

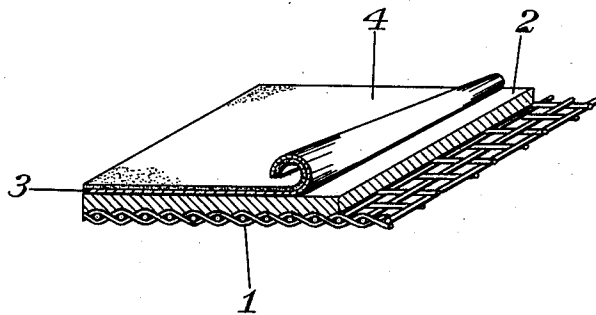
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AUTO TOP MATERIAL

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AUTO TOP MATERIAL

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8 Claims. (Cl. 154-40)

This invention relates to automobile top material and the like, and more particularly to automobile top material of improved appearance and greater durability. A portion of the disclosure in this application appeared in application Serial No. 619,210, filed June 25, 1932.

Heretofore rubber coated automobile top materials have been made by coating ordinary rubber coated fabrics with varnish of the black oil type, and in some cases with colored varnishes, to improve the appearance and to protect the rubber film from the deteriorating influences of sunlight and weather. The black varnish coated fabrics have been the only satisfactory type. However, even these have certain drawbacks, for example, the black naturally absorbs all the heat from sunlight and in time even the best of the varnishes deteriorate and some times crack. The color varnishes, with the possible exception of very few colors, have an even shorter life than the black varnish coated materials.

An object of the present invention is to provide a flexible auto top material which will withstand brilliant sunshine and the weather for much longer periods than even the best black varnish of the prior art. A further object is to provide a flexible rubberized material to which any coat of varnish or lacquer may be applied if desired. Other objects of the invention will be apparent from the description given hereinafter.

The above objects are accomplished according to the present invention by applying to the fibrous base, usually rubber coated, a thin protective film of aluminum and then, if desired, applying a surface film of any color varnish over the aluminum film. It is preferred to employ the usual type of rubber coated automobile top material and to apply a coat of an oil modified polyhydric alcohol-polybasic acid resin type varnish. The single figure in the accompanying drawing shows a section of the material according to the present invention, the figure being an enlarged view to show more clearly its character. Referring to the drawing, reference numeral 1 designates a fabric base, such as drill or sheeting; 2 the usual coating of rubber applied to the fabric base; 3 a varnish film containing the thin superimposed film of aluminum and 4 a surface film of clear or colored varnish.

The following example is given to illustrate one method of carrying out the present invention:

Example 1.—Automobile top material is made by combining two fabric sheets, such as drill or sheeting, with rubber cement. The combined fabric is then coated with a calendar coat of rub-

ber in the usual manner, which may be embossed if desired, and then varnished with the following composition, parts being given by weight:—

	Parts	
Phthalic anhydride.....	316	5
Glycerol.....	184	
Linseed oil acids.....	500	
Lead linoleate solution in mineral spirits (2.6% lead).....	87	10
Manganese linoleate solution in mineral spirits (0.3% manganese).....	10	
Mineral spirits.....	313	

The varnish formed according to this formula is applied in the usual way and is then sprayed with aluminum. This aluminum is sprayed on by means of well known types of spray guns, preferably the kind which take an aluminum wire, melt it and spray it in the form of a fine mist. This coat of clear varnish is given a complete covering of aluminum and if desired the spraying may be repeated until the desired thickness of film is obtained. The material is dried and the rubber cured simultaneously by heating the product to about 250° F. for about 2½ hours. The product may be used in this condition or if desired, it may be subsequently coated with a clear or colored varnish. The film of aluminum in this case acts as a sealer coat between the rubber coating and the colored coating composition and as such prevents the surface pigment coat from being deteriorated by any ingredients of the rubber coating.

It will be understood that the above example merely illustrates one specific method of carrying out the invention. Any suitable fibrous base material, such as is used for automobile tops can be used in the present invention, and such material may be impregnated with latex, oils, resins, or the like, or even unimpregnated, and also may be coated with a rubber composition or not, as preferred. Single fabric materials may also be used and coated in the same way.

While the above mentioned oil modified polyhydric alcohol-polybasic acid resin is preferred, other varnishes employing natural or synthetic resins may be used.

If the product is used after the aluminum has been sprayed on a very attractive and resistant surface is produced. The aluminum is partially embedded in the vehicle and a surface coat is not altogether necessary. It is also apparent that such a metallic coat will reflect a large percentage of the heat and light rays coming to it,

and thereby keep the automobile much cooler than a black or deep colored varnish.

