Aug. 21, 1945. L. A. TARBBOX 2,383,024

SIGN DEVICE

Filed April 16, 1941

Fig. 1.

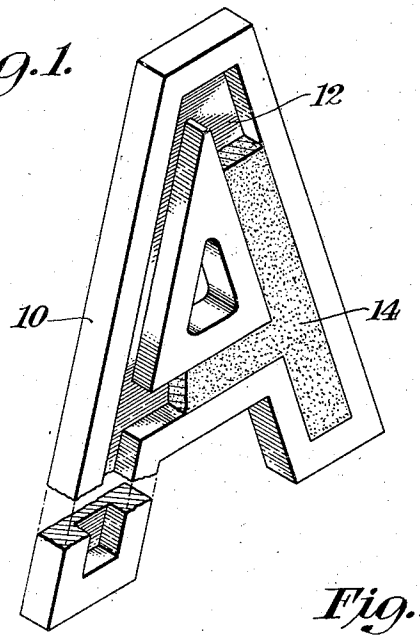


Fig. 2.

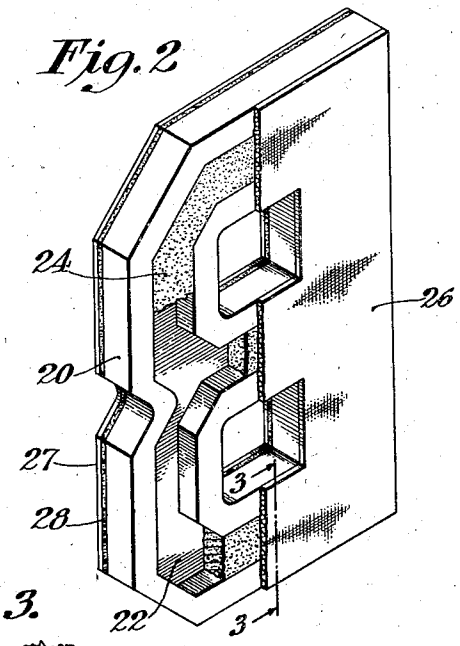


Fig. 3.

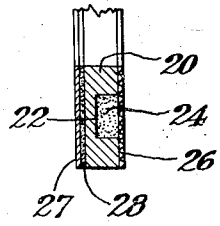


Fig. 5.

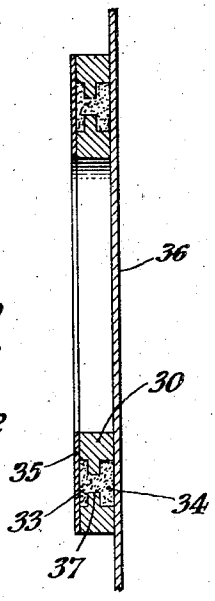


Fig. 4.

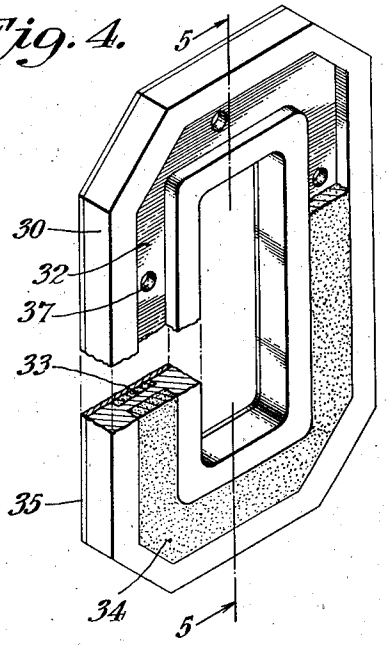
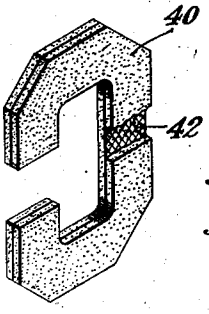


Fig. 6.



