



US00D789854S

(12) **United States Design Patent**  
**Peck**

(10) **Patent No.:** **US D789,854 S**

(45) **Date of Patent:** **\*\* Jun. 20, 2017**

(54) **DISC BRAKE ROTOR**

(71) Applicant: **Mahindra N.A. Tech Center**, Troy, MI  
(US)

(72) Inventor: **David E. Peck**, Rochester Hills, MI  
(US)

(73) Assignee: **Mahindra N.A. Tech Center**, Troy, MI  
(US)

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

(21) Appl. No.: **29/549,397**

(22) Filed: **Dec. 22, 2015**

(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 7/00; B60T 8/265; B60T 83/255;  
B60T 11/00; B60T 11/103; B60T 13/00;  
B60T 13/66; B60T 17/223; B60T  
2201/00; B60T 2201/03; B60T 2260/00;  
B60T 2270/00; B60T 2270/82; B60T  
2270/83; B60T 2270/84; B60T 1/06;  
B62L 1/02; B62L 3/02; B62K 23/06;  
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**

2,418,719 A \* 4/1947 Mann ..... B61H 5/00  
188/251 R  
3,258,089 A \* 6/1966 Hayes ..... F16D 55/226  
188/71.8

3,366,202 A \* 1/1968 James ..... F16D 65/0006  
188/218 A  
3,391,763 A \* 7/1968 Severson ..... F16D 65/125  
188/218 XL  
3,393,776 A \* 7/1968 Ludwig ..... F16D 55/228  
188/218 R  
3,623,577 A 11/1971 Scharlack  
3,721,322 A \* 3/1973 Thompson ..... F16D 55/228  
188/196 P

(Continued)

**OTHER PUBLICATIONS**

Performance Machine 11.8 inch Front Brake Rotor, image post date 2006, site visited Jan. 4, 2017, (online), <[http://www.revzilla.com/motorcycle/performance-machine-118-front-brake-rotor-for-harley-2006-2016#ask\\_and\\_answer\\_tab](http://www.revzilla.com/motorcycle/performance-machine-118-front-brake-rotor-for-harley-2006-2016#ask_and_answer_tab)>.\*

(Continued)

*Primary Examiner* — Kevin Rudzinski  
*Assistant Examiner* — Sean D Lough  
(74) *Attorney, Agent, or Firm* — Harness, Dickey & Pierce, P.L.C.

