



# United States Patent [19]

Perego

[11] Patent Number: **5,924,506**

[45] Date of Patent: **Jul. 20, 1999**

[54] **MOTORIZED WHEEL ASSEMBLY AND TOY VEHICLE WITH SUCH WHEEL ASSEMBLY**

[75] Inventor: **Gianluca Perego**, Arcore, Italy

[73] Assignee: **Peg Perego Pines S.p.A.**, Arcore, Italy

[21] Appl. No.: **08/786,092**

[22] Filed: **Jan. 17, 1997**

[30] **Foreign Application Priority Data**

Jan. 23, 1996	[IT]	Italy	MI96U0051
Jan. 23, 1996	[IT]	Italy	MI96U0050

[51] Int. Cl.<sup>6</sup> ..... **B60K 1/00**; B60K 17/30; B62D 11/04

[52] U.S. Cl. .... **180/65.5**; 180/252; 180/6.6

[58] Field of Search ..... 180/65.5, 65.1, 180/65.3, 907, 252, 6.5, 6.6; 301/6.6

[56] **References Cited**

**U.S. PATENT DOCUMENTS**

2,122,924	7/1938	Ammen et al.	280/95
2,581,554	1/1952	Radford	301/6.6
3,004,795	10/1961	Atkin	301/6.6
4,483,405	11/1984	Noda et al.	180/6.5

4,699,433	10/1987	Kopp	301/6.6
4,805,712	2/1989	Singleton	180/907
5,224,563	7/1993	Iizuka et al.	180/65.3
5,311,957	5/1994	McLaurin et al.	180/253
5,482,125	1/1996	Pagett	180/6.32

**FOREIGN PATENT DOCUMENTS**

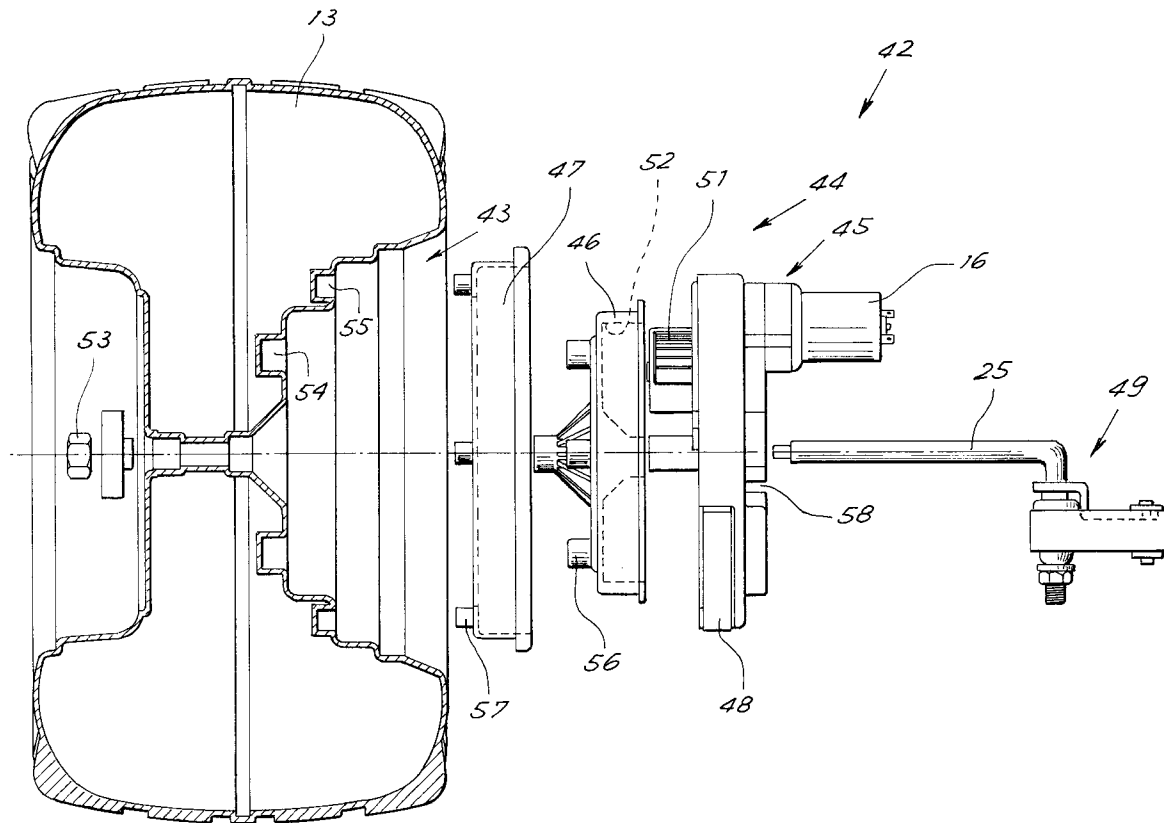
2132954	7/1984	United Kingdom	180/907
2188889	10/1987	United Kingdom	180/907

*Primary Examiner*—Lanna Mai  
*Assistant Examiner*—Bridget Avery  
*Attorney, Agent, or Firm*—McGlew and Tuttle, P.C.

