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(12) **United States Design Patent**  
**Yamaguchi**

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(54) **CATALYST CARRIER FOR EXHAUST GAS PURIFICATION**

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

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**Related U.S. Application Data**

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(30) **Foreign Application Priority Data**

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Sep. 15, 2016 (JP) ..... 2016-019971

(51) **LOC (11) Cl.** ..... **23-04**

(52) **U.S. Cl.**  
USPC ..... **D23/365; D23/355; D15/5**

(58) **Field of Classification Search**  
USPC ..... **D23/209, 341, 354, 355, 364-365, D23/386-391; D25/114-116, 118-125; D7/412**

CPC ..... **F01N 2330/06; F01N 3/0222; B01D 46/2429; B01D 46/2451; B01D 46/247; B01D 46/2492; B01D 46/2481; F28F 1/40; E04B 2/42; E04B 2/44; E04B 2/50; E04B 2/52; E04B 2/54**

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,767,309 A 8/1988 Mizuno et al.  
5,275,234 A \* 1/1994 Booth ..... F28F 1/40  
165/133

(Continued)

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(57) **CLAIM**

The ornamental design for a catalyst carrier for exhaust gas purification, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of a catalyst carrier for exhaust gas purification illustrating my new design;

FIG. 2 is a front view thereof; the rear view thereof being a mirror image;

FIG. 3 is a top view thereof, the bottom view thereof being a mirror image;

FIG. 4 is a right view thereof, the left view thereof being a mirror image;

FIG. 5 is an enlarged view delimited by the lines labelled 5 in FIG. 2;

FIG. 6 is a middle omitted cross-sectional view taken through line 6-6 of FIG. 5; and,

