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**McKinnon et al.**

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(54) **WHEEL FRAME**

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(\*\*) Term: **14 Years**

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**Related U.S. Application Data**

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(51) **LOC (9) Cl.** ..... **12-05**

(52) **U.S. Cl.** ..... **D34/29; D34/35**

(58) **Field of Classification Search** ..... D34/29,  
D34/35; 301/5.23; 29/894; 198/786, 787,  
198/789; D8/375, 499

See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

|           |      |         |                 |          |
|-----------|------|---------|-----------------|----------|
| 3,363,735 | A *  | 1/1968  | Hotchkiss       | 193/37   |
| 3,621,961 | A *  | 11/1971 | Stumpf          | 193/37   |
| 3,789,947 | A    | 2/1974  | Blumrich        |          |
| 3,878,927 | A *  | 4/1975  | Murakami        | 193/37   |
| 4,335,899 | A    | 6/1982  | Hiscock         |          |
| D294,074  | S *  | 2/1988  | Sogge           | D34/29   |
| D309,254  | S    | 7/1990  | Guile           |          |
| D340,342  | S *  | 10/1993 | Nummelin et al. | D34/29   |
| D426,692  | S *  | 6/2000  | Swanink         | D34/29   |
| D439,721  | S *  | 3/2001  | Swanink         | D34/29   |
| 6,315,109 | B1 * | 11/2001 | Dean            | 198/786  |
| 6,857,707 | B2   | 2/2005  | Guile           |          |
| D516,767  | S *  | 3/2006  | Layne           | D34/29   |
| 7,318,628 | B2   | 1/2008  | Guile           |          |
| 7,431,148 | B2 * | 10/2008 | Li et al.       | 198/786  |
| 7,566,102 | B2   | 7/2009  | Guile           |          |
| 7,641,288 | B1 * | 1/2010  | Baker et al.    | 301/5.23 |
| 7,878,284 | B1   | 2/2011  | Shultz          |          |
| 7,980,335 | B2 * | 7/2011  | Potter          | 180/7.1  |

|              |     |         |                 |        |
|--------------|-----|---------|-----------------|--------|
| D658,843     | S * | 5/2012  | Wedemeyer       | D34/35 |
| 2005/0134106 | A1  | 6/2005  | Guile           |        |
| 2007/0096541 | A1  | 5/2007  | Guile           |        |
| 2008/0018167 | A1  | 1/2008  | Fuji            |        |
| 2009/0278325 | A1  | 11/2009 | Geels et al.    |        |
| 2012/0019048 | A1  | 1/2012  | McKinnon et al. |        |

**FOREIGN PATENT DOCUMENTS**

|    |             |    |         |
|----|-------------|----|---------|
| CA | 2622950     | A1 | 3/2007  |
| CN | 101417586   | A  | 4/2009  |
| CN | 201342911   | Y  | 11/2009 |
| CN | 2010881894  | U  | 6/2011  |
| CN | 202011305   | U  | 10/2011 |
| CN | 102700358   | A  | 10/2012 |
| GB | 2408692     |    | 6/2005  |
| JP | 11/227404   |    | 8/1999  |
| JP | 2000-335726 | A  | 12/2000 |
| JP | 2003-267259 | A  | 9/2003  |
| JP | 2003-276402 | A  | 9/2003  |

(Continued)

**OTHER PUBLICATIONS**

PCT International Preliminary Report on Patentability and Written  
Opinion, PCT/AU2010-001419, dated Apr. 24, 2012.

(Continued)

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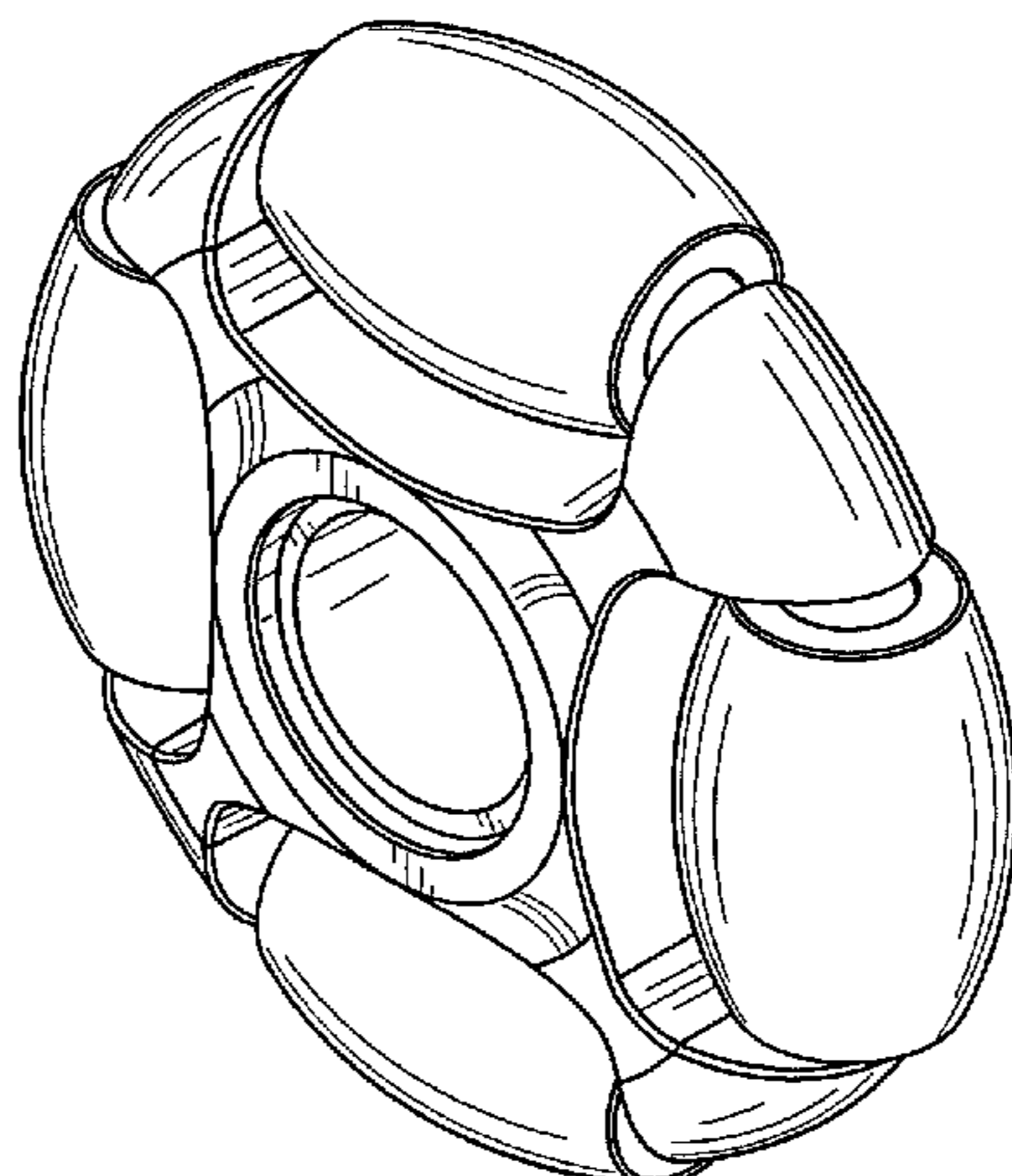
(57) **CLAIM**

