

(12) **United States Patent**
Lohrentz

(10) **Patent No.:** **US 6,415,590 B1**
(45) **Date of Patent:** **Jul. 9, 2002**

(54) **DOUBLE WINDROW ATTACHMENT LIFT MECHANISM FOR HARVESTERS**

- (75) Inventor: **Randy Lohrentz**, Buhler, KS (US)
- (73) Assignee: **Agco Corporation**, Duluth, GA (US)
- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 day.

(21) Appl. No.: **09/642,423**

(22) Filed: **Aug. 21, 2000**

(51) **Int. Cl.⁷** **A01D 43/00**

(52) **U.S. Cl.** **56/192; 56/14.9**

(58) **Field of Search** **56/378, 14.5, 14.9, 56/16.4 R, DIG. 21, 193, 192, 15.5, 15.9, 10.7, 10.6, 10.8, 11.9**

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,761,270	A	9/1956	Blaser et al.
3,059,403	A	10/1962	Bamford et al.
3,221,484	A	12/1965	Van Der Lely
3,383,844	A	5/1968	Glass et al.
3,523,410	A	8/1970	Taylor et al.
3,911,649	A	10/1975	Scarnato et al.
3,928,955	A	12/1975	Case
3,976,143	A	8/1976	Rodger
4,022,005	A	5/1977	Case
4,274,247	A	6/1981	Schmidt et al.
4,590,751	A *	5/1986	Stephenson 56/192
4,809,490	A	3/1989	Swanson
4,910,951	A	3/1990	Reilly et al.
4,991,383	A *	2/1991	Ermarcora 56/14.9
6,062,010	A *	5/2000	Kraus et al. 56/16.4 R

FOREIGN PATENT DOCUMENTS

EP 0406766 A1 * 1/1991

OTHER PUBLICATIONS

Agco Hesston Operator's Manual Double Windrow Attachment for 8400 Windrower Tractor; Copyright 1993, cover page, p. 2/97, pp. 4, 9, 10, 11, 12, 14, 18 and back page.

Agco Hesston 8400 Double Windrow Attachment Parts Catalog, Dec. 1993, cover page, table of contents, and pp. 2-1, 2-2, 2-3, 2-4, 2-5, 2-6 and 2-7.

Assembly Instructions Double Windrow Attachment for 8400 Windrower Tractor, Mar. 17, 1993, pp. 1, 15, and 16.

* cited by examiner

Primary Examiner—Thomas B. Will

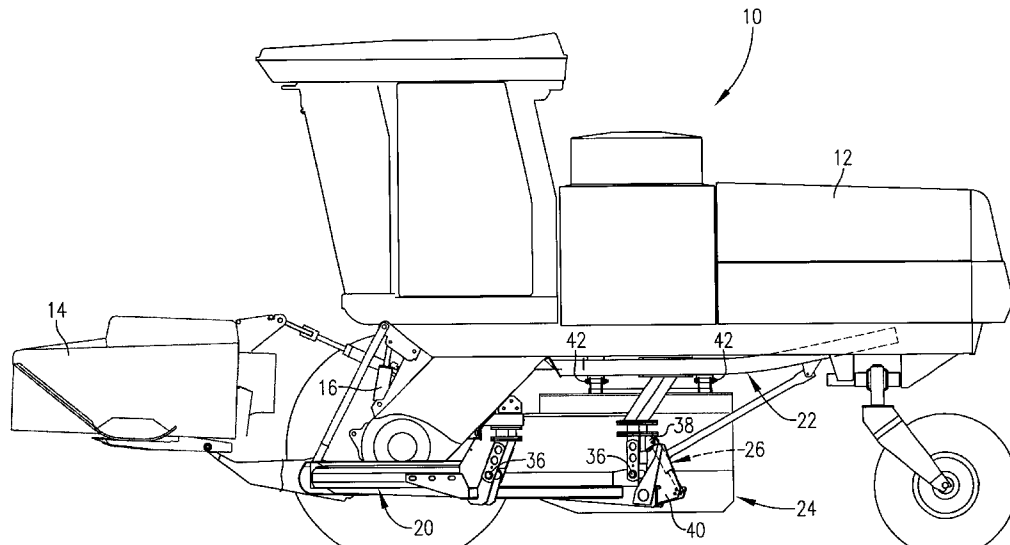
Assistant Examiner—Meredith C. Petravick

