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(12) **United States Design Patent** (10) **Patent No.:** **US D945,953 S**
Zhou et al. (45) **Date of Patent:** **** Mar. 15, 2022**

(54) **SOLAR MODULE** 3,811,181 A 5/1974 Leinkram et al.
3,837,924 A 9/1974 Baron
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(US) 4,172,739 A * 10/1979 Tassen H02S 20/32
136/246
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Huaming Zhou, Wuxi Jiangsu (CN) 4,877,460 A 10/1989 Flodl
5,096,505 A 3/1992 Fraas et al.
5,547,516 A 8/1996 Luch
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Fremont, CA (US) D389,454 S * 1/1998 Mori D13/102
5,735,966 A 4/1998 Luch
(**) Term: **15 Years** 6,232,545 B1 5/2001 Samaras et al.
6,414,235 B1 7/2002 Luch
(21) Appl. No.: **29/699,987** 6,459,032 B1 10/2002 Luch
D524,727 S 7/2006 Yamashita et al.
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D543,502 S 5/2007 Yamashita et al.

Related U.S. Application Data

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(51) **LOC (13) Cl.** **13-02**
(52) **U.S. Cl.**
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D13/199
CPC H01L 31/02; H01L 31/18; H01L 31/042;
H01L 31/048; H01L 31/0525; H01L
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H01L 31/02013; H01L 27/142; H01L
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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,340,096 A 9/1967 Mann et al.
3,769,091 A 10/1973 Leinkram et al.

FOREIGN PATENT DOCUMENTS

CN 102655030 A 9/2012
CN 202977481 U 6/2013

(Continued)

