



US00D582866S

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

(10) **Patent No.:** **US D582,866 S**
(45) **Date of Patent:** **** Dec. 16, 2008**

(54) **LED CHIP**

(75) Inventors: **John Edmond**, Cary, NC (US); **James Ibbetson**, Santa Barbara, CA (US); **Michael John Bergmann**, Chapel Hill, NC (US); **Amber Christine Salter**, Durham, NC (US); **David Todd Emerson**, Chapel Hill, NC (US); **Ashay Chitnis**, Goleta, CA (US); **Bernd P. Keller**, Santa Barbara, CA (US); **Kevin Haberern**, Cary, NC (US)

(73) Assignee: **Cree, Inc.**, Durham, NC (US)

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

(21) Appl. No.: **29/284,431**

(22) Filed: **Sep. 7, 2007**

(51) **LOC (8) Cl.** **13-03**

(52) **U.S. Cl.** **D13/180**

(58) **Field of Classification Search** D13/180;
D26/2; 257/79, 80, 81, 88, 89, 95, 98, 99,
257/100; 313/483, 498, 500; 362/555, 800
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,097,040 A 8/2000 Morimoto et al.

(Continued)

OTHER PUBLICATIONS

Lumileds LED Die; Philips/Lumileds Light from Silicon Valley "LED Die," pp. 1-2, <<http://www.lumileds.com/products/line.cm?lineId=16>> (2006).

Color photos Lumileds LEDs, 1 page, (for exam purposes, date is assumed to be before Dec. 21, 2006).

Image of Osram chip, 1 page, (prior to Dec. 29, 2005).

"Limileds LED," 1 page, (Oct. 2-4, 2002).

SemiLEDS "Products", 2 pages, http://www.semileds.com/en_04product.asp (2006).

Primary Examiner—Selina Sikder

(74) *Attorney, Agent, or Firm*—Myers Bigel Sibley & Sajovec

(57) **CLAIM**

The ornamental design for an LED chip, as shown and described.

DESCRIPTION

FIG. 1 is a top perspective view of a LED chip showing our design;

FIG. 2 is a top view thereof;

FIG. 3 is a first side view thereof;

FIG. 4 is a bottom view thereof;

FIG. 5 is a different side view thereof;

FIG. 6 is an end view thereof;

FIG. 7 is an opposing end view thereof;

FIG. 8 is a top perspective view of a second embodiment of the LED chip showing our design;

FIG. 9 is a top view thereof;

FIG. 10 is a first side view thereof;

FIG. 11 is a bottom view thereof;

FIG. 12 is a different side view thereof;

FIG. 13 is an end view thereof;

FIG. 14 is an opposing end view thereof;

FIG. 15 is a top perspective view of a third embodiment of the LED chip showing our design;

FIG. 16 is a top view thereof;

FIG. 17 is a first side view thereof;

FIG. 18 is a bottom view thereof;

FIG. 19 is a different side view thereof;

FIG. 20 is an end view thereof;

FIG. 21 is an opposing end view thereof;

FIG. 22 is a top perspective view of a third embodiment of the LED chip showing our design;

FIG. 23 is a top view thereof;

FIG. 24 is a first side view thereof;

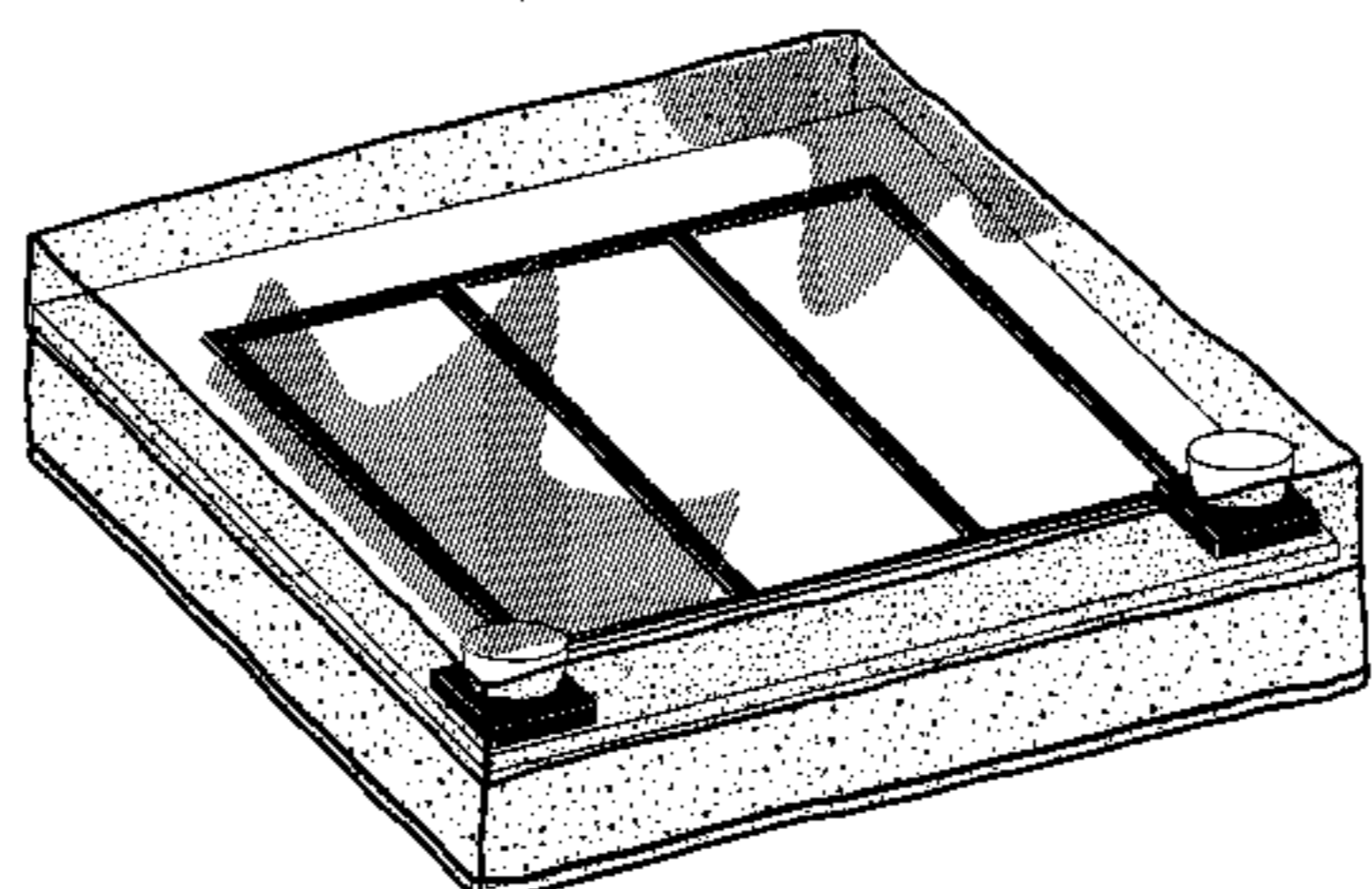
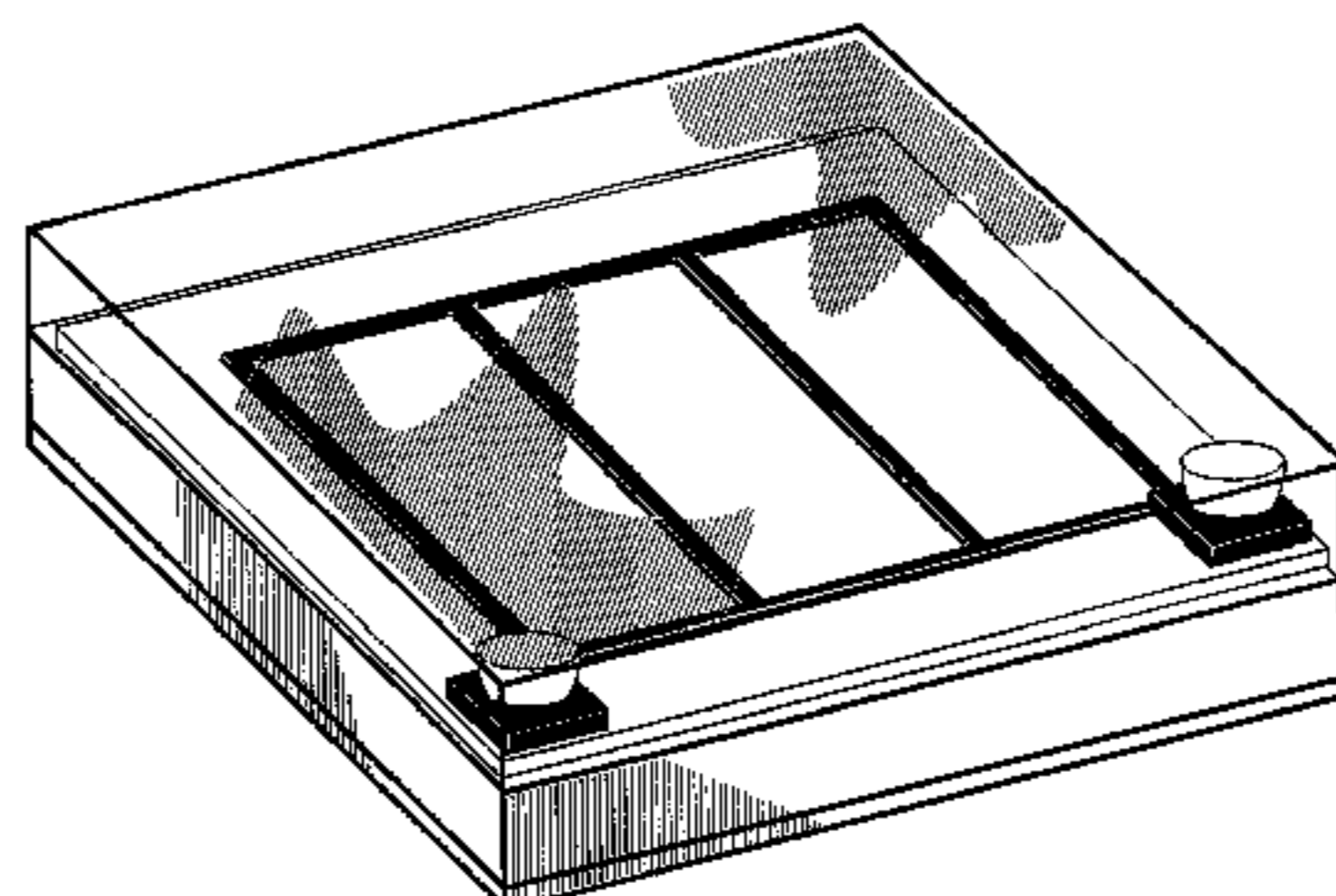
FIG. 25 is a bottom view thereof;

FIG. 26 is a different side view thereof;

FIG. 27 is an end view thereof; and,

FIG. 28 is an opposing end view thereof.

1 Claim, 8 Drawing Sheets



US D582,866 S

Page 2

U.S. PATENT DOCUMENTS			
6,255,129	B1	7/2001	Lin
6,383,835	B1 *	5/2002	Hata et al. 438/65
6,498,592	B1 *	12/2002	Matthies 345/1.1
6,518,598	B1	2/2003	Chen
6,713,868	B2 *	3/2004	Ueno 257/730
6,847,052	B2	1/2005	Fan et al.
6,870,519	B2 *	3/2005	Sundahl 345/1.3
7,289,089	B2 *	10/2007	Iwafuchi 345/82
D566,056	S *	4/2008	Edmond et al. D13/180
D566,057	S *	4/2008	Edmond et al. D13/180
D566,665	S *	4/2008	Liao et al. D13/180
2003/0222263	A1 *	12/2003	Choi 257/79
2005/0023539	A1	2/2005	Fujiwara et al.
2005/0067624	A1	3/2005	Steigerwald et al.
2006/0049422	A1	3/2006	Shoji
2006/0131600	A1 *	6/2006	Nakaoka et al. 257/99
2006/0151800	A1	7/2006	Keong et al.
2006/0226437	A1	10/2006	Fujita et al.
2007/0075323	A1 *	4/2007	Kanazawa et al. 257/98
2007/0085089	A1	4/2007	Hsu
2007/0138585	A1	6/2007	Hsin et al.