[57] **ABSTRACT**

A wheel assembly (42) for toy vehicles comprises a wheel (13) rotatably mounted on a pivot (25) having a support (49) for supporting it on a vehicle chassis and an electric power unit (44) connected to the wheel to set it in rotation. The power unit (44) is mounted stationary on the pivot and ends towards the wheel with a motor-driven cup-shaped element (46) which rotates coaxially to the pivot (25) and which is received in a corresponding housing (43) provided on the internal face of the wheel and blocked to prevent it from rotating within it.

**17 Claims, 5 Drawing Sheets**



Dynacraft BSC, Inc.  
**Exhibit 1004**  
 Dynacraft v. Mattel  
 IPR2018-00042

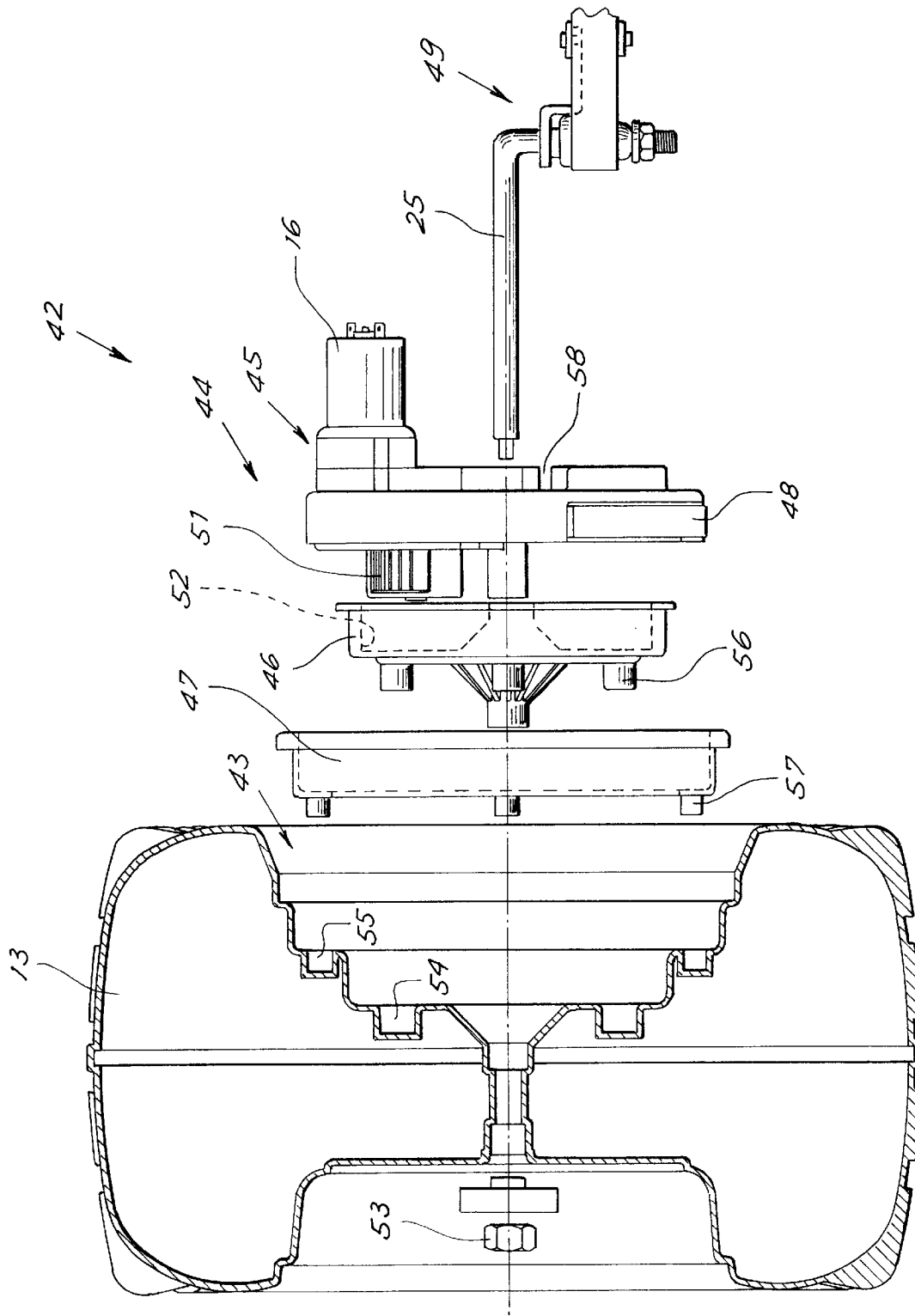


Fig. 1

