



US00D849678S

(12) **United States Design Patent** (10) **Patent No.:** **US D849,678 S**
Kojima et al. (45) **Date of Patent:** **** May 28, 2019**

- (54) **PORTABLE BATTERY CHARGER WITH SOLAR CELLS**
- (71) Applicant: **ZEON CORPORATION**, Chiyoda-ku, Tokyo (JP)
- (72) Inventors: **Kiyoshige Kojima**, Tokyo (JP); **Yuki Hayashi**, Tokyo (JP)
- (73) Assignee: **ZEON CORPORATION**, Chiyoda-ku, Tokyo (JP)
- (**) Term: **15 Years**
- (21) Appl. No.: **29/654,711**
- (22) Filed: **Jun. 27, 2018**

Related U.S. Application Data

- (62) Division of application No. 29/546,875, filed on Nov. 26, 2015, now Pat. No. Des. 824,850.

(30) **Foreign Application Priority Data**

- May 29, 2015 (JP) 2015-012065
- May 29, 2015 (JP) 2015-012067
- May 29, 2015 (JP) 2015-012068

- (51) **LOC (11) Cl.** **13-02**
- (52) **U.S. Cl.**
USPC **D13/102**

- (58) **Field of Classification Search**
USPC D13/102-110, 118-119, 184, 199;
D14/356, 432
CPC Y02E 60/10; Y02E 60/12; Y02E 60/122;
Y02E 60/124; Y02E 60/50; H01M 2/02;
H01M 2/022; H01M 2/0202; H01M
2/0207; H01M 2/0212; H01M 2/1061;
H01M 2/1022; H01M 2/1055; H01M
2/1066; H01M 2/105; H01M 2/20; H01M
2/204;

(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 5,522,943 A 6/1996 Spencer et al.
- D399,603 S * 10/1998 Hemsley, Jr. D28/66

(Continued)

