



US00D787995S

(12) **United States Design Patent**
Betto et al.

(10) **Patent No.:** **US D787,995 S**

(45) **Date of Patent:** **** May 30, 2017**

- (54) **DISC BRAKE** 3,179,209 A * 4/1965 Lucien F16D 55/00
188/251 M
- (71) Applicant: **GRIMECA S.R.L.**, Ceregnano (IT) 3,277,983 A * 10/1966 Jeffries F16D 65/18
188/196 P
- (72) Inventors: **Massimo Betto**, Pernumia (IT);
Giuseppe Lisciani, Rovigo (IT) 3,312,313 A * 4/1967 Moyer F16D 55/40
188/106 P
- (73) Assignee: **GRIMECA S.R.L.**, Ceregnano (IT) 4,102,438 A * 7/1978 Rancourt F16D 55/228
188/18 A
- (**) Term: **15 Years** 4,496,033 A * 1/1985 Hall F16D 65/18
188/347

(Continued)

(21) Appl. No.: **29/561,928**

(22) Filed: **Apr. 21, 2016**

(51) **LOC (10) Cl.** **12-16**

(52) **U.S. Cl.**
USPC **D12/180**

(58) **Field of Classification Search**

USPC D12/14, 106, 114, 118, 122, 161, 162,
D12/179, 180, 207, 217, 400
CPC ... B60T 1/06; B60T 7/00; B60T 8/265; B60T
11/00; B60T 11/103; B60T 13/00; B60T
13/66; B60T 17/223; B60T 83/255; B60T
2201/00; B60T 2201/03; B60T 2260/00;
B60T 2270/00; B60T 2270/82; B60T
2270/83; B60T 2270/84; B62K 23/06;
B62L 1/02; B62L 3/02; B62D 13/025;
B62D 21/18; B62D 53/045; B62D 63/04;
B62D 65/02; B62D 65/18; F16D 55/00;
F16D 55/226; F16D 65/00; F16D 65/092;
F16D 65/095; F16D 65/097; F16D 65/18;
F16D 65/38; F16D 65/847; B32B 3/06

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 2,410,195 A * 10/1946 Baselt F16D 65/123
164/333
- 2,971,611 A * 2/1961 Gage F16D 55/00
188/152
- 3,094,773 A * 6/1963 Bukoff B23P 11/005
29/512

OTHER PUBLICATIONS

Grimeca System 8, image post date Sep. 16, 2004, site visited Jan. 5, 2017, (online), <<http://forums.mtbr.com/downhill-freeride/grimeca-system-8-experts-needed-48551.html>>.*

(Continued)

Primary Examiner — Kevin Rudzinski
Assistant Examiner — Sean D Lough
 (74) *Attorney, Agent, or Firm* — McAndrews, Held & Malloy, Ltd.

