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

(10) **Patent No.:** **US D956,233 S**  
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- (54) **CERVICAL SCREW**
- (71) Applicant: **Solco Biomedical Co., Ltd.**,  
Pyeongtaek-si (KR)
- (72) Inventors: **Mi Rim Hyeon**, Hwaseong-si (KR);  
**Hwi Geun Yu**, Pyeongtaek-si (KR); **Il Kim**, Seoul (KR)
- (73) Assignee: **Solco Biomedical Co., Ltd.**,  
Pyeongtaek-si (KR)
- (\*\*) Term: **15 Years**

8,172,876	B2 *	5/2012	Janowski .....	A61B 17/7032
				606/246
8,197,517	B1 *	6/2012	Lab .....	A61B 17/864
				606/268
8,641,734	B2 *	2/2014	Moumene .....	A61B 17/7028
				606/257
9,060,818	B2 *	6/2015	Donahue .....	A61B 17/7086
9,084,634	B1 *	7/2015	Lab .....	A61B 17/7002
D746,461	S *	12/2015	Butler .....	D24/155
10,039,571	B2 *	8/2018	Jackson .....	A61B 17/7037
D842,479	S *	3/2019	Rezach .....	D24/155
D856,509	S *	8/2019	Lange .....	D24/110
10,485,596	B2 *	11/2019	Koller .....	A61B 17/8625
10,507,043	B1 *	12/2019	Gladieux .....	A61B 17/7035

(Continued)

- (21) Appl. No.: **29/740,856**
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**FOREIGN PATENT DOCUMENTS**

CA	2359373	A1 *	7/2002	.....	G06Q 10/107
CA	2792980	A1 *	9/2010	.....	A61B 17/8605

(Continued)

(30) **Foreign Application Priority Data**

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- (51) **LOC (13) Cl.** ..... **24-03**
- (52) **U.S. Cl.**  
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- (58) **Field of Classification Search**  
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A61B 17/7049; A61B 17/7055; A61B  
17/7037; A61B 17/8061; A61B 17/683;  
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See application file for complete search history.

*Primary Examiner* — Sheryl Lane  
*Assistant Examiner* — Ieisha N Price  
(74) *Attorney, Agent, or Firm* — Revolution IP, PLLC

(57) **CLAIM**

The ornamental design for a cervical screw, as shown and described.

**DESCRIPTION**

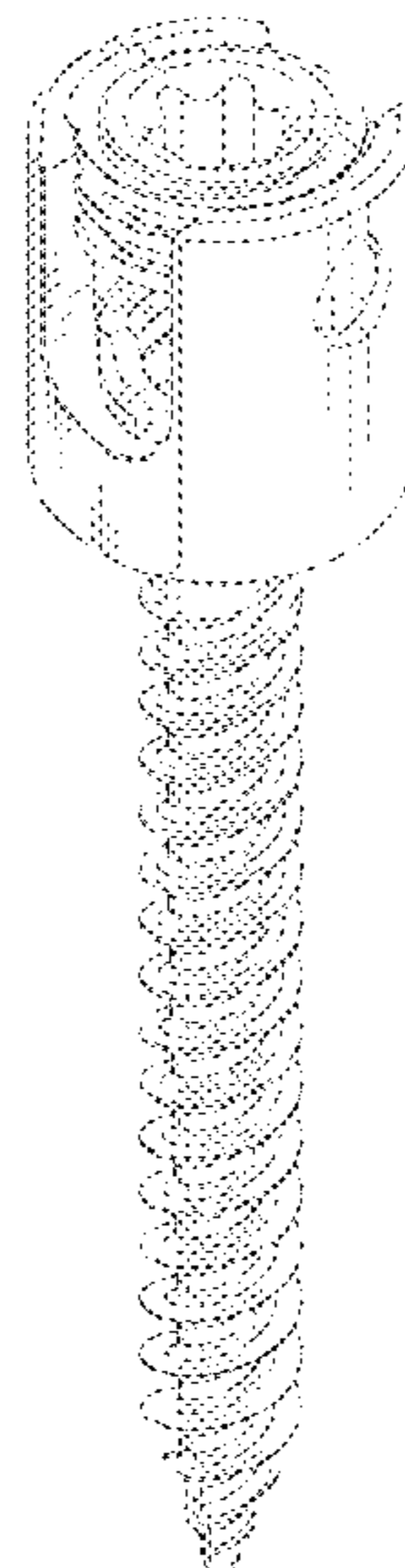
FIG. 1 is a front, top, right perspective view of a cervical screw showing my new design;  
FIG. 2 is a front view thereof;  
FIG. 3 is a rear view thereof;  
FIG. 4 is a left view thereof;  
FIG. 5 is a right view thereof;  
FIG. 6 is a top view thereof;  
FIG. 7 is a bottom view thereof; and,  
FIG. 8 is a front, bottom, right perspective view thereof.  
The broken lines in FIGS. 1, 6 and 8 depict portions of the cervical screw that form no part of the claimed design.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D601,702	S *	10/2009	Gotfried .....	D24/145
7,862,588	B2 *	1/2011	Abdou .....	A61B 17/8685
				606/246
D642,270	S *	7/2011	McAfee .....	D24/155

