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Cryan

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(54) **TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION (TENS) DEVICE**

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(**) Term: **15 Years**
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(51) **LOC (13) Cl.** **28-03**
(52) **U.S. Cl.**
USPC **D24/200**
(58) **Field of Classification Search**
USPC D24/200, 165, 185–186, 214–215; D14/218
CPC A61N 1/04; A61N 1/0404; A61N 1/0456; A61N 1/06; A61N 1/08; A61N 1/32; A61N 1/36; A61N 1/36003; A61N 1/36014; A61N 1/36017; A61N 1/36021; A61N 1/36057; A61N 1/36071; A61N 1/36128
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,741,962	A		12/1929	Theodoropulos
D263,869	S		4/1982	Sumiyasu
4,989,605	A		2/1991	Rossen
5,048,523	A		9/1991	Yamasawa et al.
D323,561	S	*	1/1992	Bartelt D24/200

(Continued)

OTHER PUBLICATIONS

Amazon, "Quell 2.0 Wearable Pain Relief Technology", Sep. 15, 2018, http://www.amazon/com/Quell-Wearable-Pain-Relief-Technology/dp/B07DHW2MJJ/ref=cm_cr_arp_d_product_top? ie=UTF8.

(Continued)

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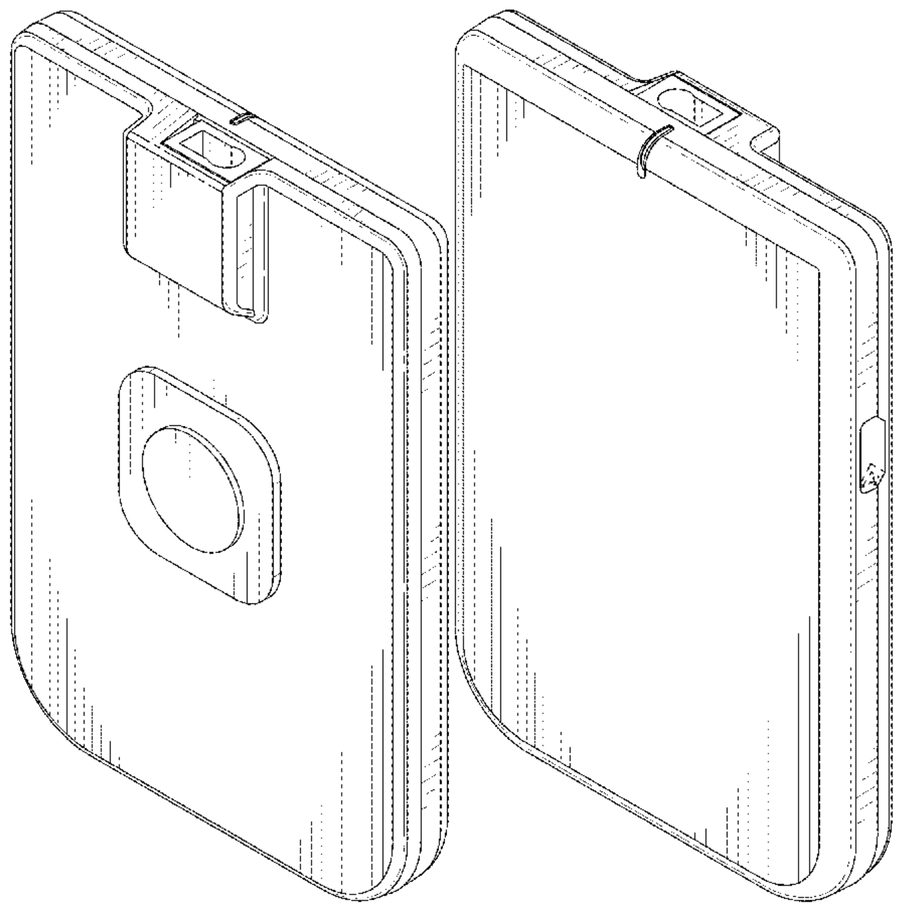
(57) **CLAIM**

The ornamental design for a transcutaneous electrical nerve stimulation (TENS) device, as shown and described.

