



US00D731435S

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

(10) **Patent No.:** **US D731,435 S**
(45) **Date of Patent:** **** Jun. 9, 2015**

(54) **VERTICAL ELECTRICAL CONNECTOR**

(71) Applicants: **Jonathan E. Buck**, Milpitas, CA (US);
Stuart C. Stoner, Lewisberry, PA (US);
Steven E. Minich, York, PA (US);
Douglas M. Johnescu, York, PA (US);
Stephen B. Smith, Mechanicsburg, PA (US)

(72) Inventors: **Jonathan E. Buck**, Milpitas, CA (US);
Stuart C. Stoner, Lewisberry, PA (US);
Steven E. Minich, York, PA (US);
Douglas M. Johnescu, York, PA (US);
Stephen B. Smith, Mechanicsburg, PA (US)

(73) Assignee: **FCI AMERICAS TECHNOLOGY LLC**, Carson City, NV (US)

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

(21) Appl. No.: **29/498,817**

(22) Filed: **Aug. 8, 2014**

Related U.S. Application Data

(62) Division of application No. 29/443,759, filed on Jan. 22, 2013, now Pat. No. Des. 712,843.

(51) **LOC (10) Cl.** **13-03**

(52) **U.S. Cl.**
USPC **D13/147**

(58) **Field of Classification Search**
USPC D13/133, 146, 147, 154, 184, 199;
439/74, 108, 180, 246, 252, 258, 278,
439/374, 378, 379, 381, 527, 529, 533, 660,
439/717, 865-894, 953; 174/16.3; 257/697,
257/727; 361/769

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D210,829 S 4/1968 Hanlon
D213,697 S 4/1969 Oxley

D402,637 S 12/1998 Carpenter, Jr.
6,461,202 B2 10/2002 Kline
6,960,103 B2 11/2005 Tokunaga
6,994,569 B2 2/2006 Minich et al.
7,118,391 B2 10/2006 Minich et al.
D550,628 S 9/2007 Whiteman et al.

(Continued)

OTHER PUBLICATIONS

U.S. Appl. No. 29/496,690, filed Jul. 16, 2014, Buck et al.

(Continued)

Primary Examiner — Daniel Bui

(74) *Attorney, Agent, or Firm* — Baker & Hostetler LLP

(57)

CLAIM

The ornamental design for a vertical electrical connector, as shown and described.

DESCRIPTION

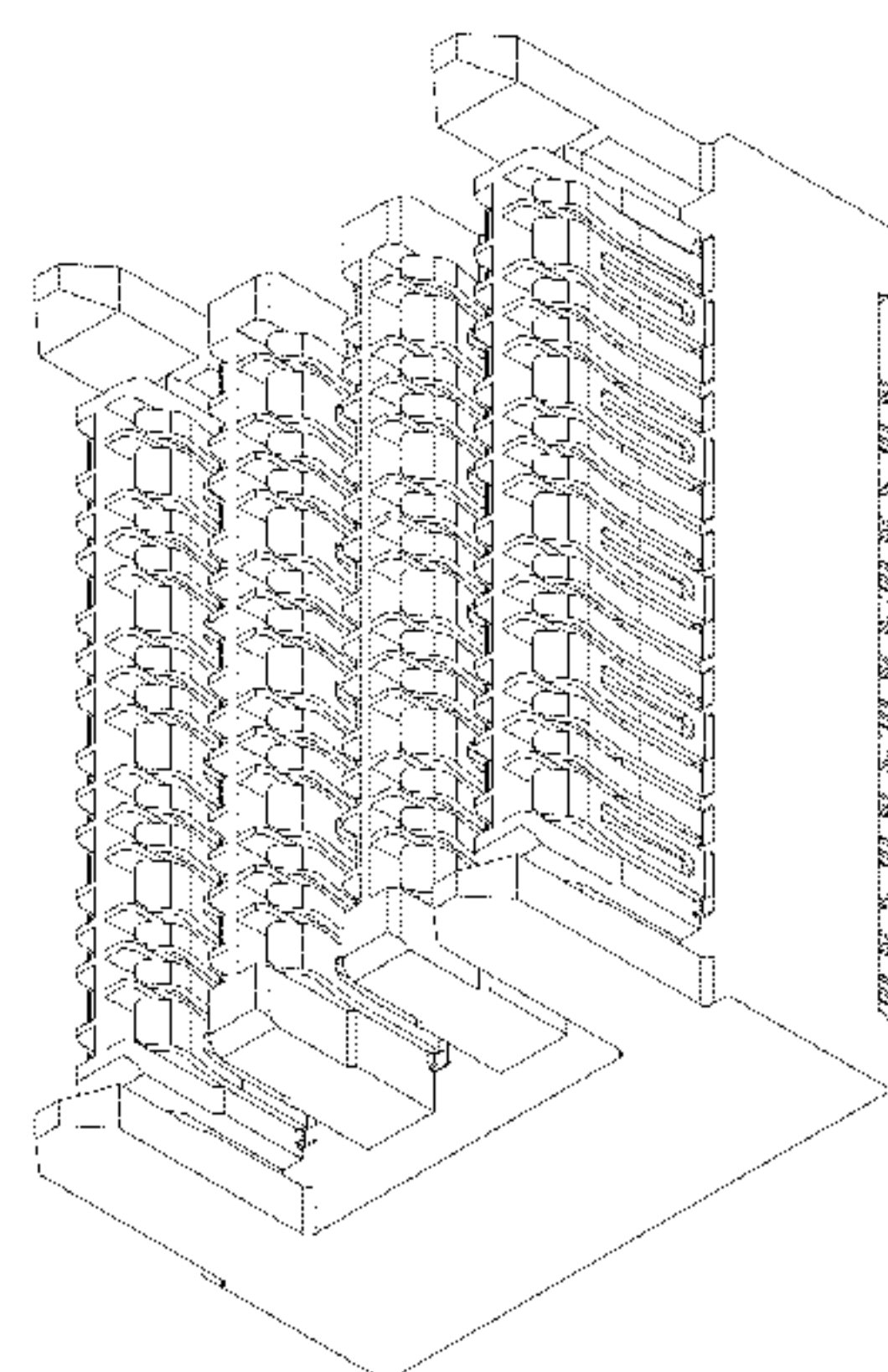
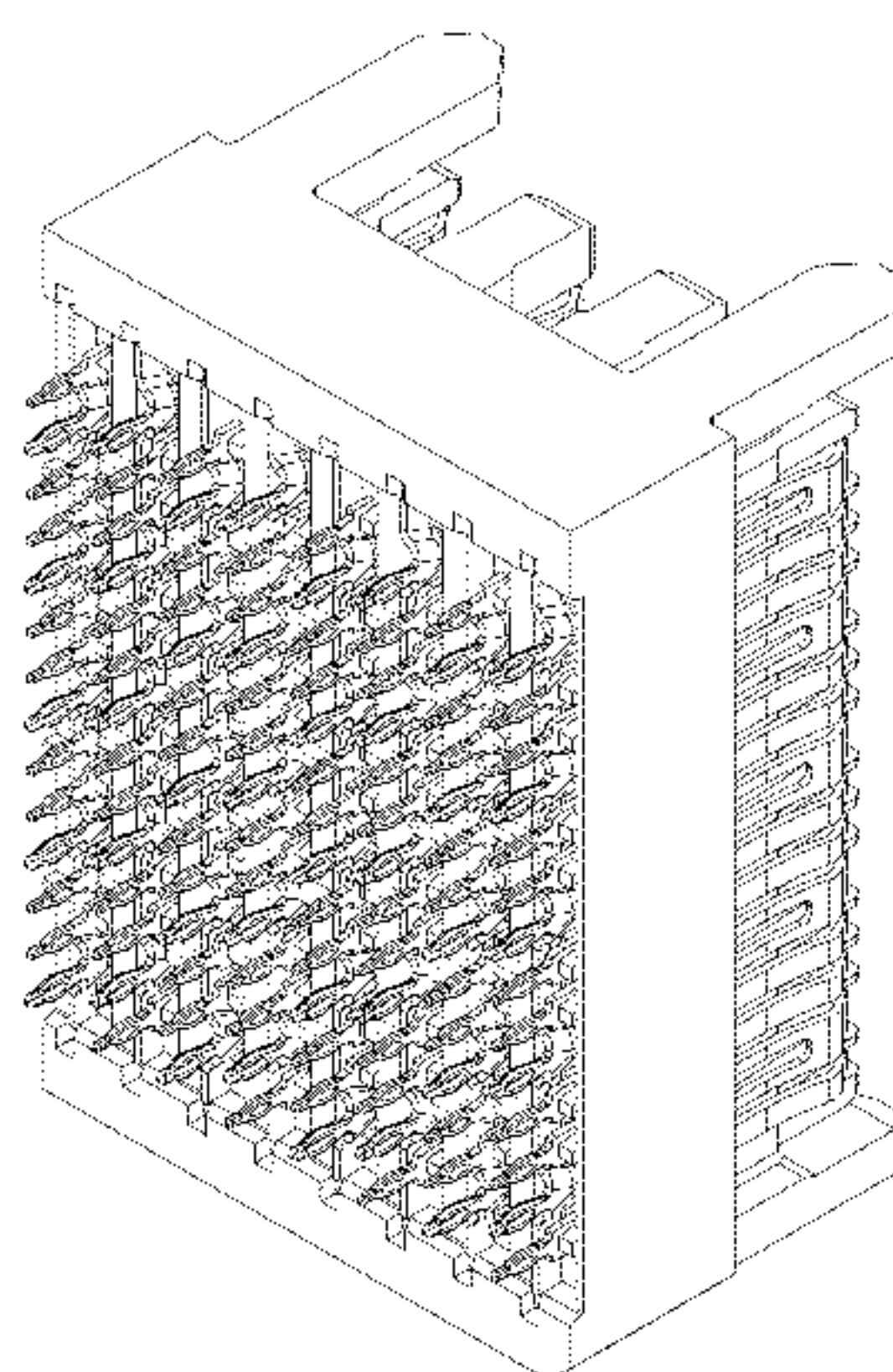
This is related by subject matter to U.S. patent application Ser. No. 29/443,206, filed Jan. 22, 2013; U.S. patent application Ser. No. 29/443,589, filed Jan. 18, 2013; and U.S. patent application Ser. No. 29/496,690, filed Jul. 16, 2014.

