

US011464923B2

# (12) United States Patent Liu et al.

# (10) Patent No.: US 11,464,923 B2

(45) **Date of Patent:** Oct. 11, 2022

## (54) INHALER SYSTEM

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(\*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 16/906,896

(22) Filed: Jun. 19, 2020

#### (65) Prior Publication Data

US 2021/0393893 A1 Dec. 23, 2021

(51) **Int. Cl.** 

**A61M 15/00** (2006.01) **A61M 11/02** (2006.01)

(Continued)

(52) U.S. Cl.

CPC ...... *A61M 15/0001* (2014.02); *A61B 5/0871* (2013.01); *A61B 5/4833* (2013.01); (Continued)

(58) Field of Classification Search

CPC ........ A61M 15/0001; A61M 15/0026; A61M 15/009; A61M 2202/064;

(Continued)

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## (57) ABSTRACT

Provided is a system including a plurality of inhalers that each include a processor configured to determine a value of a usage parameter relating to use of the respective first inhaler, encrypt data based on the value, and transmit the encrypted data. At least two of the inhalers include different medicament, such as a rescue medicament and a maintenance medicament. The system includes an external device that includes a processor configured to distinguish between the encrypted data of each respective inhaler, determine respective usage information relating to each of the distinct types of medicament based on the respective encrypted data, and control a user interface (e.g., of the external device) to communicate the usage information related to each inhaler and/or each respective type of medicament.

# 20 Claims, 12 Drawing Sheets

