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F. HART

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DECALCOMANIA

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Fig. 1

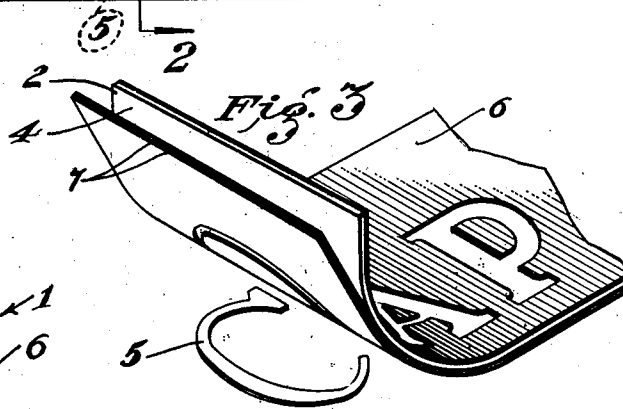
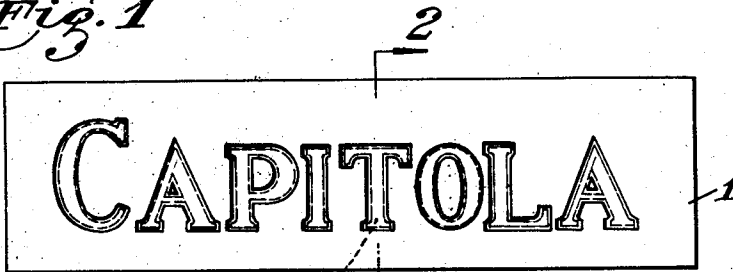


Fig. 2

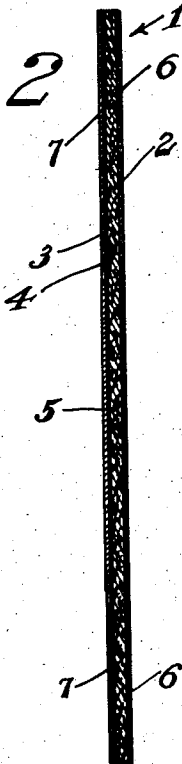
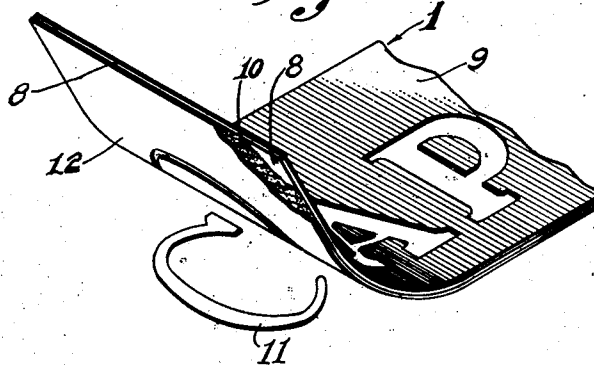


Fig. 4



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DECALCOMANIA

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12 Claims. (Cl. 41—33)

This invention relates to decalcomanias and the method of manufacturing the same.

The invention has for an object the provision of a decalcomania either of the "simplex" or "duplex" type, "simplex" indicating a carrier for the design which is formed of a single paper, or its equivalent, while "duplex" indicates a paper that includes a tissue in addition to a heavy paper, the tissue carrying the design. At the present time, decalcomanias are subject to certain difficulties when it comes to mounting the same. One of the difficulties consists in wrinkling or crinkling of the carrier when it is moistened, and which wrinkling or crinkling is communicated to the design, rendering accurate placement of the design on an object difficult. There are several types of decalcomanias on the market, known as the "varnish type" and the others as the "water transfer type". The water transfer type has many advantages over the varnish type. However, the present invention is directed to both forms. In the varnish type, a sizing is applied to the paint side of the design until it becomes tacky, and this acts to hold the particular design to the object when the backing is removed. In the case of the water type decalcomania, no sizing is used on the design, the design itself carrying some gelatinous substance which allows its transfer to the object upon wetting both the design and the paper to permit its release from the paper.

