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(12) **United States Design Patent**
Klein

(10) **Patent No.:** **US D809,029 S**
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(54) **EXTRUDED STRUCTURAL BUILDING COMPONENT FOR ROBOTICS**

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

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(51) **LOC (11) Cl.** **15-09**

(52) **U.S. Cl.**
USPC **D15/138**; D15/199

(58) **Field of Classification Search**
USPC D15/138, 199; D25/35, 38.1, 47, 48.2, D25/48.7, 48.8, 49, 56, 58, 60, 61, 69, D25/119-125, 135, 136, 138, 141, 199
CPC A47B 96/145; A47B 96/1483; A47B 2230/0022; E04B 1/58; E04B 1/5818; E04B 2/60; E04B 2/766; E04B 2001/5868; E06B 3/98; F16B 7/04; F16B 7/044; F16B 7/0466; F16B 12/40; F16B 12/2063; Y10T 403/46; Y10T 403/4697
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 1,312,689 A * 8/1919 Ford et al. E02D 29/0216 405/273
- 1,887,704 A * 11/1932 Wilisch B01J 19/32 261/94
- 2,115,962 A * 5/1938 Orme F21V 35/00 211/13.1
- 2,176,157 A * 10/1939 Tanner F28D 17/02 165/9.1

- 2,303,559 A * 12/1942 Kinney F28D 17/02 165/9.1
- 2,309,789 A * 2/1943 Reintjes C21B 9/06 165/9.1
- 2,438,814 A * 3/1948 MacDonald F28D 17/02 165/9.3

(Continued)

FOREIGN PATENT DOCUMENTS

- DE 4420978 7/1996
- DE 102012104252 11/2013

(Continued)

OTHER PUBLICATIONS

U.S. Appl. No. 14/975,122, Notice of Allowance and Fee(s) Due, dated Sep. 27, 2016.

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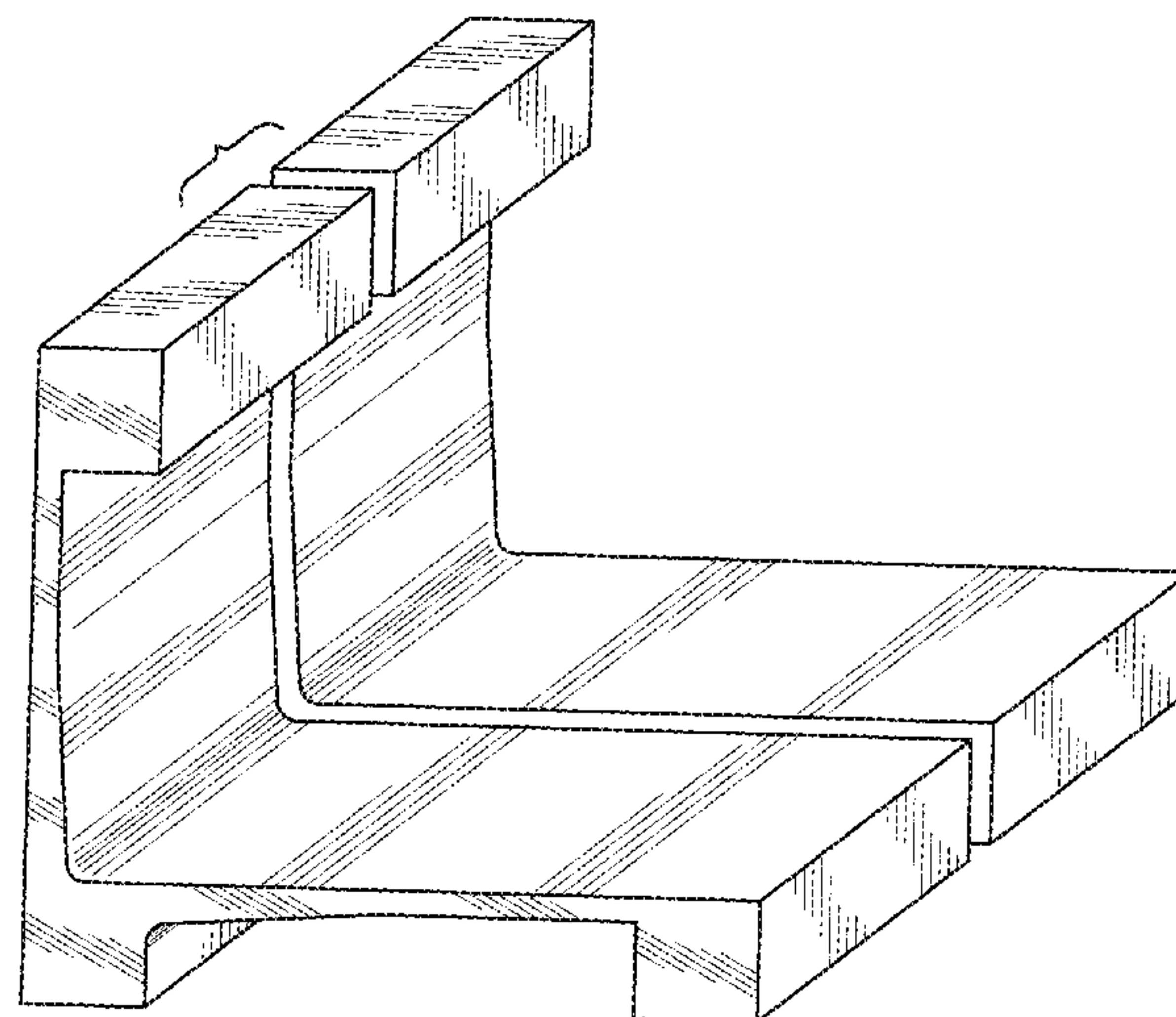
(57) **CLAIM**

