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**Iwasaki et al.**

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(54) **OPTICAL COMMUNICATION MODULE**

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(52) **U.S. Cl.**  
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D13/165, 173, 180, 182, 101, 118, 199,  
D13/151, 146; D14/432, 433, 438, 357,  
D14/496, 140, 240, 256, 299, 217;  
D21/484, 486, 499, 500

CPC ..... G02B 6/28; G02B 6/2938; G02B 6/32;  
G02B 6/38; G02B 6/4204; G02B 6/4209;  
G02B 6/421; G02B 6/4212; G02B  
6/4218; G02B 6/4219; G02B 6/46; H04J  
2203/0012; H04J 2203/0017; H04J  
2203/0019; H04J 2203/0026; H04J  
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See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

42,931 A \* 5/1864 Demuth ..... G02B 6/32  
65/59.4  
D86,515 S \* 3/1932 Cox ..... D13/145

D143,308 S \* 12/1945 Haigh et al. .... D14/256  
D143,309 S \* 12/1945 Haigh et al. .... D14/256  
2,698,925 A \* 1/1955 Taylor ..... H02G 5/08  
439/114  
3,535,537 A \* 10/1970 Powell ..... G01J 3/36  
250/227.28  
D249,789 S \* 10/1978 DeLuca ..... D14/256  
(Continued)

**FOREIGN PATENT DOCUMENTS**

JP 2018081255 A \* 5/2018

**OTHER PUBLICATIONS**

Optical interconnection modules. (Design—© Questel) orbit.com.  
[online PDF] 24 pgs. Print Dates range Jun. 22, 2018 through Sep.  
25, 2018. [Retrieved on Jun. 13, 2019] <https://sobjprd.questel.fr/export/QPTUJ214/pdf2/0614191f-5ead-4356-81e2-e7ec34cacbf5-154859.pdf>\*

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(57) **CLAIM**

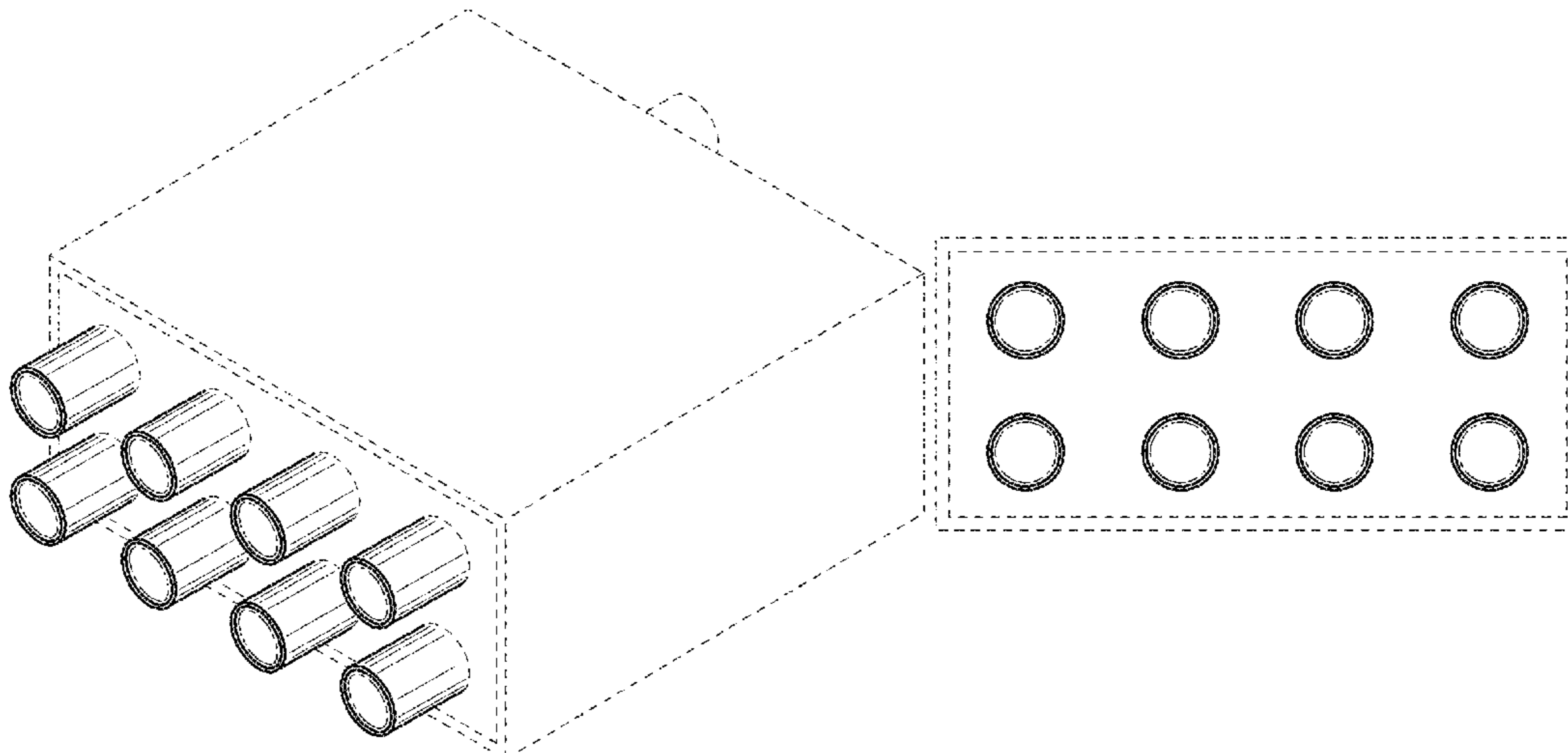
We claim the ornamental design for an optical communica-  
tion module, as shown and described.

