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

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(54) **DISK DRIVE CARRIER**
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D404,383 S * 1/1999 Chang D14/367
5,883,757 A 3/1999 Hanson 360/97.01
5,959,834 A * 9/1999 Chang 361/685
6,091,571 A 7/2000 Hanson 360/98.04
6,097,567 A 8/2000 Hanson 360/97.01
6,233,143 B1 * 5/2001 Gamble et al. 361/685

(73) Assignee: **Hewlett-Packard Company**, Palo Alto, CA (US)

FOREIGN PATENT DOCUMENTS

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

GB 808848 2/1956
JP 50-97454 8/1975
JP 57-94687 6/1982

(21) Appl. No.: **29/144,444**

OTHER PUBLICATIONS

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(51) **LOC (7) Cl.** **14-02**

(52) **U.S. Cl.** **D14/367; D14/356**

(58) **Field of Search** D14/356, 363,
D14/367, 432, 435; D13/162, 184, 199;
312/223.1-223.3, 332.1; 360/99.01-99.12,
97.01, 98.01, 98.04; 361/680-686, 690-696,
212; 369/34, 36

Photographs (copies): 1) Compaq ProLiant; 2) Dell Power-Edge; 3) HP NetServer; 4) IBM Netfinity 1"; 5) IBM Netfinity 1.6" 6) Sun Ultra Enterprises; 7) HP Disk Array 1994; 8) Trimm Technology 1997; 9) Xyratex Salient Drive Carrier 1997; 10) Symbios 1998; 11) HP Disk Array 1995; 12) DEC Storage Works 1994; 13) HP NetServer LX Pro 1998; 9 pps.

Photograph (copy): Dataflux Rugged Winchester, 5800R "Twinchesters", Signal, Oct. 1982, p. 102.

"Hard Facts About The ROLM Military Hard Disk," Defense Electronics, Oct. 1952, p. 32.

Dataflux disc drives make the grade. Again; Signal, Oct. 1982, p. 102.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,697,084 A 10/1972 Ban 274/4 F
3,959,823 A 5/1976 Heidecker et al. 360/99
3,964,098 A 6/1976 Kramer et al. 360/93
4,062,049 A 12/1977 Dirks 360/78
4,194,224 A 3/1980 Grapes et al. 360/97
4,349,850 A 9/1982 Harvey 360/74.2
4,359,762 A 11/1982 Stollorz 360/98
4,413,328 A 11/1983 Videki, II 364/900
4,633,350 A 12/1986 Hanson 360/98
4,912,580 A 3/1990 Hanson 360/98.01
5,122,914 A 6/1992 Hanson 360/98.01
5,295,027 A * 3/1994 Elsing et al. 360/97.01
5,327,308 A 7/1994 Hanson 360/97.01
D358,141 S * 5/1995 Pecone et al. D14/367
5,515,215 A 5/1996 Hanson 360/98.01
5,517,373 A 5/1996 Hanson 360/98.01
5,563,748 A 10/1996 Hanson 360/97.01
5,602,696 A 2/1997 Hanson 360/97.01
5,682,277 A 10/1997 Hanson 360/97.01
5,764,434 A 6/1998 Hanson 360/97.01
5,765,933 A * 6/1998 Paul et al. 312/332.1

(List continued on next page.)

