that he must use. Since the cost of dies and molds is often quite high, the practice of using one body portion for a number of different cups is quite advantageous. The invention contemplates the manufacture of even a greater number of heels by providing a number of different types and sizes of body portions that can be used interchangeably with the cups. The various body portions and cups can be made so they are all interchangeable, or they can be made so that certain body portions are interchangeable with certain cups. Such an arrangement is necessary where the manufacturer wishes to make an unusual form of heel like the pyramid heel, box heel, etc. In the case of the more usual heels, however, the body portions are quite similar and can be used interchangeably. By using a number of cups that are interchangeable with a number of body portions, a manufacturer can make an almost unlimited number of different heels with a small number of dies and molds. Such an arrangement is very advantageous.

The heel portions of the shoes to which the cups 20, 22, 24, 26, 28, and 30 will be secured, may have different heights and different angles. The cups themselves have different angles as indicated in the drawings by construction lines, which permit the heel to "tread" properly when it is attached to the shoe. In some cases, however, it is conceivable that the cup might not have the same angle as the heel portion of the shoe to which it is to be attached. In such a case, the bottom of the body portion would not be coplanar with the sole of the shoe. Such a heel does not "tread" properly. Where this is the case, the invention contemplates the cutting of the bottom of the body portion to the proper angle. To permit this to be done, the bottom of the body portion of the heel is preferably made a bit thicker than the sides of the body portion. A heel that is cut to "tread" properly is shown in Fig. 8. After the body portion is cut to "tread" properly, the top lift 32 is nailed onto the body portion and the heel attached to the shoe as shown in Fig. 9. The heel may be attached to the shoe by cementing or nailing or any of the methods now in use.

The thick bottom section of the body portion 10 is useful for another reason. This section may be cut to alter the height of the heel. This is advantageous since it enables the manufacturer to make even a greater number of heels from one body portion, and a number of cups.

By using a heel made in accordance with the principles of the invention, a manufacturer can make a great number of heels for different types of shoes with a relatively small number of molds and dies.

Whereas a preferred embodiment of the invention has been shown and described in the drawings and accompanying description, it is obvious to those skilled in the art that various changes may be made in the form of the invention without affecting the scope of the invention.

What I claim is:

1. A heel comprising one of a plurality of body portions and one of a plurality of cups, said body portions being substantially hollow but having a web therein, and means to maintain the said one cup and the said one body portion in assembled relation.

2. The method of forming a heel that comprises the forming of a body portion and a cup portion, assembling the said cup portion and the said body portion, and cutting the bottom of the body portion to make the heel "tread" properly.

3. The method of forming a heel that comprises the forming of a body portion and a cup portion, assembling the body portion and the said cup portion and cutting the bottom of the body portion to determine the height of the heel and to make the heel "tread" properly.

4. The method of forming a heel of plastic material that comprises the assembling of a molded body portion and one of a plurality of molded cups, and cutting the bottom of the body portion to make the heel "tread" properly.

5. A heel comprising a substantially hollow body portion and one of a plurality of interchangeable cups, said body portion having a web therein and having a ridge on the upper end thereof, said ridge being adapted to cooperate with a groove in the said cup to maintain the body portion and the cup in assembled relation.

6. A heel comprising a substantially hollow body portion and one of a plurality of interchangeable cups, said body portion having a ridge on the upper end thereof and a relatively thick bottom, said ridge being adapted to cooperate with a groove in the said cup to hold the cup and the body portion in assembled relation, said bottom being cut to make the heel tread properly.

7. A heel comprising a body portion and a cup, said body portion being substantially hollow but having a web therein, and means to maintain the cup and the body portion in assembled relation.

8. The method of forming a heel of plastic material that comprises the assembling of a molded body portion and a molded cup, and cut-

ting the bottom of the body portion to make the heel "tread" properly.

9. A heel comprising a substantially hollow body portion and a cup, said body portion having a web therein and having a ridge on the upper end thereof, said ridge being adapted to cooperate with a groove in the said cup to maintain the body portion and the cup in assembled relation.

10. A heel comprising a substantially hollow body portion and a cup, said body portion having a ridge on the upper end thereof and a relatively thick bottom, said ridge being adapted to cooperate with a groove in the said cup to hold the cup and the body portion in assembled relation, said bottom being cut to make the heel "tread" properly.

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