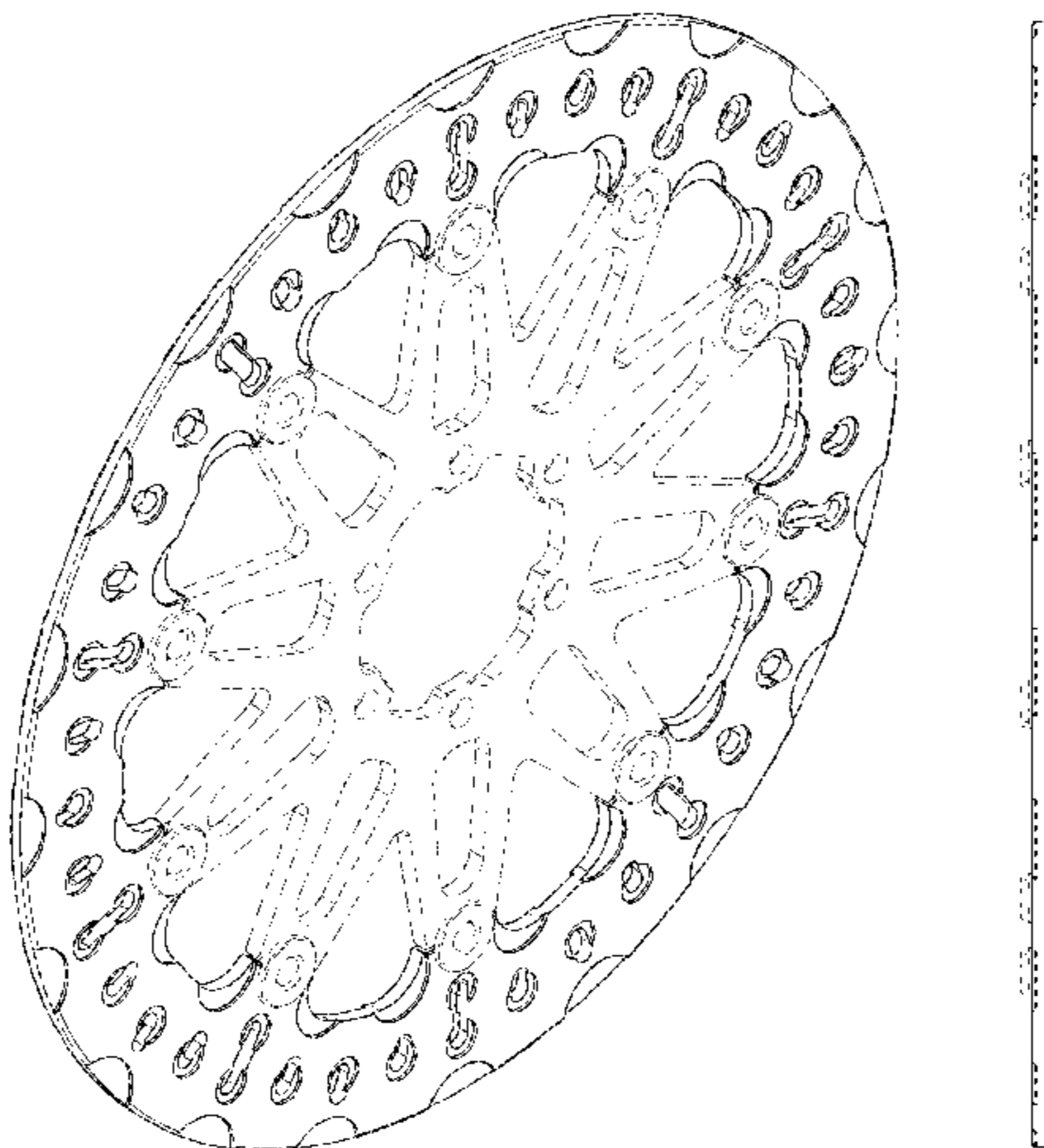
(57) **CLAIM**

The ornamental design for a disc brake, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a disc brake, showing our new design;
 FIG. 2 is a front elevation view thereof;
 FIG. 3 is a left side elevation view thereof;
 FIG. 4 is a rear elevation view thereof;
 FIG. 5 is a right side elevation view thereof;
 FIG. 6 is a top plan view thereof; and,
 FIG. 7 is a bottom plan view thereof.
 The dashed broken lines in the drawings show portions of the disc brake that form no part of the claimed design.

