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J. S. MITCHELL

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SHEET SIGN FOR APPLICATION TO ARTICLES

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Fig. 1

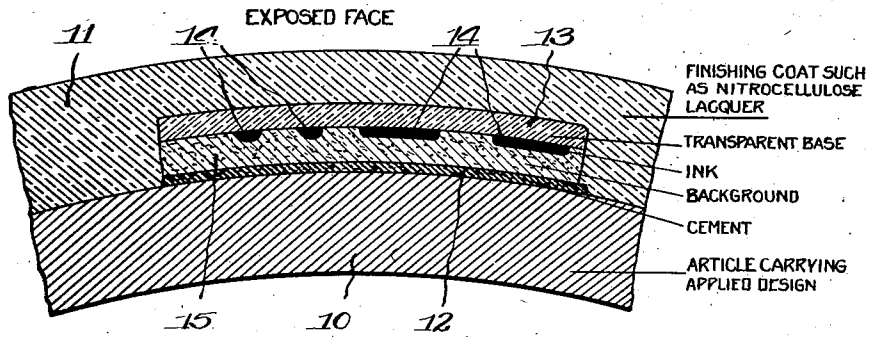


Fig. 2

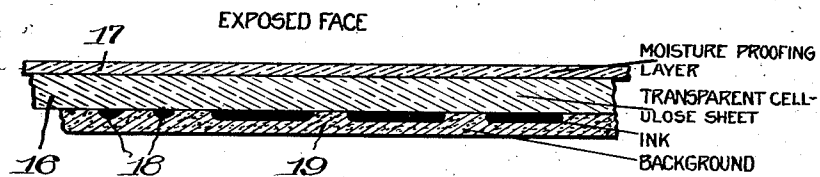


Fig. 3

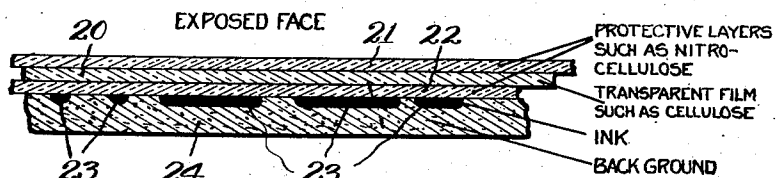
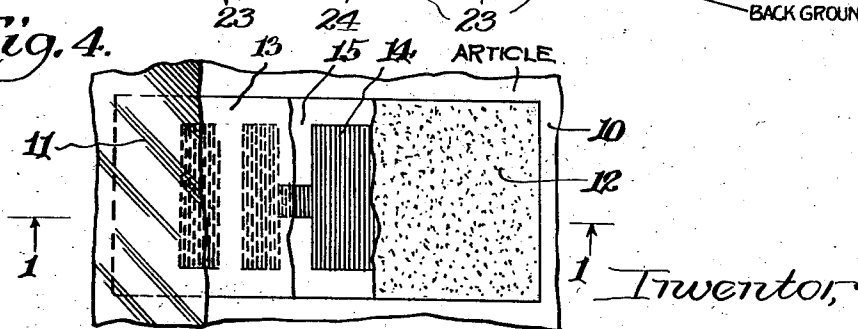


Fig. 4



Witness:
Chas. H. Koush.

Inventor,
John S. Mitchell
By W. Bartlett Jones, Atty.

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SHEET SIGN FOR APPLICATION TO ARTICLES

John S. Mitchell, Chicago, Ill.

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3 Claims. (Cl. 40—135)

The present invention relates to coated ink impressions such as signs, labels, insignia, etc., that are prepared in sheets and secured in place by a cementing agent.

Decalcomania transfers have been used and are being used for such purposes, such as placing designs on furniture, labels on metal, signs and markings on automobile bodies and other similar uses. It is customary in some instances to use a finishing coat on the article having an applied design, the coat being a covering which is continuous over the article and over the design.

