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Cabral et al.

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(54) **PANORAMIC VIRTUAL REALITY CAMERA ASSEMBLY**

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

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(51) **LOC (11) Cl.** **16-01**

(52) **U.S. Cl.**
USPC **D16/214; D16/207**

(58) **Field of Classification Search**

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CPC H04N 7/181; H04N 7/183; H04N 7/18; H04N 3/08; H04N 5/23248; H04N 5/23287; H04N 5/23258; H04N 5/2251; H04N 5/2252; H04N 2007/145; H04N 7/00; G01C 11/025; G03B 15/00; G03B 15/03; G03B 17/56; G03B 17/02; G03B 17/30; G03B 17/04; G03B 17/00; G03B 19/04; G03B 3/00; G03B 9/08; G03B 9/06; G03B 9/07; B60R 1/00; B60R 2300/105; G08B 13/19619; G08B 13/1963; G08B 13/19632; F16M 11/04; F16M 13/00; Y02E 60/12; G02B 5/00
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,535,442 A * 10/1970 Jennings G08B 13/1963 348/151
D253,786 S 12/1979 Montague
(Continued)

FOREIGN PATENT DOCUMENTS

CN 304096250 * 4/2017
CN 304096251 * 4/2017
CN 304104906 * 4/2017

OTHER PUBLICATIONS

Facebook Surround 360 3-D 360-Degree Camera System, announced Apr. 12, 2016 [online], [site visited Jul. 7, 2017] Available from Internet URL: <<http://www.adweek.com/digital/f8-2016-facebook-surround-360/>>.*

(Continued)

