

US00D699609S

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

(10) **Patent No.:** **US D699,609 S**
(45) **Date of Patent:** **** *Feb. 18, 2014**

(54) **DETECTOR FOR LIQUID CHROMATOGRAPH ANALYZER**

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(*) Notice: This patent is subject to a terminal disclaimer.

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

(21) Appl. No.: **29/445,417**

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

(30) **Foreign Application Priority Data**

Sep. 3, 2012 (JP) 2012-021172

(51) **LOC (10) Cl.** **10-04**

(52) **U.S. Cl.**
USPC **D10/81; D24/232**

(58) **Field of Classification Search**
USPC D10/75, 78, 81; D24/216, 232-234; 73/1.01, 1.02-1.08, 1.16, 19.01-19.02, 73/23.2-23.27, 23.3, 23.35-24.01, 52, 73/53.01, 61.52-61.61, 864.21, 431, 73/864.73, 31.03, 31.05, 866.5, 864.84, 73/864.23, 61.55, 863.01; 204/253, 400, 204/403.01, 403.02, 403.04, 403.05, 403.1, 204/403.11, 403.14; 205/775, 777.5, 778, 205/792; 210/656-660, 198.2, 635, 101, 210/103; 250/252.1, 251, 25, 266, 250/281-300, 305, 336.1, 338.1, 338.5, 250/339.07, 339.13, 343, 349, 239, 910; 356/446, 246, 301-337, 451, 72, 73; 422/50-53, 62-82, 83-98, 239.2, 400,

422/401, 404; 435/4, 283.1-284.1, 286.5, 435/287.1, 287.2, 806, 13, 14, 287.4, 287.7, 435/287.94, 6.18; 436/43-54, 68, 900, 514, 436/530, 95; 600/300, 301, 309, 322, 345, 600/347, 365, 393, 578, 583, 584; 604/207, 604/503, 65, 66, 67, 182; 702/19, 40; 221/65, 135; 235/451, 422.01; 95/87; 96/101, 106

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,158,630 A * 6/1979 Stearns 210/198.2
5,436,166 A * 7/1995 Ito et al. 436/161

(Continued)

FOREIGN PATENT DOCUMENTS

CN 301640276 S 8/2011
CN 301825214 S 2/2012
EM 000718408-0002 5/2007

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.

