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(54) **CASE FOR PORTABLE DISPLAY DEVICE**

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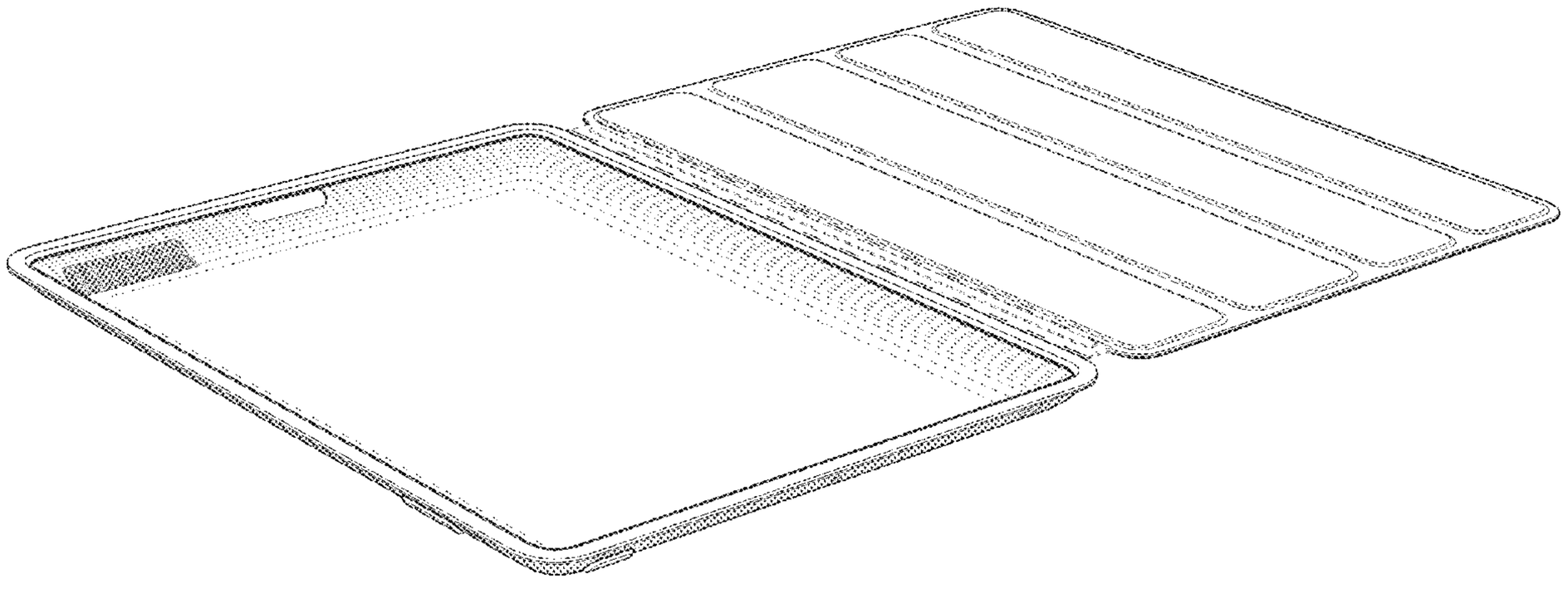
(56) **References Cited**

U.S. PATENT DOCUMENTS

144,315	A	11/1873	Cooper
1,347,839	A	7/1920	Coons
1,356,593	A	10/1920	Bettiker
1,659,395	A	2/1928	Douglas
D104,699	S	5/1937	Pilliod
D123,984	S	12/1940	Pichel
2,279,164	A	4/1942	Gettleman
D137,864	S	5/1944	Jolles
D164,628	S	9/1951	Davis
D167,065	S	6/1952	Bohanan
D167,743	S	9/1952	Dorfman
2,631,046	A	3/1953	Stephens
2,834,703	A	5/1958	Atkinson
2,968,176	A	1/1961	Collings
2,983,431	A	5/1961	Turan
3,015,834	A	1/1962	Marrinson et al.
3,257,128	A	6/1966	Schneider
3,336,610	A	8/1967	Geddings
3,442,371	A	5/1969	Deshong
3,460,744	A	8/1969	Turkenkopf
3,587,578	A	6/1971	Walker
D222,602	S	11/1971	Petrie
3,735,516	A	5/1973	Wenstrom
3,758,065	A	9/1973	Ranseen
3,797,146	A	3/1974	Holes
D232,825	S	9/1974	Gerber
3,970,332	A	7/1976	Alford, Jr.
D245,458	S	8/1977	Hauss et al.
4,044,942	A	8/1977	Sherwood
D251,082	S	2/1979	Petrie
D255,523	S	6/1980	Yarabinec
D255,524	S	6/1980	Yarabinec



