



US00D712066S

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

(10) **Patent No.:** **US D712,066 S**
(45) **Date of Patent:** **** Aug. 26, 2014**

(54) **COLUMN OVEN FOR LIQUID CHROMATOGRAPH ANALYZER**

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(73) Assignee: **Hitachi High-Technologies Corporation, Tokyo (JP)**

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

(21) Appl. No.: **29/445,424**

(22) Filed: **Feb. 12, 2013**

(30) **Foreign Application Priority Data**

Sep. 3, 2012 (JP) 2012-021176

(51) **LOC (10) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/232; D24/216**

(58) **Field of Classification Search**

USPC D24/231-233, 216-217, 223-224, 107, D24/111, 169, 186; D10/81, 75; D14/349; 73/61.52, 61.55; 210/198.2, 656, 695; 250/281-300, 382, 384; 422/62-65, 422/67, 70, 81, 500, 505-506, 509, 547; 436/43, 45, 47, 287.1, 287.3; 530/412

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D203,911 S * 2/1966 Hoogesteger D24/233
D203,985 S * 3/1966 Gruye D10/75
D264,449 S * 5/1982 Izaki D10/75
D356,967 S * 4/1995 Takekoshi et al. D10/81

D422,925 S * 4/2000 Glaser et al. D10/81
D424,458 S * 5/2000 Hanson et al. D10/81
D645,978 S * 9/2011 Oonuma et al. D24/232
D684,270 S * 6/2013 Chang et al. D24/216
D692,155 S * 10/2013 Matoba et al. D24/216
D693,713 S * 11/2013 Noda et al. D10/81
2013/0161244 A1 * 6/2013 Ishii et al. 210/91

FOREIGN PATENT DOCUMENTS

CN 301816156 S 1/2012

OTHER PUBLICATIONS

Eksigent Ekspert™ Ultralc Systems, Eksigent Technologies, UHPLC Designed for Mass Spectrometry, Chromatograph System, Design Model ekspert™ ultraLC 100, Feb. 2012, pp. 1-6.

* cited by examiner

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(57) **CLAIM**

We claim the ornamental design for a column oven for liquid chromatograph analyzer, as shown and described.

DESCRIPTION

FIG. 1 is a front, top and right side perspective view of a column oven for liquid chromatograph analyzer showing our new design;

FIG. 2 is a front elevational view thereof;

FIG. 3 is a rear elevational view thereof;

FIG. 4 is a left side elevational view thereof;