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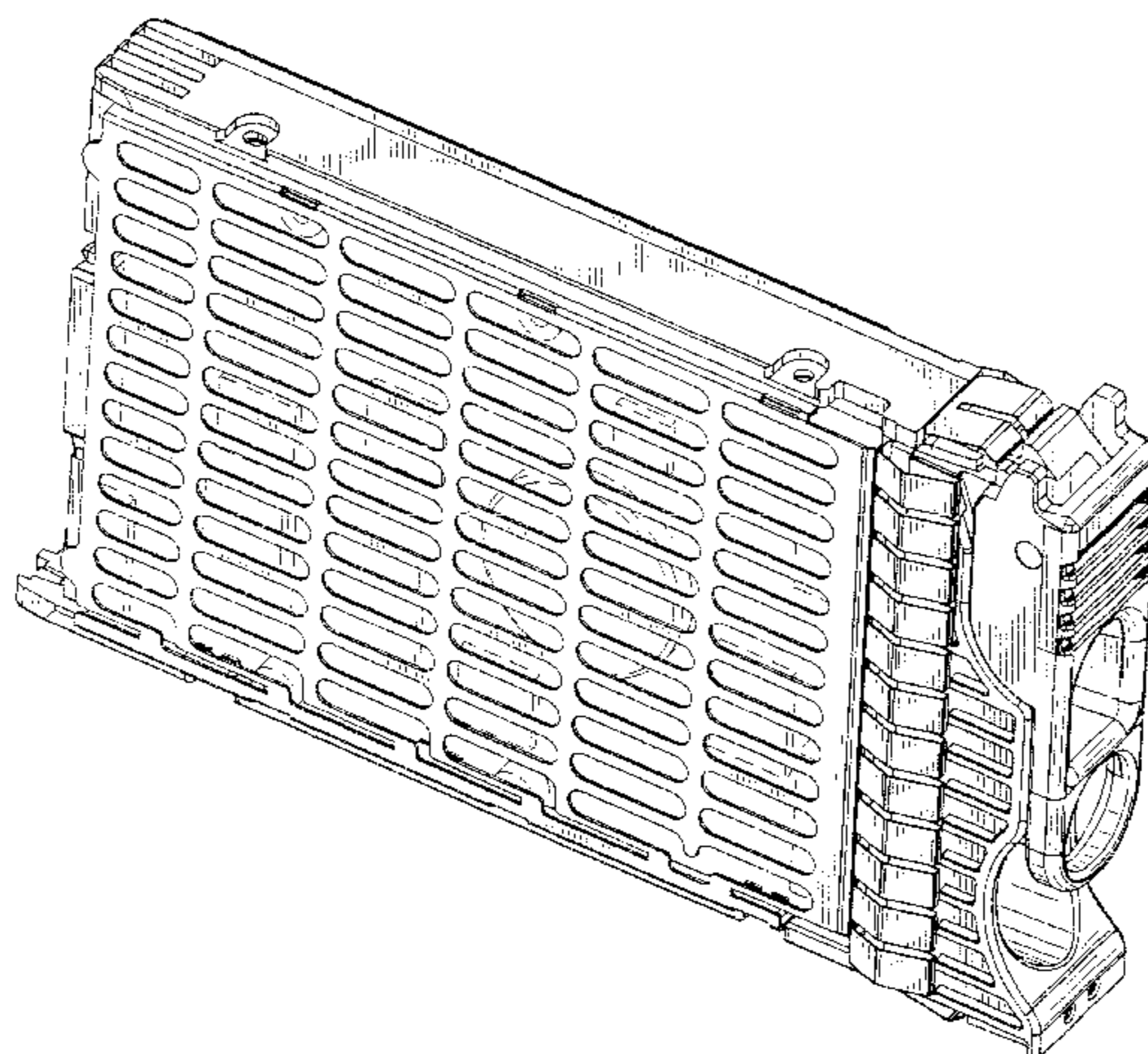
(57) **CLAIM**

The ornamental design of a disk drive carrier, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view showing the disk drive carrier; FIG. 2 is a right side view thereof; FIG. 3 is a left side view thereof; FIG. 4 is a front view thereof; FIG. 5 is a back view thereof; FIG. 6 is a top view thereof; and, FIG. 7 is a bottom side view thereof.

1 Claim, 5 Drawing Sheets



OTHER PUBLICATIONS

Micro-Winchester subsystem is Multibus-compatible, Mini-MicroWorld; Mini-Micro Systems, Jun. 1981, p. 33.

Mil-Spec, From The Ground Up; Signal, Oct., 1982, 3 pp.

Only Miltope flexible disk drives meet the tough standards of the toughest business of them all; Defense Electronics, Mar. 1981, p. 41.

