Dec. 5, 1944. J. J. LARMOUR 2,364,226

INLAID ARTICLE

Filed May 17, 1940

Fig. 1

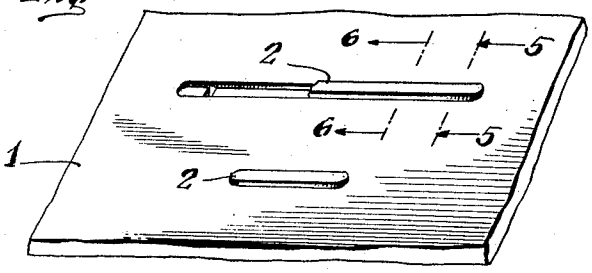


Fig. 4

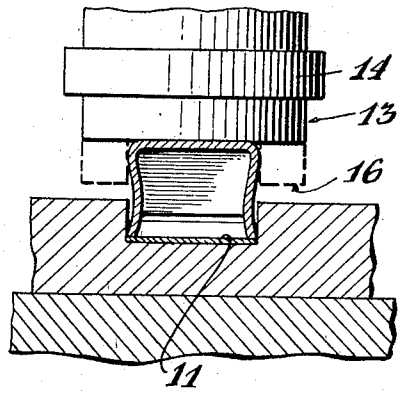


Fig. 3

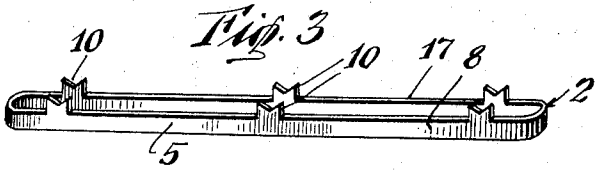


Fig. 2

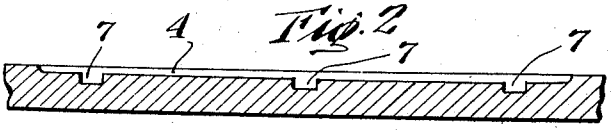


Fig. 5

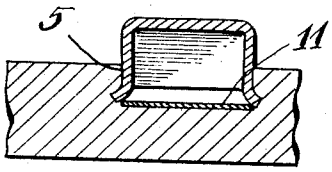


Fig. 6

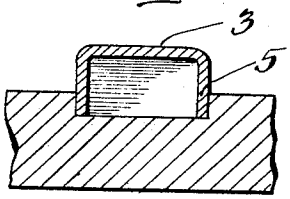


Fig. 7

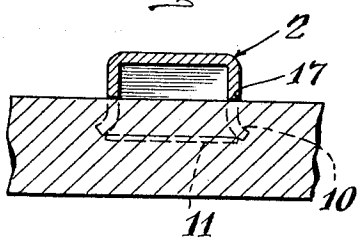


Fig. 8

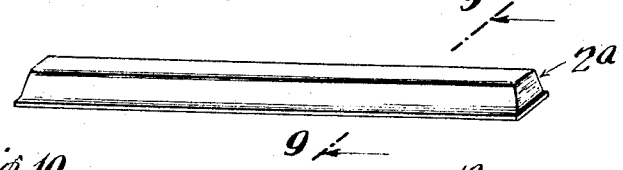


Fig. 9

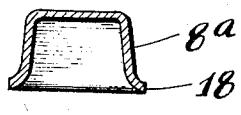


Fig. 10

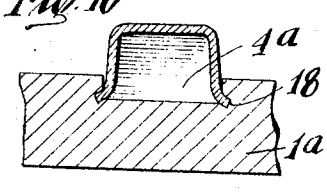
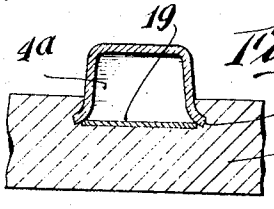


Fig. 11



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INLAID ARTICLE

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Application May 17, 1940, Serial No. 335,718

9 Claims. (Cl. 41—35)

The present invention relates to inlaying and particularly to the inlaying of ornaments into articles so as to enhance the appearance thereof.

