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

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(54) **DRILL BIT**
(71) Applicant: **Sumitomo Electric Hardmetal Corp.,**
Itami-shi (JP)
(72) Inventors: **Shuhei Misumi, Itami (JP); Minoru**
Yoshida, Itami (JP); Yoshiji Sato, Itami
(JP)
(73) Assignee: **Sumitomo Electric Hardmetal Corp.,**
Itami-shi (JP)
(**) Term: **15 Years**

10,029,316 B2 * 7/2018 Dyer B23K 26/402
10,155,269 B2 * 12/2018 Jindai C23C 14/06
10,259,050 B2 * 4/2019 Ogawa B23B 51/02
10,421,131 B2 * 9/2019 Park B23B 51/02
2002/0046629 A1 * 4/2002 Borschert B23B 51/02
76/108.1
2002/0159849 A1 * 10/2002 Longden B23B 51/02
408/199
2003/0053874 A1 * 3/2003 Moore B23B 51/009
408/230
2004/0037662 A1 * 2/2004 Kaneko B23B 51/02
408/230
2004/0101379 A1 * 5/2004 Mabuchi B23B 51/02
408/230

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(Continued)
Primary Examiner — Patricia A Palasik
(74) *Attorney, Agent, or Firm* — Baker Botts L.L.P.;
Michael A. Sartori

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(52) **U.S. Cl.**
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USPC D8/20, 70, 86; D15/132, 138, 139, 140
CPC ... B23B 31/005; B23B 51/02; B23B 2226/75;
B23B 2231/0212; B23B 2251/248; B23B
2260/072; B23C 5/10; B23D 77/00;
B23G 5/064; Y10T 407/19; Y10T
408/907
See application file for complete search history.

(57) **CLAIM**
The ornamental design for a drill bit, as shown and
described.

(56) **References Cited**
U.S. PATENT DOCUMENTS
5,622,462 A * 4/1997 Gakhar B23B 51/02
408/230
5,931,615 A * 8/1999 Wiker B23B 51/02
408/229
6,036,410 A * 3/2000 Shun'ko B23B 51/02
408/227
D525,272 S * 7/2006 Duscha D15/139

DESCRIPTION
FIG. 1 is a front view of a drill bit in accordance with an
embodiment of the present design;
FIG. 2 is a rear view thereof;
FIG. 3 is a right side view thereof;
FIG. 4 is a left side view thereof;
FIG. 5 is a top view thereof;
FIG. 6 is a bottom view thereof;
FIG. 7 is a first perspective view thereof;
FIG. 8 is a second perspective view thereof;
FIG. 9 is an enlarged view of portion 9 of FIG. 1;
FIG. 10 is an enlarged view of portion 10 of FIG. 2;
FIG. 11 is an enlarged view of FIG. 4;
FIG. 12 is an enlarged view of portion 12 of FIG. 5;
FIG. 13 is an enlarged view of portion 13 of FIG. 6;
FIG. 14 is an enlarged view of portion 14 of FIG. 7; and,
FIG. 15 is an enlarged view of portion 15 of FIG. 8.

1 Claim, 11 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

2006/0039767	A1*	2/2006	Yamamoto	.....	B23B 51/02	408/230
2006/0078393	A1*	4/2006	Lin	.....	B23B 51/02	408/230
2008/0019787	A1*	1/2008	Sampath	.....	B23B 51/02	408/230
2010/0054884	A1*	3/2010	Masuda	.....	B23B 51/02	408/230
2010/0316456	A1*	12/2010	George	.....	B23B 51/02	408/230
2011/0081215	A1*	4/2011	Nakamura	.....	B23B 51/02	408/230
2012/0201619	A1*	8/2012	Olsson	.....	B23B 51/02	408/230
2014/0219737	A1*	8/2014	Takai	.....	B23B 51/02	408/229
2014/0294529	A1*	10/2014	Takai	.....	B23B 51/02	408/229
2014/0348605	A1*	11/2014	Park	.....	B23B 51/009	408/224
2015/0071718	A1*	3/2015	Kauper	.....	B24B 3/24	407/54
2015/0321267	A1*	11/2015	Takai	.....	B23B 51/06	408/59
2016/0031016	A1*	2/2016	Takai	.....	B23B 51/06	408/57
2016/0052069	A1*	2/2016	Kauper	.....	B23B 51/02	408/144
2016/0151842	A1*	6/2016	Bjork	.....	B23B 51/06	408/59
2016/0167139	A1*	6/2016	Ogawa	.....	C23C 30/005	408/1 R
2016/0228954	A1*	8/2016	Lemmer	.....	C23C 16/27	
2017/0165797	A1*	6/2017	Nii	.....	B23P 15/28	
2017/0182566	A1*	6/2017	Dyer	.....	B23K 26/402	
2017/0326653	A1*	11/2017	Guter	.....	B23B 51/02	
2018/0065190	A1*	3/2018	Roth	.....	B23B 51/02	
2018/0257151	A1*	9/2018	Park	.....	B23B 51/02	
2019/0234150	A1*	8/2019	Miebach	.....	B23B 51/02	

