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(12) **United States Design Patent** (10) **Patent No.:** **US D784,917 S**  
**Schaedler et al.** (45) **Date of Patent:** **\*\* Apr. 25, 2017**

(54) **NON-PNEUMATIC TIRE**  
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(73) Assignee: **MTD Products Inc**, Valley City, OH (US)

1,678,014 A 7/1928 Manly  
1,702,081 A 2/1929 Hatfield  
2,620,844 A 12/1952 Lord  
2,742,941 A 4/1956 Johnson  
3,030,998 A \* 4/1962 Jensen ..... B60C 11/0311  
152/209.12

(Continued)

**FOREIGN PATENT DOCUMENTS**

EP 0 159 888 B1 3/1991  
EP 0708713 A1 5/1996

(Continued)

(\*\*) Term: **15 Years**

(21) Appl. No.: **29/546,279**

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**OTHER PUBLICATIONS**

Bothe, A.M., "Designed by Nature", Diesel Progress, North American Edition, pp. 44-45, Dec. 2008.

(Continued)

**Related U.S. Application Data**

(63) Continuation-in-part of application No. 29/539,200, filed on Sep. 11, 2015, which is a continuation of application No. 14/729,495, filed on Jun. 3, 2015.

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(51) **LOC (10) Cl.** ..... **12-15**

(52) **U.S. Cl.**  
USPC ..... **D12/592**

(57) **CLAIM**

The ornamental design for a non-pneumatic tire, as shown and described.

(58) **Field of Classification Search**  
USPC ..... D12/574, 579, 592, 605; D21/779  
CPC ..... B60C 11/0306; B60C 7/10; B60C 7/24  
See application file for complete search history.

**DESCRIPTION**

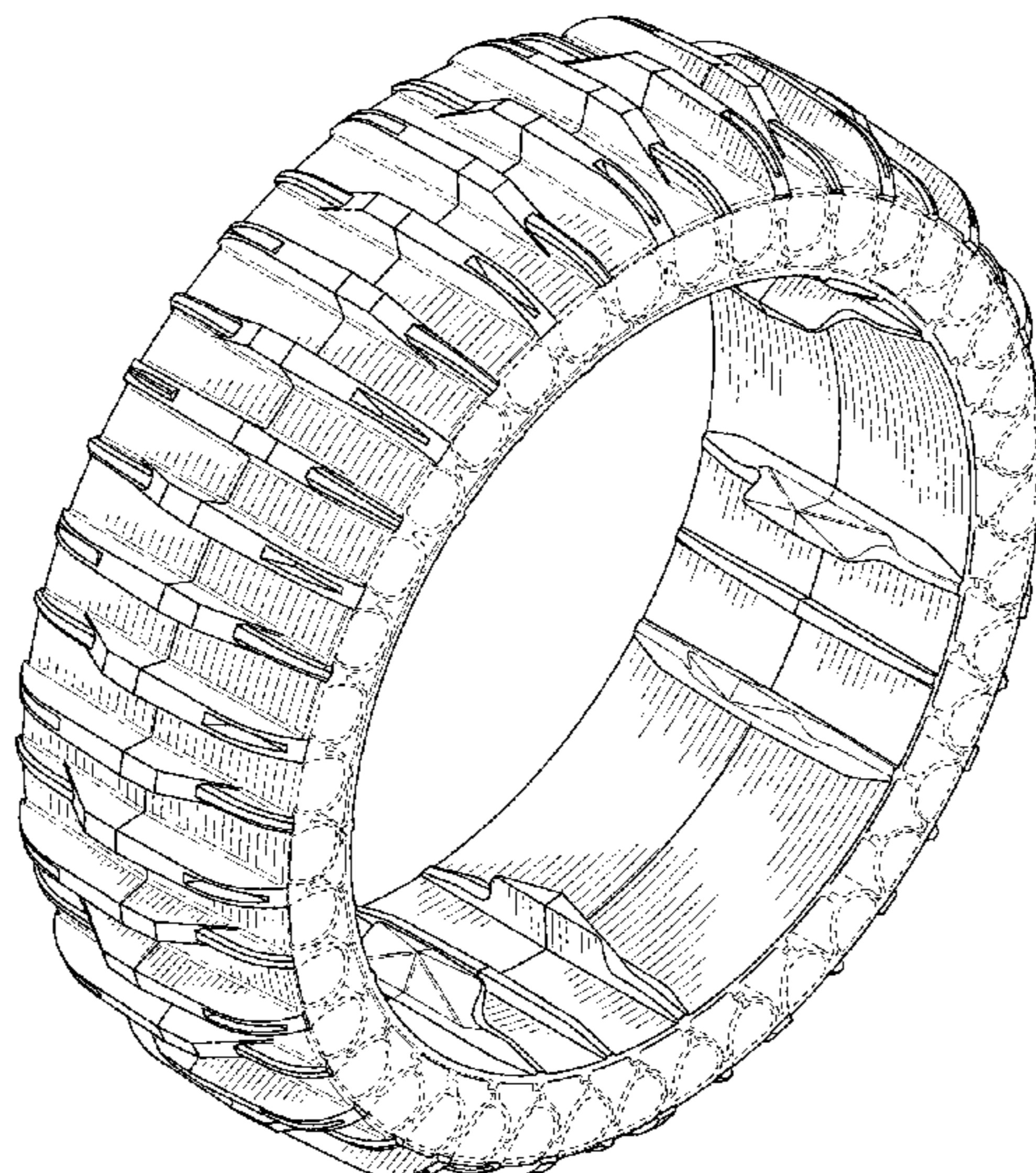
FIG. 1 is a perspective view of a non-pneumatic tire of the present invention;  
FIG. 2 is a front elevation view thereof;  
FIG. 3 is a rear elevation view thereof;  
FIG. 4 is a right side elevation thereof;  
FIG. 5 is a left side elevation view thereof;  
FIG. 6 is a top view thereof; and,  
FIG. 7 is a bottom view thereof.  
In the drawings, the broken lines depict environmental subject matter only and form no part of the claimed design.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