An object of the present invention is to provide a transfer that may be made in any size with the designs separated and which decalcomania or transfer may have the design portions applied to an object without rippling or moving from the position desired.

Another object is the provision of a transfer of the character previously stated, which may be applied by the amateur with professional results.

At the present time, there is a great deal of wastage in the use of decalcomanias. This wastage may be considerably reduced, providing an expert always applies the decalcomania to an object, but where a large number of decalcomanias are to be used, such as might be used on the outside of freight cars to indicate a given railway company, and which transfers cover an area of some 16 square feet, more or less, it is evident that wastage of such a transfer entails great loss to the user, as transfers of this size sell wholesale from \$4.00 apiece and upward, depending upon the number of colors appearing in the transfer. The present invention assures that little or

no wastage will occur and in actual tests with inexperienced men, it has been found possible, with the present invention, to produce perfect results 90 per cent. of the time.

Other objects of the invention will readily suggest themselves to those skilled in this art, among which objects are inexpensiveness in cost of manufacture, which also reduces the cost or selling price, and a decalcomania which is capable of producing superior results.

In the drawing:

Figure 1 is a plan view of a decalcomania showing the back, the outline of the letters on the back being shown by heavy lines and the paint side by dotted lines,

Figure 2 is a sectional view on the line 2—2 of Figure 1 and on an enlarged scale,

Figure 3 is a fragmentary perspective view showing application of the paint side of a transfer to a given object, duplex paper being used in this instance, and,

Figure 4 is a perspective view of simplex paper embodying the invention.

Referring now with particularity to the drawing, and with reference to Figures 1 to 3, 1 indicates a decalcomania comprising, in the present instance, duplex paper consisting of a heavy backing paper 2 upon which is superimposed a tissue 3, which tissue adheres to a surface 4 of the backing paper 2. The backing paper is commonly called the carrier, for the reason that it carries the design, and the word "backing" for a design, as a general rule, refers to the covering or the paint substance or gelatinous substance, gum or otherwise, which may be painted over the design. However, for clarity of detail, I do not use the word "backing" in the sense aforesaid, but wherever used in this specification, "backing" or "backing paper" for the design means the carrier paper, and in the case of duplex paper will include not only the heavy paper 2, but the tissue 3 as well, and in the case of simplex paper, the heavy paper. The tissue 3 carries on its outermost surface a design 5. In the present instance, the design takes the form of letters, such as shown in Figure 1. This design may be made up in a variety of methods from synthetic paint or gum and lacquer, or any form of paint which is waterproof and may, as those skilled in the art well know, be printer's ink. Usually, in the making of a decalcomania, the design is first drawn upon a suitable paper, after which the design is painted in on a screen. A number of screens are provided, depending upon the number of colors contained in the design. These design screens are

then placed over the tissue paper of the decalcomania, the particular lacquer bearing the color desired pressed through the screen by means of a squeegee and onto the tissue. This procedure is, of course, repeated, as stated, for the number of colors. This is known as the "screen process" and is well understood in the art and, therefore, I do not limit myself to any particular method by which any given design is placed upon the tissue of the duplex paper.

Having selected the particular design for the decalcomania, I apply a waterproofing material, such as a wax, lacquer, synthetic gum or paint to both sides of either the simplex or duplex paper. Taking Figure 2 for example, I apply waterproofing 6 and 7 to the paper. However, this waterproofing is applied in a particular manner, to-wit: The waterproofing terminates slightly spaced from the particular design and surrounding the design. For instance, in Figure 1, all that area included outside the heavy lines of the print, to-wit, not the letters themselves, has waterproofing applied thereto. Thus, the waterproofing would surround each letter up to and including the heavy lines which define the character of the letters on the back of the decalcomania. As a matter of fact, no line need, of necessity, appear upon the transfer, but for the purpose of defining this invention and rendering it clear, the lines are so placed as to indicate the area within which the backing is waterproofed. It is also to be noticed, upon reference to Figure 1, that the actual size of the paint design is of lesser dimension than the waterproof outline. The side bearing the design is also waterproofed, as indicated at 7, and this waterproofing terminates a slight distance around the design and substantially matches the waterproofed area on the back (see Figure 2).

