

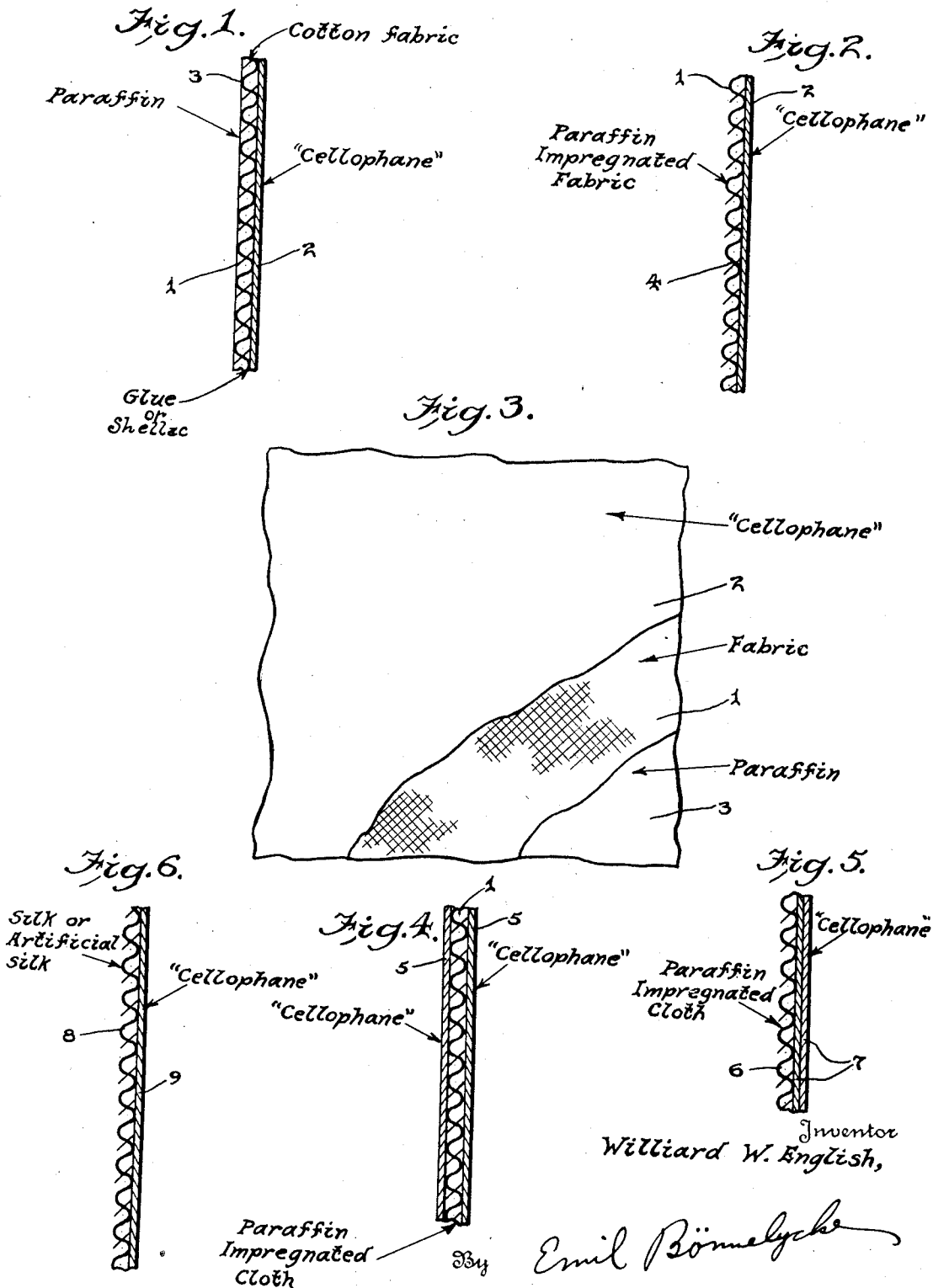
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LIGHT DIFFUSING MATERIAL

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LIGHT DIFFUSING MATERIAL

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6 Claims. (Cl. 154-46)

The present invention relates to a material to be used in connection with a source or sources of light to effect a uniform spread of light by appearances over the surface of the material without revealing the exact spot or spots where the light is located or is nearest to the material. The material has many different uses as for instance in connection with window valances, theatrical scenery, ornamentations, scrolls, stencils, signs, etc., in which a night presentation is desired.