FIG. 1 is a top, left, rear perspective view of a vertical electrical connector according to one embodiment of our design; FIG. 2 is a bottom, right, front perspective view thereof; FIG. 3 is another top, left, rear perspective view thereof; FIG. 4 is a bottom, right, rear perspective view thereof; FIG. 5 is a top, right, front perspective view thereof; FIG. 6 is a bottom, left, front perspective view thereof; FIG. 7 is a rear elevation view thereof; FIG. 8 is a front elevation view thereof; FIG. 9 is a bottom plan view thereof; FIG. 10 is a top plan view thereof; FIG. 11 is a right side elevation view thereof; and, FIG. 12 is a left side elevation view thereof.

In the figure drawings, the short-even broken line is included for the purpose of illustrating environment and forms no part of the claimed design. The long-dash broken line represents the boundary of the claimed design.

In a preferred embodiment, the nature of this product is an electrical component that can take the form of a vertical electrical connector.

1 Claim, 6 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

7,278,856 B2

10/2007

Minich

7,338,321 B2

3/2008

Laurx

7,549,897 B2

6/2009

Fedder et al.

D611,420 S

3/2010

Takada et al.

D611,421 S

3/2010

Takada et al.

D611,905 S

3/2010

Takada et al.

D611,906 S

3/2010

Takada et al.

8,408,939 B2

4/2013

Davis et al.

D712,842 S

9/2014

Buck et al.

D712,843 S

*

9/2014

Buck et al.

.....

D13/154

D712,844 S

*

9/2014

Buck et al.

D713,346 S

*

9/2014

Buck et al.

.....

D13/147

D713,356 S

9/2014

Buck et al.

D713,799 S

9/2014

Buck et al.

2004/0259420 A1

12/2004

Wu

2007/0190825 A1

8/2007

Shuey et al.

2009/0068902 A1

3/2009

Nagata

2012/0214343 A1

8/2012

Buck et al.

2014/0248794 A1

9/2014

Khazen et al.

OTHER PUBLICATIONS

U.S. Appl. No. 29/498,823, filed Aug. 8, 2014, Buck et al.

U.S. Appl. No. 29/498,828, filed Aug. 8, 2014, Buck et al.

U.S. Appl. No. 29/497,094, filed Jul. 21, 2014, Buck et al.

U.S. Appl. No. 29/500,061, filed Aug. 21, 2014, Buck et al.