Numerous articles or parts thereof are manufactured at the present time from plastic molding or synthetic resin materials such as hard rubber, pyroxylin, cellulose acetate, phenol-formaldehyde, urea formaldehyde, casein, et cetera. The appearance of articles such as clock dials, radio panels, automobile instrument panels, fountain pens, signs, boxes and the like is greatly enhanced when inlaid with initials, numbers or other ornamentation.

The present invention aims to provide a new and improved type of ornament which may be rapidly and inexpensively inlaid into articles, particularly those made of plastic molding materials, and to give a raised or relief effect not present in ordinary inlaid articles. The invention also contemplates the provision of means for securely holding the ornament in position in an article at all times, and in addition the provision of an improved method of inlaying the ornament.

An object of the present invention is to provide a new and improved type of inlaid article.

Another object of the invention is to provide an inlaid article having a new and improved outwardly projecting inlay secured thereto.

Another object of the invention is to provide a new and improved type of ornament adapted to be readily inlaid into an article.

Another object of the invention is to provide an article with a raised or outwardly projecting inlay which is securely retained in position at all times.

Other and further objects of the invention will be obvious upon an understanding of the illustrative embodiment about to be described, or will be indicated in the appended claims, and various advantages not referred to herein will occur to one skilled in the art upon employment of the invention in practice.

A preferred embodiment of the invention has been chosen for purposes of illustration and description and is shown in the accompanying drawing, forming a part of the specification, wherein

Fig. 1 is a perspective view of a fragment of an article showing the present type of ornament inlaid therein;

Fig. 2 is a sectional view illustrating one of the recesses of the article shown in Fig.. 1;

Fig. 3 is a perspective view of a preferred type of ornament;

Fig. 4 is a sectional view showing an ornament being inlaid in an article;

Fig. 5 is a sectional view along the line 5—5 of Fig. 1;

Fig. 6 is a sectional view along line 6—6 of Fig. 1;

Fig. 7 is a sectional view showing an ornament inlaid in a modified type of recess;

Fig. 8 is a perspective view of a modified type of ornament;

Fig. 9 is a sectional view taken along line 9—9 of Fig. 8;

Fig. 10 is a sectional view illustrating the modified ornament of Fig. 8 inlaid in an article; and

Fig. 11 is a sectional view similar to Fig. 10, but including a base guiding means.

Referring again to the drawing and more particularly to Figs. 1 to 3 thereof, there is shown a fragment 1 of an article inlaid with the present and preferred type of ornament 2. The showing of a fragment of an article in Fig. 1 is intended to illustrate the application of the invention to articles generally and to bring out the fact that it is not limited to any particular article. While the invention may be embodied in an article or a panel thereof made of wood, linoleum and other such substances, it will be described chiefly with reference to an article or panel made of a plastic molding material.

The plastic molding material or base member 1 which is to be inlaid with an ornament preferably has a main recess, slot or groove 4 adapted to receive the lower part 5 of an ornament 2 and this main recess or groove 4 in turn preferably has a plurality of spaced sub-recesses 7 therein at its lower part. The main recess is of substantially the same shape and size as the article which is to be inlaid. In Figs. 1 and 2 a recess is illustrated which is adapted to receive a strip-like ornament, but it will be understood that an ornament and the recess are not limited to strip shape but may be square, round, triangular, or any other desired shape. The main recess 4 and sub-recess 7 may be molded, cut or otherwise formed in the base member 1.

The ornamental member 2, shown as a strip-like member herein, is preferably stamped and formed from flat metal stock into a channel of U-shape. That is, the member is formed so as to have a cover portion 3 in the shape of the desired ornamentation, with a depending flange or skirt 8. Depending downwardly from the flange or skirt 8 is a plurality of tab-like portions 10. The flange and tab portions 8 and 10 fit, respectively, into the main recess 4 and into the sub-recesses 7 formed in the member 1 to be decorated.

At the lower part of each of the sub-recesses 7 there is preferably placed a substantially flat metal tab guiding member 11 against which rest the tab portions 10 of the ornament 2.

