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(12) **United States Design Patent** (10) **Patent No.:** **US D847,868 S**
Wilhelmi et al. (45) **Date of Patent:** **** May 7, 2019**

(54) **SEED DISK WITH INTEGRATED HUB**

5,058,766 A 10/1991 Deckler
5,121,701 A 6/1992 Reed
5,325,801 A 7/1994 Fiorido
5,392,707 A 2/1995 Romans
5,535,917 A 7/1996 Ribouveau
5,542,364 A 8/1996 Romans

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(Continued)

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FOREIGN PATENT DOCUMENTS

EP 46709 A1 3/1982
EP 636305 A1 2/1995

(Continued)

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

OTHER PUBLICATIONS

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Sauder, Derek A, U.S. Appl. No. 61/466,047, filed Mar. 22, 2011.

(Continued)

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(51) **LOC (11) Cl.** **15-03**

Primary Examiner — Mark A Goodwin

(52) **U.S. Cl.**

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CPC **A01C 7/046** (2013.01); **A01C 7/08**
(2013.01); **A01C 7/102** (2013.01); **A01C 7/121**
(2013.01); **A01C 7/124** (2013.01); **A01C 7/125**
(2013.01); **A01C 7/128** (2013.01); **A01C 19/02**
(2013.01); **Y02P 60/16** (2015.11)

(57) **CLAIM**

We claim the ornamental design for a seed disk with
integrated hub, substantially as shown and described.

(58) **Field of Classification Search**

DESCRIPTION

USPC D15/11-13, 17, 21, 27, 28, 29; 111/185,
111/200, 177, 183; 221/266, 265, 277,
221/211
CPC A01C 7/04; A01C 7/08; A01C 7/12; A01C
7/046; A01C 7/044; A01C 7/042; A01C
7/02; A01C 21/005; A01C 19/00; Y10S
111/90

FIG. 1 is a front isometric view of the seed disk with
integrated hub;
FIG. 2 is rear isometric view of the seed disk with integrated
hub;
FIG. 3 is a front plan view of the seed disk with integrated
hub;
FIG. 4 is a rear plan view of the seed disk with integrated
hub; and,
FIG. 5 is a side elevation view of the seed disk with
integrated hub.

See application file for complete search history.

