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(12) **United States Design Patent** (10) **Patent No.:** **US D937,444 S**
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(54) **CONNECTOR FOR MODULAR STRUCTURE**

(56) **References Cited**

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U.S. PATENT DOCUMENTS

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451,596 A 5/1891 Longenecker
490,122 A 1/1893 Margargal
922,215 A 5/1909 Tuteur
(Continued)

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FOREIGN PATENT DOCUMENTS

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

CA 3007687 A1 12/2018
CN 201542095 U 8/2010
(Continued)

(21) Appl. No.: **29/723,171**

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OTHER PUBLICATIONS

Related U.S. Application Data

Toja Grid QUINT 5 Arm Solo Extension Bracket for 6x6 Posts
<https://www.lowes.com/pd/Toja-Grid-QUINT-1-PACK-for-6X6-Wood/5000180641> Date Unknown.*

(60) Division of application No. 29/635,278, filed on Jan. 30, 2018, now Pat. No. Des. 887,025, which is a continuation-in-part of application No. 15/815,973, filed on Nov. 17, 2017, now abandoned.

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(51) **LOC (13) Cl.** **25-01**

Primary Examiner — Samantha Q Lawrence

(52) **U.S. Cl.**

(74) *Attorney, Agent, or Firm* — Bhole IP Law; Anil Bhole; Marc Lampert

USPC **D25/133**

(58) **Field of Classification Search**

(57) **CLAIM**

USPC D25/119, 125, 126, 127, 128, 129, 130, D25/131, 132, 133, 134, 135, 136; D8/349, 354, 382, 383, 384, 403; D21/468, 471, 478, 479

The ornamental design for a connector for a modular structure, substantially as shown and described.

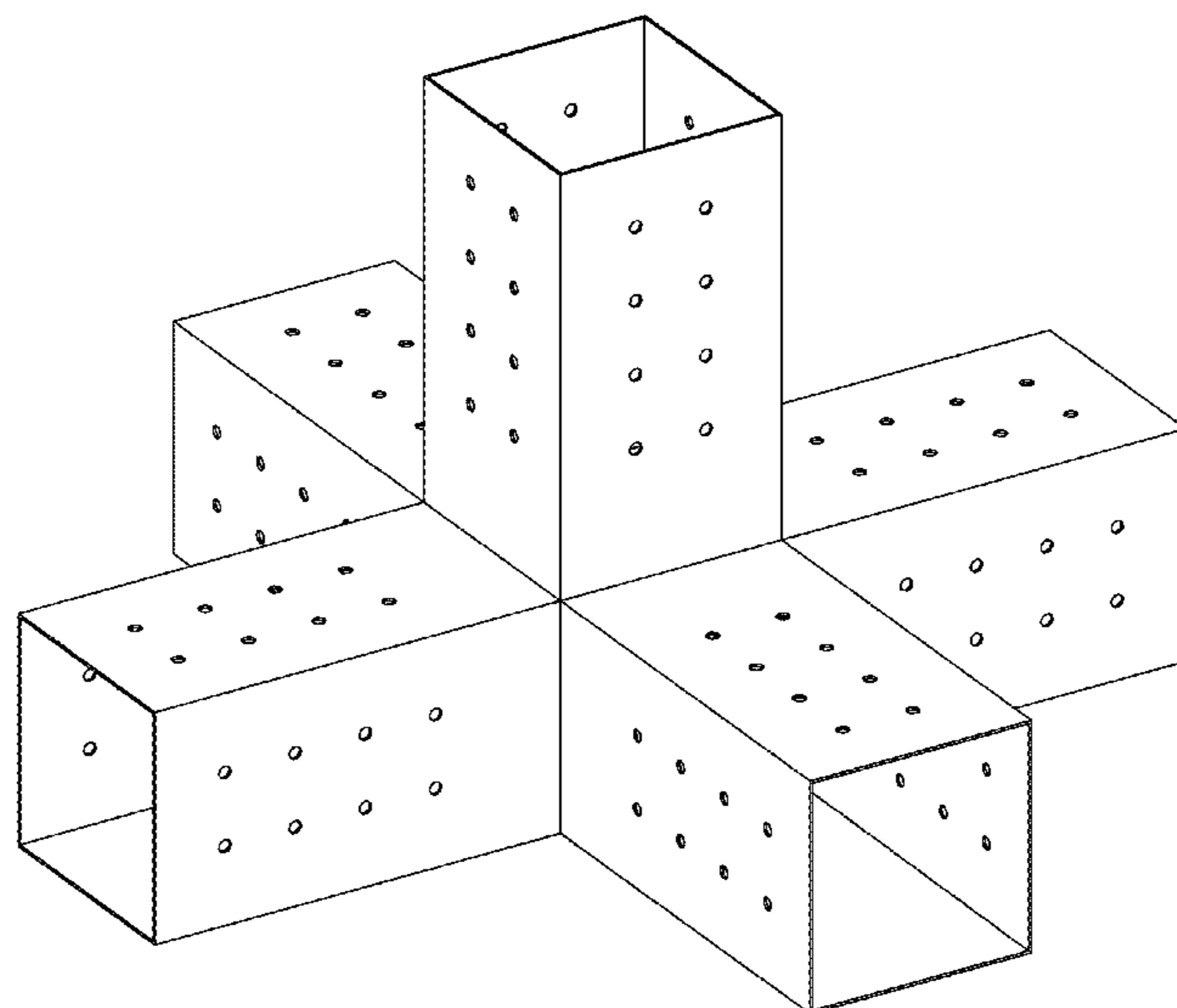
CPC A47B 47/0008; A47B 47/03; E01B 11/24; E02D 27/42; E04B 1/4157; E04B 1/58; E04B 1/617; E04B 2001/4192; E04B 2/56; E04B 2/70; E04B 1/1912; E04B 1/2688; E04B 2001/1963; E04B 2001/199; E04B 2001/1993; E04B 2001/266; E04B 2001/2676; E04B 2001/1984; E04F 13/0823; E04F 10/02; E04G 21/185; E04G 7/02; E04G 7/22; E04H 12/187; E04H 12/2253; F16B 12/40; A45F 3/24; F16M 11/24

DESCRIPTION

See application file for complete search history.