The ornamental design for a wheel frame, as shown and  
described.

**DESCRIPTION**

FIG. 1 is a perspective view of a wheel frame showing a first  
embodiment;  
FIG. 2 is a front view thereof;  
FIG. 3 is a bottom view thereof;  
FIG. 4 is a back view thereof;  
FIG. 5 is a perspective view showing an embodiment of the  
design;  
FIG. 6 is a perspective view of a second embodiment;  
FIG. 7 is a front view thereof;  
FIG. 8 is a bottom view thereof;  
FIG. 9 is a back view thereof; and,  
FIG. 10 is a perspective view thereof.

**1 Claim, 6 Drawing Sheets**



FOREIGN PATENT DOCUMENTS

|    |                 |    |         |
|----|-----------------|----|---------|
| JP | 2004-359149     | A  | 12/2004 |
| JP | 3726558         | B2 | 12/2005 |
| JP | 2007/22342      |    | 2/2007  |
| JP | 200722342       | A  | 2/2007  |
| JP | 4003082         | B2 | 11/2007 |
| JP | 4483206         | B2 | 6/2010  |
| KR | 10-1013676      |    | 4/2005  |
| KR | 10-2012-0056950 |    | 6/2012  |
| WO | 0224471         | A1 | 3/2002  |
| WO | WO 02/24471     |    | 3/2002  |
| WO | 2004014667      | A1 | 2/2004  |
| WO | WO 2004/014667  |    | 2/2004  |
| WO | 2010127985      | A1 | 11/2010 |
| WO | 2011148017      | A1 | 1/2011  |
| WO | WO 2011/047443  |    | 4/2011  |

OTHER PUBLICATIONS

Roll Flex & Ergo Roll, <[http://www.ergotechinc.com/op\\_ergo\\_roll.htm](http://www.ergotechinc.com/op_ergo_roll.htm)> (as archived by Internet Archive WayBackMachine with a date range of Oct. 21, 2008 to Sep. 28, 2010).