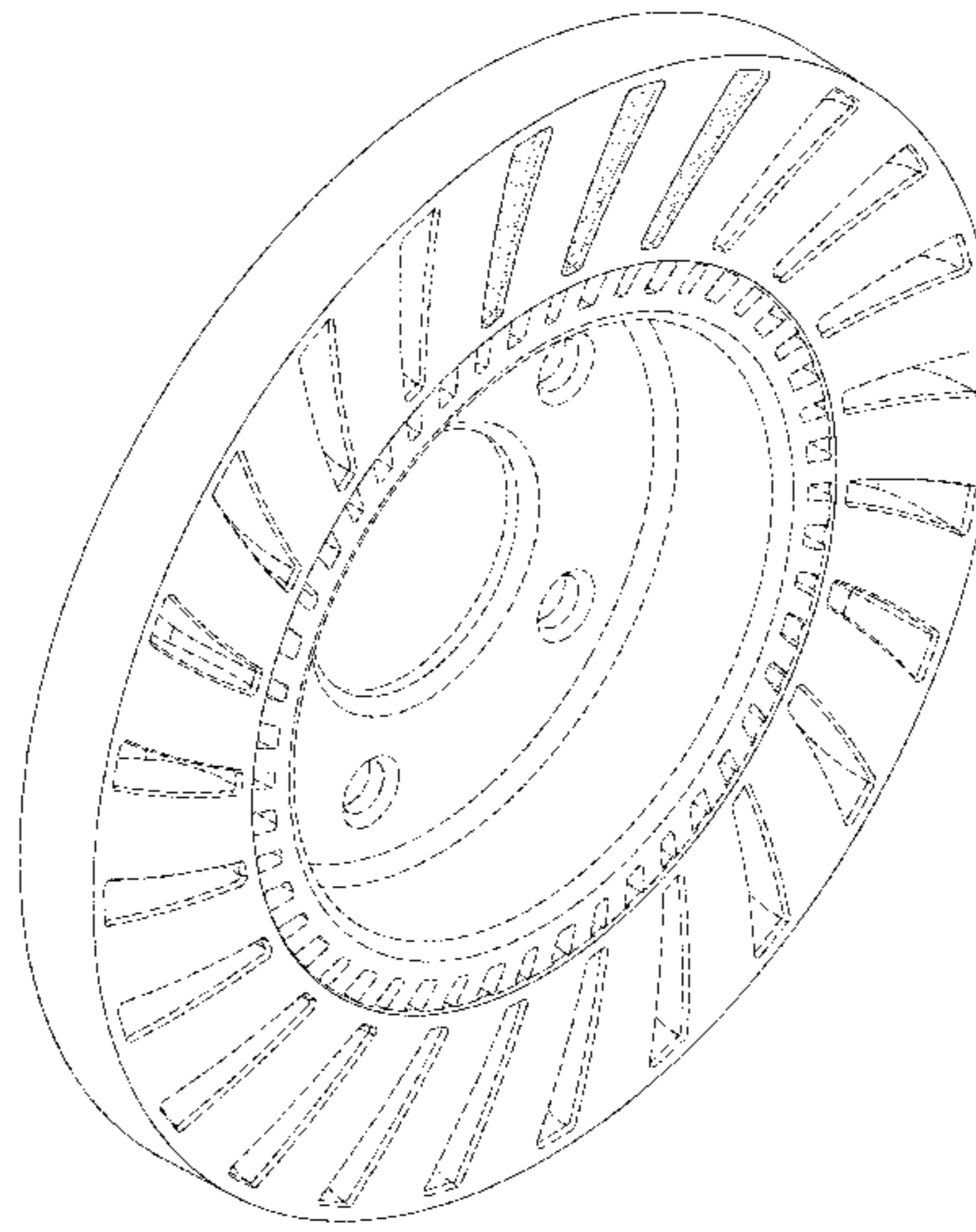
