

May 4, 1937.

G. L. DE MOTT

2,079,550

TOY

Filed Oct. 12, 1935

2 Sheets-Sheet 1

Fig. 1

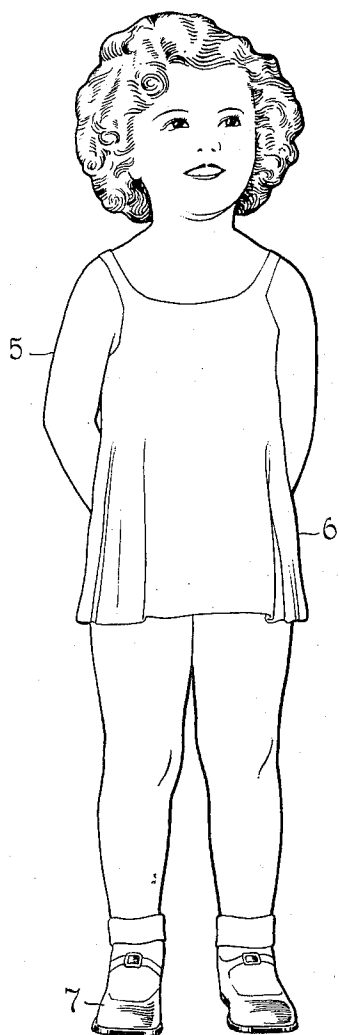


Fig. 2

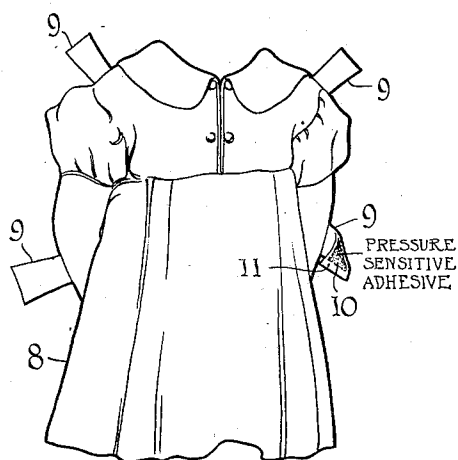
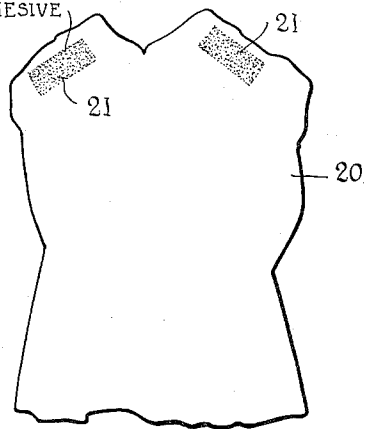


Fig. 3

PRESSURE SENSITIVE
ADHESIVE



Inventor

George L. DeMott

BY

Doyle and Ann

Attorneys

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2 Sheets-Sheet 2

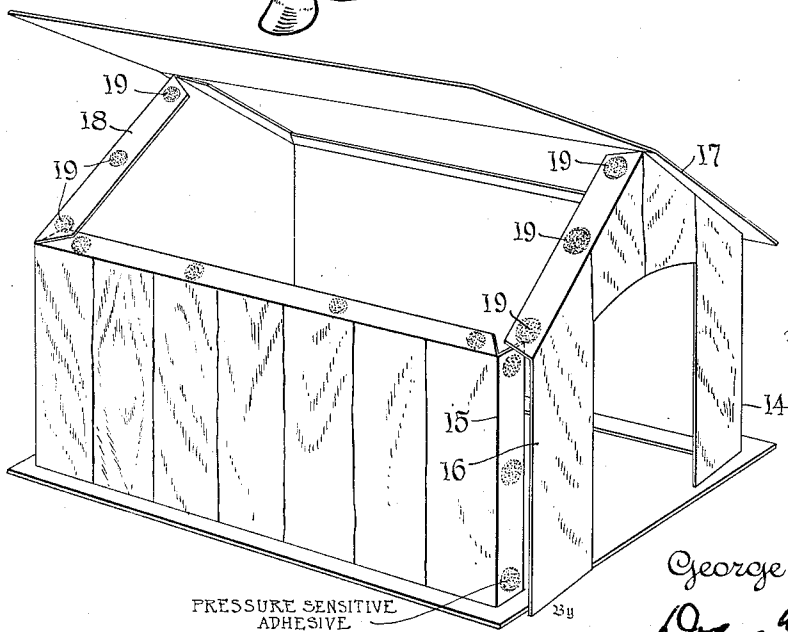
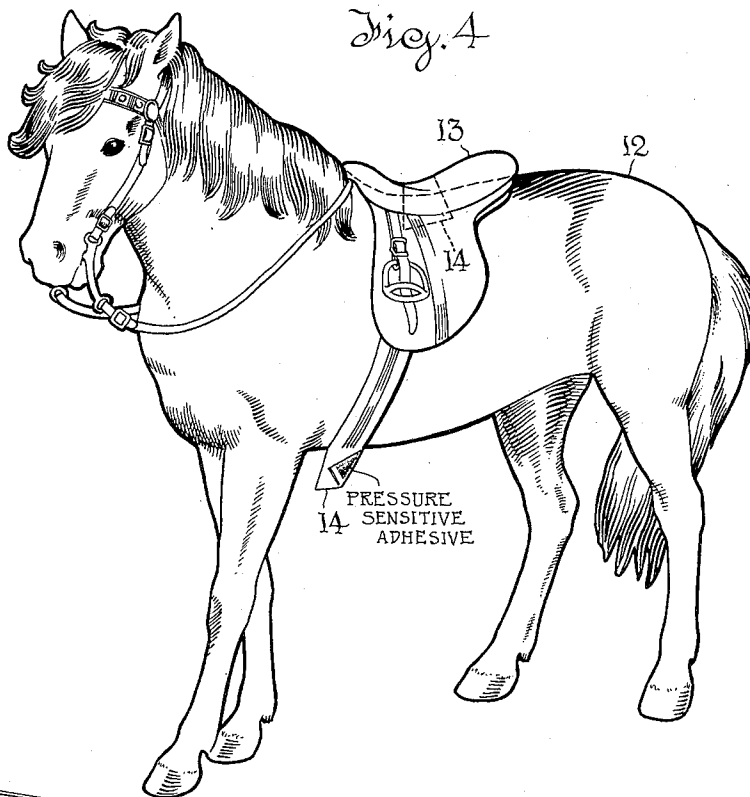