1,165,512 A 12/1915 Jordan  
1,343,154 A 6/1920 Ostmann  
1,365,539 A 1/1921 Pepple  
D57,363 S 3/1921 Lambert  
1,430,100 A 9/1922 Mitchell  
D63,848 S 1/1924 Granville  
1,495,083 A 5/1924 Krusemark  
D68,536 S 10/1925 Lenhoff  
1,584,785 A 5/1926 McCullough

**1 Claim, 5 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

4,226,273 A 10/1980 Long et al.  
 D291,428 S \* 8/1987 Shinomiya ..... D12/594  
 4,784,201 A 11/1988 Palinkas et al.  
 4,818,034 A 4/1989 Djerf  
 4,832,098 A 5/1989 Palinkas et al.  
 4,867,217 A 9/1989 Laurent  
 4,917,162 A 4/1990 De Longcamp  
 4,921,029 A 5/1990 Palinkas et al.  
 4,934,425 A 6/1990 Gajewski et al.  
 4,944,563 A 7/1990 Pinchbeck et al.  
 4,945,962 A 8/1990 Pajtas  
 5,023,040 A 6/1991 Gajewski et al.  
 5,042,544 A 8/1991 Dehasse  
 D329,413 S 9/1992 Chandler  
 5,174,634 A 12/1992 Blanck et al.  
 5,223,599 A 6/1993 Gajewski  
 5,265,659 A 11/1993 Pajtas et al.  
 5,343,916 A 9/1994 Duddey et al.  
 5,390,985 A 2/1995 Chandler  
 D364,841 S 12/1995 Brannan et al.  
 5,782,540 A 7/1998 Camfield et al.  
 D401,896 S 12/1998 Chandler et al.  
 D410,603 S 6/1999 Chandler et al.  
 6,079,582 A 6/2000 Nickel et al.  
 D434,463 S 11/2000 Lin  
 D434,464 S 11/2000 Lin  
 6,340,210 B1 1/2002 Handa et al.  
 D466,962 S 12/2002 Chen  
 6,533,007 B1 3/2003 McMannis  
 D477,273 S 7/2003 Christenbury et al.  
 D480,436 S 10/2003 Hong  
 6,681,822 B2 1/2004 Adams et al.  
 7,013,939 B2 3/2006 Rhyne et al.  
 D530,726 S \* 10/2006 Martin ..... D12/592  
 7,143,797 B2 12/2006 Vannan  
 D536,298 S 2/2007 Becker et al.  
 7,174,936 B2 2/2007 Becker et al.  
 7,201,194 B2 4/2007 Rhyne et al.  
 7,270,230 B2 9/2007 Smith  
 7,418,988 B2 9/2008 Cron et al.  
 7,523,773 B2 4/2009 Gabrys et al.  
 D602,422 S 10/2009 Laskowitz et al.  
 D602,852 S 10/2009 Laskowitz et al.  
 7,650,919 B2 1/2010 Rhyne et al.  
 D610,072 S \* 2/2010 Wallet ..... D12/579  
 D612,799 S \* 3/2010 Wallet ..... D12/579  
 7,743,806 B2 6/2010 Abe  
 7,762,296 B2 7/2010 Ganz et al.  
 D627,715 S 11/2010 Umstot et al.  
 D636,721 S \* 4/2011 Wallet ..... D12/579  
 7,950,428 B2 5/2011 Hanada et al.  
 8,056,593 B2 11/2011 Palinkas et al.  
 8,061,398 B2 11/2011 Palinkas et al.  
 8,104,524 B2 1/2012 Manesh et al.  
 8,109,308 B2 2/2012 Manesh et al.  
 8,113,253 B2 2/2012 Arakawa et al.  
 8,176,957 B2 5/2012 Manesh et al.  
 8,276,628 B2 10/2012 Hanada et al.  
 8,308,014 B2 11/2012 Chen  
 8,567,461 B2 10/2013 Williams et al.  
 8,651,156 B2 2/2014 Fadel et al.  
 D711,815 S 8/2014 Abe et al.  
 8,826,953 B2 9/2014 Pringiers  
 8,915,234 B2 12/2014 Gulke et al.  
 D727,247 S 4/2015 Martin et al.  
 8,999,480 B2 4/2015 Summers et al.  
 D748,568 S \* 2/2016 Helin ..... D12/570  
 2005/0133133 A1 6/2005 Becker et al.  
 2007/0029020 A1 2/2007 Wietharn et al.  
 2007/0119531 A1 5/2007 Steinke et al.  
 2007/0215259 A1 9/2007 Burns  
 2007/0240800 A1 10/2007 Sauerwald et al.  
 2008/0314486 A1 12/2008 Manesh et al.  
 2010/0132865 A1 6/2010 Iwase et al.  
 2010/0141019 A1 6/2010 Honiball et al.