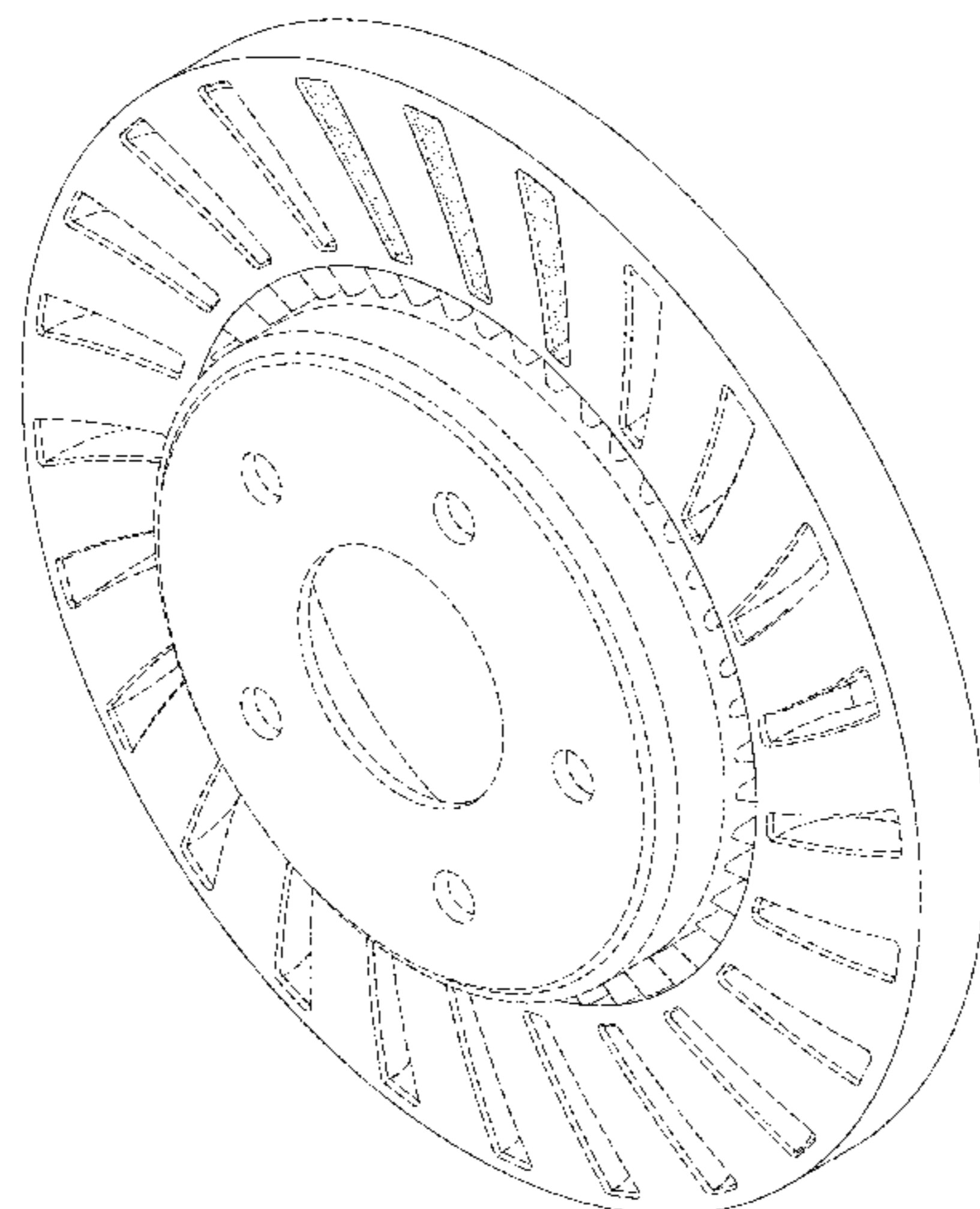
(57) **CLAIM**