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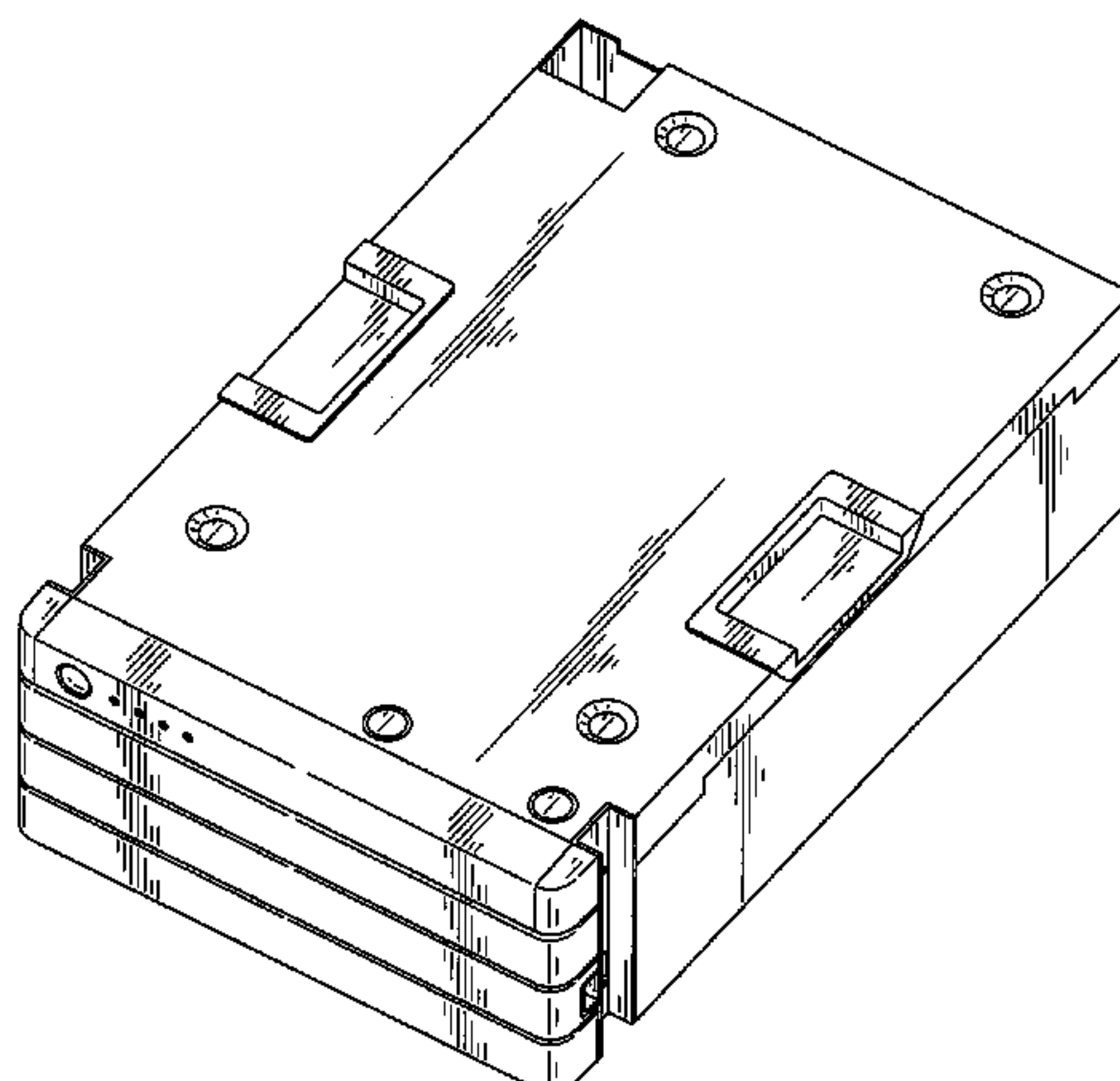
(57) **CLAIM**

We claim the ornamental design for a detector for liquid chromatograph analyzer, as shown.

DESCRIPTION

FIG. 1 is a front, top and right side perspective view of a detector 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.

1 Claim, 5 Drawing Sheets



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(56)

References Cited

U.S. PATENT DOCUMENTS

5,714,676	A *	2/1998	Hase	73/23.41				
D637,929	S *	5/2011	Kimura et al.	D10/81				
D637,930	S *	5/2011	Kimura et al.	D10/81				
D645,977	S *	9/2011	Oonuma et al.	D24/232				
D645,979	S *	9/2011	Oonuma et al.	D24/232				
D646,189	S *	10/2011	Dinter et al.	D10/81				
D661,607	S *	6/2012	Dinter et al.	D10/81				
8,303,852	B2 *	11/2012	Nishiura et al.	252/511				
2009/0236566	A1 *	9/2009	Nishiura et al.	252/511				
2010/0247888	A1 *	9/2010	Nishiura et al.	428/220				
2010/0322842	A1 *	12/2010	Iijima et al.	423/437.1				
2012/0262711	A1 *	10/2012	Oda	356/300				

