



US00D941243S

(12) **United States Design Patent** (10) **Patent No.:** **US D941,243 S**  
**Byrne et al.** (45) **Date of Patent:** **\*\* Jan. 18, 2022**

(54) **ELECTRICAL CHARGING INTERFACE**

(56) **References Cited**

(71) Applicants: **Norman R. Byrne**, Ada, MI (US);  
**Shane Rogers**, Rockford, MI (US);  
**Marc A. Mitchell**, Belmont, MI (US);  
**Joseph D. Ward**, Grand Rapids, MI (US)

U.S. PATENT DOCUMENTS

D52,628 S	11/1918	Bissell
D126,590 S	4/1941	Lewin
D235,555 S	6/1975	Plummer
D244,465 S	5/1977	Stoneman
D302,511 S	8/1989	Porcelli
5,452,807 A	9/1995	Foster et al.
D367,530 S	2/1996	Stith
D395,641 S	6/1998	Gaete
5,921,795 A	7/1999	Weener et al.
D426,520 S	6/2000	Goins
D434,502 S	11/2000	Gallant
6,364,678 B1	4/2002	Hellwig et al.
D473,518 S	4/2003	Hellwig et al.
D473,846 S	4/2003	Hellwig et al.
6,581,890 B2	6/2003	Johnson et al.
6,805,581 B2	10/2004	Love
7,004,786 B1	2/2006	Bloom et al.
D534,869 S	1/2007	Stekelenburg
D651,588 S	1/2012	Chen

(72) Inventors: **Norman R. Byrne**, Ada, MI (US);  
**Shane Rogers**, Rockford, MI (US);  
**Marc A. Mitchell**, Belmont, MI (US);  
**Joseph D. Ward**, Grand Rapids, MI (US)

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

(21) Appl. No.: **29/767,681**

(22) Filed: **Jan. 25, 2021**

(Continued)

*Primary Examiner* — Nathaniel D. Buckner

(74) *Attorney, Agent, or Firm* — Gardner, Linn, Burkhardt & Ondersma LLP

**Related U.S. Application Data**

(62) Division of application No. 29/634,788, filed on Jan. 24, 2018, now Pat. No. Des. 908,615.

(51) **LOC (13) Cl.** ..... **13-02**

(52) **U.S. Cl.**  
USPC ..... **D13/108**

(58) **Field of Classification Search**  
USPC ..... D13/107–110, 118–119, 184; D14/251, D14/253, 432, 434  
CPC ..... Y02E 60/12; Y02T 90/14; Y02T 90/122; Y02T 90/128; Y02T 90/163; H02J 7/025; H02J 7/0042; H02J 7/0044; H02J 7/0045; H02J 7/0013; H02J 7/0003; H01F 38/14; H01R 13/6675; H01M 2/1022; H01M 2/1055; H01M 10/44; H01M 10/46; H01M 10/425; B60L 11/182

See application file for complete search history.

