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(12) United States Design Patent

Stockman

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(54) **CAPACITOR**

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(*) Notice: This patent is subject to a terminal disclaimer.

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

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Related U.S. Application Data

(63) Continuation of application No. 29/589,876, filed on Jan. 5, 2017, which is a continuation of application No. 15/097,383, filed on Apr. 13, 2016, which is a continuation of application No. 13/601,205, filed on Aug. 31, 2012, now Pat. No. 9,343,238, which is a continuation of application No. 12/945,979, filed on Nov. 15, 2010, now Pat. No. 8,270,143, which is a continuation of application No. 12/246,676, filed on Oct. 7, 2008, now Pat. No. 7,835,133, which is a continuation of application No. 11/733,624, filed on Apr. 10, 2007, now Pat. No. 7,474,519, which is a continuation of application No. 11/317,700, filed on Dec. 23, 2005, now Pat. No. 7,203,053.

(51) **LOC (11) Cl.** **13-03**

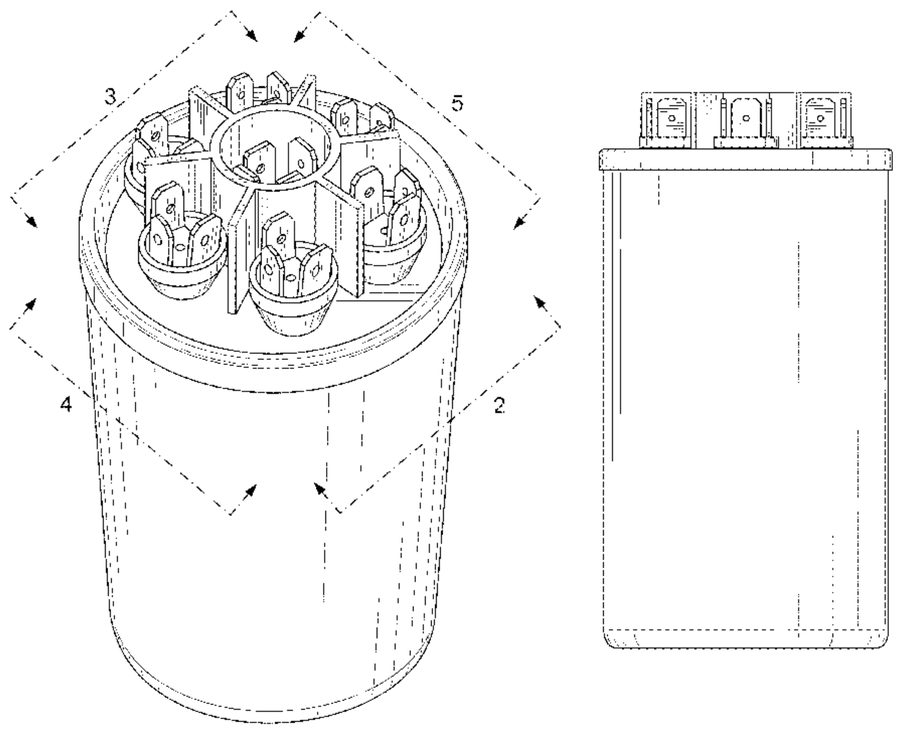
(52) **U.S. Cl.**
USPC **D13/124**

(58) **Field of Classification Search**
USPC D13/123–132, 154, 184, 199
CPC H01G 4/224; H01G 4/232; H01G 4/28; H01G 4/385; H01G 4/40
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,665,499	A		4/1928	Hoch
1,707,959	A		4/1929	Fried
1,943,714	A		1/1934	Bailey
2,202,166	A		11/1937	Peck
D122,825	S	*	10/1940	Peck D13/125
D124,726	S	*	1/1941	Shimer D13/110
2,569,925	A		12/1948	Deeley
2,896,008	A		12/1953	Putz
3,015,687	A		11/1959	Ruscito
3,302,081	A		1/1967	Grahame
3,304,473	A		2/1967	Netherwood et al.
D210,210	S	*	2/1968	Braiman et al. D13/125
3,377,510	A		4/1968	Rayno
3,921,041	A		11/1975	Stockman
3,988,650	A		10/1976	Fritze
4,028,595	A		6/1977	Stockman
4,095,902	A		6/1978	Florer et al.
4,106,068	A		8/1978	Flanagan
4,107,758	A		8/1978	Shirn et al.
4,112,424	A		9/1978	Lapeyre
4,209,815	A		6/1980	Rollins et al.
4,240,126	A		12/1980	Sanvito
4,263,638	A		4/1981	Stockman et al.
4,312,027	A		1/1982	Stockman
4,326,237	A		4/1982	Markarian et al.
4,352,145	A		9/1982	Stockman
4,363,078	A		12/1982	Dwyer
4,398,782	A		8/1983	Markarian
4,408,818	A		10/1983	Markarian
4,447,854	A		5/1984	Markarian
4,486,809	A		12/1984	Deak et al.
4,558,394	A		12/1985	Stockman
4,586,107	A		4/1986	Price
4,631,631	A		12/1986	Hodges et al.
4,633,365	A		12/1986	Stockman
4,633,367	A		12/1986	Strange et al.
4,633,369	A		12/1986	Lapp et al.
4,639,828	A		1/1987	Strange et al.
4,698,725	A		10/1987	MacDougall et al.
4,754,361	A		6/1988	Venturini
4,812,941	A		3/1989	Rice et al.
4,897,760	A		1/1990	Bourbeau
5,006,726	A		4/1991	Okumura
5,019,934	A		5/1991	Bentley et al.
5,138,519	A		8/1992	Stockman
5,148,347	A		9/1992	Cox et al.
5,313,360	A		5/1994	Stockman
5,381,301	A		1/1995	Hudis
5,673,168	A		9/1997	Efford et al.



