US00D792871S

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

(10) **Patent No.: US D792,871 S**
(45) **Date of Patent: ** Jul. 25, 2017**

(54) **ANTENNA**

(71) Applicant: **Airgain Incorporated**, San Diego, CA (US)

(72) Inventor: **Bei Zheng**, Zhang Jia Gang (CN)

(73) Assignee: **Airgain Incorporated**, San Diego, CA (US)

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

(21) Appl. No.: **29/557,698**

(22) Filed: **Mar. 10, 2016**

(51) **LOC (10) Cl.** **14-03**

(52) **U.S. Cl.**
USPC **D14/230**

(58) **Field of Classification Search**
USPC D14/138, 230–238.1, 299, 358; D13/182
CPC H01L 33/48; H01L 33/486; H01L 23/02; H05K 5/00; H01Q 13/10
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

7,061,437	B2 *	6/2006	Lin	H01Q 9/0442 343/700 MS
7,148,849	B2	12/2006	Lin	
7,215,296	B2	5/2007	Abramov et al.	
D546,821	S	7/2007	Oliver	
D549,696	S	8/2007	Oshima et al.	
7,333,067	B2	2/2008	Hung et al.	
7,336,959	B2	2/2008	Khitrik et al.	
D573,589	S	7/2008	Montgomery et al.	
7,405,704	B1	7/2008	Lin et al.	
7,477,195	B2	1/2009	Vance	
D588,115	S *	3/2009	Yoshioka	D14/230
D592,195	S	5/2009	Wu et al.	
7,570,215	B2	8/2009	Abramov et al.	
D599,334	S	9/2009	Chiang	
D606,053	S	12/2009	Wu et al.	
D607,442	S *	1/2010	Su	D14/230
D608,769	S	1/2010	Bufe	
D612,368	S	3/2010	Yang et al.	
7,705,783	B2	4/2010	Rao et al.	

(Continued)

OTHER PUBLICATIONS

http://www.airgain.com/ultraM2450DLC—Retrieved Jun. 21, 2016.*
http://www.airgain.com/ultraM2450DLCB2—Retrieved Jun. 21, 2016.*

Primary Examiner — Manpreet Matharu
Assistant Examiner — Mojtaba Tehrani
(74) *Attorney, Agent, or Firm* — Clause Elght IPS; Michael Catania

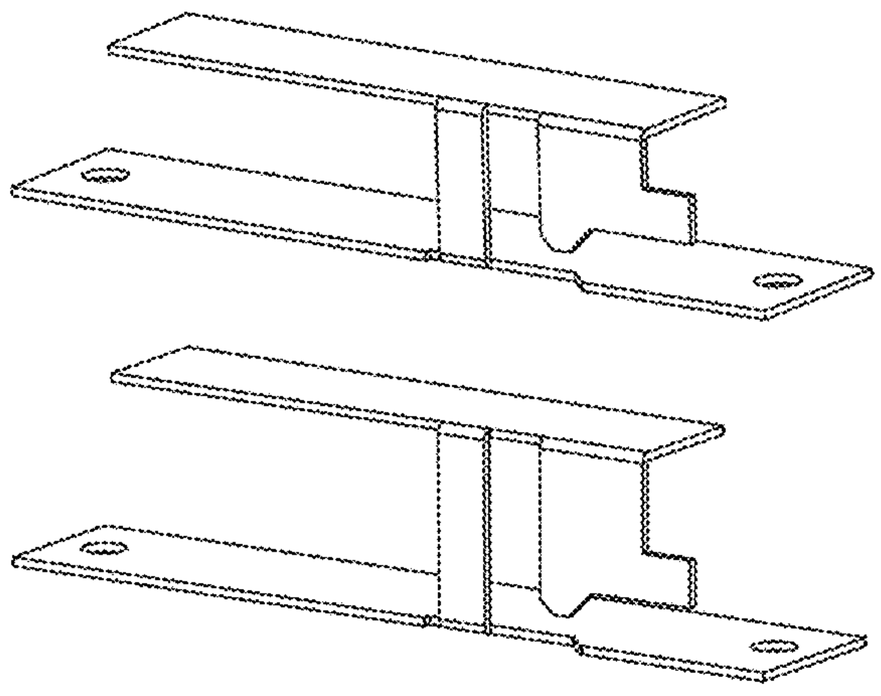
(57) **CLAIM**

The ornamental design for an antenna, as shown and described.

