



US00D699610S

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

(10) **Patent No.:** **US D699,610 S**

(45) **Date of Patent:** **\*\* \*Feb. 18, 2014**

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

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

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

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

(21) Appl. No.: **29/445,423**

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

(30) **Foreign Application Priority Data**

Sep. 3, 2012 (JP) ..... 2012-021175

(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, 281-300, 250/305, 336.1, 338.1, 338.5, 339.07, 250/339.13, 343, 349, 239, 910; 356/446, 356/246, 301-337, 451, 72, 73; 422/50-53, 422/62-82, 83-98, 239.2, 400, 401, 404;

435/4, 283.1-284.1, 286.5, 287.1, 435/287.2, 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**

EM 000528989-0001 5/2006

**OTHER PUBLICATIONS**

U.S. Appl. No. 29/429,038, Matoba et al., filed Aug. 7, 2012 of co-pending appl.

(Continued)

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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;

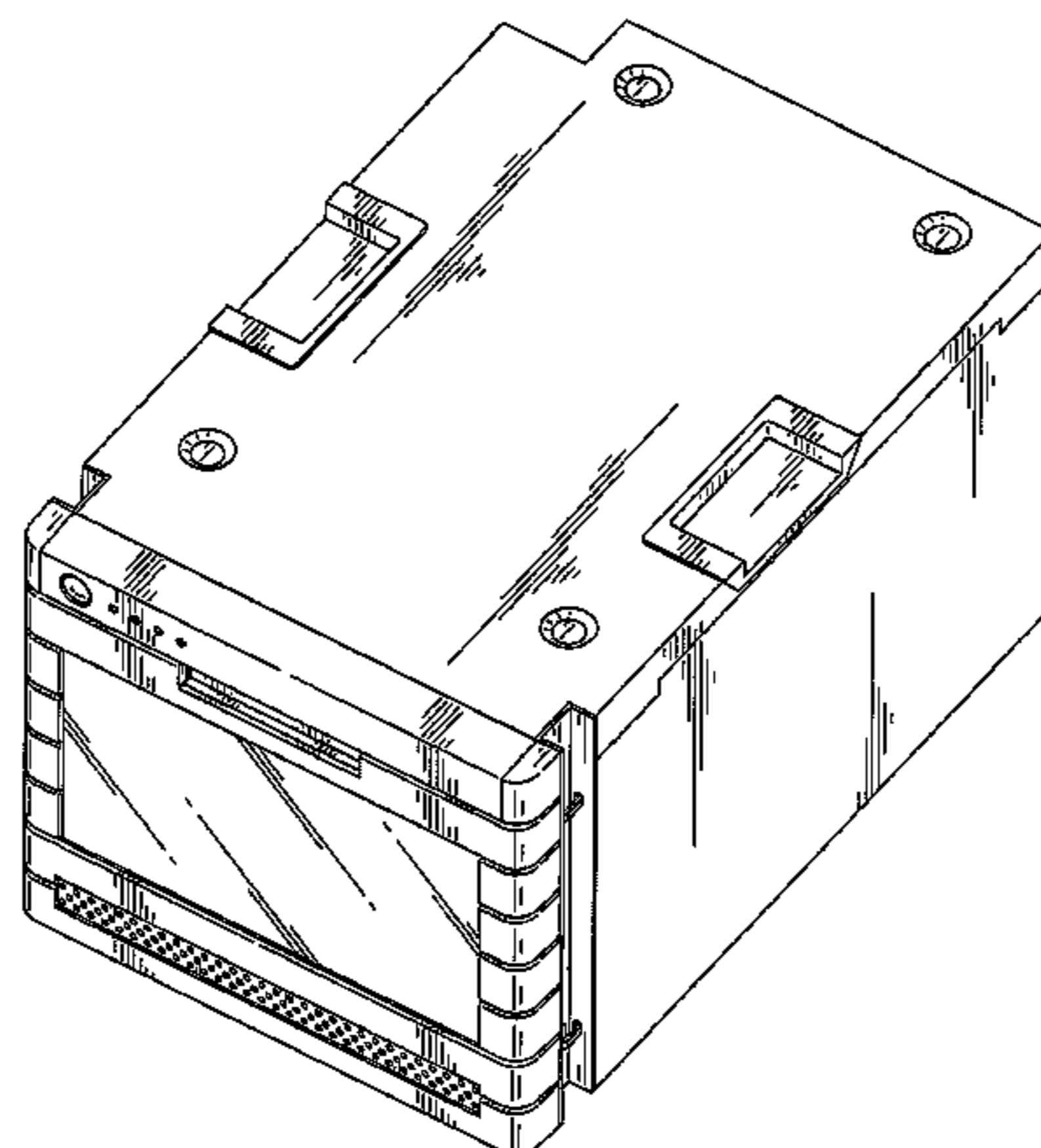
FIG. 3 is a rear elevational view thereof;

