



US00D964281S

(12) **United States Design Patent** (10) **Patent No.:** **US D964,281 S**
Wang et al. (45) **Date of Patent:** **** Sep. 20, 2022**

(54) **COIL COMPONENT**

(71) Applicant: **TDK CORPORATION**, Tokyo (JP)

(72) Inventors: **Chen Wang**, Tokyo (JP); **Satoshi Sugimoto**, Tokyo (JP)

(73) Assignee: **TDK CORPORATION**, Tokyo (JP)

(**) Term: **15 Years**

(21) Appl. No.: **29/754,321**

(22) Filed: **Oct. 9, 2020**

(30) **Foreign Application Priority Data**

Apr. 10, 2020 (JP) 2020-007586 D

(51) **LOC (13) Cl.** **13-02**

(52) **U.S. Cl.**
USPC **D13/117**

(58) **Field of Classification Search**
USPC D13/101, 103, 104, 107, 110, 112, 117,
D13/118, 119, 120, 133, 156, 179, 183,
D13/199

(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

D329,041 S * 9/1992 Masuda D13/117
D665,740 S * 8/2012 Yamada D13/117

(Continued)

OTHER PUBLICATIONS

Inductors. (Design—© Questel) orbit.com. [Online PDF compilation of references] 75 pgs. Print Dates Range Sep. 7, 2020-May 22, 2020 [Retrieved Feb. 8, 2022].*

(Continued)

Primary Examiner — George D. Kirschbaum

Assistant Examiner — Suzanne E Tisdell

(74) *Attorney, Agent, or Firm* — Oliff PLC

(57) **CLAIM**

The ornamental design for a coil component, as shown and described.

DESCRIPTION

FIG. 1 is a front elevation view of a first embodiment of the coil component;

FIG. 2 is a rear elevation view thereof;

FIG. 3 is a left-side elevation view thereof;

FIG. 4 is a right-side elevation view thereof;

FIG. 5 is a top plan view thereof;

FIG. 6 is a bottom plan view thereof; and

FIG. 7 is a perspective view thereof.

FIG. 8 is a front elevation view of a second embodiment of the coil component;

FIG. 9 is a rear elevation view thereof;

FIG. 10 is a left-side elevation view thereof;

FIG. 11 is a right-side elevation view thereof;

FIG. 12 is a top plan view thereof;

FIG. 13 is a bottom plan view thereof; and

FIG. 14 is a perspective view thereof.

FIG. 15 is a front elevation view of a third embodiment of the coil component;

FIG. 16 is a rear elevation view thereof;

FIG. 17 is a left-side elevation view thereof;

FIG. 18 is a right-side elevation view thereof;

FIG. 19 is a top plan view thereof;

FIG. 20 is a bottom plan view thereof; and

FIG. 21 is a perspective view thereof.

FIG. 22 is a front elevation view of a fourth embodiment of the coil component;

FIG. 23 is a rear elevation view thereof;

FIG. 24 is a left-side elevation view thereof;

FIG. 25 is a right-side elevation view thereof;

FIG. 26 is a top plan view thereof;

FIG. 27 is a bottom plan view thereof; and

FIG. 28 is a perspective view thereof.

FIG. 29 is a front elevation view of a fifth embodiment of the coil component;

FIG. 30 is a rear elevation view thereof;

FIG. 31 is a left-side elevation view thereof;

(Continued)

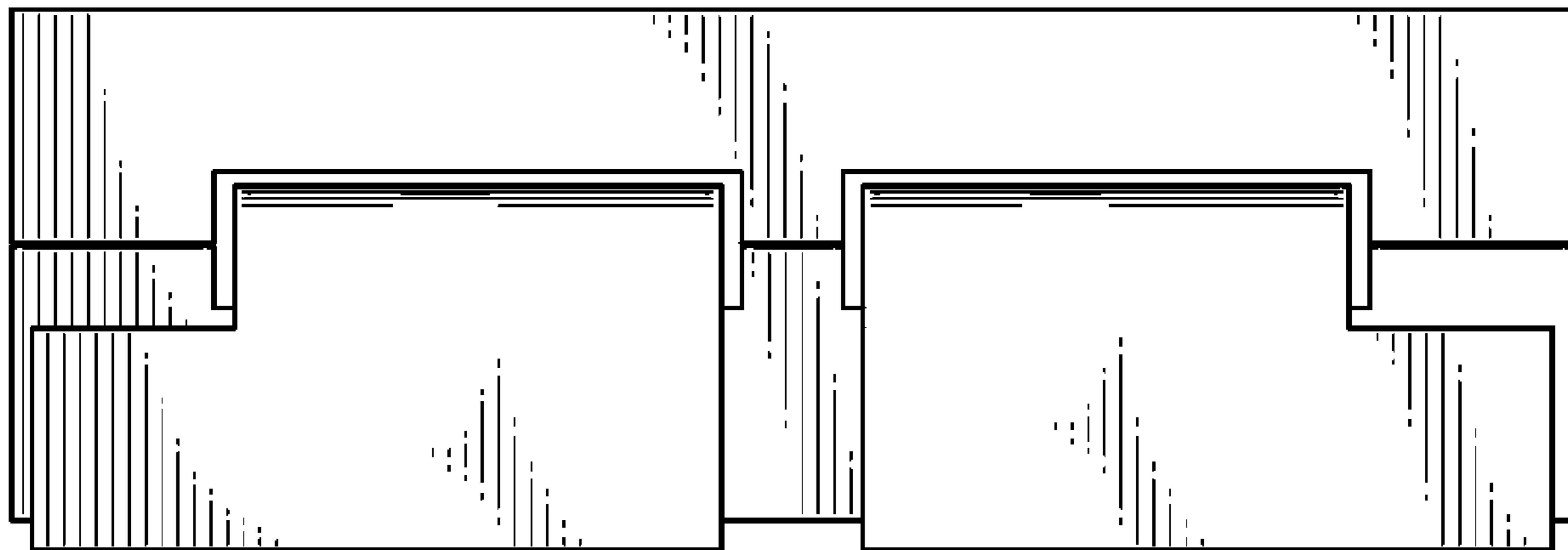


FIG. 32 is a right-side elevation view thereof;
 FIG. 33 is a top plan view thereof;
 FIG. 34 is a bottom plan view thereof; and
 FIG. 35 is a perspective view thereof.
 FIG. 36 is a front elevation view of a sixth embodiment of the coil component;
 FIG. 37 is a rear elevation view thereof;
 FIG. 38 is a left-side elevation view thereof;
 FIG. 39 is a right-side elevation view thereof;
 FIG. 40 is a top plan view thereof;
 FIG. 41 is a bottom plan view thereof; and,
 FIG. 42 is a perspective view thereof.

(56)

References Cited

U.S. PATENT DOCUMENTS

D693,302 S *	11/2013	Yamada	.....	D13/117
D721,651 S *	1/2015	Iwakura	.....	D13/117
D796,438 S *	9/2017	Kakuda	.....	D13/117
D830,972 S *	10/2018	Numajiri	.....	D13/117
D871,338 S *	12/2019	Komaya	.....	D13/117
D906,965 S *	1/2021	Oka	.....	D13/117
D910,561 S *	2/2021	Yasuda	.....	D13/117
D920,911 S *	6/2021	Moriya	.....	D13/117
D923,574 S *	6/2021	Monma	.....	D13/117
D938,910 S *	12/2021	Abe	.....	D13/110
D942,946 S *	2/2022	Takagi	.....	D13/117

OTHER PUBLICATIONS

Power Choke Coil Using Low loss Magnetic Materials for Automotive Use. Dec. 2020. Panasonic. <https://news.panasonic.com/global/press/data/2020/12/en201221-2/en201221-2.html>.
 Core & Coil. Feb. 1, 2016. Philips. https://images.tradeservice.com/OA2QNPBKZAEURZ8S/ATTACHMENTS/DIR100162/ABTFRME00630_1_2.pdf.
 SRR1260 Series Shielded SMD Power Inductors. Mar. 31, 2015. Mouser, <https://www.mouser.com/datasheet/2/54/srr1260-1391580.pdf>.

1 Claim, 42 Drawing Sheets

(58) **Field of Classification Search**

CPC H01R 13/641; H02B 1/20; H01M 2/1022;
 H01M 2/1027; H01M 2/1072; H01M
 2/105; H01M 2/1077; H01F 5/02; H01F
 5/04; H01F 27/292; H01F 27/325; H01F
 27/2847

See application file for complete search history.

