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United States Patent [19]

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Matsuoka et al.

[45] Date of Patent: **May 11, 1999**

[54] **DEVELOPING AGENT REPLENISHING APPARATUS AND CARTRIDGE**

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[73] Assignee: **Konica Corporation**, Tokyo, Japan

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[21] Appl. No.: **08/902,898**

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[22] Filed: **Jul. 30, 1997**

[30] Foreign Application Priority Data

Aug. 7, 1996	[JP]	Japan	8-208287
Aug. 21, 1996	[JP]	Japan	8-219810

[51] **Int. Cl.⁶** **G03G 15/08**

[52] **U.S. Cl.** **399/258; 399/262; 222/DIG. 1**

[58] **Field of Search** 399/258, 262, 399/263; 222/DIG. 1, 444, 449, 518, 633, 549, 559; 220/348, 350, 380

Primary Examiner—Robert Beatty
Attorney, Agent, or Firm—Frishauf, Holtz, Goodman, Langer & Chick

[57] ABSTRACT

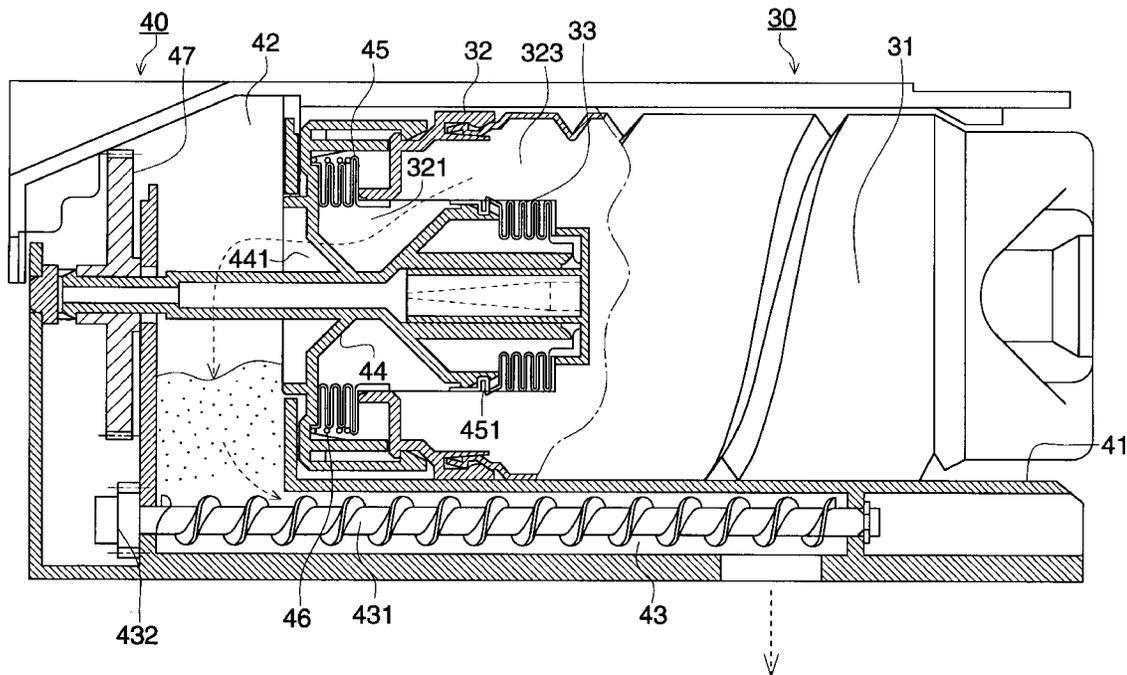
A developing agent replenishing apparatus includes a developing agent receiving port for receiving a developing agent from a replenishment cartridge which stores developing agent when the cartridge is mounted and a conveyor for conveying the developing agent received in the receiving port to a developing device. The developer agent receiving port has a receiving opening and the replenishment cartridge has a replenishment opening. Cylindrical expandable covers are provided at the receiving and replenishment openings for opening or closing these openings.

