



US00D670372S

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

(10) **Patent No.:** **US D670,372 S**
(45) **Date of Patent:** **** Nov. 6, 2012**

(54) **HEATER PLATE AND HEATER ELEMENT ASSEMBLY**

(75) Inventors: **Makoto Inagawa**, Palo Alto, CA (US);
Shinichi Kurita, San Jose, CA (US)

(73) Assignee: **Applied Materials, Inc.**, Santa Clara, CA (US)

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

(21) Appl. No.: **29/403,680**

(22) Filed: **Oct. 10, 2011**

(51) **LOC (9) Cl.** **23-03**

(52) **U.S. Cl.** **D23/415**

(58) **Field of Classification Search** D23/403-406,
D23/409, 410, 422, 499, 345, 347, 349, 415-419;
D7/402, 407, 417; 40/428, 798; 44/520,
44/530; 52/36.3; 126/25 B, 298, 500, 512,
126/540, 543, 544, 548, 555; 160/DIG. 9;
431/263, 273, 329; 219/549

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,153,140	A *	10/1964	Theodore et al.	219/549
3,425,020	A *	1/1969	Nishida et al.	338/208
4,197,449	A *	4/1980	Fessenden	219/549
4,293,763	A *	10/1981	McMullan	219/528
4,429,214	A *	1/1984	Brindley et al.	392/435
4,849,255	A *	7/1989	Grise et al.	427/122
D304,855	S *	11/1989	Aoki	D23/386
D320,649	S *	10/1991	Fleming	D23/386
5,144,113	A *	9/1992	Hall et al.	219/549
D353,666	S *	12/1994	Jonsson	D23/386
5,835,983	A *	11/1998	McMahen et al.	219/527
6,043,468	A *	3/2000	Toya et al.	219/544
6,176,668	B1	1/2001	Kurita et al.	
6,213,704	B1	4/2001	White et al.	
6,521,873	B1 *	2/2003	Cheng et al.	219/528
6,746,198	B2	6/2004	White et al.	
6,906,293	B2 *	6/2005	Schmiz et al.	219/494
7,115,844	B2 *	10/2006	Ferguson	219/549
7,154,070	B2 *	12/2006	Watanabe et al.	219/444.1

D547,117	S *	7/2007	Ross	D7/407
7,741,582	B2 *	6/2010	Howick et al.	219/210
8,008,607	B2 *	8/2011	Ptasienski et al.	219/543
2004/0094534	A1 *	5/2004	Howick et al.	219/529
2007/0151841	A1 *	7/2007	Inagawa et al.	204/192.1
2008/0029387	A1 *	2/2008	Inagawa et al.	204/192.12
2009/0135567	A1 *	5/2009	Fann et al.	361/722

* cited by examiner

Primary Examiner — Karen S Acker

(74) *Attorney, Agent, or Firm* — Patterson & Sheridan, LLP

(57) **CLAIM**

The ornamental design for a heater plate and heater element assembly, as shown and described.

DESCRIPTION

FIG. 1 is an isometric view of a heater plate and heater element assembly showing my new design;

FIG. 2 is a front elevation thereof;

FIG. 3 is a detailed view thereof showing the heater element within the grooves of two heater plates;

FIG. 4 is an exploded view of the design of FIG. 1 showing the heater element between the two heater plates. The grooved surfaces face each other to provide encasement of the heater element;

FIG. 5 is a plan view of the bottom heater plate of the design of FIG. 1, grooved on the inner side to accept the heater element;

FIG. 6 is a front elevation view thereof;

FIG. 7 is a side elevation view thereof, the opposite side being a mirror image;

FIG. 8 is a rear elevation view thereof;

FIG. 9 is an enlarged isometric view thereof showing the heater element placed within the bottom heater plate;

FIG. 10 is a detail view thereof;