* cited by examiner

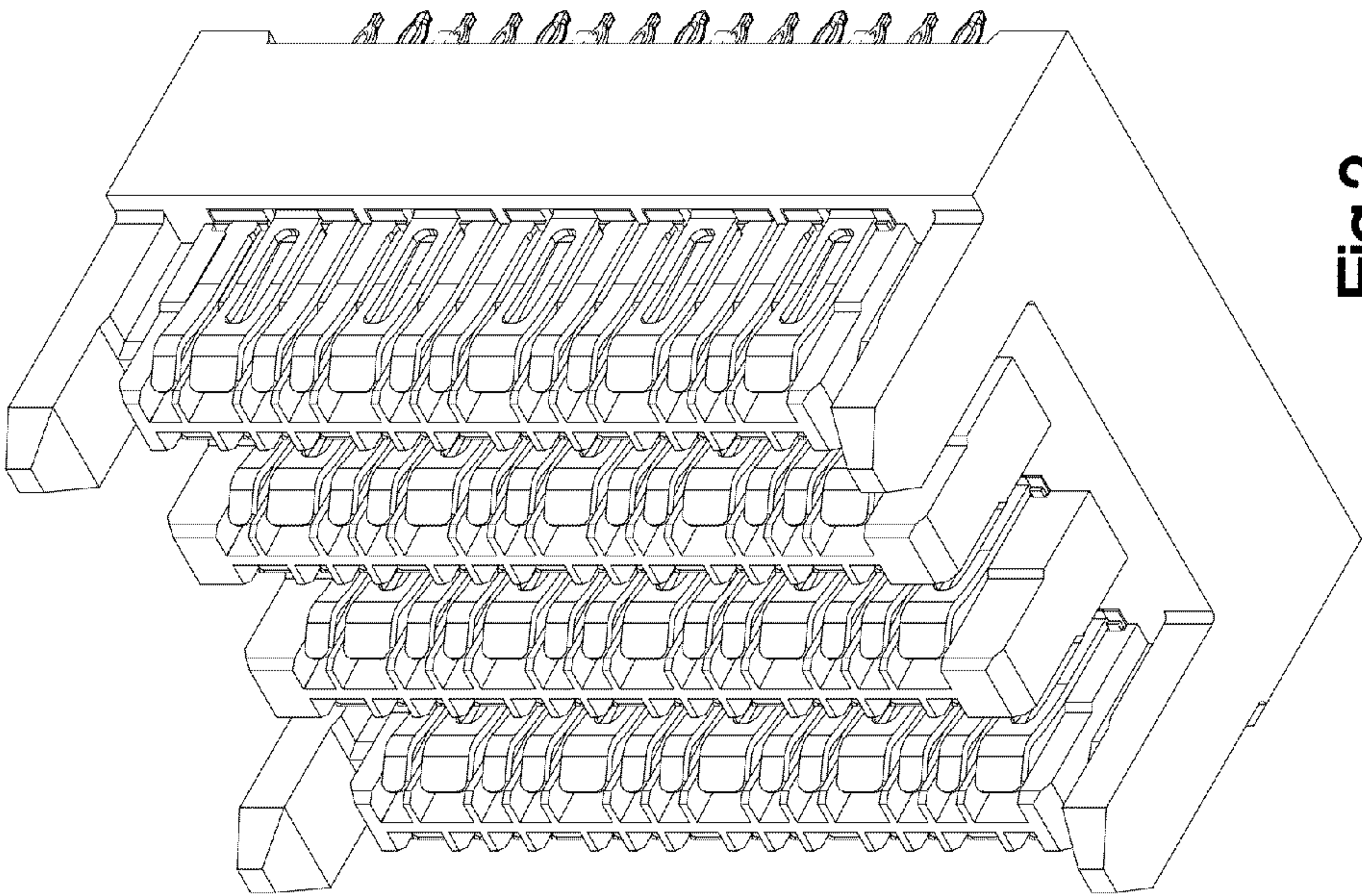


Fig.2

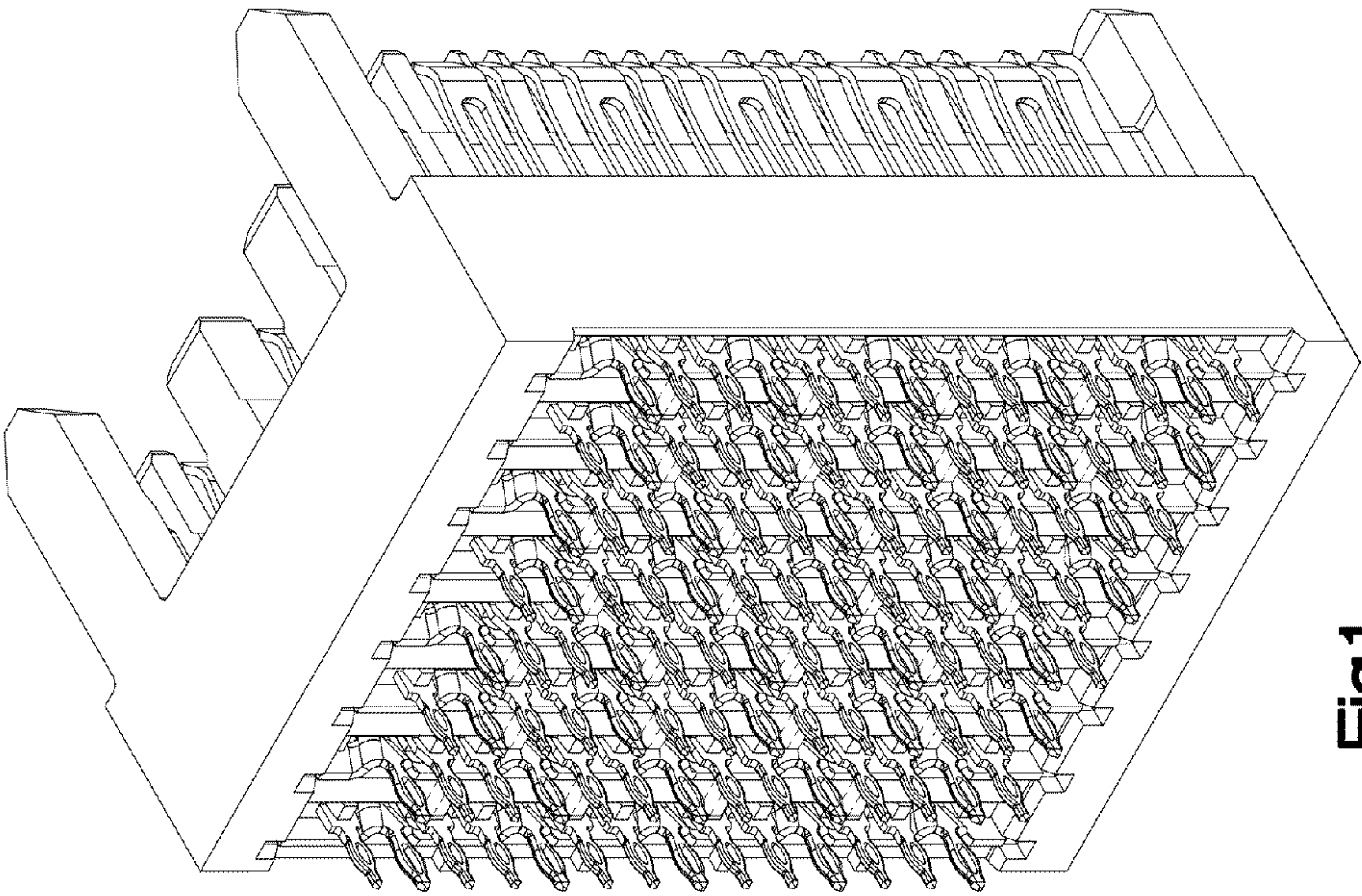


