



US00D543562S

(12) **United States Design Patent** (10) **Patent No.:** **US D543,562 S**
Braunschweig et al. (45) **Date of Patent:** **** May 29, 2007**

(54) **ABRASIVE ARTICLE WITH HOLES**

FOREIGN PATENT DOCUMENTS

(75) Inventors: **Ehrich J. Braunschweig**, Woodbury, MN (US); **Charles J. Studiner, IV**, Cottage Grove, MN (US)
(73) Assignee: **3M Innovative Properties Company**, St. Paul, MN (US)
(**) Term: **14 Years**

EP	0 285 042 A1	10/1988
EP	1 488 888 A1	12/2004
EP	1 524 077 A1	4/2005
FR	2 659 892	9/1991
GB	2 017 485 A	10/1979
GB	2 057 483 A	4/1981
GB	2 162 213 A	1/1986
WO	03/020474 A1	3/2003

(21) Appl. No.: **29/253,148**
(22) Filed: **Feb. 1, 2006**

OTHER PUBLICATIONS

(51) **LOC (8) Cl.** **15-09**
(52) **U.S. Cl.** **D15/126**
(58) **Field of Classification Search** D15/124, D15/126, 138, 139; 451/47, 56, 324, 443, 451/541, 544, 547, 548-551
See application file for complete search history.

U.S. Appl. No. 11/229,281, Woo et al., Filed Sep. 16, 2005.
U.S. Appl. No. 11/228,896, Rambossek et al., Filed Sep. 16, 2005.
U.S. Appl. No. 29/238,541, Braunschweig et al., Filed Sep. 16, 2005.
U.S. Appl. No. 29/238,542, Braunschweig et al., Filed Sep. 16, 2005.
U.S. Appl. No. 29/238,556, Braunschweig et al., Filed Sep. 16, 2005.
U.S. Appl. No. 29/246,256, Shimizu et al., Filed Mar. 28, 2006.
U.S. Appl. No. 29/246,257, Shimizu et al., Filed Mar. 28, 2006.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,307,312 A *	1/1943	Whiting	451/548
2,358,861 A	9/1944	Koelher		
2,564,217 A	8/1951	Taylor		
2,749,681 A	6/1956	Reidenbach		
2,749,683 A	8/1956	Soderman		
2,838,890 A	6/1958	McIntyre		
3,021,649 A	2/1962	Robbins		
3,353,308 A	11/1967	Zane		
3,386,214 A	5/1968	Shoemaker		
3,426,488 A	2/1969	Kubsh		
3,932,966 A	1/1976	Stern		
4,062,152 A	12/1977	Mehrer		
4,158,935 A	6/1979	Robert		
4,287,685 A	9/1981	Marton		
D277,486 S *	2/1985	Yanagiura	D15/126
4,631,220 A	12/1986	Clifton		
4,964,243 A	10/1990	Reiter		
4,964,245 A	10/1990	Braasch		
5,007,206 A	4/1991	Paterson		
5,022,191 A	6/1991	Broido		

(Continued)