* cited by examiner

FIG.1

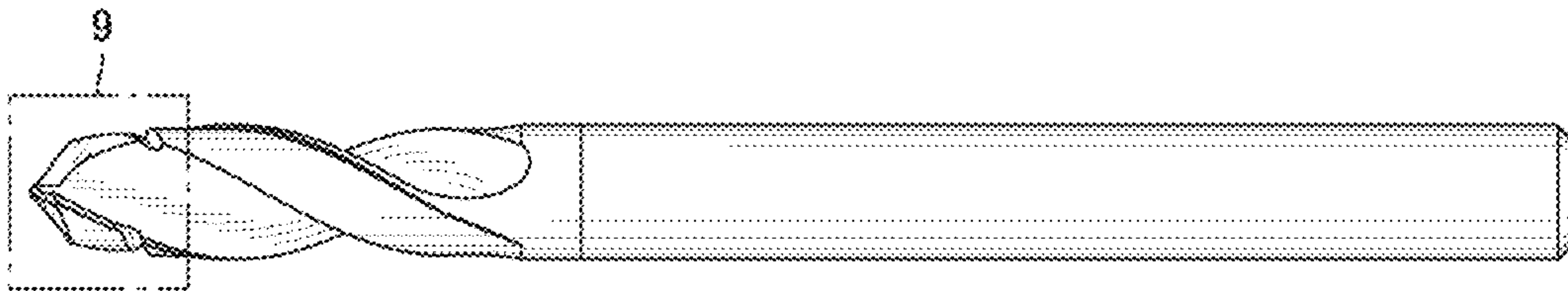


FIG.2

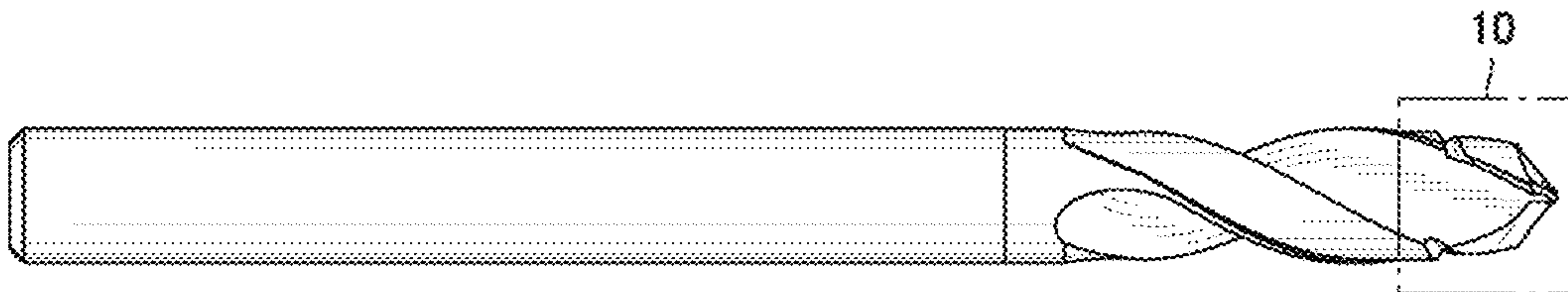