D258,723	S	3/1981	Cornou
4,310,117	A	1/1982	Gullett
D274,493	S	7/1984	Dyby
D275,153	S	8/1984	Weinreb
4,520,958	A	6/1985	Jones et al.
4,566,720	A	1/1986	Goldman et al.
D283,231	S	4/1986	Bradenburger
4,592,358	A	6/1986	Westplate
4,621,729	A	11/1986	Jackson
4,629,070	A	12/1986	Roberg
4,643,544	A	2/1987	Loughran
4,671,334	A	6/1987	Yadegar et al.
4,693,495	A	9/1987	LaPointe
D293,428	S	12/1987	Watts
4,718,550	A	1/1988	Johnson
D296,006	S	5/1988	Asche
D297,228	S	8/1988	Harpaz et al.
4,787,766	A	11/1988	Lorsch
4,877,074	A	10/1989	Castellano
D306,850	S	3/1990	Beedy
D308,760	S	6/1990	King
D310,987	S	10/1990	Law et al.
D311,688	S	10/1990	Hodge
D312,130	S	11/1990	Jones
D312,214	S	11/1990	Hodge
D312,835	S	12/1990	Holm
D313,964	S	1/1991	Fuller
5,000,319	A	3/1991	Mermelstein
D317,329	S	6/1991	Annand
D318,372	S	7/1991	Mackey
D319,016	S	8/1991	Kahl
D320,274	S	9/1991	Douglas
D321,091	S	10/1991	Dickinson
D321,761	S	11/1991	Shimizu
D321,855	S	11/1991	Ross
5,066,158	A	11/1991	Huang
5,092,354	A	3/1992	Pacelli, Jr.
D325,637	S	4/1992	O'Brien et al.
D327,046	S	6/1992	Eskandry et al.
D329,747	S	9/1992	Embree
D331,191	S	11/1992	Ventola et al.
5,179,944	A	1/1993	McSymytz
D340,701	S	10/1993	Takeuchi
D341,373	S	11/1993	Stem
D345,014	S	3/1994	Huffman
D352,357	S	11/1994	Ashley
D356,120	S	3/1995	Allen
5,431,449	A	7/1995	Arimoto et al.
D360,778	S	8/1995	Apt, III et al.
5,439,101	A	8/1995	Brink et al.
5,450,858	A	9/1995	Zablotsky et al.
D364,191	S	11/1995	Allen
5,480,192	A	1/1996	Angerbauer et al.
5,487,566	A	1/1996	Hedge, Jr.
D369,998	S	5/1996	Eskandry
D370,177	S	5/1996	Bankier
D370,650	S	6/1996	Eskandry
5,566,871	A	10/1996	Weintraub
D383,213	S	9/1997	Ingram
D389,509	S	1/1998	Yasoshima
D389,646	S	1/1998	Sankey et al.
D390,007	S	2/1998	Ahem, Jr.
D391,298	S	2/1998	Johnson et al.
D405,200	S	2/1999	Hines
D406,463	S	3/1999	Rutledge
5,887,723	A	3/1999	Myles et al.
5,902,256	A	5/1999	Benaron
D411,353	S	6/1999	Dickinson et al.
D414,033	S	9/1999	Rohm
5,996,778	A	12/1999	Shih
D418,867	S	1/2000	Platte, III
6,122,785	A	9/2000	Bondie et al.
D432,477	S	10/2000	Gorodetsky
D435,171	S	12/2000	Anderson
D436,179	S	1/2001	Small
D442,321	S	5/2001	Cheng
D445,744	S	7/2001	Hsing
D446,982	S	8/2001	Block
6,289,968	B1	9/2001	Karten et al.
D449,927	S	11/2001	Dorizas
D461,469	S	8/2002	Wang et al.
6,427,371	B2	8/2002	Olson et al.
D467,429	S	12/2002	Bone et al.
6,493,969	B2	12/2002	Devos
D468,868	S	1/2003	Thorpe et al.
6,527,330	B1	3/2003	Steffens et al.
D473,939	S	4/2003	Hantke et al.
D473,940	S	4/2003	Hantke et al.
6,539,653	B1	4/2003	Finke
6,568,005	B2	5/2003	Fleming et al.
D480,971	S	10/2003	DeLuca et al.
6,634,691	B2	10/2003	Henderson
D484,736	S	1/2004	Sarnoff
D487,521	S	3/2004	Link
D487,551	S	3/2004	Lee
6,702,359	B2	3/2004	Armstrong et al.
6,763,942	B1	7/2004	Yeh
D494,469	S	8/2004	Solowiejko
6,772,879	B1	8/2004	Domotor
D496,322	S	9/2004	Famey et al.
D498,308	S	11/2004	Mock
D505,041	S	5/2005	Lesosky
6,887,486	B2	5/2005	Gregoire
D511,838	S	11/2005	Vedra
D512,100	S	11/2005	Howes et al.
D517,512	S	3/2006	Peng
D518,007	S	3/2006	Peng
D518,008	S	3/2006	Peng
D521,553	S	5/2006	Sterman
7,037,021	B2	5/2006	Raschke
D527,535	S	9/2006	Sturba et al.
D533,347	S	12/2006	Andre et al.
D538,096	S	3/2007	Bartell et al.
D538,575	S	3/2007	Bartell et al.
D538,787	S	3/2007	Tsai
D542,772	S	5/2007	Shimizu
D544,922	S	6/2007	Shaffer
D548,782	S	8/2007	Nash
D550,137	S	9/2007	Kraines
D551,265	S	9/2007	Brinson
D553,410	S	10/2007	Kramer
D555,667	S	11/2007	Hussaini et al.
D556,681	S	12/2007	Kim
D557,347	S	12/2007	Nishimoto
D557,814	S	12/2007	Glenn et al.
D560,383	S	1/2008	Woods
7,318,521	B2	1/2008	Lau
7,322,063	B2	1/2008	Esimai
D564,223	S	3/2008	Messineo
D565,196	S	3/2008	Mock et al.
D566,111	S	4/2008	Nakagawa
D572,709	S	7/2008	Nakagawa et al.
7,398,868	B2	7/2008	Morszeck
D574,819	S	8/2008	Andre et al.
D574,962	S	8/2008	Atkins et al.
D577,743	S	9/2008	Liu
7,435,103	B2	10/2008	Ma
D581,857	S	12/2008	Bogard
D581,859	S	12/2008	Bogard
D581,865	S	12/2008	Koza
D582,047	S	12/2008	Yim
D582,405	S	12/2008	Andre et al.
D582,475	S	12/2008	Guest
D583,360	S	12/2008	Gredler
D583,479	S	12/2008	Yim
D583,959	S	12/2008	Yim
D584,141	S	1/2009	Smith et al.
D584,612	S	1/2009	Ianello
D587,797	S	3/2009	Blanchard
D587,812	S	3/2009	Uchiyama et al.
D592,402	S	5/2009	Ahlgrim et al.
D593,540	S	6/2009	Skurdal
D594,876	S	6/2009	Hwang
D596,305	S	7/2009	Usui et al.
D597,302	S	8/2009	Adams et al.
D599,286	S	9/2009	Horito et al.
D599,484	S	9/2009	Gray et al.
D599,761	S	9/2009	Birsel et al.

