



US00D803197S

(12) **United States Design Patent** (10) **Patent No.:** **US D803,197 S**  
**He et al.** (45) **Date of Patent:** **\*\* Nov. 21, 2017**

- (54) **SET OF ANTENNAS**
- (71) Applicant: **Airgain Incorporated**, San Diego, CA (US)
- (72) Inventors: **Ziming He**, Irvine, CA (US); **Nando Hunt**, San Diego, CA (US)
- (73) Assignee: **Airgain Incorporated**, San Diego, CA (US)
- (\*\*) Term: **15 Years**
- (21) Appl. No.: **29/580,642**
- (22) Filed: **Oct. 11, 2016**
- (51) **LOC (10) Cl.** ..... **14-03**
- (52) **U.S. Cl.**  
USPC ..... **D14/230**
- (58) **Field of Classification Search**  
USPC ..... D14/138, 230-238, 299, 358; D12/42, D12/43; 343/700 R-705, 711-713, 735, 343/736, 741, 748, 767, 795, 819, 840, 343/846, 866, 871-908; 455/90.2, 90.3, 455/91, 128, 269, 344, 347, 562.1  
CPC ..... H01Q 7/00; H01Q 13/10; H01Q 9/285; H01Q 19/30; H01Q 19/12; H01Q 1/38; H01Q 1/36; H04B 1/0475; H04B 1/034; H05K 11/00  
See application file for complete search history.

- D549,696 S 8/2007 Oshima et al.
- 7,333,067 B2 2/2008 Flung et al.
- 7,336,959 B2 2/2008 Khitrik et al.
- D573,589 S 7/2008 Montgomery et al.
- 7,405,704 B1 8/2008 Lin et al.
- 7,477,195 B2 1/2009 Vance
- D592,195 S 5/2009 Wu et al.
- 7,570,215 B2 8/2009 Abramov et al.
- D599,334 S 9/2009 Chiang
- D606,053 S 12/2009 Wu et al.
- D607,442 S 1/2010 Su et al.
- D608,769 S 1/2010 Bufe
- D612,368 S 3/2010 Yang et al.
- 7,705,783 B2 4/2010 Rao et al.
- 7,729,662 B2 6/2010 Abramov et al.
- D621,819 S 8/2010 Tsai et al.
- 7,843,390 B2 11/2010 Liu
- D633,483 S 3/2011 Su et al.
- D635,127 S 3/2011 Tsai et al.

(Continued)

*Primary Examiner* — John Windmuller  
(74) *Attorney, Agent, or Firm* — Clause Eight IPS; Michael Catania