5,921,820	A	7/1999	Dijkstra	
5,940,263	A	8/1999	Jakoubovitch	
6,009,348	A	12/1999	Rorvick et al.	
6,014,308	A	1/2000	Stockman	
6,031,713	A	2/2000	Takeisha et al.	
6,084,764	A	7/2000	Anderson	
6,141,205	A	10/2000	Nutzman	
6,147,856	A	11/2000	Karidis	
6,157,531	A	12/2000	Breyen et al.	
6,212,058	B1	4/2001	Huber	
6,222,270	B1	4/2001	Lee	
6,282,078	B1	8/2001	Tsai	
6,282,081	B1	8/2001	Takabayashi et al.	
6,310,756	B1	10/2001	Miura et al.	
6,313,978	B1	11/2001	Stockman et al.	
6,373,720	B1	4/2002	Fechtig et al.	
6,385,490	B1	5/2002	O'Phelan	
6,404,618	B1	6/2002	Beard et al.	
6,490,158	B1	12/2002	Ellyson et al.	
6,697,249	B2	2/2004	Maletin et al.	
6,798,677	B2	9/2004	Jakob et al.	
6,807,048	B1	10/2004	Nielsen	
6,819,545	B1	11/2004	Lobo et al.	
6,842,328	B2	1/2005	Schott	
6,847,517	B2	1/2005	Iwaida et al.	
6,888,266	B2	5/2005	Burke et al.	
6,922,330	B2	7/2005	Nielson et al.	
6,930,874	B2	8/2005	Lobo	
6,982,539	B1	1/2006	Ward	
6,995,971	B2	2/2006	Norton	
7,031,139	B1	4/2006	Fayram	
7,046,498	B1	5/2006	Huang	
D522,456	S *	6/2006	Matsumoto	D13/125
7,110,240	B2	9/2006	Breyen	
7,203,053	B2	4/2007	Stockman	
7,251,123	B2	7/2007	O'Phelan	
7,365,959	B1	4/2008	Ward	
7,423,861	B2	9/2008	Stockman	
7,474,519	B2	1/2009	Stockman	
7,474,520	B2	1/2009	Kashihara	
7,492,574	B2	2/2009	Fresard et al.	
7,511,941	B1	3/2009	Gallay	
7,547,233	B2	6/2009	Inoue et al.	
7,667,954	B2	2/2010	Lessner	
7,710,713	B2	5/2010	Restorff	
7,835,133	B2	11/2010	Stockman	
7,848,079	B1	12/2010	Gordin et al.	
7,867,290	B2	1/2011	Nielsen	
7,881,043	B2	2/2011	Hirose et al.	
7,911,762	B2	3/2011	Stockman	
7,911,766	B2	3/2011	Caumont et al.	
7,952,854	B2	5/2011	Stockman	
7,987,593	B1	8/2011	Gorst	
8,029,290	B2	10/2011	Johnson	
8,170,662	B2	5/2012	Bocek	
8,174,817	B2	5/2012	Georgopoulos et al.	
8,270,143	B2	9/2012	Stockman	
8,274,778	B2	9/2012	Yoshinaga et al.	
8,310,802	B2	11/2012	Fujii et al.	
8,331,076	B2	12/2012	Tuncer	
8,456,795	B2	6/2013	Stockman	
8,465,555	B2	6/2013	Sherwood	
8,514,547	B2	8/2013	Galvagni	
8,514,548	B2	8/2013	Miller et al.	
8,531,815	B2	9/2013	Stockman	
8,537,522	B2	9/2013	Stockman	
8,559,161	B2	10/2013	Takeoka et al.	
8,761,875	B2	6/2014	Sherwood	
8,842,411	B2	9/2014	Zhang	
8,853,318	B2	10/2014	Tielemans	
8,861,178	B2	10/2014	Terashima et al.	
8,861,184	B2	10/2014	Schmidt	
8,871,850	B2	10/2014	Koh et al.	
8,885,318	B2	11/2014	Stockman	
8,891,224	B2	11/2014	Stockman	
D729,164	S *	5/2015	Chen	D13/124
9,105,401	B2	8/2015	Dreissig	
9,318,261	B2	4/2016	Stockman	
9,324,501	B2	4/2016	Stockman	
9,343,238	B2	5/2016	Stockman	
9,378,893	B2	6/2016	Stockman	
9,412,521	B2	8/2016	Stockman	
9,424,995	B2	8/2016	Stockman	
9,466,429	B1 *	10/2016	Casanova	H01G 11/82
9,496,086	B2	11/2016	Stockman	
9,536,670	B2	1/2017	Stockman	
9,859,060	B1	1/2018	Stockman et al.	
2001/0025618	A1	10/2001	Kelling	
2006/0227495	A1	10/2006	Stockman	
2007/0025051	A1 *	2/2007	Stockman	H01G 2/24 361/301.5
2007/0236860	A1	10/2007	Stockman	
2007/0279015	A1	12/2007	Livingston et al.	
2008/0158780	A1	7/2008	Stockman	
2009/0052109	A1	2/2009	Stockman et al.	
2009/0219665	A1	9/2009	Stockman	
2011/0063775	A1	3/2011	Stockman	
2011/0134584	A1 *	6/2011	Stockman	H01G 5/38 361/328
2011/0157764	A1	6/2011	Stockman	
2011/0228446	A1	9/2011	Stockman	
2011/0317333	A1 *	12/2011	Chun	H01G 2/04 361/518
2013/0003252	A1	1/2013	Stockman	
2013/0214720	A1	8/2013	Stockman	
2013/0329342	A1	12/2013	Stockman	
2013/0343029	A1	12/2013	Stockman	
2014/0049205	A1 *	2/2014	Curiel	H02P 1/44 318/785
2014/0201018	A1	7/2014	Chassin	
2014/0285949	A1	9/2014	Stockman	
2014/0347784	A1	11/2014	Stockman et al.	
2015/0016012	A1	1/2015	Stockman	
2015/0022991	A1 *	1/2015	Stockman	H01G 4/385 361/821
2015/0138690	A1	5/2015	Stockman	
2015/0255218	A1	9/2015	Stockman et al.	
2016/0203916	A1	7/2016	Stockman	
2016/0233030	A1	8/2016	Stockman	
2017/0011855	A1	1/2017	Stockman et al.	
2017/0032898	A1	2/2017	Stockman	
2017/0110252	A1 *	4/2017	Stockman	H01G 4/385
2017/0186554	A1	6/2017	Stockman	
2017/0236646	A1 *	8/2017	Stockman	H01G 4/385

FOREIGN PATENT DOCUMENTS

CA	2285721 A1 *	4/2000	H01G 4/221
EP	1115128 A2 *	7/2001	H01G 2/14
EP	2587503	5/2013	
FR	2343221	9/1977	
GB	517718	2/1940	
GB	2070861	9/1981	
GB	2169747	7/1986	

OTHER PUBLICATIONS

Grainger. <URL: https://www.grainger.com/product/5CMW3&AL!2966!3!166587674359!!!g!82128730437!?cm_mmc=PPC:+Google+PLA?campaignid=719691765&s_kwcid=AL!2966!3!166587674359!!!!82128730437!&ef_id=WRSnxQAAAILWhRIb:20170824174108:s. Visited Aug. 24, 2017. Capacitor.*

"American Radionics—Home of the Turbo200 MultiUse Capacitor," online archive of website captured at http://web.archive.org/web/20050309191805fw_/http://www.americanradionic.com/home, Mar. 9, 2005, (16 pages), (accessed May 29, 2014).