**DESCRIPTION**

FIG. 1 is a front left perspective view of an optical com-  
munication module showing our new design;  
FIG. 2 is a front elevational view thereof;  
FIG. 3 is a rear elevational view thereof;  
FIG. 4 is a top plan view thereof;  
FIG. 5 is a bottom plan view thereof;  
FIG. 6 is a right side view thereof; and,  
FIG. 7 is a left side view thereof.

The broken lines in the drawings depict portions of the  
optical communication module that form no part of the  
claimed design.

**1 Claim, 7 Drawing Sheets**



(56)

References Cited

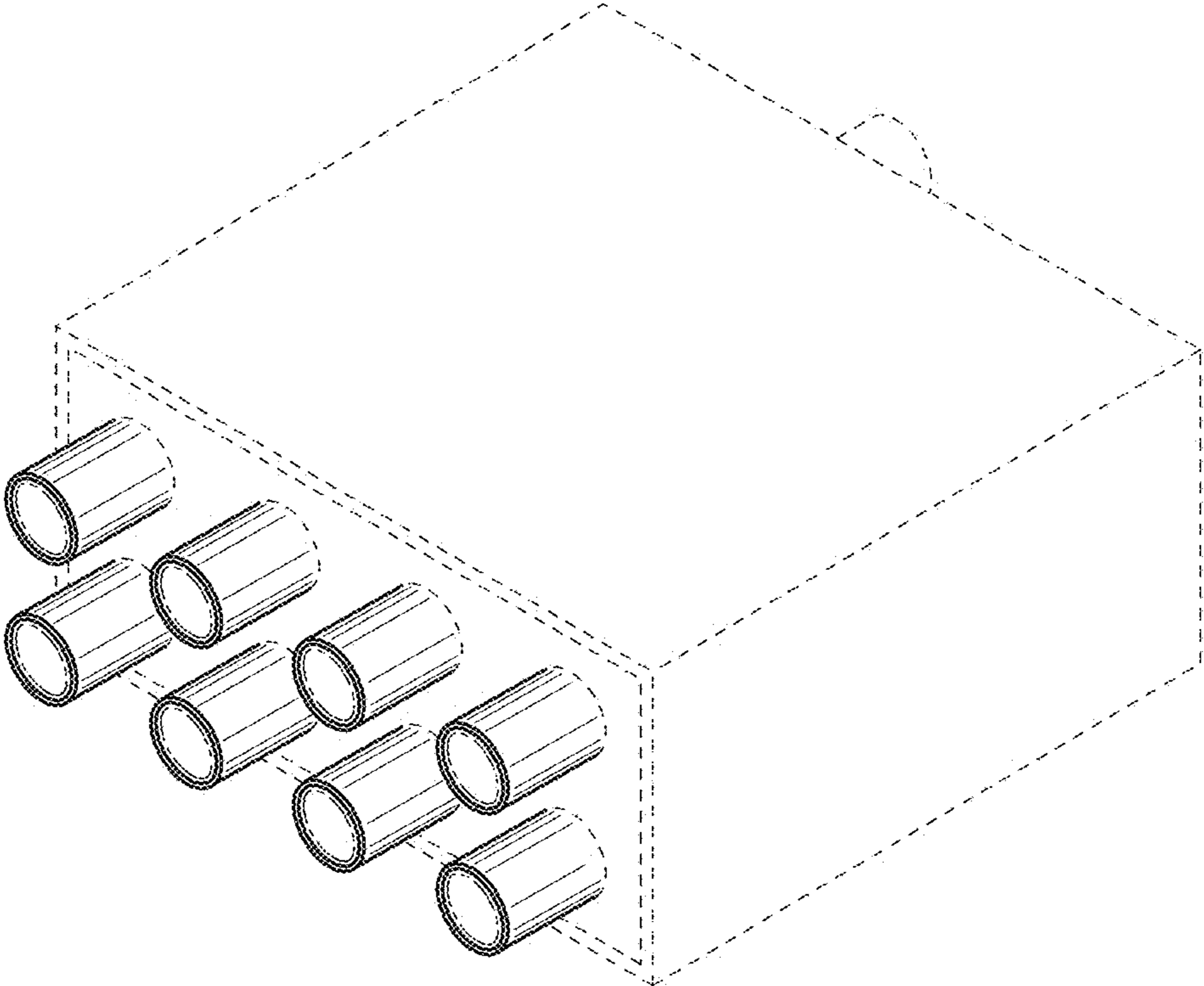
U.S. PATENT DOCUMENTS

D253,593 S *	12/1979	Smith	D14/453	D563,880 S *	3/2008	Grant	D13/147
D261,503 S *	10/1981	Shu	D13/151	D596,131 S *	7/2009	Soulodre	D13/151
D264,710 S *	6/1982	Shu	D13/151	D613,251 S *	4/2010	Walker	D13/147
D274,717 S *	7/1984	Shu	D13/151	D618,180 S *	6/2010	Gross	D13/154
4,737,116 A *	4/1988	Slye	H01R 23/688	D618,181 S *	6/2010	Gross	D13/154
			333/32	D618,616 S *	6/2010	Kesler	D13/133
D300,820 S *	4/1989	Orbanic	D13/147	D618,627 S *	6/2010	Arenas	D13/154
D301,239 S *	5/1989	Chino	D13/146	D625,268 S *	10/2010	So	D13/147
D301,240 S *	5/1989	Chino	D13/146	D625,269 S *	10/2010	So	D13/147
D301,241 S *	5/1989	Chino	D13/147	D635,930 S *	4/2011	Li	D13/147
D301,242 S *	5/1989	Chino	D13/146	D637,560 S *	5/2011	Pera	D13/154
D301,243 S *	5/1989	Chino	D13/146	D643,404 S *	8/2011	Lee	D14/205
D333,122 S *	2/1993	Kamakura	D13/123	D659,642 S *	5/2012	Chen	D13/133
D389,122 S *	1/1998	Foye	D13/147	D665,359 S *	8/2012	Yamauchi	D13/133
D389,801 S *	1/1998	Foye	D13/147	D673,916 S *	1/2013	Regnier	D13/151
