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(12) **United States Patent**
Herzog

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(54) **DISPENSER ASSEMBLY**

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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.

WO WO 00/12403 A1 3/2000

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(21) Appl. No.: **10/971,516**

Primary Examiner—Kevin P Shaver

Assistant Examiner—Stephanie E Tyler

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(74) *Attorney, Agent, or Firm*—Ostrolenk, Faber, Gerb &
Soffen, LLP

(65) **Prior Publication Data**

(57) **ABSTRACT**

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(51) **Int. Cl.**

B65D 88/54 (2006.01)

B67D 5/40 (2006.01)

(52) **U.S. Cl.** **222/321.7**; 222/382; 222/464.1

(58) **Field of Classification Search** ... 222/321.1–321.9,
222/464.1–464.7, 378–383.1, 211, 136, 207,
222/137; 239/305, 308

See application file for complete search history.

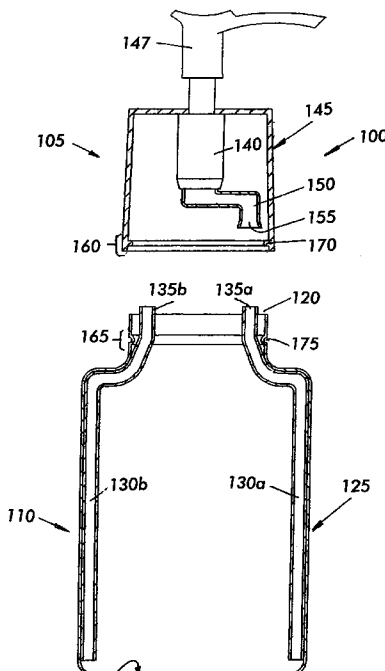
A dispenser assembly is provided. The dispenser assembly includes a container having a bottom, an open top and a side wall extending between the bottom and the open top, and a mating arrangement, the side wall having an inner surface; at least one container passageway mounted on the inner surface of the side wall and extending from the open top of the container to a position proximate to the bottom of the container; and a pump cap having a cap body, a pump mechanism arranged within the cap body, a pump cap passageway coupled to the pump mechanism, and a coupling arrangement arranged on the pump cap body and configured to detachably couple to the mating arrangement of the container such that the container passageway aligns with and sealingly engages the pump cap passageway in a fluid connection when the pump cap is mounted to the container. In this manner, the dispenser permits a fluid arranged within the container to flow through the container passageway and the pump cap passageway when the pump mechanism of the pump cap is activated.