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

**DESCRIPTION**

FIG. 1 is a front perspective view of a disc brake rotor; FIG. 2 is a rear perspective view of the disc brake rotor; FIG. 3 is a front elevation view of the disc brake rotor; FIG. 4 is a rear elevation view of the disc brake rotor; and, FIG. 5 is a side elevation view of the disc brake rotor. The broken line portions of the disclosure are for the purposes of illustrating portions of the brake rotor that form no part of the claimed design. Stipple shading is used to indicate portions of the disc brake rotor of a contrasting appearance to the portions that are not stipple shaded.

**1 Claim, 4 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

3,964,583	A *	6/1976	Montalvo, Jr. ....	F16D 55/02 188/352	D640,620	S *	6/2011	Bielis, IV .....	D12/180
4,448,291	A	5/1984	Ritsema et al.		D640,621	S *	6/2011	Schmitz .....	D12/180
4,470,485	A	9/1984	Warwick		D640,622	S *	6/2011	Schmitz .....	D12/180
4,811,822	A	3/1989	Estaque		D640,960	S *	7/2011	Schmitz .....	D12/180
5,279,396	A	1/1994	Estaque et al.		D647,015	S *	10/2011	Henning .....	D12/180
5,427,212	A	6/1995	Shimazu et al.		D647,442	S *	10/2011	Schmitz .....	D12/180
5,429,216	A *	7/1995	Kahr .....	F16D 65/092 188/250 E	D655,147	S *	3/2012	Zorovich .....	D8/107
5,487,452	A *	1/1996	Moinard .....	F16D 55/14 188/72.6	D664,080	S *	7/2012	Perry .....	D12/180
5,544,726	A	8/1996	Topouzian et al.		D664,487	S *	7/2012	Perry .....	D12/180
5,706,915	A	1/1998	Shimazu et al.		8,371,422	B2 *	2/2013	Frost .....	F16D 55/22 188/152
5,735,366	A *	4/1998	Suga .....	F16D 65/0006 188/218 XL	D690,634	S *	10/2013	Joseph .....	188/18 A
5,772,286	A *	6/1998	Jordan .....	B01D 46/10 188/218 A	D690,650	S *	10/2013	Lin .....	D13/122
5,862,892	A *	1/1999	Conley .....	F16D 65/123 164/98	D691,528	S *	10/2013	Joseph .....	D12/180
5,878,848	A	3/1999	Zhang		D700,551	S *	3/2014	Davenport, III .....	D12/180
6,073,735	A	6/2000	Botsch et al.		8,733,517	B2 *	5/2014	Tironi .....	F16D 65/128 188/218 XL
6,119,820	A	9/2000	Steptoe et al.		D709,522	S *	7/2014	Yano .....	D15/1
6,142,267	A	11/2000	Sporzynski et al.		D709,523	S *	7/2014	Nonaka .....	D15/1
6,161,660	A	12/2000	Suga et al.		D719,197	S *	12/2014	Tsuchiya .....	D15/138
6,164,423	A	12/2000	Dickerson		D719,198	S *	12/2014	Tsuchiya .....	D15/138
6,216,829	B1	4/2001	Daudi		D726,300	S *	4/2015	DeFilippis .....	D23/414
6,234,282	B1	5/2001	Martin		9,062,730	B2 *	6/2015	Waninger .....	F16D 65/128
6,247,562	B1 *	6/2001	Gotti .....	F16D 65/0006 188/218 XL	9,068,612	B2 *	6/2015	Gebauer .....	F16D 65/128
6,260,669	B1	7/2001	Daudi		D747,244	S *	1/2016	Nosworthy .....	D12/180
D446,756	S *	8/2001	York .....	D12/180	9,255,617	B2 *	2/2016	Ronchi .....	F16D 65/0006
6,283,255	B1 *	9/2001	Gardner .....	B60T 1/065 188/18 A	D753,037	S *	4/2016	Pasfield .....	D12/180
