

ALIEN PROPERTY CUSTODIAN

COVERING FOR AIR-PLANES

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This invention relates to a process of covering air-planes and air-plane parts.

The air-plane canvas which has hitherto been used in the aircraft industry is made of linen because of its comparatively high resistance to tearing. A disadvantage of it is its sensitivity to water, which has to be remedied by careful and tedious lacquering and care has to be taken to produce a smooth aero-dynamically favorable surface by a special tensioning process involving in some cases repeated lacquering.

It is therefore an object of the present invention to provide an improved and simple process for producing air-plane coverings insensitive to water.

A further object resides in the provision of air-plane parts which possess a tightly fitting and water-proof covering.

Still further objects will appear from the following detailed specification.

We have found that the aforementioned objects may be achieved by making the covering from a fabric which consists of polyvinyl chloride produced as described in U. S. Patent No. 1,982,765. The mechanical and chemical properties of such polyvinyl chloride have been described in said specification, especially its fastness to water. A fabric made from this polyvinyl chloride has a resistance to tearing which is sufficiently high for the usual requirements. A further advantage which is of special importance for the purpose in question is that this material may be strongly

tensioned by a simple short treatment at 135° C., for example for 2 minutes. The material may alternatively be tensioned by cautious treatment with a suitable volatile solvent or mixture of solvents. Furthermore, by a single or multiple lacquering with a lacquer of the same material a completely smooth surface is obtained which, even if, before being coated, the fabric is loose, ensures that it will be under high tension after drying. The several treatments just named may be combined by application either simultaneously or in succession.

For strengthening a fabric of polyvinyl chloride it may be laminated with a sheet of the same or similar material of any desired thickness, and so also another kind of fabric may be stuck to it in any suitable manner so as to reinforce it in desired degree in respect of mechanical or other properties, for instance waterproof character, incombustibility, high resistance to rupture and the like. To increase the stability to light, particularly to ultra-violet radiation and to heat rays, a polyvinyl chloride fabric or the covering lacquer may be incorporated with a material which by suitable absorption of the rays in question lends the required protection.

The application of the fabric to the supporting structure of the air-plane body may be carried out in the usual manner.

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