

US00D952830S

(12) **United States Design Patent** (10) **Patent No.:** **US D952,830 S**
Robinson et al. (45) **Date of Patent:** **** May 24, 2022**

(54) **FAN SHROUD**
(71) Applicant: **Regal Beloit America, Inc.**, Beloit, WI (US)
(72) Inventors: **Jeevan Gnana Robinson**, Fort Wayne, IN (US); **Neha Kumari**, North Sidney, OH (US); **Yunpeng Yang**, Fort Wayne, IN (US)
(73) Assignee: **REGAL BELOIT AMERICA, INC.**, Beloit, WI (US)

5,326,225 A * 7/1994 Gallivan F04D 29/164
416/169 A
5,466,120 A 11/1995 Takeuchi et al.
D368,772 S 4/1996 Liao
D453,960 S * 2/2002 Shelby D23/411
D454,947 S 3/2002 Wagner
(Continued)

(**) Term: **15 Years**
(21) Appl. No.: **29/716,500**
(22) Filed: **Dec. 10, 2019**
(51) **LOC (13) Cl.** **23-03**
(52) **U.S. Cl.**
USPC **D23/412**
(58) **Field of Classification Search**
USPC D23/328, 332, 333, 370-383, 385,
D23/335-337, 341, 351, 352, 354,
D23/411-414
CPC .. F04D 25/084; F04D 25/086; F04D 25/0673;
F04D 29/646; F04D 25/08; F04D 29/32;
F04D 29/52; F04D 29/324; F04D 29/38
See application file for complete search history.

FOREIGN PATENT DOCUMENTS

CN 201606274 U 10/2010
CN 202900765 U 4/2013
(Continued)

OTHER PUBLICATIONS

Partial European Search Report for Application EP20210474.1 dated Apr. 21, 2021; 12 pp.
(Continued)

Primary Examiner — Sharon S Oum
(74) *Attorney, Agent, or Firm* — Armstrong Teasdale LLP