FOREIGN PATENT DOCUMENTS

- CN 3500998 1/2006
- JP 7775731 S 12/1989
- JP 1511339 S 11/2014

Primary Examiner — Rosemary K Tarcza

Assistant Examiner — Nathaniel D. Buckner

(74) *Attorney, Agent, or Firm* — Kenja IP Law PC

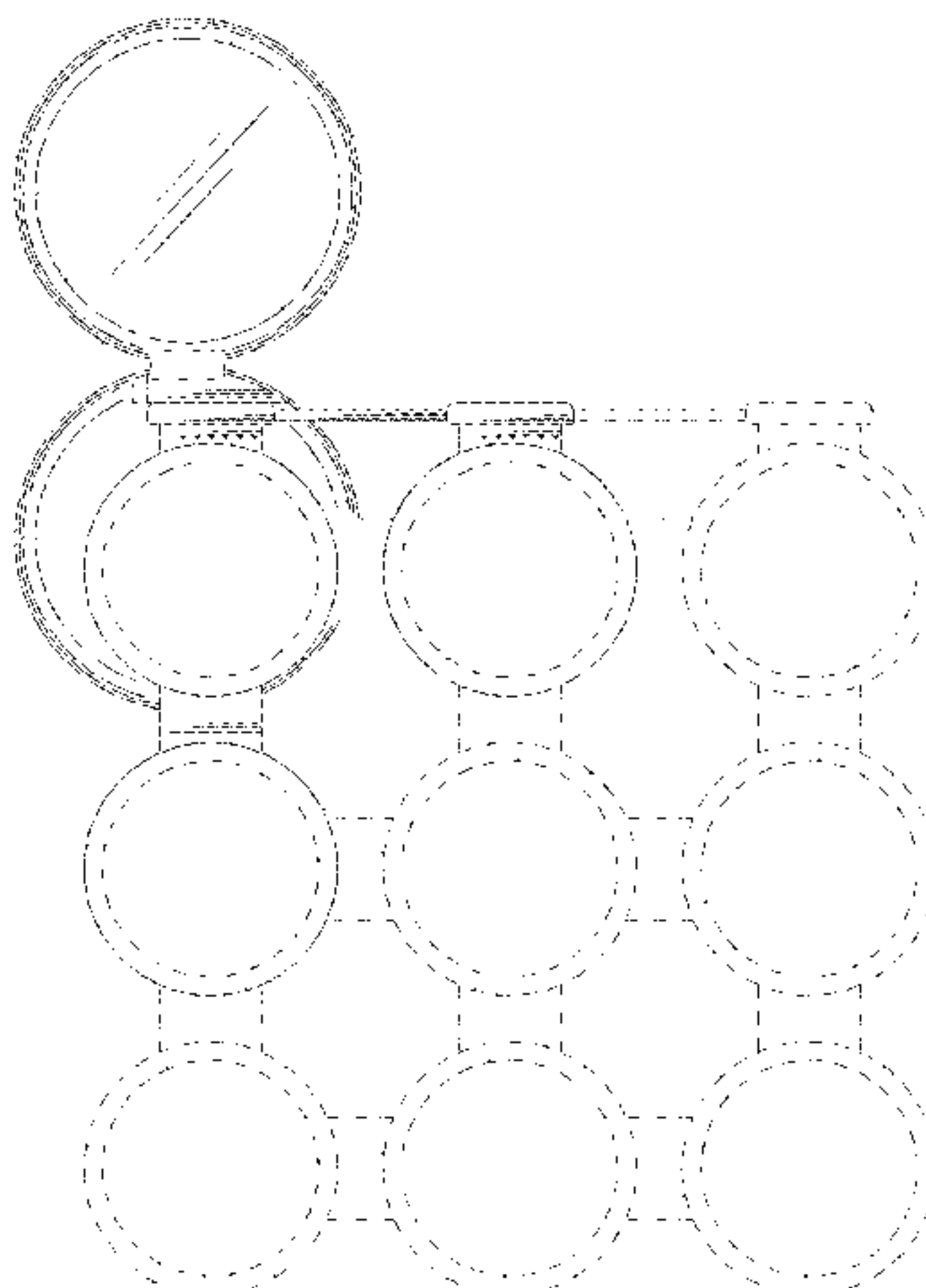
(57) **CLAIM**

The ornamental design for a portable battery charger with solar cells, as shown and described.

DESCRIPTION

FIG. 1 is a front view of a portable battery charger with solar cells showing our new design;
 FIG. 2 is a top view thereof;
 FIG. 3 is a right side view thereof;
 FIG. 4 is a bottom view thereof;
 FIG. 5 is an enlarged sectional view taken along line 5-5 in FIG. 1;
 FIG. 6 is a front view showing the solar cells in a deployed state;
 FIG. 7 is a top view showing the deployed state;
 FIG. 8 is a right side view showing the deployed state;
 FIG. 9 is a left side view showing the deployed state;
 FIG. 10 is a rear view showing the deployed state; and,
 FIG. 11 is a bottom view showing the deployed state.
 The broken lines in the figures depict portions of the article and environmental subject matter which form no part of the claimed design. The dot-dash broken lines depict the boundary of the claimed design, and form no part thereof.

1 Claim, 11 Drawing Sheets



(58) **Field of Classification Search**

CPC H01M 2/206; H01M 10/44; H01M 10/46;
H01M 10/465; H01M 10/482; H01M
2200/30; H01M 2250/30; H01M 2250/40;
H02J 7/00; H02J 7/0003; H02J 7/0011;
H02J 7/0013; H02J 7/0054; H02J 7/0055;
H02J 7/0057; H02J 2007/0062