FIG. 1 is a perspective view of the connector; FIG. 2 is a rear elevation of the connector of FIG. 1; FIG. 3 is a front elevation of the connector of FIG. 1; FIG. 4 is a plan view of the connector of FIG. 1; FIG. 5 is a bottom view of the connector of FIG. 1; FIG. 6 is a side elevation of the connector of FIG. 1; and, FIG. 7 is a side elevation from the opposite side to FIG. 6 of the connector of FIG. 1.

1 Claim, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

949,394 A	2/1910	Daly		5,104,252 A	4/1992	Colonias et al.	
1,097,934 A	5/1914	Price		5,150,982 A	9/1992	Gilb	
1,201,159 A	10/1916	Dettmer		5,186,571 A	2/1993	Hentzschel	
1,214,738 A	2/1917	Wolf		5,192,056 A	3/1993	Espinueva	
1,441,559 A	1/1923	Jacob		5,238,321 A	8/1993	Jarjoura	
1,816,049 A	7/1931	Larner		5,259,685 A	11/1993	Gilb	
1,818,418 A	8/1931	Millard		D342,662 S	12/1993	Lavin, Sr.	
1,848,085 A	3/1932	Eisenschmidt		5,284,311 A	2/1994	Baer	
2,016,702 A	10/1935	Harry		5,375,384 A	12/1994	Wolfson	
2,037,736 A	4/1936	Payne et al.		D355,349 S	2/1995	Taparuskas	
2,153,547 A	4/1939	Charlop		D356,646 S	3/1995	Cole	
2,225,599 A	12/1940	Zillig		RE34,892 E	4/1995	Dunwoodie	
D141,423 S	5/1945	Lewis		D361,462 S	8/1995	Newham	
2,477,163 A	7/1949	Barnett		D365,714 S	1/1996	Masello	
D178,316 S	7/1956	Vegors		5,490,523 A	2/1996	Mallookis	
2,869,693 A	1/1959	Wood		D370,681 S	6/1996	Diamond	
2,931,129 A	4/1960	Boniface		5,555,681 A	9/1996	Cawthorn	
3,188,696 A	6/1965	Earhart		5,556,218 A *	9/1996	Homer	E04B 1/5831 403/170
3,229,004 A	1/1966	Lewine		D374,937 S	10/1996	Salas	
3,252,287 A *	5/1966	Suzuki	E02D 29/02 405/29	5,590,974 A *	1/1997	Yang	A47B 47/005 403/171
3,278,149 A	10/1966	Brucker		D398,219 S	9/1998	Campman	
3,294,298 A	12/1966	Danielson		5,941,183 A	8/1999	Ming-Shun	
3,310,324 A	3/1967	Boden		5,941,527 A	8/1999	Selton	
3,352,491 A	11/1967	Nelson		D426,041 S	5/2000	Boghossian	
3,369,333 A	2/1968	Wheeler		D427,810 S	7/2000	Ali et al.	
3,462,021 A	8/1969	Hawke		6,092,342 A	7/2000	Sharapata	
3,537,221 A	11/1970	Helfman et al.		6,109,461 A	8/2000	Kluge et al.	
3,545,796 A	12/1970	Nicholls		D430,789 S	9/2000	Opperman	
3,615,110 A	10/1971	Fugate		D434,880 S	12/2000	McNary et al.	
3,645,569 A *	2/1972	Reilly	A47B 47/0008 403/4	D439,246 S	3/2001	Hansen	
3,740,084 A	6/1973	Tellberg		D442,236 S	5/2001	Chang	
D232,201 S	7/1974	Hoffman		6,230,466 B1	5/2001	Pryor	
3,829,999 A	8/1974	Bernstein		6,247,869 B1	6/2001	Lichvar	
3,907,445 A	9/1975	Wendt		D444,816 S	7/2001	Stravitz	
3,945,741 A	3/1976	Wendt		6,336,620 B1	1/2002	Belli	
3,989,398 A	11/1976	Wendt		6,354,451 B1	3/2002	Holst	
D245,649 S	9/1977	Hughes		D455,643 S	4/2002	Aubin	
4,046,186 A	9/1977	Nordstrom		6,463,711 B1	10/2002	Callies	
4,046,295 A	9/1977	Eichler		D465,646 S	11/2002	Hendrickson	
4,076,431 A	2/1978	Burvall		6,536,179 B2	3/2003	Little	
D250,240 S	11/1978	Braginetz		6,636,620 B1	10/2003	Hoshino	
D250,241 S	11/1978	Braginetz		D492,040 S	6/2004	Kozak	
4,125,973 A	11/1978	Lendrihas		6,745,521 B1	6/2004	Klemming	
4,125,984 A	11/1978	Jonas		6,751,921 B1	6/2004	Iwakawa	
4,133,151 A	1/1979	Burvall		D493,091 S	7/2004	Griggy	
D251,018 S	2/1979	Lockwood		D508,572 S	8/2005	Suggate	
D258,194 S	2/1981	Stanley		6,969,211 B2	11/2005	Altman	
4,313,688 A	2/1982	Daniels		7,014,383 B2	3/2006	Schmid et al.	
D264,481 S	5/1982	Russo		7,231,954 B2	6/2007	Green	
4,381,629 A	5/1983	Ahn		D547,863 S	7/2007	Heinsch	
4,422,792 A	12/1983	Gilb		D548,064 S	8/2007	Norton	
4,429,730 A	2/1984	Elston		7,264,416 B2	9/2007	Kahl	
D275,264 S	8/1984	Wegener		D558,041 S	12/2007	Skinner	
D277,819 S	3/1985	Crosslen		7,464,513 B2	12/2008	Rioux	
D280,466 S	9/1985	Seltzer et al.		D598,734 S	8/2009	Miranda et al.	
4,572,695 A	2/1986	Gilb		7,600,348 B1	10/2009	Kostka	
4,594,017 A	6/1986	Hills		D610,717 S	2/2010	Lin	
4,616,950 A	10/1986	Morris		D619,879 S	7/2010	McCarthy et al.	
4,630,550 A	12/1986	Weitzman		7,762,042 B2	7/2010	Packard	
D289,605 S	5/1987	Lyle		D622,864 S *	8/2010	Bajrami	D25/35
4,665,672 A	5/1987	Commins et al.		D650,987 S	12/2011	Rothbauer	
4,717,279 A	1/1988	Commins		D658,491 S	5/2012	Raber	
D294,805 S	3/1988	Boyer		D665,656 S	8/2012	Anzelmo	
4,801,121 A	1/1989	Zunker		8,234,826 B1	8/2012	Proffitt	
4,856,252 A	8/1989	Cornell		D673,306 S	12/2012	Min-Ju	
4,885,883 A	12/1989	Wright		8,429,857 B2	4/2013	Melose	
4,910,939 A	3/1990	Cavanagh		D689,045 S	9/2013	Mardas	
4,919,394 A	4/1990	Otte et al.		D689,207 S	9/2013	Benet	
4,925,141 A	5/1990	Classen		8,572,905 B1	11/2013	Driggers	
D310,760 S	9/1990	Murphy		D701,108 S	3/2014	Rodgers	
4,991,726 A	2/1991	Johnson		8,689,494 B2	4/2014	Leavitt	
D318,569 S	7/1991	Schaefer		8,720,129 B2	5/2014	Sias et al.	
5,033,901 A	7/1991	Dias		8,739,476 B1	6/2014	Royer	
				8,769,887 B2	7/2014	Proffitt	
				8,870,163 B2	10/2014	Regan	
				8,925,893 B2	1/2015	Biedenweg et al.	
				D726,342 S	4/2015	Rodriguez	

