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# United States Patent [19]

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[54] **SPIN COATING APPARATUS**

[75] Inventors: **Haruo Amada, Kamisato; Akihiro Kojima; Hiroshi Kagohashi**, both of Kasugai; **Atsuyuki Sakai; Katsumasa Shimura**, both of Nagoya; **Hisamitsu Maekawa, Kasugai**, all of Japan

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[73] Assignees: **Hitachi, Ltd., Tokyo; CKD Corporation, Komaki**, both of Japan

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[51] Int. Cl.<sup>5</sup> ..... **B05C 5/00; B05C 11/02; B05C 11/10**

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[58] Field of Search ..... **118/683, 688, 695, 696, 118/697, 52, 712, 320; 222/571, 52, 63, 71, 148, 334, 146.1; 417/63, 393, 395; 92/103 R, 103 M; 239/71; 73/40, 40.5 R**

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Primary Examiner—W. Gary Jones  
 Assistant Examiner—Todd J. Burns  
 Attorney, Agent, or Firm—Antonelli, Terry, Stout & Kraus

### [57] ABSTRACT

The present invention relates to a spin coating apparatus for feeding a clean liquid at a fixed rate. In any of the feeding apparatus in the prior art, no constituent other than a filter has the function of eliminating foreign matter, and the operation of feeding a liquid under precise control is not attained. This results in the problem of the mixing of the foreign matter (and air bubbles) in the feed liquid, and the problem of nonuniformity in a feed speed as well as a feed amount. As expedients for solving these problems, the present invention provides the functions of automatically sensing and excluding factors for the appearances of the foreign matters, and devices for automatically and precisely controlling feed control elements such as a pump, thereby feeding the clean liquid in a constant amount and at a constant speed.

23 Claims, 12 Drawing Sheets