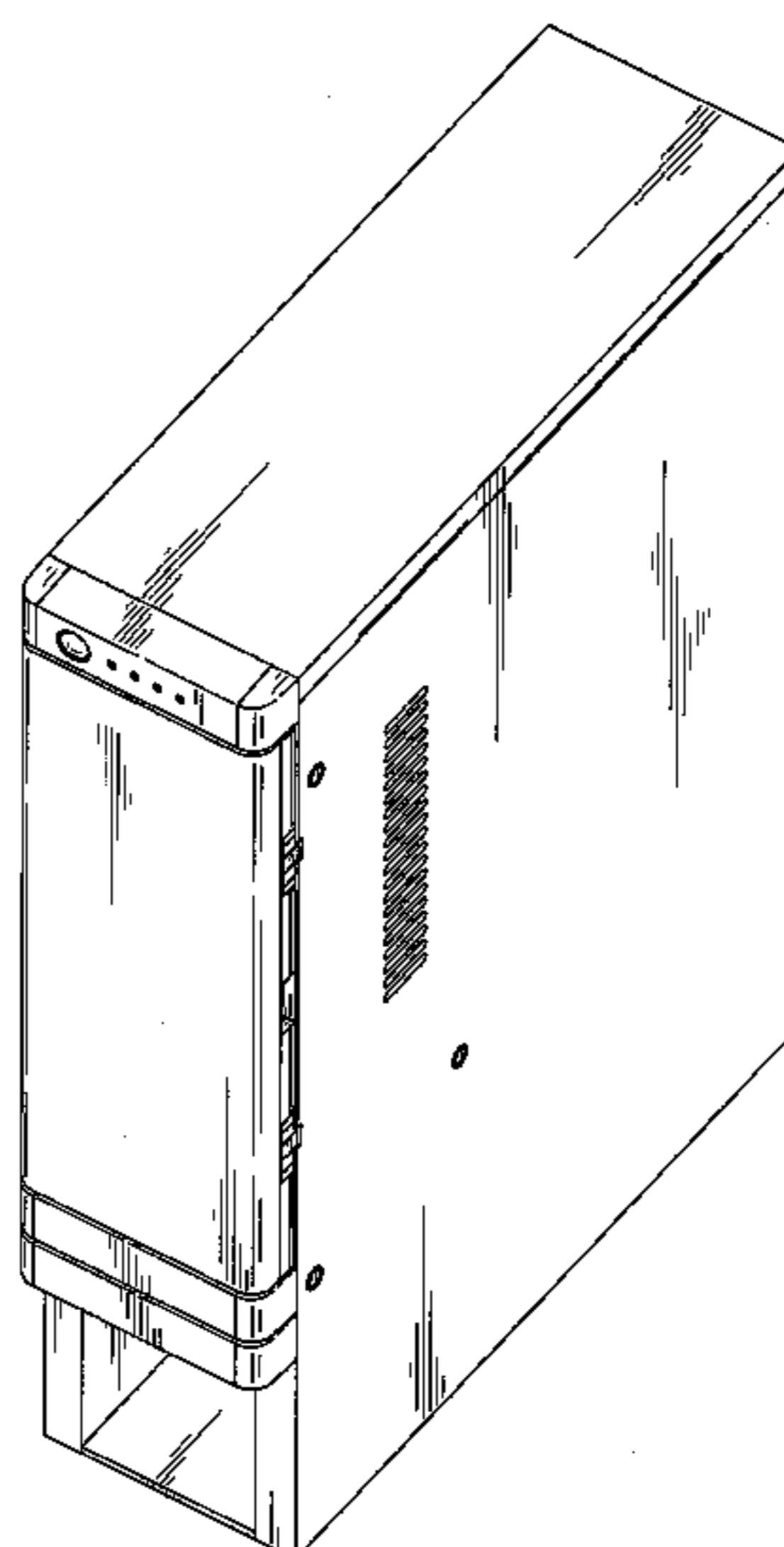
FIG. 5 is a right side elevational view thereof;

FIG. 6 is a top plan view thereof; and,

FIG. 7 is a bottom plan view thereof.

Portions of the column oven for liquid chromatograph analyzer shown in broken lines form no part of the claimed design.

