L. R. KAMPES.

DOLL HEAD.

APPLICATION FILED OCT. 18, 1919.

1,357,779. Patented Nov. 2, 1920.

Fig. 1.

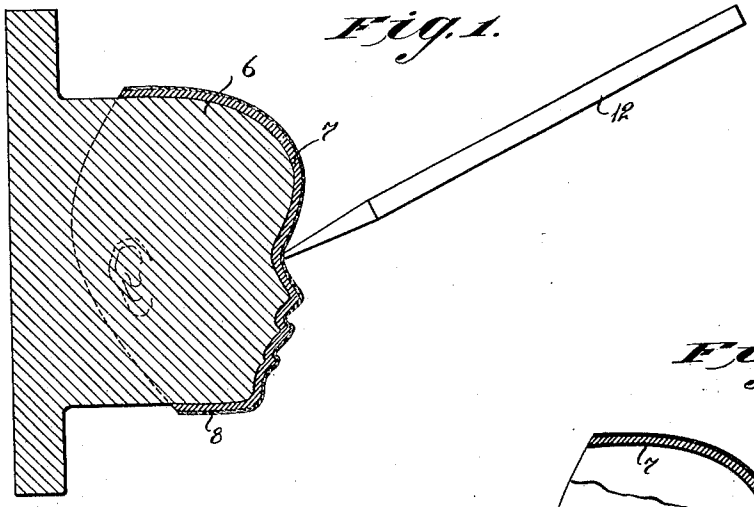


Fig. 4.

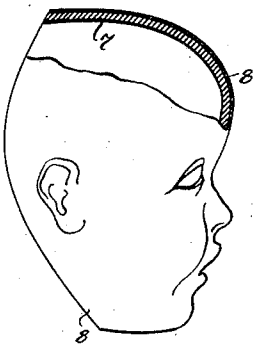


Fig. 2.

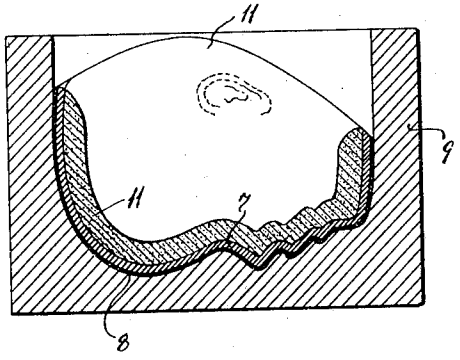
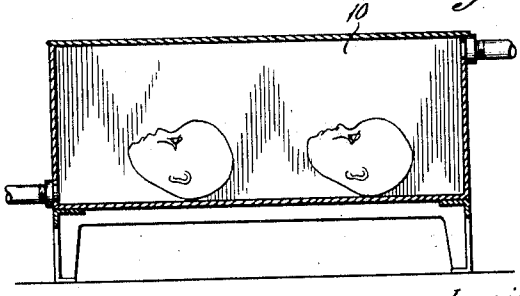


Fig. 3.



WITNESSES

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DOLL-HEAD.

1,357,779. Specification of Letters Patent. Patented Nov. 2, 1920.

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To all whom it may concern:

Be it known that I, LOUISE R. KAMPES, a citizen of the United States, and a resident of Atlantic City, county of Atlantic, and State of New Jersey, have invented a new and Improved Doll-Head, of which the following is a full, clear, and exact description.

This invention relates to doll head construction, and more particularly to the method of making doll faces, and to the completed article itself.

A purpose of this invention is to provide ways and means for manufacturing doll heads, and more particularly for manufacturing the faces thereof. An object is to provide a doll face which either has a hard unyielding surface, or which has a yieldable, soft, skin-like and pliant surface according to the desires of the trade and the manufacturers.

I have in view as a further purpose, to provide a doll head, and ways and means for the construction of same, which will enable the manufacturer to produce doll faces having variable features, that is to say the doll faces constructed in accordance with the plans of this invention may be varied in facial form and expressional features to render more pleasing and profitable the general line of dolls offered for sale to the public.

With the above several objects and others in view, the invention has relation to the structural methods employed, and has further relation to the structure of the doll face as described in this specification; and the several derivations in the method and structure as set forth in the appended claims, and as portrayed in the accompanying drawings, wherein:

Figure 1 illustrates a cross sectional view taken through a die and the material comprising the doll face applied to the die where the material is in a near stage of completion to form a doll face.

Fig. 2 is a sectional view presented to illustrate the manner of inserting the doll face within a retaining die to approximately maintain the facial expression of the doll face while a reinforcement backing is built into the back of the face material to form an unyieldable and substantially strong doll head or face.

Fig. 3 illustrates in cross section a vulcanizer of any suitable design for curing the completed face structure of the doll. This view shows several completed doll faces in the vulcanizer undergoing the vulcanizing process.

Fig. 4 illustrates a completed doll face structure of the soft yieldable type, this view being partly broken away at the top to disclose the material structure of the doll face.

Doll heads or faces constructed in accordance with the plans of my invention make use of one or more dies for aiding in the shaping of the faces, and employ a heating or curing furnace for vulcanizing the completed faces to preserve the head and face structure for substantial and long time wear. A plaster Paris backing may be employed to render the doll face stronger and unyieldable or the backing may be omitted to leave a doll face having soft yieldable characteristics more similar to the human face of which the doll face is constructed to imitate.