DESCRIPTION

FIG. **1** is a top plan view of the first embodiment of an antenna, showing my new design;
FIG. **2** is a top plan view thereof;
FIG. **3** is a front elevation view thereof;
FIG. **4** is a bottom plan view thereof;
FIG. **5** is a side elevation view thereof;
FIG. **6** is a top plan view of the second embodiment of an antenna;
FIG. **7** is a top plan view thereof;
FIG. **8** is a front elevation view thereof;
FIG. **9** is a bottom plan view thereof;
FIG. **10** is a side elevation view thereof;
FIG. **11** is a top plan view of the third embodiment of an antenna;
FIG. **12** is a top plan view thereof;
FIG. **13** is a front elevation view thereof;
FIG. **14** is a bottom plan view thereof; and,
FIG. **15** is a side elevation view thereof.
The broken lines are for illustration purposes only and form no part of the claimed invention.

1 Claim, 6 Drawing Sheets



(56) **References Cited**

U.S. PATENT DOCUMENTS

7,729,662	B2	6/2010	Abramov et al.	
D621,819	S	8/2010	Tsai et al.	
7,843,390	B2	11/2010	Liu	
D633,483	S	3/2011	Su et al.	
D635,127	S	3/2011	Tsai et al.	
7,907,971	B2	3/2011	Salo et al.	
D635,560	S	4/2011	Tsai et al.	
D635,963	S	4/2011	Podduturi	
D635,964	S	4/2011	Podduturi	
D635,965	S	4/2011	Mi et al.	
D636,382	S	4/2011	Podduturi	
7,965,242	B2	6/2011	Abramov et al.	
D649,962	S	12/2011	Tseng et al.	
D651,198	S	12/2011	Mi et al.	
D651,592	S *	1/2012	Hunter	D14/238
D654,059	S	2/2012	Mi et al.	
D654,060	S	2/2012	Ko et al.	
D658,639	S	5/2012	Huang et al.	
D659,129	S	5/2012	Mi et al.	
D659,685	S	5/2012	Huang et al.	
D659,688	S	5/2012	Huang et al.	
8,175,036	B2	5/2012	Visuri et al.	
8,184,601	B2	5/2012	Abramov et al.	
D662,916	S	7/2012	Huang et al.	
8,248,970	B2	8/2012	Abramov et al.	
D671,097	S	11/2012	Mi et al.	
8,310,402	B2	11/2012	Yang	
D676,429	S	2/2013	Gosalia et al.	
D678,255	S	3/2013	Ko et al.	
8,423,084	B2	4/2013	Abramov et al.	
D684,565	S	6/2013	Wei	
D685,352	S	7/2013	Wei	
D685,772	S	7/2013	Zheng et al.	
D686,600	S	7/2013	Yang	
D689,474	S	9/2013	Yang et al.	
D692,870	S	11/2013	He	
D694,738	S	12/2013	Yang	
D695,279	S	12/2013	Yang et al.	
D695,280	S	12/2013	Yang et al.	
D703,195	S	4/2014	Zheng	
D703,196	S	4/2014	Zheng	
D706,247	S	6/2014	Zheng et al.	
D706,750	S	6/2014	Bringuir	
D706,751	S	6/2014	Chang et al.	
D708,602	S	7/2014	Gosalia et al.	
D709,053	S	7/2014	Chang et al.	
D710,832	S	8/2014	Yang	
D710,833	S	8/2014	Zheng et al.	
8,854,265	B1	10/2014	Yang et al.	
D716,775	S	11/2014	Bidermann	
D765,062	S *	8/2016	Zheng	D14/230
D768,116	S *	10/2016	Zheng	D14/230
D778,882	S *	2/2017	Zheng	D14/230
D778,883	S *	2/2017	Zheng	D14/230
2002/0003499	A1	1/2002	Kouarn et al.	
2004/0222936	A1	11/2004	Hung et al.	
2005/0073462	A1	4/2005	Lin et al.	
2005/0190108	A1	9/2005	Lin et al.	
2006/0208900	A1	9/2006	Tavassoli Hozouri	
2007/0030203	A1	2/2007	Tsai et al.	
2008/0150829	A1	6/2008	Lin et al.	
2009/0002244	A1	1/2009	Woo	
2009/0058739	A1	3/2009	Konishi	
2009/0135072	A1	5/2009	Ke et al.	
2009/0262028	A1	10/2009	Murnbru et al.	
2010/0188297	A1	7/2010	Chen et al.	
2010/0309067	A1	12/2010	Tsou et al.	
2011/0006950	A1	1/2011	Park et al.	
2012/0038514	A1	2/2012	Bang	
2012/0229348	A1	9/2012	Chiang	
2012/0242546	A1 *	9/2012	Hu	H01Q 1/243 343/700 MS