* cited by examiner

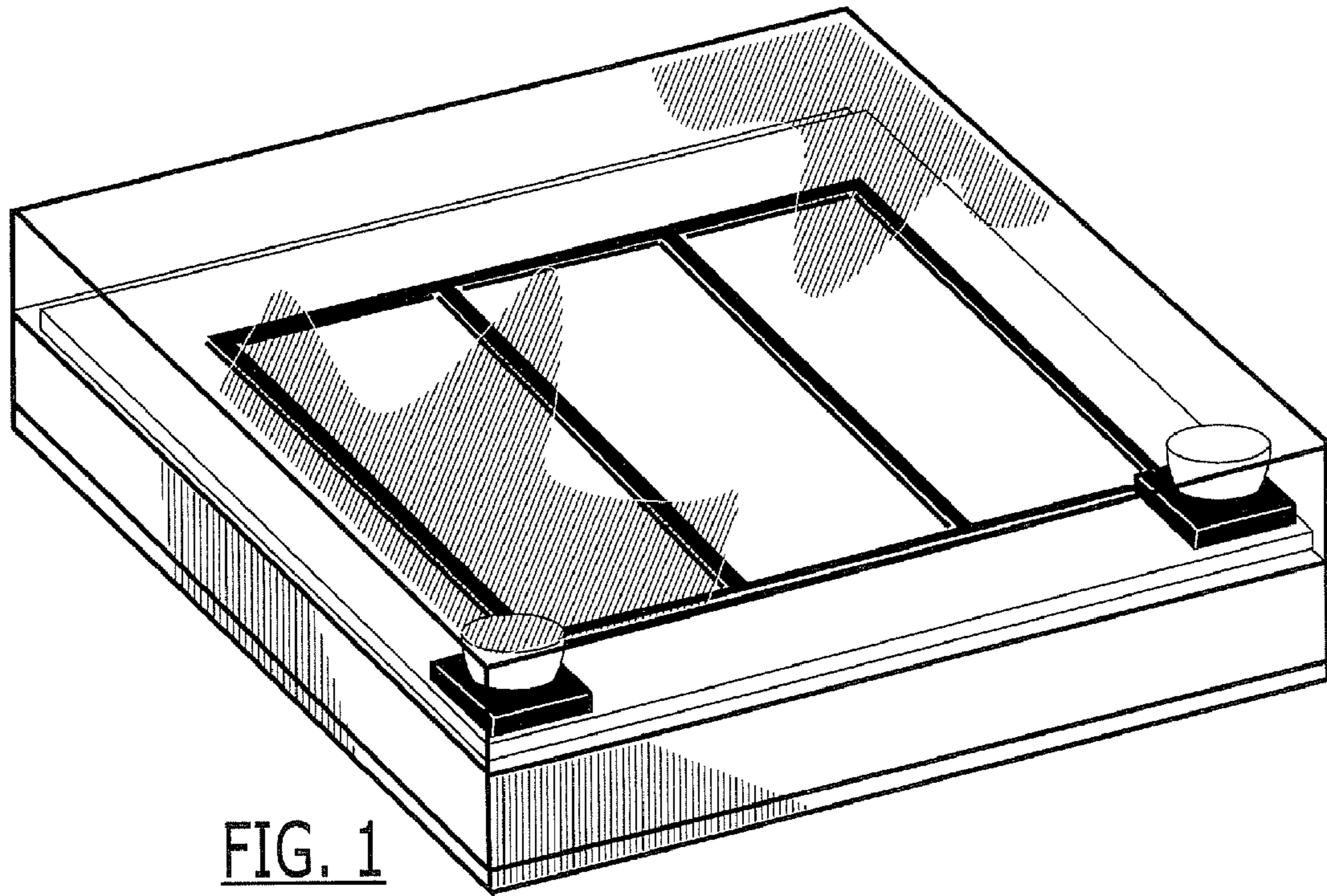


FIG. 1

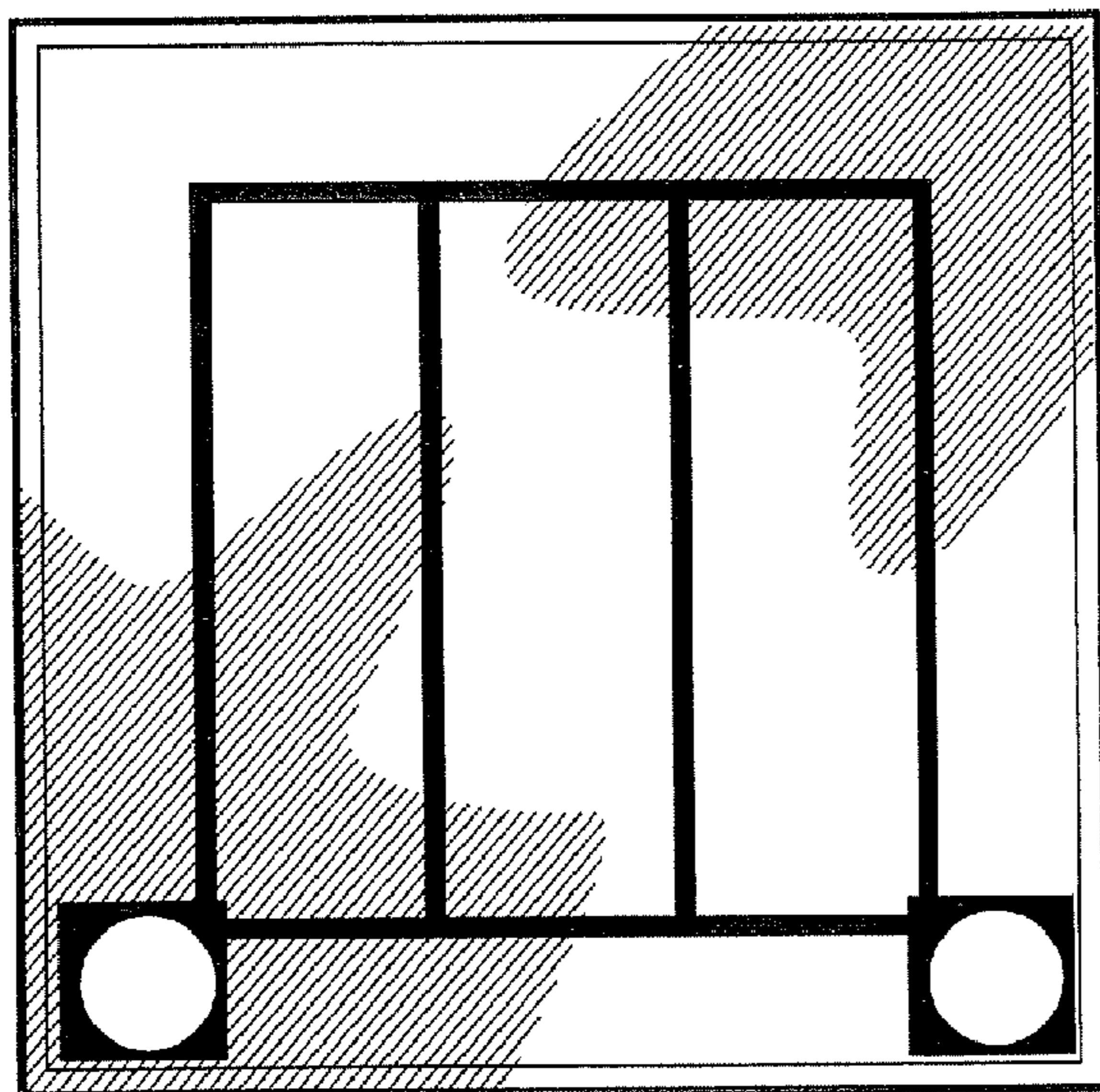


FIG. 2

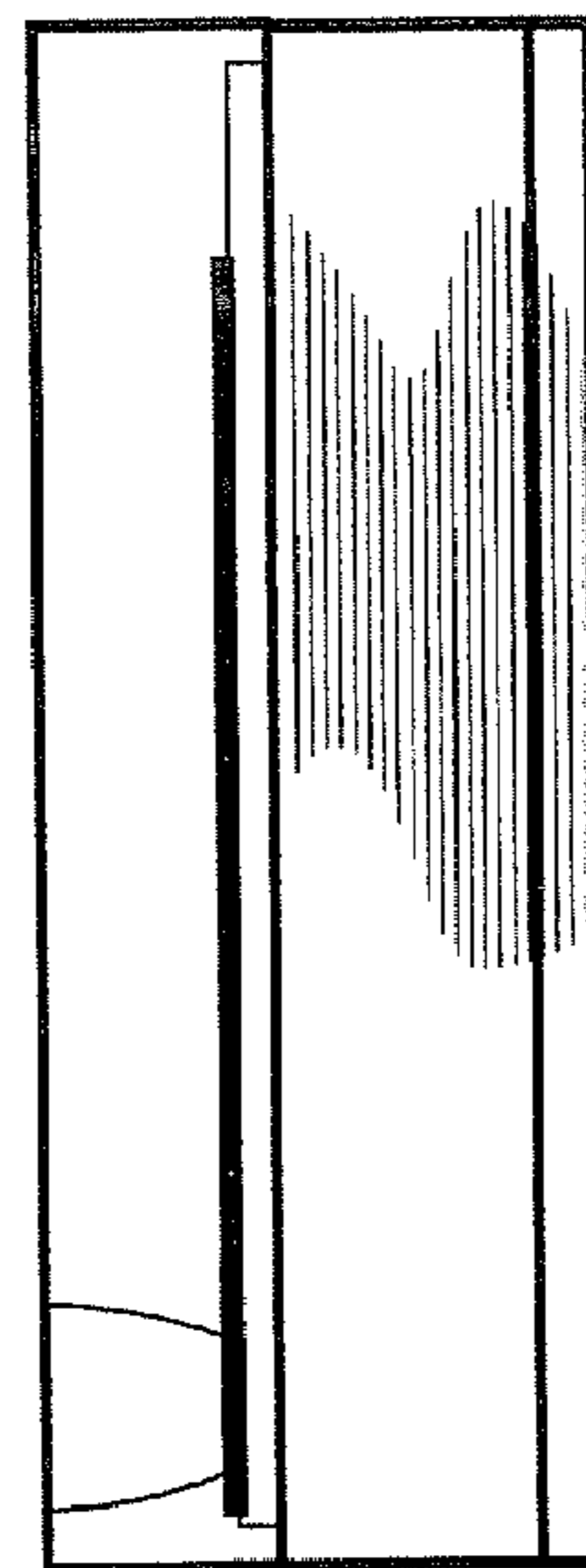


FIG. 3

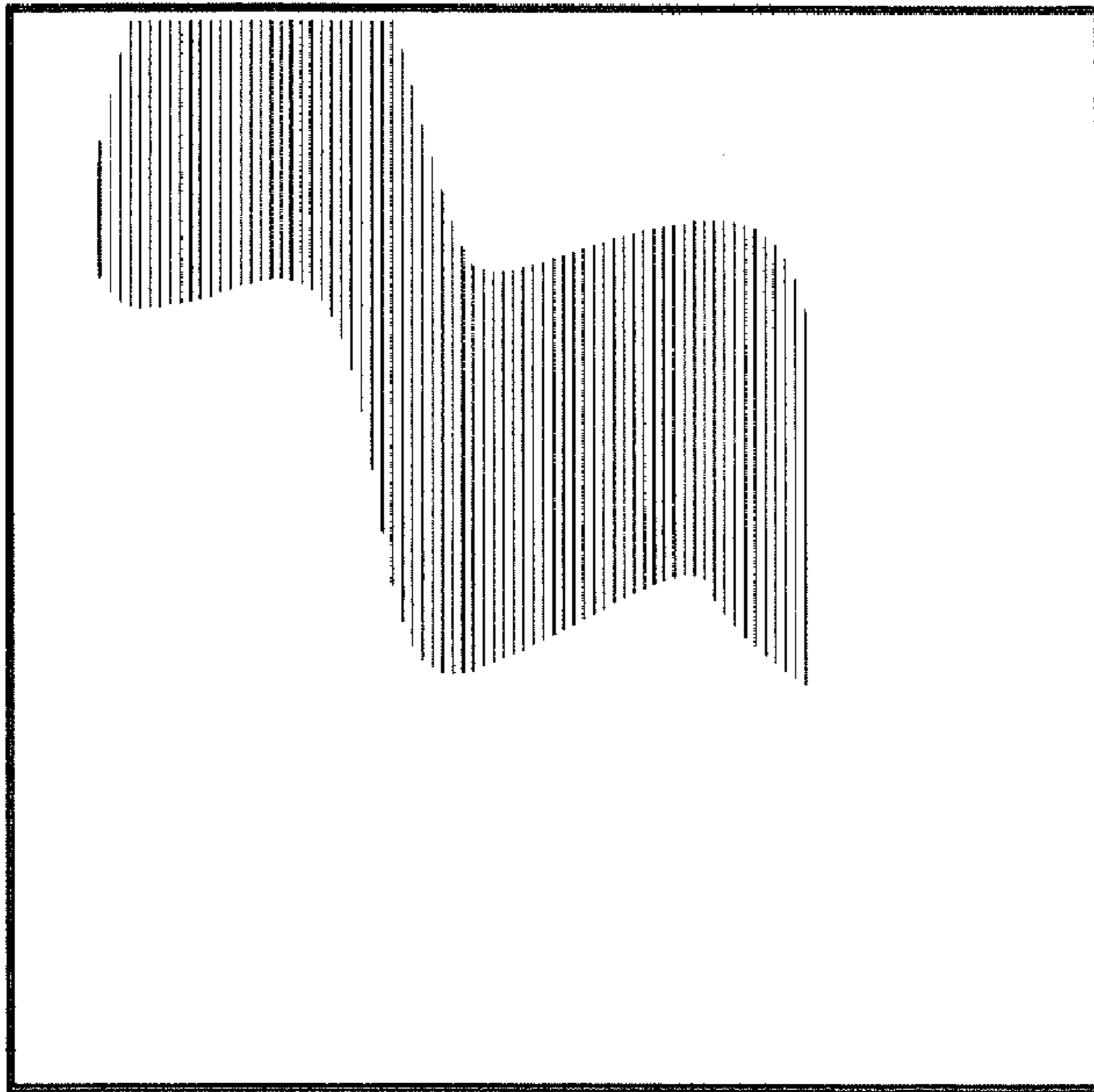


