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(12) **United States Design Patent** (10) **Patent No.:** **US D963,277 S**  
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(54) **WASTE RECEPTACLE**  
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1,922,729 A 8/1933 Geibel  
1,980,938 A 11/1934 Geibel  
2,046,777 A 7/1936 Geibel  
2,308,326 A 1/1943 Ambrose  
D148,825 S 2/1948 Snider  
2,457,274 A 12/1948 Rifken

(Continued)

FOREIGN PATENT DOCUMENTS

AU 622536 4/1992  
AU 365296 11/2015

(Continued)

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OTHER PUBLICATIONS

U.S. Appl. No. 13/040,770, filed Mar. 4, 2011, Yang et al.

(Continued)

(\*\*) Term: **15 Years**

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(21) Appl. No.: **29/747,968**

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(52) **U.S. Cl.**  
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(58) **Field of Classification Search**  
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B65D 21/0209; B65D 2543/00194  
See application file for complete search history.

(57) **CLAIM**

The ornamental design for a waste receptacle, as shown and described.

**DESCRIPTION**

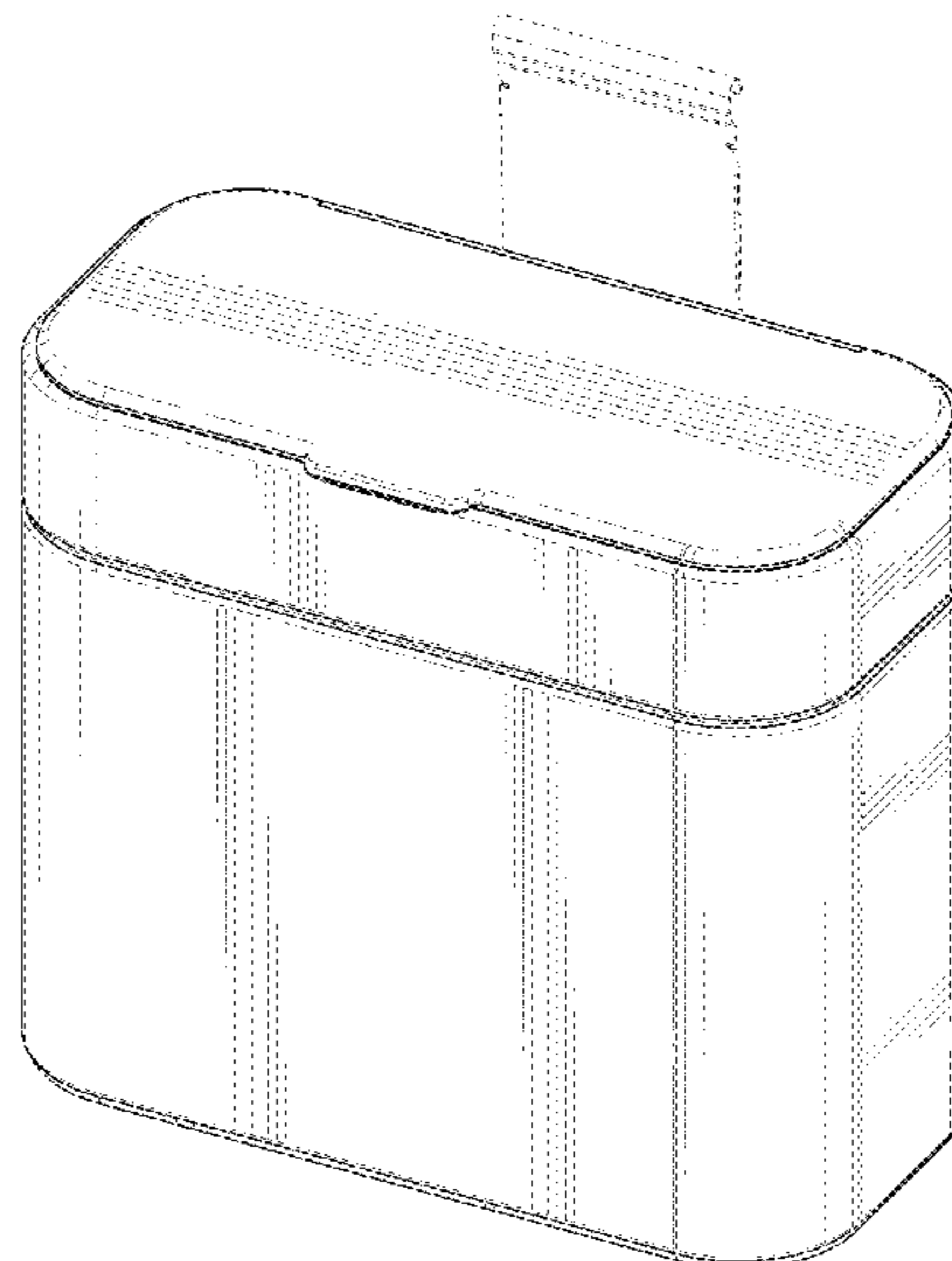
FIG. 1 is a top, front, left-side perspective view of a waste receptacle embodying our design;  
FIG. 2 is a bottom, rear, right-side perspective view thereof;  
FIG. 3 is a front elevation view thereof;  
FIG. 4 is a rear elevation view thereof;  
FIG. 5 is a right-side elevation view thereof;  
FIG. 6 is a left-side elevation view thereof;  
FIG. 7 is a top plan view thereof; and,  
FIG. 8 is a bottom plan view thereof.  
The broken lines in the figures show portions of the waste receptacle, which form no part of the claimed design.