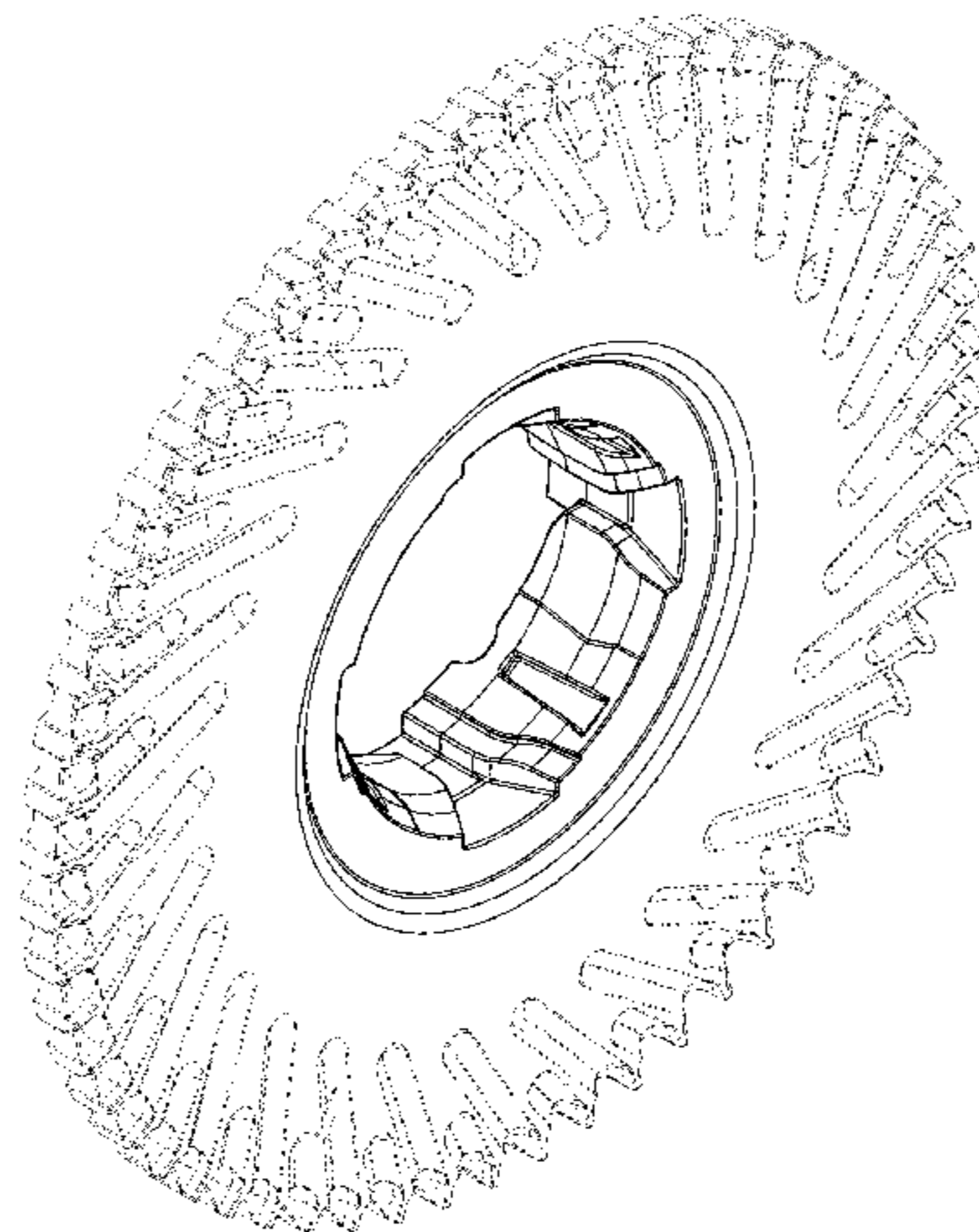
A description of the appearance of the article is as follows:
The broken lines represent portions of the article, and form
no part of the claimed design.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,796,346 A 3/1974 Ribouveau
4,047,638 A 9/1977 Harrer et al.
4,600,122 A 7/1986 Lundie et al.
4,664,290 A 5/1987 Martin et al.

1 Claim, 5 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

5,626,090 A 5/1997 Thompson
 5,842,428 A 12/1998 Stufflebeam et al.
 5,848,571 A 12/1998 Stufflebeam et al.
 6,044,779 A 4/2000 Brown et al.
 6,109,193 A 8/2000 Crabb et al.
 6,352,042 B1* 3/2002 Martin A01C 7/046
 111/184
 D458,939 S* 6/2002 Krkobabic D15/13
 D458,940 S* 6/2002 Krkobabic D15/13
 6,499,414 B2* 12/2002 Dunham A01C 7/046
 111/174
 6,516,733 B1 2/2003 Sauder et al.
 6,581,535 B2 6/2003 Barry et al.
 6,634,522 B2 10/2003 Hak
 6,718,892 B1 4/2004 Roseboom
 6,739,272 B2 5/2004 Crabb et al.
 6,742,465 B2 6/2004 Crabb et al.
 6,748,885 B2 6/2004 Sauder et al.
 6,758,153 B1* 7/2004 Hagen A01C 7/046
 111/185
 6,776,108 B2 8/2004 Crabb et al.
 6,932,236 B2 8/2005 Ven Huizen
 7,083,067 B2 8/2006 Hak
 7,093,548 B2 8/2006 Eben et al.
 7,152,542 B2 12/2006 Eben et al.
 7,228,807 B1 6/2007 Ven Huizen
 7,334,532 B2 2/2008 Sander et al.
 7,341,010 B1 3/2008 Friestad et al.
 7,404,366 B2 7/2008 Mariman
 7,497,175 B2 3/2009 Friestad et al.
 7,617,785 B2 11/2009 Wendte
 7,661,377 B2 2/2010 Keaton et al.
 7,699,009 B2 4/2010 Sander et al.
 D628,214 S* 11/2010 Knobloch D15/27
 8,281,725 B2 10/2012 Wendte et al.
 8,371,239 B2 2/2013 Rans et al.
 8,371,240 B2 2/2013 Wollenhaupt et al.
 8,375,873 B2 2/2013 Nelson et al.
 8,375,874 B2* 2/2013 Peterson A01C 7/046
 111/185
 8,516,969 B2 8/2013 Wendte et al.
 8,800,457 B2 8/2014 Garner et al.
 D712,437 S* 9/2014 Wilhelmi A01C 19/02
 D15/28
 9,277,688 B2 3/2016 Wilhelmi
 9,282,691 B2 3/2016 Wilhelmi
 9,282,692 B2 3/2016 Wilhelmi

