



US00D458924S

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

(10) **Patent No.: US D458,924 S**
(45) **Date of Patent: ** Jun. 18, 2002**

(54) **DISK DRIVE CARRIER**
(75) Inventors: **Brian S. Tsuyuki**, Roseville; **Herbert J. Tanzer**, Folsom, both of CA (US); **Darrel W. Poulter**, Middleton, ID (US)

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

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

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

(22) Filed: **Jul. 2, 2001**

(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

(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

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

FOREIGN PATENT DOCUMENTS

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

OTHER PUBLICATIONS

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.

(List continued on next page.)

Primary Examiner—Freda Nunn

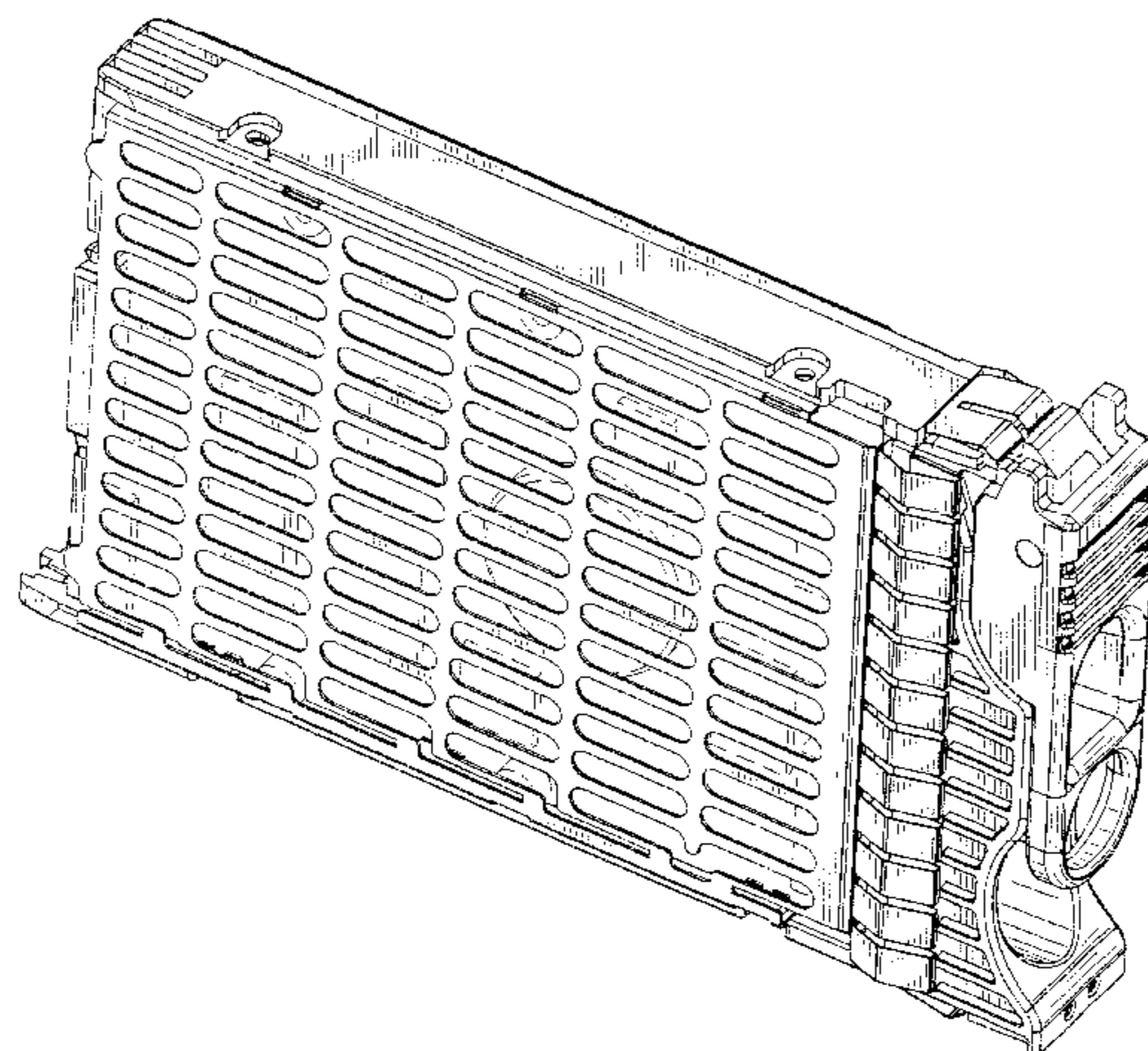
(57) **CLAIM**

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

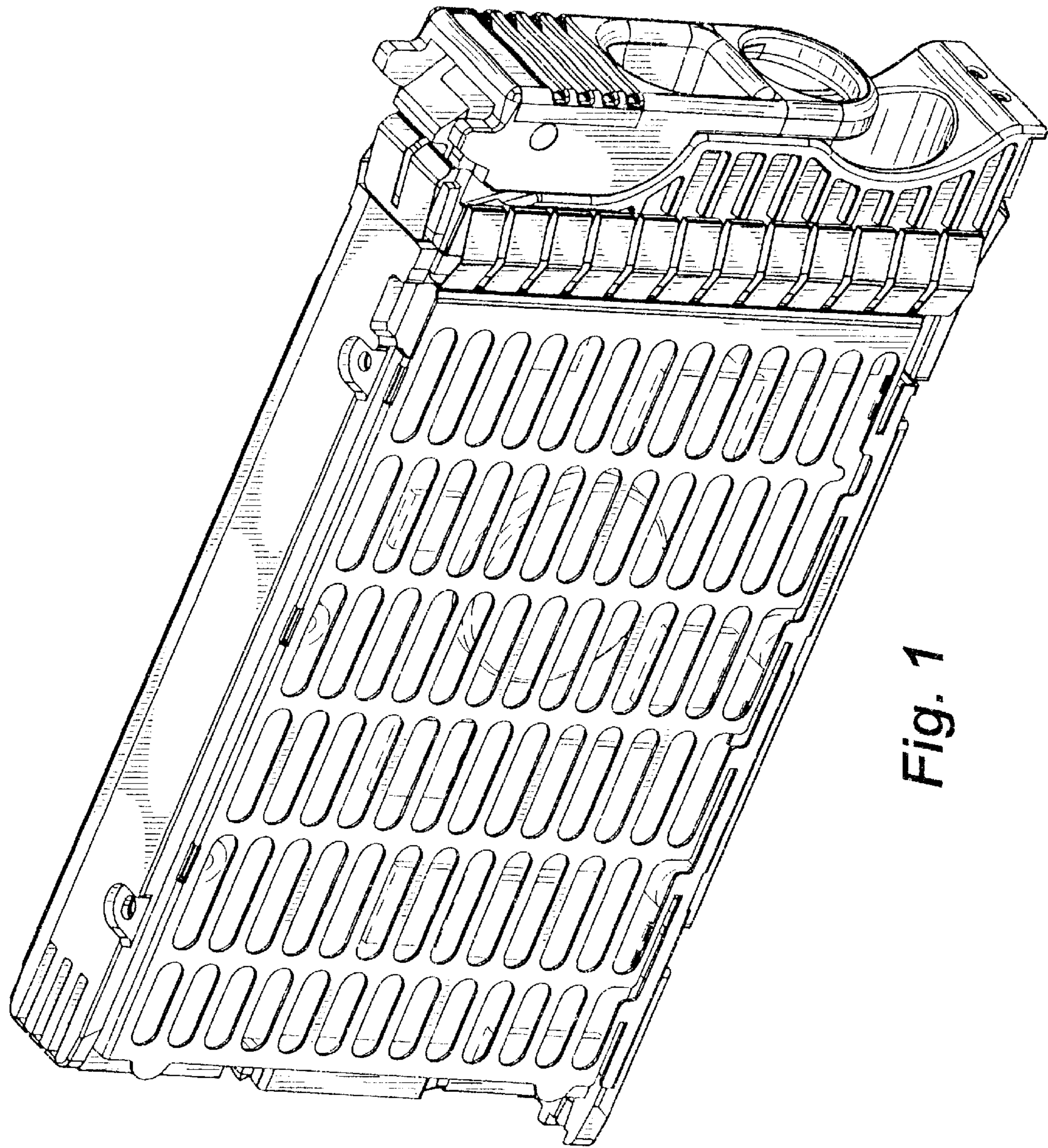


Fig. 1

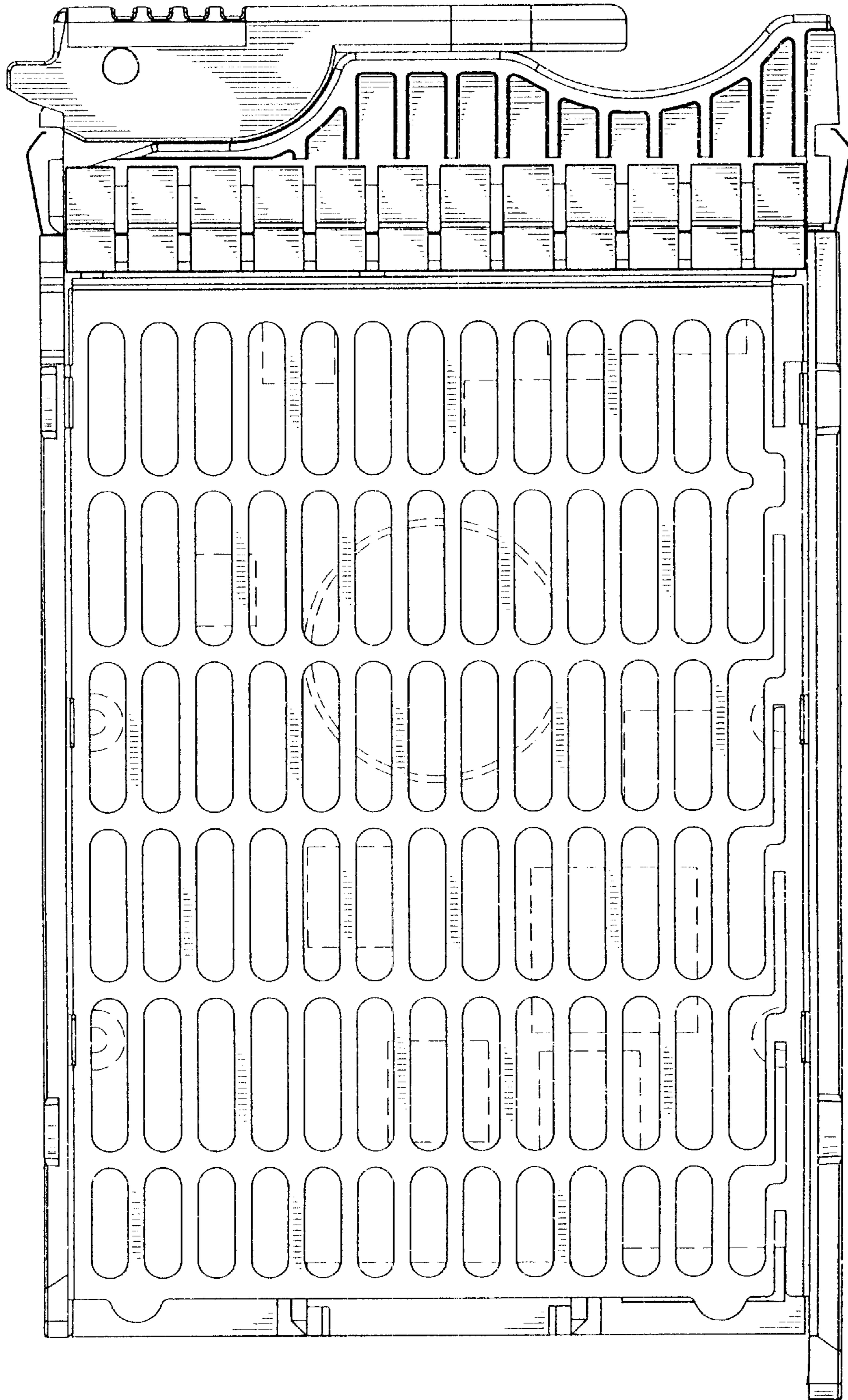


Fig. 2

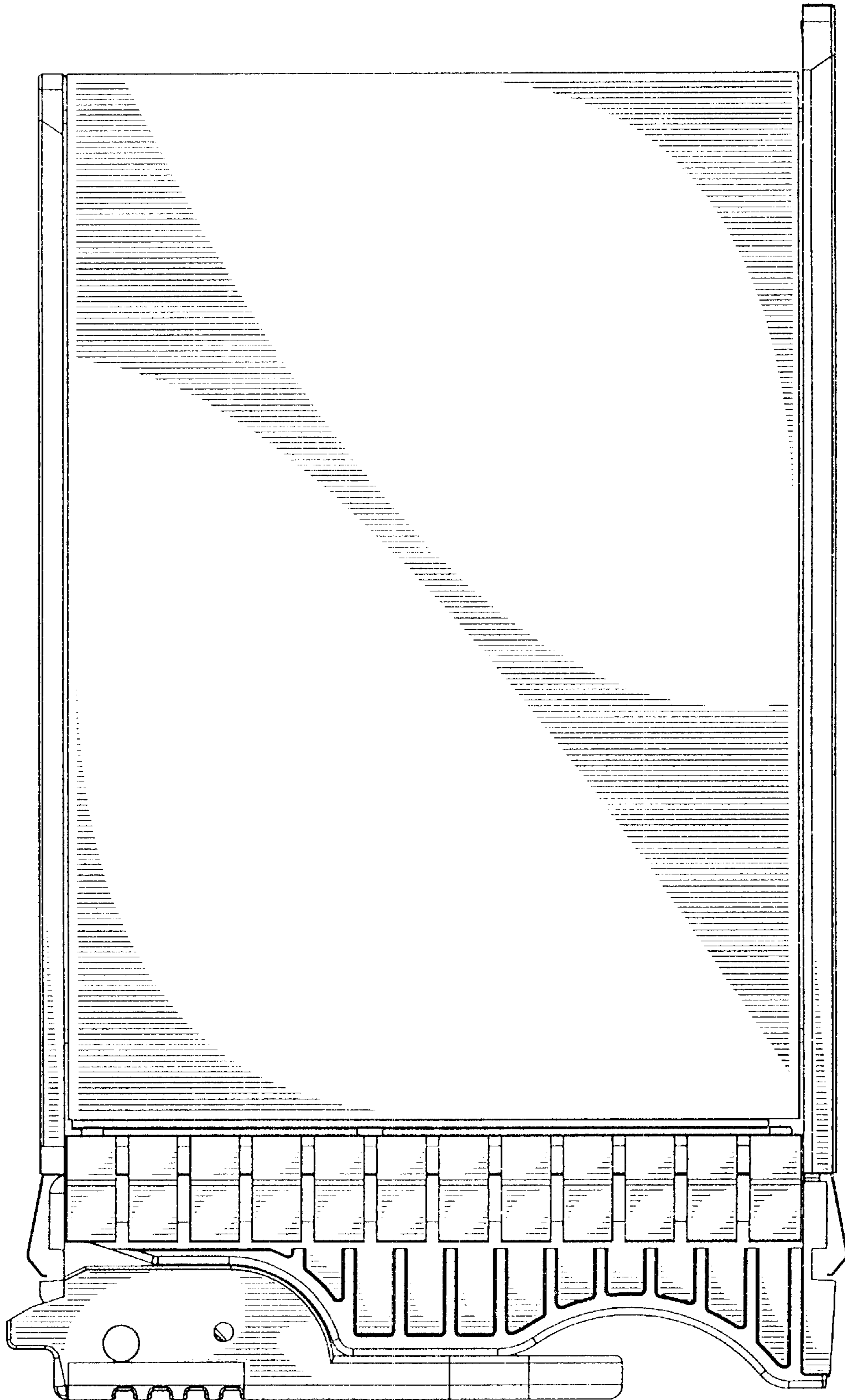