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D598,018	S	*	8/2009	Sumii	D14/301
D641,692	S		7/2011	Wharram	
D663,262	S		7/2012	Cheung	
D700,134	S		2/2014	Fallon	
D718,234	S	*	11/2014	Rautiainen	D13/108
D718,236	S	*	11/2014	Murray	D13/108
D720,289	S	*	12/2014	Chiang	D13/108
D725,034	S	*	3/2015	Chen	D13/108
9,046,281	B2		6/2015	Curran	
D734,248	S		7/2015	Nook et al.	
D743,954	S	*	11/2015	Chuang	D13/168
D747,267	S	*	1/2016	Aumiller	D13/108
D754,598	S		4/2016	Munshi et al.	
D755,119	S		5/2016	Munshi et al.	
D757,014	S	*	5/2016	Hahn	D13/108
D772,813	S	*	11/2016	Wahl	D13/108
D782,977	S		4/2017	Zhang	
D784,259	S	*	4/2017	Huang	D13/108
D790,452	S		6/2017	Kojima et al.	
D800,649	S		10/2017	Kojima et al.	
D803,774	S		11/2017	Kojima et al.	
D806,020	S	*	12/2017	Lu	D13/107
D825,549	S	*	8/2018	Lebovitz	D14/253
2011/0291607	A1		12/2011	Rossi et al.	