Primary Examiner — Derrick E Holland

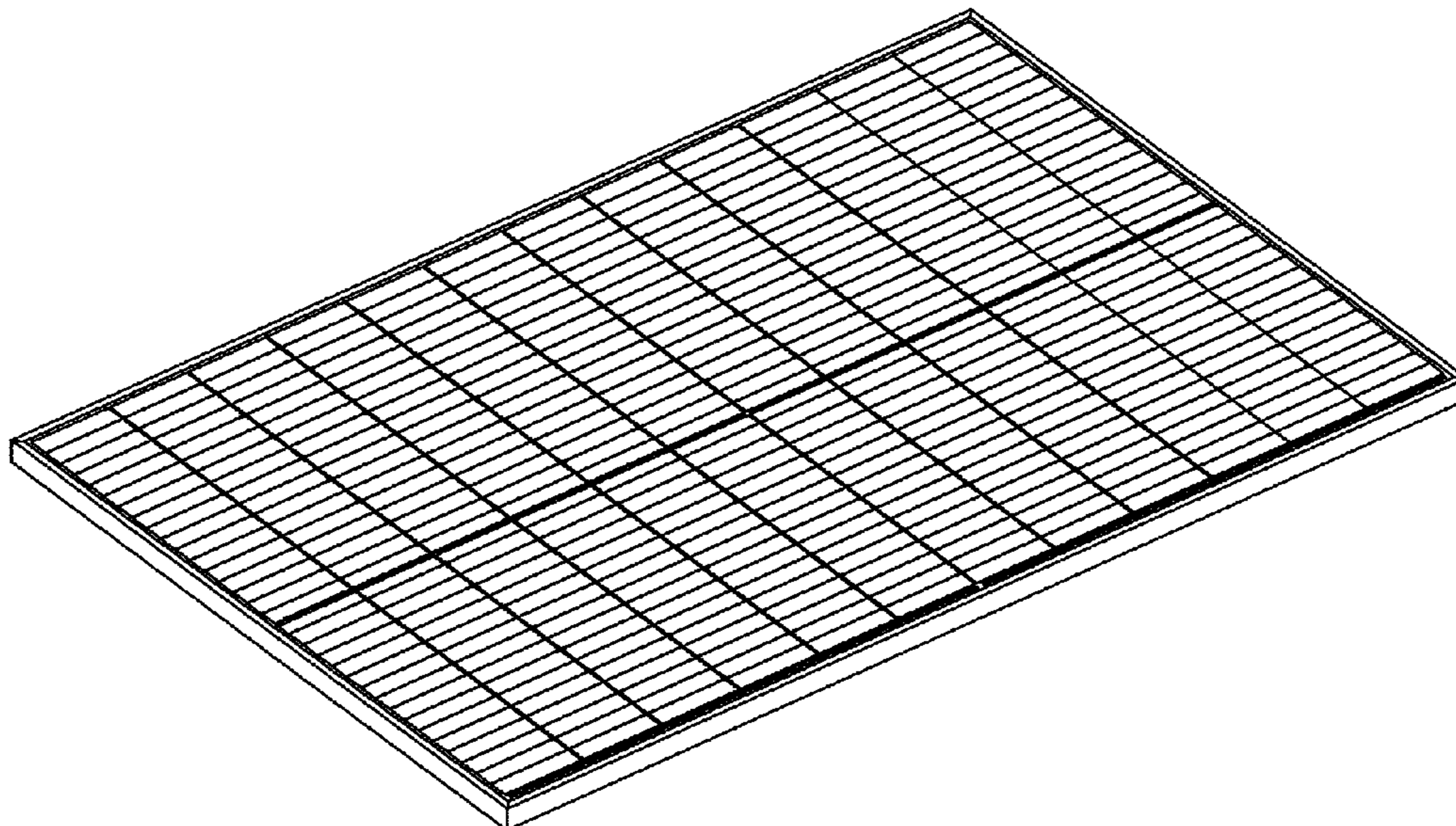
(57) **CLAIM**

The ornamental design for a solar module, as shown and described.

DESCRIPTION

FIG. 1 is a top perspective view of a solar module, showing our new design;
FIG. 2 is a top plan view thereof;
FIG. 3 is a left side elevation view thereof;
FIG. 4 is a right side elevation view thereof;
FIG. 5 is a front elevation view thereof;
FIG. 6 is a back elevation view thereof; and,
FIG. 7 is a bottom plan view thereof.

1 Claim, 3 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

7,732,243 B2 6/2010 Luch
 7,740,497 B2 6/2010 Nightingale
 7,898,053 B2 3/2011 Luch
 7,898,054 B2 3/2011 Luch
 7,989,692 B2 8/2011 Luch
 7,989,693 B2 8/2011 Luch
 8,007,306 B2 8/2011 Nightingale et al.
 8,033,857 B2 10/2011 Nightingale et al.
 8,198,696 B2 6/2012 Luch
 8,242,351 B2 8/2012 Gibson et al.
 D688,620 S * 8/2013 Burt D13/102
 8,563,848 B1 10/2013 Wen et al.
 D694,175 S 11/2013 Kannou et al.
 D696,186 S 12/2013 Kannou et al.
 D699,176 S 2/2014 Salomon et al.
 D741,793 S * 10/2015 Lim H01L 31/022433
 D750,556 S 3/2016 Morad et al.
 D762,163 S 7/2016 Parilla et al.
 D763,787 S 8/2016 Parilla et al.
 D767,484 S 9/2016 Morad et al.
 D781,230 S 3/2017 Gibson et al.
 D784,254 S 4/2017 Parilla et al.
 D788,027 S 5/2017 Gibson et al.
 2003/0121228 A1 7/2003 Stoehr et al.
 2005/0133079 A1 * 6/2005 Boulanger H01L 31/035281
 2007/0235077 A1 10/2007 Nagata et al.
 2008/0011350 A1 1/2008 Luch
 2008/0216887 A1 9/2008 Hacke et al.
 2008/0314433 A1 12/2008 Luch
 2009/0107538 A1 4/2009 Luch
 2009/0120484 A1 5/2009 Nightingale
 2009/0293941 A1 12/2009 Luch
 2010/0024881 A1 2/2010 Hacke et al.
 2010/0078058 A1 4/2010 Nightingale et al.
 2010/0108118 A1 5/2010 Luch
 2010/0175743 A1 7/2010 Gonzalez et al.
 2011/0067754 A1 3/2011 Luch
 2011/0126878 A1 6/2011 Hacke et al.
 2011/0168238 A1 7/2011 Metin et al.
 2011/0186104 A1 8/2011 Shugar et al.
 2011/0186107 A1 8/2011 Gibson et al.
 2011/0197947 A1 8/2011 Croft
 2011/0240096 A1 10/2011 Maheshwari