DESCRIPTION

FIG. **1** is a front perspective view of the transcutaneous electrical nerve stimulation (TENS) device;
FIG. **2** is a rear perspective view of the transcutaneous electrical nerve stimulation (TENS) device;
FIG. **3** is a front view of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. **1**;
FIG. **4** is a rear view of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. **1**;
FIG. **5** is a side view, in elevation, of the left side of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. **1**;
FIG. **6** is a side view, in elevation, of the right side of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. **1**;
FIG. **7** is an end view, in elevation, of the top end of transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. **1**; and,
FIG. **8** is an end view, in elevation, of the bottom end of the transcutaneous electrical nerve stimulation (TENS) device, taken from the frame of reference of FIG. **1**.
The broken lines are included for the purpose of illustrating unclaimed portions of the transcutaneous electrical nerve stimulation (TENS) device and form no part of the claimed design.

1 Claim, 8 Drawing Sheets



(56) **References Cited**

U.S. PATENT DOCUMENTS

D342,571	S		12/1993	Givens, Sr.
D346,029	S		4/1994	Shalvi
5,429,589	A		7/1995	Cartmell et al.
D411,887	S		7/1999	Agarwala
6,099,488	A		8/2000	Hung
6,132,387	A		10/2000	Gozani et al.
D443,362	S		6/2001	Storp
D450,313	S		11/2001	Koinuma
D462,772	S		9/2002	Lamping et al.
D484,984	S		1/2004	Takizawa et al.
D534,871	S		1/2007	Larsen
D541,042	S		4/2007	Andre et al.
D547,454	S		7/2007	Hsieh
D566,383	S		4/2008	Harris et al.
D584,414	S		1/2009	Lash et al.
D592,200	S		5/2009	Liu
D598,556	S		8/2009	Chen
D600,352	S		9/2009	Cryan
D607,198	S		1/2010	Andre et al.
D609,353	S		2/2010	Cryan
D611,611	S		3/2010	Sachi et al.
D615,526	S		5/2010	Andre et al.
D625,016	S		10/2010	Potts et al.
D625,829	S		10/2010	Arbesman et al.
D629,115	S		12/2010	Robertson
D636,881	S		4/2011	Clemens et al.
D637,988	S		5/2011	Jinkinson
D658,302	S		4/2012	Nixon
D677,792	S		3/2013	Vandiver
D680,735	S		4/2013	Itabashi et al.
D687,951	S		8/2013	Della Torre et al.
D688,707	S		8/2013	Vincent et al.
D704,848	S		5/2014	Thomas et al.
D705,428	S		5/2014	Cheney et al.
D712,045	S		8/2014	Thornton
D712,052	S		8/2014	Thomas et al.
D713,049	S		9/2014	Shah
D716,457	S		10/2014	Brefka et al.
