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

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(45) **Date of Patent:** **\*\* Mar. 31, 2009**

(54) **ADHESIVE FILM MATERIAL FOR USE IN MANUFACTURING SEMICONDUCTORS**

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(73) Assignee: **Nitto Denko Corporation**, Osaka (JP)

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

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(30) **Foreign Application Priority Data**

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May 30, 2007	(JP)	.....	2007-014405
May 30, 2007	(JP)	.....	2007-014407

(51) **LOC (9) Cl.** ..... **13-03**

(52) **U.S. Cl.** ..... **D13/182**

(58) **Field of Classification Search** ..... D13/182;  
29/25.35; 156/235, 248, 678; 257/678, E21.505;  
310/340, 366; 438/133, 199, 450, 462  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,209,481 A \* 6/1980 Kashiro et al. .... 264/437

(Continued)

*Primary Examiner*—Selina Sikder

(74) *Attorney, Agent, or Firm*—Osha • Liang LLP

(57) **CLAIM**

The ornamental design for adhesive film material for use in manufacturing semiconductors, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of a first embodiment of the adhesive film material for use in manufacturing semiconductors showing our new design;

FIG. 2 is a front view thereof;

FIG. 3 is a plan view thereof;

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

FIG. 5 is an enlarged plan view of the design as identified by A and B in FIG. 2;

FIG. 6 is a sectional view taken along line 6—6 in FIG. 5;

FIG. 7 is a sectional view taken along line 7—7 in FIG. 5;

FIG. 8 is a perspective view of a second embodiment of the adhesive film material for use in manufacturing semiconductors;

FIG. 9 is a front view thereof;

FIG. 10 is a plan view thereof;

FIG. 11 is a right side view, the left side being a mirror image thereof;

FIG. 12 is an enlarged plan view of the design as identified by A and B in FIG. 9;

FIG. 13 is a sectional view taken along line 13—13 in FIG. 12;

FIG. 14 is a sectional view taken along line 14—14 in FIG. 12;

FIG. 15 is a perspective view of a third embodiment of the adhesive film material for use in manufacturing semiconductors;

FIG. 16 is a front view thereof;

FIG. 17 is a plan view thereof;

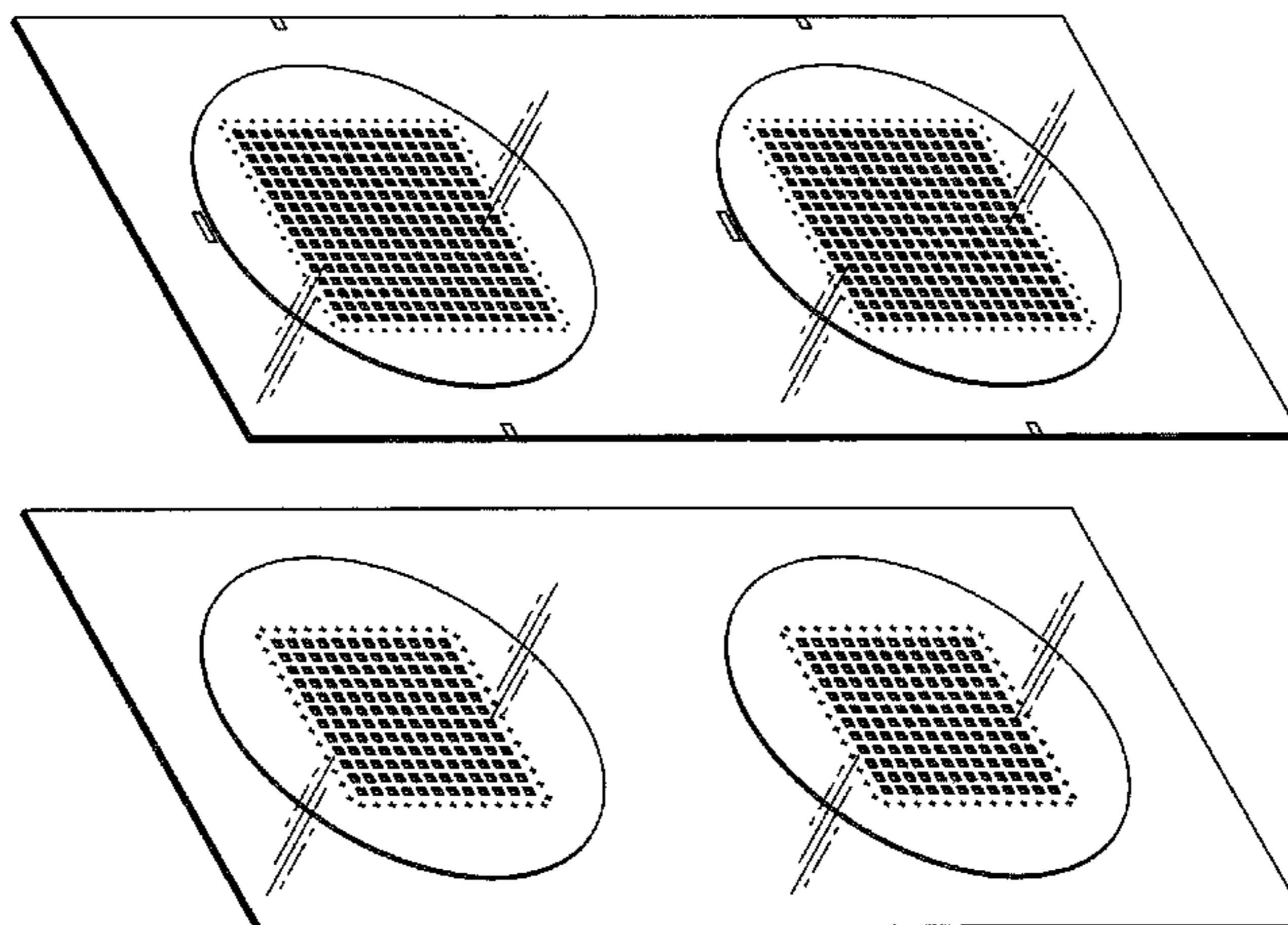
FIG. 18 is a right side view, the left side being a mirror image thereof;