D599,821	S	9/2009	Tang	
D599,959	S	9/2009	Washington	
D600,699	S	9/2009	Johnston et al.	
7,584,841	B2	9/2009	Chan et al.	
D601,369	S	10/2009	Mock et al.	
D602,598	S	10/2009	Yim	
D603,906	S	11/2009	Miller et al.	
D604,727	S	11/2009	Chu et al.	
D604,744	S	11/2009	Tseng et al.	
D605,940	S	12/2009	Lin	
D606,096	S	12/2009	Bui	
D606,119	S	12/2009	Miller et al.	
D606,120	S	12/2009	Miller et al.	
D606,121	S	12/2009	Miller et al.	
D606,751	S	12/2009	Andre et al.	
D607,253	S	1/2010	McCammon	
D607,255	S	1/2010	Sunseri	
D608,794	S	1/2010	Xiao et al.	
7,643,274	B2	1/2010	Bekele	
D609,360	S	2/2010	Yim	
D609,718	S	2/2010	Chang et al.	
D609,912	S	2/2010	Kyono et al.	
D613,062	S	4/2010	Romero et al.	
D613,982	S	4/2010	Wilson et al.	
D616,416	S	5/2010	Lin	
D616,464	S	5/2010	Park	
D616,930	S	6/2010	Engel et al.	
7,735,644	B2	6/2010	Sirichai et al.	
D619,361	S	7/2010	Andre et al.	
D620,122	S	7/2010	Cotton	
D620,877	S	8/2010	Rusher et al.	
D622,061	S	8/2010	Higginson	
D622,258	S	8/2010	Joseph	
D622,716	S	8/2010	Andre et al.	
D623,940	S	9/2010	Ianello	
D624,615	S	9/2010	Kusmierz	
D627,078	S	11/2010	Matsuo et al.	
D627,117	S	11/2010	Hale	
D627,775	S	11/2010	Li	
D627,777	S	11/2010	Akana et al.	
D628,004	S	11/2010	Moorefield	
D628,132	S	11/2010	Grzyb et al.	
D628,197	S	11/2010	Li	
D628,705	S	12/2010	Usui et al.	
D628,706	S	12/2010	Usui et al.	
D629,195	S	12/2010	Jusic	
D629,914	S	12/2010	Hunter	
D631,912	S	2/2011	Epstein	
D632,660	S	2/2011	Donowho et al.	
D633,388	S	3/2011	Andre et al.	
D633,673	S	3/2011	McKnight	
D633,879	S	3/2011	Heng et al.	
D635,135	S	3/2011	Li	
D635,564	S	4/2011	Li	
D637,399	S	5/2011	Romero et al.	
D637,814	S	5/2011	Akana et al.	
D638,526	S	5/2011	Newman	
D638,627	S	5/2011	Romero et al.	
D639,296	S	6/2011	Tseng et al.	
D640,089	S	6/2011	Green et al.	
D641,348	S	7/2011	Kim et al.	
D641,720	S	7/2011	Heng et al.	
D644,248	S	8/2011	Kim et al.	
D649,785	S	12/2011	Akana et al.	
D652,829	S	1/2012	Kim et al.	
D656,495	S	3/2012	Andre et al.	
D656,929	S	4/2012	Hsiung	
D657,354	S	4/2012	Kim	
D658,186	S	4/2012	Akana et al.	
D658,187	S *	4/2012	Diebel	G06F 1/1679 D14/440
D658,188	S *	4/2012	Diebel	D14/440
D658,880	S	5/2012	Akana et al.	
D662,503	S	6/2012	Akana et al.	
D663,304	S	7/2012	Akana et al.	
D663,724	S	7/2012	Lee et al.	
D664,564	S	7/2012	Gillett et al.	
8,245,843	B1 *	8/2012	Wu	H01M 10/465 206/320
D669,059	S	10/2012	Huang	
D670,499	S	11/2012	Akana et al.	
D670,692	S	11/2012	Akana et al.	
D671,114	S	11/2012	Akana et al.	
8,312,991	B2 *	11/2012	Diebel	A45C 13/005 206/45.24
D671,948	S	12/2012	Akana et al.	
D672,781	S	12/2012	Lu	
D674,799	S	1/2013	Kim	
D674,800	S	1/2013	Kim	
D678,260	S	3/2013	Bau	
D679,279	S	4/2013	Yang et al.	
D679,715	S	4/2013	Akana et al.	
D681,641	S	5/2013	Van Den Nieuwenhuizen et al.	
D682,836	S	5/2013	Akana et al.	
D682,838	S	5/2013	Akana et al.	
D685,800	S	7/2013	Canizares et al.	
D685,801	S	7/2013	Canizares et al.	
D685,802	S	7/2013	Canizares et al.	
D687,438	S	8/2013	Lu	
D688,251	S	8/2013	Akana et al.	
D688,868	S	9/2013	Akana et al.	
D689,482	S	9/2013	Akana et al.	
D689,498	S	9/2013	Akana et al.	
D690,703	S	10/2013	Welch et al.	
D691,142	S *	10/2013	Diebel	G06F 1/1679 D14/440
D691,143	S	10/2013	Diebel	
D691,145	S	10/2013	Nam-Su	
D691,611	S	10/2013	Kirzinger	
D692,433	S	10/2013	Akana et al.	
D692,434	S	10/2013	Kim	
D694,741	S	12/2013	Kim	
D696,253	S	12/2013	Akana et al.	
D696,256	S	12/2013	Piedra et al.	
D696,669	S	12/2013	Akana et al.	
D696,693	S	12/2013	Kim et al.	
8,640,864	B2 *	2/2014	Chen	G06F 1/1626 206/45.2
8,657,112	B2	2/2014	Igarashi	
D701,205	S	3/2014	Akana et al.	
D702,673	S *	4/2014	Murchison	D14/250
D703,209	S	4/2014	Marcus	
D704,689	S *	5/2014	Chang	D14/250
D706,783	S *	6/2014	Almodova	D14/440
D707,229	S *	6/2014	Almodova	D14/440
8,757,375	B2 *	6/2014	Huang	A47B 23/043 206/320
D708,838	S *	7/2014	Lee	D3/201
8,763,795	B1 *	7/2014	Oten	A45C 11/00 206/45.23
8,783,458	B2 *	7/2014	Gallagher	A45C 11/00 206/320
8,790,758	B2	7/2014	Kenney et al.	
D710,838	S	8/2014	Song	
D710,859	S *	8/2014	Mecchella	D14/440
D711,861	S	8/2014	Mei	
D711,887	S	8/2014	Akana et al.	
8,797,132	B2 *	8/2014	Childs	A45C 11/00 335/219
D713,847	S *	9/2014	Su	D14/440
D713,848	S *	9/2014	Akana	D14/440
D729,812	S	5/2015	Ahn et al.	
D733,111	S	6/2015	Kim	
D734,760	S *	7/2015	Brunner	D14/440
D745,011	S	12/2015	Akana et al.	
D748,636	S	2/2016	Zadvinskis	
D760,232	S	6/2016	Akana et al.	
D783,589	S *	4/2017	Tattari	D14/250
D784,995	S *	4/2017	Akana	D14/440
D807,891	S *	1/2018	Yeo	D14/440
D857,023	S *	8/2019	Hyun	D14/440
D871,415	S *	12/2019	Lin	D14/440
D920,337	S *	5/2021	Chan	D14/440
D928,788	S *	8/2021	Kang	D14/440
2003/0034263	A1 *	2/2003	D'Hoste	A45C 9/00 206/320
2005/0001021	A1	1/2005	Hutchinson	

