



US00D609319S

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

(10) **Patent No.:** **US D609,319 S**  
(45) **Date of Patent:** **\*\* Feb. 2, 2010**

(54) **PARTICULATE FILTER FOR DIESEL ENGINE**

FOREIGN PATENT DOCUMENTS

EP 1142619 10/2001

(75) Inventors: **Kazushige Ohno**, Ibi-gun (JP);  
**Kazutake Ogyu**, Ibi-gun (JP);  
**Shigeharu Ishikawa**, Ibi-gun (JP)

(Continued)

(73) Assignee: **Ibiden Co., Ltd.**, Ogaki-shi (JP)

*Primary Examiner*—T. Chase Nelson  
*Assistant Examiner*—David G Muller

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

(74) *Attorney, Agent, or Firm*—Ditthavong Mori & Steiner, P.C.

(21) Appl. No.: **29/328,231**

(57) **CLAIM**

(22) Filed: **Nov. 20, 2008**

The ornamental design for a particulate filter for diesel engine, as shown and described.

(30) **Foreign Application Priority Data**

Jun. 19, 2008 (CN) ..... 2008 3 0128652

**DESCRIPTION**

(51) **LOC (9) Cl.** ..... **23-04**

(52) **U.S. Cl.** ..... **D23/365**

(58) **Field of Classification Search** ..... D23/365,  
D23/363, 358, 386, 354, 341, 364; 55/385.3,  
55/502, 497, 506, 505, 521, 495, 422, 493,  
55/DIG. 30, 582.3; 210/497.1

See application file for complete search history.

FIG. 1 is a front view of a particulate filter for diesel engine showing our new design;

FIG. 2 is a right side view thereof;

FIG. 3 is a left side view thereof;

FIG. 4 is a cross-sectional view taken along line 4—4 in FIG. 1;

FIG. 5 is a cross-sectional view taken along line 5—5 in FIG. 1;

FIG. 6 is a cross-sectional view taken along line 6—6 in FIG. 2;

FIG. 7 is an enlarged view showing the top left quarter of FIG. 2;

FIG. 8 is an enlarged view showing the top left quarter of FIG. 3;

FIG. 9 is an enlarged view showing the top left quarter of FIG. 4; and,

FIG. 10 is an enlarged view showing the top left quarter of FIG. 5.

The rear view, the top plan view and the bottom plan view are omitted since it is identical with the front view.

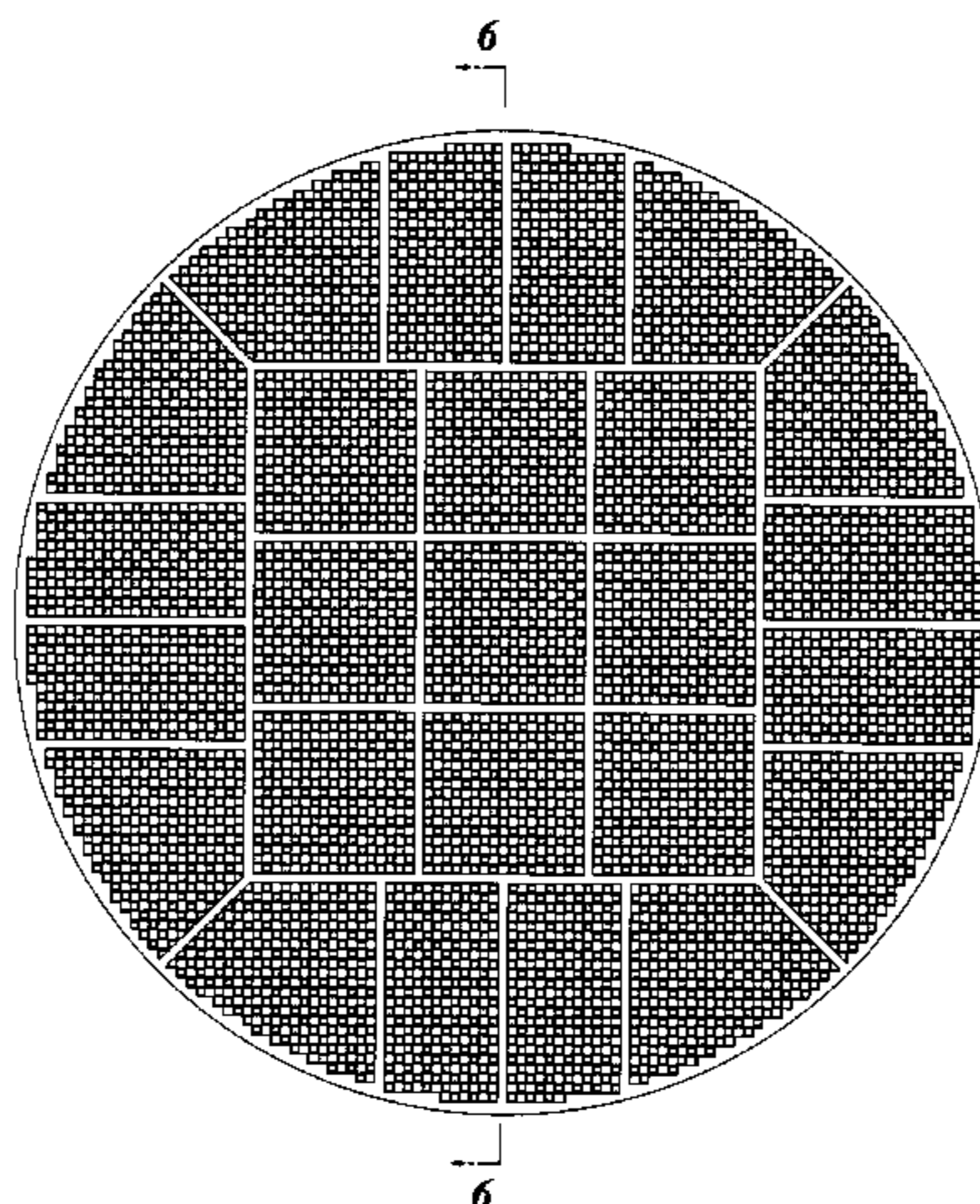
(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,304,585	A	12/1981	Oda et al.	
4,357,987	A	11/1982	Oda et al.	
D417,268	S *	11/1999	Gillingham	..... D23/365
D450,826	S *	11/2001	Song	..... D23/365
D461,003	S *	7/2002	Gieseke et al.	..... D23/365
D484,584	S *	12/2003	Anderson et al.	..... D23/365
6,669,751	B1	12/2003	Ohno et al.	
D505,194	S	5/2005	Komori et al.	
6,984,253	B2 *	1/2006	Ichikawa et al.	..... 55/DIG. 30
D519,197	S	4/2006	Komori et al.	
D522,117	S	5/2006	Komori et al.	
D523,543	S	6/2006	Komori et al.	
D523,544	S	6/2006	Komori et al.	
7,112,233	B2	9/2006	Ohno et al.	