(56)

References Cited

U.S. PATENT DOCUMENTS

D727,143 S 4/2015 Gomez
 9,091,037 B2 7/2015 Fairbairn
 9,102,092 B2 8/2015 Mukith et al.
 D737,670 S 9/2015 Beyerle et al.
 9,144,291 B2 9/2015 Huang
 D744,319 S 12/2015 White
 9,228,338 B2 1/2016 Lin
 D749,597 S 2/2016 Wengreen
 9,388,540 B2 7/2016 Koering
 D768,466 S 10/2016 Simmons et al.
 D769,470 S 10/2016 Criscione et al.
 D775,512 S 1/2017 White
 D776,965 S 1/2017 Anderson
 D783,390 S 4/2017 Nelson
 9,631,770 B2 4/2017 Holestine
 D805,218 S 12/2017 Malone
 9,856,640 B2 1/2018 Shuhaibar
 D820,359 S 6/2018 Deemer
 D822,454 S 7/2018 Kanter
 D824,399 S 7/2018 Wengreen
 10,024,046 B2 7/2018 Higginbotham
 10,030,408 B2 7/2018 Crandall et al.
 D825,967 S 8/2018 Tolokan et al.
 D826,695 S 8/2018 Bolster
 D832,858 S 11/2018 Wengreen
 D834,396 S 11/2018 MacDonald
 D835,973 S 12/2018 Bertato
 10,202,766 B1 2/2019 Fox
 D842,684 S 3/2019 House
 D843,823 S 3/2019 Bouchard
 D843,932 S 3/2019 Sinai et al.
 D845,113 S 4/2019 Salter
 D845,116 S 4/2019 Wokutch
 D845,310 S 4/2019 Wengreen
 D845,959 S 4/2019 Wengreen
 D846,369 S 4/2019 Ni
 D846,370 S 4/2019 Ni
 D852,788 S 7/2019 Kanter
 D854,191 S 7/2019 Sorensen
 D854,710 S 7/2019 Hendry
 D856,282 S 8/2019 Pillsbury
 D856,781 S 8/2019 Hendry et al.
 D859,958 S 9/2019 Ni
 10,422,140 B2 9/2019 Mitchell
 D866,465 S 11/2019 Harrison
 10,480,177 B2 11/2019 Siddhartha et al.
 D870,544 S 12/2019 Lai et al.
 10,518,596 B2 12/2019 Aitoh et al.
 10,597,899 B2 3/2020 Crandall et al.
 D887,025 S * 6/2020 Styrac D25/133
 10,697,198 B2 6/2020 Crandall et al.
 10,760,298 B2 9/2020 Crandall et al.
 D900,199 S 10/2020 Rogers
 D901,929 S 11/2020 McCune et al.
 D905,067 S 12/2020 Wengreen
 D905,068 S 12/2020 Wengreen
 D905,069 S 12/2020 Wengreen
 D912,496 S 3/2021 Fox
 D915,186 S 4/2021 Barker
 10,975,584 B2 4/2021 Brownmiller et al.
 D918,010 S 5/2021 Lynn et al.
 D920,728 S 6/2021 Scott
 D929,611 S 8/2021 Styrac et al.
 11,098,476 B2 8/2021 Jin et al.
 2003/0101677 A1 6/2003 Hewett
 2004/0170471 A1 9/2004 Wadsworth et al.
 2004/0182430 A1 9/2004 Seo
 2005/0098772 A1 5/2005 Fuoco
 2006/0029462 A1 2/2006 Patberg
 2006/0185706 A1 8/2006 Slade
 2006/0193687 A1 8/2006 Ghosh
 2006/0260259 A1 11/2006 Morse
 2007/0209312 A1 9/2007 Keys et al.
 2007/0209314 A1 * 9/2007 Vaughn E04C 3/32
 52/838

2007/0261356 A1 11/2007 Vaughn
 2007/0266647 A1 11/2007 Pedersen et al.
 2008/0110583 A1 5/2008 Lallemand
 2008/0178551 A1 7/2008 Porter
 2008/0229678 A1 9/2008 Goddard
 2011/0179741 A1 7/2011 Yen
 2011/0258941 A1 10/2011 Dalo
 2011/0308063 A1 12/2011 Feeleus
 2013/0036702 A1 2/2013 Paceti et al.
 2013/0108394 A1 5/2013 Zhu
 2013/0232758 A1 8/2013 Pond
 2013/0247499 A1 9/2013 Zimmerman et al.
 2013/0276382 A1 10/2013 Workman
 2013/0306808 A1 11/2013 Huang
 2014/0082921 A1 3/2014 Adams
 2015/0152630 A1 6/2015 Winter
 2015/0328977 A1 11/2015 Lueschen et al.
 2016/0168840 A1 6/2016 Monty et al.
 2017/0089059 A1 3/2017 Farre Berga
 2017/0233996 A1 8/2017 Abernathy et al.
 2017/0314254 A1 * 11/2017 Houghton E04B 1/2403
 2018/0135295 A1 5/2018 Bowron
 2018/0135296 A1 5/2018 Brekke
 2018/0230664 A1 * 8/2018 Dominguez E04H 12/2269
 2018/0238041 A1 8/2018 Styrac
 2019/0078313 A1 3/2019 Morgan
 2019/0226201 A1 7/2019 Nguyen
 2019/0271146 A1 9/2019 Fox
 2019/0277022 A1 9/2019 Francis
 2020/0375366 A1 12/2020 Chen