FIG. 19 is an enlarged plan view of the design as identified by A and B in FIG. 16;

FIG. 20 is a sectional view taken along line 20—20 in FIG. 19; and,

FIG. 21 is a sectional view taken along line 21—21 in FIG. 19.

**1 Claim, 9 Drawing Sheets**



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## U.S. PATENT DOCUMENTS

4,961,804	A *	10/1990	Aurichio .....	156/248	6,518,097	B1 *	2/2003	Yim et al. ....	438/119
5,476,565	A *	12/1995	Akada et al. ....	156/235	D549,189	S *	8/2007	Misumi et al. ....	D13/182
5,918,113	A *	6/1999	Higashi et al. ....	438/119	2002/0042189	A1 *	4/2002	Tanaka .....	438/450
6,245,593	B1 *	6/2001	Yoshihara et al. ....	438/106	2003/0226640	A1 *	12/2003	Yamazaki et al. ....	156/345.1
6,457,220	B1 *	10/2002	Hamano .....	29/25.35	2005/0139973	A1 *	6/2005	Matsumura et al. ....	257/678

\* cited by examiner

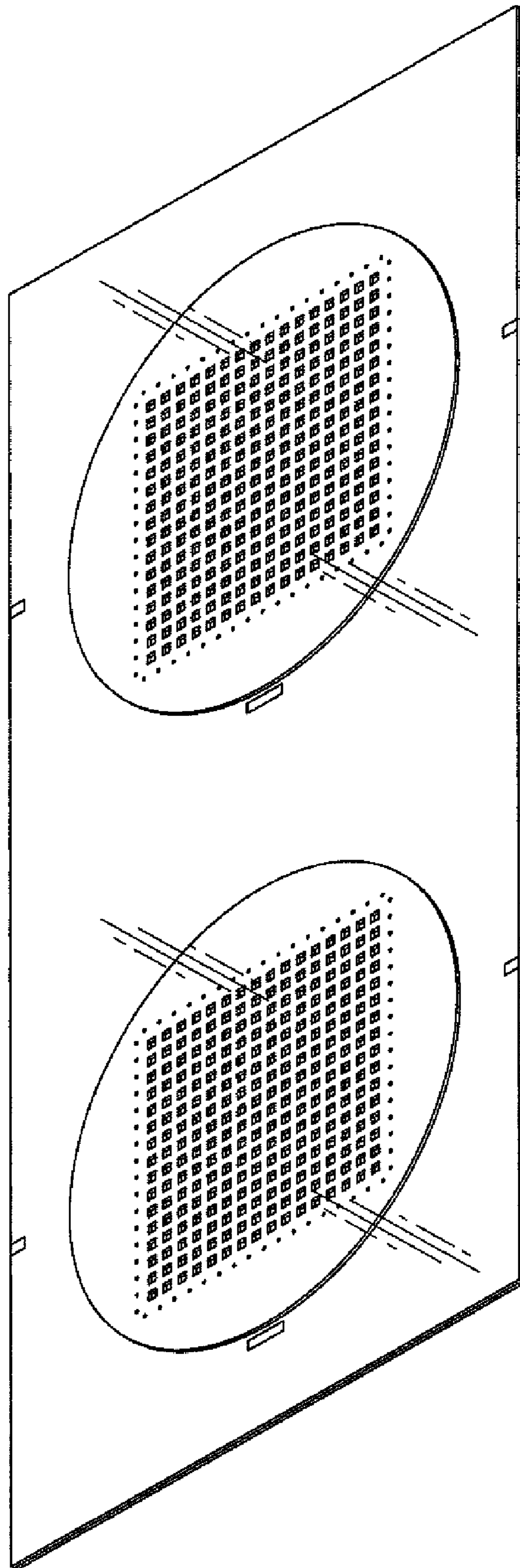


FIG. 1