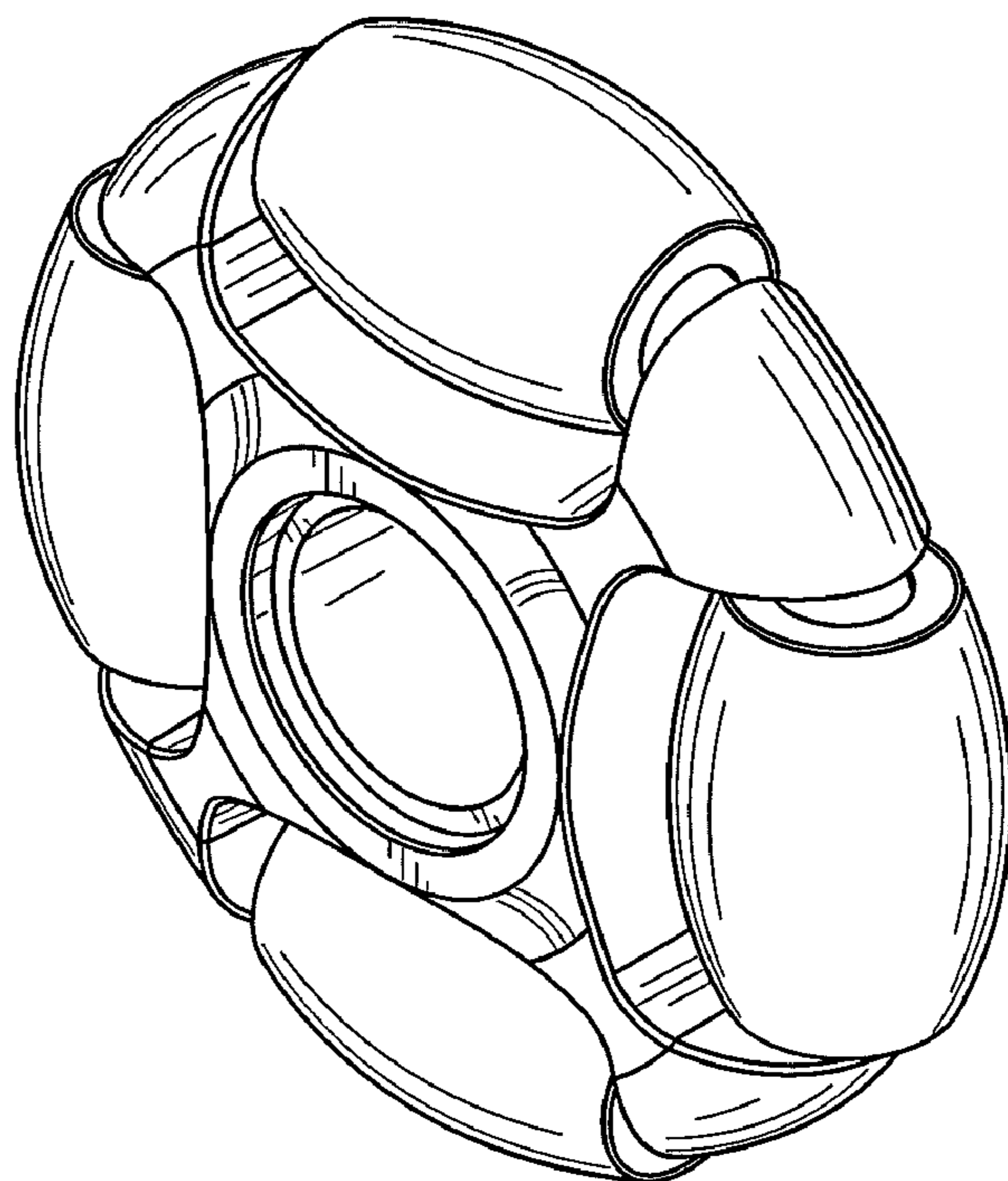
The freedom of motion! <[www.marx-rollentechnik.de/englisch/index.php](http://www.marx-rollentechnik.de/englisch/index.php)>, at least Oct. 9, 2009 (as archived by Internet Archive WayBackMachine search run on Aug. 15, 2012).

All-side rollers, <<http://www.traporol.de/all-side-rollers.html>>, at least Oct. 19, 2008 (as archived by Internet Archive WayBackMachine search run on Aug. 15, 2012).

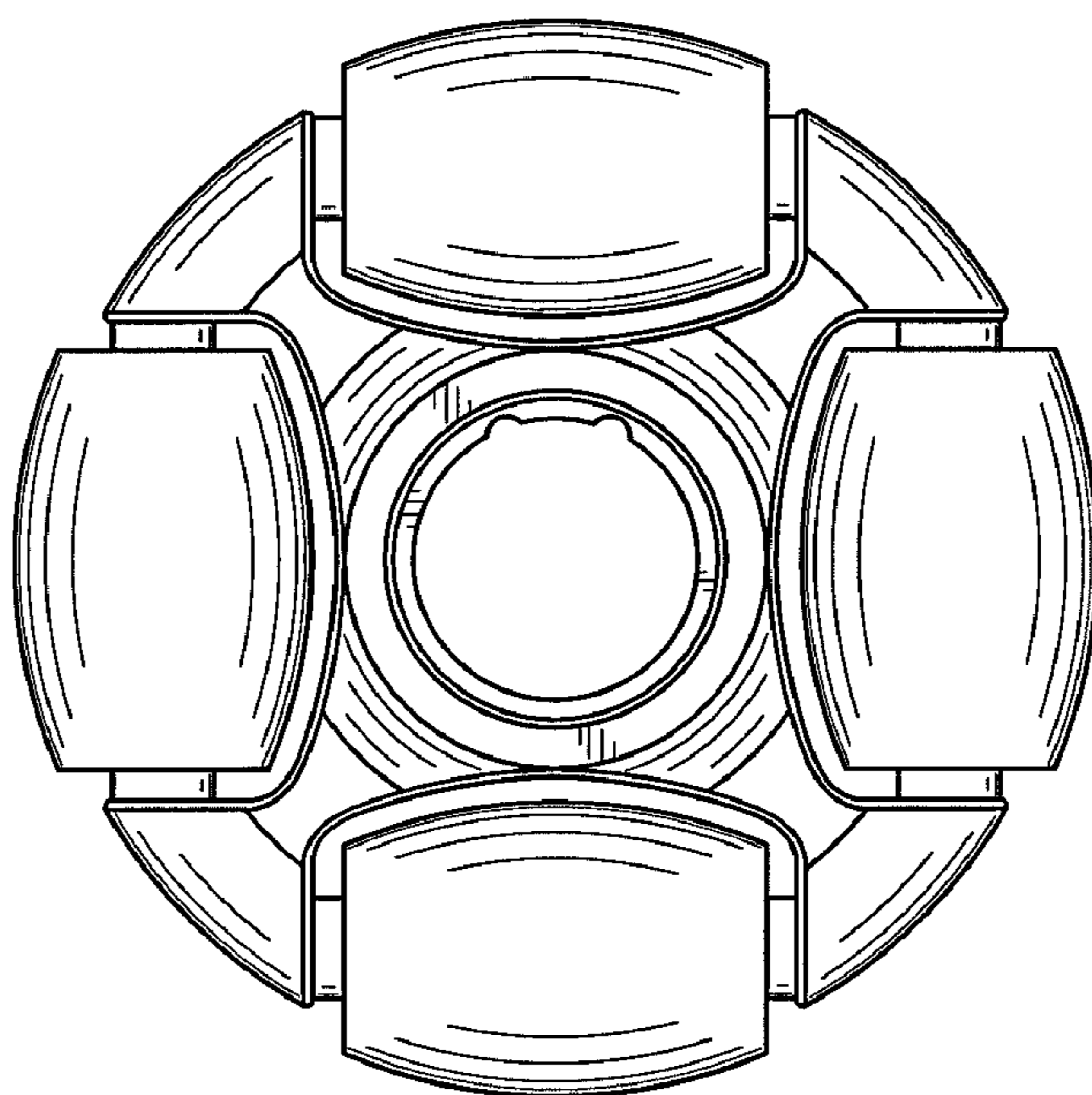
Kornylak Corporation, Conveyor Wheels, Omni Directional, Bi Directional, Powered & Robot Wheels, <<http://www.kornylak.com/wheels/wheels.html>>, (as archived by Internet Archive WayBackMachine search run on Aug. 15, 2012.).