Primary Examiner—Antoine D. Davis
Assistant Examiner—Patricia Palasik

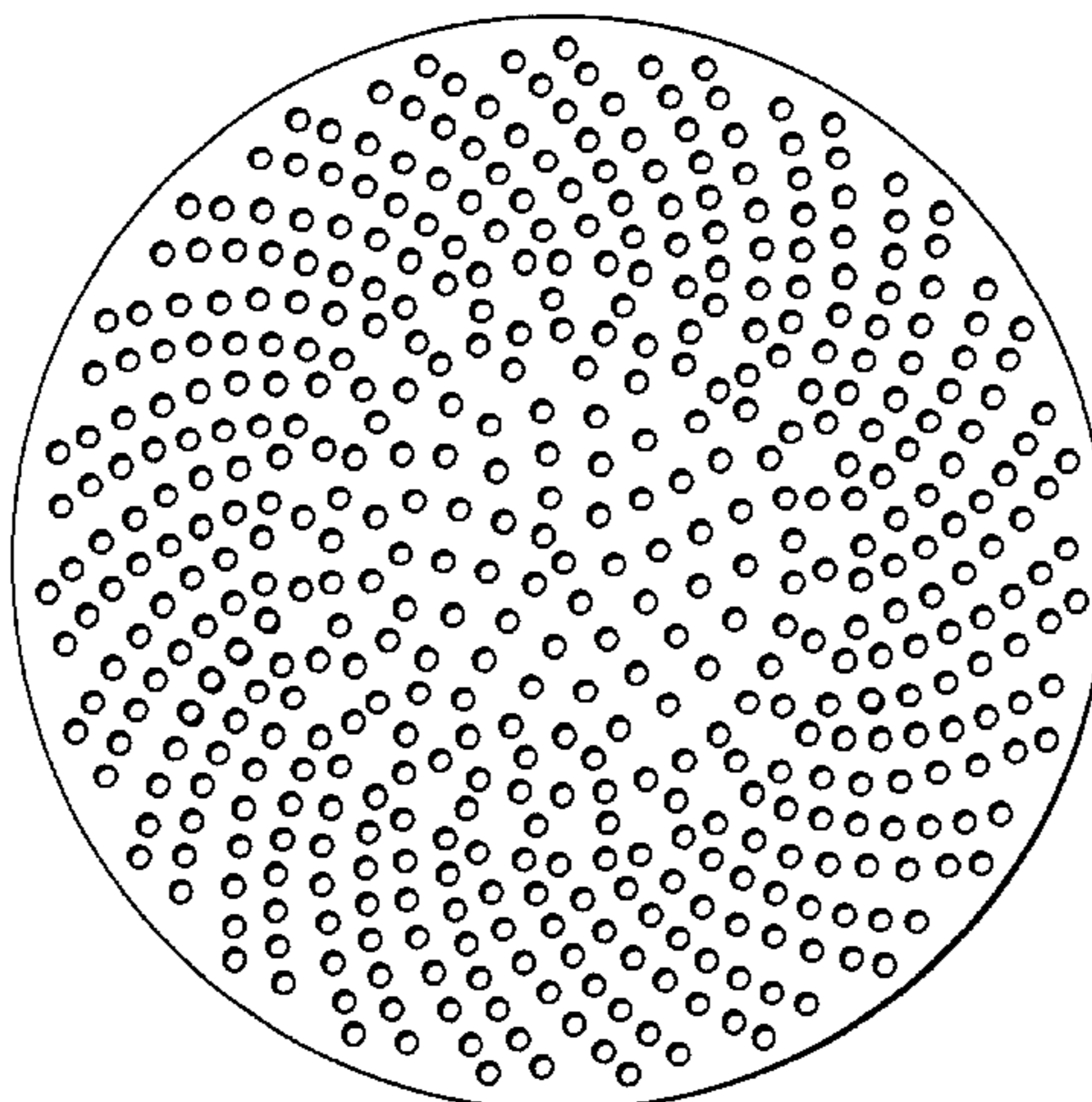
(57) **CLAIM**

The ornamental design for an abrasive article with holes, as shown and described.

DESCRIPTION

FIG. 1 is a top perspective view of an abrasive article with holes, as shown;
FIG. 2 is a top view thereof;
FIG. 3 is a bottom view thereof; and,
FIG. 4 is a front side view thereof; the left, right, and back side views being identical thereto.

1 Claim, 2 Drawing Sheets



US D543,562 S

Page 2

U.S. PATENT DOCUMENTS

5,667,433 A 9/1997 Mallon
5,674,122 A 10/1997 Krech
5,807,161 A 9/1998 Manor et al.
5,810,650 A 9/1998 Jöst
5,989,112 A 11/1999 Long et al.
D421,029 S 2/2000 Cha
6,059,644 A 5/2000 Manor et al.
D426,560 S * 6/2000 Texler et al. D15/139
6,077,156 A 6/2000 Amin et al.
6,190,246 B1 2/2001 Parrott et al.
6,312,325 B1 11/2001 Van Osenbruggen
6,368,199 B1 4/2002 Van Osenbruggen
6,371,842 B1 * 4/2002 Romero 451/548
D460,767 S 7/2002 Kim et al.
6,419,574 B1 * 7/2002 Takahashi et al. 451/548
6,575,821 B2 6/2003 Jöst
2003/0003856 A1 1/2003 Swei
2003/0054746 A1 3/2003 Nussbaumer et al.
2003/0159363 A1 8/2003 Chesley et al.
2004/0072510 A1 4/2004 Kinoshita et al.
2006/0019579 A1 1/2006 Braunschweig