D716,963	S		11/2014	Yosef et al.
D732,682	S		6/2015	Porat
D735,873	S		8/2015	Brefka et al.
D744,661	S		12/2015	Rizzi
D745,975	S		12/2015	Igaue et al.
D750,263	S		2/2016	Shigeno et al.
D750,798	S		3/2016	Yosef et al.
D754,355	S		4/2016	Ganapathy et al.
D754,973	S		5/2016	Danze et al.
D757,292	S		5/2016	Chen
D758,605	S		6/2016	Chen
D758,606	S		6/2016	Chen
D759,262	S		6/2016	Chen
D759,263	S		6/2016	Chen
D759,958	S		6/2016	Requa
D762,628	S		8/2016	Yoon et al.
D762,872	S		8/2016	Chen
D767,775	S		9/2016	Gilmer et al.
D774,654	S		12/2016	Anderson
D775,361	S		12/2016	Vosch et al.
D778,453	S		2/2017	Knaus et al.
D779,677	S		2/2017	Chen
9,561,397	B2		2/2017	Zaki
D784,544	S		4/2017	Dudkiewicz et al.
D784,546	S		4/2017	Gordon
D784,946	S		4/2017	Jun et al.
D788,056	S		5/2017	Choi et al.
D789,546	S		6/2017	Matfus et al.
D789,547	S		6/2017	Matfus et al.
D791,333	S		7/2017	Wilson
D792,363	S		7/2017	Kim et al.
D794,331	S		8/2017	Grote
D798,170	S		9/2017	Toth et al.
D801,542	S		10/2017	Anderson
D802,780	S		11/2017	Hsu
D806,669	S		1/2018	Kangasmaa et al.
D810,311	S		2/2018	Chen
D810,843	S		2/2018	Karvandi
D810,952	S		2/2018	Hsu
D811,729	S		3/2018	Bysshe
D813,405	S	*	3/2018	Ho D24/200
D813,407	S		3/2018	Chen
D813,408	S		3/2018	Chen
D821,592	S	*	6/2018	Pham D24/200
D828,569	S		9/2018	Mercuro
D829,182	S		9/2018	Li
10,076,662	B2		9/2018	Tuan
D830,565	S		10/2018	Xu
D831,017	S		10/2018	Choe et al.
D831,221	S		10/2018	Smith
D831,335	S		10/2018	Crease
D832,230	S		10/2018	Lee et al.
D834,719	S		11/2018	Theriot et al.
D836,788	S		12/2018	Peng
D837,394	S		1/2019	Cryan et al.
D857,910	S		8/2019	Cryan et al.
D861,903	S		10/2019	Cryan et al.
D861,904	S	*	10/2019	Ho D24/200
D862,716	S	*	10/2019	Cryan D24/200
D865,986	S		11/2019	Cryan et al.
D879,983	S	*	3/2020	Wang D24/200
2006/0089683	A1	*	4/2006	Hagglof A61N 1/36021 607/48
2011/0066209	A1		3/2011	Bodlaender et al.
2013/0158627	A1		6/2013	Gozani et al.
2013/0197341	A1		8/2013	Grob et al.
2013/0317333	A1		11/2013	Yang et al.
2014/0206976	A1		7/2014	Thompson et al.
2014/0221797	A1		8/2014	Bailey et al.
2014/0309709	A1		10/2014	Gozani et al.
2015/0174402	A1		6/2015	Thomas et al.
2015/0238094	A1		8/2015	Lai et al.
2017/0188872	A1		7/2017	Hughes et al.
2017/0209693	A1		7/2017	An et al.
2017/0224990	A1		8/2017	Goldwasser et al.
2017/0368345	A1		12/2017	Kong et al.
2018/0177996	A1		6/2018	Gozani et al.

