



US00D877286S

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

(10) **Patent No.:** **US D877,286 S**
(45) **Date of Patent:** **** Mar. 3, 2020**

(54) **PERFORATING GUN CONTACT RING**

(71) Applicant: **OSO Perforating, LLC**, Oklahoma City, OK (US)

(72) Inventors: **Tobias D. Hartman**, Irving, TX (US);
Jeremy J. Ursi, Carrollton, TX (US)

(73) Assignee: **OSO Perforating, LLC**, Oklahoma City, OK (US)

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

(21) Appl. No.: **29/657,527**

(22) Filed: **Jul. 23, 2018**

(51) **LOC (12) Cl.** **22-03**

(52) **U.S. Cl.**
USPC **D22/112**

(58) **Field of Classification Search**
USPC D8/354, 358, 382; D12/197; D15/126,
D15/138, 139; D22/100, 112, 115, 119,
D22/199
CPC E21B 43/116; E21B 43/1185; F42D 1/05;
F42D 1/06
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,347,929	A	9/1994	Lerche et al.	
5,531,164	A	7/1996	Mosley	
5,603,379	A	2/1997	Henke et al.	
5,714,709	A *	2/1998	Schillinger	F42B 33/06
				102/255
5,780,764	A *	7/1998	Welch	F42D 1/043
				102/275.4
5,803,175	A	9/1998	Myers, Jr. et al.	
D477,554	S *	7/2003	Keefer	D12/197
6,851,471	B2	2/2005	Barlow et al.	
6,926,087	B1	8/2005	Henke et al.	
D511,366	S *	11/2005	Brown	D22/112
6,959,765	B2	11/2005	Bell	

D566,640	S *	4/2008	Holz	D12/197
7,530,397	B2	5/2009	Bell	
7,536,942	B2	5/2009	Bell	
7,698,982	B2	4/2010	Bell	
D647,114	S *	10/2011	Pearce	D15/139
D647,115	S *	10/2011	Pearce	D15/139
RE43,120	E *	1/2012	Popov	D10/70

(Continued)

FOREIGN PATENT DOCUMENTS

WO	WO2016186611	A1	11/2016
WO	WO2018030996	A1	2/2018

Primary Examiner — Michael C Stout

Assistant Examiner — Fitzgerald L Butac

(74) *Attorney, Agent, or Firm* — Fish & Richardson P.C.

(57) **CLAIM**

The ornamental design for a perforating gun contact ring, as shown and described.

DESCRIPTION

FIG. 1 is a top, left perspective view of a perforating gun contact ring, according to our new design.

FIG. 2 is a top, right perspective view of the perforating gun contact ring of FIG. 1.

FIG. 3 is a right view of the perforating gun contact ring of FIG. 1.

FIG. 4 is a left view of the perforating gun contact ring of FIG. 1.

FIG. 5 is a front view of the perforating gun contact ring of FIG. 1.

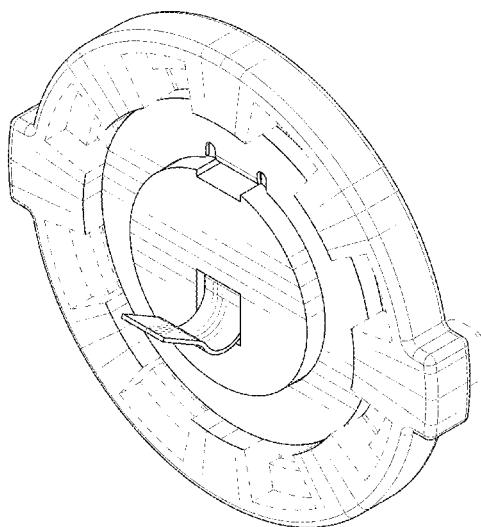
FIG. 6 is a back view of the perforating gun contact ring of FIG. 1.

FIG. 7 is a top view of the perforating gun contact ring of FIG. 1; and,

FIG. 8 is a bottom view of the perforating gun contact ring of FIG. 1.

The broken lines show portions of a perforating gun contact ring that form no part of the claimed design.