FOREIGN PATENT DOCUMENTS

EP 2492408 A1 8/2012
 EP 3456990 A1 3/2019
 FR 2300863 A1 9/1976
 FR 2579720 A1 10/1986
 FR 2991304 A1 12/2013
 GB 422765 A 1/1935
 GB 910183 A 11/1962
 JP S48-032321 4/1973
 JP S48-32322 4/1973
 JP S5217102 U 2/1977
 JP S58-061816 4/1983
 JP 1997268655 10/1997
 RU 73909 U1 6/2008
 WO 201656696 A1 4/2016
 WO 2016178637 A1 11/2016
 WO 2019048362 3/2019
 WO 2021094982 5/2021

OTHER PUBLICATIONS

Notice of Allowance for U.S. Appl. No. 29/635,278, United States Patent & Trademark Office, dated May 7, 2020.
 Notice of References Cited for U.S. Appl. No. 29/635,278, United States Patent & Trademark Office, dated May 7, 2020.
 International Search Report of the International Searching Authority for PCT/CA2018/050169, Canadian Intellectual Property Office, Lily Truong, Canada, dated Jun. 21, 2018.
 Office action for U.S. Appl. No. 15/815,973, United States Patent & Trademark Office, dated Aug. 15, 2018.
 Office action for U.S. Appl. No. 15/815,973, United States Patent & Trademark Office, dated Mar. 19, 2019.
 Office action for U.S. Appl. No. 16/485,272, United States Patent & Trademark Office, dated Dec. 19, 2019.
 Office action for U.S. Appl. No. 29/635,278, United States Patent & Trademark Office, dated Sep. 17, 2019.
 Office Action for U.S. Appl. No. 15/815,973, United States Patent and Trademark Office, FORD, Gisele D., dated Nov. 17, 2017.
 Written Opinion of the International Searching Authority for PCT/CA2018/050169, Canadian Intellectual Property Office, Lily Truong, Canada, dated Jun. 21, 2018.
 Office action for U.S. Appl. No. 29/635,278, United States Patent & Trademark Office, dated Feb. 14, 2020.

(56)

References Cited

OTHER PUBLICATIONS

Pergola CUBIC 3-way corner bracket for 7×7 cm post-beam <https://www.vinuovo.com/en/ pergola-cubic-way-corner-bracket-for-7x7-94058077.html#reviews> Aug. 1, 2019 (Year: 2019).

Toja Grid TRIO 2 Pack for 6×6 Wood G0210360-2 <https://www.patioproductions.com/toja-grid-trio-2-pack-for-6x6-wood-g0210360-2.html> Date Unknown.

Extended European Search Report for 18757067.6, European Patent Office, dated Jul. 23, 2020.

“Russian Patent Office, Office Action dated Jul. 6, 2021 for application No. 2019128908”.

Li, Hui, “First Notification of Office Action”, CN patent application 201880024165.9.

“Office Action for JP 2021-002873”, Japanese Patent Office, dated Jun. 3, 2021.

“Office Action for JP 2021-002874”, Japanese Patent Office, dated Jun. 3, 2021.

“Office Action for JP 2021-002875”, Japanese Patent Office, dated Jun. 3, 2021.

“Office Action for JP 2021-002876”, Japanese Patent Office, dated Jun. 3, 2021.

“Office Action for JP 2021-002877”, Japanese Patent Office, dated Jun. 3, 2021.

“Office Action for JP 2021-002878”, Japanese Patent Office, dated Jun. 3, 2021.