OTHER PUBLICATIONS

Amazon, "Quell Wearable Pain Relief Technology Starter Kit", Oct. 18, 2017, http://www.amazon.com/Quell-Wearable-ReliefTechnology-Starter/dp/B075YVCLZT/ref=cm_cr_arp_d_product_top?ie=UTF8.

* cited by examiner

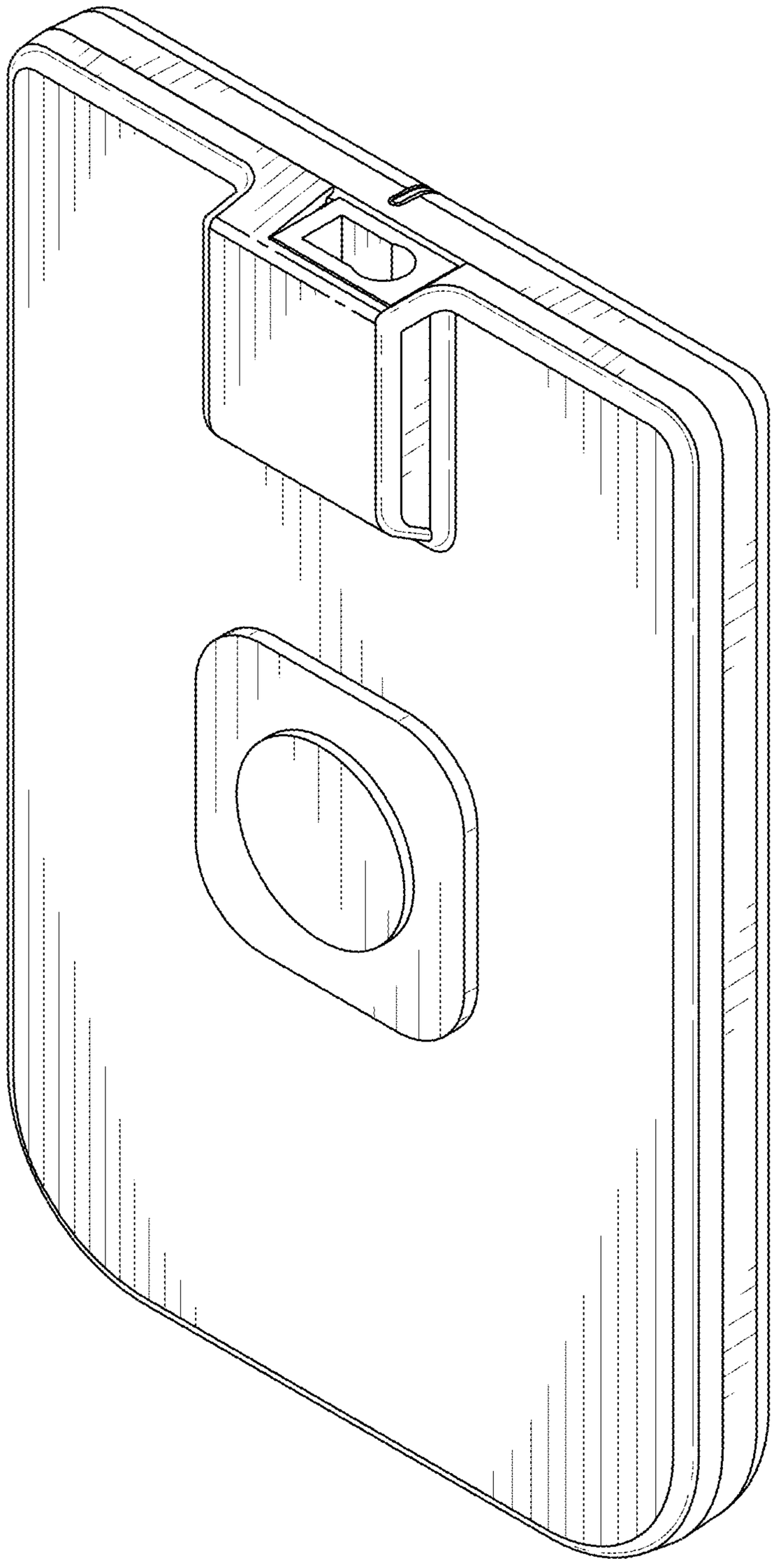