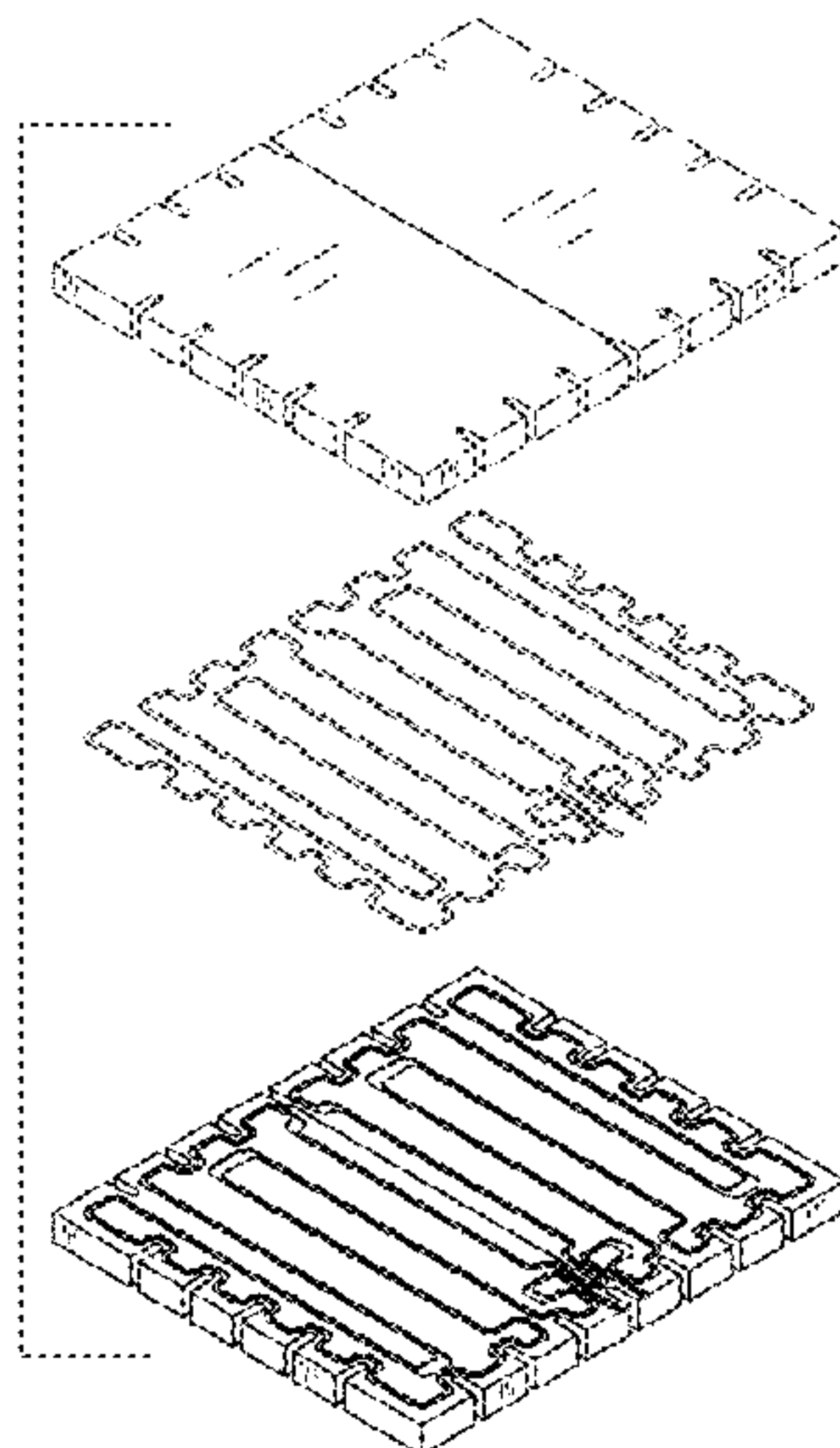
FIG. 11 is a plan view of the heater element of the design of FIG. 1, the opposite side being a mirror image;

FIG. 12 is a front elevation view thereof;

FIG. 13 is a side elevation view thereof; and,

FIG. 14 is a rear elevation view thereof.