* cited by examiner

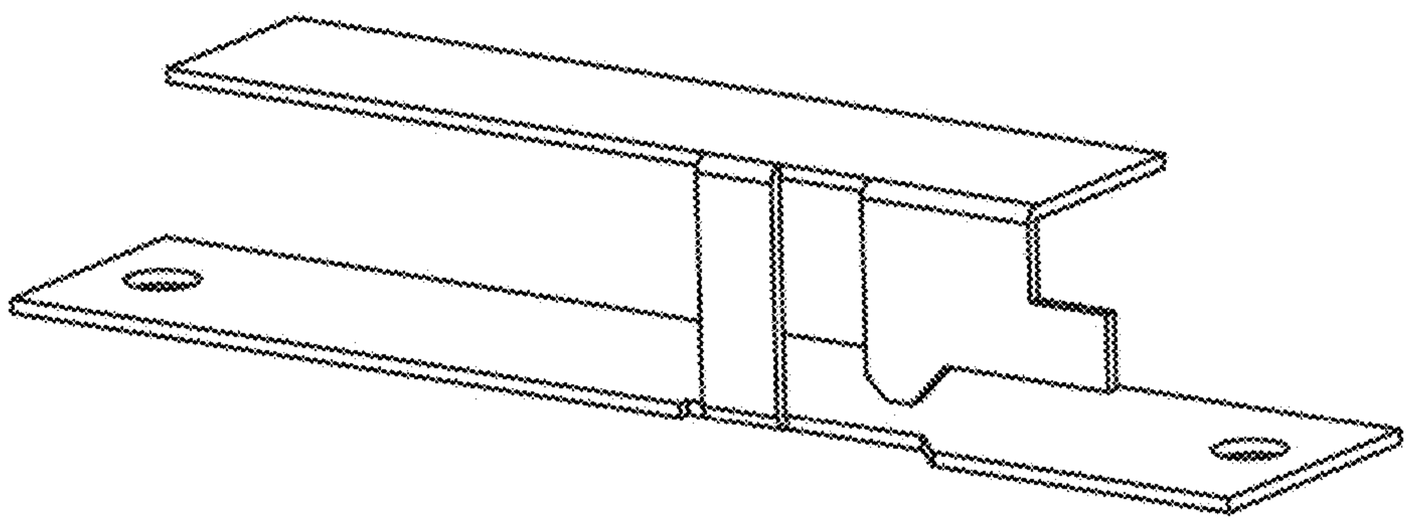


FIG. 1

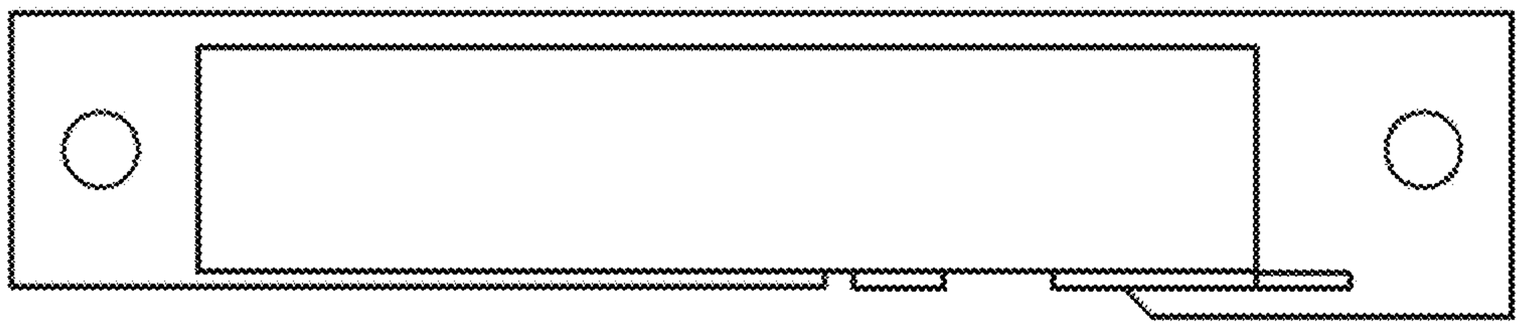


FIG. 2

