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Matsuoka et al.

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

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

5,481,344	1/1996	Yasuda et al.	399/120
5,495,323	2/1996	Meetze, Jr. .	
5,500,719	3/1996	Ichikawa et al.	399/238
5,557,382	9/1996	Tatsumi et al.	399/262
5,589,919	12/1996	Ikunami et al. .	
5,620,434	4/1997	Brony	604/406
5,765,079	6/1998	Yoshiki et al.	399/258

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

FOREIGN PATENT DOCUMENTS

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

0604999 A2	7/1994	European Pat. Off. .
87 08 034	6/1987	Germany .
19541680 A1	5/1996	Germany .
3-87864	4/1991	Japan .
7-295356	11/1995	Japan .

[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

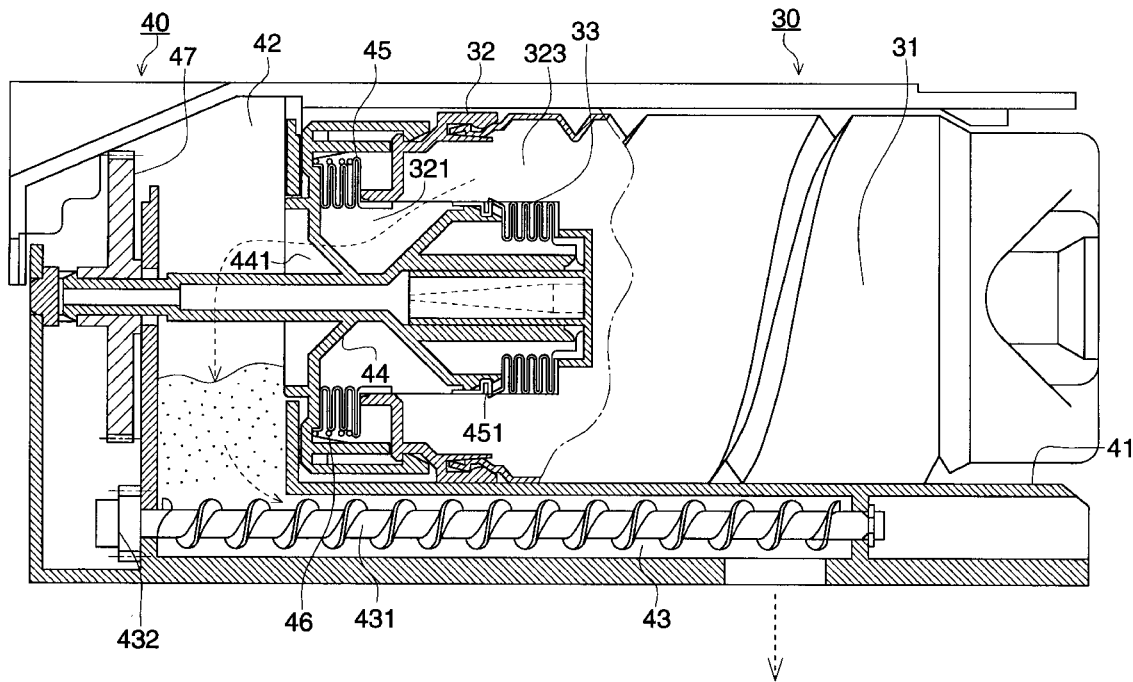
A developing agent replenishing apparatus includes a developing agent receiving port for receiving a developing agent from a replenishment cartridge which stores developing agent when the cartridge is mounted and a conveyor for conveying the developing agent received in the receiving port to a developing 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.

[56] References Cited

U.S. PATENT DOCUMENTS

3,446,403	5/1969	Serio .	
3,971,493	7/1976	Williams .	
4,271,986	6/1981	Stecker	222/151
4,719,949	1/1988	Mears	141/301
5,074,342	12/1991	Kraehn .	
5,154,212	10/1992	Weber .	
5,248,847	9/1993	Aoyama	399/238

