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TRANSFER INK

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My invention relates to a composition suitable as a base for a marking ink that may be used for transfers which are commonly employed for transferring a mark to a fabric. In particular, the invention comprehends a water soluble marking composition which may be readily removed from a fabric by the application of water.

Transfers of the type referred to commonly consist of a thin sheet of paper on which is printed the name or trade-mark of a manufacturer or dealer. The mark on these transfers is readily transferred to fabrics by laying the transfer on the fabric, with the side having the mark printed thereon in contact with the fabric, and pressing on the transfer with a hot iron. The heat from the iron softens the marking composition and it is transferred to the fabric. A satisfactory composition for the base of a marking ink for transfers must be normally solid, but melt at a relatively low temperature, so that it can be kept liquid in the fountain of the printing device by a suitable heating device. When heat is applied to the composition, it must not become so liquid that it will run out of the engraved channels in the printing roller; it must be such as to be easily wiped clean from the smooth surface of the printing roller by the usual doctor blade; and it must have the characteristic of hardening rapidly so that it becomes thoroughly hardened in the travel from the printing roller to the winding roll on which the transfers are wound so that it will not offset. The melting point of the composition, while being comparatively low, must not be such that it softens in the extreme heat of summer. In addition, a marking compound for transfers should not be stringy either in printing or in transferring to the textile fabric, and should be free from bubbles which would leave openings in the transferred design. Moreover, the composition should be readily releasable from the paper when heated in the transferring operation and it should remain on the surface of the fabric, without striking in or penetrating into the fabric. In fact, the transferred lines on the fabric should, as far as possible, stand out like solid material lying on the surface of the goods.

Besides the above qualities, the composition must be capable of carrying, without deleterious alteration, the desired colors or metallic powders used as pigments to render the transferred marking visible on the textile fabric. And it should be sufficiently flexible to permit handling of the transfers and textile fabric having a marking thereon without chipping and breaking.

In certain instances, particularly where the

mark is applied to dress goods, it is desirable to have a marking composition which may be readily removed from the fabric by the ordinary washing of the fabric. The marking composition of my invention has all of the necessary and desirable qualities mentioned above and in addition it is water soluble. This latter characteristic renders the composition removable from a fabric by the application of water. The composition which I have devised includes a saponifiable wax, oil and an alkali. To these are added other substances to obtain various characteristics necessary or desirable in the composition, an exceptionally good composition including two parts of beeswax, one part of carnauba wax, two parts of pure boiled linseed oil, commonly known as No. 3 lithographic varnish, a thick oil which can be drawn out in ropes, one part of triethanolamine, three-eighths parts of sodium hydroxide, three-fourths part of granulated sugar, and three-fourths part of magnesium oxide. The wax forms the body of the composition which is thickened by the boiled linseed oil which also improves the running qualities of the composition and prevents the composition from striking into the fabric. Upon the introduction of the sodium hydroxide which saponifies a part of the oil and wax there is foaming and the triethanolamine cuts the foam. The magnesium oxide is a transparent thickener which thickens the composition.

The several ingredients may be mixed together in the following manner: The beeswax and the carnauba wax are melted into the pure boiled linseed oil. To this very hot liquid mixture of oil is added first the triethanolamine and then the sodium hydroxide. The sodium hydroxide when added to the hot mixture of oil and wax causes a foaming and the triethanolamine retards and cuts this foam; it is added before the sodium hydroxide to act as a preventative and serves to minimize the foaming. While the solution is very hot, the granulated sugar is added. When the sugar is added, the solution should be sufficiently hot to at least caramelize the sugar. Next is added the transparent thickener or filler magnesium oxide, and at this time the pigment or color is added. The pigment may be omitted and the composition without the pigment stored as stock, the desired pigment being added prior to using the composition.

Another satisfactory composition may be made by mixing under the same conditions three pounds of beeswax, two pounds of boiled linseed oil, six ounces of caustic soda, one pound of triethanol-

amine, twelve ounces of sugar, and four ounces of magnesium oxide.

In the above compositions, the sugar may be replaced in whole or in part by starch.

5 The proportions of the ingredients as given above produce compositions especially adapted for winter use. A composition for use in summer is preferably somewhat harder, and carries less oil or more wax.

10 In making transfers, the composition is mixed with suitable amounts of pigment colors, such as pigment earths, or with so-called bronzes, as desired, to yield a transfer of the desired color. The marking ink so formed is printed by an engraved roller running in the ink in the fountain of the press with a doctor blade serving to wipe excess composition off the roller.

The transfer paper can be printed almost as rapidly as it can be inspected, and will not offset.

20 The printed transfers may be stored without deterioration, and the transfers applied to hose and other fabrics can be washed out without injury to the fabric. Moreover, the transferred designs on the fabric stand out like solid material lying on the surface of the goods.

25 It is obvious that various changes may be made

in the proportions and ingredients of the compositions described above without departing from the spirit and scope of my invention as expressed in the appended claims.

Having thus described certain embodiments of the invention, what is claimed is: 5

1. A transfer ink adapted to be removed from a fabric by water including approximately three parts of a saponifiable wax, two parts of boiled linseed oil, three-eighths part of sodium hydroxide, and a pigment. 10

2. A transfer ink adapted to be removed from a fabric by water including approximately three parts of a saponifiable wax, two parts of boiled linseed oil, three-eighths part of sodium hydroxide, one part of triethanolamine, and a pigment. 15

3. A transfer ink adapted to be removed from a fabric by water including approximately three parts of a saponifiable wax, two parts of boiled linseed oil, three-eighths part of sodium hydroxide, one part of triethanolamine, three-fourths part of granulated sugar, three-fourths part of magnesium oxide, and a pigment. 20

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