(Continued)

**1 Claim, 10 Drawing Sheets**



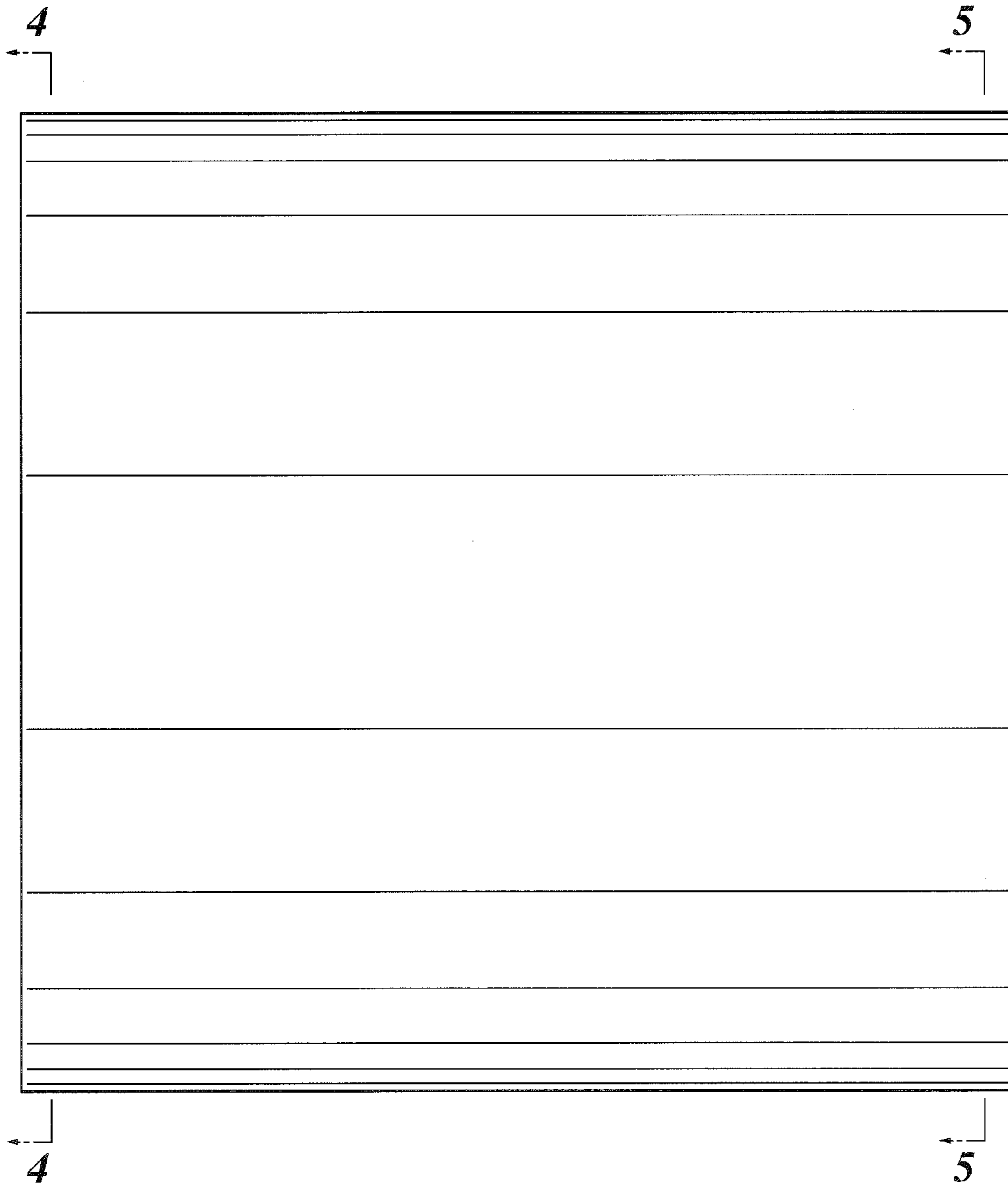
# US D609,319 S

Page 2

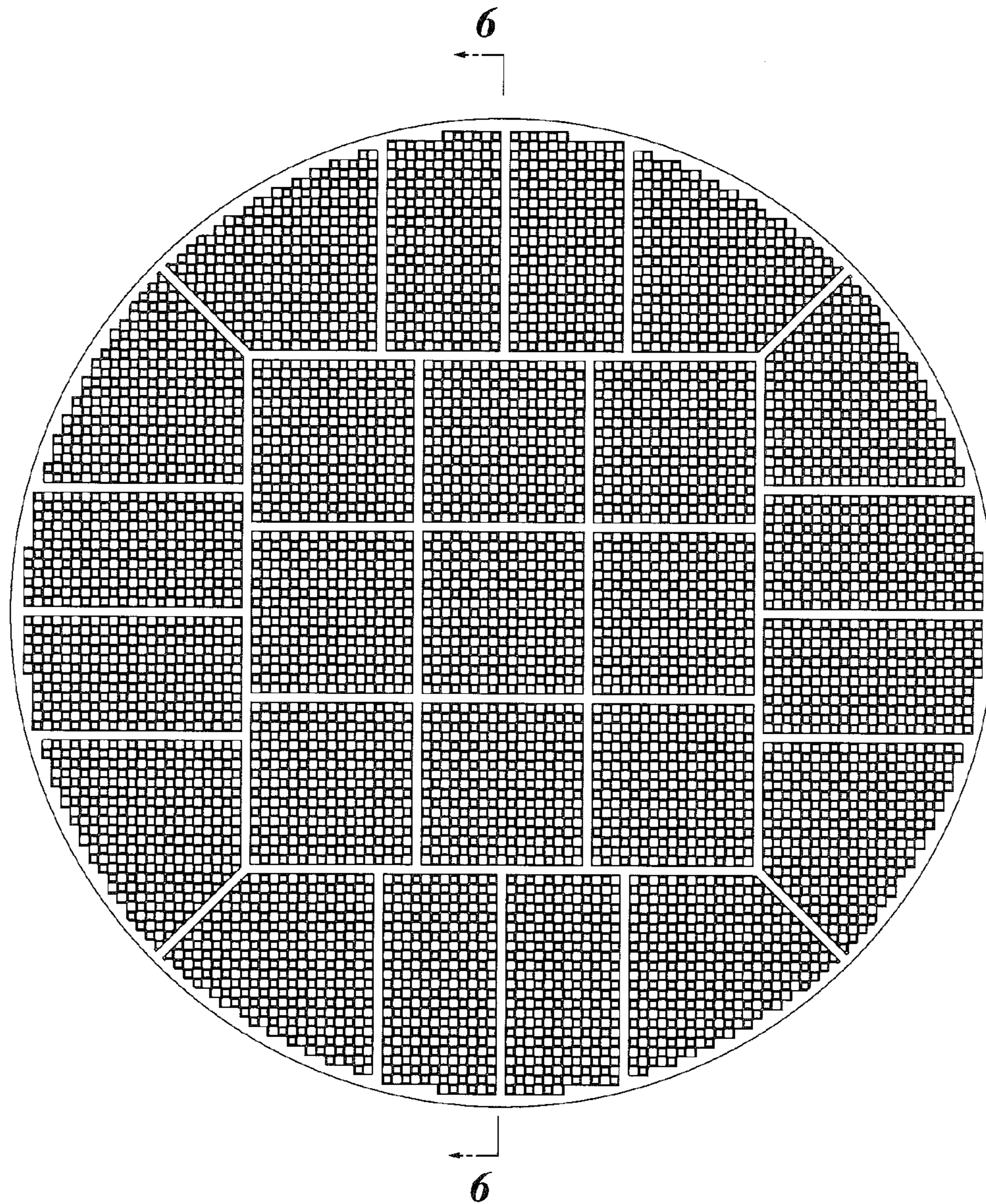
U.S. PATENT DOCUMENTS			GB		
				2031571	4/1980
D530,003	S	10/2006 Komori et al.	JP	55-046338	4/1980
D534,264	S	12/2006 Komori et al.	JP	61-051240	11/1986
D538,911	S	3/2007 Komori et al.	JP	2001-096112	4/2001
7,326,271	B2 *	2/2008 Kasai et al. .... 55/523	JP	2001-096113	4/2001
7,393,376	B2	7/2008 Taoka et al.	JP	2001-096116	4/2001
7,427,309	B2	9/2008 Ohno et al.	JP	2001-096117	4/2001
7,435,279	B2 *	10/2008 Masukawa et al. .... 55/523	JP	4051163	4/2001
7,445,656	B2 *	11/2008 Bardon et al. .... 55/523	JP	4146048	4/2001
7,488,365	B2 *	2/2009 Golden et al. .... 55/521	JP	2001-162119	6/2001
7,517,379	B2 *	4/2009 Sorensen, Jr. .... 55/385.3	JP	2001-162121	6/2001
7,524,360	B2 *	4/2009 Cheng .... 55/385.3	JP	3803009	6/2001
7,537,634	B2 *	5/2009 Hatano et al. .... 55/282.3	JP	2001-290916	7/2001
7,550,025	B2 *	6/2009 Fukuda et al. .... 55/385.3	JP	11055771	10/2002
2002/0197193	A1	12/2002 Harada et al.	JP	11055772	10/2002
2004/0055265	A1	3/2004 Ohno et al.	JP	11055773	10/2002