"AC Capacitors," brochure by AmRad Engineering, Inc., undated (4 pages).

"American Radionic Co., Inc. Introduces a New Circuit Component The Patented Ultramet™ Capacitor," poster by American Radionic Co., Inc., (poster undated, 1980 year date appears below one image), (one page).

"American Radionic Co., Inc. Introduces a New Circuit Component, The Patented Ultramet™ Capacitor," poster by American Radionic Co., Inc., which is reprint from Electronic News dated Feb. 11, 1980, (one page).

"American Radionic Co., Inc. Introduces . . . The World's First Multiple Metallized Film Dielectric Capacitor Produced from a Single Winding! The Patented Ultramet™ Capacitor," poster by American Radionic Co., Inc. (undated) (one page).
"American Radionic Company's Chronology of Patents, New Products and Technology Transfer Programs—From the Present, to the Past, a Thirty-Five Year Review," online website having URL: http:/www.americanradionic.com/content/blogcategory/13/29/8/16, accessed May 19, 2014 (undated) (3 pages).
"American Radionic Introduces Capacitors Without Compromise", color brochure, 1989, (1 page).
"AmRad Engineering: Universal Capacitor," The Air Conditioning|Heating|Refrigeration News, Jan. 29, 2005, Printout of website having URL: "http://www.archrnews.com/articles/print/amrad-engineering-universal-capacitor" (accessed Jun. 2, 2014) (1 page).
"Capacitors—Motor Run, Oil Filled Capacitors, AC Rated. AmRad." Online archive of website captured at http://webarchive.org/web/20041214091042/http://americanradionic.com, Dec. 14, 2004, (13 pages) (accessed May 29, 2014).
"Capacitors—Motor Run, Oil Filled Capacitors, AC Rated. AmRad." Online archive of website captured at http:/webarchive.org/web/20011126195819/http://www.americanradionic.com, Nov. 26, 2001, (13 pages) (accessed May 29, 2014).
"Capacitors—Motor Run, Oil Filled Capacitors, AC Rated. AmRad." Printout of website having URL: http://amradcapacitors.com/index.htm, Jan. 3, 2003(20 pages).
"Industrial Power Factor Correction Capacitors," Cornell Dubilier, Undated (1 page).
"Product of the Year Awards," Electronic Products Magazine, Jan. 1981, pp. 39-45.
"Super-Sized Show," ASHRae Journal Show Daily, 2005 International Air-Conditioning, Heating, Refrigerating Exposition, Tuesday, Feb. 8, 2005 (24 pages).
"The Patented Ultramet™ Capacitor," poster by American Radionic Co., Inc., (undated) (three pages).
"The Patented Ultramet™ Capacitor. A product of years of American Radionic research & development," poster by American Radionic Co., Inc. (undated) (one page).
Answer and affirmative defenses to Complaint by Cornell-Dubliner Electronics, Inc. (Allaman, Melissa) (Entered: Jan. 9, 2015).
Answer and affirmative defenses to Complaint by Packard Inc. (Allaman, Melissa) (Entered: Jan. 9, 2015).
Case Management and Scheduling Order: Amended Pleadings and Joinder of Parties due by Apr. 9, 2015. Discovery due by Feb. 16, 2016. Dispositive motions due by Apr. 7, 2016. Pretrial statement due by Aug. 11, 2016. All other motions due by Jul. 28, 2016. Plaintiff disclosure of expert report due by Dec. 10, 2015. Defendant disclosure of expert report due by Jan. 14, 2016. Final Pretrial Conference set for Aug. 18, 2016 at 01:15 PM in Orlando Courtroom 4 A before Judge Roy B. Dalton, Jr., Jury Trial Set for the trial team commencing Sep. 6, 2016 at 09:00 AM in Orlando Courtroom 4 A before Judge Roy B. Dalton Jr., Conduct mediation hearing by Mar. 29, 2016. Lead counsel to coordinate dates. Signed by Judge Roy B. Dalton, Jr. on Feb. 10, 2015. (VMF). (Entered: Feb. 10, 2015).
Complaint for Patent Infringement against Cornell-Dubliner Electronics, Inc., Packard Inc. with Jury Demand (Filing fee $400 receipt No. ORL-38930) filed by American Radionic Company, Inc. (Attachments: #1 Civil Cover sheet, #2 Exhibit A)(LMM) Modified on Nov. 19, 2014 (LMM). (Entered: Nov. 19, 2014).
Declaration of Noah C. Graubart in Support of Plaintiff's Claim Construction Brief by American Radionic Company, Inc. (Attachments: #1 Exhibit 1, #2 Exhibit 2, #3 Exhibit 3, #4 Exhibit 4, #5 Exhibit 5, #6 Exhibit 6) (Graubart, Noah) (Entered: Jun. 18, 2015).
Defendants' First Supplemental Disclosure of Non-Infringement and Invalidity Contentions *American Radionic, Inc.*, v. *Packard, Inc., and Cornell-Dubilier Electronics, Inc.*, No. 6:14-cv-01881-RBD-KRS.
Document from Defendants' First Supplemental Disclosure of Non-Infringement and Invalidity Contentions that purported to be Standard for Safety UL 810 Capacitors, Underwriters Laboratories Inc. having multiple dates ranging from 1976 to 1988 (22 pages).
First Amended Answer and affirmative defenses to 1 Complaint by Cornell-Dubliner Electronics, Inc. (Allaman, Melissa) (Entered: Feb. 4, 2015).
First Amended Answer and affirmative defenses to 1 Complaint by Packard Inc. (Allaman, Melissa) (Entered: Jan. 9, 2015).
Hudis, Martin et al., "Motor-Run Capacitors," Motors & Motor Control, undated (reprinted from Appliance Manufacturer, Oct. 1994) (3 pages).
Hudis, Martin, "Plastic Case Self-Protected Liquid Filled AC Capacitors for 70° Applications," Presented at CAPTECH '97, Mar. 1997, 7 pages.
Hudis, Martin, "Technology Evolution in Metallized Polymeric Film Capacitors over the Past 10 Years," Presented at CARTS Symposium in Nice, France, Oct. 1996, 9 pages.
Joint Pre-Hearing Statement re: Claim Construction by American Radionic Company, Inc., Packard Inc., Cornell-Dubliner Electronics, Inc. (Attachments: #1 Exhibit. 1, #2 Exhibit 2) (Graubart, Noah) Modified on Jul. 24, 2015.
Macomber, Laird L., et al., "New Solid Polymer Aluminum Capacitors Improve Reliability," Electro Power Electronics, Oct. 1, 2001, 5 pages.
Macomber, Laird L., et al., "Solid Polymer Aluminum Capacitor Chips in DC-DC Converter Modules Reduce Cost and Size and Improve High-Frequency Performance," PCIM Power Electronics 2001 Proceeding for the PowerSystems World Conference, Sep. 2001, 8 pages.
Mallory Distributor Products Co., 1967 Precision Electronic Components Catalog, 52 pages.
Minute Entry, Proceedings of Claim Construction Hearing held before Judge Roy B. Dalton, Jr. on Aug. 24, 2015. Court Report: Arnie First (VMF) (FMV). (Entered: Aug. 24, 2015).
Notice of Filing of Claim Construction Evidence by American Radionic Company, Inc. (Attachments: #1 Exhibit 1, #2 Exhibit 2, #3 Exhibit 3) (Graubart, Noah) Modified on Aug. 25, 2015 (EJS). (Entered: Aug. 25, 2015).
Order granting 69 Motion for Consent Judgment and Injunction, Signed by Judge Roy B. Dalton, Jr. on Nov. 5, 2015. (CAC) (Entered Nov. 5, 2015).
Parente, Audrey, "Can-sized device the right fit," The Daytona Beach News-Journal, Jan. 3, 2005 (2 pages).
Photograph 1 from Defendants' First Supplemental Disclosure of Non-Infringement and Invalidity Contentions, undated (1 page).
Photograph 10, undated (1 page).
Photograph 11, undated (1 page).
Photograph 12, undated (1 page).
Photograph 13, undated (1 page).
Photograph 14, undated (1 page).
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Photograph 17, undated (1 page).
Photograph 18, undated (1 page).
Photograph 19, undated (1 page).
Photograph 2 from Defendants' First Supplemental Disclosure of Non-Infringement and Invalidity Contentions, undated (1 page).
Photograph 20, undated (1 page).
Photograph 3 from Defendants' First Supplemental Disclosure of Non-Infringement and Invalidity Contentions, undated (1 page).
Photograph 4 from Defendants' First Supplemental Disclosure of Non-Infringement and Invalidity Contentions, undated (1 page).
Photograph 5 from Defendants' First Supplemental Disclosure of Non-Infringement and Invalidity Contentions, undated (1 page).
Photograph 6 from Defendants' First Supplemental Disclosure of Non-Infringement and Invalidity Contentions, undated (1 page).
Photograph 7 from Defendants' First Supplemental Disclosure of Non-Infringement and Invalidity Contentions, undated (1 page).
Photograph 8, undated (1 page).
Photograph 9, undated (1 page).
Plaintiff's Brief re 59 Declaration Plaintiff's Claim Construction Brief filed by American Radionic Company, Inc. (Graubart, Noah) (Entered May 18, 2015).