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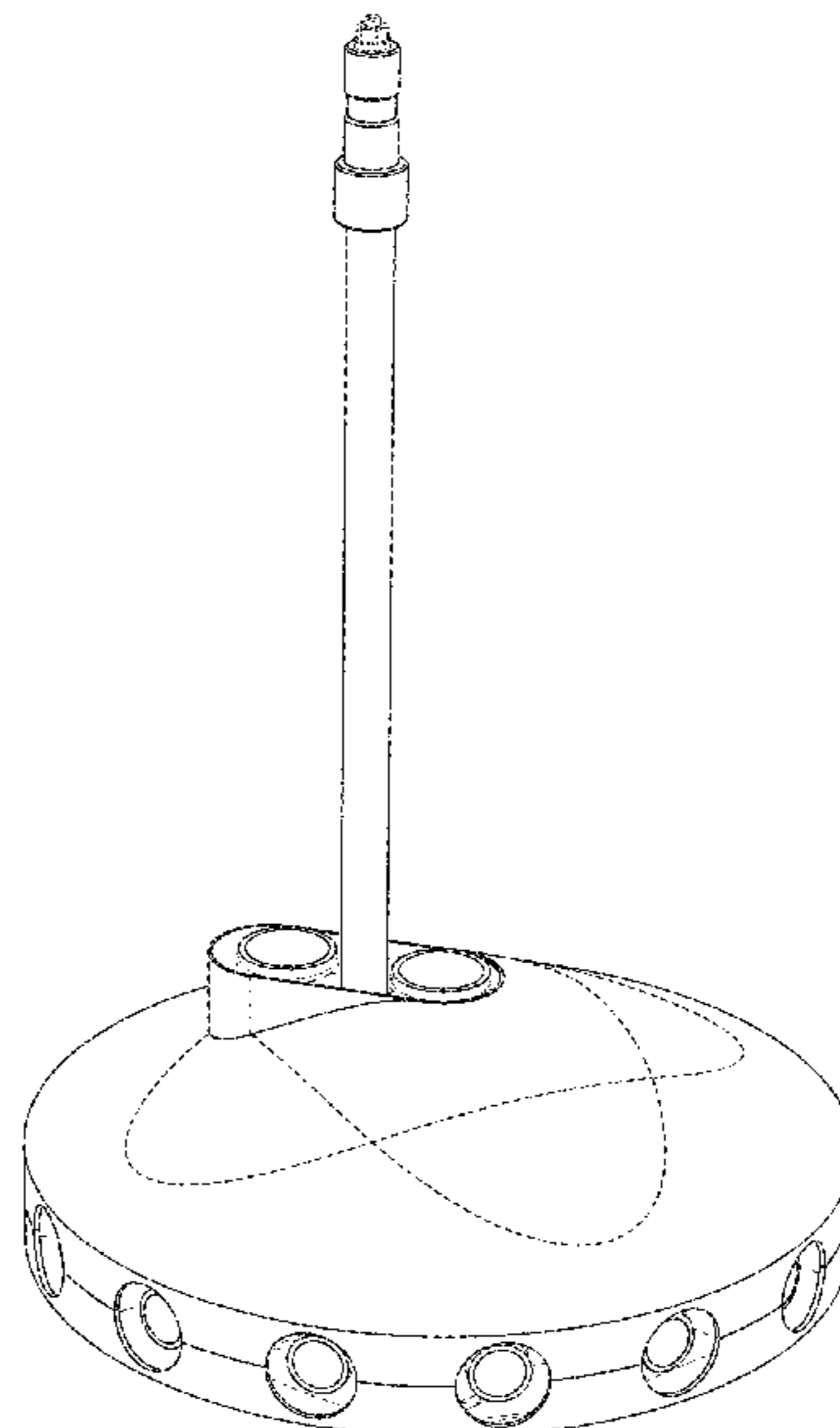
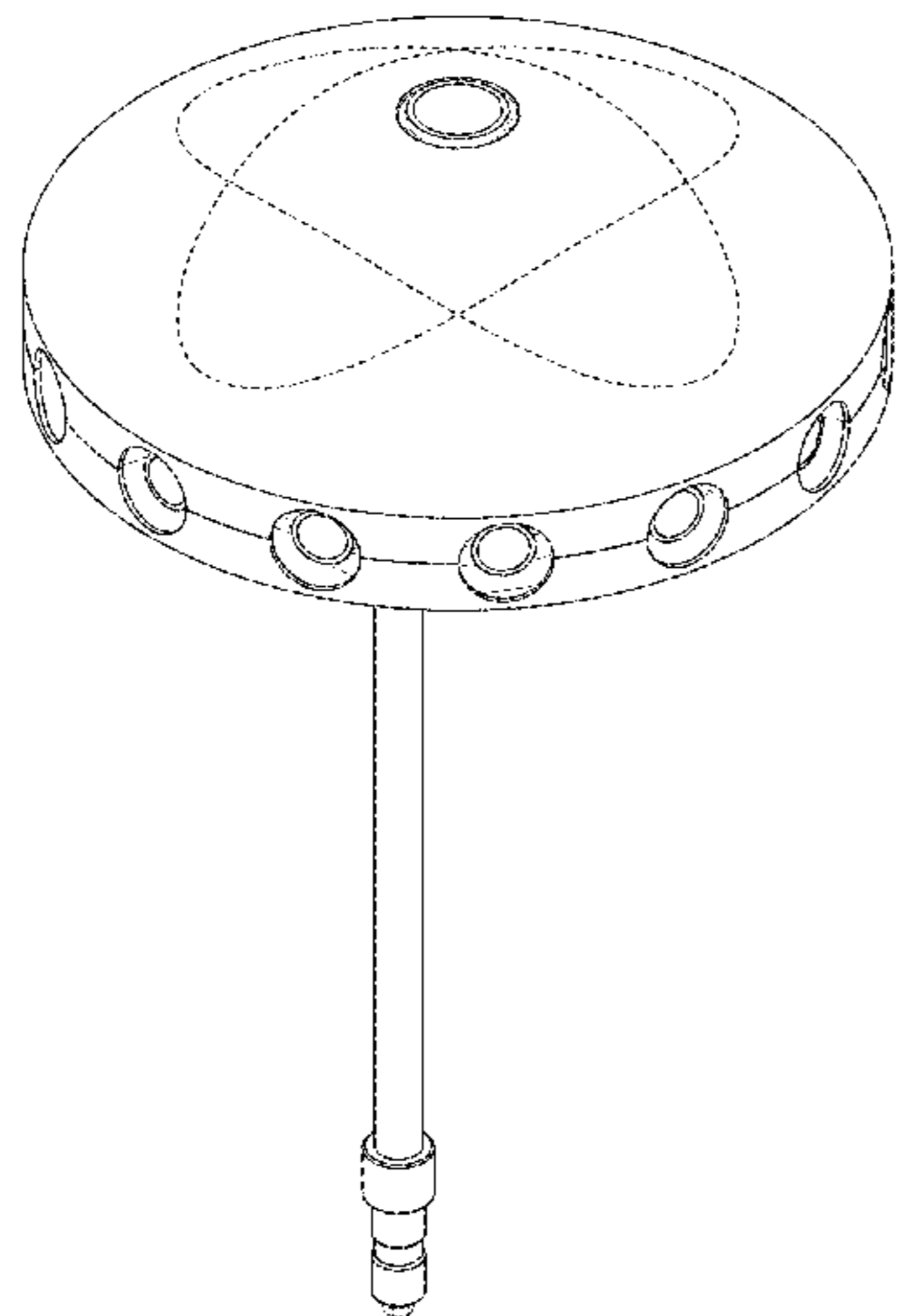
(57) **CLAIM**

We claim the ornamental design for a panoramic virtual reality camera assembly, as shown and described.

DESCRIPTION

FIG. 1 is a first top isometric view of a panoramic virtual reality camera assembly showing the new design. FIG. 2 is a second bottom isometric view thereof. FIG. 3 is a first side view thereof. FIG. 4 is a second side view thereof. FIG. 5 is a top view thereof; and, FIG. 6 is a bottom view thereof. The broken lines shown in the drawings depict portions of the panoramic virtual reality camera assembly that form no part of the claimed design.

