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METHOD OF MAKING LAMP HOUSINGS

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This invention relates to the making of lamp housings, such as dome lamp housings, for automobiles, and an object is to produce a novel and inexpensive method of producing a lamp housing by which the number of operations is reduced, thereby considerably reducing the cost of production without detracting from the quality and appearance of the finished product.

Another object is to provide a method of this character by which the lamp housing is formed after the sheet material has been coated to provide a light-reflecting surface and a decorative surface.

Another object is to produce a method of forming lamp housings from a strip of metal coated or treated to provide light-reflecting surfaces, and having other surfaces treated so that when introduced into a plating bath only that portion of the housing will be plated on which plating is desired.

Other objects reside in the production of a lamp housing having the novel features of construction and arrangement hereinafter described.

For purposes of illustration, but not of limitation, an embodiment of the invention is shown in the accompanying drawings, in which:

Figure 1 is a plate of sheet material coated to provide light colored areas surrounded by decorative dark color portions;

Figure 2 is an enlarged plan view of a section of the plate showing the next step in operation of forming the lamp housing;

Figures 3 and 4 are sectional views showing the next succeeding steps and forming of the housing;

Figure 5 is a plan view of one side of a metal plate which is coated as by lithography;

Figure 6 is a plan view of the opposite side of the plate shown in Figure 5 and showing the light colored areas;

Figure 7 is an enlarged plan view of one of the discs stamped from the plate; and

Figures 8, 9, 10 and 11 are views showing successive steps in forming a lamp housing from the disc shown in Figure 7.

The illustrated embodiment of the invention shown on Figures 1 to 4 comprises a method of forming lamp housings, the first step of which consists in providing a plate 10 of sheet material, such as relatively light gage sheet metal, coated as by lithography, with a series of light colored decorative portions 12. It is to be understood that the light colored areas 11 do not have to be of disc shape, although preferably they are in the form of discs, nor is it necessary that the remainder of the plate be of a dark color. In some instances it was sufficient that the light colored areas be surrounded by a decorative border or circle, such as a dark colored ring. Since the method of coating the plate forms no part of the present invention no part of the present invention is considered necessary. Suffice it to say that the coating or paint should be of such character that it has a certain degree of flexibility so as not to crack or chip off during the bending or shaping of the material.

The next operation consists of stamping out portions from the plate 10 to provide discs 13 in which the light colored area 11 is disposed centrally thereof, there being sufficient of the darker area 12 for the purpose acquired. The discs 13 are then placed in a suitable die and shaped into the form indicated in Figure 3 to provide a cup 14. The light colored area 11 is disposed at the inside of the bottom of the cup to provide the light reflecting surface and the darker colored or decorative area 12 is disposed on the rim portion 15 and a portion of the inside walls of the cup. The final operation consists in forming the cup into the shape shown in Figure 4 in which the rim 15 is curved outwardly and a shoulder 16 is provided. It will be noted that the bottom of the cup and the adjacent side wall portions are provided with a light colored area 11, and the rim 15 and adjacent walls of the cup are provided with a dark or decorative portion 12. It is to be understood that a lamp bulb is suitably mounted within the housing and a disc of glass, or other translucent or transparent material, covers the open end of the cup, the light being reflected by the light colored surface 11, whereas the darker colored area 12 provides the trim or finish for the exposed portions of the housing.

From the above description it is manifest that the lamp housing can be produced at a relatively low cost, particularly since it eliminates the necessity of painting, plating, or otherwise finishing the housing after it is formed into shape. In accordance with this process the plate is precoated to provide the light reflecting surface and the decorative trim, and after the shaping operations the housing is ready for installation without further work. This is valuable, particularly in the case of large production, such as the manufacture of dome light housings for automobile bodies.