Calendar, Defense Electronics, Dec. 1962, pp. 51-52.

ASF Pluggable Design, F. Dibble, W.L. Jaskiewicz, W.C. Miller and R.E. Weber; IBM Technical Disclosure Bulletin, vol. 24, No. 1 1A, Jun. 1981, IBM Corp. 1981, p. 28.

Low-Cost, Rack-Mounted, Direct-Access Disk Storage Device, W.P. Bakkan, R.C. Lentz, F.C. Pexton and J.R. Reidenbach, IBM Technical Disclosure Bulletin, vol. 19, No. , Mar. 1977, IBM Corp. 1977.

U.S. Patent Application Ser. No. 09/809,409 (10012052-1, 50918-1490), entitled "Systems with Enhanced Electrostatic Discharge Protection," filed on Mar. 15, 2001.

* cited by examiner

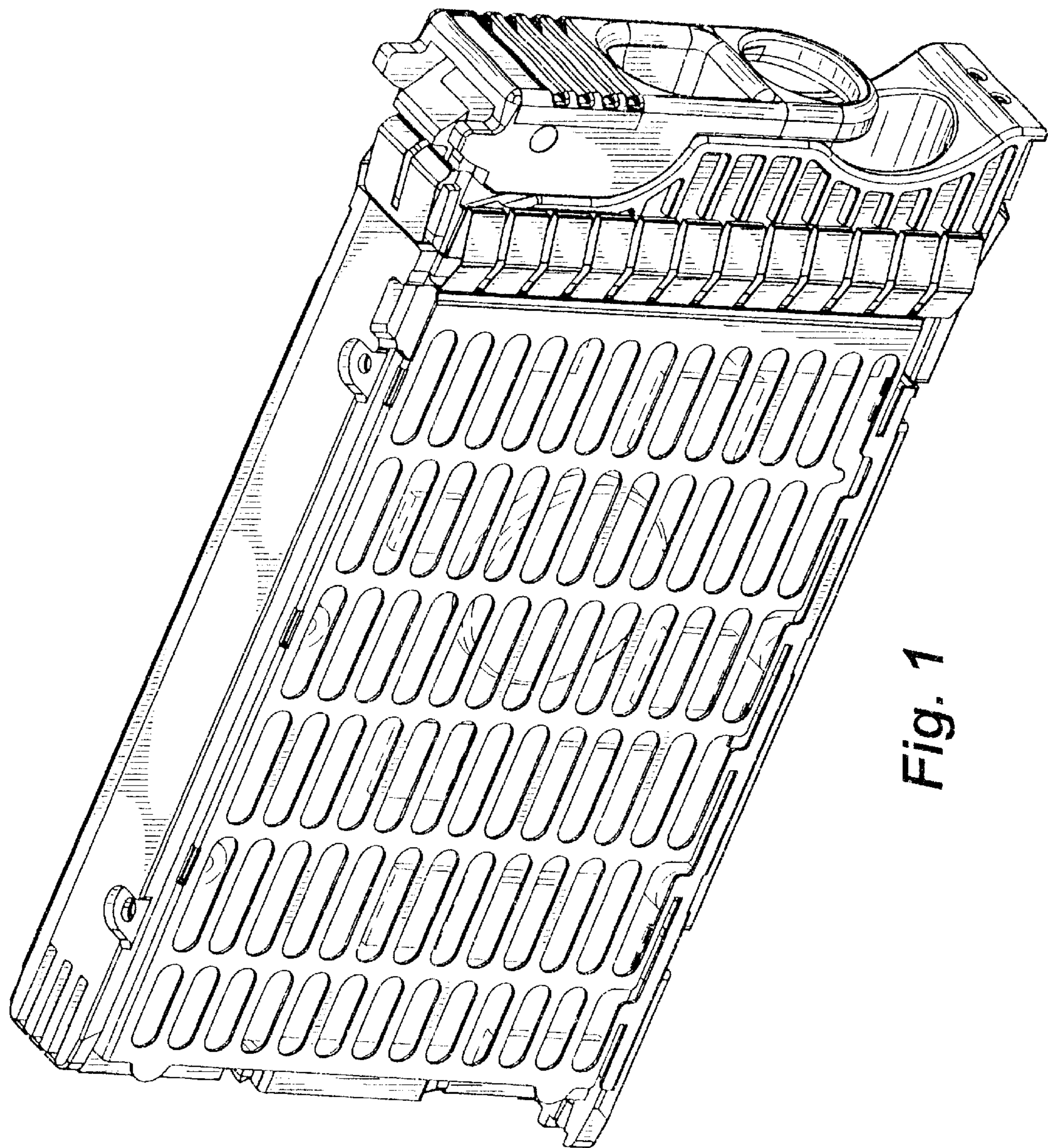


Fig. 1

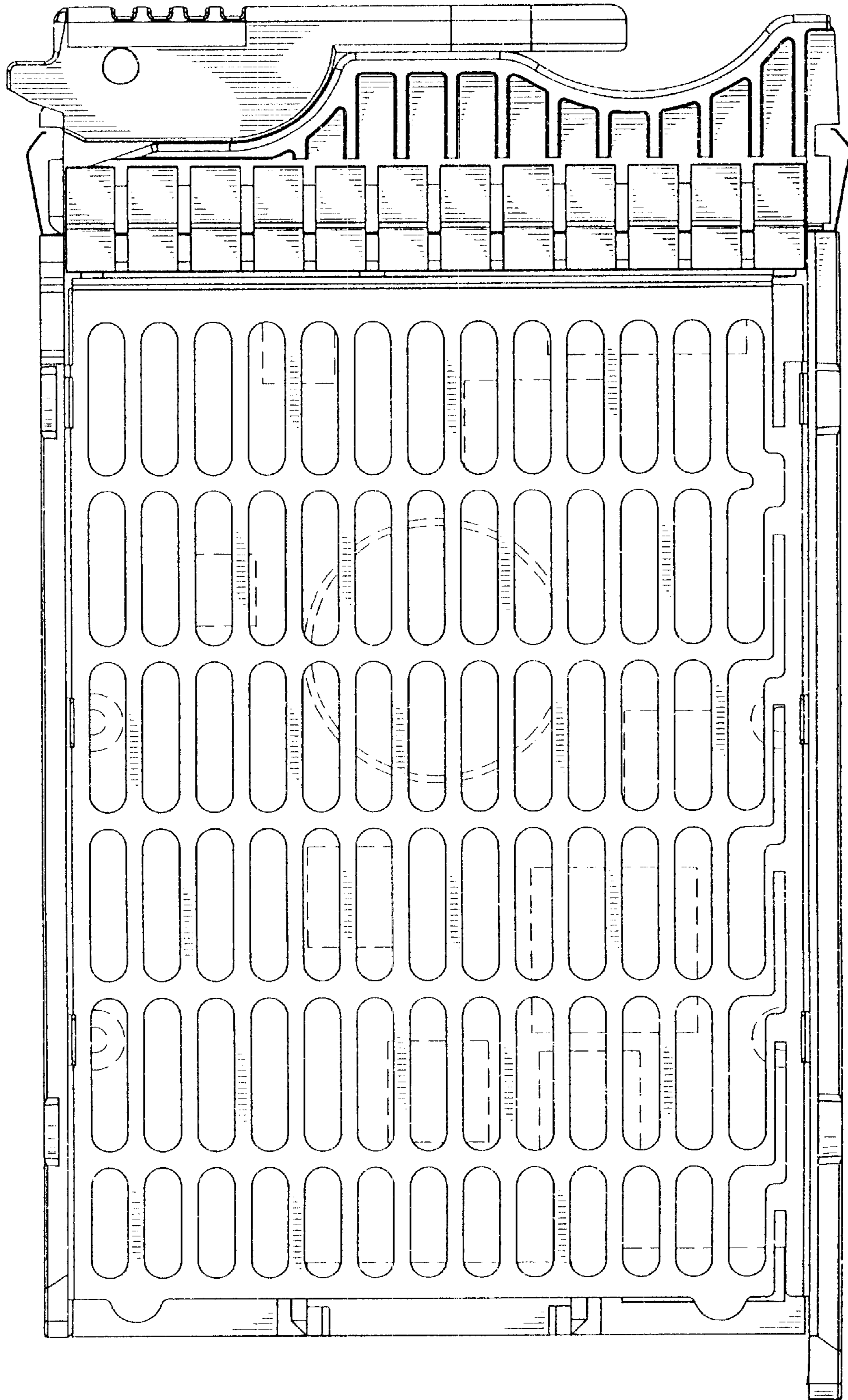


Fig. 2

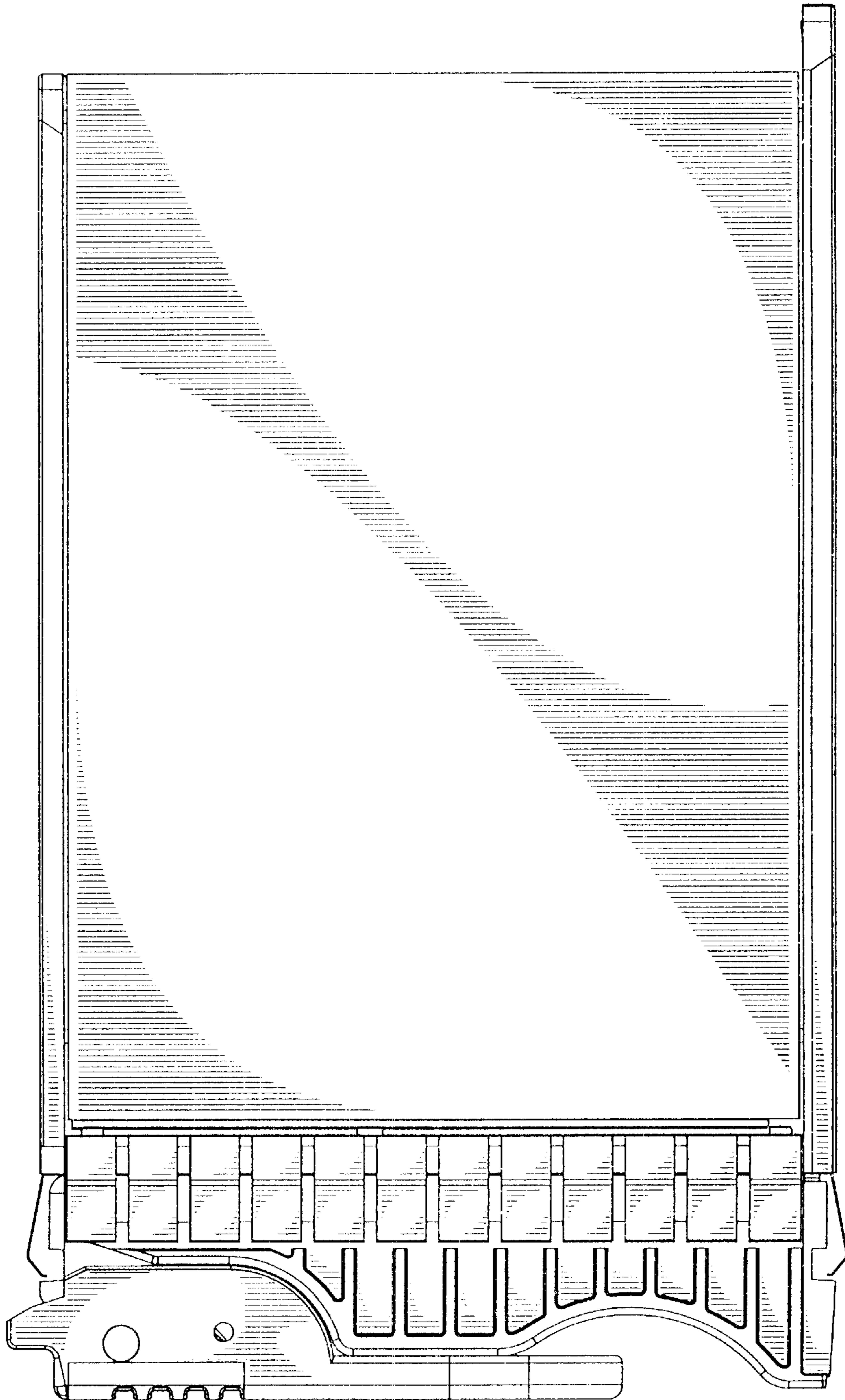


Fig. 3