FIG. 1

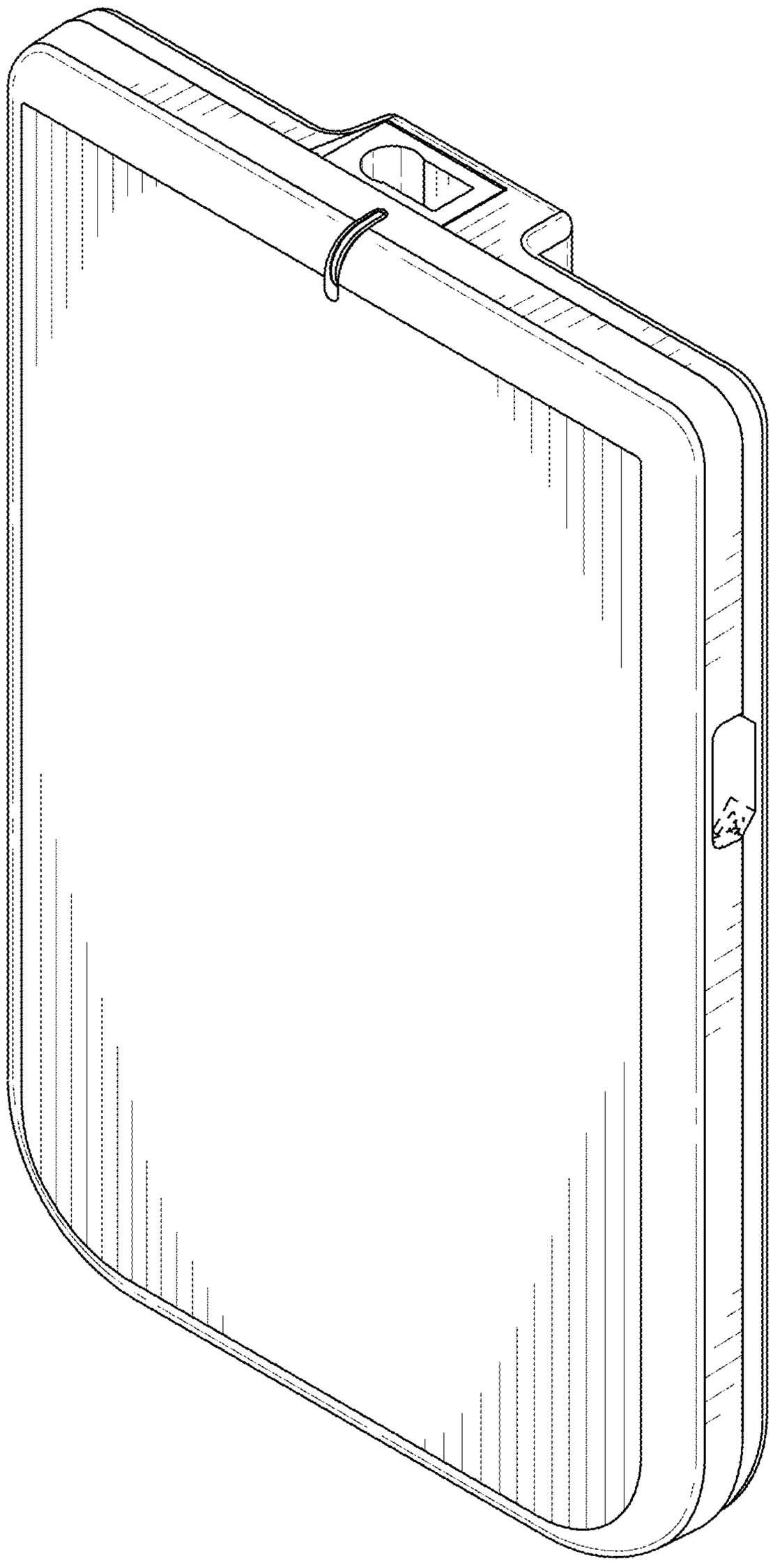


FIG. 2

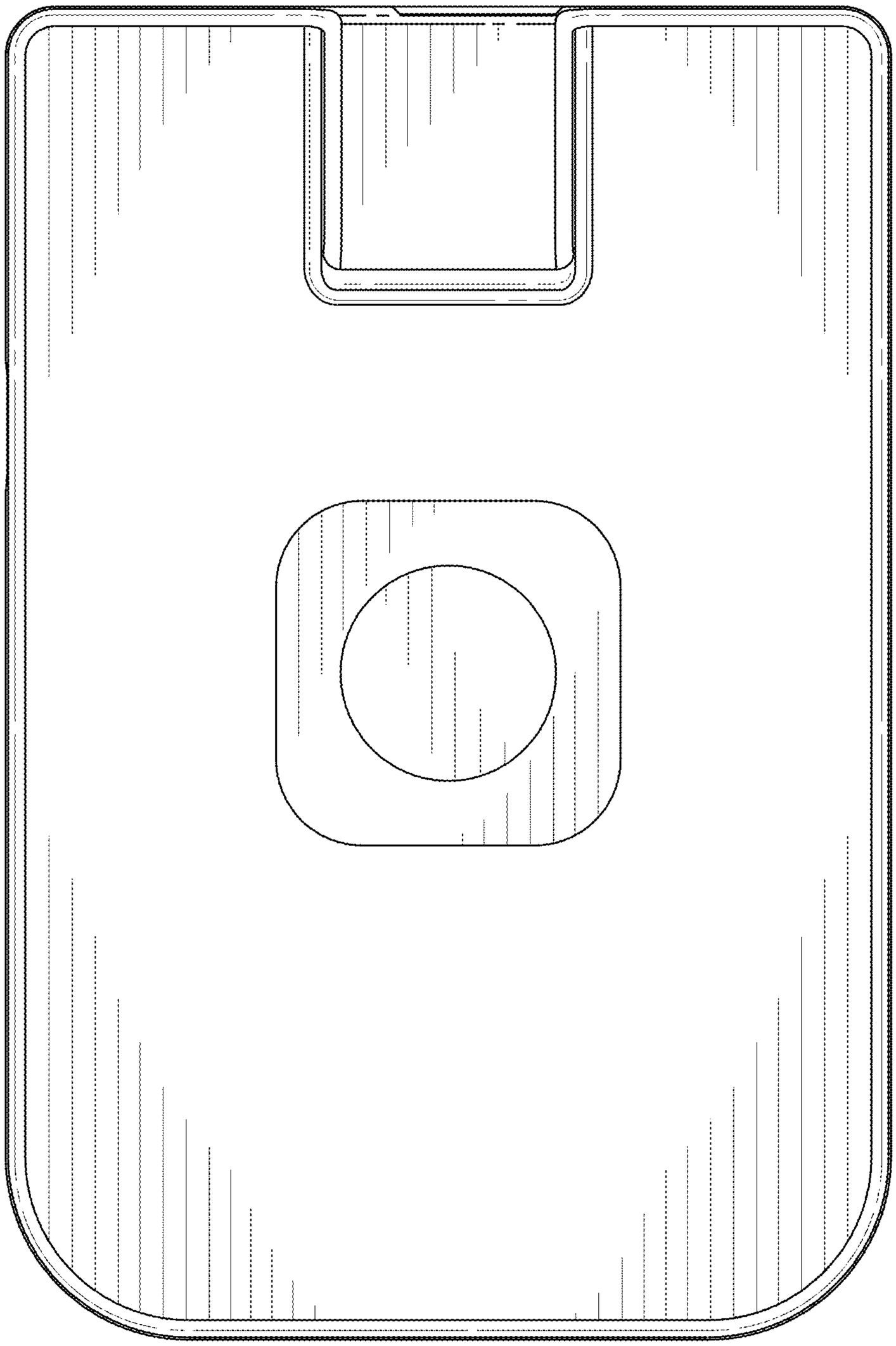


FIG. 3