(56) **References Cited**

U.S. PATENT DOCUMENTS

830,182 A 9/1906 Skov  
1,426,211 A 8/1922 Pausin  
1,461,253 A 7/1923 Owen  
1,754,802 A 4/1930 Raster  
1,820,555 A 8/1931 Buschman  
1,891,651 A 12/1932 Padelford et al.

**1 Claim, 7 Drawing Sheets**



(56)

## References Cited

## U.S. PATENT DOCUMENTS

2,593,455 A	4/1952	James	5,065,891 A	11/1991	Casey
2,759,625 A	8/1956	Ritter	D322,350 S	12/1991	Craft, Jr. et al.
2,796,309 A	6/1957	Taylor	5,076,462 A	12/1991	Perrone
2,888,307 A	5/1959	Graves et al.	D323,573 S	1/1992	Schneider
2,946,474 A	7/1960	Knapp	5,090,585 A	2/1992	Power
3,008,604 A	11/1961	Garner	5,090,785 A	2/1992	Stamp
3,023,922 A	3/1962	Arrington et al.	5,100,087 A	3/1992	Ashby
3,137,408 A	6/1964	Taylor	5,111,958 A	5/1992	Witthoeft
3,300,082 A	1/1967	Patterson	D327,760 S	7/1992	Donnelly
3,392,825 A	7/1968	Gale et al.	D329,929 S	9/1992	Knoedler et al.
3,451,453 A	6/1969	Heck	5,147,055 A	9/1992	Samson et al.
3,654,534 A	4/1972	Fischer	5,156,290 A	10/1992	Rodrigues
3,800,503 A	4/1974	Maki	D331,097 S	11/1992	Sieren
3,820,200 A	6/1974	Myers	5,170,904 A	12/1992	Neuhaus
3,825,150 A	7/1974	Taylor	5,174,462 A	12/1992	Hames
3,825,215 A	7/1974	Borglum	D332,852 S	1/1993	Delmerico
3,886,425 A	5/1975	Weiss	D335,562 S	5/1993	Evans
3,888,406 A	6/1975	Nippes	5,213,272 A	5/1993	Gallagher et al.
3,891,115 A	6/1975	Ono	5,222,704 A	6/1993	Light
4,014,457 A	3/1977	Hodge	D337,181 S	7/1993	Warman
4,027,774 A	6/1977	Cote	5,226,558 A	7/1993	Whitney et al.
4,081,105 A	3/1978	Dagonnet et al.	5,230,525 A	7/1993	Delmerico et al.
4,189,808 A	2/1980	Brown	5,242,074 A	9/1993	Conaway et al.
4,200,197 A	4/1980	Meyer et al.	D340,333 S	10/1993	Duran et al.
4,217,616 A	8/1980	Jessup	5,249,693 A	10/1993	Gillispie et al.
4,303,174 A	12/1981	Anderson	5,261,553 A	11/1993	Mueller et al.
4,320,851 A	3/1982	Montoya	5,265,511 A	11/1993	Itzov
4,349,123 A	9/1982	Yang	5,295,607 A	3/1994	Chang
4,357,740 A	11/1982	Brown	5,305,916 A	4/1994	Suzuki et al.
4,416,197 A	11/1983	Kehl	5,314,151 A	5/1994	Carter-Mann
4,417,669 A	11/1983	Knowles et al.	5,322,179 A	6/1994	Ting
4,457,483 A	7/1984	Gagne	5,329,212 A	7/1994	Feigleson
4,535,911 A	8/1985	Goulter	5,337,581 A	8/1994	Lott
4,570,304 A	2/1986	Montreuil et al.	5,348,222 A	9/1994	Patey
4,576,310 A	3/1986	Isgar et al.	5,353,950 A	10/1994	Taylor et al.
D284,320 S	6/1986	Kubic et al.	5,372,272 A	12/1994	Jennings