The ornamental design for an extruded structural building component for robotics, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of an extruded structural building component for robotics showing my new design; FIG. 2 is a left side elevational view thereof, the opposite side being substantially identical; FIG. 3 is a front plan view thereof; FIG. 4 is a back plan view thereof; and, FIG. 5 is a bottom plan view thereof. The article is shown with a symbolic break in its length. The appearance of any portion of the article between the break lines forms no part of the claimed design. Any broken line illustration of environmental structure in the drawing is not part of the design sought to be patented. Note: The use of separation and a bracket indicates that the precise length is not claimed.

1 Claim, 3 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

2,793,022 A * 5/1957 Harris C10B 29/02
165/9.1

3,612,585 A 10/1971 Mayr

3,654,742 A * 4/1972 Wilnau B28B 19/0053
264/261

3,739,541 A * 6/1973 Andrews E04C 1/392
52/220.2

3,785,098 A 1/1974 Schweitzer

3,802,492 A * 4/1974 Hilgemann E04B 5/48
165/54

3,960,637 A * 6/1976 Ostrow E04C 3/06
156/293

3,977,149 A * 8/1976 Haynes E04C 2/30
52/579

4,003,450 A * 1/1977 Lohl E04C 2/06
182/194

D245,999 S * 10/1977 Strigle, Jr. 261/DIG. 72

4,123,881 A * 11/1978 Muse E04B 2/44
52/100

D251,204 S * 2/1979 Ceglia D25/113

4,245,621 A * 1/1981 Hollobaugh F24J 2/045
126/621

4,269,006 A * 5/1981 Larrow E04B 1/14
52/309.14

4,282,923 A * 8/1981 Cheetham F28D 17/02
165/9.1

4,291,513 A * 9/1981 Ankarswed E04C 2/044
52/284

4,433,521 A * 2/1984 Dietrich E04B 2/08
52/302.4

4,444,523 A 4/1984 Stumpf

4,479,777 A * 10/1984 Simon F28D 17/02
110/338

4,630,419 A * 12/1986 Pilgrim B28B 1/52
52/309.13

4,711,437 A 12/1987 Longenecker et al.