(57) **CLAIM**

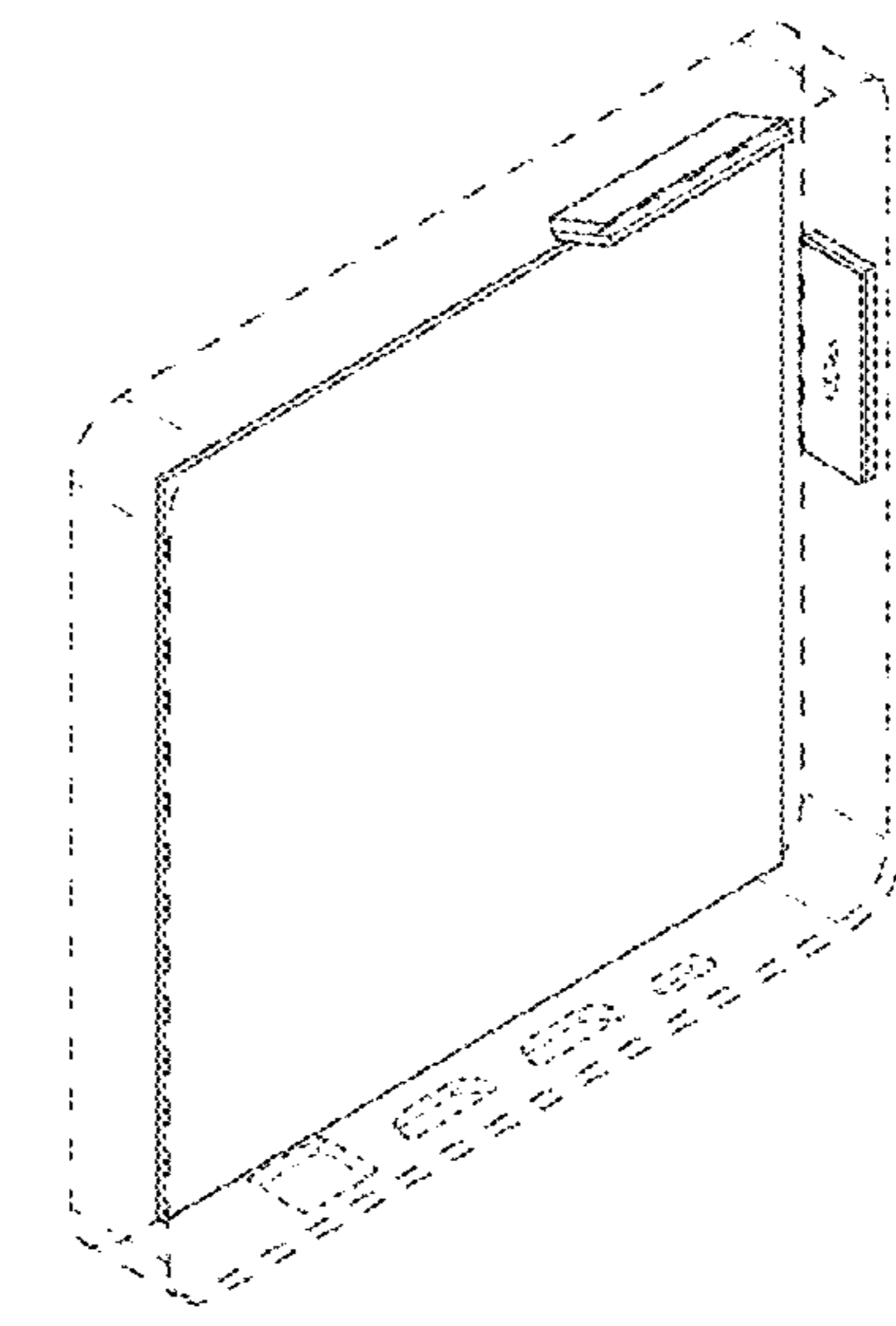
The ornamental design for a set of antennas, as shown and described.

**DESCRIPTION**

FIG. 1 is a top plan view of a set of antennas showing our new design;  
FIG. 2 is a side elevation view thereof;  
FIG. 3 is a side elevation view thereof;  
FIG. 4 is front elevation view thereof;  
FIG. 5 is a rear elevation view thereof;  
FIG. 6 is a top perspective view thereof; and,  
FIG. 7 is a top perspective view thereof.  
The broken lines in the drawings represent environment that forms no part of the claimed design.

**1 Claim, 5 Drawing Sheets**

- (56) **References Cited**  
U.S. PATENT DOCUMENTS  
4,319,249 A \* 3/1982 Evans ..... H01Q 21/062 343/703  
6,204,819 B1 \* 3/2001 Hayes ..... H01Q 1/243 343/700 MS  
7,061,437 B2 6/2006 Lin et al.  
7,148,849 B2 12/2006 Lin  
7,215,296 B2 \* 5/2007 Abramov ..... H01Q 3/24 343/834  
D546,821 S 7/2007 Oliver



(56)