**1 Claim, 7 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

10,820,936 B2 \* 11/2020 Ortiz ..... A61B 17/7076  
 2002/0120272 A1 \* 8/2002 Yuan ..... A61B 17/7037  
 606/276  
 2004/0260284 A1 \* 12/2004 Parker ..... A61B 17/7037  
 606/276  
 2005/0049588 A1 \* 3/2005 Jackson ..... A61B 17/7037  
 606/308  
 2005/0049589 A1 \* 3/2005 Jackson ..... A61B 17/7037  
 606/308  
 2006/0089644 A1 \* 4/2006 Felix ..... A61B 17/7037  
 606/250  
 2006/0100621 A1 \* 5/2006 Jackson ..... A61B 17/7037  
 606/304  
 2006/0149232 A1 \* 7/2006 Sasing ..... A61B 17/7037  
 606/308  
 2006/0200128 A1 \* 9/2006 Mueller ..... A61B 17/7037  
 606/308  
 2006/0200136 A1 \* 9/2006 Jackson ..... A61B 17/7037  
 606/304  
 2007/0161999 A1 \* 7/2007 Biedermann ..... A61B 17/7037  
 606/254  
 2007/0167948 A1 \* 7/2007 Abdou ..... A61B 17/704  
 606/86 A  
 2007/0198018 A1 \* 8/2007 Biedermann ..... A61B 17/8685  
 606/139  
 2008/0004625 A1 \* 1/2008 Runco ..... A61B 17/7037  
 606/273  
 2008/0015580 A1 \* 1/2008 Chao ..... A61B 17/7037  
 606/86 A  
 2008/0015597 A1 \* 1/2008 Whipple ..... A61B 17/7037  
 606/250  
 2008/0287998 A1 \* 11/2008 Doubler ..... A61B 17/863  
 606/269  
 2009/0143827 A1 \* 6/2009 Levy ..... A61B 17/7037  
 606/308  
 2009/0163956 A1 \* 6/2009 Biedermann ..... A61B 17/7037  
 606/265  
 2009/0248088 A1 \* 10/2009 Biedermann ..... A61B 17/7032  
 606/305  
 2009/0264896 A1 \* 10/2009 Biedermann ..... A61B 17/7037  
 606/104  
 2010/0004692 A1 \* 1/2010 Biedermann ..... A61B 17/7098  
 606/305  
 2010/0087862 A1 \* 4/2010 Biedermann ..... A61B 17/702  
 606/259  
 2010/0125302 A1 \* 5/2010 Hammill, Sr. .... A61B 17/7038  
 606/308  
 2010/0228300 A1 \* 9/2010 Armstrong ..... A61B 17/7037  
 606/301  
 2010/0234902 A1 \* 9/2010 Biedermann ..... A61B 17/7032  
 606/305