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**



(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

OTHER PUBLICATIONS

U.S. Appl. No. 29/429,040, Matoba et al., filed Aug. 7, 2012 of co-pending appl.  
U.S. Appl. No. 29/445,419, Noda et al., filed Feb. 12, 2013 of co-pending appl.  
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

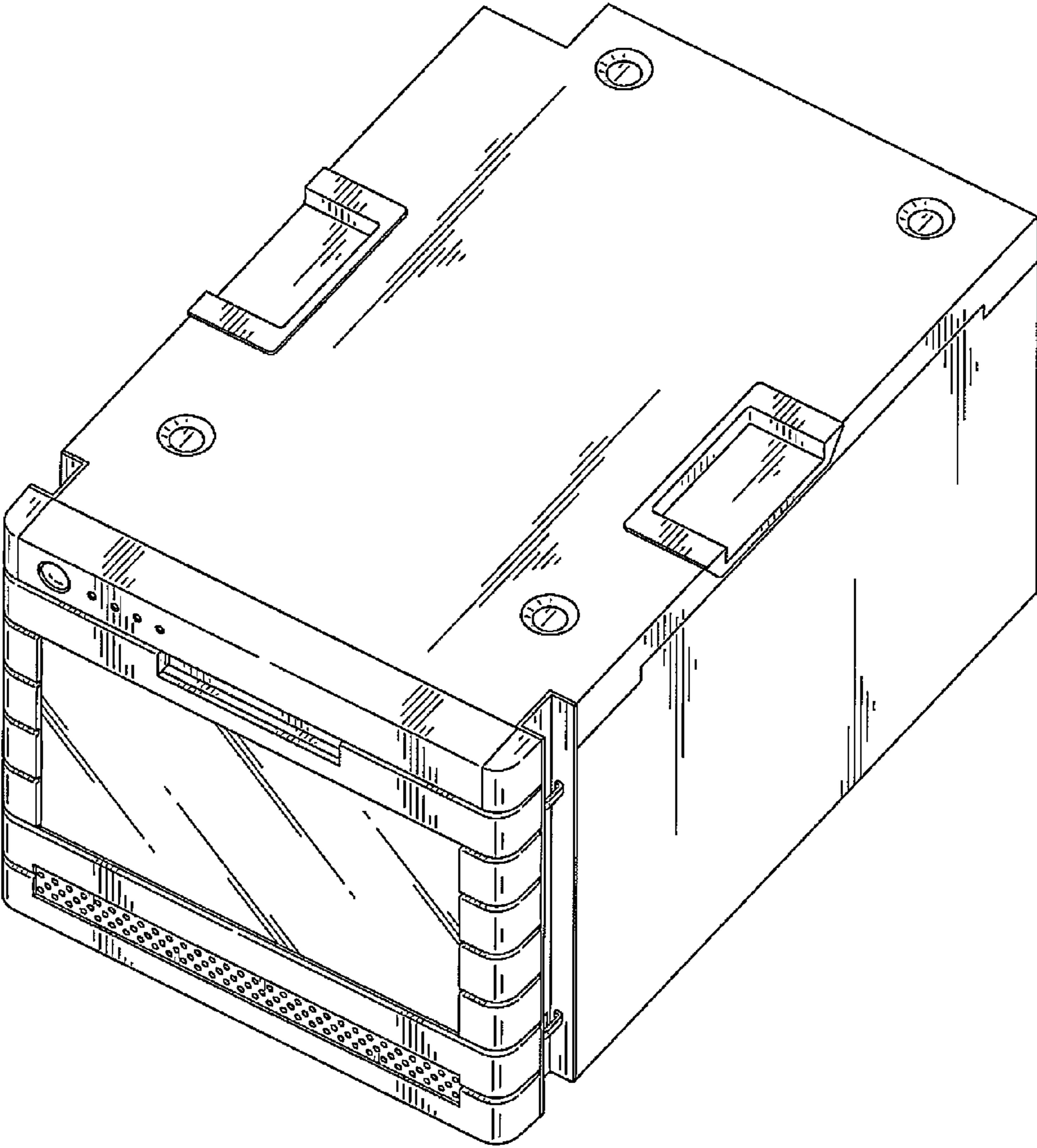


FIG. 1