INVENTOR
Leon A. Tarbox
BY Nathaniel Ely
ATTORNEY

Patented Aug. 21, 1945 2,383,024

UNITED STATES PATENT OFFICE

2,383,024

SIGN DEVICE

Leon A. Tarbox, Cranford, N. J.

Application April 16, 1941, Serial No. 388,719

10 Claims. (Cl. 40—140)

This invention relates to improvements in interchangeable letter signs and more particularly to improved methods and apparatus for making temporary titles as for photography, etc.

It has been found desirable by photographers, both professional and amateur, advertisers, and others, to prepare signs or titles which could be readily assembled, from individual letters, by temporarily attaching the letters in proper position on a suitable mat or background. Various suggestions for attaching the letters have been made, including making the letters from wood blocks and nailing them to a background or gluing them in place, but in most cases the mat is destroyed or rendered useless after several titles have been made. Special mats, such as are required with magnetic letters, have also been tried, but they are expensive and have only a limited field of service. Furthermore, if different colored letters or characters are desired, it is necessary to have a very large assortment for the desired purposes.

The principal object of my invention is to provide a font of characters, which are of light weight and inexpensive in construction, which are particularly satisfactory for titling or sign making, and which are provided with thermoplastic material of comparatively low-melting point so that they will readily adhere to any form of mat or backing plate by merely warming the thermoplastic material and so that they can be readily removed after having served their purpose.

A further object of my invention is to provide an improved method of preparing titles as for photography, in which the characters may be suitably aligned and attached to any mat or backing member including clear glass so that pictures may be taken with the desired characters silhouetted thereon.

A still further object of my invention is to provide a construction of letter or character for temporary sign work, in which the color of the letter may be readily and quickly changed without destroying the character itself.

Further objects and advantages of the invention will appear from the following disclosure of preferred forms of embodiment thereof taken in connection with the attached drawing, in which:

Fig. 1 is a perspective view, partly in section, of the rear of one form of letter;

Fig. 2 is a perspective view, partly in section, of the rear of a modified form of letter;

Fig. 3 is a vertical cross section taken substantially along the line 3—3 of Fig. 2;

Fig. 4 is a perspective view; and

Fig. 5 is a vertical cross section through a still further modified form of letter;

Fig. 6 is a perspective view of a still further modified form of letter.

In accordance with the preferred form of embodiment of my invention, I provide a font of characters, such as letters, numerals, etc., which are adapted to be adhesively attached by means of thermoplastic materials to a wide variety of mats, plates or other forms of background so that a letter, phrase, title, or other combination can be prepared and temporarily held in position. While of general application, my invention is particularly applicable to the making of titles in connection with the so-called "home movies." For such purposes, I prefer to use a raised or three-dimensional form of letter such as the block type shown at 10 in Fig. 1. It will be apparent that the shape of the letter or character is not restricted, and I may use any shape or size which may be desired, but the field of use usually limits the letters to small ones, as of six inches or less in major length.

The principal feature of my invention is the nature of the adhesive by which the letter may be held in the desired position. This is preferably a thermoplastic material having a melting point in the range of 110–170° F., which, at normal atmospheric temperature, will be solid and will not deteriorate. At normal temperatures, it should not be adhesive or even sticky or tacky. It is preferably brittle at normal atmospheric temperatures, although readily changed to become adhesive upon warming.

As a subordinate feature of my construction, I prefer to use some form of principal reinforcement to aid in fixing the shape of the letter and to prevent it from breaking on handling. With most thermoplastic materials that I have used, the reinforcement counteracts the normal brittleness, thus rendering the characters useful over a longer period. The reinforcement may be merely an intermediate cloth or paper or wire layer, film or screen, or the body portion of the letter may be of a solid material such as wood, glass or metal or other suitable material and the thermoplastic material secured thereto on either or both faces.

As one preferred form of embodiment, I have shown in Fig. 1, a three-dimension letter 10, which may be of a rigid or flexible material and is conveniently made of wood, such as plywood.

