

May 20, 1947.

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2,420,974

SEAT COVERING

Filed June 8, 1945

Fig. 1.

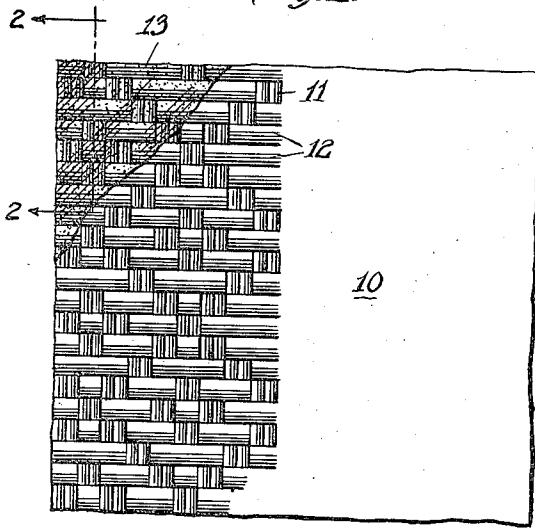


Fig. 2.

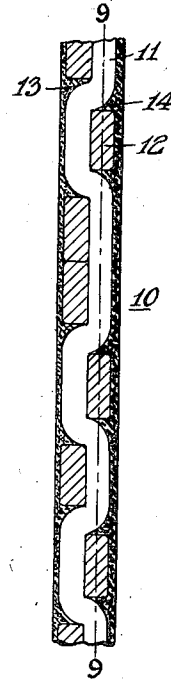
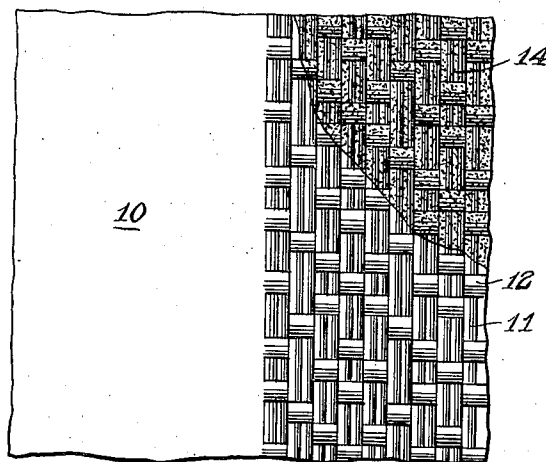


Fig. 3.



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2,420,974

SEAT COVERING

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Application June 8, 1945, Serial No. 598,289

7 Claims. (Cl. 117—68)

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This invention relates to improvements in seat coverings and seat covering materials, and more particularly to the material used to make automobile slip covers.

Summer slip covers for automobiles must be relatively inexpensive, and for that reason are quite generally made from twisted paper fibre strands which may be dyed in different colors, and then woven into a textile fabric. The coloring does not appreciably enhance the appearance of the paper fibres, but on the contrary the coloring is relatively unattractive, being dull and lifeless in eye-appearance. The coloring also has a tendency to fade. These disadvantages tend to impair the salability of slip covers made from such seat covering materials, and this in turn adversely affects the demand for the seat covering material.

Applying a clear lacquer to the woven fabric base imparts a glossy finish to the surface of the fibre strands thus bringing out the colors and protecting them from fading. Lacquer is ordinarily made by dissolving lac, shellac, or the like, in a suitable solvent such as alcohol. The lacquer coating also forms a moisture-repellent washable surface for the fabric base, from which grease and oil can be readily removed.

A fabric woven from twisted paper fibre deteriorates quickly when damp, and while the lacquer coating protects that side of the fabric base to which it is applied, lacquer is relatively expensive, so that the cost of applying a coating of lacquer to both sides of a fabric causes a substantial increase in manufacturing cost over a similar fabric having a coating of lacquer applied to the right side only. This increase in the cost of applying a coating of lacquer to both sides of the fabric is necessarily reflected in a substantial advance in the price of the slip covers made from such a fabric, and as the advantages of such an article are not obvious, they are not appreciated by the ultimate user, hence slip covers made from a fabric lacquered upon both sides are not salable in competition with the relatively cheaper slip covers manufactured from a fabric lacquered upon the right side only.

