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(54) Title: A DRY POWDER INHALER AND SYSTEM FOR DRUG DELIVERY

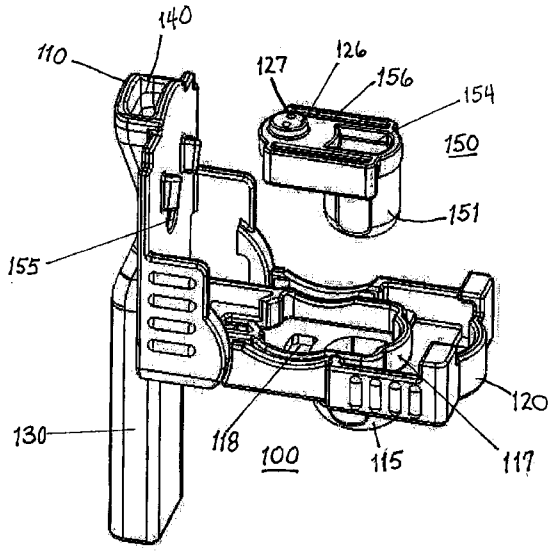


FIG. 4B

(57) Abstract: A breath-powered, dry powder inhaler (100), a cartridge (150), and a pulmonary- drug delivery system are provided. The dry powder inhaler (100) can be provided with or without a unit dose cartridge (150) for using with the inhaler (100). The inhaler (100) and/or cartridge (150) can be provided with a drug delivery formulation comprising, for example, a diketopiperazine and an active ingredient, including, peptides and proteins such as insulin and glucagon-like peptide 1 for the treatment of diabetes and/or obesity. The dry powder inhaler (100) is compact; can be provided in various shapes and sizes, colors, and comprises a housing (120), a mouthpiece (130), a cartridge placement area, and a mechanism for opening and closing the medicament cartridge. The device is easy to manufacture, provides a pre-metered single unit dose, it is relatively easy to use, and can be reusable or disposable.

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