



US00D622676S

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

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(45) **Date of Patent:** **** Aug. 31, 2010**

(54) **LED DISPLAY DEVICE**

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(73) Assignee: **Nichia Corporation**, Tokushima (JP)

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

(21) Appl. No.: **29/295,003**

(22) Filed: **Sep. 19, 2007**

(30) **Foreign Application Priority Data**

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Mar. 19, 2007	(JP)	2007-006998

(51) **LOC (9) 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

5,155,669 A * 10/1992 Yamuro 362/249.06
(Continued)

FOREIGN PATENT DOCUMENTS

JP 2005-515481 A 5/2005
(Continued)

Primary Examiner—Selina Sikder

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

(57) **CLAIM**

The ornamental design for a LED display device, as shown and described.

DESCRIPTION

FIG. 1 is a front view of the LED display device according to the first embodiment showing our new design;

FIG. 2 is an enlarged front view thereof shown broken away for ease of illustration;

FIG. 3 is an enlarged right side view thereof;

FIG. 4 is an enlarged left side view thereof;

FIG. 5 is an enlarged front view of a center section shown in FIG. 1;

FIG. 6 is an enlarged rear view thereof;

FIG. 7 is an enlarged top plan view thereof;

FIG. 8 is an enlarged bottom view thereof;

FIG. 9 is an enlarged front perspective view thereof;

FIG. 10 is an enlarged rear perspective view thereof;

FIG. 11 is an enlarged sectional view taken along line “11—11” in FIG. 5;

FIG. 12 is an enlarged sectional view taken along line “12—12” in FIG. 5;

FIG. 13 is a first reference view showing an alternate configuration;

FIG. 14 is a second reference view showing an alternate configuration;

FIG. 15 is a front view of the LED display device according to the second embodiment;

FIG. 16 is an enlarged front view thereof shown broken away for ease of illustration;

FIG. 17 is an enlarged right side view thereof;

FIG. 18 is an enlarged left side view thereof;

FIG. 19 is an enlarged front view of a center section shown in FIG. 15;

FIG. 20 is an enlarged rear view thereof;

FIG. 21 is an enlarged top plan view thereof;

FIG. 22 is an enlarged bottom view thereof;

FIG. 23 is an enlarged front perspective view thereof;

FIG. 24 is an enlarged rear perspective view thereof;

FIG. 25 is an enlarged sectional view taken along line “25—25” in FIG. 19;

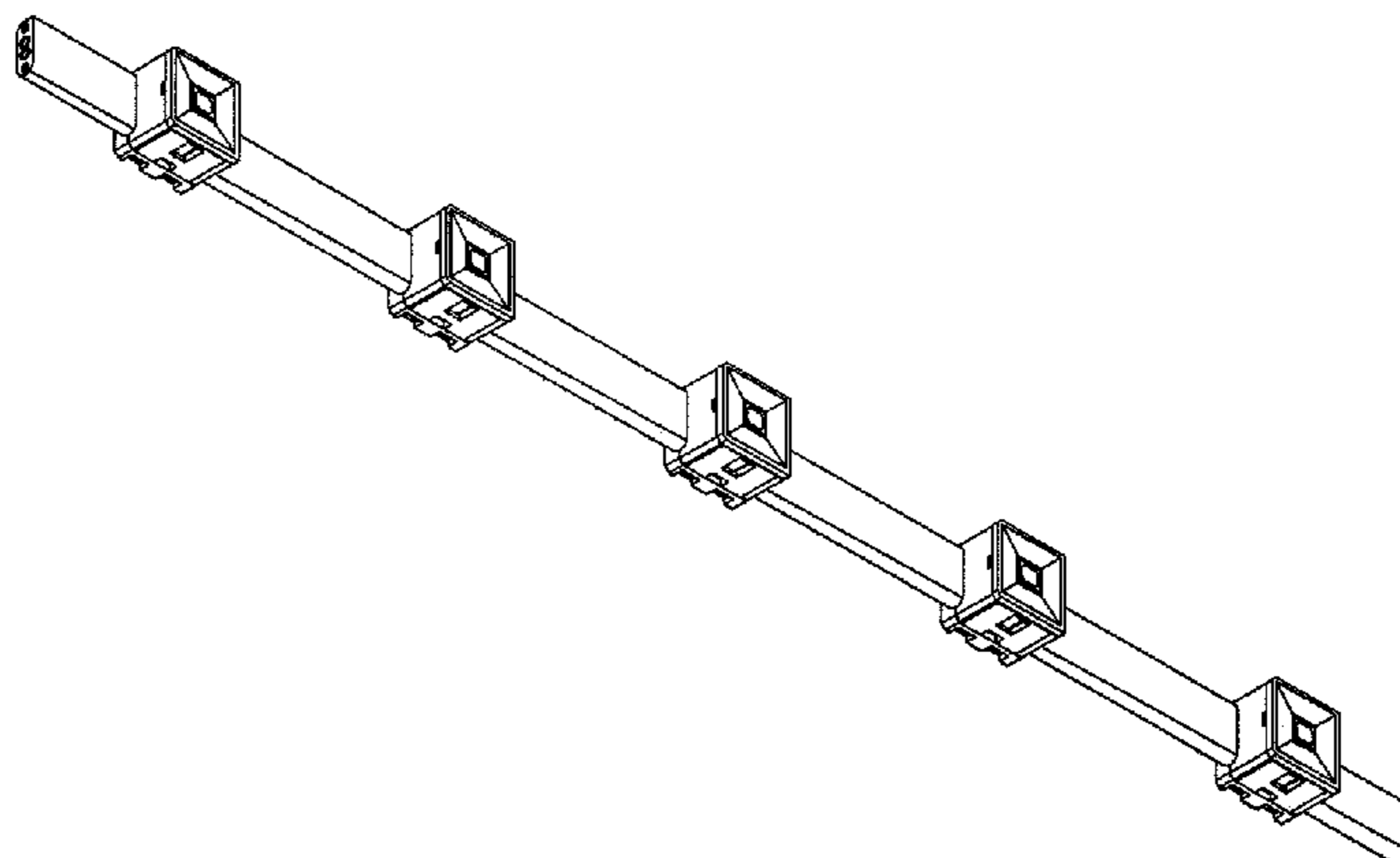
FIG. 26 is an enlarged sectional view taken along line “26—26” in FIG. 19;

FIG. 27 is a first reference view showing an alternate configuration; and,

FIG. 28 is a second reference view showing an alternate configuration.

The broken lines in the drawing are shown for illustrative purpose only and form no part of the claimed design.

1 Claim, 10 Drawing Sheets



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U.S. PATENT DOCUMENTS

5,559,681 A * 9/1996 Duarte 362/231
6,188,527 B1 * 2/2001 Bohn 359/710
6,371,637 B1 * 4/2002 Atchinson et al. 362/555
6,932,495 B2 * 8/2005 Sloan et al. 362/294
7,135,034 B2 * 11/2006 Friedman et al. 607/88
7,152,999 B2 * 12/2006 Lin 362/249.06
7,201,511 B2 * 4/2007 Moriyama et al. 362/646
7,217,012 B2 * 5/2007 Southard et al. 362/391
7,253,444 B2 * 8/2007 Ikeda 257/81

D565,515 S * 4/2008 Chen D13/180
2003/0193803 A1 * 10/2003 Lin 362/250
2004/0223328 A1 * 11/2004 Lee et al. 362/249
2005/0157500 A1 * 7/2005 Chen et al. 362/294
2007/0081342 A1 * 4/2007 Szeto 362/294
2007/0247851 A1 * 10/2007 Villard 362/294