I have attempted to produce a low cost slip cover material which is moisture-repellent on both sides by submerging the fabric in a liquid waterproofing agent to impregnate the body of the fabric. This waterproofing agent is relatively cheap, and the method of applying the waterproofing agent is relatively inexpensive, hence the use of said agent does not appreciably increase the cost of manufacture. When how-

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ever, the fabric is thus impregnated the unattractive lifeless appearance of the colored twisted paper fibre strands is accentuated, and it is not possible to apply a lacquer coating to bring out the colors, because the waterproofing agent has a deleterious action on lacquer. If lacquer is applied to the surface of the fabric after it has been impregnated with the waterproofing agent, the lacquer coating does not dry but remains soft and tacky, and the lacquer does not adhere as well as when it is applied directly to the fabric in the untreated state. Subjecting the fabric to the waterproofing process after the lacquer has been first applied to one side of the fabric and allowed to dry is equally unsatisfactory, because the waterproofing agent softens the lacquer coating and otherwise impairs the finish.

The object of this invention is a twisted paper fibre seat covering material or fabric which possesses all of the desirable properties and advantages, but eliminates all of the disadvantages, of either a waterproofed, or a lacquered fabric, and which is both commercially and economically practical.

Another object is a fabric which is entirely practical for use as a seat covering material, which has a moisture-repellent underside, and a washable, glossy, highly colored and fade-proof right side, and which can be marketed without any substantial increase in price over a seat covering material having the right side thereof coated with lacquer and the underside untreated.

Another object is an inexpensive textile fabric made of flexible paper fibre useful in the manufacture of slip covers, having one side treated with a relatively inexpensive waterproofing agent in such a manner that no deleterious effect is produced upon a glossy fade-proof moisture-repellent flexible coating applied to the opposite side of the fabric, and without impairing the flexibility thereof.

Other objects will appear from the detailed description which follows:

In the drawings comprising but a single sheet of three figures, numbered Figs. 1 to 3 both inclusive, one embodiment of the invention is illustrated.

Fig. 1 is a view of the top surface or right side of the textile material showing a fragmentary view of the lacquer coating;

Fig. 2 is a vertical cross sectional enlarged view taken along the line 2—2 of Fig. 1 looking in the direction of the arrows; and

Fig. 3 is a view of the reverse side or underside of the textile material or fabric, showing a frag-

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mentary view of the moisture-repellent or water-proof coating.

Like reference characters designate corresponding parts throughout the several figures of the drawing.

After the colored twisted paper fibre strands have been woven into a flexible fabric, and before said fabric is processed as hereinafter described, the woven fabric whose fibre strands remain unchanged physically, may be considered to be (a) receptive to lacquer, in that if lacquer is applied to the fabric it adheres readily and dries quickly, and (b) normally innocuous to lacquer, in that the normal qualities or properties of the lacquer are not adversely affected when the lacquer is applied to the fabric.

A coating of the waterproofing agent 14 is applied with a brush, which may be of the rotary power driven type, to one side only of the material (Fig. 3). The waterproofing agent 14, which is in liquid form penetrates the paper fibres and thus tends to impregnate the fabric. The waterproofing agent 14 is applied in the form of an aqueous solution of aluminum salts in a wax emulsion. One such waterproofing agent which gives good results is distributed by Arnold, Hoffman & Co., Inc., of Providence, R. I. I have found that lacquer will not readily adhere to a fabric which has been impregnated with a waterproofing agent of this type, but that the lacquer fails to dry properly and remains soft and tacky. Impregnating the fabric with this type of waterproofing agent therefore, effectively destroys the lacquer receptive and lacquer innocuous properties of the fabric, or the affinity of the paper fibre for lacquer.

By limiting the penetration of the waterproofing agent 14 to a reasonable depth however, I have found that the underside of the fabric is made moisture-repellent without adversely affecting the lacquer receptive and lacquer innocuous qualities of that portion of the fabric which has not been penetrated by the waterproofing agent 14. The surface of the unimpregnated portion of the fabric is for convenience referred to as the untreated or right side thereof.