1 Claim, 5 Drawing Sheets



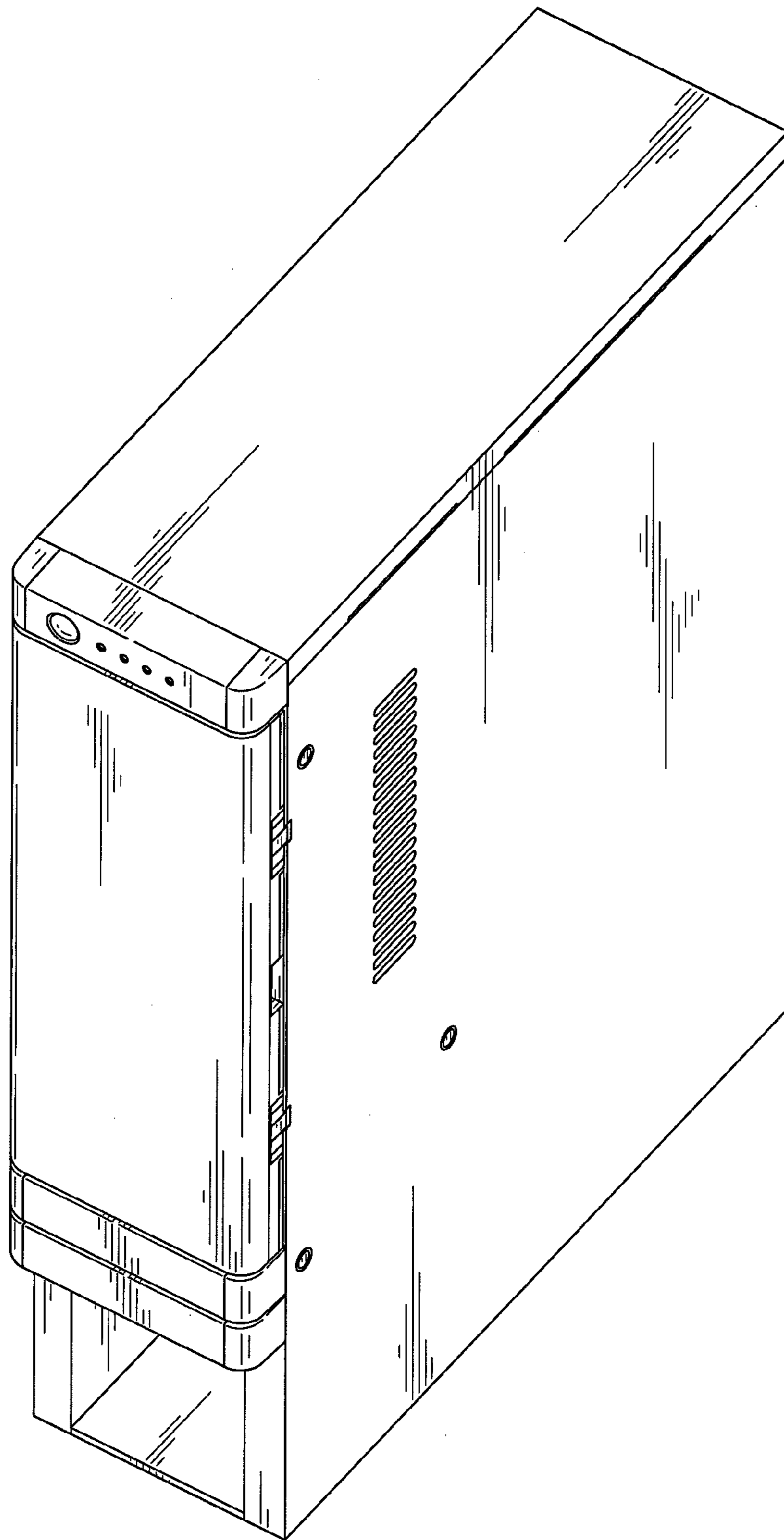


FIG. 1

