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

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(54) **OPTICAL MODULE**

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

USPC **D13/154**; D14/435

(58) **Field of Classification Search**

USPC D14/140, 140.1, 140.4, 217, 240, 242,
D14/256, 300, 313, 496, 299, 356, 357,
D14/358, 432, 435, 435.1; D13/123, 133,
D13/135, 154; D10/46

CPC G02B 6/42; G02B 6/4268; G02B 6/4204;
G02B 6/4271; G02B 6/4269; G02B 6/43;
G02B 6/3893; G02B 6/54; H05K 1/02;
H05K 1/021; H05K 1/0274; H05K
1/0216; H01R 13/6335

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D133,267 S *	8/1942	Burt	.....	D13/154
D241,649 S *	9/1976	Andersen et al.	.....	D13/154
D340,389 S *	10/1993	Yamanashi	.....	D13/154
D488,449 S *	4/2004	Kuo	.....	D13/154
D513,252 S *	12/2005	Wang	.....	D14/357
7,094,078 B2 *	8/2006	Okada	.....	G06F 1/1632 439/135
7,147,501 B1 *	12/2006	Wu	.....	H01R 13/6275 439/352
7,318,740 B1 *	1/2008	Henry	.....	H01R 13/6275 439/352
D566,651 S *	4/2008	Chan	.....	D13/123

D654,434 S *	2/2012	Ishigami	.....	D13/123
8,500,342 B2 *	8/2013	Yu et al.	.....	385/139
9,028,270 B1 *	5/2015	Vanderwoud	.....	H01R 13/6335 439/476.1
9,063,305 B2 *	6/2015	McColloch	.....	H05K 7/20409
D734,728 S *	7/2015	Lagziel	.....	D13/154
D744,957 S *	12/2015	Tal	.....	D13/154
9,380,003 B2 *	6/2016	Tang	.....	H04L 49/30
9,383,519 B2 *	7/2016	Yi	.....	G02B 6/36

(Continued)

OTHER PUBLICATIONS

Mellanox—QSFP transceiver module_MC2210411-SR4L. [online image] 1 pg. manufactured Nov. 21, 2013. [Retrieved on Sep. 23, 2019] https://webobjects2.cdw.com/is/image/CDW/4500034?wid=1142&hei=818&resMode=bin&fit=fit,1.*

(Continued)

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(57) **CLAIM**

The ornamental design for an optical module, as shown and described.

DESCRIPTION

FIG. 1 is a front perspective view of an optical module according to an embodiment of the present design.

FIG. 2 is a rear perspective view of the optical module of FIG. 1.

FIG. 3 is a front view the optical module of FIG. 1.

FIG. 4 is a back view of the optical module of FIG. 1.

FIG. 5 is a left side view of the optical module of FIG. 1.