International Search Report PCT/AU2010/001419 dated Dec. 21, 2010.

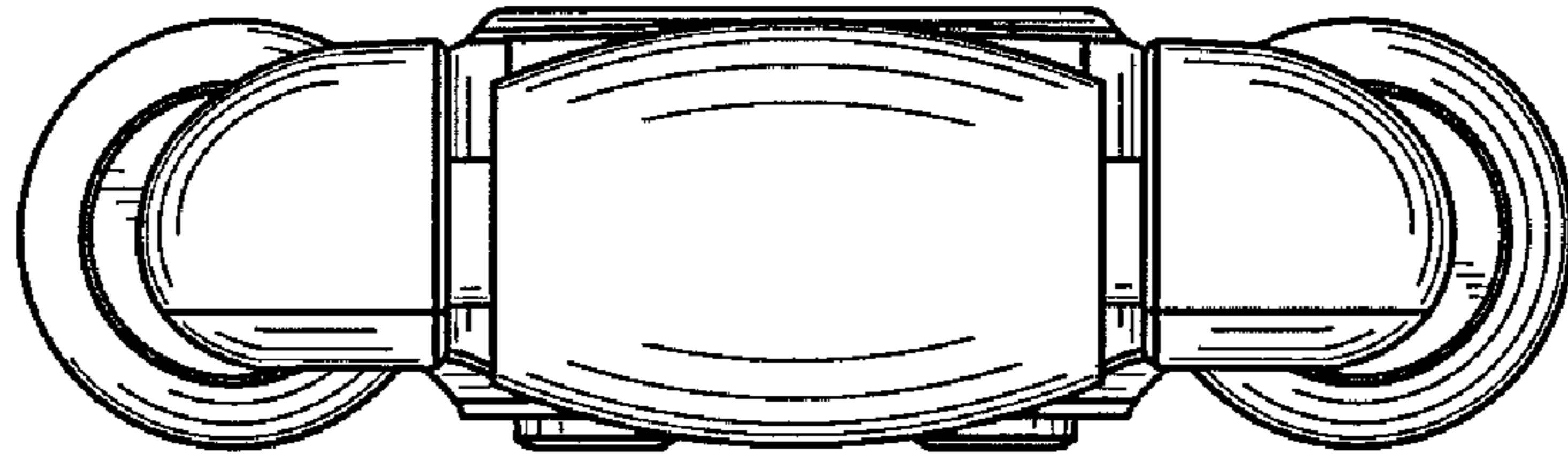