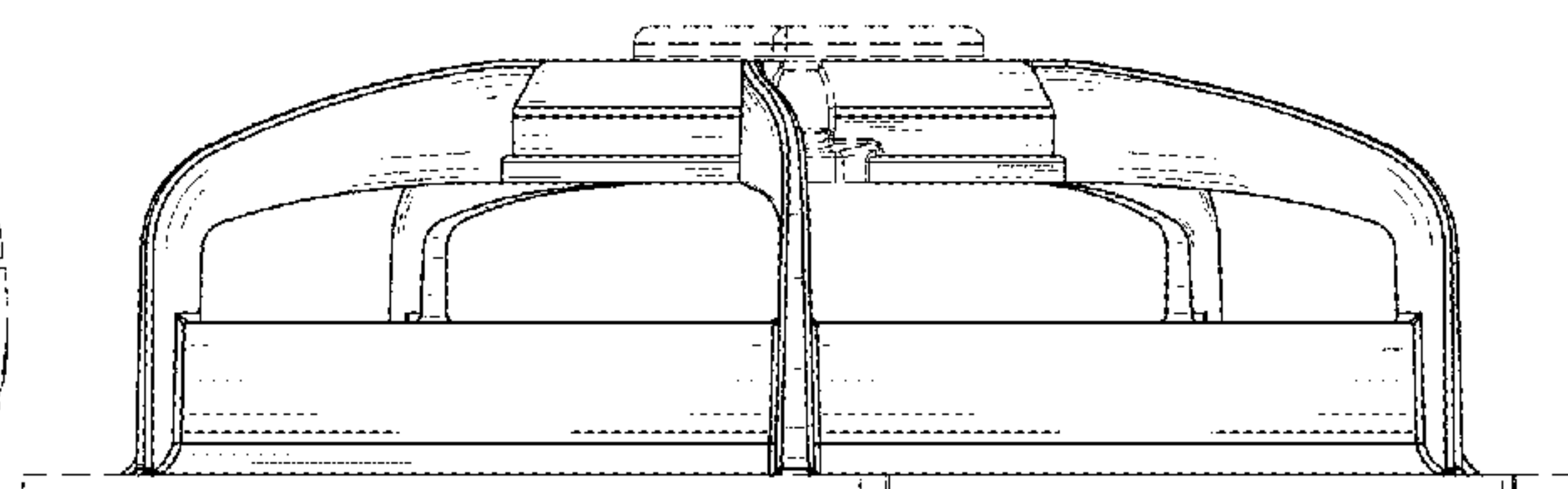
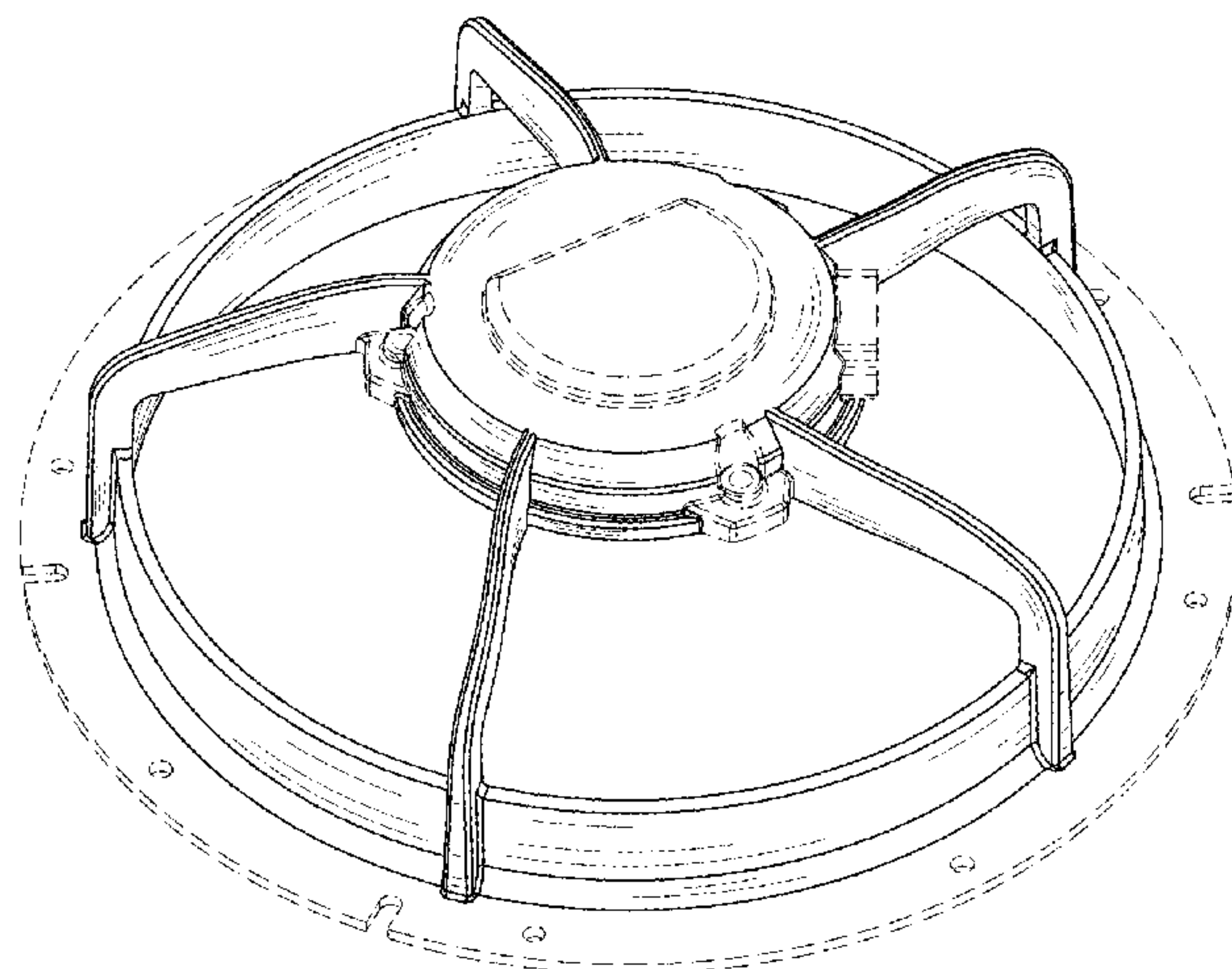
(57) **CLAIM**

We claim the ornamental design for a fan shroud, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a fan shroud showing the new design.
FIG. 2 is a front view thereof.
FIG. 3 is a rear view thereof.
FIG. 4 is right side view thereof.
FIG. 5 is a left side view thereof.
FIG. 6 is a top view thereof.
FIG. 7 is a bottom view thereof; and,
FIG. 8 is a cross-sectional view thereof taken along line "8-8" of FIG. 6.
The broken lines illustrate portions of the fan shroud that form no part of the claimed design.

