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United States Patent [19] de Caussin

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- [54] **APPARATUS AND METHOD FOR HYDRAULICALLY FED CUTTINGS REMOVAL AND COLLECTION FOR CUTTING TYPE MACHINE TOOLS**
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[57] ABSTRACT

An apparatus and method for the hydraulic removal and collection of cuttings from machine tool systems. The present invention provides a cutting removal and collection system comprising a housing at least partially enclosing a machine tool and a plurality of trays at the bottom of the housing for collecting the cuttings as they fall from the machine tool. Jets of fluid, such as a liquid coolant, are used to direct the cuttings along the trays and into a rotating drum. The drum has a hollow annular structure with fins disposed in an axial direction along its interior. The drum also has a perforated surface for allowing drainage of the fluid off of said cuttings and back into a tank positioned below the rotating drum. As the drum rotates, the fins carry the cuttings in the circumferential direction of rotation. Once the cuttings are carried to a certain height, gravity causes the cuttings to fall onto a drop tray positioned along a horizontal chord of the rotating drum. The cuttings then slide off or are pushed off the drop tray into a collection drum.

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26 Claims, 4 Drawing Sheets