(74) *Attorney, Agent, or Firm*—Hovey Williams LLP

(57) **ABSTRACT**

A hay harvester has a double windrow cross-conveyor supported rearwardly of the harvesting header to receive a stream of conditioned crop materials from the header and transport the same laterally to an outboard position. A deflector adjacent the discharge end of the conveyor is maintained in a lowered position to direct materials to the ground to form a first windrow during a first pass and is then placed in a raised position during a return pass so as to allow the stream discharging from the cross-conveyor to be deposited close to the first windrow, thus forming a double windrow. The cross-conveyor is hingedly affixed to the vehicle in such a manner that the normally tilted down, lower front edge of the cross-conveyor can be raised up into a transport position for higher ground clearance or to switch to single swathing. The header and cross-conveyor are preferably plumbed in a parallel fluid flow relationship so that they are raised or lowered simultaneously.

23 Claims, 4 Drawing Sheets



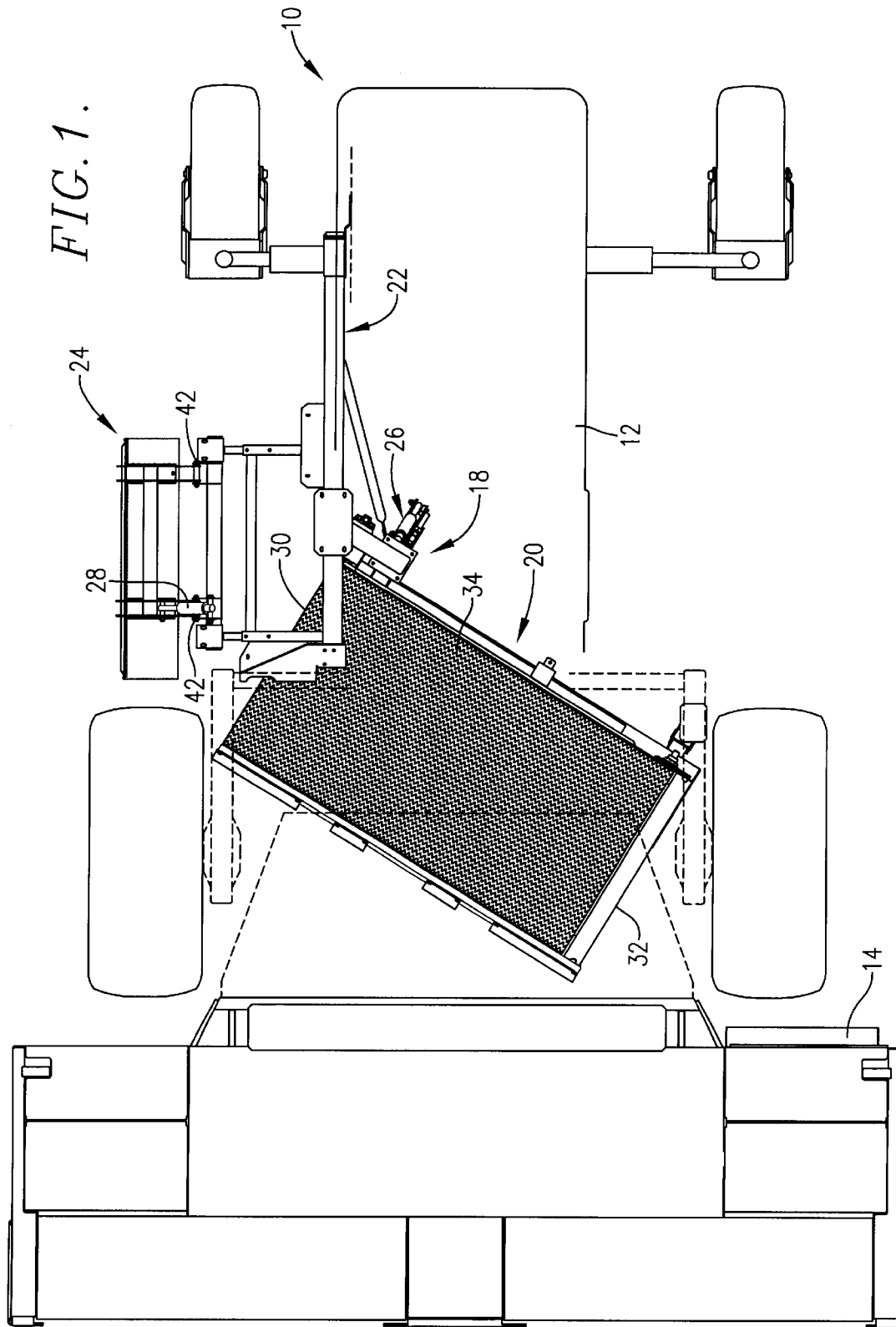
H&S Mfg. Co., Inc.