* cited by examiner

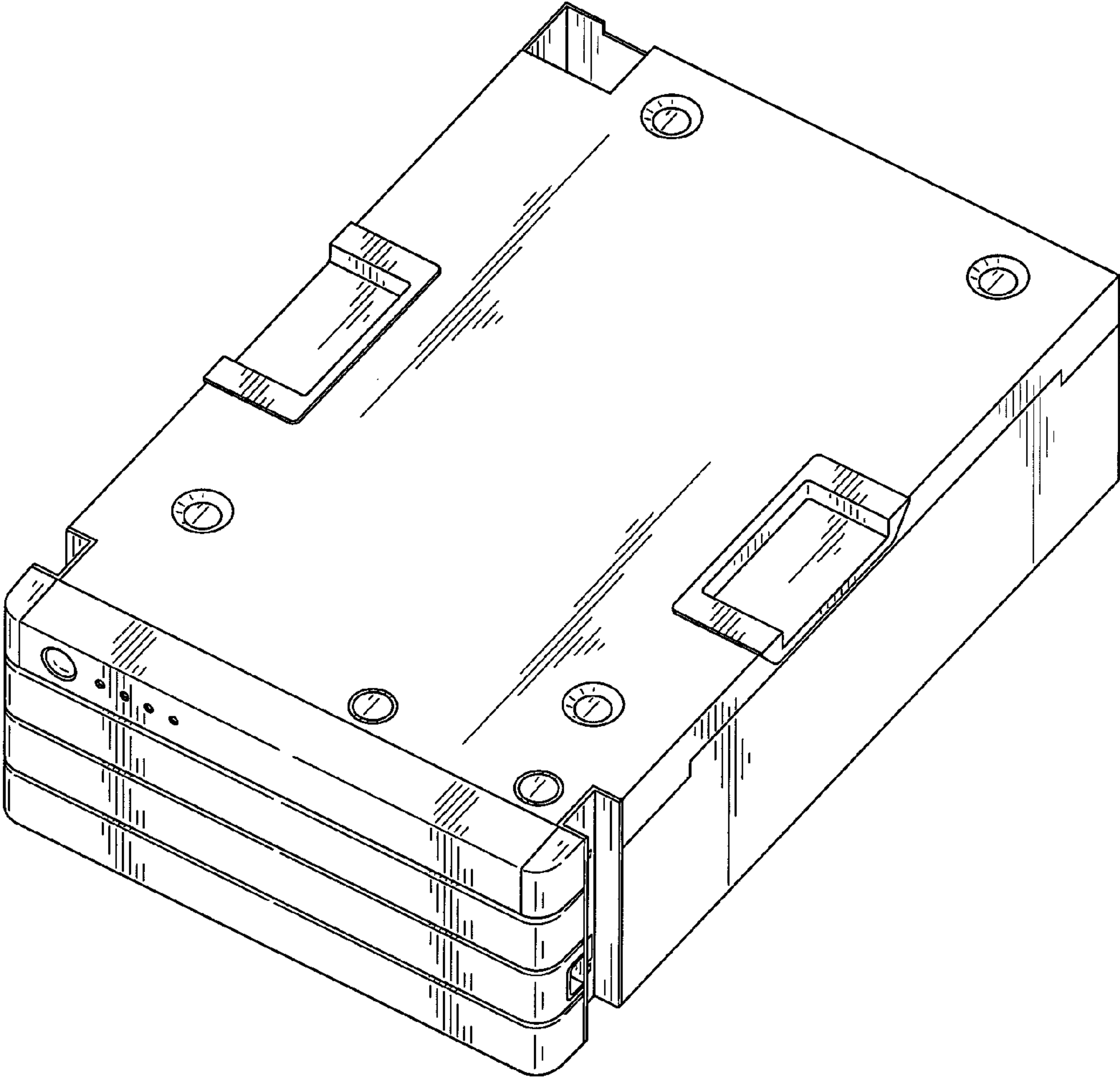


