



US005766354A

United States Patent [19][11] **Patent Number:** **5,766,354****Ohmori et al.**[45] **Date of Patent:** **Jun. 16, 1998**[54] **SPIN-COATING DEVICE**

[56]

References Cited

[75] **Inventors:** **Kazunori Ohmori; Kazuhiko Nagata;**
Hiroyuki Kosaka; Goroku Kitta;
Kazumi Kuriyama, all of Yamanashi,
Japan

U.S. PATENT DOCUMENTS

4,822,639 4/1989 Fujii et al. 118/52
5,095,848 3/1992 Ikeno 118/52

[73] **Assignees:** **Pioneer Electronic Corporation;**
Pioneer Video Corporation, both of
Japan

Primary Examiner—Laura Edwards
Assistant Examiner—Calvin Padgett
Attorney, Agent, or Firm—Fish & Richardson P.C.

[57]

ABSTRACT[21] **Appl. No.:** **766,591**[22] **Filed:** **Dec. 12, 1996**[30] **Foreign Application Priority Data**

Dec. 22, 1995 [JP] Japan 7-350109

[51] **Int. Cl.⁶** **B05B 13/02; B05B 3/00**[52] **U.S. Cl.** **118/319; 118/52; 134/153**[58] **Field of Search** 118/52, 319, 320;
134/902, 153; 269/21; 427/240; 438/782,
758; 15/302

A spin-coating device comprises; a turntable for concentrically supporting a substrate; a spindle motor for rotating the turntable about a central axis thereof and connected via a rotating shaft thereto; a supply mechanism for feeding and dripping a fluid coating material onto the substrate; and a holding mechanism for maintaining that the central axis of rotation of the turntable carrying the substrate is placed to be inclined at a predetermined angle with respect to a gravitational direction while the fluid coating material is dripped onto the rotating substrate.

4 Claims, 5 Drawing Sheets