FIG.3

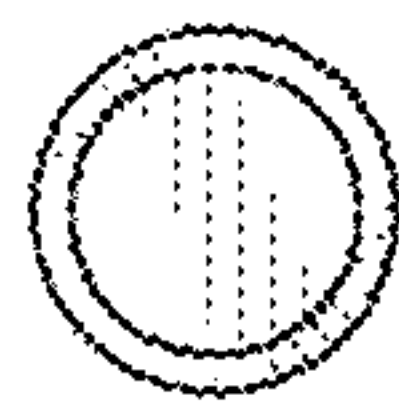


FIG.4

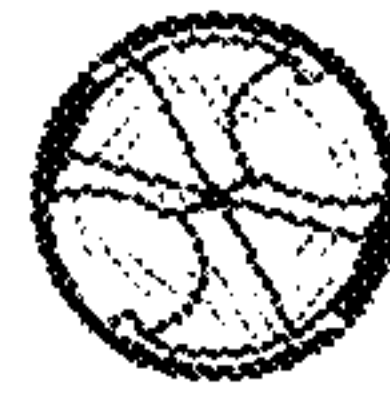


FIG.5

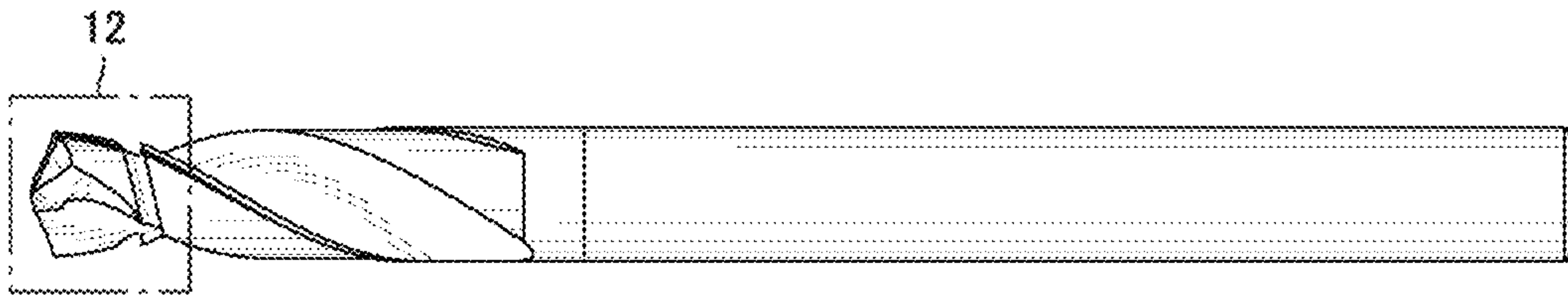


FIG.6

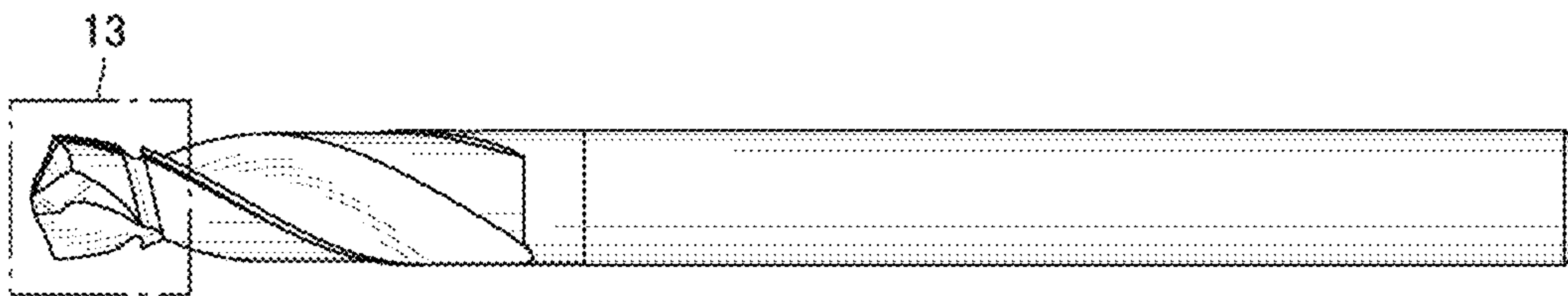