Response to Plaintiff's Claim Construction Brief re 60 Brief—Plaintiff filed by Cornell-Dubliner Electronics, Inc., Packard Inc. (Killen, Craig) Modified on Jul. 17, 2015 (EJS). (Entered Jul. 16, 2015).
Status report Joint Claim Construction Statement by American Radionic Company, Inc., Packard Inc., and Cornell-Dubliner Electronics, Inc. (Attachments: #1 Exhibit 1, #2 Exhibit 2) (Graubart, Noah) Modified on May 29, 2015 (SWT). (Entered: May 28, 2015).
Transcript of Markman Hearing held on Aug. 24, 2015 before Judge Roy B. Dalton, Jr., Court Reporter Arnie R. First, DRD, CRR< ArnieFirst.CourtReporter@gmail.com. Transcript may be viewed at the court public terminal or purchased through the Court Reporter before the deadline for Release of Transcript Restriction. After that date it may be obtained through PACER or purchased through the court Reporter, Redaction Request due Oct. 22, 2015. Redacted Transcript Deadline set for Nov. 2, 2015. Release of Transcript Restriction set for Dec. 30, 2015. (ARF) (Entered: Oct. 1, 2015).
International Search Report and Written Opinion, PCT/US2014/39003, dated Oct. 2, 2014, 12 pages.

* cited by examiner

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Assistant Examiner — Lauren McVey
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(57) **CLAIM**

The ornamental design for a capacitor, as shown and described.

DESCRIPTION

FIG. **1** is a front top-left perspective view of a capacitor showing my new design, taken at line **1** in FIG. **6**;
FIG. **2** is a front elevation view thereof, taken at line **2** in FIG. **1**;
FIG. **3** is a rear elevation view thereof, taken at line **3** in FIG. **1**;
FIG. **4** is a left side elevation view thereof, taken at line **4** in FIG. **1**;
FIG. **5** is a right side elevation view thereof, taken at line **5** in FIG. **1**;
FIG. **6** is a top plan view thereof; and,
FIG. **7** is a bottom plan view thereof.
The evenly spaced broken lines represent an unclaimed boundary; the dot-dash broken lines in FIGS. **1** and **6** are for reference purposes only. The broken lines form no part of the claimed design.