2011/0004256 A1 \* 1/2011 Biedermann ..... A61B 17/7098  
 606/301  
 2011/0093021 A1 \* 4/2011 Fanger ..... A61B 17/7034  
 606/308  
 2011/0251650 A1 \* 10/2011 Biedermann ..... A61B 17/7037  
 606/305  
 2012/0035670 A1 \* 2/2012 Jackson ..... A61B 17/7032  
 606/305  
 2012/0143265 A1 \* 6/2012 Biedermann ..... A61B 17/7032  
 606/328  
 2012/0165881 A1 \* 6/2012 Biedermann ..... A61B 17/7037  
 606/328  
 2012/0165882 A1 \* 6/2012 Biedermann ..... A61B 17/7037  
 606/328  
 2012/0209336 A1 \* 8/2012 Jackson ..... A61B 17/7032  
 606/305  
 2013/0110177 A1 \* 5/2013 Doubler ..... A61B 17/7037  
 606/305  
 2013/0218213 A1 \* 8/2013 Lemoine ..... A61B 17/7032  
 606/305  
 2013/0338716 A1 \* 12/2013 Biedermann ..... A61B 17/7035  
 606/278  
 2013/0345758 A1 \* 12/2013 Biedermann ..... A61B 17/7032  
 606/279  
 2014/0094849 A1 \* 4/2014 Spratt ..... A61B 17/7035  
 606/257  
 2015/0025579 A1 \* 1/2015 Biedermann ..... A61B 17/7032  
 606/266  
 2015/0080960 A1 \* 3/2015 Biedermann ..... A61B 17/7032  
 606/278  
 2015/0142059 A1 \* 5/2015 Biedermann ..... A61B 17/7035  
 606/266  
 2015/0230829 A1 \* 8/2015 Harris ..... A61B 17/7037  
 606/270  
 2015/0289916 A1 \* 10/2015 Sharps ..... A61B 17/8625  
 606/315  
 2016/0157908 A1 \* 6/2016 Cawley ..... A61F 2/0077  
 606/301  
 2018/0325569 A1 \* 11/2018 Ramsay ..... A61B 17/7037  
 2020/0155203 A1 \* 5/2020 Biedermann ..... A61B 17/7037  
 2021/0169531 A1 \* 6/2021 Left ..... A61B 17/7035  
 2021/0236174 A1 \* 8/2021 Jackson ..... A61B 17/7037

FOREIGN PATENT DOCUMENTS

EP 1743584 A1 \* 1/2007 ..... A61B 17/7037  
 EP 1972289 A2 \* 9/2008 ..... A61B 17/7031  
 EP 2586391 A1 \* 5/2013 ..... A61B 17/7035  
 EP 2674123 A1 \* 12/2013 ..... A61B 17/7035  
 EP 3730078 A1 \* 10/2020 ..... A61B 17/8605  
 EP 3730079 A1 \* 10/2020 ..... A61B 17/1631  
 WO WO-2010148299 A1 \* 12/2010 ..... A61B 17/863  
 WO WO-2013028851 A \* 2/2013 ..... A61B 17/7037  
 WO WO-2017062402 A2 \* 4/2017 ..... A61B 17/7032  
 WO WO-2019081438 A1 \* 5/2019 ..... A61B 17/7037