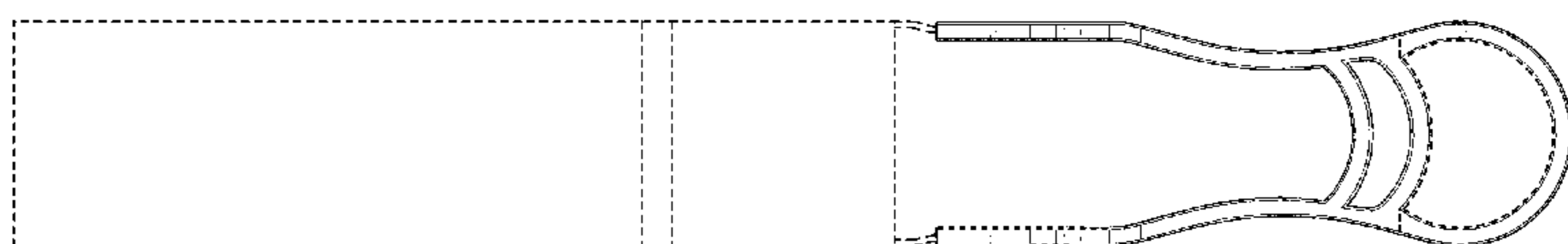
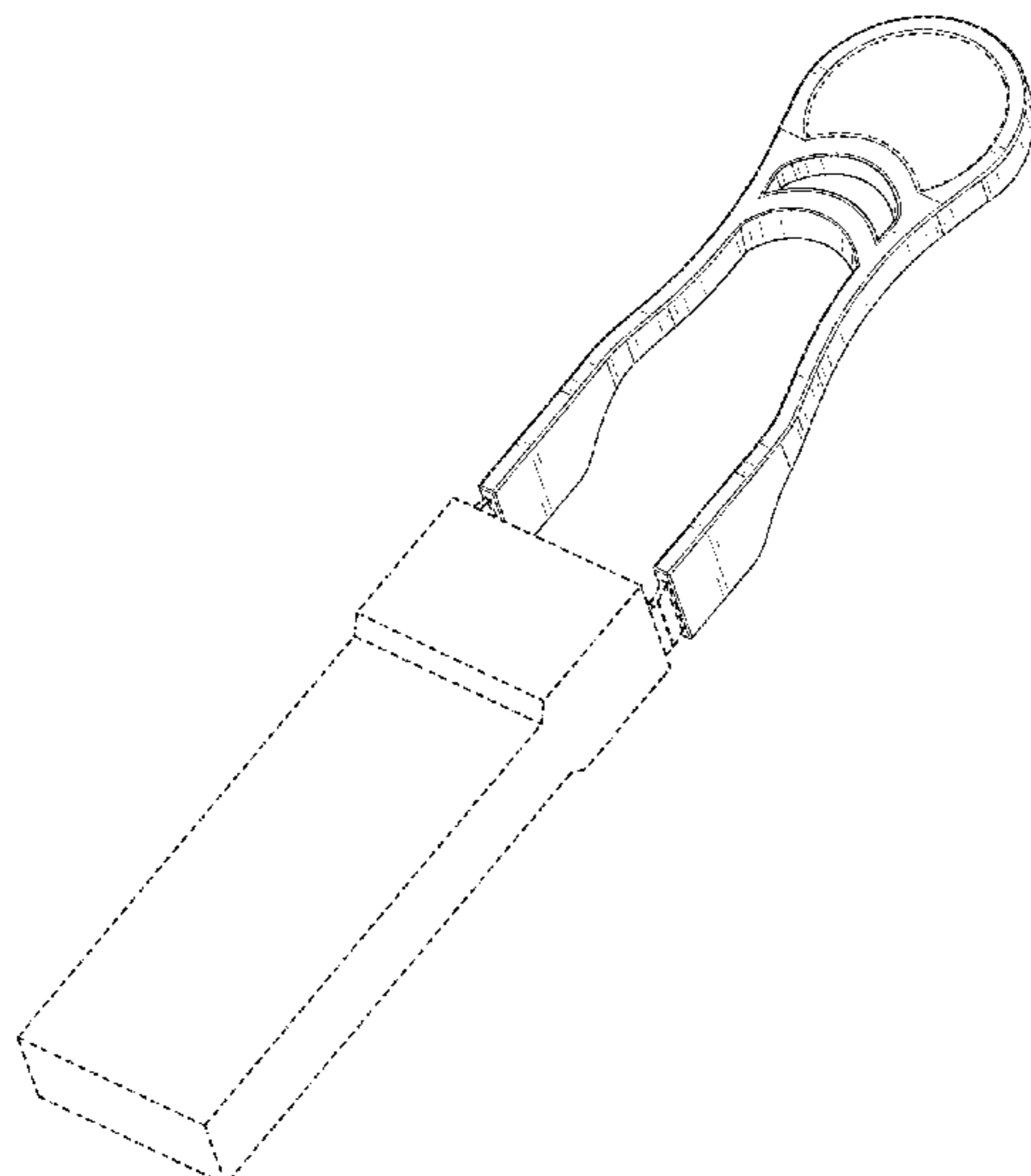
FIG. 6 is a right side view of the optical module of FIG. 1.