39 Claims, 19 Drawing Sheets



GPI EXHIBIT 1006
GENERAL PLASTIC v. CANON
IPR2015-01954

FIG. 1

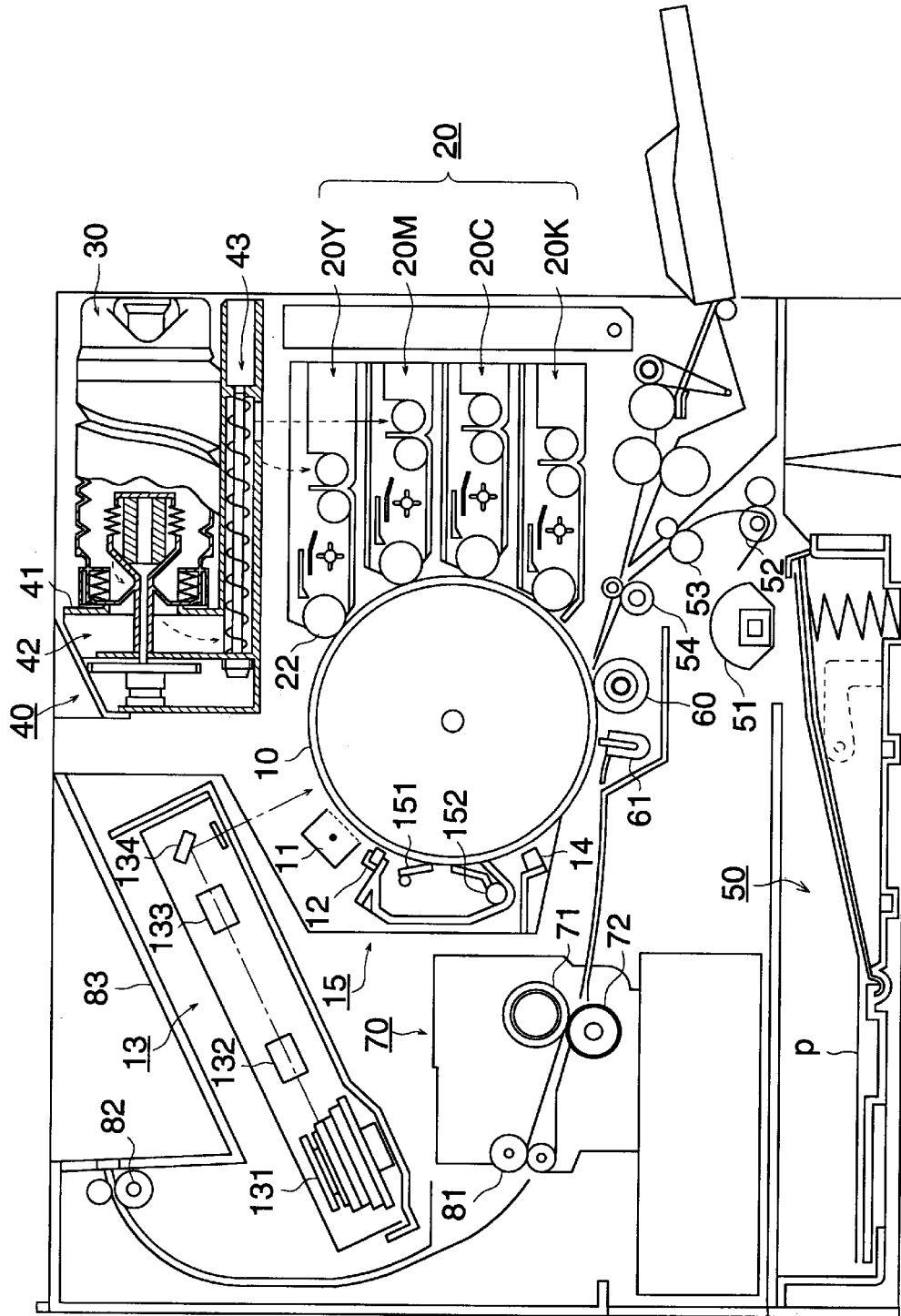


FIG. 2

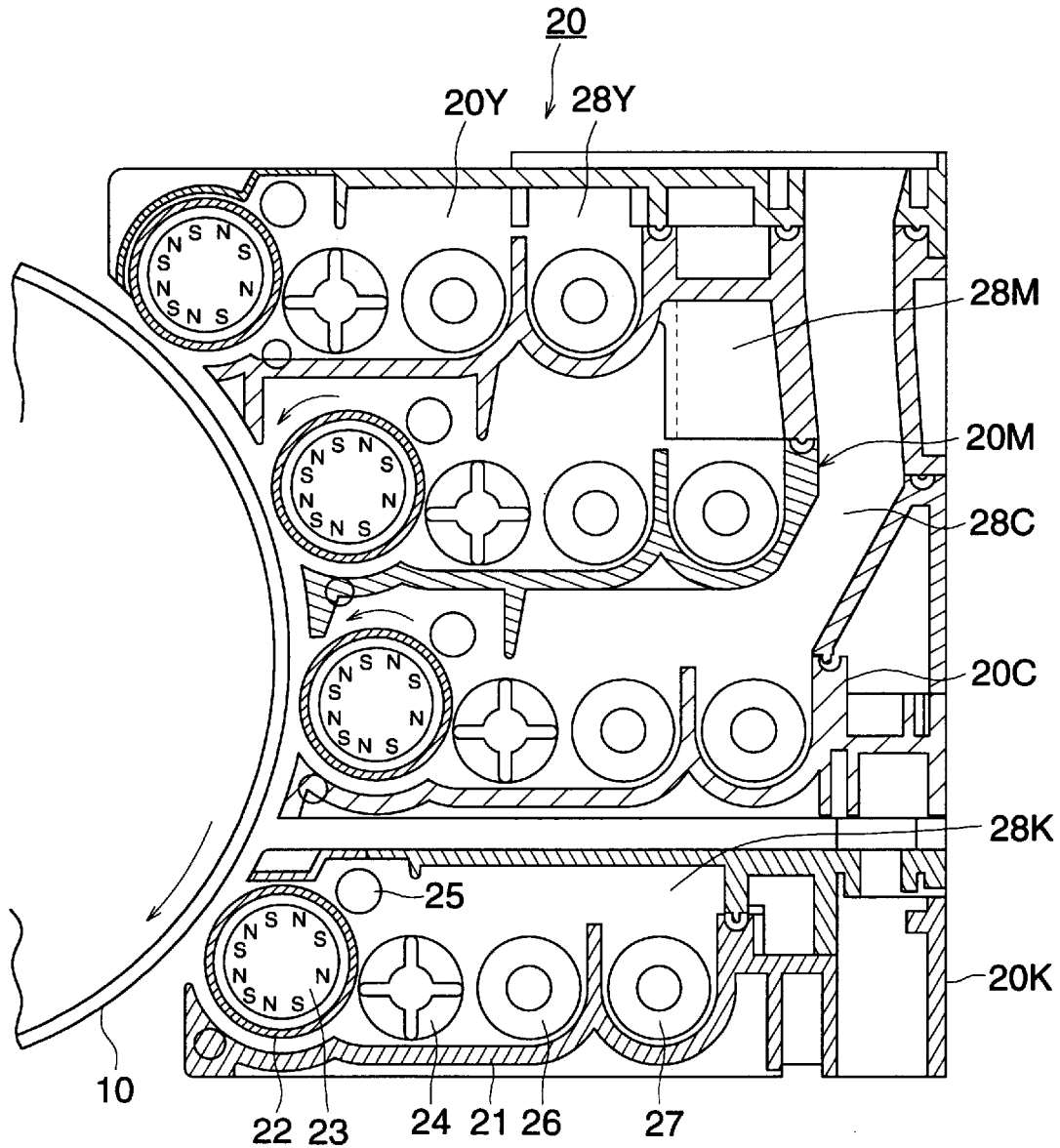
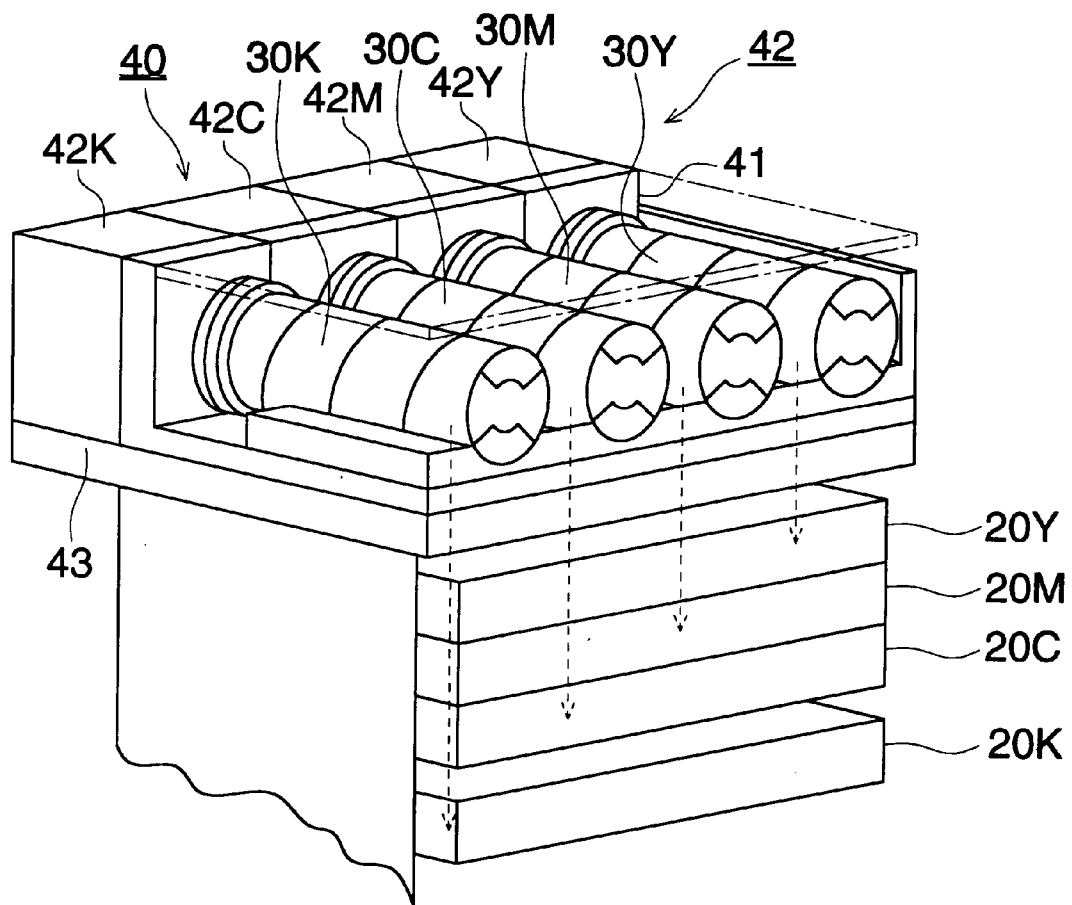