* cited by examiner

FIG. 1

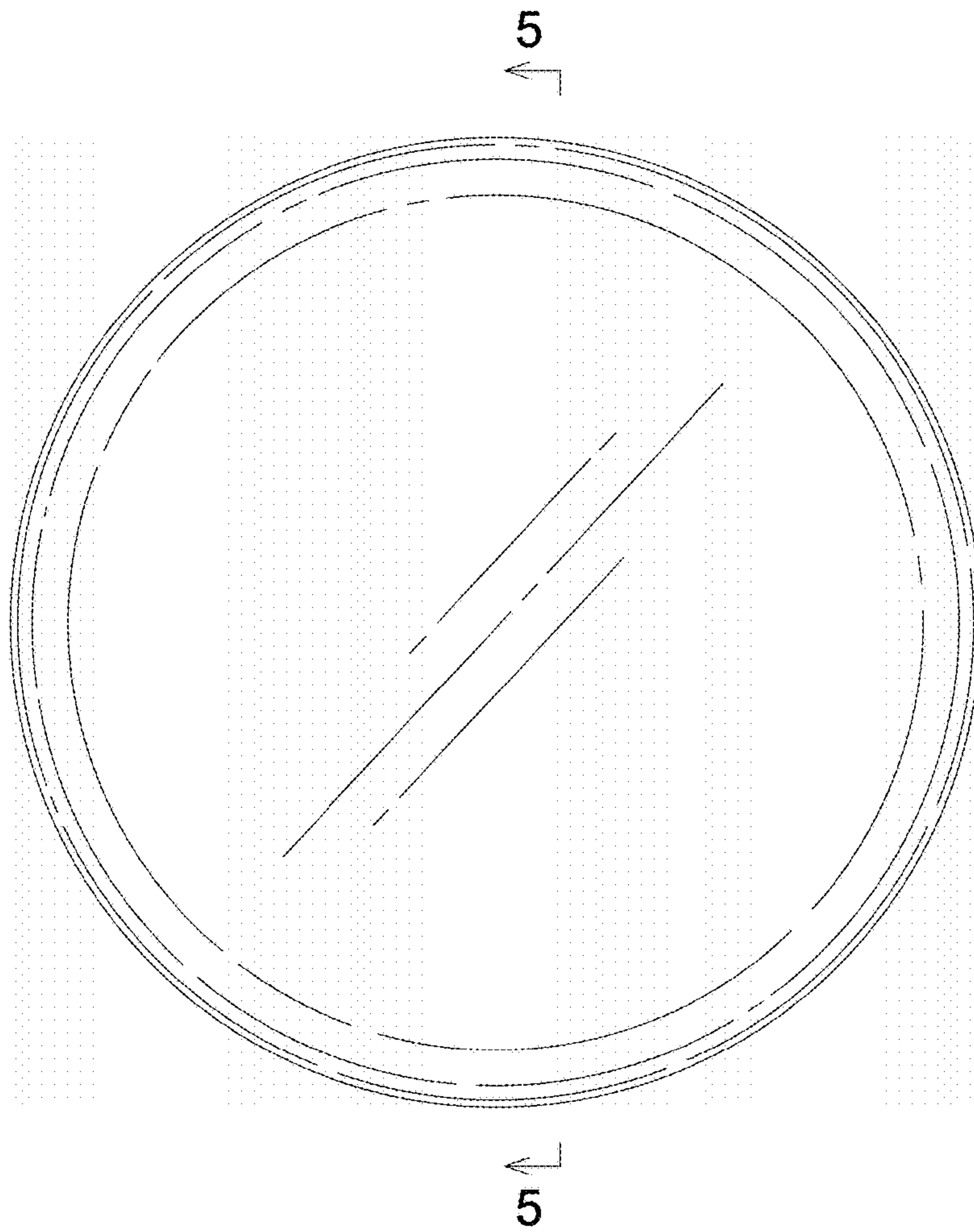


FIG. 2

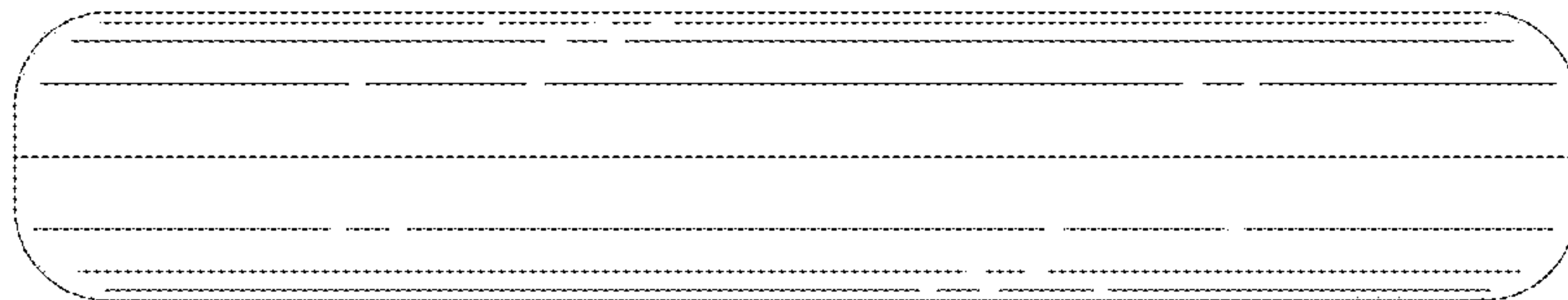