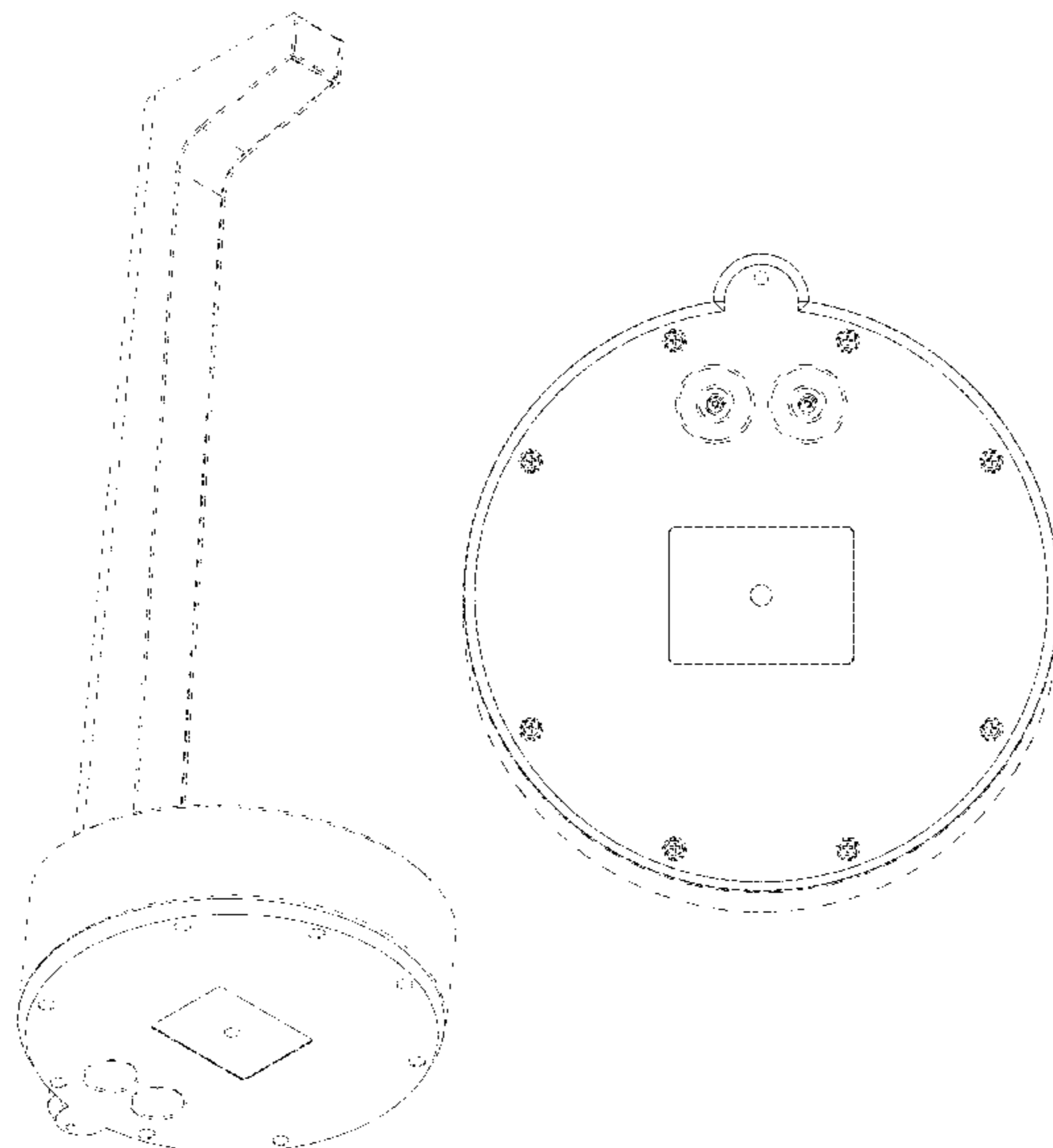
(57) **CLAIM**

The ornamental design for an electrical charging interface, as shown and described.

**DESCRIPTION**

FIG. 1 is a bottom-front perspective view of an electrical charging interface showing our new design; FIG. 2 is a bottom-rear perspective view thereof; FIG. 3 is a front elevation thereof; FIG. 4 is a rear elevation thereof; FIG. 5 is a right side elevation thereof; FIG. 6 is a left side elevation thereof; and, FIG. 7 is a bottom plan view thereof. The broken lines in the drawings are for the purpose of illustrating portions of the electrical charging interface that form no part of the claimed design.