FIG. 7 is a top view of the optical module of FIG. 1; and,

FIG. 8 is a bottom view of the optical module of FIG. 1.

The broken lines shown in the drawings depict unclaimed environmental structure and form no part of the claimed design.

1 Claim, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

9,430,004 B2 * 8/2016 Meadowcroft G06F 1/183
 9,470,860 B2 * 10/2016 McColloch G02B 6/4268
 9,523,826 B2 * 12/2016 Tsai G02B 6/423
 9,645,334 B2 * 5/2017 Ishii G02B 6/4272
 9,720,189 B1 * 8/2017 Wang G02B 6/387
 9,739,953 B2 * 8/2017 Moriyama G02B 6/387
 9,927,585 B1 * 3/2018 Shih G02B 6/4257
 D815,641 S * 4/2018 Ellis, II D14/435
 10,079,452 B1 * 9/2018 Zhang H01R 13/5812
 10,162,132 B2 * 12/2018 Zhang G02B 6/3893
 10,254,491 B2 * 4/2019 Chung G02B 6/4292
 10,288,824 B2 * 5/2019 Lin G02B 6/4261
 10,330,873 B2 * 6/2019 Chuang G02B 6/4261
 10,411,423 B1 * 9/2019 Park H04B 1/38
 10,444,453 B1 * 10/2019 Khamaisee H04B 10/40
 2009/0291578 A1 * 11/2009 Wu H01R 9/032
 439/258
 2010/0216325 A1 * 8/2010 Huang H01R 13/6275
 439/155
 2011/0194828 A1 * 8/2011 Hackett G02B 6/3825
 385/134
 2012/0094515 A1 * 4/2012 Wu H01R 13/6272
 439/159
 2012/0282796 A1 * 11/2012 Wu H01R 13/633
 439/350
 2013/0115794 A1 * 5/2013 Chang H01R 13/6335
 439/160
 2013/0183846 A1 * 7/2013 Kappla G02B 6/4246
 439/350
 2013/0244459 A1 * 9/2013 Lee H01R 13/443
 439/133
 2013/0279122 A1 * 10/2013 Tang H01R 13/6335
 361/747
 2014/0179143 A1 * 6/2014 Kappla H01R 13/6275
 439/310
 2014/0348468 A1 * 11/2014 Lagziel G02B 6/4255
 385/78
 2014/0369651 A1 * 12/2014 Ben David G02B 6/4268
 385/89

2015/0188635 A1 * 7/2015 Yeh H04B 10/40
 398/135
 2015/0263453 A1 * 9/2015 Wang H01R 13/6335
 385/76
 2016/0111819 A1 * 4/2016 Frahmman H01R 13/6275
 385/76
 2016/0216460 A1 * 7/2016 Yang G02B 6/4284
 2016/0252690 A1 * 9/2016 Kawamura G02B 6/4246
 398/79
 2016/0266340 A1 * 9/2016 Zhang G02B 6/32
 2016/0327756 A1 * 11/2016 Raven G02B 6/3893
 2017/0139157 A1 * 5/2017 Kanno G02B 6/3821
 2018/0040982 A1 * 2/2018 Resendez H01R 13/635
 2018/0136416 A1 * 5/2018 Kurashima G02B 6/3879
 2018/0172930 A1 * 6/2018 Kanda H04B 10/564
 2018/0235087 A1 * 8/2018 Uchida H05K 1/189
 2018/0252871 A1 * 9/2018 Yeh G02B 6/387
 2018/0254581 A1 * 9/2018 Yeh G02B 6/00
 2018/0267263 A1 * 9/2018 Wang G02B 6/4214
 2018/0284359 A1 * 10/2018 Akieda G02B 6/3858
 2018/0284363 A1 * 10/2018 Zhang G02B 6/3893
 2018/0372956 A1 * 12/2018 Chen G02B 6/4204
 2019/0029102 A1 * 1/2019 Chen H05K 1/021
 2019/0044299 A1 * 2/2019 Kazav H01R 43/26
 2019/0058275 A1 * 2/2019 Li H01R 13/405
 2019/0058287 A1 * 2/2019 Li H01R 13/6335
 2019/0079252 A1 * 3/2019 Watanabe G02B 6/3898
 2019/0097735 A1 * 3/2019 Akieda H04B 10/801
 2019/0101714 A1 * 4/2019 Kurashima G02B 6/4277
 2019/0113698 A1 * 4/2019 Huang G02B 6/4269
 2019/0187390 A1 * 6/2019 Yamashita G02B 6/425
 2019/0204516 A1 * 7/2019 Chen G02B 6/4246
 2019/0204517 A1 * 7/2019 Chen G02B 6/426
 2019/0271818 A1 * 9/2019 Cabessa G02B 6/4269