2006/0021310	A1	2/2006 Ohno et al.	JP	11055774	10/2002
2006/0213163	A1	9/2006 Taoka et al.	JP	11055775	10/2002
2007/0125053	A1	6/2007 Matsubara et al.	JP	11055882	10/2002
2008/0120950	A1	5/2008 Ohno et al.	JP	11055883	10/2002
2008/0236123	A1	10/2008 Chen et al.	JP	11072155	4/2003
			JP	11089138	11/2003
			JP	11089139	11/2003
			JP	11089428	11/2003
			JP	11095954	2/2004
			JP	11096386	2/2004
			JP	12010438	6/2004
			JP	12010439	6/2004
			JP	12010668	6/2004
			JP	2004-216375	8/2004
			JP	12013775	8/2004
			JP	12013776	8/2004
			JP	2006-061909	3/2006
			JP	2006-181575	7/2006
			JP	3889194	3/2007
			WO	WO 01/23069	4/2001
			WO	WO 10/23069	4/2001
			WO	WO 01/051173	7/2001
			WO	WO 03/078026	9/2003
			WO	WO 04/096414	11/2004
			WO	WO 2007-019801	2/2007
FOREIGN PATENT DOCUMENTS					
EP	1249262	10/2002			
EP	1486242	12/2004			
EP	1508355	2/2005			
EP	1508356	2/2005			
EP	1508357	2/2005			
EP	1508358	2/2005			
EP	1516659	3/2005			
EP	1604719	12/2005			
EP	1604720	12/2005			
EP	1604721	12/2005			
EP	1604722	12/2005			
EP	1604723	12/2005			
EP	1604724	12/2005			
EP	1604725	12/2005			
EP	1618941	1/2006			
EP	1666121	6/2006			
EP	1688171	8/2006			
EP	1775009	4/2007			