Fig. 3

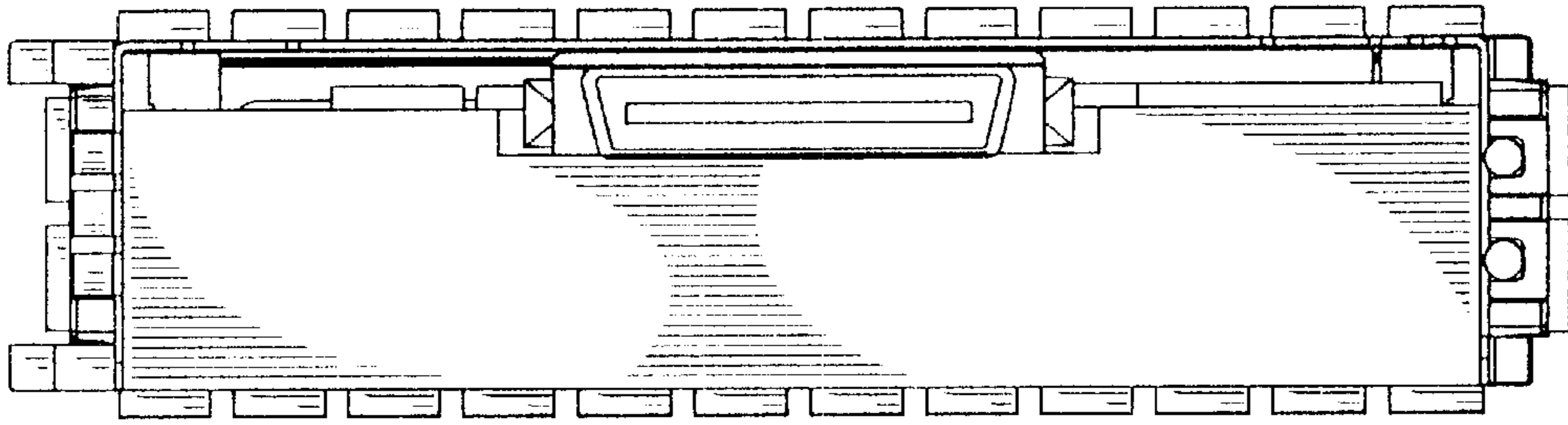


Fig. 5

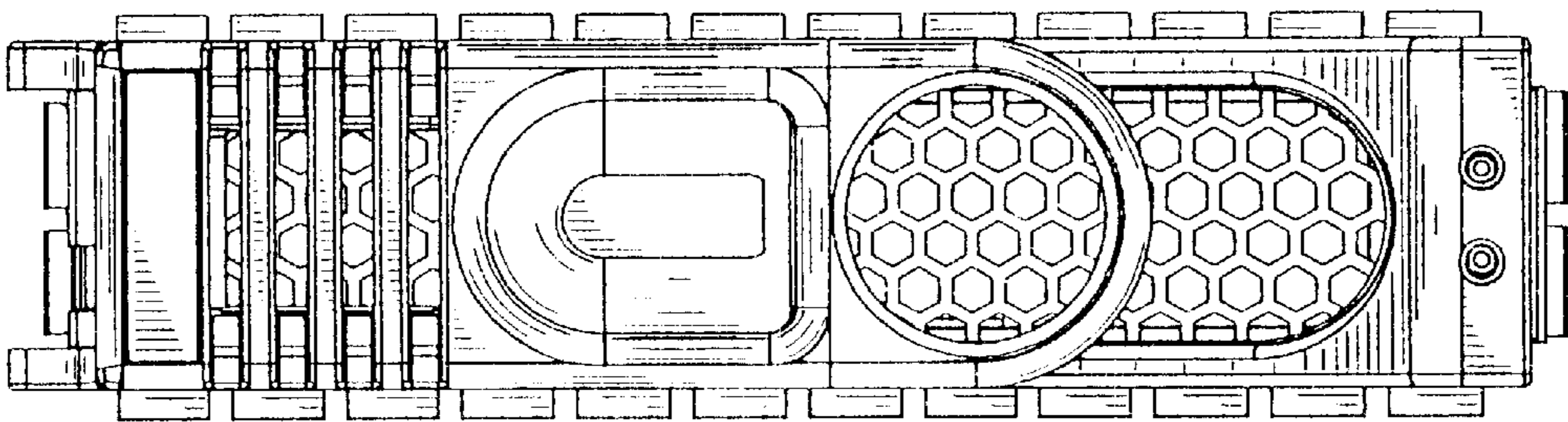


Fig. 4

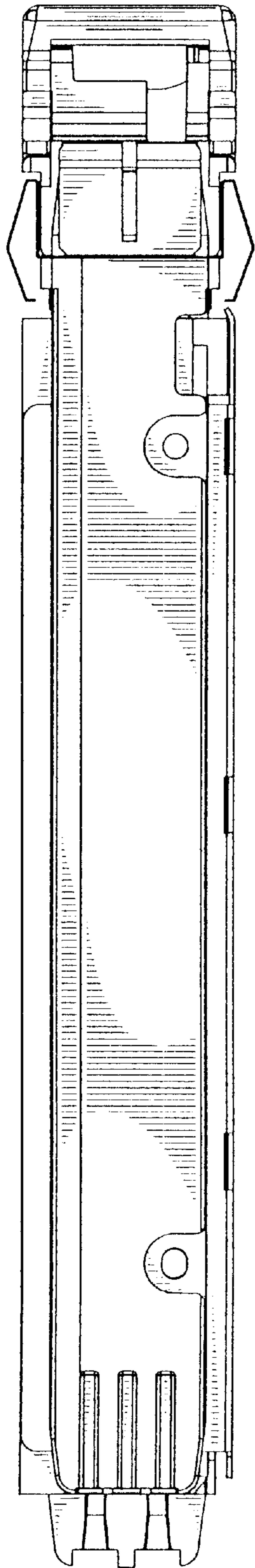


Fig. 6

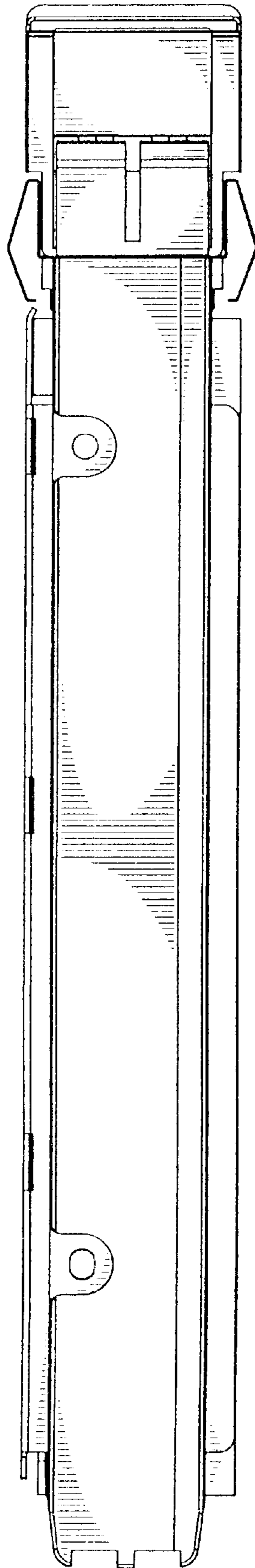


Fig. 7