It is intended that the waterproofing of the tissue should penetrate the tissue so that both sides of the tissue are waterproofed, as best illustrated in Figure 3, which is illustrative of the backing being lifted from the tissue and the tissue in turn being raised, leaving the design 5 upon some object. This view does not indicate an actual condition in the application of the decalcomania, as the backing is usually moved from the tissue without raising the tissue, the tissue left in place and usually rolled and then slid sideways or lifted up so as to leave the design. In other words, by Figure 3, it is not intended to indicate a simultaneous lifting of the backing and tissue.

In the case of simplex paper, as illustrated in Figure 4, 8 indicates the backing or carrier, 9 the waterproofing on the back of the carrier, 10 a soluble gum which holds the design 11 on the carrier 8, and 12 the waterproofing which surrounds the design. I have specifically omitted in the description of the duplex paper to mention the gum, such as shown at 10. However, whatever is necessary for properly holding a design to the carrier or backing is included. In the case of the simplex paper, the object upon which the design is to appear is thoroughly wetted with water or other substance, as is likewise the back of the paper carrier or backing 8. The water will, of course, penetrate through the pervious portions which outline the design, with the result that the soluble gum will be dissolved and the design transferred to the object upon which it is to appear. By waterproofing all areas surrounding the design, the water only directly releases the design and the backing or carrier 8 does

not crinkle, with the result that the design is not crinkled and it becomes an easy matter to apply the design to any object.

I have thus illustrated for a decalcomania two methods whereby known defects now prevalent in decalcomanias are overcome.

For convenience, the waterproofing on the outermost surface of the backing or carrier may be colored, thus bringing out details of the outline of the design for the convenience of workmen.

The word "design" is used in its generic sense as covering any configuration, whether it be letter, drawing, photograph, or that which gives a sense impression of form.

I claim:

1. A decalcomania including a design member, a backing therefor, said backing provided with water impervious and pervious areas, and said design member located on the water pervious area.

2. A decalcomania including a design member, a backing for carrying said design member, said design member being substantially waterproof, and said backing being water pervious at the area carrying said design member and water impervious at all other areas.

3. A decalcomania including a backing, a removable design carried by said backing, and waterproofing for said backing outlining said design.

4. A decalcomania including a water pervious backing, a waterproofed area on said backing defining a design outline, and a design member within the space defined by said outline.

5. A decalcomania including a water pervious backing, a removable design member carried on one surface of said backing, and waterproofing applied to the surface of said backing and outlining the said design member.

6. A decalcomania including a backing formed of water pervious material, a paint design carried by said backing and on one surface thereof, and waterproofing applied to a surface of said backing and outlining the paint design.

7. A decalcomania including a backing formed of water pervious material, a paint design carried by said backing and on one surface thereof, waterproofing applied to a surface of said backing and outlining the paint design, and waterproofing applied to the opposite surface of said backing and also defining the paint design.

8. A duplex decalcomania including a backing, a tissue carried by one surface of said backing, a removable paint design secured to a surface of said tissue, and a waterproofing applied to said tissue and outlining said paint design.

9. A duplex decalcomania including a backing, a tissue carried by one surface of said backing, a removable paint design secured to a surface of said tissue, a waterproofing applied to said tissue and outlining said paint design, and waterproofing applied to a surface of said backing and likewise outlining the paint design.

10. A decalcomania including a removable design member, a backing for said design member, and a colored waterproofing applied to one surface of said backing and outlining said design member, the backing being pervious to water in the area carrying said design member.

11. A decalcomania including a backing, a removable design member carried by one surface of said backing, the opposite surface of the backing being imprinted to indicate the relative position and character of said design member, and wa-

terproofing applied to one surface of said backing and outlining said design member.

12. A decalcomania including a backing, a removable design member carried by one surface of said backing, the opposite surface of the backing being imprinted to indicate the relative position and character of said design member, color-

less waterproofing applied to the surface of the backing carrying said design member and outlining the same, and colored waterproofing on the opposite side of said backing and likewise defining the said design member.

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