1 Claim, 6 Drawing Sheets



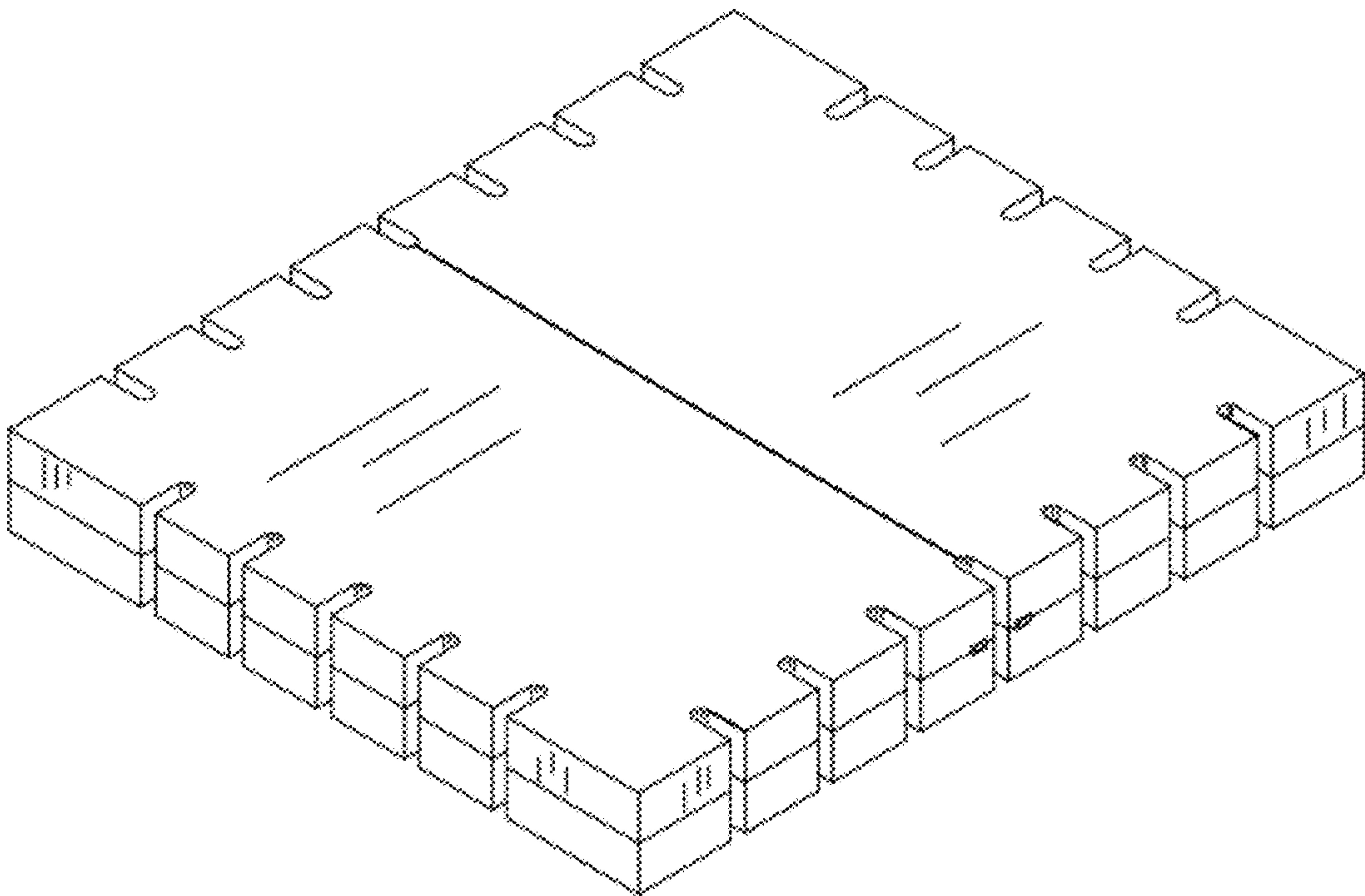


FIG. 1

FIG. 3