2010/0200131 A1 8/2010 Iwase et al.  
 2010/0307653 A1 12/2010 Delfino et al.  
 2011/0024008 A1 2/2011 Manesh et al.  
 2011/0079335 A1 4/2011 Manesh et al.  
 2011/0126948 A1 6/2011 Boyer et al.  
 2011/0168313 A1 7/2011 Ma et al.  
 2011/0240189 A1 10/2011 Dutton  
 2011/0240193 A1 10/2011 Matsuda et al.  
 2012/0060991 A1 3/2012 Mun et al.  
 2012/0205017 A1 8/2012 Endicott  
 2012/0234444 A1 9/2012 Palinkas et al.  
 2013/0233458 A1 9/2013 Meraldi et al.  
 2013/0278044 A1 10/2013 Dotson et al.  
 2013/0319591 A1 12/2013 Van De Wiele  
 2014/0000777 A1 1/2014 Choi et al.  
 2014/0034219 A1 2/2014 Chadwick et al.  
 2014/0062171 A1 3/2014 Martin et al.  
 2014/0083581 A1 3/2014 Schaedler et al.  
 2014/0238561 A1 8/2014 Choi et al.  
 2014/0326374 A1 11/2014 Cron et al.  
 2014/0367007 A1 12/2014 Thompson  
 2015/0034222 A1 2/2015 Martin et al.  
 2015/0202926 A1 \* 7/2015 Fredenburg ..... B60C 11/0311  
 152/209.12  
 2016/0214435 A1 \* 7/2016 Schaedler ..... B60C 7/24

FOREIGN PATENT DOCUMENTS

EP 0 530 240 B1 8/1996  
 EP 0 802 865 B1 12/2001  
 JP H 01311902 A 12/1989  
 JP H 01314602 A 12/1989  
 JP 2007137207 A 6/2007  
 JP 2008037262 A 2/2008  
 JP 2009-269413 A 11/2009  
 JP 2013079037 A 5/2013  
 KR 20110031693 A 3/2011  
 KR 20120065690 A 6/2012  
 KR 20120070469 A 6/2012  
 KR 101430368 B1 8/2014  
 NO WO 2007/137858 A2 12/2007  
 WO WO 97/18959 A1 5/1997  
 WO WO 2008/050503 A1 5/2008  
 WO WO 2014/148824 A1 9/2014

OTHER PUBLICATIONS

Michelin, "How the Michelin X Tweel Airless Radial Tire Works", <http://www.michelintweel.com/aboutTweel.html>, 3 pages, Michelin 2012-2014.  
 Reilly, M.B. et al., "Student's Tire Design is on a Roll, Ranks in Top 100 of More than 11,000 International Contest Entries", University of Cincinnati, 3 pages, Jun. 26, 2013.  
 Polaris Defense, Terrainarmor Non-Pneumatic Tires, Polaris Industries, Inc., 2 pages, 2013.  
 "Yokohama's Airless Concept Tire—A Non-Pneumatic Secret?", <http://www.airless-tire.com/yokohama-airless-concept-tire/> 2 pages, Oct. 28, 2012.  
 Vijayenthiran, V., "Hankook is the Latest to Roll out Airless Tire Concept", MotorAuthority.com, 3 pages, Sep. 9, 2013.  
 "Airless Tires", <http://www.bridgestonetire.com/tread-and-tread/tire-talk-airless-concept-tires>, 2 pages, Sep. 5, 2014.  
 Shankland, S., "Out with the Air: Bridgestone Shows off Tires You Never have to Inflate", CNET Magazine, <http://www.cnet.com/news/out-with-the-air-bridgestone-shows-off-non-pneumatic-tires/>, 2 pages, Oct. 3, 2014.  
 "BriTek's Brilliant Airless Bicycle Tire Reinvents the Wheel", <http://inhabitat.com/britek-reinvents-the-wheel-creates-airless-bicycle-tires/>, 2 pages, May 5, 2015.  
 Office Action issued by the USPTO in U.S. Appl. No. 14/729,495 on Sep. 28, 2016.  
 Office Action issued by the USPTO in Design U.S. Appl. No. 29/539,200 on Oct. 13, 2016.  
 Office Action issued by the USPTO in Design U.S. Appl. No. 29/546,275 on Oct. 13, 2016.