Fig.1

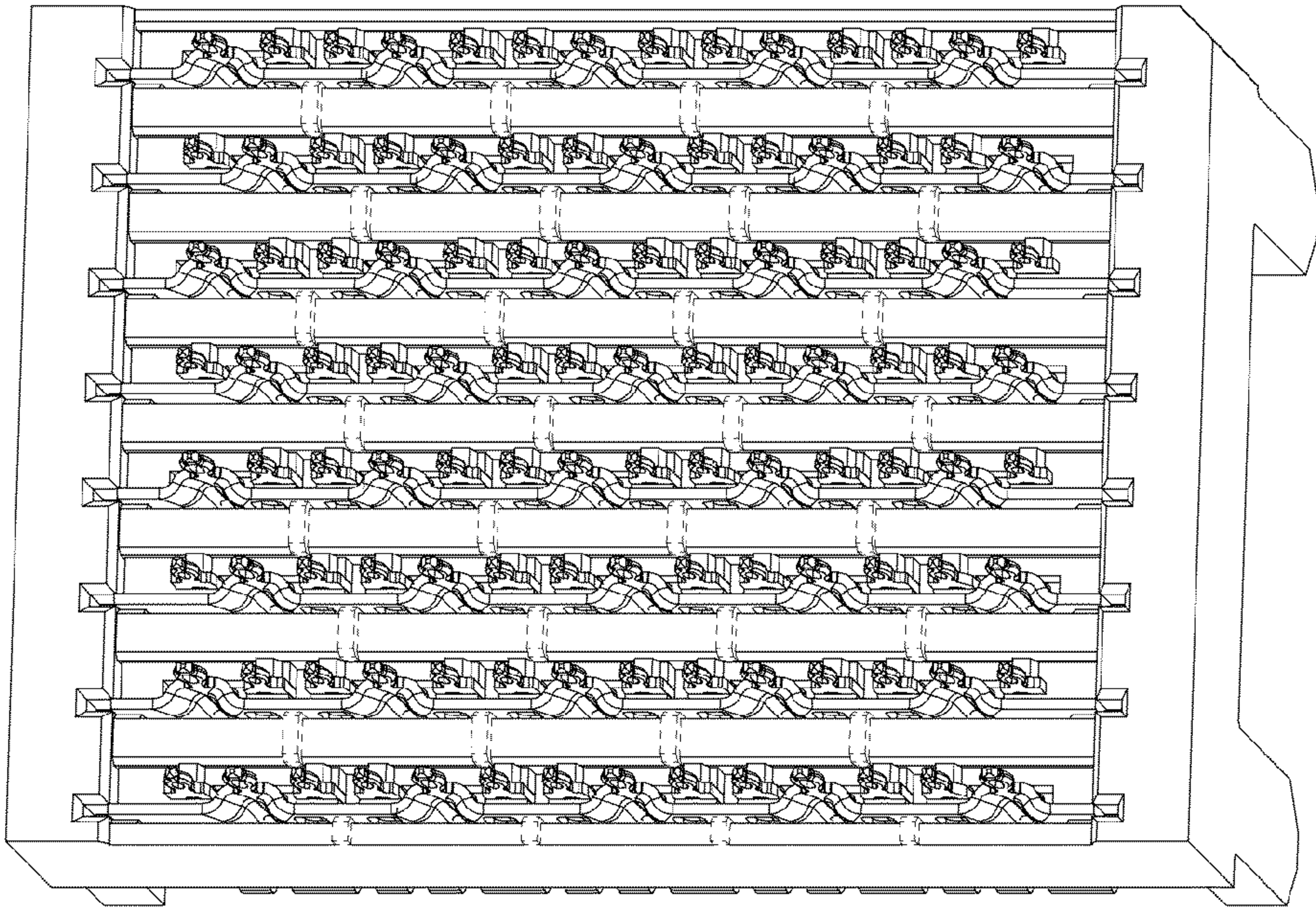


Fig.4

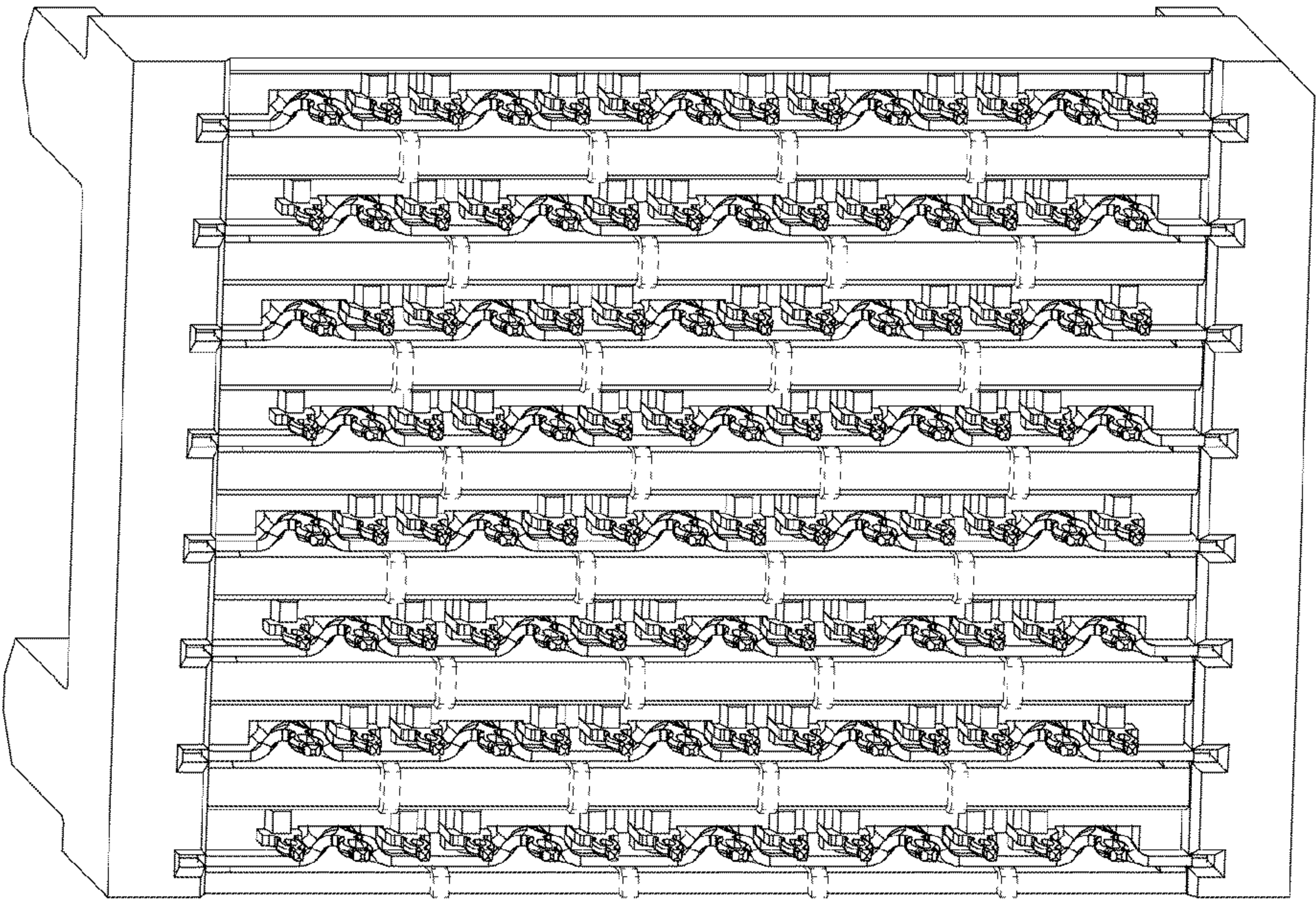