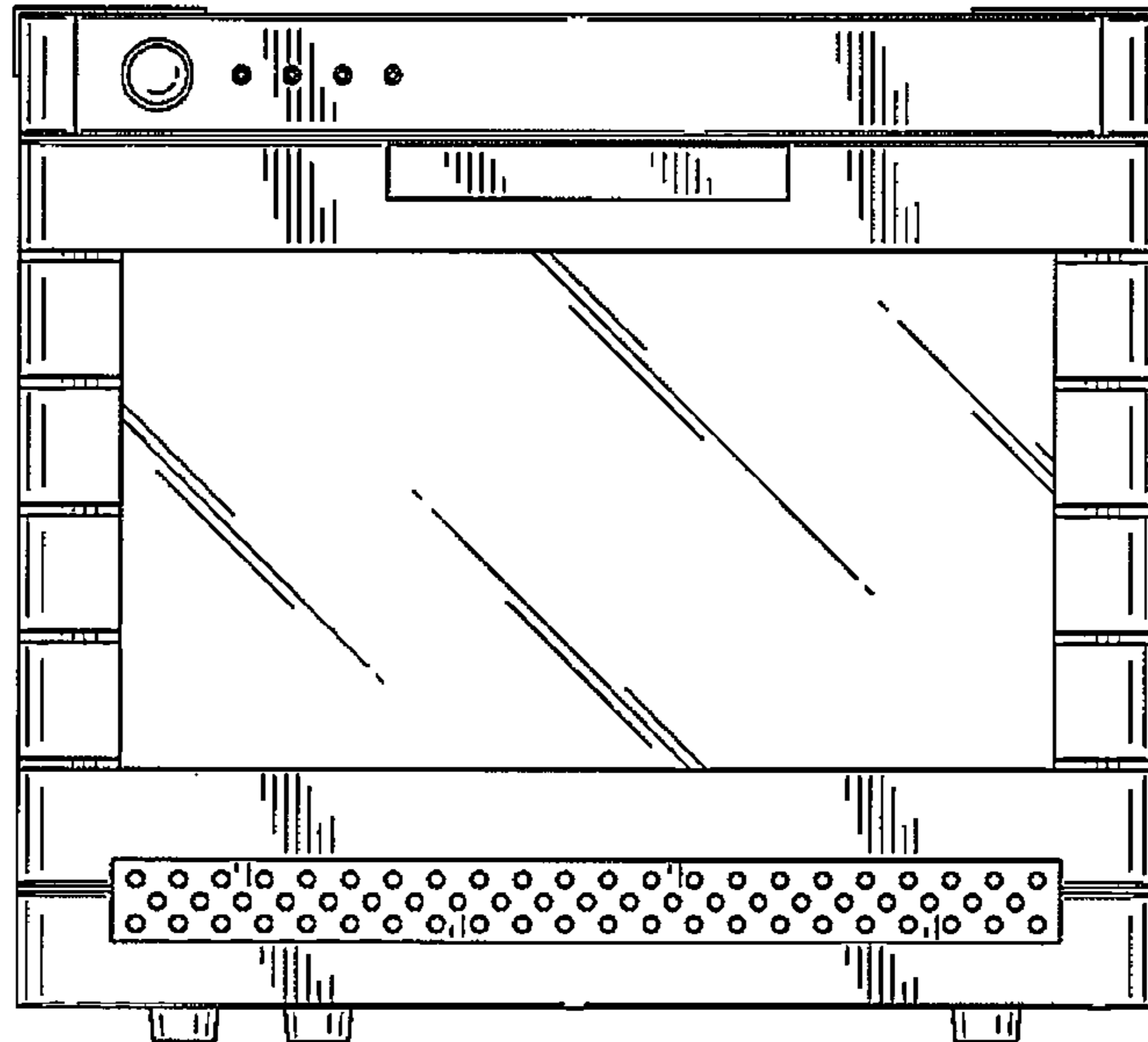


FIG. 2

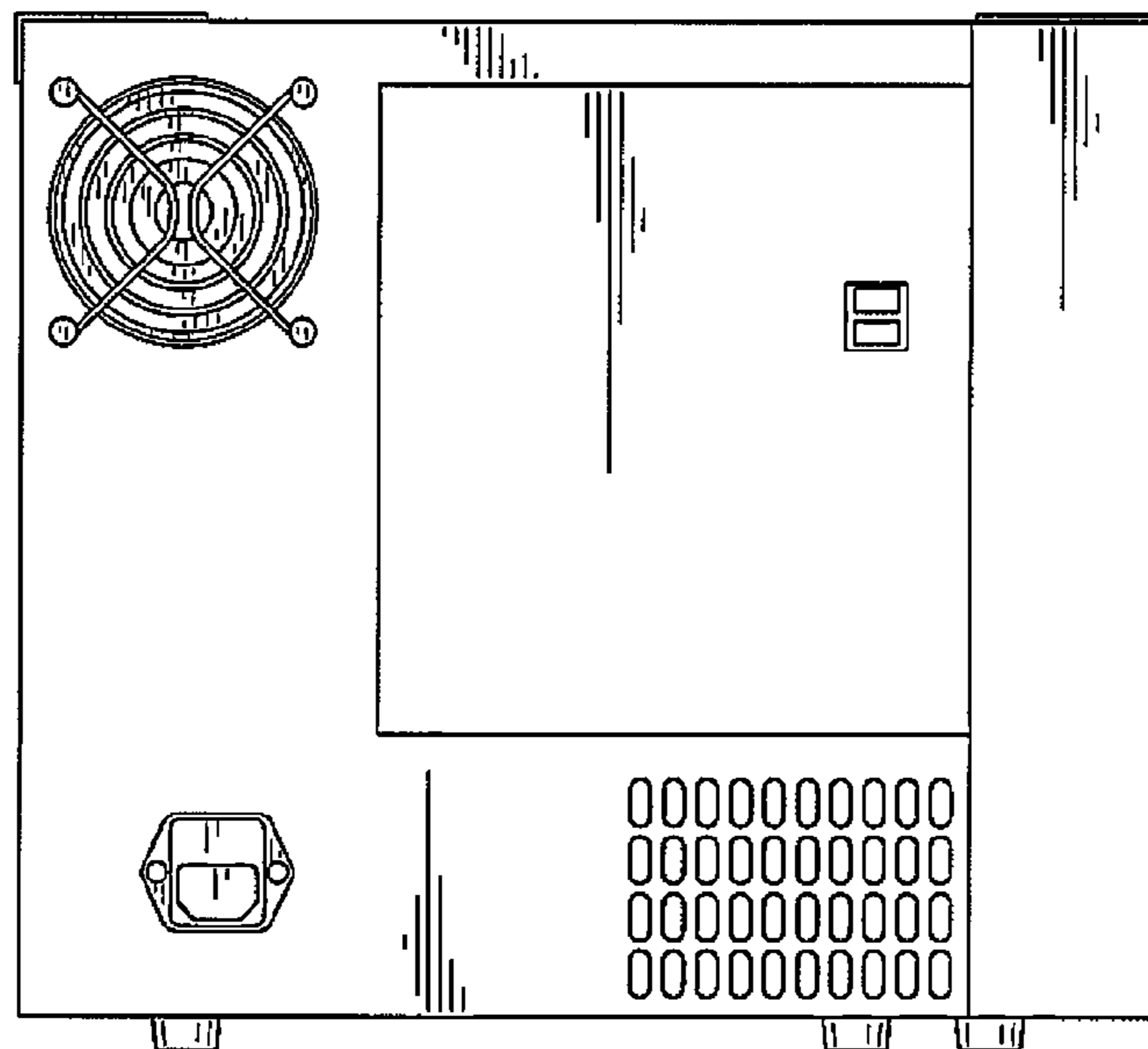


FIG. 3