1 Claim, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D653,523	S *	2/2012	Wackwitz	.....	D15/138	D805,885	S *	12/2017	Karmarkar	.....	D8/382
8,136,439	B2	3/2012	Bell			D816,005	S *	4/2018	Johns	.....	D12/197
8,191,445	B2 *	6/2012	Drivdahl	.....	E21B 10/48 76/108.2	D820,823	S *	6/2018	Ahn	.....	D14/253
8,302,523	B2	11/2012	Bell			D824,479	S *	7/2018	Jen	.....	D22/108
D681,078	S *	4/2013	Heo	.....	D15/126	D825,643	S *	8/2018	Wengreen	.....	D16/242
D681,704	S *	5/2013	Stoyanov	.....	D15/138	D829,080	S *	9/2018	Hill	.....	D8/354
D682,978	S *	5/2013	Benson	.....	D22/112	D832,898	S *	11/2018	Wetherell	.....	D15/126
8,770,301	B2	7/2014	Bell			D834,074	S *	11/2018	Palushaj	.....	D15/126
8,875,787	B2	11/2014	Tassaroli			D834,077	S *	11/2018	Monden	.....	D15/139
9,074,429	B2 *	7/2015	Pearce	.....	E21B 10/02	D834,078	S *	11/2018	Monden	.....	D15/139
9,145,764	B2	9/2015	Burton et al.			D834,368	S *	11/2018	Oas	.....	D7/392.1
9,175,553	B2	11/2015	McCann et al.			D844,682	S *	4/2019	Karol	.....	D15/138
9,194,219	B1	11/2015	Hardesty et al.			D845,358	S *	4/2019	Geldenduys	.....	D15/138
9,291,040	B1	3/2016	Hardesty et al.			D845,745	S *	4/2019	Kasahara	.....	D8/358
D760,308	S *	6/2016	Krishnegowda	.....	D15/139	D846,008	S *	4/2019	Geldenduys	.....	D15/138
D761,393	S *	7/2016	Crochet, Sr.	.....	D23/259	10,244,914	B2 *	4/2019	Tchakarov	.....	B24D 13/14
D765,214	S *	8/2016	Padgett	.....	D22/115	2007/0169524	A1 *	7/2007	Tharp	.....	B60K 15/0406 70/172
D766,704	S *	9/2016	Hill	.....	D8/354	2013/0174755	A1 *	7/2013	DeVries	.....	F41A 19/69 102/206
9,441,465	B2	9/2016	Tassaroli			2015/0226044	A1 *	8/2015	Ursi	.....	E21B 43/119 166/55
D775,933	S *	1/2017	Hill	.....	D8/349	2016/0002985	A1 *	1/2016	Baudoin	.....	E21B 43/1195 175/56
D775,934	S *	1/2017	Hill	.....	D8/349	2016/0263993	A1 *	9/2016	Loffink	.....	B60K 15/0406
9,702,680	B2	7/2017	Parks et al.			2016/0290084	A1 *	10/2016	LaGrange	.....	E21B 29/02
D795,606	S *	8/2017	Cudworth	.....	D6/515	2016/0333676	A1 *	11/2016	Hardesty	.....	E21B 43/11857
D795,682	S *	8/2017	Downs	.....	D8/382	2017/0184379	A1 *	6/2017	Barzilai	.....	F42B 4/20
D797,168	S *	9/2017	Ruan	.....	D15/126	2017/0211363	A1	7/2017	Bradley et al.		
9,752,421	B2	9/2017	LeGrange et al.			2017/0241244	A1 *	8/2017	Barker	.....	E21B 43/117
D799,702	S *	10/2017	Wong	.....	D24/186	2017/0268860	A1	9/2017	Eitschberger		
D805,878	S *	12/2017	Rassat	.....	D8/354	2019/0085664	A1 *	3/2019	Hardesty	.....	E21B 43/116
D805,883	S *	12/2017	Evitt	.....	D8/382						
D805,884	S *	12/2017	Evitt	.....	D8/382						