1 Claim, 8 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D486,905 S 2/2004 Wang
 D507,343 S 7/2005 Chiu et al.
 D507,641 S 7/2005 Chiu et al.
 D509,583 S * 9/2005 Graham D23/411
 D509,584 S 9/2005 Li et al.
 D513,799 S * 1/2006 Li D23/411
 6,987,336 B2 * 1/2006 Streng F04D 29/668
 310/51
 D515,688 S 2/2006 Li
 D558,324 S 12/2007 Hong
 D559,968 S 1/2008 Lee et al.
 D560,789 S 1/2008 Lee et al.
 D561,888 S 2/2008 Yang et al.
 D564,653 S 3/2008 Iwase et al.
 D566,829 S 4/2008 Parker et al.
 D570,996 S 6/2008 Harman et al.
 D570,999 S 6/2008 Harman et al.
 D571,000 S 6/2008 Bei et al.
 D585,130 S 1/2009 Harman et al.
 D600,340 S 9/2009 Parker et al.
 7,594,800 B2 * 9/2009 Teipen F03D 1/0691
 416/247 R
 D620,096 S * 7/2010 Underwood D23/379
 D626,643 S 11/2010 Situ et al.
 D632,779 S 2/2011 Spaggiari
 D645,134 S 9/2011 Lee et al.
 D654,997 S 2/2012 Spaggiari
 8,128,372 B2 3/2012 Best
 8,167,564 B2 5/2012 Streng et al.
 D683,840 S 6/2013 Rasmussen
 D692,119 S 10/2013 Rasmussen
 D704,323 S 5/2014 Rasmussen
 D715,904 S * 10/2014 Tate D23/414
 D725,257 S 3/2015 Huang et al.
 D726,897 S * 4/2015 Hatz D23/411
 D727,490 S 4/2015 Hatz
 D750,211 S 2/2016 Arai et al.
 D755,363 S 5/2016 Rasmussen
 D755,945 S 5/2016 Arai et al.
 D755,946 S 5/2016 Arai et al.
 D755,947 S 5/2016 Arai et al.
 9,494,162 B2 11/2016 Haaf et al.
 D773,632 S 12/2016 Panyasahabade
 9,651,054 B2 5/2017 Chang et al.
 9,803,649 B2 10/2017 Ragg et al.
 D804,647 S 12/2017 Chang et al.
 D806,225 S 12/2017 Chang et al.
 D812,732 S 3/2018 Murakami et al.
 D829,878 S 10/2018 Sallander
 10,260,508 B2 4/2019 Chang et al.
 D854,143 S 7/2019 Yu
 D858,737 S 9/2019 Tadokoro et al.
 10,428,830 B2 10/2019 Lee et al.
 D886,275 S 6/2020 Avedon
 D898,182 S * 10/2020 Zhang D23/411
 D910,834 S 2/2021 Wang et al.
 D930,808 S * 9/2021 Hsu D23/370
 2004/0212262 A1 10/2004 Chiu et al.
 2005/0074336 A1 4/2005 Li et al.
 2005/0232765 A1 10/2005 Watanabe et al.

2005/0271529 A1 12/2005 Stommel et al.
 2006/0073018 A1 4/2006 Girod et al.
 2007/0020103 A1 1/2007 Spaggiari
 2007/0048138 A1 * 3/2007 Horski F04D 29/526
 416/179
 2007/0274821 A1 11/2007 Yoshida
 2009/0155080 A1 6/2009 Yu
 2009/0191055 A1 7/2009 Li et al.
 2011/0091315 A1 4/2011 Chang et al.
 2012/0057966 A1 3/2012 Chen et al.
 2012/0114498 A1 5/2012 Hsieh et al.
 2014/0064973 A1 3/2014 Ren et al.
 2017/0051758 A1 2/2017 Sun
 2017/0067486 A1 3/2017 Cho et al.
 2017/0211589 A1 7/2017 Murakami et al.
 2018/0112675 A1 4/2018 Neff et al.
 2019/0093669 A1 * 3/2019 Inouchi F04D 29/545
 2019/0145429 A1 * 5/2019 Ishida F04D 29/661
 417/354
 2019/0162201 A1 5/2019 Huang et al.
 2019/0195232 A1 6/2019 Sakurada et al.
 2019/0264708 A1 8/2019 Chang et al.
 2019/0389345 A1 12/2019 Kim
 2020/0116159 A1 4/2020 Yang et al.
 2020/0158129 A1 5/2020 Iwata et al.

FOREIGN PATENT DOCUMENTS

CN 205047519 U 2/2016
 CN 208073869 U 11/2018
 CN 209083612 U 7/2019
 DE 4215504 A1 11/1993
 EP 1732375 B1 8/2009
 EP 2211444 A2 7/2010
 EP 1897209 B1 8/2011
 EP 2691654 A1 2/2014
 EP 2696480 A2 2/2014
 EP 2771581 A1 9/2014
 EP 2691655 B1 5/2016
 EP 3172447 A1 5/2017
 EP 3274589 A1 1/2018
 EP 3029336 B1 2/2018
 EP 3498506 A1 6/2019
 JP H03141900 A 6/1991
 JP H09317686 A 12/1997
 JP 2015108316 A 6/2015
 WO 2011038884 A1 4/2011
 WO 2013110516 A1 8/2013
 WO 2015000676 A1 1/2015
 WO 2015075103 A1 5/2015
 WO 2015124487 A2 8/2015

OTHER PUBLICATIONS

EPO Extended European Search Report for EP Patent Application 20212429.3 dated May 4, 2021; 8 pp.
 EPO Extended European Search Report for EP Patent Application 20210474.1 dated Jun. 29, 2021; 11 pp.
 Extended European Search Report for Patent Application EP 20212427.7 dated Apr. 30, 2021; 8 pp.