1 Claim, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

4,696,376 A * 9/1987 Reynolds F16D 55/36
188/18 A
5,358,086 A * 10/1994 Muller F16D 13/64
188/218 XL
5,501,306 A * 3/1996 Martino F16D 65/12
188/218 XL
D381,609 S * 7/1997 Ohata D12/180
D381,610 S * 7/1997 Ohata D12/180
D381,611 S * 7/1997 Ohata D12/180
D397,070 S * 8/1998 Adams, III D12/180
5,842,546 A * 12/1998 Biswas F16D 65/092
188/250 B
D419,934 S * 2/2000 DiBella D12/180
6,095,293 A * 8/2000 Brundrett F16D 55/36
188/18 A
6,119,818 A * 9/2000 Krumbeck B62L 1/00
188/24.12
D431,369 S * 10/2000 Thomas D5/1
6,283,257 B1 * 9/2001 Lee F16D 65/12
188/218 XL
6,308,808 B1 * 10/2001 Krenkel F16D 65/126
188/218 XL
D461,481 S * 8/2002 Carlson D12/123
6,446,770 B2 * 9/2002 Qian F16D 65/12
188/218 XL
6,530,457 B1 * 3/2003 Nago B62L 1/00
188/17
D497,127 S * 10/2004 Veneziano D12/180
D501,437 S * 2/2005 Okabe D12/180
6,877,207 B1 * 4/2005 Barnhardt F16D 65/12
29/557
D508,666 S * 8/2005 Cornolti D12/180
D508,882 S * 8/2005 Cornolti D12/180
D509,173 S * 9/2005 Cornolti D12/180
D521,428 S * 5/2006 Campbell D12/180
D524,201 S * 7/2006 Okabe D12/180
7,097,006 B2 * 8/2006 Veneziano F16D 65/128
188/218 XL
D541,717 S * 5/2007 Chen D12/180
7,264,102 B2 * 9/2007 Bassett F16F 15/1292
192/214.1
D557,187 S * 12/2007 Johnson D12/180
7,331,433 B2 * 2/2008 Okabe B62L 1/005
188/218 XL
D569,307 S * 5/2008 Albertsson D12/11
7,398,867 B2 * 7/2008 Agardy F03D 7/0204
188/18 A
D581,329 S * 11/2008 Ohigashi D12/180
D581,844 S * 12/2008 Ohigashi D12/180
D582,320 S * 12/2008 Tanaka D12/110
D585,345 S * 1/2009 Maier D12/180
D605,090 S * 12/2009 Tanaka D12/110
7,836,938 B2 * 11/2010 Agarwal F16F 7/00
164/100
7,938,378 B2 * 5/2011 Hanna F16D 65/0006
248/560
D651,145 S * 12/2011 Lockrem D12/180
D661,632 S * 6/2012 Shinagawa D12/180
D661,633 S * 6/2012 Shinagawa D12/180
8,251,190 B2 * 8/2012 Gey F16D 65/128
188/218 XL
D670,153 S * 11/2012 Wu D8/356
D670,204 S * 11/2012 Yasuhara D12/110
8,353,391 B2 * 1/2013 Fujita F16D 65/12
188/218 XL