\* cited by examiner



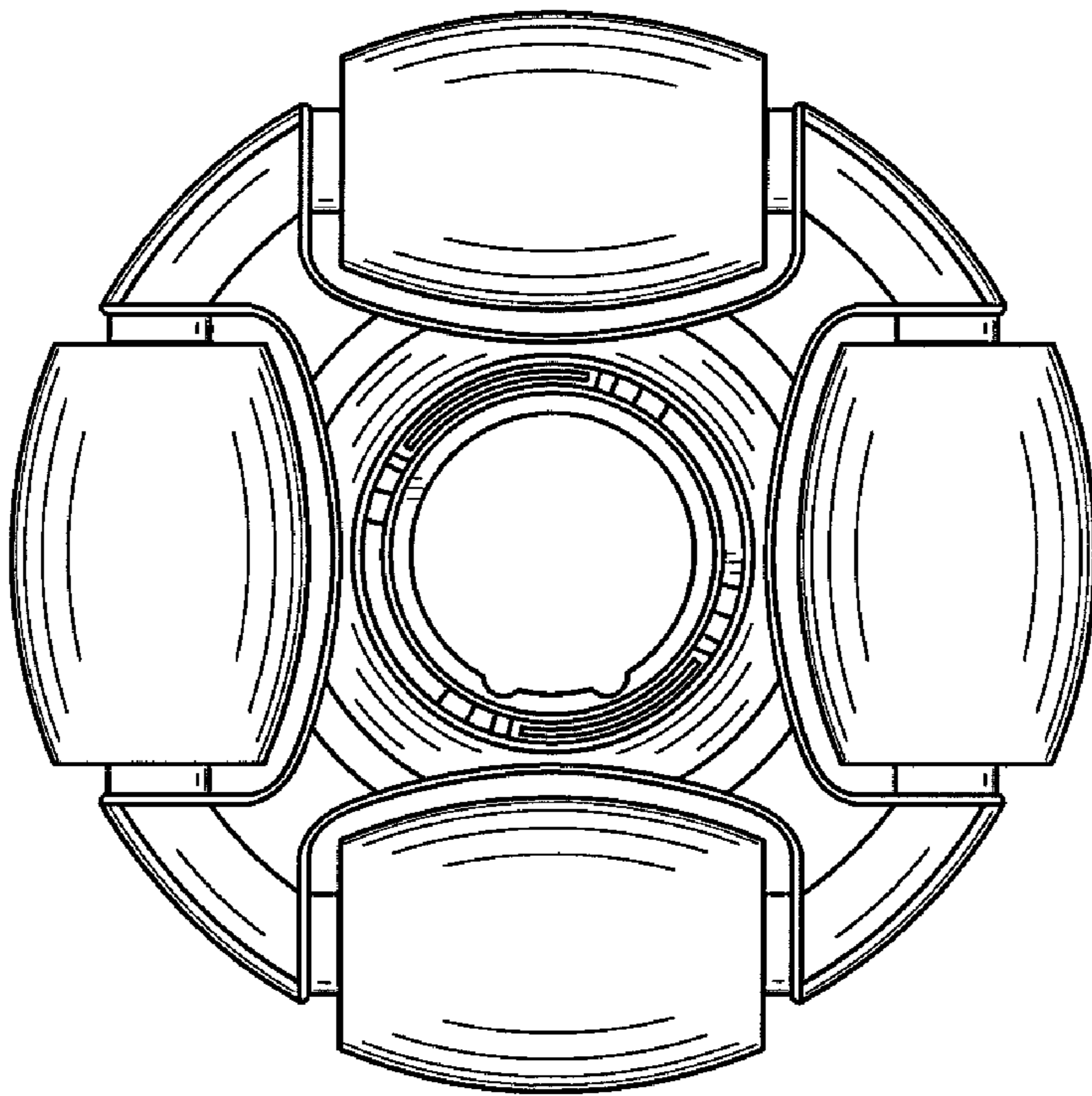
**FIG. 1**