**1 Claim, 5 Drawing Sheets**



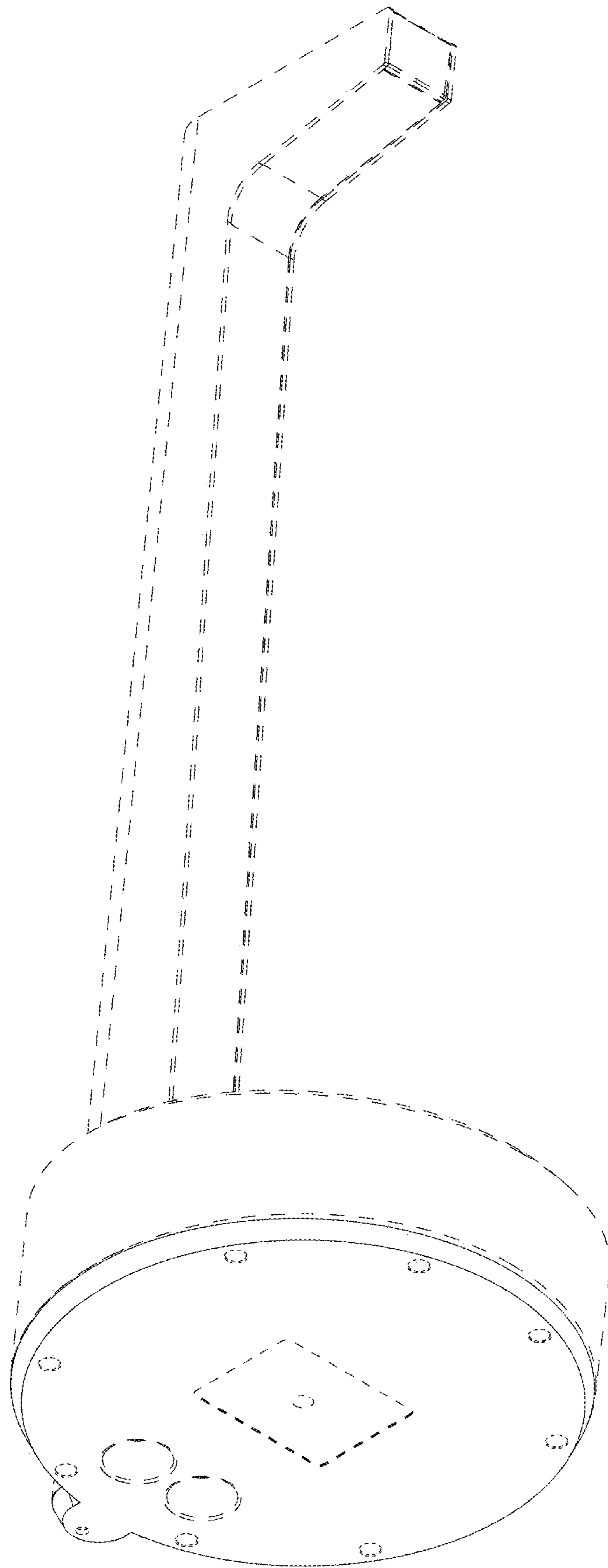
(56)