* cited by examiner

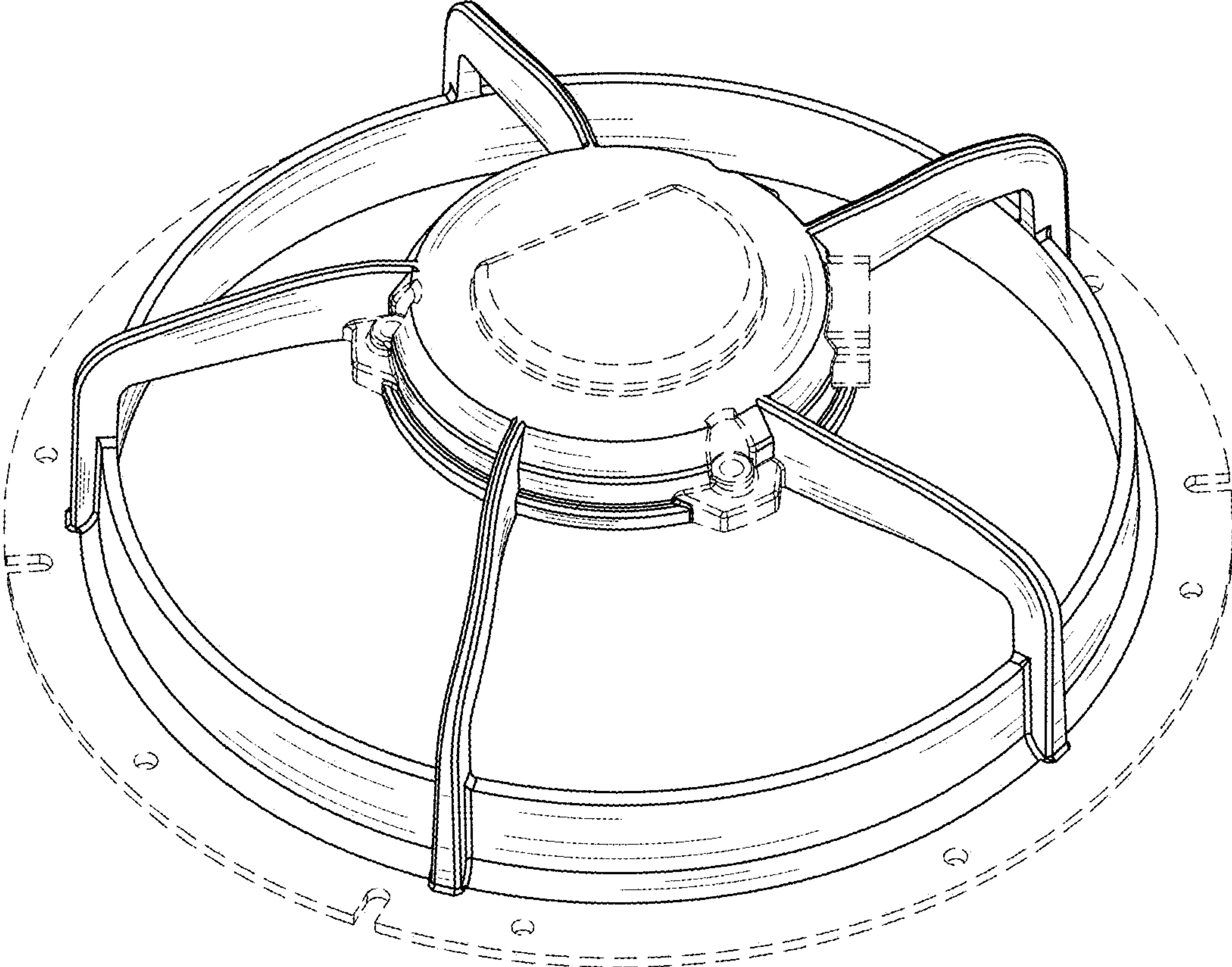


FIG. 1