Fig.3

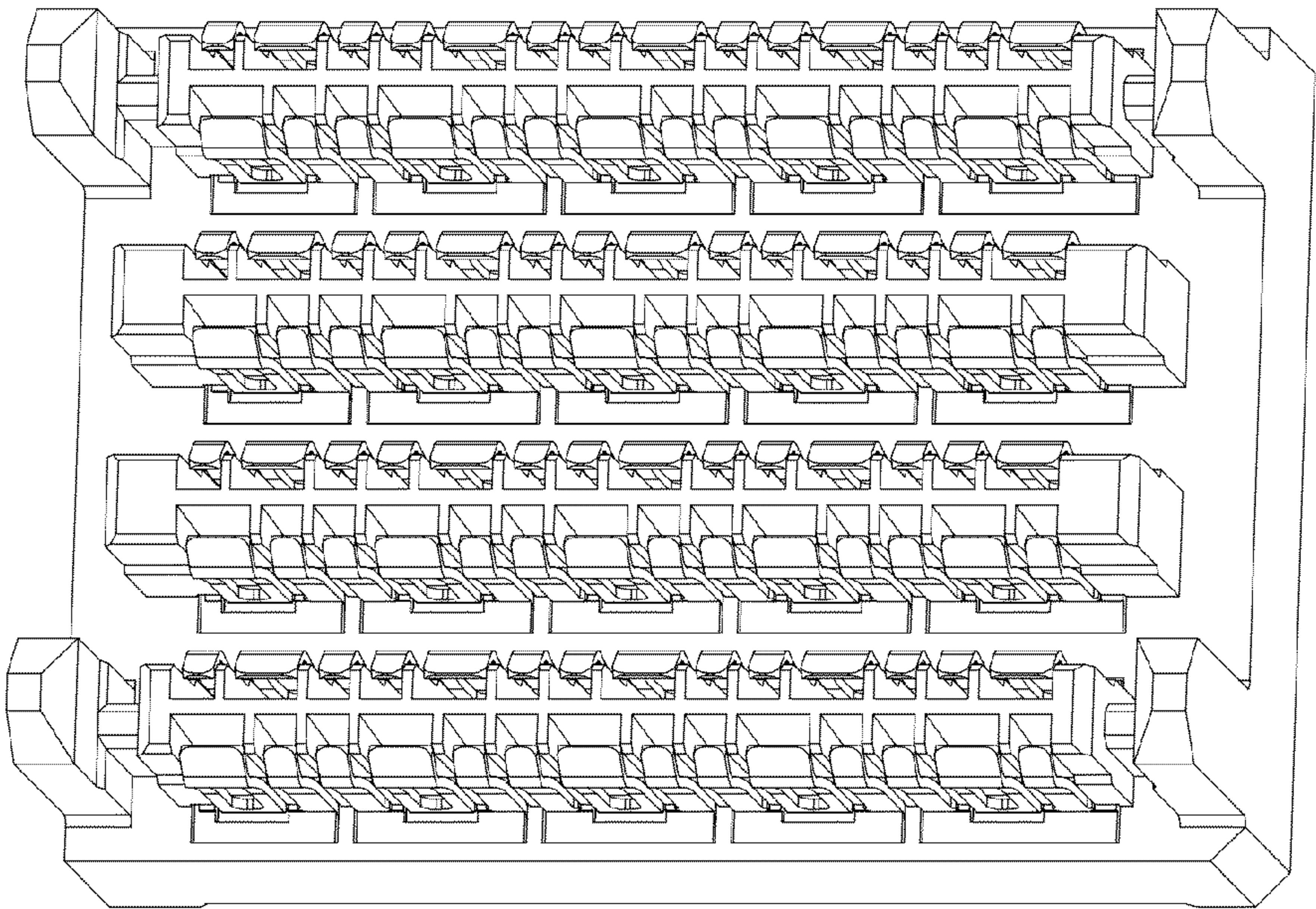


Fig.6

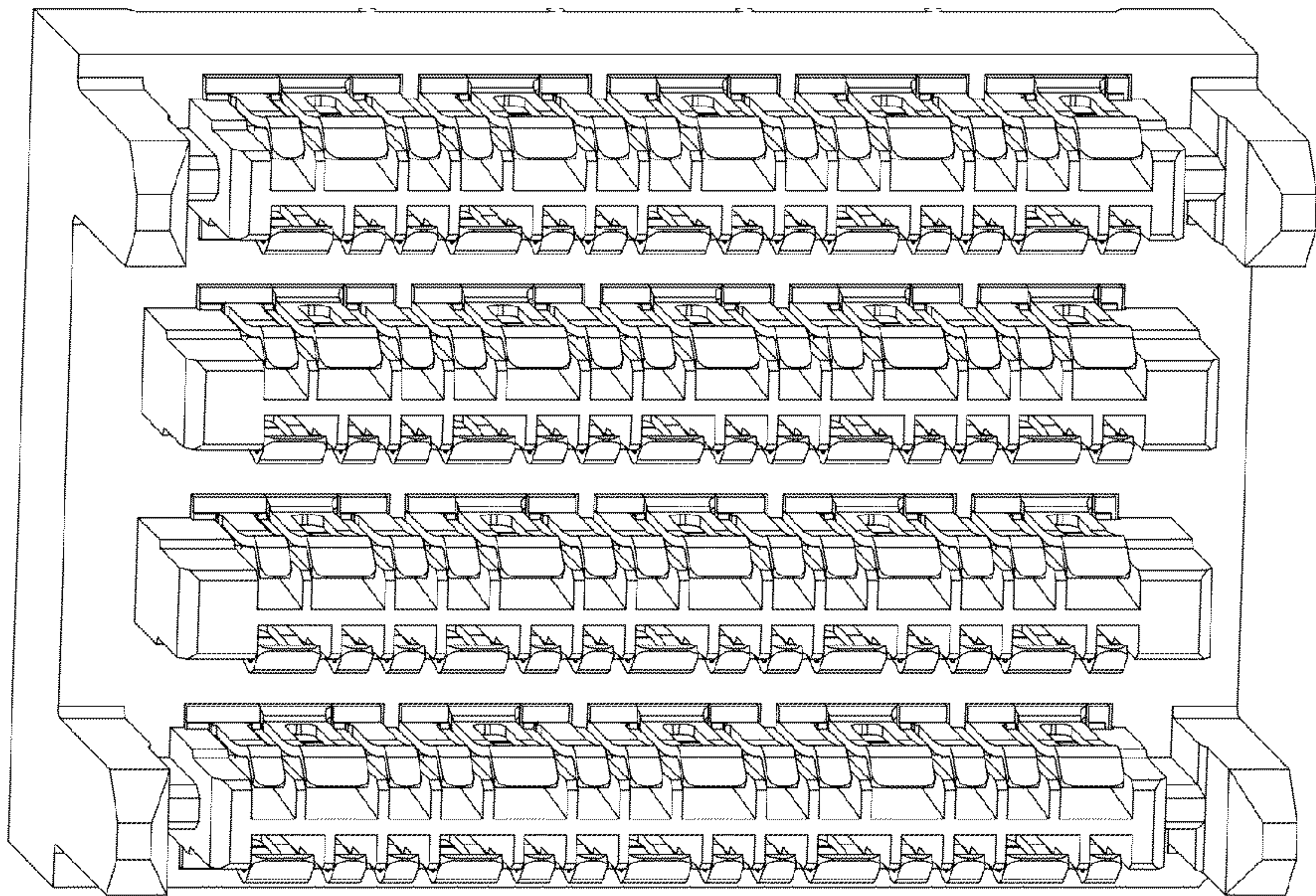