References Cited

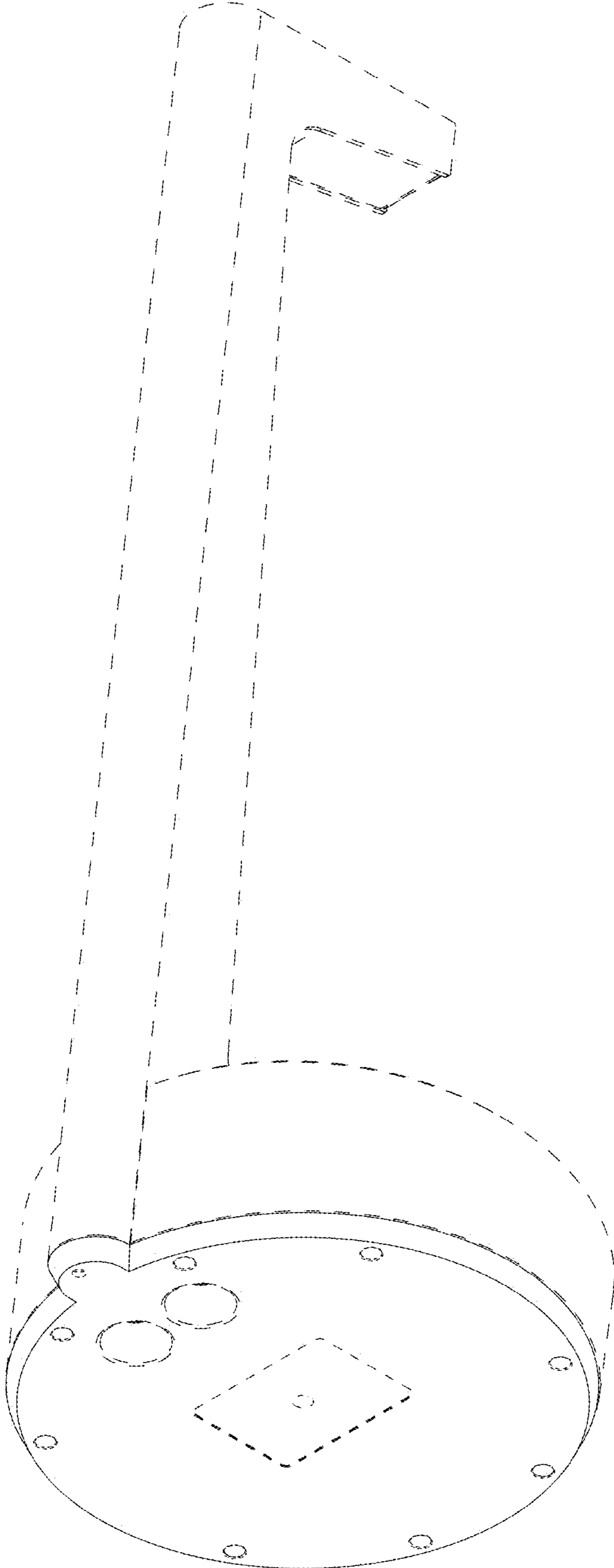
U.S. PATENT DOCUMENTS

D658,925 S	5/2012	Horimoto	
8,193,768 B2	6/2012	Hallett	
D669,856 S	10/2012	Rosendahl	
D671,545 S	11/2012	Guran	
D680,792 S	4/2013	Bodum	
D691,953 S	10/2013	Chayer	
D692,831 S	11/2013	Beldock et al.	
D693,307 S	11/2013	Beldock et al.	
D693,308 S	11/2013	Beldock et al.	
D694,182 S *	11/2013	Lee .....	D13/108
D697,510 S *	1/2014	Sato .....	D14/420
D704,178 S	5/2014	Kwak et al.	
8,723,055 B2	5/2014	Beldock et al.	
D712,838 S	9/2014	Beldock et al.	
D718,236 S	11/2014	Murray	
D721,335 S	1/2015	Smeja	
9,088,088 B1	7/2015	Black et al.	
9,088,117 B2	7/2015	Rosenblum	
9,124,044 B2	9/2015	Beldock et al.	
D740,750 S	10/2015	Mayden et al.	
D743,382 S	11/2015	Katori	
9,178,324 B2	11/2015	Beldock et al.	
D749,504 S	2/2016	Jeong et al.	
D759,257 S	6/2016	Chen	
D760,022 S	6/2016	Garvey	
9,362,696 B1	6/2016	Black et al.	
D761,733 S	7/2016	Sumwalt et al.	
D762,177 S	7/2016	Sumwalt et al.	
D768,634 S	10/2016	Akana et al.	
9,484,751 B2	11/2016	Byrne et al.	
D782,408 S *	3/2017	Morgan .....	D13/102
D782,973 S	4/2017	Zhou	
D791,771 S	7/2017	Akana et al.	
D796,433 S	9/2017	Langhammer et al.	
D802,529 S *	11/2017	Andersson .....	D13/108
D806,035 S	12/2017	Byrne et al.	
D810,015 S	2/2018	Carreon et al.	
D814,849 S	4/2018	Lee et al.	
D817,268 S	5/2018	Symons	
D821,307 S	6/2018	Calachan et al.	
D824,723 S	8/2018	Averty	
D826,849 S	8/2018	Maibach et al.	
D830,856 S	10/2018	Golnik et al.	
D832,264 S	10/2018	Kim et al.	
D834,560 S	11/2018	Hardi	
D843,213 S	3/2019	Wettlaufer et al.	
10,263,373 B2	4/2019	Byrne et al.	
D855,567 S	8/2019	Cai	
D872,698 S	1/2020	Yu	
D875,103 S *	2/2020	Vogel .....	D14/447
D893,420 S *	8/2020	Xiao .....	D13/108
D895,543 S *	9/2020	Akana .....	D13/108
D897,956 S *	10/2020	Yang .....	D13/108
D900,735 S *	11/2020	He .....	D13/108
D900,737 S *	11/2020	Hsu .....	D13/108
D908,615 S *	1/2021	Byrne .....	D13/108
D922,947 S *	6/2021	Wang .....	D13/108
2011/0197794 A1	8/2011	Nunes	
2012/0081842 A1	4/2012	Ewing et al.	
2012/0289081 A1	11/2012	Izzard	
2015/0108841 A1	4/2015	Weber et al.	
2015/0263547 A1	9/2015	Browne	
2016/0079721 A1	3/2016	Jones et al.	
2018/0191113 A1 *	7/2018	Byrne .....	G06F 1/26

