US00D342721S

United States Patent [19]

Itoh

[11] Patent Number: Des. 342,721

[45] Date of Patent: ** Dec. 28, 1993

[54] **HEAT DISSIPATING DEVICE FOR A SEMICONDUCTOR PACKAGE**

[75] Inventor: **Akira Itoh**, Osaka, Japan

[73] Assignee: **Itoh Research & Development Laboratory Co., Ltd.**, Osaka, Japan

[**] Term: **14 Years**

[21] Appl. No.: **933,503**

[22] Filed: **Aug. 21, 1992**

[30] **Foreign Application Priority Data**

Mar. 4, 1992 [JP] Japan 4-6202

[52] **U.S. Cl.** **D13/179**

[58] **Field of Search** 437/902; 165/80.2, 80.3, 165/104.33; 257/713, 720; 361/383, 386; 174/52.1, 15.2, 16.3; D13/179, 182

[56] **References Cited**

U.S. PATENT DOCUMENTS

D. 276,719	12/1984	Sugimoto et al.	D13/179 X
3,241,605	3/1966	Tabor	D13/179 X
3,406,753	10/1968	Habdas	165/80.2 X
3,572,428	3/1971	Monaco	361/383 X
3,589,046	5/1971	Jordan	174/52.1
3,884,293	5/1975	Pessolano et al.	361/386 X
4,292,647	9/1981	Lee	165/80.3 X
4,644,385	2/1987	Nakanishi et al.	257/713
4,716,494	12/1987	Bright et al.	174/16.3 X
5,087,888	2/1992	Mountz et al.	361/383 X
5,155,579	10/1992	Yeung	174/16.3 X

FOREIGN PATENT DOCUMENTS

0054597	6/1982	European Pat. Off.	361/386

OTHER PUBLICATIONS

Air–Cooled Module on p. 1007 of *IBM Technical Disclosure Bulletin* vol. 20 No. 3 Aug. 1977.

Heat Removal Module on p. 2249 of *IBM Technical Disclosure Bulletin* vol. 22 No. 6 Nov. 1979.

Primary Examiner—Wallace R. Burke

Assistant Examiner—Joel Sincavage

Attorney, Agent, or Firm—W. G. Fasse; D. H. Kane, Jr.

[57] **CLAIM**

The ornamental design for a heat dissipating device for a semiconductor package, as shown and described.

DESCRIPTION

FIG. **1** is a front view of an embodiment of the heat dissipating device for a semiconductor package;

FIG. **2** is a top plan view thereof;

FIG. **3** is a bottom plan view thereof;

FIG. **4** is a right side view thereof;

FIG. **5** is a perspective view thereof;

FIG. **6** is a sectional view taken along section line **6—6** in FIG. **2**; and,

FIG. **7** is the same view as in FIG. **4** showing the heat dissipating device attached to a semiconductor package shown in broken lines since the packages do not form any part of the claimed design.