D390,534 S *	2/1998	Prucey	D13/146	D675,567 S *	2/2013	Hyakutake	D13/133
D393,264 S *	4/1998	Leung	D13/147	D691,951 S *	10/2013	Evers	D13/133
D399,846 S *	10/1998	Beggs	D14/217	D691,993 S *	10/2013	Drew	D14/441
5,859,945 A *	1/1999	Kato	G02B 6/4249	D694,712 S *	12/2013	Aguiar	D13/133
			385/33	D695,222 S *	12/2013	Hyakutake	D13/133
D405,092 S *	2/1999	Ohshima	D13/147	D695,223 S *	12/2013	Hyakutake	D13/133
D425,028 S *	5/2000	Lee	D13/147	D697,486 S *	1/2014	Grant	D13/147
D433,998 S *	11/2000	Ishitsuka	D13/123	D697,487 S *	1/2014	Grant	D13/147
D434,726 S *	12/2000	Middlehurst	D13/147	D701,509 S *	3/2014	DeGiovine	D14/433
D441,374 S *	5/2001	Genatossio	D14/496	D703,613 S *	4/2014	Battaglia	D13/147
D447,473 S *	9/2001	Chuang	D13/151	D704,648 S *	5/2014	Grant	D13/147
D463,414 S *	9/2002	Gao	D13/182	D704,653 S *	5/2014	Smith	D13/147
D465,247 S *	11/2002	Sorensen	D21/499	D704,654 S *	5/2014	Smith	D13/147
D465,816 S *	11/2002	Sorensen	D21/500	D704,655 S *	5/2014	Smith	D13/147
D474,451 S *	5/2003	Liao	D13/158	D704,657 S *	5/2014	Smith	D13/147
D475,019 S *	5/2003	Soulodre	D13/151	D704,659 S *	5/2014	Smith	D13/147
D476,622 S *	7/2003	Ando	D13/118	D704,661 S *	5/2014	Smith	D13/147
D476,978 S *	7/2003	Dugas	D14/240	D704,663 S *	5/2014	Smith	D13/147
D476,980 S *	7/2003	Dugas	D14/240	D705,173 S *	5/2014	Smith	D13/147
D476,981 S *	7/2003	Dugas	D14/240	D707,182 S *	6/2014	Smith	D13/147
D480,689 S *	10/2003	Ishibashi	D13/154	D735,140 S *	7/2015	Liao	D13/147
D483,338 S *	12/2003	Takagi	D13/182	D737,217 S *	8/2015	Leidolt	D13/153
D484,105 S *	12/2003	Takagi	D13/182	D742,327 S *	11/2015	Nakai	D13/154