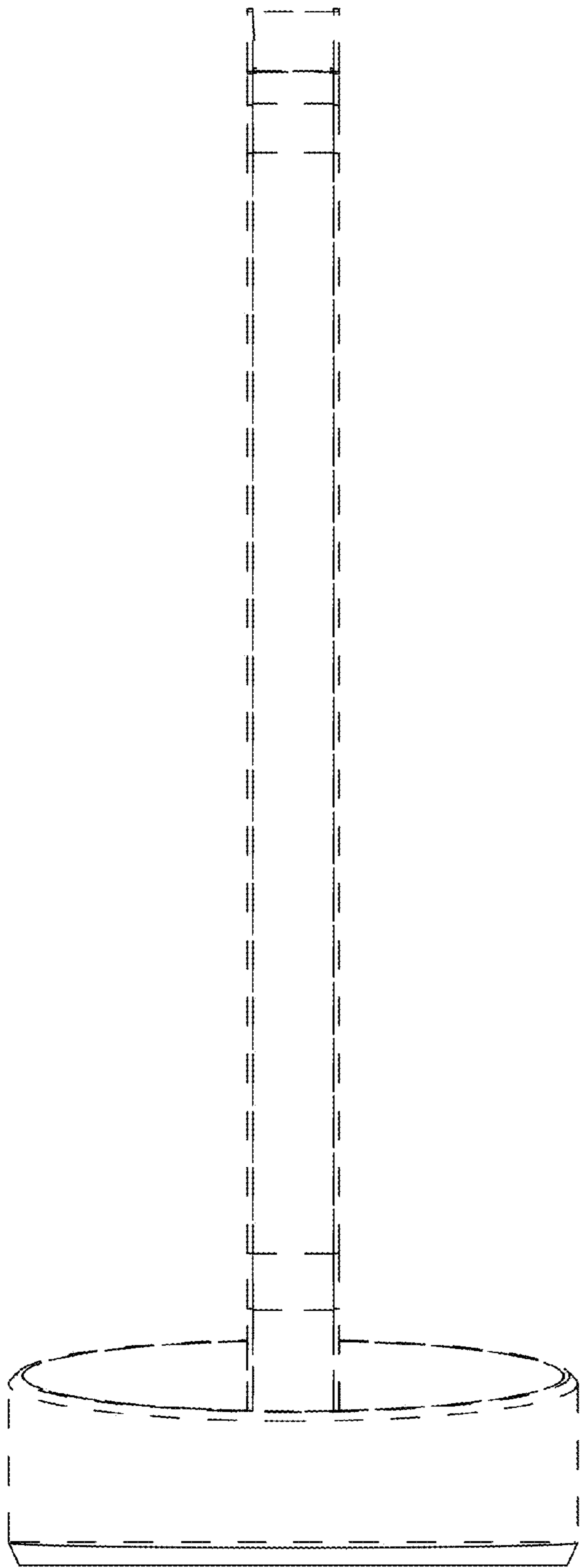
\* cited by examiner