The decalcomania transfers are made by printing, lithographing or otherwise applying a design onto a gummed surface of a sheet of paper. The design is then coated with a backing which may be varnish or lacquer at which backing it is anchored to an article. On wetting the paper the gum is dissolved, the paper removed and the design exposed. Such a design is injured or subjected to injury when a lacquer or varnish coat is applied over it by action of ingredients of the coating on the ink of the design. This is particularly true of solvents in lacquers which are now extensively used.

Another type of decalcomania has first a transparent nitrocellulose coat over the gum of the gummed paper. The design is then applied on this transparent coat rather than on the gum surface. Such transfers on peeling off the paper present a nitrocellulose film over the design. But when this film is again coated with a finish containing solvents for nitrocellulose, or the material of the film, the solvent is conducted through the film and subjects the ink of the design to injury.

Much trouble has been encountered in the art because of injury to signs and transfers upon placing a finishing coat over an article on which such a design has been applied.

The present invention aims to overcome the difficulties by providing over the ink of the design a transparent coating which is resistant to passage of solvents through it.

One object is to employ over the exposed face of the design a cellulose or similar sheet or film.

Another object is to employ a moisture-proofed cellulose film over the exposed face of the design.

Still another object is the formation of a sign useful like a decalcomania transfer, which dispenses with the gummed paper base of such a transfer, and hence which in use dispenses with the removal of and waste of such paper base.

Various other objects and advantages of the invention will appear from the following description of the invention for which the accompanying

drawing is an illustration of the exemplary embodiments chosen to explain the nature of the invention and the manner in which I prefer to carry it out in practice.

In the drawing,

Fig. 1 represents a rounded article in cross-section, taken on line 1—1 of Fig. 4, bearing a sheet sign of this invention with a finishing coating extending continuously over the sign and the article.

Fig. 2 is a cross-section of sheet sign showing one manner of constructing it.

Fig. 3 is a modified form.

Fig. 4 is a view in elevation of the sign shown in Fig. 1.

It is to be understood that the drawing is diagrammatic and exaggerated in proportions for the purpose of illustrating the invention. It is not to be construed as limiting the invention as will appear hereinafter.

The invention contemplates the construction of a sign which in general procedure of its manufacture duplicates the manufacture of a decalcomania transfer. The outstanding distinction is the substitution of a transparent sheet for the usual paper base, the transparent sheet to be permanently a part of the sign in contrast to the temporary character of the paper base. Another, and naturally following, distinction is the elimination of the gum layer which permits removal of the paper base.

In the making of a sign by and for the present invention I provide first a preferably flexible, transparent, film or sheet which is insoluble and unaffected by solvents or ingredients in such a finishing coat as may be placed over it. I prefer to use a sheet of cellulose regenerated from viscose, but I do not consider the invention is limited to such material. It is the property of the material in its relation to the ingredients of finishing coats that interests me, rather than the specific material itself. A thin sheet of mica could be employed but it is of course not so practical, for obvious reasons. A thin sheet of transparent insoluble resin substance, such as phenol-condensation products could be used, but likewise these are not so practical as regenerated cellulose.

Because regenerated cellulose is quite absorbent of water and moisture which may alter its form by shrinkage, I may first moisture-proof the sheet.

This is of practical value for the reason that the sheet is the vehicle for the design, and it is desired not to injure the design. The waterproofing is preferably placed on both sides of the

sheet, but it may be placed only on the exposed side which does not carry the ink. For cellulose base sheets I prefer to use a nitrocellulose lacquer coating as the moisture proofing agent. Because the exposed surface is thus protected, the sign may be handled without danger of moisture of the hands impairing the sign by shrinkage of the cellulose. Of course other base materials which do not absorb moisture do not require the moisture proofing, nor does the cellulose film require it as an essential part of the invention.

