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(54) Title: PRINTING SYSTEM ASSEMBLIES AND METHODS

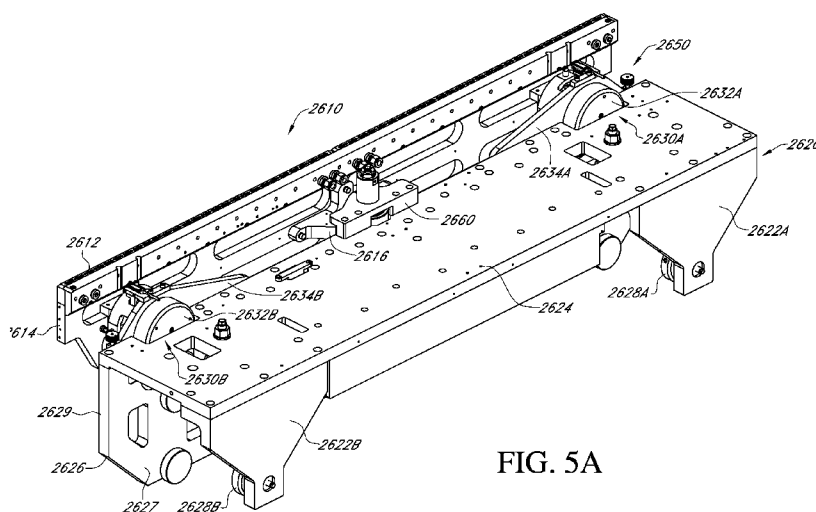


FIG. 5A

(57) Abstract: The present teachings disclose various embodiments of a printing system for printing a substrate, in which the printing system can be housed in a gas enclosure, where the environment within the enclosure can be maintained as a controlled printing environment. A controlled environment of the present teachings can include control of the type of gas environment within the gas enclosure, the size and level particulate matter within the enclosure, control of the temperature within the enclosure and control of lighting. Various embodiments of a printing system of the present teachings can include a Y-axis motion system and a Z-axis moving plate that are configured to substantially decrease excess thermal load within the enclosure by, for example, eliminating or substantially minimizing the use of conventional electric motors.



WO 2015/195493 A8



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