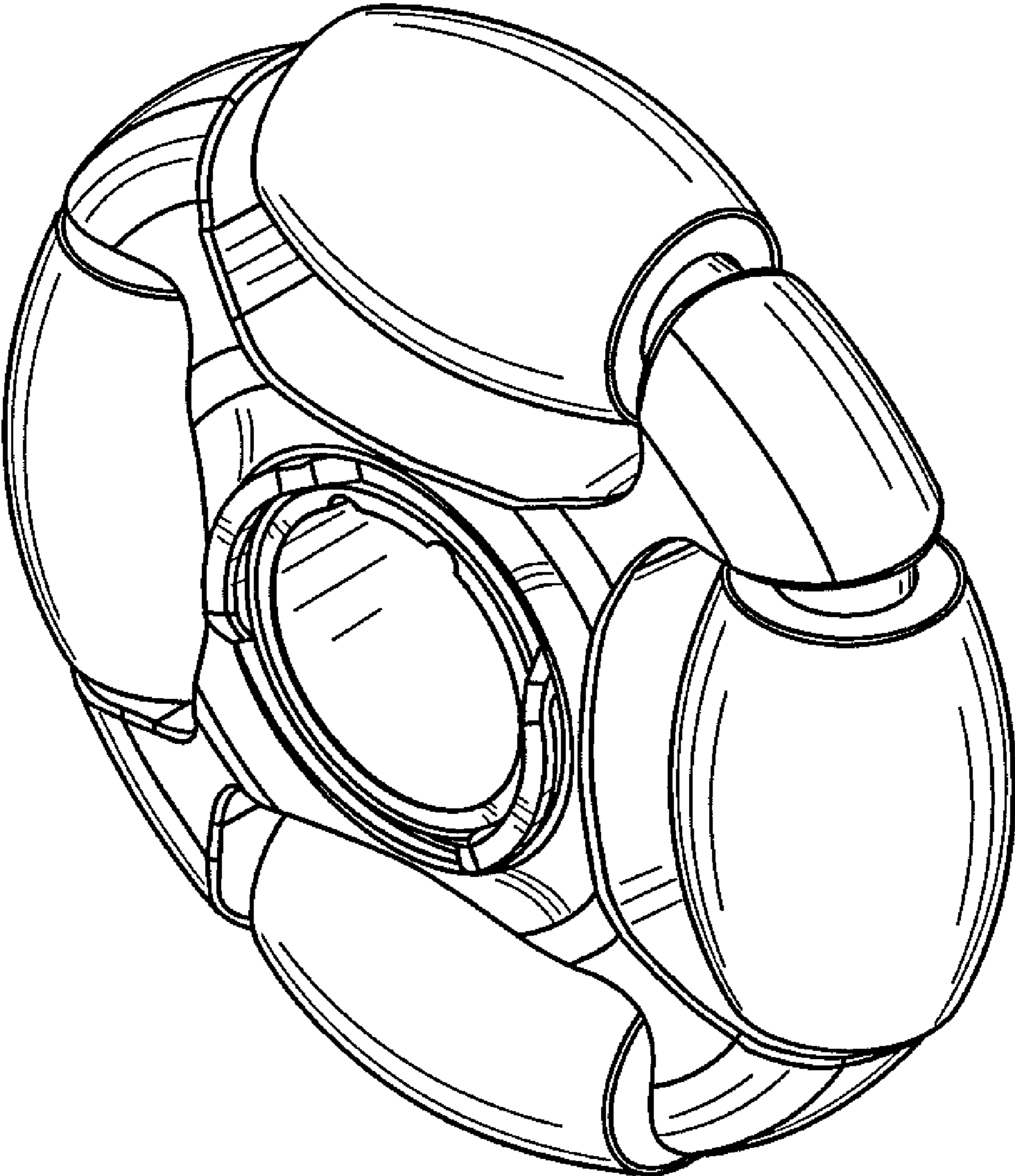
**FIG. 2**



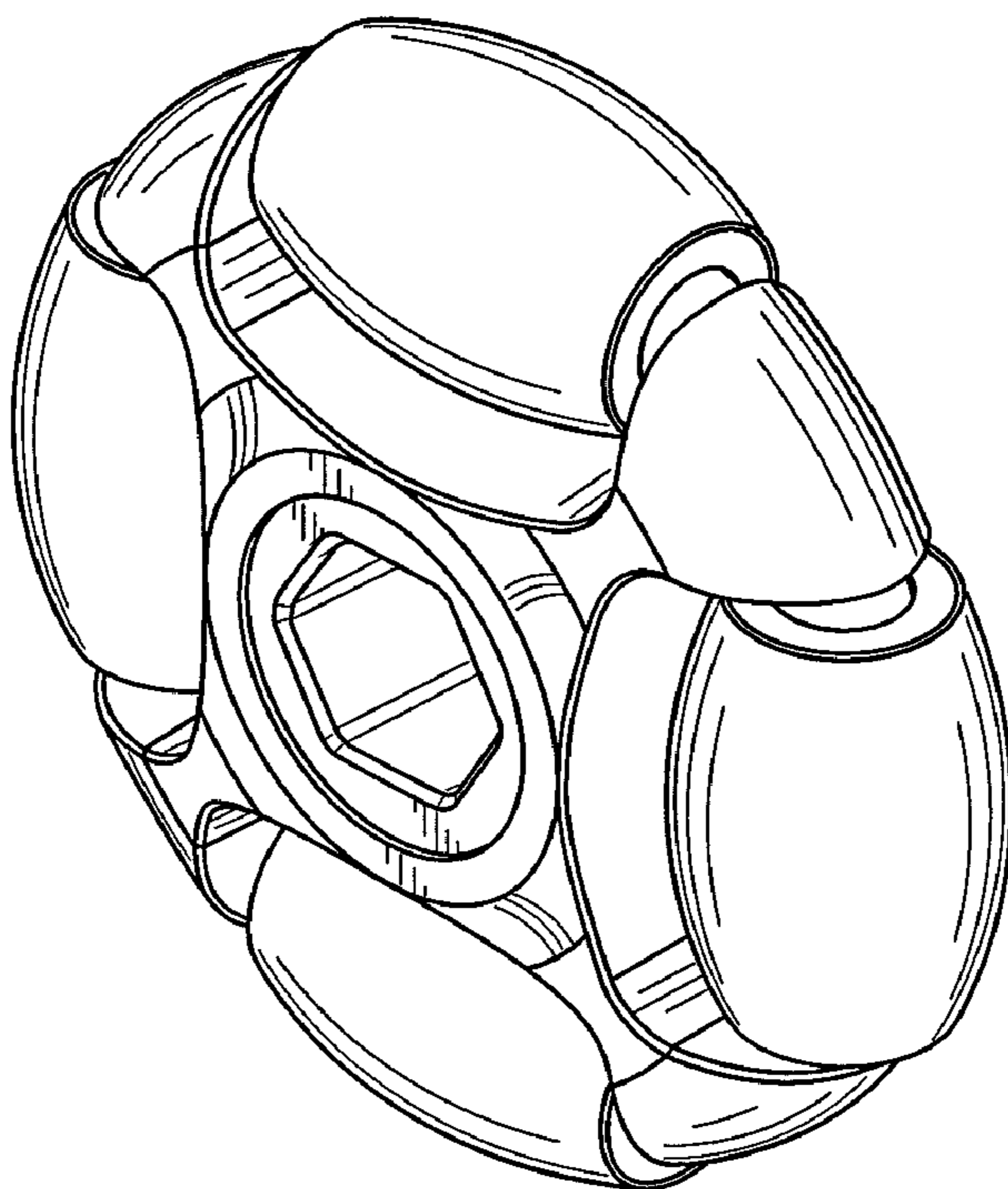
**FIG. 3**