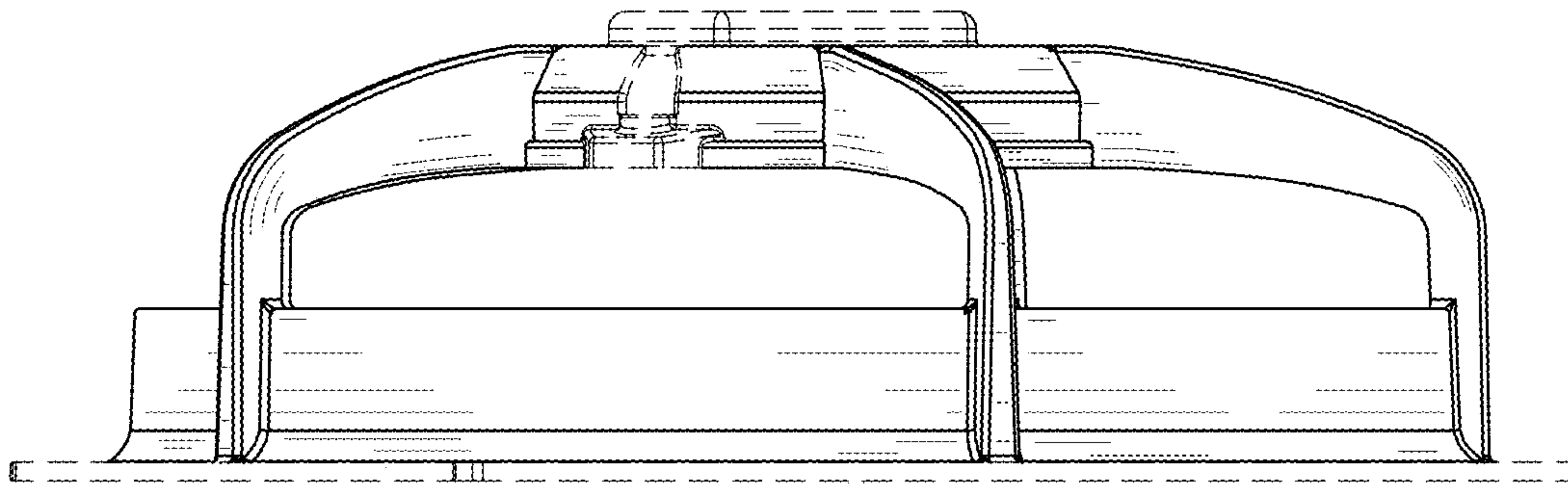


FIG. 2

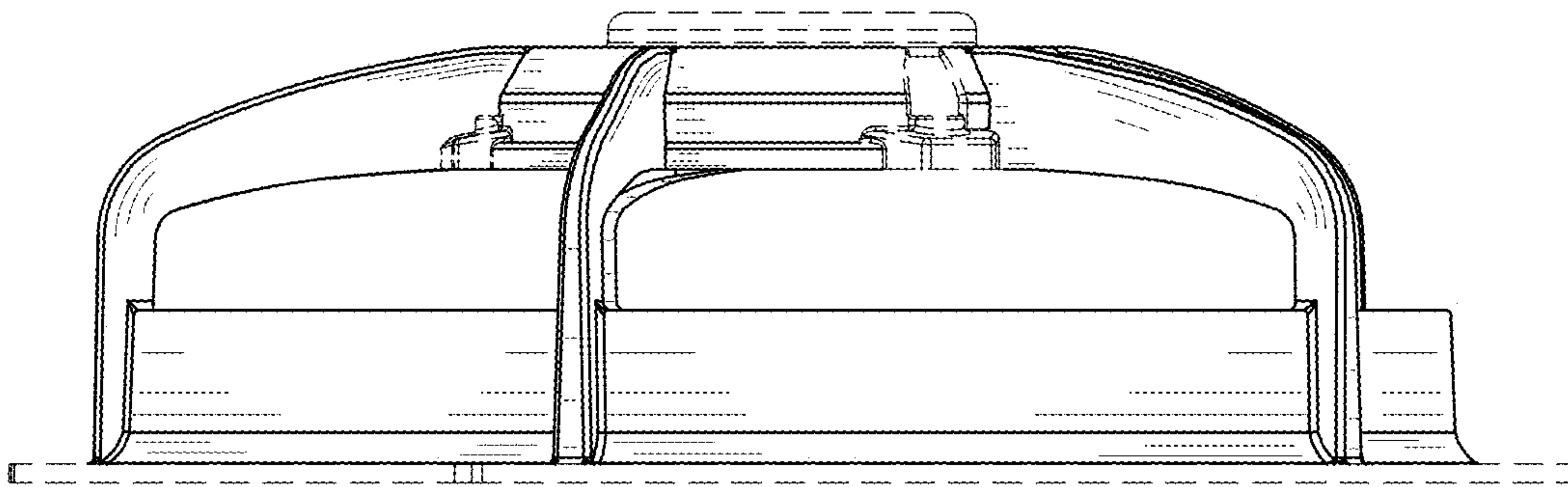


FIG. 3