1 Claim, 6 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D262,222	S	12/1981	Vernon	
D288,414	S *	2/1987	Finkler	D10/64
D331,060	S	11/1992	Emmons et al.	
D424,086	S	5/2000	Choi	
D445,123	S	7/2001	Shen	
D475,385	S	6/2003	Christianson	
D493,479	S	7/2004	Yoshikawa	
D496,676	S	9/2004	Yoshikawa	
D505,439	S	5/2005	Liiv	
6,947,059	B2	9/2005	Pierce et al.	
7,126,630	B1 *	10/2006	Lee	H04N 5/225 348/159
7,429,997	B2	9/2008	Givon	
7,463,280	B2	12/2008	Steuart	
7,834,910	B2 *	11/2010	DeLorme	G03B 41/00 348/218.1
D645,071	S	9/2011	Hinkel	
D664,178	S	7/2012	Hinkel	
D671,157	S	11/2012	Richardson et al.	
D700,232	S	2/2014	Ramsay et al.	
D733,208	S *	6/2015	Tzarnotzky	D16/207
D742,955	S	11/2015	Kozko et al.	
D745,076	S	12/2015	Pfeil	
D768,751	S	10/2016	Sarwari	
9,513,458	B1 *	12/2016	Flugge	G02B 7/04
D780,248	S *	2/2017	Anari, III	D16/242
9,575,394	B1 *	2/2017	Wallace	H04N 5/2252
D785,070	S *	4/2017	Mistry	D16/207
D798,930	S *	10/2017	Macmillan	D16/202
D818,024	S *	5/2018	Chen	D16/202
2005/0207487	A1 *	9/2005	Monroe	G08B 13/19628 375/240.01
2008/0298674	A1 *	12/2008	Baker	G06K 9/209 382/154
2009/0201413	A1 *	8/2009	Fishman	H04N 5/2252 348/373
2011/0249100	A1 *	10/2011	Jayaram	H04N 5/2253 348/48
2014/0153916	A1 *	6/2014	Kintner	G03B 17/561 396/419
2015/0138311	A1 *	5/2015	Towndrow	H04N 5/23238 348/36
2015/0346589	A1 *	12/2015	Dering	G03B 17/561 396/428
2016/0191815	A1 *	6/2016	Annau	H04N 5/247 348/38
2016/0212409	A1 *	7/2016	Cole	H04N 13/0022
2016/0352982	A1 *	12/2016	Weaver	H04N 5/23238

OTHER PUBLICATIONS

360 Degree Photo, announced Jun. 12, 2016 [online], [site visited Jul. 7, 2017] Available from Internet URL: <<https://droidsans.com/how-to-take-facebook-360photo/>>.*

Facebook Surround 360, announced 04/0/2016 [online], [site visited Jul. 7, 2017] Available from Internet URL: <<https://web.archive.org/web/20160802133245/https://facebook360.fb.com/facebook-surround-360/>>.*

Facebook 17-camera 3D-360 video capture system, announced Jul. 30, 2016 [online], [site visited Jul. 7, 2017] Available from Internet URL: <<http://linuxgizmos.com/facebook-open-sources-a-3d-360-video-capture-system/>>.*

Facebook 360-degree video camera, announced Apr. 12, 2016 [online], [site visited Jul. 7, 2017] Available from Internet URL: <<https://www.theverge.com/2016/4/12/11395898/facebook-surround-360-video-camera-vr-f8-conference>>.*

Facebook 360 Surround Camera, announced Apr. 12, 2016 [online], [site visited Oct. 26, 2016], Available from Internet URL: <<https://www.youtube.com/watch?v=HEua6dQrgOg>> at approximately 2:15.*

Surround 360 VR Camera, announced Apr. 12, 2016 [online], [site visited Oct. 26, 2016], Available from Internet URL: <<https://www.youtube.com/watch?v=zwrsgQpHJWI>> at approximately 7:45.*

GoPro Odyssey, six pages, [online] [retrieved Jun. 22, 2016], Retrieved from the internet <<https://gopro.com/odyssey>>.

Jump—Google VR, five pages, [online] [retrieved Jun. 22, 2016], Retrieved from the internet <<https://vr.google.com/jump/>>.

Lee, Nicole, “Samsung unveils Project Beyond, a 3D-capturing camera for Gear VR,” engadget, Nov. 12, 2014, two pages, [online] [retrieved Jun. 22, 2016], Retrieved from the internet <<https://www.engadget.com/2014/11/12/samsung-project-beyond/>>.

Lytro Immerge, six pages, [online] [retrieved Jun. 22, 2016], Retrieved from the internet <<https://www.lytro.com/immerge#immergeDetails>>.