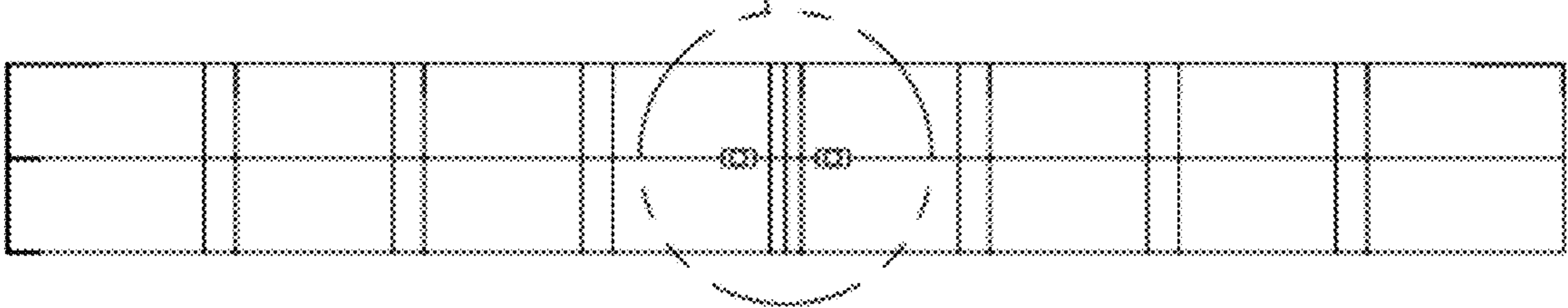
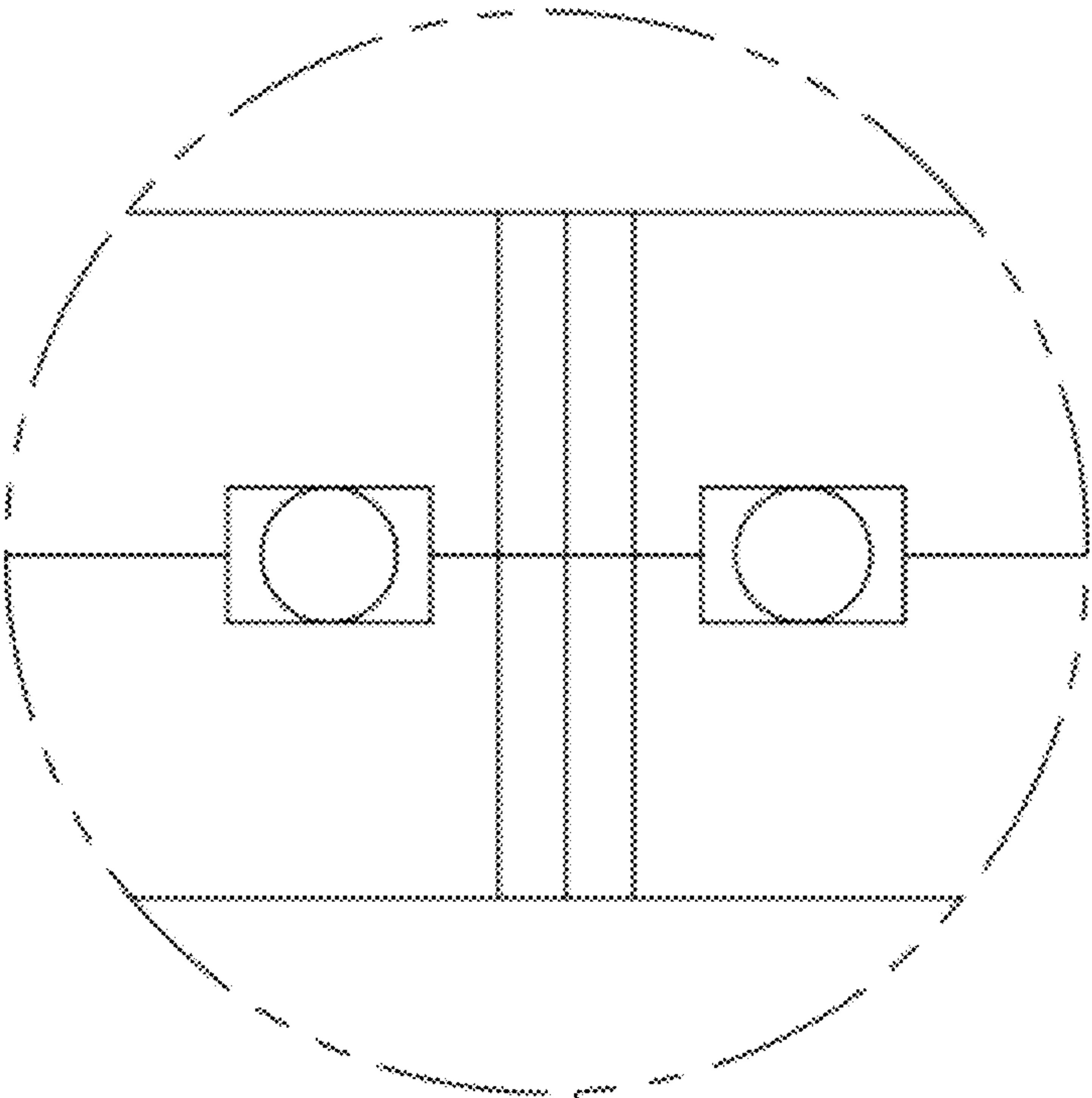