References Cited

U.S. PATENT DOCUMENTS

7,907,971 B2 3/2011 Salo et al.  
 D635,560 S 4/2011 Tsai et al.  
 D635,963 S 4/2011 Podduturi  
 D635,964 S 4/2011 Podduturi  
 D635,965 S 4/2011 Mi et al.  
 D636,382 S 4/2011 Podduturi  
 7,965,242 B2 6/2011 Abramov et al.  
 D649,962 S 12/2011 Tseng et al.  
 D651,198 S 12/2011 Mi et al.  
 D654,059 S 2/2012 Mi et al.  
 D654,060 S 2/2012 Ko et al.  
 D658,639 S 5/2012 Huang et al.  
 D659,129 S 5/2012 Mi et al.  
 D659,685 S 5/2012 Huang et al.  
 D659,688 S 5/2012 Huang et al.  
 8,175,036 B2 5/2012 Visuri et al.  
 8,184,601 B2 5/2012 Abramov et al.  
 D662,916 S 7/2012 Huang et al.  
 8,248,970 B2 8/2012 Abramov et al.  
 D671,097 S 11/2012 Mi et al.  
 8,310,402 B2 11/2012 Yang  
 D676,429 S 2/2013 Gosalia et al.  
 D678,255 S 3/2013 Ko et al.  
 8,390,519 B2\* 3/2013 Wang ..... H01Q 1/243  
 343/700 MS  
 8,416,137 B2\* 4/2013 Kitchener ..... H01Q 1/48  
 343/700 MS  
 8,423,084 B2 4/2013 Abramov et al.  
 D684,565 S 6/2013 Wei  
 D685,352 S 7/2013 Wei  
 D685,772 S 7/2013 Zheng et al.  
 D686,600 S 7/2013 Yang  
 D689,474 S 9/2013 Yang et al.  
 D692,870 S 11/2013 He  
 D694,738 S 12/2013 Yang  
 D695,279 S 12/2013 Yang et al.  
 D695,280 S 12/2013 Yang et al.  
 8,654,030 B1 2/2014 Mercer  
 D703,195 S 4/2014 Zheng

D703,196 S 4/2014 Zheng  
 D706,247 S 6/2014 Zheng et al.  
 D706,750 S 6/2014 Bringuir  
 D706,751 S\* 6/2014 Chang ..... D14/230  
 D707,663 S\* 6/2014 Podduturi ..... D14/230  
 D708,602 S 7/2014 Gosalia et al.  
 D709,053 S 7/2014 Chang et al.  
 D710,832 S 8/2014 Yang  
 D710,833 S 8/2014 Zheng et al.  
 8,854,265 B1\* 10/2014 Yang ..... H01Q 9/045  
 343/700 MS  
 D716,775 S 11/2014 Bidermann  
 D733,104 S\* 6/2015 Yang ..... D14/230  
 9,077,077 B2\* 7/2015 Wong ..... H01Q 1/243  
 D751,535 S\* 3/2016 Podduturi ..... D14/230  
 D754,108 S\* 4/2016 Yang ..... D14/230  
 9,432,070 B2 8/2016 Mercer  
 2002/0003499 A1 1/2002 Kouam et al.  
 2003/0189519 A1\* 10/2003 Rutfors ..... H01Q 1/243  
 343/702  
 2004/0222936 A1 11/2004 Hung et al.  
 2005/0001768 A1\* 1/2005 Sekiguchi ..... H01Q 9/0421  
 343/700 MS  
 2005/0073462 A1 4/2005 Lin et al.  
 2005/0190108 A1 9/2005 Lin et al.  
 2006/0208900 A1 9/2006 Tavassoli Hozouri  
 2007/0030203 A1 2/2007 Tsai et al.  
 2008/0150829 A1 6/2008 Lin et al.  
 2009/0002244 A1 1/2009 Woo  
 2009/0058739 A1 3/2009 Konishi  
 2009/0135072 A1 5/2009 Ke et al.  
 2009/0262028 A1\* 10/2009 Mumbru ..... H01Q 5/371  
 343/702  
 2010/0188297 A1 7/2010 Chen et al.  
 2010/0309067 A1 12/2010 Tsou et al.  
 2011/0006950 A1 1/2011 Park et al.  
 2012/0038514 A1 2/2012 Bang  
 2012/0229348 A1 9/2012 Chiang  
 2012/0242546 A1 9/2012 Hu et al.  
 2013/0021211 A1\* 1/2013 Komaki ..... H01Q 1/243  
 343/700 MS