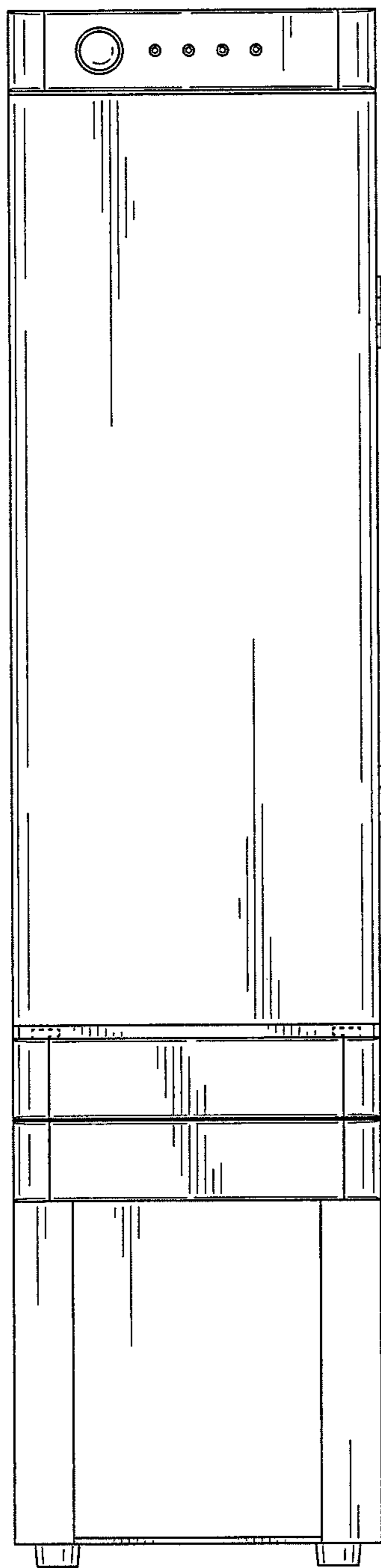


FIG. 2

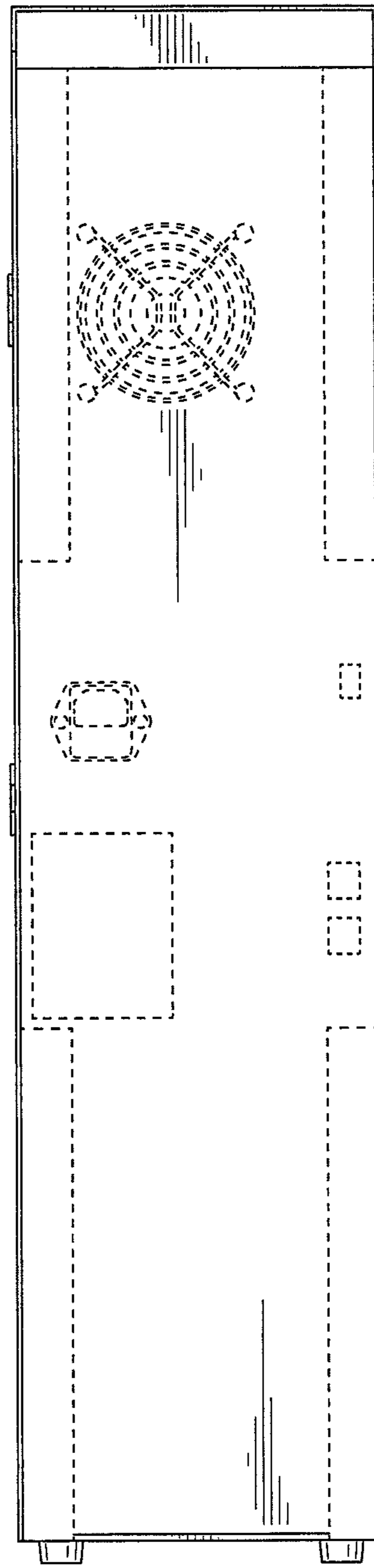


