United States Patent

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[54] **TOY-MOLDING APPARATUS**
2 Claims, 6 Drawing Figs.

[52] **U.S. Cl.** **249/117,**
18/DIG. 57
[51] **Int. Cl.** **B29c 1/14**
[50] **Field of Search** 18/DIG. 57;
249/117, 140

[56] **References Cited**
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ABSTRACT: A toy mold which enables children to form plastic characters and other items with accurately formed facial features and with different colored sections clearly separated from each other. The mold comprises deep narrow depressions in the cavity walls that define the mouth and other facial features, and which serve as dividing lines at the collar and other areas. A child can fill these small depressions with black molding material, wipe away any excess that overflows the depression, and allow the material to set. He can then place lighter colored molding material in the rest of the cavity to form the rest of the character.

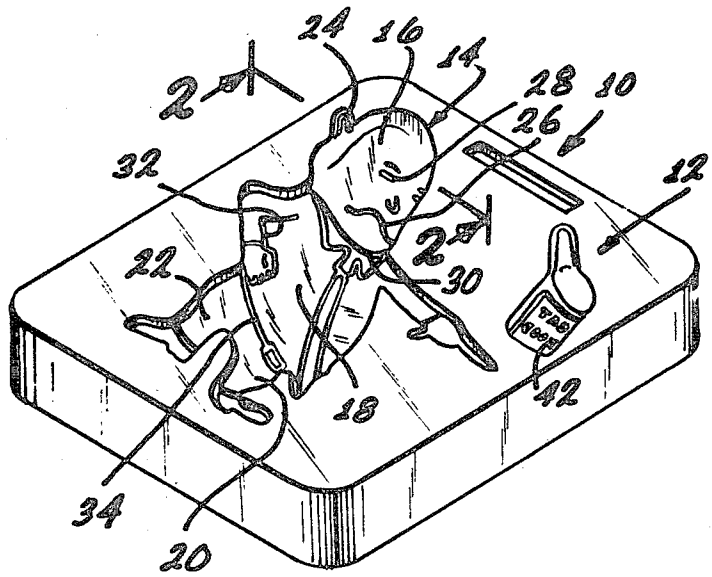
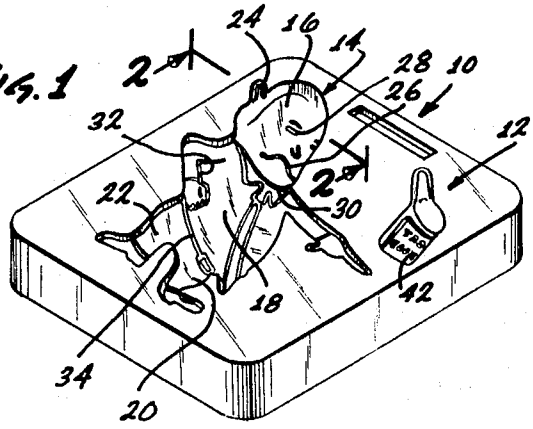


FIG. 1



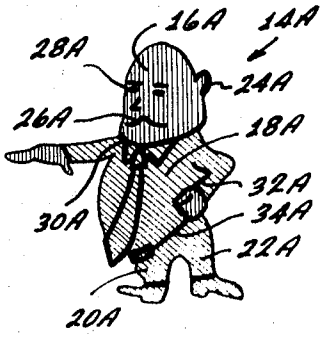
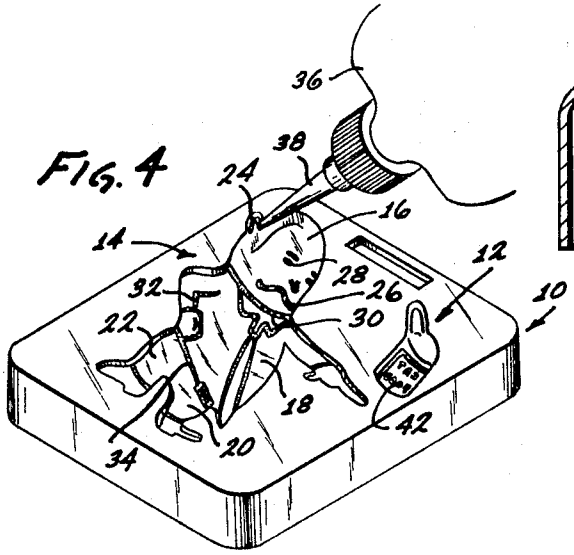