* cited by examiner

FIG. 1

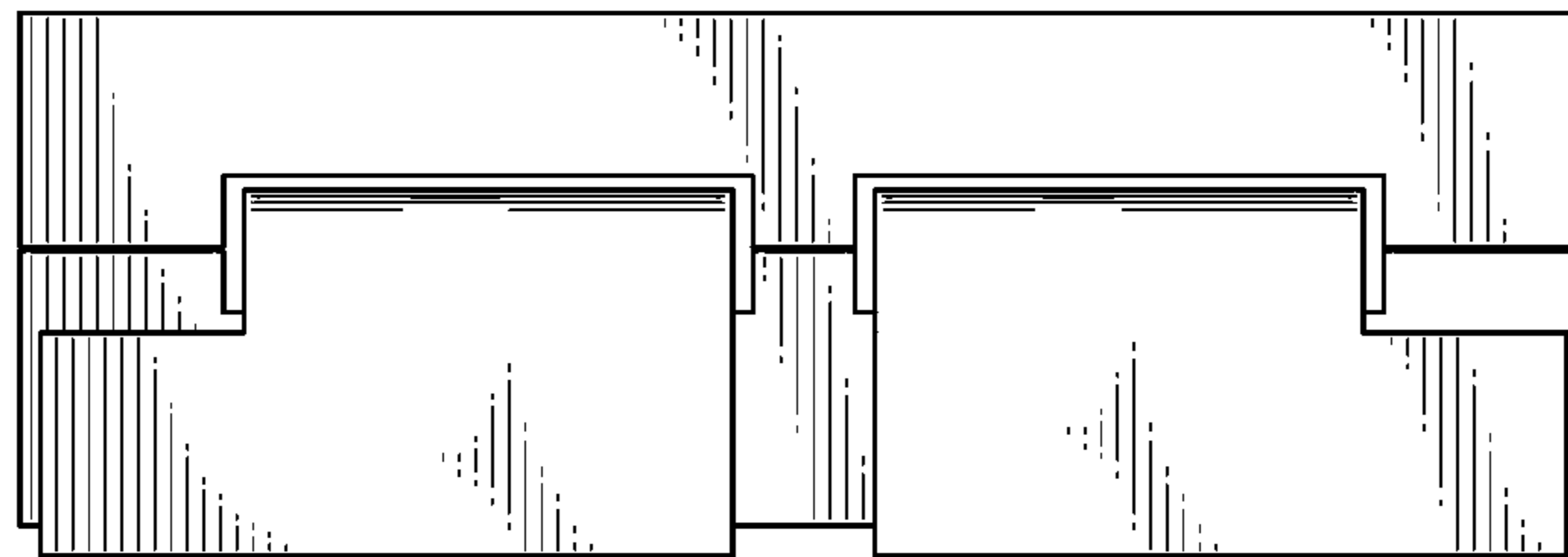


FIG. 2

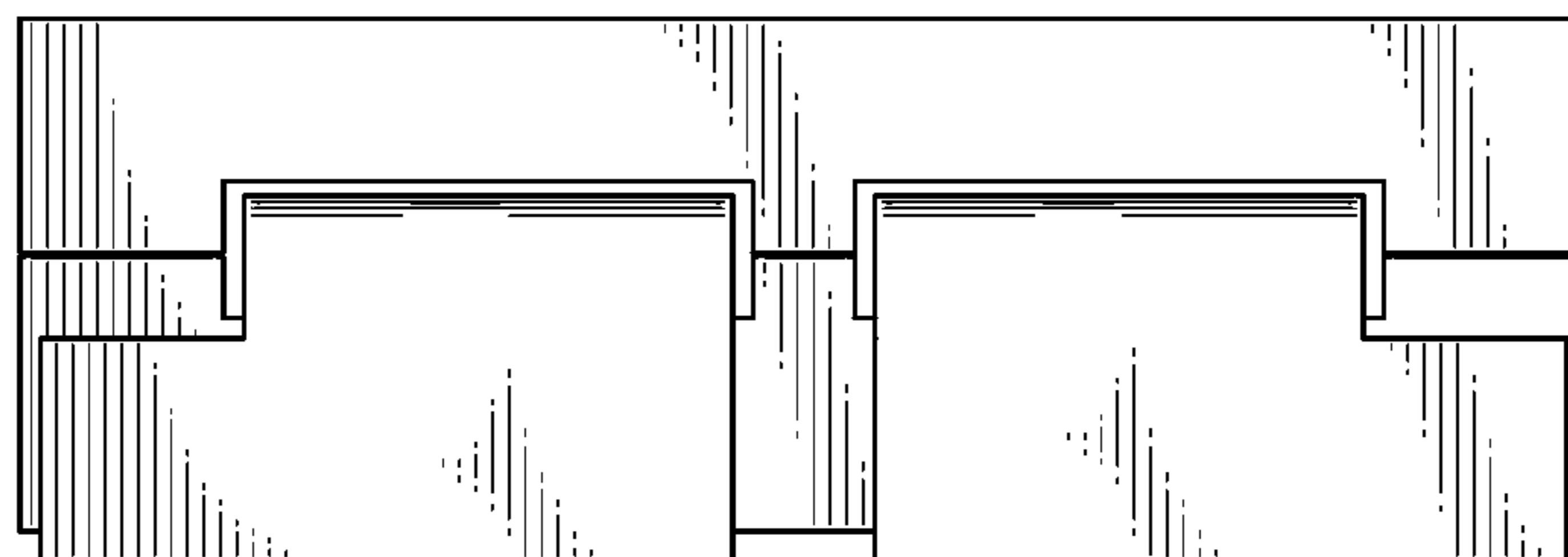


FIG. 3

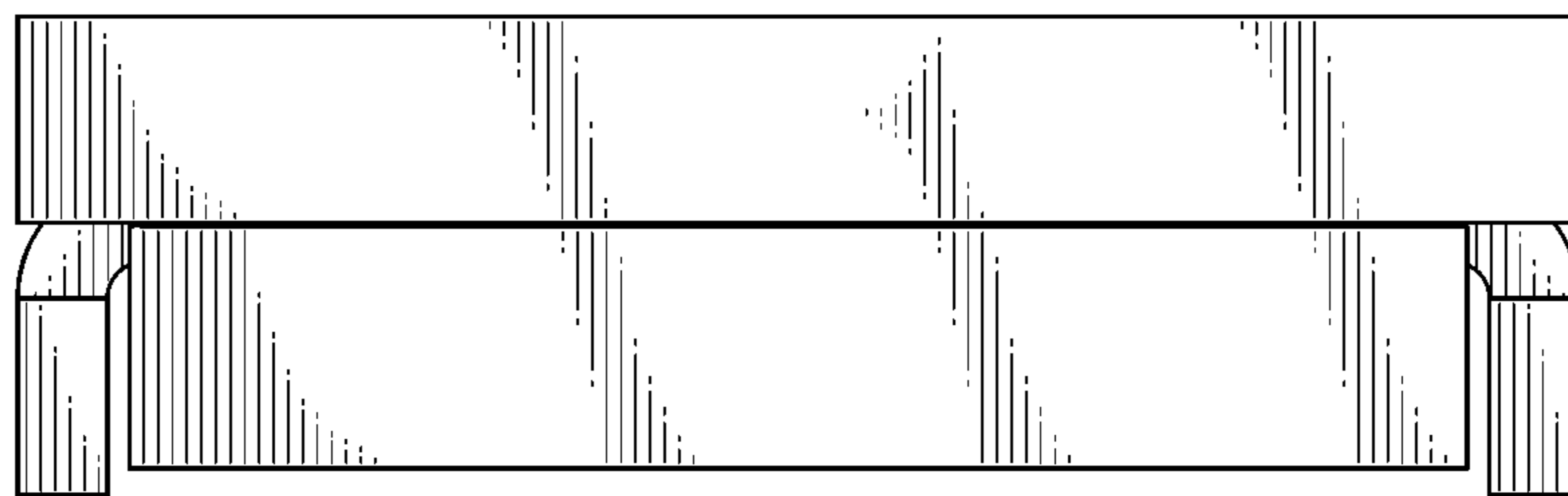


FIG. 4

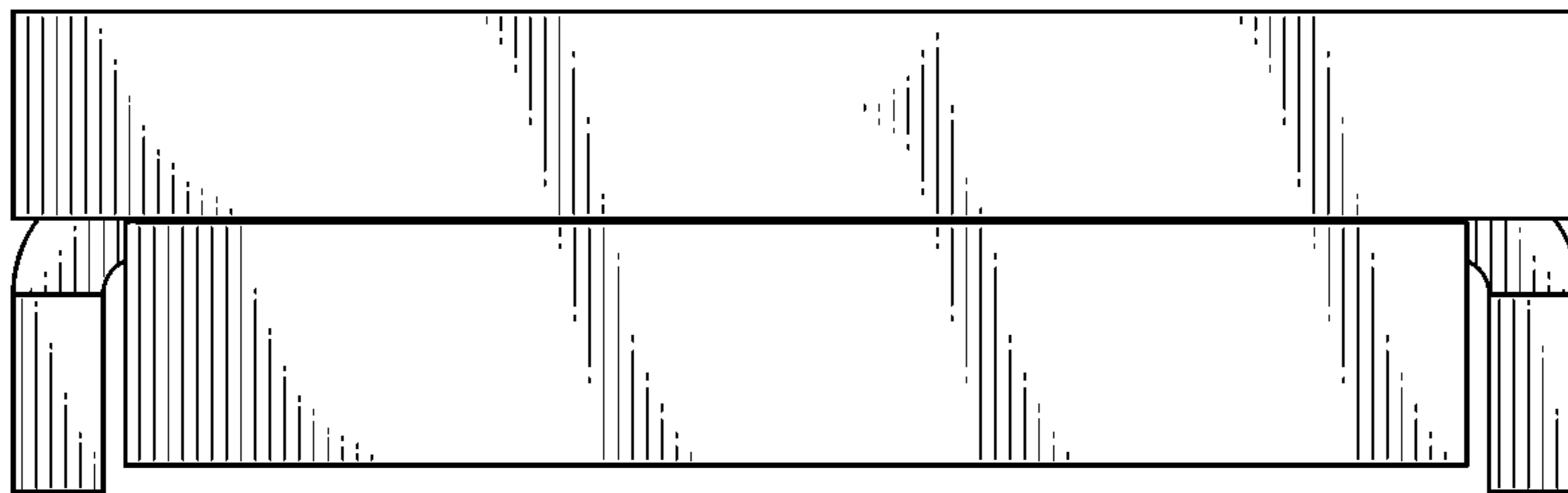


FIG. 5

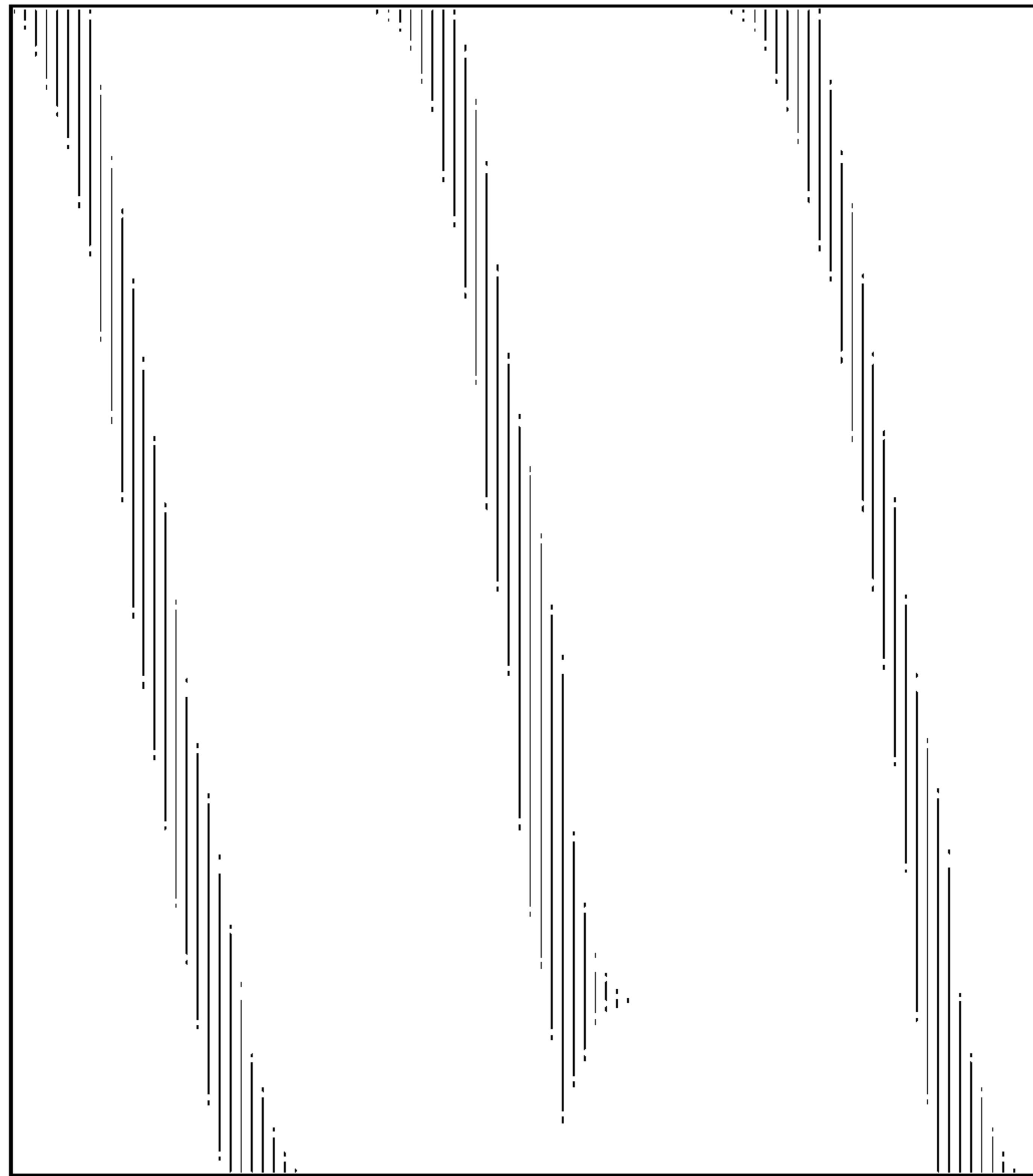


FIG. 6

