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**Shipman**

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(54) **PRODUCTION OF SMOOTH SUPPORTING SURFACES FOR DATA BEARING FILMS**

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(57) **ABSTRACT**

**Related U.S. Application Data**

(63) Continuation-in-part of application No. 08/129,343, filed on Sep. 30, 1993, now abandoned.

(51) **Int. Cl.<sup>7</sup>** ..... **B32B 3/02**

(52) **U.S. Cl.** ..... **428/64.2**; 427/264; 427/265; 427/266; 427/269; 427/270; 427/271; 427/287; 427/388.1; 427/389.7; 427/407.2; 427/409; 427/412.1; 427/435; 427/443.2; 427/510; 427/512; 427/558; 427/559; 427/595; 428/414

(58) **Field of Search** ..... 427/510, 559, 427/512, 595, 558, 264, 265, 266, 269–271, 287, 388.1, 389.7, 407.2, 409, 412.1, 435, 443.2, 64.2, 414

Master discs and similar devices used in the production of digital data storage and recording discs and the like are produced with a substrate member which is provided with a layer of material which is applied to the substrate member in liquid form of a thickness greater than the surface roughness of the substrate member and of a thickness greater than any particulates present on the substrate member. The material layer is preferably a polymer such as epoxy, acrylic or styrene and is hardenable by exposure to UV light, heat, air circulation or catalytic reaction to provide a substantially smooth flat surface for receiving a data bearing film. The film may be treated to generate bumps or pits representing digital signals, for example, which are free of any defects resulting from surface roughness or contamination of the substrate member. The substrate member may be more easily cleaned and reused without concern for its surface condition thereby reducing costs associated with manufacturing large quantities of digital data recording and storage devices.

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**18 Claims, 2 Drawing Sheets**