FIG. 3

FIG. 4



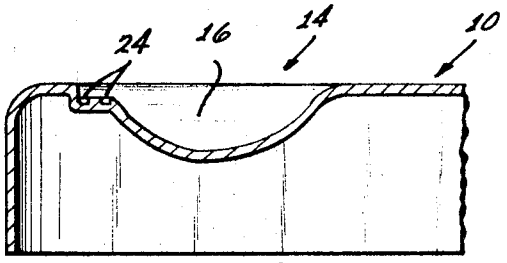


FIG. 2

FIG. 5

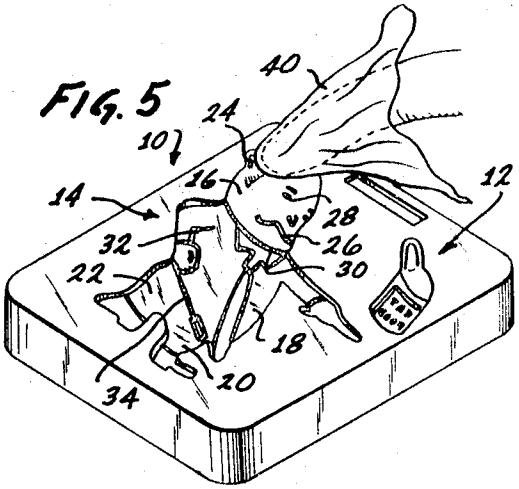
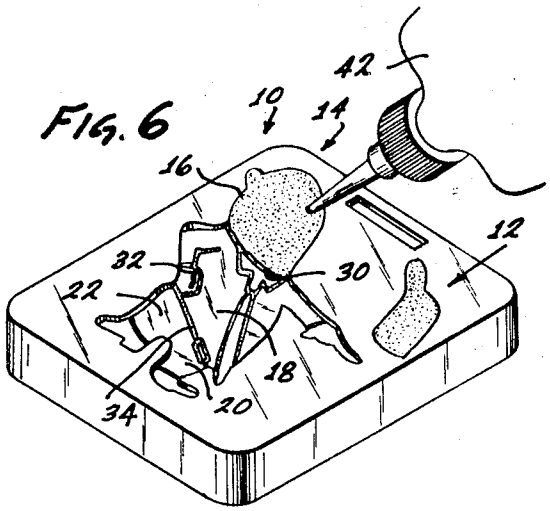


FIG. 6



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TOY-MOLDING APPARATUS

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to molding apparatus and methods for producing playthings and like items.

2. Description of the Prior Art

An entertaining toy is provided by molds that can be filled by a child to form characters and other items. Heretofore, only one color of material has generally been used for an entire item. Accordingly, while the item may have a well defined outline, the facial features and other parts within the item are generally poorly defined. It is possible to paint the items so as to better define the features and create a more colorful character or other object. However, children generally do not have the skill necessary to accurately paint delicate features, and the extra supplies and effort required can hamper the entertainment. Several different colors of molding material can be applied in the mold to a single item, but the different colors tend to run together and create indefinite dividing lines, particularly in the case of mouths and other facial features which are small.

OBJECTS AND SUMMARY OF THE INVENTION

An object of the present invention is to provide apparatus that enables the molding of objects with features thereon which are well defined.

Another object is to provide a method for forming a multicolored object wherein the sections of different colors are well defined.

In accordance with the present invention, a mold is provided that enables a child to form a character or other item having features that are defined by a color which is different from the background, the features being accurately placed and clearly differentiated from the surroundings. In one embodiment of the invention, a mold is provided with a cavity that defines a character with predetermined facial features, including a mouth, ear and eye. Each of these features is defined by a deep narrow depression in the walls of the cavity. A child can form the character by first filling the deep feature-defining depressions with a black molding material, wiping away any excess that may overflow the depression. He then allows this small amount of material to set. After this, he fills the rest of the facial area of the cavity with flesh-colored material and allows it to set. When the formed character is removed from the mold, it will have black lines that clearly define the facial features.

The novel features of the invention are set forth with particularity in the appended claims. The invention will be best understood from the following description when read in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a mold constructed in accordance with the invention;

FIG. 2 is a sectional view taken on the line 2–2 of FIG. 1;

FIG. 3 is a front view of a character formed in the mold of FIG. 1;

FIG. 4 is a perspective view showing a step of the process of the invention, wherein limited areas of the mold, such as those representing facial features, are filled with a dark molding substance;

FIG. 5 is a perspective view of another step in the process wherein excess material applied in the step represented in FIG. 4, is removed; and

FIG. 6 is a perspective view of still another step in the process wherein the remainder of the cavity is filled.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

FIG. 1 illustrates a mold 10 having a pair of cavities 12 and 14 which define items that can be molded by a child. Typically, the mold 10 is constructed of metal, and a child can pour a liquid plastisol into one of the cavities such as cavity 14. The child then heats the mold, causing the plastisol to set i into a solid rubbery figure. Heretofore, such molded items have generally been constructed using only one color of molding material for the entire item. Thus, while facial and other features could be provided, in the form of protrusions or indentations into the item, such features were not easily distinguishable because all of the material was of the same color. The features could be painted with a color different from the background, but this required substantial agility, which is often lacking in children, at least to the extent that good results could not be generally obtained.