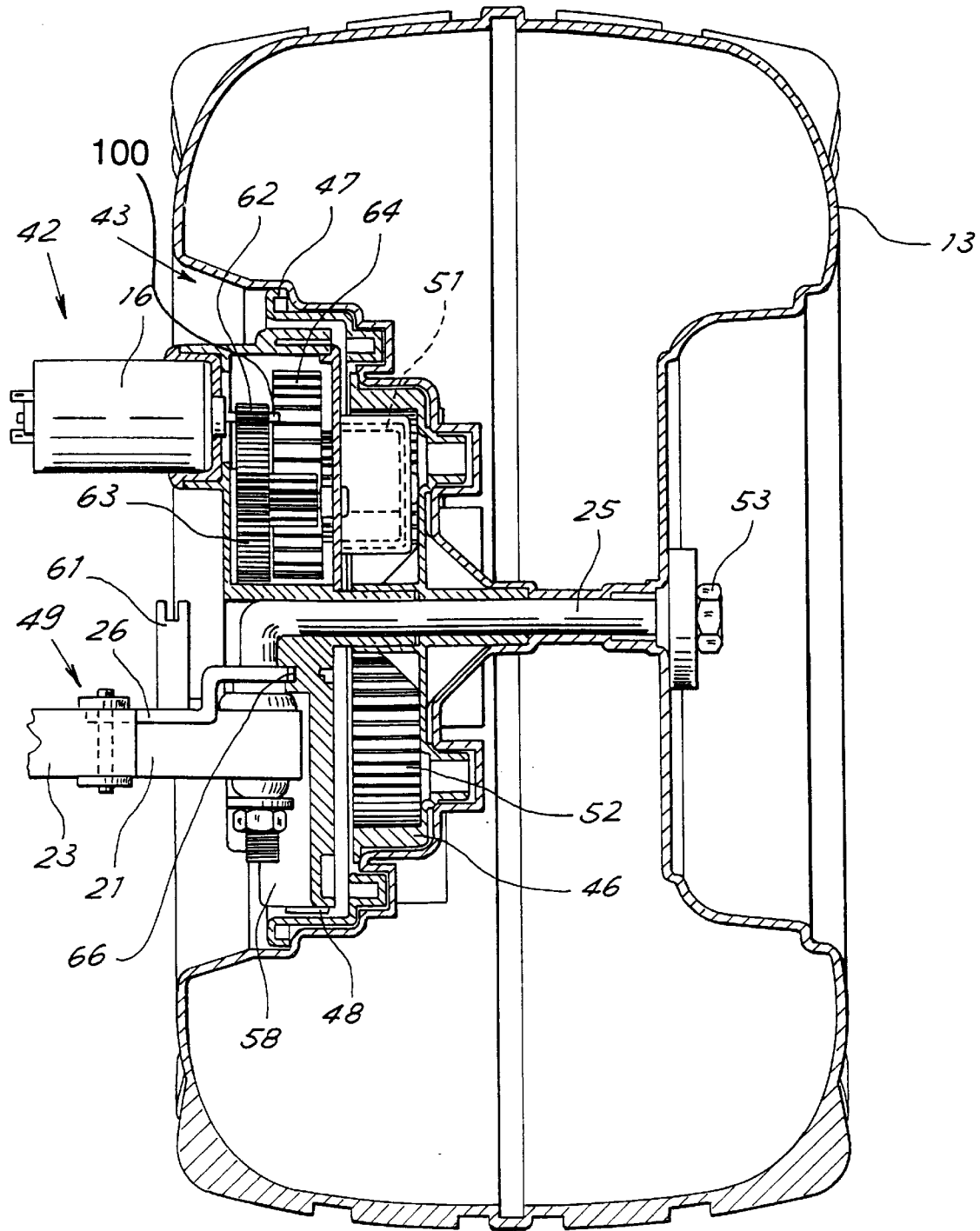


Fig. 2

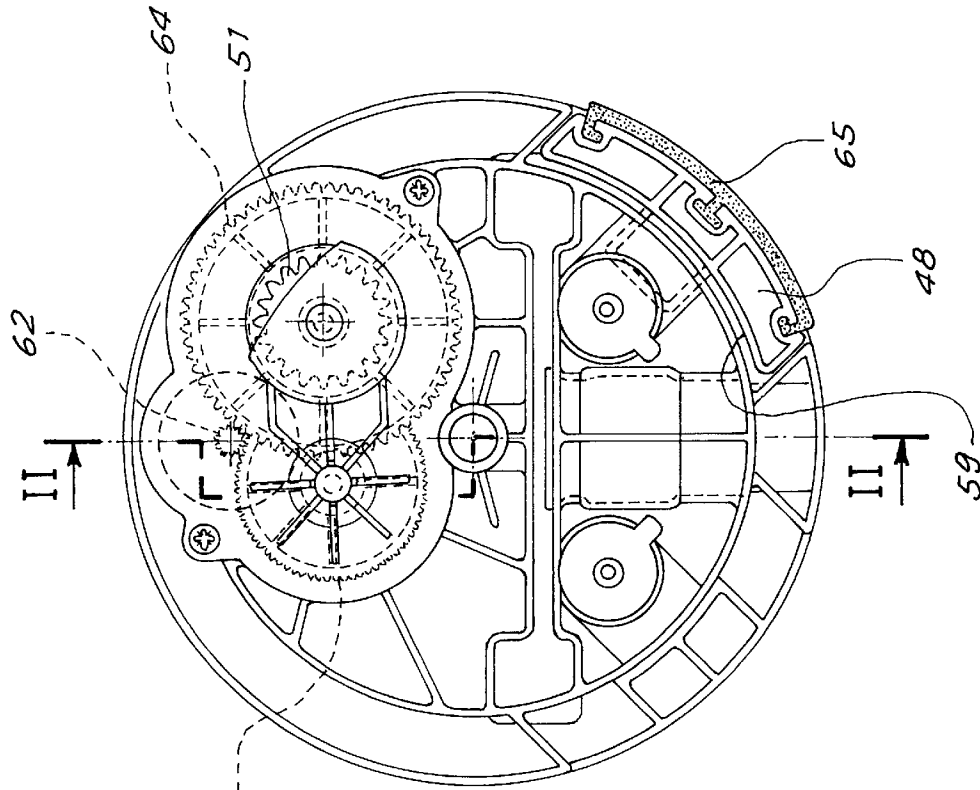


Fig. 4

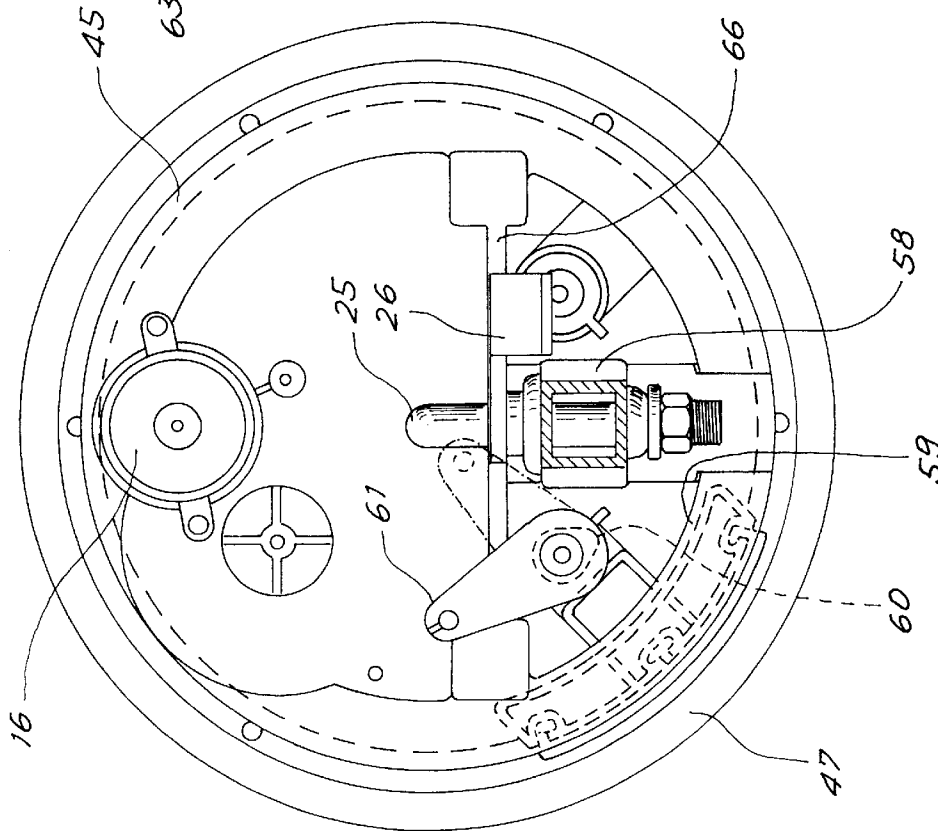


Fig. 3

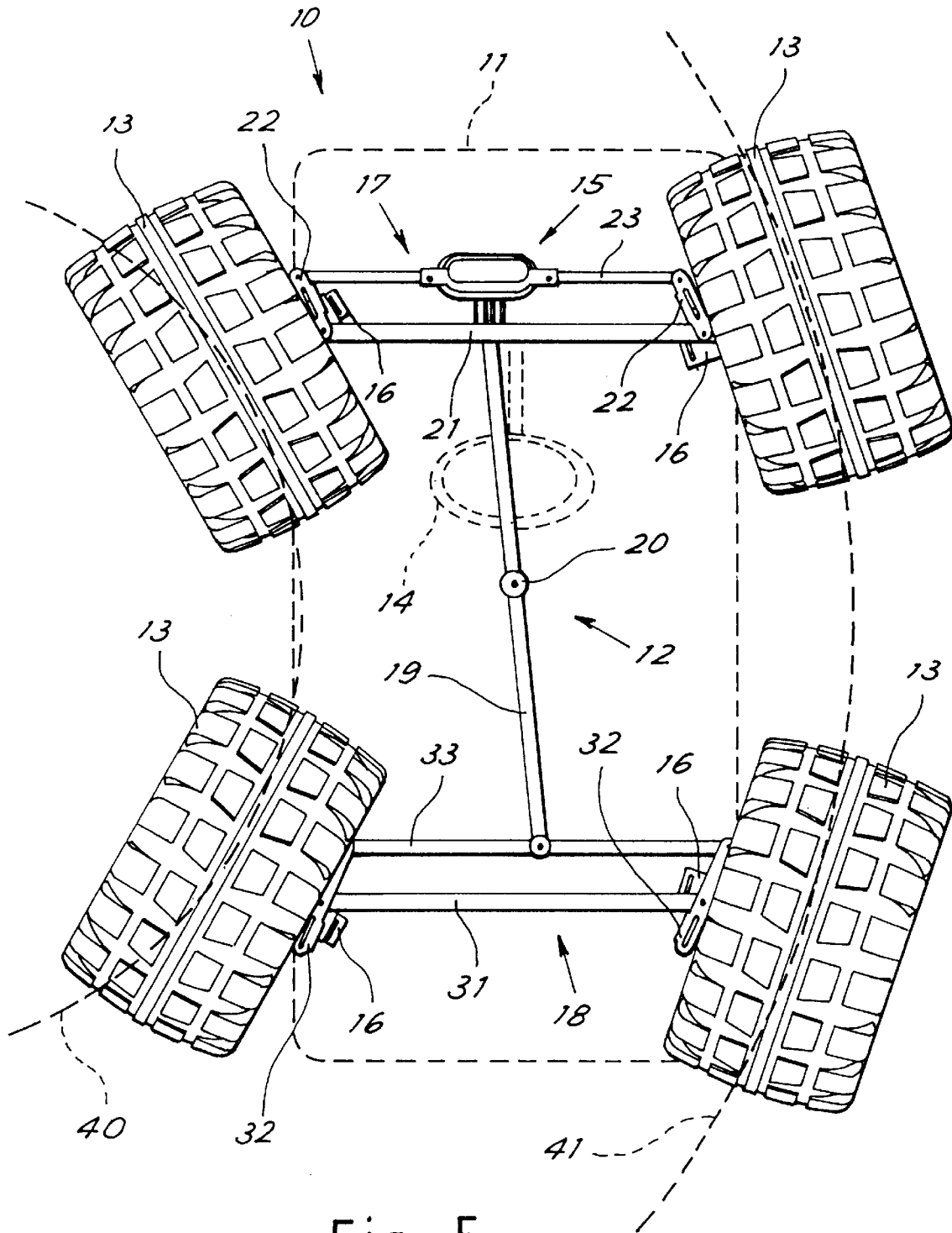


Fig. 5

# 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.