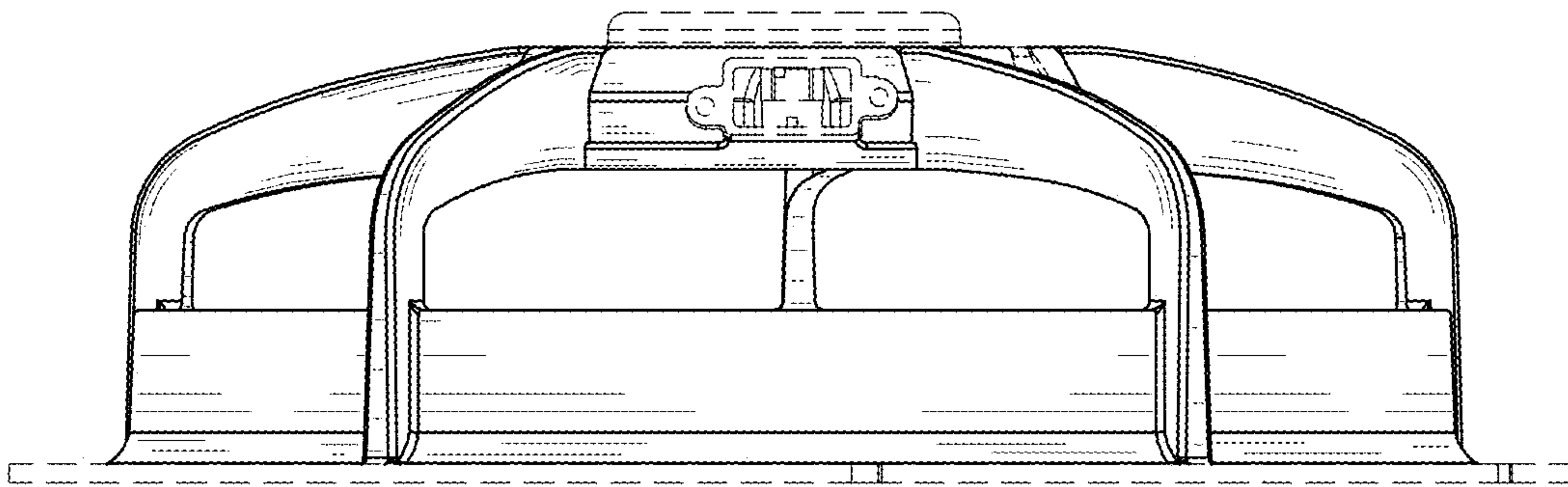


FIG. 4

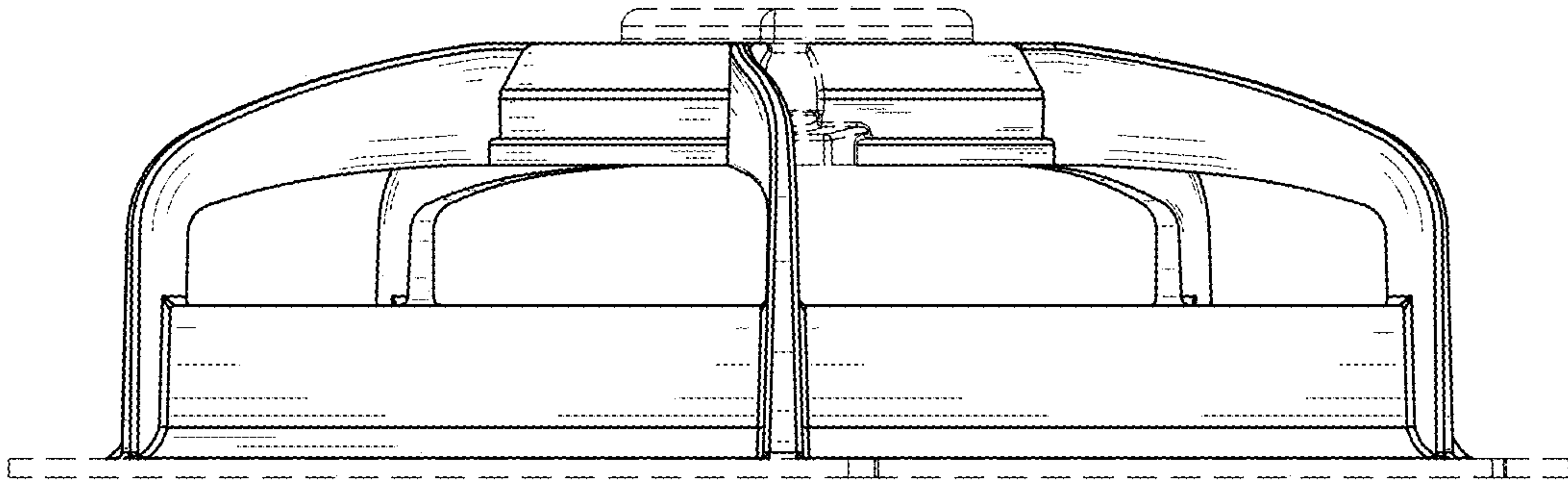