4,609,117 A	9/1986	Pamment	5,381,588 A	1/1995	Nelson
4,630,332 A	12/1986	Bisbing	5,385,258 A	1/1995	Sutherlin
4,630,752 A	12/1986	DeMars	5,390,818 A	2/1995	LaBuda
4,664,347 A	5/1987	Brown et al.	5,404,621 A	4/1995	Heinke
4,697,312 A	10/1987	Freyer	5,407,089 A	4/1995	Bird et al.
4,711,161 A	12/1987	Swin et al.	5,419,452 A	5/1995	Mueller et al.
4,729,490 A	3/1988	Ziegenbein	5,471,708 A	12/1995	Lynch
4,753,367 A	6/1988	Miller et al.	5,474,201 A	12/1995	Liu
4,763,808 A	8/1988	Guhl et al.	5,501,358 A	3/1996	Hobday
4,765,548 A	8/1988	Sing	D368,563 S	4/1996	Brightbill et al.
4,765,579 A	8/1988	Robbins, III et al.	5,520,067 A	5/1996	Gaba
4,785,964 A	11/1988	Miller et al.	5,520,303 A	5/1996	Bernstein et al.
4,792,039 A	12/1988	Dayton	5,527,840 A	6/1996	Chutko et al.
4,794,973 A	1/1989	Perisic	5,531,348 A	7/1996	Baker et al.
4,813,592 A	3/1989	Stolzman	5,535,913 A	7/1996	Asbach et al.
4,823,979 A	4/1989	Clark, Jr.	5,558,254 A	9/1996	Anderson et al.
4,834,260 A	5/1989	Auten	5,560,283 A	10/1996	Hannig
4,863,053 A	9/1989	Oberg	5,584,412 A	12/1996	Wang
4,867,339 A	9/1989	Hahn	D377,554 S	1/1997	Adriaansen
4,869,391 A	9/1989	Farrington	5,611,507 A	3/1997	Smith
4,884,717 A	12/1989	Bussard et al.	5,628,424 A	5/1997	Gola
4,888,532 A	12/1989	Josson	5,632,401 A	5/1997	Hurd
4,892,223 A	1/1990	DeMent	5,636,416 A	6/1997	Anderson
4,892,224 A	1/1990	Graham	5,636,761 A	6/1997	Diamond et al.
D307,344 S	4/1990	Massonnet	5,644,111 A	7/1997	Cerny et al.
4,913,308 A	4/1990	Culbertson	5,645,186 A	7/1997	Powers et al.
4,915,347 A	4/1990	Iqbal et al.	5,650,680 A	7/1997	Chula
4,918,568 A	4/1990	Stone et al.	D383,277 S	9/1997	Peters
D308,272 S	5/1990	Koepsell	5,662,235 A	9/1997	Nieto
4,923,087 A	5/1990	Burrows	5,671,847 A	9/1997	Pedersen et al.
4,944,419 A	7/1990	Chandler	5,690,247 A	11/1997	Boover
4,948,004 A	8/1990	Chich	5,695,088 A	12/1997	Kasbohm
4,964,523 A	10/1990	Bieltvedt et al.	5,699,929 A	12/1997	Ouno
4,972,966 A	11/1990	Craft, Jr.	D388,922 S	1/1998	Peters
4,996,467 A	2/1991	Day	D389,631 S	1/1998	Peters
5,031,793 A	7/1991	Chen et al.	5,704,511 A	1/1998	Kellams
5,048,903 A	9/1991	Loblein	5,724,837 A	3/1998	Shin
5,054,724 A	10/1991	Hutcheson	5,730,312 A	3/1998	Hung
5,065,272 A	11/1991	Owen et al.	5,732,845 A	3/1998	Armaly, Jr.
			5,735,495 A	4/1998	Kubota
			5,738,239 A	4/1998	Triglia
			5,770,935 A	6/1998	Smith et al.
			5,799,909 A	9/1998	Ziegler