9,313,942 B2 4/2016 Wilhelmi
 9,902,512 B2* 2/2018 Baroncini B65B 35/12
 10,010,023 B2* 7/2018 Natarajan A01C 7/04
 10,028,427 B2* 7/2018 Arnett A01C 7/046
 2002/0066743 A1 6/2002 Hak
 2004/0112913 A1 6/2004 Hak
 2005/0204971 A1 9/2005 Ven Huizen
 2005/0204972 A1 9/2005 Eben et al.
 2005/0252431 A1 11/2005 Kjelsson
 2006/0266269 A1 11/2006 Eben et al.
 2007/0125284 A1 6/2007 Mariman
 2008/0110382 A1 5/2008 Brockmeier
 2010/0116185 A1 5/2010 Keaton et al.
 2010/0224110 A1 9/2010 Mariman
 2010/0282141 A1 11/2010 Wollenhaupt et al.
 2010/0282147 A1 11/2010 Wollenhaupt et al.
 2010/0300341 A1 12/2010 Peterson et al.
 2011/0120356 A1 5/2011 Wendte et al.
 2011/0232549 A1 9/2011 Applegate et al.
 2011/0271887 A1 11/2011 Shoup
 2012/0186505 A1 7/2012 Gilstring
 2013/0192504 A1 8/2013 Sauder et al.

FOREIGN PATENT DOCUMENTS

FR 2971391 A1 8/2012
 RU 2123248 C1 12/1998
 RU 2267246 C2 1/2006
 WO 2012129442 9/2012

OTHER PUBLICATIONS

Kinze Manufacturing, Inc., PCT/US2013/065630 filed Oct. 18, 2013, "The International Search Report and the Written Opinion of the International Searching Authority, or the Declaration", dated Feb. 6, 2014.
 Kinze Manufacturing, Inc., PCT/US2013/065657 filed Oct. 18, 2013, "The International Search Report and the Written Opinion of the International Searching Authority, or the Declaration", dated Feb. 7, 2014.
 Kinze Manufacturing, Inc., PCT/US2013/065664 filed Oct. 18, 2013, "The International Search Report and the Written Opinion of the International Searching Authority, or the Declaration", dated Jan. 31, 2014.
 Kinze Manufacturing, Inc., PCT/US2013/065673 filed Oct. 18, 2013, The International Search Report and the Written Opinion of the International Searching Authority, or the Declaration, dated Feb. 6, 2014.