* cited by examiner

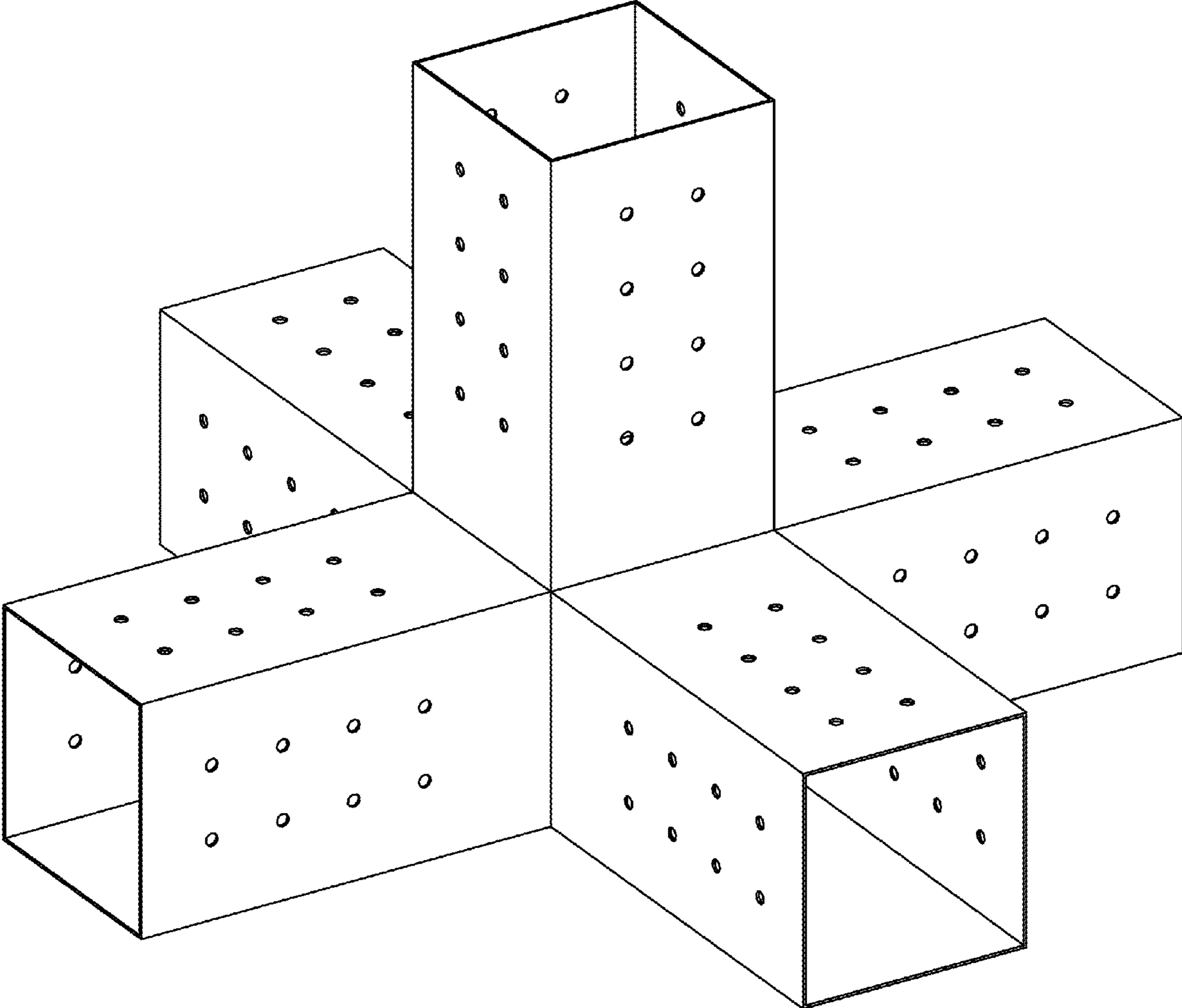


FIG. 1

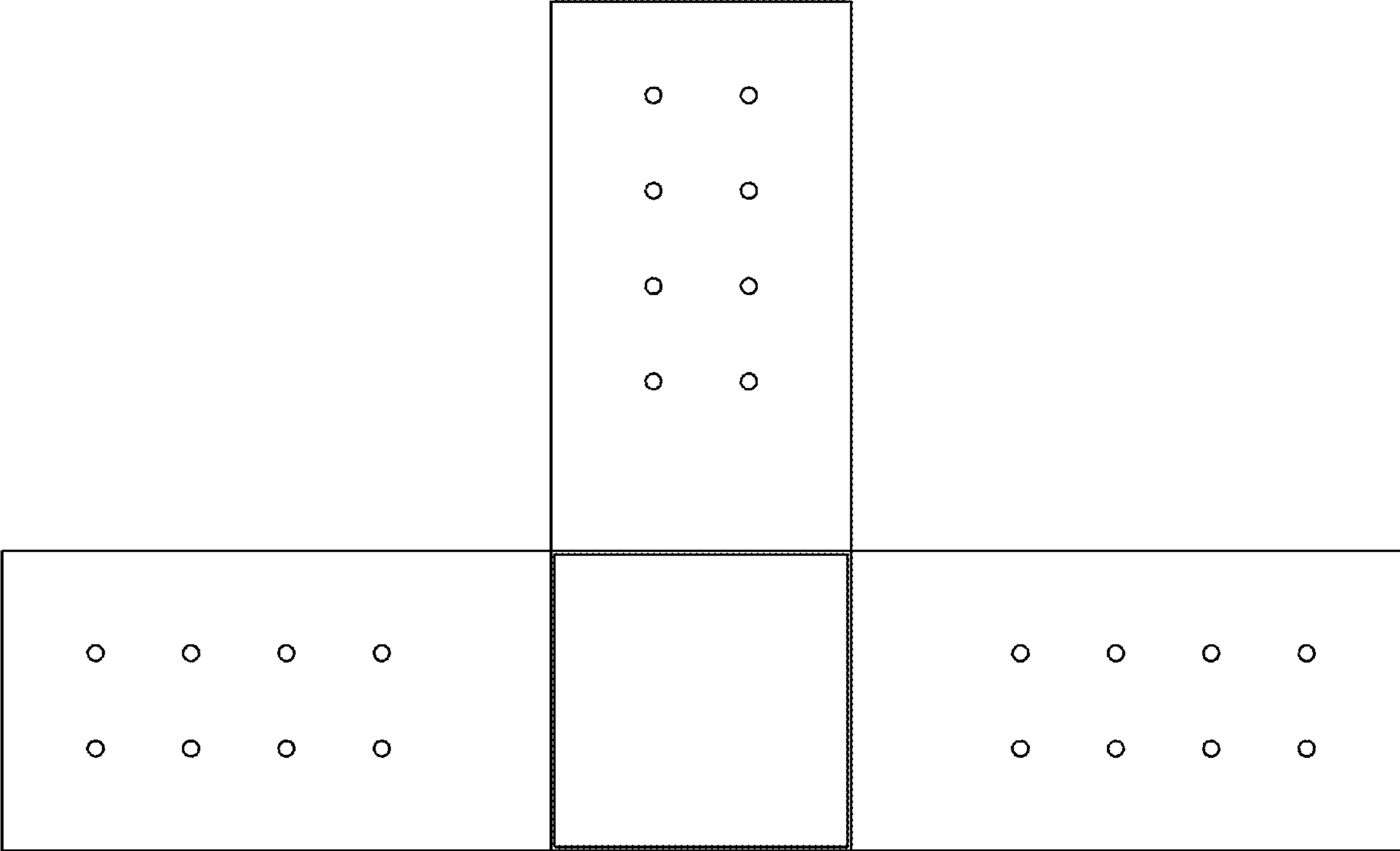