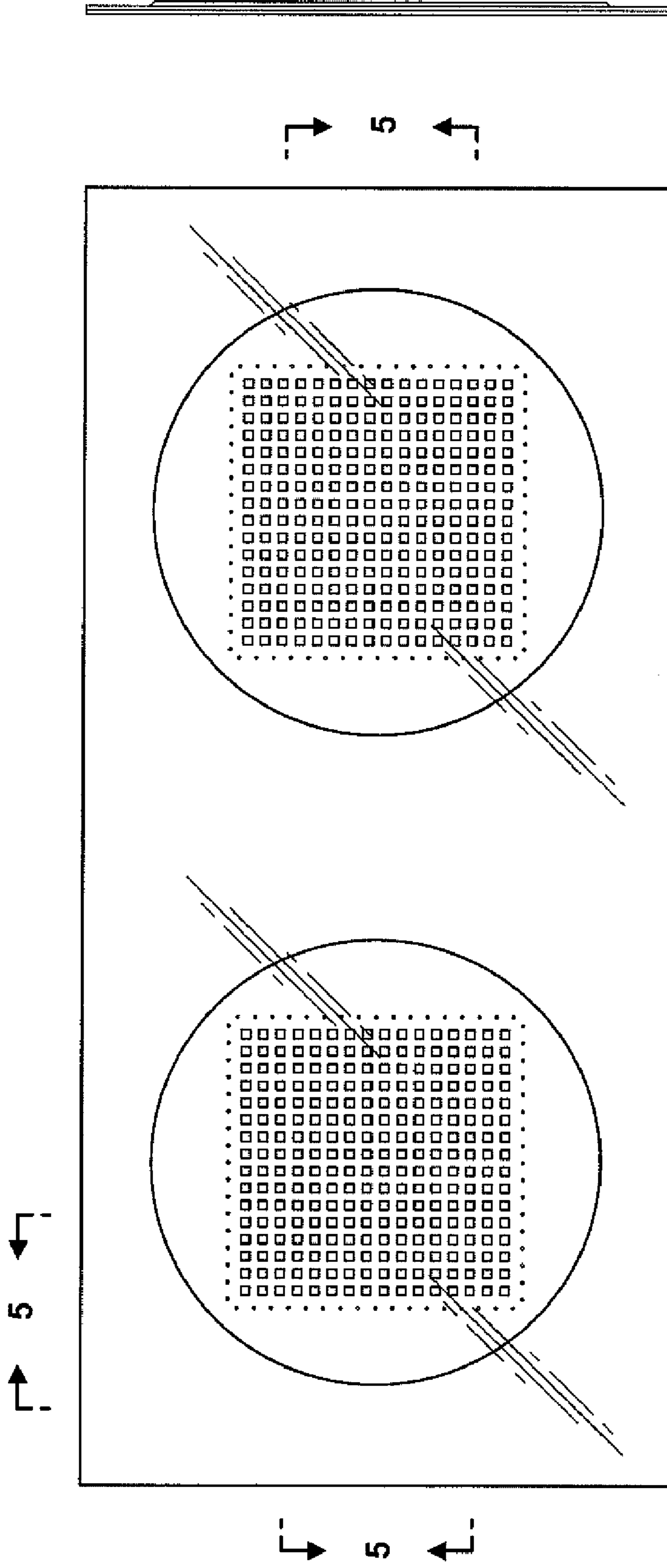


FIG. 4

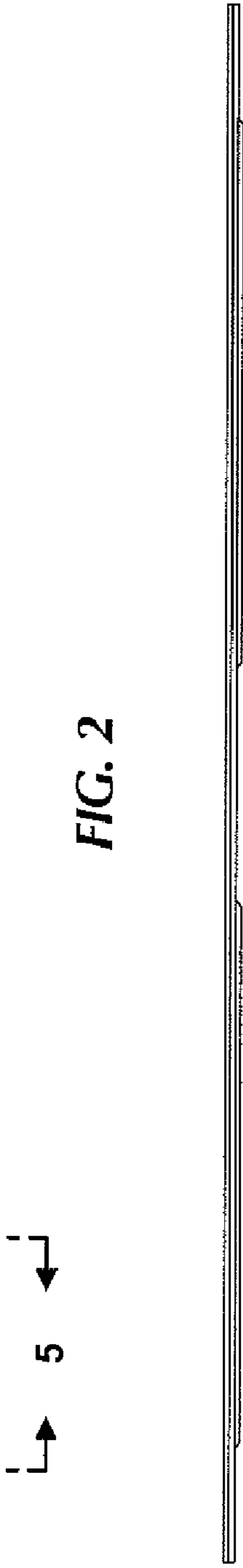


FIG. 2

FIG. 3

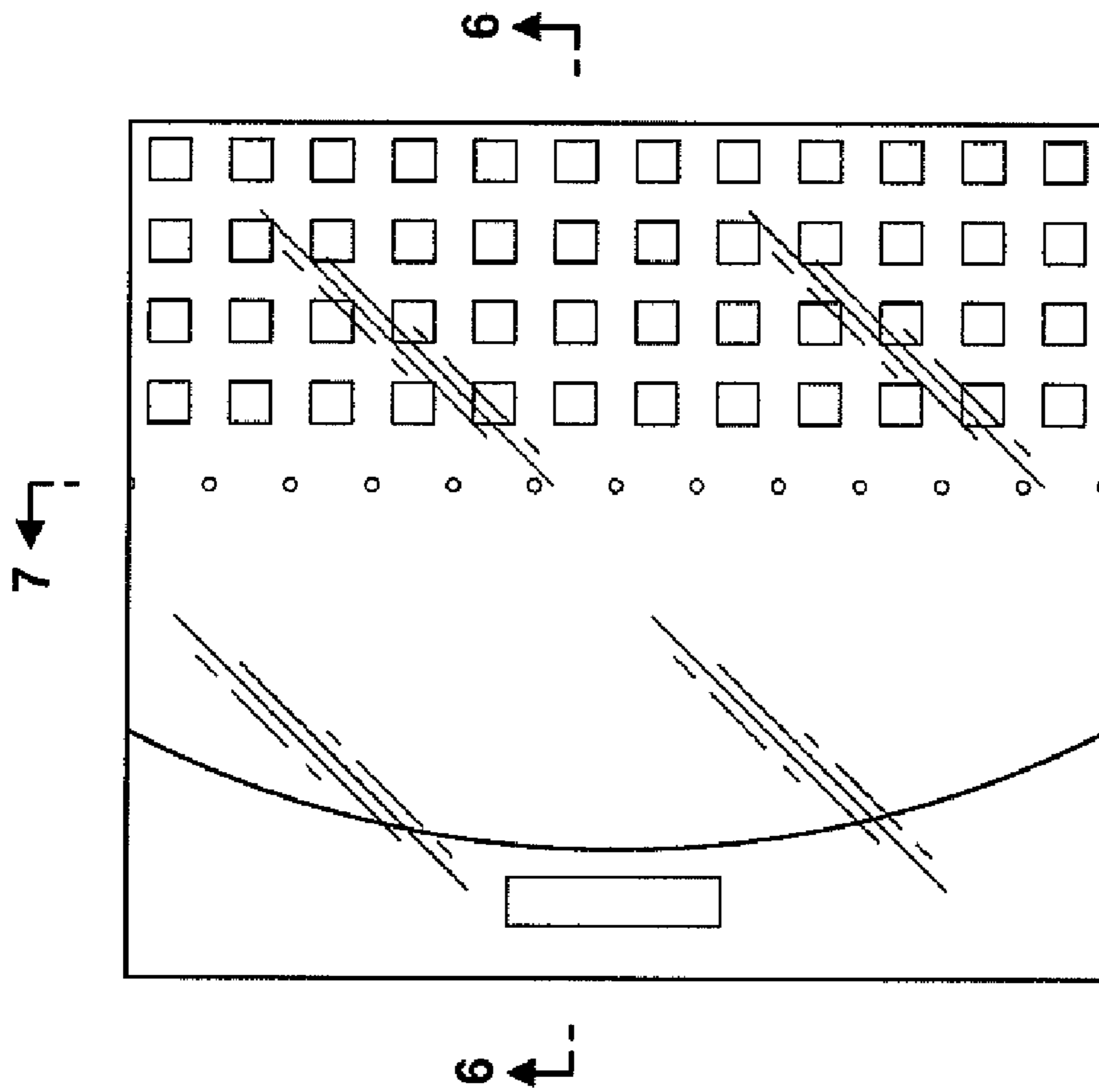


FIG. 5



FIG. 7



FIG. 6



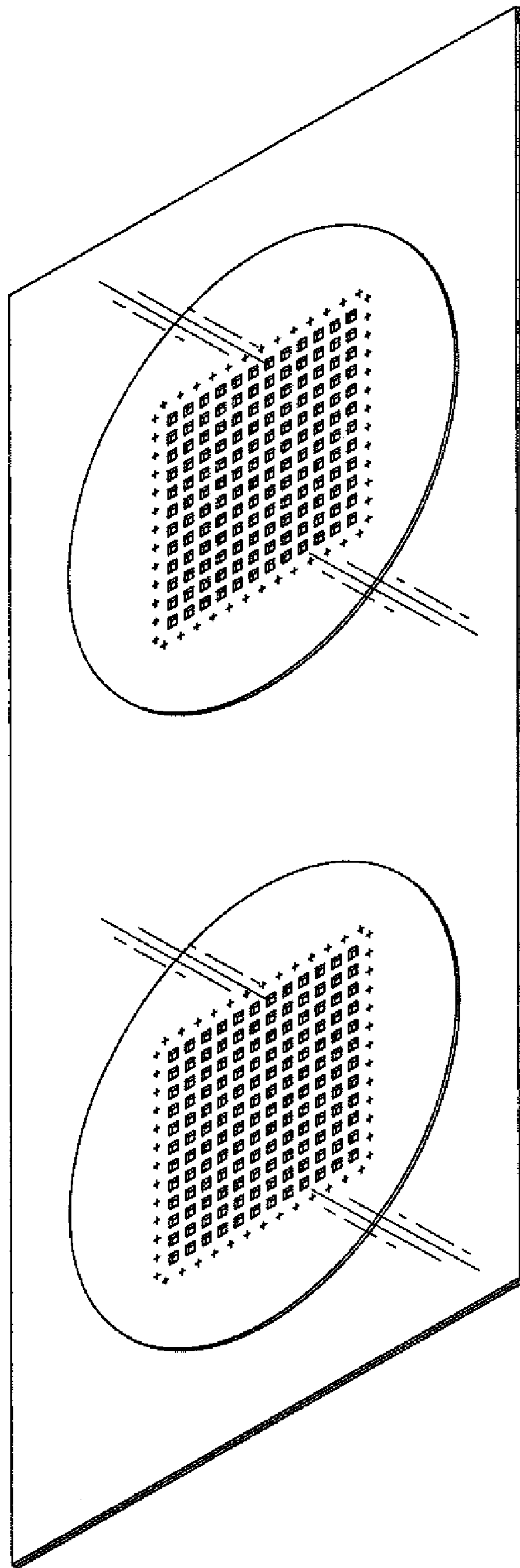