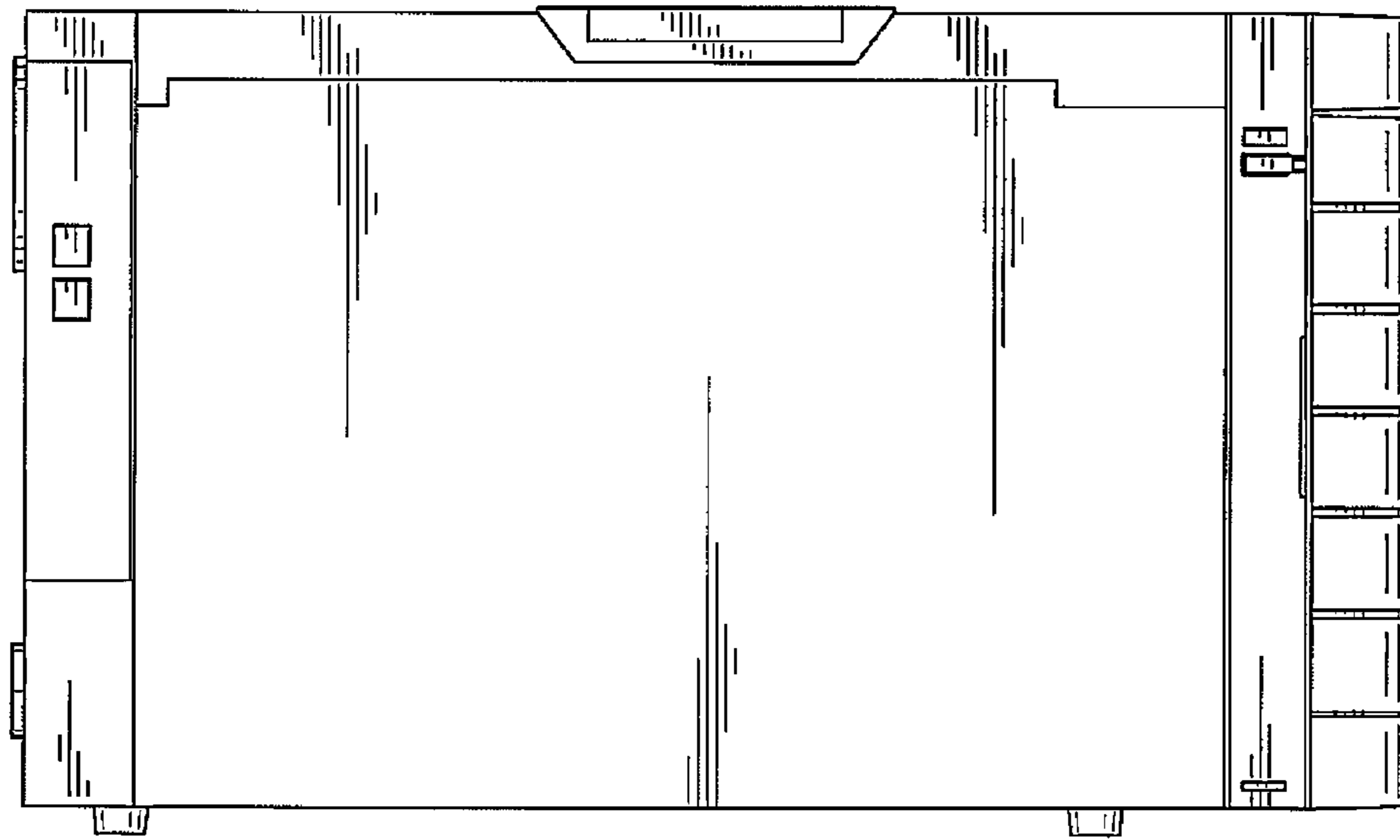


FIG. 4

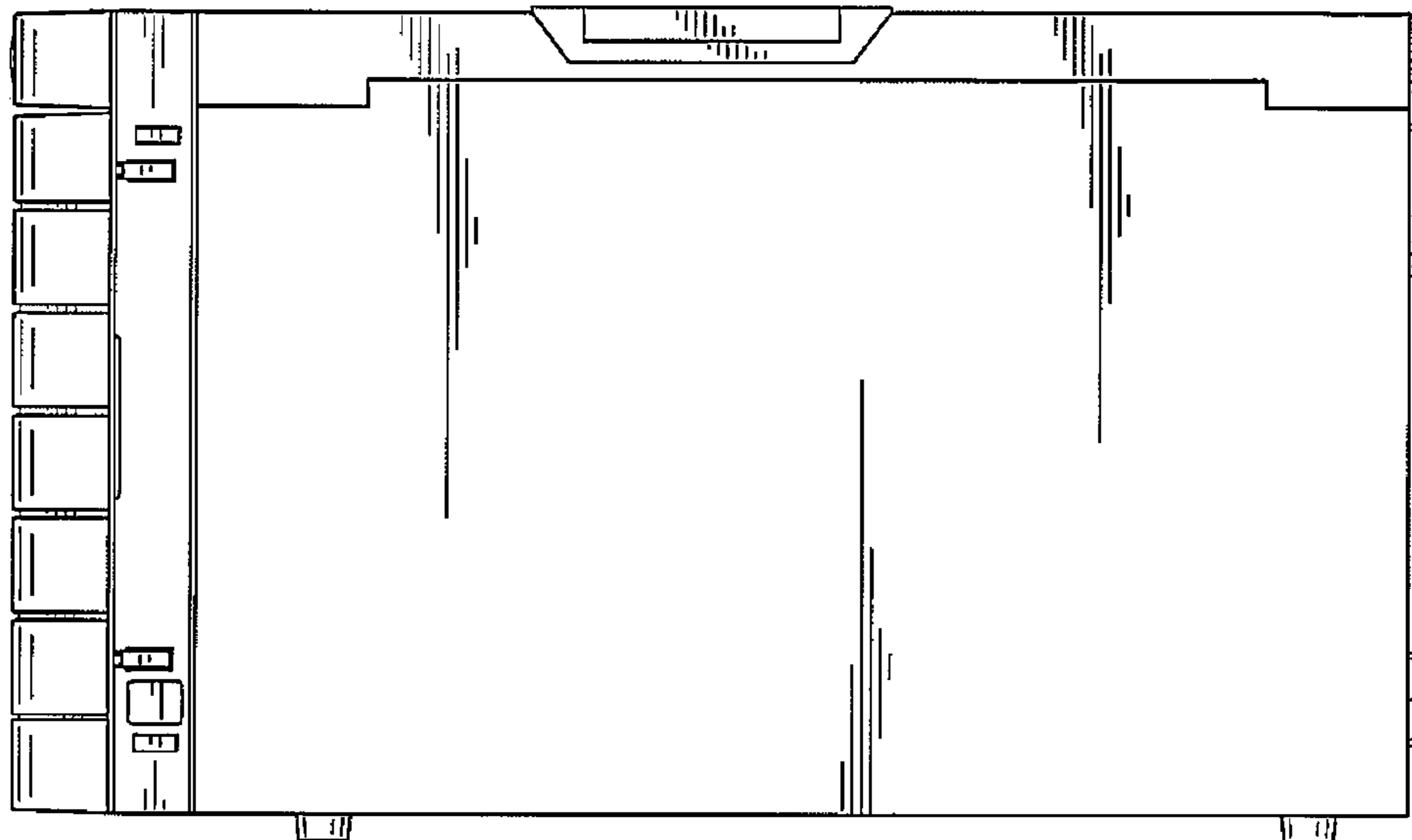


FIG. 5