2006/0160477 A1 * 7/2006 Kinoshita et al. 451/56
2006/0160481 A1 7/2006 Miyanaga

OTHER PUBLICATIONS

U.S. Appl. No. 29/246,258, Shimizu et al., Filed Mar. 28, 2006.
U.S. Appl. No. 29/246,259, Shimizu et al., Filed Mar. 28, 2006.
U.S. Appl. No. 29/246,260, Shimizu et al., Filed Mar. 28, 2006.
U.S. Appl. No. 29/246,261, Shimizu et al., Filed Mar. 28, 2006.
U.S. Appl. No. 29/253,110, Braunschweig, Filed Feb. 1, 2006.
U.S. Appl. No. 29/253,085, Braunschweig, Filed Feb. 1, 2006.
U.S. Appl. No. 29/253,084, Braunschweig, Filed Feb. 1, 2006.

* cited by examiner

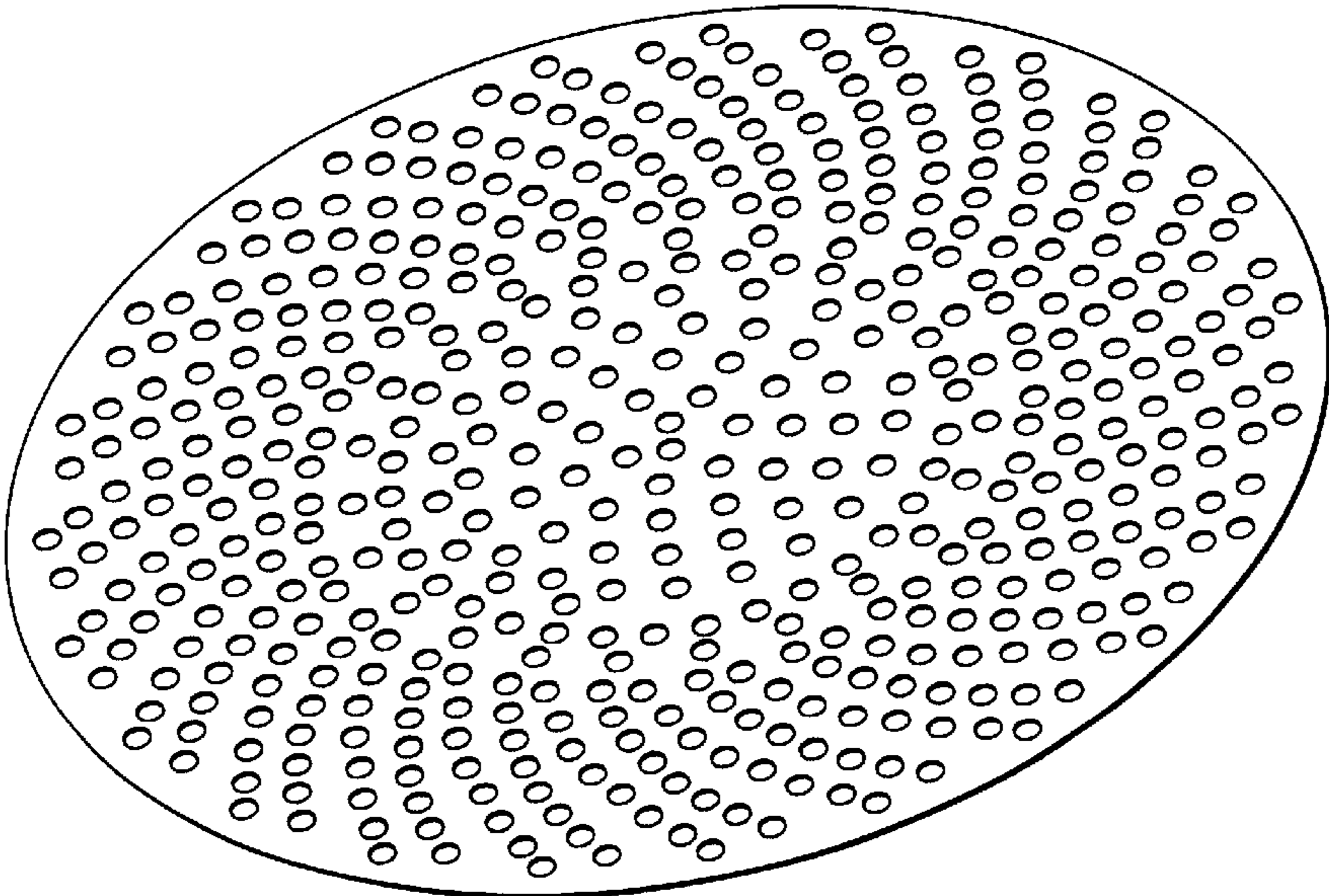


Fig. 1

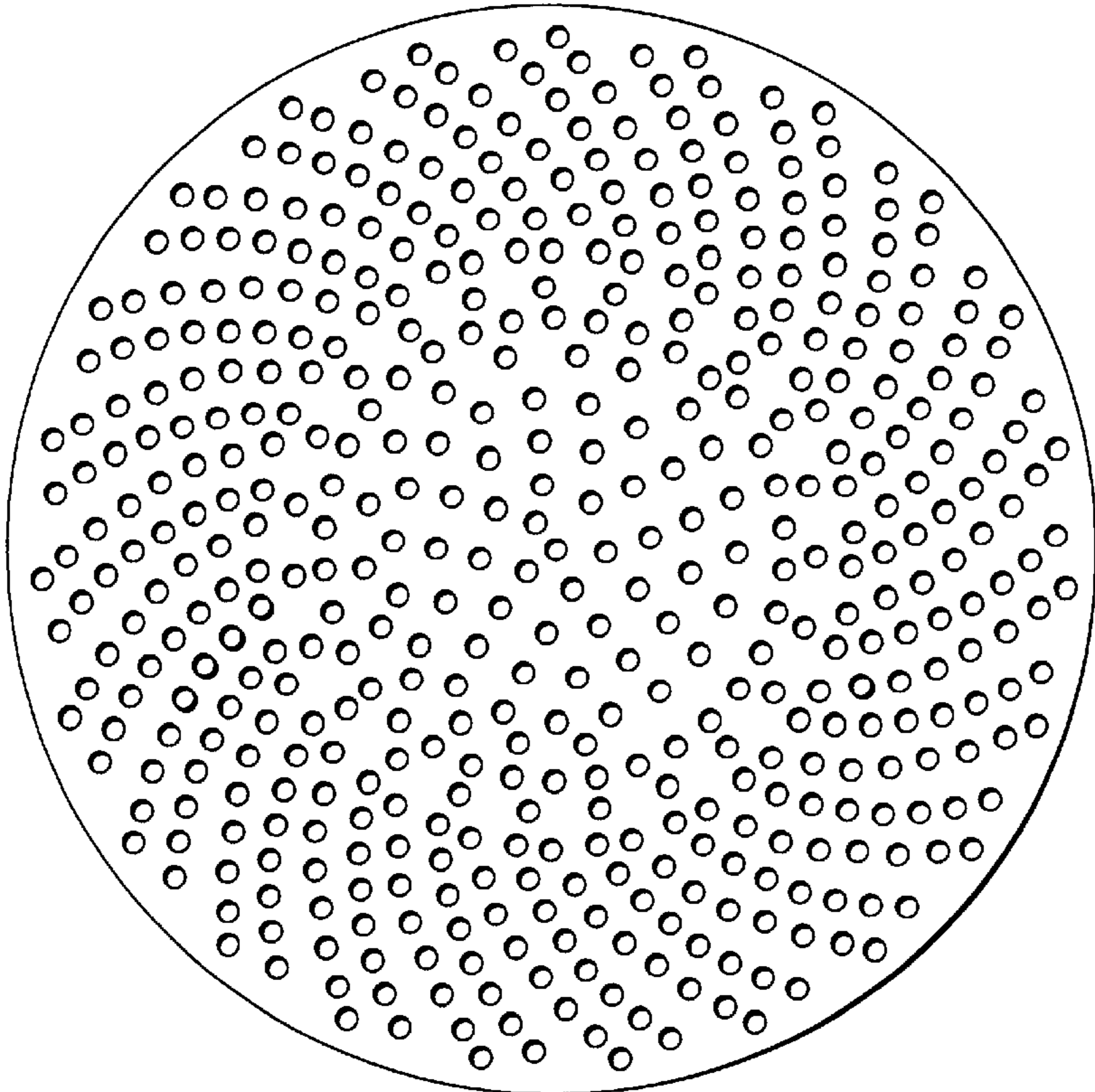


Fig. 2

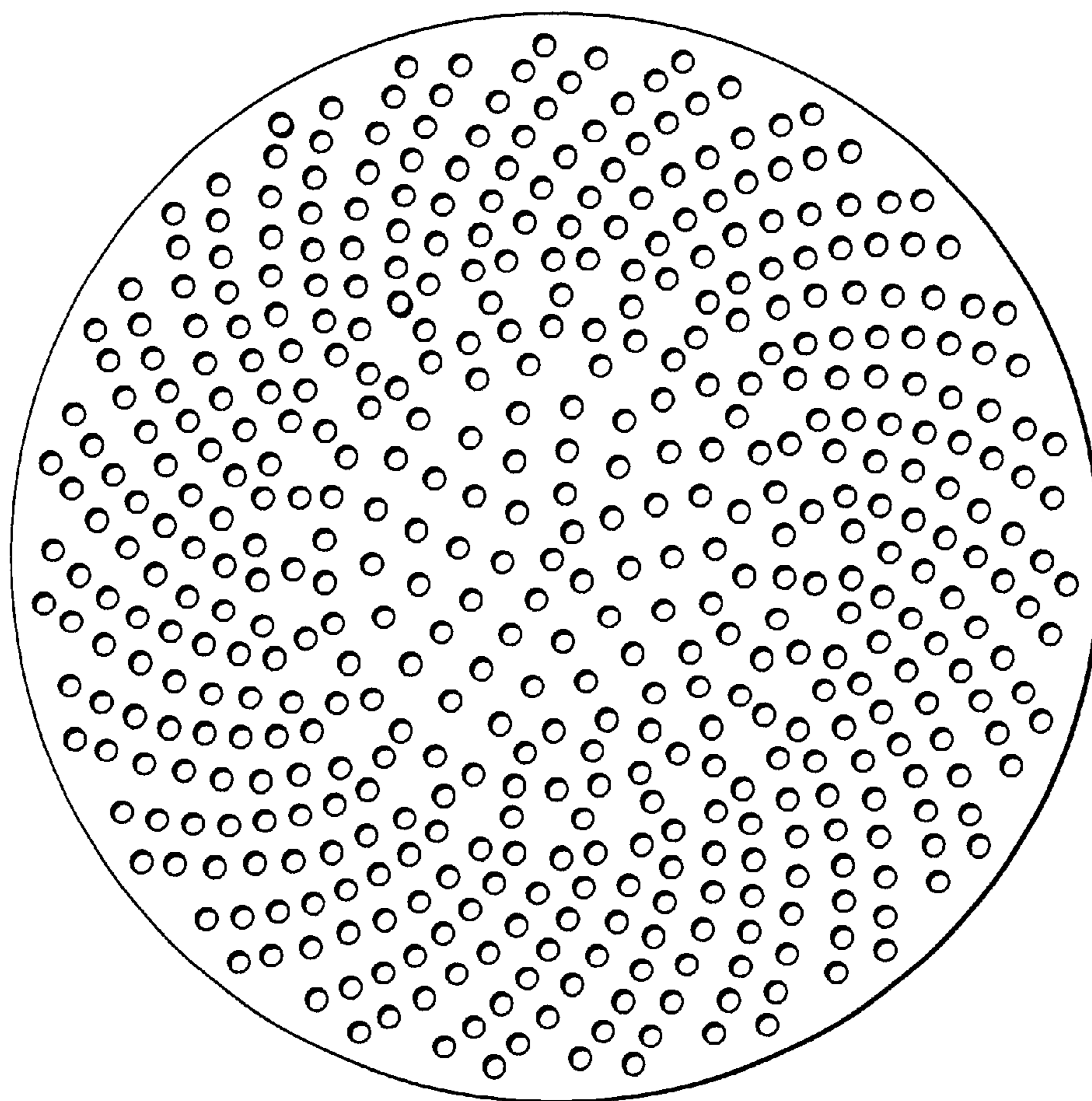


Fig. 3

Fig. 4