D494,147 S *	8/2004	Takagi	D13/182	D750,567 S *	3/2016	Katagiyama	D13/147
D495,659 S *	9/2004	Shimaya	D13/147	D794,569 S *	8/2017	Giordano	D13/133
D503,385 S *	3/2005	Hosokawa	D13/147	D799,598 S *	10/2017	Clark	D21/324
D505,664 S *	5/2005	Takagi	D13/182	10,018,787 B1 *	7/2018	Wang	G02B 6/3885
D514,520 S *	2/2006	Bahramian	D13/147	10,139,567 B1 *	11/2018	Beranek	G02B 6/32
D514,531 S *	2/2006	Takagi	D13/182	D837,216 S *	1/2019	Bagley	D14/433
D518,797 S *	4/2006	Takagi	D13/182	D837,788 S *	1/2019	Bagley	D14/433
D520,450 S *	5/2006	Shiraishi	D13/133	D837,789 S *	1/2019	Woody	D14/433
D551,251 S *	9/2007	Horio	D14/496	D843,332 S *	3/2019	Siddiqui	D13/162
D555,604 S *	11/2007	Horio	D13/165	10,234,632 B1 *	3/2019	Keeler	G02B 6/32
D558,672 S *	1/2008	Easley	D13/133	D847,758 S *	5/2019	Chadbourne	D13/154
D558,673 S *	1/2008	Easley	D13/133	D849,853 S *	5/2019	Chen	D21/499
D560,620 S *	1/2008	Horio	D13/165	2002/0061161 A1 *	5/2002	Tsiboulia	G02B 6/3516
D560,621 S *	1/2008	Horio	D13/165				385/18
D561,107 S *	2/2008	Cuff	D13/147	2002/0094146 A1 *	7/2002	Yamaguchi	G02B 6/421
D561,108 S *	2/2008	Cuff	D13/147				385/2
D561,698 S *	2/2008	Cuff	D13/147	2002/0102043 A1 *	8/2002	Shin	G02B 6/423
D561,847 S *	2/2008	Glickman	D21/500				385/14
D562,775 S *	2/2008	Cuff	D13/147	2003/0044130 A1 *	3/2003	Crane, Jr.	G02B 6/3839
D563,327 S *	3/2008	Horio	D13/165				385/92
D563,877 S *	3/2008	Grant	D13/147	2015/0277646 A1 *	10/2015	Ogura	G06F 1/16
D563,878 S *	3/2008	Grant	D13/147				345/173
D563,879 S *	3/2008	Grant	D13/147	2017/0242202 A1 *	8/2017	Xie	G02B 6/3672
				2018/0145789 A1 *	5/2018	Iwasaki	G02B 6/2938
				2019/0086619 A1 *	3/2019	Chen	G02B 6/4204