1 Claim, 4 Drawing Sheets

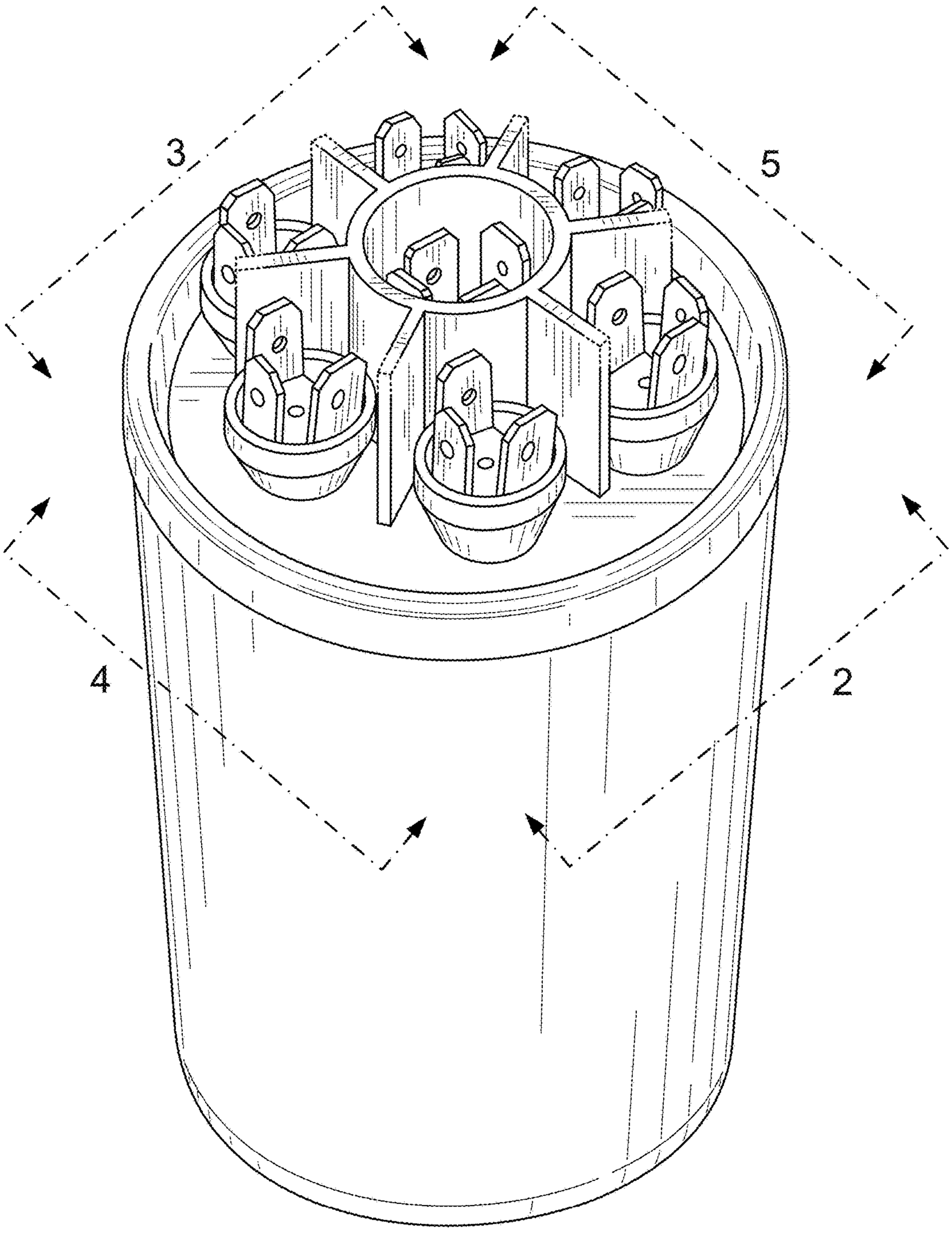

FIG. 1