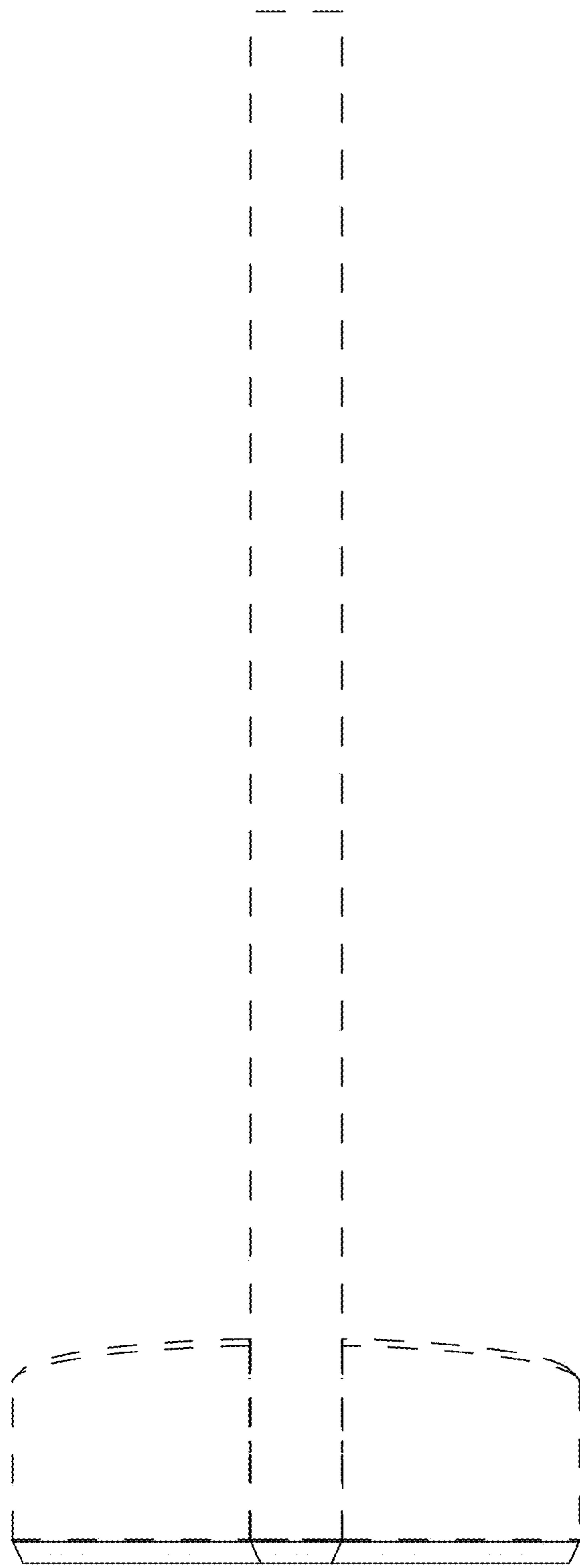
**FIG. 1**



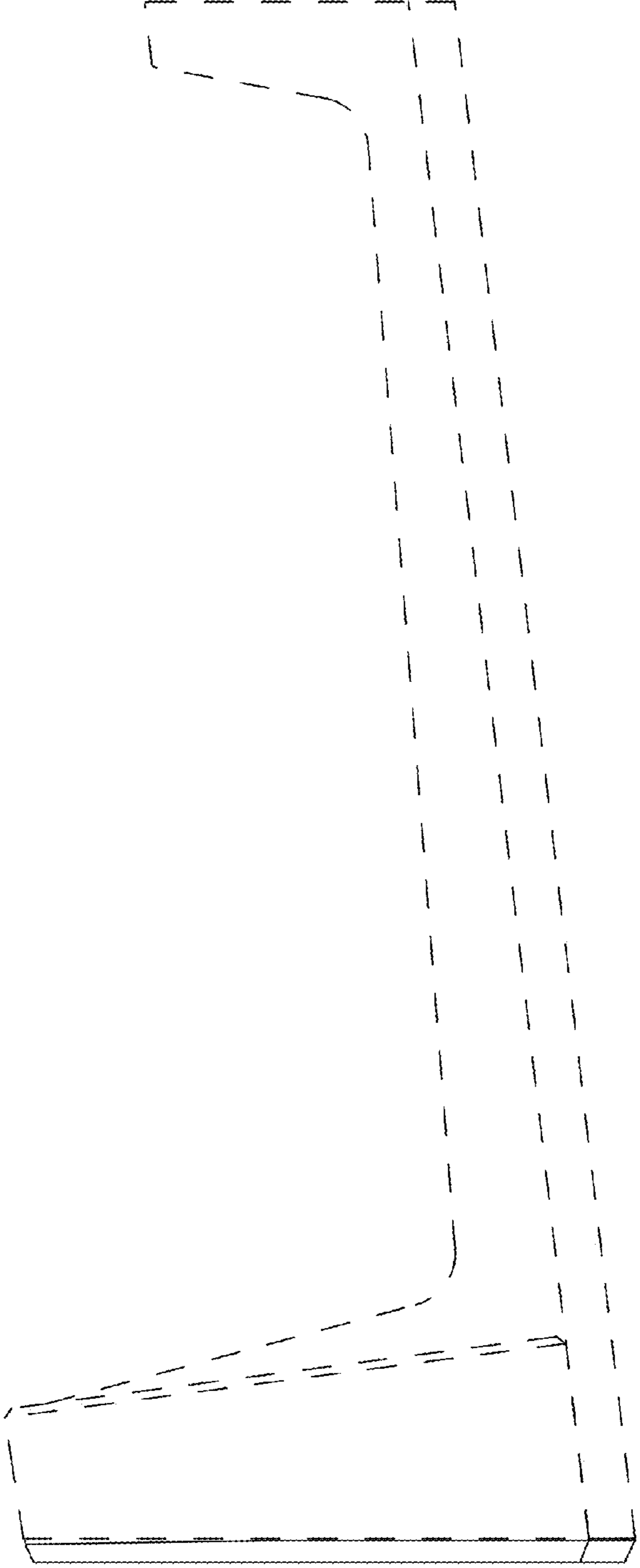