Nokia OZO: Virtual Reality Camera with 360degree audio and video capture, six pages, [online] [retrieved Jun. 22, 2016], Retrieved from the internet <<https://ozo.nokia.com/>>.

Technology—Jaunt, four pages, [online] [retrieved Jun. 22, 2016], Retrieved from the internet <<https://www.jauntvr.com/technology/>>.

Aldred, J., “Facebook Posts its Open Source 3D 360 Camera Rig and Software to Github,” posted at Diyphotography.net, Jul. 29, 2016, three pages. [Online], [Retrieved Jun. 19, 2017] Retrieved from the Internet, <URL: <http://www.diyphotography.net/facebook-posts-open-source-3d-360-camera-rig-software-github/>>.

* cited by examiner

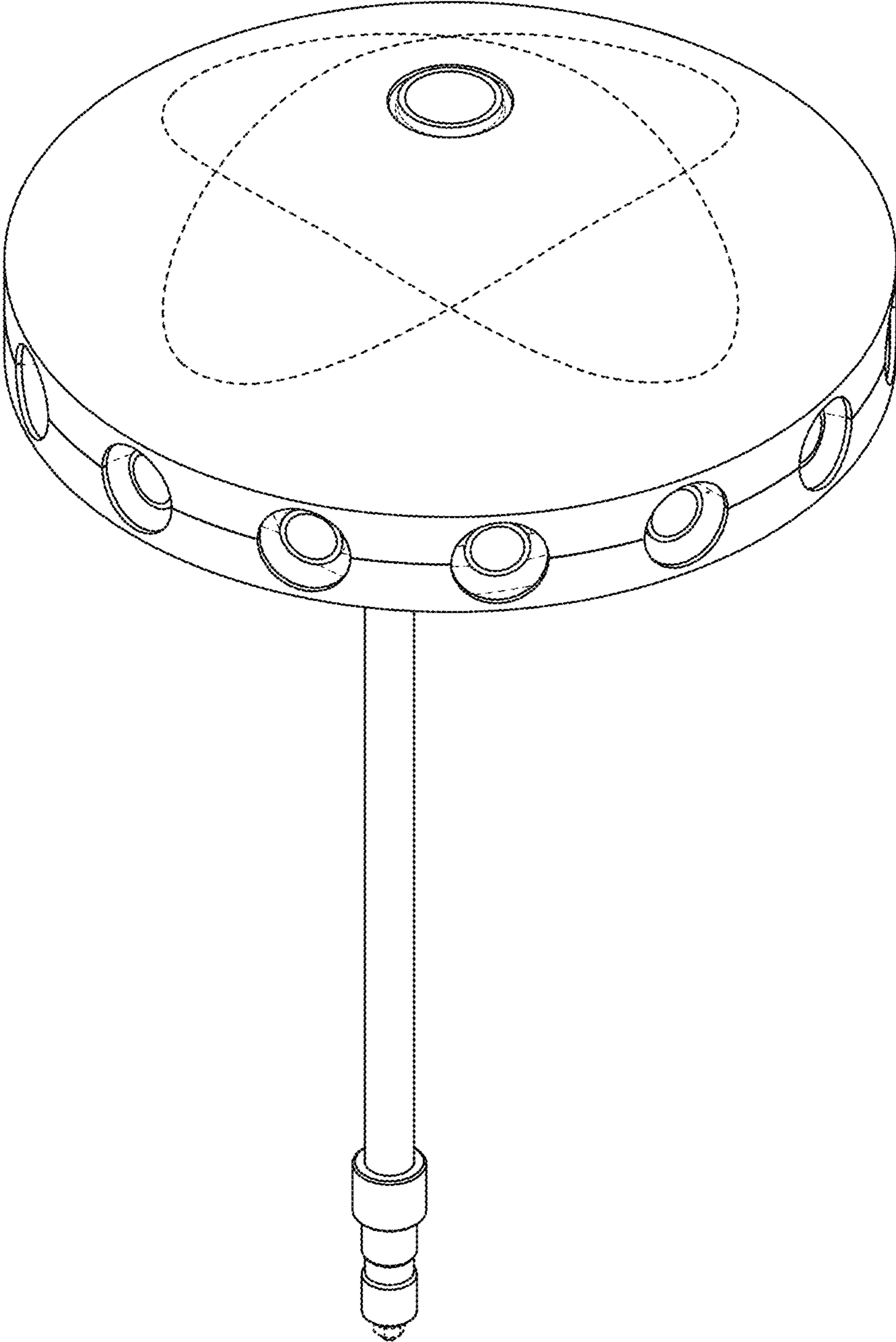


FIG. 1

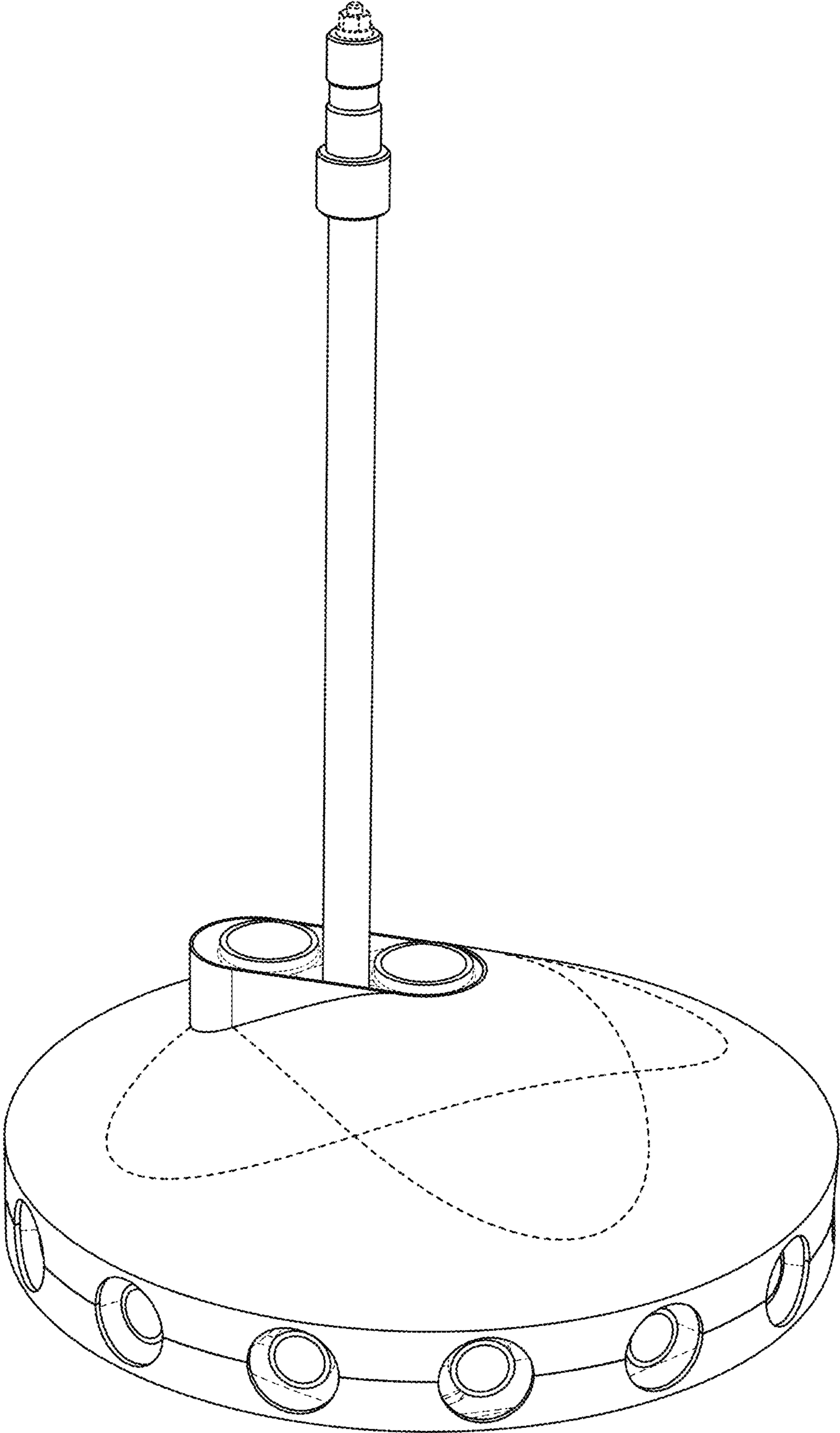


FIG. 2