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19 Claims, 6 Drawing Sheets



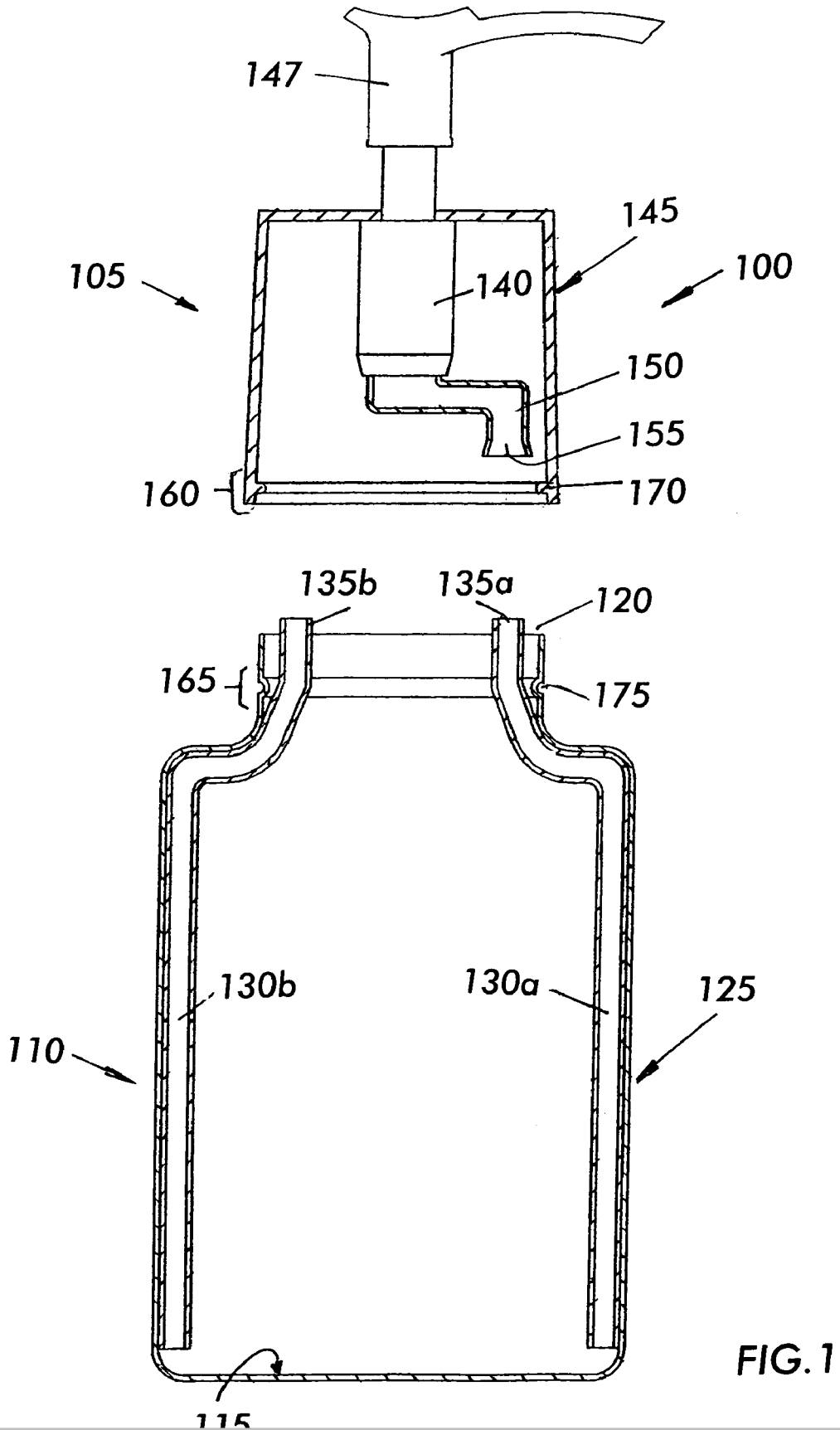


FIG. 1