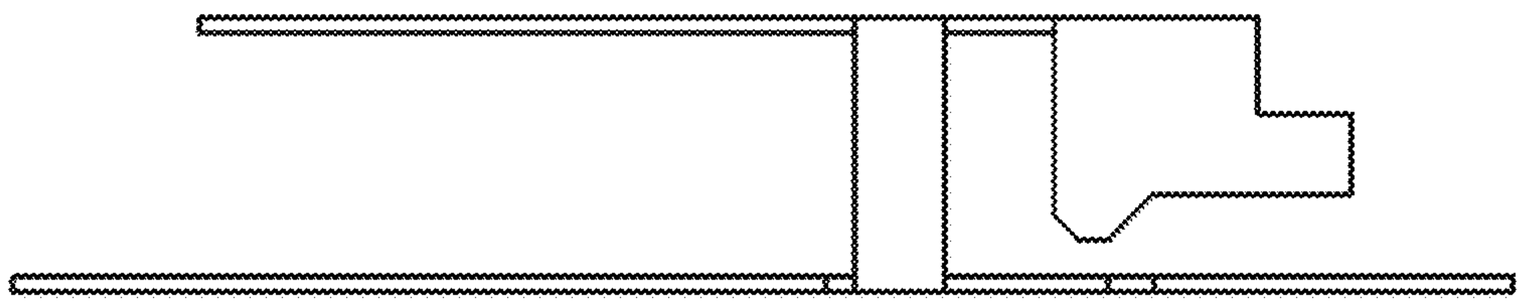


FIG. 3

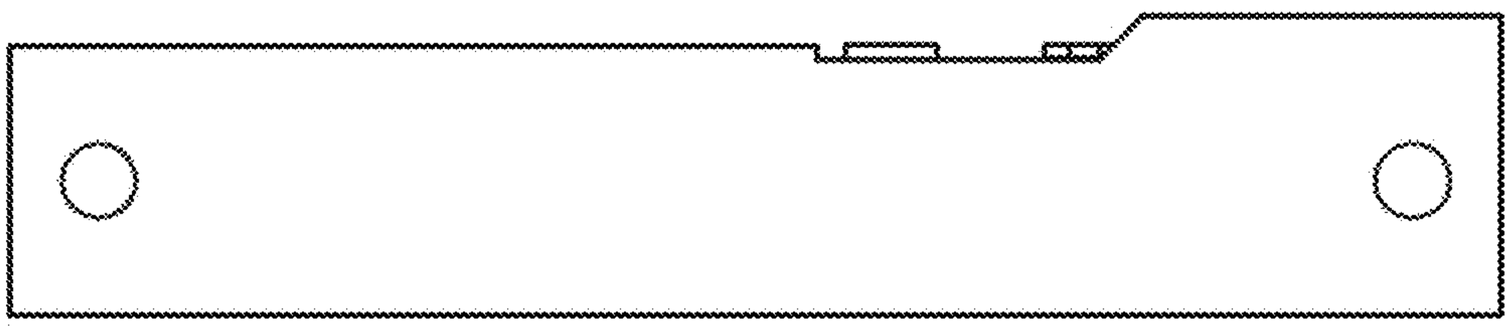


FIG. 4

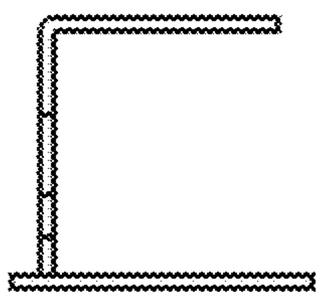