FIG. 4

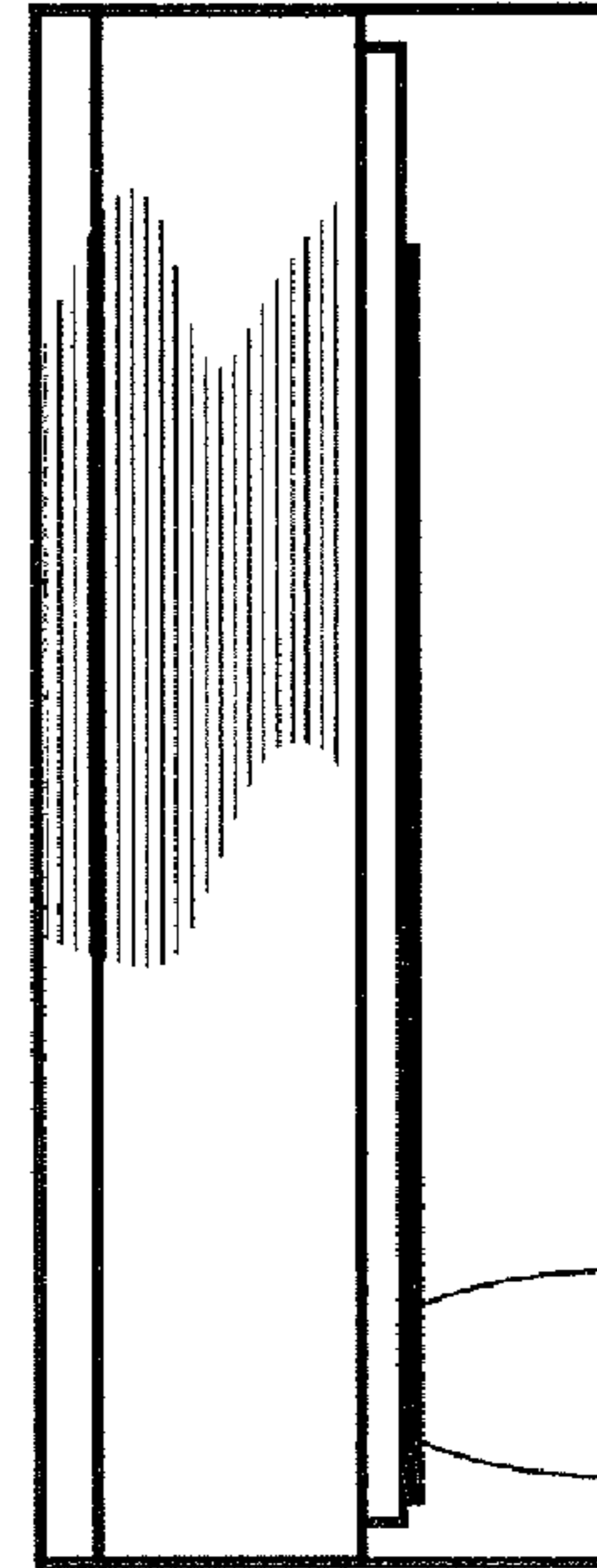


FIG. 5

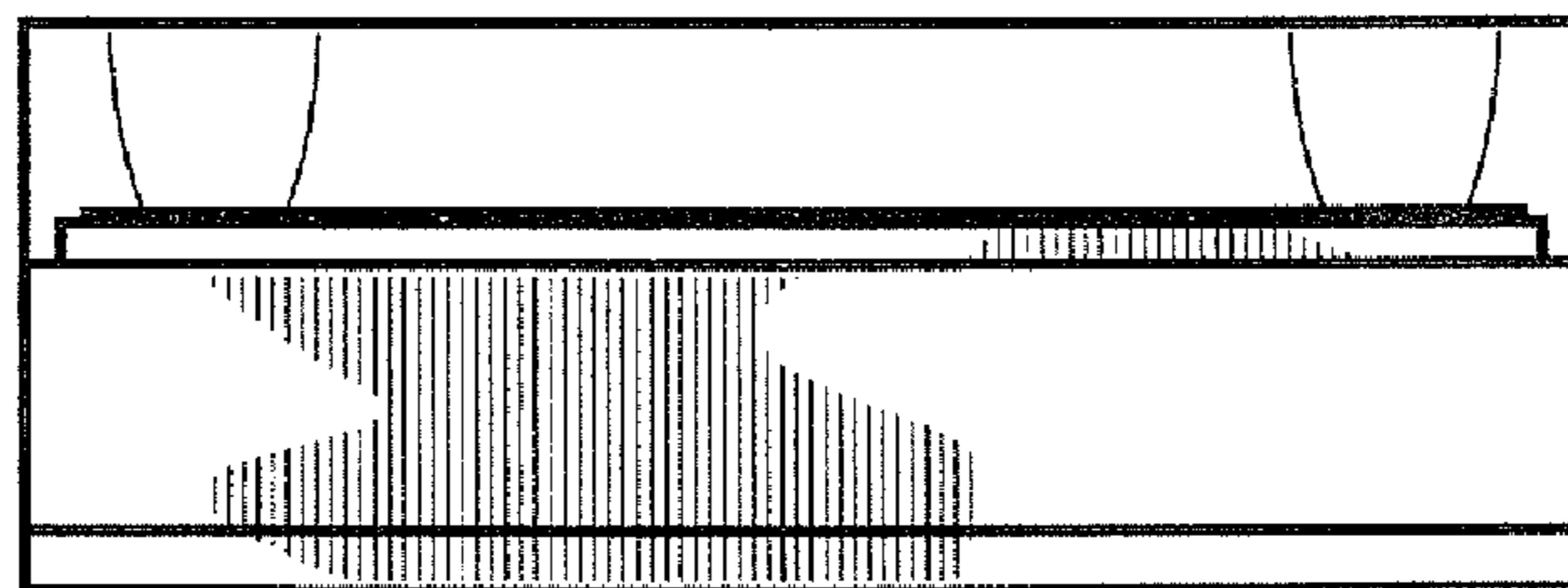


FIG. 6

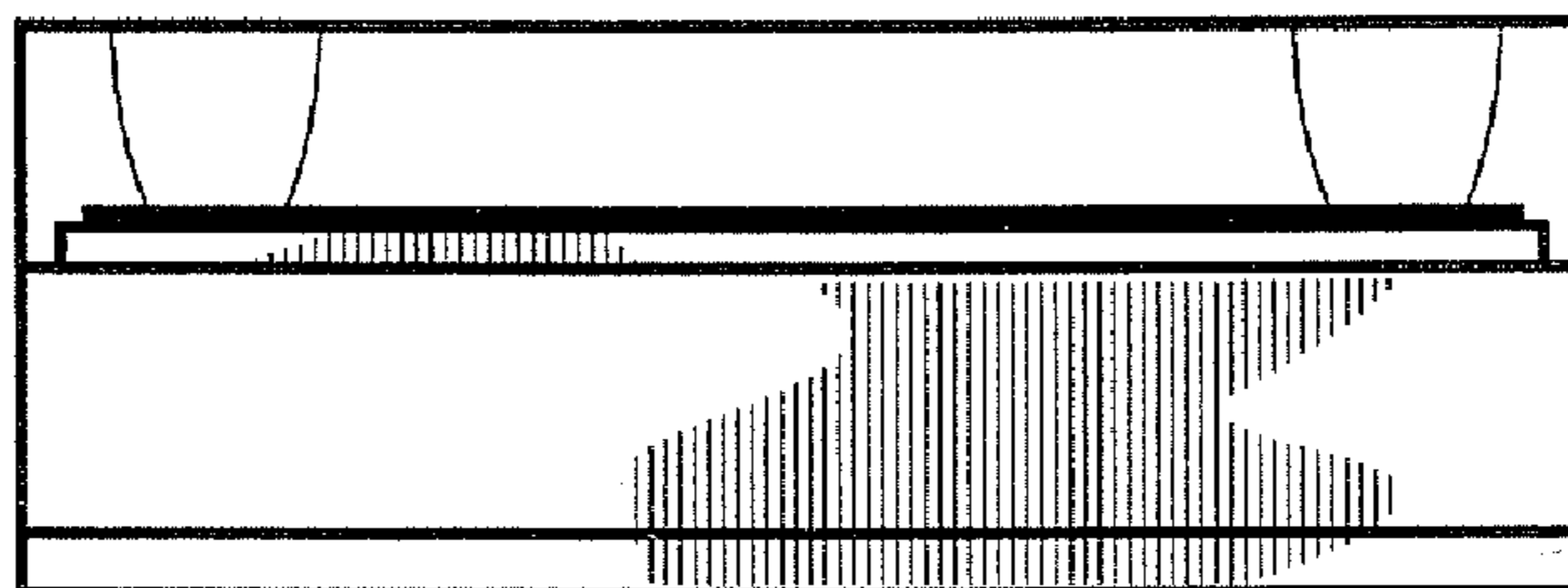


FIG. 7

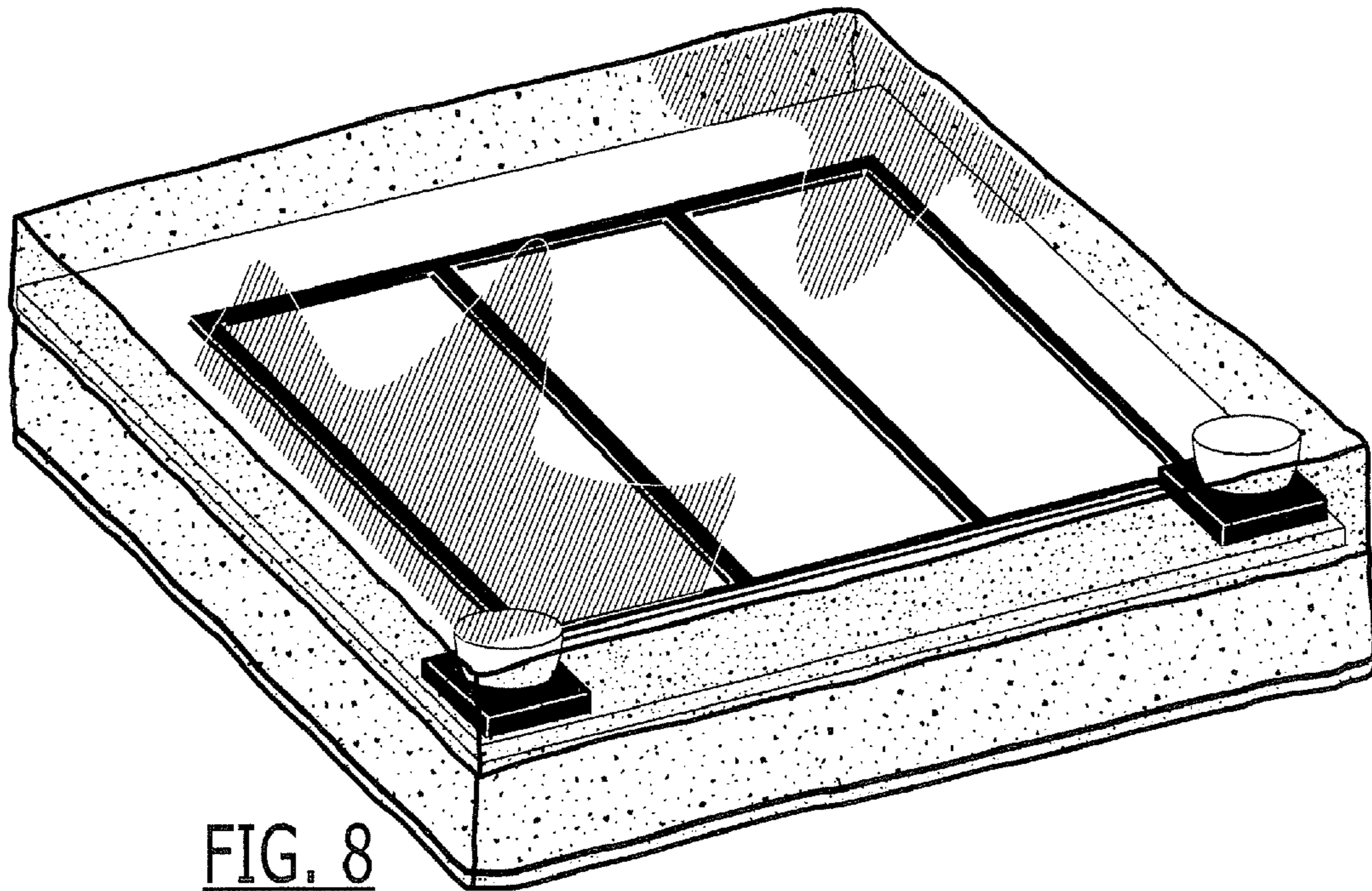