OTHER PUBLICATIONS

Sinovo_SOQP-PSM-2 QSFP28 optical module. [online image] 1
 pg. [Retrieved on Sep. 23, 2019] https://pic2.zhimg.com/80/v2-7f58db79b054f883a187296adefcd6d9_hd.jpg.*

* cited by examiner

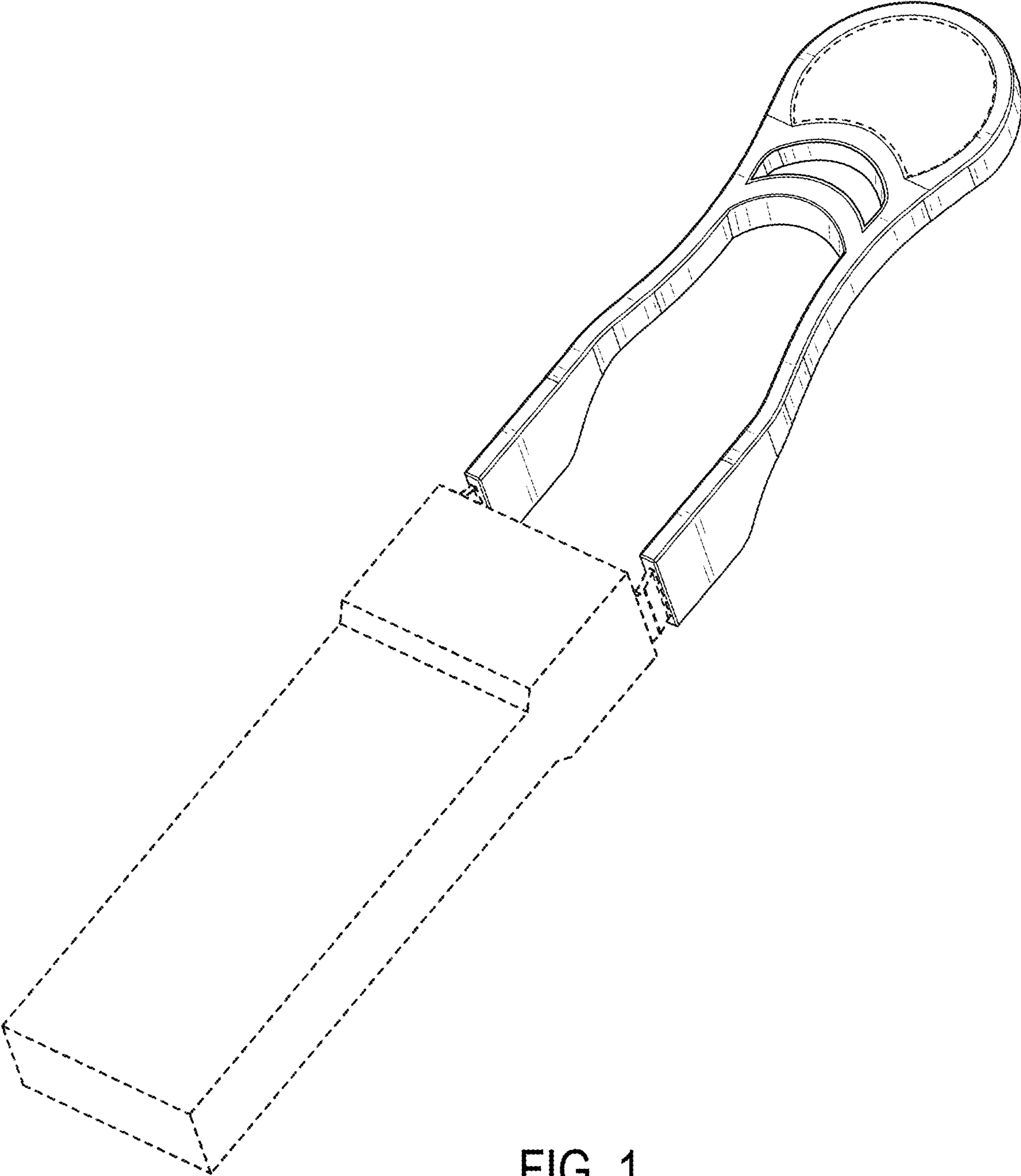


FIG. 1

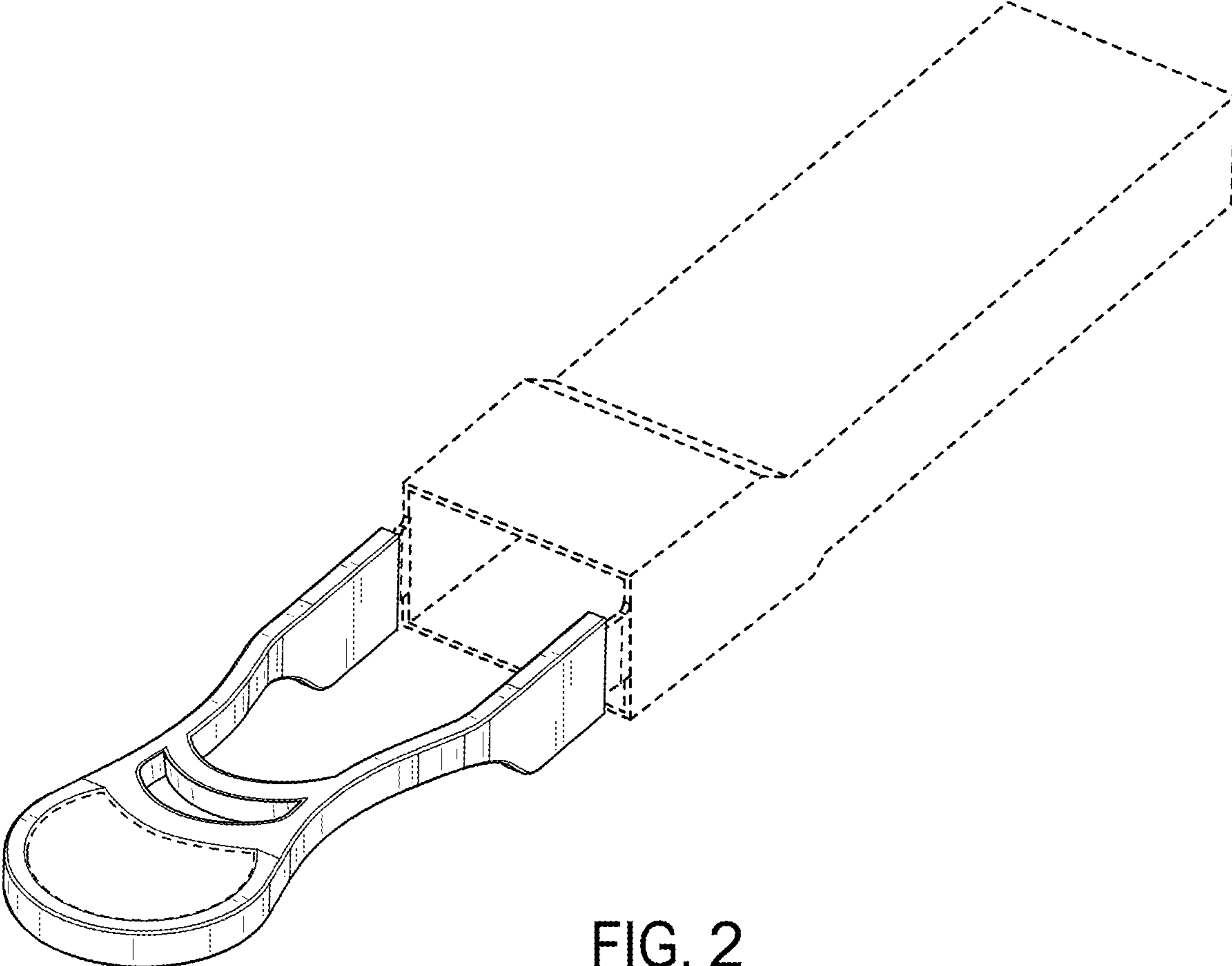