\* cited by examiner

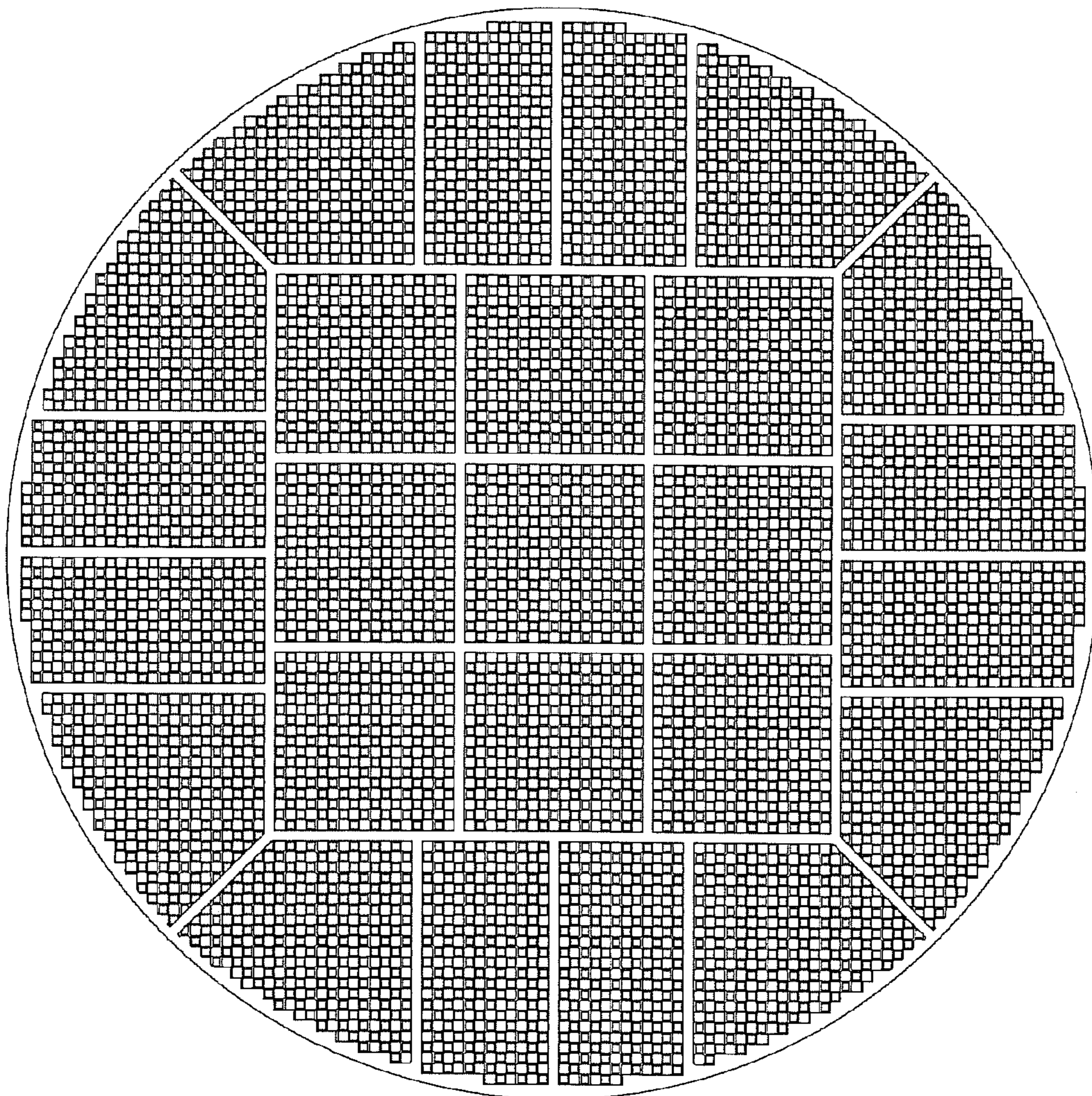
*FIG. 1*