FIG. 8

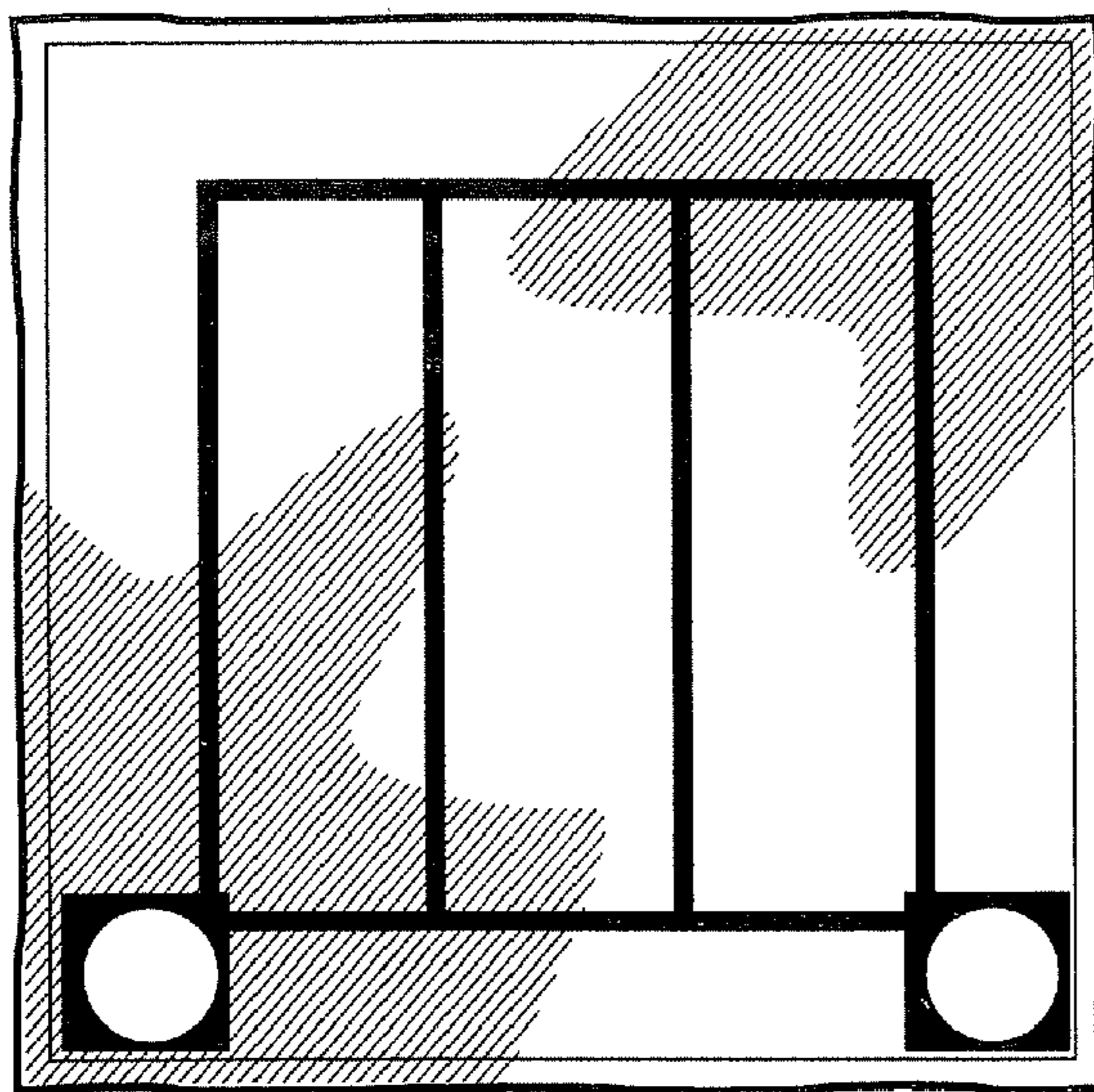


FIG. 9

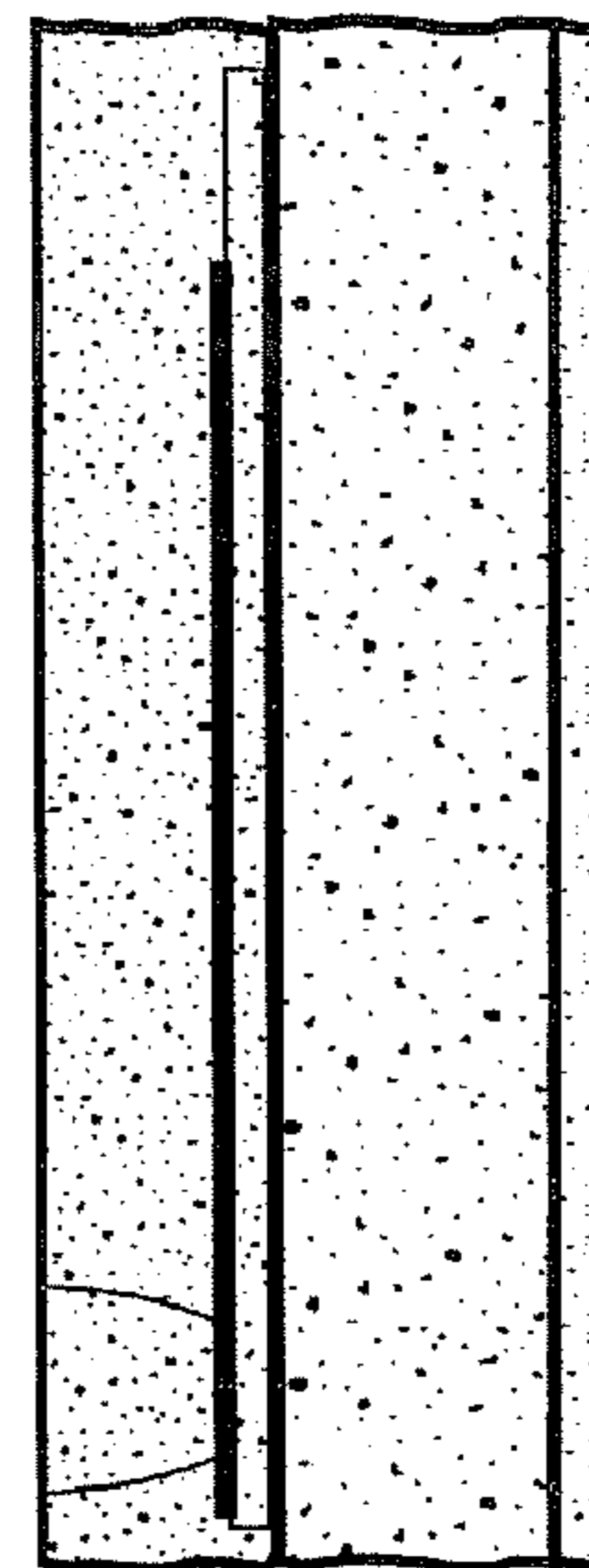


FIG. 10

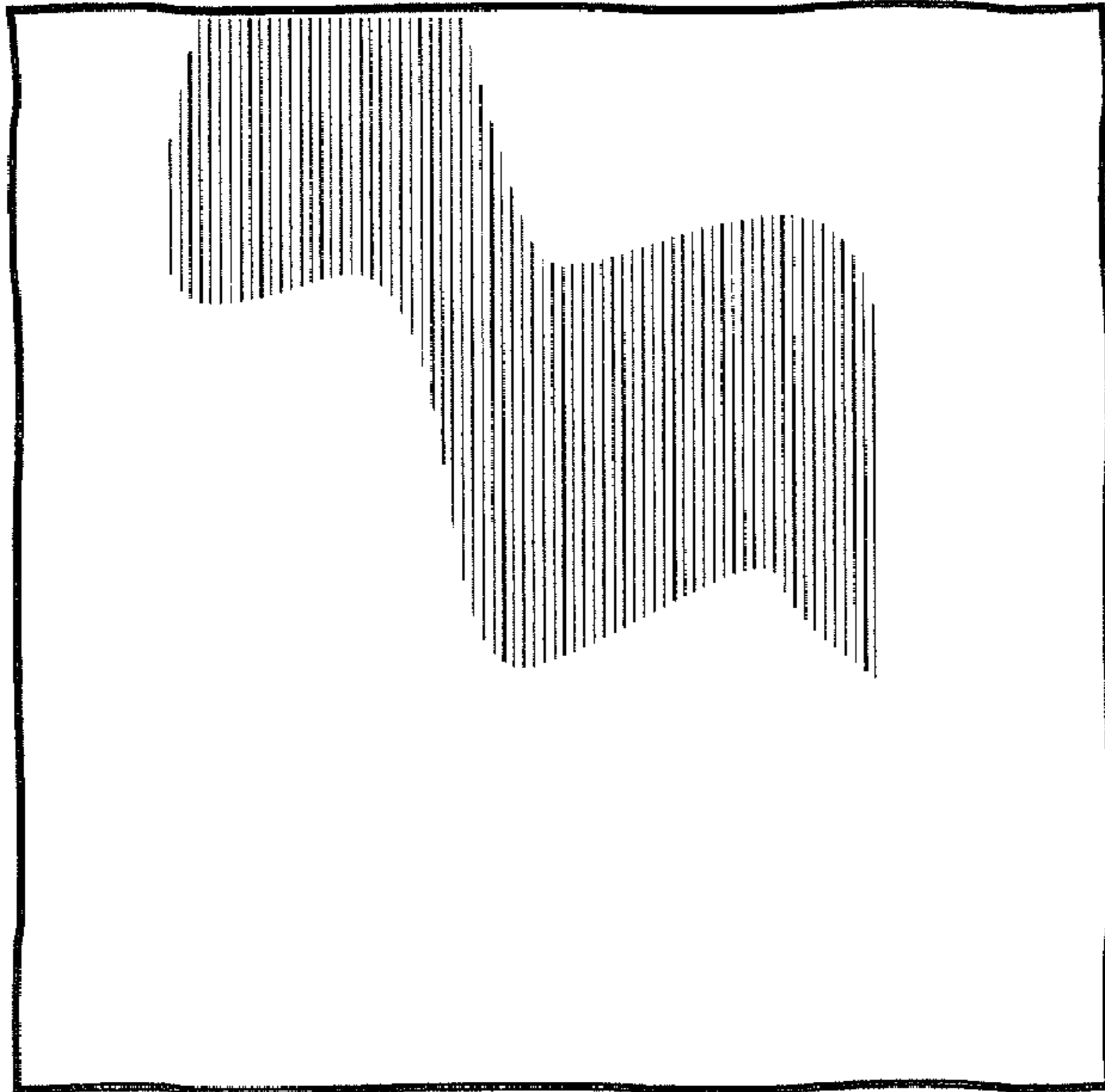


FIG. 11

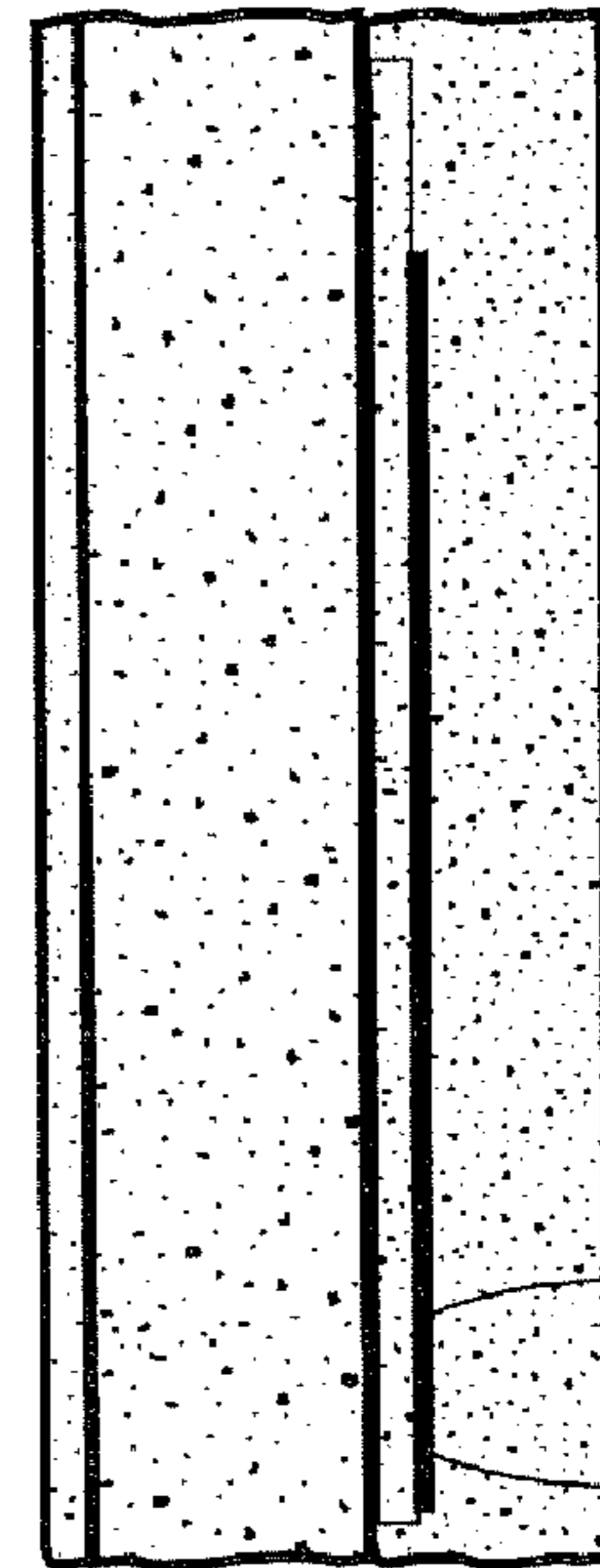