8,365,881 B2 * 2/2013 Iwai B62L 1/005
188/218 XL
8,376,101 B2 * 2/2013 Crippa F16D 65/18
188/370
8,387,760 B2 * 3/2013 Gherardi F16D 65/12
188/18 A
D687,742 S * 8/2013 Lin D12/114
D693,280 S * 11/2013 Shinagawa D12/180
D695,656 S * 12/2013 Qin D12/180
8,733,517 B2 * 5/2014 Tironi F16D 65/128
188/218 XL
D721,309 S * 1/2015 Moore D12/180
8,978,842 B2 * 3/2015 Iwai C23C 4/02
188/218 XL
9,022,182 B2 * 5/2015 Cavagna F16D 65/128
188/218 XL
9,234,553 B2 * 1/2016 Iwai F16D 65/12
D749,025 S * 2/2016 Dunlap, III D12/180
D749,476 S * 2/2016 Dunlap, III D12/180
D749,477 S * 2/2016 Dunlap, III D12/180
2004/0084260 A1 * 5/2004 Hoyte B22D 19/04
188/218 XL
2004/0178031 A1 * 9/2004 Gotti F16D 65/123
188/218 XL
2005/0082125 A1 * 4/2005 Gehrs F16D 65/12
188/218 XL
2008/0296108 A1 * 12/2008 Mozzati F16D 65/0006
188/218 XL
2009/0056134 A1 * 3/2009 Kleber B21J 5/00
29/894
2011/0056792 A1 * 3/2011 Cole F16D 13/64
192/107 C
2011/0155495 A1 * 6/2011 Matsuda B62K 11/04
180/219
2014/0155206 A1 * 6/2014 Johnson B62M 9/124
474/80
2014/0167382 A1 * 6/2014 Ishii B62K 25/24
280/279
2014/0167452 A1 * 6/2014 Nakagawa B62J 15/00
296/198
2014/0175836 A1 * 6/2014 Nakagawa B62J 15/00
296/193.09
2014/0183836 A1 * 7/2014 Ishii B62K 25/08
280/267
2014/0224612 A1 * 8/2014 Boonpongmanee .. F16D 25/046
192/79
2015/0034431 A1 * 2/2015 Wen F16D 65/847
188/218 XL
2015/0047932 A1 * 2/2015 Shinagawa F16D 65/12
188/218 XL
2015/0053166 A1 * 2/2015 Takahashi F02F 11/002
123/193.5
2015/0151811 A1 * 6/2015 Riley B62L 3/08
188/17
2015/0203169 A1 * 7/2015 Nishino B62K 23/06
74/491
2015/0292566 A1 * 10/2015 Konopka F16D 13/10
192/76
2016/0160947 A1 * 6/2016 Wen F16D 65/12
188/218 XL

OTHER PUBLICATIONS

Grimeca Kit Disc Brake, image post date 2014, site visited Jan. 5, 2017, (online), <<http://gmbvespa.com/grimeca-kit-disc-brake>>.*
Disc Brake Rotors, image post date 1995, site visited Jan. 5, 2017, (online), <<http://www.ebay.com/bhp/disc-brake-rotor>>.*

