



US005903806A

United States Patent [19]

[11] Patent Number: **5,903,806**

Matsuoka et al.

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

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

[75] Inventors: **Isao Matsuoka; Yozo Fujii**, both of Hachioji, Japan

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

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

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

[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**

[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

FOREIGN PATENT DOCUMENTS

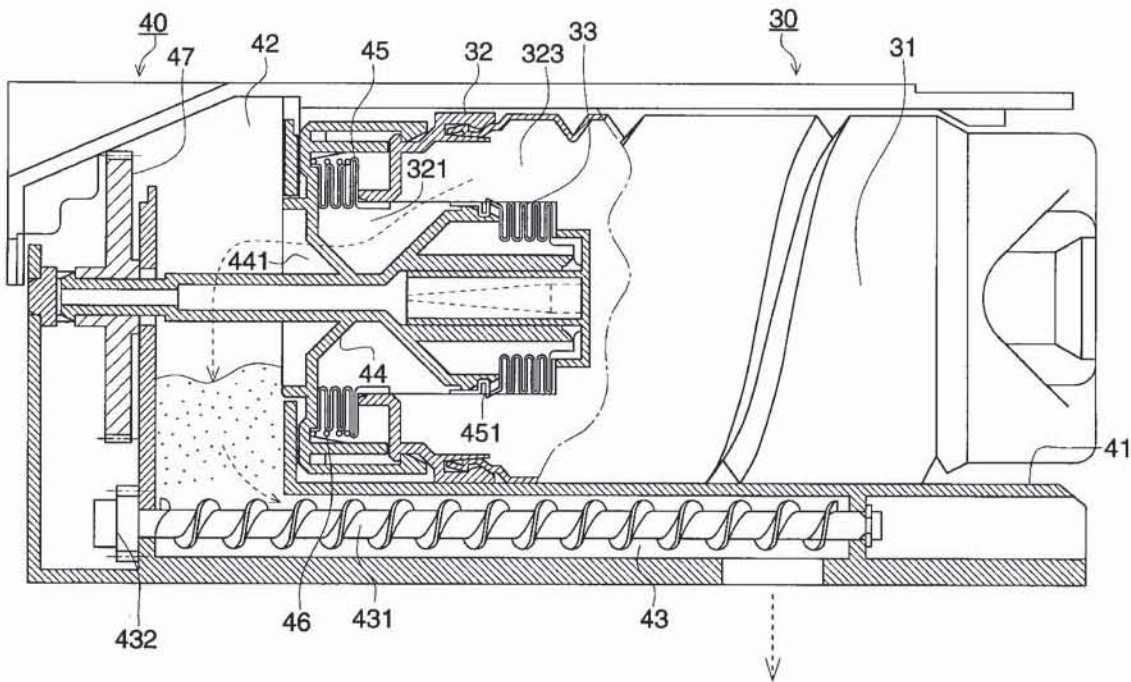
0604999 A2	7/1994	European Pat. Off. .
87 08 034	6/1987	Germany
19541680 A1	5/1996	Germany
3-87864	4/1991	Japan
7-295356	11/1995	Japan

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.