FOREIGN PATENT DOCUMENTS

WO 02/097770 A2 12/2002

* cited by examiner



FIG. 1



FIG. 2

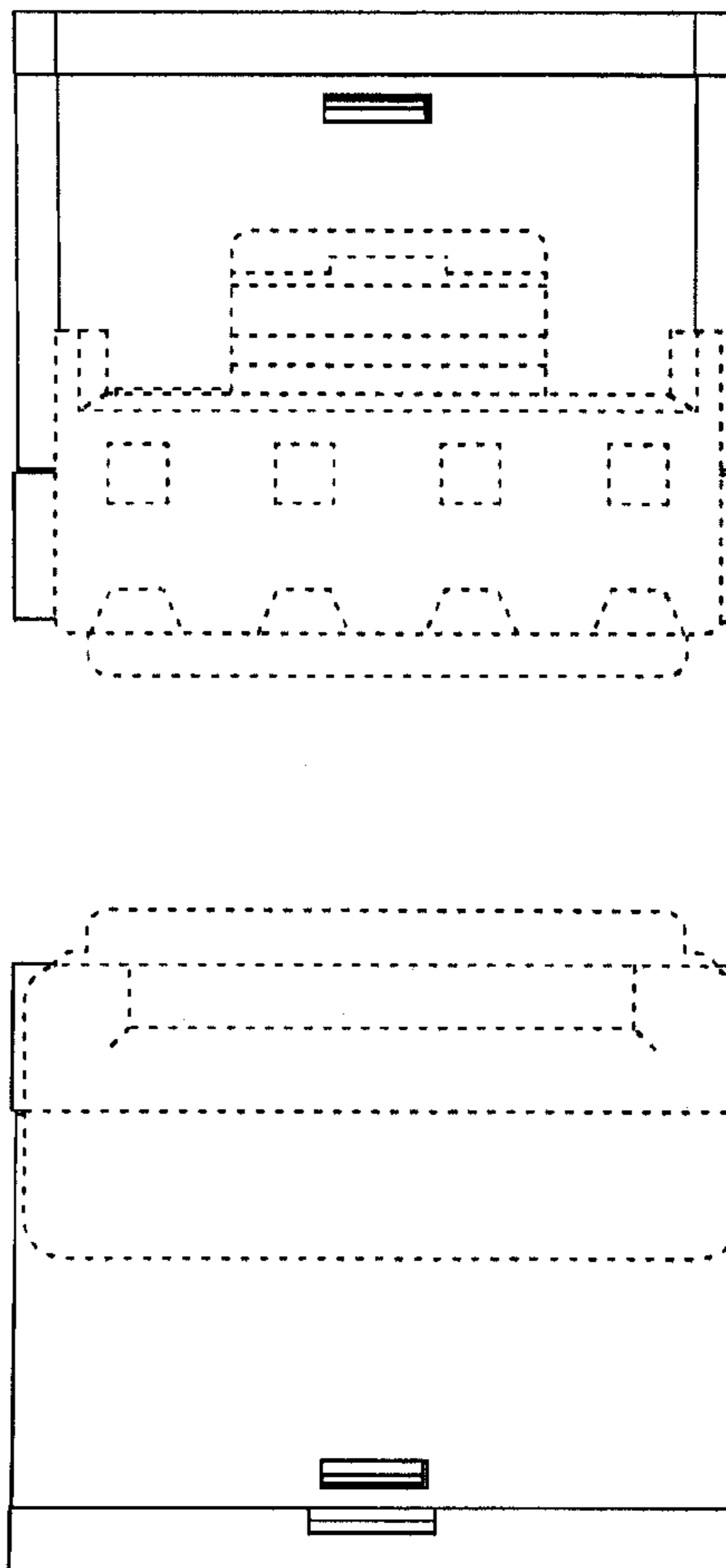


FIG. 3

FIG. 4

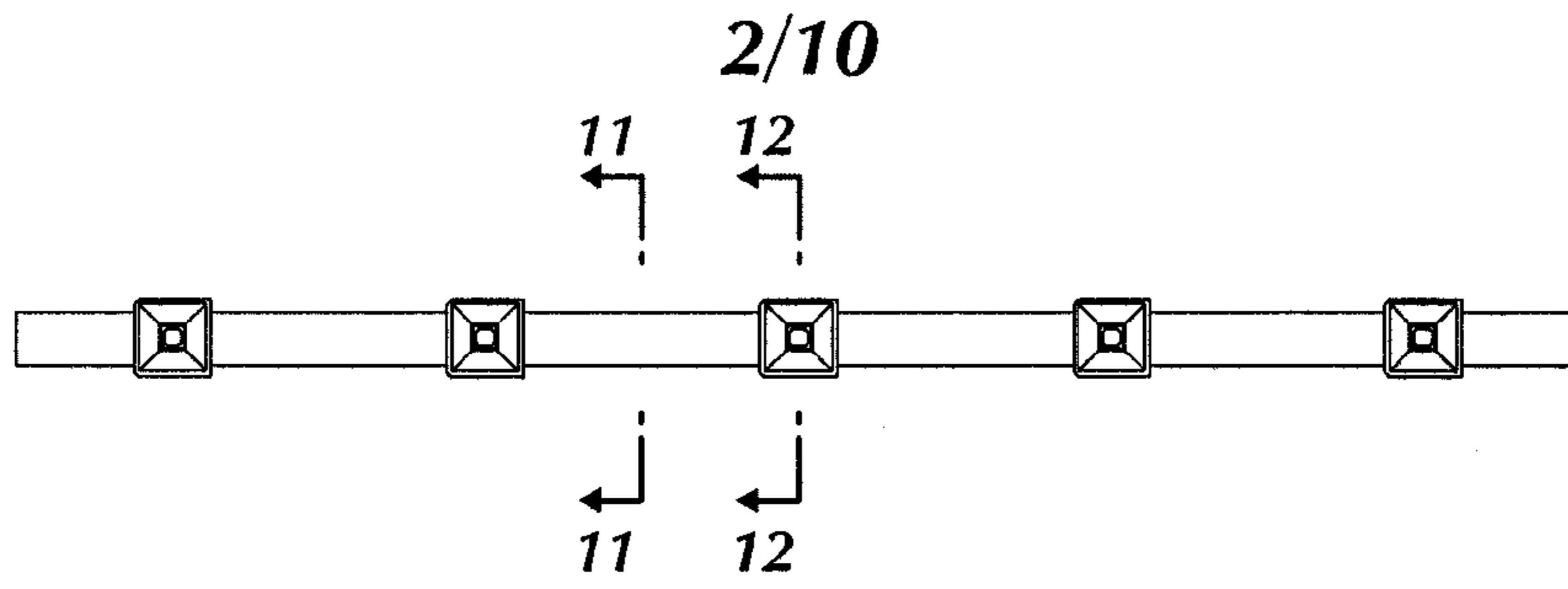