FIG. 12

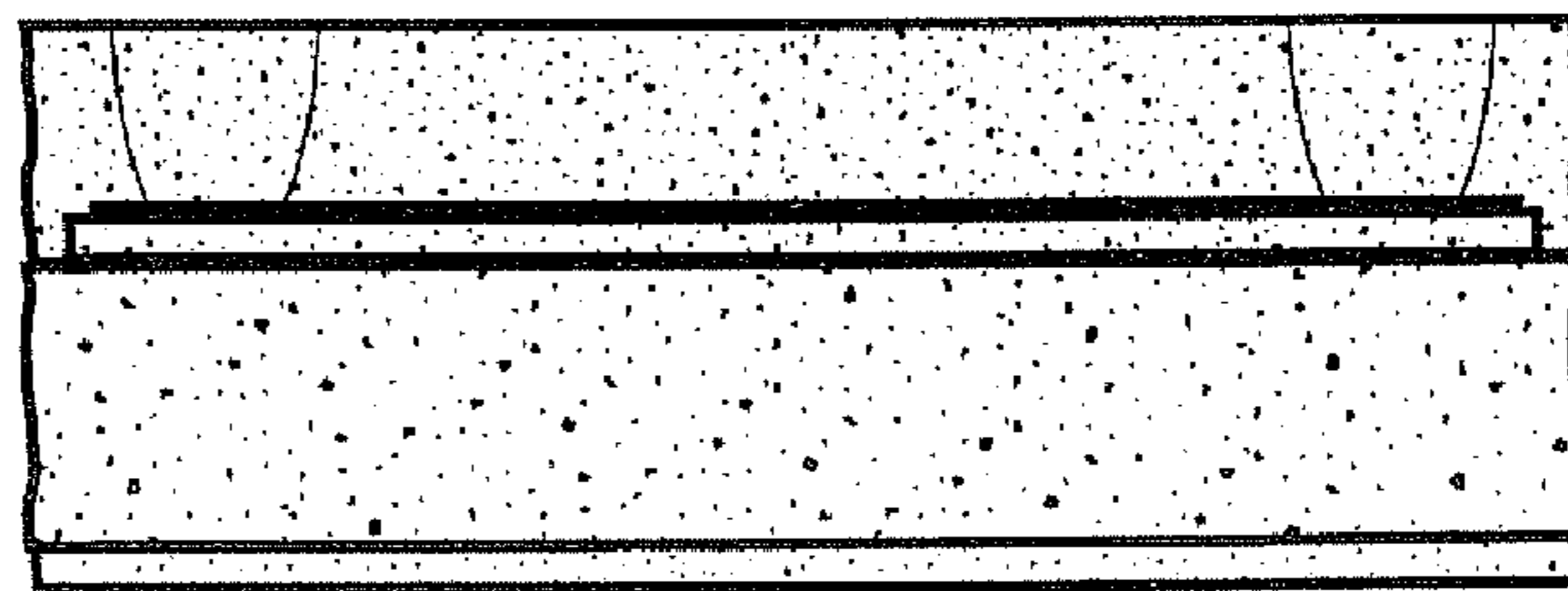


FIG. 13

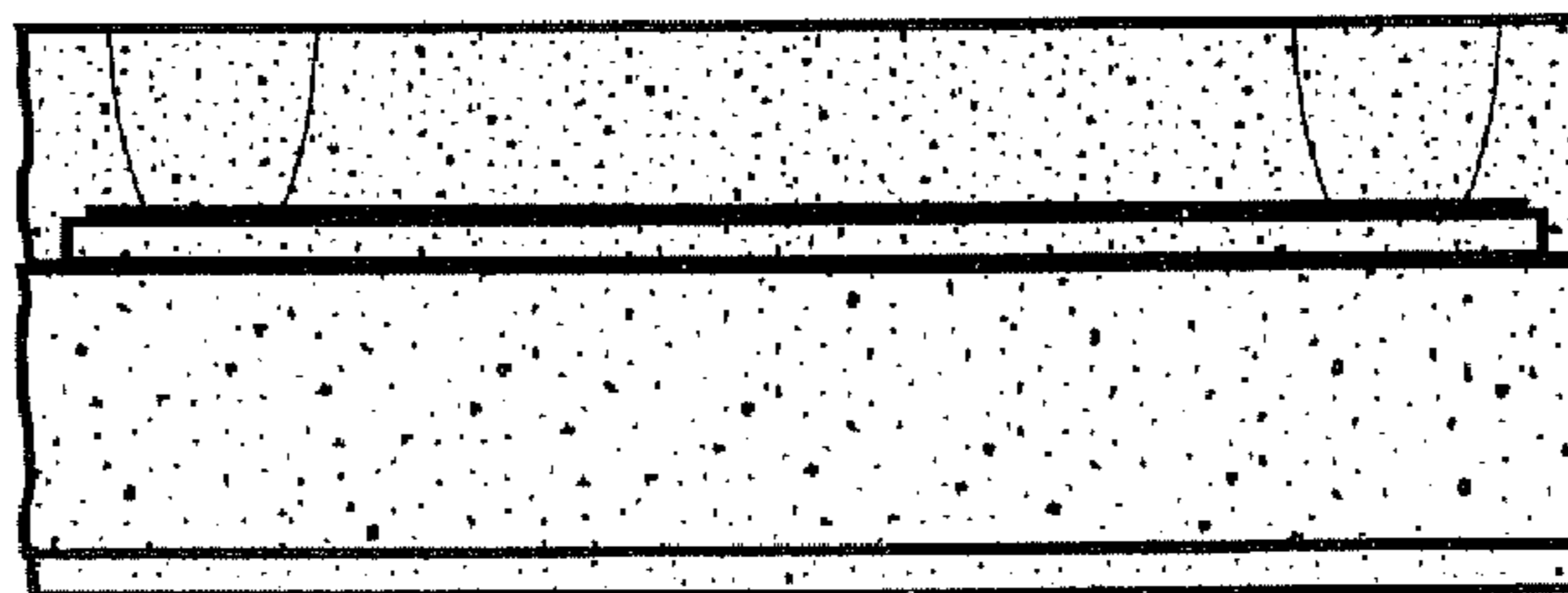


FIG. 14

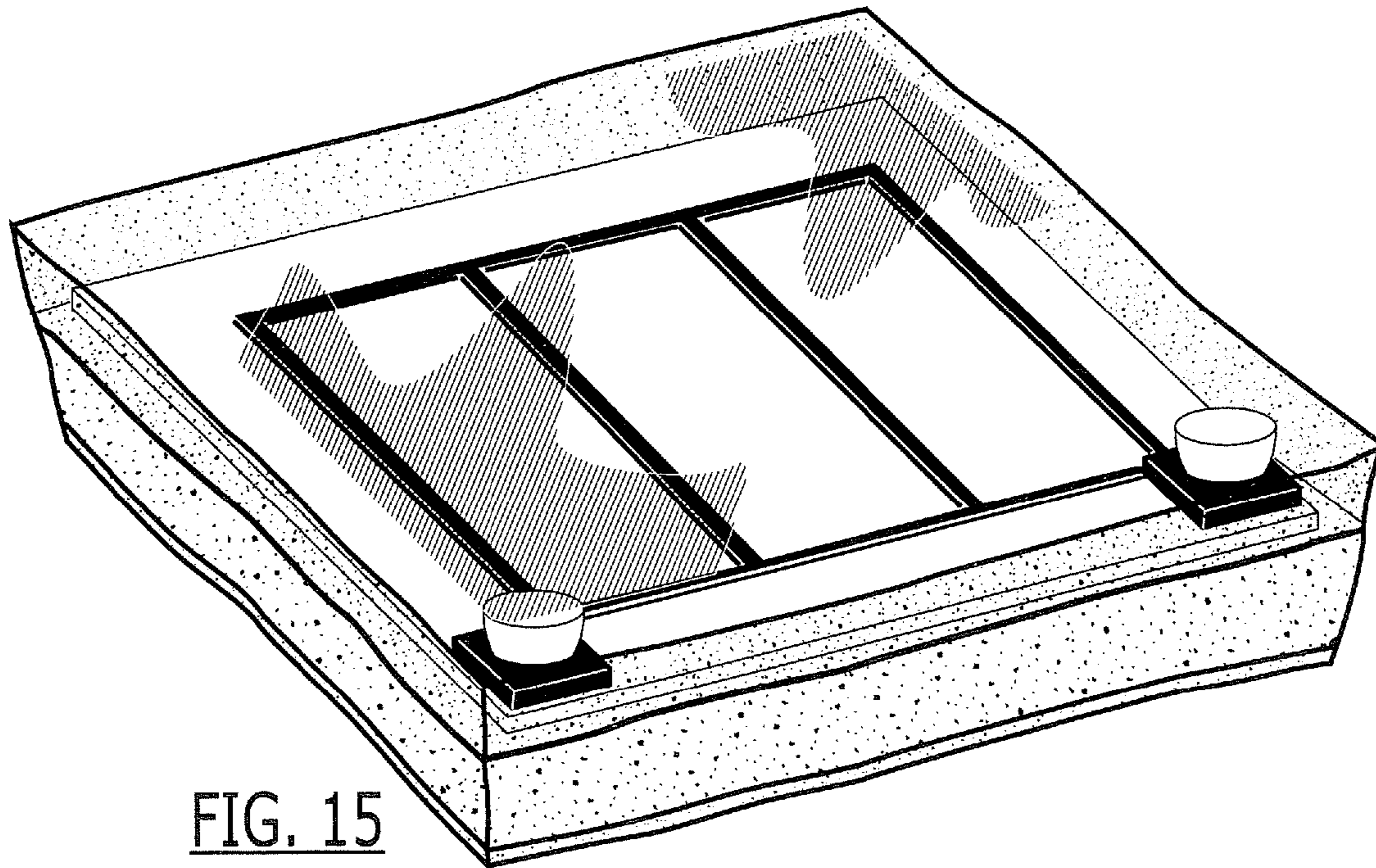


FIG. 15

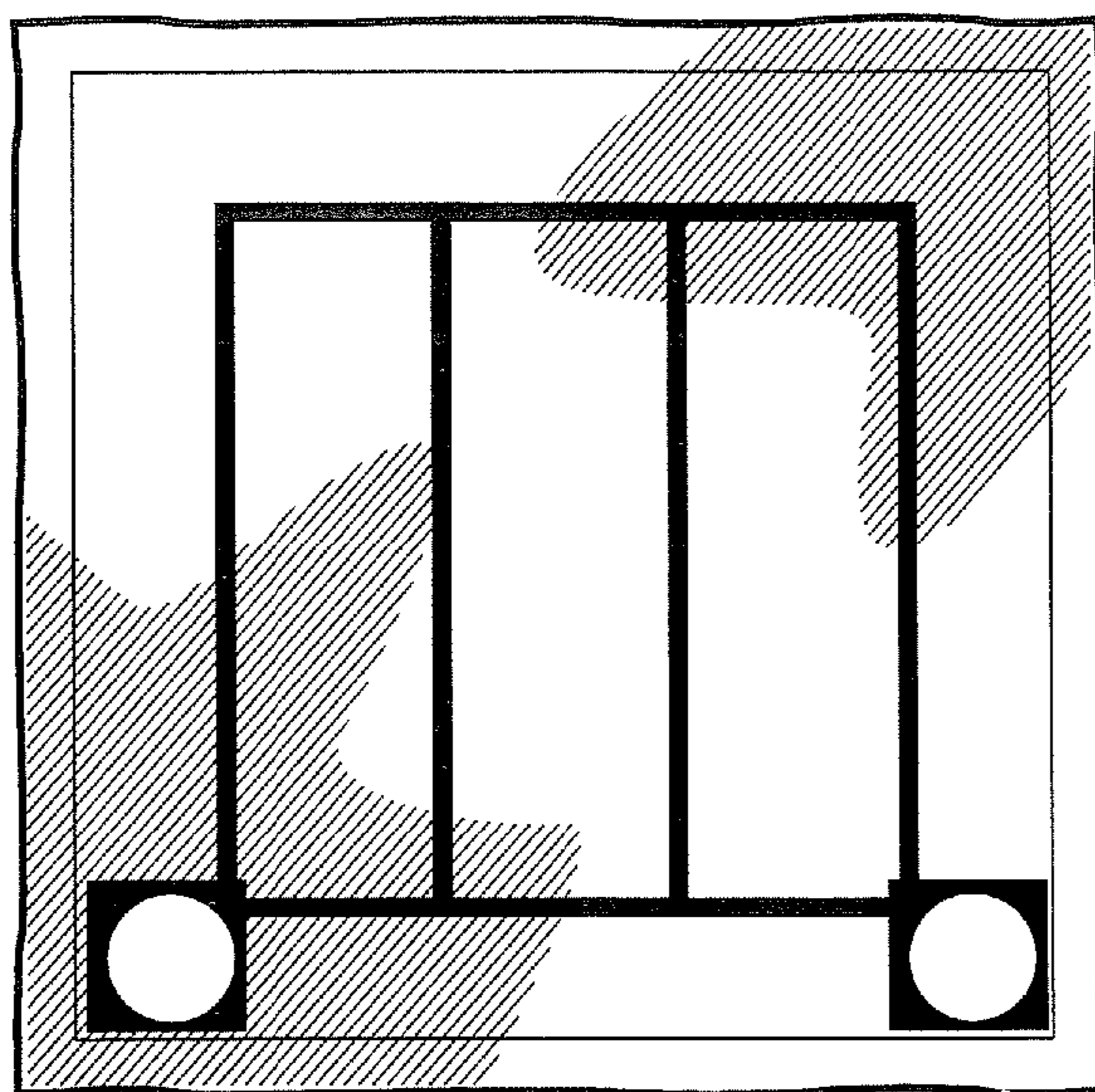