Fig.5

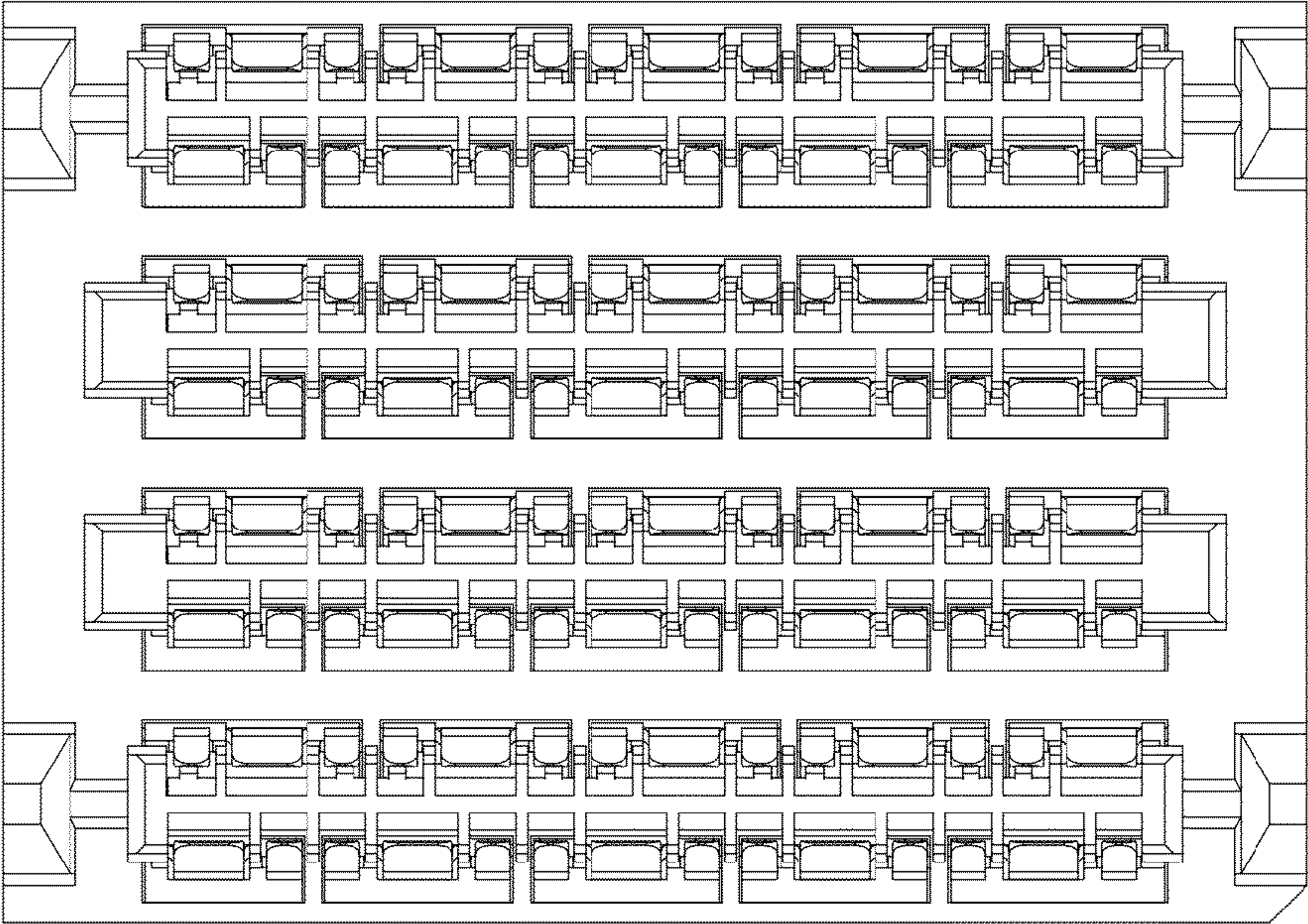


Fig.8

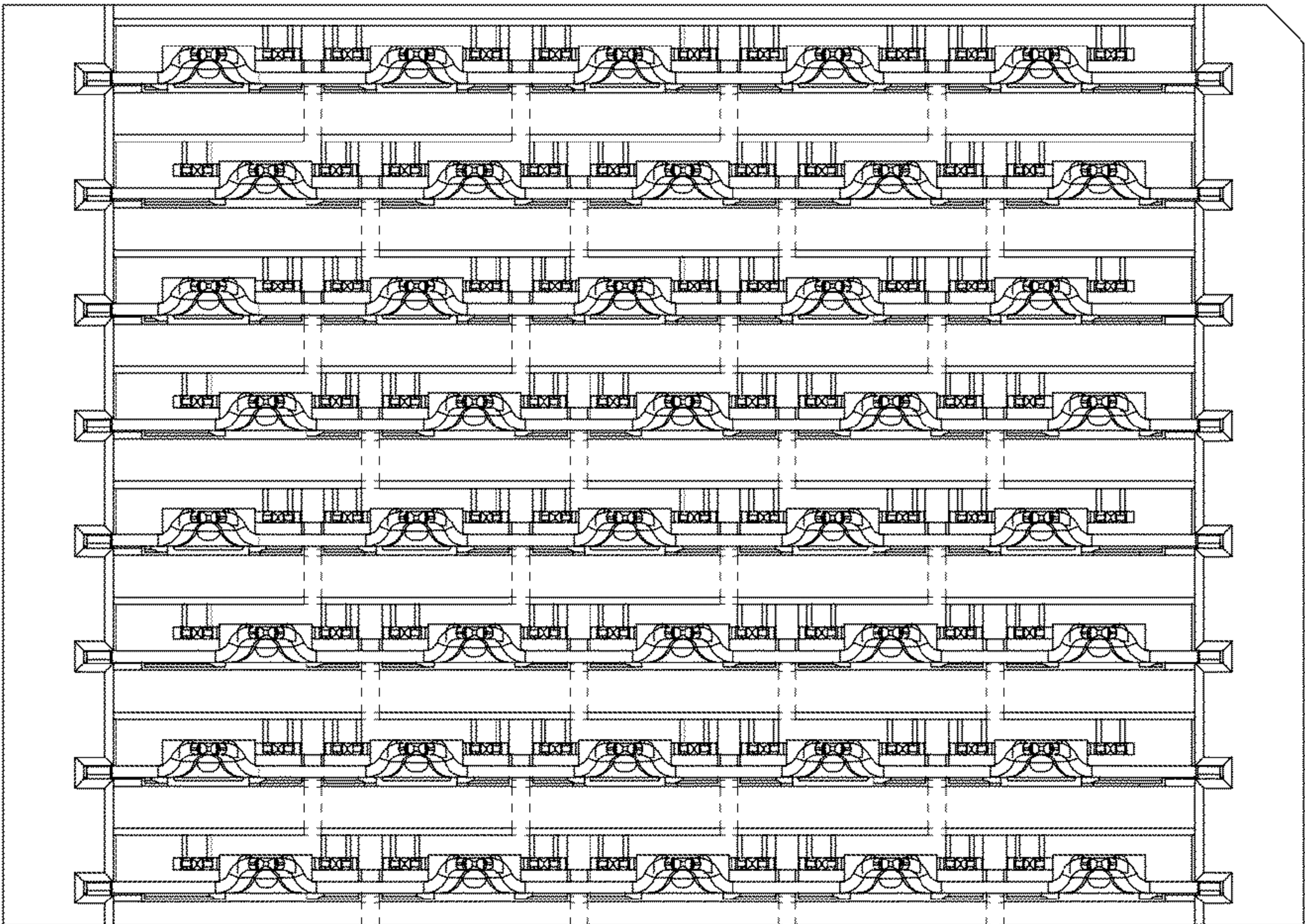