\* cited by examiner

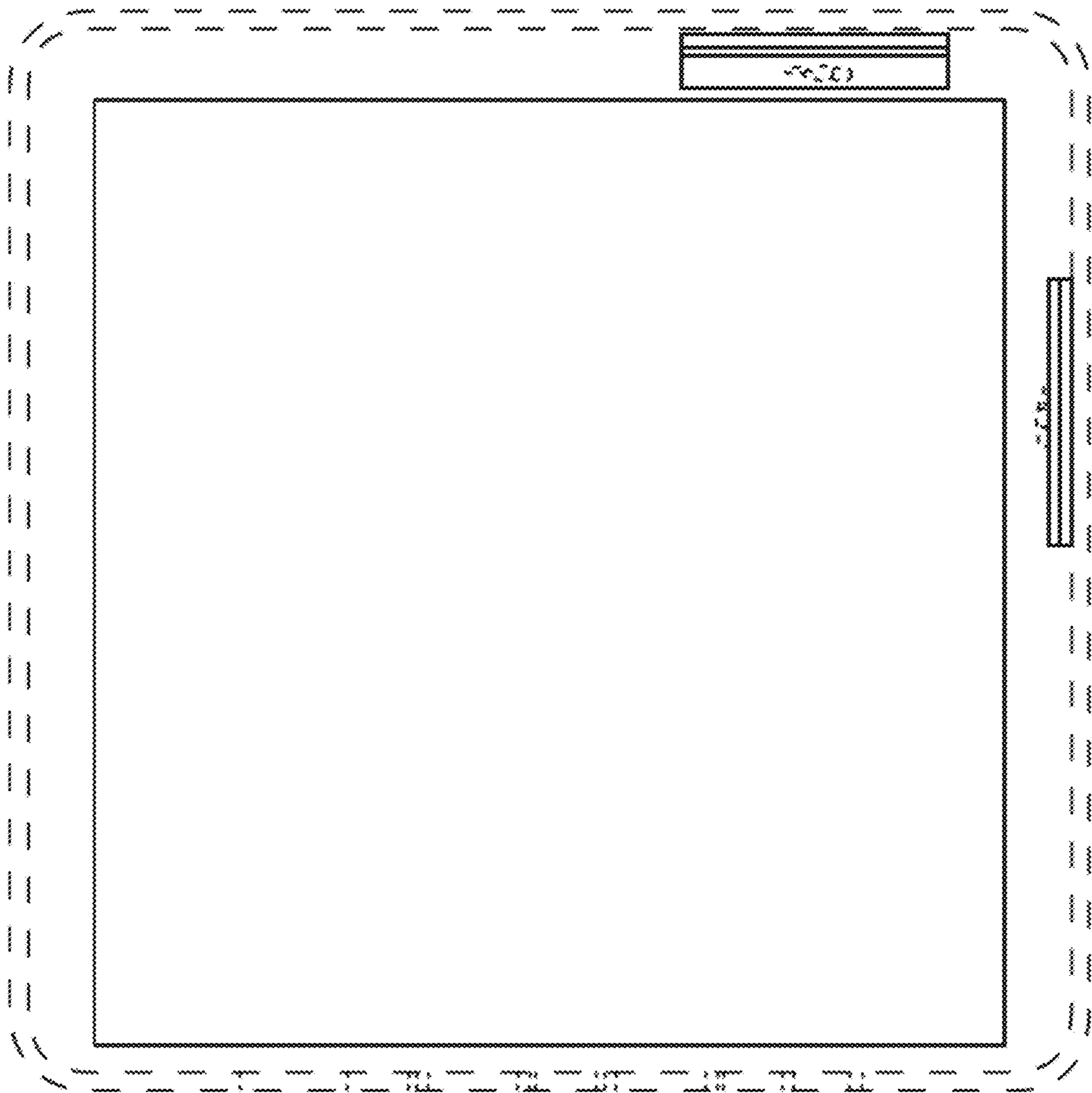


FIG. 1