FIG. 1

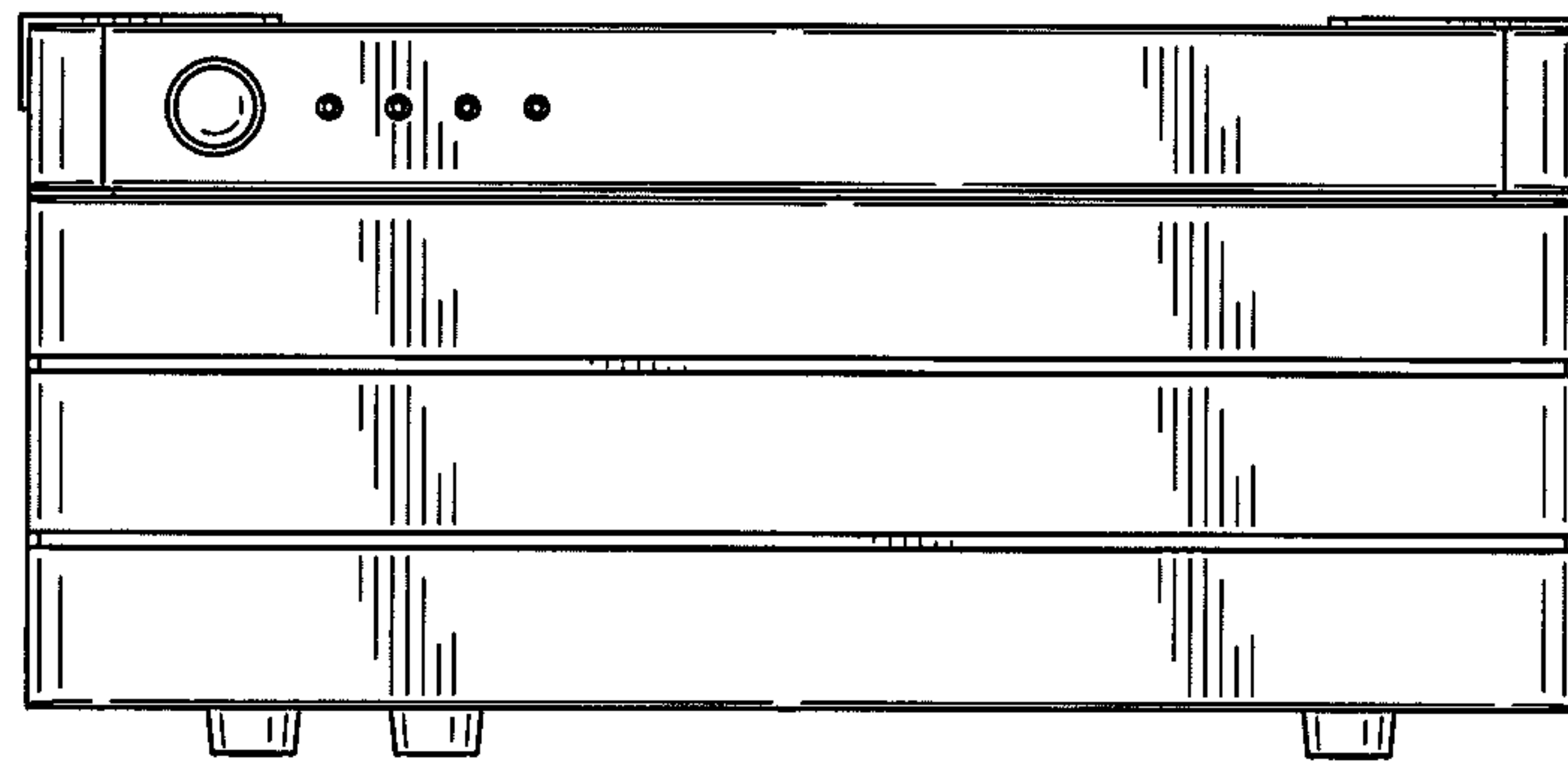


FIG. 2