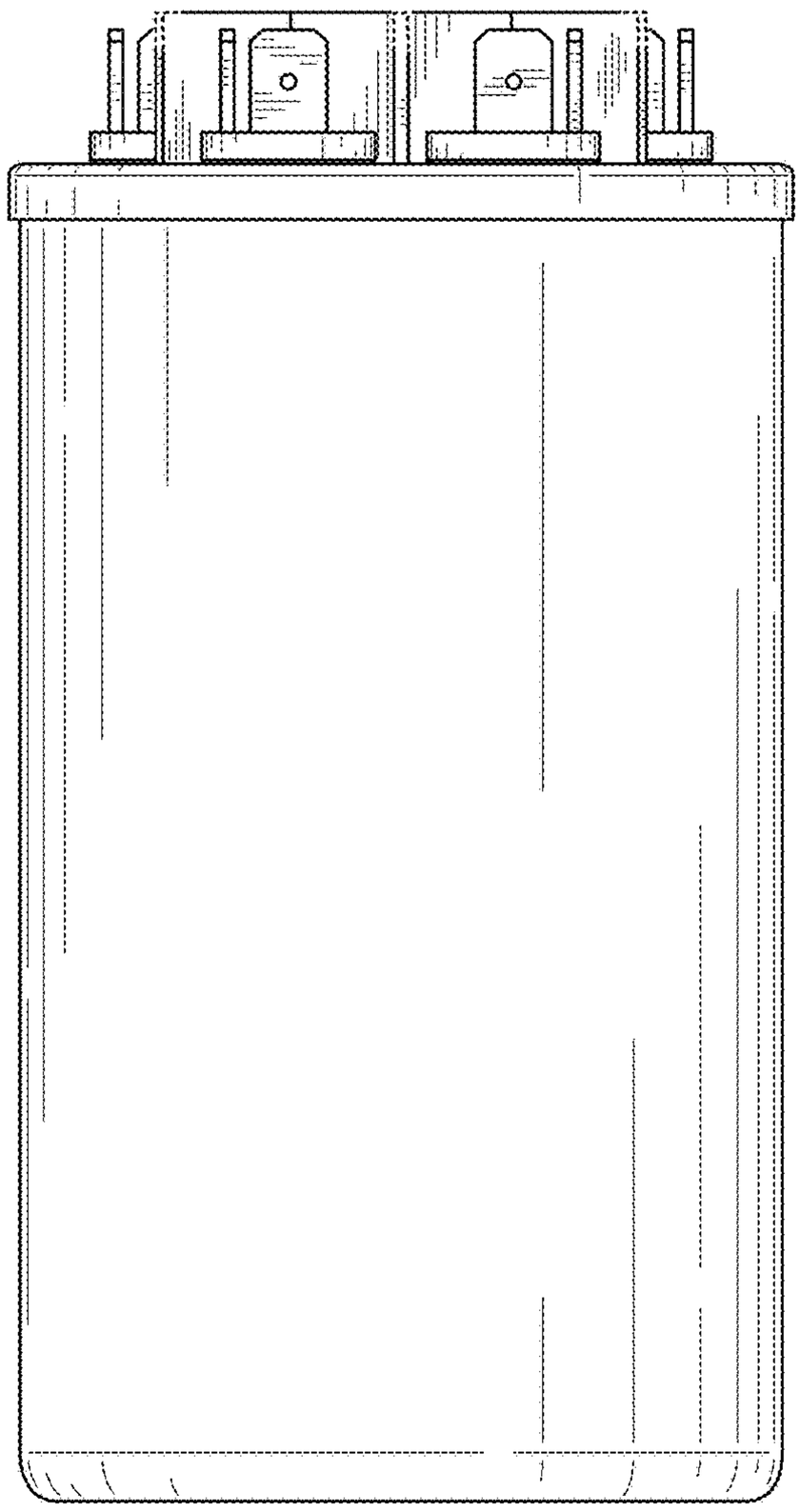

FIG. 2

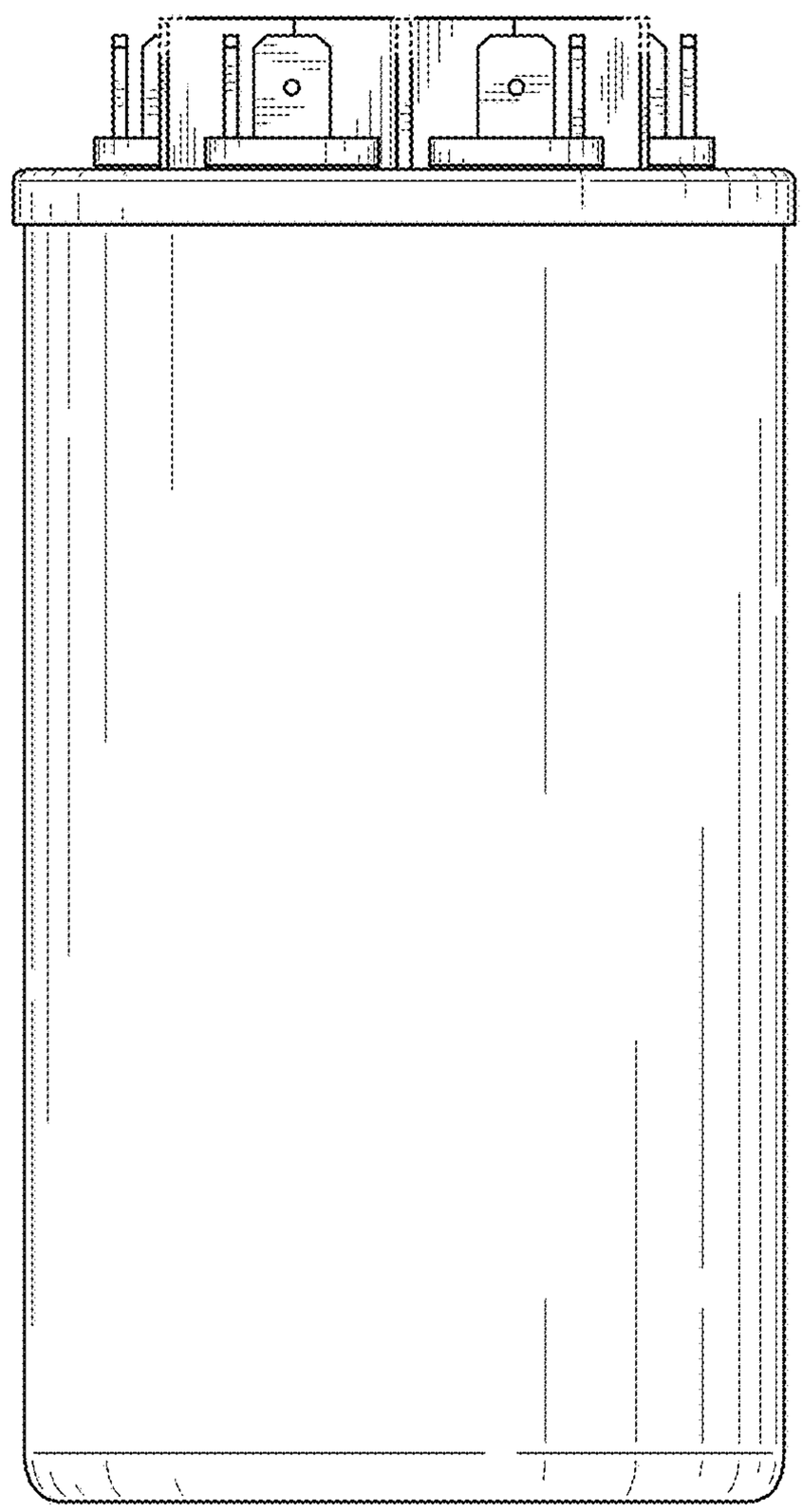

FIG. 3

