

[54] **COATING INSULATING MATERIALS BY GLOW DISCHARGE**

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[57] **ABSTRACT**

Coatings of hard carbon, silicon, or germanium are applied to electrically insulating materials in a D.C. glow discharge chamber. Initiation and maintenance of a glow discharge is ensured by using a cathode of larger area than the material to be coated. For example the cathode may be twice the diameter of the material to be coated. Materials capable of being coated include zinc sulphide, zinc selenide, silica, and glass. The gases used are hydrocarbon e.g. butane, methane, etc. for carbon coatings; silane for silicon coatings; and germane for germanium coatings.

25 Claims, 2 Drawing Figures