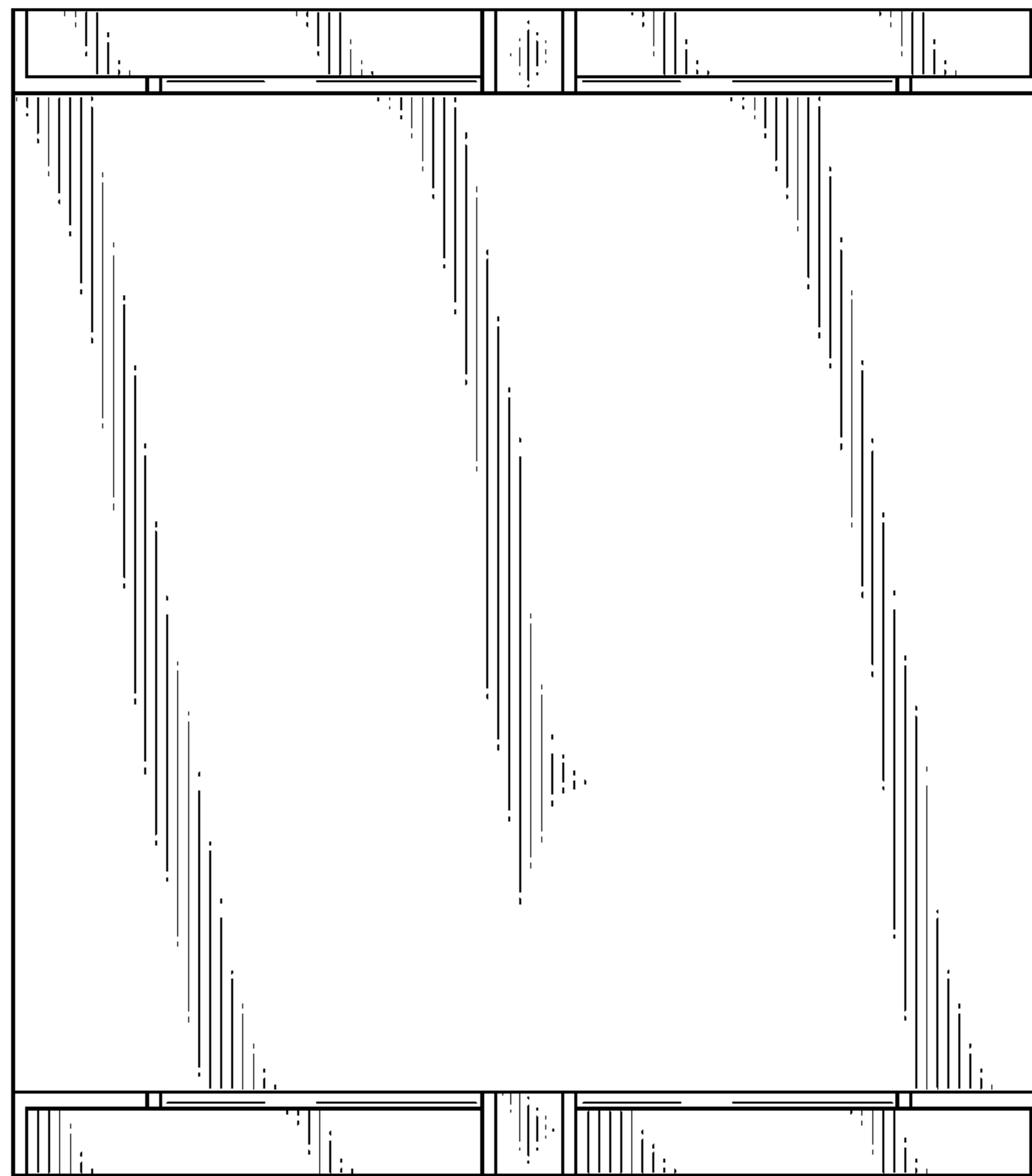


FIG. 7

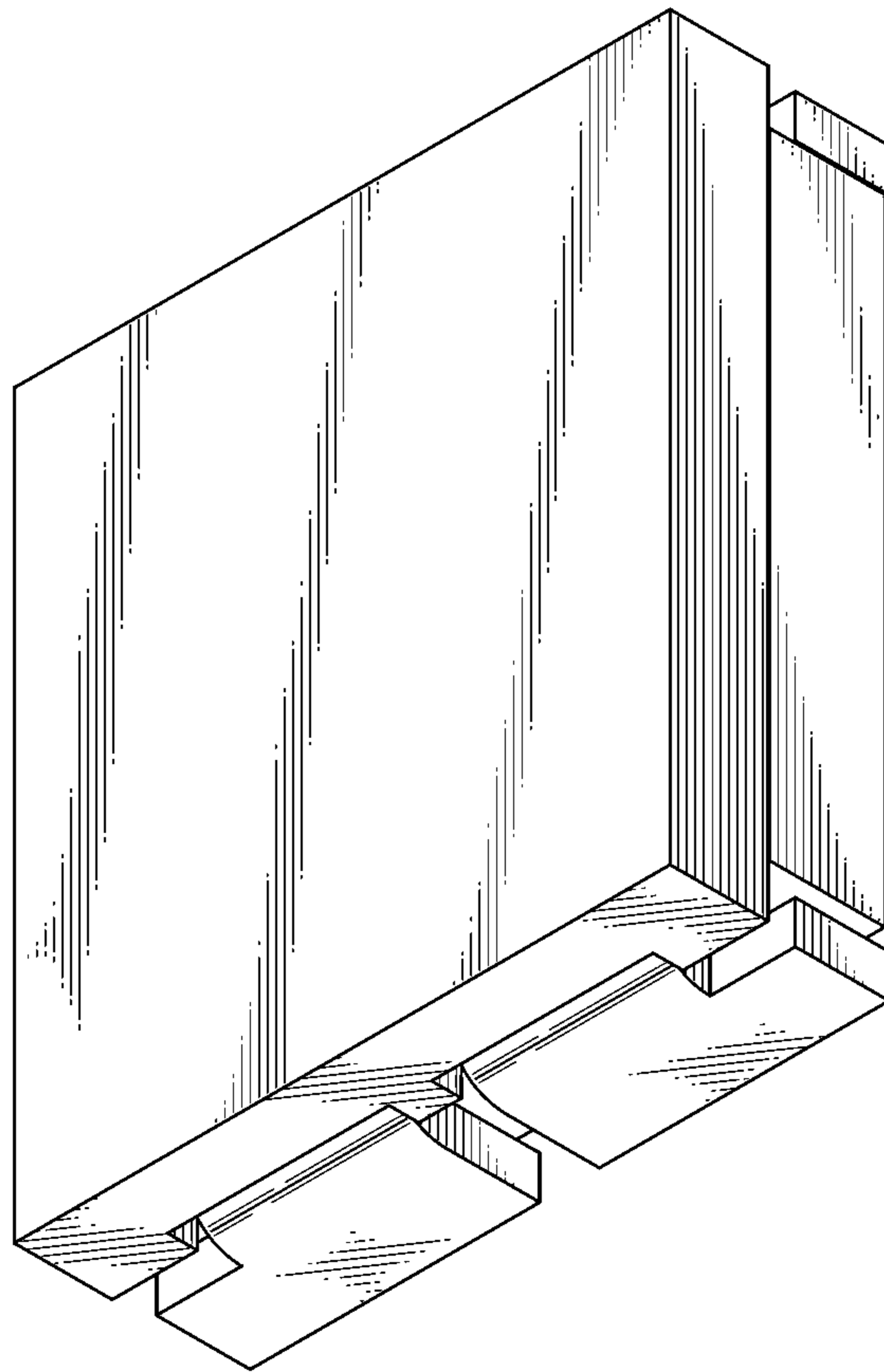


FIG. 8

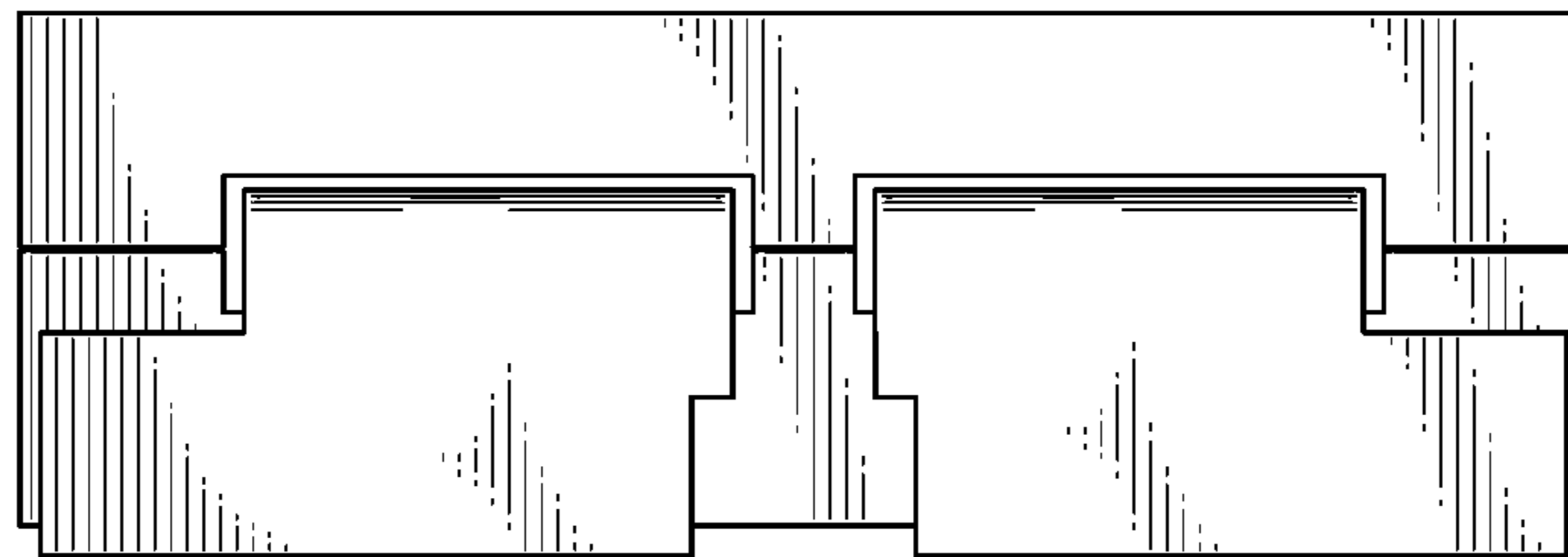


FIG. 9



FIG. 10

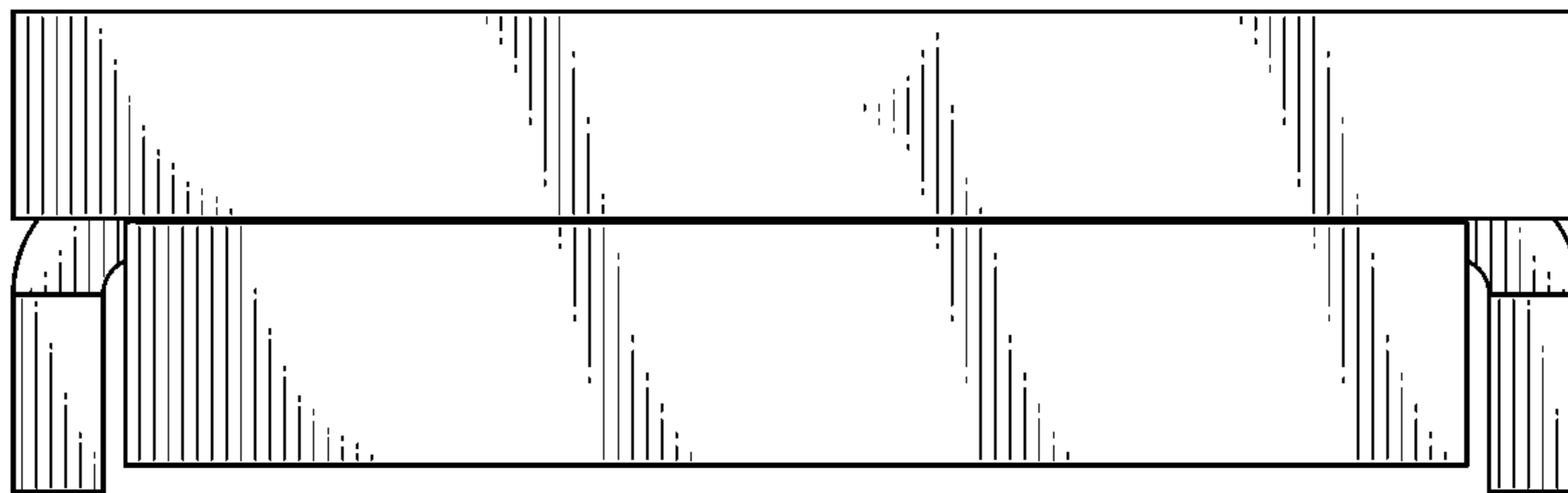


FIG. 11

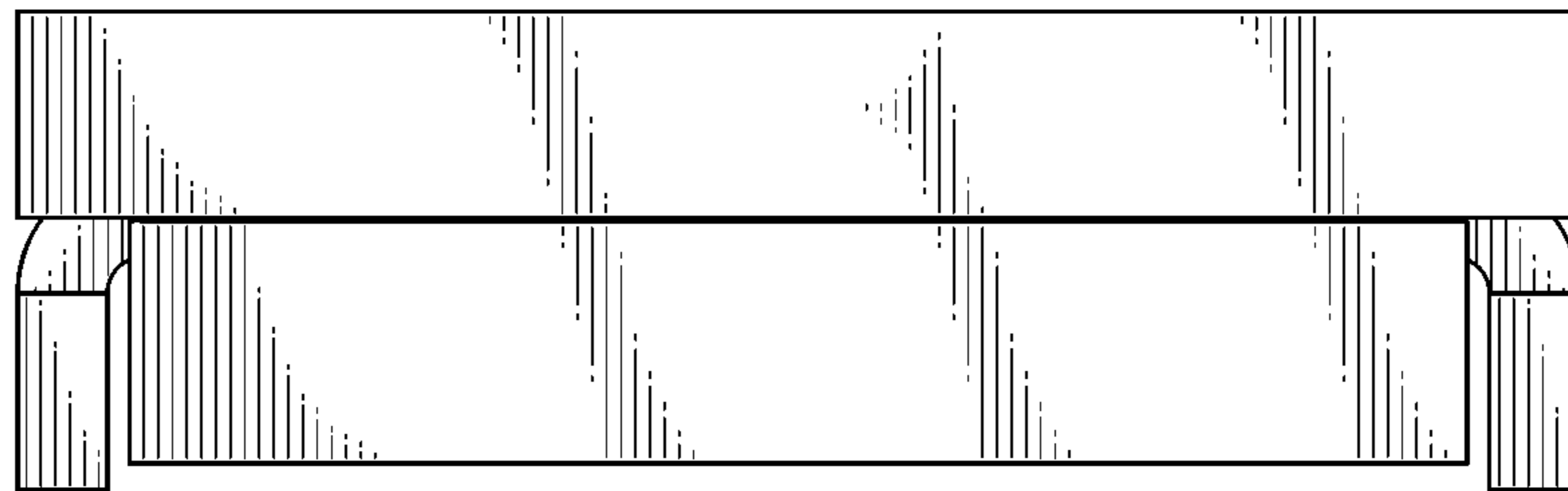


FIG. 12

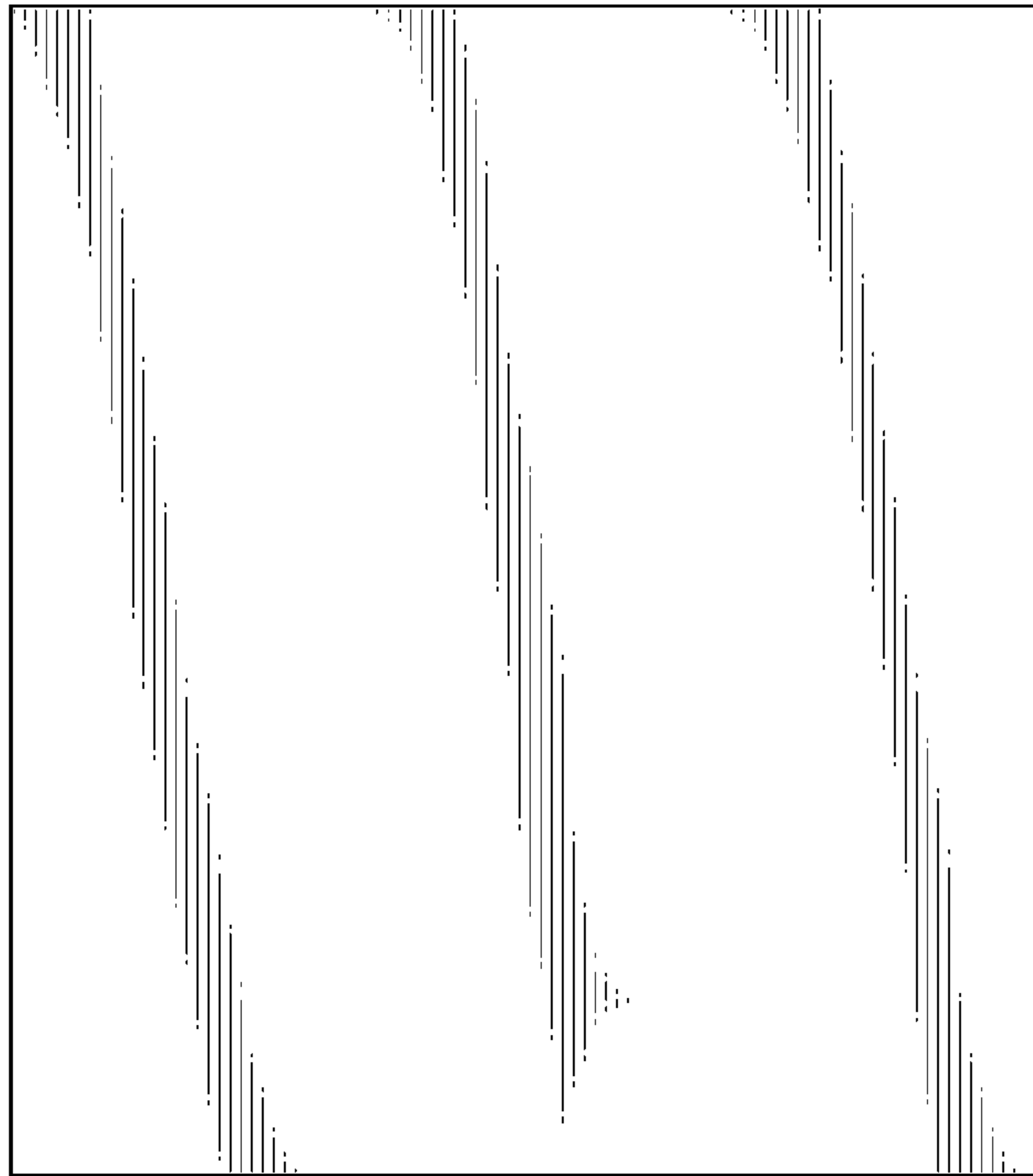


FIG. 13