4,940,081 A * 7/1990 Hyde F28D 17/02
165/9.1

5,177,924 A * 1/1993 Kakuk E04C 2/16
52/606

D349,046 S * 7/1994 Brown D21/500

5,368,416 A * 11/1994 Cataldo E01F 8/0011
405/258.1

D362,311 S * 9/1995 Cataldo D25/113

5,465,541 A * 11/1995 Lin E04B 1/0023
52/220.2

5,475,961 A 12/1995 Menchetti

6,219,989 B1 4/2001 Tumura

6,263,628 B1 * 7/2001 Griffin E04C 2/288
52/309.11

6,412,243 B1 7/2002 Sutelan

6,418,686 B1 * 7/2002 Record E04C 2/288
52/284

D467,007 S * 12/2002 Daudet D25/61

6,668,512 B2 * 12/2003 Ray E04B 5/19
52/843

6,755,000 B2 * 6/2004 Wone Hahn E04F 19/0436
52/287.1

7,152,449 B2 12/2006 Durney et al.

7,178,304 B2 * 2/2007 Brady E04B 2/7457
52/481.1

7,373,762 B2 * 5/2008 Hubbard E04B 1/10
52/281

7,584,584 B2 * 9/2009 Fennell, Jr. E04C 1/40
52/405.3

