



US00D647114S

(12) **United States Design Patent**
Pearce et al.

(10) **Patent No.:** **US D647,114 S**

(45) **Date of Patent:** **** *Oct. 18, 2011**

(54) **DRILL BIT WITH TAPERED WATERWAY**

(75) Inventors: **Cody A. Pearce**, Midvale, UT (US);
Michael D. Rupp, Murray, UT (US);
Christian M. Lambert, Draper, UT (US)

(73) Assignee: **Longyear TM, Inc.**, South Jordan, UT (US)

(**) Term: **14 Years**

(21) Appl. No.: **29/354,586**

(22) Filed: **Jan. 26, 2010**

Related U.S. Application Data

(63) Continuation-in-part of application No. 12/638,229, filed on Dec. 15, 2009, which is a continuation-in-part of application No. 12/564,779, filed on Sep. 22, 2009, now Pat. No. 7,918,288, which is a continuation of application No. 11/610,680, filed on Dec. 14, 2006, now Pat. No. 7,628,228.

(51) **LOC (9) Cl.** **15-09**

(52) **U.S. Cl.** **D15/139**

(58) **Field of Classification Search** D8/70;
D15/138, 139, 140; 175/57, 58, 307, 329,
175/330, 379, 403, 405.1, 410, 412; 408/145,
408/201, 204, 238, 540, 541, 542, 548
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

367,956 A	8/1887	Brewer	
1,572,386 A	2/1926	Gates	
2,147,843 A *	2/1939	Jamar et al.	76/108.1
2,147,849 A	2/1939	Leo	
2,495,400 A *	1/1950	Williams, Jr.	175/405.1
2,966,949 A	1/1961	Wepsala, Jr.	
2,969,122 A	1/1961	Steffes	

3,215,215 A	11/1965	Kellner	
RE26,669 E	9/1969	Henderson	
3,495,359 A	2/1970	Smith et al.	
4,128,136 A	12/1978	Generoux	
4,190,126 A *	2/1980	Kabashima	175/426
4,208,154 A	6/1980	Gundy	
4,499,959 A	2/1985	Grappendorf	
4,822,757 A *	4/1989	Sadamori	438/140
5,025,871 A	6/1991	Stewart	
5,069,584 A	12/1991	Obermeier et al.	
D342,270 S	12/1993	Kwang	
5,316,416 A	5/1994	Kim	
5,628,376 A	5/1997	Kleine	

(Continued)

FOREIGN PATENT DOCUMENTS

WO 200192677 A1 12/2001

(Continued)

OTHER PUBLICATIONS

Office Action dated Jul. 28, 2008 from U.S. Appl. No. 11/610,680 (7 pages).

(Continued)

Primary Examiner — Patricia Palasik

(74) *Attorney, Agent, or Firm* — Workman Nydegger

(57) **CLAIM**

The ornamental design for a drill bit with tapered waterway, as shown and described.