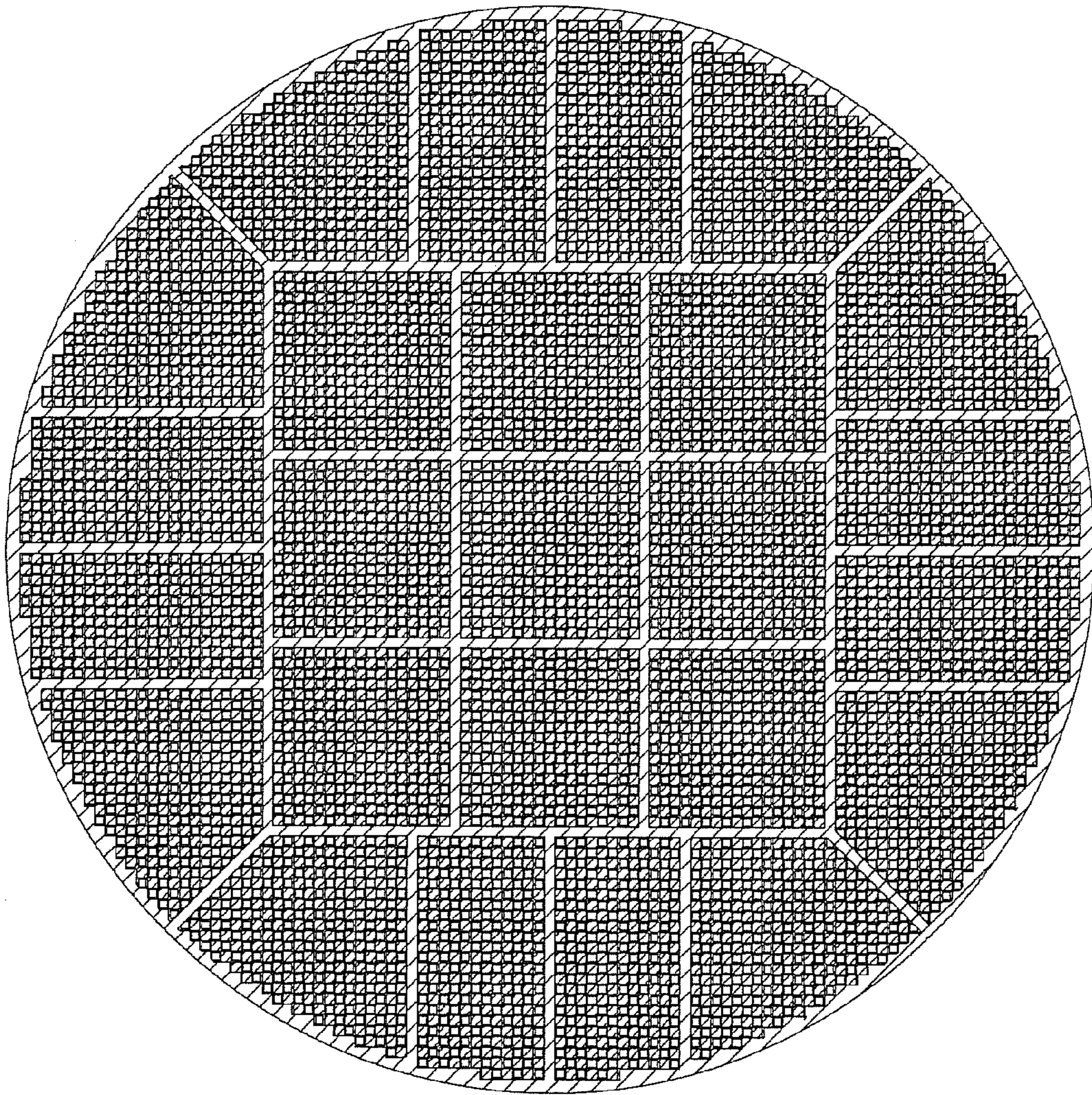
**FIG. 2**



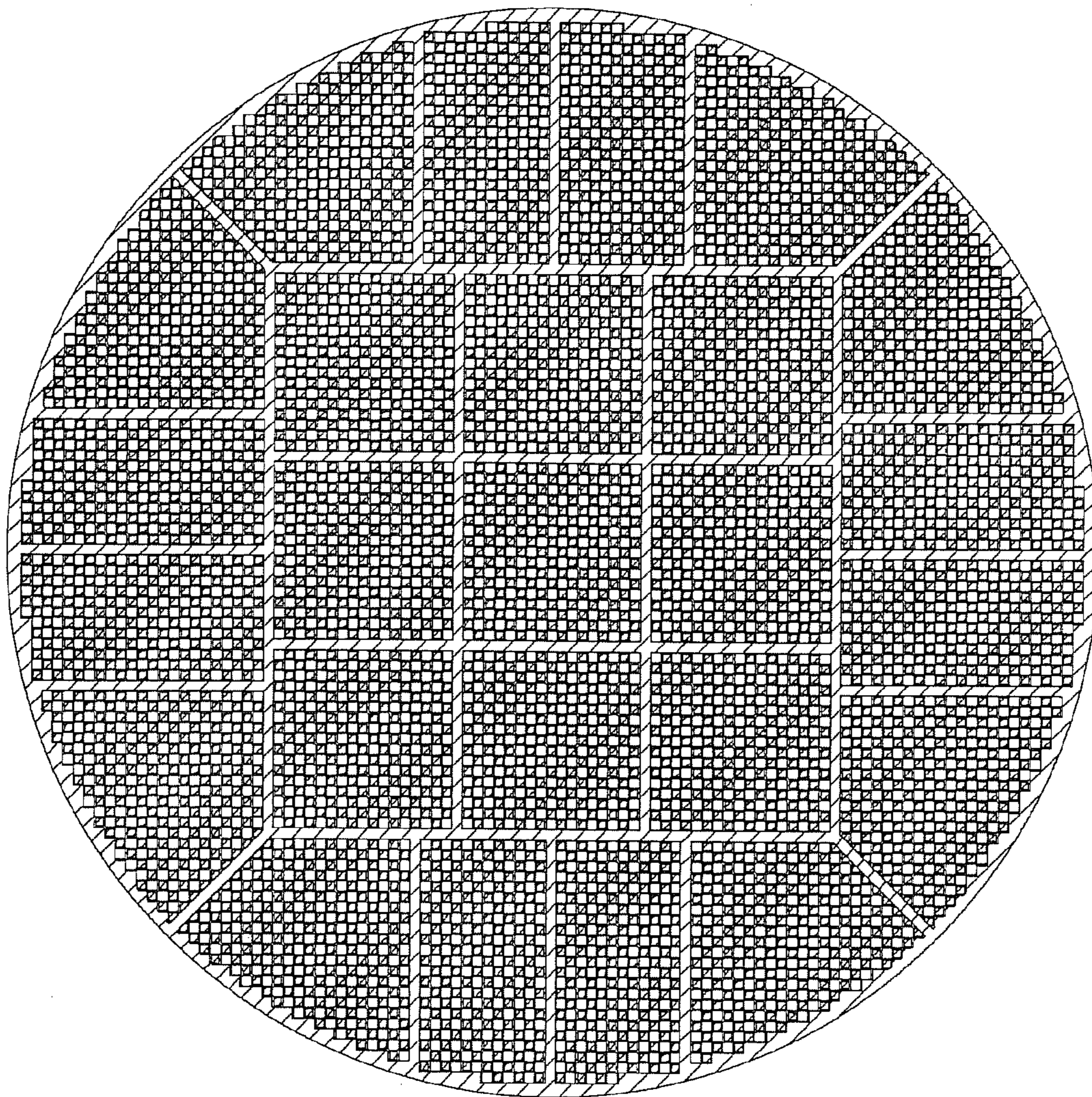
