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(54) **Title**: A DRY POWDER INHALATION SYSTEM

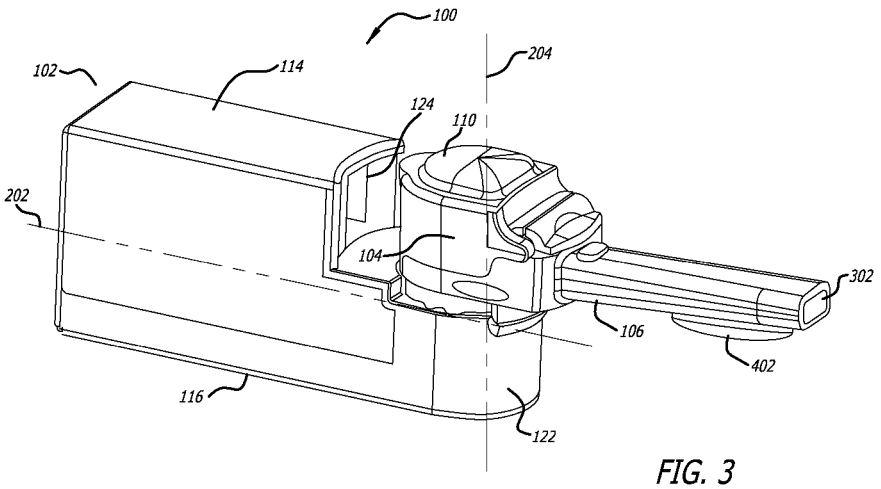


FIG. 3

(57) **Abstract**: Dry powder inhaler systems for pulmonary delivery of pharmaceuticals are disclosed. The dry powder inhalation systems comprise a dry powder inhalation device or inhaler (109) and a cartridge (1600) containing a pharmaceutical formulation comprising an active ingredient for delivery to the pulmonary circulation. The present devices provide rugged devices which are reusable, use pre-metered unit dose cartridges which deliver a medicament in a liner manner, and can be disassembled for cleaning. The devices also provide a high resistance inhalation system which enables deagglomeration of dry powder particles, have a consistent airflow, are easy to manufacture and are simple and relatively easy to use.

WO 2009/121020 A1