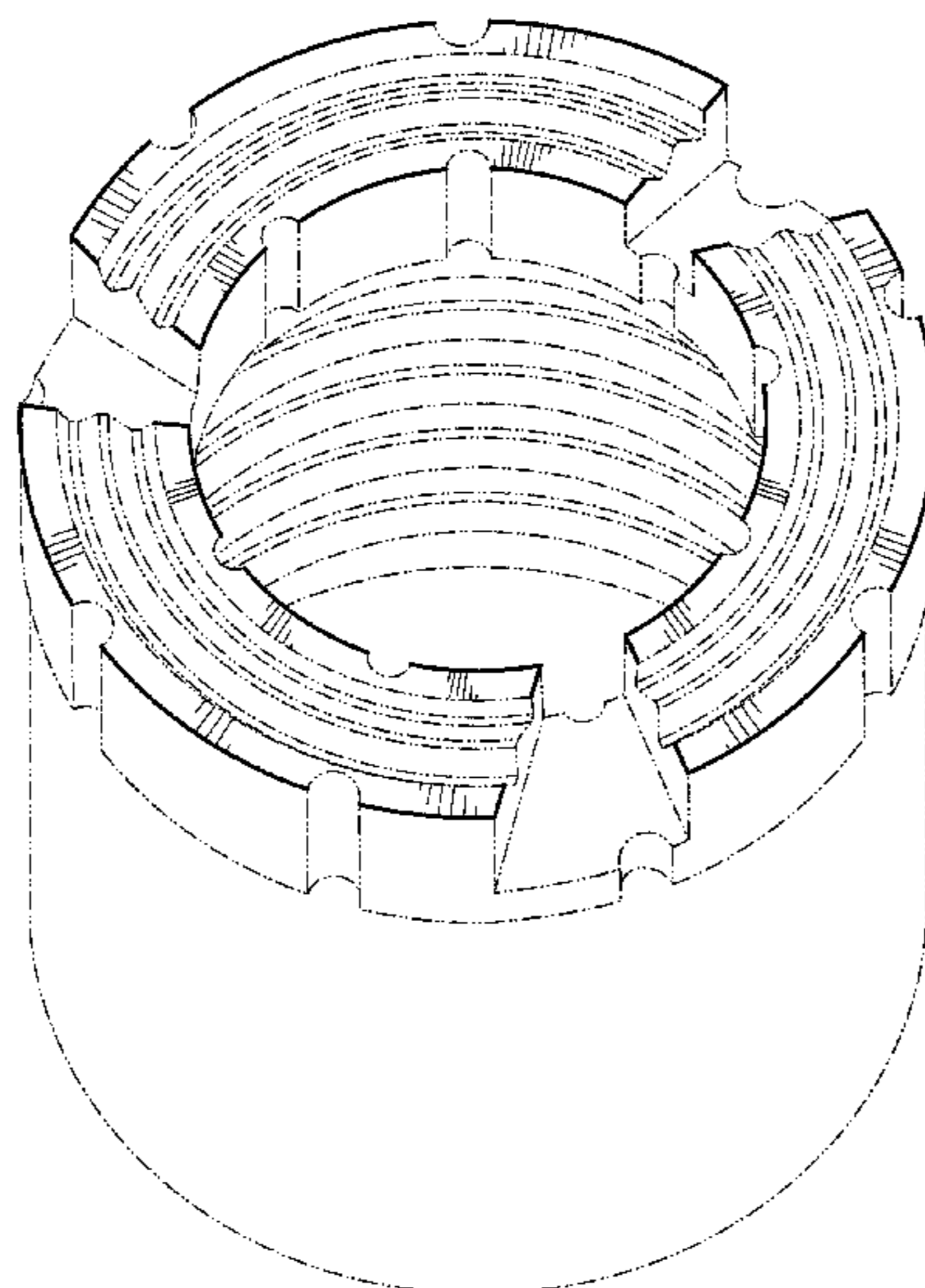
DESCRIPTION

FIG. 1 is a perspective view of a drill bit with tapered waterway; and,

FIG. 2 is a top plan view of the drill bit with tapered waterway shown in FIG. 1.

The phantom, broken lines shown in the drawings form part of the design that is not claimed herein.

1 Claim, 2 Drawing Sheets



U.S. PATENT DOCUMENTS

5,823,276	A	10/1998	Beck, III	
5,836,409	A	11/1998	Vail, III	
5,932,508	A	8/1999	Armstrong et al.	
6,595,844	B1	7/2003	Mizuno et al.	
7,189,036	B1 *	3/2007	Watson	408/204
7,628,228	B2	12/2009	Drivdahl et al.	
7,641,004	B2 *	1/2010	Lapointe	175/405.1
7,828,090	B2	11/2010	Drivdahl et al.	
2005/0016775	A1	1/2005	Hiranuma et al.	
2007/0246266	A1	10/2007	Larbo	
2008/0142262	A1 *	6/2008	Drivdahl et al.	175/20
2009/0283326	A1	11/2009	Oothoudt	
2010/0006344	A1	1/2010	Drivdahl et al.	
2010/0012385	A1	1/2010	Drivdahl et al.	

FOREIGN PATENT DOCUMENTS

WO	2006004494	A1	1/2006
WO	2006076795	A1	7/2006

OTHER PUBLICATIONS

Office Action dated Mar. 18, 2009 from U.S. Appl. No. 11/610,680 (7 pages).