FIG. 7

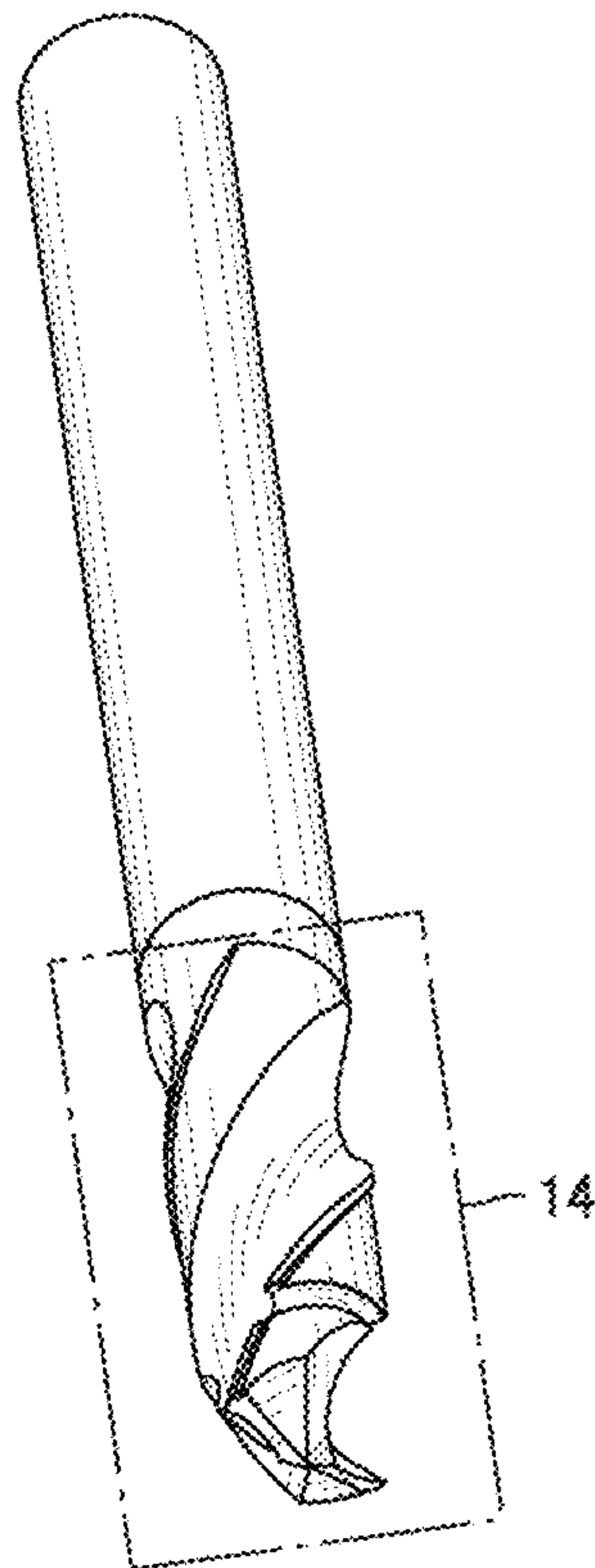


FIG.8

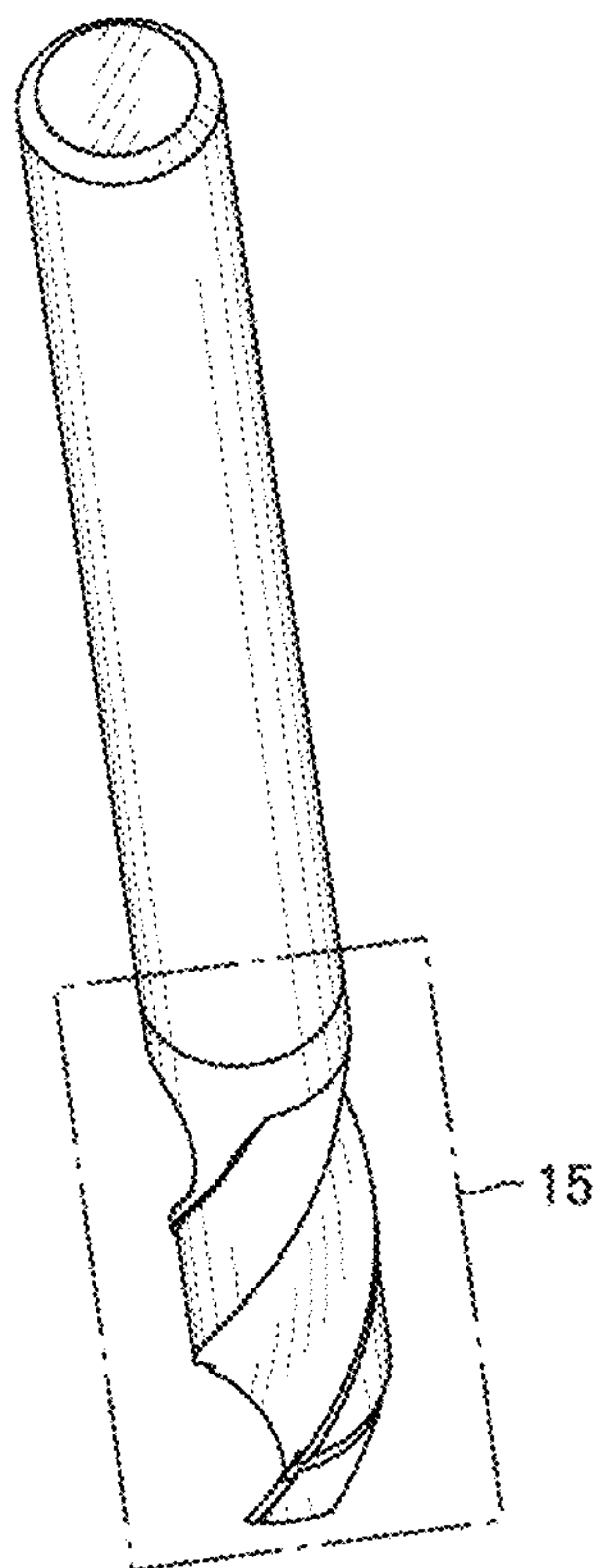