FIG. 5



FIG. 6

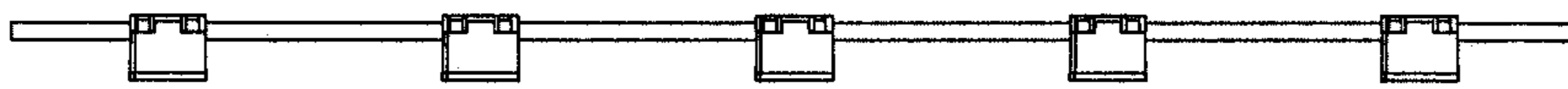


FIG. 7



FIG. 8

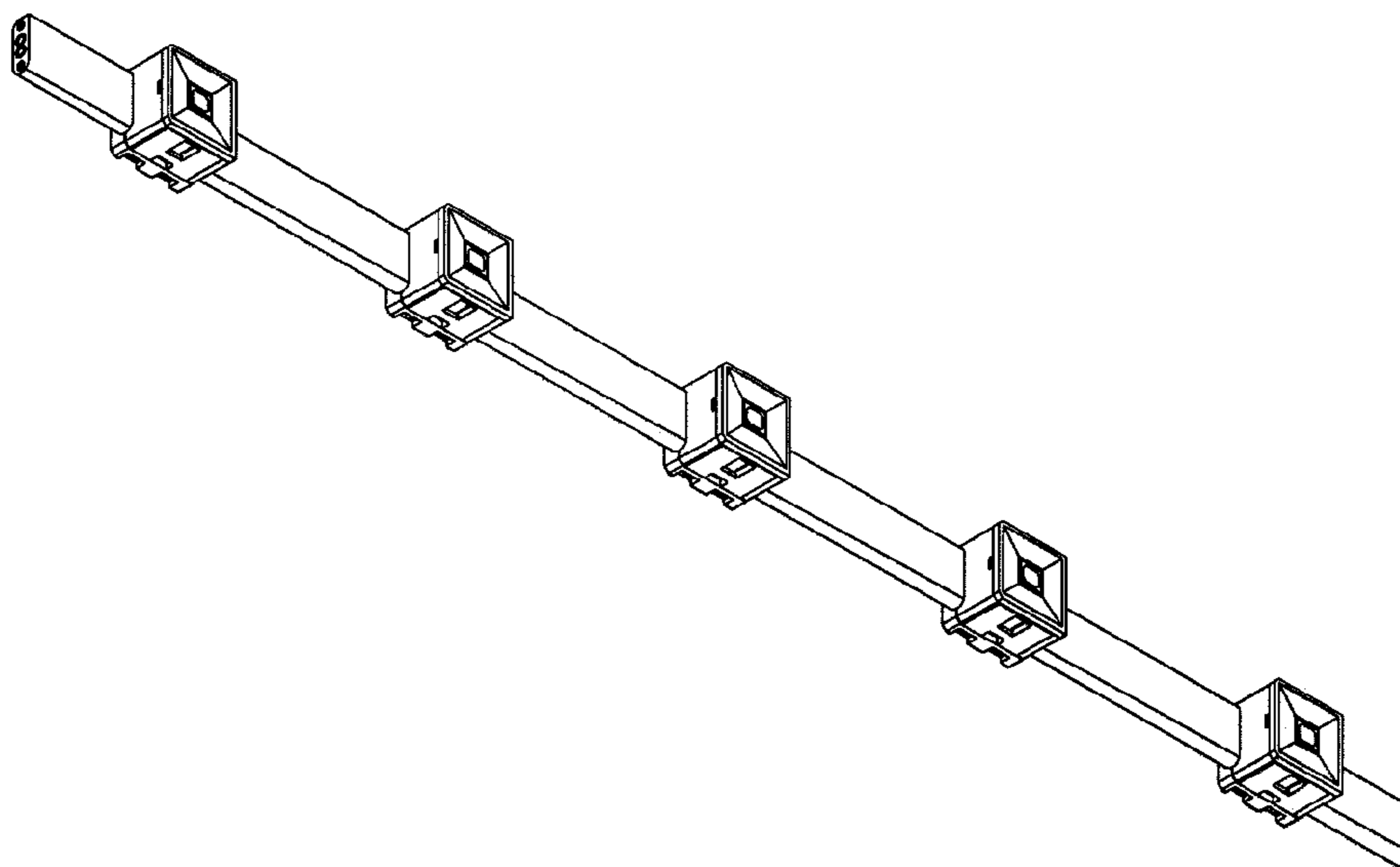


FIG. 9

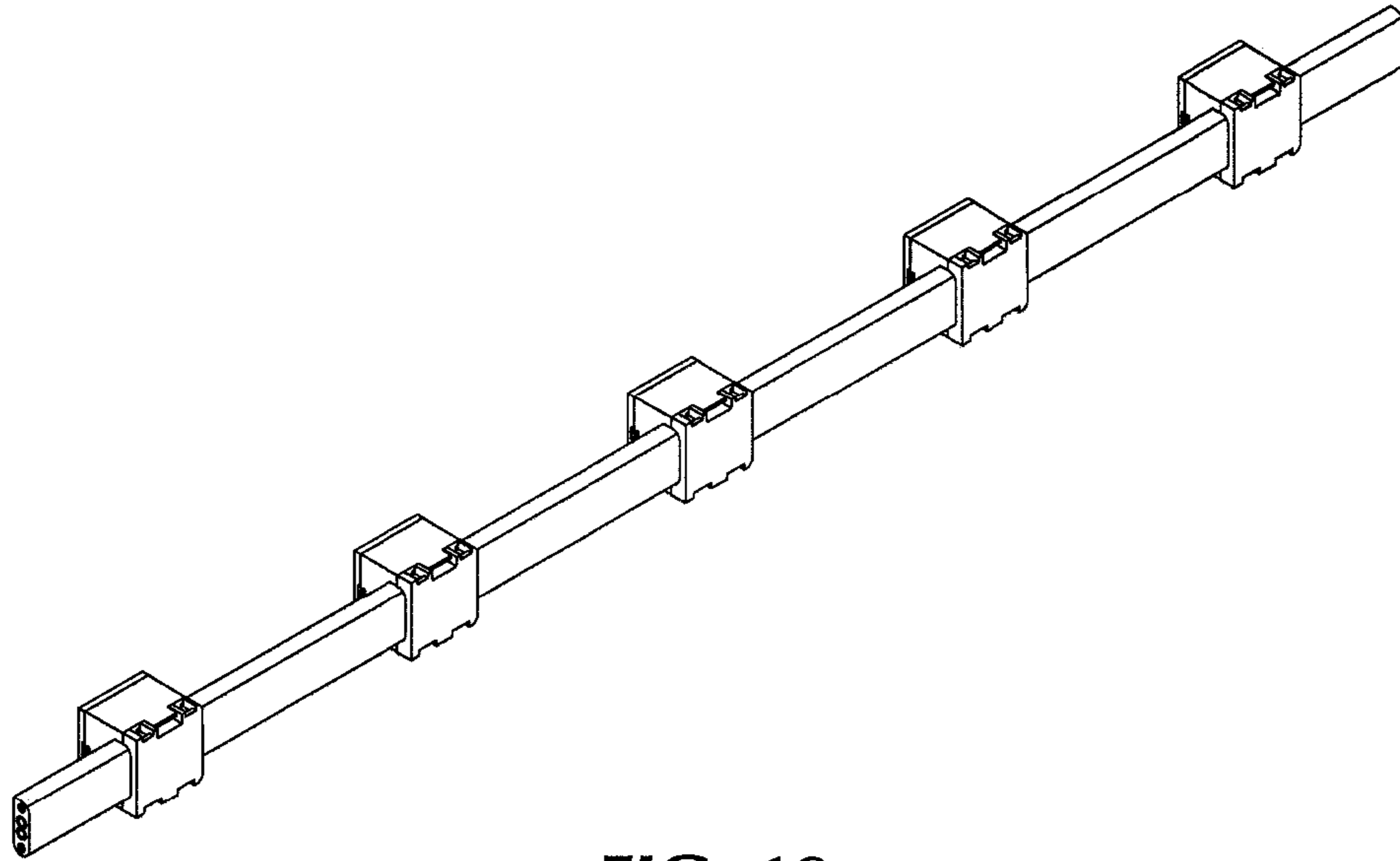