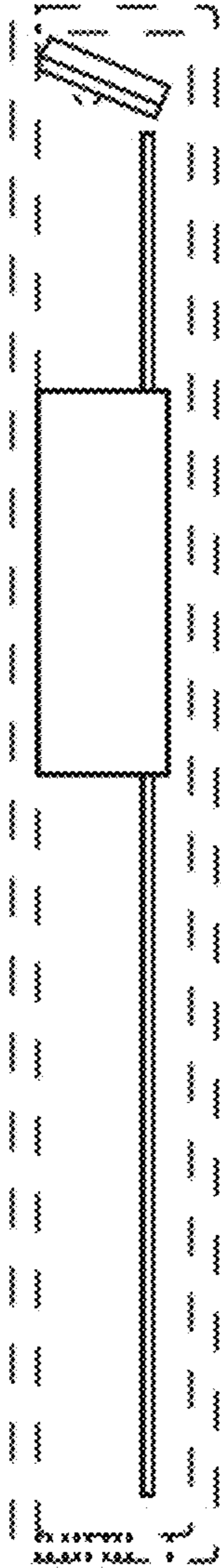


FIG. 2

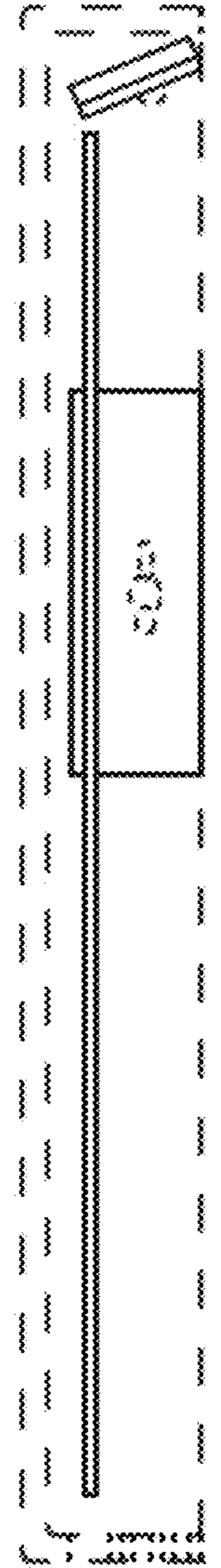