7,637,076 B2 12/2009 Vaughn

D628,713 S * 12/2010 LaCroix D25/113

D636,897 S * 4/2011 Bott D25/113

8,011,165 B2 * 9/2011 Blahut E04C 3/29
442/224

8,033,076 B2 * 10/2011 Plagemann B29C 70/52
52/653.1

8,429,873 B2 * 4/2013 Devine, Jr. E04B 1/14
52/284

8,640,429 B1 * 2/2014 Watts E04C 3/08
52/404.1

9,038,351 B2 * 5/2015 Hohmann, Jr. E04B 1/4178
52/714

9,133,867 B2 9/2015 Lang

D753,740 S * 4/2016 Chambers D15/144.1

9,327,206 B2 * 5/2016 Donohoe A63H 33/084

9,624,659 B2 * 4/2017 Hohmann, Jr. E04B 1/4185

9,737,825 B2 * 8/2017 Donohoe A63H 33/044

2003/0097806 A1 * 5/2003 Brown E04B 5/026
52/220.1

2004/0187426 A1 9/2004 Callahan

2010/0057242 A1 * 3/2010 Williams B25J 9/0009
700/114

2013/0109267 A1 * 5/2013 Schweikardt A63H 33/04
446/85

2013/0318907 A1 * 12/2013 Knight, III E04F 15/02044