FIG. 10

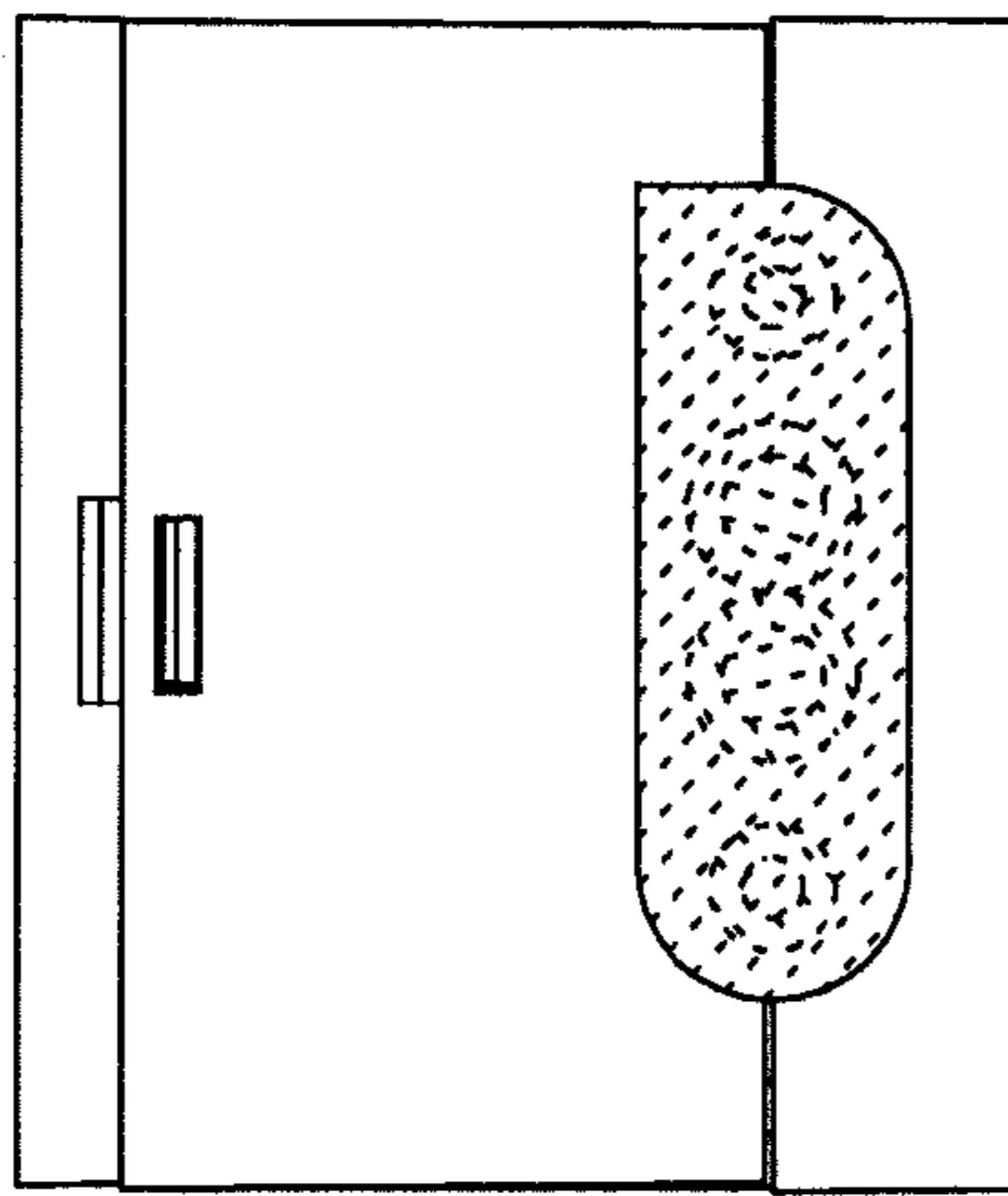


FIG. 11

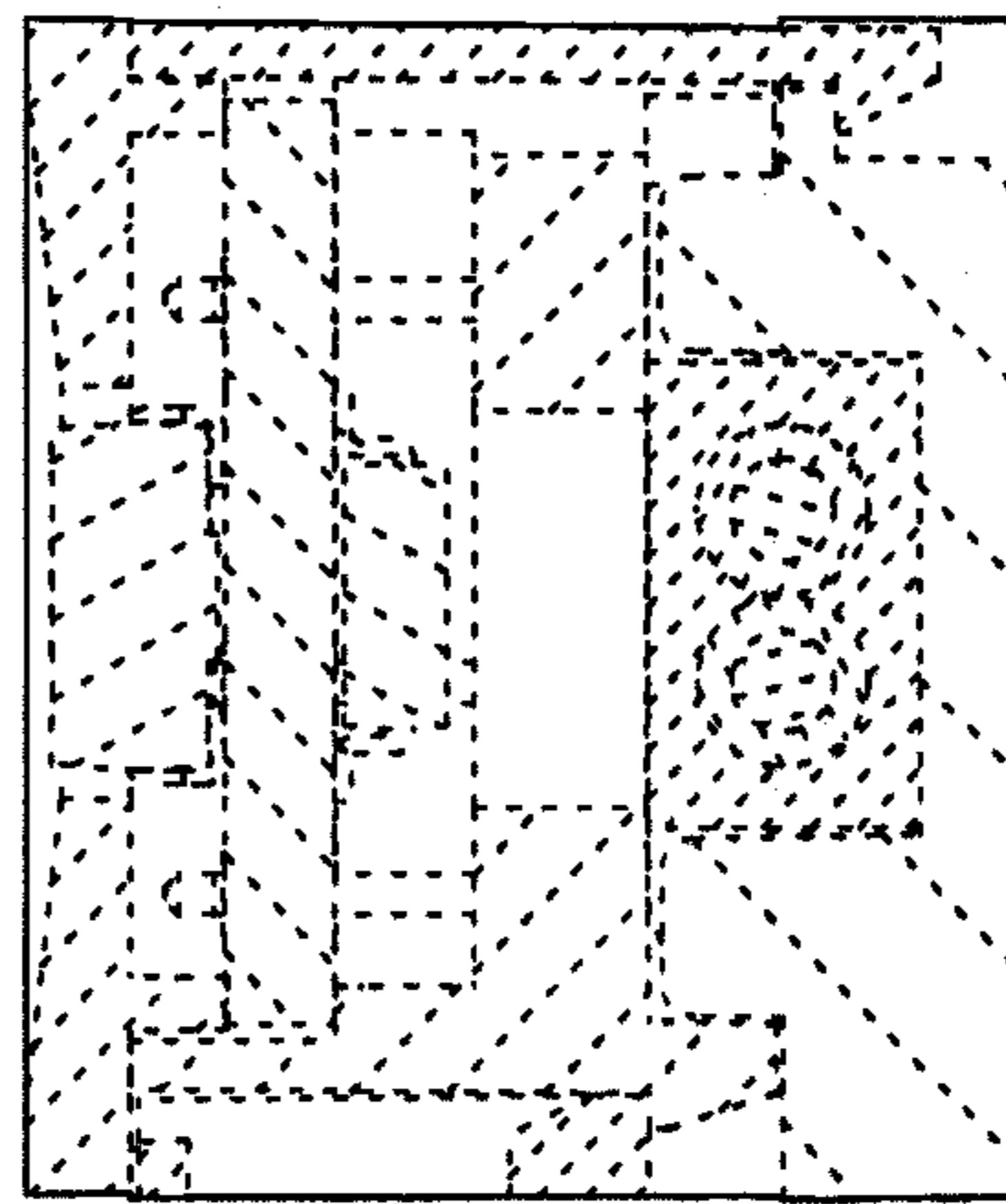


FIG. 12

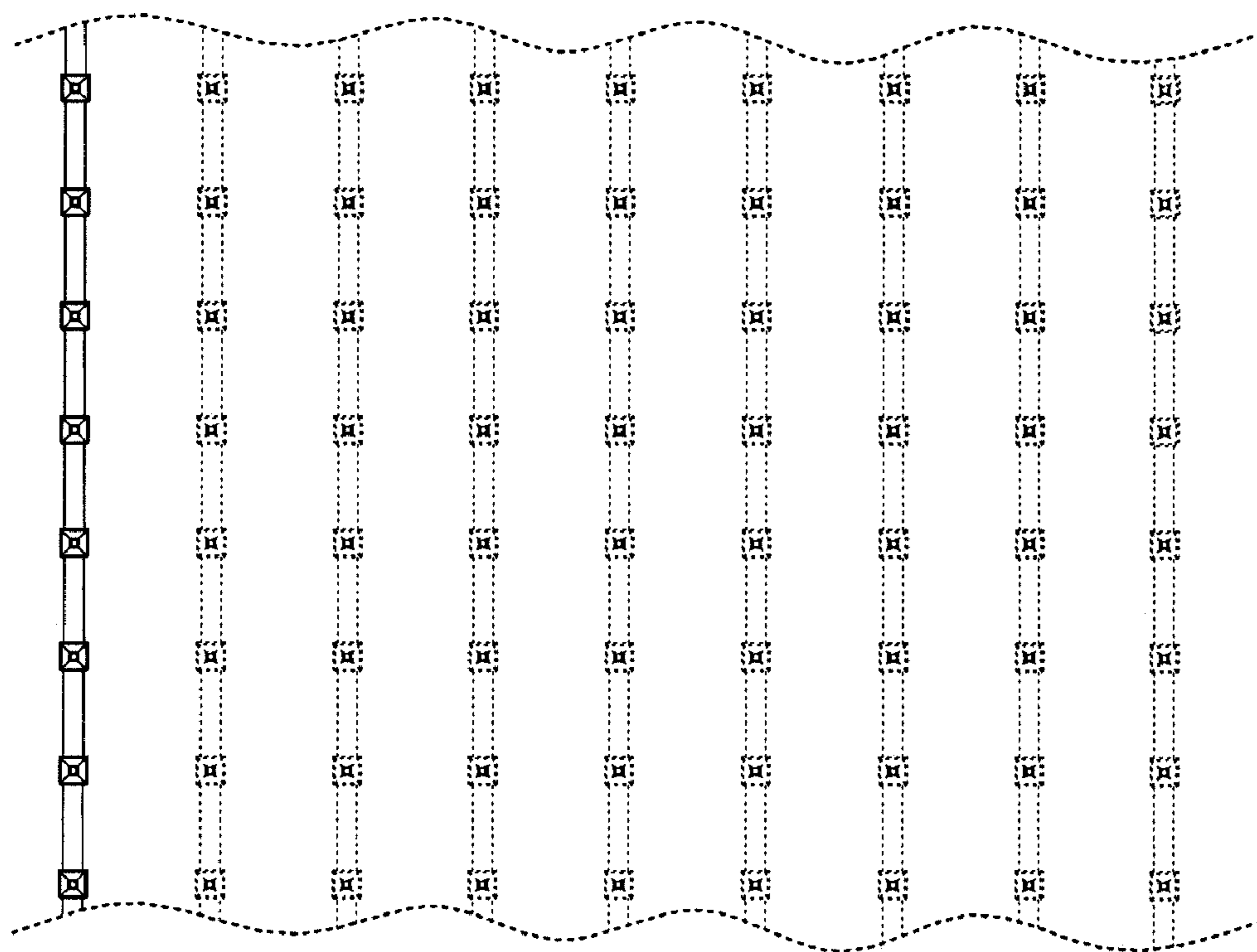