Impregnation by the waterproofing agent 14 is accordingly arrested before it penetrates the paper fibre to such a depth as to permit any component of the agent deleterious to lacquer, to impair the affinity for lacquer of the paper fibre forming the surface of the untreated or right side of the fabric. By applying the waterproofing agent 14 to the underside only of the fabric which is thus effectively made moisture-repellent and substantially waterproof upon the side so treated, and then purposely utilizing the interior of the fabric base 10 to protect a substantial zone thereof (such as the zone indicated generally to the left of the broken line 9-9 of Fig. 2) from the deleterious effect produced by said waterproofing agent 14, the lacquer receptive and lacquer innocuous qualities of the untreated portion of the fabric, particularly of the untreated opposite surface thereof, are effectively preserved and remain unimpaired.

After the fabric has been impregnated with the waterproofing agent 14 it is pressed, and dried by heating, without however producing any marked change in eye-appearance in the coloring of the woven paper fibre strands displayed on the underside of the material, and without adversely affecting either the flexibility of the fabric or the lacquer receptive and lacquer innocuous qualities of the right or previously untreated side of

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the fabric. Care should be exercised to regulate the drying temperature, because if the water-proof coating 14 is subjected to too much heat during drying, its moisture-repellent qualities will be substantially impaired.

After the fabric 10 has been thoroughly dried, it is passed through a lacquering machine, and a surfacing coating 13 of clear lacquer is applied to that surface (Fig. 1) of the fabric which was not treated with the waterproofing agent 14. Since this surface remains in its original condition, the said surface is still lacquer receptive and lacquer innocuous, so that the lacquer adheres readily and evenly and dries quickly, thus producing a clear lacquered surface presenting a high gloss finish 13 to the right side of the fabric 10 (Fig. 1) which, in eye-appearance, is in marked contrast to the previously relatively lifeless colors of the twisted paper fibre strands. This high gloss lacquered surface also prevents the colors from fading. The flexibility of the fabric is not impaired by the presence of the coatings 13 and 14, and the fabric may be folded and wrinkled without rupturing or flaking either of the coatings or otherwise impairing their moisture-repellent properties.

The material 10 may be manufactured into flexible slip covers for automobiles and summer furniture, with the glossy lacquered side 13 displayed on the outside. The lacquered surface 13 and the waterproofed underside 14 of the slip cover both repel moisture and dampness thus preventing the base material from absorbing moisture, thereby avoiding deterioration of the twisted paper fibre strands which compose the base material, and prolonging the useful life of the woven material 10 and of the slip covers made therefrom.

By utilizing the body of this relatively cheap but durable lacquer receptive and lacquer innocuous paper-fibre base fabric 10 to effectively separate or insulate the opposite sides thereof into two spaced zones, so that a cheap waterproofing agent 14 may be inexpensively applied in liquid condition to one side of the fabric which may then be pressed and thoroughly dried without impairing either the moisture-repellent properties thereof or the lacquer receptive and lacquer innocuous properties of the untreated zone to the surface whereof a coating of lacquer 13 may thereafter be applied to produce a highly glossy surface which prevents the coloring from fading, a lacquered and water-repellent textile fabric can be produced without in any way impairing the flexibility of the basic material. The material so produced possesses all of the desirable properties and advantages, and eliminates all of the disadvantages, of a similar fabric which is either: lacquered upon one side and untreated upon the other, lacquered upon both sides, or treated upon both sides with a waterproofing agent. This new and improved textile fabric is therefore ideally suited for use in the manufacture of removable slip covers, particularly slip covers for automobiles and summer furniture, because it is both commercially and economically practical; that is, it can be manufactured, used and sold to advantage, in competition with other materials of the same general class but which lack some of the advantages described herein.

It is apparent that other embodiments of this invention will be obvious to those skilled in the art without departing from the spirit and scope thereof; and therefore it is not intended to limit the invention except as indicated in the appended

claims.