FIG. 3

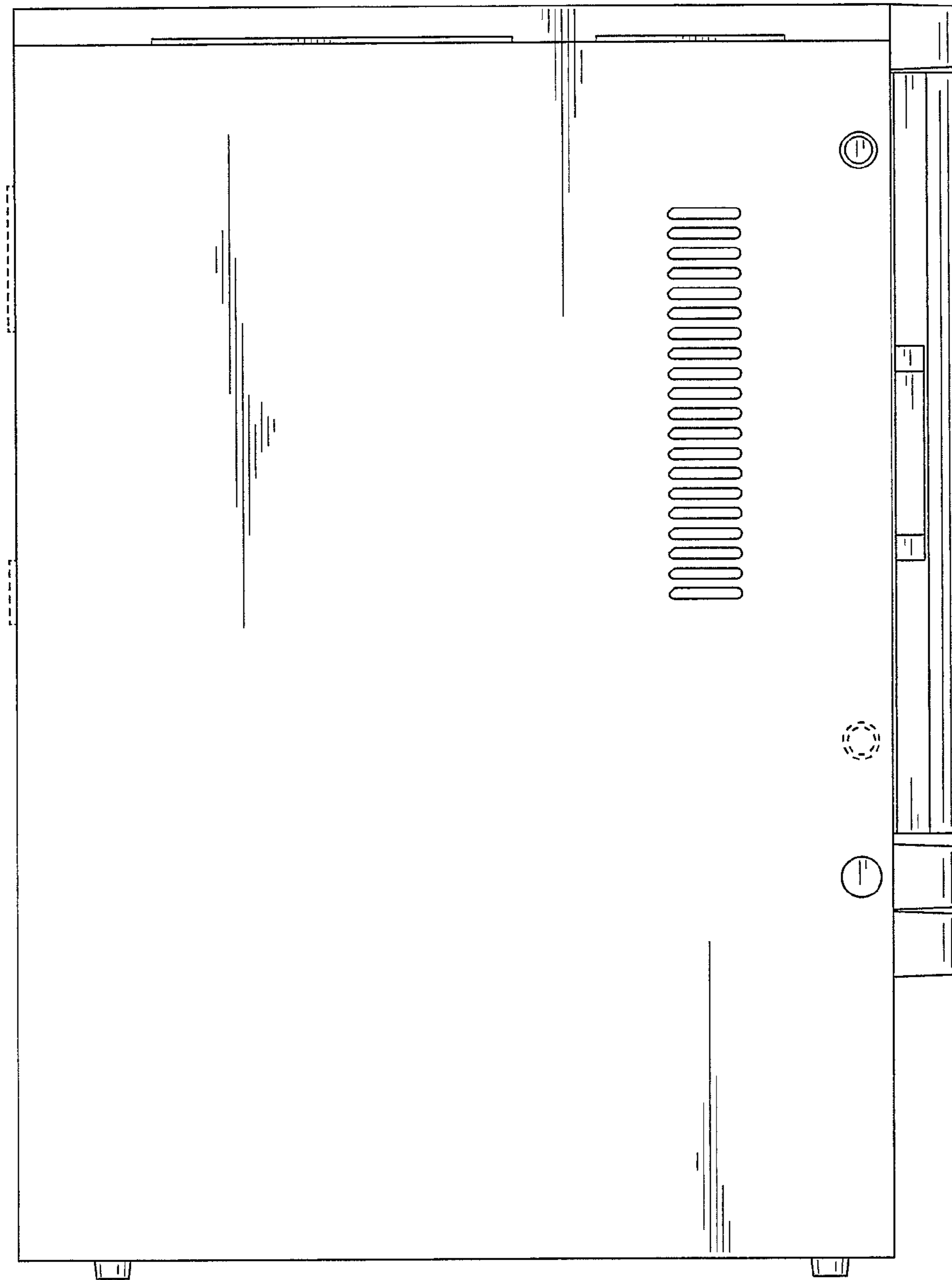


FIG. 4