FIG. 16

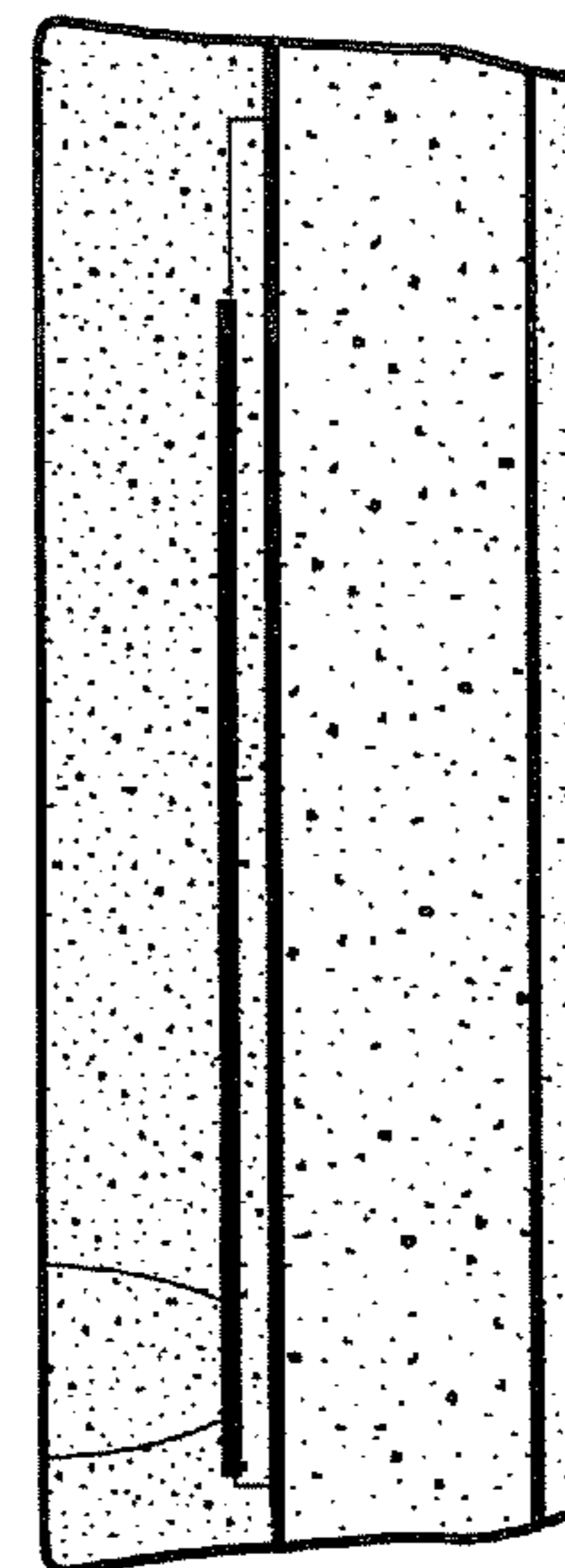


FIG. 17

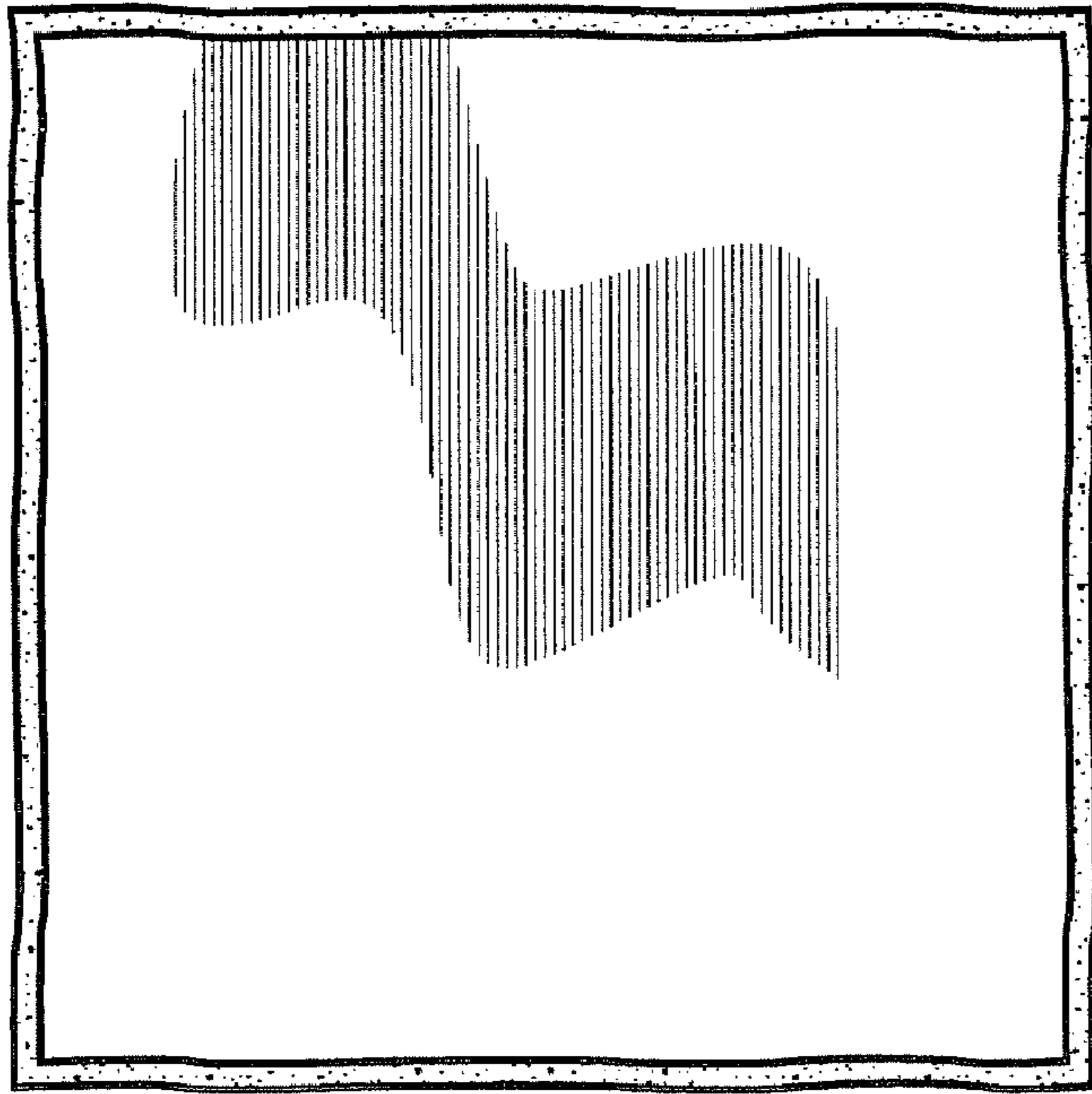


FIG. 18

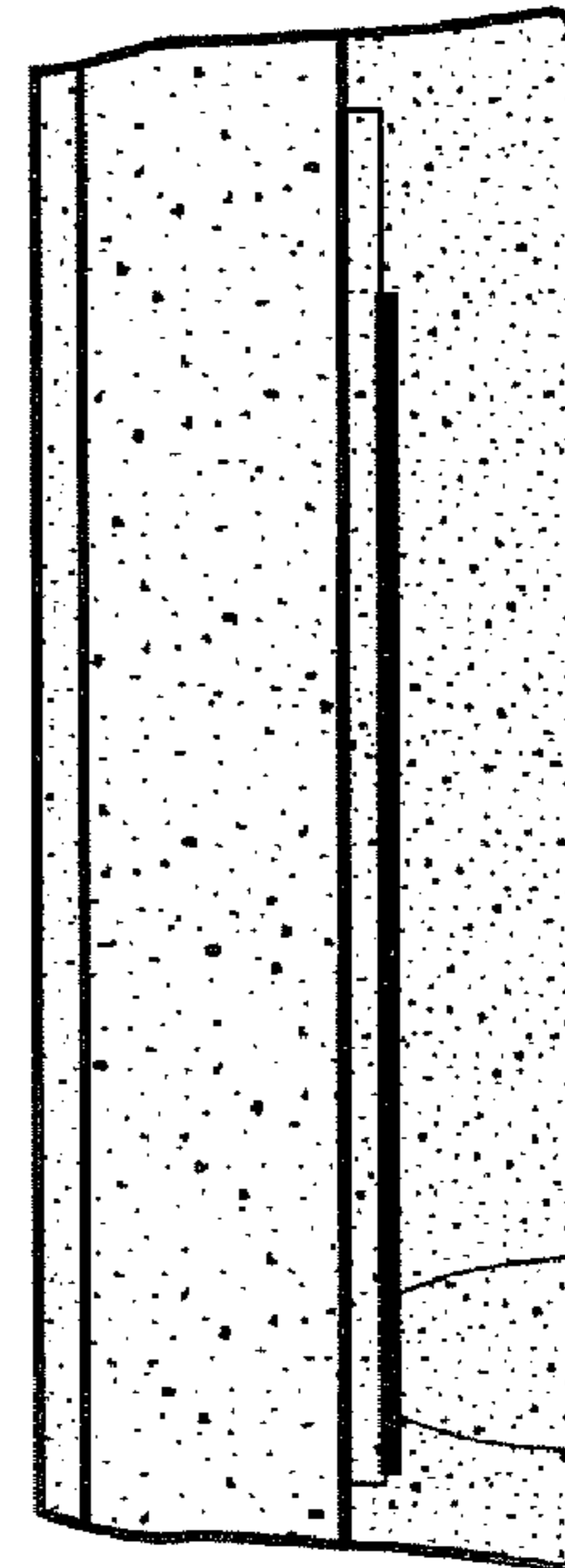


FIG. 19

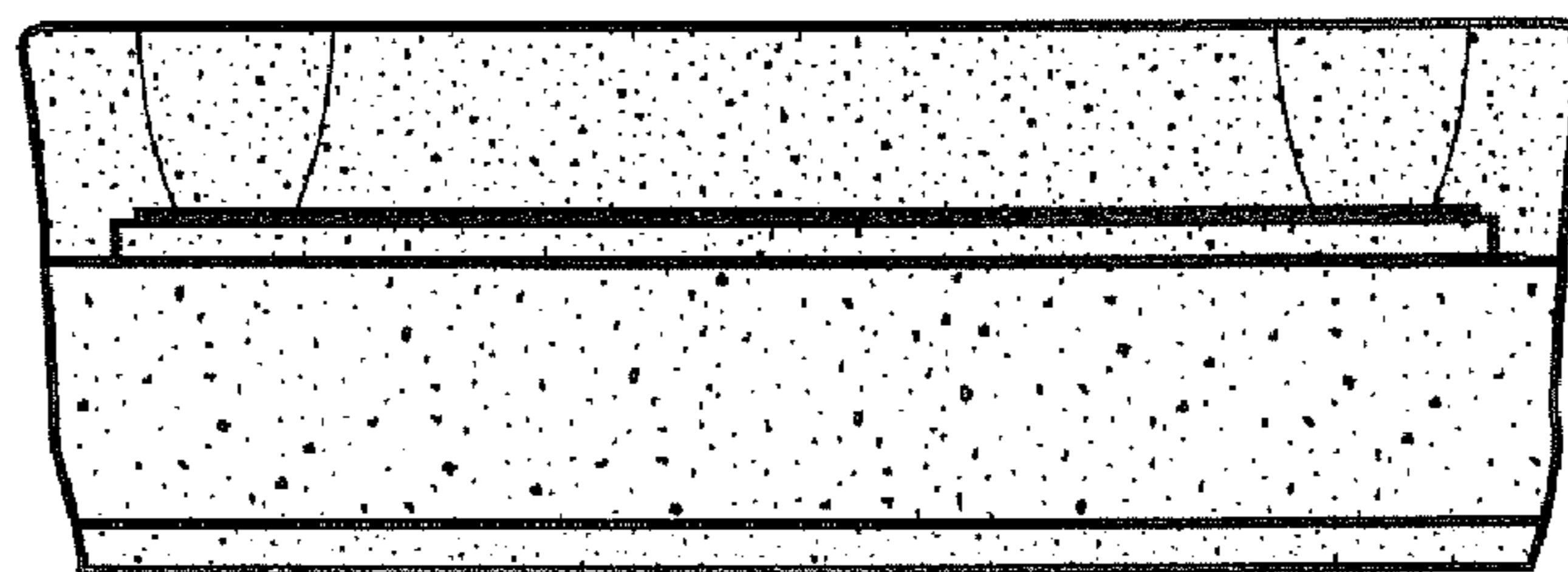