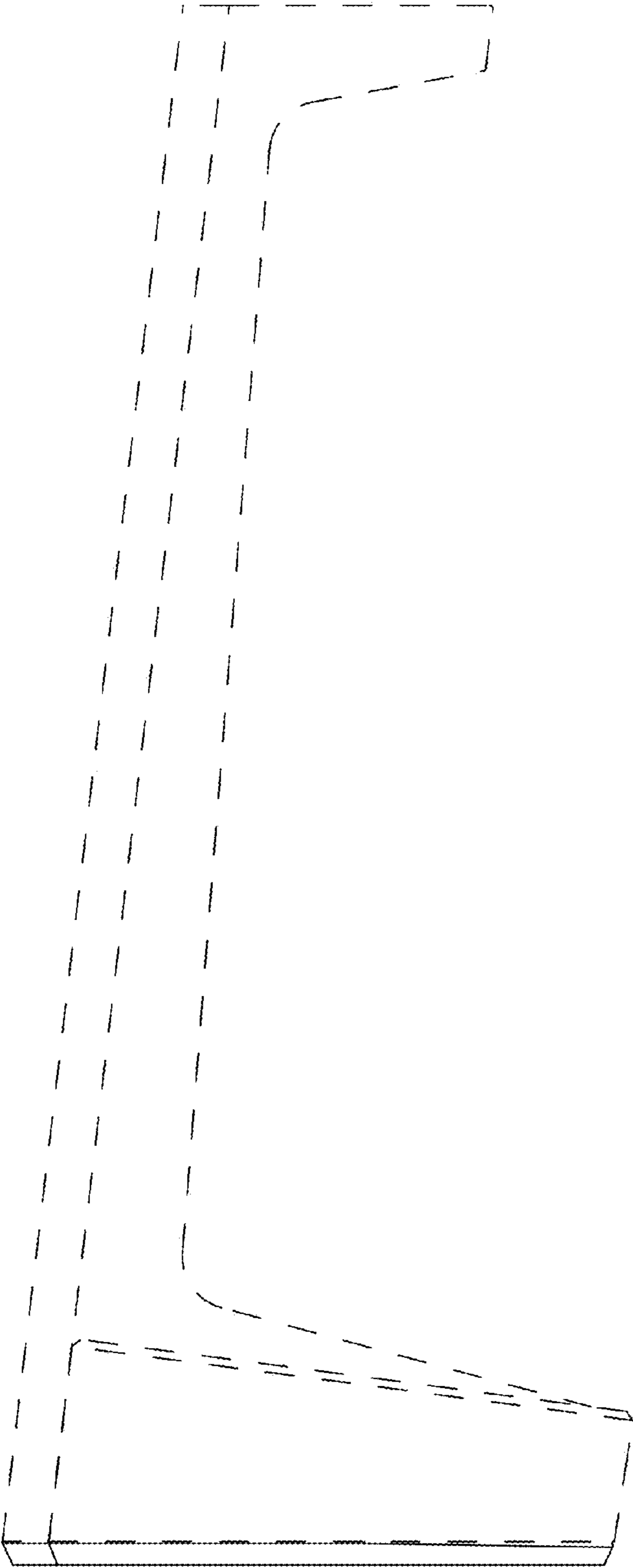
**FIG. 2**