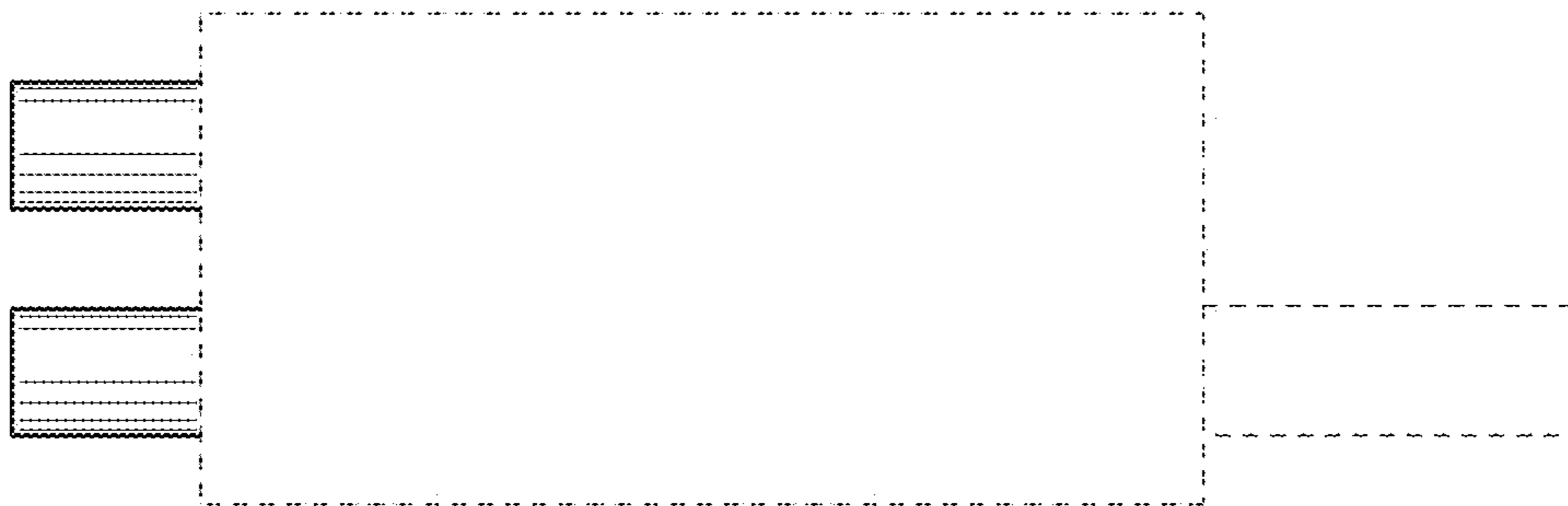
\* cited by examiner



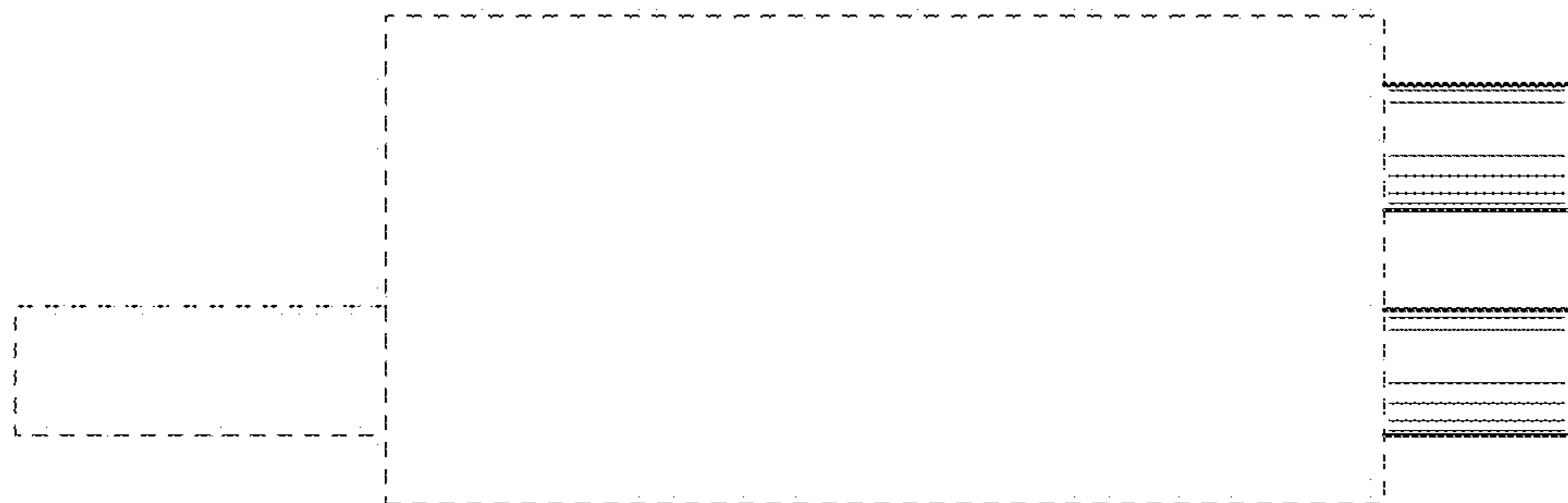
**FIG. 1**