* cited by examiner

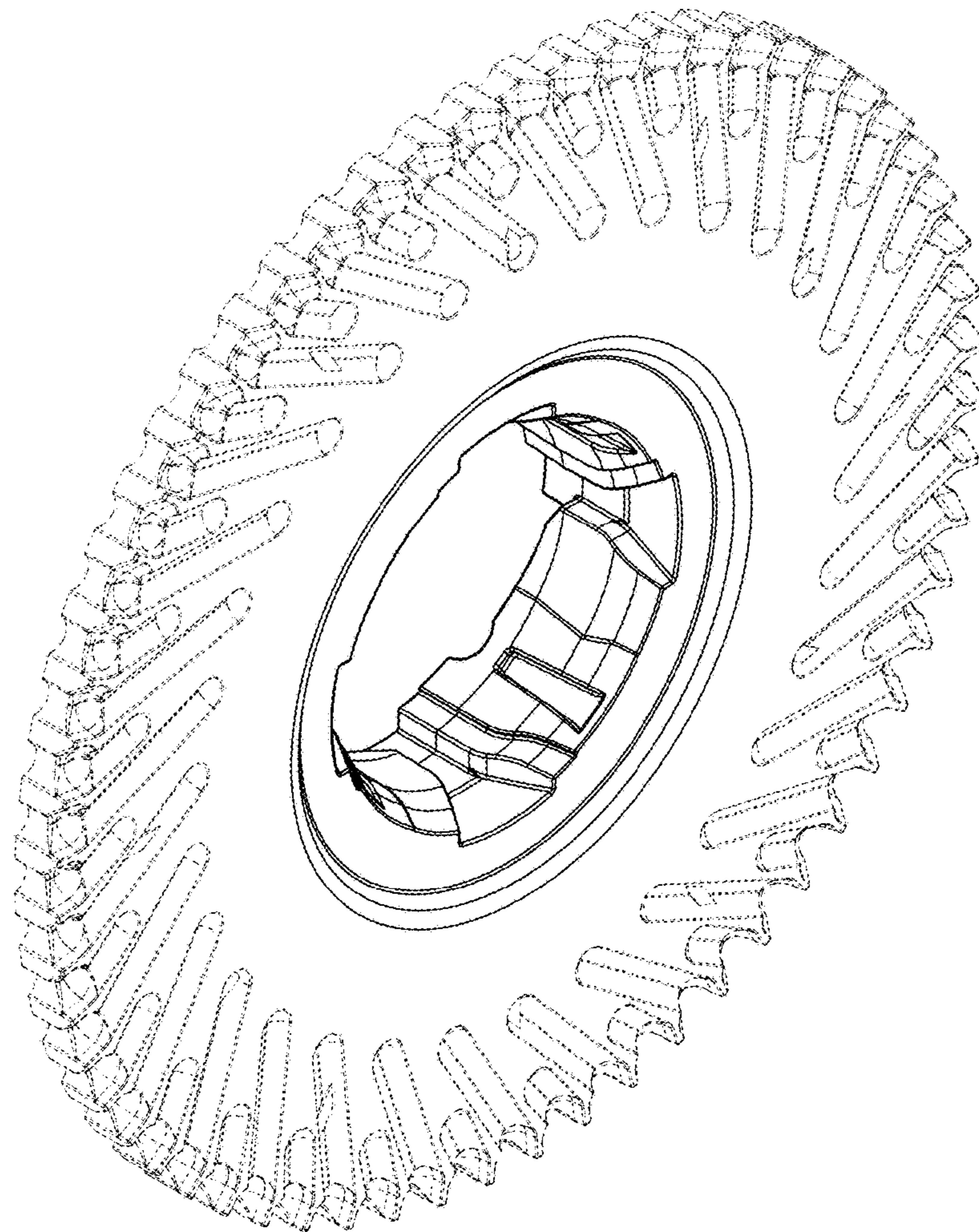


Fig. 1