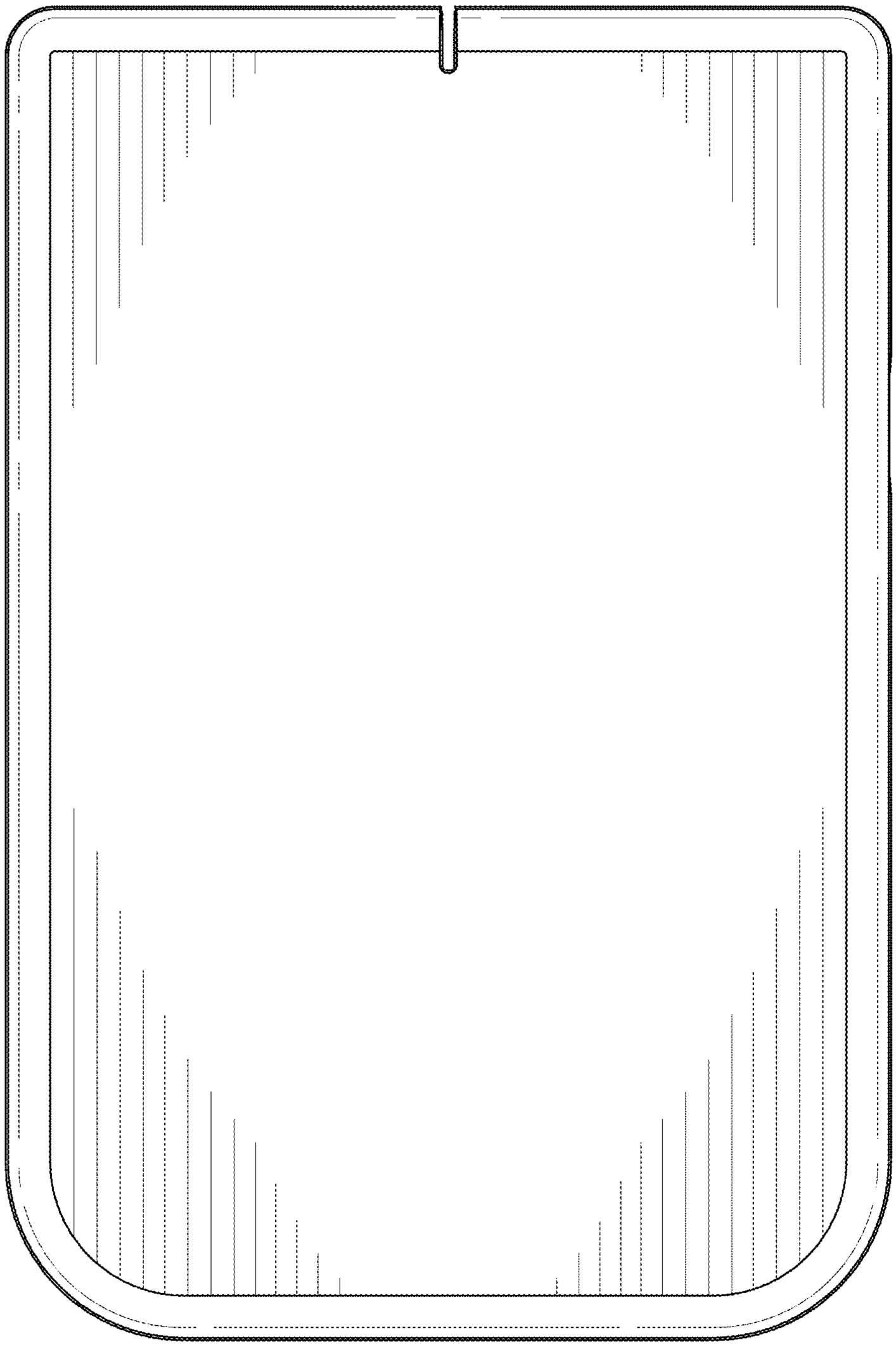


FIG. 4

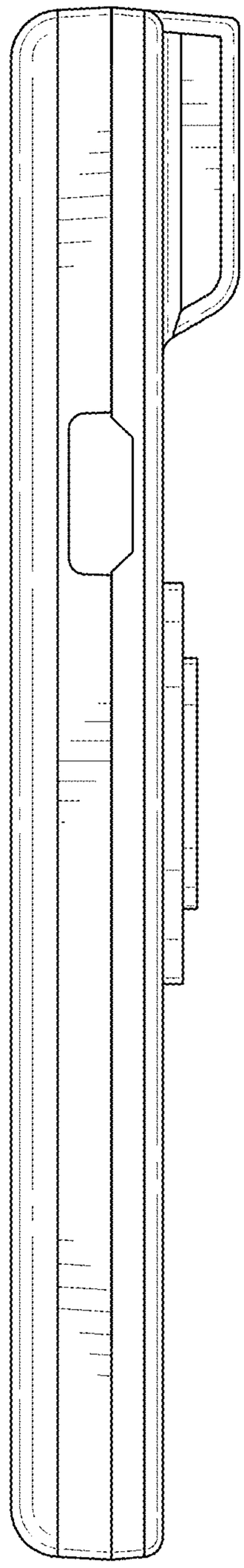


FIG. 5

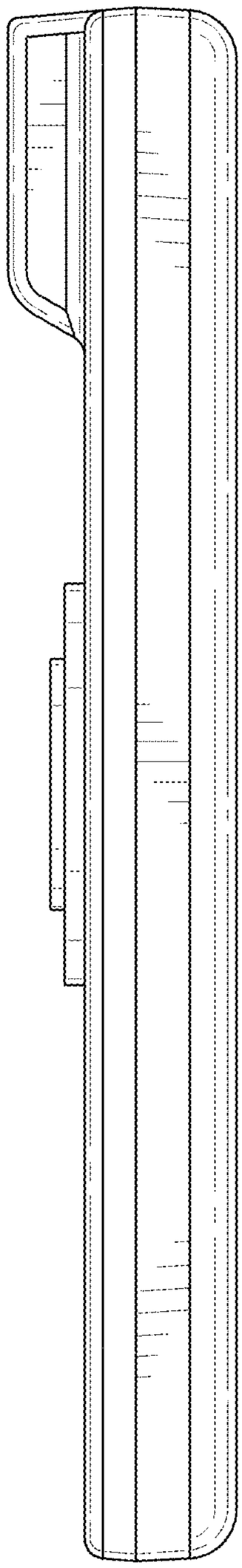