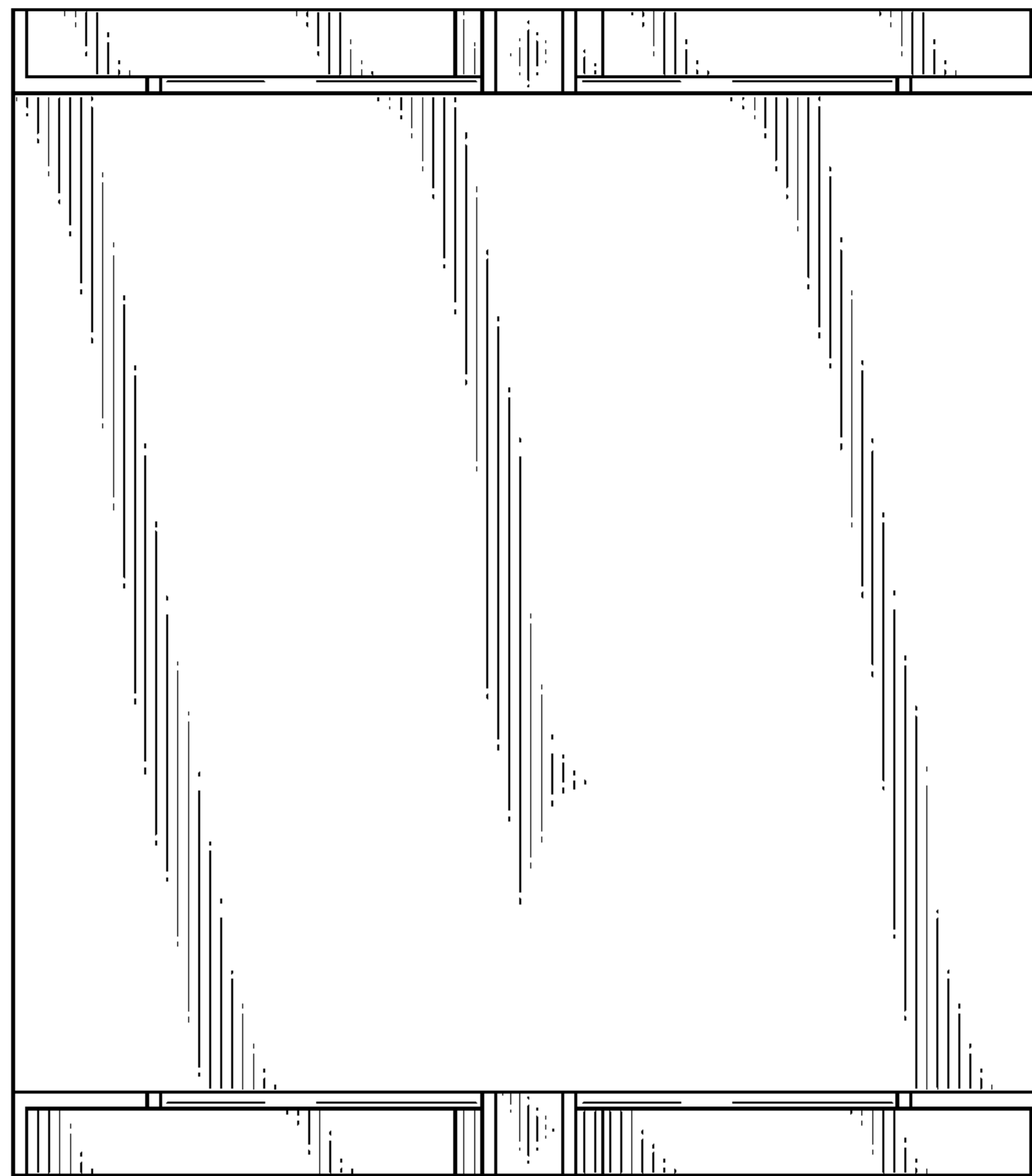


FIG. 14

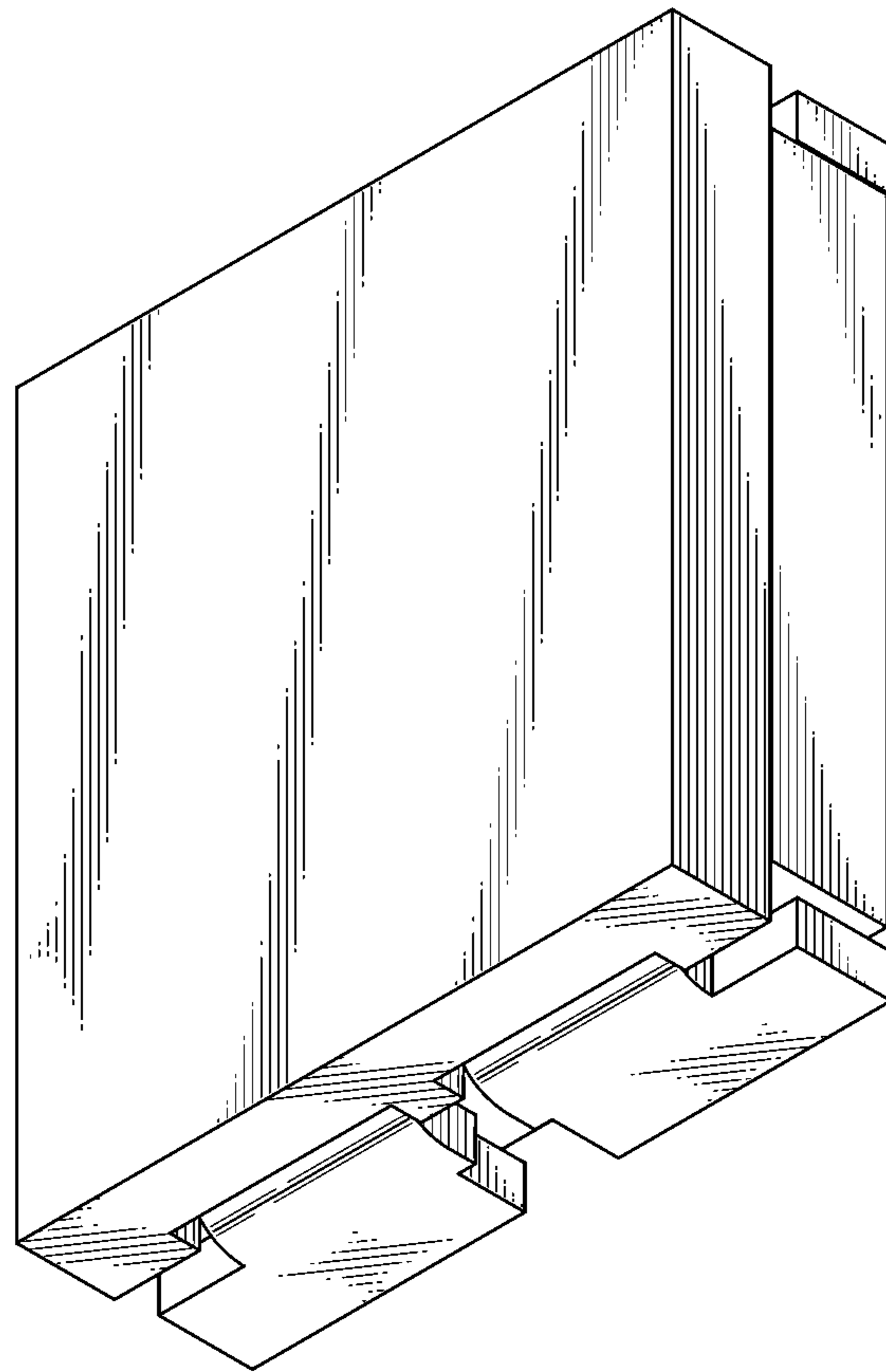


FIG. 15

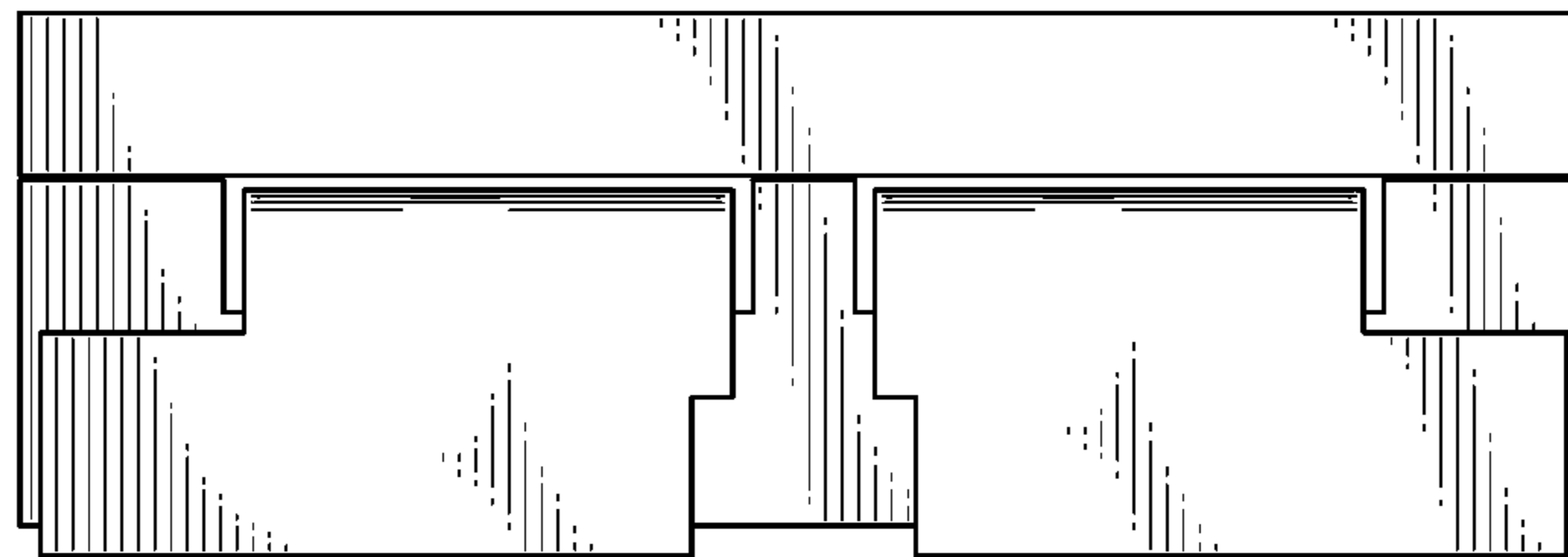


FIG. 16

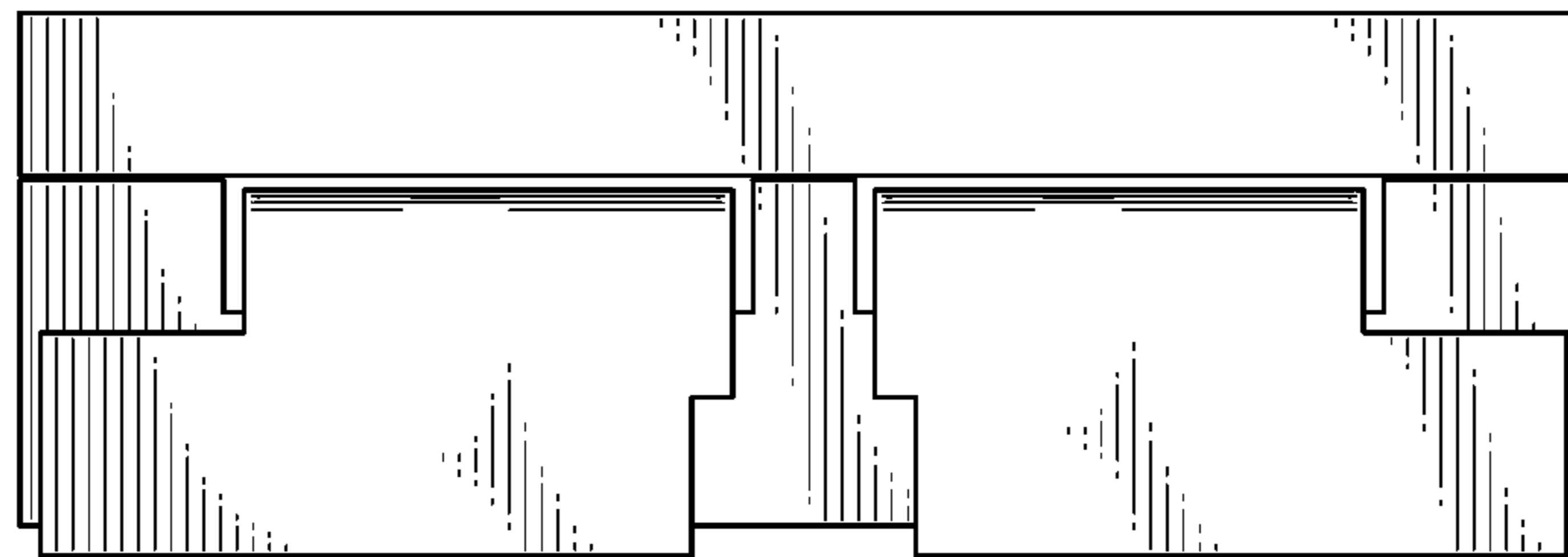


FIG. 17

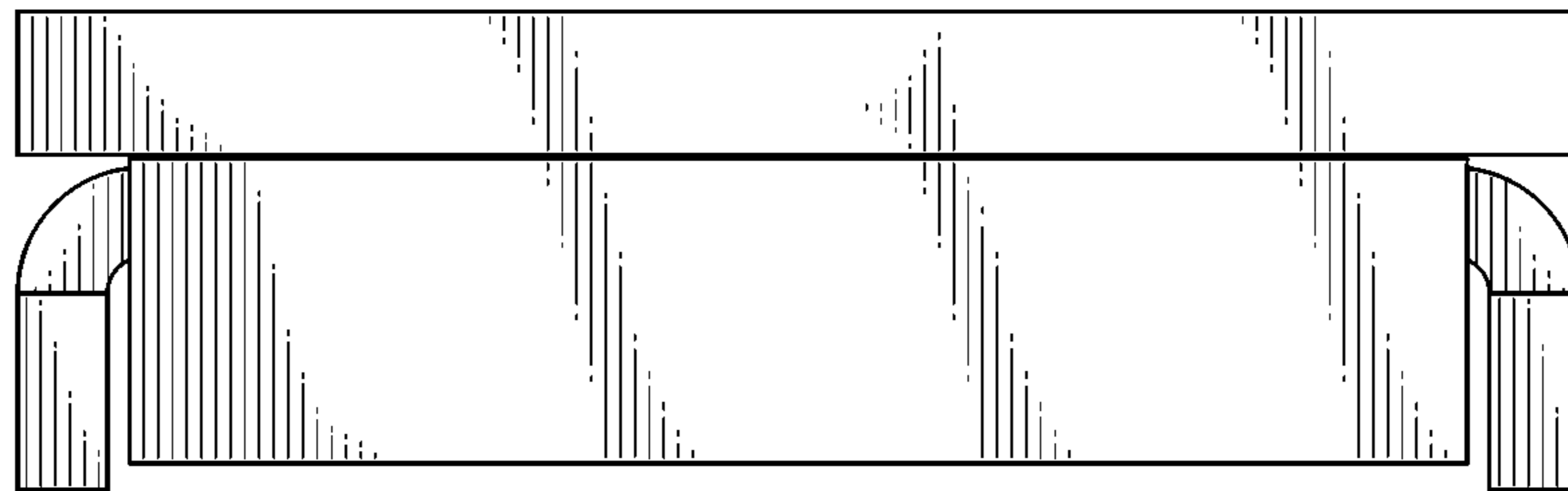


FIG. 18

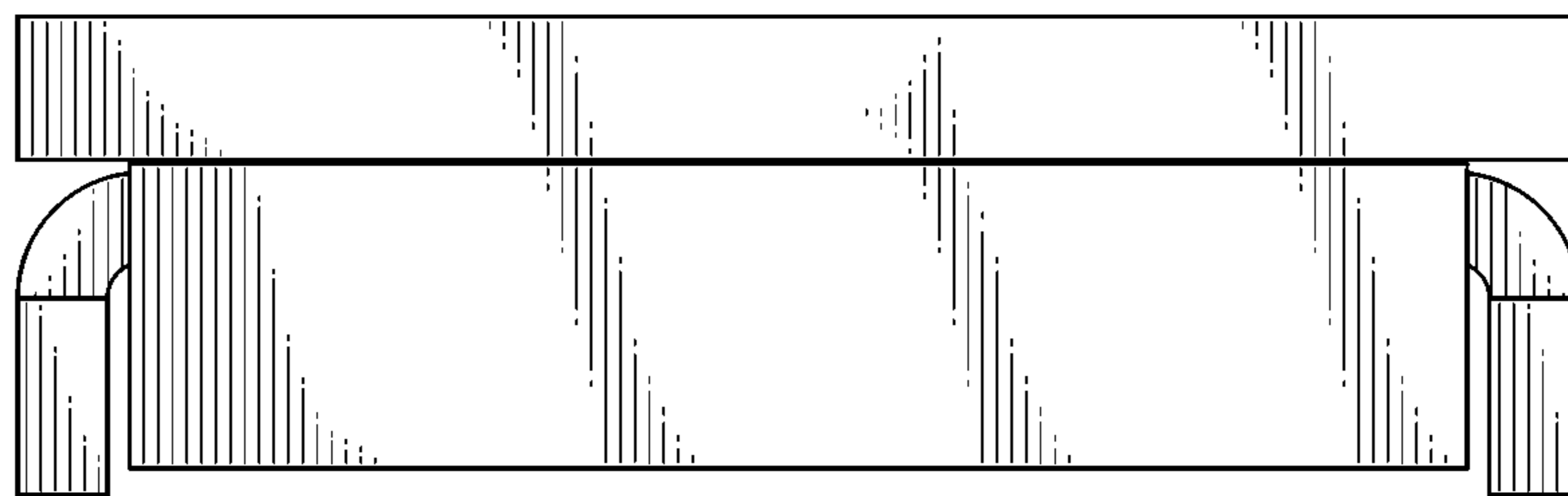