H&S Mfg Co., Inc.

v. Oxbo Int'l Co.

Exhibit 1016

IPR2016-00950



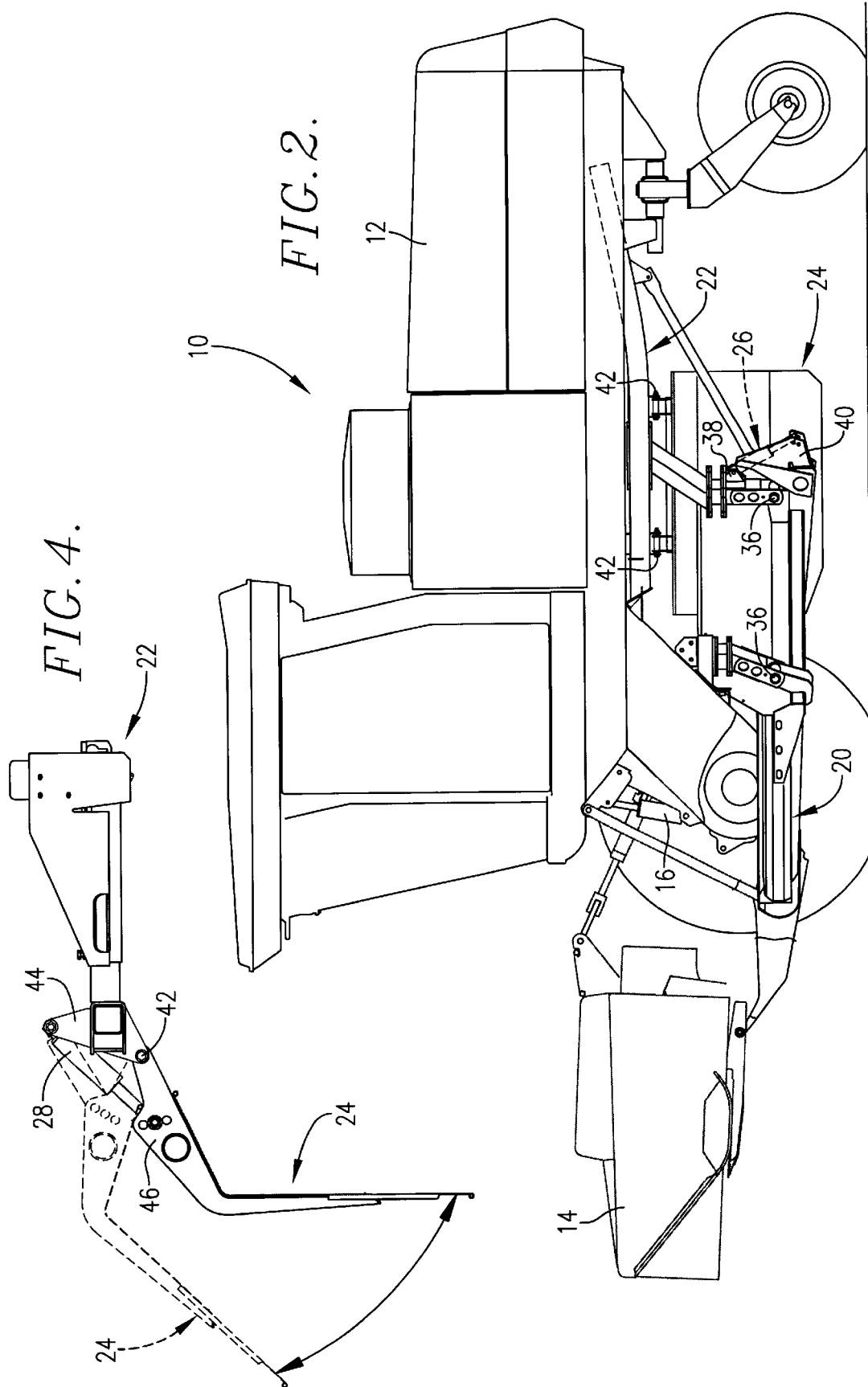


FIG. 4.