* cited by examiner

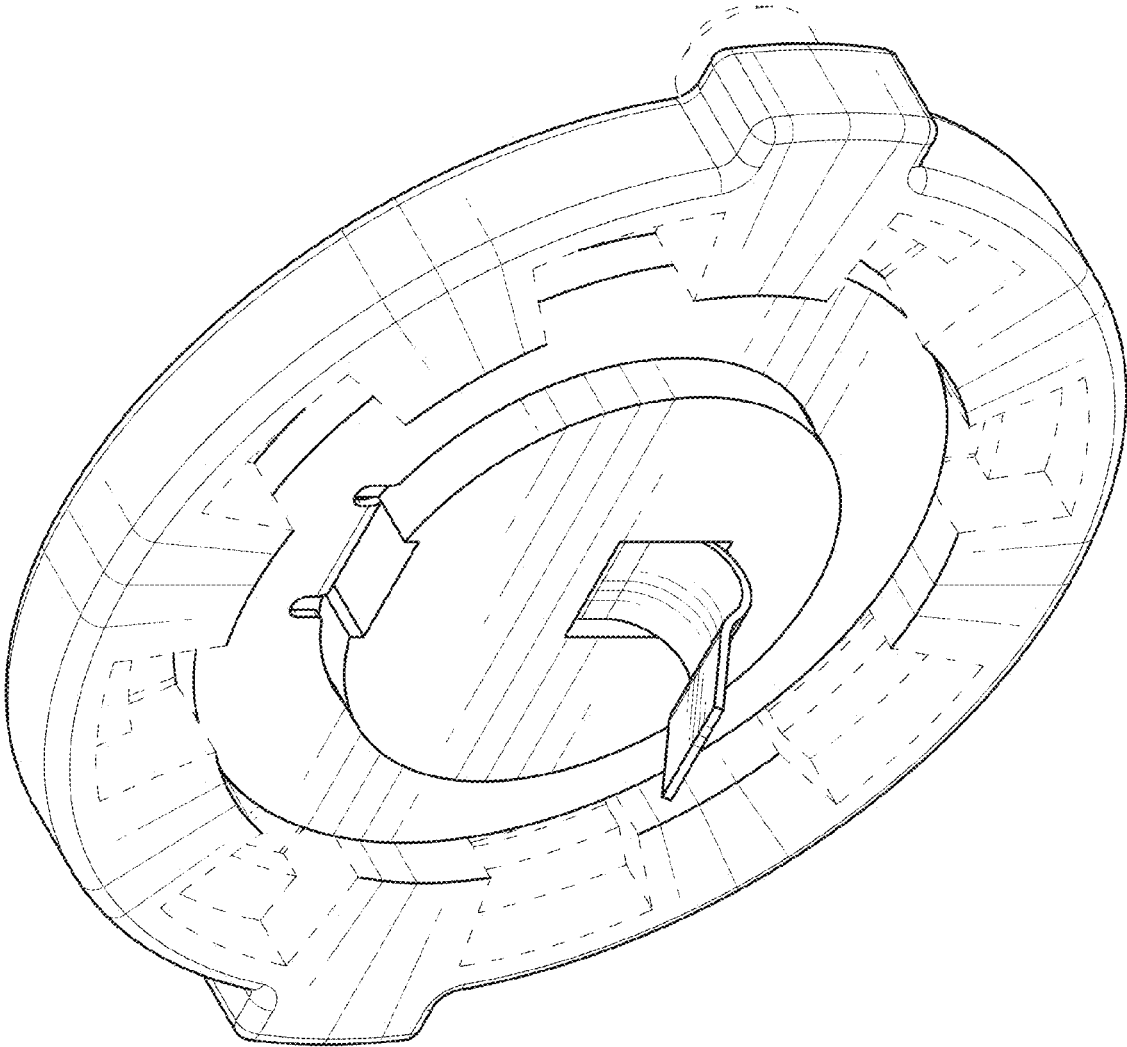


FIG. 1