FIG. 5

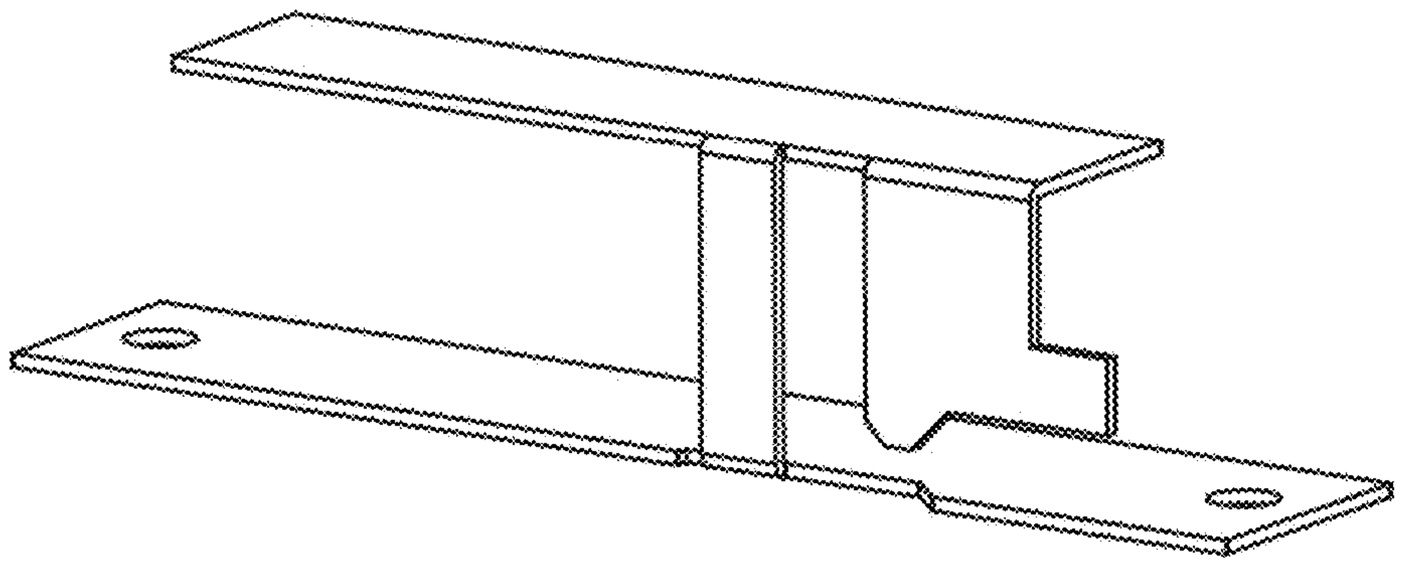


FIG. 6

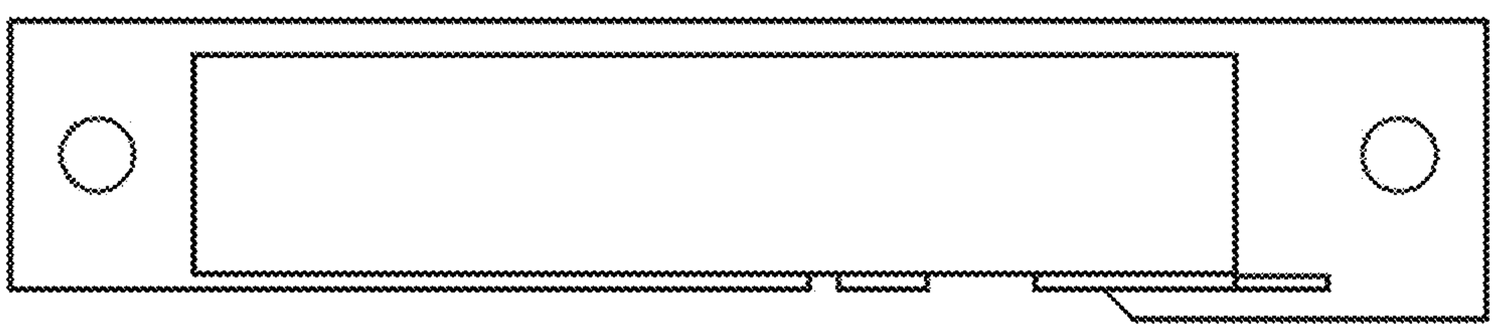


FIG. 7