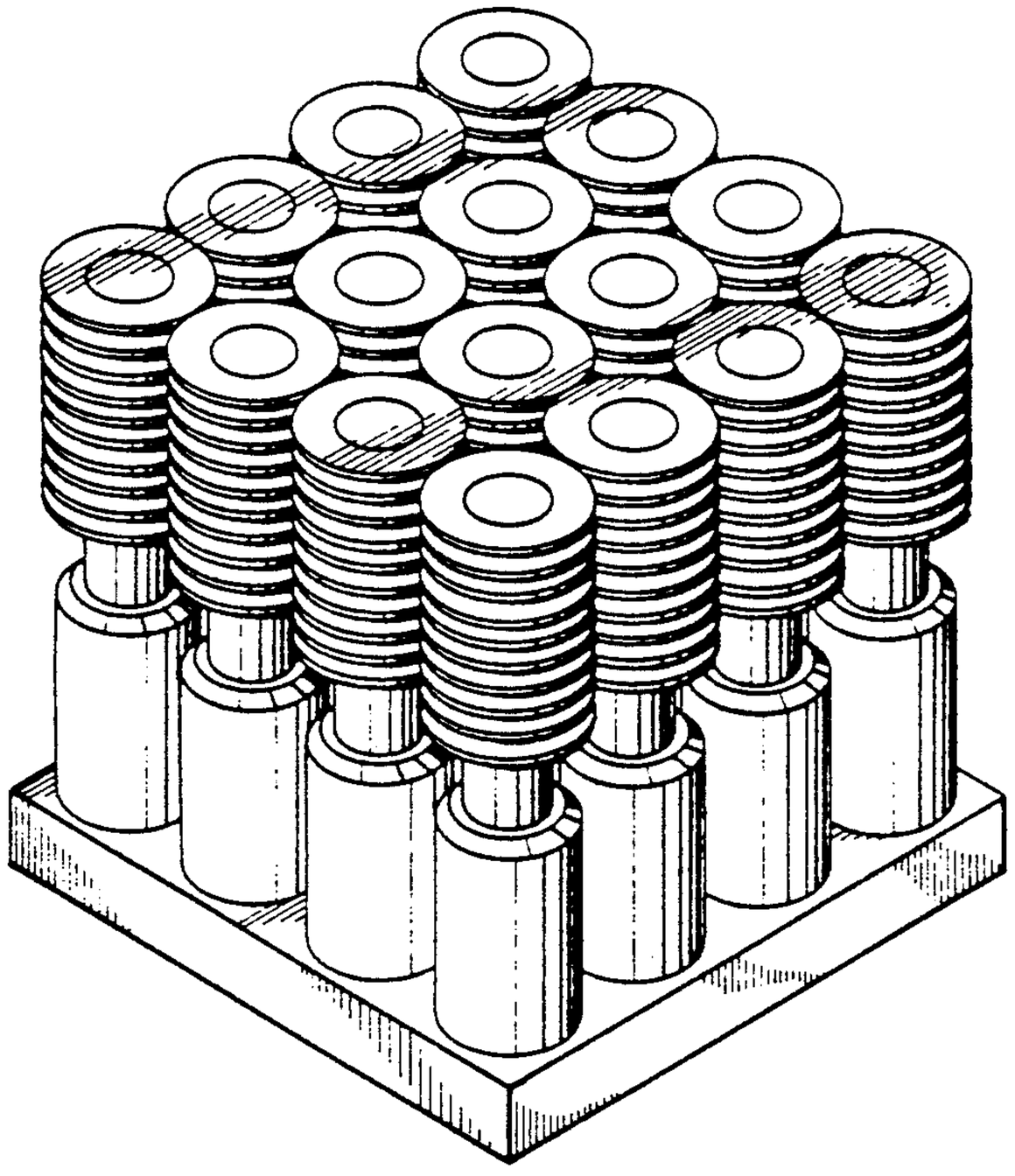


FIG. 1

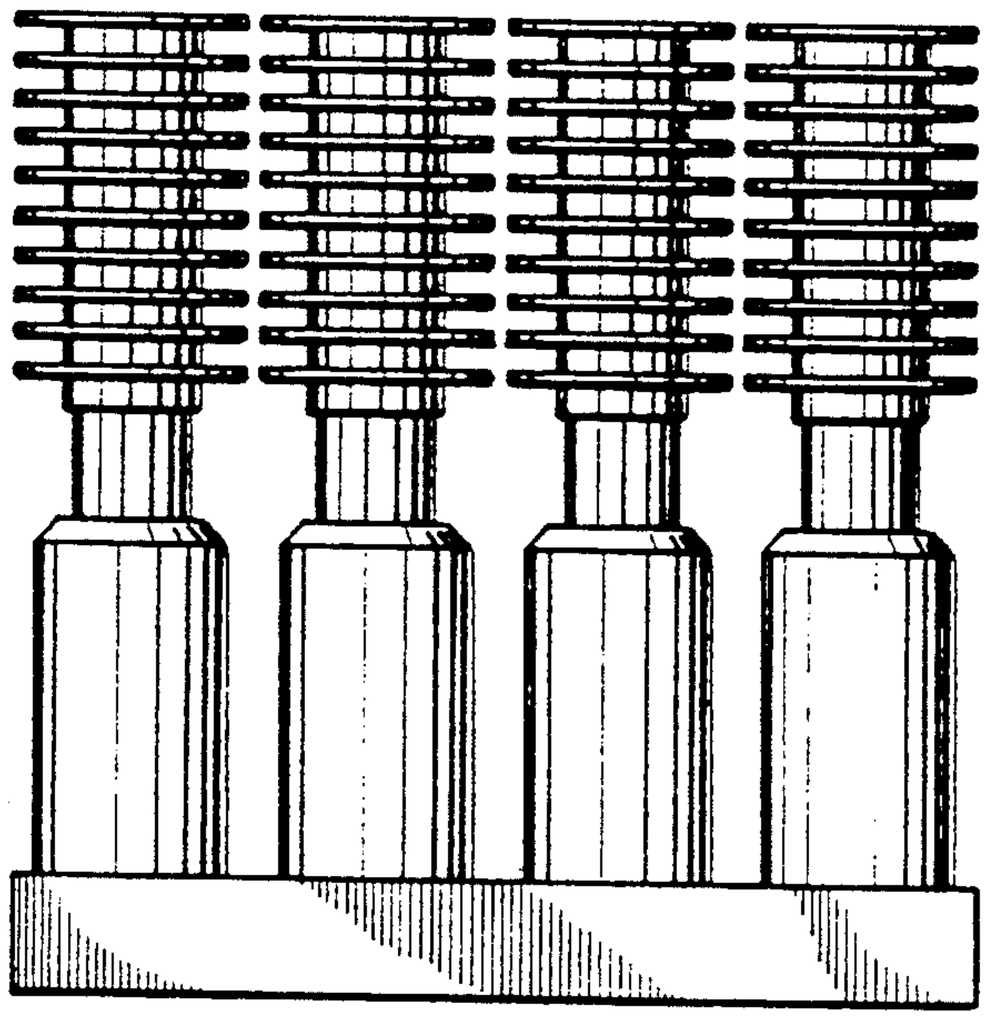


FIG. 4