The design is then applied to the transparent film. The cellulose sheet which is not moisture-proofed on both sides receives the impression directly on the cellulose surface. If it has been moisture-proofed on both sides as above described, it is applied on one proofing coat, such as the nitrocellulose. The design may have a backing coat which may be considered as a part of the design, and which provides an exposed surface that is cemented or applied to the article or surface that is to bear the sign.

In the accompanying drawing Figs. 1 and 4 illustrate an article 10 to which a sign has been applied and on which, over the sign a finishing coat 11 has been applied, such as nitrocellulose lacquer. A cement 12 is indicated by which the sheet sign has been anchored. The sheet sign is carried by a transparent base 13 which may be the cellulose sheet or the moisture-proofed cellulose sheet above described. The areas 14 indicate insignia such as ink impressions on a background 15 which may be an enamel lacquer over the ink design, and in reality a part of the design.

Fig. 2 is a more detailed view of the sheet sign as a unitary structure, showing a transparent cellulose sheet 16 having on the outside a moisture proofing layer 17, such as nitrocellulose. An ink design 18 is impressed on the other cellulose surface. A background coat 19 is also indicated.

Fig. 3 is similar to Fig. 2 but shows a cellulose film 20 having a moisture proofing coat, such as nitrocellulose on both sides, the outside being 21, and the other side being 22, the latter one bearing the ink design 23 and the backing coat 24.

In using regenerated cellulose I provide a cheap base, which is highly transparent and flexible and tough, and which may be made very thin. It provides an excellent surface for receiving a finish. It also provides an excellent surface for receiving a moisture-proofing coat.

In using nitrocellulose lacquers for the moisture proofing coat or coats I provide a substance which is cheap and effective, and easily applied. It provides an excellent surface for receiving the ink or the finishing coat referred to, from which the ink is to be protected. I may use a moisture proofing nitrocellulose film which contains emollient, as well known in the art, to give it softness and flexibility, thus preserving the benefits of flexibility of the cellulose.

When the sign is applied any finishing coat may be applied over it. If there is water in the coat, the nitrocellulose moisture-proofing coat on the cellulose protects the cellulose from the water. If the finish contains a nitrocellulose solvent, the cellulose will not conduct it to the ink of the design. Likewise, the cellulose will protect the ink of the design from action or injury by any ink solvent in the finishing coat.

The invention thus permits the formation of a flexible sheet sign which can be applied by a cement to some article and then coated with a finishing coat without injury to the design.

The sign itself is an improvement over the ordinary decalcomania transfer, disregarding the application of a finishing coat, for the reason that the ink design is or may be protected by a cellulose or similar film or one or two water-proofing coatings. There is no necessity of wetting to remove the usual paper vehicle, no waste of that paper, and no hiding of the design prior to application.

It will be readily understood that various changes and modifications may be made from the arrangements herein disclosed without in any way departing from the spirit and scope of the invention as expressed in the appended claims.

What I claim is:

1. A finished article comprising a body, a sheet sign cemented to said body, and a finishing coat over said sign and body, said sheet sign being a unitary structure having a transparent vehicle sheet, an ink design facing into and carried by said sheet, said sheet having the property of excluding ingredients of the finishing coating on application thereof from the ink of the design, said sign being cemented with the design side to the body.

2. A finished article comprising a body, a sheet sign cemented to said body, and a nitrocellulose finishing coating over said sign and said body, said sign being a unitary structure having a transparent vehicle sheet of cellulose, an ink design facing into and carried by said sheet, said sign being cemented with the design side to the body, said cellulose having the property of excluding ingredients of the finishing coating on applications thereof from the ink of the design.

3. A finished article comprising a body, a sheet sign cemented to said body, and a nitrocellulose finishing coating over said sign and said body, said sign being a unitary structure having a transparent vehicle sheet of regenerated cellulose, a film of nitrocellulose on one side of said sheet, an ink design facing into and carried by said sheet at the other side, said sign being cemented with the design side to the body, said cellulose having the property of excluding ingredients of the finishing coating on application thereof from the ink of the design.

JOHN S. MITCHELL.