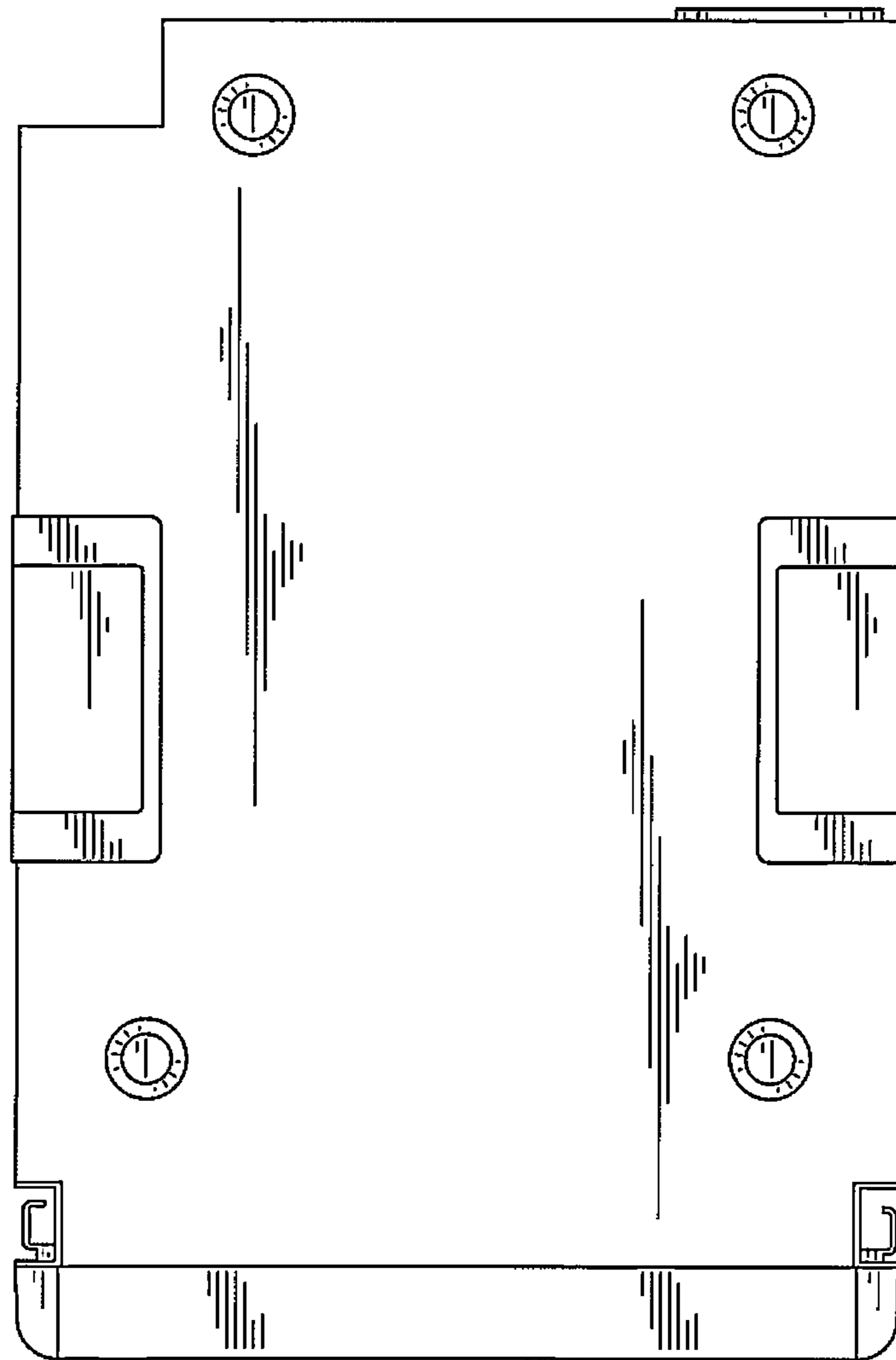


FIG. 6

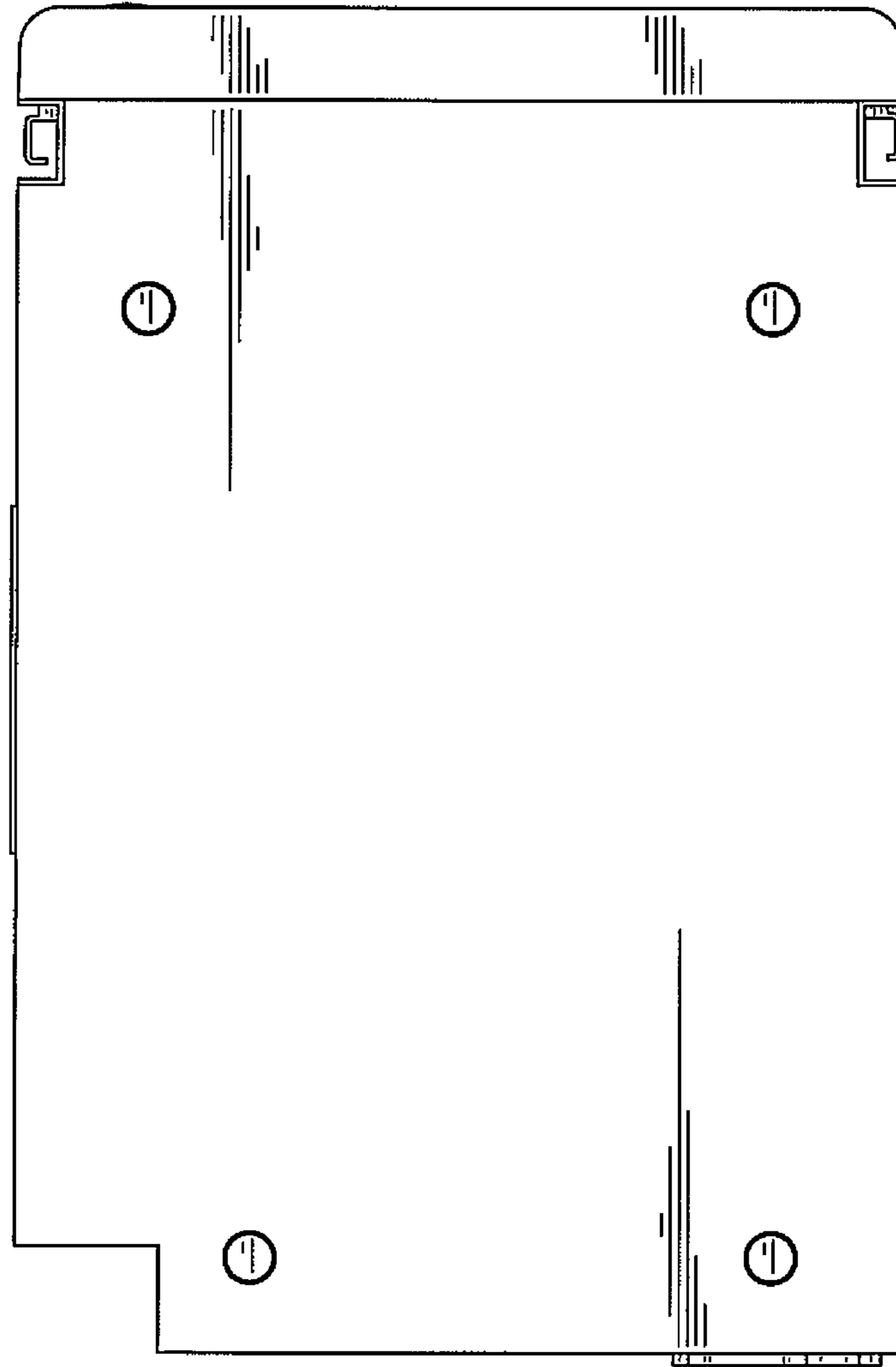


FIG. 7