FIG. 8

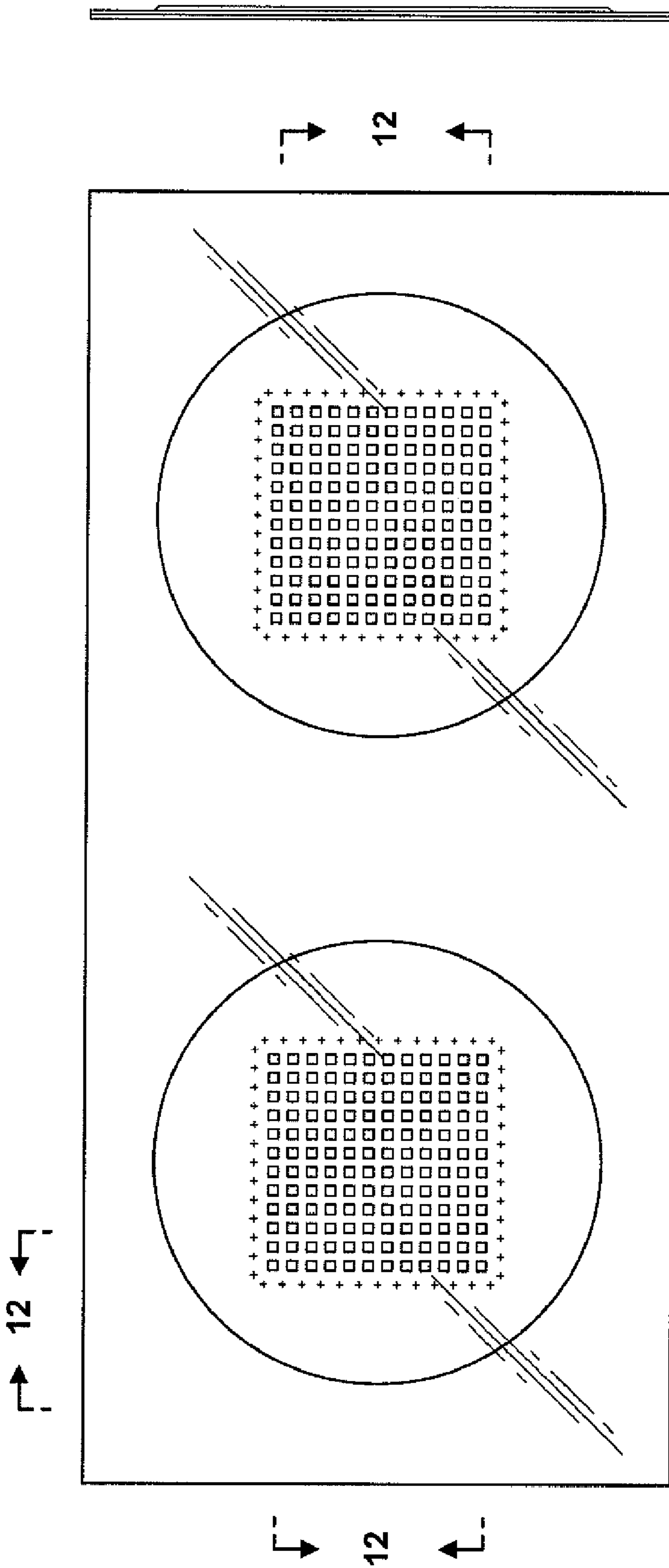


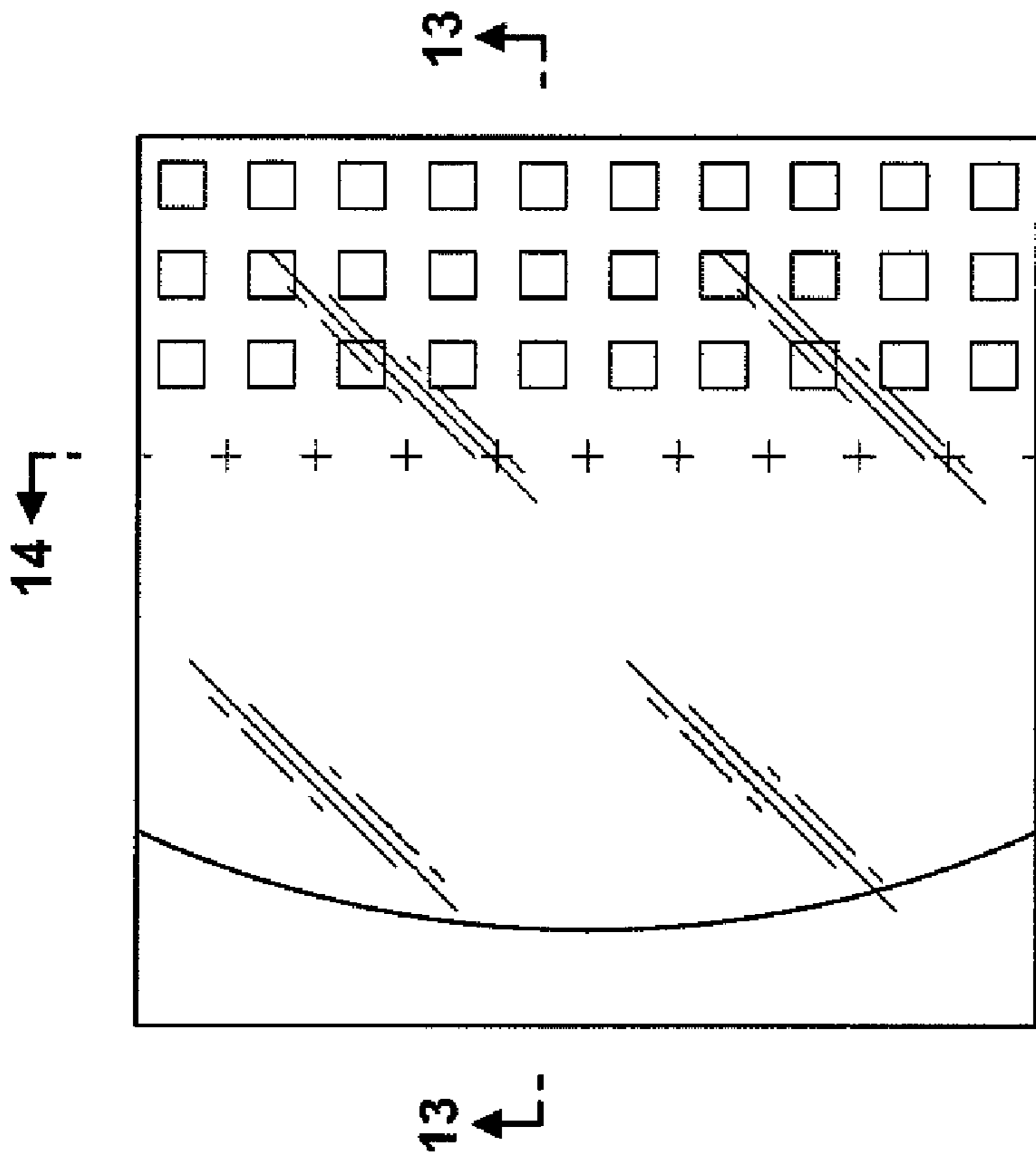
FIG. 11

FIG. 9

12



FIG. 10



14 ←

FIG. 12



FIG. 14



FIG. 13



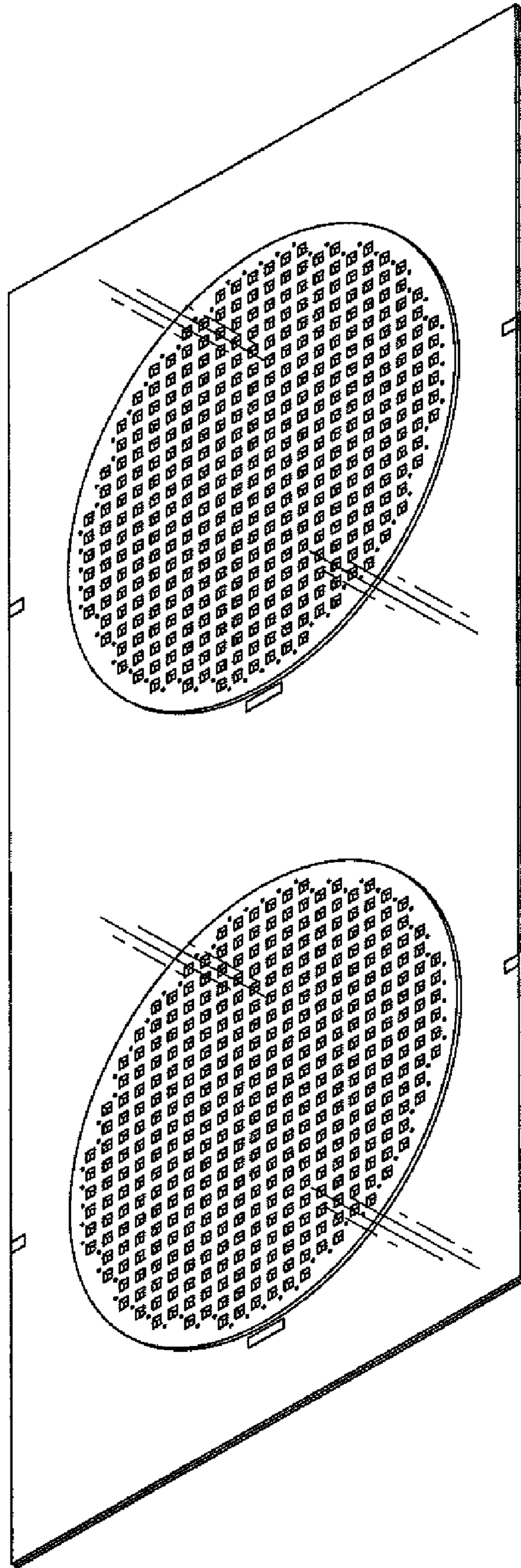


FIG. 15