\* cited by examiner



FIG. 1

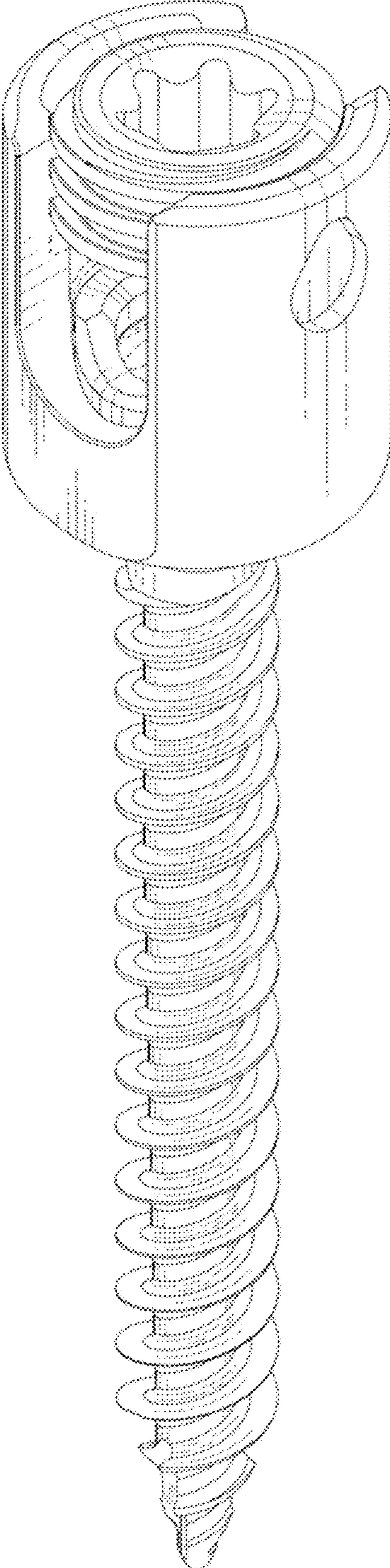


FIG. 2