Office Action dated Jul. 7, 2009 from U.S. Appl. No. 11/610,680 (6 pages).

International Search Report mailed Aug. 1, 2008 from PCT Application No. PCT/US2007/087619 (2 pages).

Notice of Allowance dated Sep. 30, 2009 from U.S. Appl. No. 11/610,680 (1 page).

Boart Longyear, Alpha Bit, 2003 (1 page).

Issue Notification dated Nov. 18, 2009 from U.S. Appl. No. 11/610,680, filed Dec. 14, 2006 (1 page).

Office Action dated Feb. 25, 2010 from U.S. Appl. No. 12/564,779, filed Sep. 22, 2009 (19 pages).

Office Action dated Mar. 8, 2010 from U.S. Appl. No. 12/568,204, filed Sep. 28, 2009 (18 pages).

Notice of Allowance dated Apr. 5, 2010 from U.S. Appl. No. 29/354,579, filed Jan. 26, 2010 (10 pages).

Office Action dated Apr. 26, 2010 from U.S. Appl. No. 12/564,540, filed Sep. 22, 2009 (7 pages).

Notice of Allowance dated Jun. 1, 2010 from U.S. Appl. No. 29/354,579, filed Jan. 26, 2010 (8 pages).

Office Action dated Jun. 1, 2010 from U.S. Appl. No. 12/567,477, filed Sep. 25, 2009 (21 pages).

Office Action dated Jun. 3, 2010 from U.S. Appl. No. 12/568,231, filed Sep. 28, 2009 (17 pages).

Notice of Allowance dated Jul. 19, 2010 from U.S. Appl. No. 12/564,779, filed Sep. 22, 2009 (8 pages).

Office Action dated Aug. 23, 2010 from U.S. Appl. No. 12/568,204, filed Sep. 28, 2009 (9 pages).

Issue Notification dated Aug. 11, 2010 from U.S. Appl. No. 29/354,579, filed Jan. 26, 2010 (1 page).

Notice of Allowance dated Sep. 1, 2010 from U.S. Appl. No. 12/564,540, filed Sep. 22, 2009 (11 pages).

Office Action dated Sep. 7, 2010 from U.S. Appl. No. 12/564,779, filed Sep. 22, 2009 (12 pages).

Office Action dated Sep. 21, 2010 from U.S. Appl. No. 12/567,477, filed Sep. 25, 2009 (12 pages).

Notice of Allowance dated Nov. 26, 2010 from U.S. Appl. No. 12/568,204, filed Sep. 28, 2009 (13 pages).

Office Action dated Dec. 27, 2010 from U.S. Appl. No. 12/909,187, filed Oct. 21, 2010 (15 pages).

Issue Notification dated Jan. 5, 2011 from U.S. Appl. No. 12/568,231, filed Sep. 28, 2009 (1 pages).

Notice of Allowance dated Jan. 21, 2011 from U.S. Appl. No. 12/564,779, filed Sep. 22, 2009 (8 pages).

Supplemental Notice of Allowability dated Sep. 29, 2010 from U.S. Appl. No. 12/564,540, filed Sep. 22, 2009 (4 pages).

Notice of Allowance dated Sep. 30, 2010 from U.S. Appl. No. 12/568,231, filed Sep. 28, 2009 (15 pages).

Supplemental Notice of Allowability dated Feb. 23, 2011 from U.S. Appl. No. 12/564,779, filed Sep. 22, 2009 (2 pages).

Issue Notification dated Mar. 16, 2011 from U.S. Appl. No. 12/564,779, filed Sep. 22, 2009 (1 page).

Notice of Allowance dated Feb. 9, 2011 from U.S. Appl. No. 12/567,477, filed Sep. 25, 2009 (6 pages).

Supplemental Notice of Allowability dated Mar. 25, 2011 from U.S. Appl. No. 12/567,477, filed Sep. 25, 2009 (2 pages).

Issue Notification dated Mar. 2, 2011 from U.S. Appl. No. 12/568,204, filed Sep. 28, 2009 (1 pages).

Notice of Allowance dated Jun. 2, 2011 from U.S. Appl. No. 12/909,187, filed Oct. 21, 2010 (5 pages).