Pressure applied against an ornament 2 (Fig. 4) causes the tab portions 10 to spread outwardly and engage with or embed themselves in the sides of the sub-recesses, the substantially flat metal tab guiding member 11 at the lower part of the sub-recesses being effective to guide the tab portions outwardly and prevent their digging into the bottom of the sub-recesses. Preferably a pressure member 13 is utilized to force the ornament 2 downwardly and this pressure member 13 may, if desired, be heated by means of a heating coil 14, the heat generated thereby being transmitted to the pressure member 13 and to ornament 2 so as to cause a localized heating and softening of the plastic member 1 with which the ornament is being secured.

If desired, the pressure member 13 may be formed with a recess therein, as shown by the dotted lines of Fig. 4, adapted to receive the upper portions of a channel shaped ornament 2. With this type of pressure member, sidewise movement of an ornament will be minimized and also the lower portion 16 will act to limit excessive inward movement due to the lower portions 16 contacting the article 1 and acting as a stop. Also, if desired, the pressure member 13 may be caused to reciprocate rapidly and tap an ornament into position instead of using straight pressure.

In inlaid position the tabs 10, which have been guided outwardly by the plate or flat member 11, are embedded in the sides of the sub-recesses 7. The lower edges 17 of the ornamental member 2 intermediate the tab portions 10 preferably rest against the bottom of the main recess 4 intermediate the sub-recess 7. These intermediate edges 17 may be forced into the article 1 but preferably the portions 10 are relied upon to hold the inlay in place. The spreading or outward flaring of the tab portions 10 tends to also pull outwardly of the portions of the depending flanges 8 intermediate the tabs 10. Thus the intermediate flange or skirt portions of an ornamental member are moved firmly into contact with the sides of the main recess 4 so as to further lock and hold an ornament in the recess.

If desired, the main recess 4 need not be utilized and instead the article to be ornamented may be provided only with the spaced sub-recesses 7 (Fig. 7). In such a construction the tab portions 10 are adapted to fit into the sub-recesses and engage the sides thereof in the same manner as above described. The edges 17 on the flange or skirt portions of an ornament intermediate the tab portions 10 will, in such event, rest against the surface of the article instead of within a main recess.

The substantially flat guiding members or plates 11 may be omitted from the lower parts of the sub-recesses 7 but in such event the tabs 10 of an ornament should preferably be flared outwardly slightly so that upon the application of pressure to the ornament, the tabs 10 will be more readily guided outwardly into engagement with the sides of the sub-recesses.

Since the present type of ornament is not flush with the surface thereof, the inlaid ornament or decoration stands out in relief and provides a three dimensional effect not present in ordinary inlaid articles.

In Figs. 8 to 10 there is illustrated a form of the invention wherein no tabs are utilized on the ornament. This modified type of ornament 2a is adapted to fit into a main recess 4a similar to the main recess 4 shown and described in connection with the preferred embodiment; no sub-recesses 7 are necessary with this modification. The skirt or flange 8a of the modified ornament 2a is flared outwardly slightly, as shown in exaggerated form in Figs. 9 and 10, so that when it is seated in a recess and pressure is applied to the upper part thereof, the edges 18 and flange 8a will spread outwardly into engagement with the side walls of a main recess 4a. The ornament 2a may be pressed or tapped into position and heated as described in connection with the preferred embodiment. Like the preferred embodiment the ornament may have a square, circular, triangular or other shape.

Fig. 11 illustrates the modified form of ornament shown in Figs. 8, 9 and 10 utilized with a substantially flat guiding member or plate 19 at the lower part of the recess 4a. The guiding member 19 preferably covers the entire bottom of a main recess 4a so as to more effectively guide the edges 18 and flange 8a of the modified article outwardly into engagement with the walls of a recess. The application of the ornament to an article is similar to that described hereinabove.

