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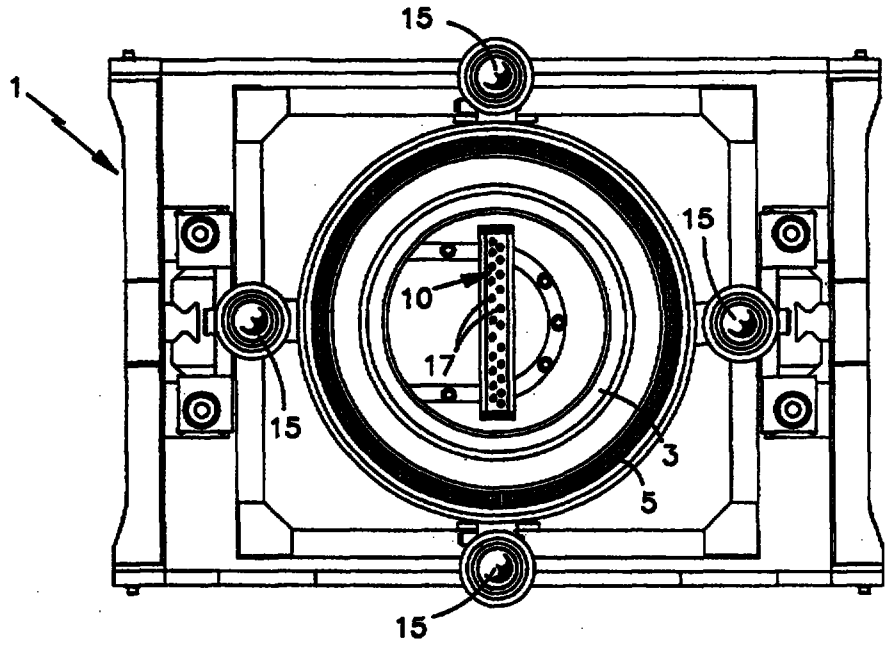
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(57) Abstract

A stripping system employing an end-effector with a nozzle and at least one brush circumferentially disposed around that nozzle, and a vacuum device for creating a vacuum between the nozzle and the brush, can remove substances from a substrate with such complete effluent recovery so as to prevent flash rusting of the substrate. The nozzle has orifices, bores, and a plenum chamber such that the plenum chamber is sufficiently large to maintain the desired pressure and amount of liquid to the orifices, the bores have a sufficient length to orient the liquid flowing therethrough in a laminar flow upon reaching the orifices, and the orifices are sized and oriented on the nozzle face in order to produce an even energy profile when the liquid strikes the substrate. The brush has sufficient tuft density and bristle stiffness to allow make-up air into the vacuum while preventing the escape of effluent.