Fig. 5

Inventor
George L. De Mott
Dodge and Son.
Attorneys

UNITED STATES PATENT OFFICE

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TOY

George L. De Mott, Washington, D. C.

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4 Claims. (Cl. 46—157)

This invention relates to toys, and particularly to figure toys made wholly or in part of paper or other cellulosic, or similar, material. More particularly, it relates to a method of and means for securing such toys together by adhesives which entirely avoid the use of solvents.

In the prior art, such toys as paper-dolls, paper cut-outs and the like have sometimes been made with their parts permanently attached, as by printing the designs directly on the body of the toy. In the case of paper-dolls, it has also been suggested to make clothing which is so formed that it may be thrust into position over the head of the doll, the clothing being suitably perforated for this purpose.

The simplest and most common structure has been to form a toy of stiff paper or cardboard with colors printed thereon, and to provide articles to be attached thereto, particularly dresses in the case of paper-dolls, with integral flexible tabs either of paper or of paper suitably reinforced, these tabs being formed for bending about the margin of the doll body to hold the clothing in place. The tabs are usually held in place loosely by being bent around the body of the toy at several points. The parts cannot be secured together permanently as this prevents separation, hence even though it is unsatisfactory, the bent tab method of securing has been widely followed. Children sometimes employ paper clips in connection with the tabs, but these are unsightly and quickly tear the tabs. Ordinary glue cannot be used on the tabs, as it prevents interchanging of parts.

The main object of this invention is to secure paper toys together, or to secure dolls and their apparel together, in such a way that the parts can be separated or assembled repeatedly without damage.

Another object is to provide securing means forming a permanent part of the toy so that it may never be lost or misplaced.

Other objects and advantages will be apparent from the following description when read in connection with the accompanying drawings, in which:—

Figure 1 is a face view of a toy cut-out in the form of a paper-doll adapted to be used with an embodiment of this invention;

Fig. 2 is a front view of an article of clothing suitable for use with the doll shown in Fig. 1 and embodying this invention;

Fig. 3 is a rear view of an article of clothing also suitable for use with the doll of Fig. 1, and showing a modification of the invention;

Fig. 4 is a view in elevation, of another form of toy having its parts secured together according to this invention; and

Fig. 5 is a perspective view of still another form of toy to which this invention may be applied.

Although the invention is applicable to toys in general, and particularly to paper toys composed of a plurality of parts, it will probably be found most useful in connection with paper or reinforced paper toys made in the form of dolls, animals, houses and similar objects.

For purposes of illustration, the invention will be described as embodied in a few of the most common forms of paper toys, the illustrations of Figs. 1, 2 and 3 being directed to the form commonly known as a paper-doll.

Referring to Fig. 1 of the drawings, the reference character 5 designates a doll body composed wholly or in part of paper, and preferably of a thickness to make it more or less rigid. It may be reinforced by fabric, if desired, in order to increase its rigidity and durability. As shown, the body 5 has printed thereon in suitable color the simulation of an undergarment 6. It is preferable that at least the body of the doll shall conform to nature, and the legs, arms and head be appropriately printed in colors. The body 5, as here shown, also has printed on it an indication of footwear in the form of slippers 7, although these, too, may be made removable.

In Fig. 2, there is shown a dress 8, printed in color on a paper sheet or a sheet composed partly of paper and having either integral or attached to it, tabs 9 for securing the dress to the body of the doll. Although the dress 8 is indicated as being printed on the paper, it may be made up of crepe paper or light fabric mounted on a semi-rigid paper backing sheet of the shape of dress 8. In the later case, the tabs 9 will preferably be formed integral with the backing sheet. In any case, the dress, or the backing sheet, or the tabs, or all of them, may be reinforced with fabric such as linen to increase the durability of the article, and to prevent the tabs from being torn off.