In presenting a more detailed discussion of my invention together with the ways and means of practising same, I point out a die 6 having an exterior shape to conform approximately to the face of the doll to be manufactured. A portion of plastic material is applied to the configurated die and spread over the die to form the layer of material 7. Raw or unvulcanized rubber may be employed for this purpose or even less expensive material such as artificial rubber composition or in fact any suitable elastic composition material may be used. The unvulcanized composition is applied in one or more layers, as for example it may produce a better and more substantial doll face to apply several thin layers of raw or unvulcanized rubber whereupon each layer will adhere to the adjacent one.

A suitable fabric covering 8 is next applied to the plastic layer 7 and carefully worked into the plastic material until the weave of the fabric has become thoroughly embedded within the plastic material causing the plastic material and fabric to assume a composite and homogeneous structure. Any appropriate fabric such as silk, cotton, or linen may be well used for this purpose.

After the plastic composition and cloth application have been completed, the facial doll figure is removed from the die 6 and placed in an oven or vulcanizing kiln 10 to cure and vulcanize the doll facial structure. This operation may be performed by any

suitable apparatus, and I have shown one simple form of vulcanizer 10 which may be used for this purpose, and doll faces are shown within the vulcanizer. After the doll faces are thoroughly cured they are removed and the resulting article comprises a doll face which will wear a long time, and is substantially strong in construction. This doll face is pliant and flexible and resembles quite well the pliant softness and yieldable characteristics of the human face.

In some cases it is desirable to produce doll faces not having the soft and pliant characteristics of the one just described. In this case the facial figure comprising the material 7 and 8 is removed from the die 6 and placed in another die 9. The die 9 has an internal configuration conforming in outline to the general features of the shaped article removed from the die 6. The shaped and partly completed doll face is inserted in the die 9 to hold it in proper shape and maintain the features thereof during the application of a reinforcement or backing material. This material comprises plaster Paris or other suitable substance workable in plastic form. The plaster Paris is worked into the back of the shaped material 7 and 8 as brought out in Fig. 2. The plastic material 11 is applied to the material in a layer of suitable thickness. The plastic material 7 and the backing reinforcement 11 adhere to form a substantially strong and composite face structure.

After the doll face has been completed as above described by applying the backing reinforcement therein, it is placed in the vulcanizer and treated until the raw rubber or composition is thoroughly cured. This drys out the entire structure and forms a doll head of pronounced strength and wearing ability. The backing reinforcement resists the bending and mashing of the doll face. This form of doll face may be manufactured where it is a more practical and desirable product than the first form described.

One of the important features of my invention is the particular method employed for varying the characteristic facial expressions of dolls manufactured in accordance with this invention. This particular feature and method sets my invention forward as a marked improvement over any existing manufactured articles coming under this class. When the plastic layer of material 7 and fabric covering 8 is applied to the die 6, the features of the doll may be brought out to any desired tendency. For example the manufacturing artist will usually knead and work the plastic material into the configurated die 6 by the dexterous and skilful manipulation of his fingers, and in the execution of this step in the manufacturing process the artist is able to shape the nose, mouth, chin and cheeks of the doll to any desired form. The doll manufacturing artist may therefore change the expression of each succeeding doll. Likewise he may employ a shaping tool such as a stylus 12 for facilitating the careful work entailed in properly rounding out the eyes, nose, and lip features of the face. When the material 7 is plastic it is quite subject to change and a skilful artist may very ably change expressions of each succeeding doll which he makes.

The fabric covering 8 serves to hold the plastic material in shape so that a working tool 12 or the artist's fingers will not seriously displace the plastic material 7 due to the fabric covering 8. This modeling process or method of artistically constructing and varying the facial expressions on each doll is carried out prior to the vulcanizing and curing process. After the curative process is complete, the resulting doll face is a work of art, and manufacture in which ingenuity and skill are combined to build dolls at a comparatively rapid rate yet consistently different in the facial expression of each to give the dealer a line of dolls not displaying the same monotony in facial expression but varying in appearance to the extent of interesting and impressing the trade.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. The hereindescribed method of constructing a doll's face consisting in applying rubber to a die, shaping said material to form a doll's face, applying a fabric covering to the shaped material, removing the fabric covered shaped material, placing the same in an interior configurated die to retain the shape brought out from the first named die, applying a reinforcement to the interior of the material to stiffen and strengthen the same, and vulcanizing the article thus produced.

2. That improvement in the art of manufacturing doll faces which comprises, applying rubber to a die to shape the same to form a doll face, applying a fabric covering to the shaped rubber, removing the shaped rubber and placing the same in an interior configurated die to retain the shape brought out from the first named die, applying a reinforcement to the doll face to stiffen and strengthen same, and finally the vulcanization of the article for preservation.

3. That improvement in the art of manufacturing doll faces which comprises, applying un-vulcanized plastic rubber composition to a facial configurated die, applying a fabric covering to the shaped un-vulcanized plastic rubber composition, followed by a process of artfully and skilfully shaping the material to bring out the desired impression and facial character of the doll face,

and finally vulcanizing the article for preserving the same.

4. That improvement in the art of manufacturing dolls which comprises, applying un-vulcanized plastic rubber composition to a facial configurated die to approximately shape the composition to conform to the facial contour of the die, applying a fabric covering to the shaped composition, skilfully manipulating and working the shaped material to bring out the desired doll features and to vary said features from that of previously manufactured dolls, the removal of the doll face from the die and inserting it in another die having an internal configuration to retain the facial shape of the doll, applying a backing reinforcement to the shaped doll face, and finally vulcanizing the article for preserving the same.

LOUISE R. KAMPES.

Witness:
F. A. JONES.