FIG. 9

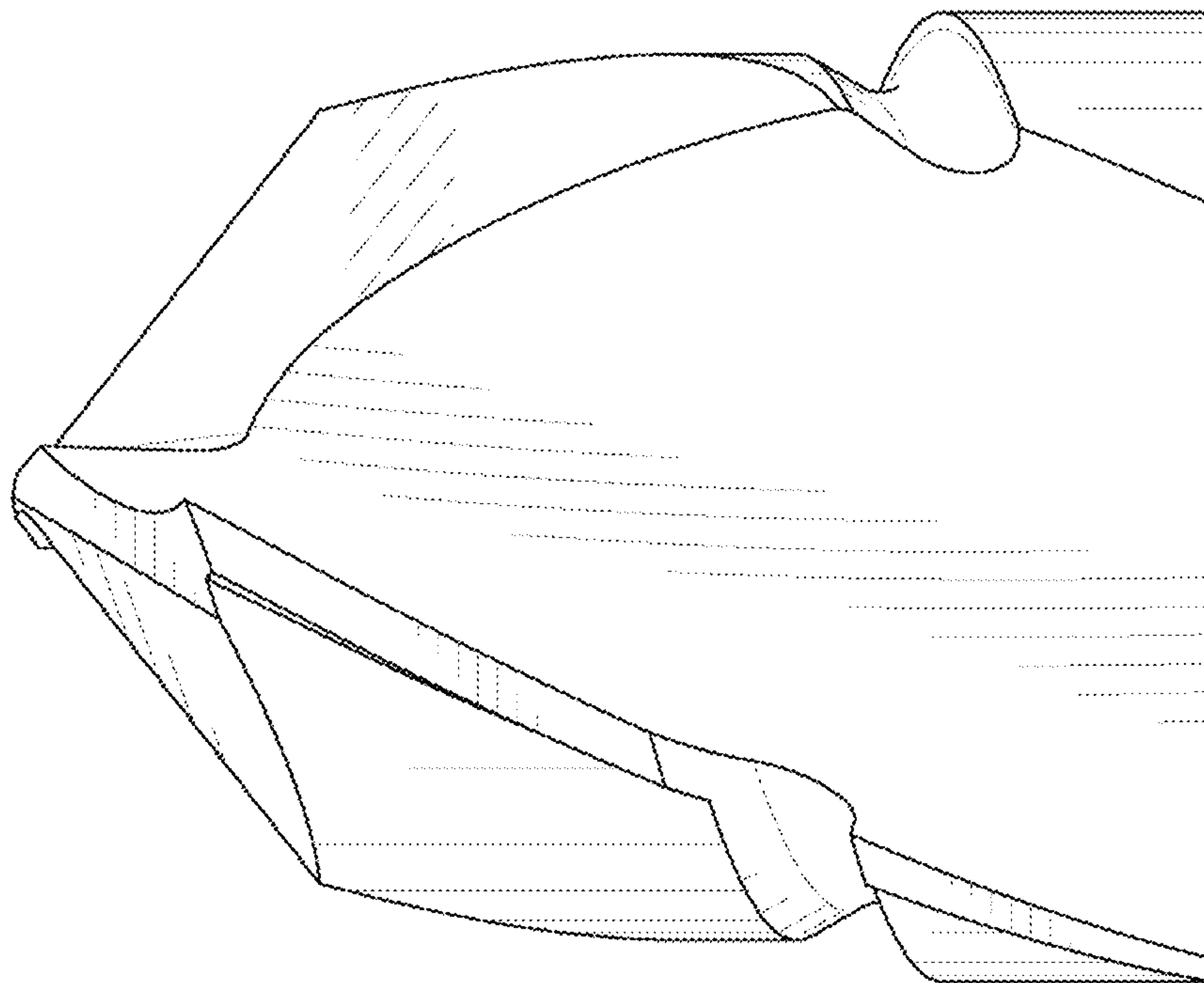


FIG.10

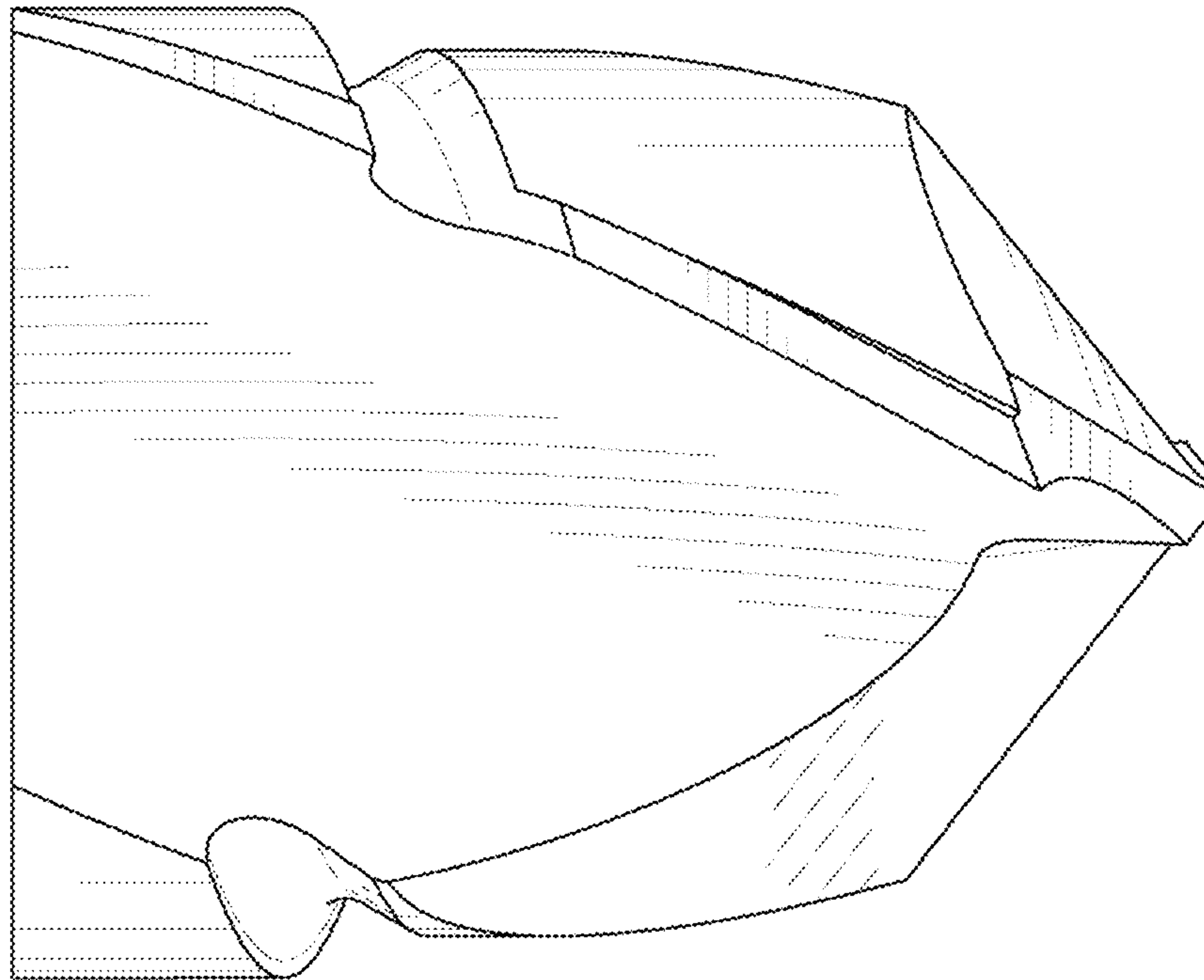