39 Claims, 19 Drawing Sheets



GPI EXHIBIT 1006
 GENERAL PLASTIC v. CANON
 IPR2015-01954

FIG. 1

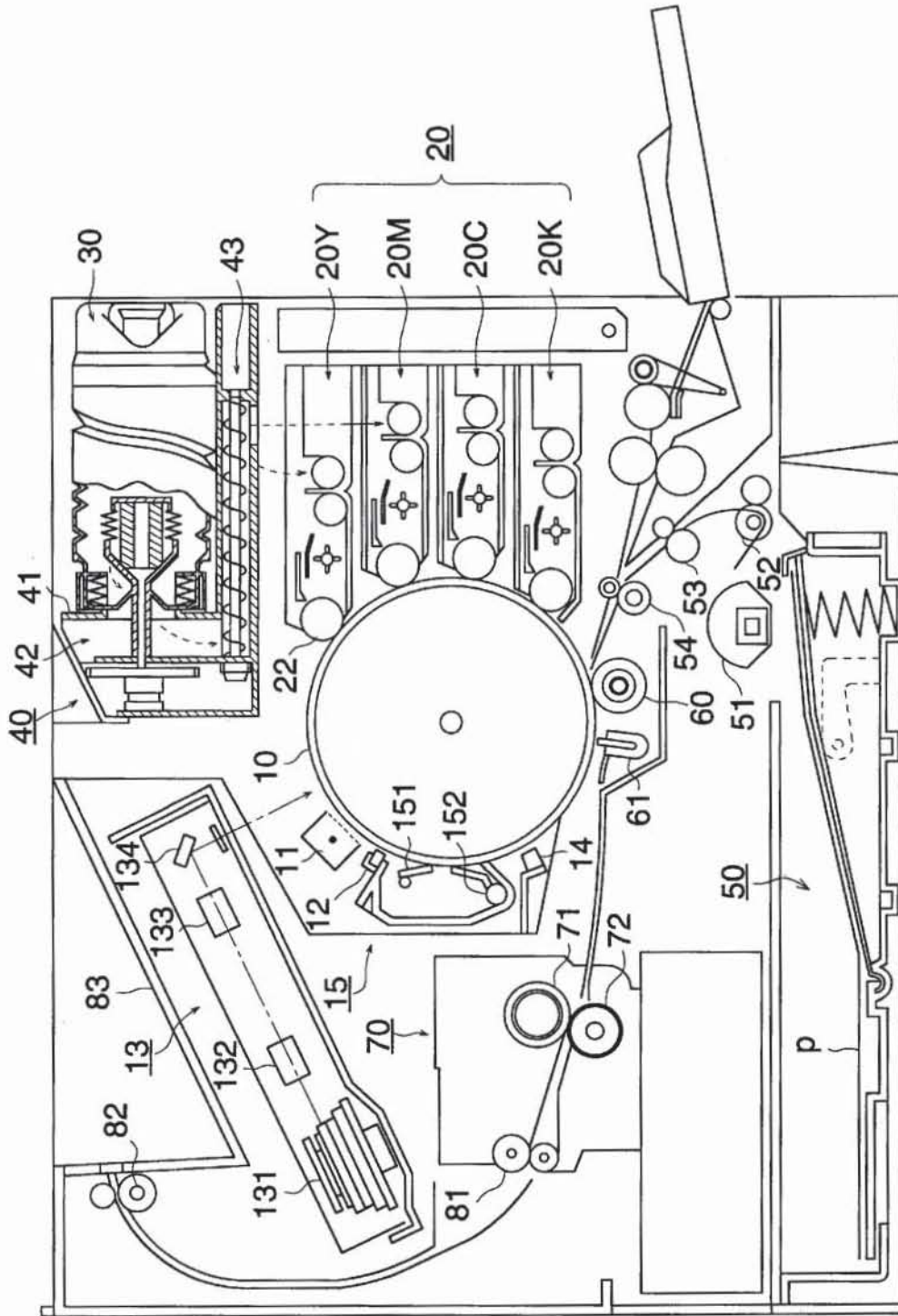


FIG. 2

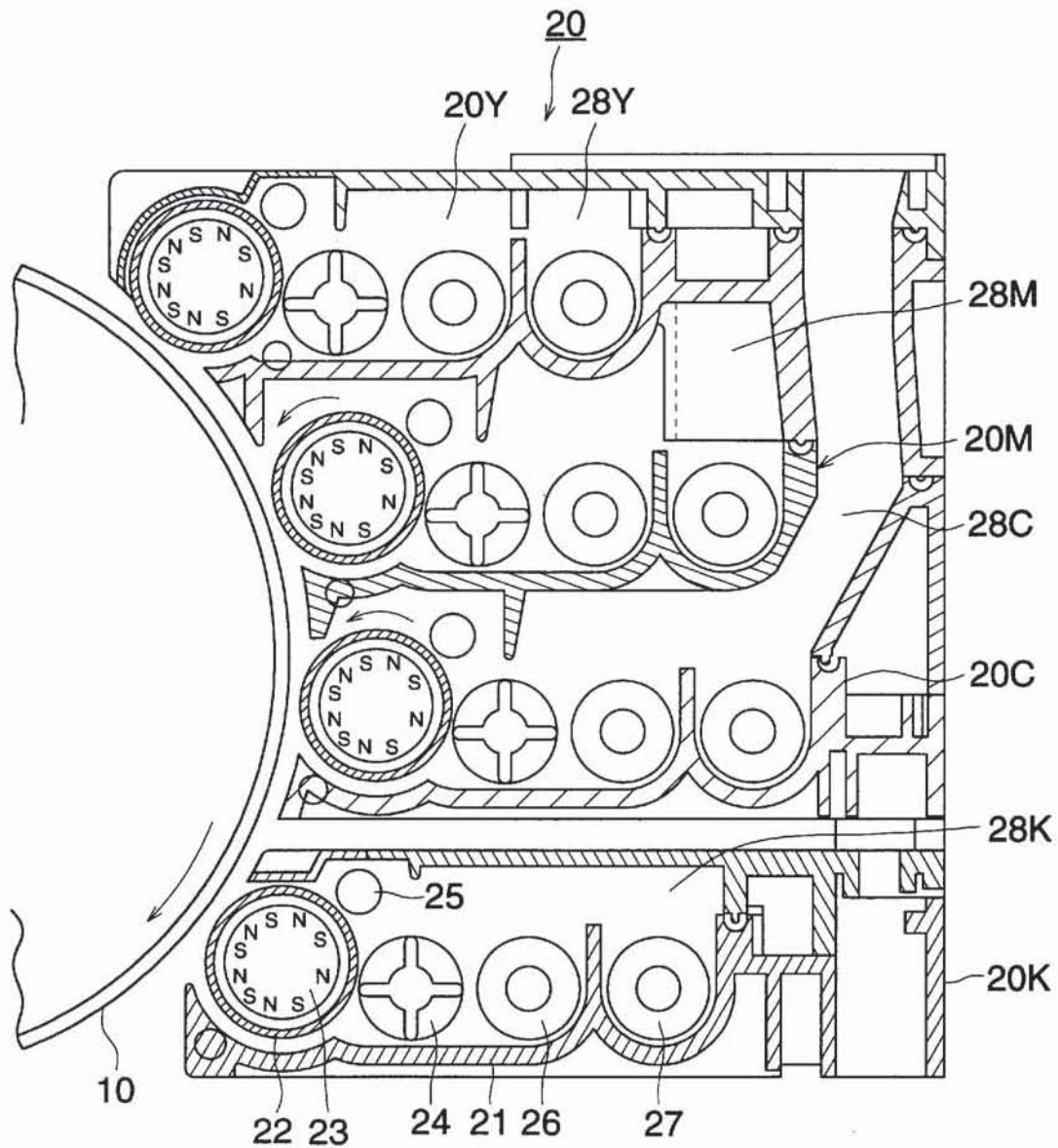
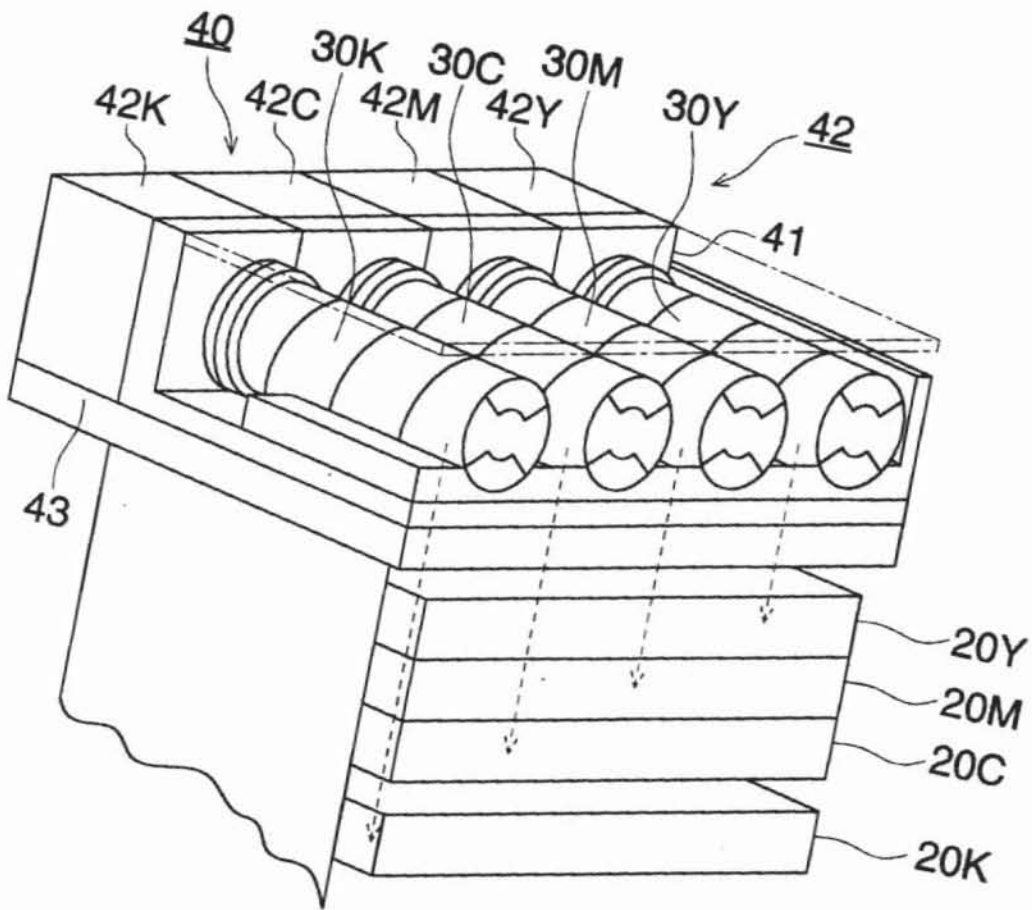