2005/0021114	A1	1/2005	Hidaka	
2005/0246851	A1	11/2005	Cline	
2008/0167095	A1	7/2008	Kim et al.	
2008/0302687	A1*	12/2008	Sirichai	A45C 11/00 206/320
2009/0000169	A1	1/2009	Houssain et al.	
2009/0017883	A1	1/2009	Lin	
2009/0107858	A1	4/2009	Huang	
2009/0159763	A1	6/2009	Kim	
2009/0194209	A1	8/2009	De Filippis et al.	
2010/0122924	A1	5/2010	Andrews	
2010/0289390	A1	11/2010	Kenney	
2010/0300909	A1	12/2010	Hung	
2011/0164365	A1	7/2011	McClure et al.	
2012/0194448	A1	8/2012	Rothkopf	
2012/0211613	A1*	8/2012	Yang	A45C 11/00 248/174
2012/0305413	A1*	12/2012	Chung	A45C 11/00 206/45.23
2013/0020216	A1	1/2013	Chiou	
2013/0048520	A1	2/2013	Garrett et al.	
2013/0093304	A1*	4/2013	Childs	F16M 11/10 312/240
2013/0140203	A1*	6/2013	Chiang	G06F 1/1628 206/320
2013/0233762	A1	9/2013	Balaji et al.	
2013/0277271	A1	10/2013	Toulotte	

FOREIGN PATENT DOCUMENTS

AU	338106	S	8/2011
EM	001266266-0001		3/2011
EM	001266282-0001		3/2011
EM	001266290-0001		3/2011
GB	4020173	S	6/2011
JP	D1429341		12/2011
TW	D154071		6/2013

OTHER PUBLICATIONS

"Speck's Pixelskin HD Wrap for iPad 2," Speck Products [online], dated Mar. 17, 2011, URL: <www.speckproducts.com/tablet-ipad-cases/pixelskin-hd-wrap-ipad-case-black.html>, <www.wirelessgoodness.com/2011/03/17/specks-pixelskin-hd-wrap-for-the-ipad-2-does-its-best-impersonation-of-apples-smartcover>.

"Speck's CandyShell Wrap for iPad," Speck Products [online], dated Mar. 18, 2011, URL: <www.speckproducts.com/tablet-ipad-cases/candyshell-wrap-ipad-cover-black.html>, <www.ipadmodo.com/10601/speck-unveils-new-candyshell-wrap-multi-functioncase-for-ipad>, <www.ohgizmo.com/2011/03/01/ohgizmo-review-spcks-candyshell-wrap-dustjacket-for-the-ipad>.