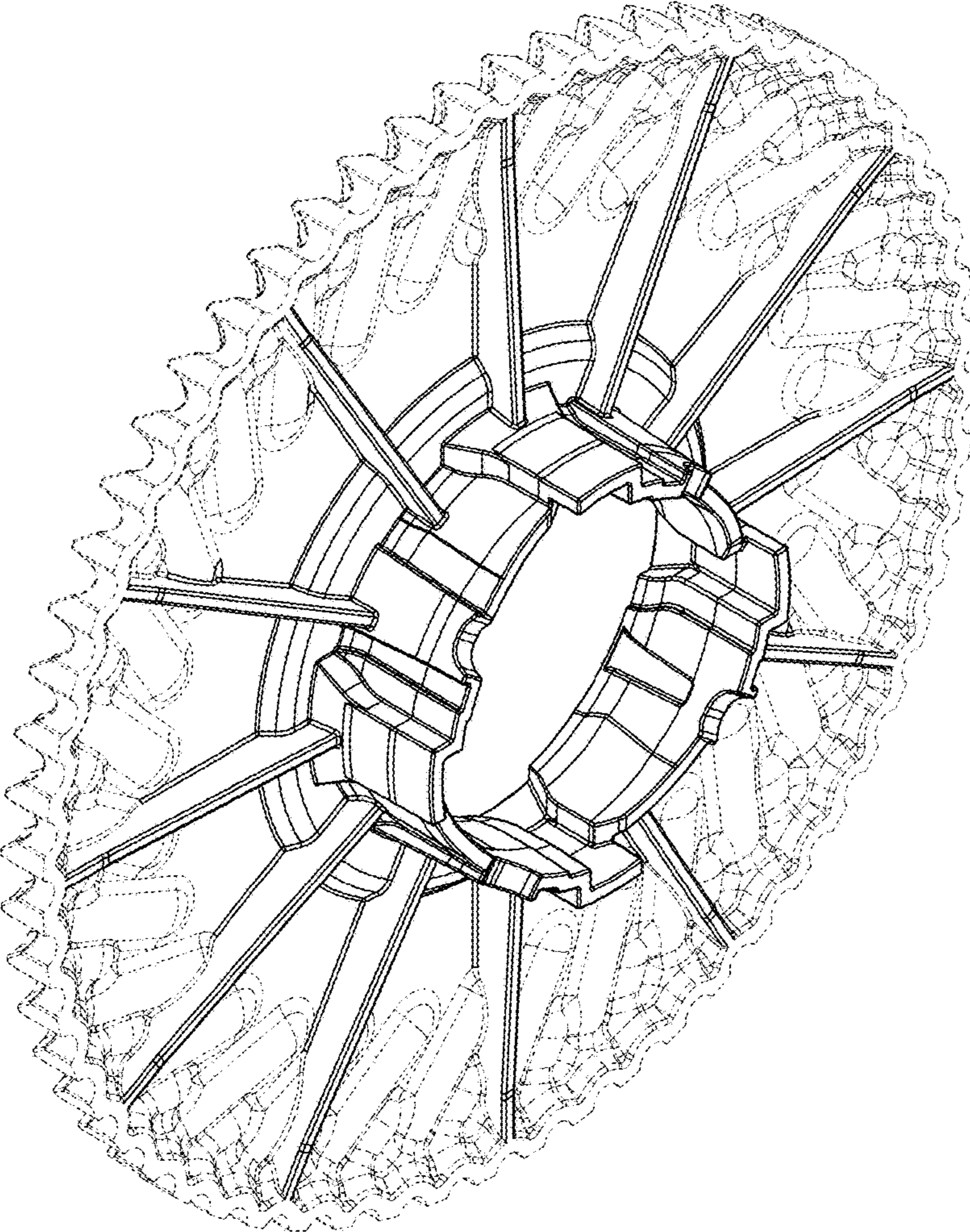


Fig. 2