FIG. 2

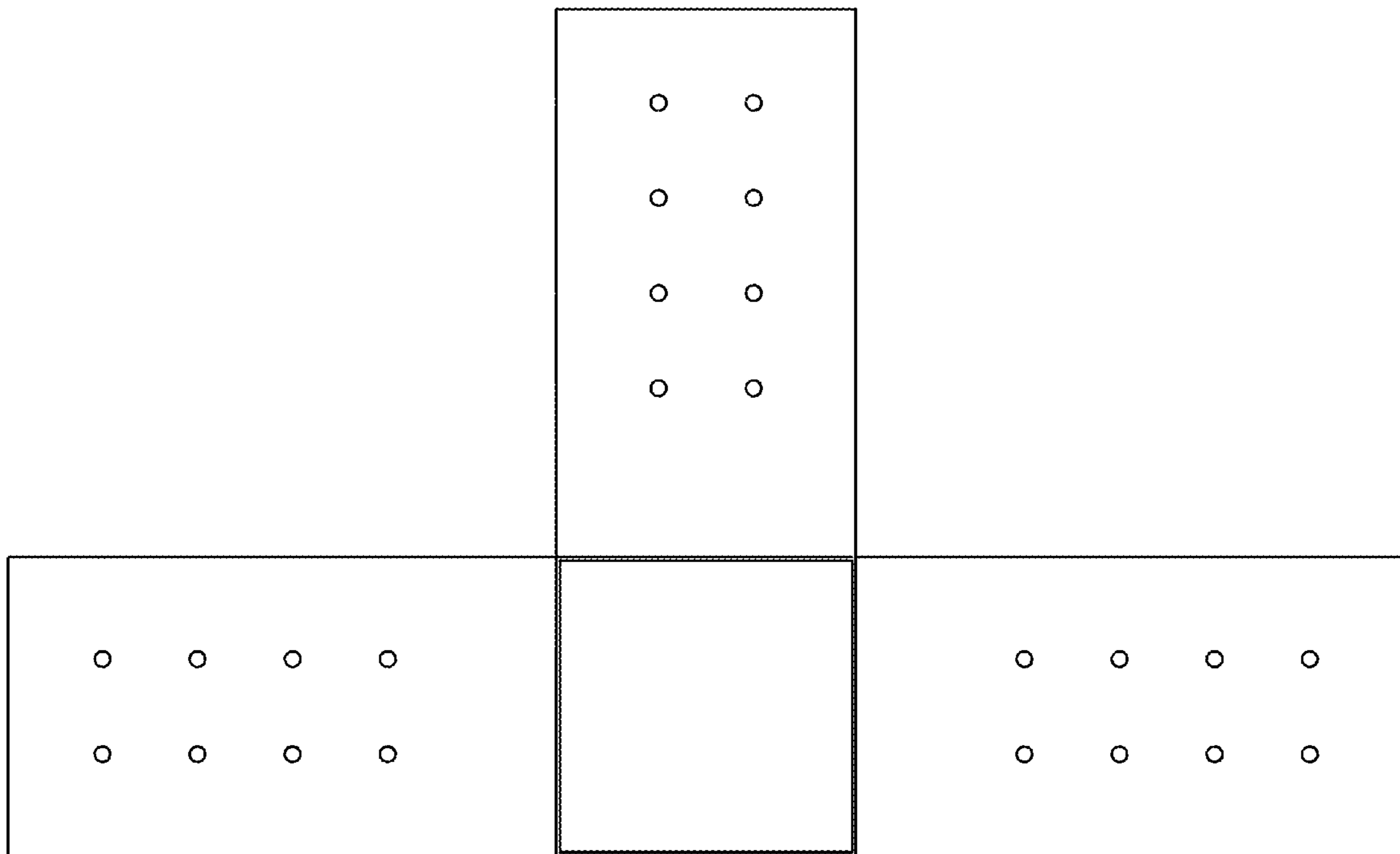


FIG. 3