*FIG. 3*



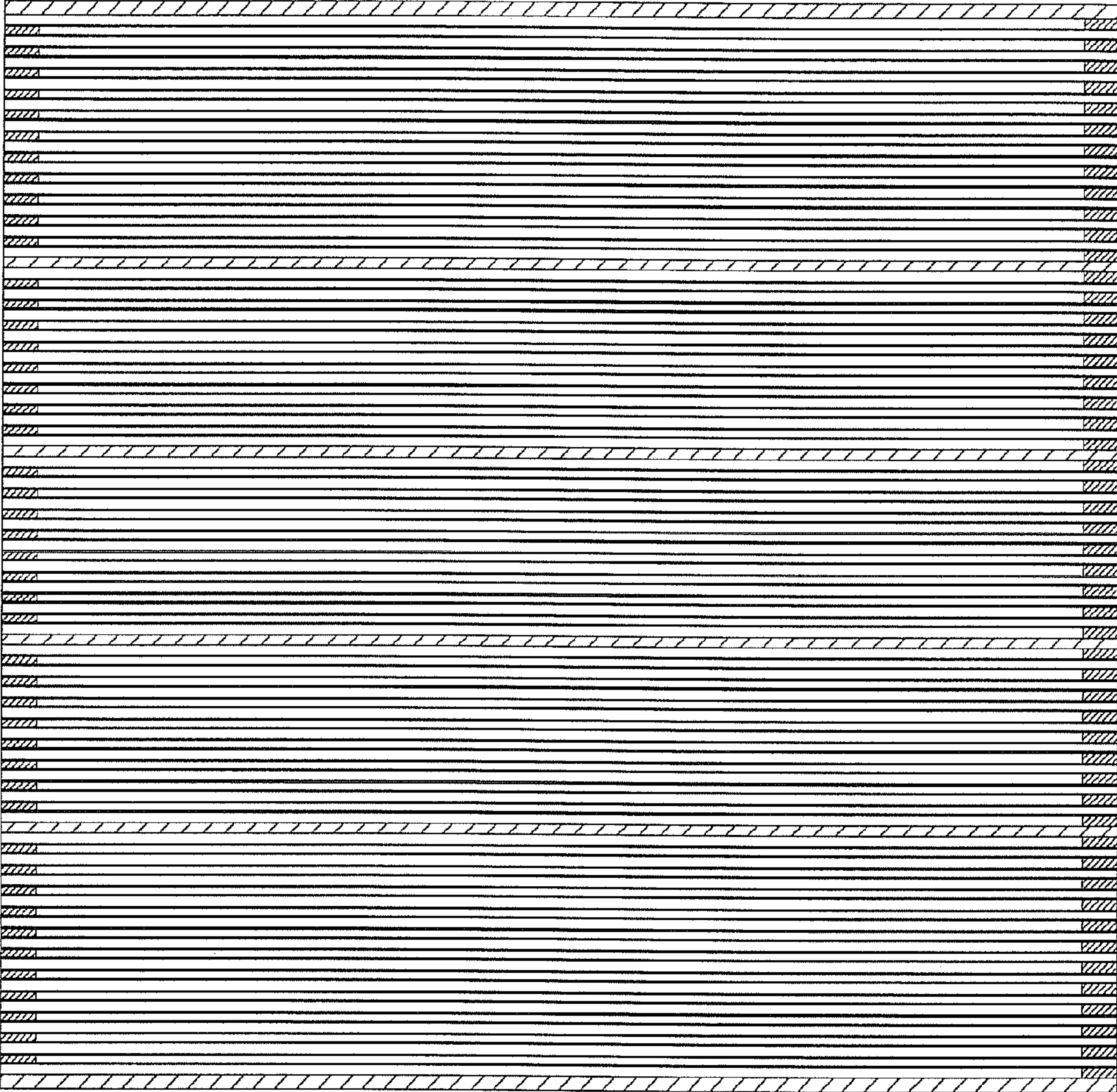
*FIG. 4*



*FIG. 5*