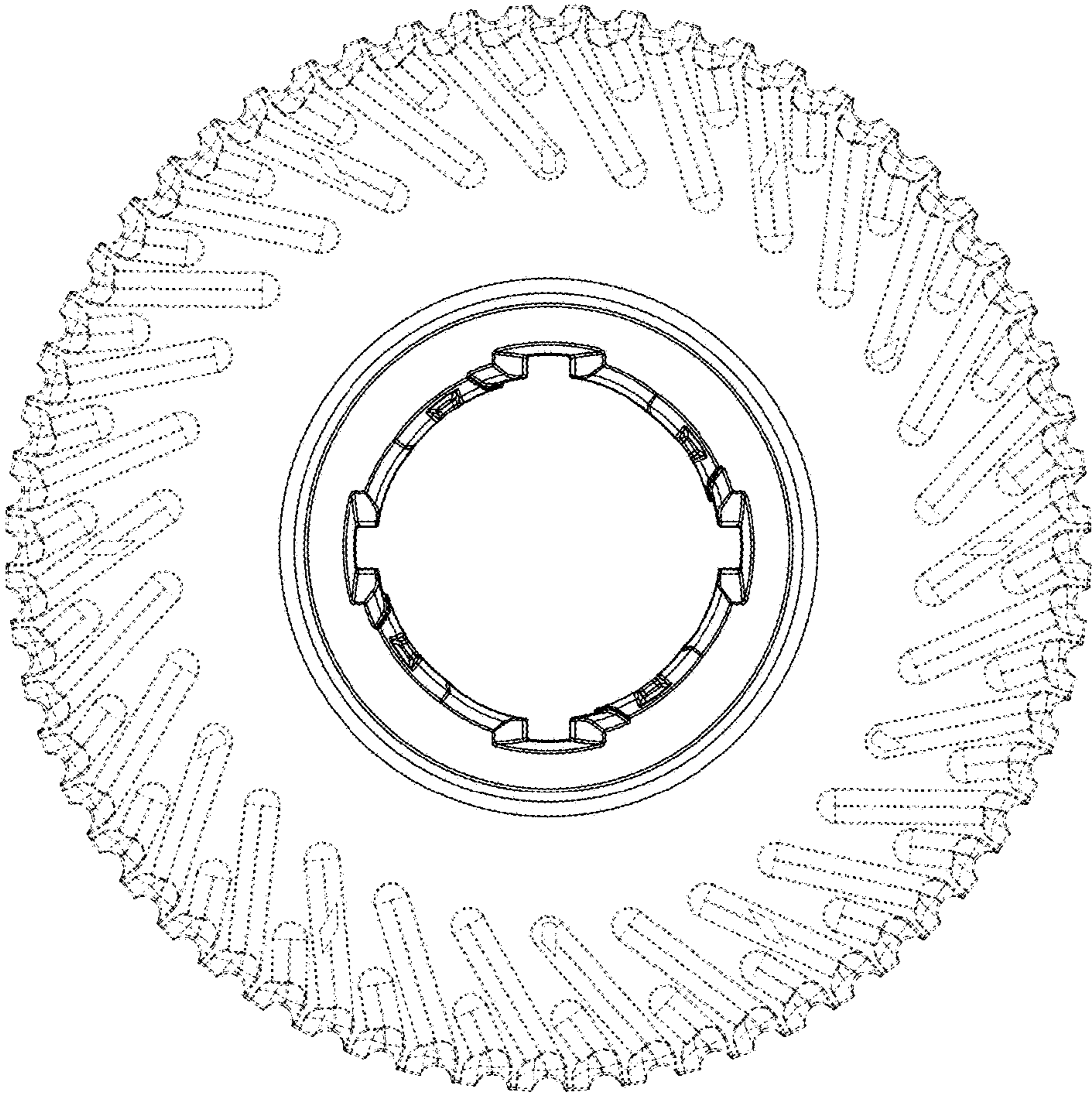


Fig. 3

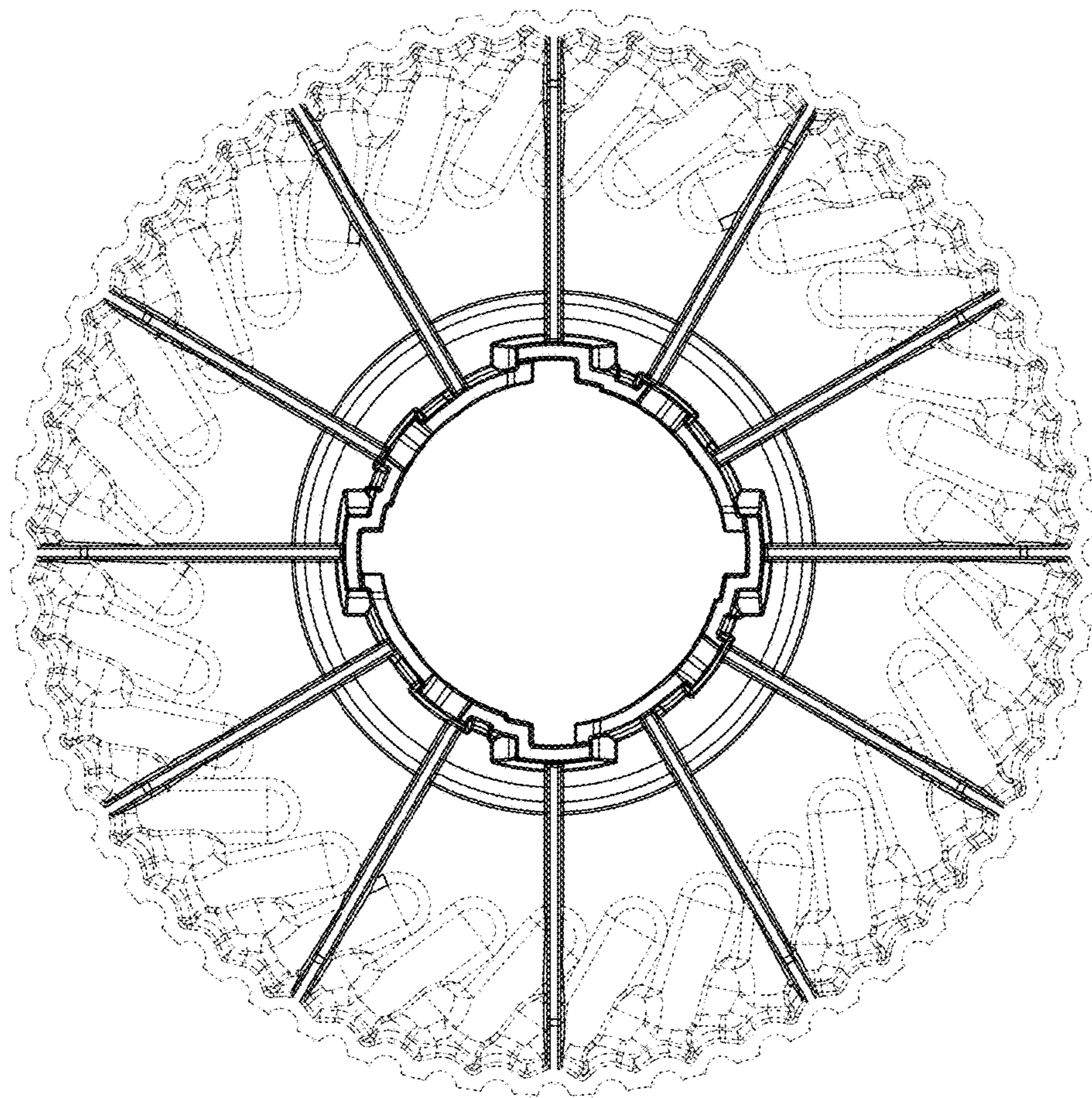