The material also has the advantage that it prevents ultra-violet light from reaching the rubber coat, which prolongs the life of the rubberized fabric many times that of a similar fabric which is not so treated. A further advantage of the aluminum surface film is that as the film weathers the surface gradually disintegrates and disappears, continually exposing a new, bright, clean surface of aluminum, which is essentially the same in appearance as the original unexposed film. This type of finish is particularly advantageous for trucks transporting foodstuffs or other perishable material where excess of heat is to be avoided, and the interior of an automobile or truck with this new material is very appreciably cooler in summer weather than when the usual black colored material is used.

When the automobile top material of the present invention is subsequently varnished or lacquered with a pigmented coating, the intermediate film of aluminum acts as a sealer coat and prevents oils and other softeners of the rubber composition from migrating to the surface film. This function of the aluminum film prevents the dulling and more or less rapid failure of the pigmented surface film encountered heretofore in attempting to use a pigmented coating composition other than black over the rubber coated top material. The subsequently applied varnish or lacquer shows a durability comparable to that of a similar composition applied to metal or wood.

As many apparently widely different embodiments of this invention may be made without departing from the spirit and scope thereof, it is to be understood that the invention is not limited to the specific embodiments thereof except as defined in the appended claims.

I claim:

1. A material suitable for automobile tops which comprises a fabric base coated with a rubber composition including oil and softener, and superimposed thereon a continuous pliable film of sprayed aluminum which is impervious to the oils and softeners contained in rubber.

2. A material suitable for automobile tops which comprises a fabric base, a rubber composition including oil and softener on the fabric carrying a varnish coat thereon, and a continuous pliable barrier film of sprayed aluminum which is impervious to the oils and softeners contained in rubber adhered to and superimposed on said varnish coat.

3. As an article of manufacture, auto top material comprising a fabric base coated with a rubber composition including oil and softener and superposed thereon a continuous film of aluminum which is impervious to the oils and softeners contained in the rubber, the said aluminum film being in the form and united to the coated fabric base in the manner obtainable by spraying aluminum in discrete particle form on the coated fabric base.

4. Auto top material having a fabric base impregnated and coated with a rubber composition including oil and softener, a coat of varnish and superimposed thereon a continuous film of aluminum which is impervious to the oils and softeners contained in the rubber, the said alu-

minum film being in the form and united to the coated fabric base in the manner obtainable by spraying aluminum in discrete particle form on the coated fabric base.

5. Auto top material having two base fabrics cemented together, a rubber composition coat including oil and softener, a varnish coat thereon, and a coat of aluminum which is continuous and impervious to the oils and softeners contained in the rubber, the said aluminum coat being in the form and united to the coated fabric base in the manner obtainable by spraying aluminum in discrete particle form on the coated fabric base.

6. The process of preparing auto top material which comprises combining two fabric sheets with rubber cement, coating the combined fabrics with a rubber composition including oil and softener, calendering, applying a varnish coat of an oil modified polyhydric alcohol-polybasic acid resin composition, spraying melted aluminum on said varnish coat until a pliable continuous impervious coat of aluminum has been deposited, heating the coated material at 250° F. for 2½ hours and applying a protective surface coat of varnish.

7. A pliable auto top material having a base material comprising two fabric sheets adherently combined, a coating of a rubber composition including oil and softener on the base material, a varnish coat on the rubber composition having a continuous pliable film of metal thereon which is impervious to the oils and softeners contained in the rubber, and a coating of varnish on the metal film, the said metal film being in the form and united to the coated fabric base in the manner obtainable by spraying molten metal in discrete particle form on the coated fabric base.

8. A pliable auto top material having a base material comprising two fabric sheets adherently combined with rubber cement, a coating of a rubber composition including oil and softener on the base material, a varnish coat of an oil modified polyhydric alcohol-polybasic acid resin composition consisting of:

Parts by weight

Phthalic anhydride.....	316
Glycerol	184
Linseed oil acids.....	500
Lead linoleate solution in mineral spirits (2.6% lead)	87
Manganese linoleate solution in mineral spirits (0.3% manganese)	10
Mineral spirits.....	313

on the rubber composition coating, a continuous pliable film of aluminum which is impervious to the oils and softeners contained in the rubber composition superposed on the varnish coat, and a protective surface coat of varnish on the aluminum film, the said aluminum film being in the form and united to the coated base fabric in the manner obtainable by spraying molten aluminum in discrete particle form on the coated fabric base, the various laminae except the final protecting varnish coat being in the form obtainable and united to the conterminous layers in the manner obtainable by heating the base coat aluminum film and intermediate coats at 250° F. for 2½ hours.

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