FIG. 5

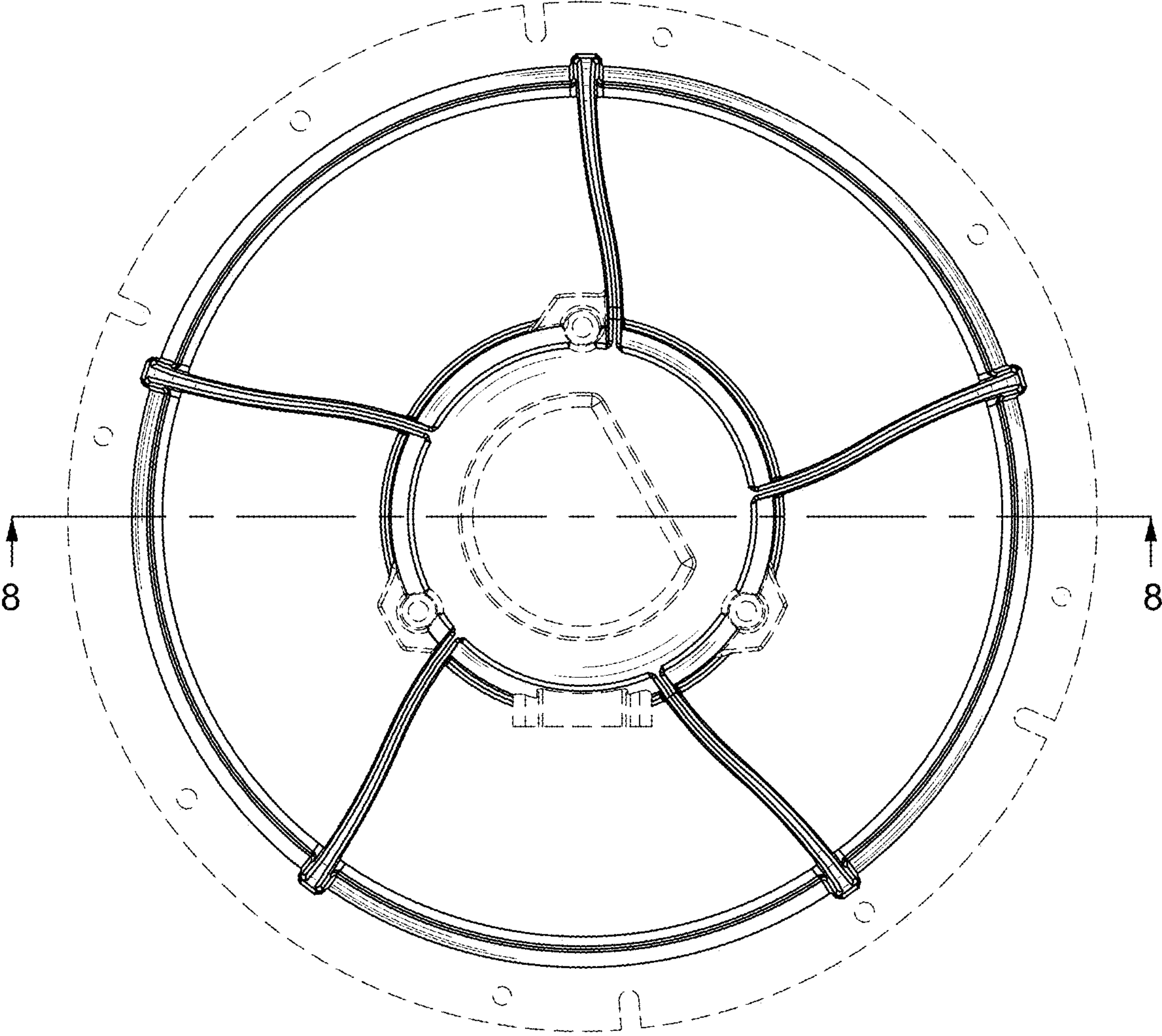


FIG. 6