* cited by examiner

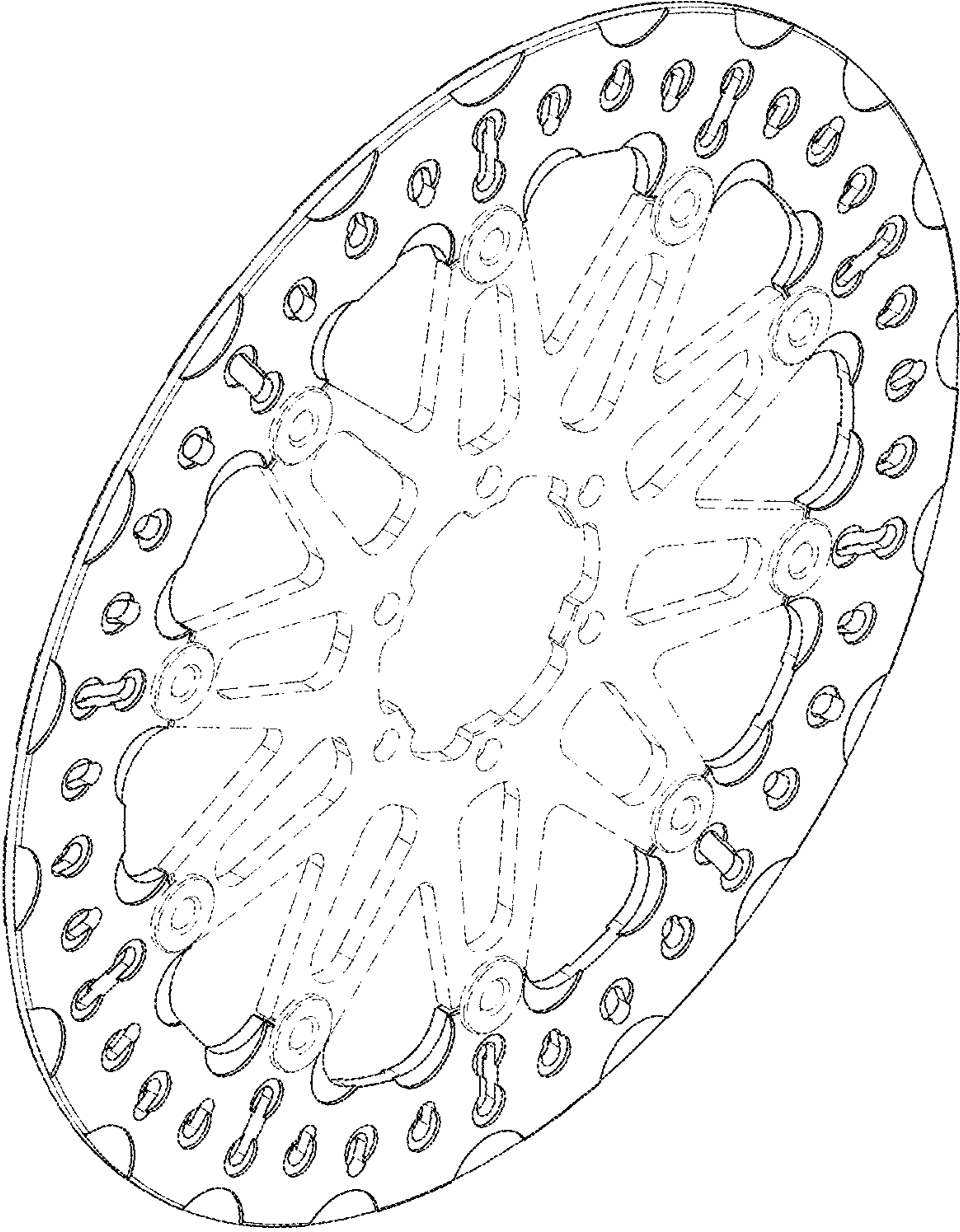


Fig.1

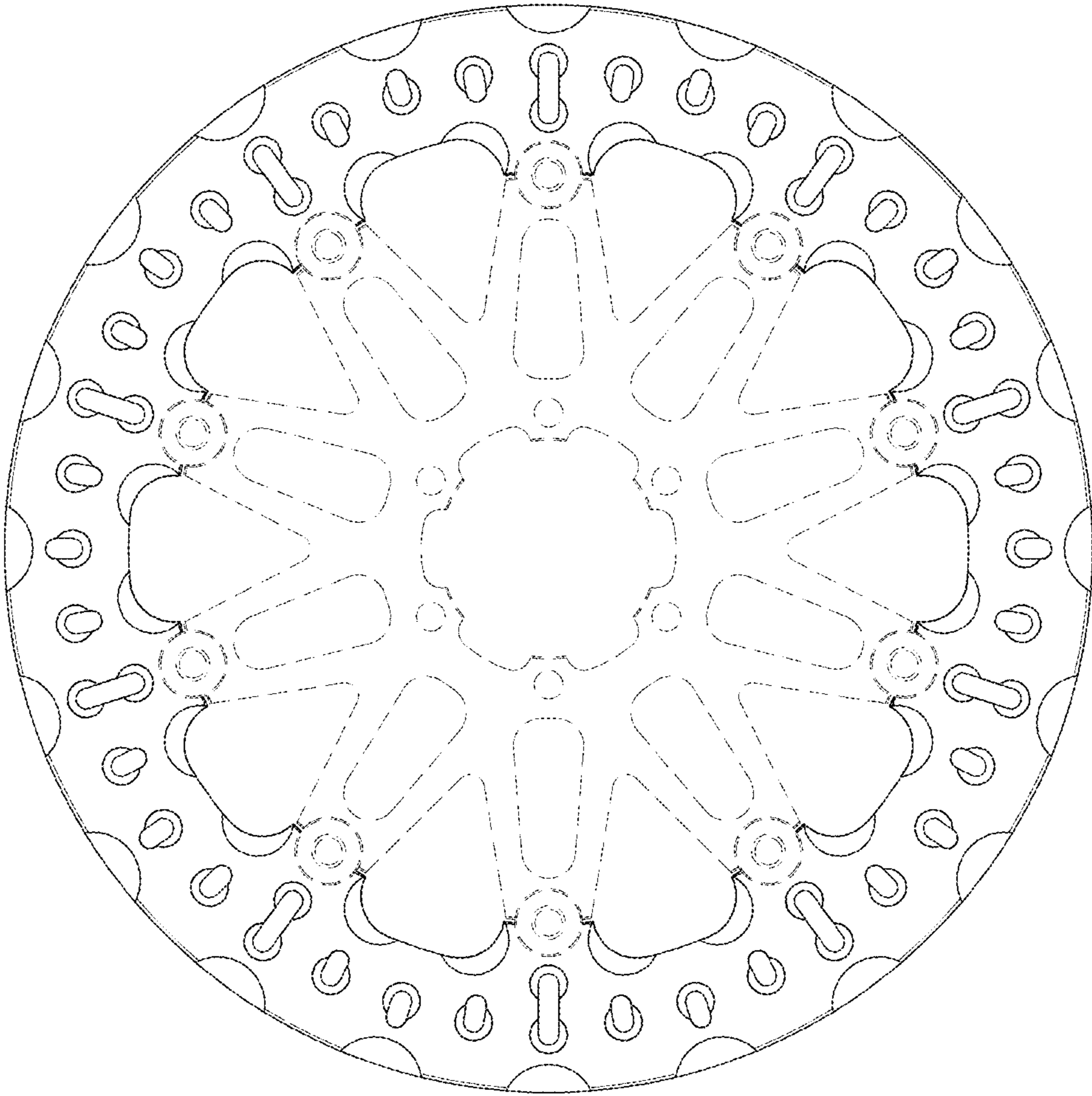


Fig.2

