July 28, 1931. I. SIMON 1,816,200

MOLDED ARTICLE

Filed Sept. 3, 1926

Fig. 1.

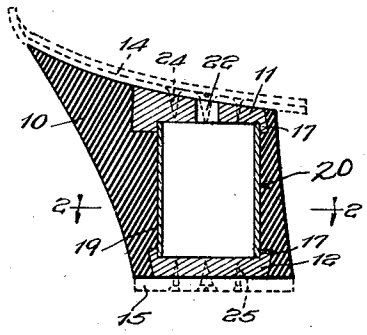
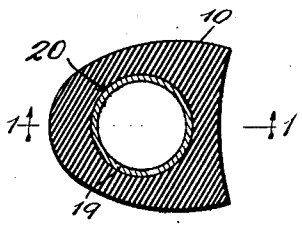


Fig. 2.



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UNITED STATES PATENT OFFICE

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MOLDED ARTICLE

Application filed September 3, 1926. Serial No. 133,424.

My invention relates broadly to molded articles and particularly to hollow articles formed from phenolic condensation products or the like.

Another object of the invention is to form improved heels for shoes from phenolic condensation products or other plastic compounds.

Still another object of the invention is to form articles which are relatively light in weight from phenolic condensation products or other plastic compounds.

Many other objects and advantages of the construction herein shown and described will be obvious to those skilled in the art from the disclosure herein given.

To this end my invention consists in the novel construction, arrangement and combination of parts herein shown and described, and more particularly pointed out in the claims.

In the drawings, wherein like reference characters indicate like or corresponding parts:

Fig. 1 is a vertical central section taken through a heel embodying the invention; and

Fig. 2 is a section taken on line 2—2 of Fig. 1.

Referring for the present to Figs. 1 and 2 of the drawings, I have shown one form of the invention embodied in a heel particularly adapted for women's shoes. The heel preferably comprises a body portion 10 formed of a phenolic condensation product, the body portion 10 being provided with inserts 11 and 12 of wood or the equivalent whereby the heel may be attached to a shoe indicated in dotted lines at 14 and whereby a thread member 15 may be secured to the heel. Interposed between the inserts 11 and 12 and preferably extending into recesses 17 formed therein is a tubular member 19 defining a cylindrical pocket 20. In the preferred embodiments of the invention the tubular member 19 is preferably formed of some metal, such as aluminum, and is preferably of such diameter that the body portion 10 of the heel comprises a relatively small amount of material and is therefore relatively light in weight. This is advantageous in that heretofore attempts to form heels of the kind described from phenolic condensation products have not met with commercial success because of the weight of the material. By practicing my improved method, the completed heels are relatively light in weight and may be used with advantage in place of heels formed from wood or metal. An added advantage of my product is the relatively permanent polished appearance of the heels. This largely negatives the need of covering it with leather in any of the embodiments of the invention.

My improved heel is preferably formed in a mold wherein the phenolic condensation product may be subjected to heat and pressure. To prevent collapse of the body portion 10 during the molding process, I preferably employ the member 19 occupying the pocket 20 which may be in the form of a tube, if so desired. It is readily understood by those skilled in the art that the inserts 11 and 12 together with the tubular member 19 may be placed in a suitable mold and that the phenolic condensation product may then be introduced into the mold after which the mold may be closed and subjected to heat and pressure until the phenolic condensation product is cured. The amount of pressure to which the phenolic condensation product is subjected varies with the texture thereof, but it is readily apparent that it may be subjected to a relatively high pressure without failure of the tubular member 19. I may dispense with the tubular member 19 in some instances and simply position a core of baked sand between the inserts 11 and 12. I have made a number of heels in this manner and have found them satisfactory in all respects, it being immaterial that a rough surface is left within the heel by the sand.

After the article has been subjected to heat and pressure for a predetermined period of time, the heel is removed from the mold and the sand core is removed from the interior of the heel through an opening 22 provided in the insert 11. The heel may then be attached to the shoe 14 by means of screws 24 or the equivalent screw-threaded into the insert 11

and the tread member 15 may be attached to the heel by means of screws 25 or the equivalent screw-threaded into the insert 12. It is generally unnecessary to color the body portion 10 or to polish it as the proper coloring matter may be mixed with the phenolic condensation product and the pressure to which the product is subjected will impart the necessary polish.

As pointed out above, I prefer in some instances to dispense with the tubular member 19 and rely solely upon a sand core. It is likewise apparent that if desired, I may in some instances employ the tubular member 19 and, in some instances, the sand core. While I have shown the tubular member 19 as substantially cylindrical in form, it is readily understood that I am not limited to such construction but that it may be made to conform more or less to the shape of the body portion 10.

I have employed the term "plastic material" in the claims to include phenolic condensation products in liquid form.

Having thus described my invention, it is obvious that various immaterial modifications may be made in the same without departing from the spirit of my invention; hence I do not wish to be understood as limiting myself to the exact form, construction, arrangement and combination of parts herein shown and described or uses mentioned.

What I claim as new and desire to secure by Letters Patent is:

1. A heel of the character described comprising a body portion formed of a plastic material moldable under pressure, a nailing insert at the top and bottom of said body portion, and a relatively large metallic tubular member interposed between and in contact with said inserts.

2. A heel of the class described comprising a tubular body portion formed of plastic material, a pair of penetrable inserts seated in said body portion at the top and bottom thereof, each of said inserts having a substantially annular shoulder seated in said body portion and with one edge substantially flush with the bore of said body portion, and a tubular member of substantially light, but rigid, construction seated within the bore of said body member and with its opposite edges disposed against the shoulders of said inserts.

3. A heel of the class described comprising a tubular body portion, a penetrable insert seated in said body portion at one end thereof, a reenforcing member of substantially rigid material positioned in the interior of said body portion in a manner to engage the insert, said insert having means formed therein for securing said reenforcing member in relatively fixed position with respect to the insert.

4. A heel of the class described comprising a tubular body portion, a penetrable insert seated therein, a tubular member of substantially rigid construction positioned in the interior of said body portion in a manner to engage the insert, said insert having a recess formed therein for securing said tubular member against lateral displacement with respect to the insert.

In testimony whereof, I have hereunto signed my name.

ISIDORE SIMON.