FIG. 19

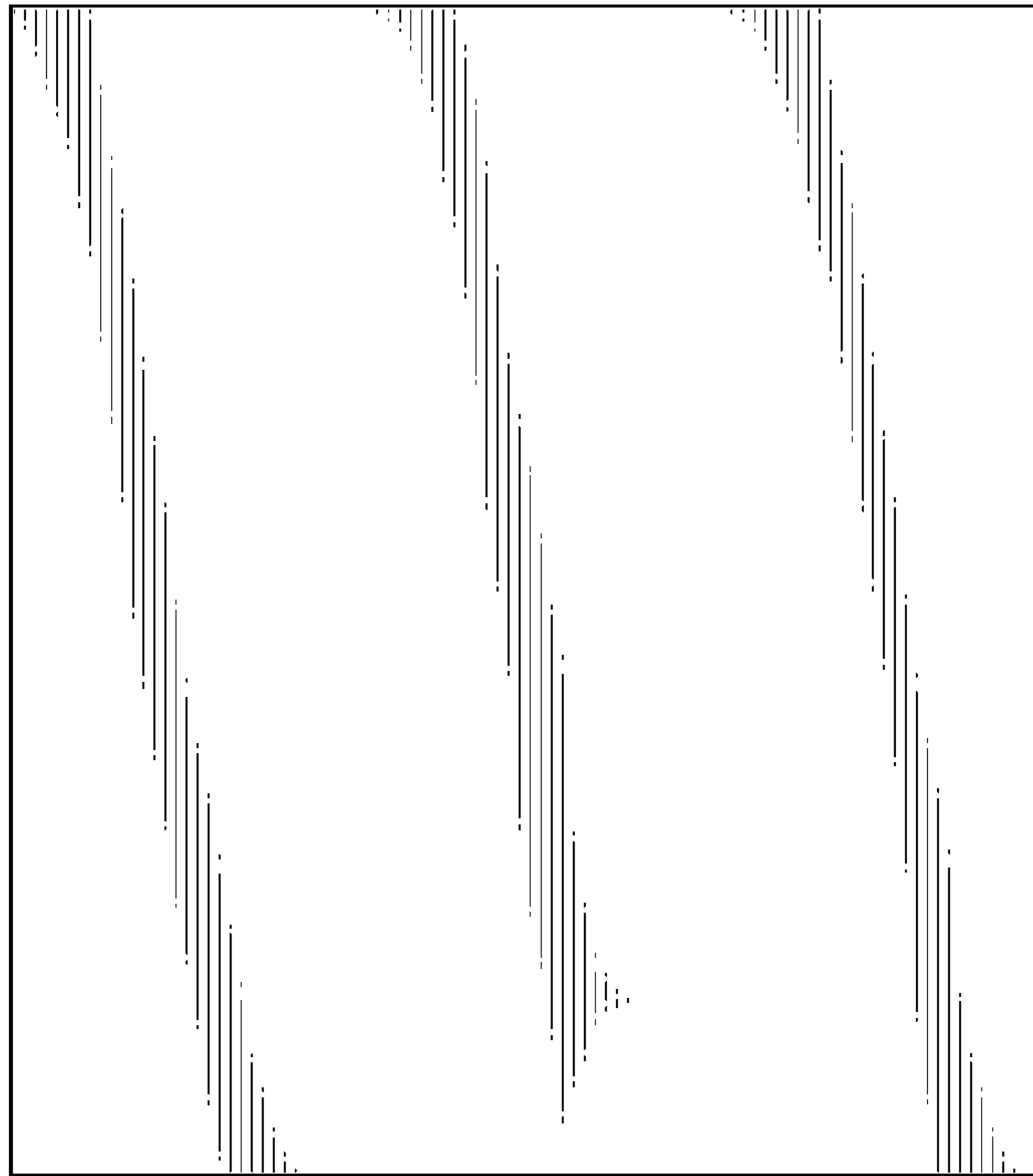


FIG. 20

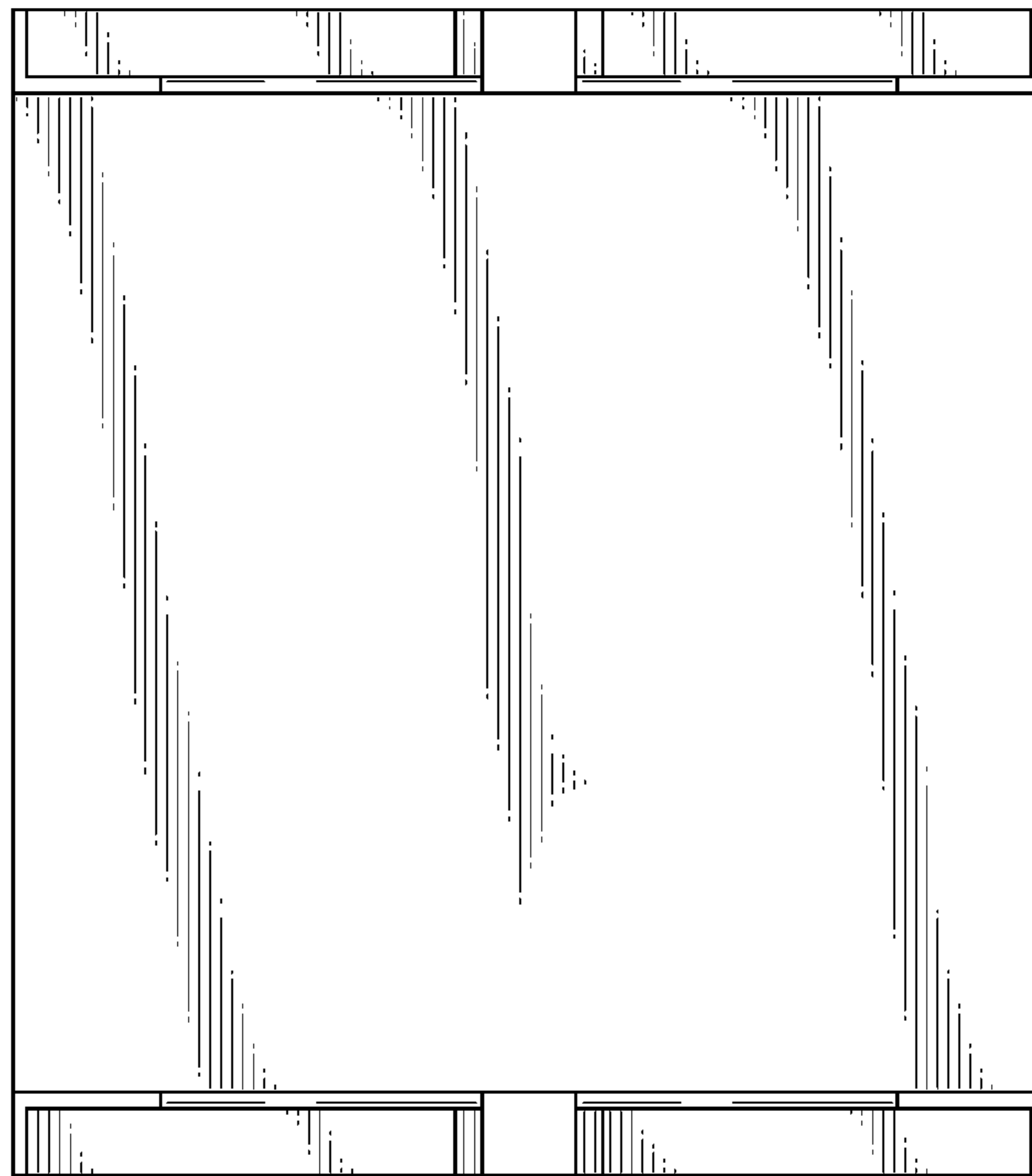


FIG. 21

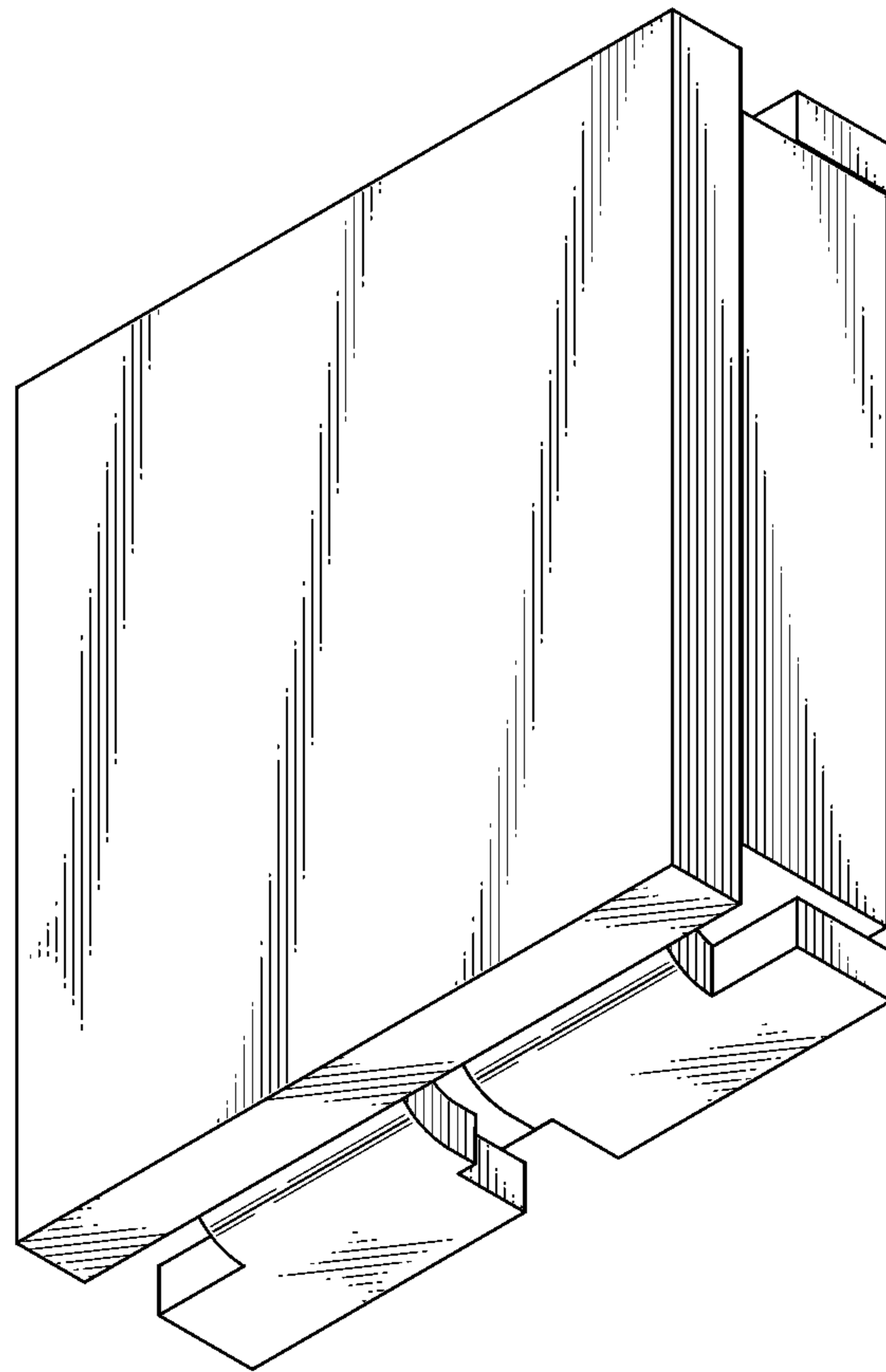


FIG. 22

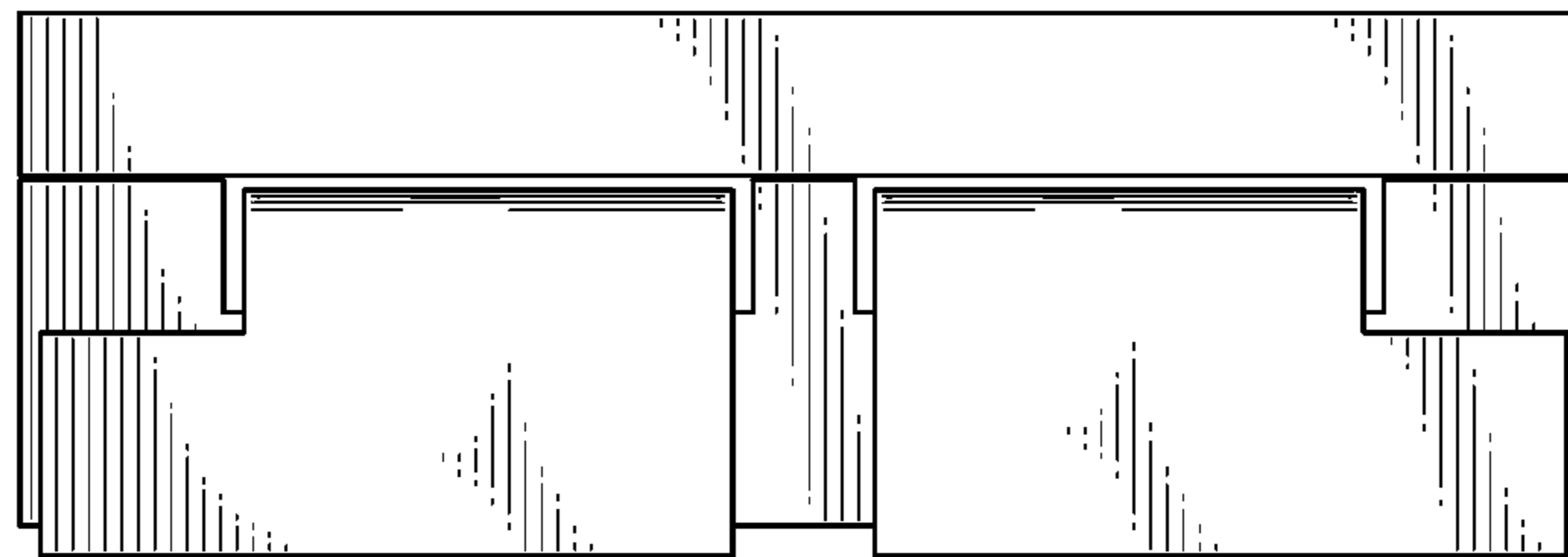


FIG. 23

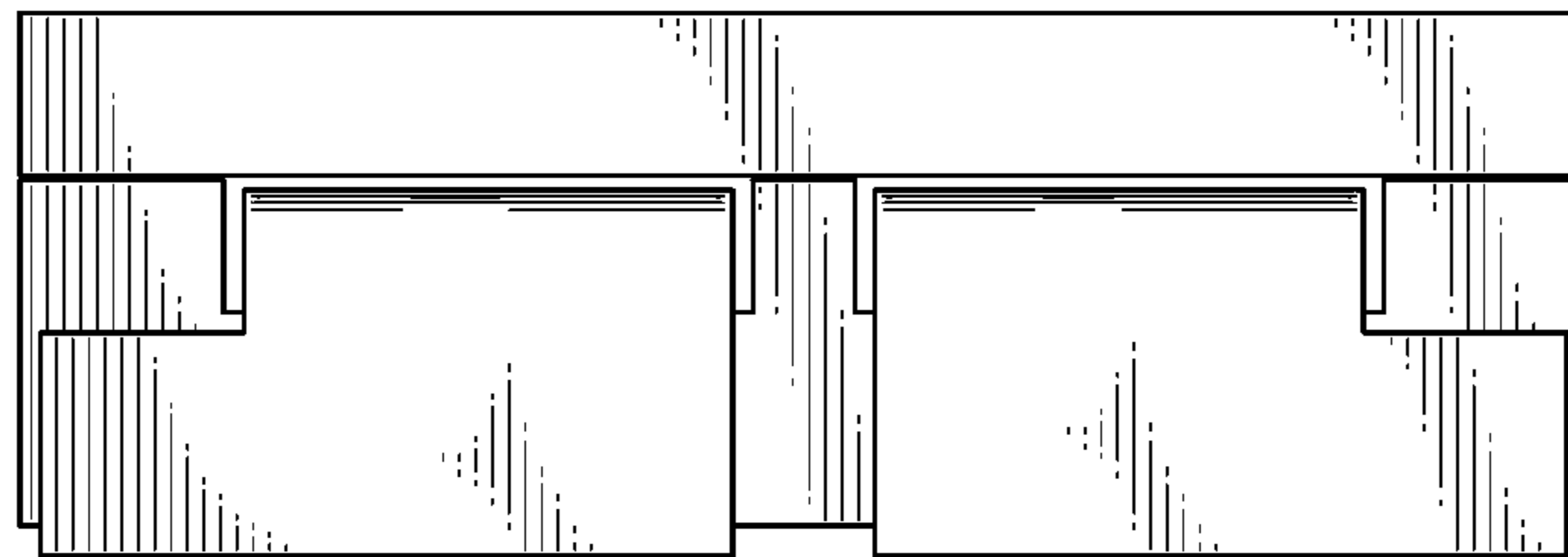


FIG. 24

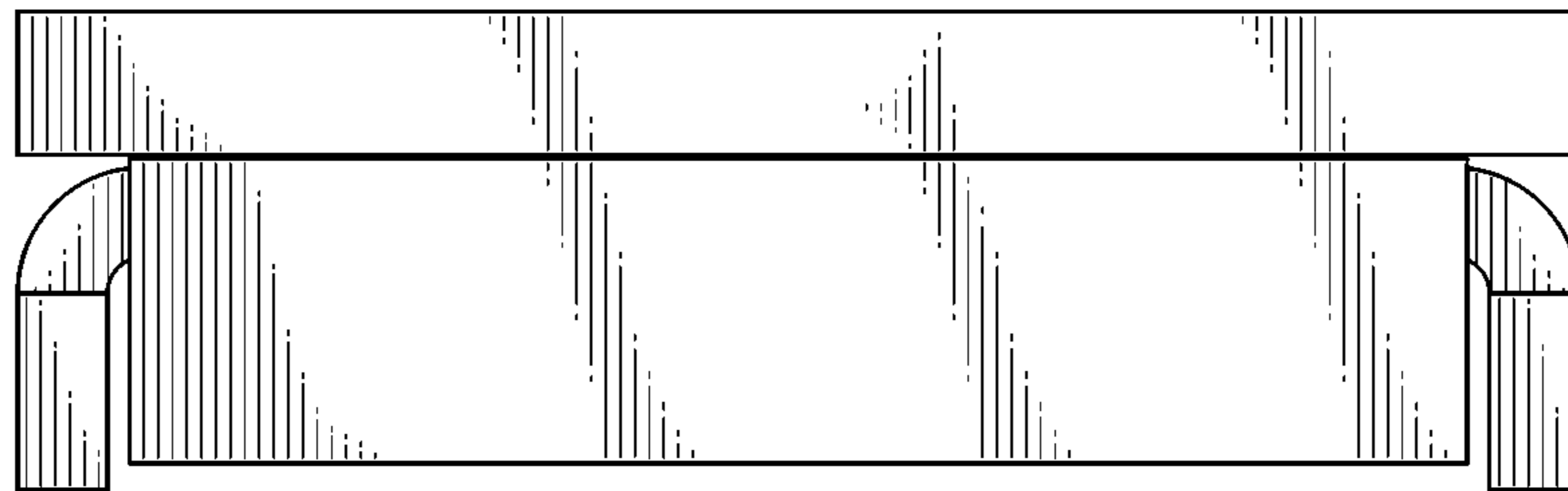