FIG. 2

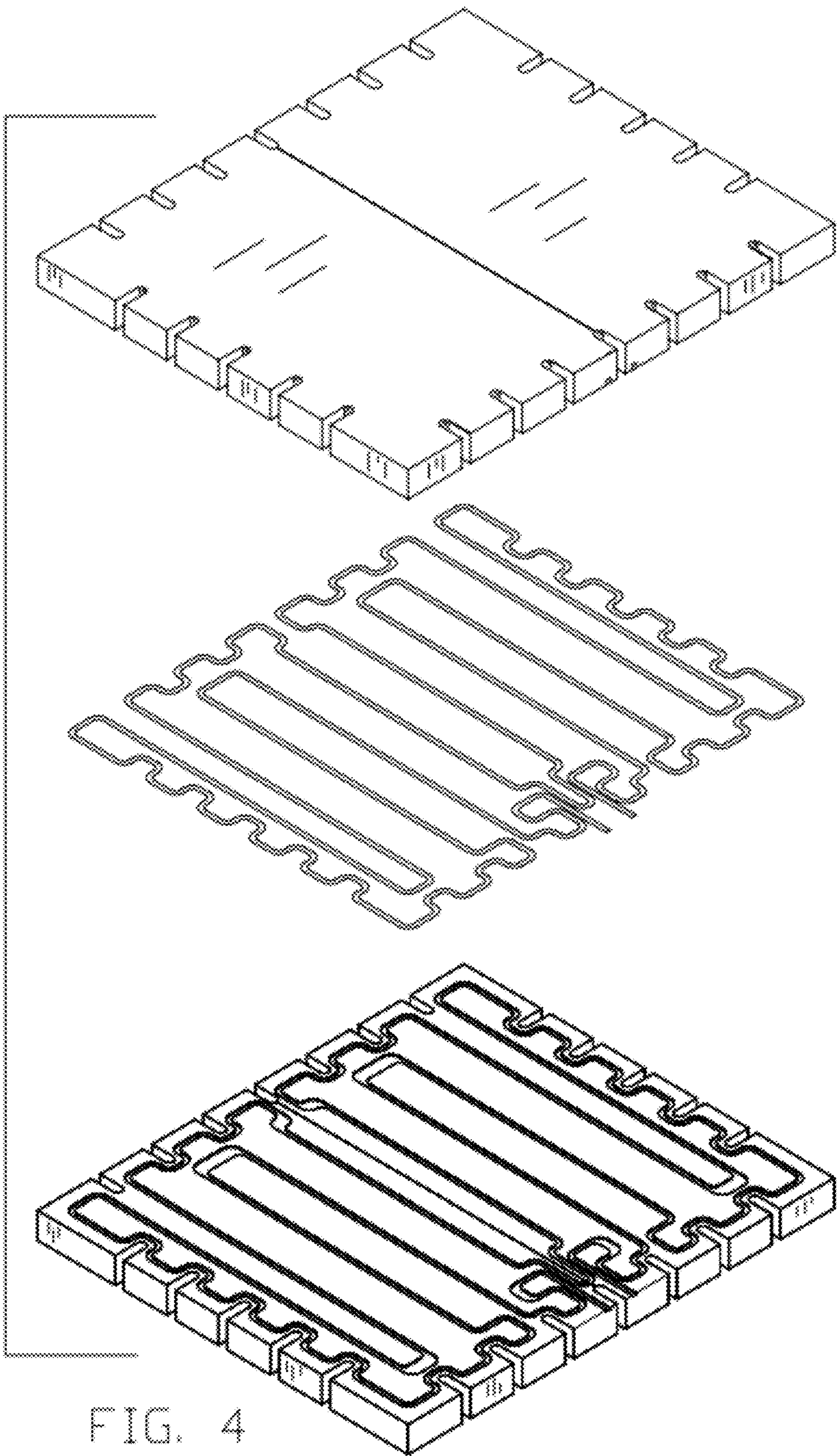




FIG. 8