In the embodiment of the invention shown in Figures 5 to 11, a metal plate 10 has one side 17 coated as by lithography, and the opposite side 18 provided with a series of light colored areas.
or discs 18. As above described, a series of discs 12 are stamped or cut out from the plate 10, as indicated in Figure 7, with the light colored area disposed centrally thereof. The disc 12 is then formed by dies through the successive steps shown in Figures 8 to 11 into the form of the lamp housing desired, the light colored areas 19 disposed in the inside of the housing and covering a portion of the adjacent side walls, as clearly shown in Figures 9 and 11. It will be understood that the lithographed or coated surface 17 is on the rear side of the housing, as indicated at 20, but the rim portion 21 is uncoated. Unlike the method described in connection with Figures 1 to 4, the side 18 of the plate remains uncoated except for the light colored discs 12, and these uncoated surfaces are disposed on the outside of the rim or flange of the lamp housing and the side walls thereof except for the coated surfaces 20.

Many dome lamp housings are nickel or chromium plated and an unnecessarily large surface of the housing is coated, only the exposed rim portion ordinarily being polished to a high luster. While it is customary to rust-proof the unexposed portions of the housing, it is not necessary to plate the surfaces, any other form of rust-proofing being satisfactory. Consequently, it is desired to avoid plating except where absolutely necessary, thereby to reduce the cost of manufacture as much as possible. By providing the lithographed coating 17, the rear side of the housing is sufficiently rust-proofed, and furthermore, when the housing is introduced into the plating bath, the electrodeposition occurs only on the exposed rim surface 21 and adjacent portions of the inside walls. The exposed rim, which is curled over, is buffed to a high polish, and the rear side of the housing is satisfactorily rust resistant. It is thus apparent that the cost of manufacture is materially reduced not only from the standpoint in saving of nickel, or other plating material, but an inexpensive rust-proof coating is provided on the rear side of the housing and the light reflecting surface is disposed in the proper position without the necessity of spraying, or otherwise applying it, after the housing is formed.

It is to be understood that numerous changes in details of construction, operation, choice of colors and arrangement of colored areas or surfaces, can be effected without departing from the spirit of the invention, especially as defined in the appended claims.

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

1. The method of forming lamp housings consisting of applying a coating to a relatively thin flat plate of sheet metal to provide a series of light colored discs surrounded by distinguishingly colored decorating portions, stamping out sections of the plate in such manner that the light colored discs are disposed centrally thereof, and forming the sections into rimmed cups so that the light colored areas are in the bottom of the cups to provide a light-reflecting surface and the distinguishingly colored decorating portions are disposed on the rims.

2. The method of forming lamp housings consisting of coating a sheet metal plate to provide a series of light colored areas, stamping from said plate a series of flat discs having the light colored areas disposed centrally thereof, and thereafter forming the discs into housings in such manner that the light colored areas are disposed inside and in the central portion thereof.

3. The method of forming lamp housings consisting of coating a sheet metal plate to provide a series of light colored areas on one side, applying material on the opposite side of the plate, such material being rust-resistant and capable of preventing electrodeposition of nickel thereon, severing sections from said plate with the light colored areas disposed centrally thereof, shaping said sections into substantially cup-like form, introducing the shaped sections into a plating bath for depositing electrolyte nickel, and polishing the exposed plating portions.

4. The method of forming lamp housings consisting of coating a sheet metal plate to provide a series of light colored areas on one side, lithographing the opposite side of the plate, severing sections from the plate with the light colored areas disposed centrally thereof and thereafter shaping said sections into substantially cup-like form with the light colored areas on the inside and at the bottom thereof.

5. The method of forming lamp housings which consists in lithographing a relatively flat plate of sheet metal to provide a series of colored areas surrounded by distinguishingly colored portions, stamping from said plate a series of sections, each section having centrally thereof one of said colored areas, and thereafter shaping said sections into rimmed cups so that said colored areas are in the bottom of each cup and the distinguishingly colored areas are in the rims.

6. The method of forming lamp housings consisting of coating a flat sheet metal plate to provide a series of light colored areas on one side, treating the opposite side of the plate to render it rust resistant, severing sections from the plate with the light colored areas disposed centrally thereof, and thereafter shaping said sections into substantially cup-like form with the light colored areas on the inside and at the bottom thereof.

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