6,308,808	B1	10/2001	Krenkel et al.		9,371,875	B2 *	6/2016	Noriega Gonzalez .....	F16D 65/847
6,318,513	B1 *	11/2001	Dietrich .....	B60T 13/741 188/156	9,429,203	B2 *	8/2016	Watarai .....	F16D 65/128
D456,326	S *	4/2002	York .....	D12/180	2003/0205438	A1 *	11/2003	Hartsock .....	B60T 13/74 188/342
D458,198	S *	6/2002	Oberti .....	D12/180	2004/0065514	A1 *	4/2004	Chen .....	B60T 11/046 188/24.11
D458,567	S *	6/2002	Oberti .....	D12/180	2004/0200678	A1 *	10/2004	Lin .....	F16D 65/0031 188/218 XL
D458,882	S *	6/2002	Oberti .....	D12/180	2005/0161295	A1 *	7/2005	Nilsson .....	B60T 8/17636 188/158
D459,282	S *	6/2002	Oberti .....	D12/180	2005/0183909	A1 *	8/2005	Rau .....	F16D 65/0006 188/218 XL
D465,179	S *	11/2002	Ballinger .....	D12/180	2006/0076200	A1 *	4/2006	Dessouki .....	F16D 65/0018 188/218 XL
D471,140	S *	3/2003	Oberti .....	D12/180	2007/0181390	A1 *	8/2007	Korm .....	F16D 65/128 188/218 XL
6,536,564	B1	3/2003	Garfinkel et al.		2007/0199778	A1 *	8/2007	Lee .....	F16D 65/12 188/218 XL
D482,643	S *	11/2003	Gavin .....	D12/180	2008/0142319	A1 *	6/2008	Manter .....	B23K 1/0018 188/218 XL
D484,836	S *	1/2004	Gavin .....	D12/180	2009/0026027	A1 *	1/2009	Martino .....	B22F 5/106 188/218 XL
6,739,437	B2	5/2004	Garfinkel et al.		2010/0116598	A1 *	5/2010	Watarai .....	B60T 1/06 188/24.22
6,797,094	B2 *	9/2004	Pacchiana .....	C04B 35/573 156/89.11	2012/0138398	A1 *	6/2012	Nadal Aloy .....	F16D 65/12 188/218 XL
D512,353	S *	12/2005	Aloy .....	D12/180	2012/0168266	A1 *	7/2012	Veneziano .....	F16D 65/12 188/218 XL
6,978,866	B2 *	12/2005	Niebling .....	F16D 65/12 188/18 A	2012/0255820	A1 *	10/2012	McCord .....	F16D 65/12 188/218 XL
D513,722	S *	1/2006	Aloy .....	D12/180	2013/0133998	A1 *	5/2013	Maronati .....	F16D 65/123 188/218 XL
7,017,718	B2 *	3/2006	Gotti .....	F16D 65/123 188/218 XL	2013/0327602	A1 *	12/2013	Barber .....	B22C 9/02 188/218 XL
7,066,306	B2 *	6/2006	Gavin .....	F16D 65/12 188/218 XL	2014/0151166	A1 *	6/2014	Tironi .....	F16D 65/12 188/218 XL
7,097,006	B2 *	8/2006	Veneziano .....	F16D 65/128 188/218 XL	2014/0158486	A1 *	6/2014	Schorn .....	F16D 65/12 188/218 XL
7,104,368	B2 *	9/2006	Cornolti .....	F16D 65/123 188/18 A	2015/0015057	A1 *	1/2015	Oberti .....	F16D 65/123 301/6.8
7,219,777	B2 *	5/2007	Lin .....	F16D 65/12 188/218 XL	2015/0267765	A1 *	9/2015	Kim .....	F16D 65/125 192/107 M
D565,487	S	4/2008	Zhang		2016/0039436	A1 *	2/2016	Bhagwatkar .....	A63H 19/24 348/148
D605,017	S *	12/2009	McElmury .....	D8/71					
D605,099	S *	12/2009	Schmitz .....	D12/180					
D607,795	S *	1/2010	Schmitz .....	D12/180					
D607,796	S *	1/2010	Schmitz .....	D12/180					
7,690,484	B2 *	4/2010	Oberti .....	B22C 7/06 188/218 XL					
D624,472	S *	9/2010	Schmitz .....	D12/180					
7,934,777	B1 *	5/2011	Yahas .....	B60B 3/16 188/18 A					