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39 Claims, 19 Drawing Sheets



GPI EXHIBIT 1009
GENERAL PLASTIC v. CANON
IPR2016-01360

FIG. 1

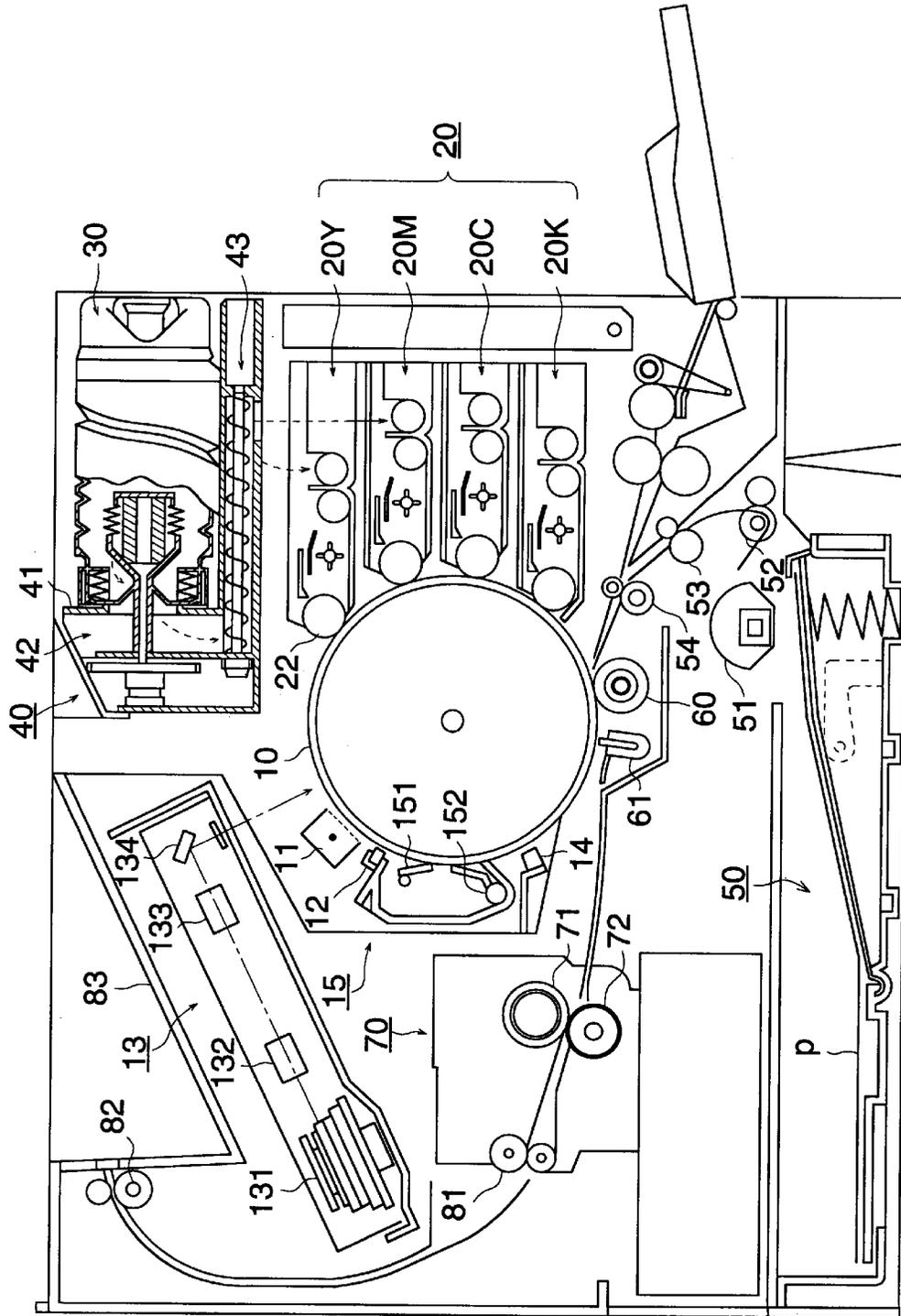