Fig.7

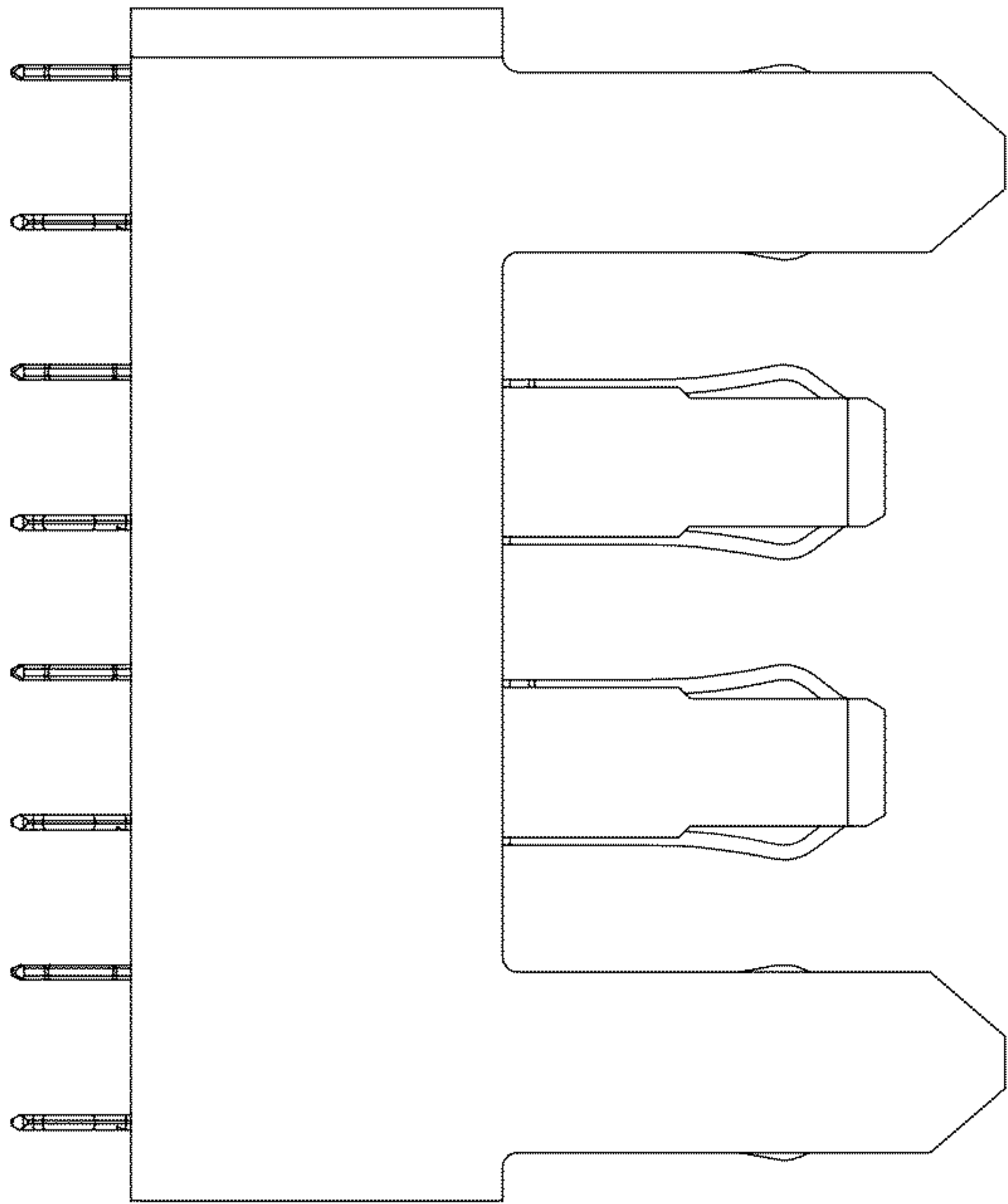


Fig.10

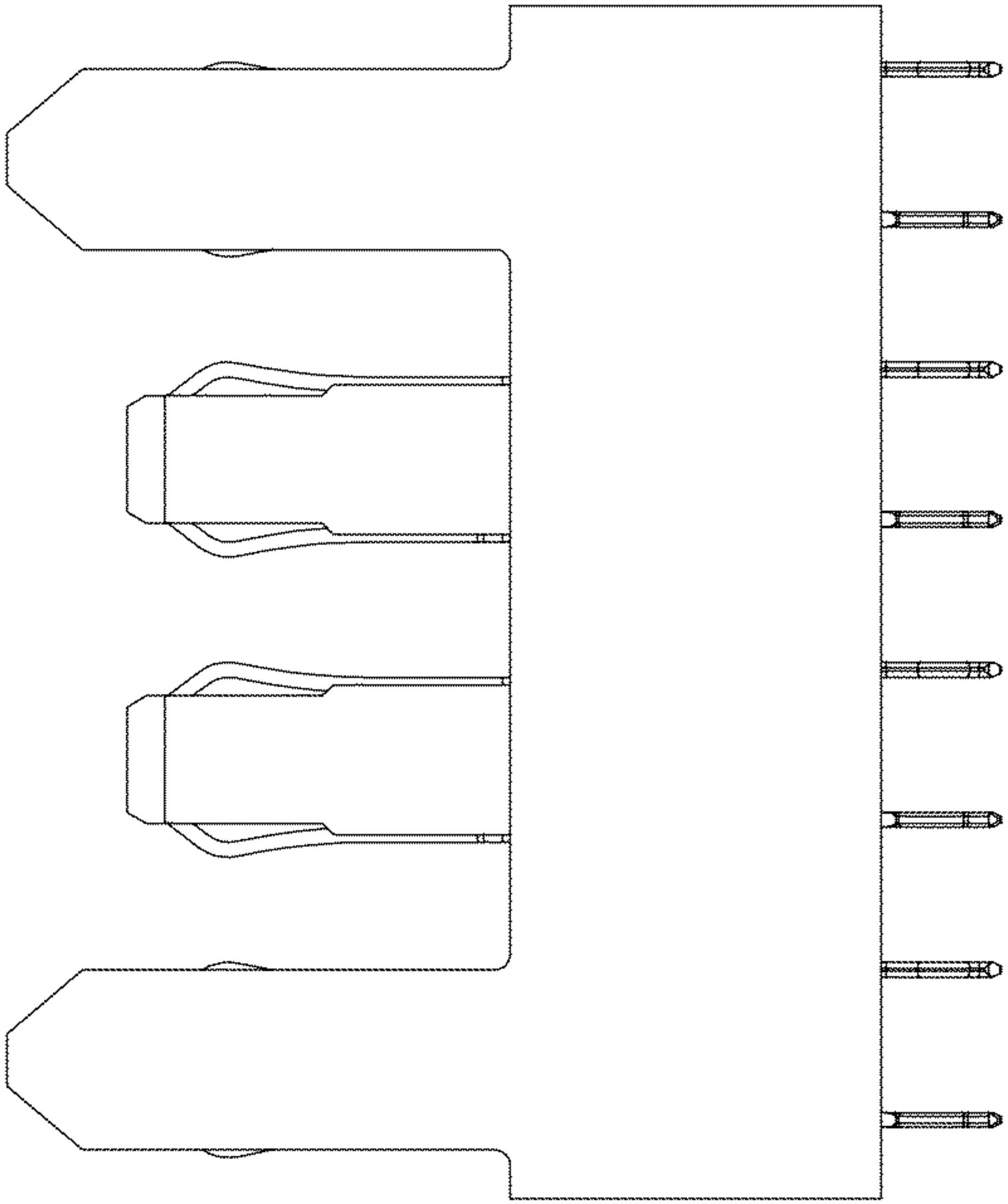