It is an object of this invention to provide a flexible or semi-flexible material which will reveal and throw off an even and uniform illumination at night and a clear and sharply defined day appearance. It is a further object to provide a material to be used for signs and night lighting ornamentation to simulate a similar representation produced by neon tubes. A still further object resides in the characteristic feature of the material being able to diffuse the light to such an extent that it will not show any bright spots where the source or sources of light are located nor will it show the location of the filaments of electric light bulbs.

Further objects will be apparent from the following description taken in connection with the accompanying drawing in which the same reference numerals indicate corresponding parts and in which:

Figure 1 is a cross-sectional view of the fabric, Fig. 2 is a cross-sectional view of a slightly modified material,

Fig. 3 is an elevational view with certain parts partly broken away,

Fig. 4 is a cross-sectional view of a further modified material, and

Figs. 5 and 6 are cross-sectional views of two additional modified materials.

In Figs. 1 to 3, the basic material is a fabric 1 which can be made of any suitable material such as woven fabrics in cotton, linen, etc., in white or colors. On one side of the fabric is secured and closely adhering thereto a layer of a transparent material or sheet 2 which is a cellulosic material and preferably "Cellophane" although celluloid, glass, transparent cellulose and other materials can be used for certain specific purposes. The "Cellophane" is preferably colored depending upon the color desired although clear "Cellophane" can be used. If a deeper shade of color is desired it is only necessary to add one or more sheets or layers by gluing them together depending upon the depth of shade desired.

In order to distribute or diffuse the source of light over the surface of the material, the cloth fabric 1 is coated on one side, as in 3 (Figs. 1 and 3), or impregnated, as in 4 (Fig. 2), by a light diffusing material, preferably paraffin. The paraffin is preferably ironed hot into the fabric from one side and the "Cellophane" sheet is glued to the fabric on the side opposite to that on which the paraffin is applied.

In Fig. 4, the paraffin impregnated cloth layer 1 is provided on both sides thereof with a sheet of "Cellophane" 5 which is glued or otherwise closely adhered to the fabric.

The close weave of the cotton fabric together with the paraffin affords a perfect diffusion of light and together with the "Cellophane" a perfect even distribution and animation of the light. The paraffin acts as a means of excluding the exact location of the source of the light to the extent that when viewed from the opposite side to that of the source uniform light of even distribution will be seen. The "Cellophane" is primarily for the purpose of animating the light. The depth and tone of the color depends upon the thickness or number of sheets of "Cellophane" used. It is also possible to use any wax in place of the paraffin.

Fig. 5 shows the paraffin impregnated cloth fabric 6 provided with two sheets of "Cellophane" 7.

It is also possible to use silk and artificial silk as shown in Fig. 6 in which the fabric 8 is silk or artificial silk and the sheet 9 is "Cellophane" which closely adheres to the silk sheet. In this combination, it is not absolutely necessary to use an impregnating material as paraffin for the reason that fairly good results can be obtained without impregnation especially if high quality fabrics are chosen.

The material, according to this invention, when made of a fabric and a cellulosic material as two closely adhering layers into a so-called unitary product, is capable of being rolled, folded and cut into any shape and configuration desired. It is also possible to manufacture the material according to this invention by applying the cellulosic material while still in a plastic state to the fabric so that a gluing step will not be necessary. In its widest use the material will be produced as a single sheet of two layers, one layer being cotton cloth and the other being "Cellophane", the finished material having a paraffin surface on the cloth side and a high glossy smooth surface on the "Cellophane" side.

It is also possible to use paper impregnated

with wax, paraffin, etc., together with the "Cellophane" which adheres closely to the paper although the result would not be as satisfactory as when cloth is used particularly when its non-permanence is considered.

I claim as my invention:

1. The herein described material for signs for diffusing light and the like comprising two closely adhering layers glued together, one layer being a translucent textile fabric impregnated with paraffin on one side thereof and the other being transparent, and the transparent layer adhering to the fabric layer on the side opposite the paraffined side.

2. A material according to claim 1, in which the textile fabric is silk and the transparent material is a cellulose product.

3. A material according to claim 1, in which the textile fabric is cotton and the transparent material is a cellulose product.

4. A material according to claim 1, in which the transparent material is "Cellophane".

5. A semi-flexible material for signs for figurative and decorative purposes to be used with lighting means, comprising a textile fabric coated on one side with paraffin, and a layer of transparent cellulosic material secured and closely adhered to the fabric on the side thereof opposite to that of the paraffin.

6. A material according to claim 5, in which the textile fabric is cotton and the cellulosic material is "Cellophane".

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