FIG. 2

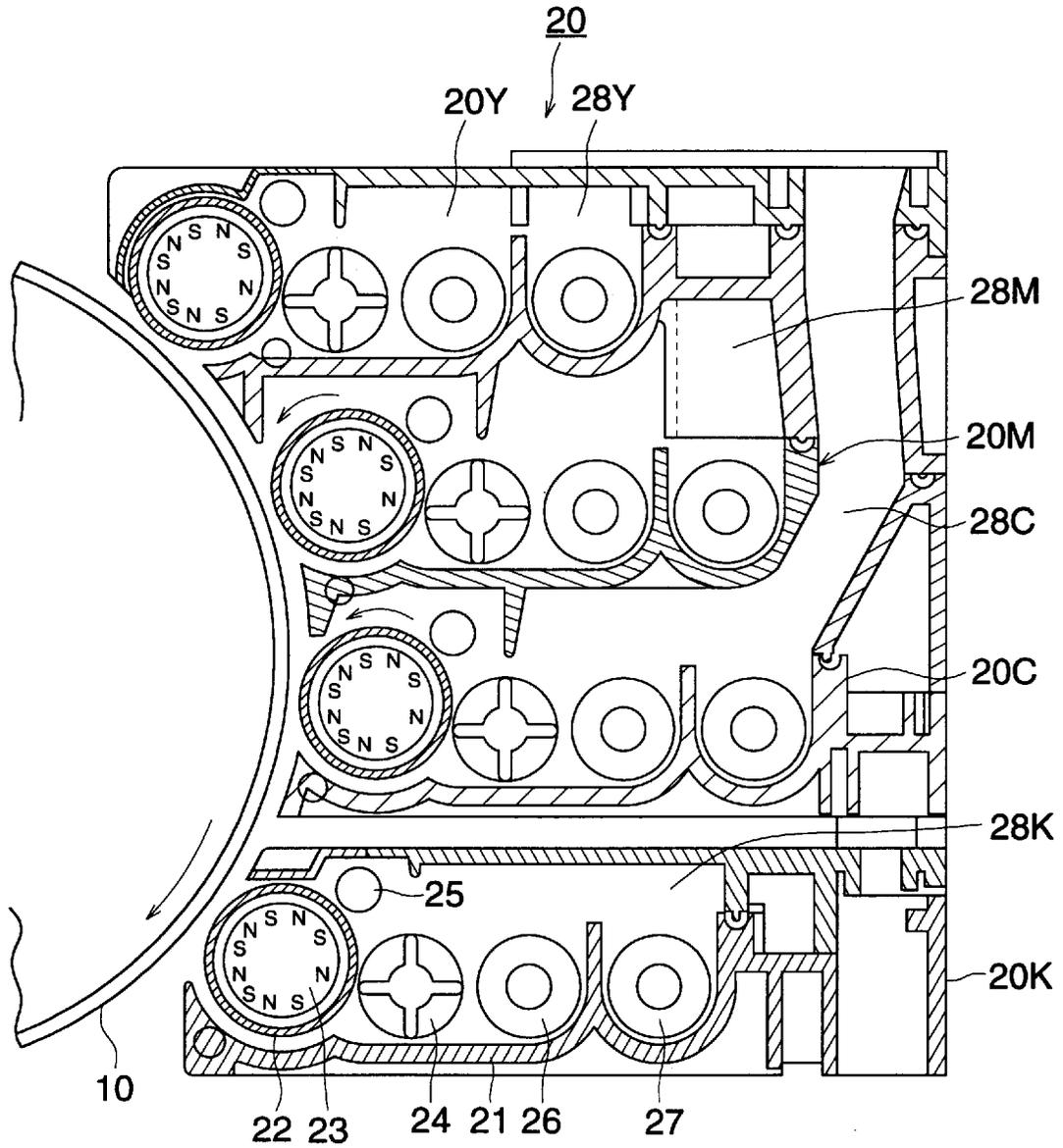
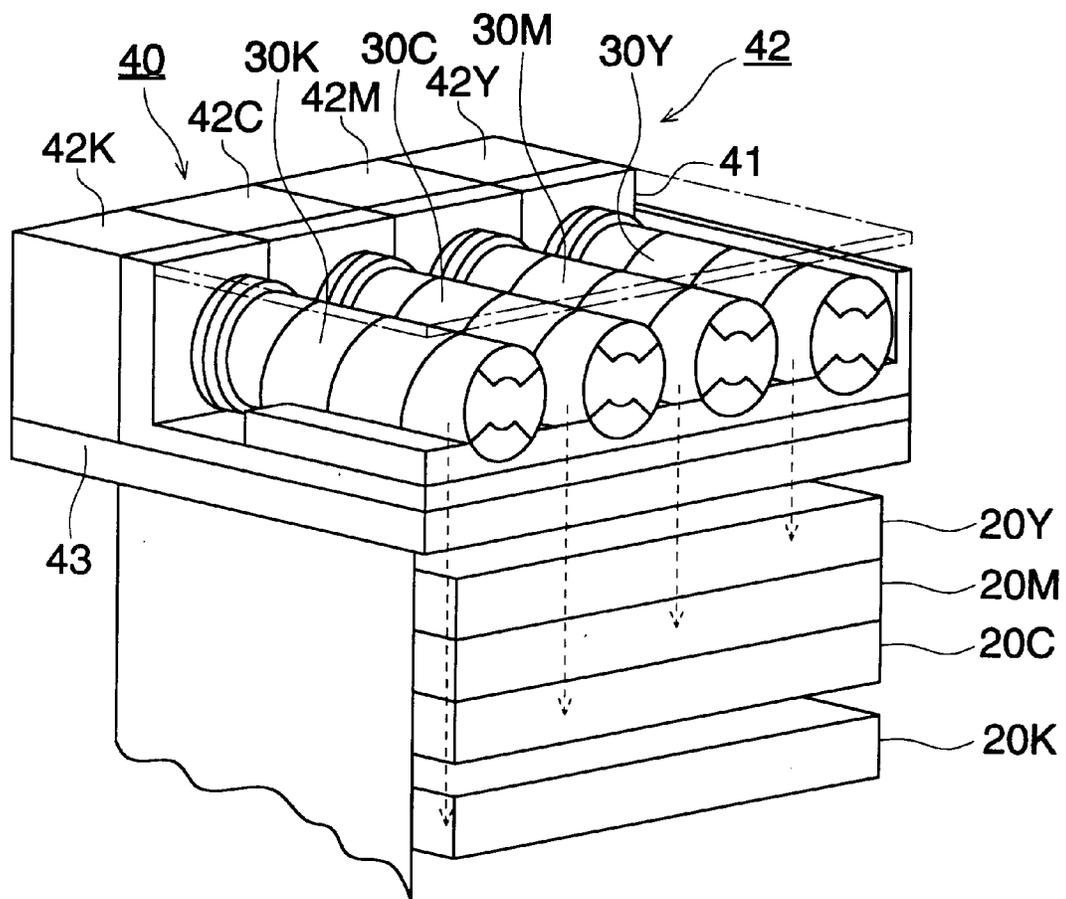