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What is claimed is:

1. A slip cover material comprising a flexible base of interwoven paper fibre strands, the paper fibre normally having an affinity for lacquer, said base being separated into two zones, each zone including its adjoining surface, the surface of one of said zones being impregnated with a relatively inexpensive waterproofing agent containing a water soluble aluminum salt and wax, said agent forming a dry, transparent, moisture-repellent flexible coating, which does not visibly enhance the color of the paper fibre, upon the impregnated surface, the fibre of the other zone and of its purposely untreated surface retaining an affinity for lacquer, and a coating of lacquer comprising shellac applied to the surface of said untreated zone to form a transparent, glossy, washable, dry, flexible coating which enhances the lustre of the fibres and prevents fading thereof.

2. A slip cover material comprising variously colored strands of paper fibre interwoven to form a flexible fabric base, the paper fibre normally having an affinity for lacquer, said base being separated into two zones, each zone including its adjoining surface, the surface of one of said zones being impregnated with a relatively inexpensive waterproofing agent containing a water soluble aluminum salt and wax, said agent forming a dry, transparent, moisture-repellent flexible coating, which does not visibly enhance the color of the paper fibre, upon the impregnated surface, the fibre of the other zone and of its purposely untreated surface retaining an affinity for lacquer comprising shellac, and a coating of lacquer applied to the surface of said untreated zone to form a transparent, glossy, washable, dry, flexible coating which permanently enhances the lustre of the paper fibre strands.

3. A flexible slip cover material composed of interwoven strands of twisted paper fibre, said fibres being normally innocuous to lacquer, an inexpensive waterproofing agent comprising a water soluble aluminum salt and wax applied to one side only of said fabric and penetrating the paper fibre, said agent forming a dry moisture-repellent coating which does not adversely affect the appearance of the fibre strands or the flexibility of the material, the depth of penetration of said agent being insufficient to impair the lacquer innocuous qualities of the opposite surface of the fabric, and a coating of lacquer comprising shellac applied to the opposite uncoated surface of said fabric.

4. A slip cover material comprising colored strands of lacquer receptive and lacquer innocuous twisted paper fibre interwoven to form a cheap flexible fabric base, a coating of lacquer comprising shellac applied to one side of said base to produce a transparent glossy washable dry surface which enhances the coloring of the fibres and prevents fading thereof, and a coating of a water soluble aluminum salt and wax applied

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to the opposite side of said base in spaced relation to said lacquer coating to prevent said coating from deleteriously affecting the lacquer.

5. A slip cover material comprising variously colored strands of lacquer receptive and lacquer innocuous twisted paper fibre interwoven to form a cheap flexible fabric base, said base being treated on one side only with an agent containing a water soluble aluminum salt and wax forming a moisture-repellent dry coating which does not enhance the eye-appearance of the paper fibres or impair their flexibility but which effectively impairs their lacquer-receptive-innocuous qualities, the depth of penetration of the paper fibres by said waterproofing agent being purposely arrested in spaced relation to the opposite untreated surface of the fabric base so that the fibres upon said untreated surface retain their lacquer-receptive-innocuous qualities, and a coating of shellac applied to said untreated surface to produce a transparent glossy washable dry flexible surface which permanently enhances the color of the paper fibre strands.

6. A flexible textile material comprising interwoven strands of twisted paper having unimpregnated fibres at the interior of said strands, a moisture-repellent, dry, transparent coating of an agent comprising a water soluble aluminum salt and wax on one side of the material, said coating being flexible with the material, and a moisture-repellent, dry, transparent, glossy, washable coating comprising shellac on the other side of the material which is also flexible with the material and which enhances and permanently preserves the lustre of the so-coated fibres.

7. A textile material comprising colored paper twisted into strands of different colors, said strands being interwoven to form a flexible fabric having unimpregnated fibres at the interior of said strands, a moisture-repellent, dry, transparent coating of an agent comprising a water soluble aluminum salt and wax on one side of the material, said coating being flexible with the fabric, and a moisture-repellent, dry, transparent, glossy, washable coating comprising shellac on the other side of the material, said coating being also flexible with the fabric and enhancing the lustre and permanently preserving the color of the so-coated fibres.

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