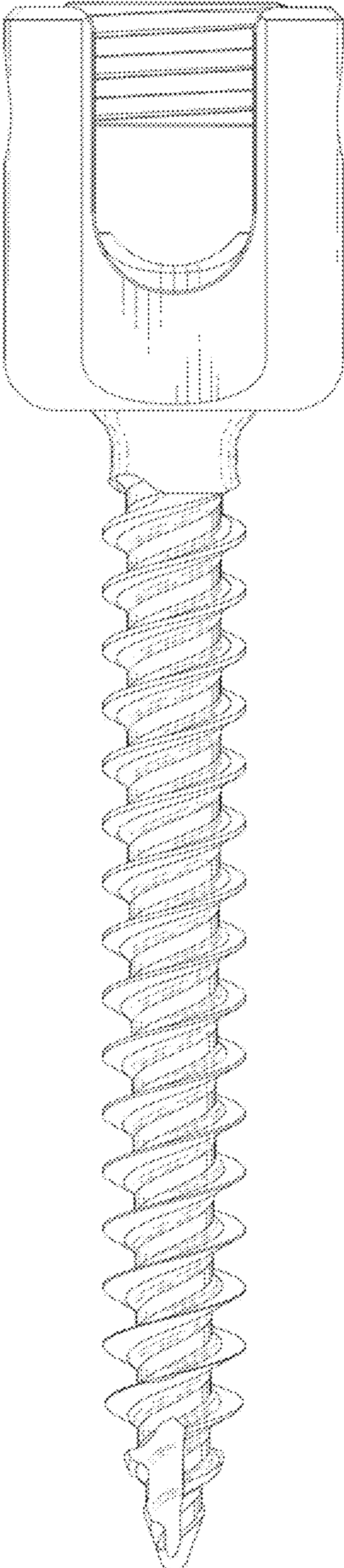


FIG. 3

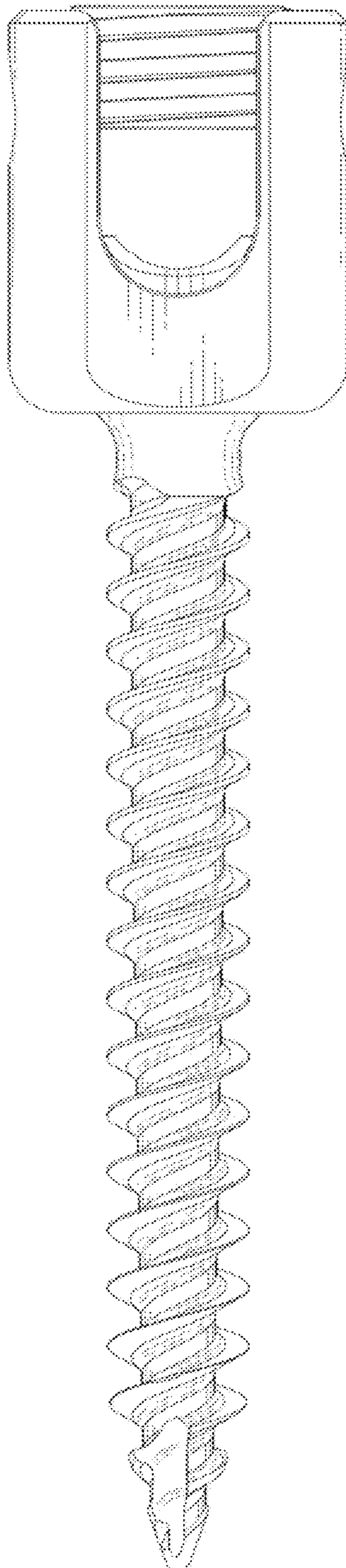


FIG. 4