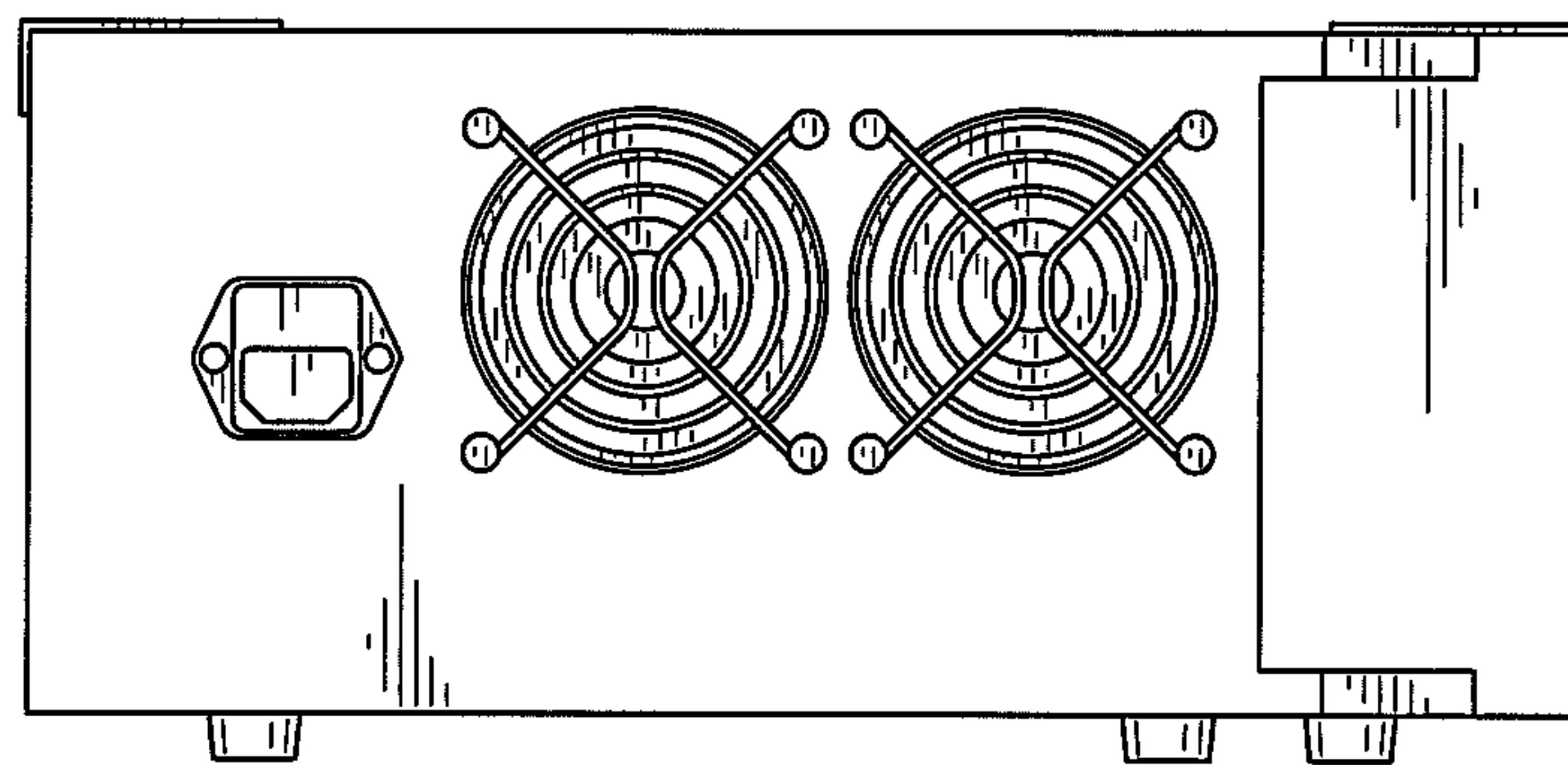


FIG. 3