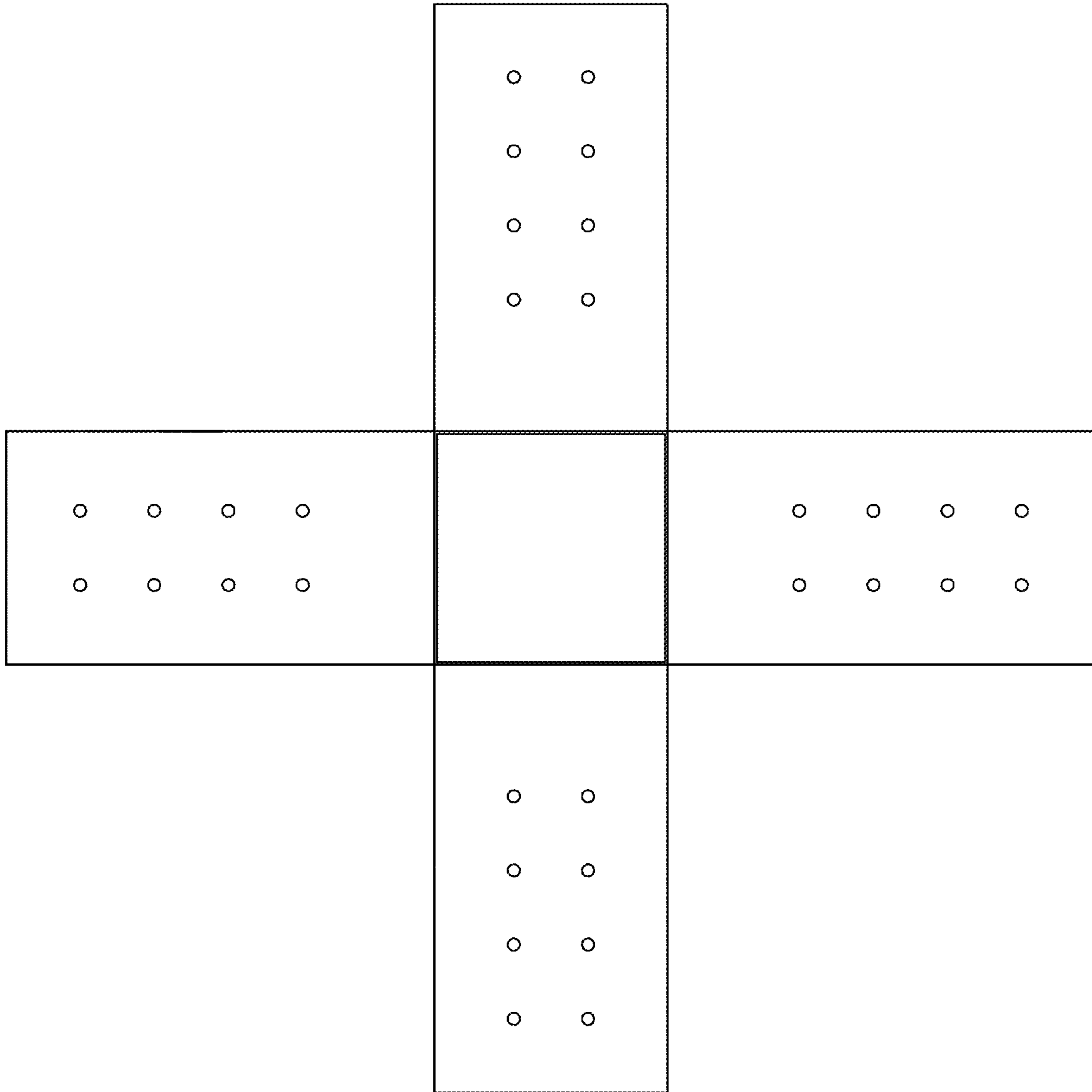


FIG. 4

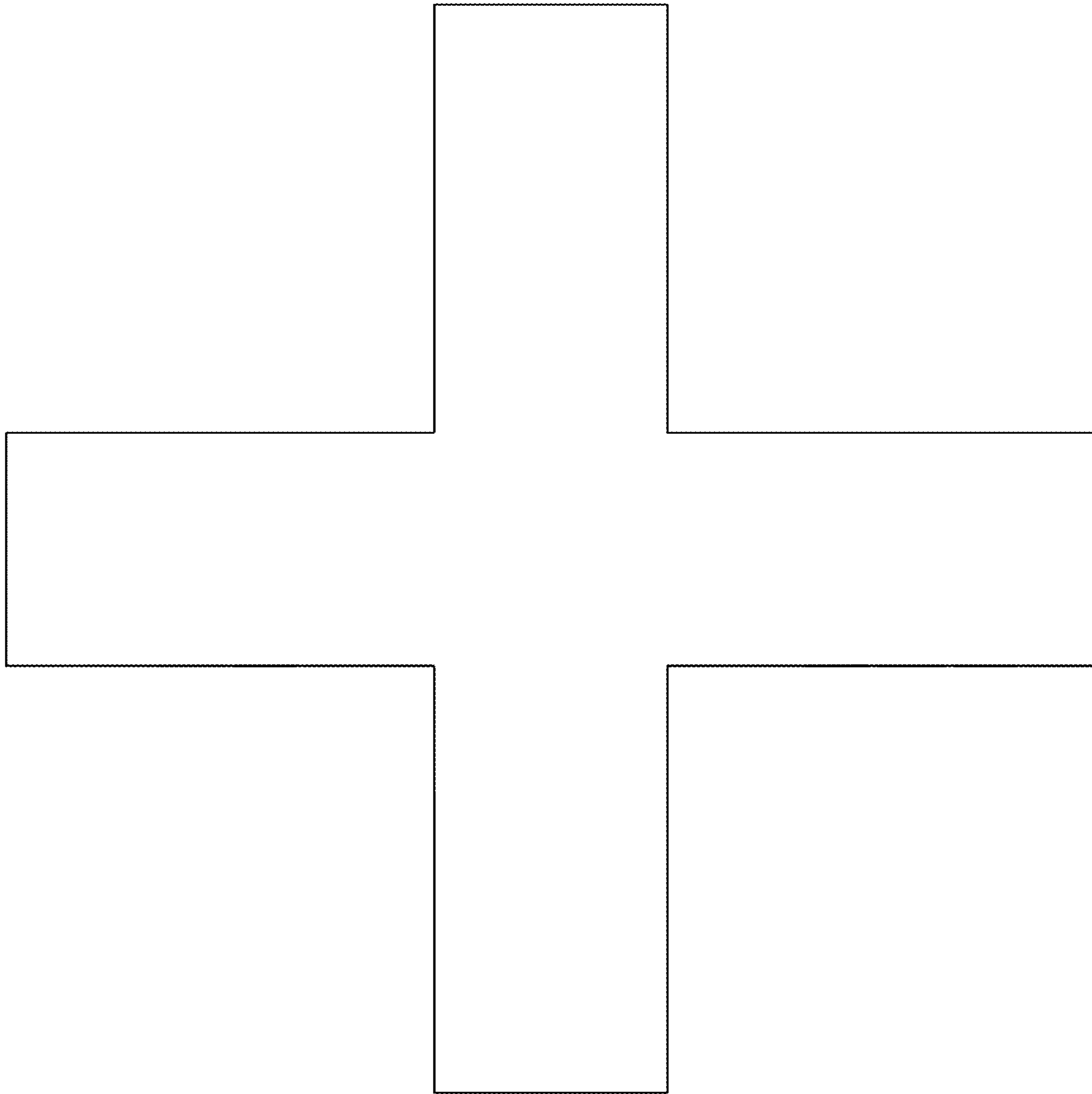


FIG. 5