FIG. 13

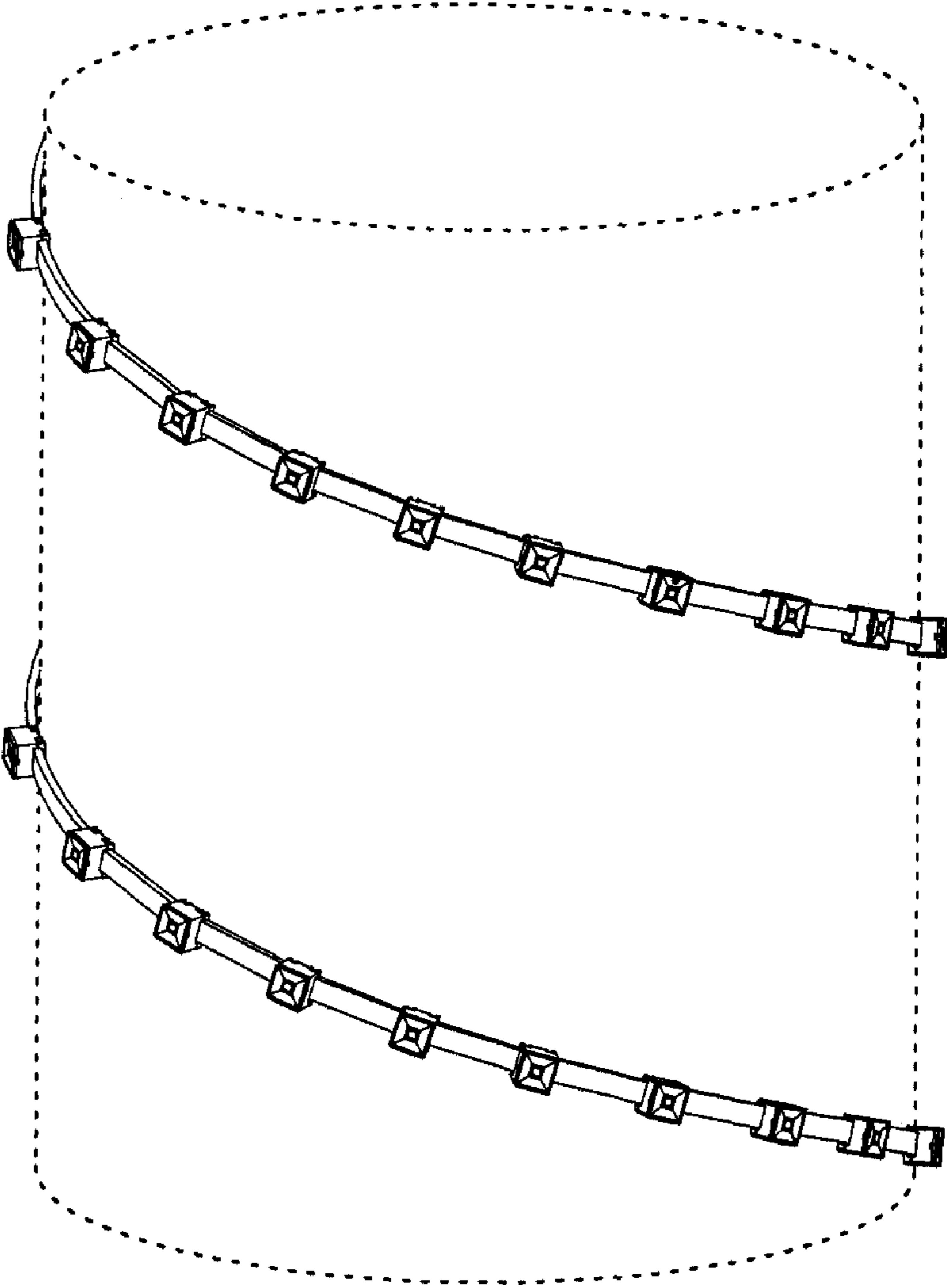


FIG. 14



FIG. 15

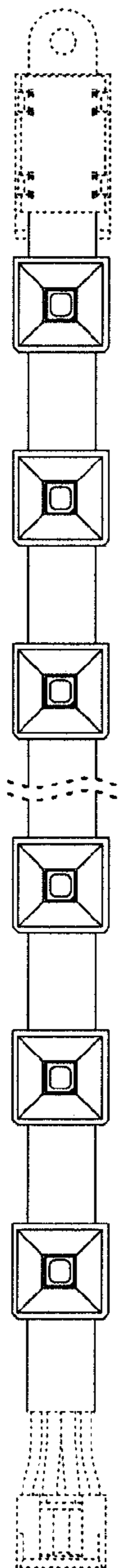


FIG. 16

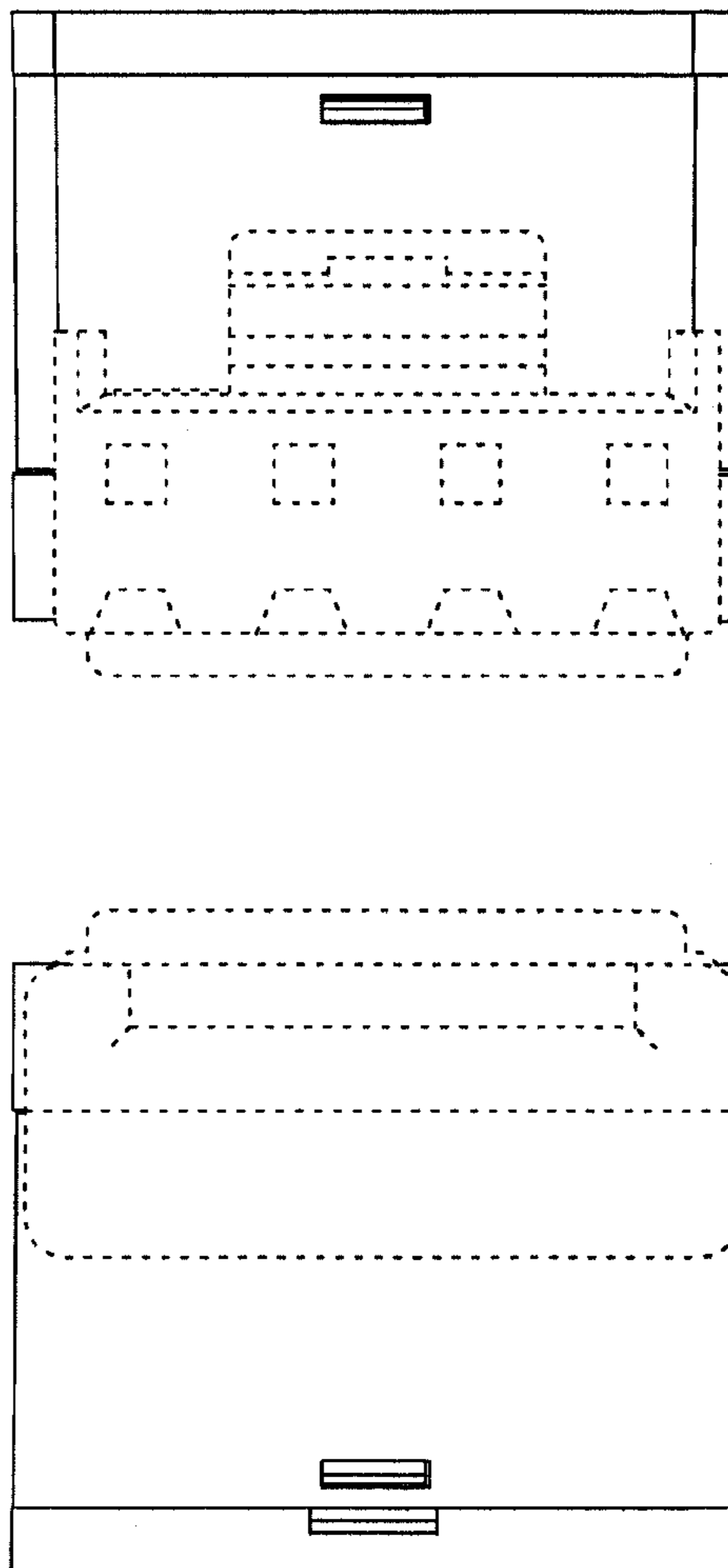


FIG. 18