2011/0315196 A1 12/2011 Gibson et al.
 2012/0031461 A1 2/2012 Luch
 2012/0125391 A1 5/2012 Pinarbasi et al.
 2012/0167945 A1 7/2012 Shugar et al.
 2012/0167946 A1 7/2012 Maheshwari et al.
 2012/0167947 A1 7/2012 Battaglia, Jr. et al.
 2012/0167948 A1 7/2012 Marathe et al.
 2012/0171802 A1 7/2012 Luch et al.
 2012/0204938 A1 8/2012 Hacke et al.
 2012/0211052 A1 8/2012 Marathe et al.
 2012/0318318 A1 12/2012 Metin et al.
 2012/0318319 A1 12/2012 Pinarbasi et al.
 2012/0325282 A1 12/2012 Snow et al.
 2013/0032194 A1 2/2013 Gibson et al.
 2013/0068827 A1 3/2013 Akimoto
 2014/0060638 A1 * 3/2014 Oh H01L 31/0504
 2014/0102502 A1 4/2014 Luch et al.
 2014/0352773 A1 * 12/2014 Chuang H01L 31/022433
 2016/0163913 A1 * 6/2016 Gonzalez H01L 31/1876
 2016/0172515 A1 6/2016 Shugar et al.
 2016/0226438 A1 8/2016 Gibson et al.
 2016/0226439 A1 8/2016 Gibson
 2017/0301802 A1 10/2017 Gibson
 2017/0301821 A1 10/2017 Gibson et al.
 2017/0301822 A1 10/2017 Gibson et al.
 2017/0336105 A1 11/2017 Au et al.

FOREIGN PATENT DOCUMENTS

CN 203242643 U 10/2013
 CN 203445139 U 2/2014
 CN 104201227 A 12/2014
 CN 104810412 A 7/2015
 CN 205609546 U 9/2016
 CN 205609547 U 9/2016
 CN 205609548 U 9/2016
 ES 1073379 U 12/2010
 JP 2013140841 A 7/2013
 WO 2012091781 A1 7/2012
 WO 2012091782 A1 7/2012
 WO 2012106003 A1 8/2012
 WO 2014112424 A1 7/2014
 WO 2016123559 A1 8/2016