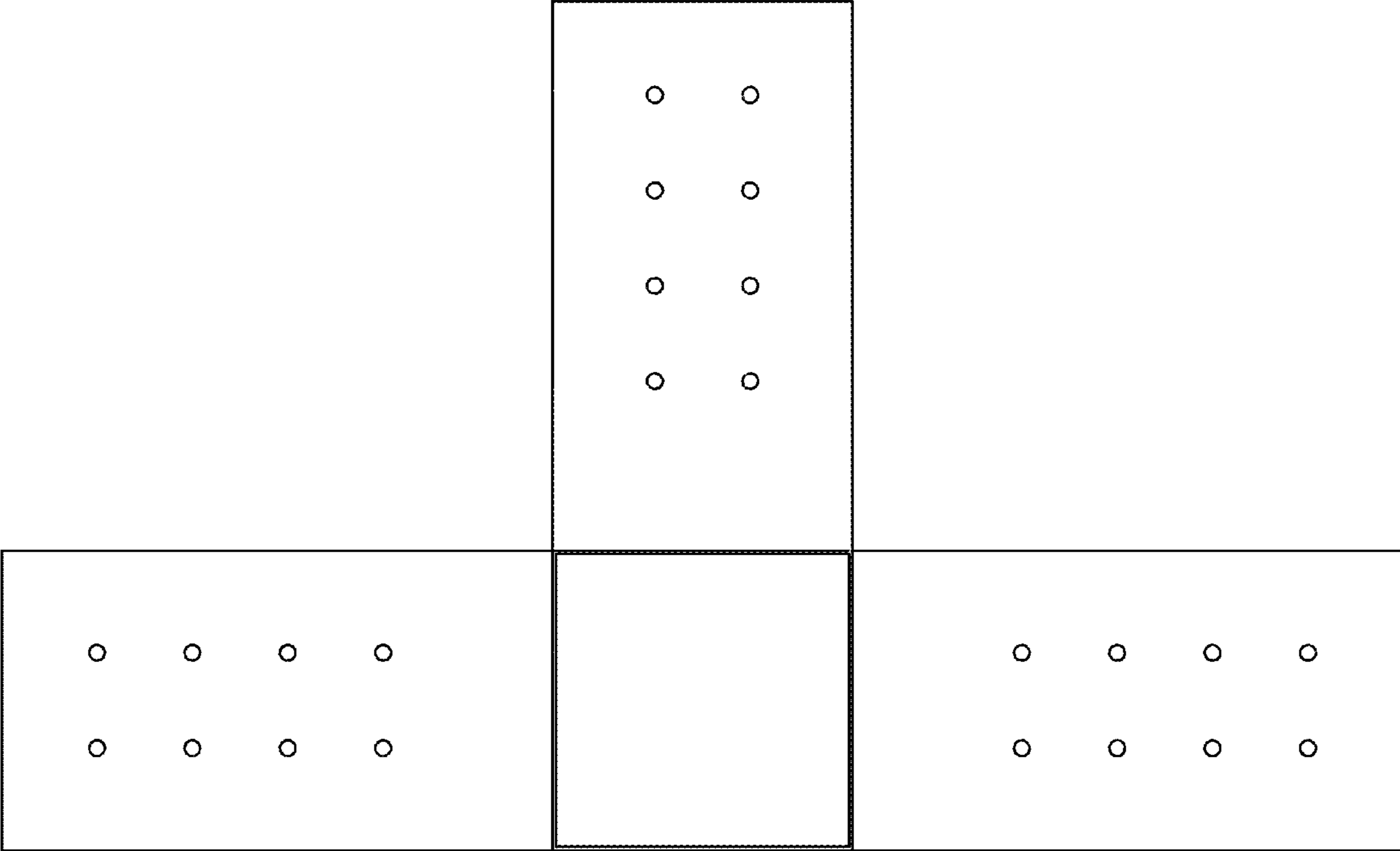


FIG. 6

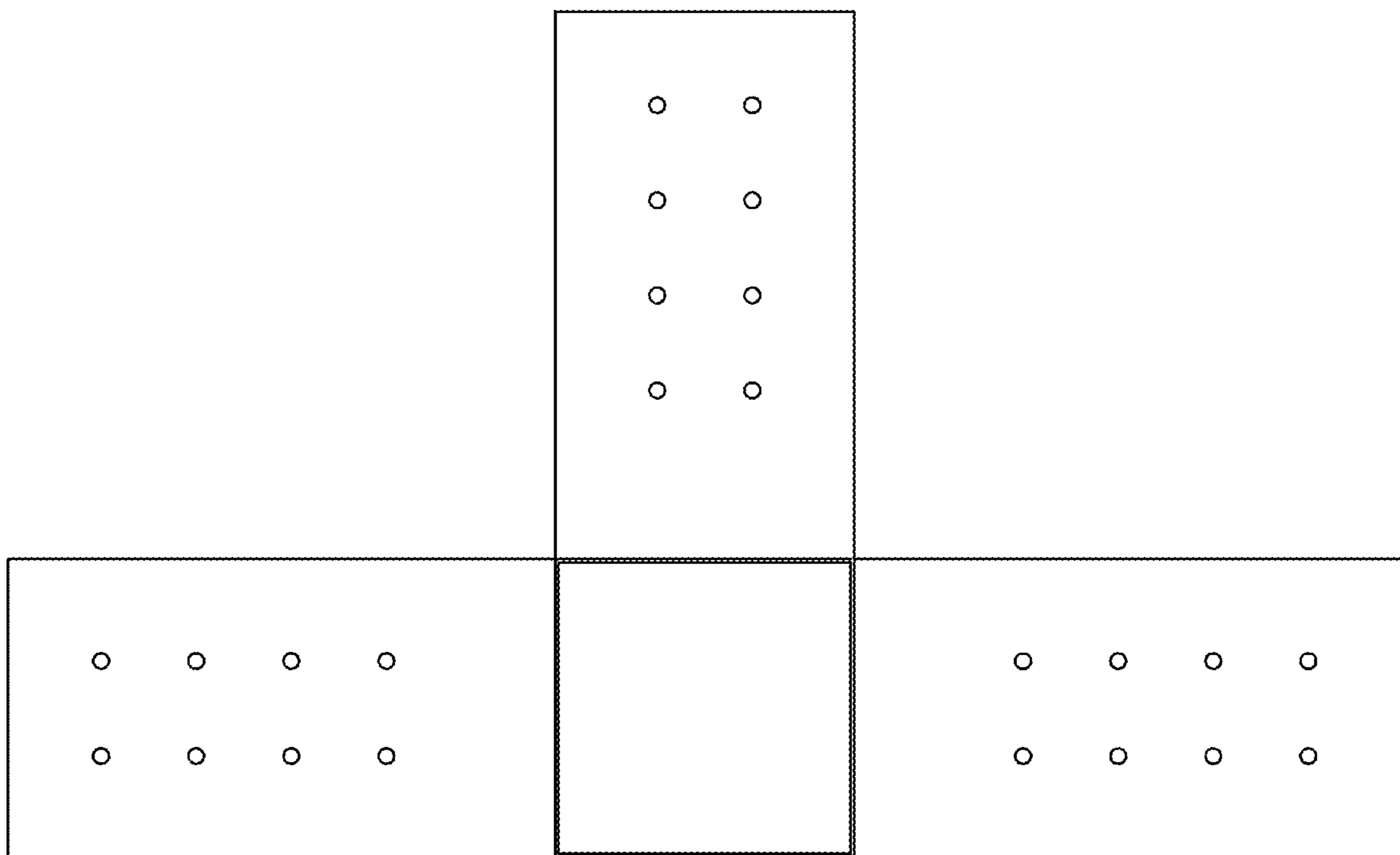


FIG. 7