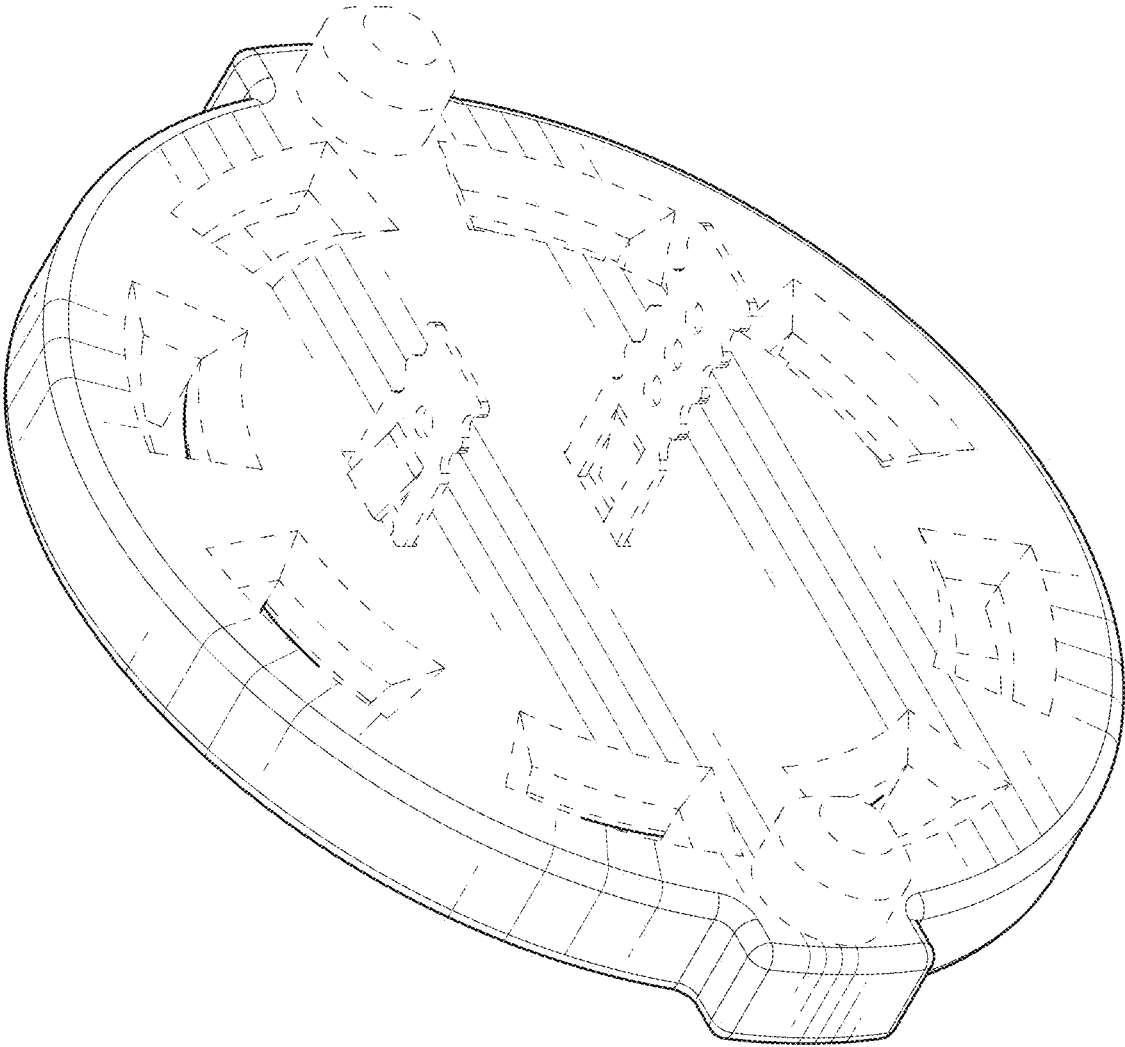


FIG. 2