FIG. 25

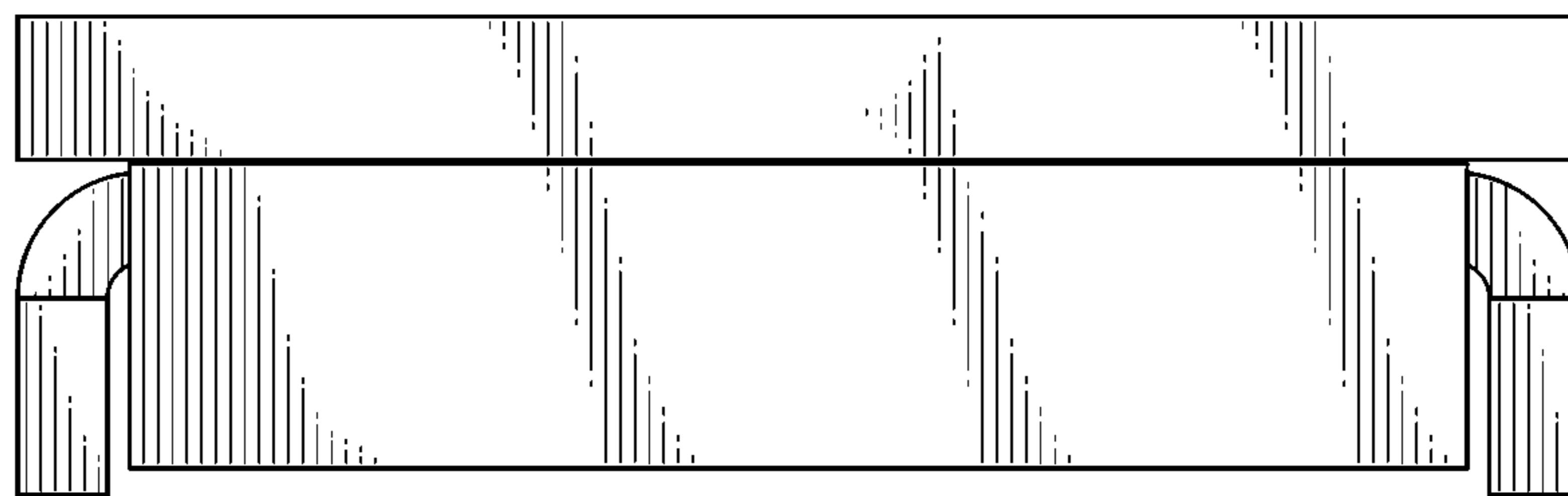


FIG. 26

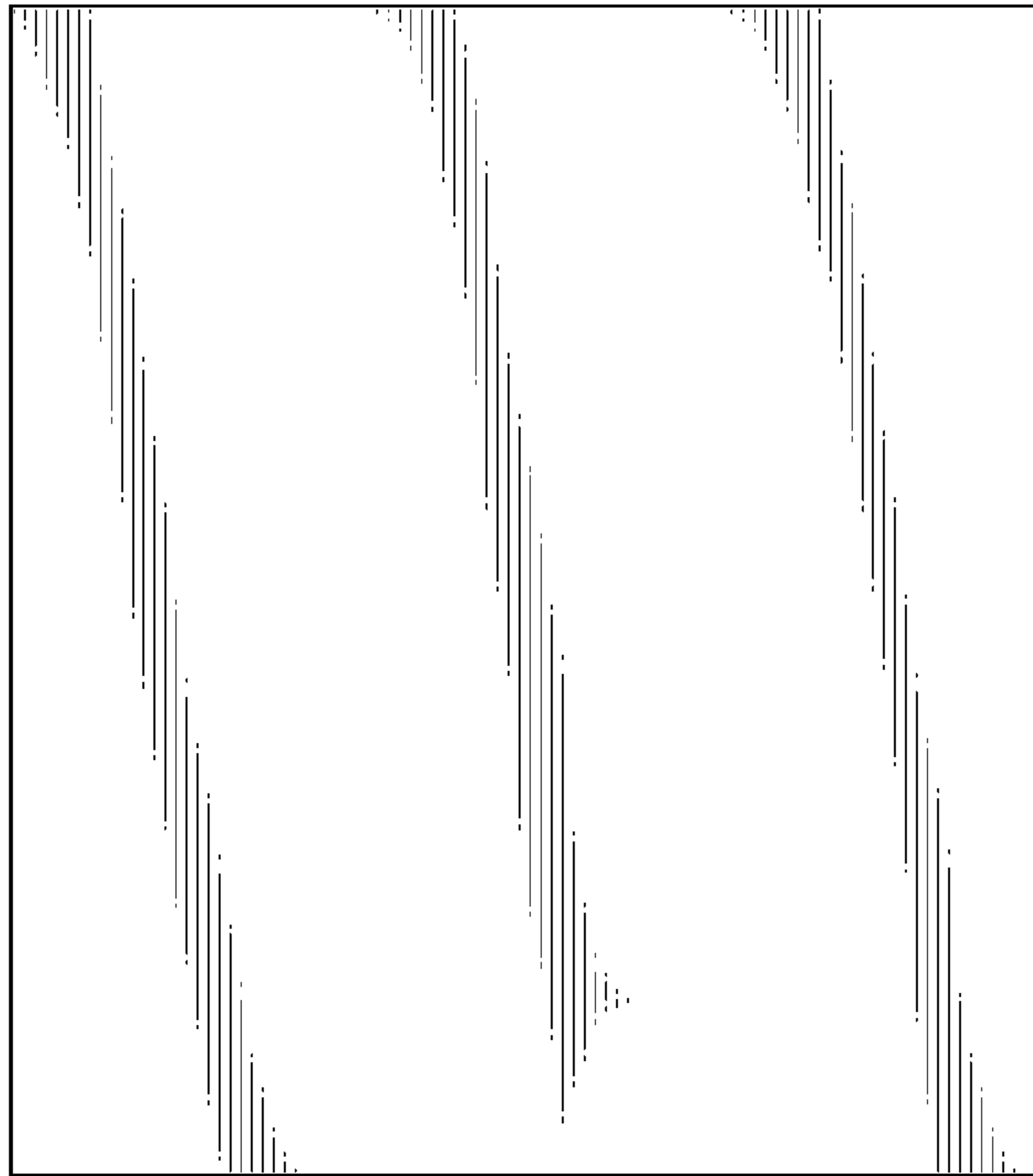


FIG. 27

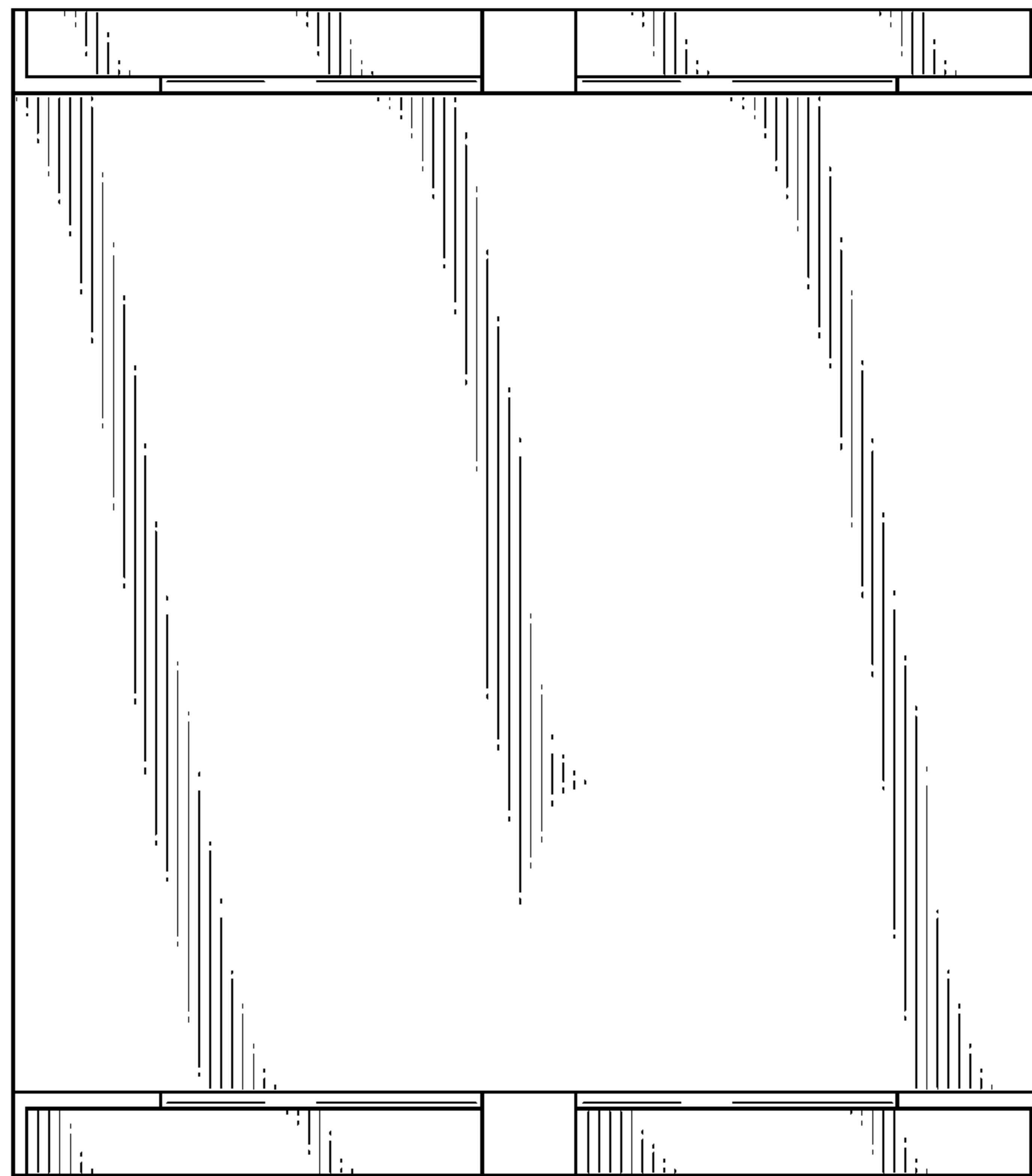


FIG. 28

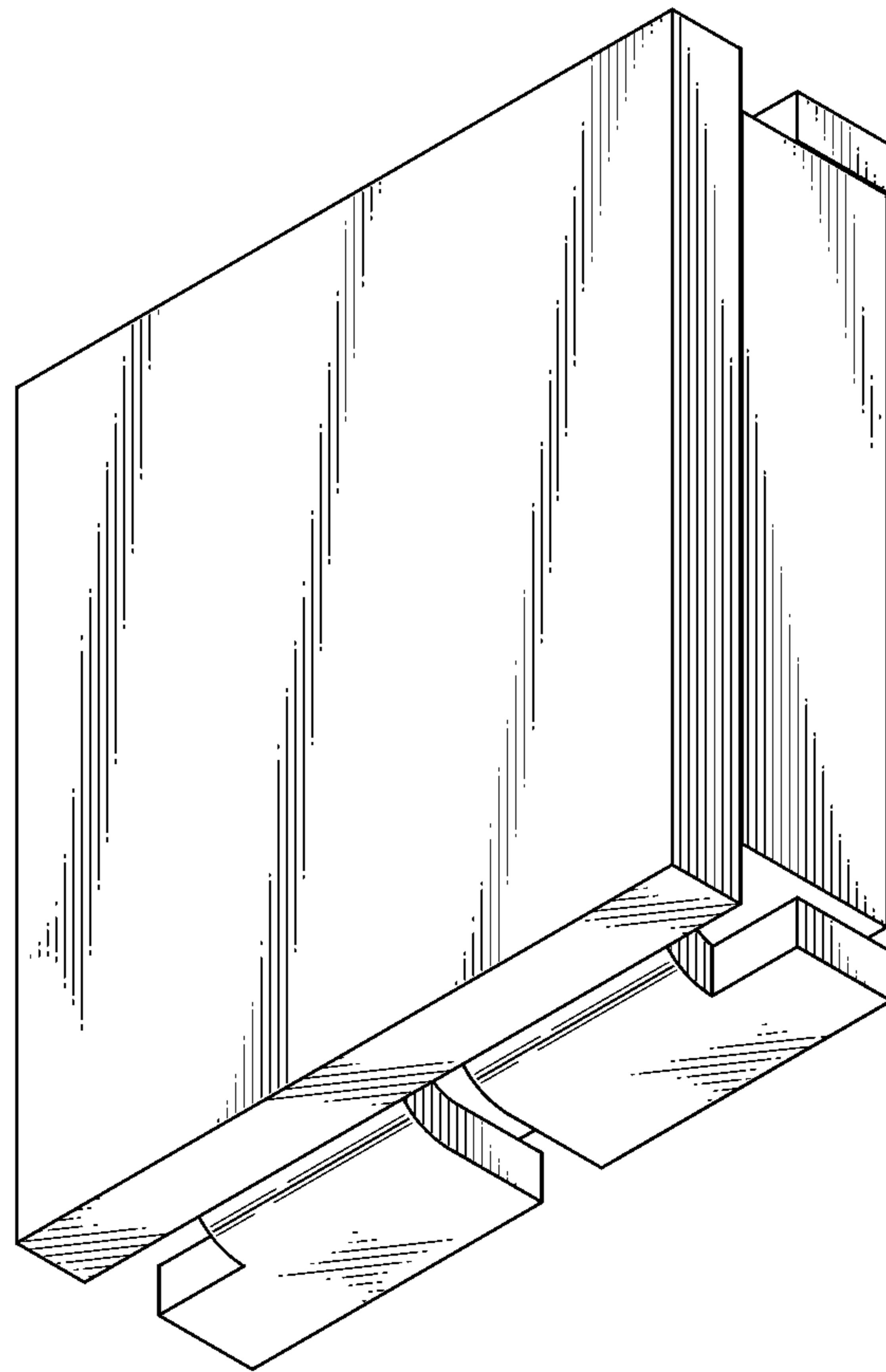


FIG. 29

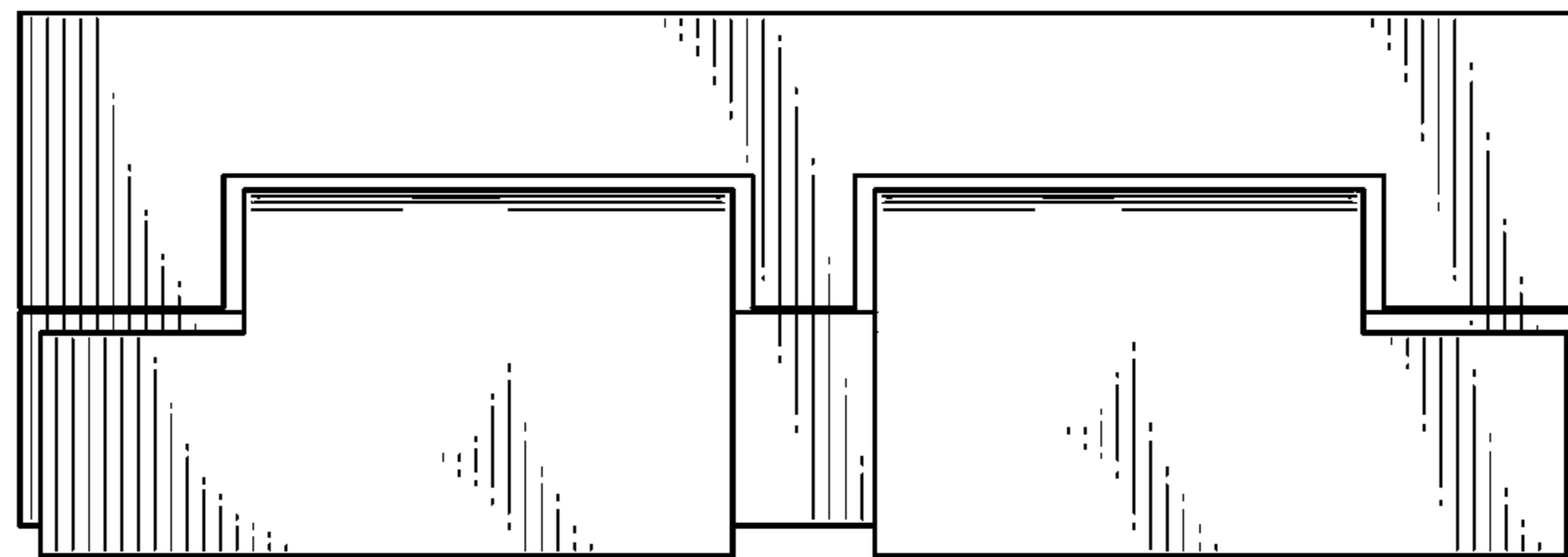


FIG. 30