(56)

**References Cited**

OTHER PUBLICATIONS

Office Action issued by the USPTO in Design U.S. Appl. No. 29/546,281 on Oct. 13, 2016.

Notice of Allowance issued by the USPTO in Design U.S. Appl. No. 29/546,285 on Oct. 18, 2016.

\* cited by examiner

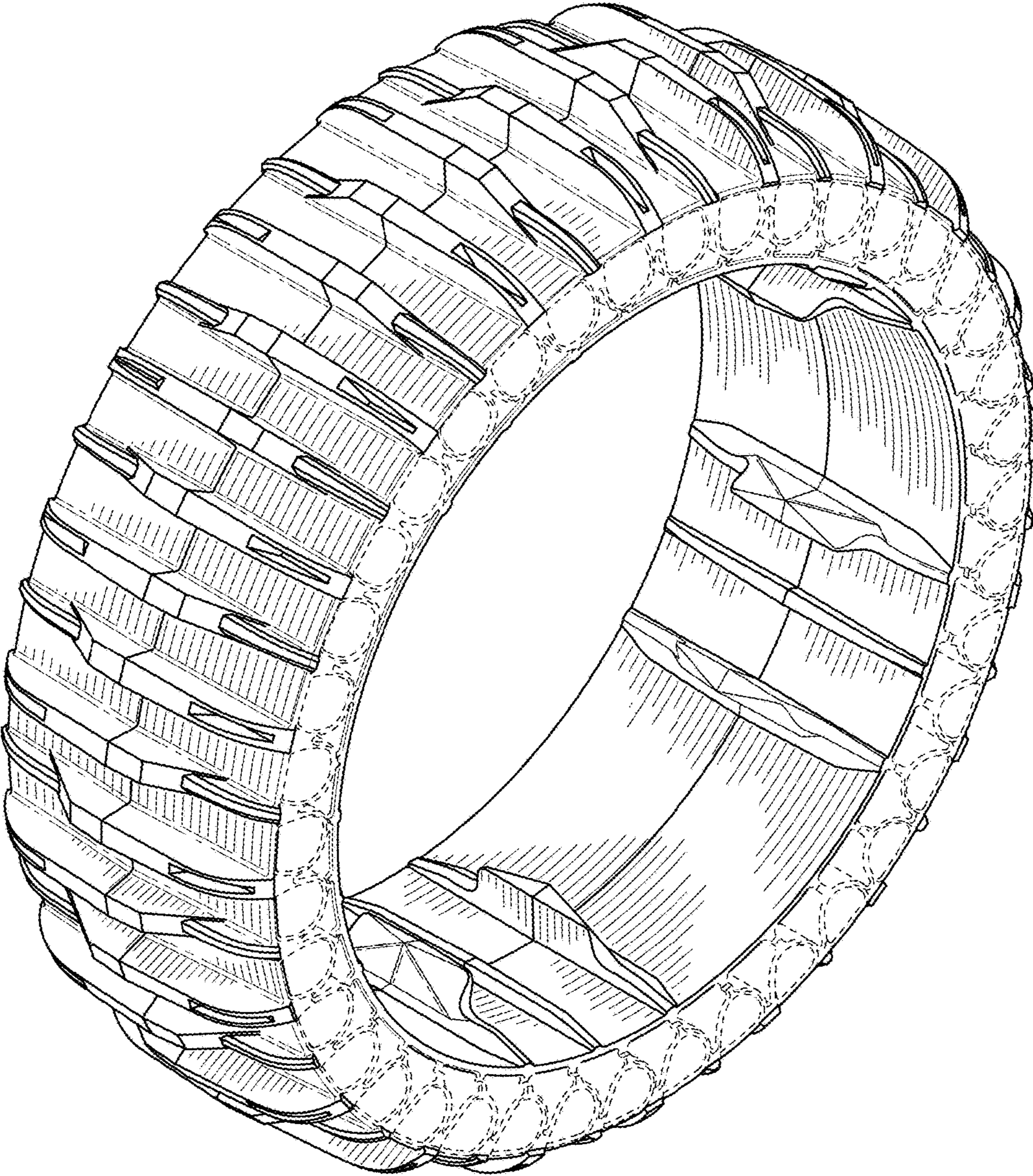


FIG. 1

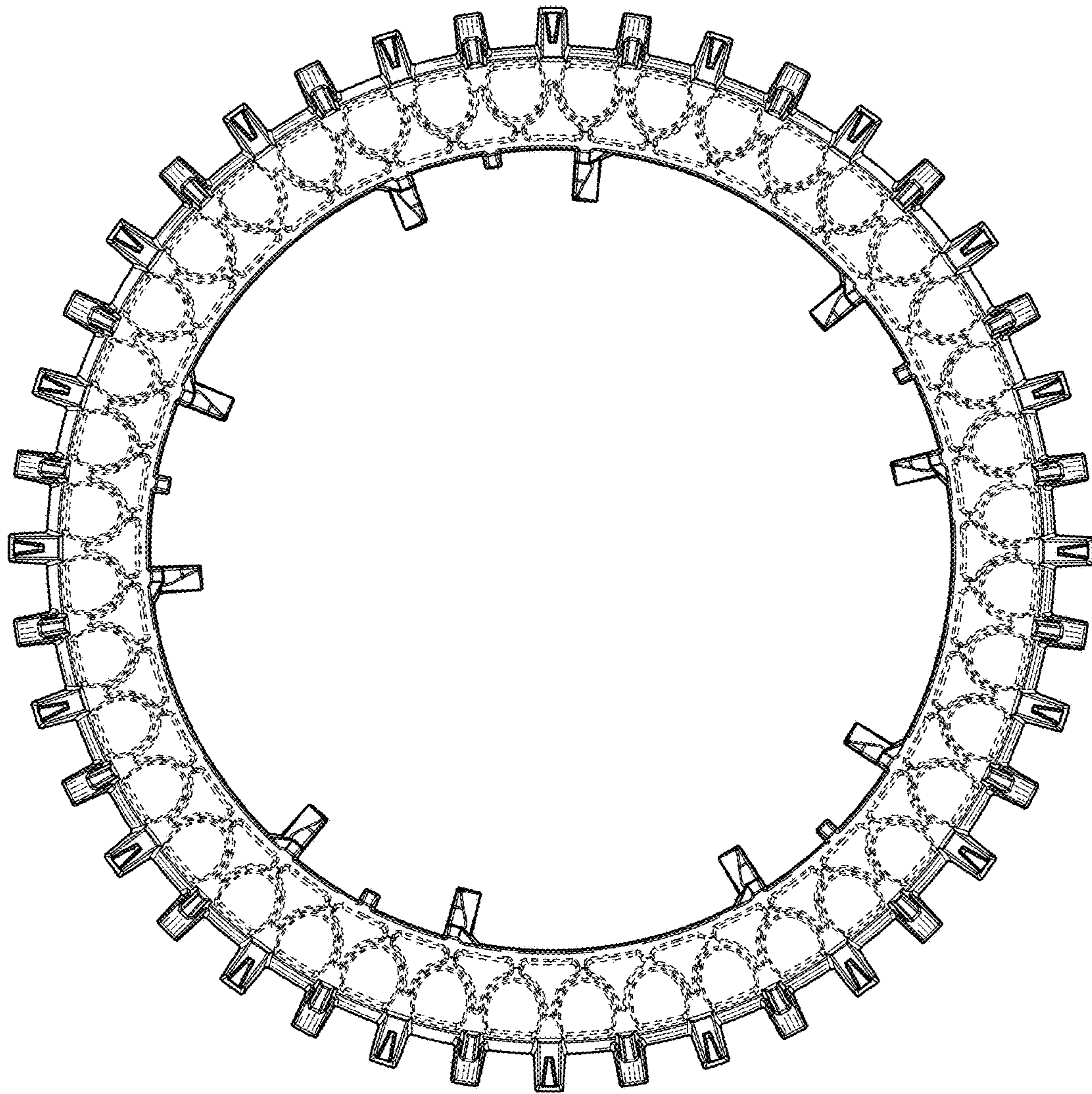


FIG. 2