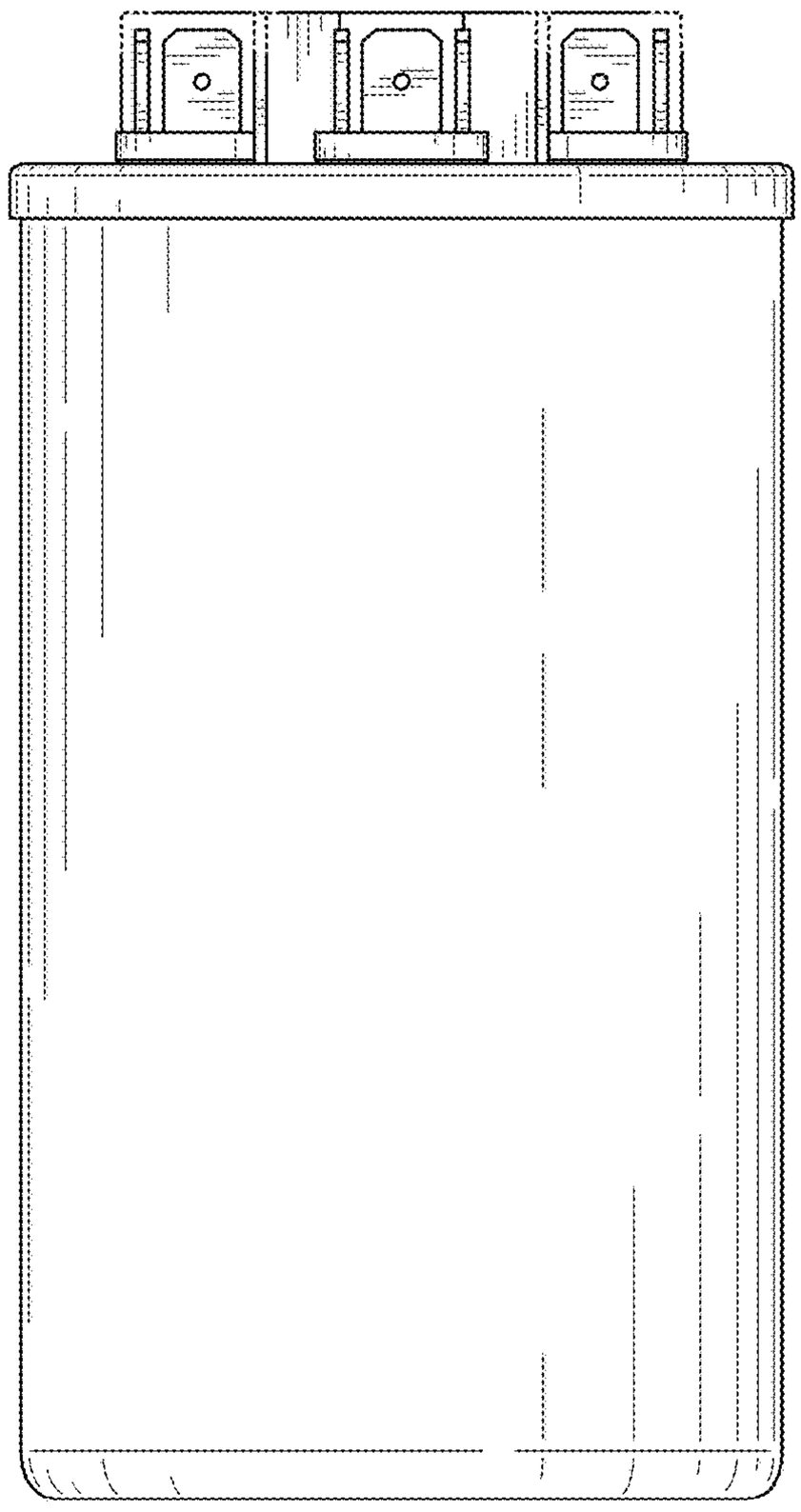

FIG. 4

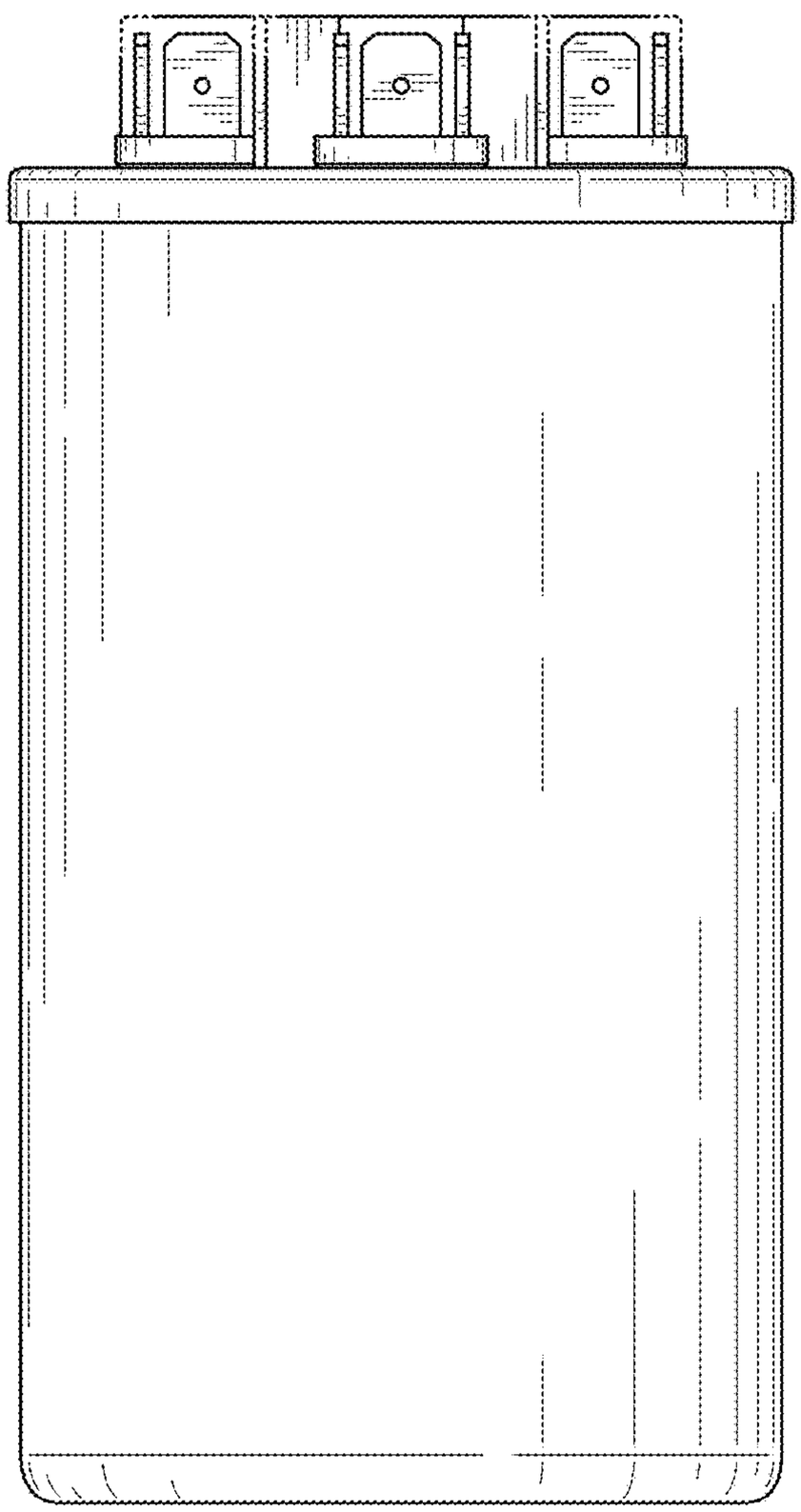

FIG. 5