FIG. 3

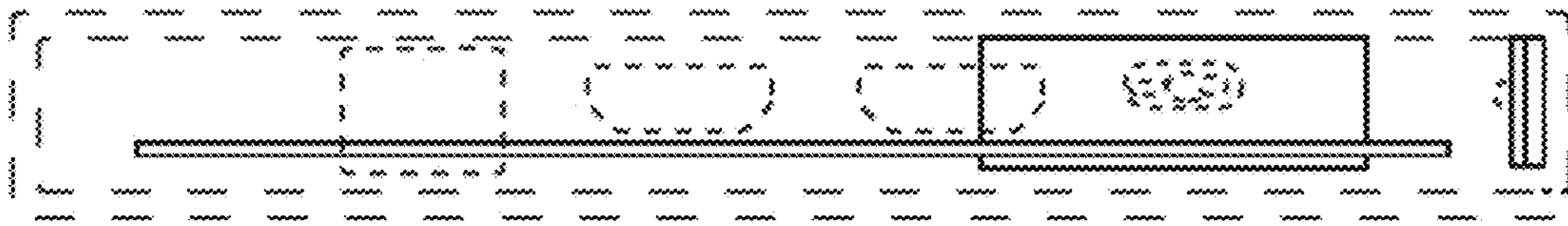


FIG. 4



FIG. 5