FIG. 3

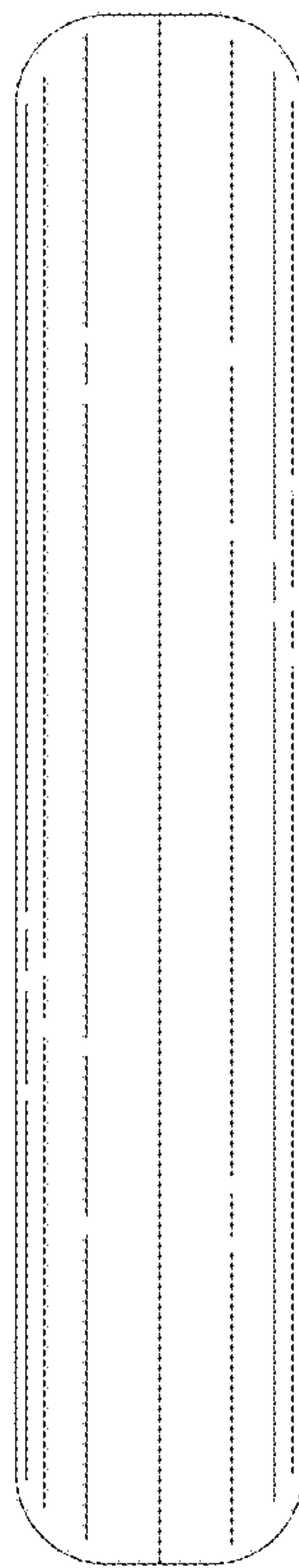


FIG. 4

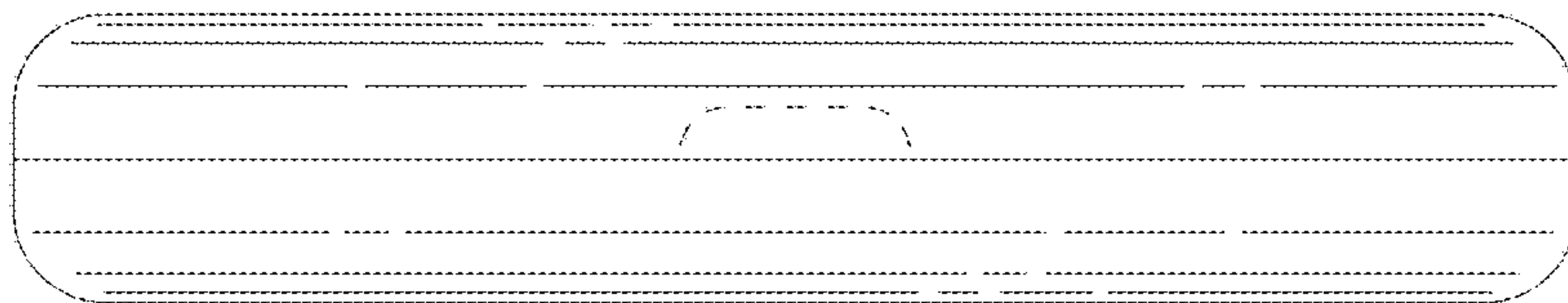


FIG. 5