If such leter is to be secured face up on a suitable mat, the rear face may be provided with a channel, generally indicated at **12**, which may conform to the general outline of the letter. Within the channel **12**, fluid thermoplastic material **14** is placed and, when solid, it will firmly adhere to the letter body. If desired, the thermoplastic material may be reinforced as by using a cloth, string, or wick, which is impregnated therewith. The rear surface of the letter thus has an exposed portion of the thermoplastic material, which, when slightly heated, becomes sufficiently adhesive to permit immediate attachment of the letter to any desired surface. The channel also serves as a reservoir for the thermoplastic material, making it possible to reuse the letter a large number of times.

After use, the letter may be readily removed from the mat by merely lifting the letter from the surface. A brittle product is a highly desirable material in this respect, for it frees itself in a complete and substantially clean manner from practically all usual backing materials or mats and ordinarily they are left clean and unmarred or may be readily cleaned by wiping off any residual material.

A modified form of letter construction is shown in Figs. 2 and 3, in which the character **20** is similarly provided with a suitable hollowed-out channel **22**, into which a normally solid thermoplastic material **24** is placed. In this case, the letter may be conveniently provided with a backing portion or coating **26** of cloth impregnated with the thermoplastic material, and in such case the thermoplastic material **24** in the channel serves as a suitable binder to the letter and the backing portion **26**. This backing portion may be repeatedly heated and repeatedly applied to and removed from a mat without breaking away from the letter.

In this form of construction, I have also provided detachable front surfaces or faces **27** and **28** for the letter. These may also be of a thermoplastic material such as paraffin, which is readily colored each face may be of a different color. To change the color of the letter, for example, it is merely necessary to pass an appropriate colored face over a warm member, after which it will adhere either to the letter itself or to the outermost face. In a similar manner, the change of color can be readily accomplished by merely lifting off one face if the under face is of the desired color.

Color of letters is not only important in ordinary advertising but is especially important in the so-called "home movie" titling. The use of different faces materially reduces the number of letters required and, being made of a suitable thermoplastic material, they can be easily molded in the different colors and the face of the desired color can be readily affixed to the letter body. It is also possible, by using a colored thermoplastic material of slightly lower melting point, to dip the letters in the coloring material. When a changed color is required, they may be either re-dipped or the color may be stripped off as the letter is stripped from the mat.

A still further modified form of construction is shown in Figs. 4 and 5, in which the letter **30** is provided with channels **31** and **32** on both sides. In this latter form of construction, the channels are both provided with suitable thermoplastic material indicated at **33** and **34** with the thermoplastic material **33** substantially integral with the face **35**. In this manner a more secure bond is made. The mat or background is indicated at **36**. Transverse openings **37** may be found desirable to increase the bond.

A solid thermoplastic letter **40** is shown in Fig. 6. This is not as strong as the wooden or metallic foundation letters in the foregoing forms but is cheapest and, if carefully handled, is readily used. It may also be reinforced with a central cloth or wire mesh **42** of a sufficient fineness to assure flexibility. Other internal reinforcements such as fibrous sheets, like paper, or cellulose derivatives, which are flexible, may be used.

The letters have the advantage that they may be applied to any customary backing material or mat and, with an all-plastic letter, such as shown in Fig. 6, the surface need not even be flat. When on glass, it is possible to arrange pictures with the letters silhouetted thereon as the light can pass around or through the letter to a picture or scene in the background without obliterating the scene. In each case, the letter is freely removed and the mat is not disfigured.

The words "front" or "face" and "back" of the letter are relative in that ordinarily the exposed portion of a letter is the face or front and the adherent surface is the rear or bottom and has the thermoplastic material. However, in making signs which are visible through glass, as in the inside of a store window, the adherent surface may also be a colored face and the rear or inside exposed portion may also be colored.