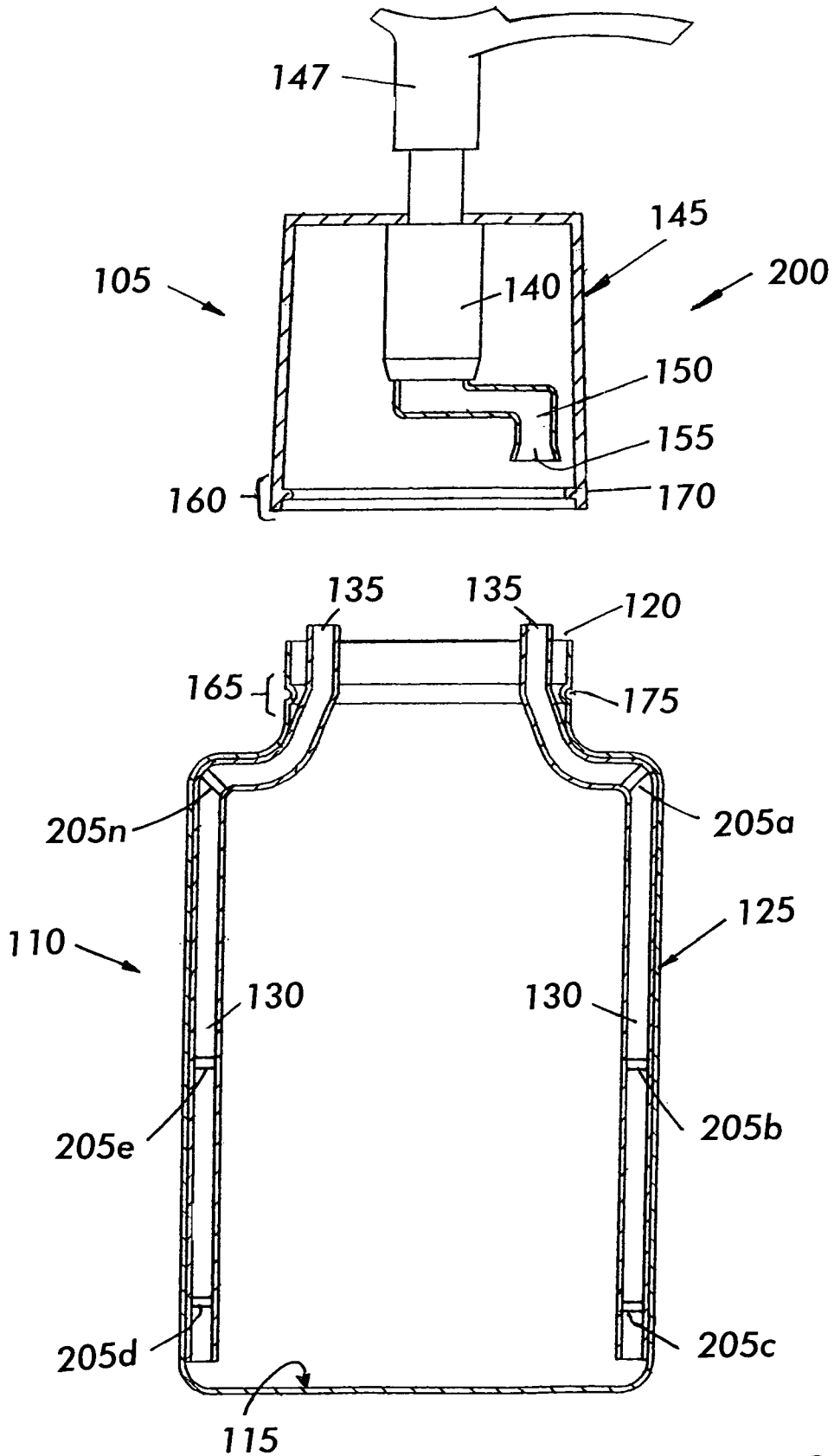


FIG. 2

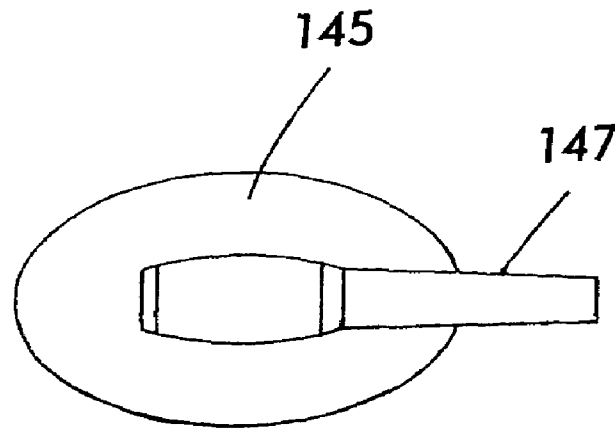


FIG. 3A

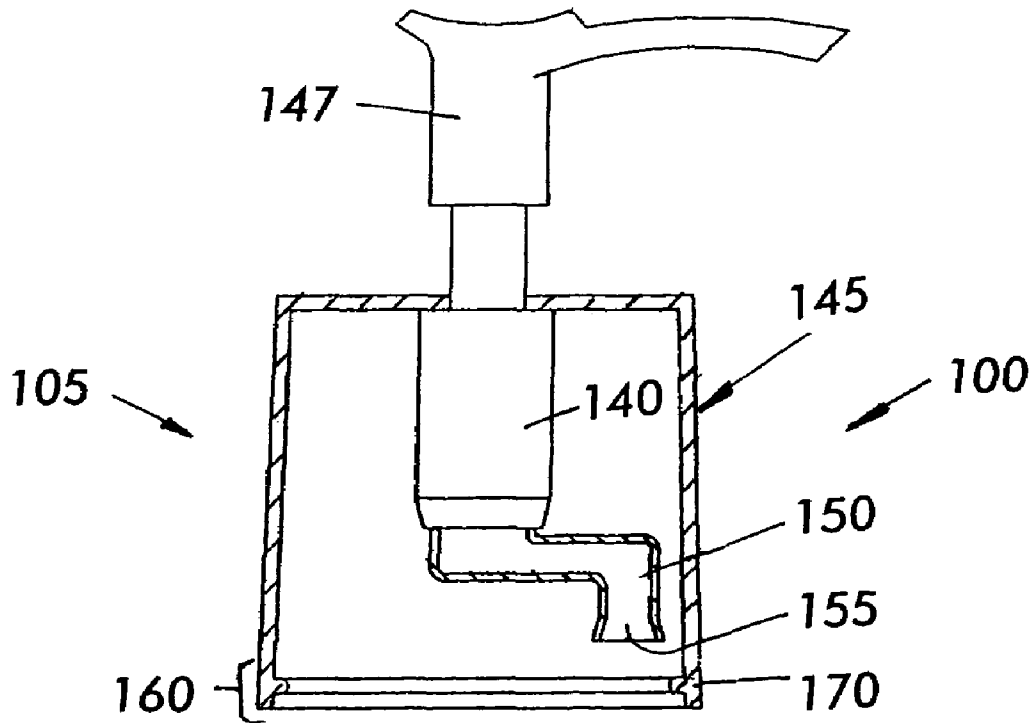