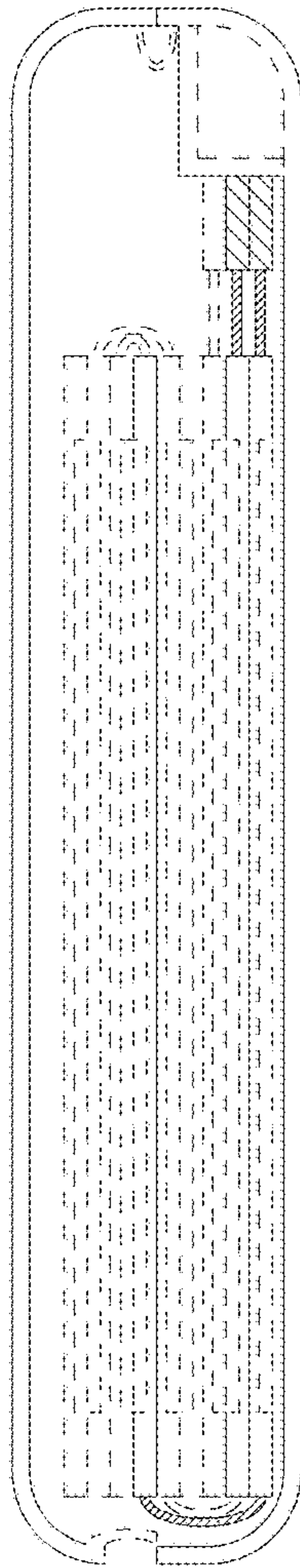


FIG. 6

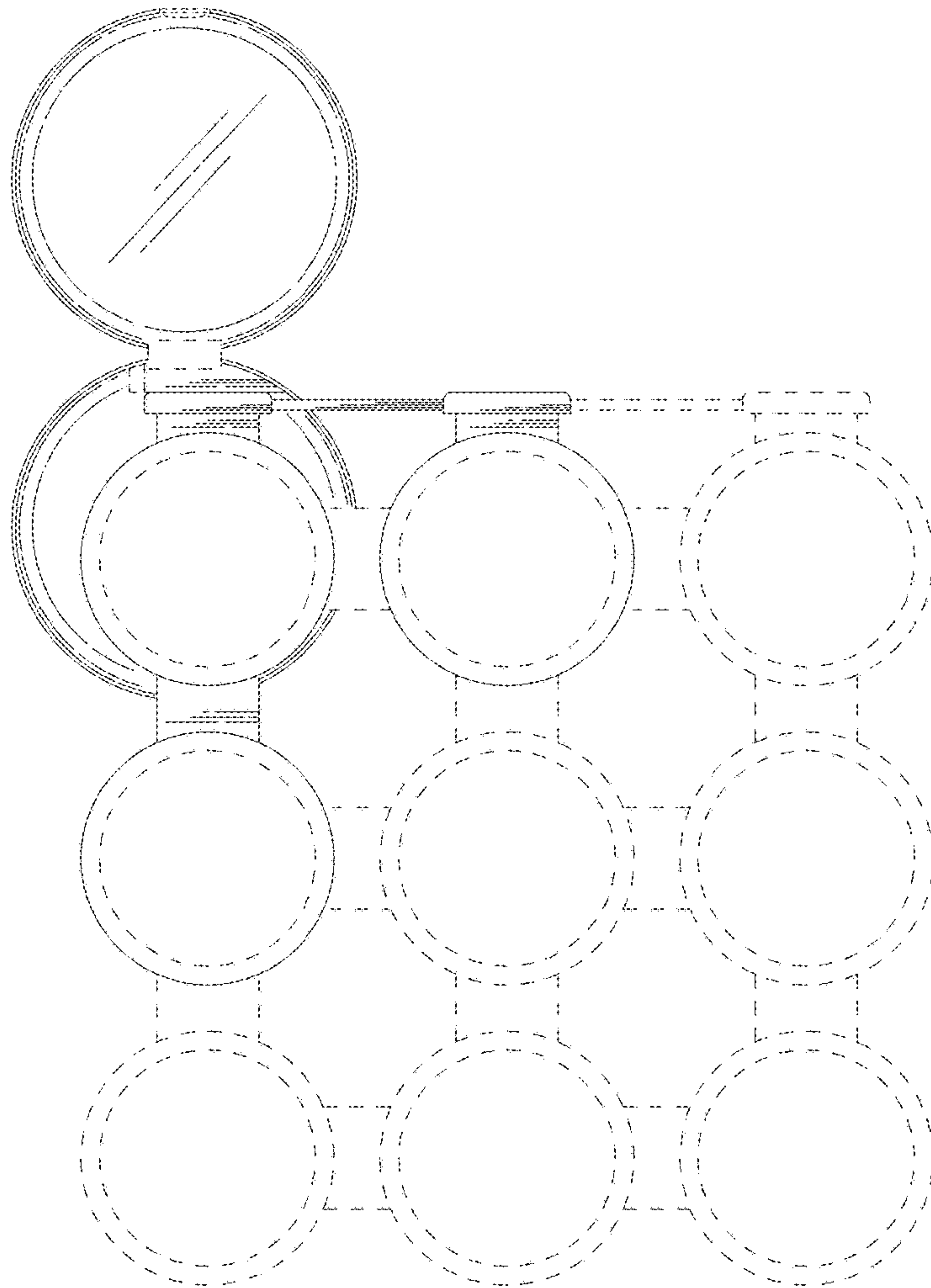


FIG. 7

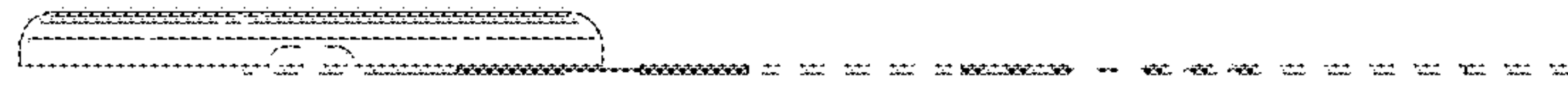