FIG. 17

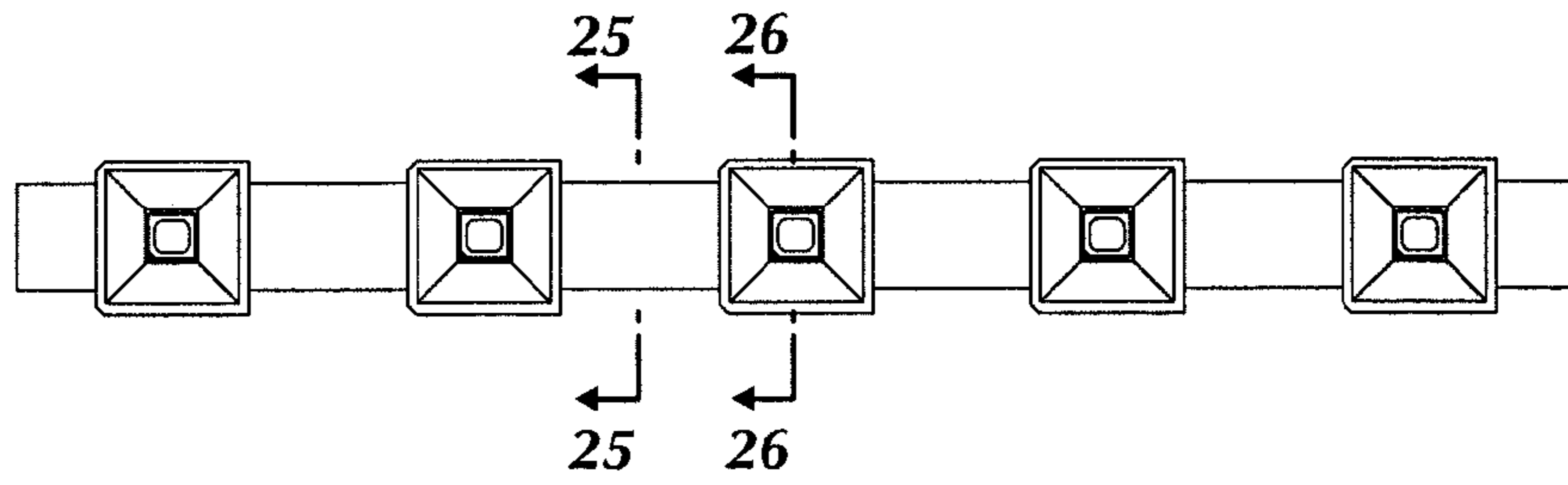


FIG. 19

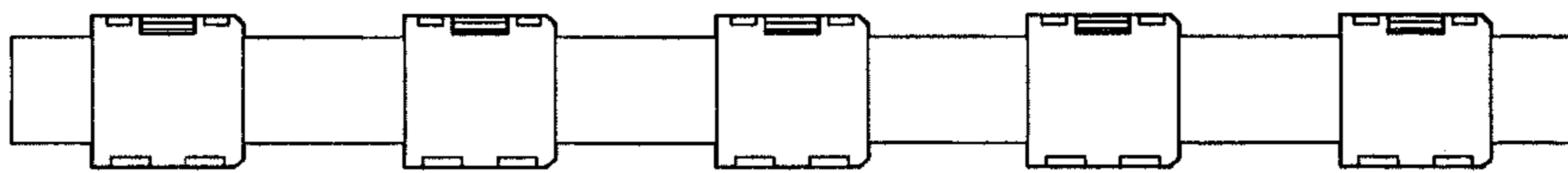


FIG. 20

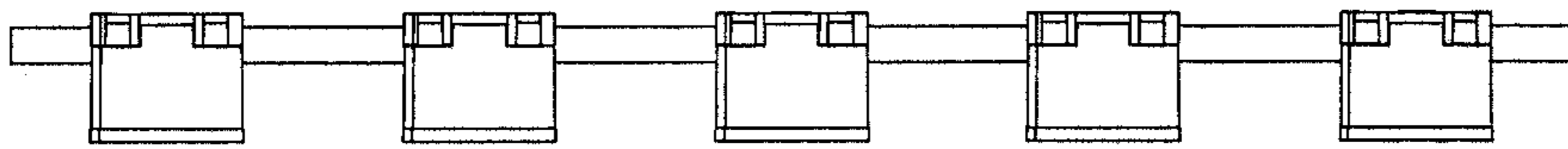


FIG. 21