As examples of suitable thermoplastic materials, I include not only the natural waxes of animal, vegetable or mineral origin such as paraffin, beeswax, stearic acid and ceresin, but also the synthetic materials or combinations of these materials or with other products. I also believe that certain of the synthetic resins including the vinylite resins and other polymerized compounds can be used if they have substantially the above characteristics. In this respect, brittle is used to distinguish the characteristic that the characters can be readily and freely broken away from a mat or background material as distinguished from the action of glue and other viscous and tacky substances.

While I have shown and described a preferred form of embodiment of my invention, I am aware that modifications may be made thereto, and I, therefore, desire a broad interpretation of my invention within the scope and spirit of the description herein and of the claims appended hereinafter.

I claim:

1. A three-dimensional detachable character for a sign or title, having a raised body portion of the predetermined shape and a thermoplastic surface on the back of and integral with said letter whereby on partial heating of the surface the letter can be rendered adherent to a surface, said material permitting substantially clean release of the character in the cold condition.

2. A three-dimensional character adapted to be detachably secured to a surface, said character having a reinforcing body portion of substantially the desired configuration and having a part of its attaching surface provided with a thermoplastic material which is substantially brittle when cold and adhesive when warmed, said material permitting substantially clean release of the character in cold condition.

3. A three-dimensional character adapted to be detachably secured to a surface, said character having a reinforcing body portion of substantially the desired configuration and having

a part of its attaching surface provided with a thermoplastic material which is substantially brittle when cold and adhesive when warmed, said thermoplastic material having a melting point in the range of 110° F. to 170° F.

4. A three-dimensional character adapted to be detachably secured to a surface, said character having a rigid reinforced body portion of substantially the desired configuration and having a part of its attaching surface provided with a thermoplastic material which is substantially brittle when cold and adhesive when warmed, said material permitting substantially clean release of the character in cold condition.

5. A three-dimensional character adapted to be detachably secured to a surface, said character having a reinforced body portion of substantially the desired configuration and having a part of its attaching surface provided with a thermoplastic material which is substantially brittle and can be cleanly broken away from an attaching surface when cold and which is adhesive when warmed, said body portion having a recess in which an excess of the thermoplastic material is placed as a reservoir to permit repeated attachment and detachment of the character.

6. A detachable letter for a sign or title, having a body portion of the predetermined character and shape, a thermoplastic portion on the back of said letter whereby on partial heating it can be rendered temporarily adherent to a surface, a detachable face, and a thermoplastic binder between the face and the body portion.

7. A detachable letter for a sign or title, having a body portion of the predetermined character and shape, a thermoplastic portion on the back of said letter whereby on partial heating it can be rendered adherent to a surface, a detachable face, and a thermoplastic binder between the face and the body portion, the detachable face being of a color different from the body portion and readily stripped therefrom.

8. A three-dimensional character adapted to be detachably secured to a surface, said character having a reinforcing body portion of substantially the desired configuration, an exposed face, thermoplastic material to detachably secure said face to the body portion, and thermoplastic material on the surface of the body portion opposite the exposed face whereby said character may be attached to a mat or background member, the thermoplastic material being a normally hard and brittle material which, upon heating, becomes adhesive and when cold can be readily broken away from the mat or background material.

9. A detachable character for a sign or title, having a body portion of the predetermined shape, recesses in the opposite faces of said body portion, and a thermoplastic material in said recesses, part of said thermoplastic material being adapted for detachably securing the character to a mat or background material, and a face member secured to the other part of said thermoplastic material.

10. A three-dimensional character adapted to be detachably secured to a surface, said character having a reinforcing body portion of substantially the desired configuration, an exposed face, thermoplastic material to detachably secure said face to the body portion, and thermoplastic material on the surface of the body portion opposite the exposed face whereby said character may be attached to a mat or background member, the thermoplastic material being a normally hard and brittle material which, upon heating, becomes adhesive and when cold can be readily broken away from the mat or background material, the adherent sides of said body portion having a reservoir of the thermoplastic material.

LEON A. TARBOX.