(56)

## References Cited

## U.S. PATENT DOCUMENTS

5,816,431	A	10/1998	Giannopoulos	D503,021	S	3/2005	Yang et al.
5,816,640	A	10/1998	Nishimura	D503,022	S	3/2005	Lai
D401,028	S	11/1998	Ahern, Jr. et al.	D503,502	S	3/2005	Lai
D401,383	S	11/1998	Gish	6,866,826	B2	3/2005	Moore et al.
D401,719	S	11/1998	Van Leeuwen et al.	6,883,676	B2	4/2005	Lin
5,873,643	A	2/1999	Burgess, Jr. et al.	D507,090	S	7/2005	Yang et al.
5,881,896	A	3/1999	Presnell et al.	6,920,994	B2	7/2005	Lin
5,881,901	A	3/1999	Hampton	D509,339	S	9/2005	Lin
5,884,237	A	3/1999	Kanki et al.	6,974,948	B1	12/2005	Brent
5,887,748	A	3/1999	Nguyen	D513,445	S	1/2006	Lin
D412,552	S	8/1999	Burrows	6,981,606	B2	1/2006	Yang et al.
5,961,105	A	10/1999	Ehrnsberger et al.	D517,764	S	3/2006	Wang
5,967,355	A	10/1999	Ragot	D517,767	S	3/2006	Yang et al.
5,967,392	A	10/1999	Niemi et al.	D518,266	S	3/2006	Yang et al.
5,987,708	A	11/1999	Newton	7,017,773	B2	3/2006	Gruber et al.
6,000,569	A	12/1999	Liu	D522,203	S	5/2006	Lin
6,010,024	A	1/2000	Wang	D522,204	S	5/2006	Lin
6,024,238	A	2/2000	Jaros	7,044,323	B2	5/2006	Yang
6,036,050	A	3/2000	Ruane	D522,704	S	6/2006	Lin
6,102,239	A	8/2000	Wien	D524,504	S	7/2006	Lin
6,105,859	A	8/2000	Stafford	D525,756	S	7/2006	Yang et al.
6,123,215	A	9/2000	Windle	7,073,677	B2	7/2006	Richardson et al.
D431,700	S	10/2000	Roudebush	7,077,283	B2	7/2006	Yang et al.
6,126,031	A	10/2000	Reason	7,080,750	B2	7/2006	Wein et al.
6,129,233	A	10/2000	Schiller	D526,457	S	8/2006	Lin
6,131,861	A	10/2000	Fortier, Jr. et al.	D526,458	S	8/2006	Lin
D435,951	S	1/2001	Yang et al.	D526,756	S	8/2006	Lin
6,209,744	B1	4/2001	Gill	7,086,550	B2	8/2006	Yang et al.
6,211,637	B1	4/2001	Studer	D528,726	S	9/2006	Lin
6,234,339	B1	5/2001	Thomas	D530,476	S	10/2006	Lin
6,250,492	B1	6/2001	Verbeek	D530,874	S	10/2006	Lin
D445,980	S	7/2001	Tjugum	7,121,421	B2	10/2006	Yang et al.
6,286,706	B1	9/2001	Tucker	D531,499	S	11/2006	Zaidman
6,328,320	B1	12/2001	Walski et al.	D535,450	S	1/2007	Chen
6,345,725	B1	2/2002	Lin	D535,799	S	1/2007	Epps
6,364,147	B1	4/2002	Meinzinger et al.	D535,800	S	1/2007	Yang et al.