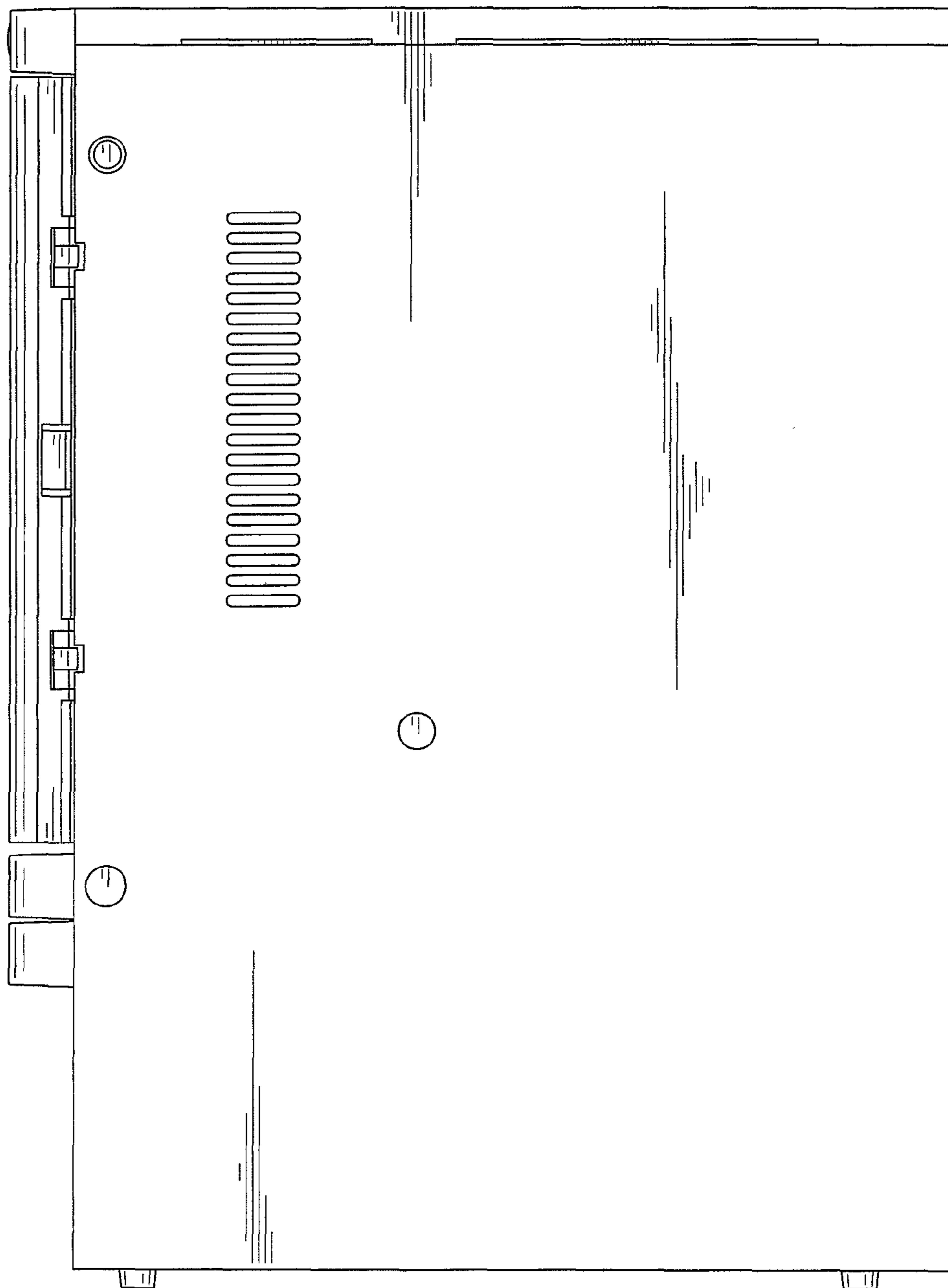


FIG. 5

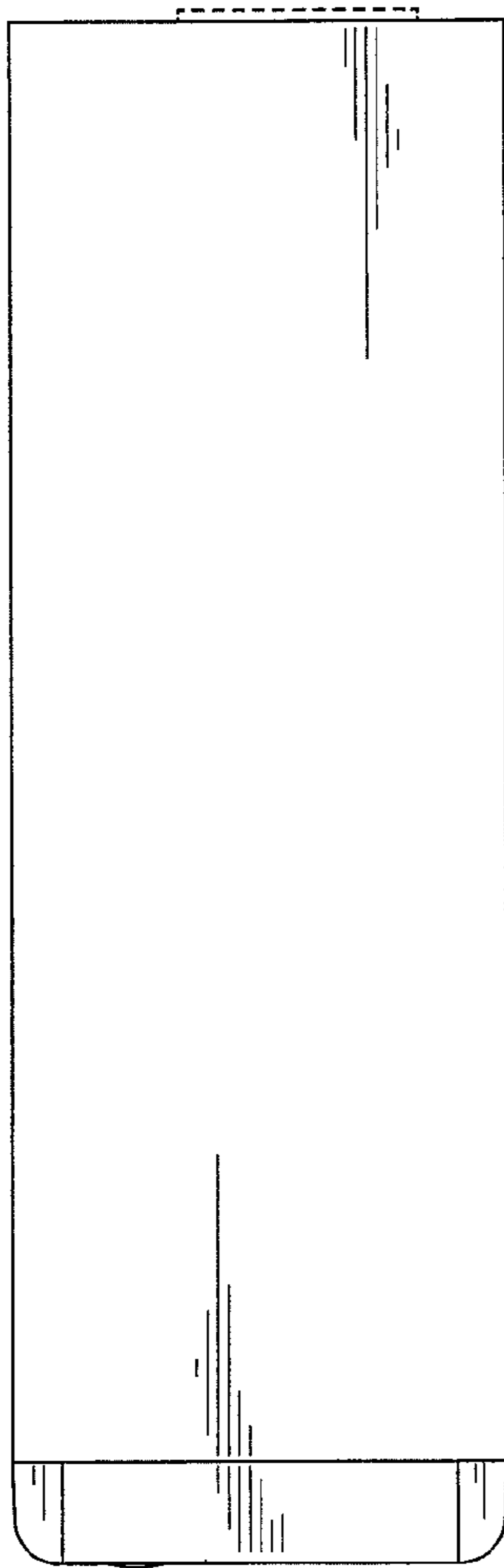