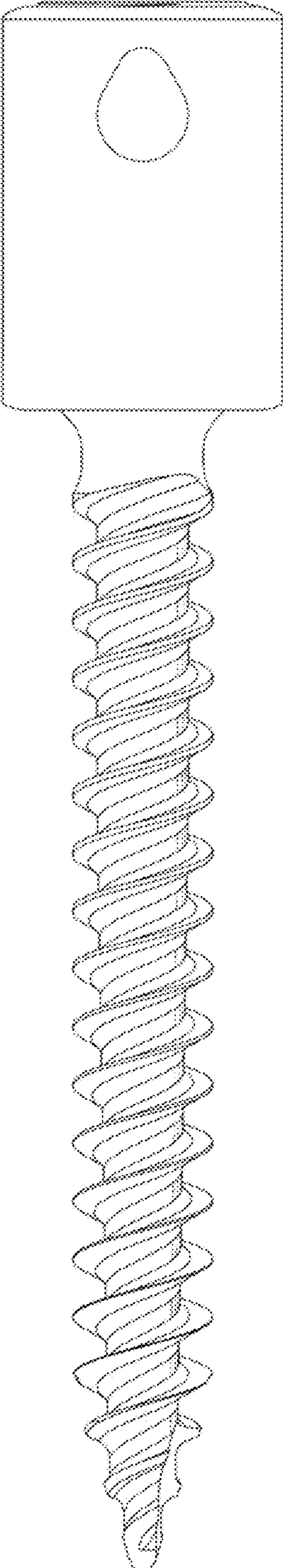


FIG. 5

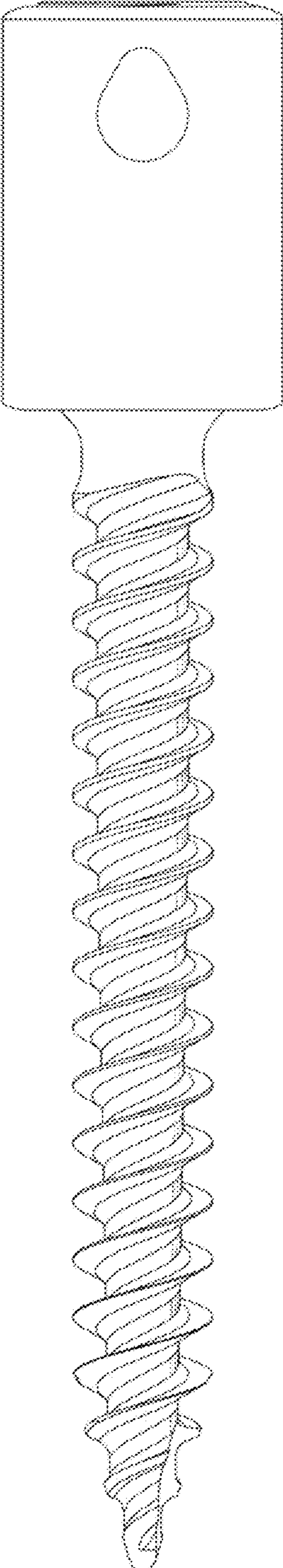




FIG. 6