FIG. 3B

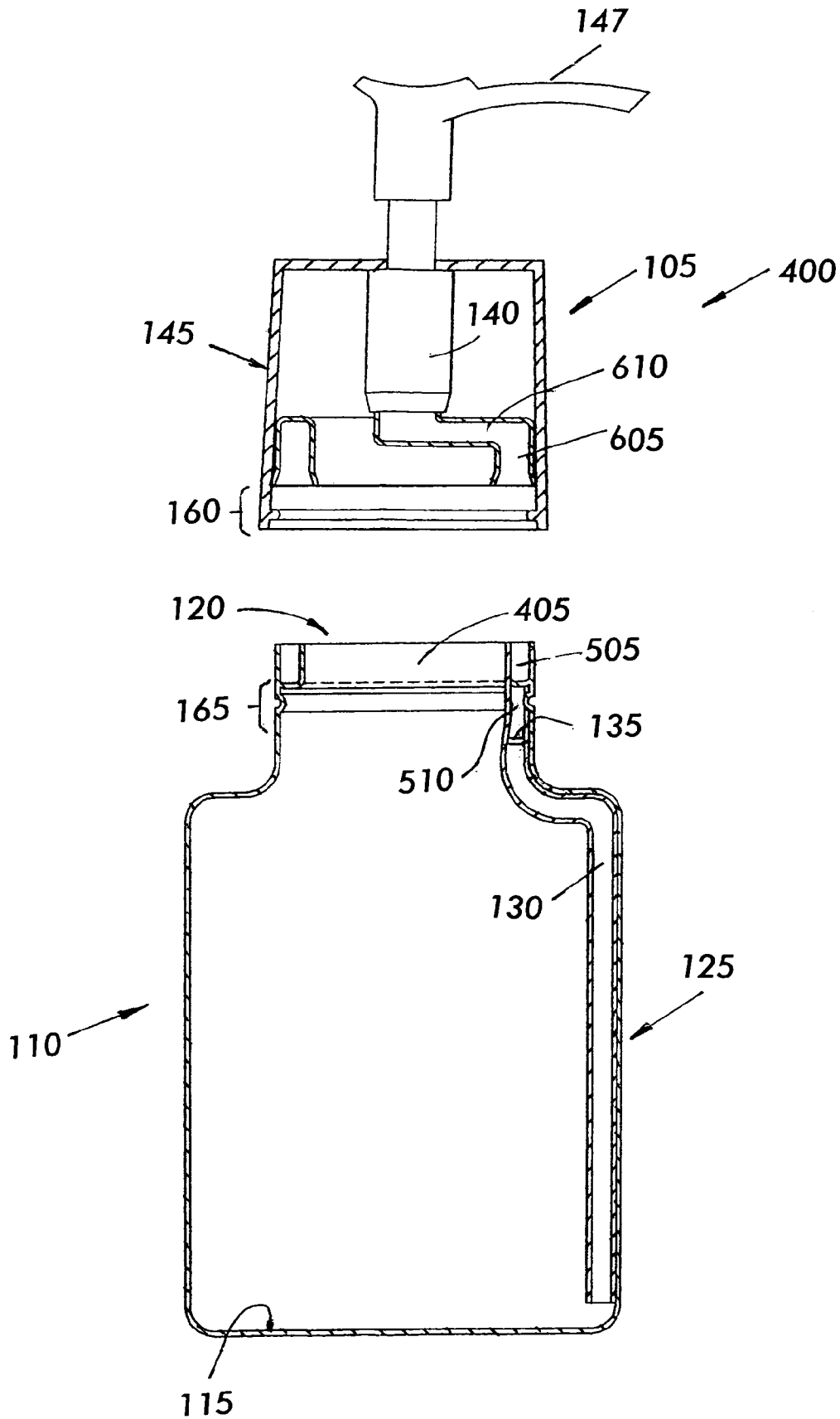


FIG. 4

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