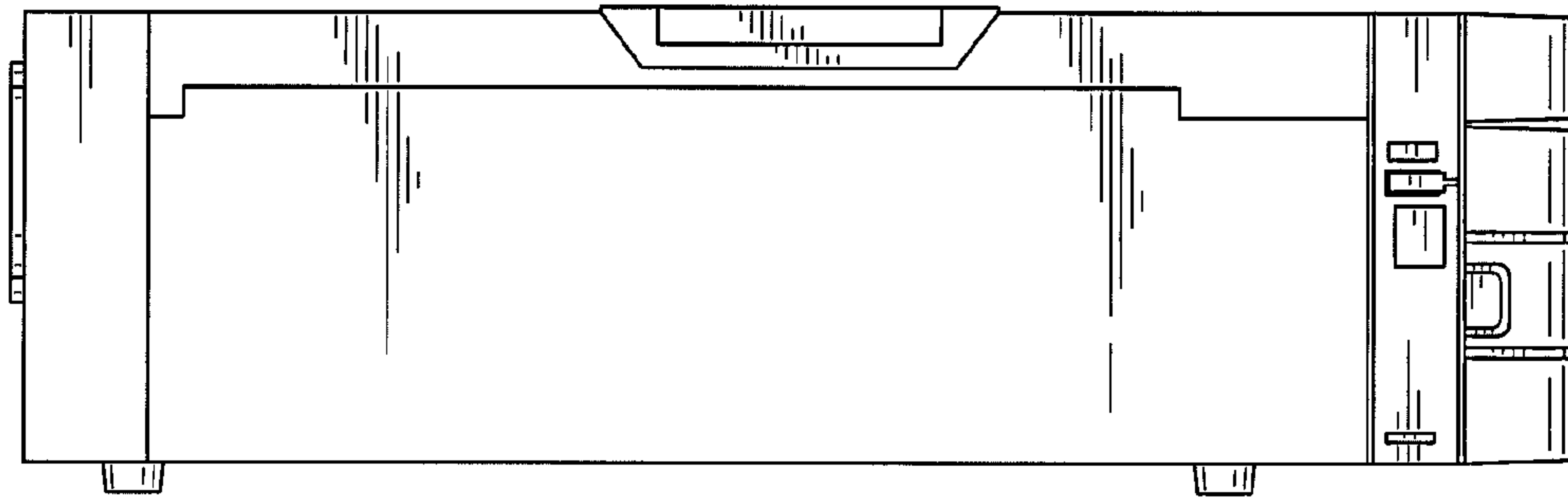


FIG. 4

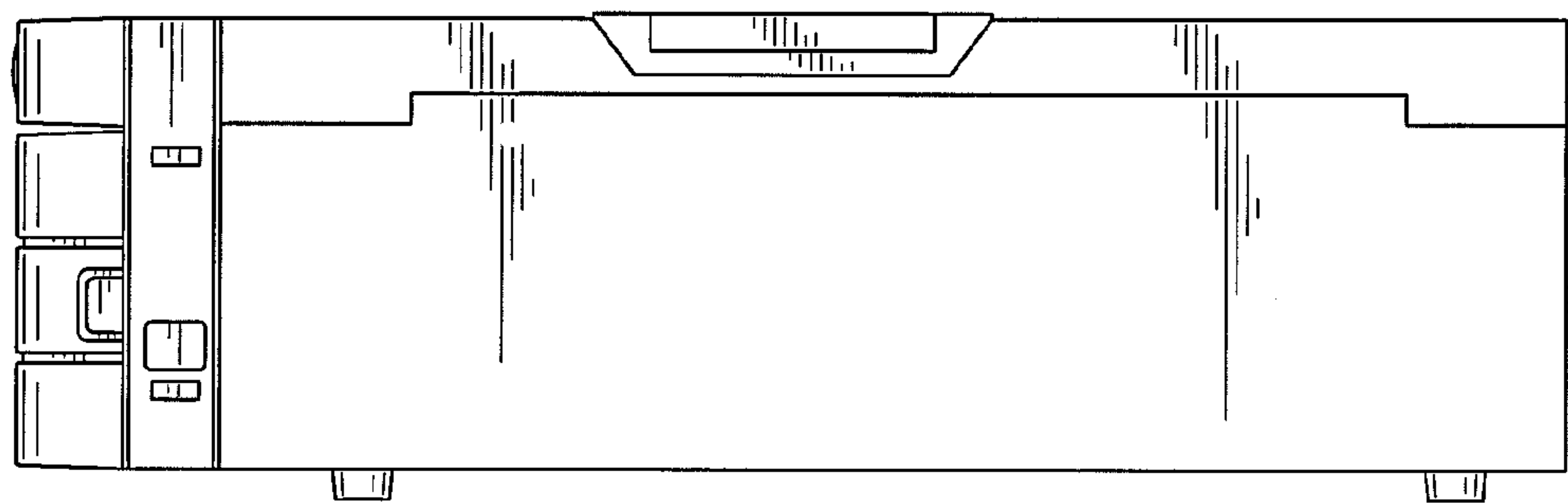