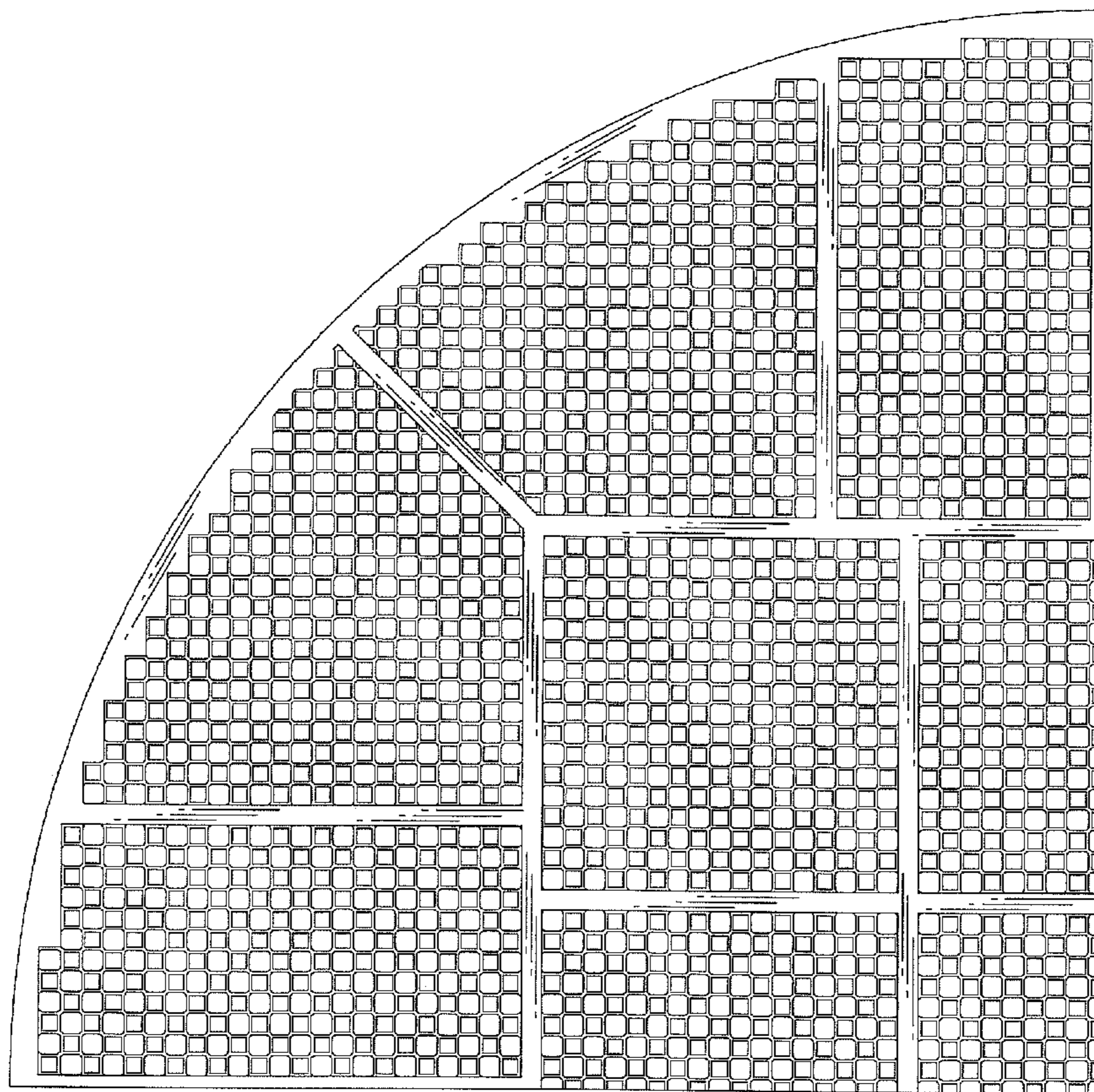


*FIG. 6*

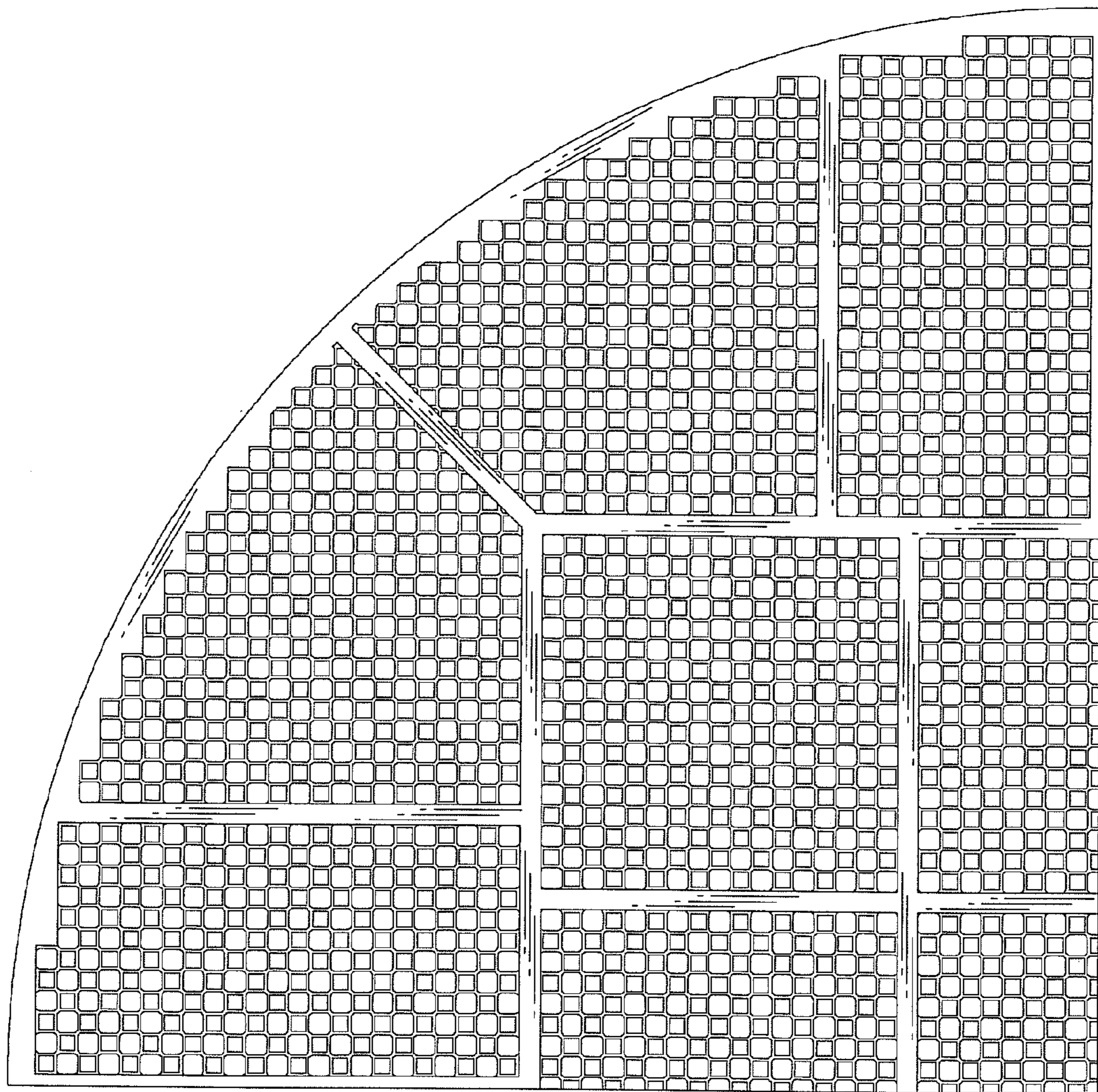