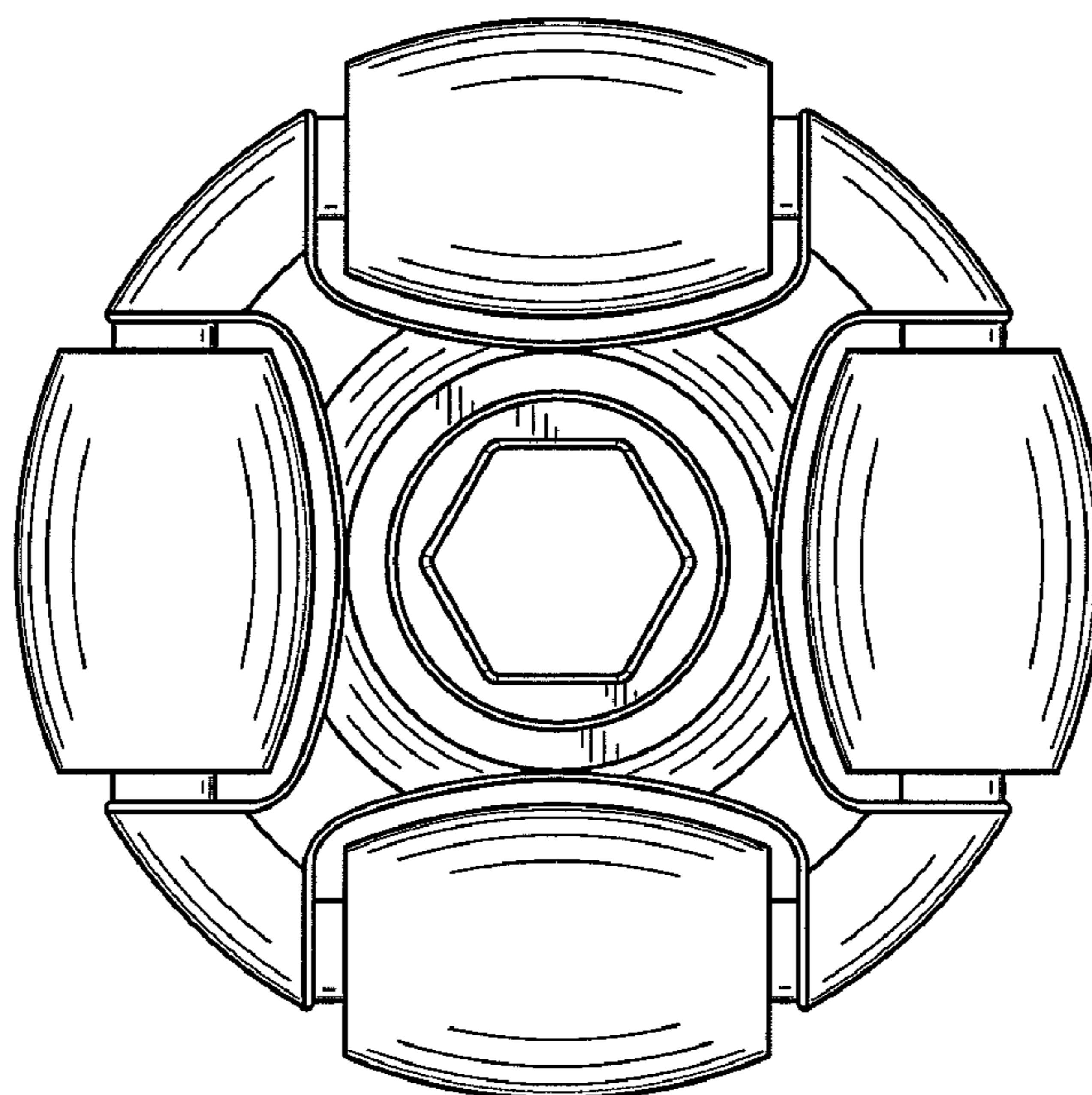
**FIG. 4**



**FIG. 5**



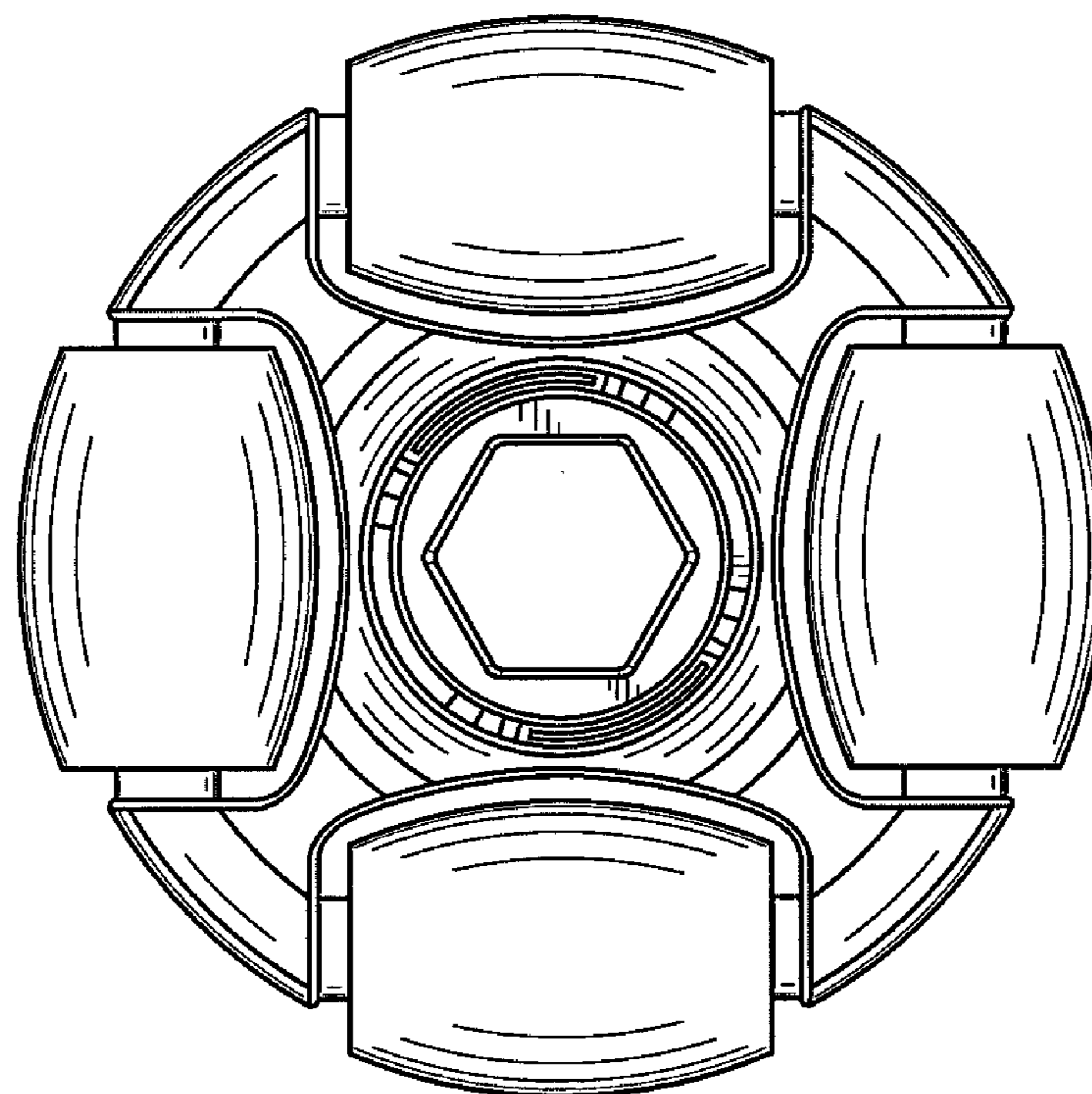