**FIG. 3**



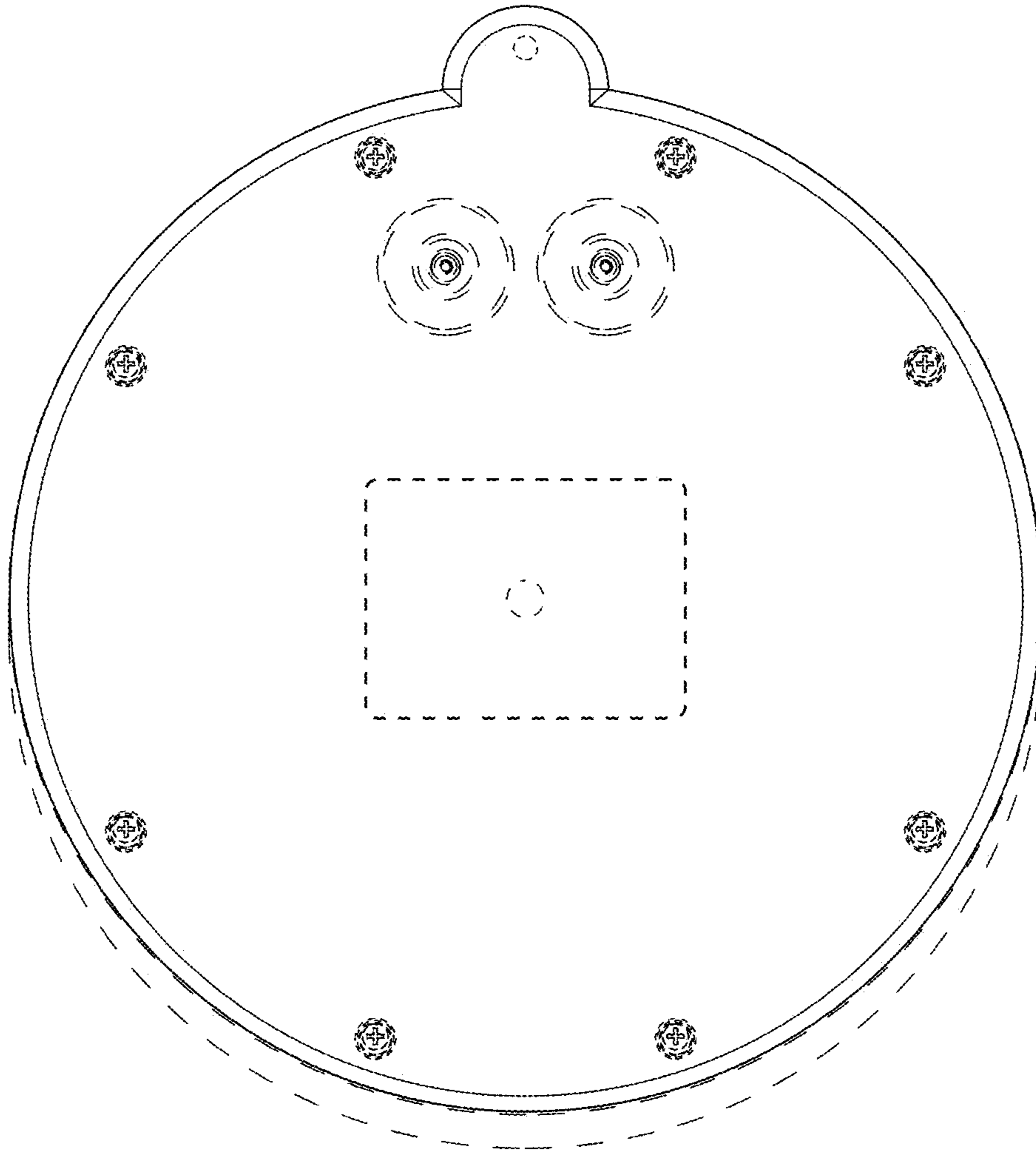
**FIG. 4**



**FIG. 5**

**FIG. 6**





**FIG. 7**