"Apple Smart Cover," Apple Store [online], dated Mar. 18, 2011, URL: <http://store.apple.com/us/product/MC942>, <www.apple.com/ipad/smart-cover>, <www.apple.com/pr/library/2011/03/02/ipad.html>, <http://obamapacman.com/2011/03ipad-2-apple-keynote-video-download/ipad-2-keynote-063>, <www.ifixit.com/teardown/ipad-2-smart-cover-teardown/5089/1>, <www.macstories.net/stories/the-genius-of->.

"Apple iPad Case," Apple Store [online], dated Mar. 18, 2011, URL: <http://store.apple.com/us/product/MC361ZM/B?afid=p21 0frg1&cid=AOS-US-SHOPX>, <www.ilounge.com/index.php/reviews/entry/apple-ipad-case>, <www.patentlyapple.com/patently-apple/2010/08/applesipad-case-design-is-now-registered-with-patent-office.html>, <www.tuaw.com/photos/ipad-case-from-apple>.

"Original Targus Folding Genuine Leather Case for Apple iPad with Built-in Holder," Case-Parts [online], dated Mar. 25, 2011, URL: <http://www.case-parts.com/details/Original-Targus-Folding-Genuine-Leathe-Case-for-Apple-iPad-with-Built-in-Holder-IPAD-570/photos.htmn>.

"Introducing the Convertible Magazine Jacket for iPad," Incase Wire [online], dated Nov. 23, 2010, URL: <http://goincase.com/blog/2010/11/23/introducing-the-convertible-magazine-jacket-for-ipad/>.

AppOSX, "Review: AViiQ Smart Case for iPad 2," YouTube [online], May 24, 2011, URL: <http://www.youtube.com/watch?v=DaHjzeVWEuA>.

wwwinsanelygreatmac, "AViiQ Smart Case for iPad 2 compliments Apple's Smart Cover (Review)," YouTube [online], dated Aug. 31, 2011, URL: <http://www.youtube.com/watch?v=wMoZM-ZSn4g>.

Tkvipertech, "iPad 2—Best Protective Case—Smart Cover+ Smart Cover Back by Simplism," YouTube [online], dated May 15, 2011, URL: <http://www.youtube.com/watch?v=SRHhU98NAd0&feature=endscreen&NR=1>.

Covert, Adrian. "The First iPad 2 Smart Cover Clones are Here," Gizmodo [online], dated Mar. 15, 2 011, URL: <http://gizmodo.com/5782270/the-first-ipad-2-smart-cover-clones-are-here>.

* cited by examiner

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(57) **CLAIM**

The ornamental design for a case for portable display device, as shown and described.

DESCRIPTION

FIG. **1** is a top front perspective view of a case for portable display device in an open position showing the claimed design;
FIG. **2** is a bottom rear perspective view thereof;
FIG. **3** is a front view thereof;
FIG. **4** is a rear view thereof;
FIG. **5** is a bottom view thereof;
FIG. **6** is a top view thereof;
FIG. **7** is an enlarged left side view thereof;
FIG. **8** is an enlarged right side view thereof;
FIG. **9** is a front view thereof showing the case for portable display device in a closed position;
FIG. **10** is an enlarged bottom view in two parts; and,
FIG. **11** is an enlarged top view in two parts.

The dashed broken lines in the figures show portions of the case for portable display device that form no part of the claimed design.

The dot-dash broken lines in the figures show boundaries that form no part of the claimed design.

The shade lines in the figures show contour or transparency and not surface ornamentation.