**FIG. 6**



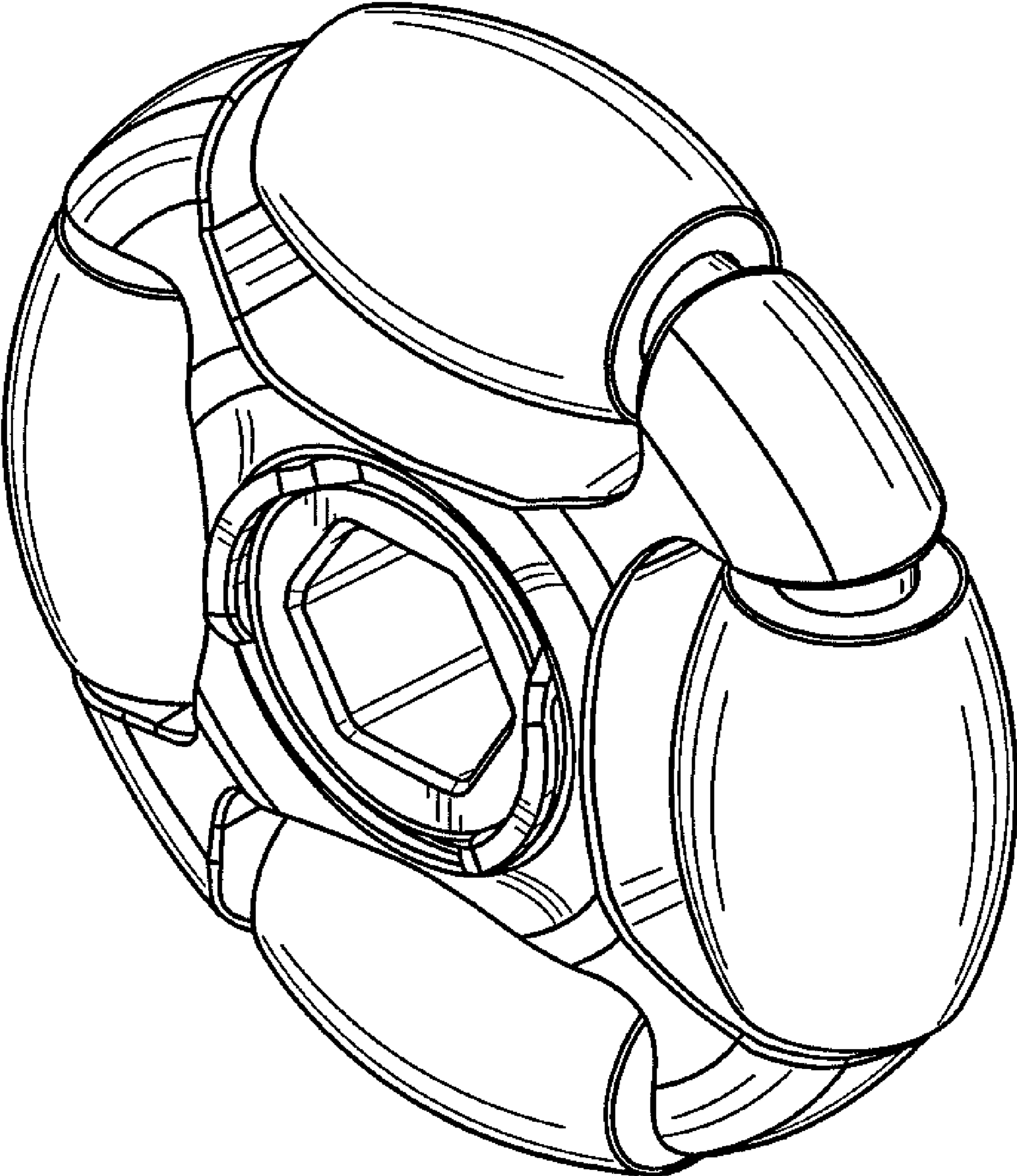
**FIG. 7**



**FIG. 8**



**FIG. 9**



**FIG. 10**