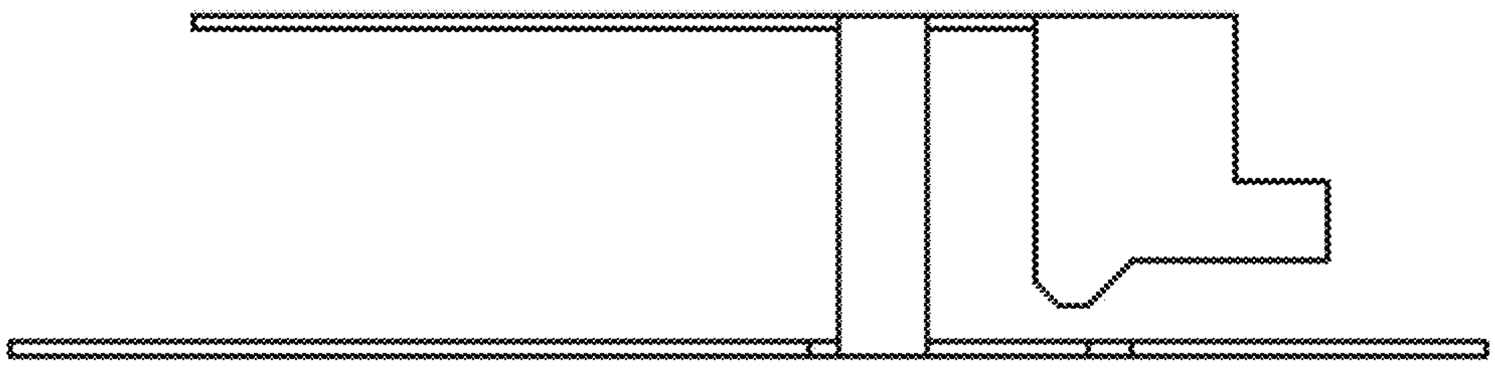


FIG. 8

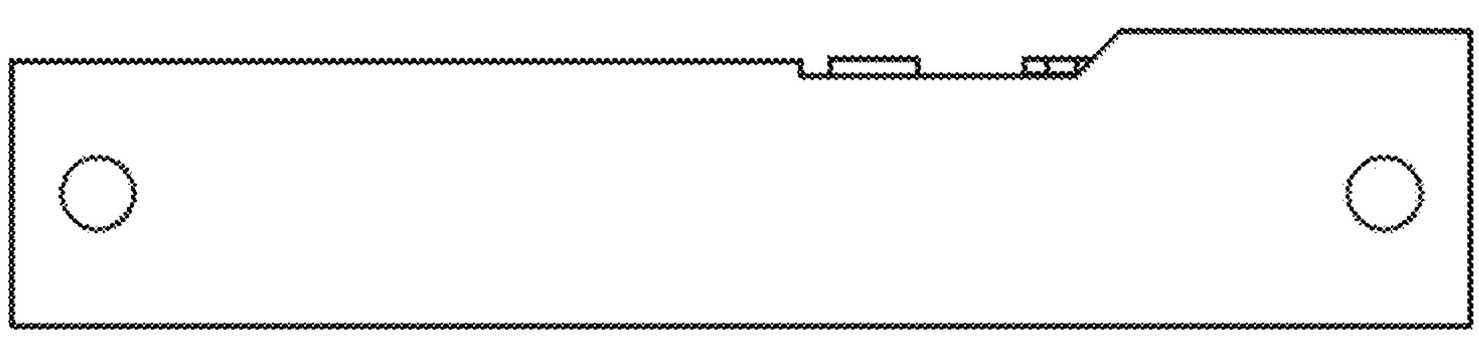


FIG. 9

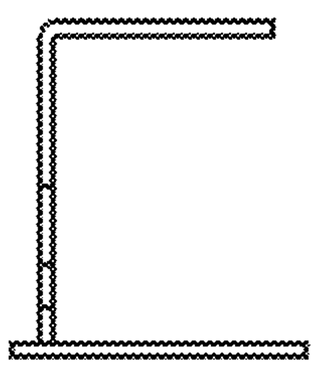