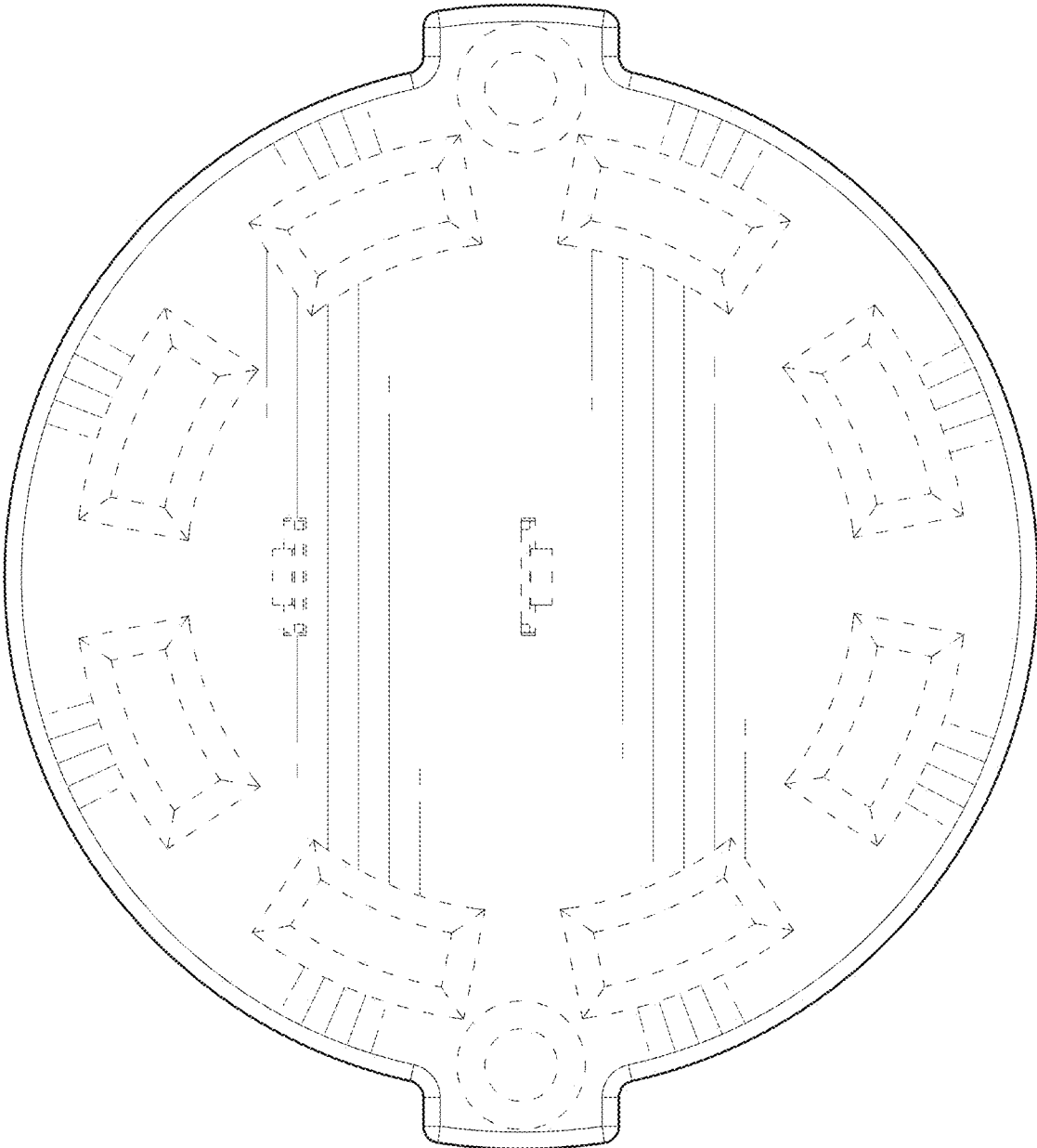


FIG. 3

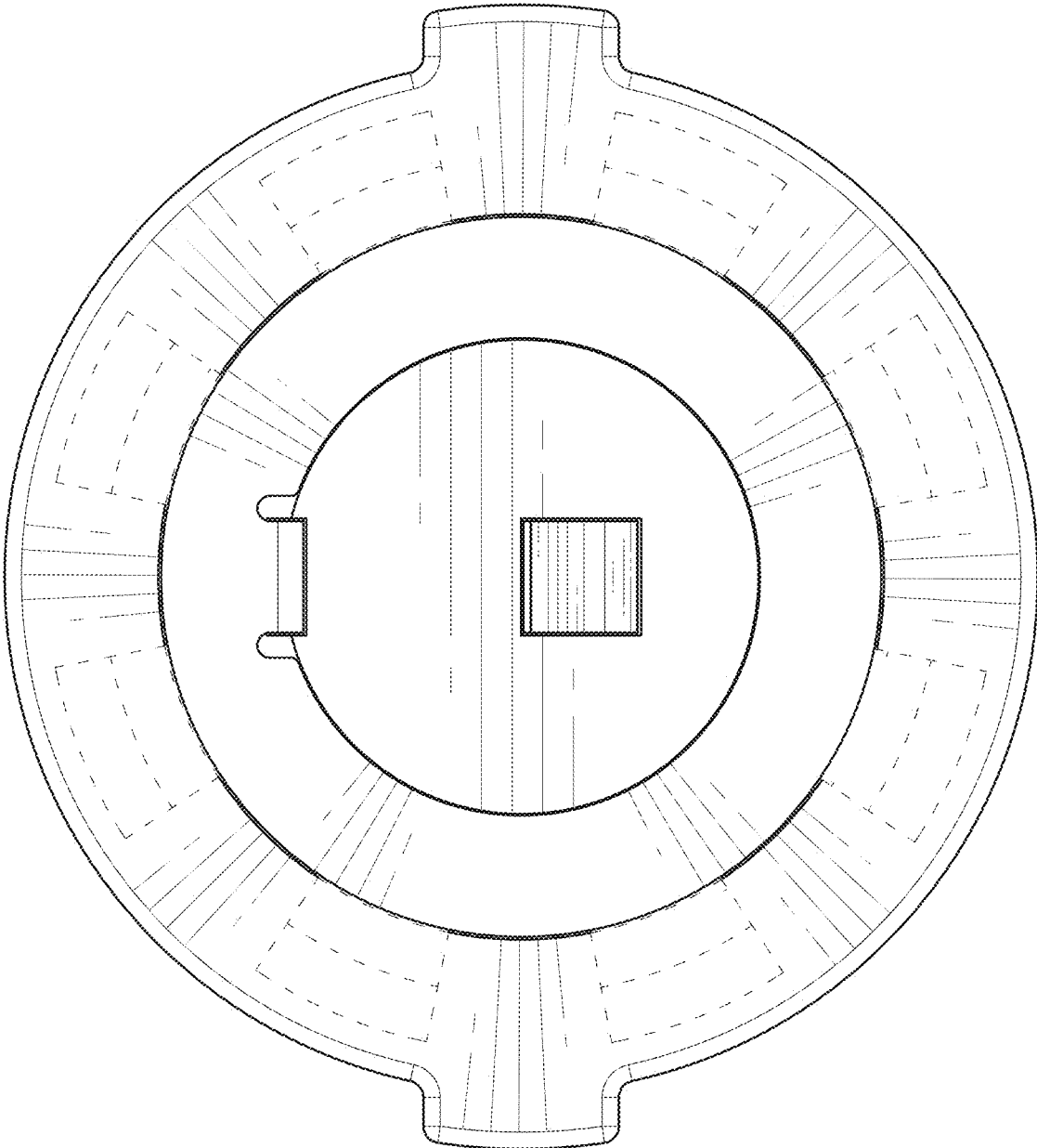