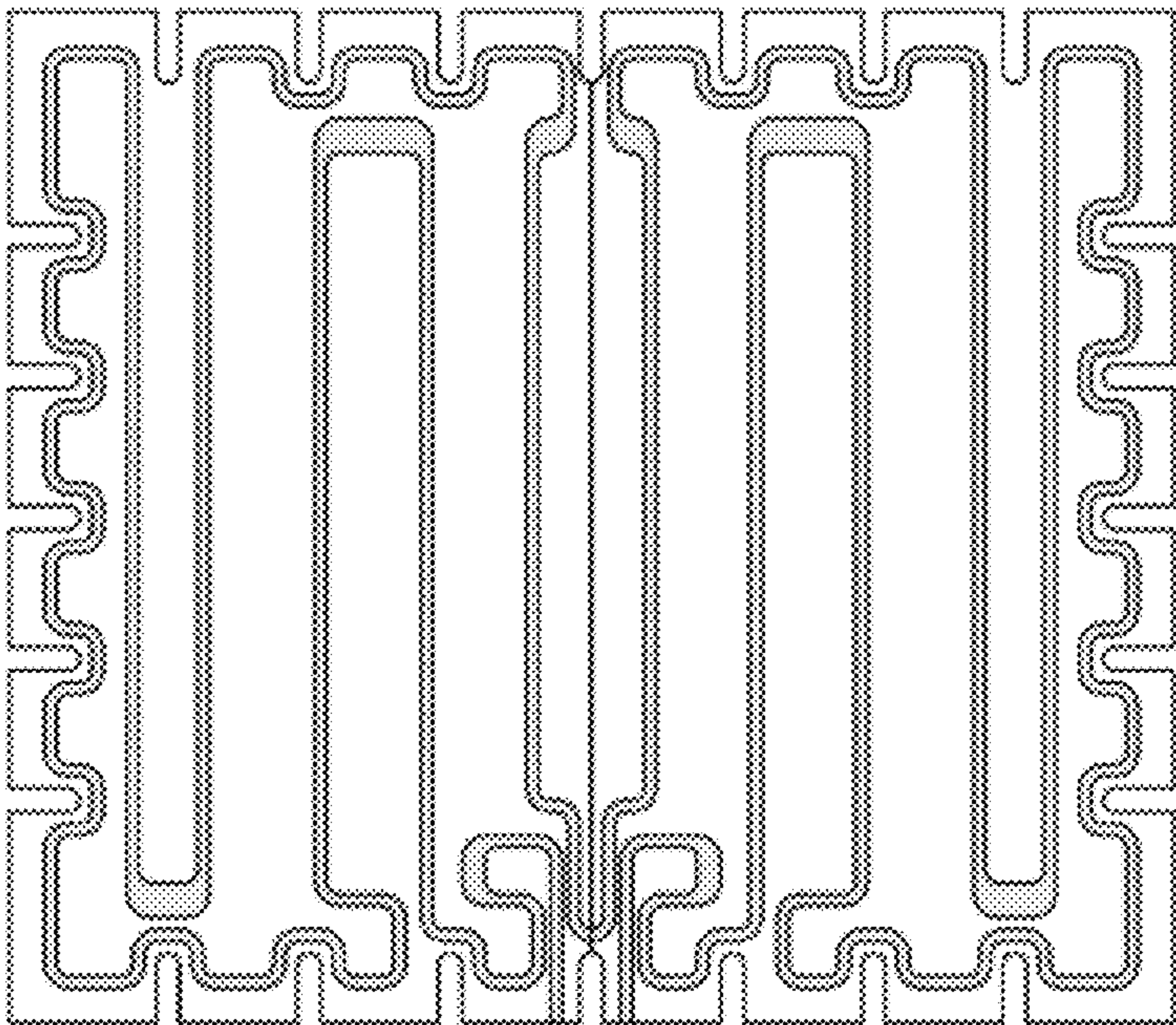


FIG. 5



FIG. 7



FIG. 6