FIG. 2

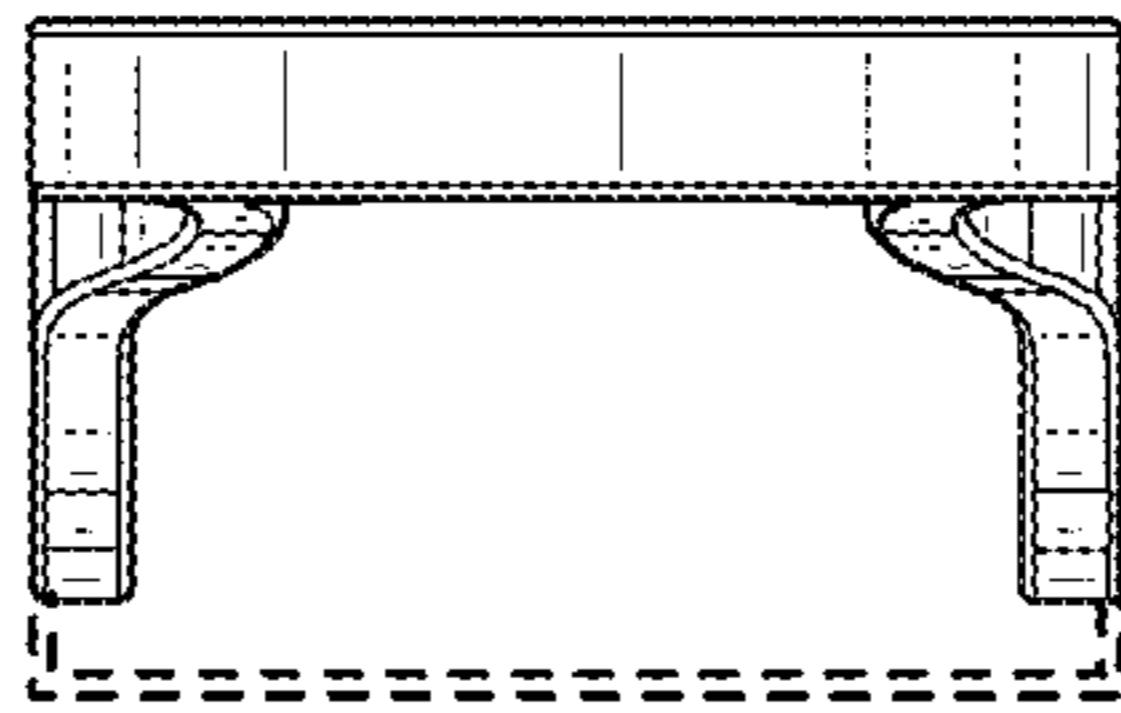


FIG. 3



FIG. 4

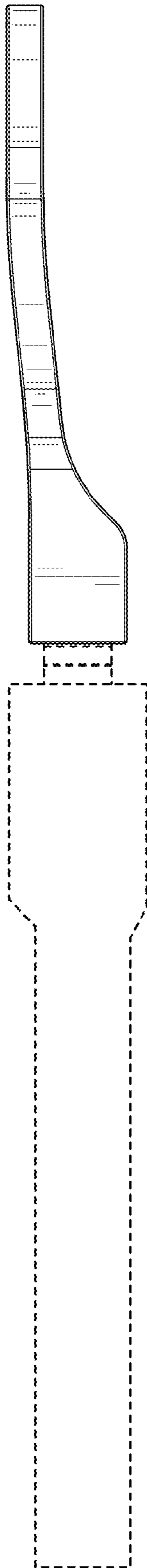


FIG. 5