Fig.9

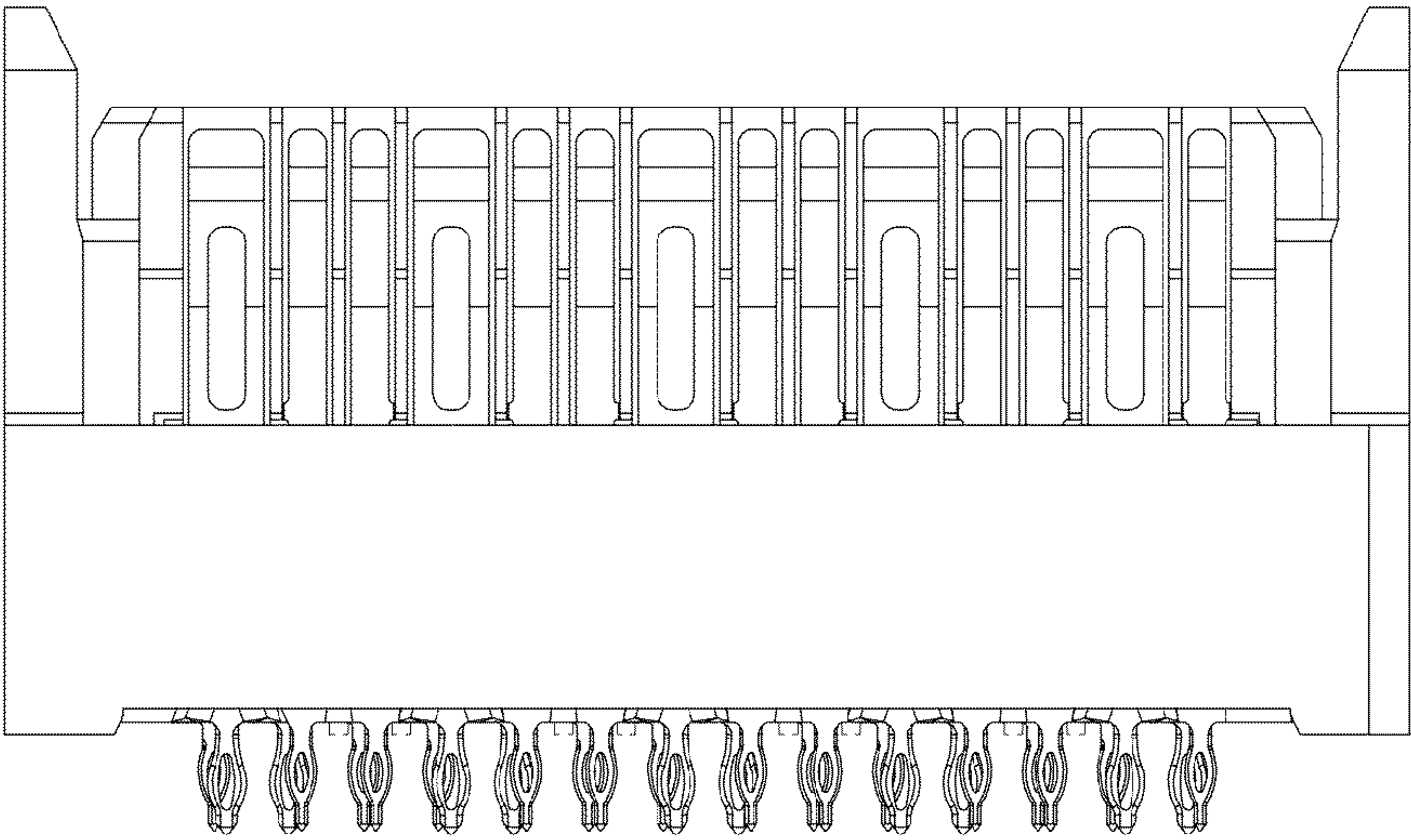


Fig.12

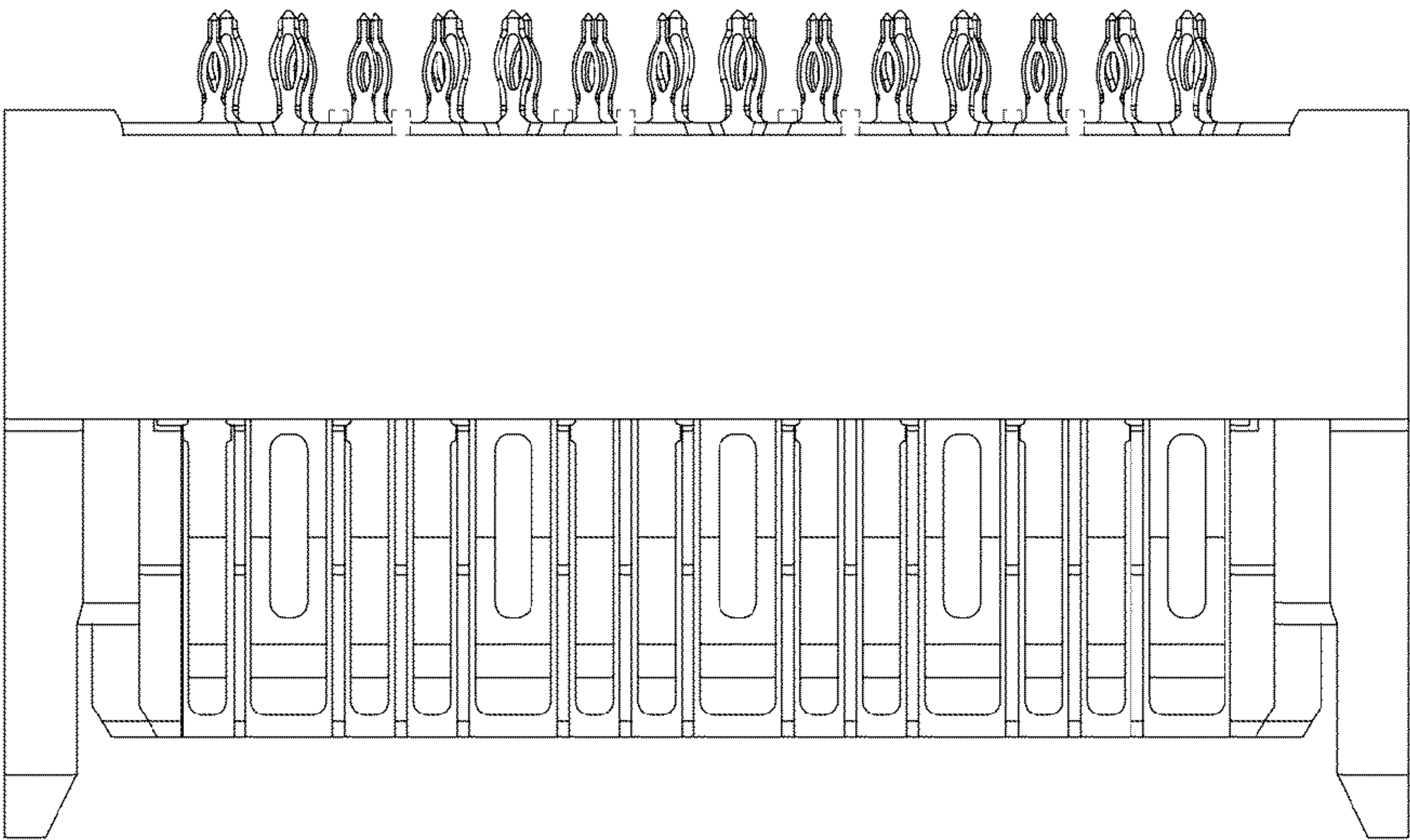


Fig.11