In accordance with the present invention, the walls of the cavity 14 are constructed to enable a child to mold an item with clearly defined features that are of different color from their surroundings. Such an item shown at 14A in FIG. 3 is a character with a face area 16A, body 18A and legs 20A and 22A. The face has several features including an ear 24A, mouth 26A and eye 28A. These facial features are of a dark color, such as black, while the surrounding area of the head is of another color such as pink. In accordance with the invention, the walls of the mold cavity 14 of FIG. 1 are constructed to enable a child to mold the character so that different colored molding material is applied to different areas in a closely controlled manner. As a result, when the item is removed from the mold, it has the appearance shown in FIG. 3, and requires no painting.

The mold cavity 14 of FIG. 1 includes a head section 16, body section 18, and two leg sections 20, 22. Several deep, narrow cavities are provided in the head section at 24, 26 and 28 to define the ear, mouth, and eye of the character to be molded. Each of these feature-defining depressions is provided to receive a molding material of a different color than that which is applied to the rest of the head. In a similar manner, collar line 30, arm lines 32 and belt line 34 are provided to receive a different color plastic from the surroundings, to highlight these features. As shown in FIG. 2, the facial feature cavities, such as cavity 24 represent the ear, and is about as deep as it is wide.

The process of forming the character 14A is shown in FIGS. 4—6. It may be noted that the mold 10 may be placed on a heater (not shown) which causes the molding material to set. In the first step of the process, a container 36 with a black color plastisol or other molding material is used to fill only the feature-defining areas, such as cavities 24, 26 and 28, and any other area of the mold which is to be colored black. The container 36 typically is provided with a fine nozzle 38 to permit accurate placement of this molding material. Often a child will overfill the small feature-defining depressions. As will be apparent from the drawings, the cavities or grooves 24 have substantially vertical sidewalls, that is approximately perpendicular to the surfaces of the adjoining features in the mold cavity 16. Thus, they define relatively sharp and well defined upper edges to ensure that wiping of excess material therein can be accomplished, leaving the material in the grooves having well-defined side edges. The excess is eliminated in the manner shown in FIG. 5, by wiping it away with a cloth 40. The mold may then be heated by the heating device on which it has been placed, to cause setting of the black-colored features.

After the black-colored portions have set, another container 42 containing another color material, such as a pink material is used to fill the head section 16 of the mold. Additional containers may be used for still other areas, such as one which holds green molding material for part of the body portion 18. The mold is heated again to set these materials, the black and pink materials becoming integral during such setting. When the mold cools, the item may be lifted from the mold to provide the FIG. 16A of FIG. 3.

As mentioned above, the feature cavities 24, 26 and 28 enable the better definition of the facial features. The collar area 30 provides a band of a single color (black) that separates material in nearby regions, these regions being the face area

16 and body area 18, which receive material of different colors. Without the collar band 30A, the dividing line between the pink and green colors in the areas 16A and 18A of the finished figure would be indefinite. With the band 30A separating these colors, any merging of the colors where they meet, or waviness of the meeting line, is camouflaged by the black collar band in front of it. Thus, the depressions for receiving black molding material not only enable the production of sharp facial features, but provide a sharp dividing line between different colors.

In molding the items, it is generally preferable to at least partially set one color, such as the black or other color in the facial feature depressions, before applying a second color in the region above it. This helps to prevent running of the colors into each other, which can, for example, cause the character to have a dirty-looking face. However, such running together only occurs some of the time, and it is possible to form attractive items without first setting one color before applying another over it.

The use of narrow depressions for receiving a color different from the surroundings is also very useful in forming words on a item. For example, the mold cavity 12 that defines a can of cat food has deep, narrow depressions 42 that spell the word "CAT FOOD." In forming an item representing a cat food can, these depressions 42 are filled with a black-molding material, which is then set, prior to filling the rest of the cavity 12.

The items which can be constructed by a child using the molds of this invention can be used in a variety of applications, such as in enabling a child to construct his own cartoons. A stand can be placed in the molding material prior to its setting, which will support the figure in a substantially upright position. While items with substantially two-dimensional faces can be formed, with only the features protruding therefrom, it is generally preferable to sculp the face to provide a bas-relief item for a three-dimensional effect.

Although particular embodiments of the invention have been described and illustrated herein, it is recognized that modifications and variations may readily occur to those skilled in the art, and consequently, it is intended that the claims be interpreted to cover such modifications and equivalents.

What we claim is:

1. Toy apparatus for enabling children to produce multicolored molded items, comprising:

a mold having an open cavity configured to define at least two adjacent toy features separated by a predetermined common boundary;

an elongated relatively deep and narrow recess extending along and defining said boundary, said recess having sidewalls substantially perpendicular to the adjacent surfaces of said adjacent features and meeting the same at relatively sharp well defined upper edges whereby to enable a child to fill said recess with a first molding material then wipe said cavity to remove any said molding material from said adjacent toy features, leaving the same only in said recess, prior to filling the remainder of said cavity with different molding material.

2. Apparatus as defined in claim 1 wherein the depth of said recess is about the same as its width.