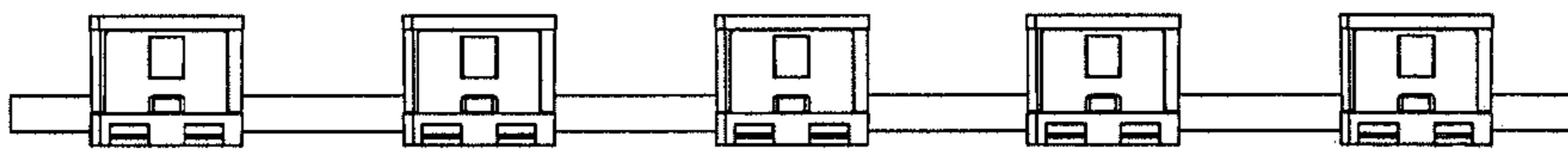


FIG. 22

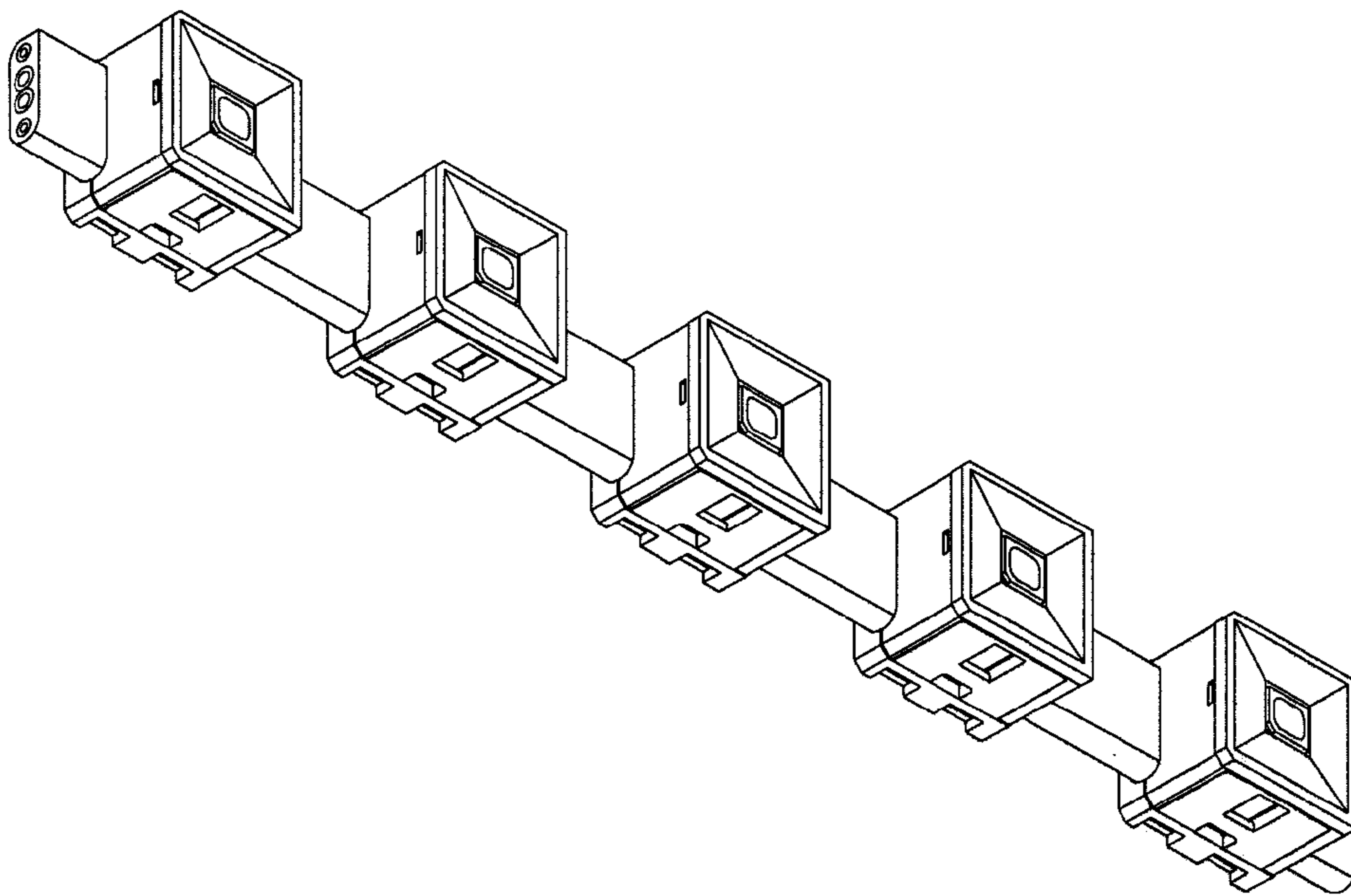


FIG. 23

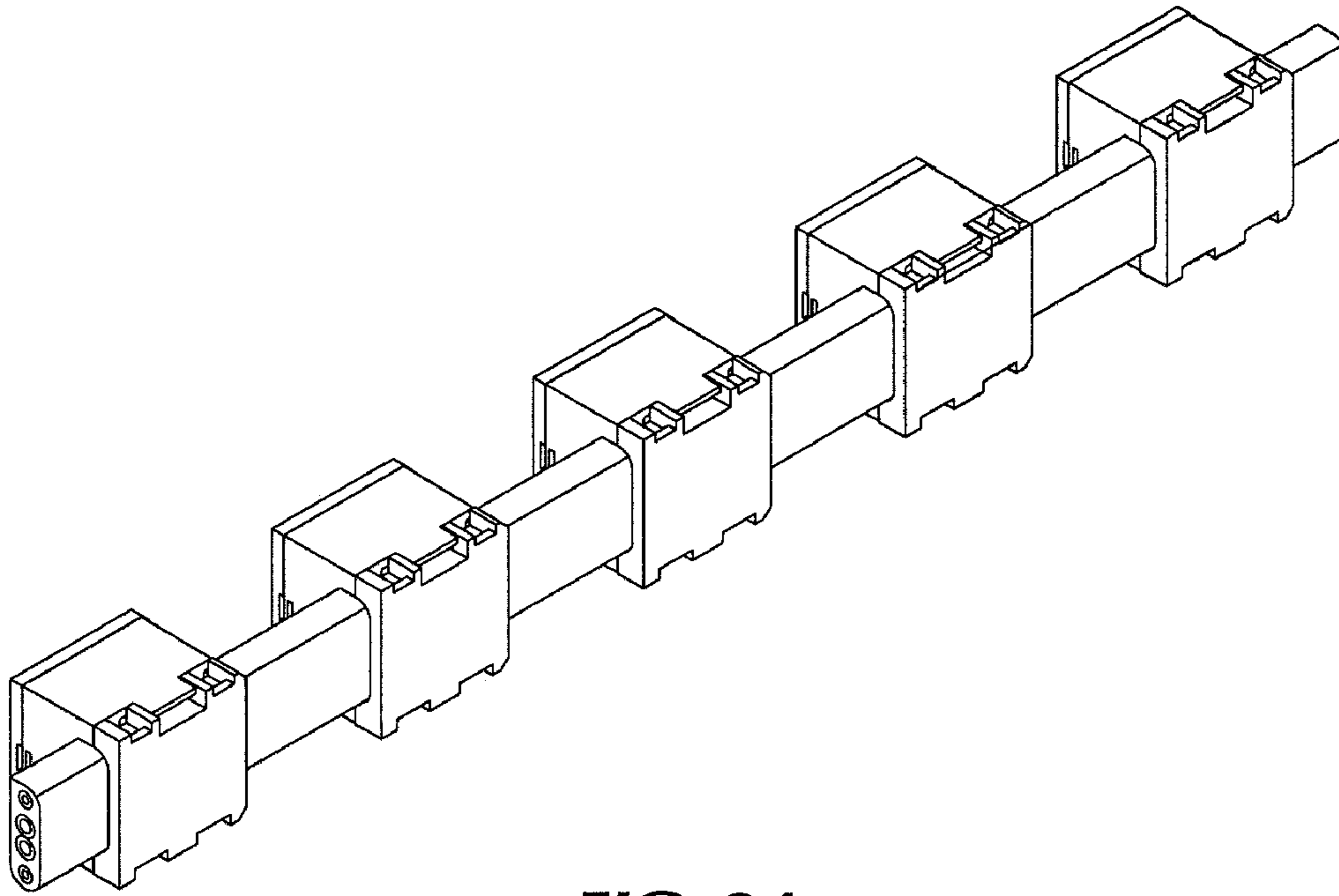


FIG. 24

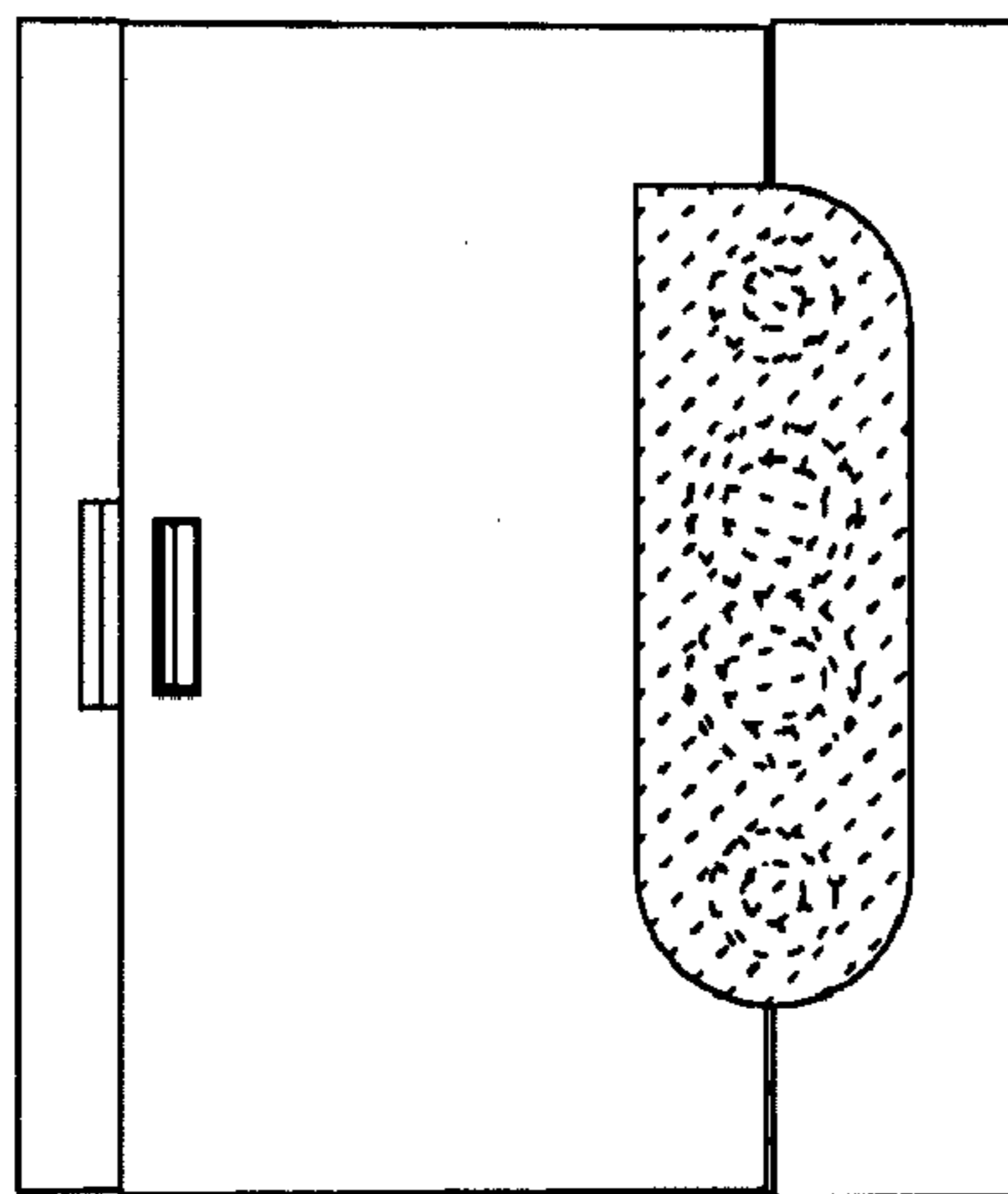