FIG. 6

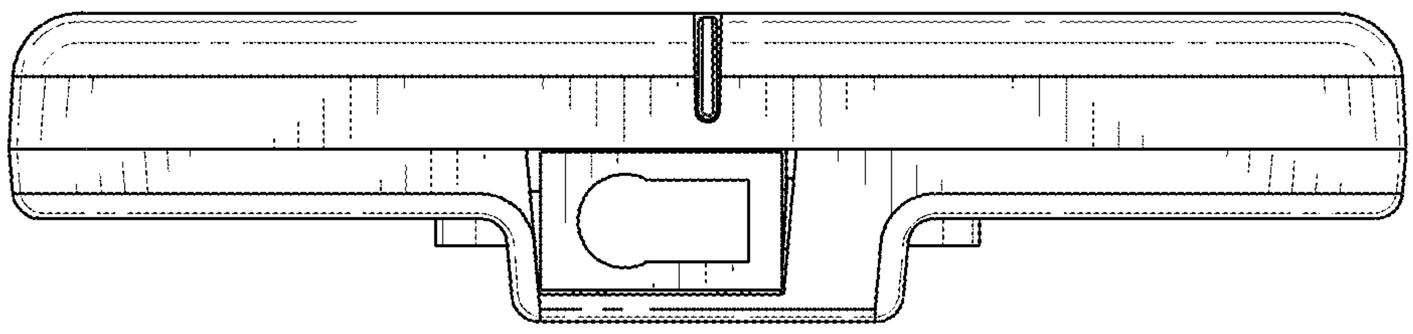


FIG. 7

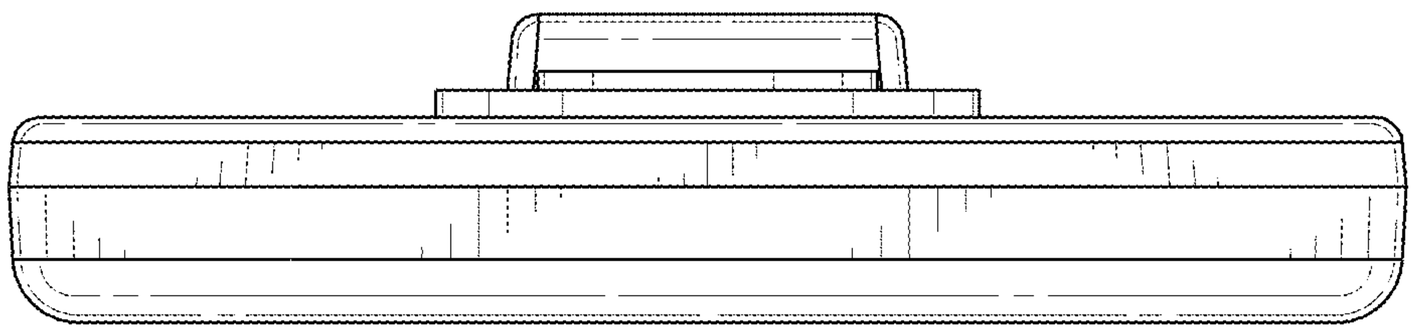


FIG. 8