FIG. 3



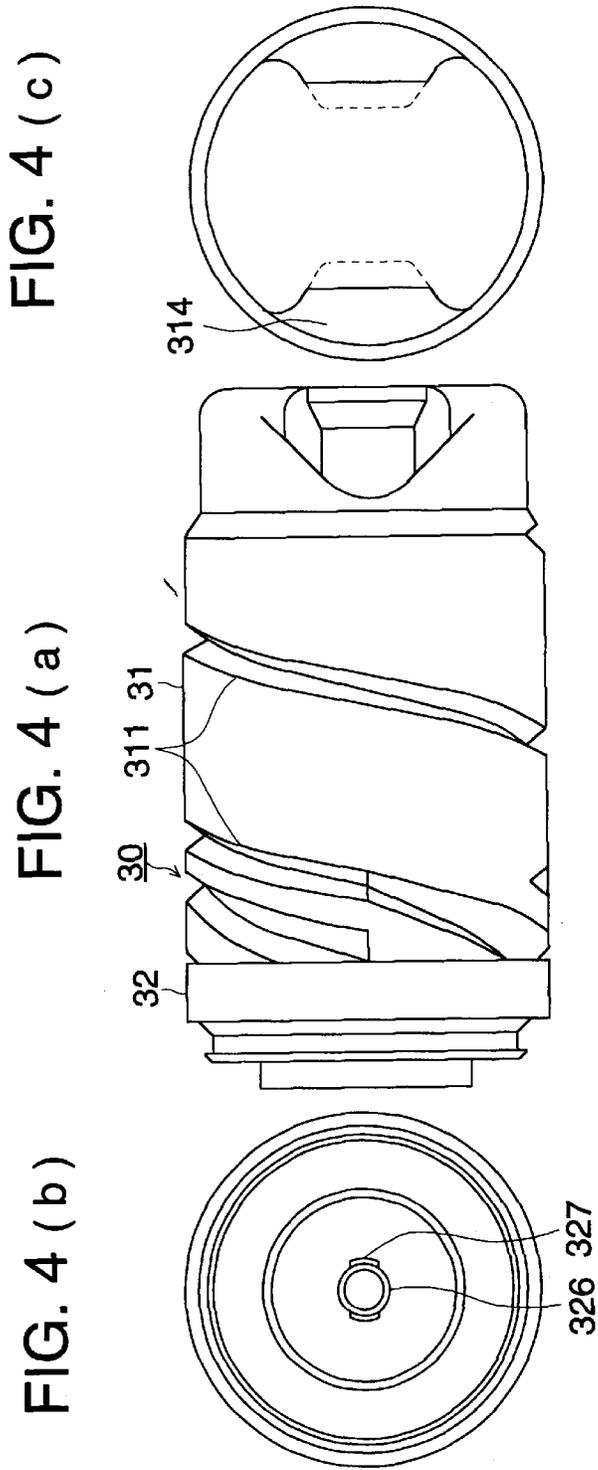


FIG. 4 (c)

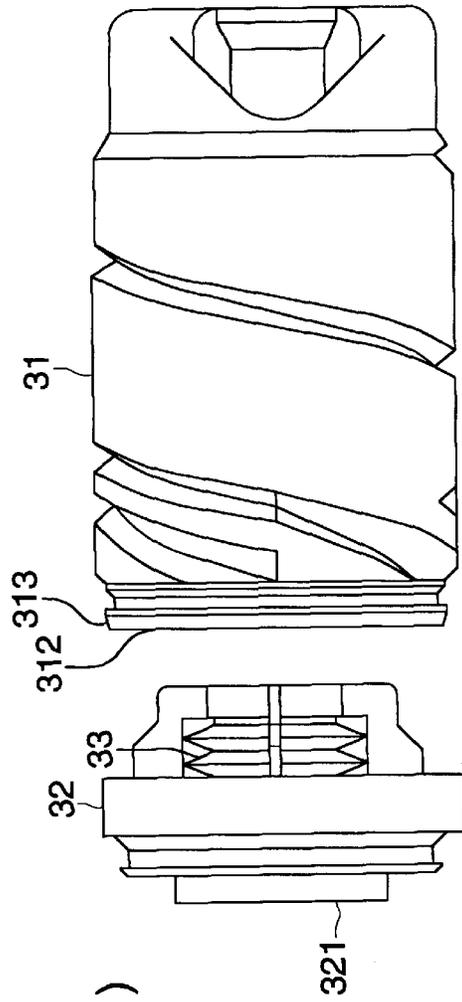
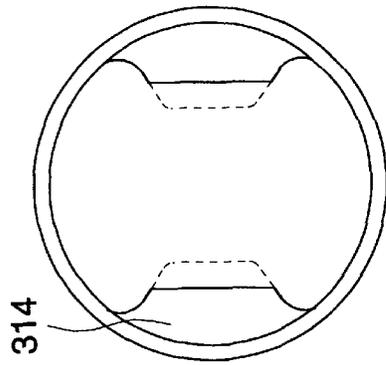


FIG. 4 (d)

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