1 Claim, 8 Drawing Sheets

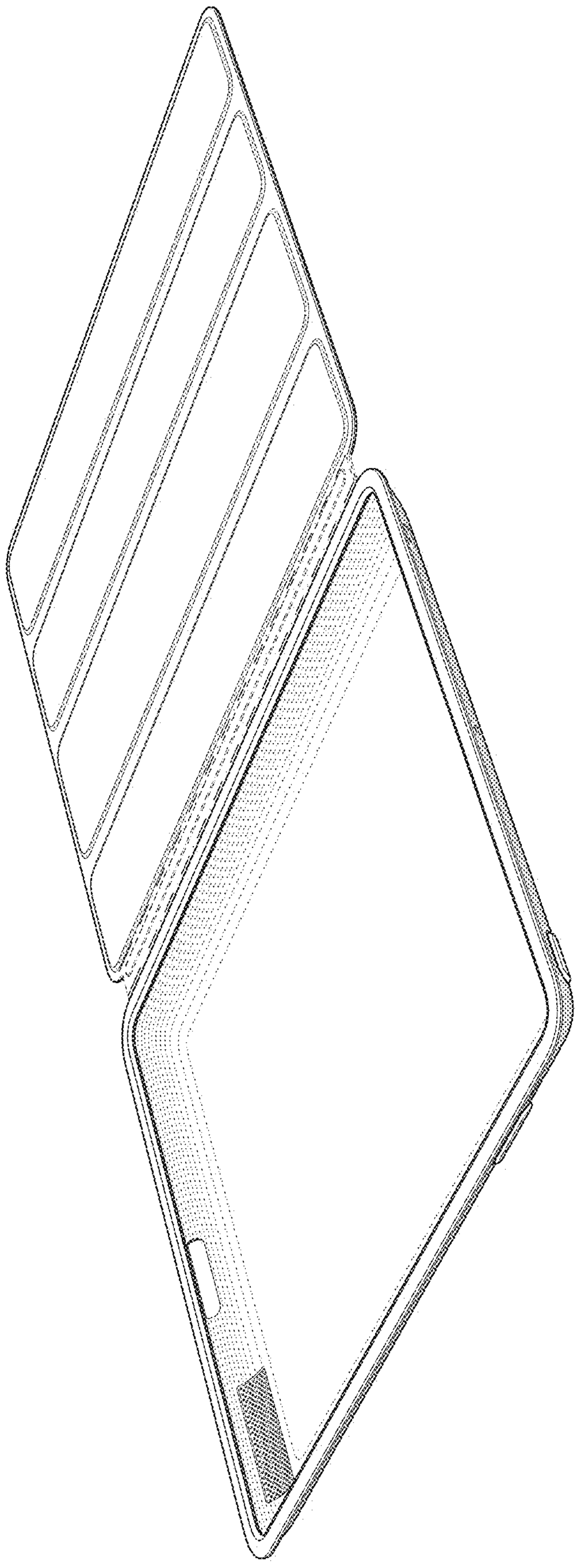


FIG. 1

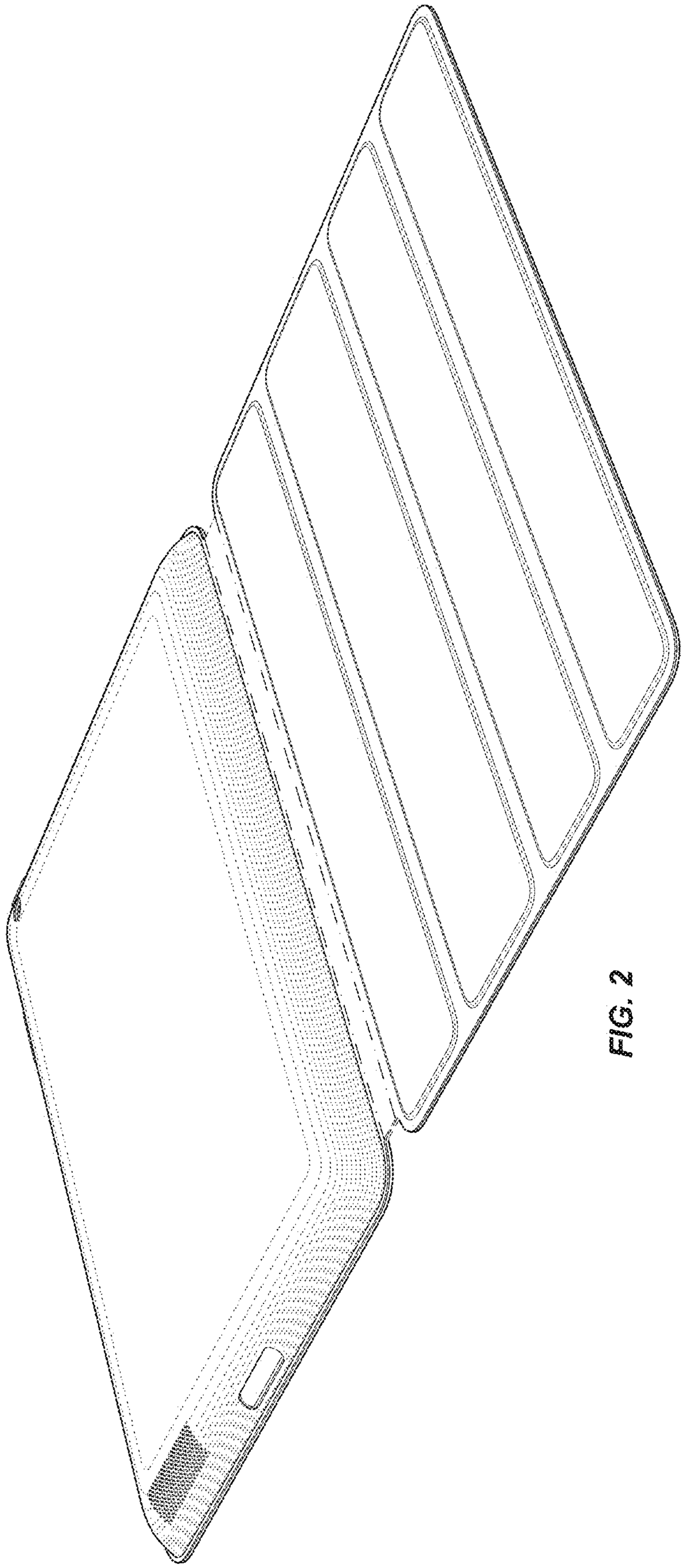
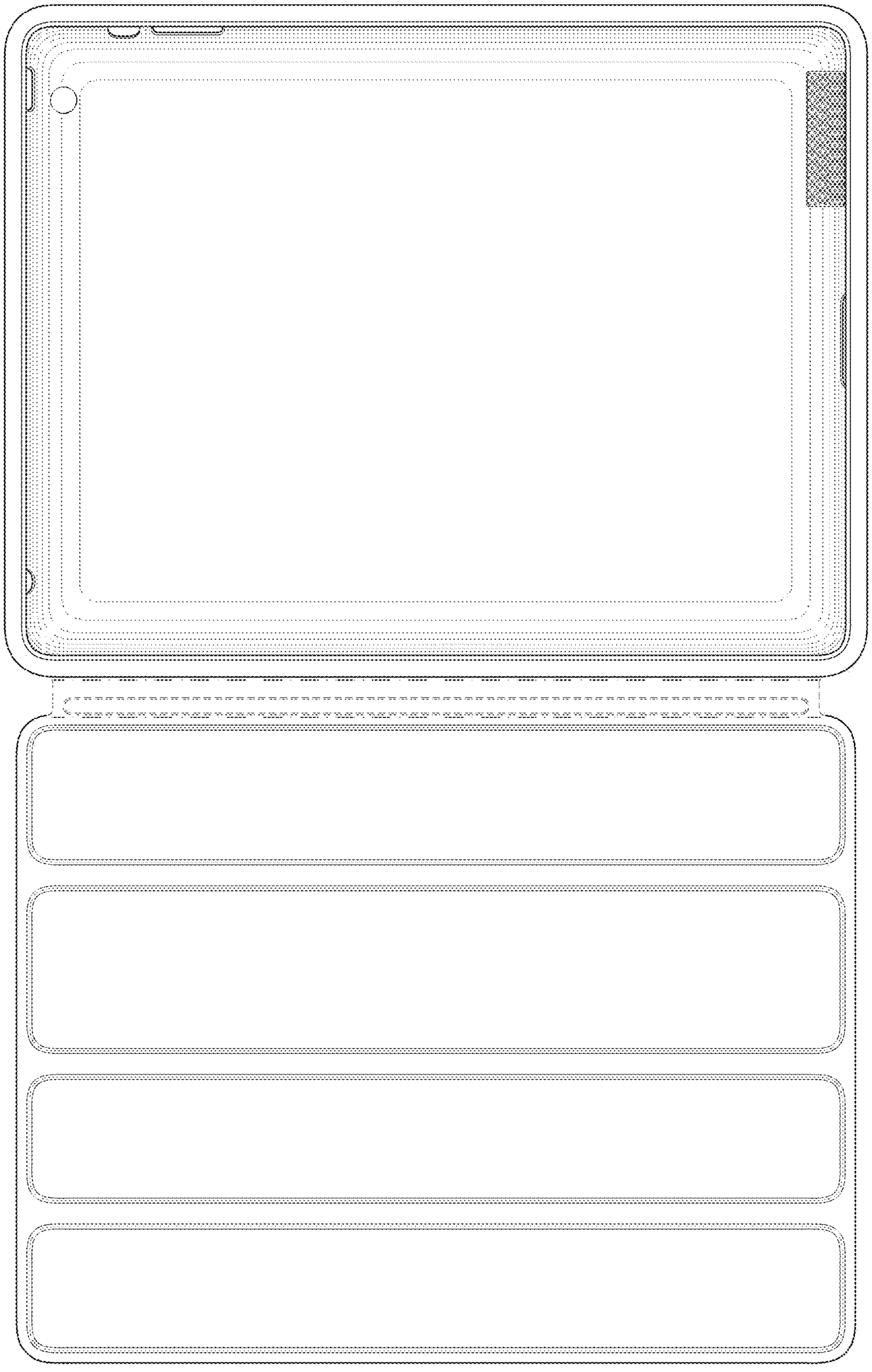