FIG. 5

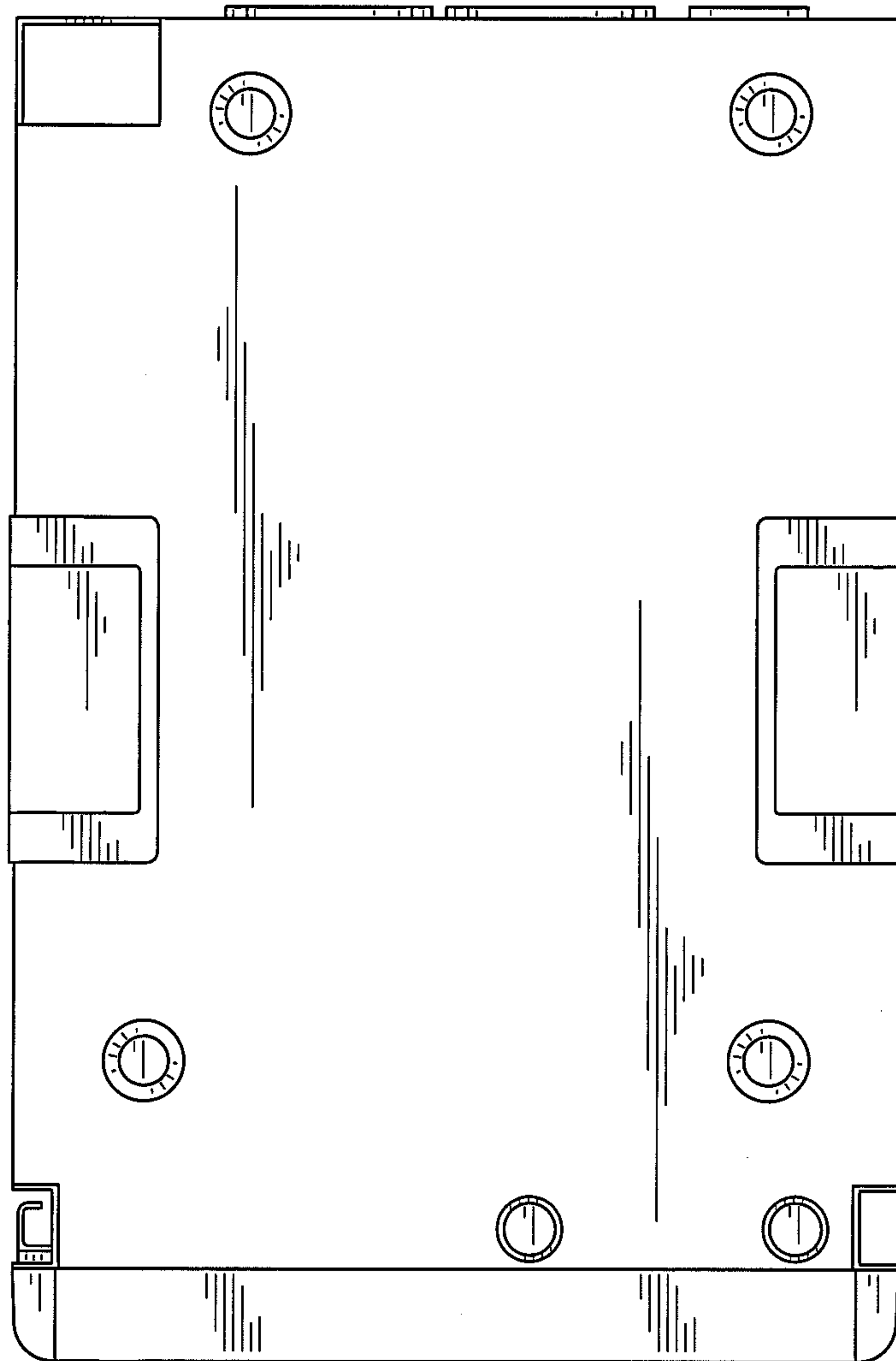