FIG.11

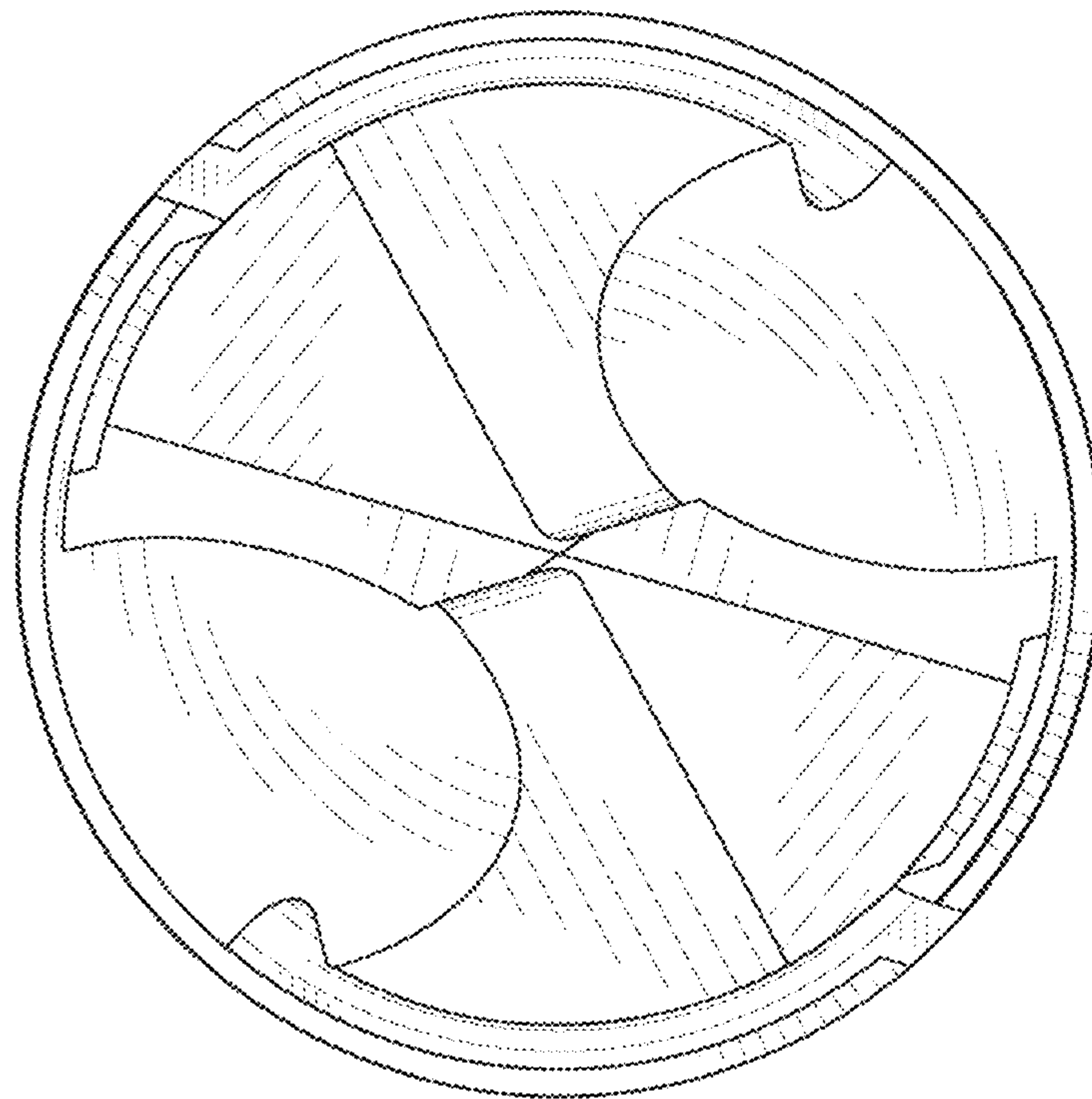


FIG.12

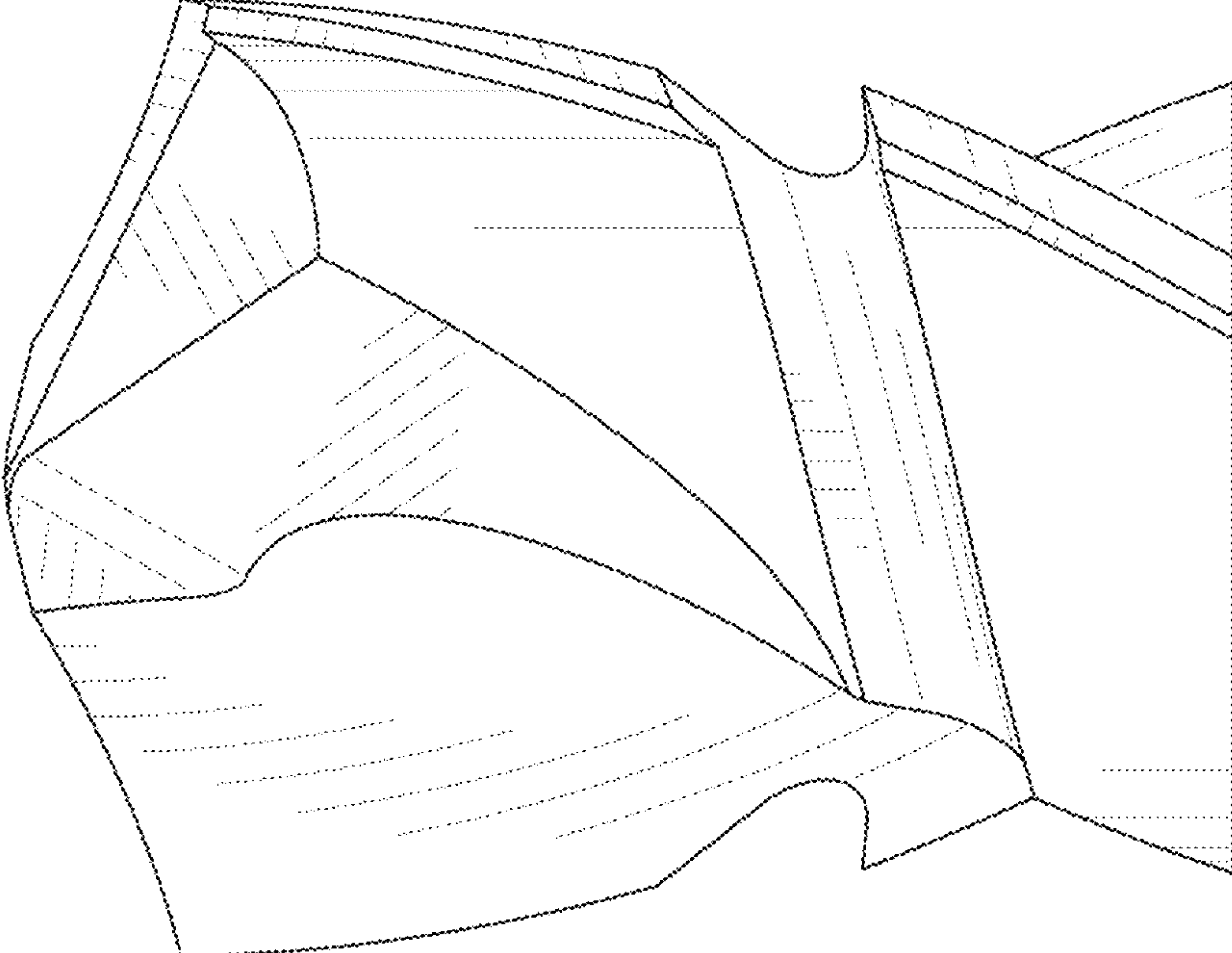


FIG. 13