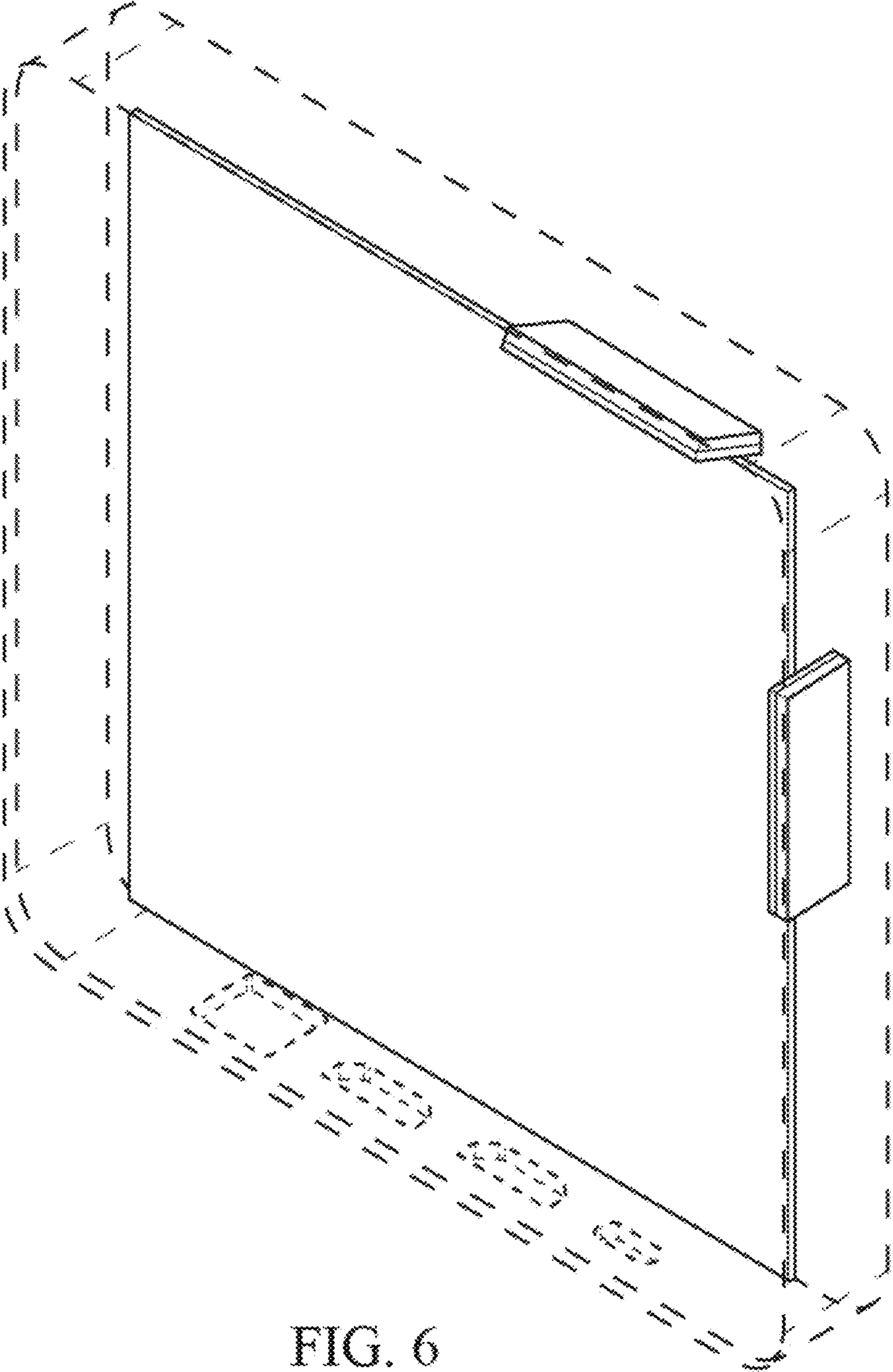


FIG. 6

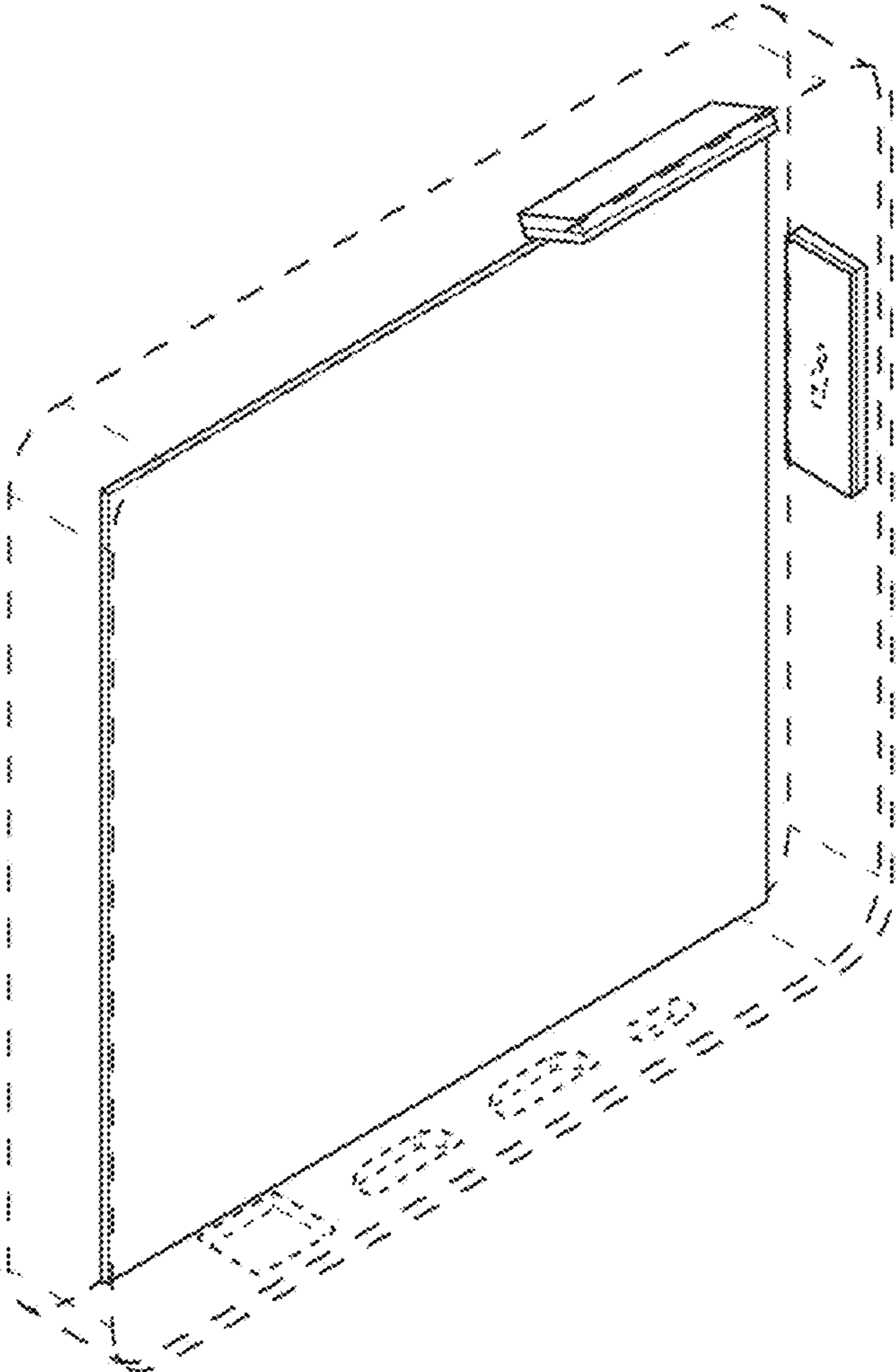


FIG. 7