FIG. 4

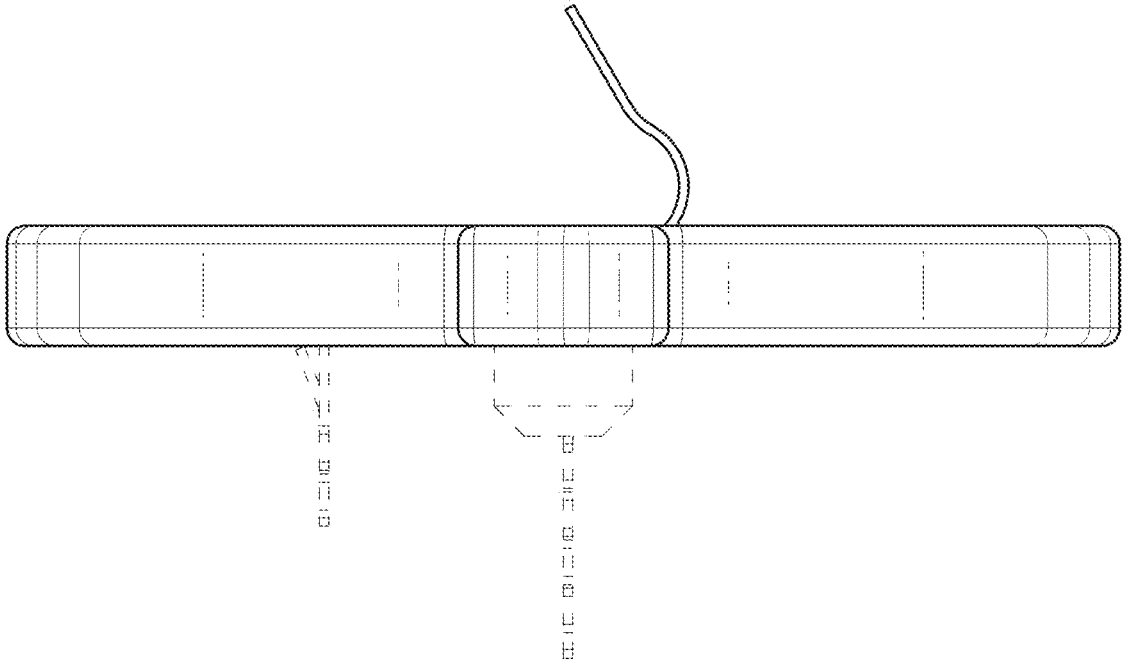


FIG. 5