FIG. 20

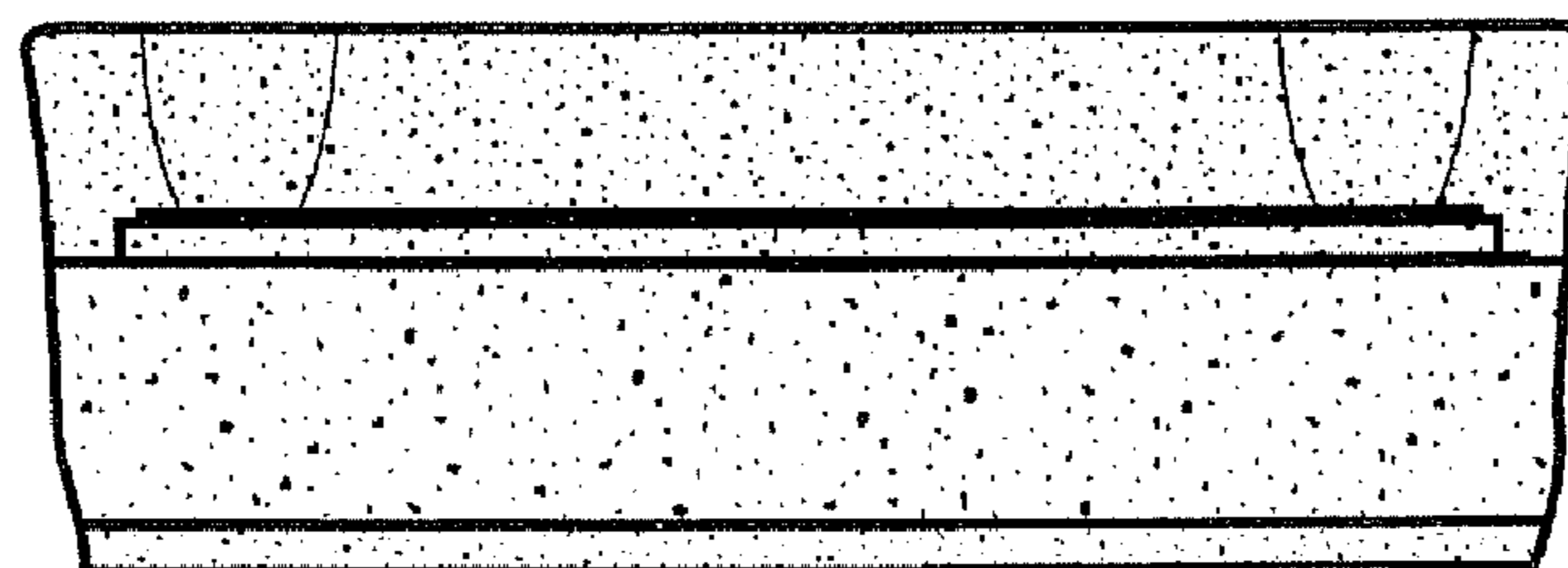


FIG. 21

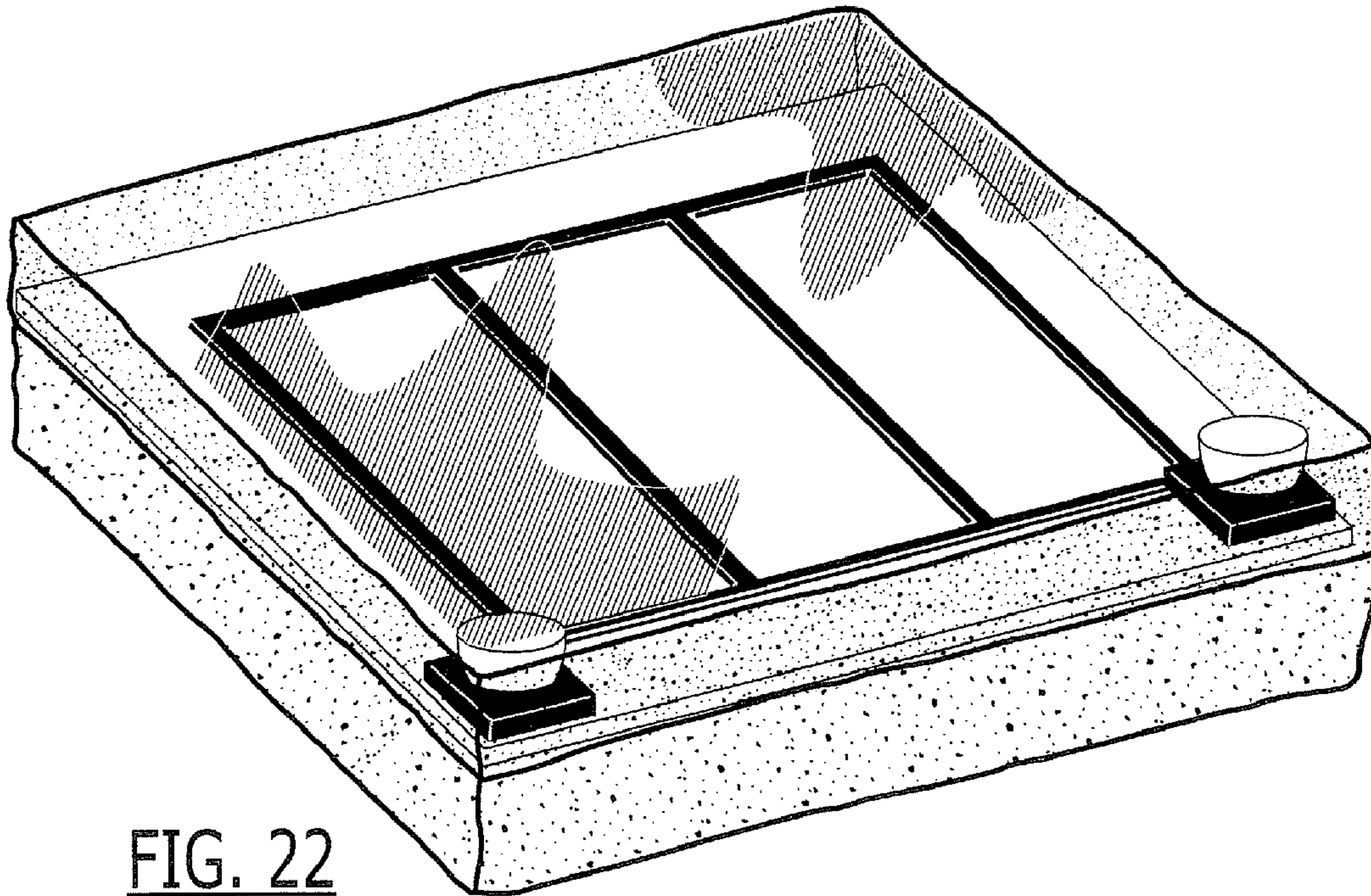


FIG. 22

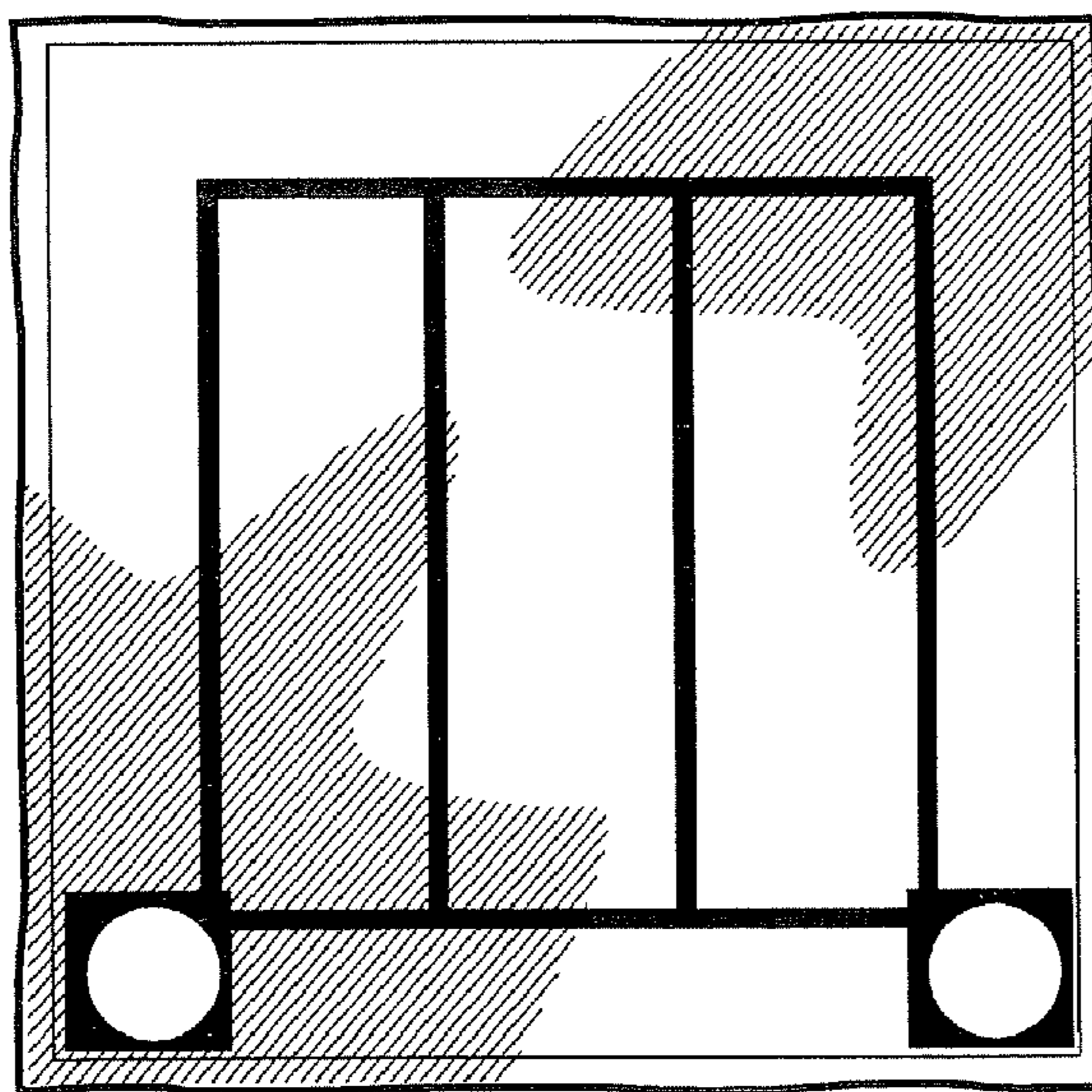


FIG. 23

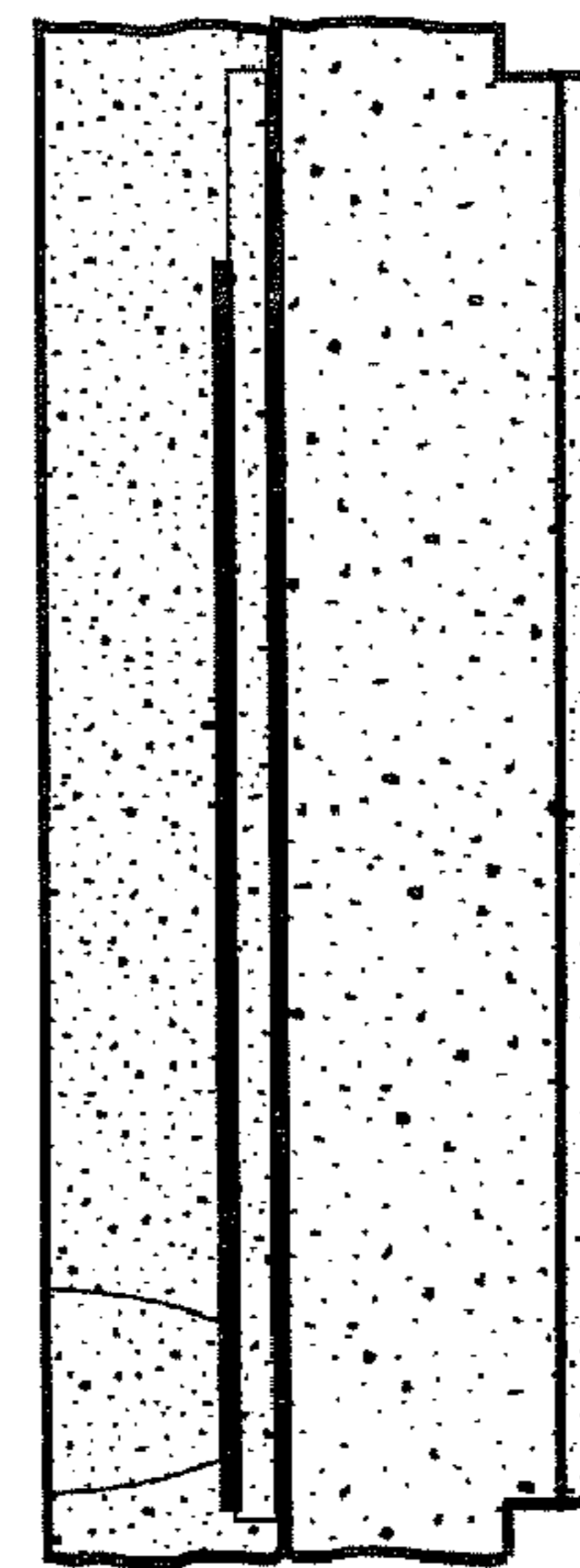


FIG. 24