Fig. 4

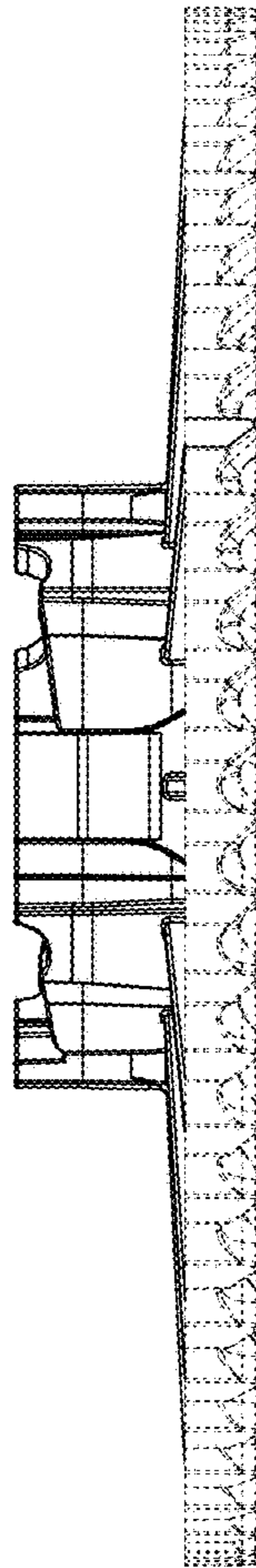


Fig. 5