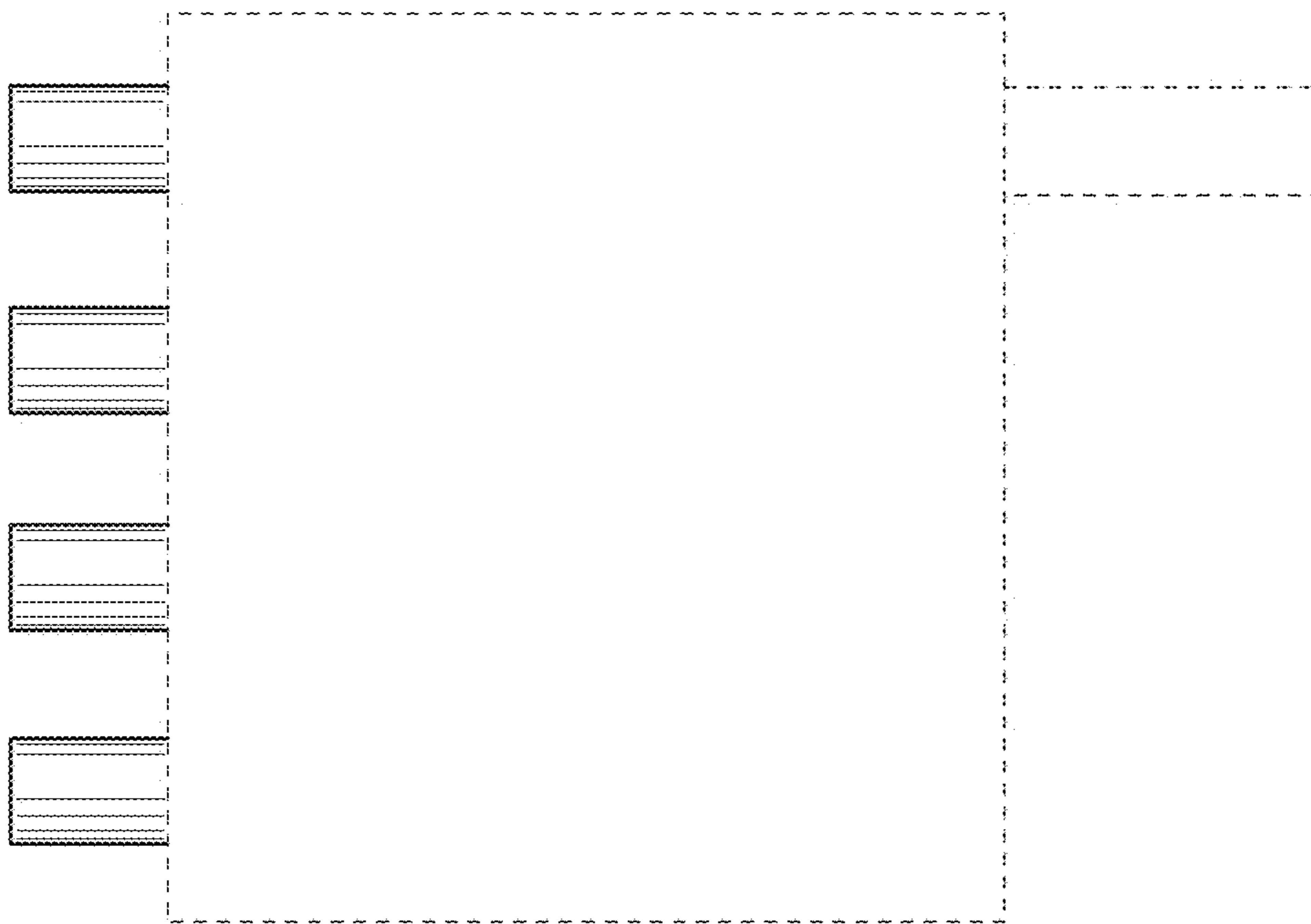
*FIG. 2*



***FIG. 3***



***FIG. 4***



***FIG. 5***



***FIG. 6***





***FIG. 7***