52/698

2014/0005986 A1 * 1/2014 Aish G06F 17/5004
703/1

2015/0059966 A1 * 3/2015 Nasr B21D 47/04
156/196

2016/0194874 A1 * 7/2016 Radford E04B 7/22
52/600

2016/0311165 A1 * 10/2016 Mark B33Y 10/00

2017/0096814 A1 * 4/2017 Ukrainetz E04B 2/60

2017/0121960 A1 * 5/2017 Ledford E04B 1/2403

2017/0144210 A1 * 5/2017 Anderson E04B 2/60

2017/0191265 A1 * 7/2017 Edwards, III E02D 27/00

FOREIGN PATENT DOCUMENTS

EP 1104826 6/2001

FR 1422576 12/1965

WO WO2011152741 12/2011

* cited by examiner

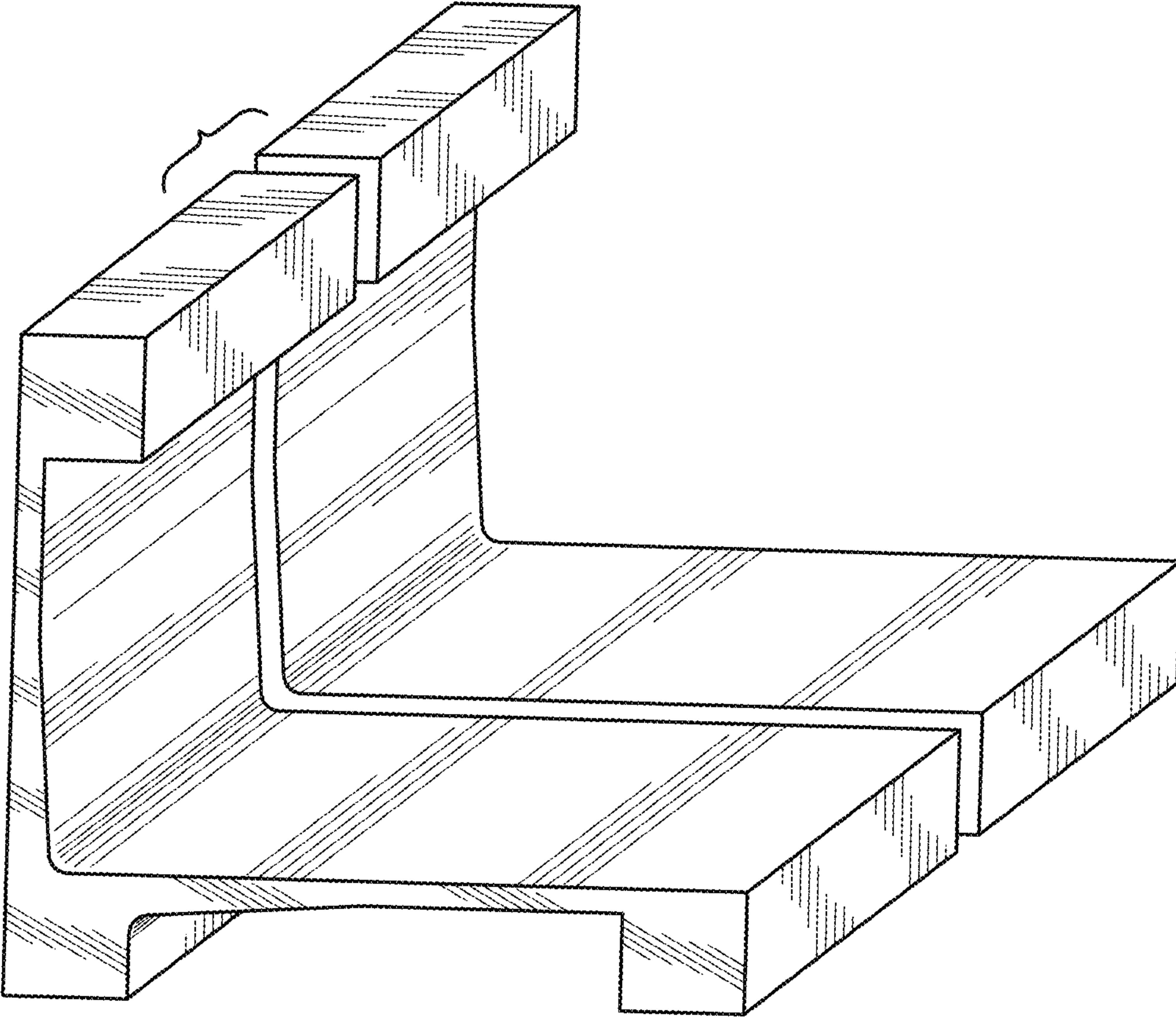


FIG. 1

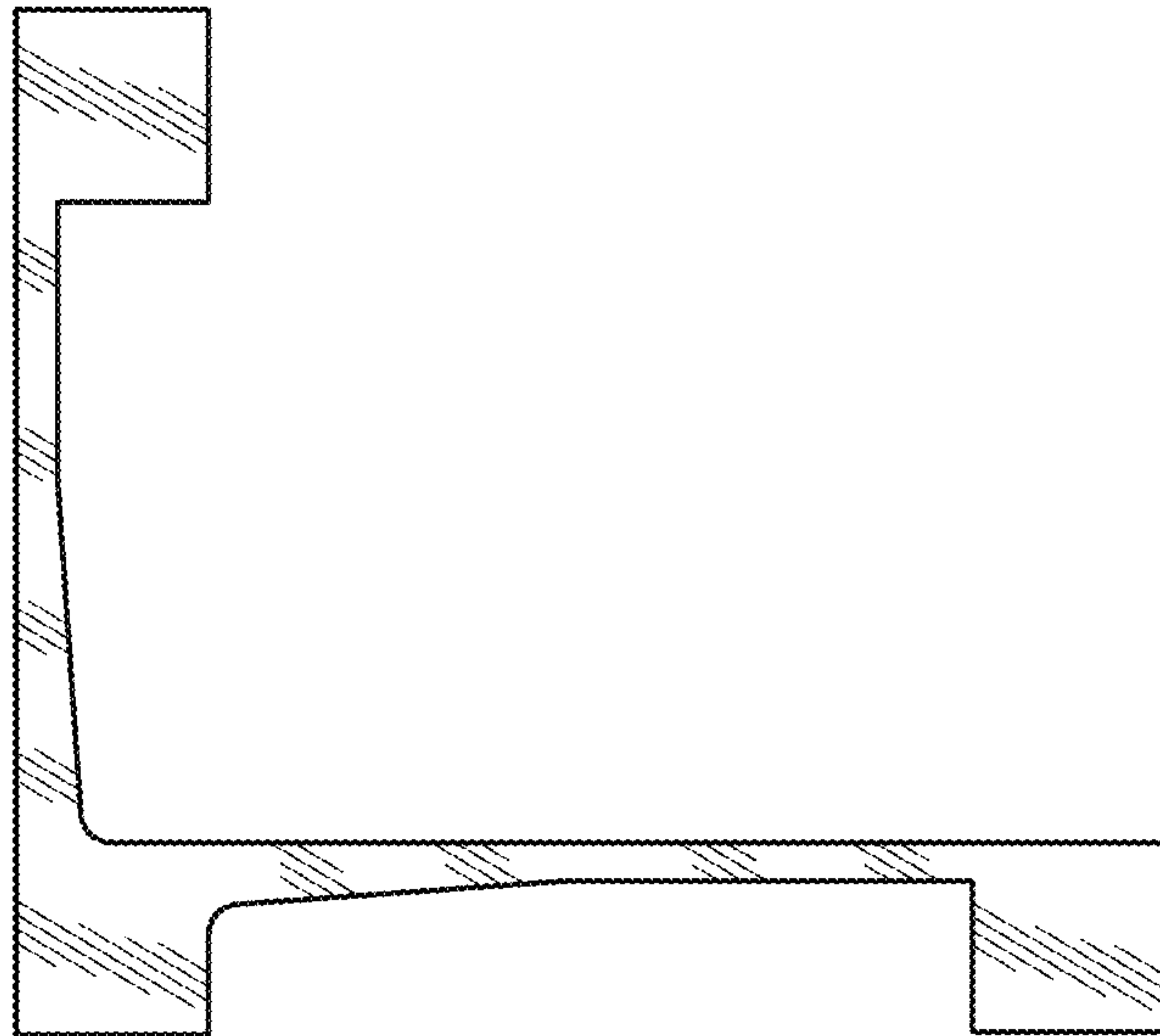


FIG. 2

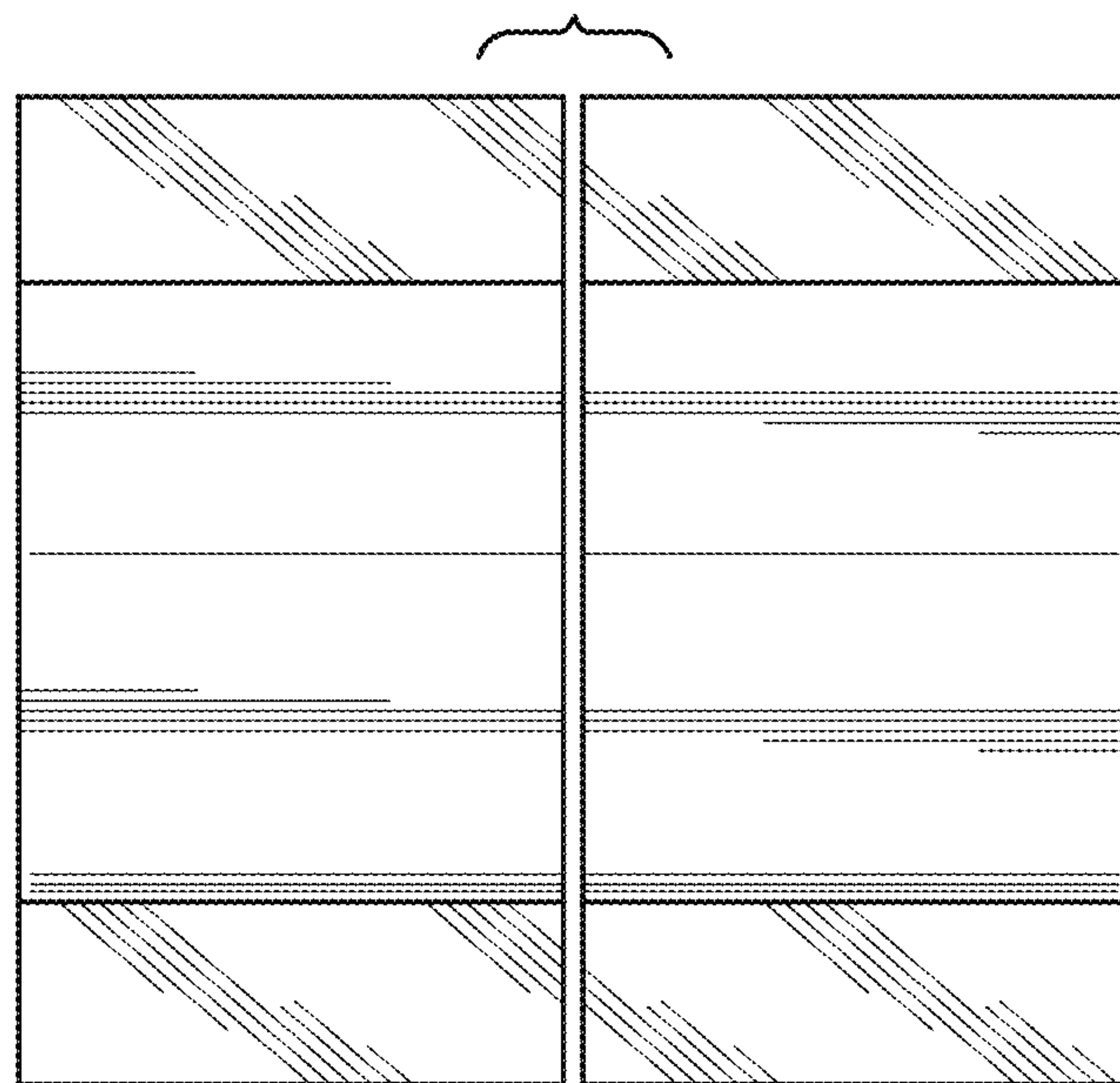


FIG. 3

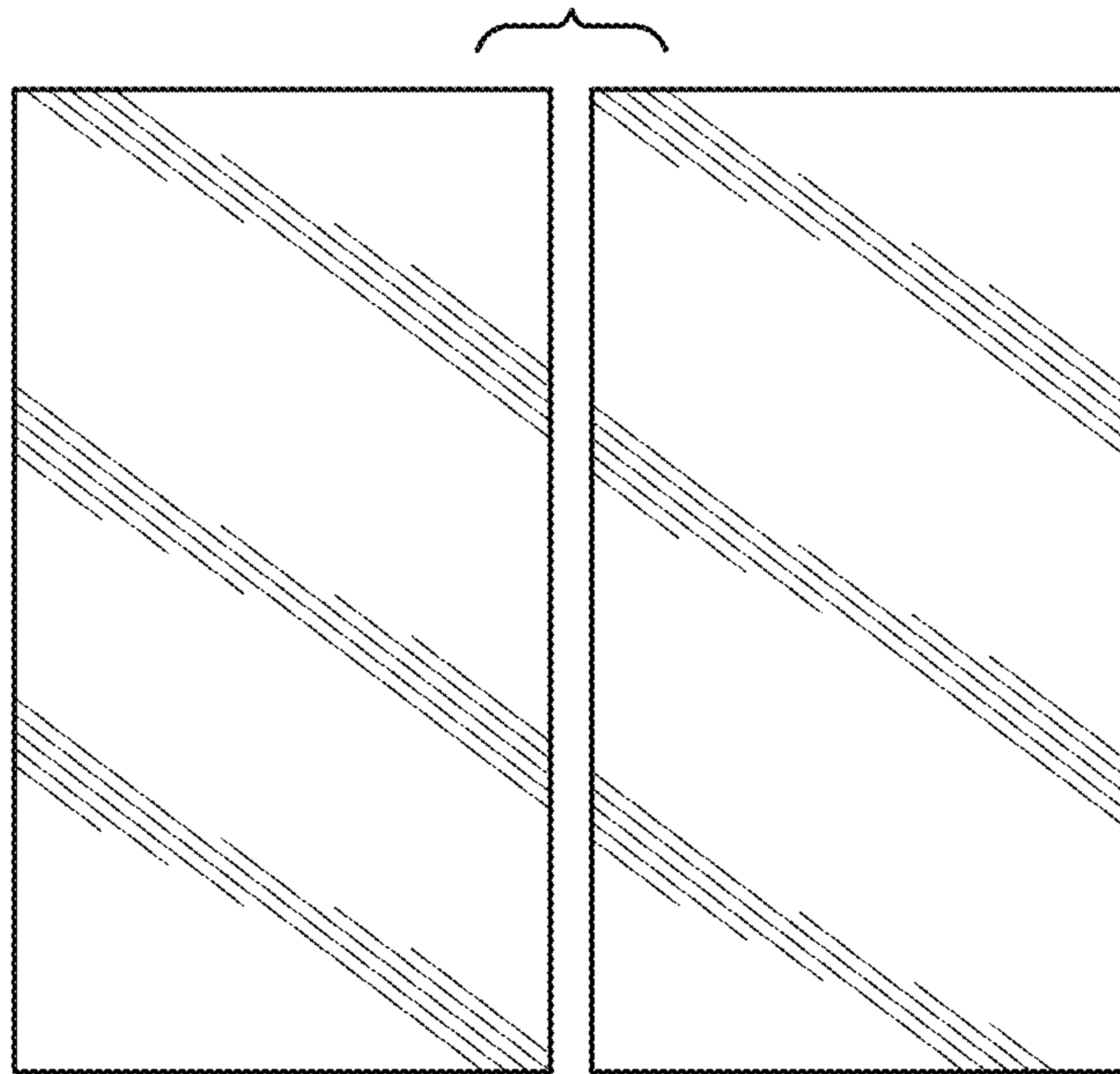


FIG. 4

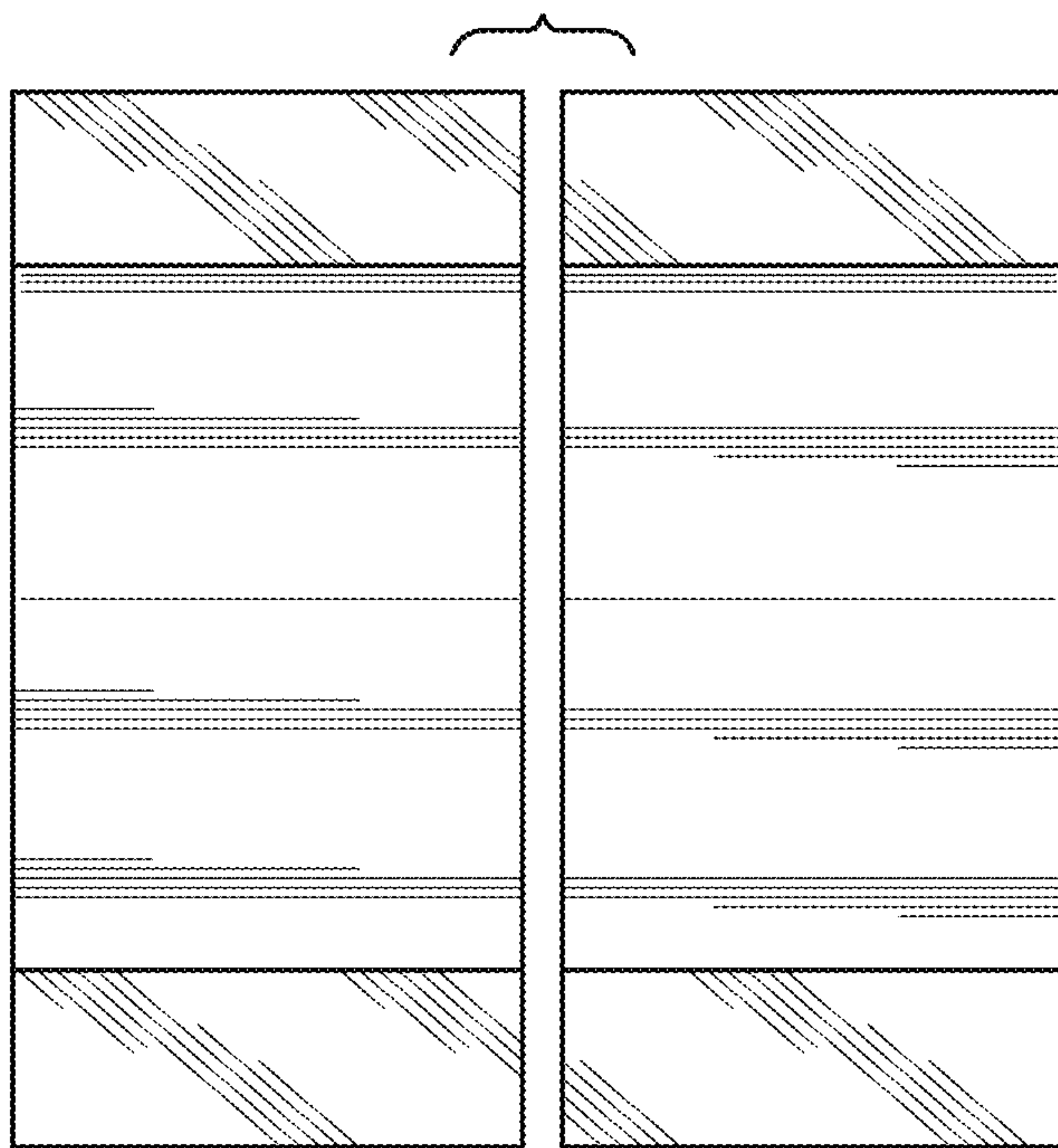


FIG. 5