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(54) Title: ELECTROSTATIC SPRAY DRYING NOZZLE ASSEMBLY

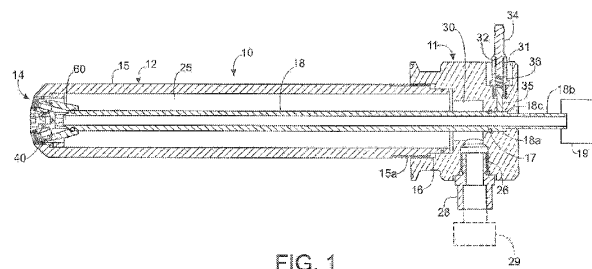


FIG. 1

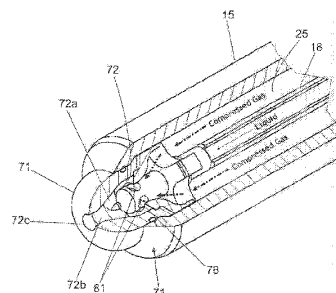


FIG. 10

(57) Abstract: An electrostatic sprayer (10, 70) operable at high flow rates and low pressures particularly suitable for spray drying. The sprayer (10, 70) includes an elongated body (12) having a downstream spray nozzle assembly (14, 71) through which electrically charged liquid is directed via a central feed tube (18) within the nozzle body (12) and atomizing air is supplied via an annular passage (25) about the liquid feed tube (18). In one embodiment, the nozzle assembly is an external mix cluster head spray nozzle assembly (14) having a plurality of circumferentially spaced metallic spray tips (40). In another embodiment, the spray nozzle is an internal mix nozzle assembly *71) having a spray tip (71) with an internal mixing chamber (72a) for atomizing liquid prior to discharge.

[Continued on next page]

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