FIG. 6

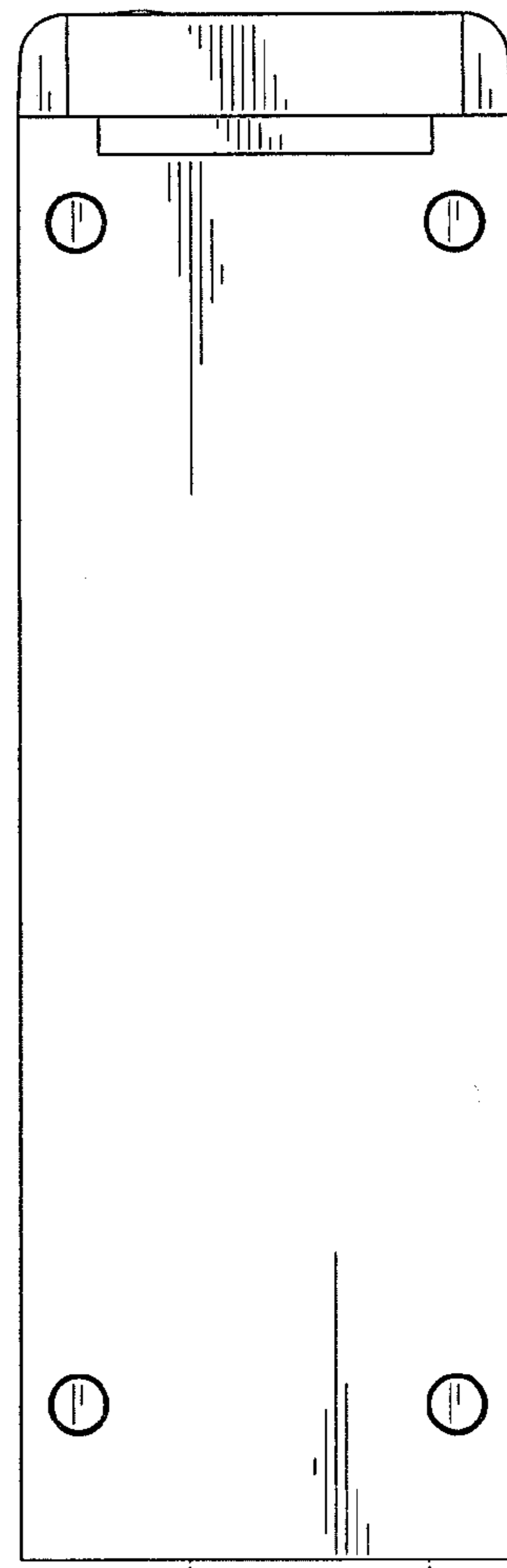


FIG. 7