FIG. 6

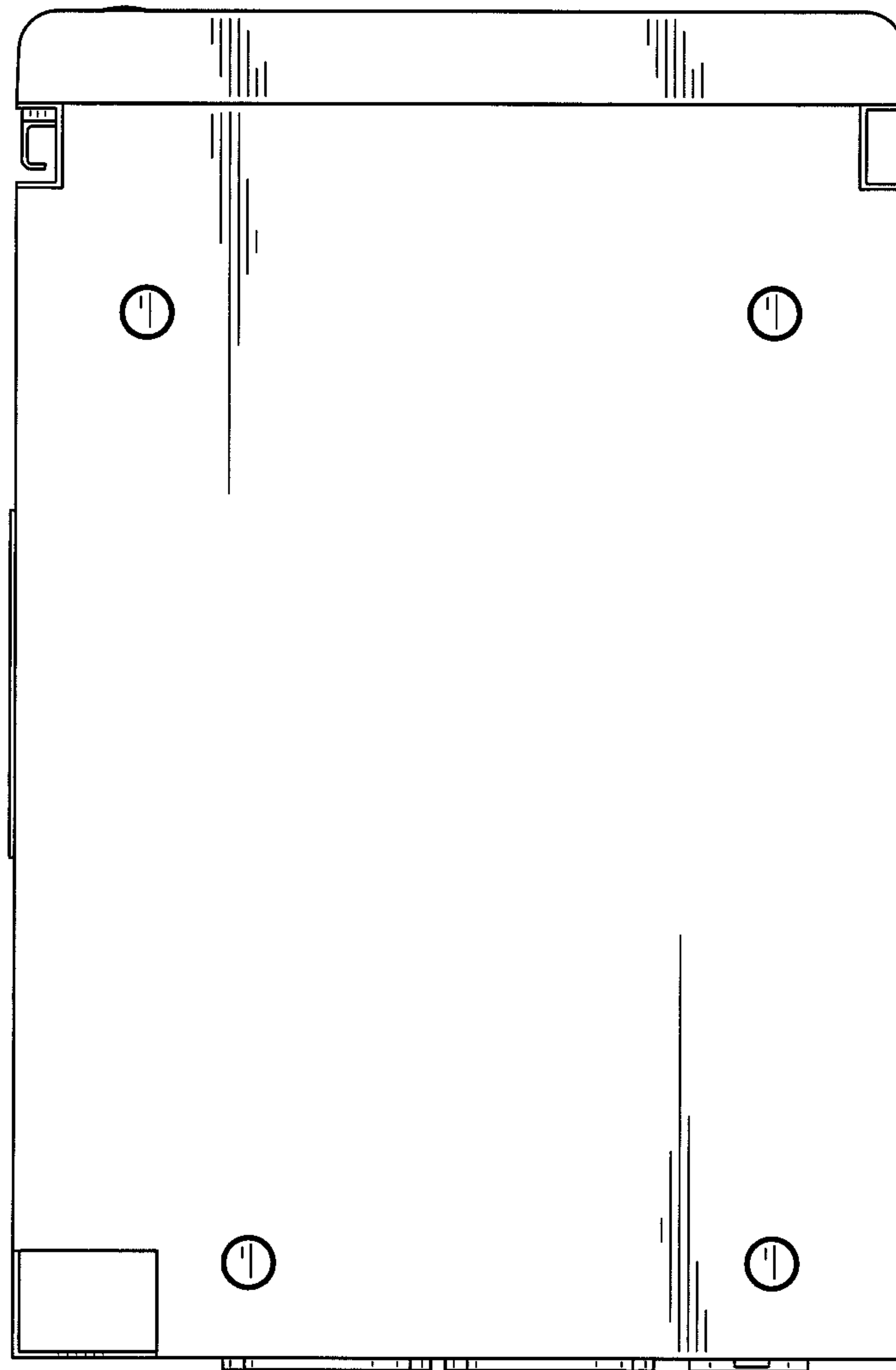


FIG. 7