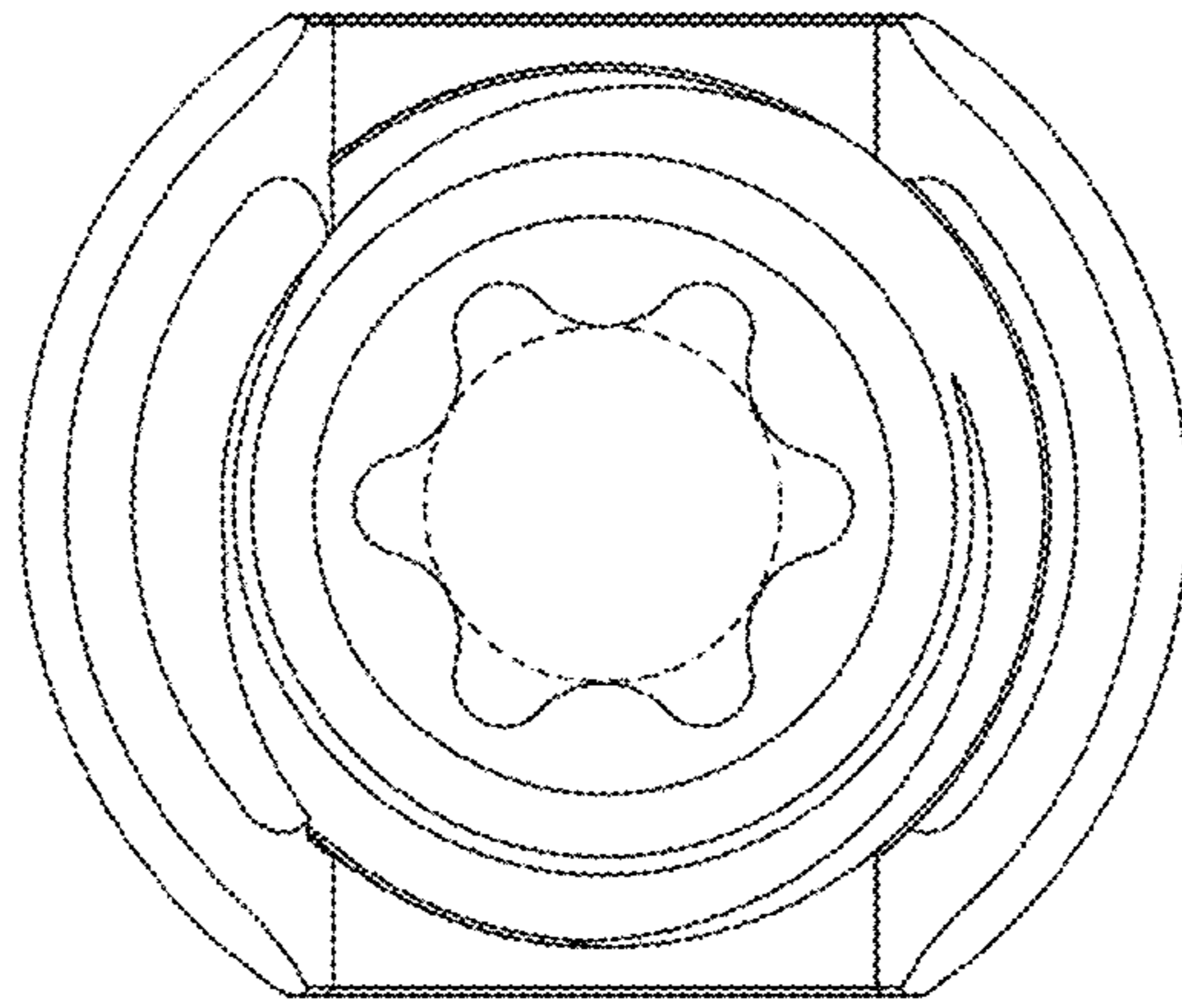


FIG. 7

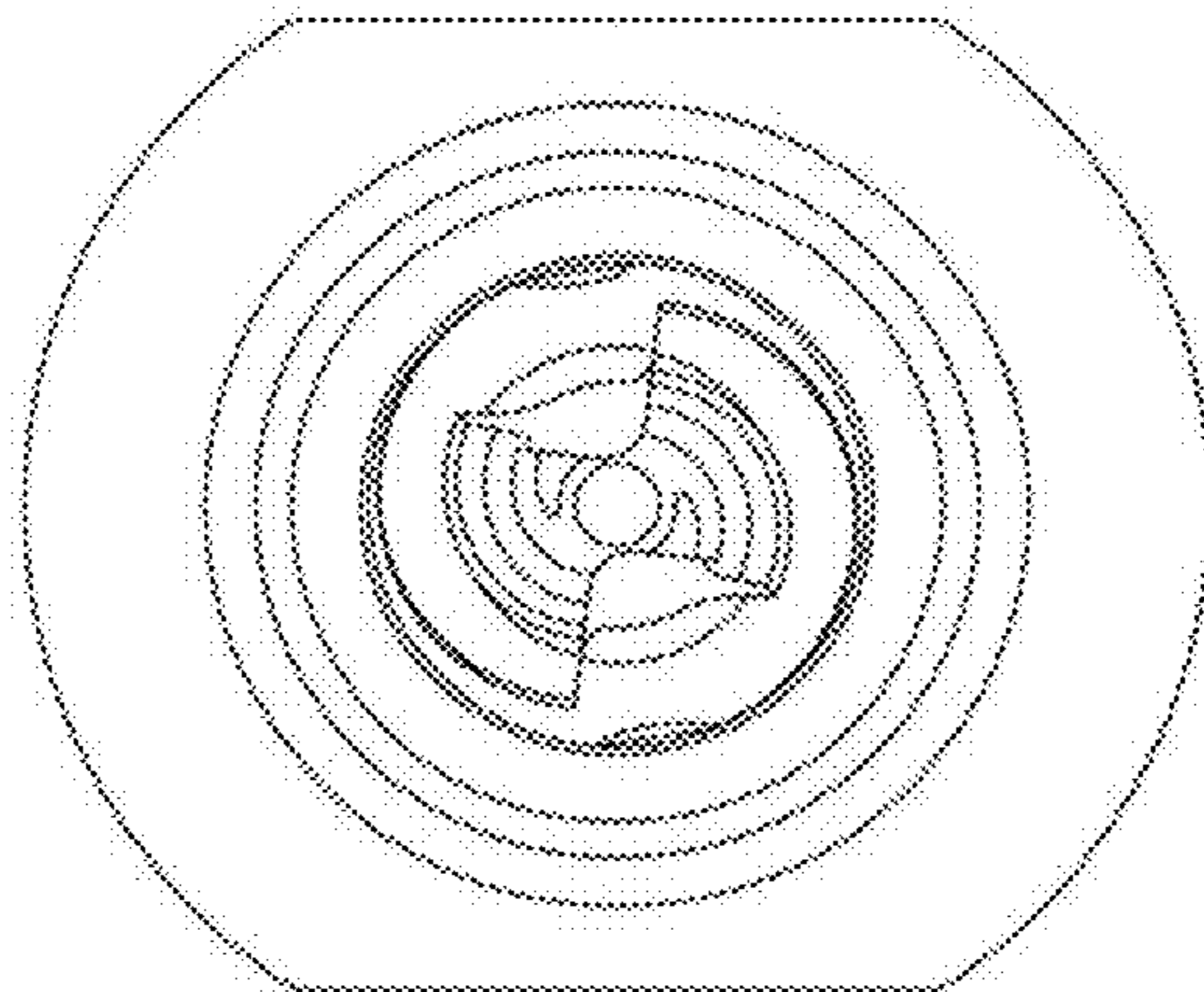




FIG. 8