(56)

**References Cited**

U.S. PATENT DOCUMENTS

2016/0102564 A1\* 4/2016 Tanaka ..... F01D 5/26  
416/241 R  
2016/0290423 A1\* 10/2016 Tironi ..... F16D 65/12

OTHER PUBLICATIONS

Racingbrake UP Rotor, image post date Aug. 3, 2007 , site visited  
Jan. 4, 2017, (online), <[https://www.heeltoeauto.com/pitboard/  
?p=112](https://www.heeltoeauto.com/pitboard/?p=112)>.\*

Scappa carbon disc, image post date Sep. 26, 2014, site visited Jan.  
4, 2017, (online), <[http://www.light-bikes.it/forum/index.  
php?topic=37099.0](http://www.light-bikes.it/forum/index.php?topic=37099.0)>.\*

Slotted Brake Rotors, image post date Jan. 1, 2014, site visited Jan.  
4, 2017, (online), <[http://web.archive.org/web/20140101225324/  
http://brakeperformance.com/](http://web.archive.org/web/20140101225324/http://brakeperformance.com/)>.\*

Brake Discs in Delhi, image post date 1996, site visited Jan. 4, 2017,  
(online), <<https://dir.indiamart.com/delhi/brake-disc.html>>.\*

\* cited by examiner

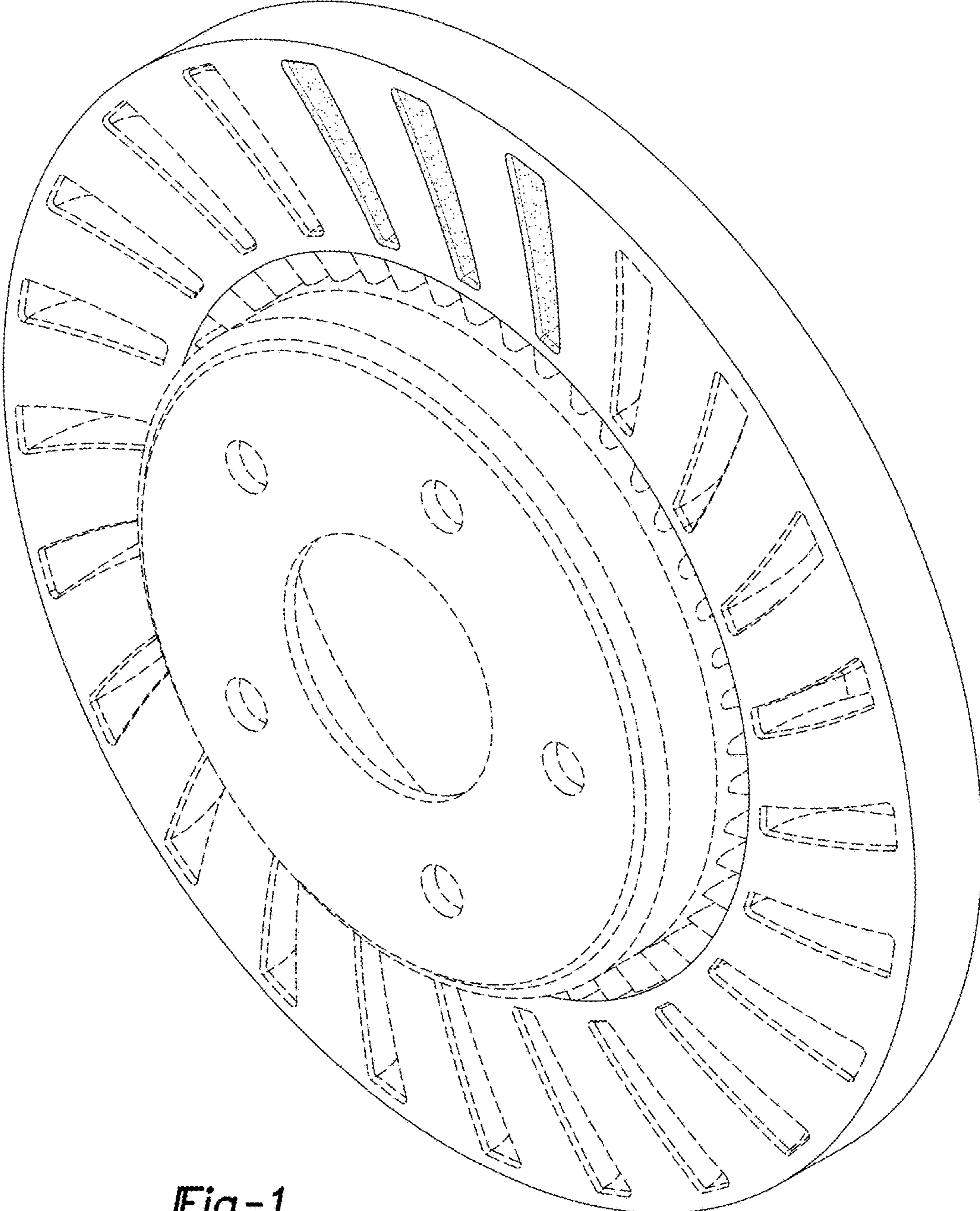


Fig-1

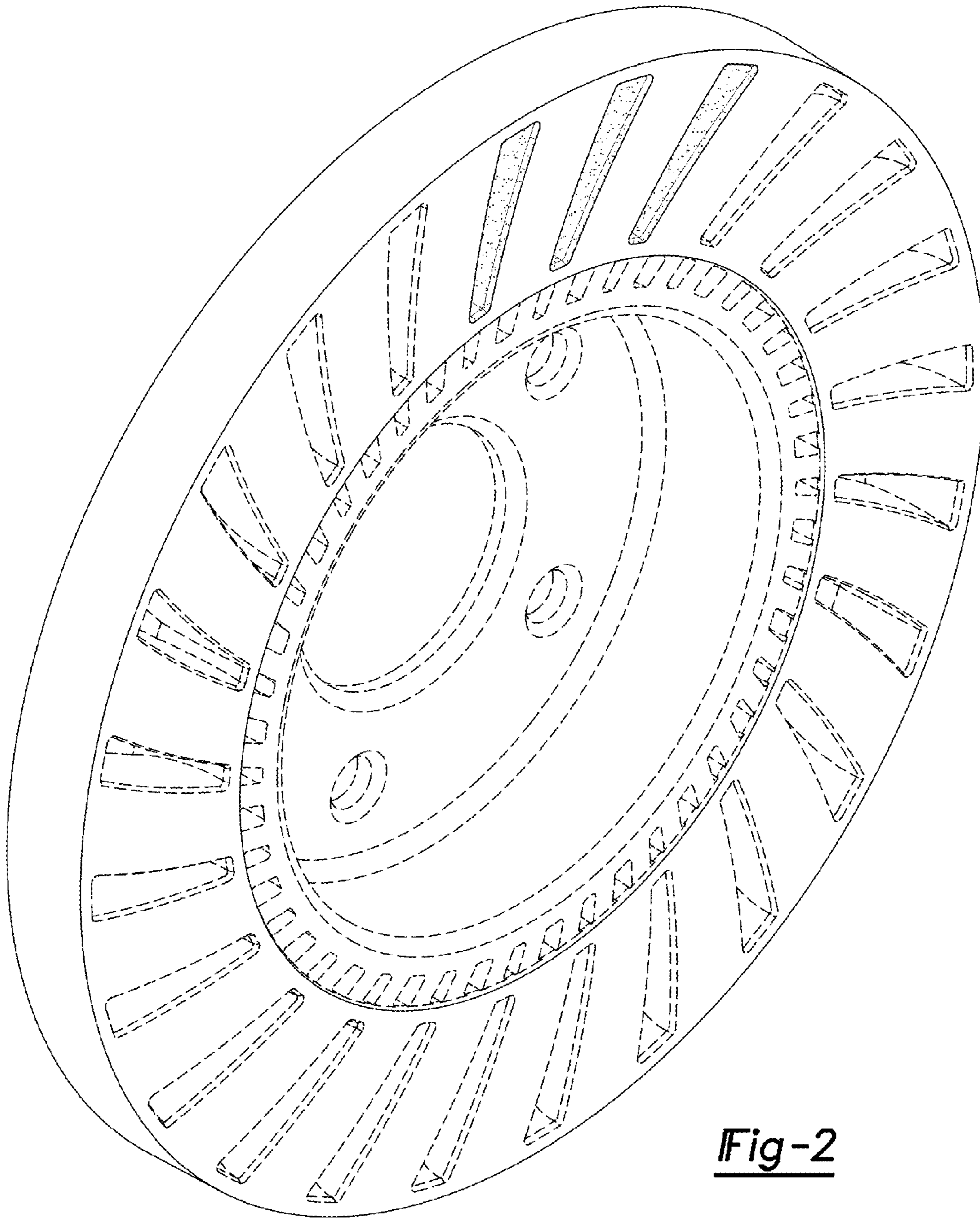


Fig-2

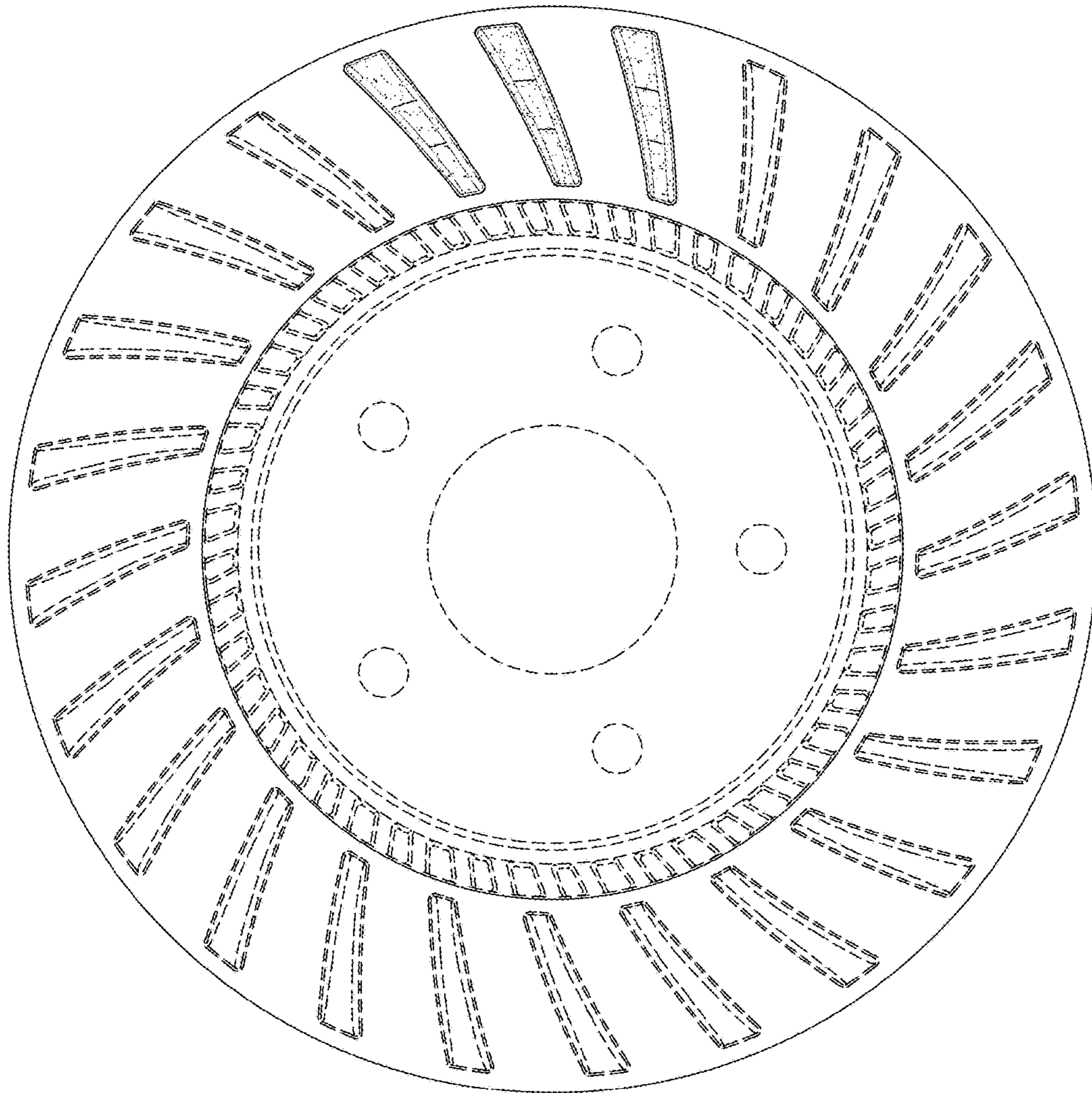


Fig-3

Fig-5

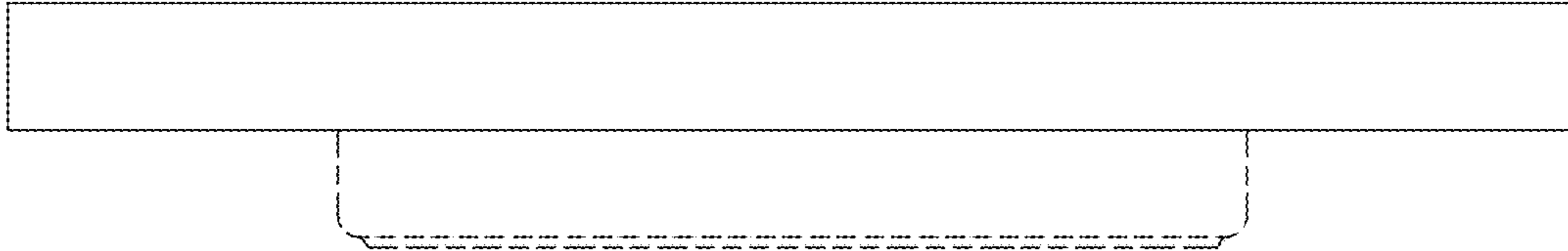


Fig-4