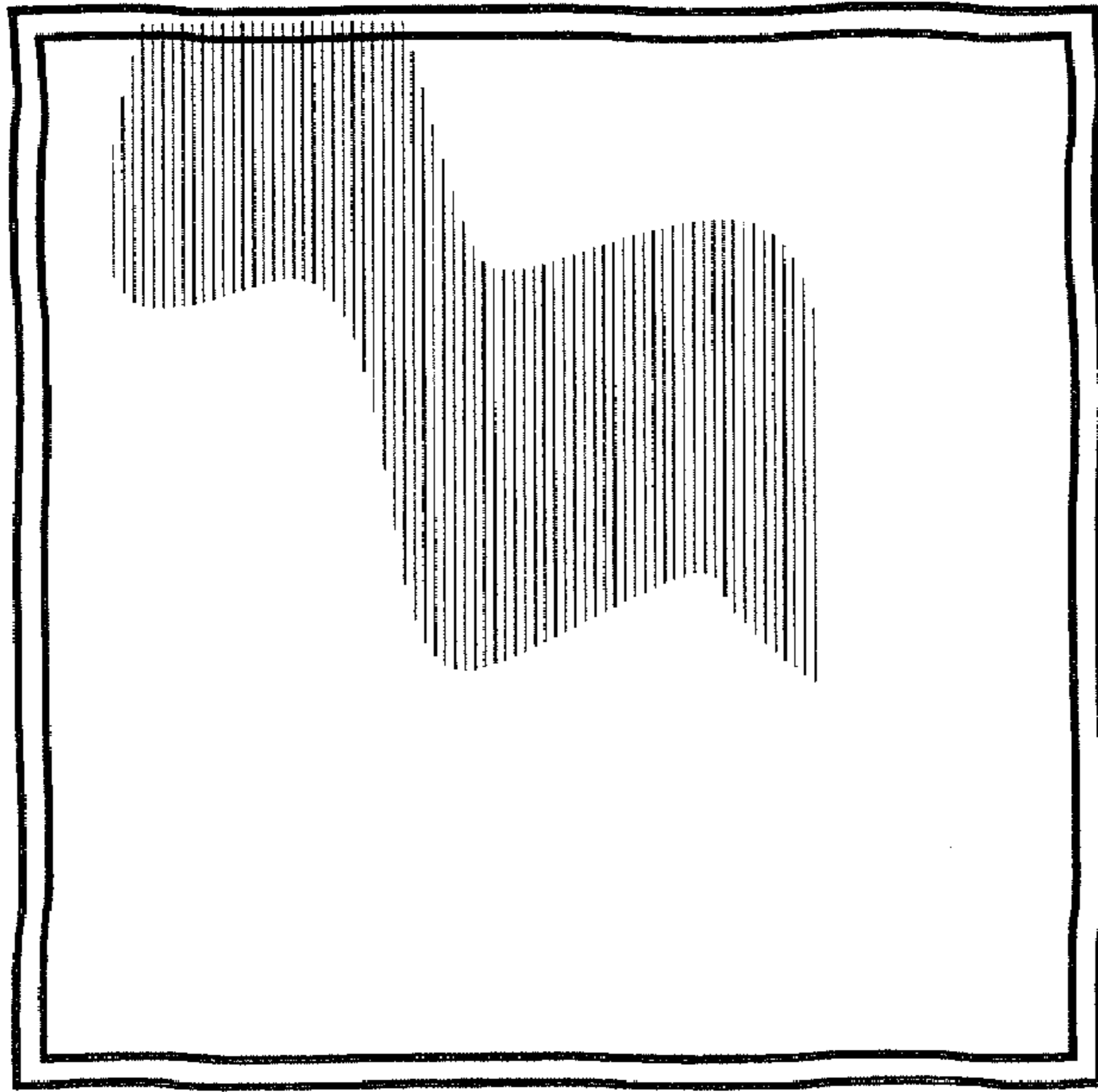


FIG. 25

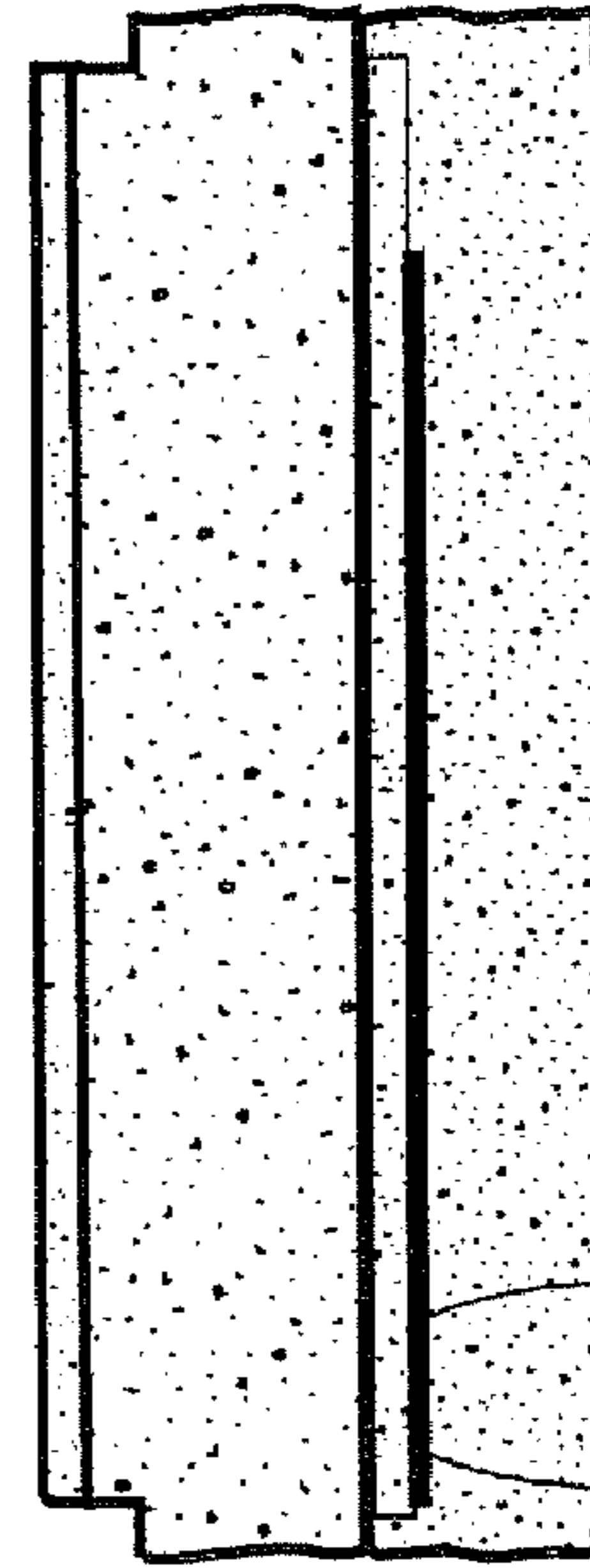


FIG. 26

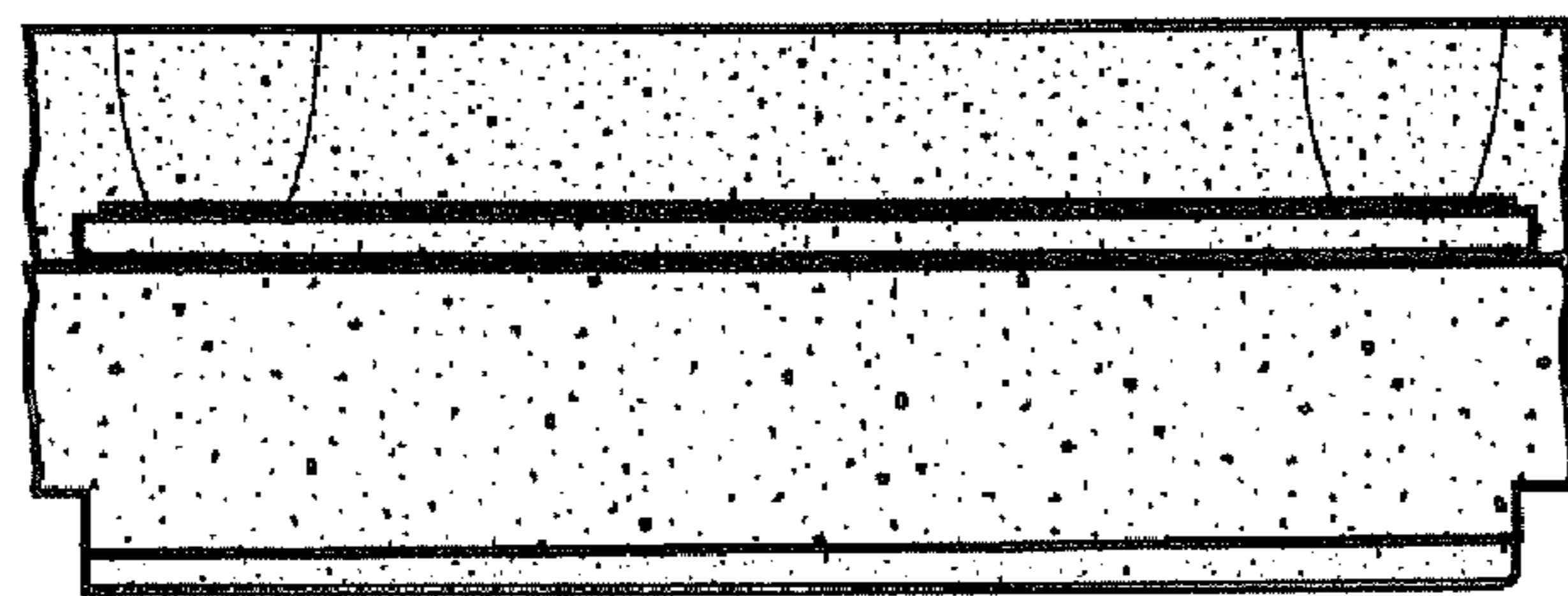


FIG. 27

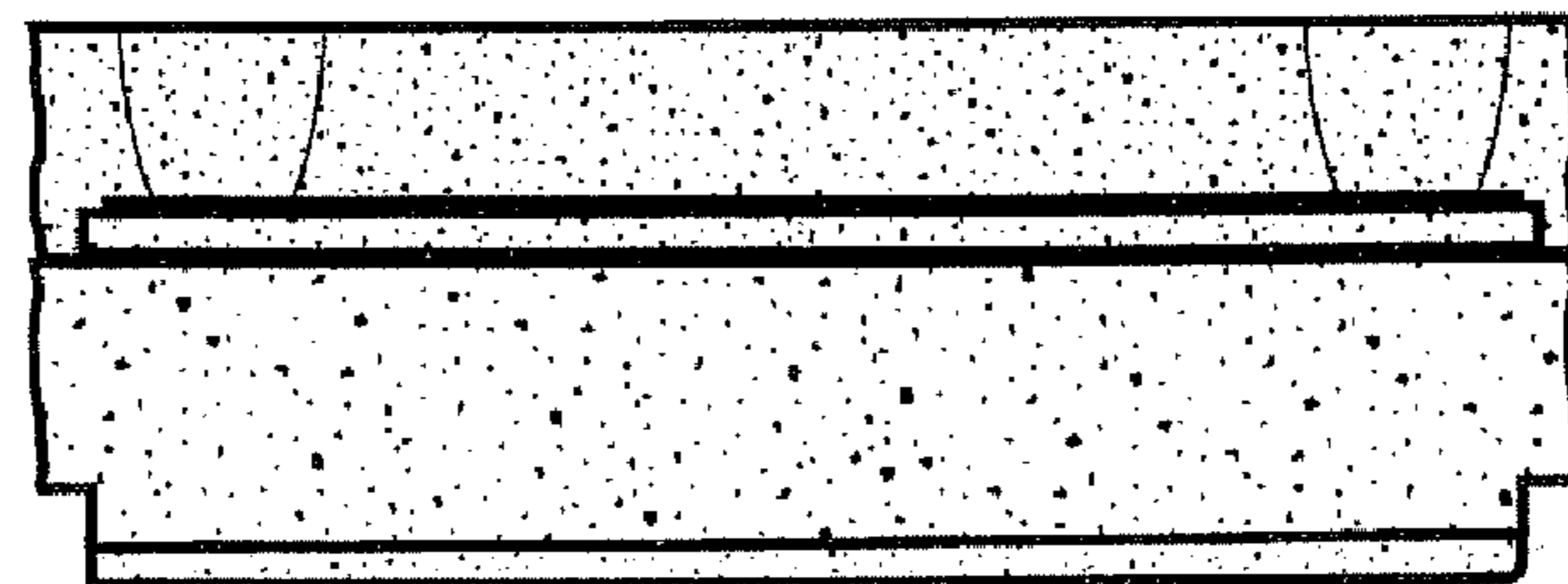


FIG. 28