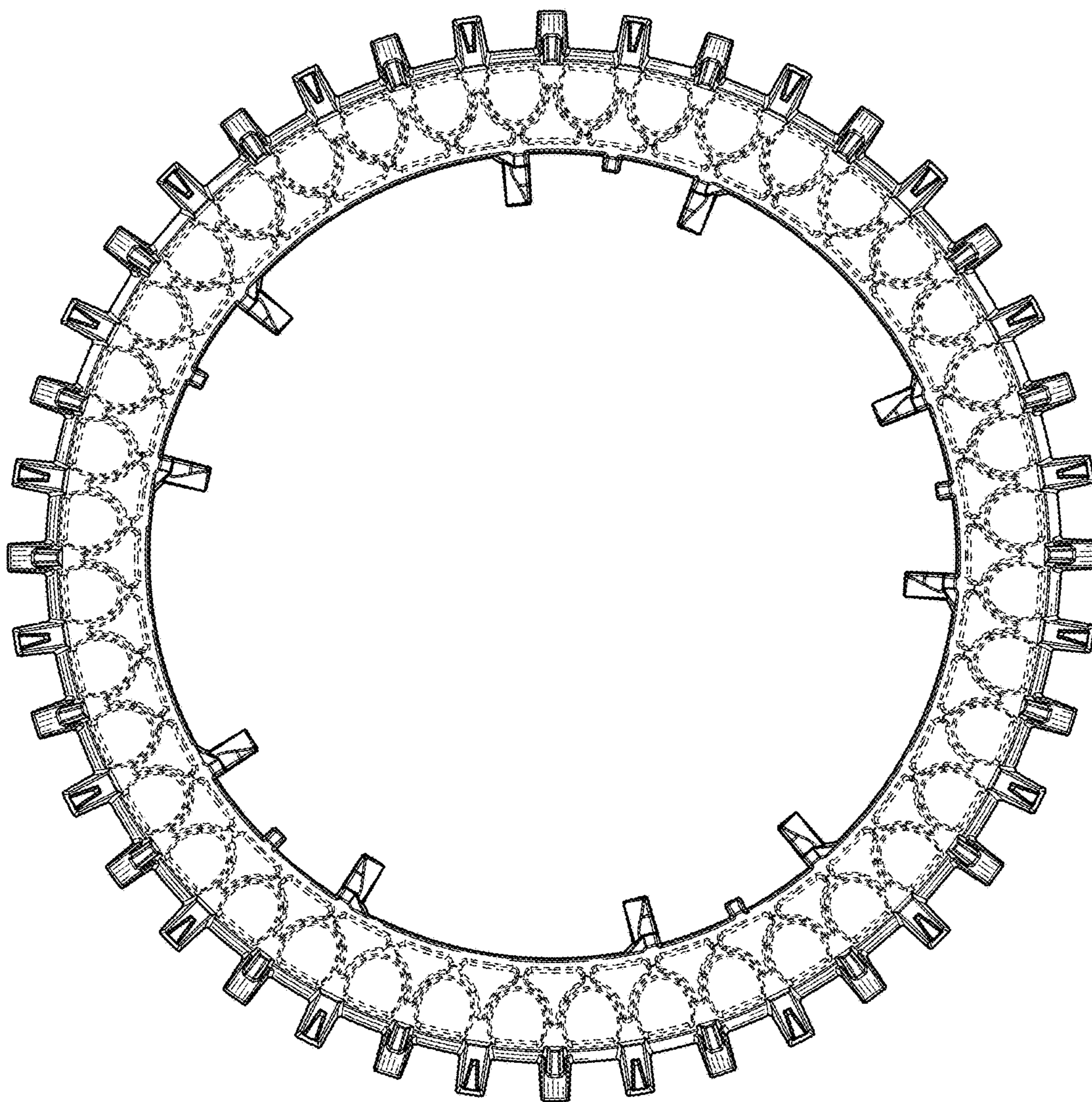


FIG. 3

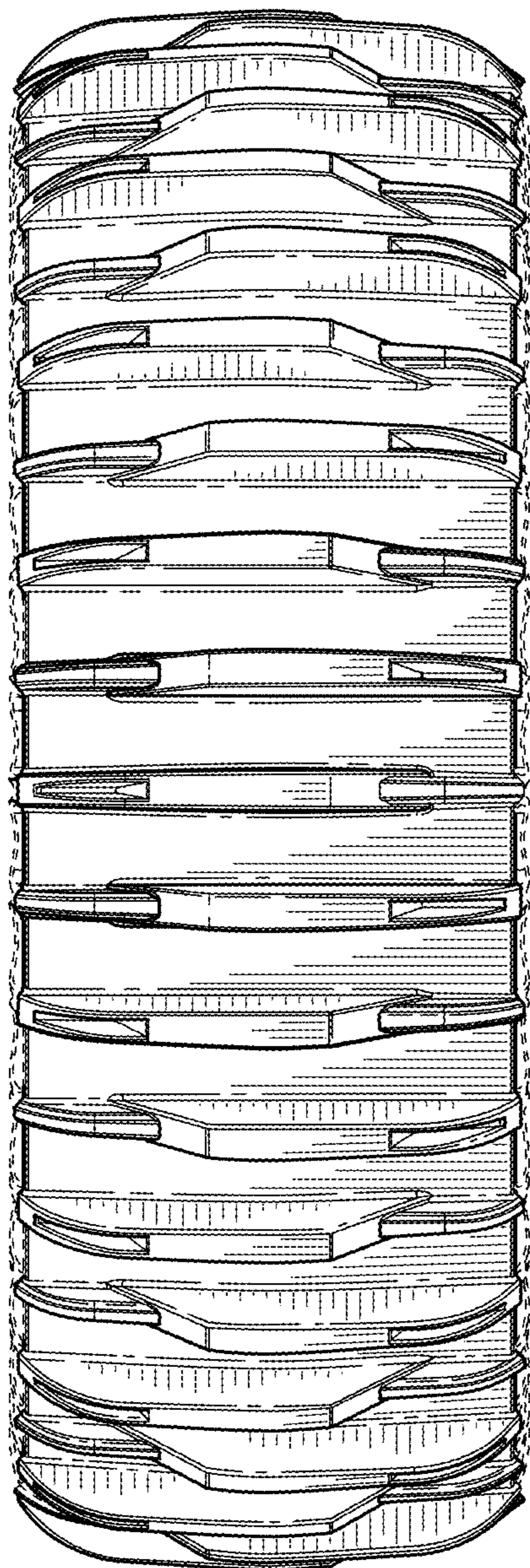


FIG. 4

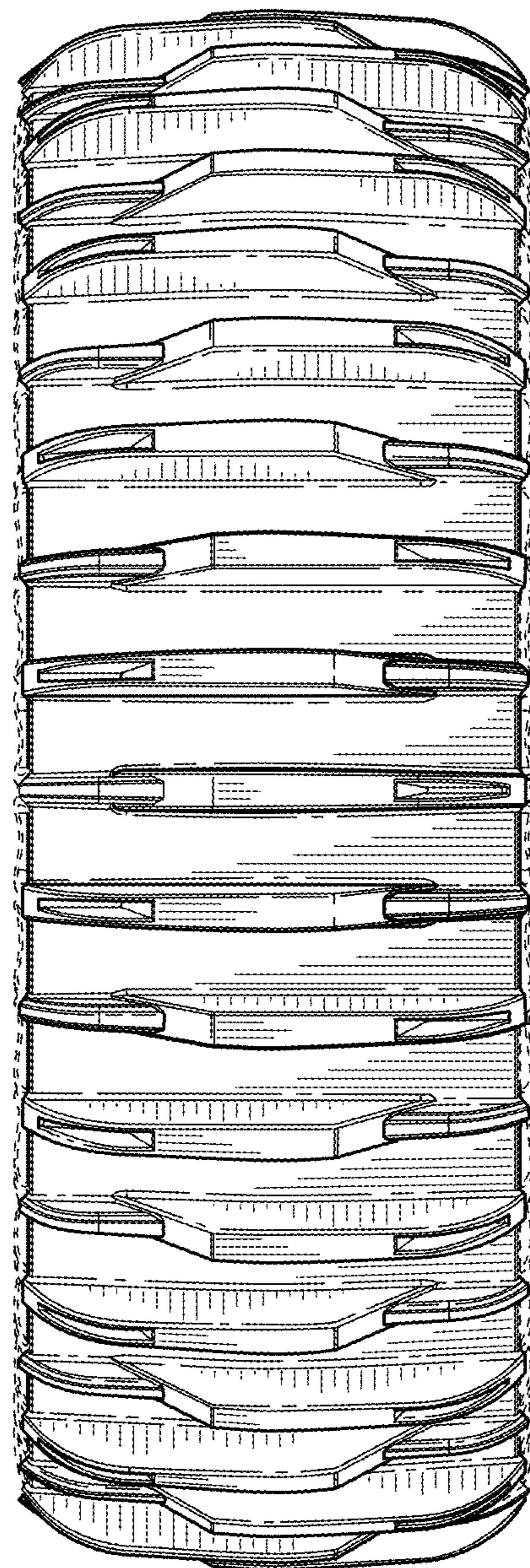