It will be seen that the present invention provides a new and improved type of inlaid articles. Ornaments are adapted to be rapidly and securely inlaid into articles, thus facilitating mass production and resulting in consequent lower manufacturing costs. An article inlaid with the present ornament and by the present method gives a pleasing raised or relief effect not embodied in usual types of ornamentated articles.

As various changes may be made in the form, construction and arrangement of the parts herein without departing from the spirit and scope of the invention and without sacrificing any of its advantages, it is to be understood that all matter herein is to be interrupted as illustrative and not in a limiting sense.

Having thus described my invention, I claim:

1. An article of manufacture comprising, in combination, a member made of a plastic molding material having a preformed channel-shaped recess therein adapted to receive portions of a decorative member, and a decorative member made from relatively thin metal having a substantially channel-shaped cross section with the legs of the channel extending into said recess and having a length substantially greater than the depth of the recess, and with portions at the free edges of said legs flared out of the normal planes thereof into engagement with the walls of said recess to lock said decorative member with said first member, the upper portion of said decorative member projecting above the surface of said first member in final inlaid position.

2. An article of manufacture comprising, in combination, a member having a recess therein adapted to receive a guiding member, a substantially flat guiding member at the bottom of said recess, and a channel shaped decorative member having sides of greater length than the depth of the recess seated on said guilding member with portions of the sides in engagement with the walls of said recess, the upper portion of said decorative member projecting above the surface of said first member in final inlaid position.

3. An article of manufacture comprising, in

combination, a member made of a plastic molding material having a plurality of spaced preformed recesses therein adapted to receive correspondingly spaced tab portions of a decorative member, and a decorative member having a skirt or flange with a plurality of tab portions extending downwardly from the free edges of said skirt or flange and into said spaced recesses, the free edges of said tab portions being embedded in the walls of corresponding recesses so as to lock said decorative member with said first member.

4. An article of manufacture comprising, in combination, a member made of a plastic molding material having a preformed recess therein with an outer peripheral wall adapted to abut the flange of a decorative member, and a decorative member having a flanged outer edge extending into said recess, the width of said flange being greater than the depth of said recess, and with portions of the flanged edge thereof in engagement with the peripheral wall of said recess to hold said decorative member in the recess of said first member.

5. An article of manufacture comprising, in combination, a member having a preformed surface recess therein adapted to receive a guiding member, a substantially flat guiding member at the lower part of said recess, and a decorative member having a flange extending about at least a substantial portion of its periphery, the length of said flange being substantially greater than the depth of said recess, said decorative member being seated on said guiding member, with portions of the free edge of the flange flared outwardly and in engagement with the walls of said recess.

6. An article of manufacture, comprising, in combination, a member made of a plastic molding material having a surface recess therein adapted to receive a decorative member, and a decorative member made of relatively thin metal seated in said preformed recess having a depending skirt portion of greater length than the depth of the recess extending along its edge with spaced tab portions projecting downwardly from said skirt portion, said tab portions being embedded in said first member to lock said decorative member with said first member.

7. An article of manufacture comprising, in combination, a member made of a plastic molding material having a preformed main recess therein and a plurality of spaced preformed sub-recesses in said first recess adapted to receive correspondingly spaced tab portions of a decorative member, and a decorative member having a flange at an edge thereof, said flange having a plurality of tab portions embedded in the walls of a corresponding sub-recess so as to lock said decorative member with said first member.

8. An article of manufacture comprising, in combination, a member made of a plastic molding material having a preformed recess therein adapted to receive portions of the skirt of a decorative member, and a decorative member having a depending skirt portion of greater length than the depth of the recess extending into said recess and having a smooth outwardly flared free edge portion in engagement with the walls of the recess in said first member to hold the decorative member in the recess of said first member.

9. An article of manufacture comprising, in combination, a member made of a plastic molding material having a main recess therein and a plurality of spaced sub-recesses in said first recess adapted to receive correspondingly spaced tab portions of a decorative member and a decorative member having a flange thereon of greater width than the depth of said main recess, said flange having a plurality of tab portions embedded in the walls of corresponding sub-recesses so as to lock said decorative member with said first member.

JAMES J. LARMOUR.