FIG. 10

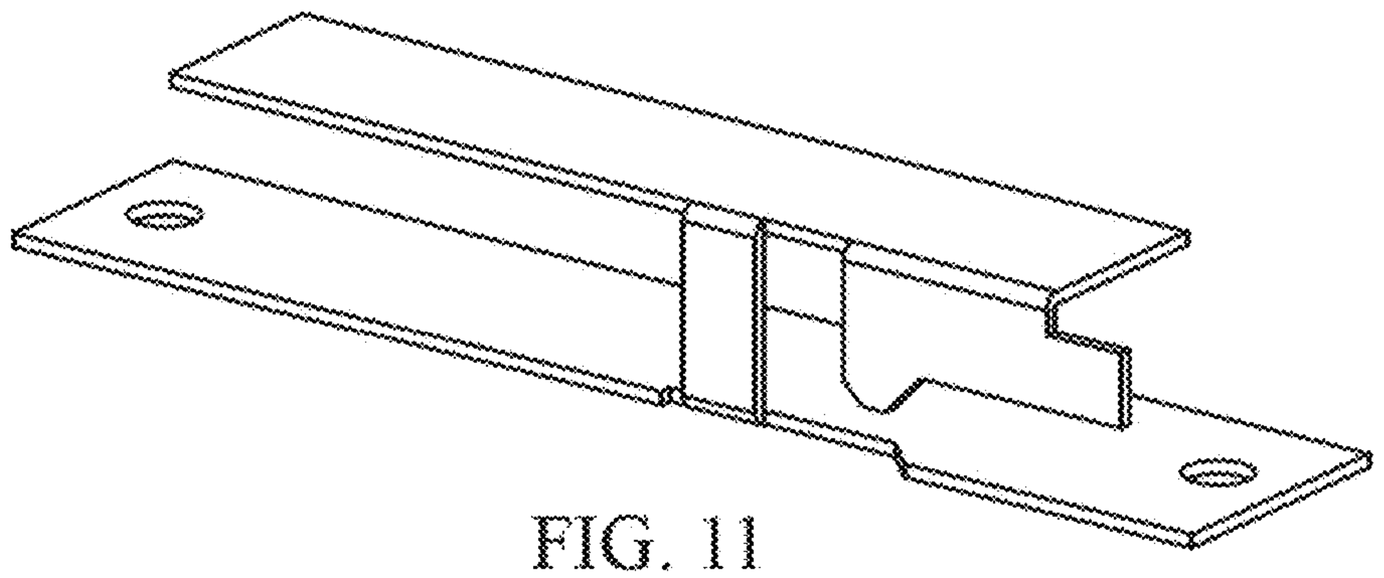


FIG. 11

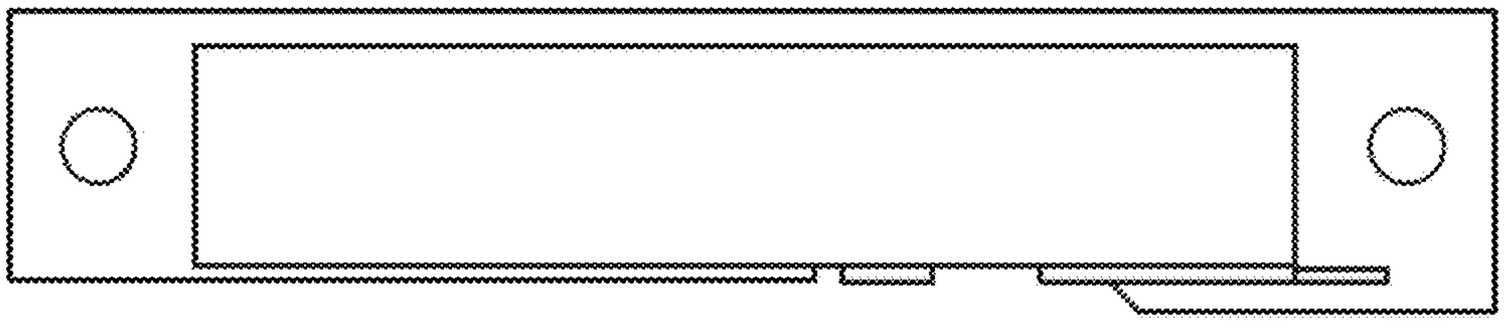


FIG. 12

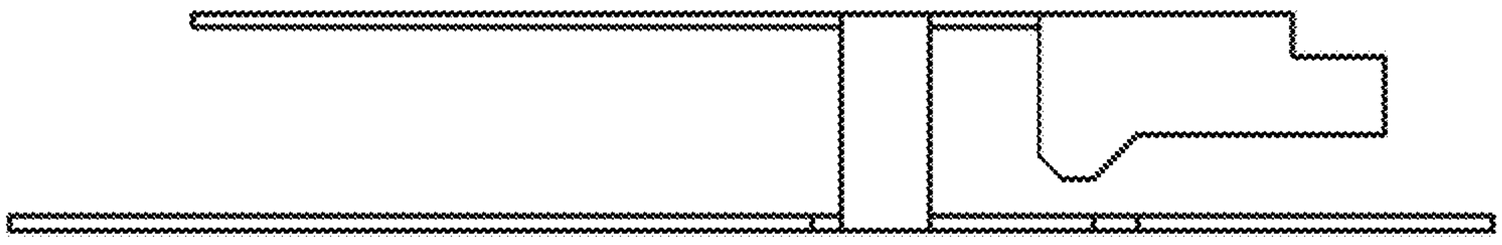