FIG. 8

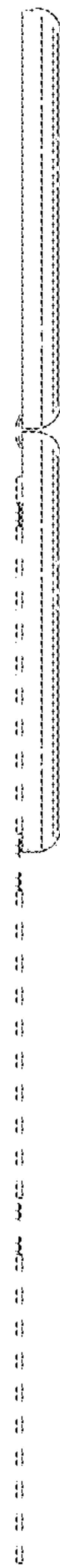


FIG. 9



FIG. 10

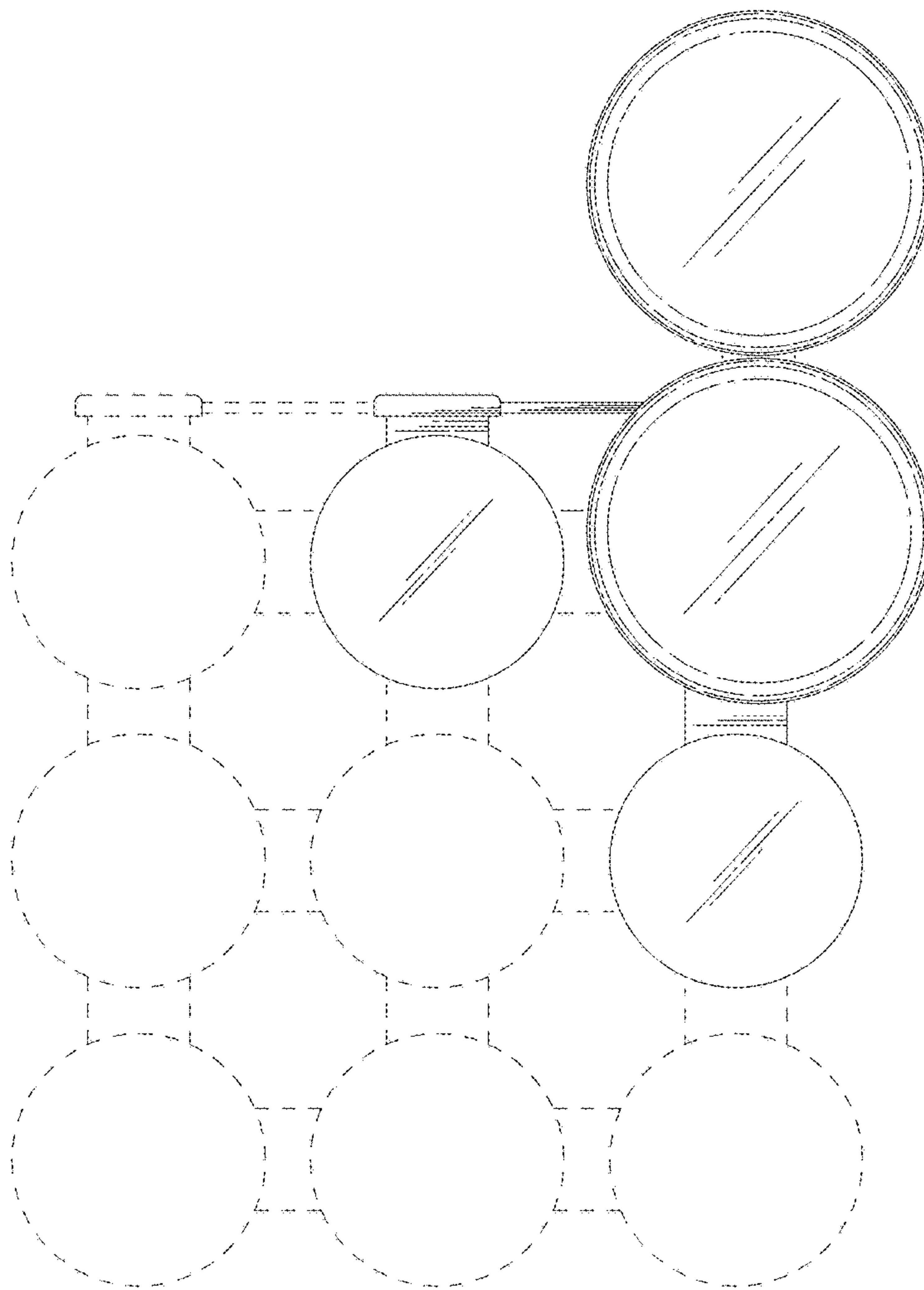


FIG. 11