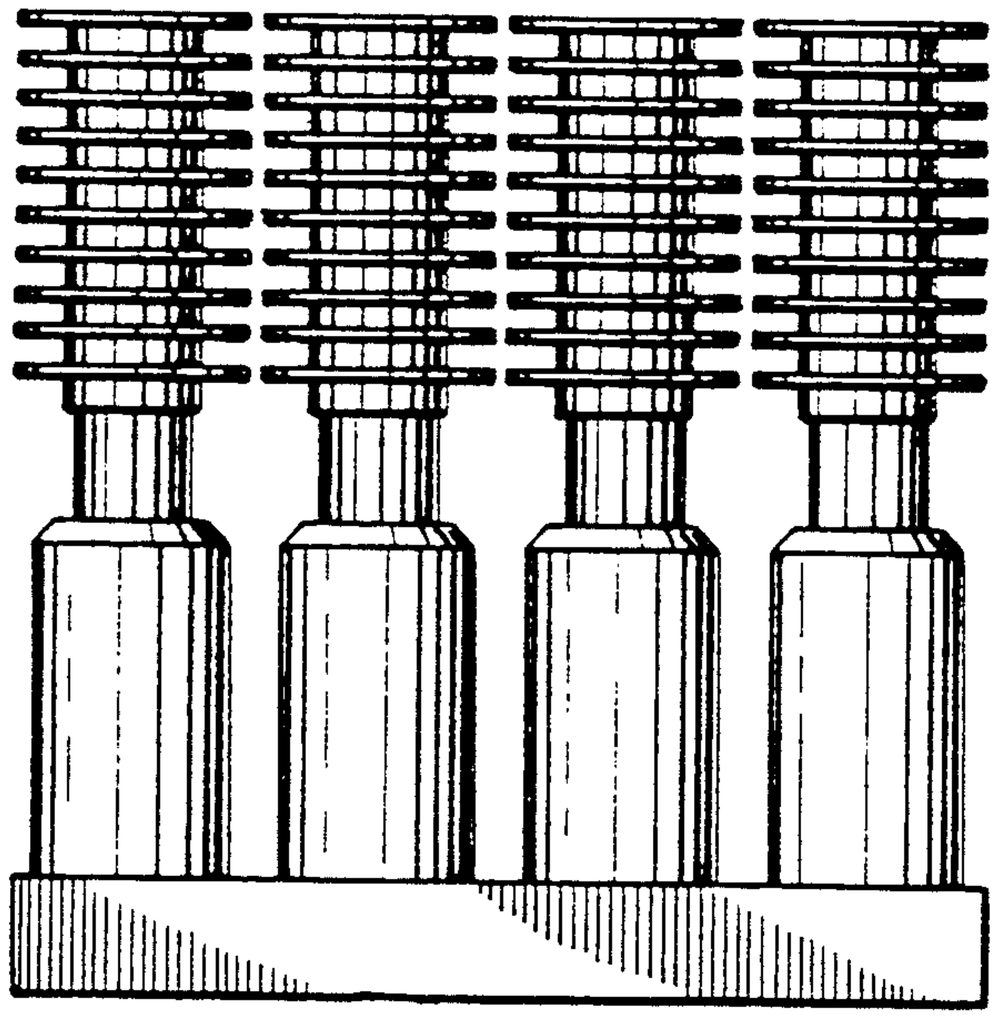


FIG. 2

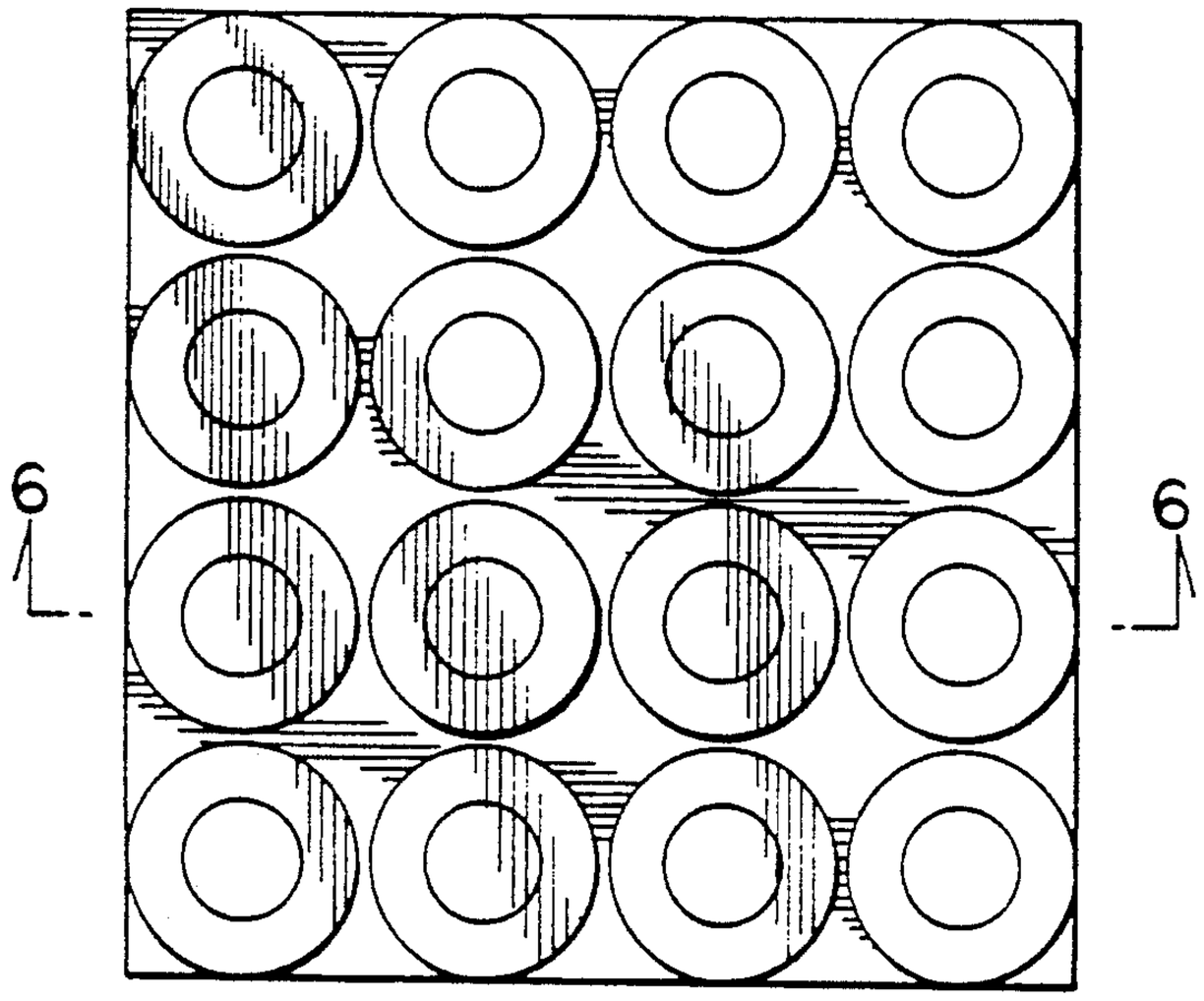


FIG. 3

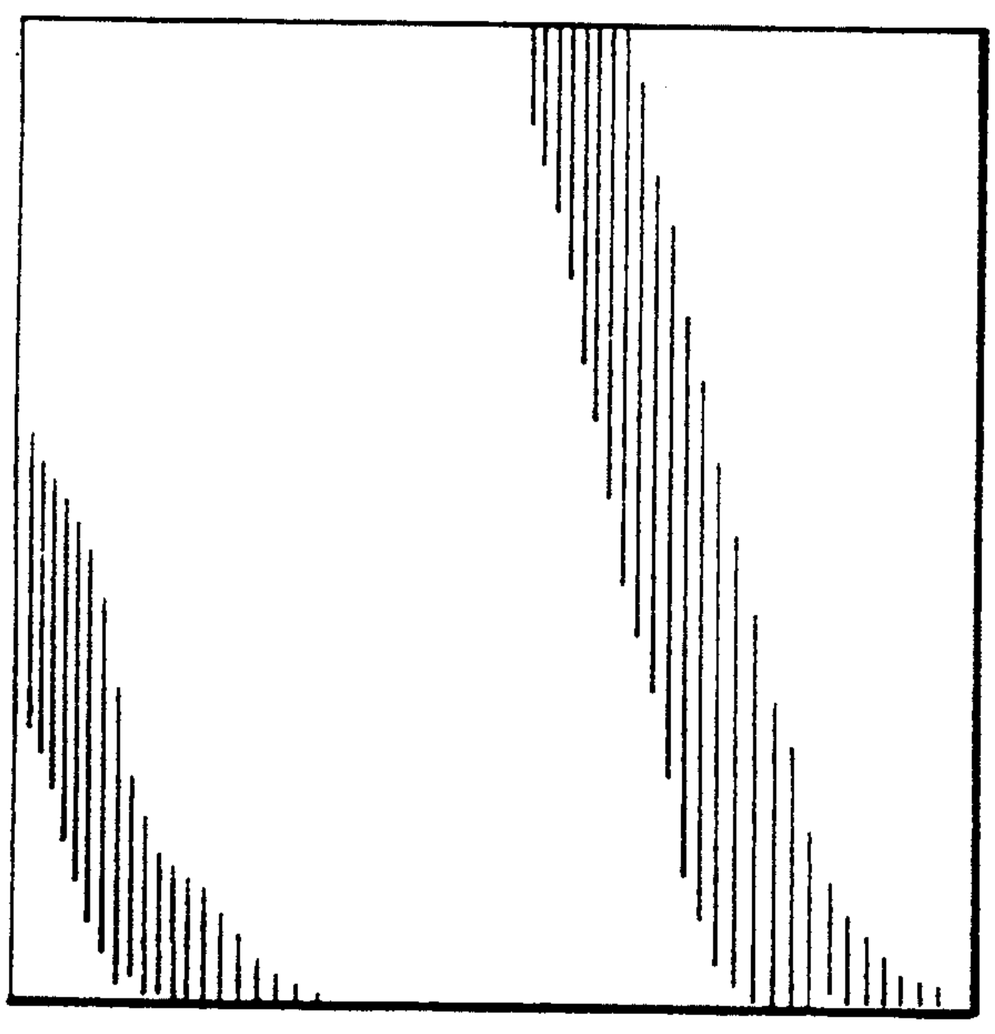