It will be understood that in practice heretofore known, the dress 8 would be placed against the doll body 5 and the tabs 9 bent backwardly around behind the doll body to hold the dress in position. Such a securing means is unsatisfactory as the dress falls off easily if the doll is moved.

Accordingly, it is proposed, in conformance with this invention, to coat at least a portion of one of the parts to be secured together with a non-drying permanently tacky pressure sensi-

tive adhesive 10, that is, an adhesive which has associated with it a hygroscopic substance to collect moisture from the air and keep the adhesive moist or tacky, and which is energized by pressure so that it may be placed and removed again and again without the use of heat or of any solvent.

In practice, the adhesive may be placed on all or only a part of the doll body, or it may coat the entire face of or only portions of the article of apparel. Although such arrangements are contemplated and are within the scope of the invention, it will usually be the most practicable to place the adhesive coating on tabs, as best shown in Fig. 2 of the drawings. It is preferred that these tabs be treated with an adhesive repellent substance such as ordinary animal glue, before the adhesive is applied. Such a treatment toughens the fibers and closes up the pores of the paper so as to prevent absorption of the adhesive and consequent weakening of the tabs. When glue in water solution is applied in conjunction with a hygroscopic substance such as glycerine, and a tanning agent such as formaldehyde, the paper is rendered waterproof, remains soft and flexible and the adhesive remains tacky. The glue is also hardened by the formaldehyde. Non-drying adhesives which are sensitive to pressure and which require no heat or solvent for their application are known.

One very simple form of adhesive which may be used in practicing this invention is composed of one part gum rubber to about four parts of asphaltum, the two ingredients being dissolved in a suitable solvent such as carbon disulphide or benzene. This adhesive is applied after the paper has been treated as described above.

Inasmuch as it may be somewhat difficult to grasp the ends of the tabs after they are stuck in position, it will be preferable to coat the tabs over a limited area and particularly to leave a small strip 11 adjacent the end of each tab free from adhesive so that this end may be seized upon when the tab is to be loosened.

The loosening of the tabs may also be facilitated by creping the paper and then coating the entire active face of the tab with adhesive. The creping decreases the area of contact between the tab and the doll body and aids in the removal of the tab.

The doll dress shown in Fig. 3 omits the attaching tabs, the pressure sensitive adhesive being applied directly to the body of the dress at points 21.

This invention is not limited in its use to paper-dolls as shown in Fig. 1, but may also be applied to other toys or cut-outs as shown in Figs. 4 and 5.

In Fig. 4, the reference character 12 designates a pony made of paper or similar material and having a saddle 13 attached thereto by the use of pressure sensitive adhesive applied to the tabs 14. The saddle 13 may obviously be applied by the use of adhesive applied directly to the parts, that is, the tabs may be omitted as in the case of the doll dress shown in Fig. 3.

Still another embodiment of the invention is illustrated in Fig. 5, where the reference character 14 designates a paper toy in the form of a house and comprising at least two parts adapted to be assembled by bringing the parts 15 and 16 together in overlapping relation, one of these parts being coated with pressure sensitive adhesive in spots as indicated on the drawings. The roof indicated at 17 is also secured in place against flaps 18 by pressure sensitive adhesive 19.

Pressure sensitive adhesives not only require no heat or solvent for their use, but they may be made to remain in a permanently tacky condition. When pressed against a surface they adhere perfectly and may be removed without leaving any adhesive on the surface. This characteristic persists for an indefinite period and permits repeated use without material reduction in the degree of adhesion obtained.

Paper toys assembled by use of adhesives of the above characteristics are well suited to use by children, as they avoid use of all solvents which can be spilled on rugs or furniture. These toys having their parts attached in this manner may be used for long periods without destroying the attaching tabs or the adhesive surfaces. The adhesive cannot be separated from the toy and the effect is neat and pleasing throughout the life of the toy.

It will be understood that while only a few forms of figure toys to which this invention is applicable have been illustrated, it is not intended that the invention be limited to these precise embodiments. The term "figure toy" used herein is intended to include a toy made to represent any animate object, such as those illustrated and similar ones.

What is claimed is:

1. A figure toy comprising a body portion having a cooperating portion attached thereto by a permanently tacky pressure sensitive adhesive, said cooperating portion being adapted for repeated attachment to and removal from said body portion.

2. A paper doll comprising a doll body having an article of apparel attached thereto by a permanently tacky pressure sensitive adhesive, said article being adapted for repeated attachment to and removal from said body.

3. A paper doll having a body portion coated over a limited area of one surface thereof with a permanently tacky pressure sensitive adhesive; and an article of apparel attached to said body portion by means of said adhesive and adapted for repeated attachment to and removal from said body.

4. A paper doll comprising a body; an article of apparel having a plurality of tabs adapted for engagement about the edges of said body; and a coating of non-drying permanently tacky pressure sensitive adhesive on said tabs for securing said tabs to said body to permit repeated attachment and removal of said apparel.

GEORGE L. DE MOTT.