FIG. 13

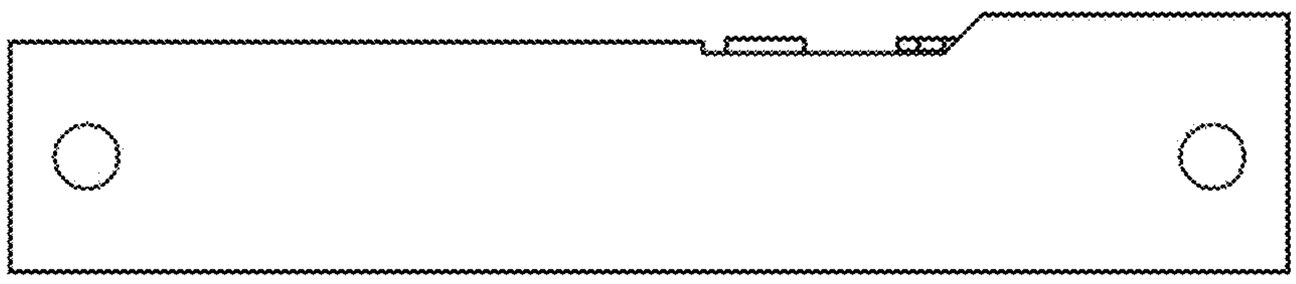


FIG. 14

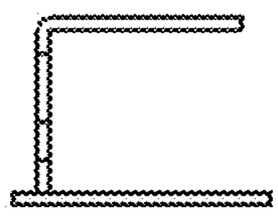


FIG. 15