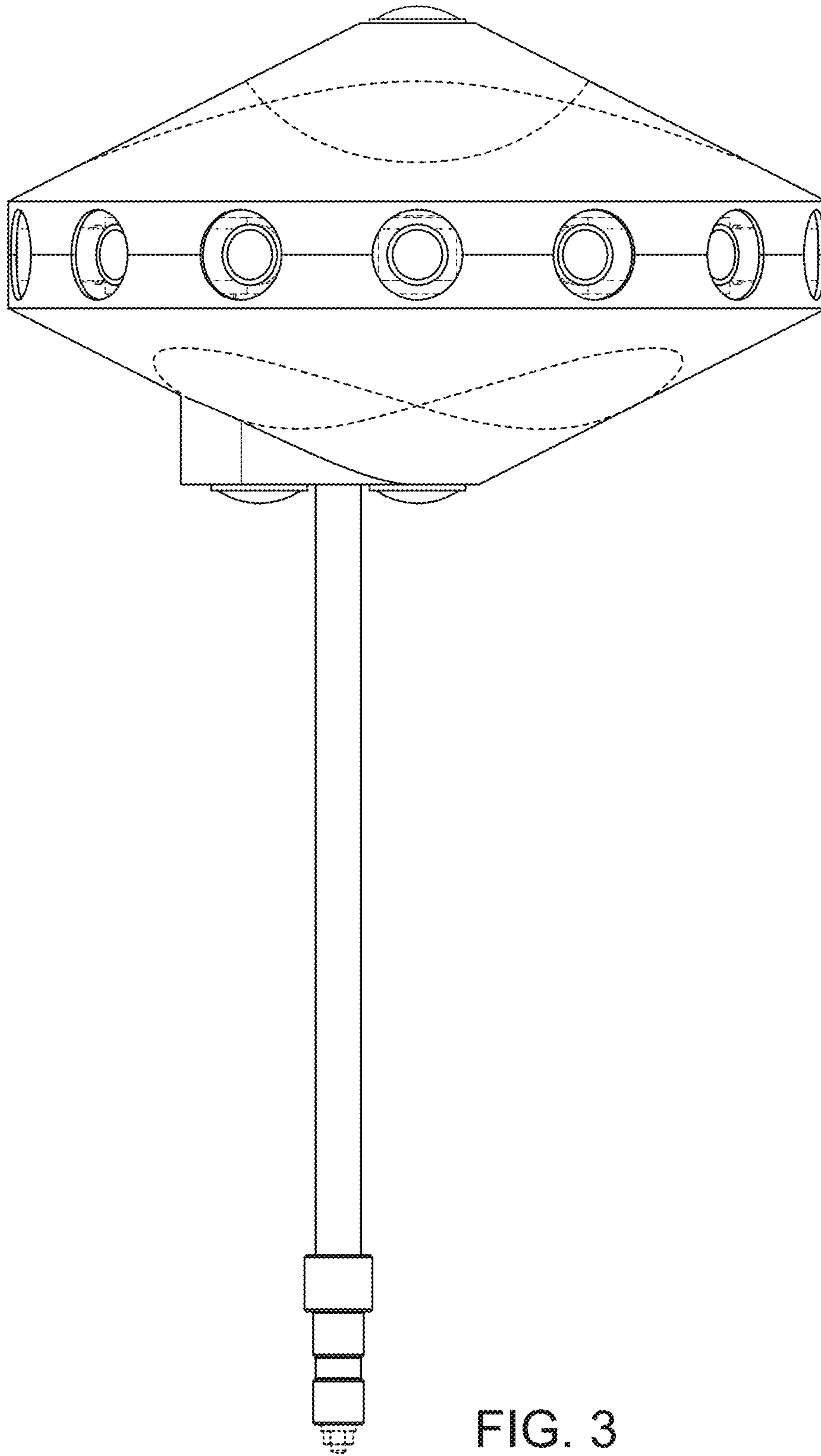


FIG. 3

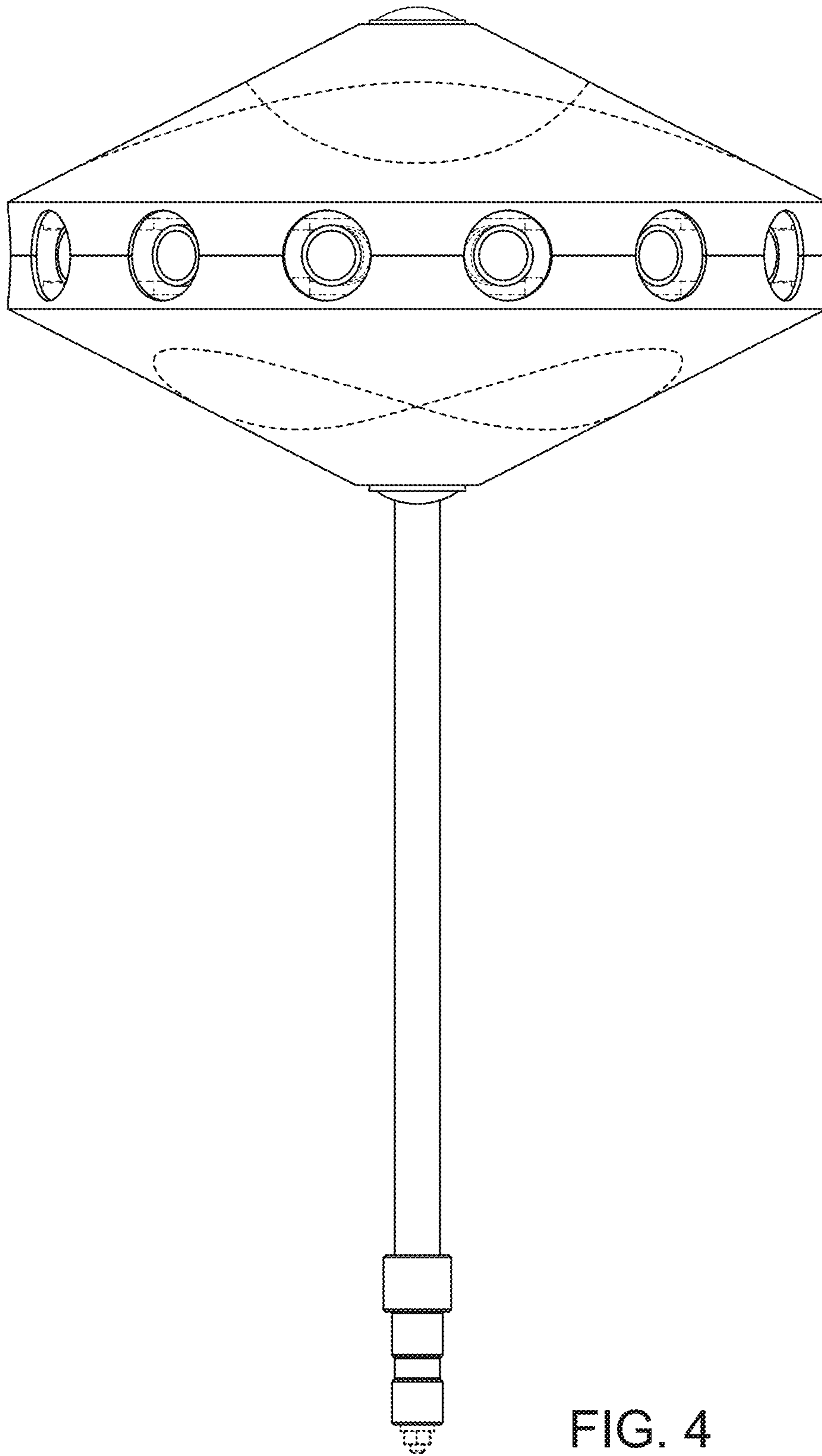


FIG. 4

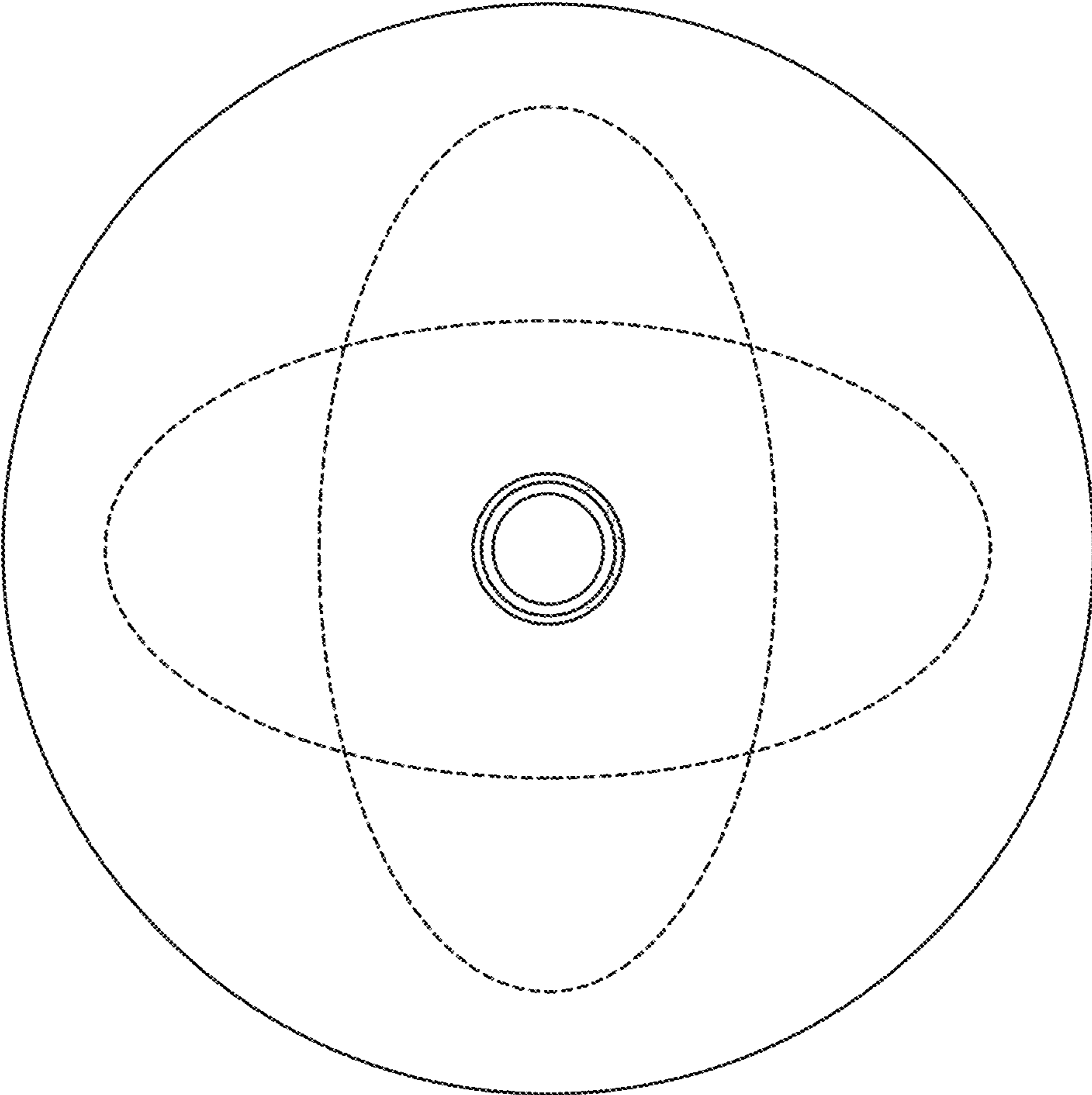


FIG. 5

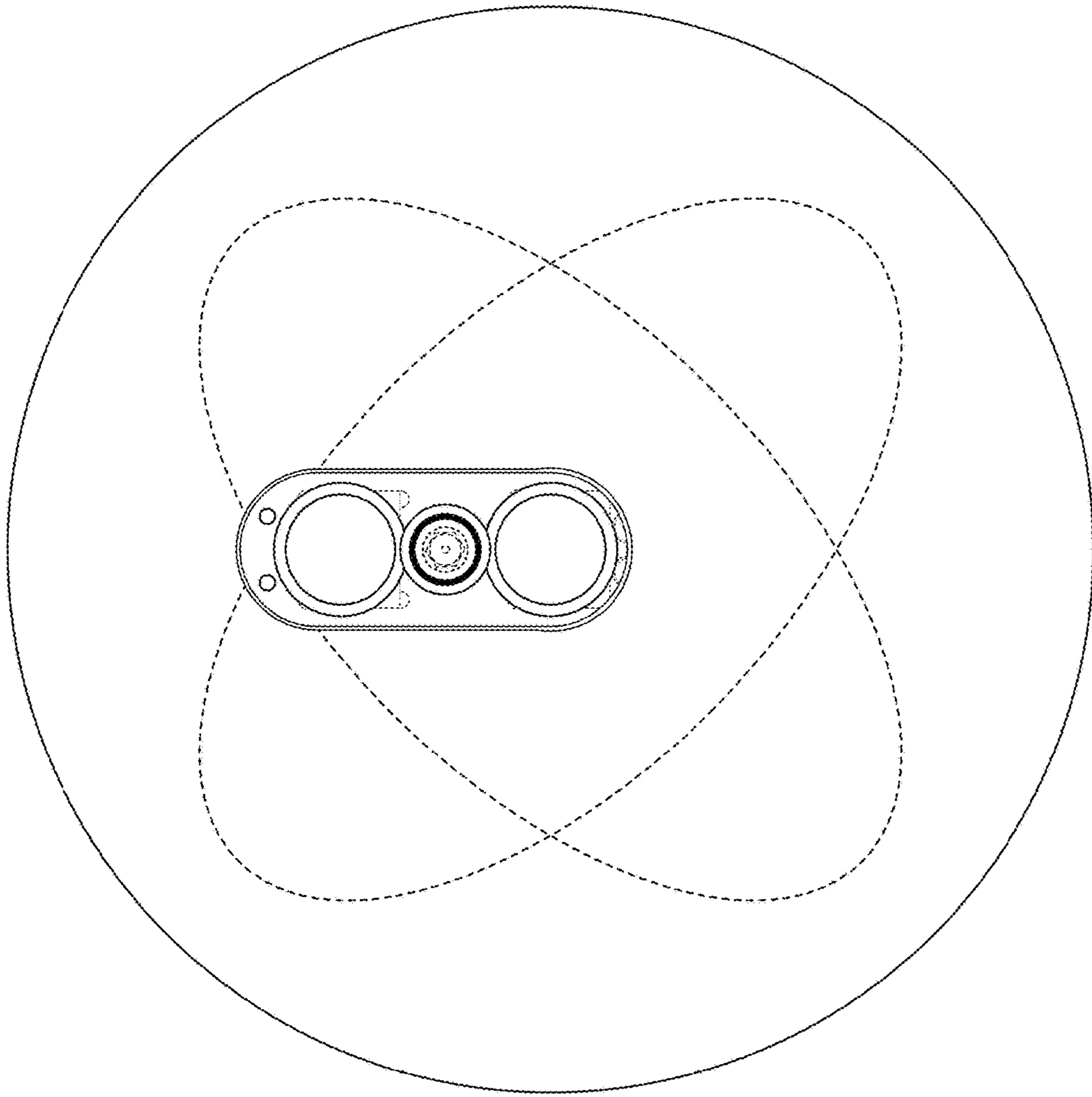


FIG. 6