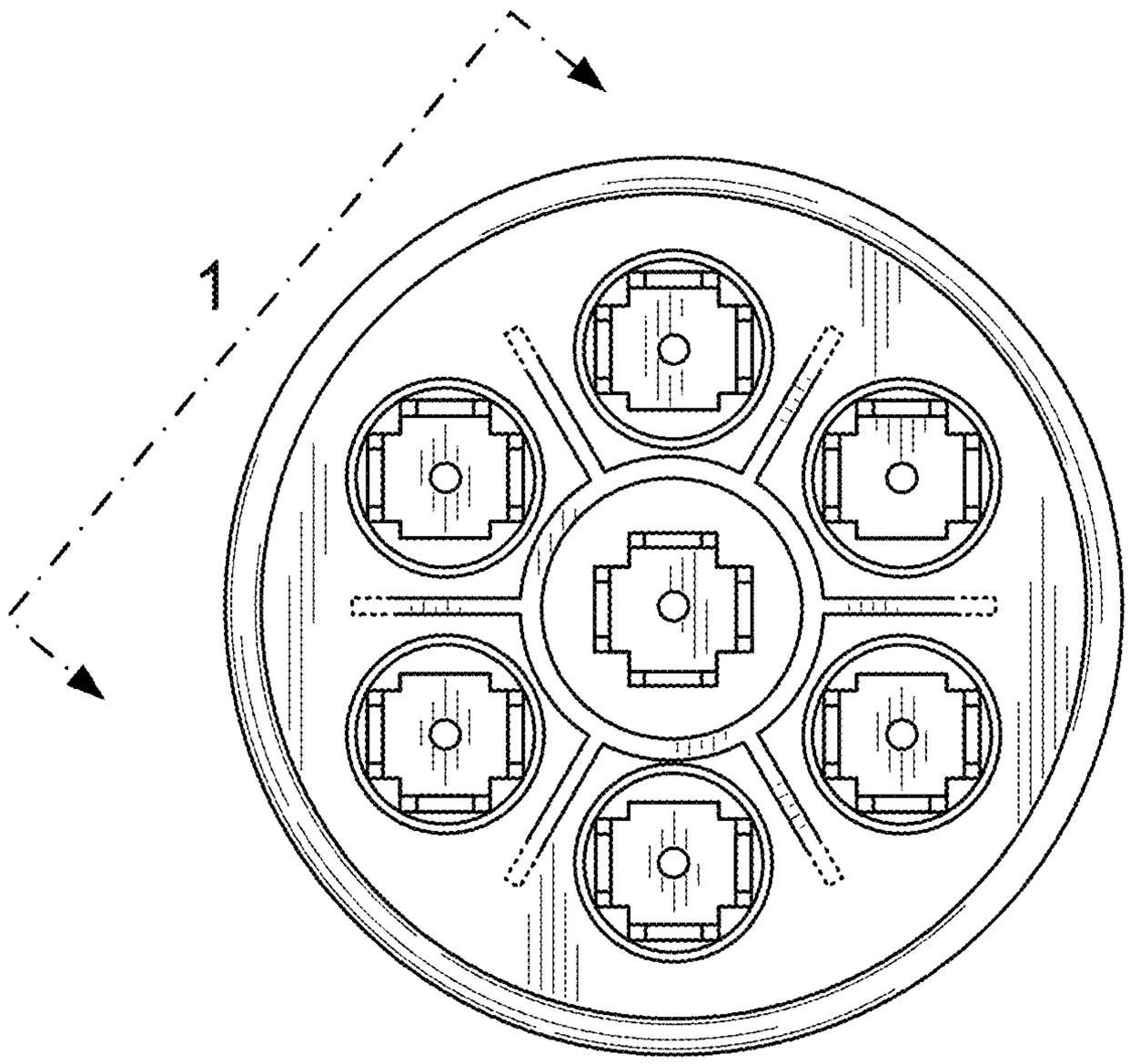

FIG. 6

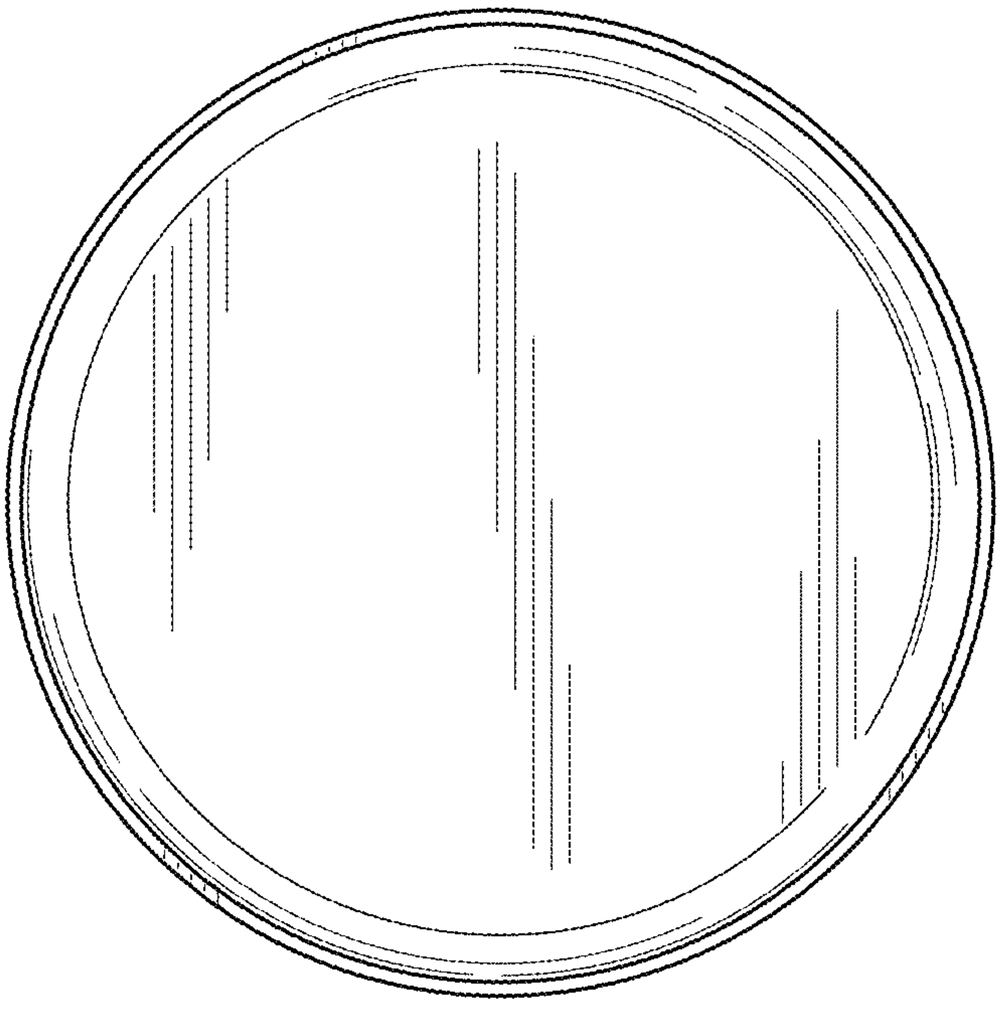

FIG. 7