FIG. 3



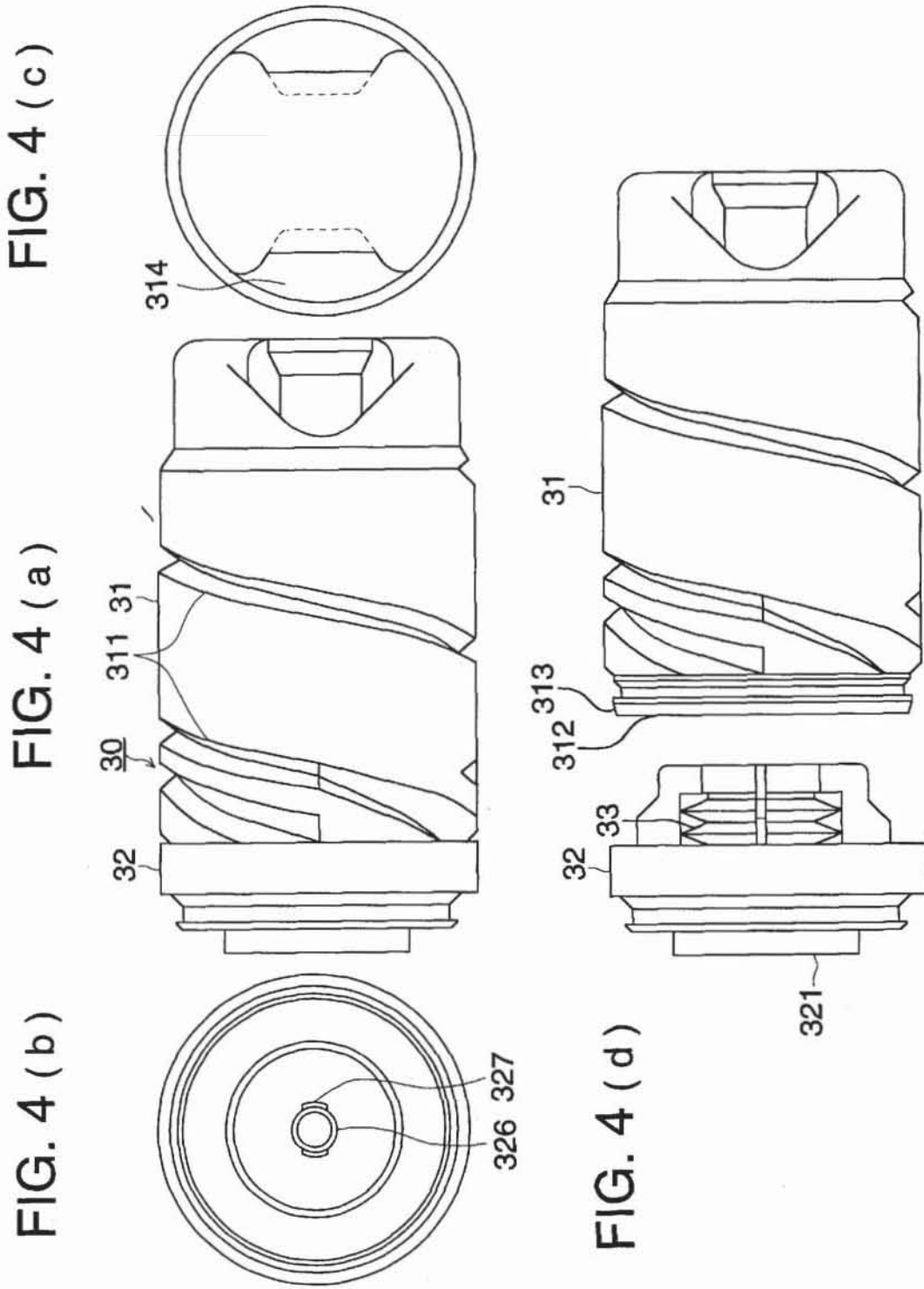


FIG. 4 (c)

FIG. 4 (a)

FIG. 4 (b)

FIG. 4 (d)

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.