FIG. 25

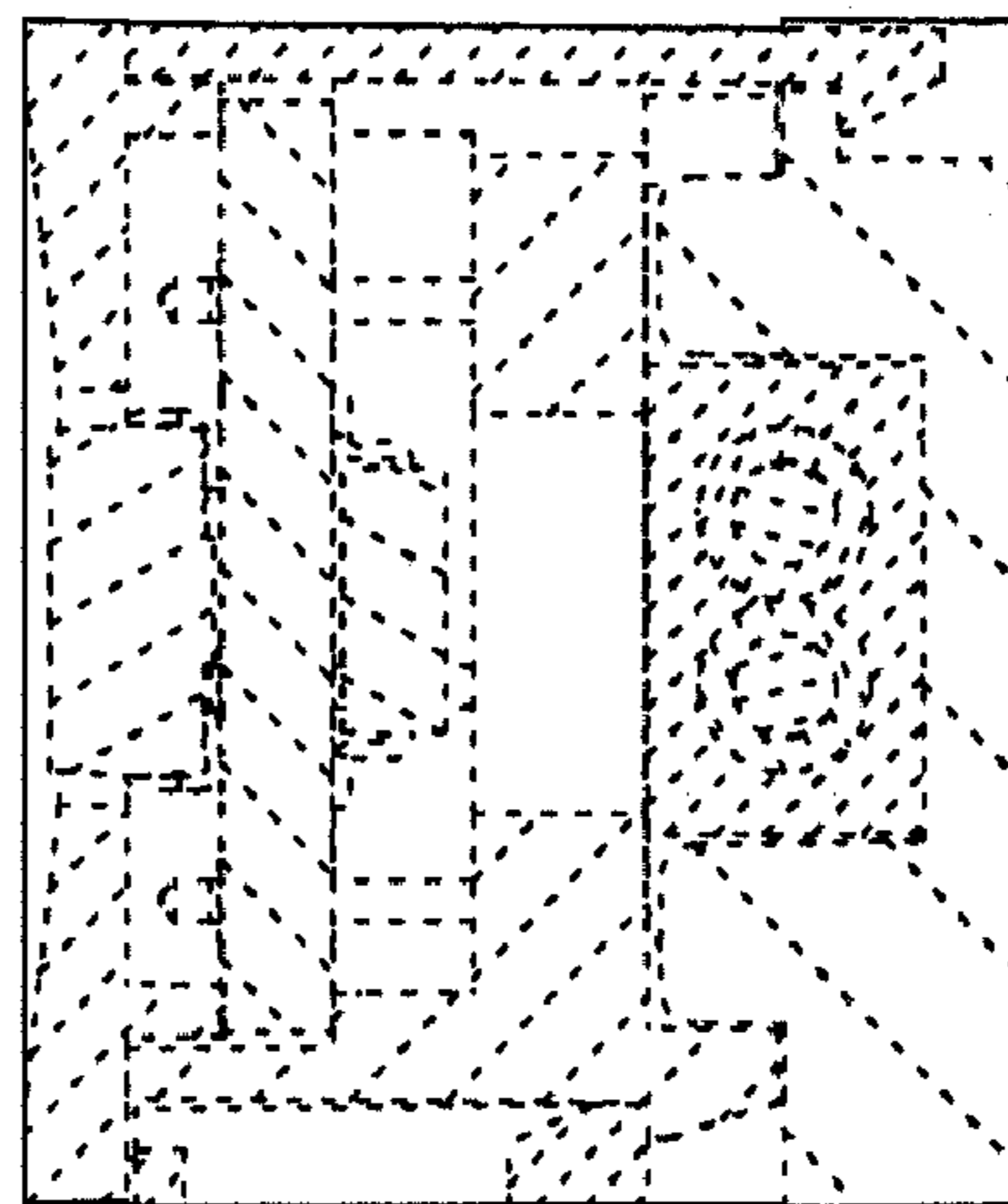


FIG. 26

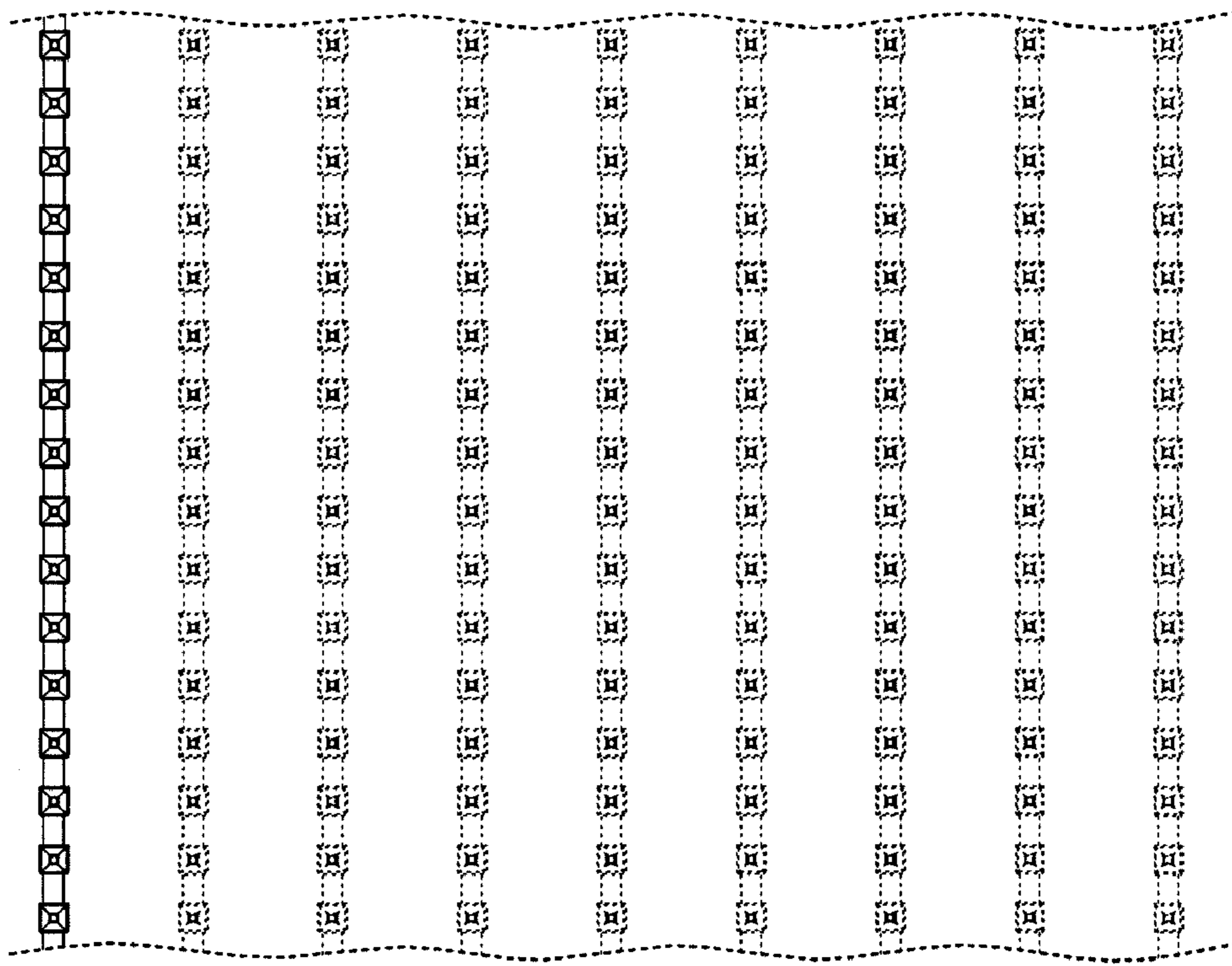


FIG. 27

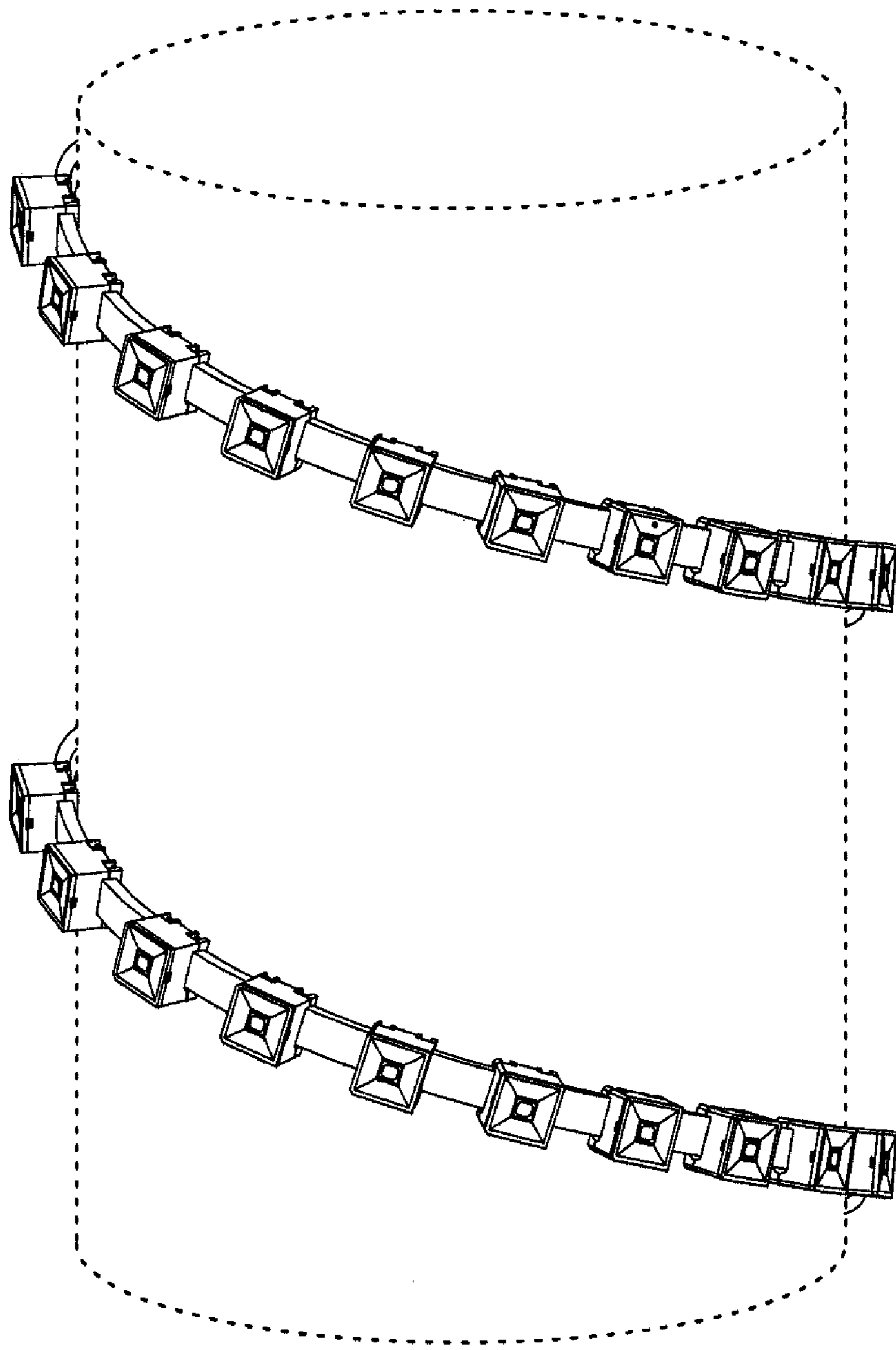


FIG. 28