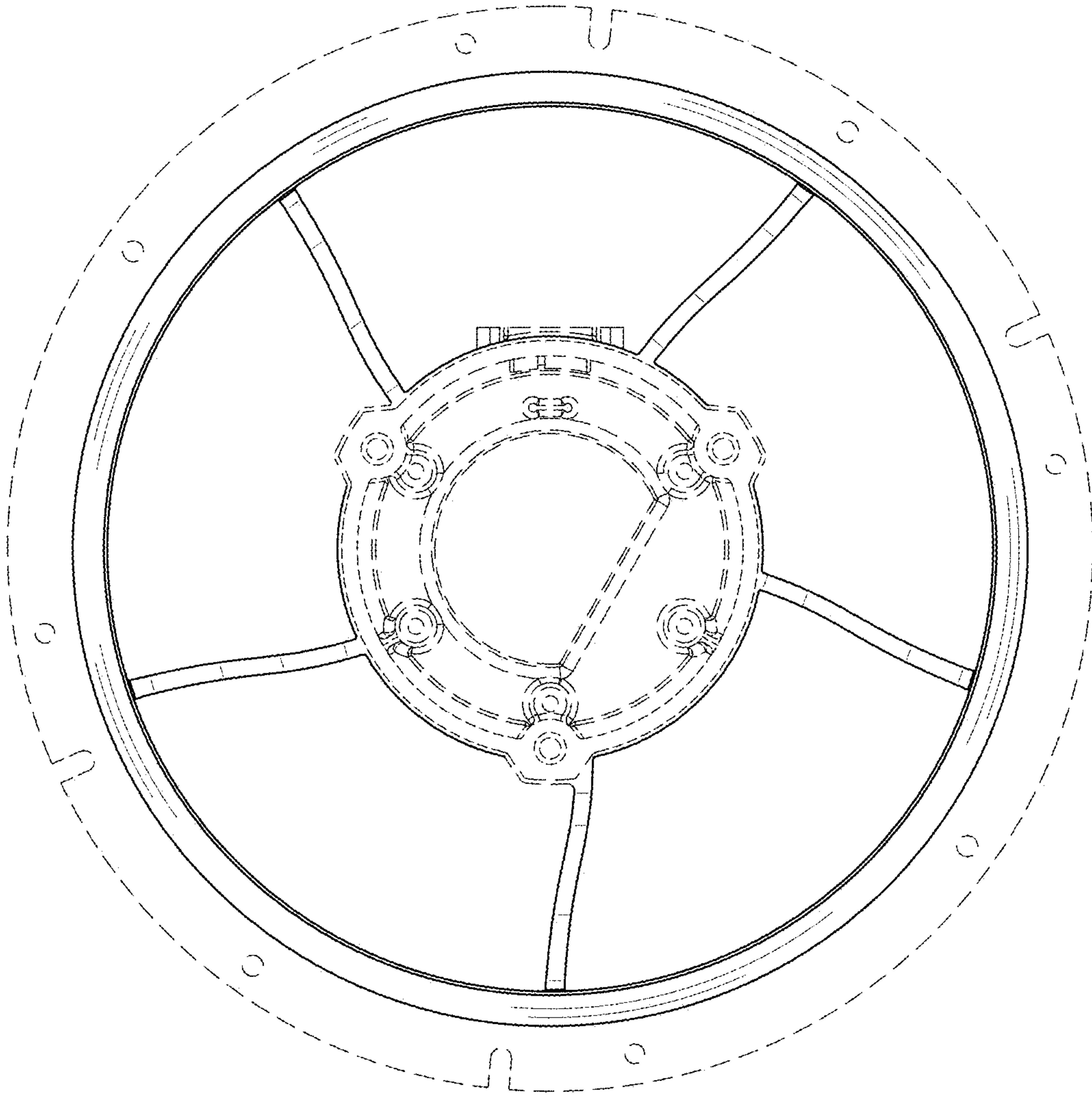


FIG. 7

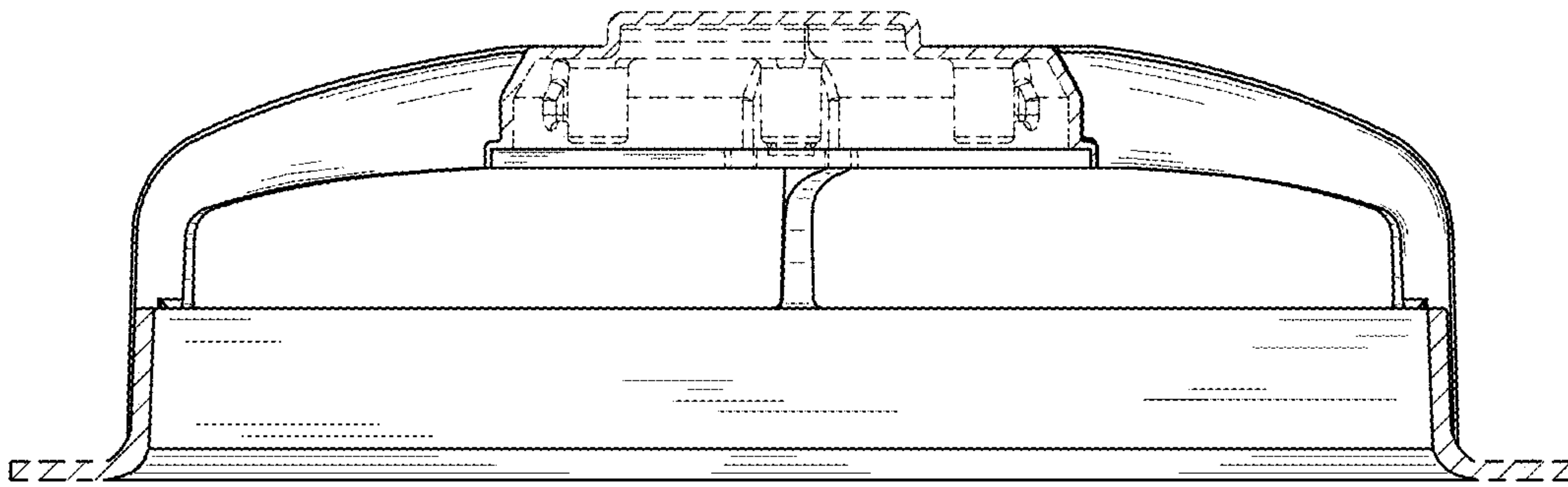


FIG. 8