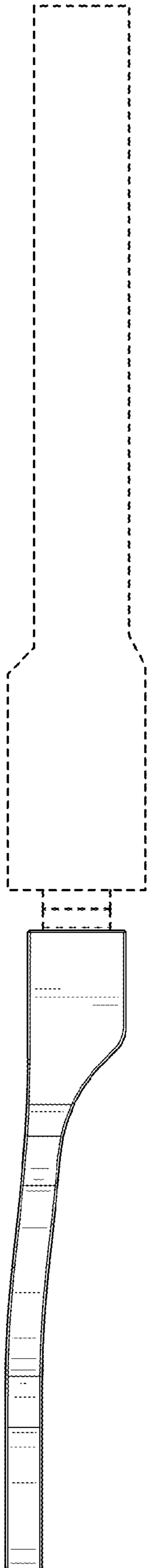


FIG. 6

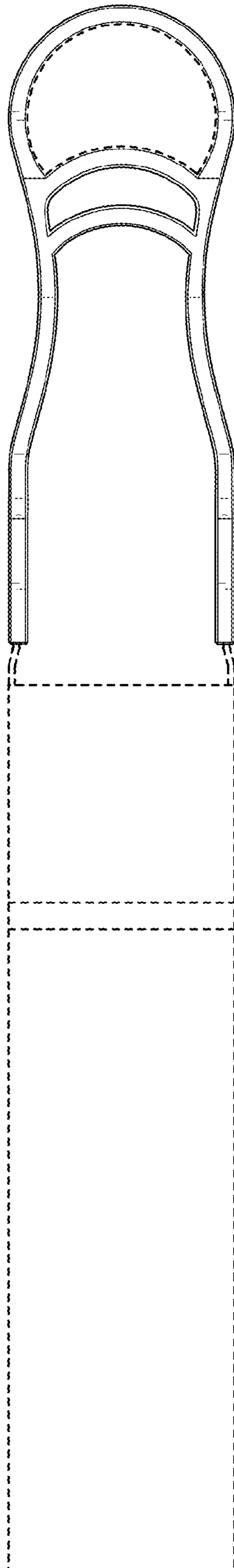


FIG. 7

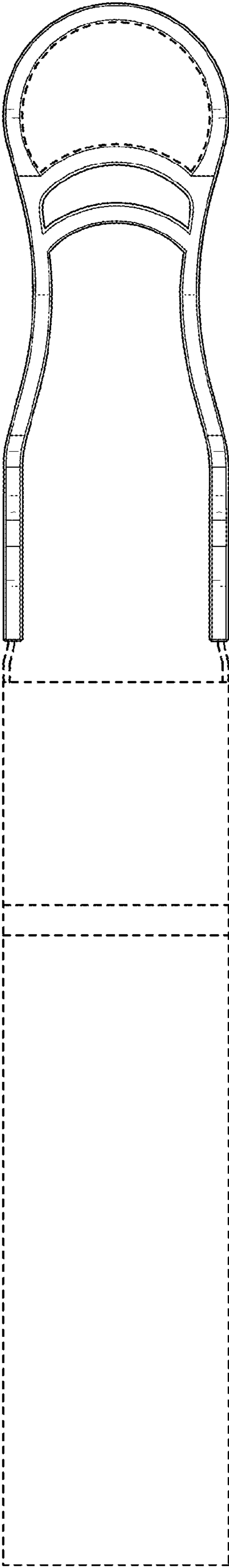


FIG. 8