FIG. 3



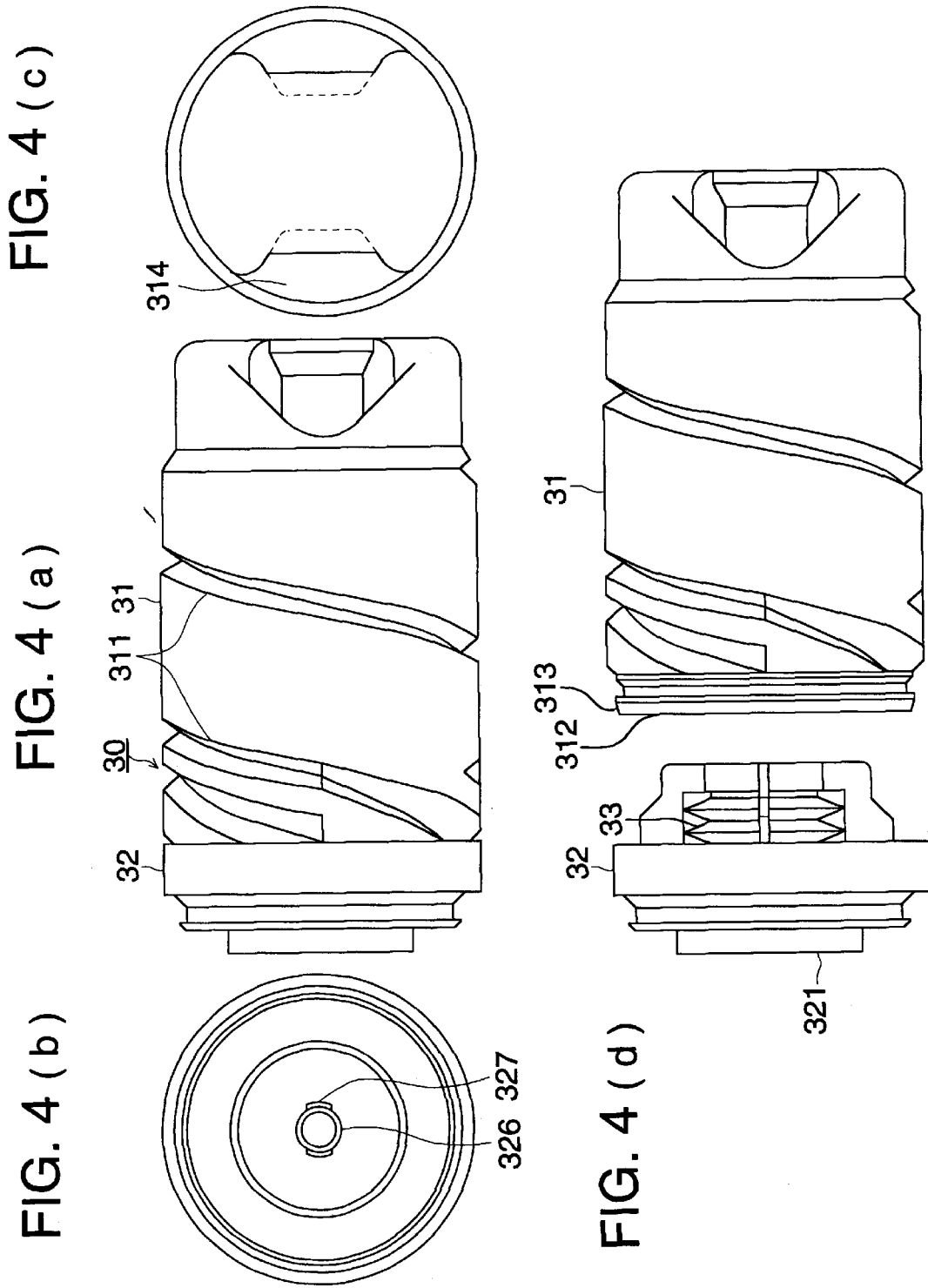


FIG. 4 (c)

FIG. 4 (a)

FIG. 4 (b)

FIG. 4 (d)

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