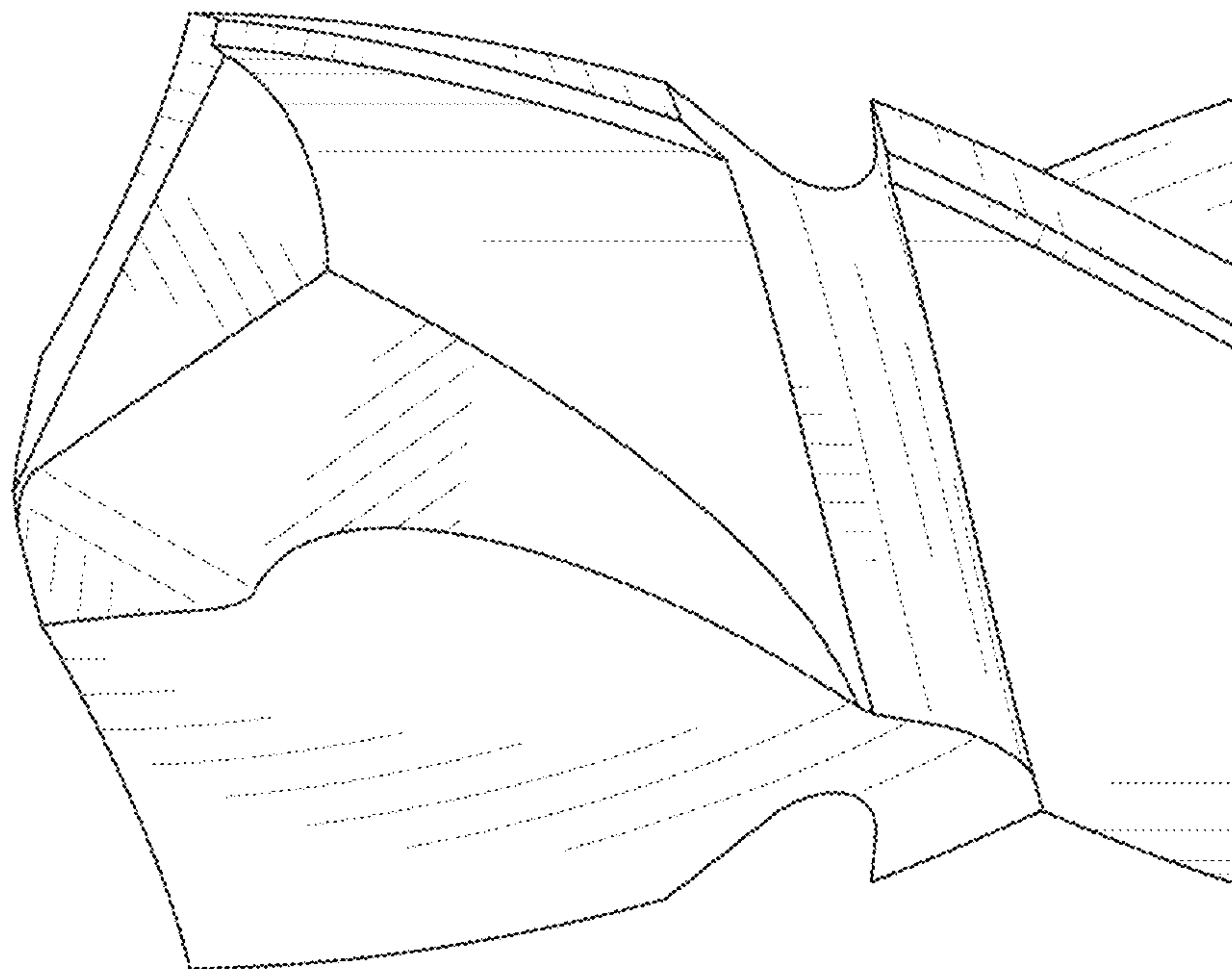


FIG.14

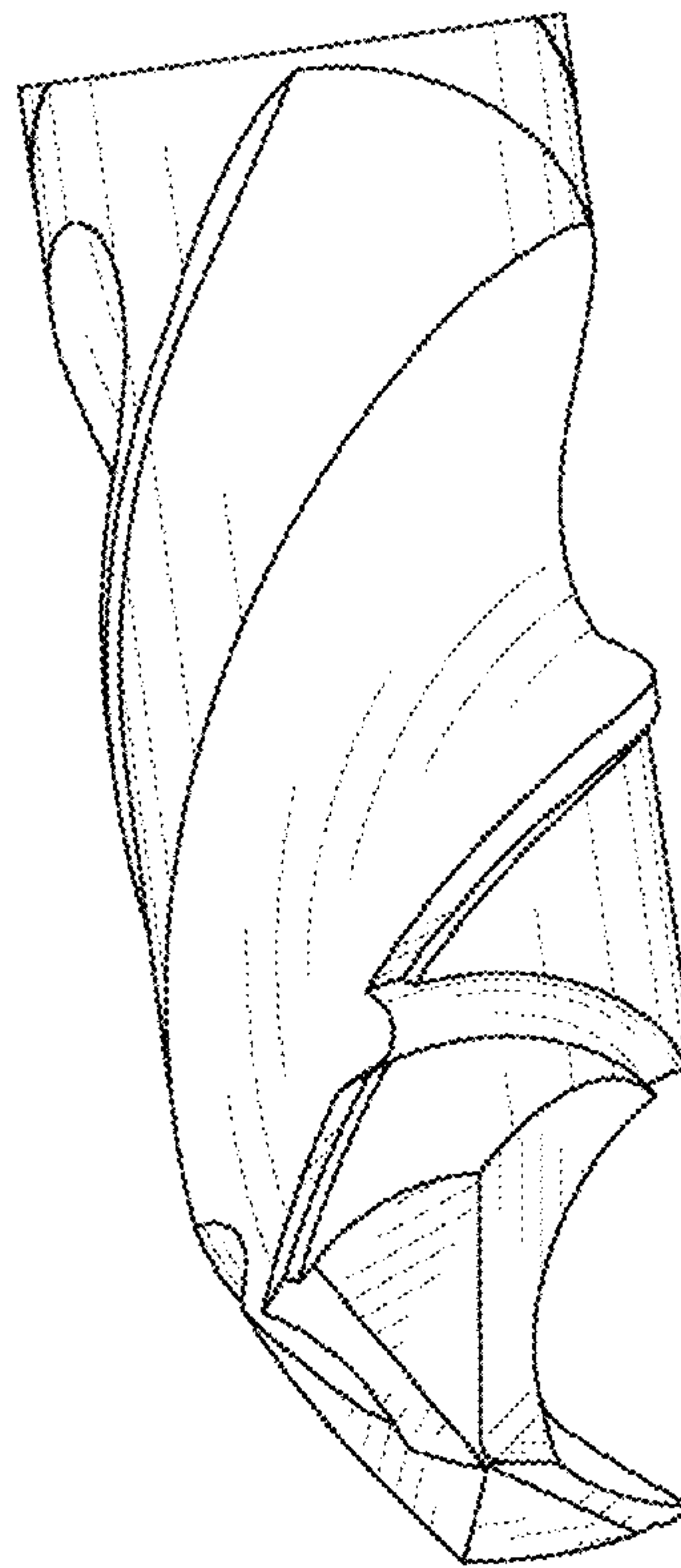


FIG.15