Notice of Allowance dated Jul. 19, 2011 from U.S. Appl. No. 29/354,592, filed Jan. 26, 2010 (8 pages).

Notice of Allowance dated Aug. 10, 2011 from U.S. Appl. No. 12/909,187, filed Oct. 21, 2010 (5 pages).

Notice of Allowance dated Aug. 4, 2011 from U.S. Appl. No. 29/354,592, filed Jan. 26, 2010 (8 pages).

* cited by examiner

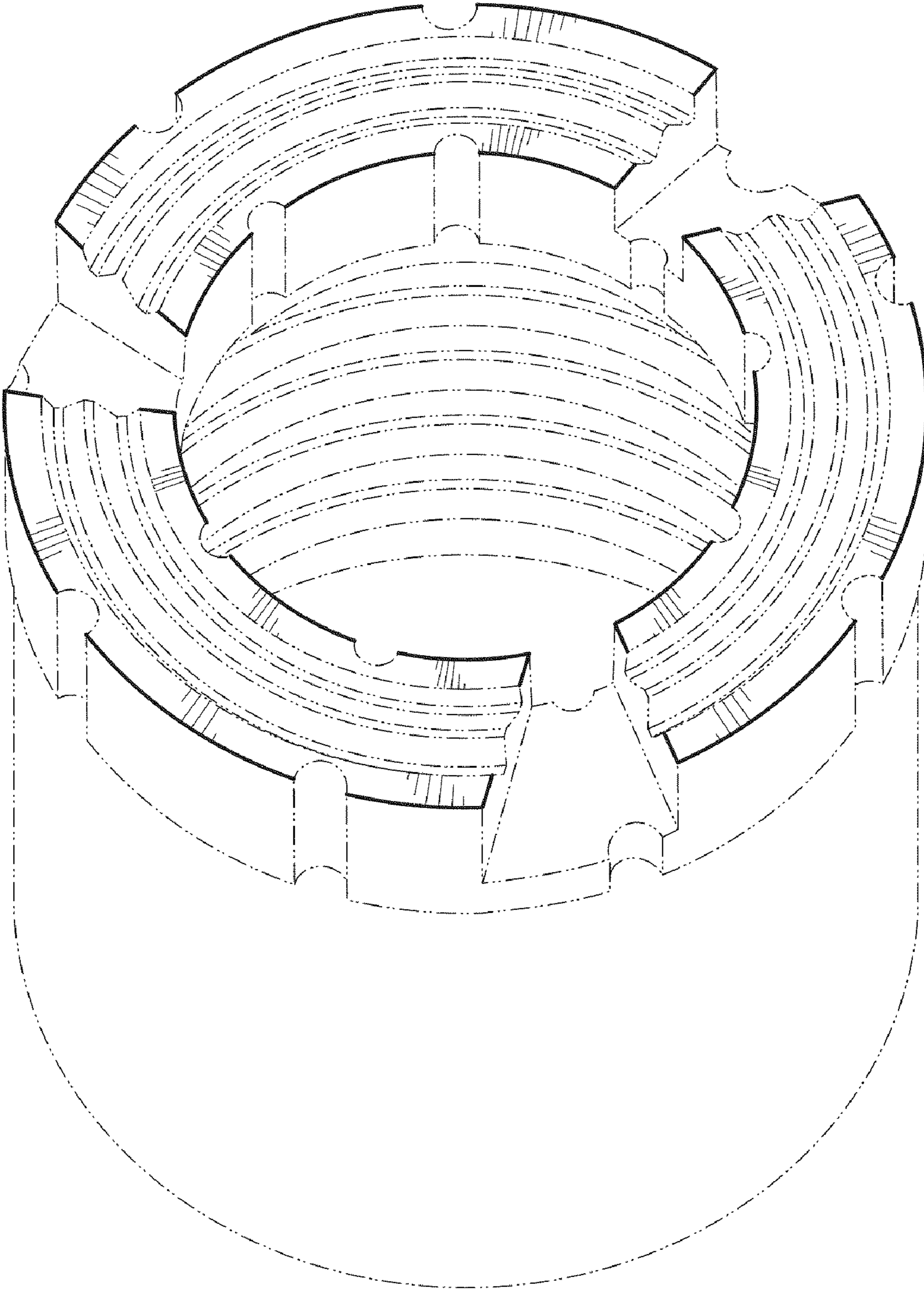


FIG. 1

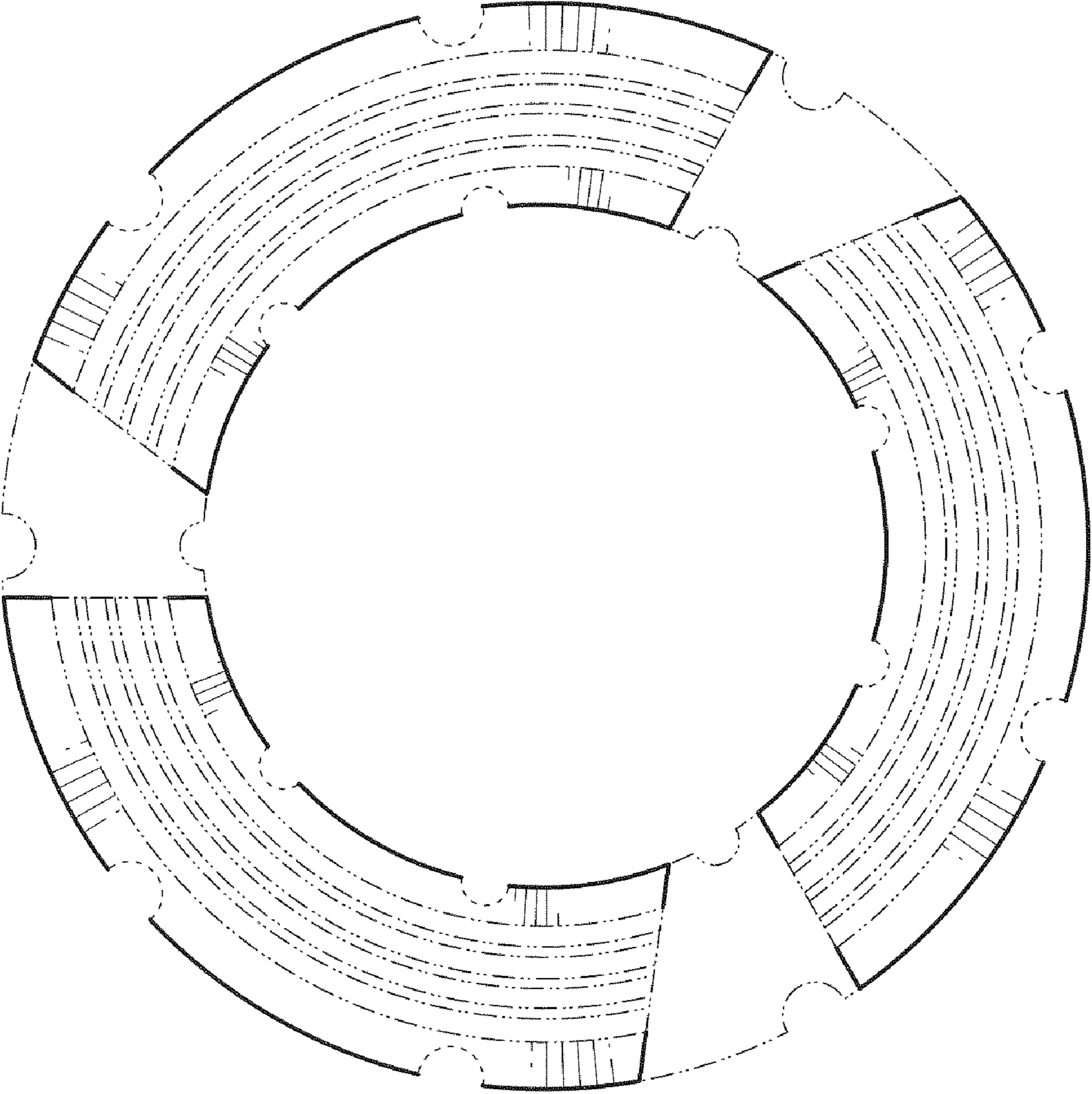


FIG. 2