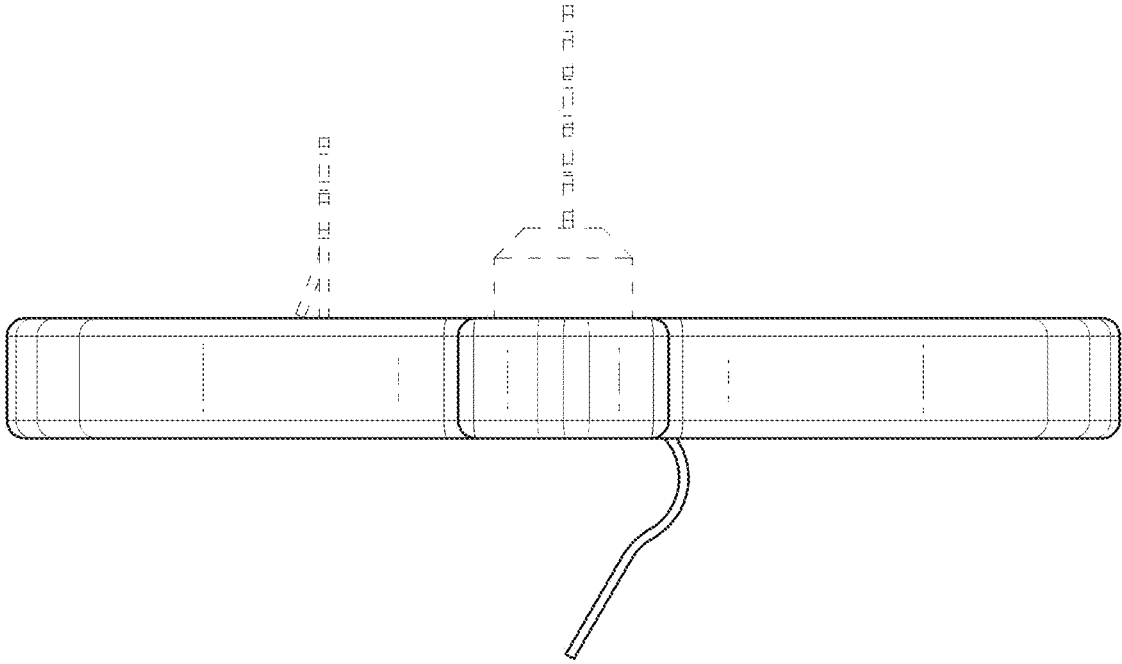


FIG. 6

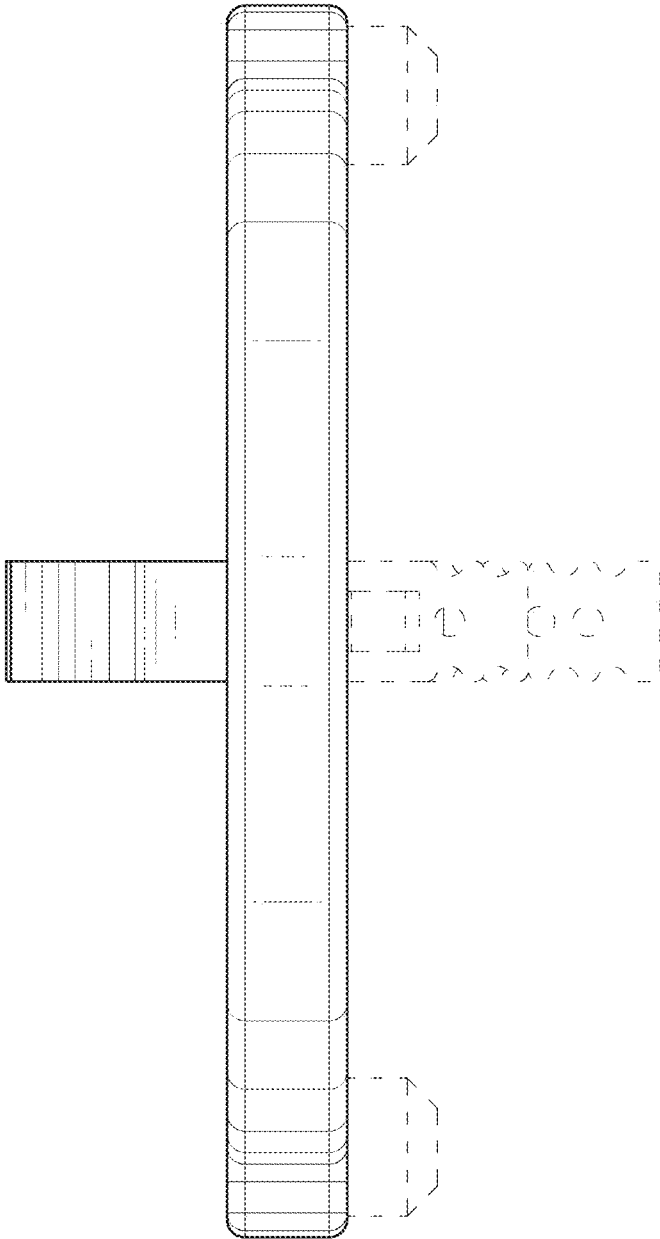