* cited by examiner

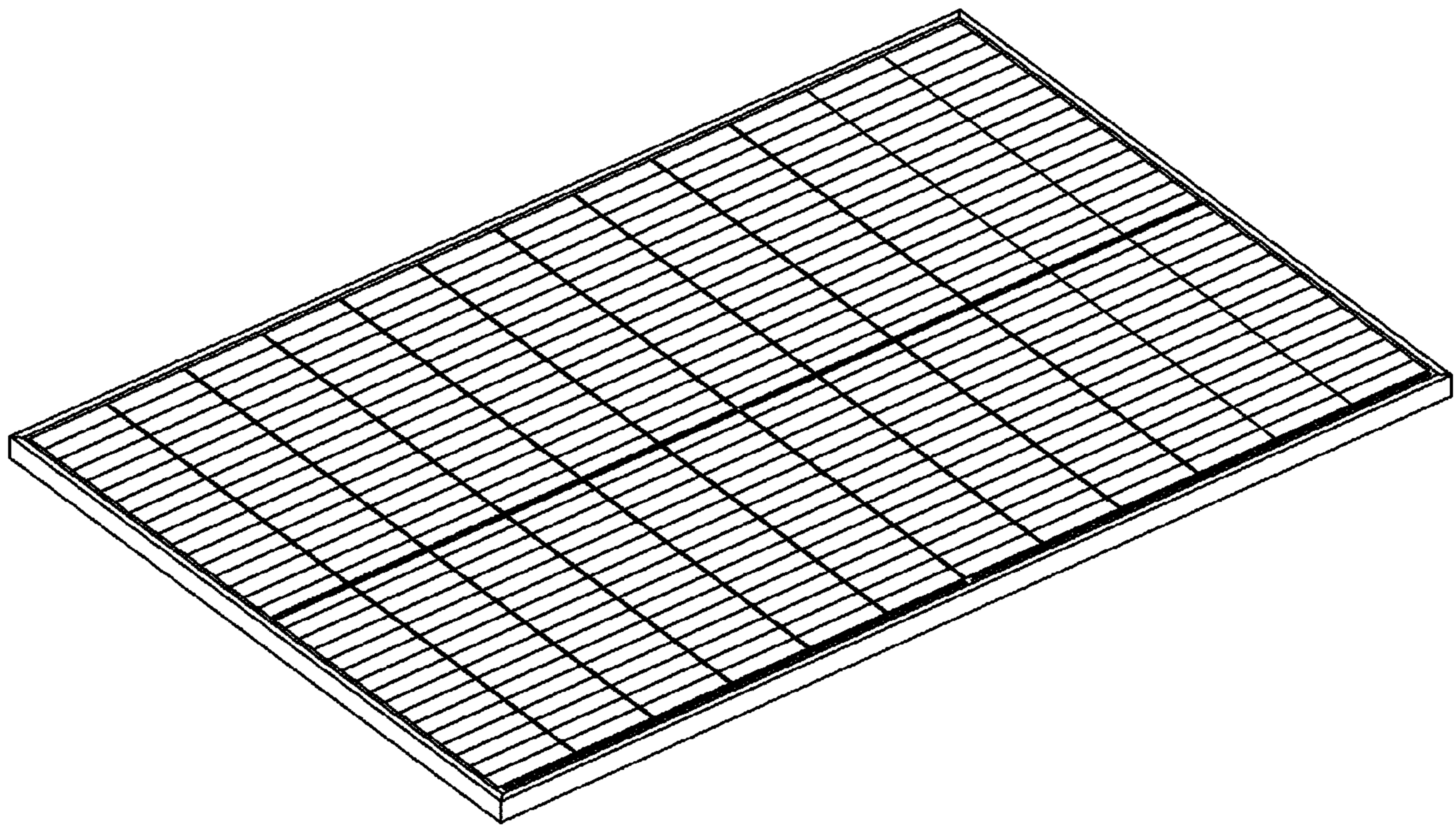


FIG. 1

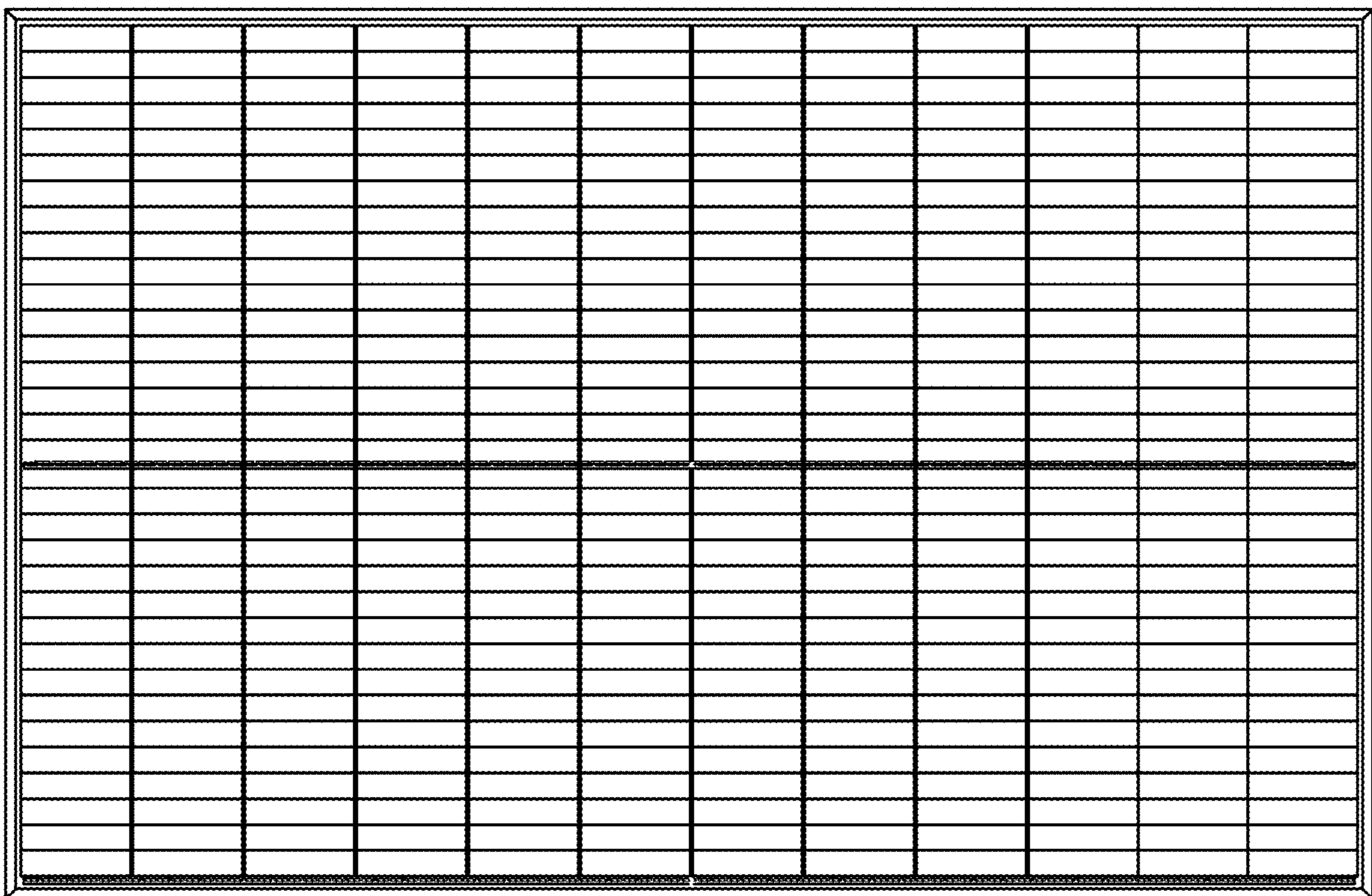