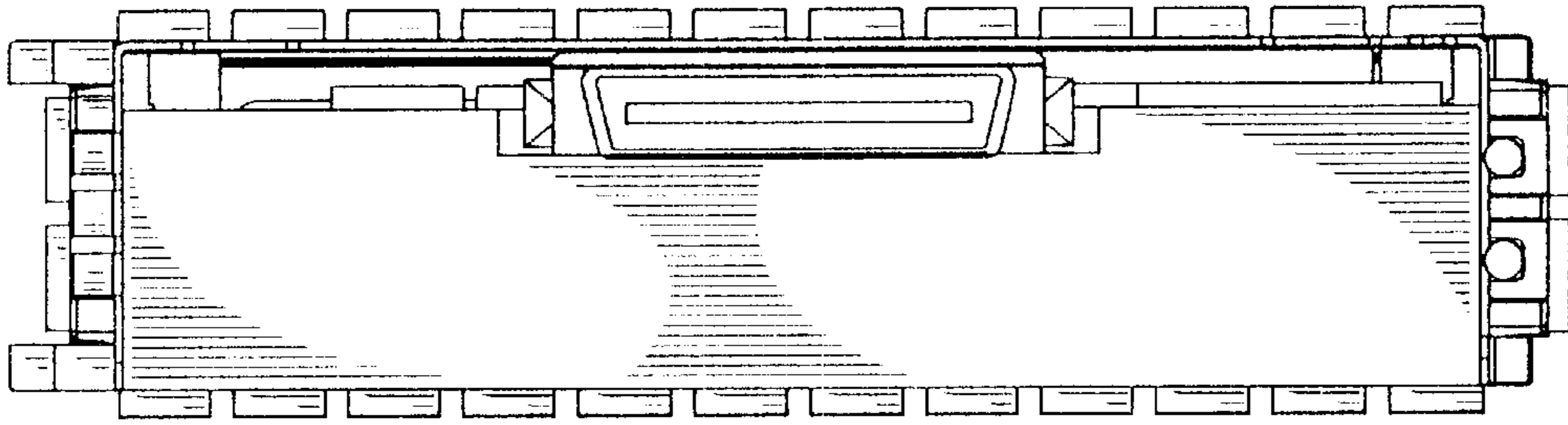


Fig. 5

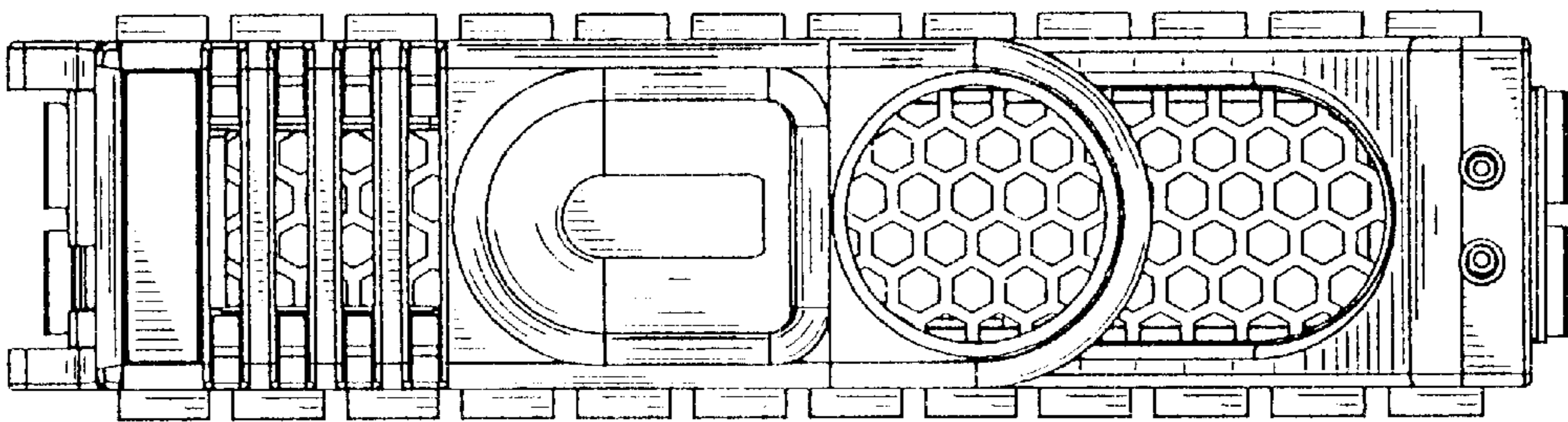


Fig. 4

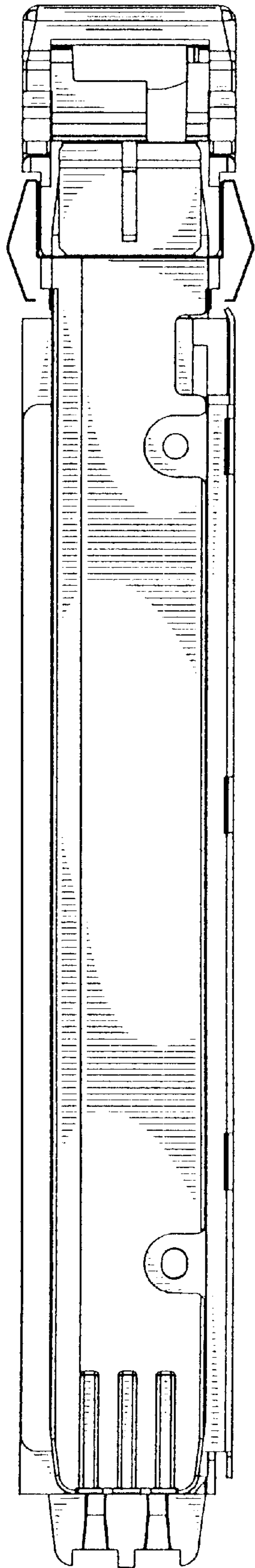


Fig. 6

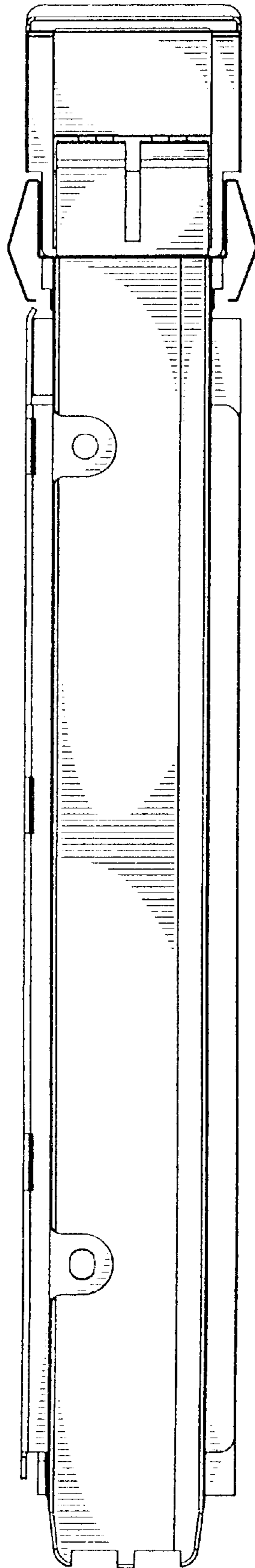


Fig. 7