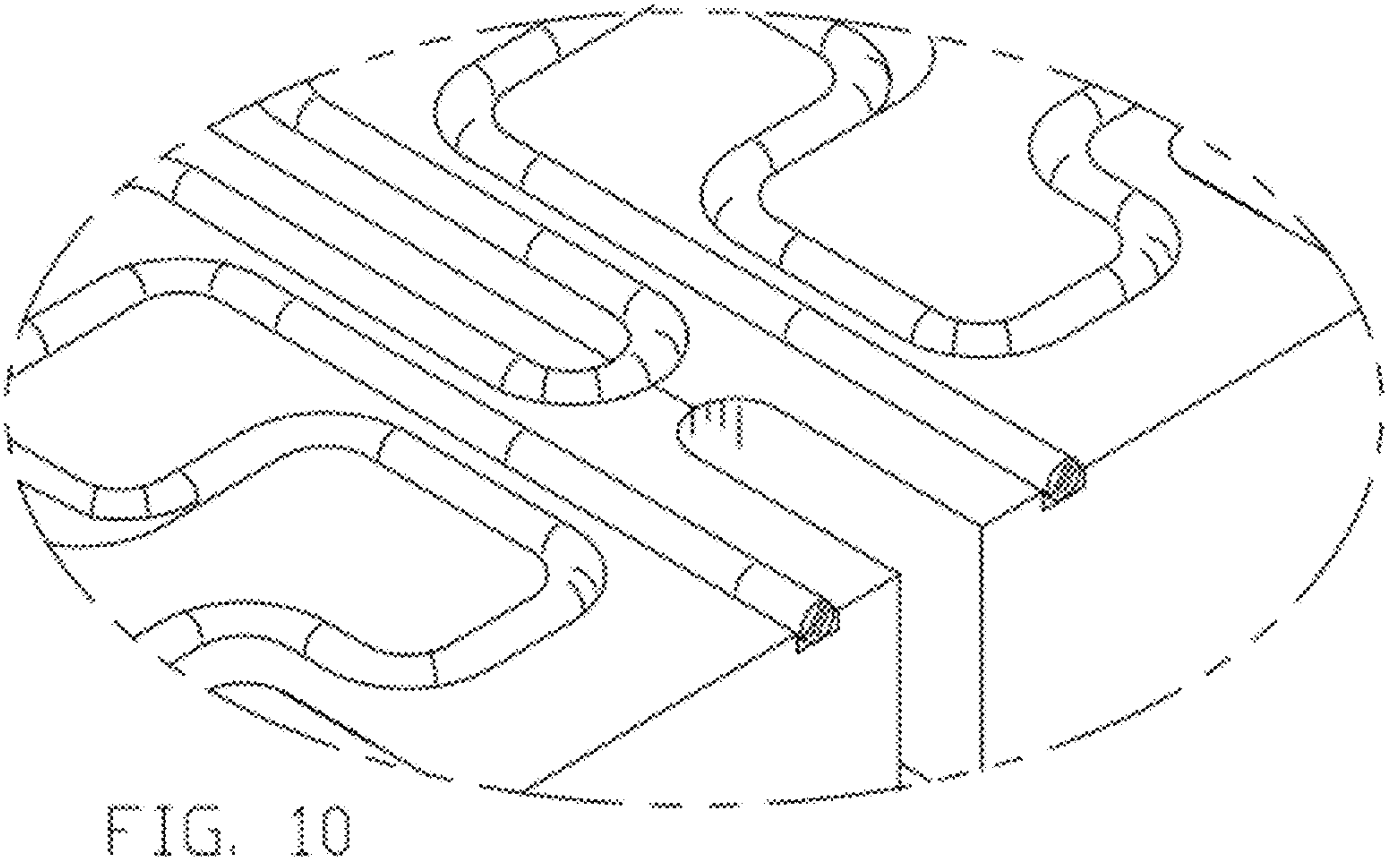
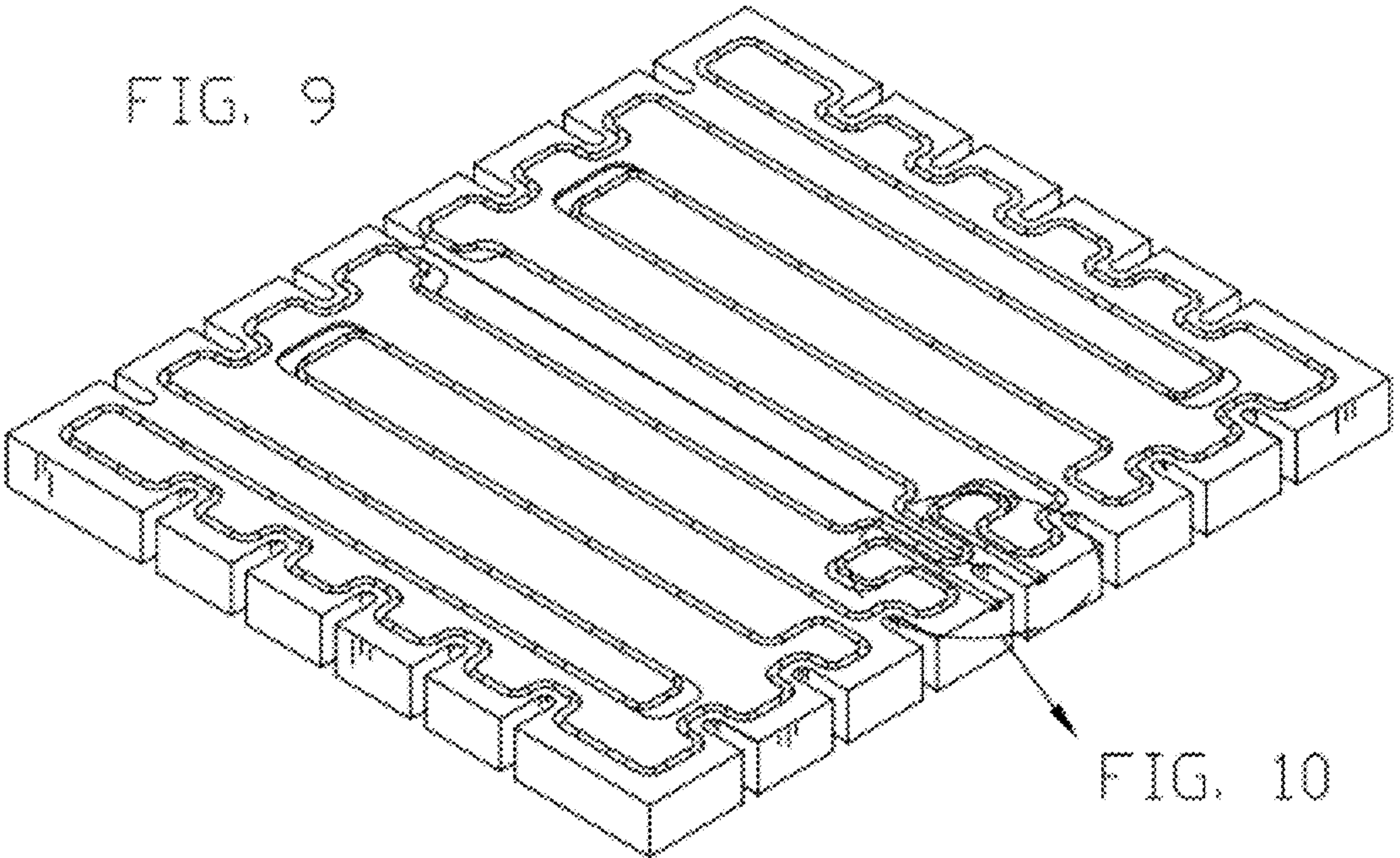