FIG. 5

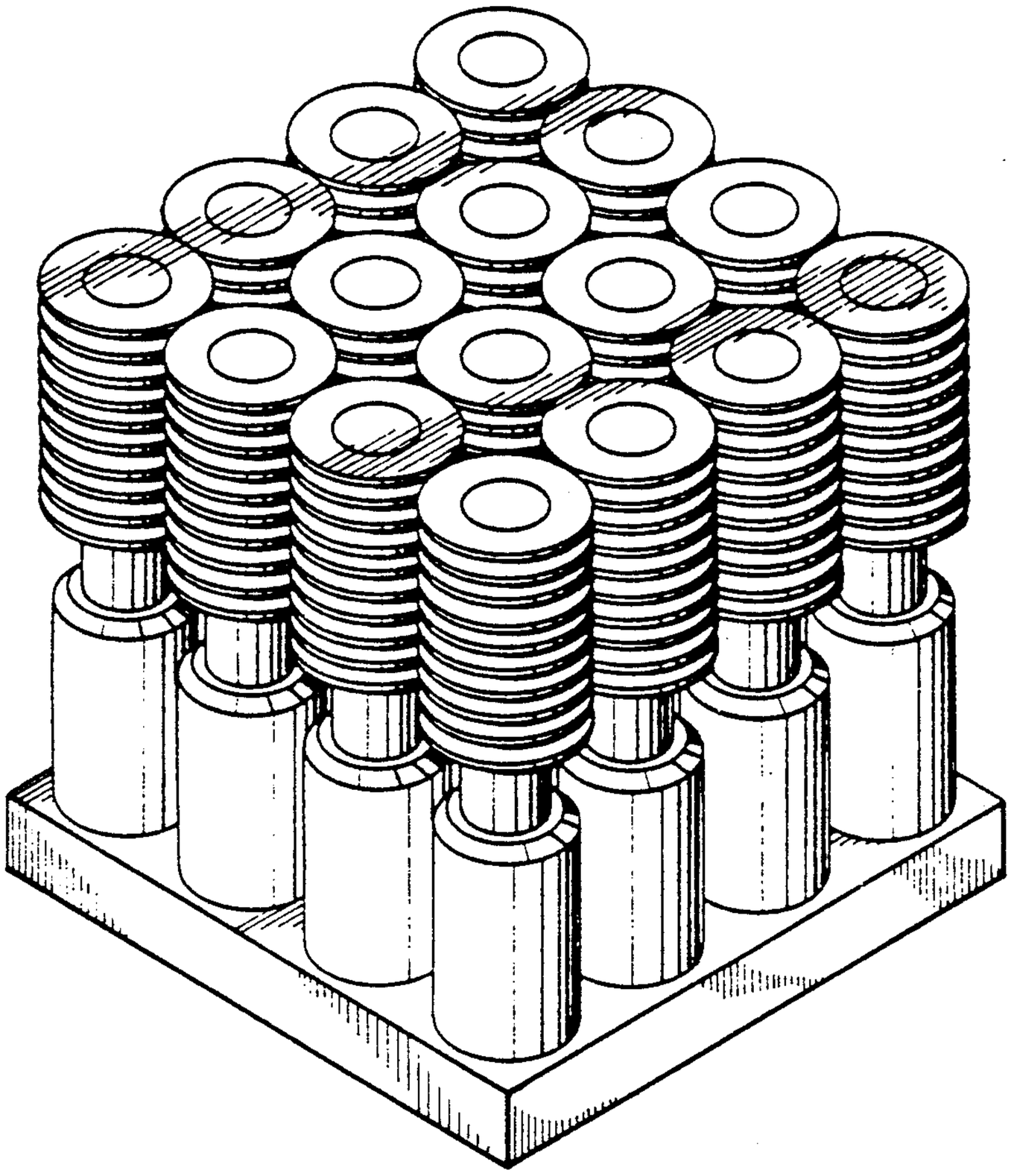


FIG. 6

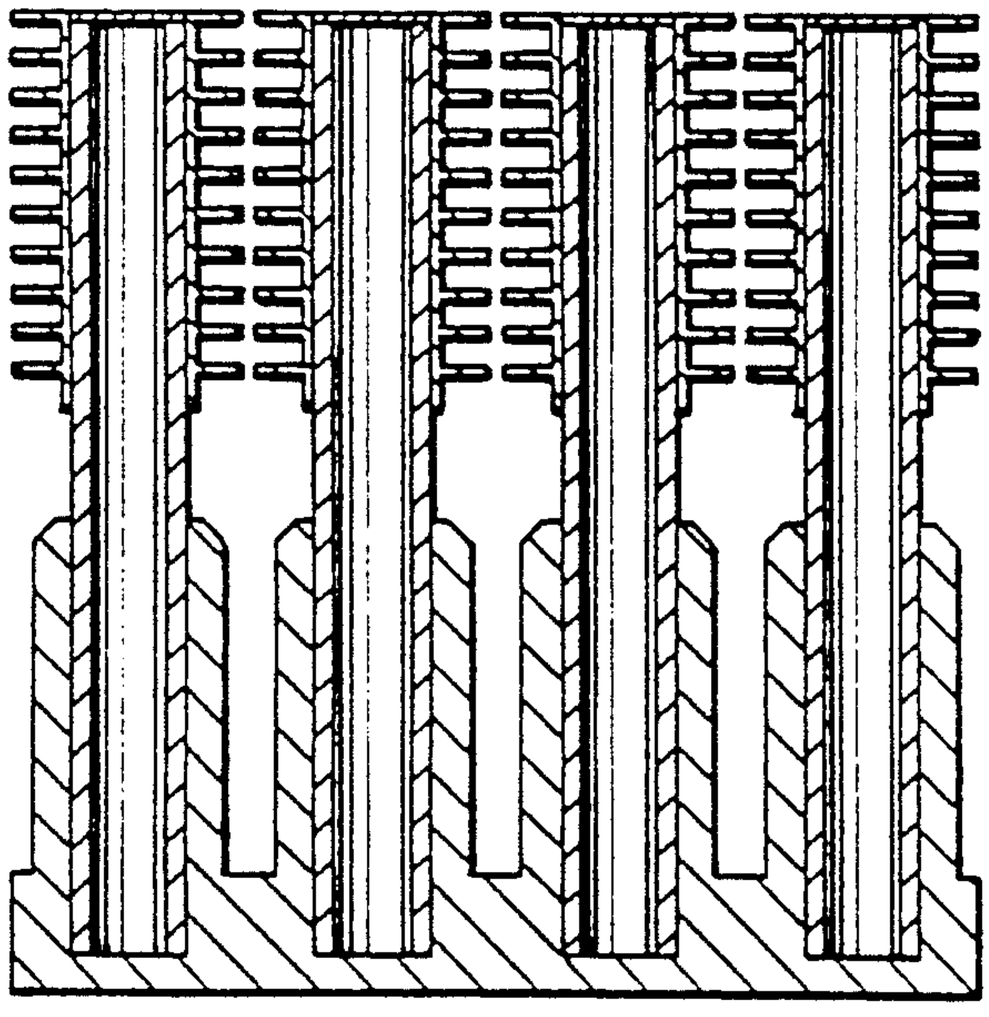