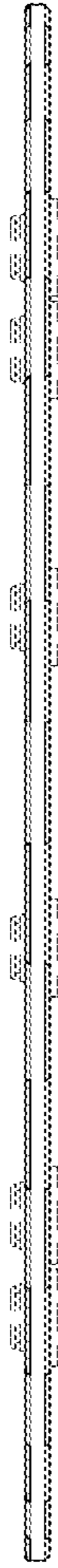


Fig. 3

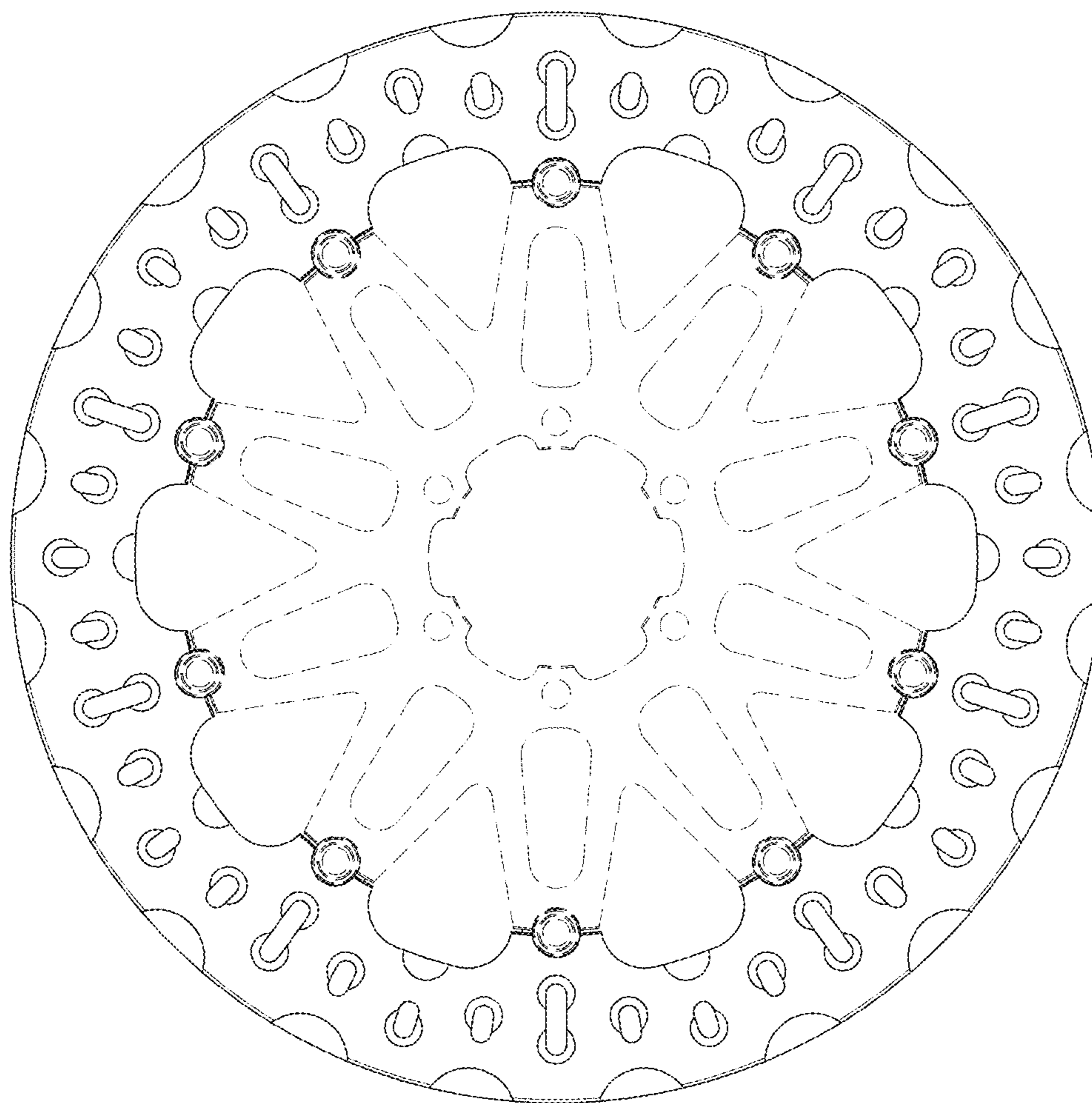


Fig.4

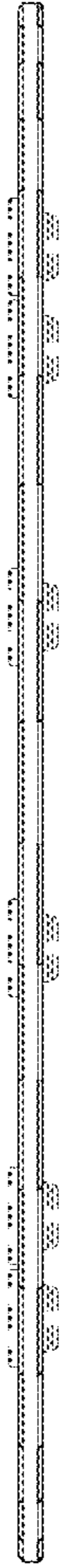


Fig. 5

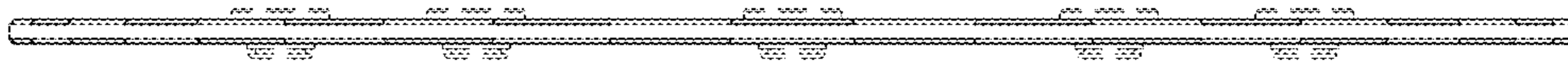


Fig. 6

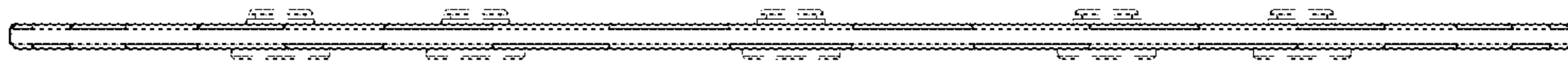


Fig. 7