FIG. 7

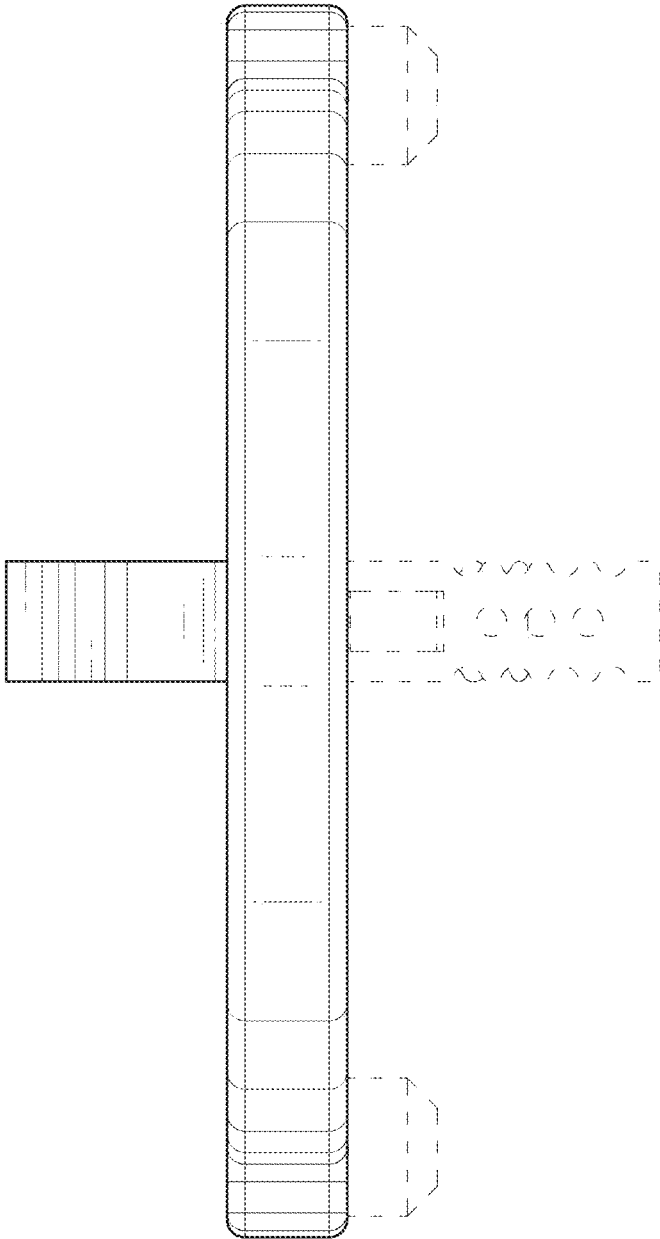


FIG. 8