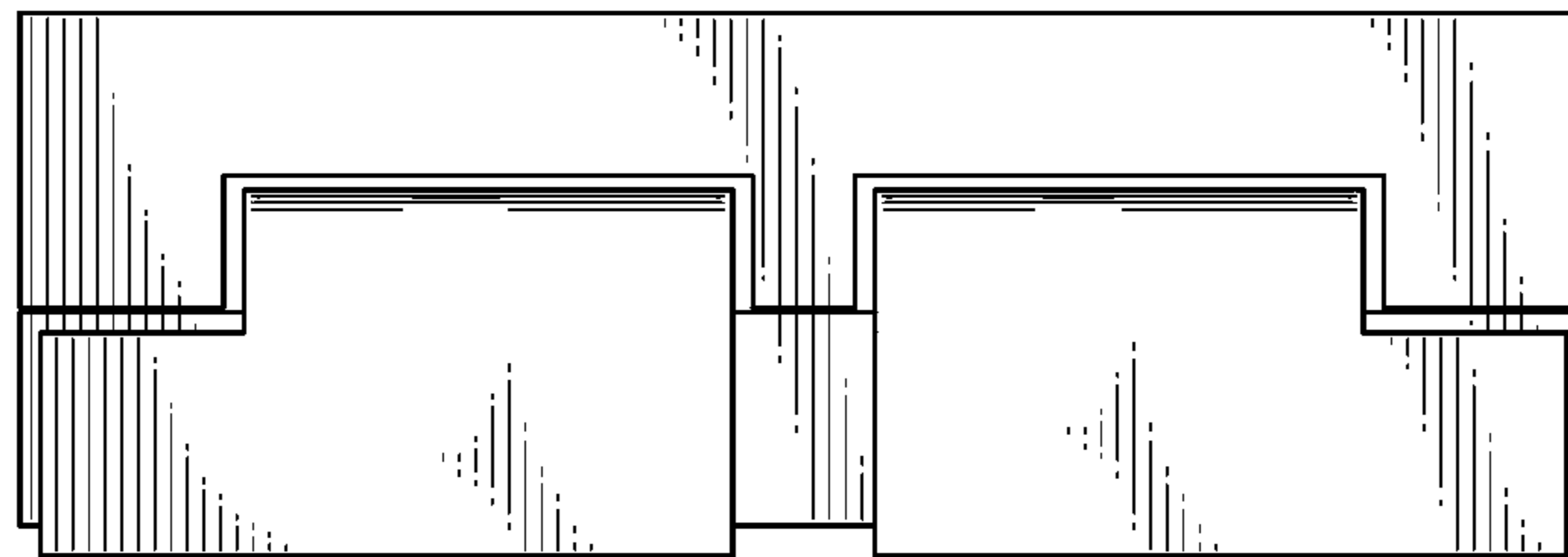


FIG. 31

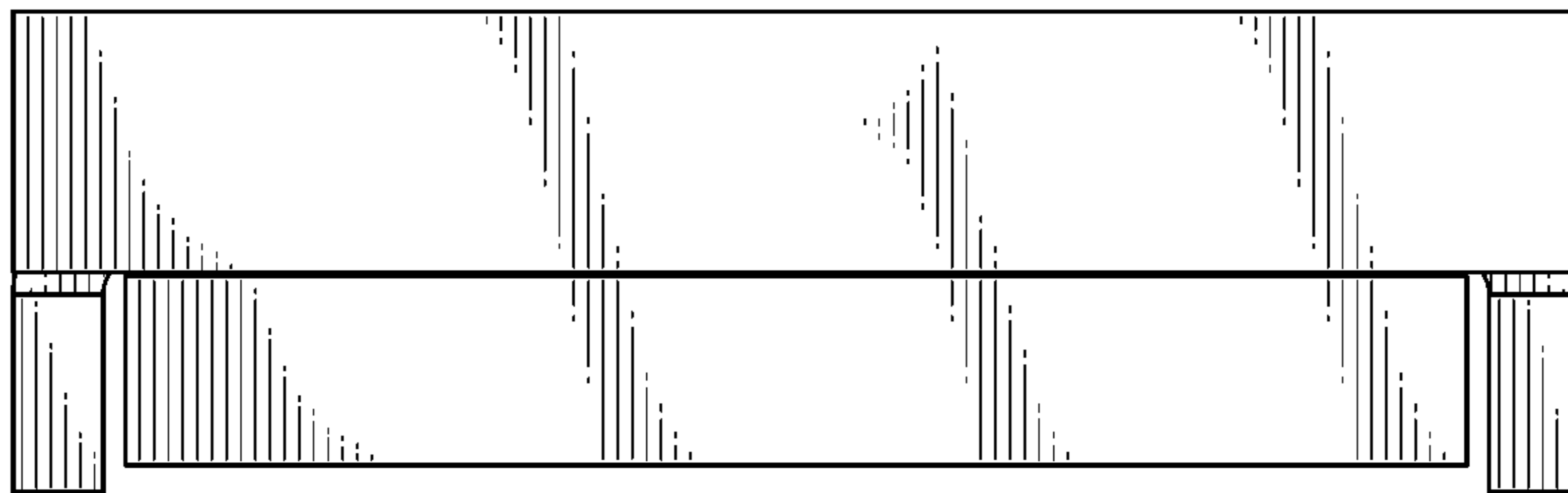


FIG. 32

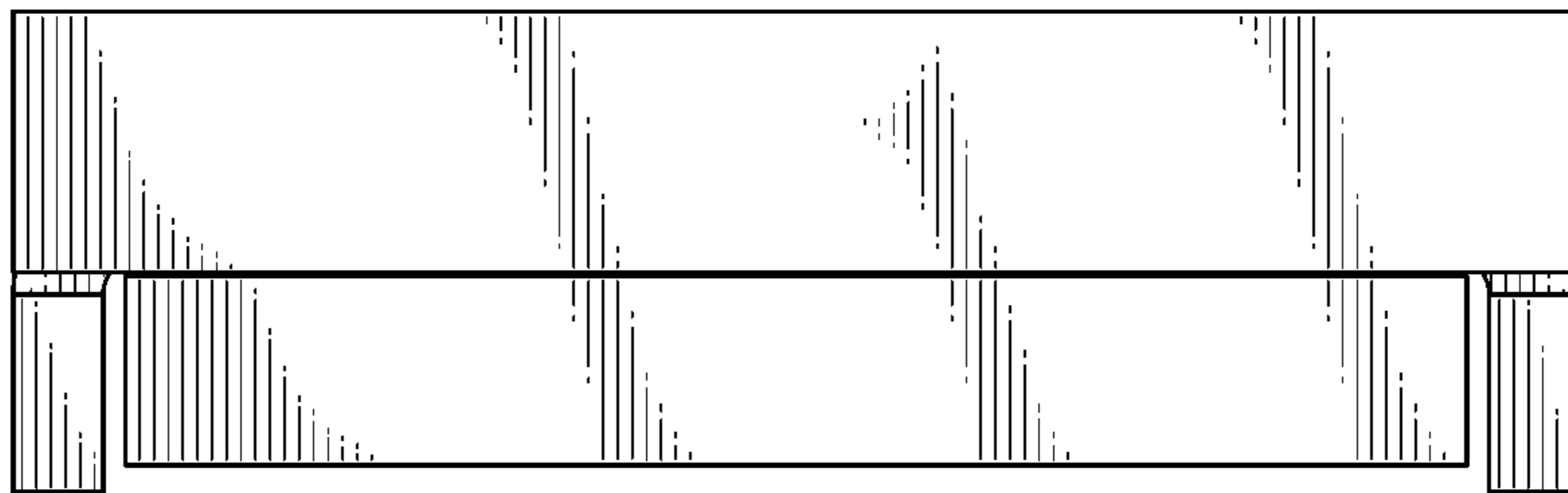


FIG. 33

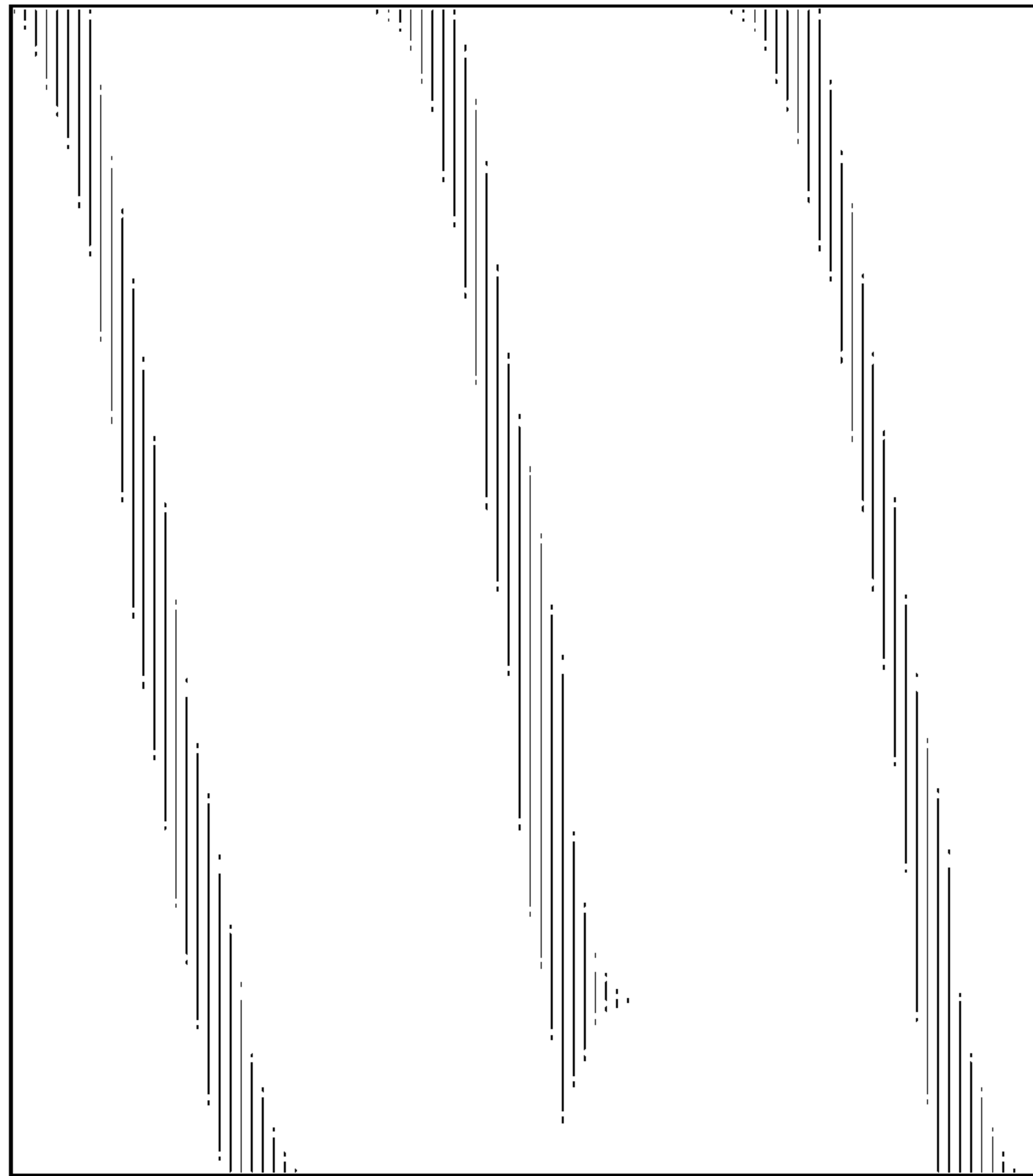


FIG. 34

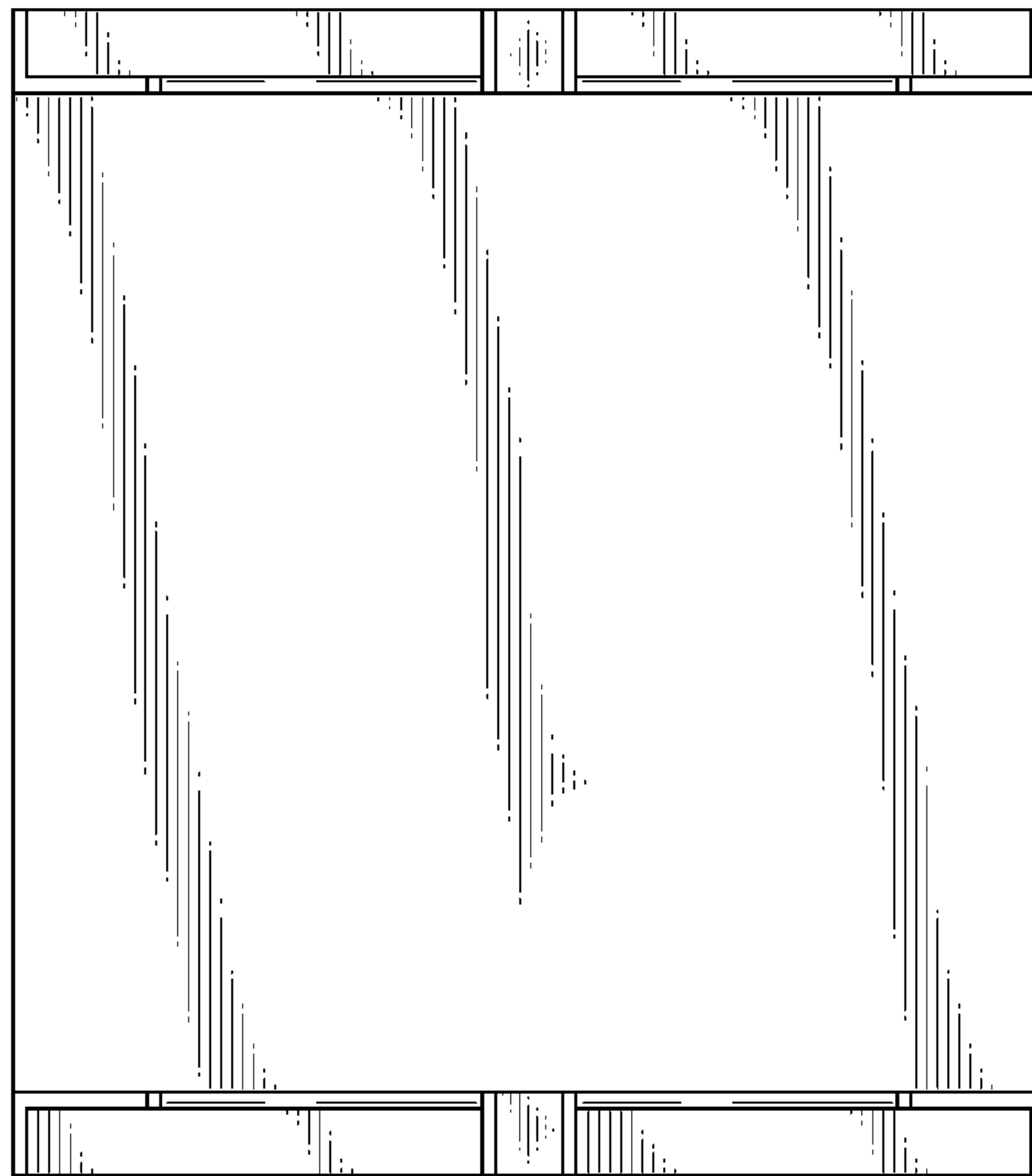


FIG. 35

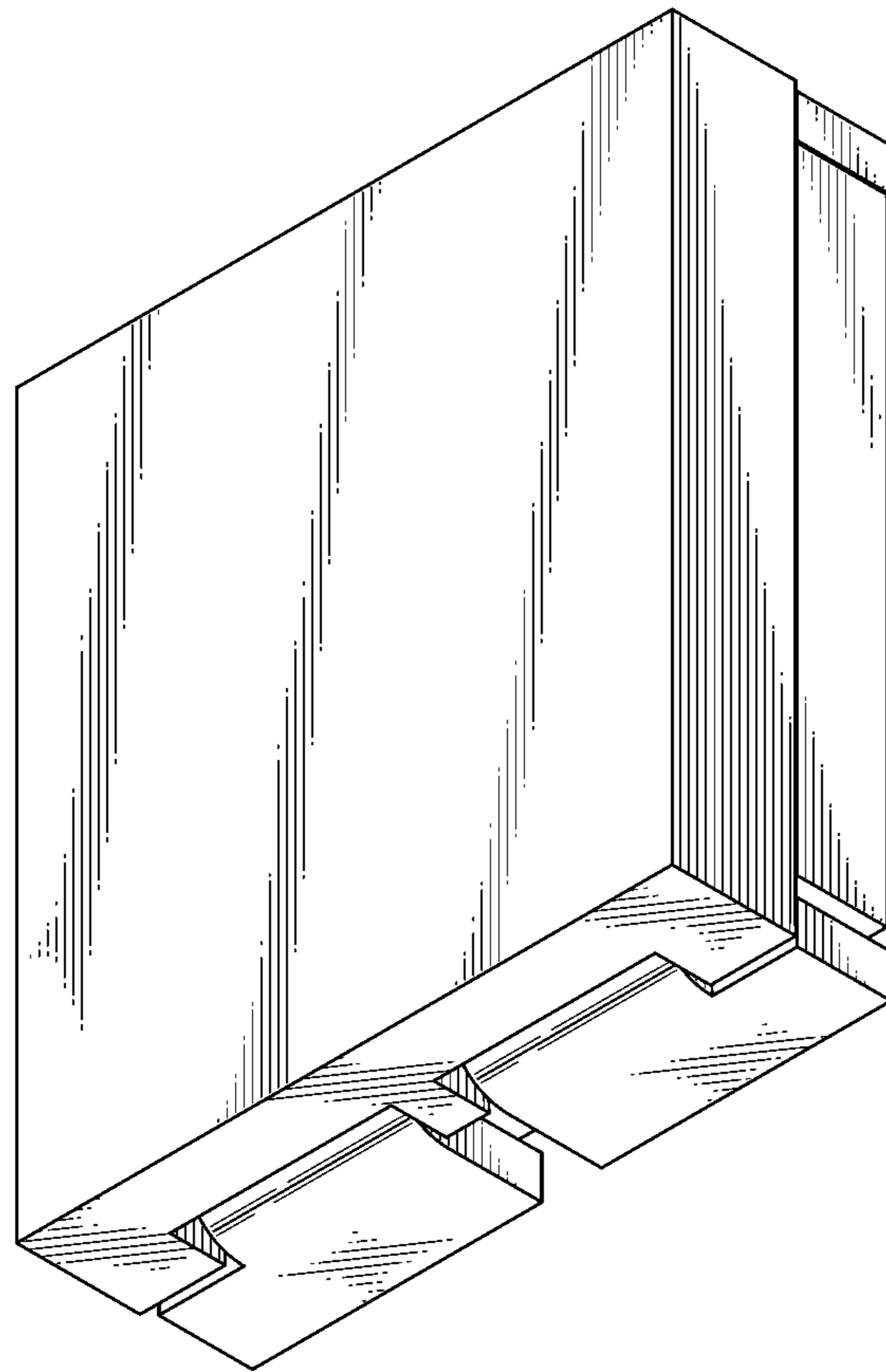


FIG. 36