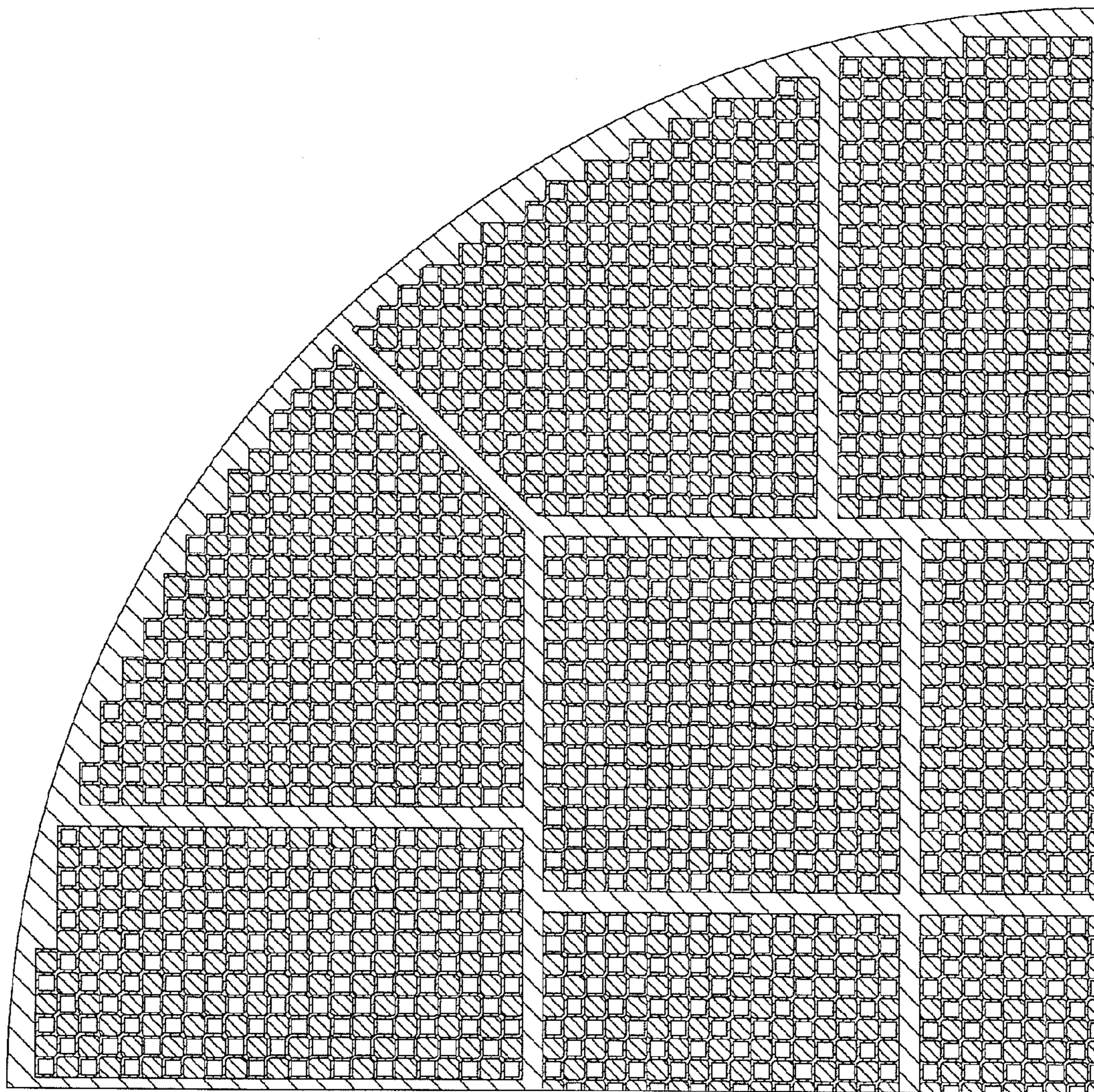
*FIG. 7*



*FIG. 8*



*FIG. 9*



*FIG. 10*