FIG. 14

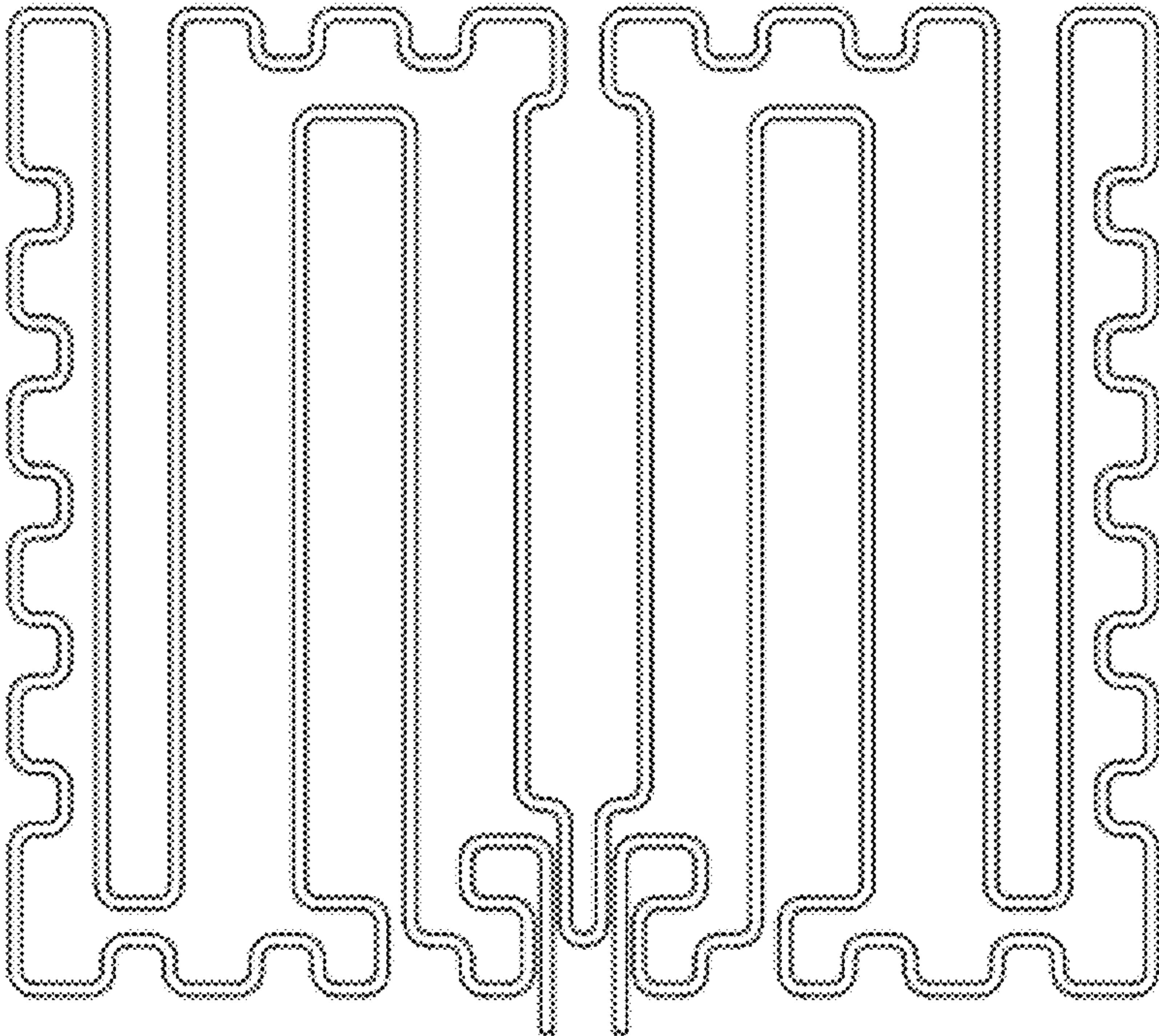


FIG. 11



FIG. 13

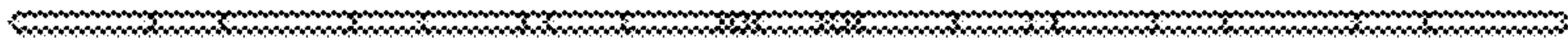


FIG. 12