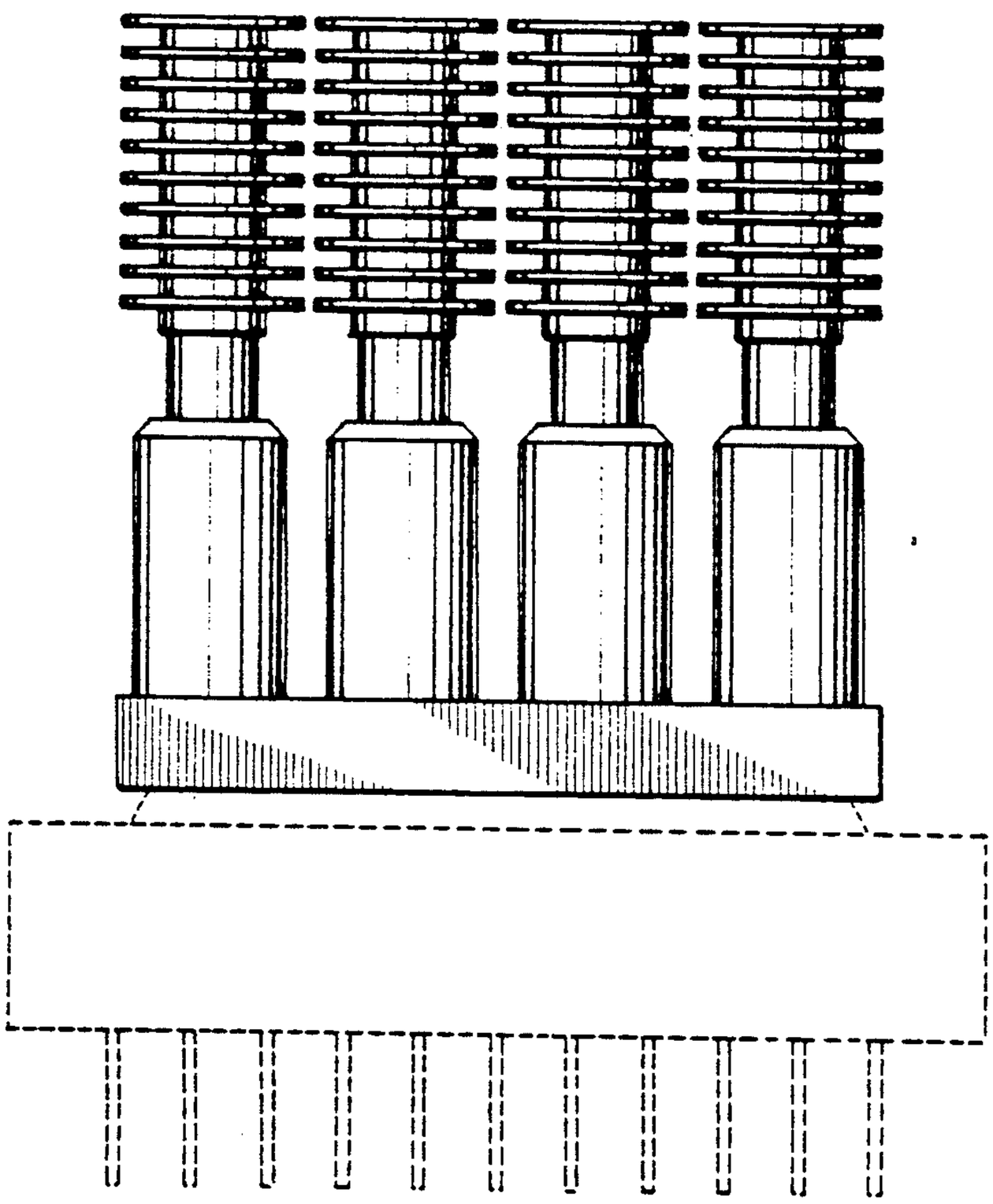


FIG. 7



UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : Des. 342,721

DATED : Dec. 28, 1993

INVENTOR(S) : Akira Itoh

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Insert item [63]

— The present Design Application relates to U. S. Design Application USSN: 07/933,532, filed on August 21, 1992. —

Signed and Sealed this

Fifth Day of December, 1995

Attest:

BRUCE LEHMAN

Attesting Officer

Commissioner of Patents and Trademarks