FIG. 2



FIG. 3



FIG. 4

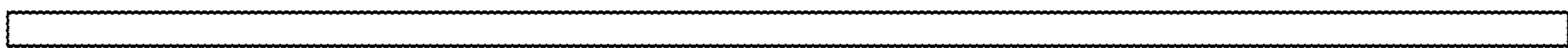


FIG. 5

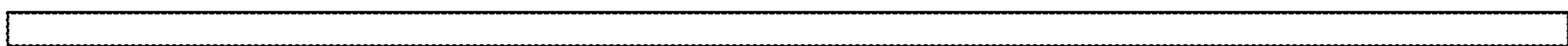


FIG. 6

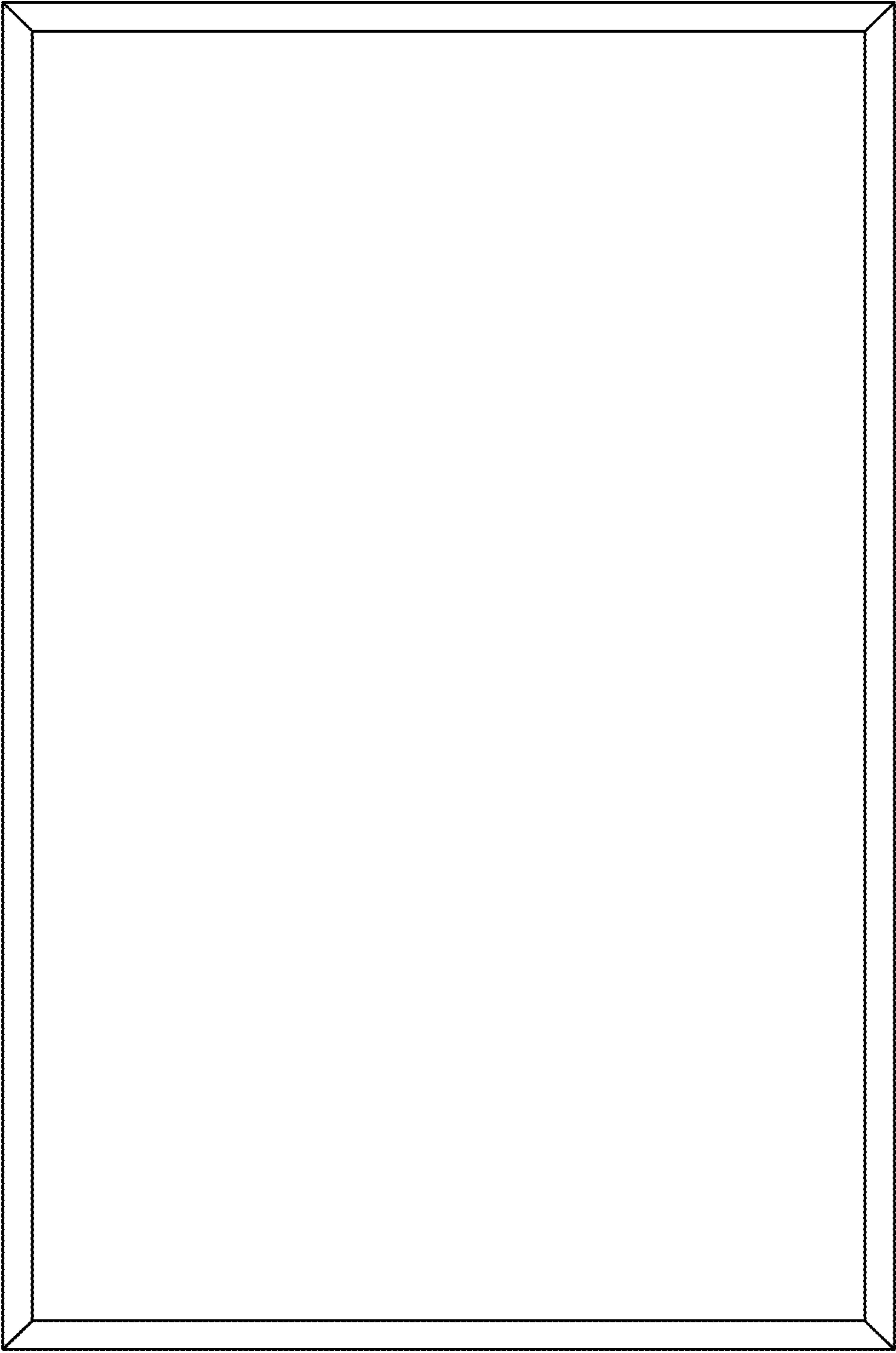


FIG. 7