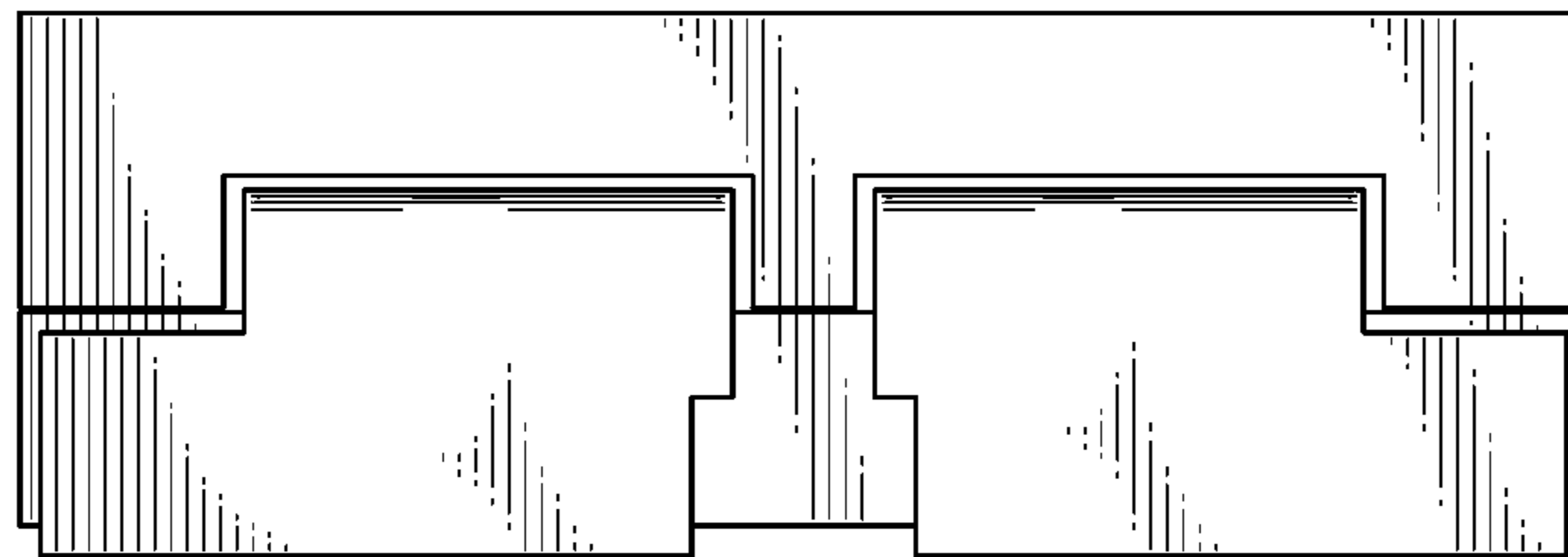


FIG. 37

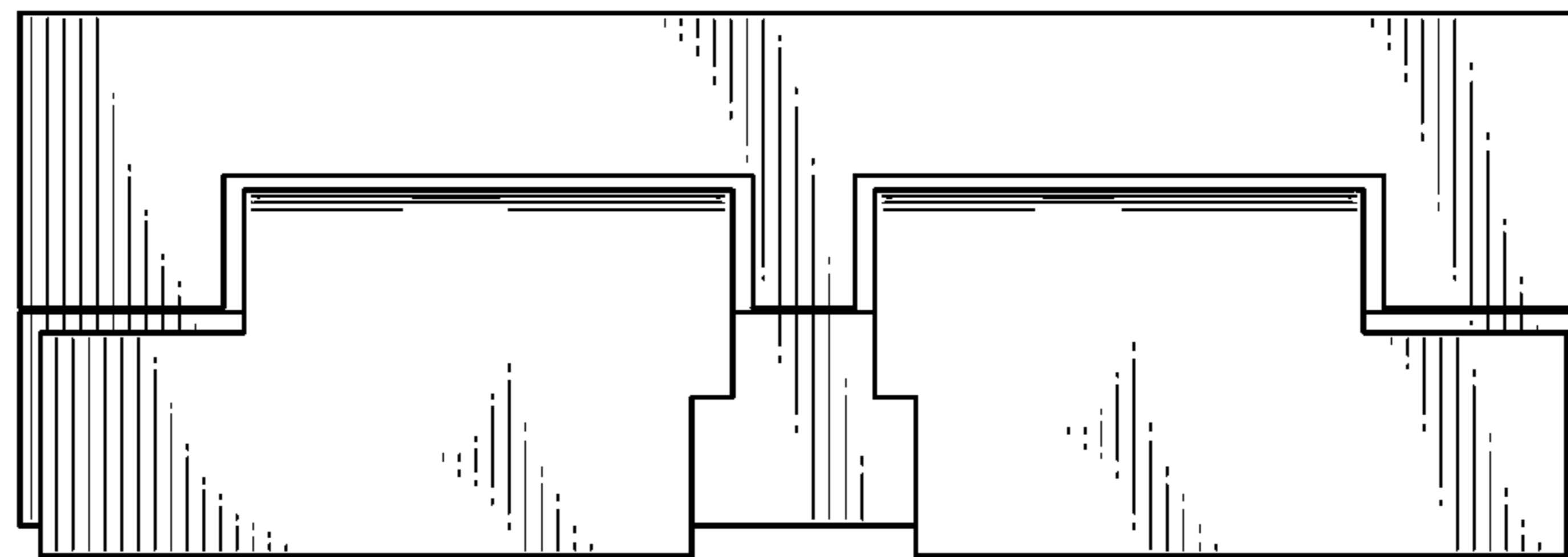


FIG. 38

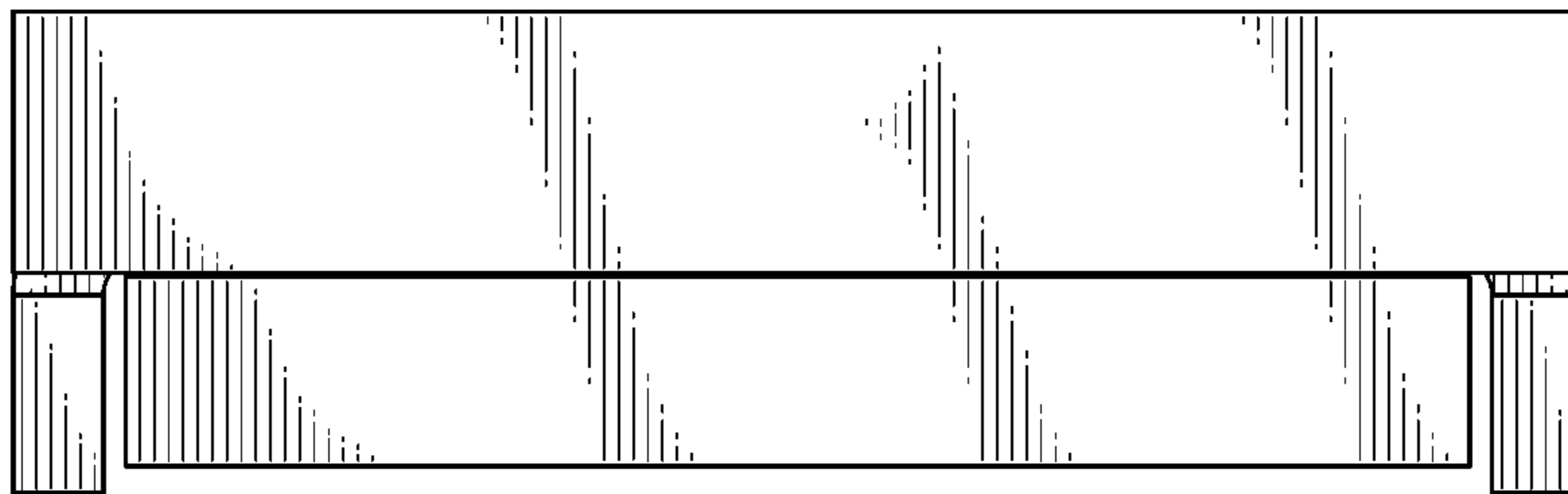


FIG. 39

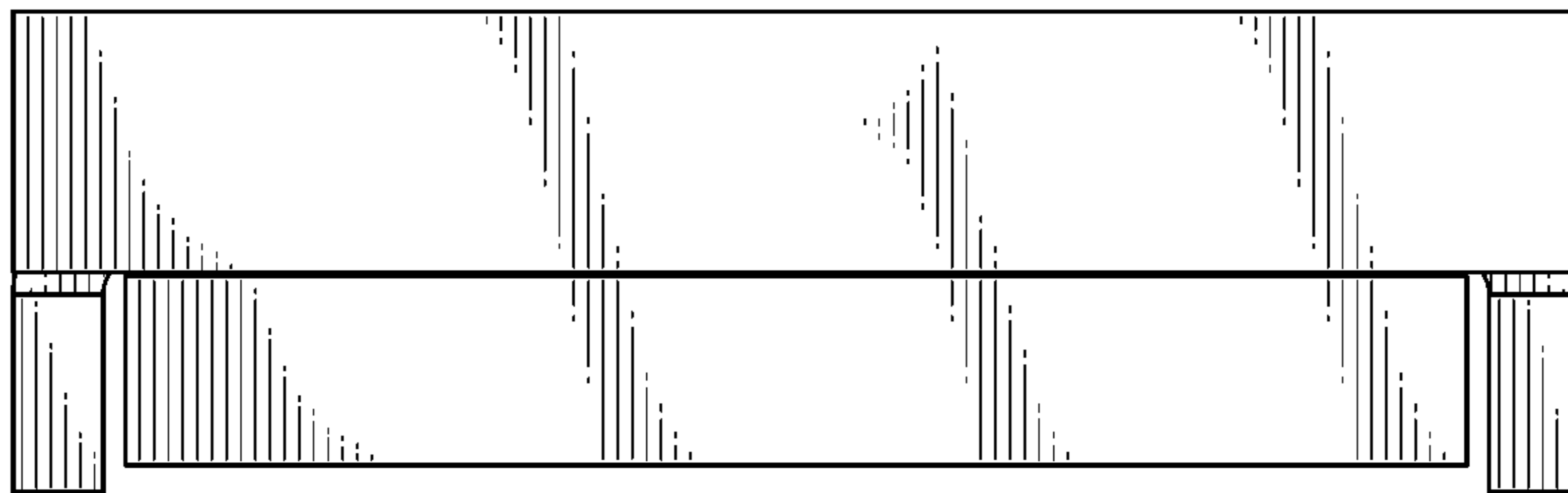


FIG. 40

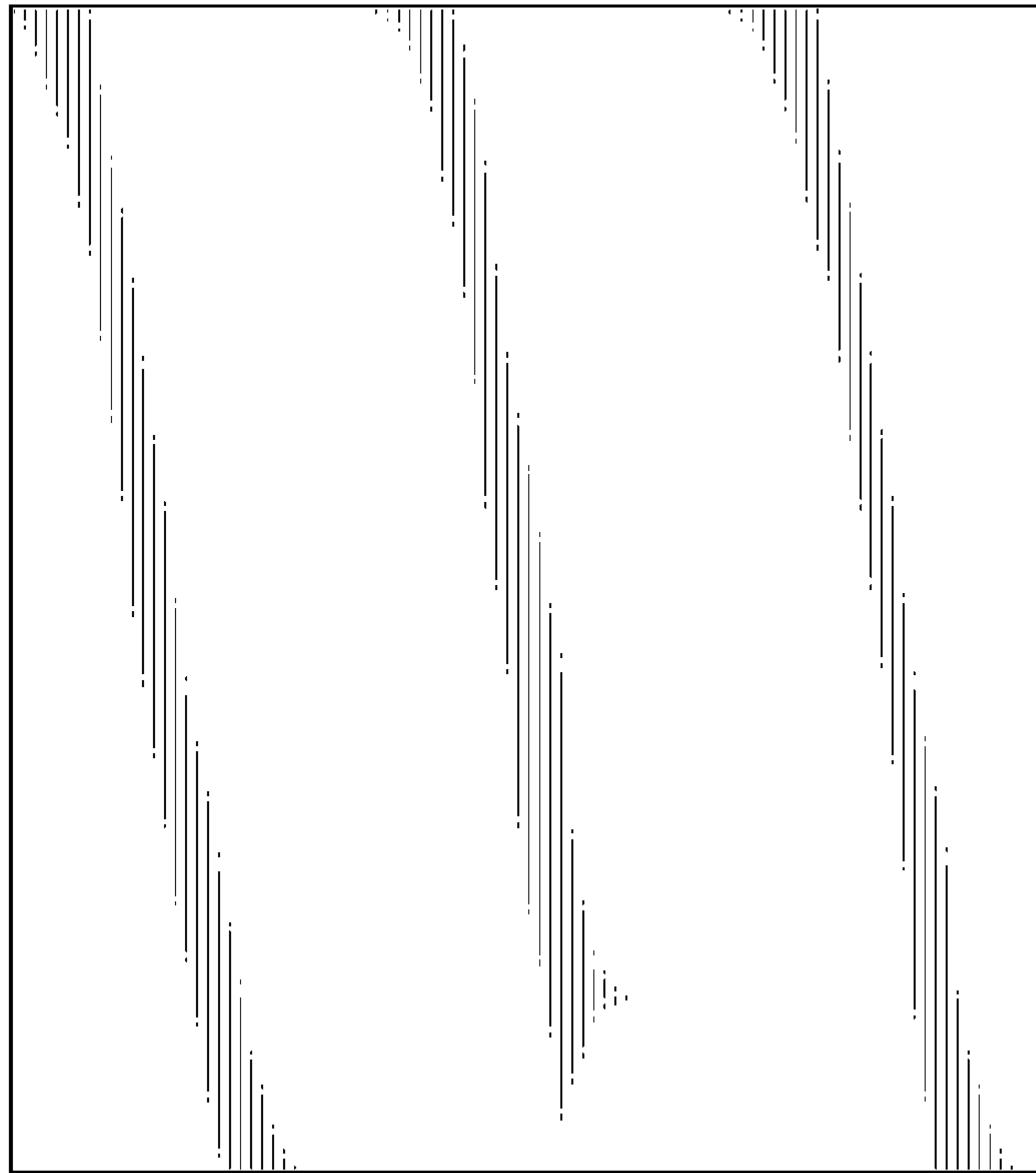


FIG. 41

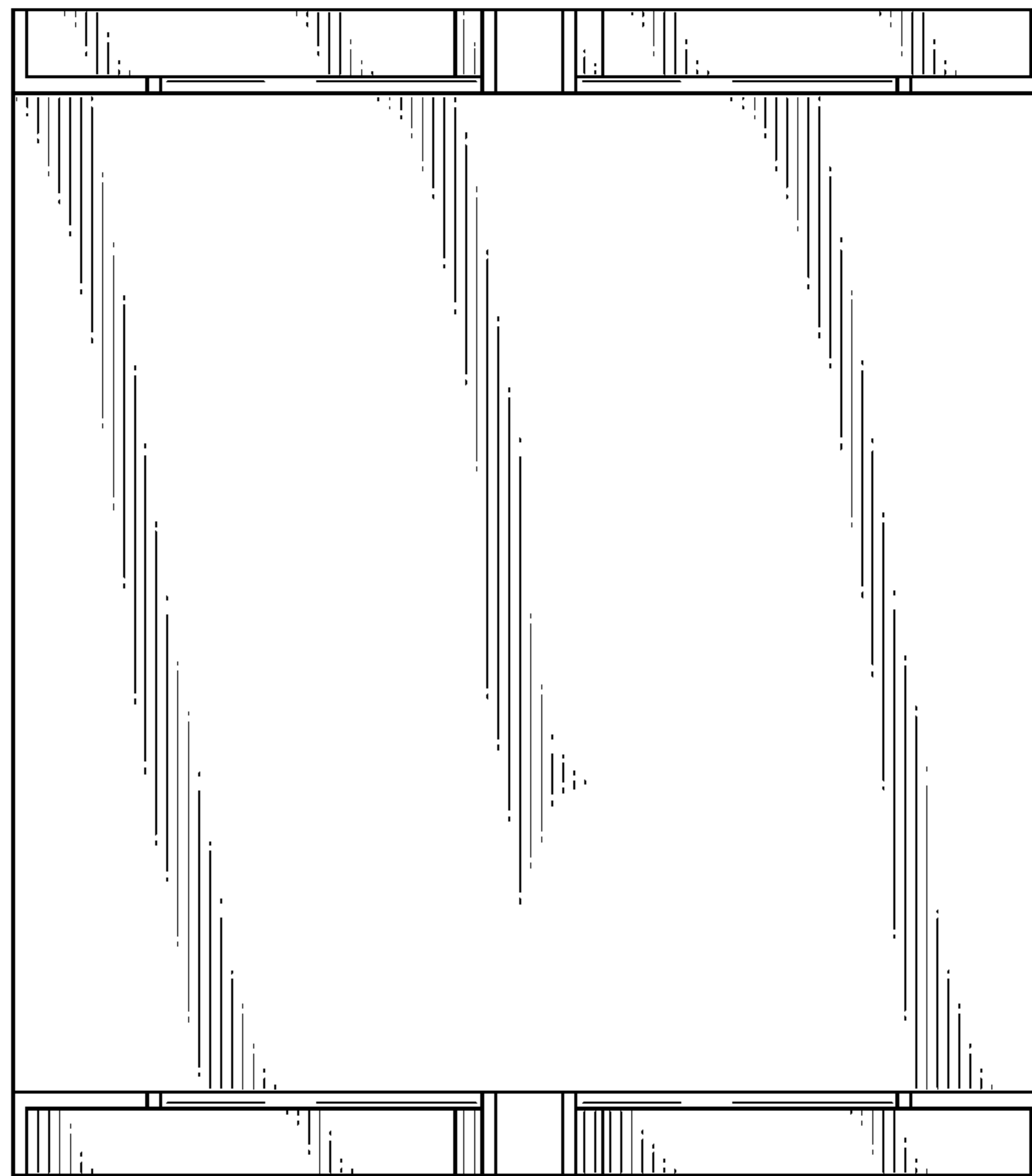


FIG. 42