FIG. 2



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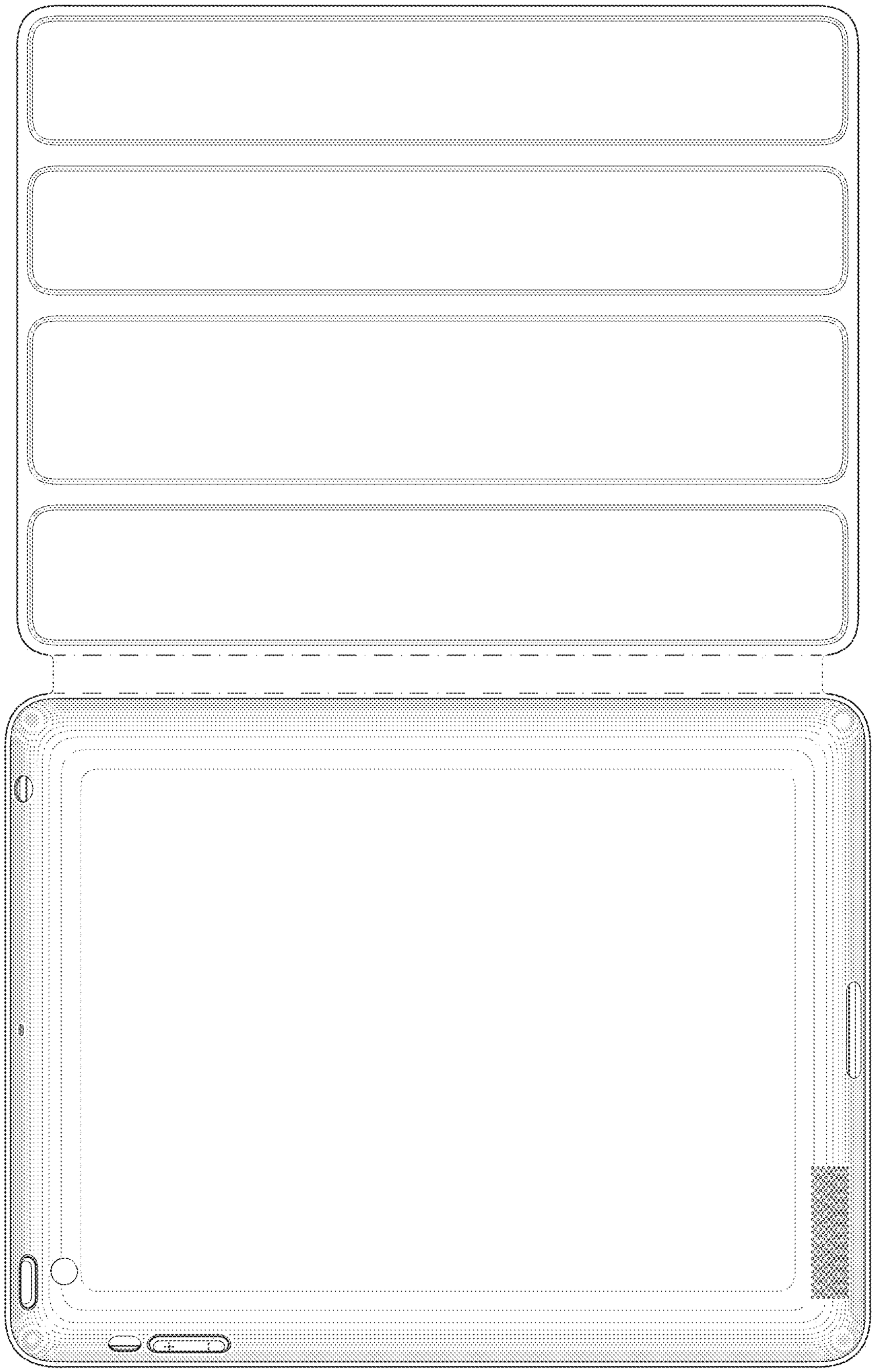
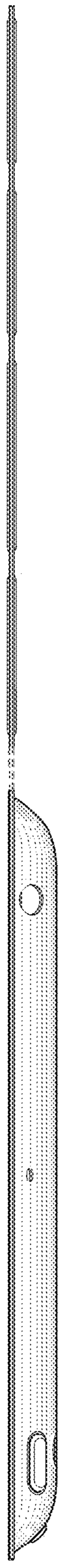