FIG. 2.

FIG. 3.

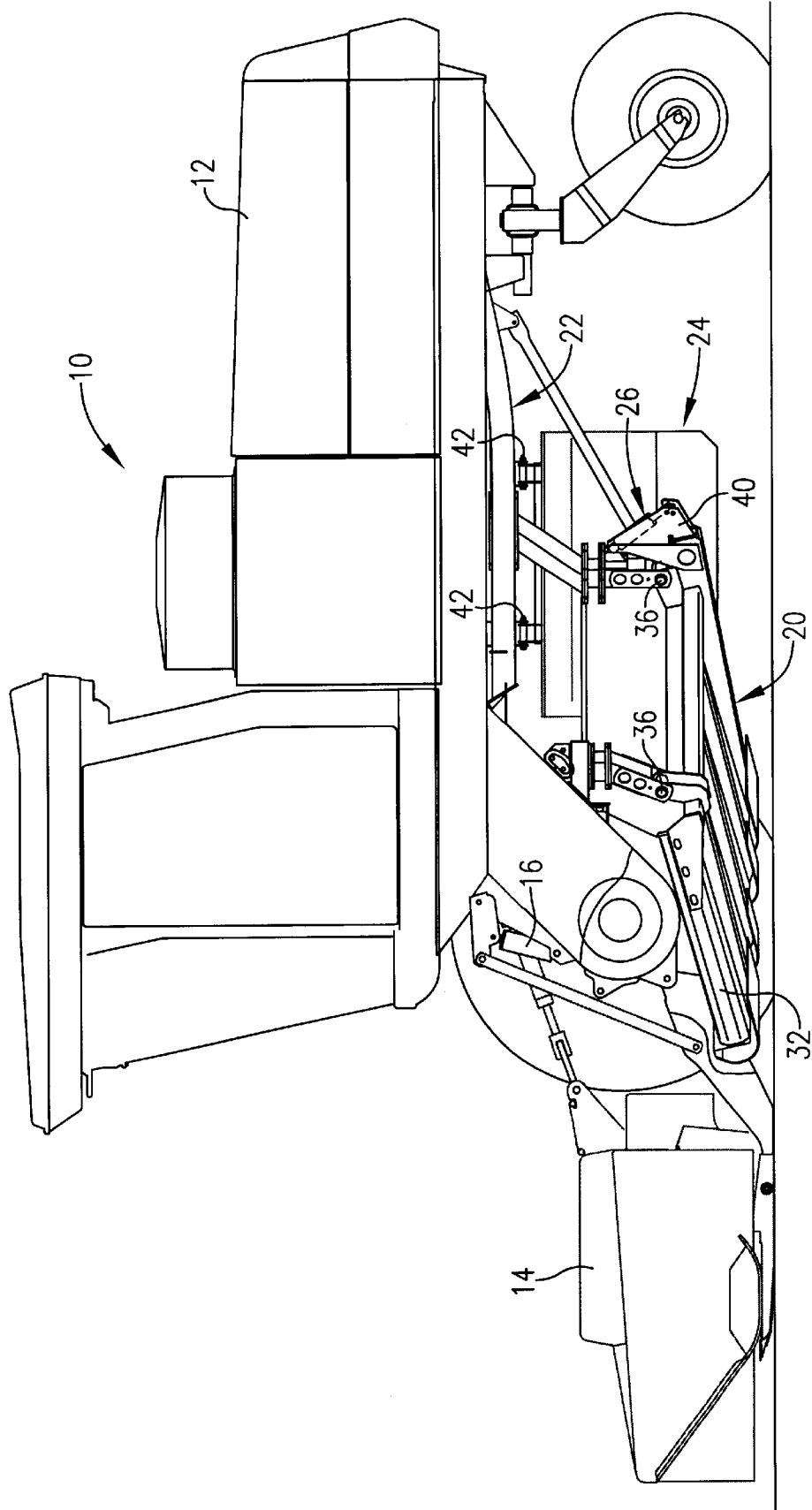
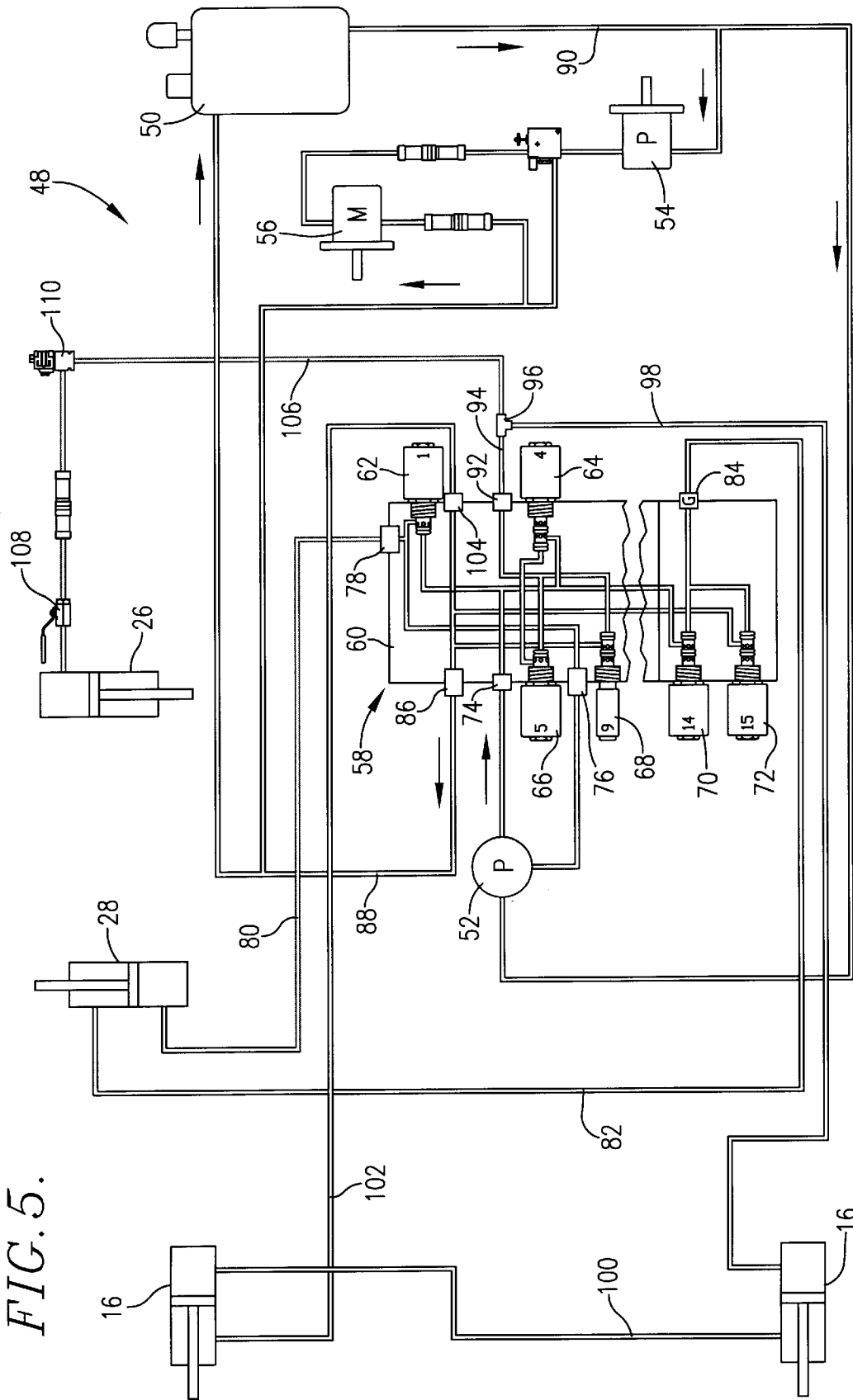


FIG. 5.



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.