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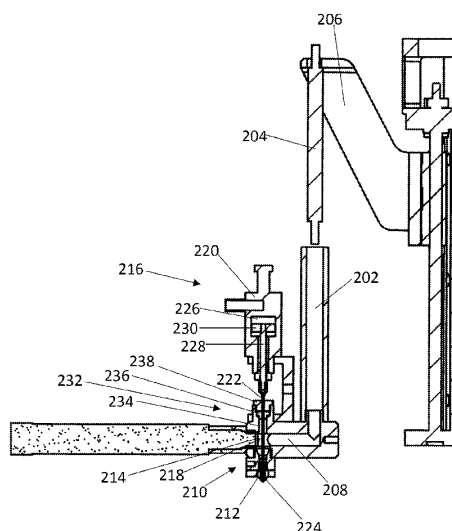


FIG. 2A

(57) **Abstract:** Provided herein are devices and systems for depositing a material or manufacturing a product, such as a pharmaceutical dosage form, by additive manufacturing. Further provided are methods of using the devices and systems, as well as methods of manufacturing a product, such as a pharmaceutical dosage form, by additive manufacturing. In certain embodiments, the device includes a material supply system (102) configured to melt and pressurize a material, a pressure sensor (214) configured to detect the pressure of the material within the device, and a control switch (216) comprising a sealing needle (218) operable in an open position and a closed position. The sealing needle (218) extends through a feed channel (208) containing the material and includes a tapered end (224), wherein the tapered end (224) of the sealing needle (218) engages a tapered inner surface of a nozzle (212) to inhibit flow of the material through the nozzle (212) when the sealing needle (218) is in the closed position.

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