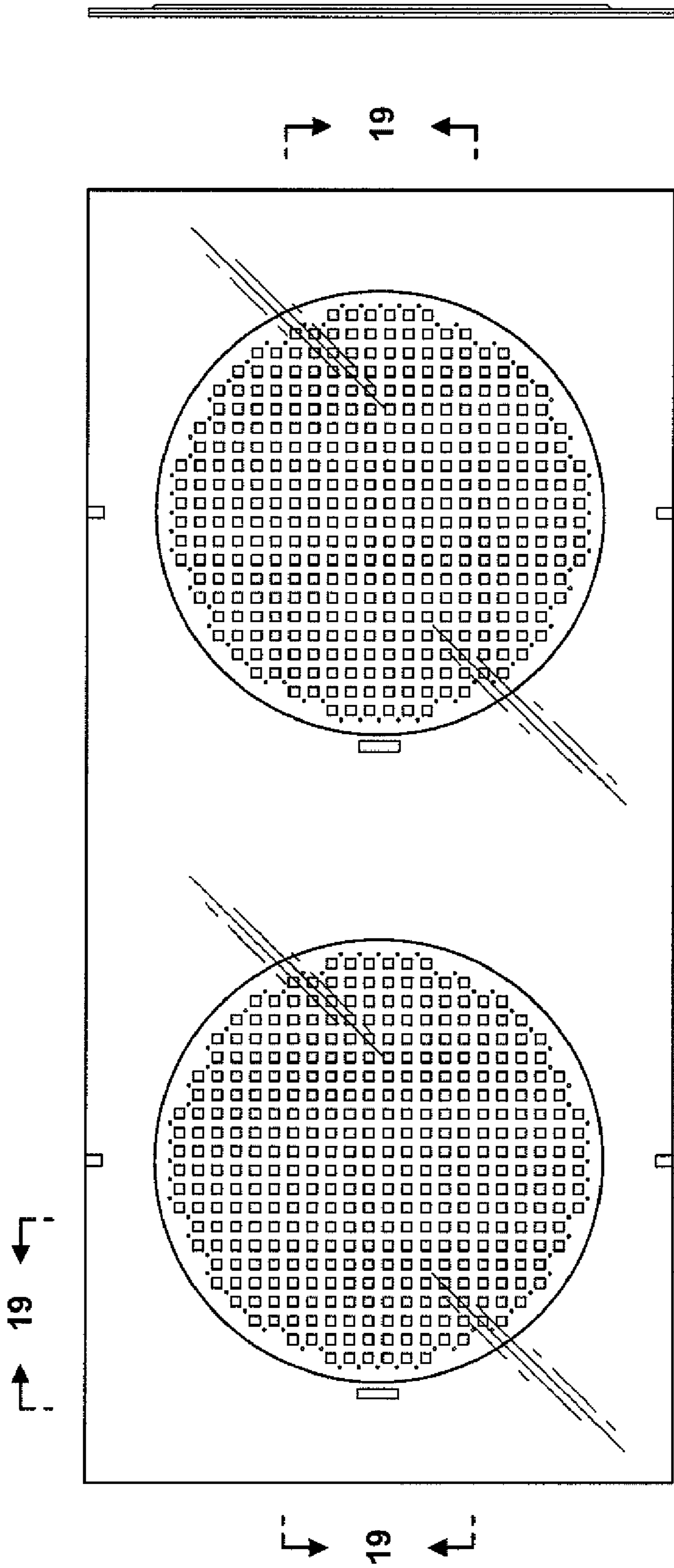


FIG. 18

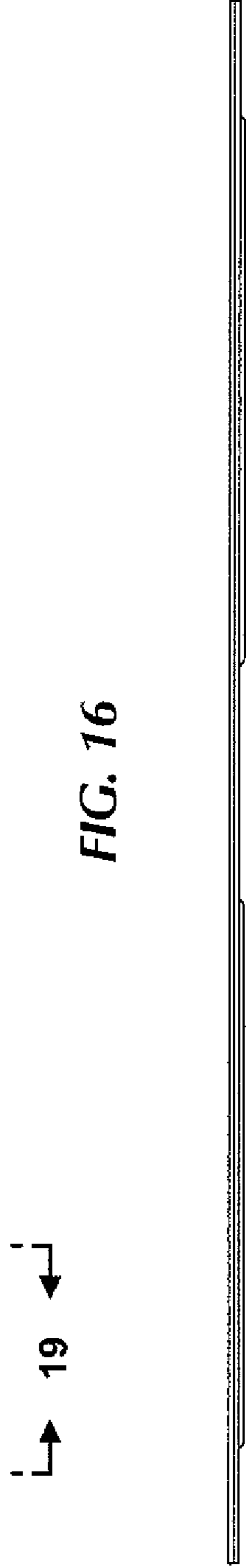


FIG. 16

FIG. 17

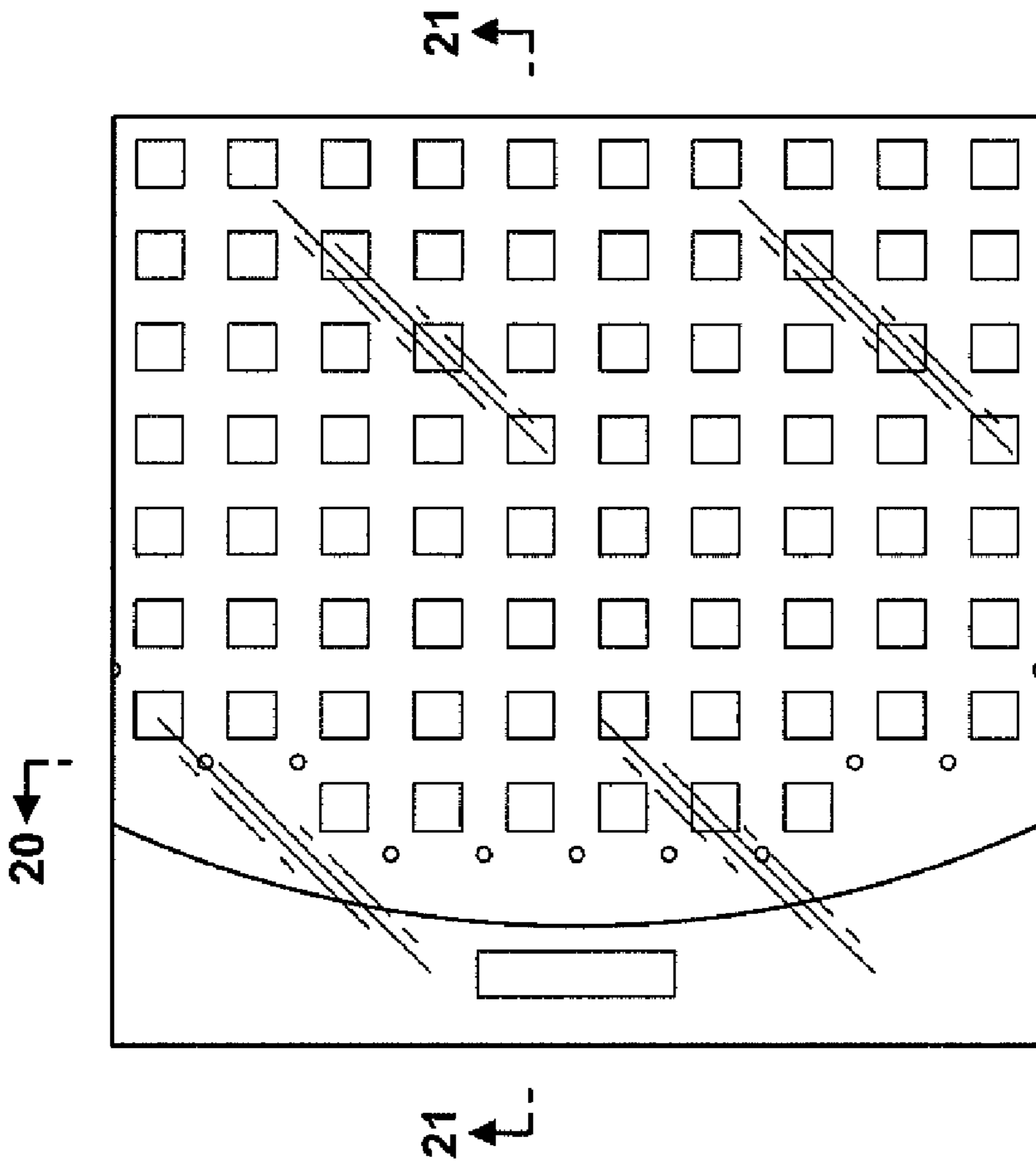


FIG. 19

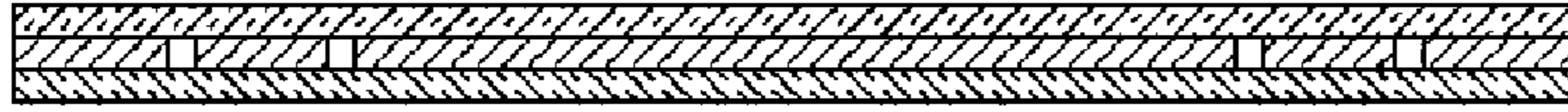


FIG. 21



FIG. 20