FIG. 4

FIG. 5



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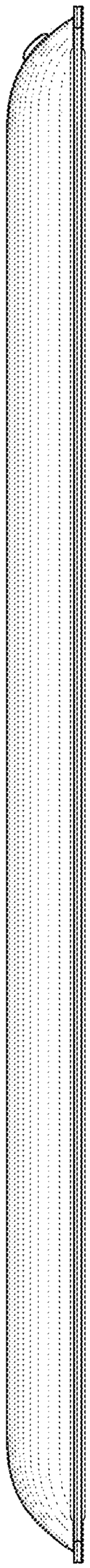

FIG. 7

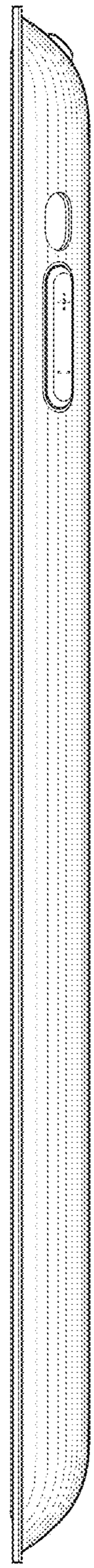

FIG. 8

FIG. 9

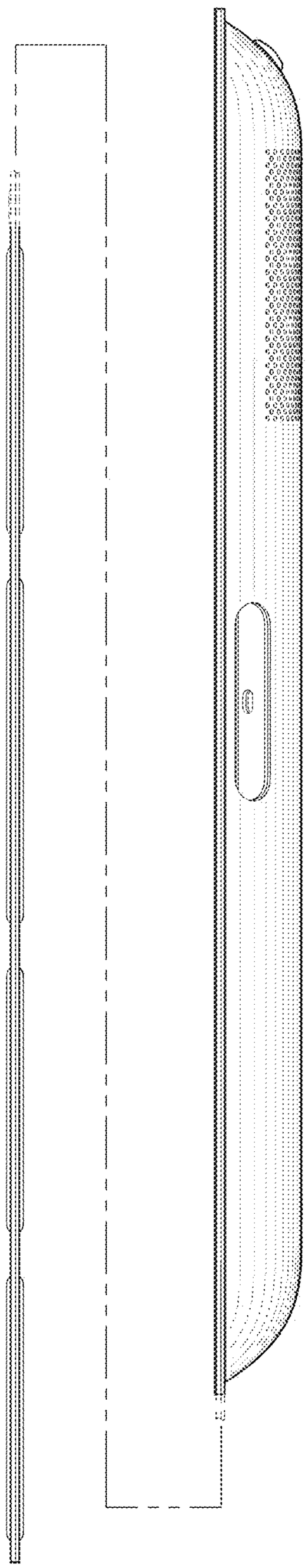

FIG. 10

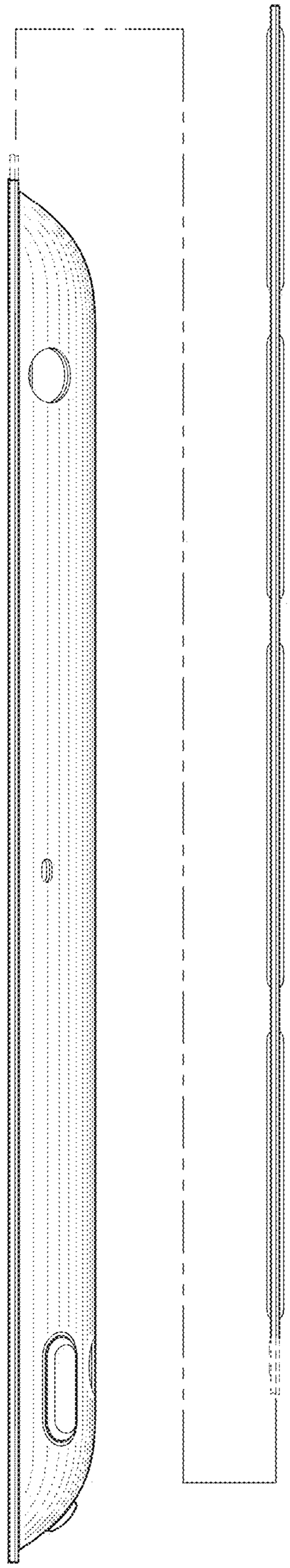

FIG. 11