FIG. 5

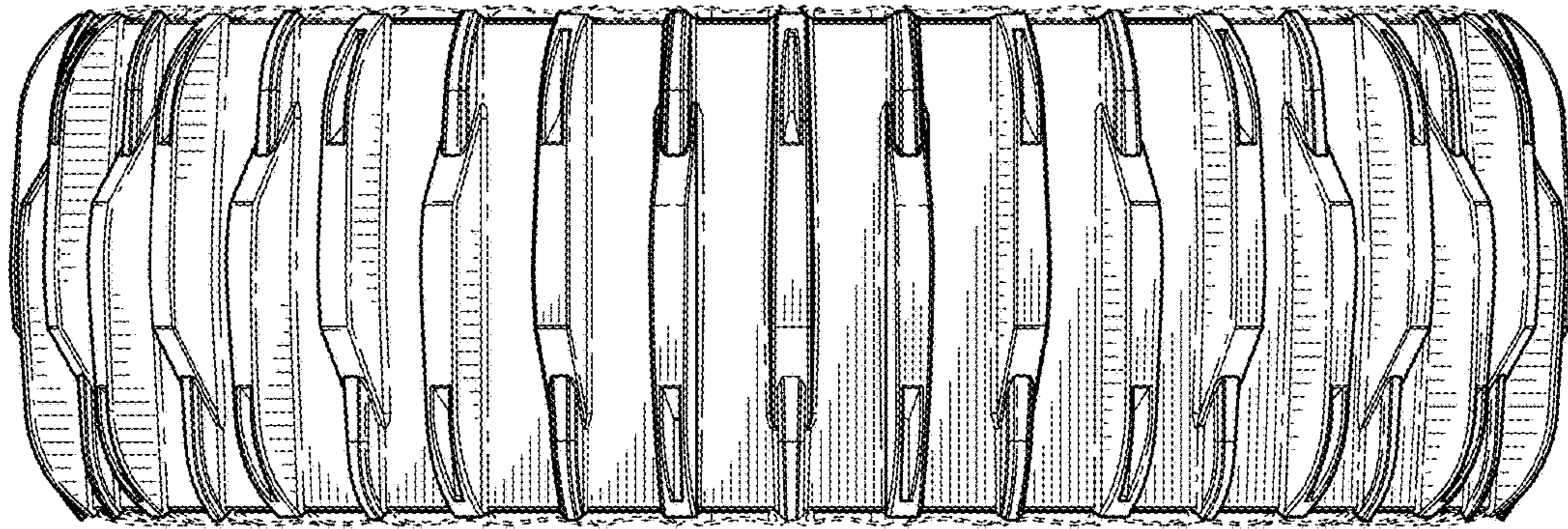


FIG. 6

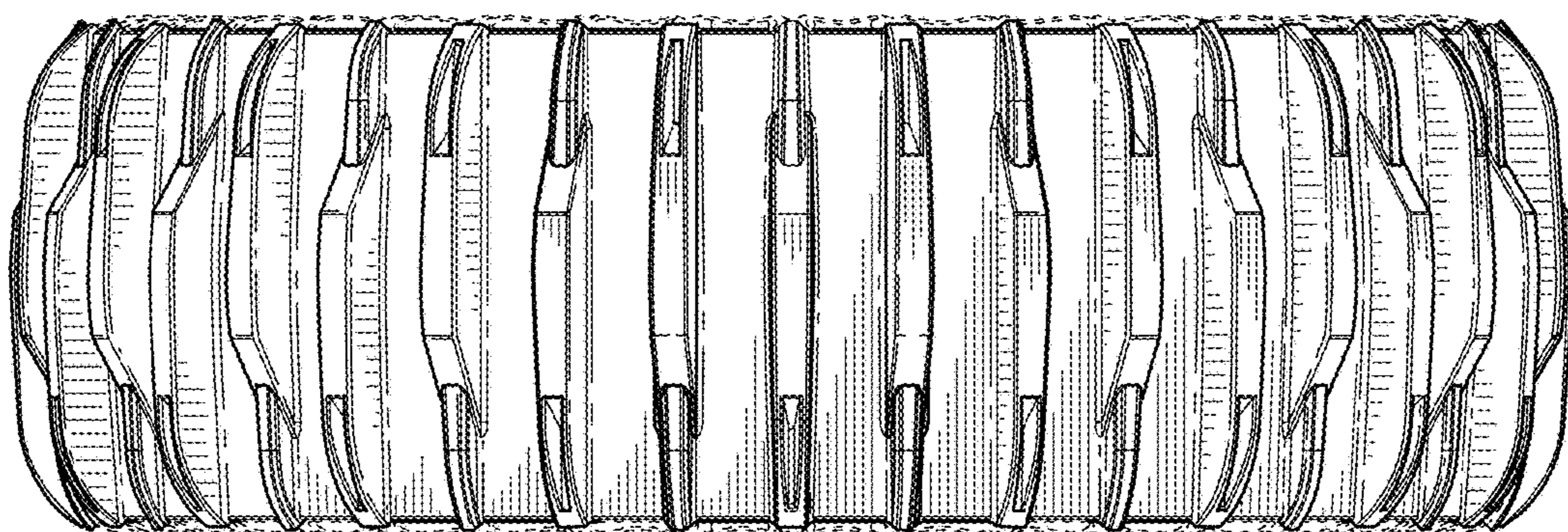


FIG. 7