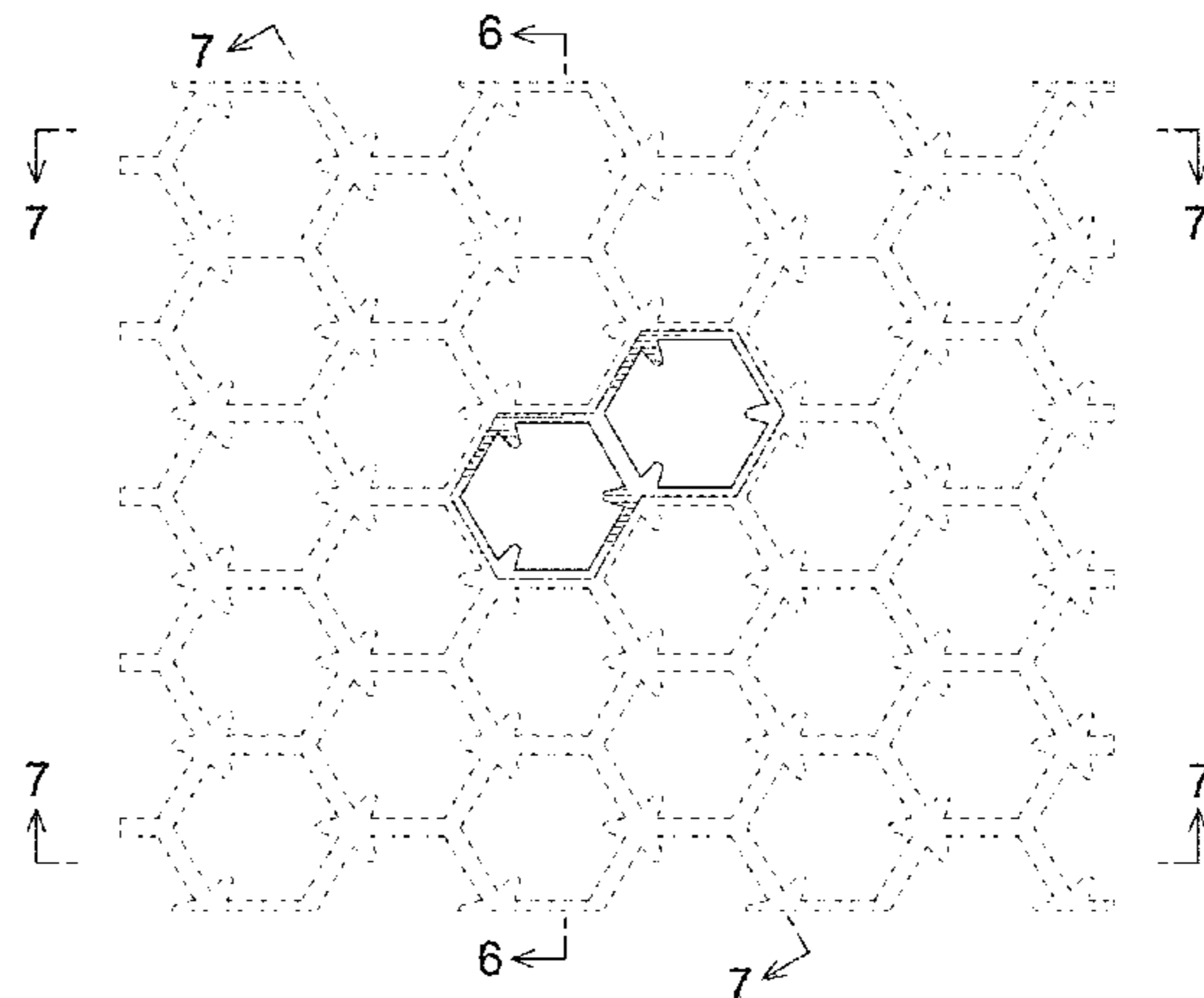
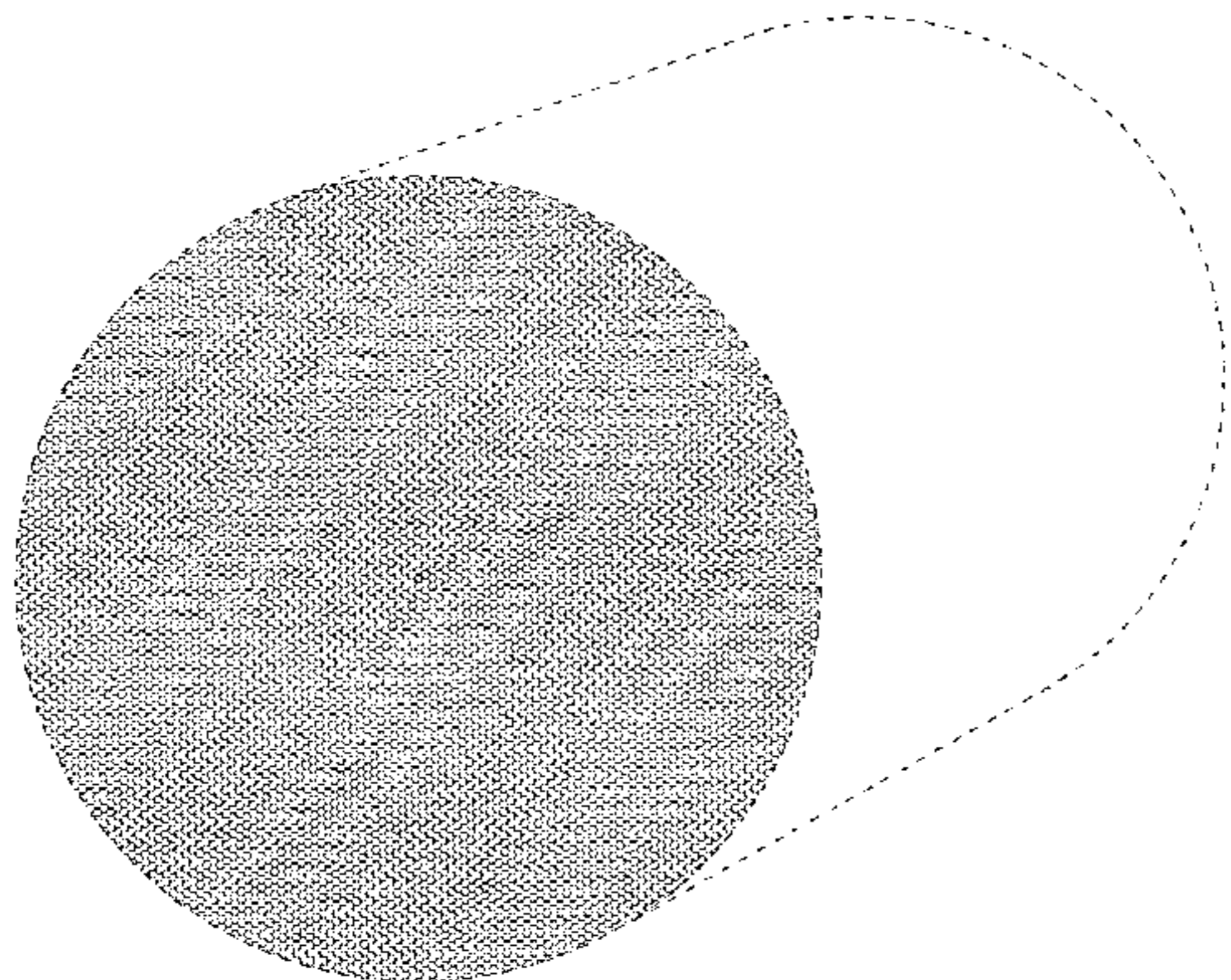
FIG. 7 is a middle omitted partial cross-sectional view taken through and delimited by lines 7-7 of FIG. 5.

The catalyst carrier is used for removing toxic substances contained in exhaust fumes emitted from automobile engines and the like. The catalyst carrier has fins in each of its cells. The fin is provided in the same sectional shape over the whole length of the cells.

In the drawings, the dot-dash broken lines define the boundary of the claimed design and form no part of the claim.

The dashed broken lines depict portions of the catalyst carrier for exhaust gas purification and form no part of the claim.

**1 Claim, 7 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

6,202,703	B1 *	3/2001	Kuroda	.....	C22C 9/05
					138/178
6,343,923	B1 *	2/2002	Cunningham	.....	B28B 3/269
					264/177.12
D476,625	S	7/2003	Watanabe et al.		
D612,007	S *	3/2010	Brockdorff	.....	D23/207
D645,116	S *	9/2011	McKean	.....	D23/207
8,091,615	B2 *	1/2012	Houfuku	.....	F28F 1/40
					165/133
D715,965	S	10/2014	Kim		
D744,078	S	11/2015	Iwasaki et al.		
D796,344	S	9/2017	Paulick		
2009/0011181	A1	1/2009	Mizuno et al.		
2016/0243785	A1	8/2016	Kondo et al.		
2017/0065919	A1	3/2017	Yamanishi et al.		

\* cited by examiner

Fig. 1

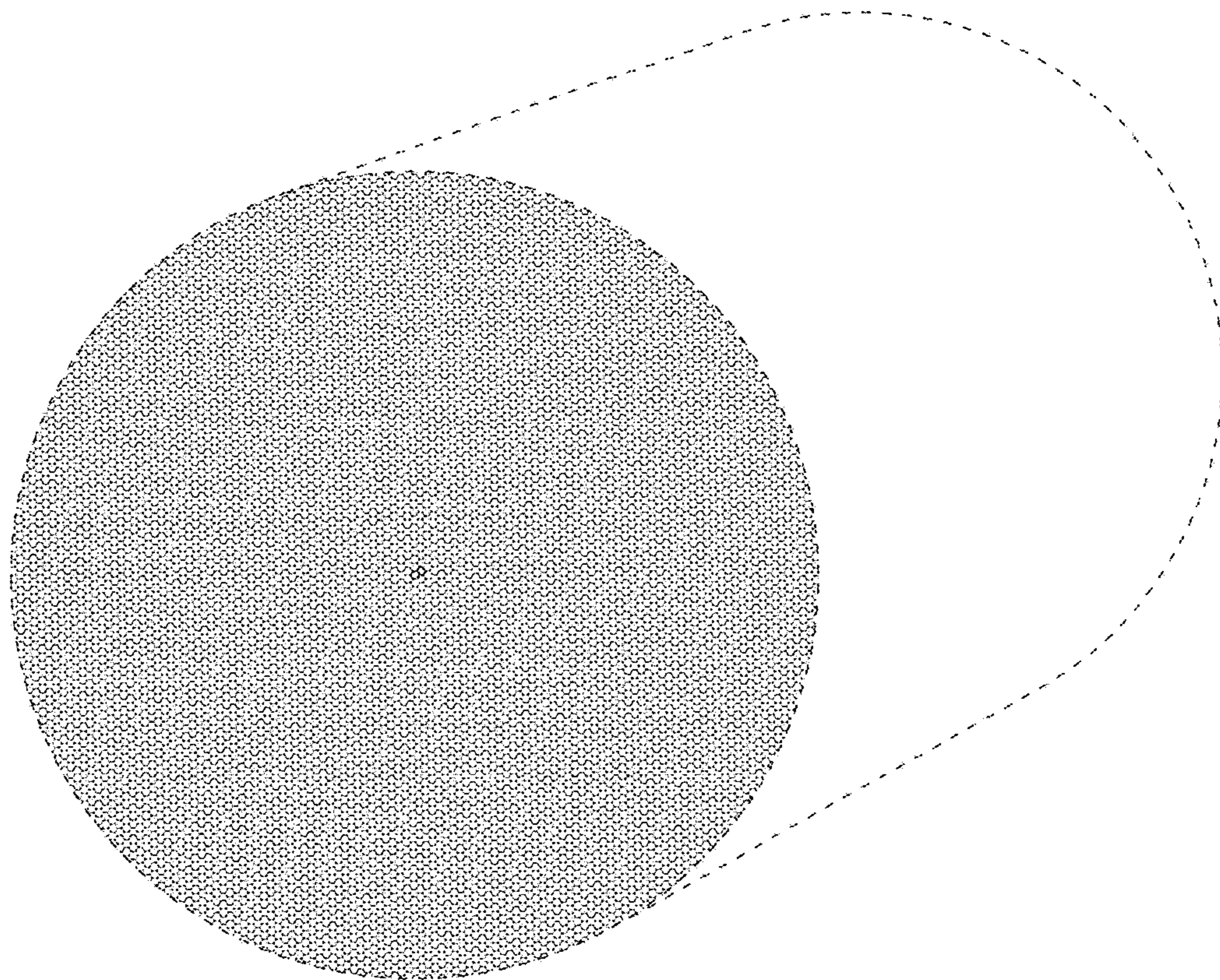


Fig. 2

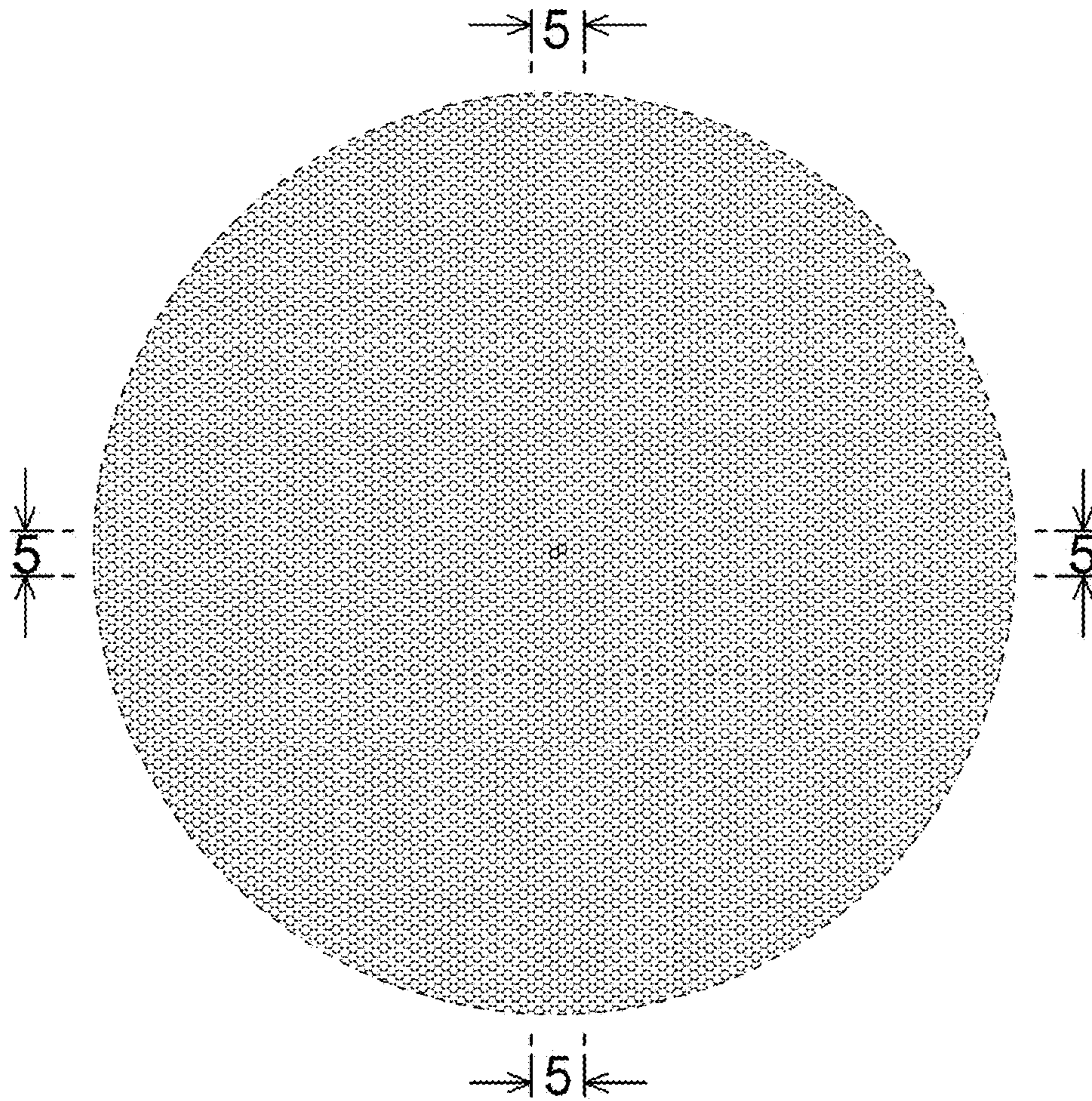


Fig. 3



Fig. 4



Fig. 5

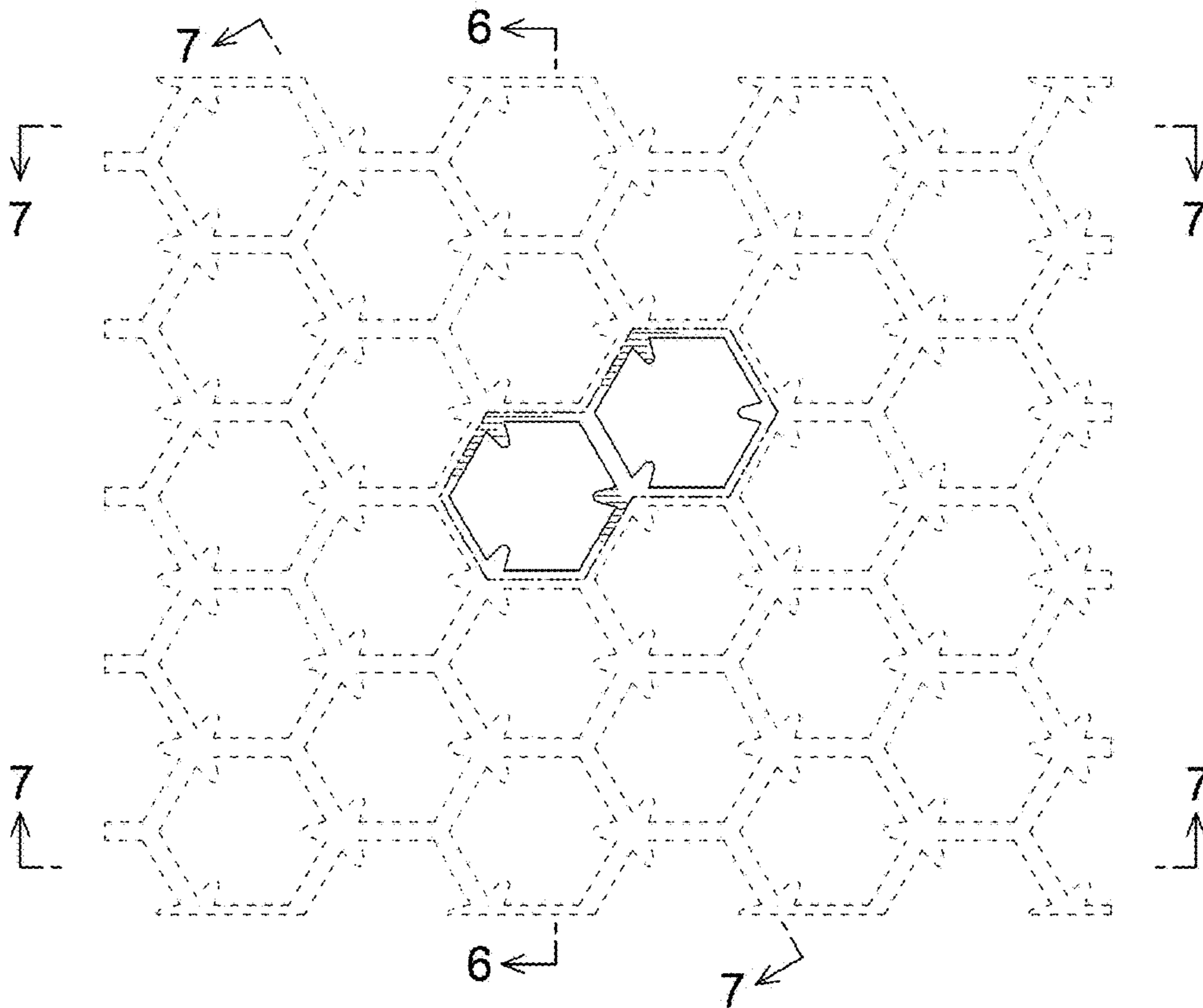


Fig. 6

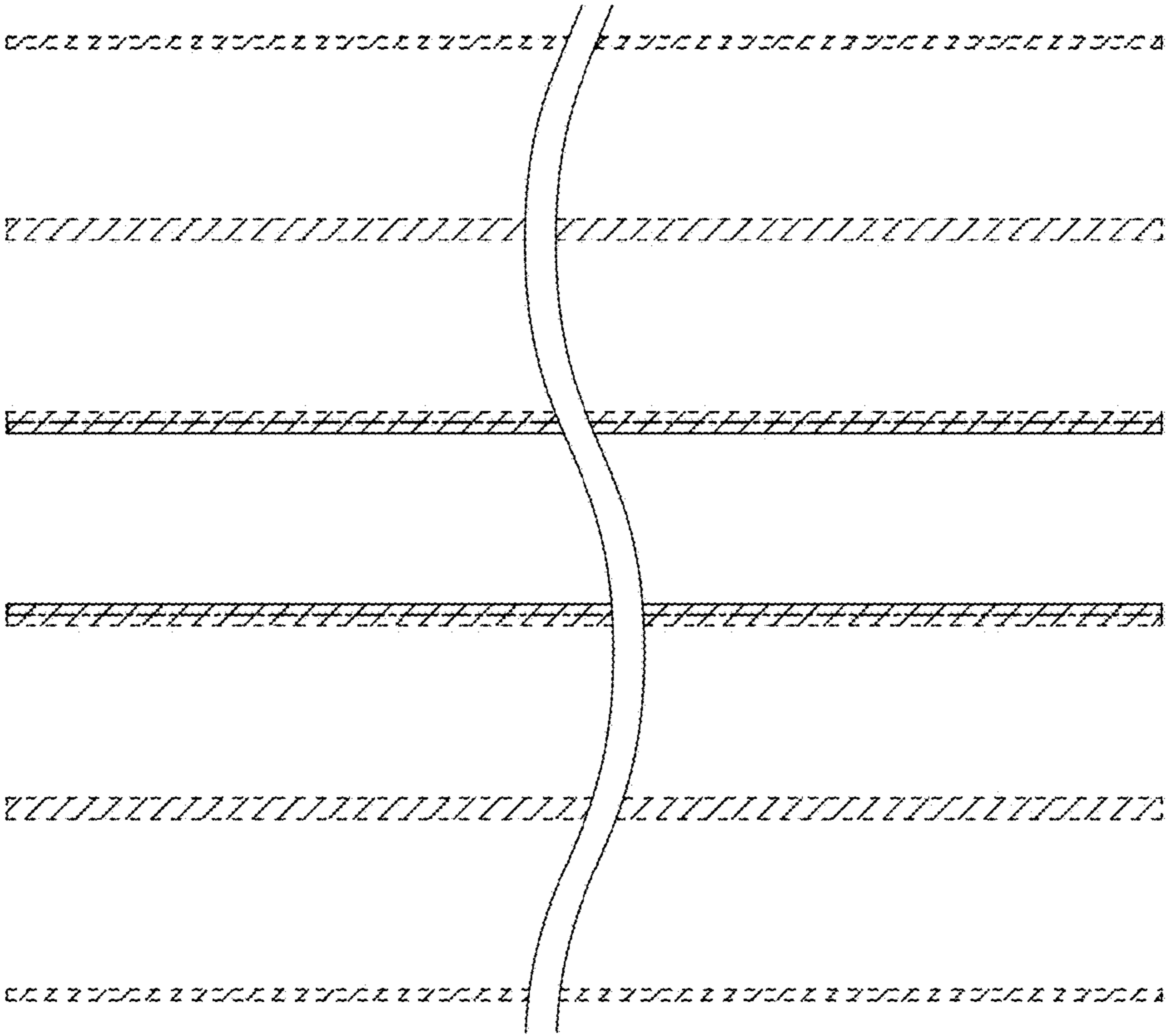




Fig. 7