6,386,386	B1	5/2002	George	7,163,591	B2	1/2007	Kim et al.
6,390,321	B1	5/2002	Wang	7,168,591	B1	1/2007	Miller
6,401,958	B1	6/2002	Foss et al.	D537,223	S	2/2007	Lin
D466,667	S	12/2002	Lin	D537,597	S	2/2007	Bolden
6,519,130	B1	2/2003	Breslow	D537,599	S	2/2007	Lin
6,557,716	B1	5/2003	Chan	D537,601	S	2/2007	Lin
D476,456	S	6/2003	Englert et al.	D537,999	S	3/2007	Lin
D476,457	S	6/2003	Verbeek	D538,995	S	3/2007	Lin
6,596,983	B2	7/2003	Brent	D539,498	S	3/2007	Yang et al.
D480,193	S	9/2003	Wang	D539,499	S	3/2007	Yang et al.
6,612,099	B2	9/2003	Stravitz	D540,001	S	4/2007	Zimmerman
6,626,316	B2	9/2003	Yang	D542,001	S	5/2007	Yang et al.
6,626,317	B2	9/2003	Pfiefer et al.	D542,995	S	5/2007	Lin
D481,508	S	10/2003	Wang	D543,673	S	5/2007	Yang et al.
6,632,064	B1	10/2003	Walker et al.	D544,170	S	6/2007	Lin
D481,846	S	11/2003	Lin	D544,171	S	6/2007	Lin
D482,169	S	11/2003	Lin	D544,671	S	6/2007	Saunders et al.
6,659,407	B2	12/2003	Asaro	D545,024	S	6/2007	Liao
6,681,950	B2	1/2004	Miller, Jr. et al.	7,225,943	B2	6/2007	Yang et al.
6,701,832	B1	3/2004	Hawkins	D547,020	S	7/2007	Chen
D488,604	S	4/2004	Yang et al.	7,243,811	B1	7/2007	Ramsey
D488,903	S	4/2004	Yang et al.	D550,918	S	9/2007	Wang et al.
D489,503	S	5/2004	Lin	D552,319	S	10/2007	Gusdorf
D489,855	S	5/2004	Tseng	D552,321	S	10/2007	Yang et al.
D489,857	S	5/2004	Yang et al.	D552,823	S	10/2007	Yang et al.
D490,583	S	5/2004	Yang et al.	D552,824	S	10/2007	Zimmerman
D490,954	S	6/2004	Brand	D552,825	S	10/2007	Yang et al.
D491,706	S	6/2004	Yang et al.	D555,320	S	11/2007	Yang et al.
6,758,366	B2	7/2004	Bourgund et al.	D557,869	S	12/2007	Hawker et al.
D493,930	S	8/2004	Wang	D559,494	S	1/2008	Yang et al.
D494,723	S	8/2004	Lin	D559,495	S	1/2008	Yang et al.
6,774,586	B1	8/2004	Shih	D562,522	S	2/2008	Daams
6,785,912	B1	9/2004	Julio	7,328,842	B2	2/2008	Wagner et al.
6,812,655	B1	11/2004	Wang et al.	D564,169	S	3/2008	Wang
6,814,249	B2	11/2004	Lin	D564,723	S	3/2008	Yang et al.
D499,450	S	12/2004	Goodman et al.	D566,367	S	4/2008	Lin
6,837,393	B1	1/2005	Kuo	D566,369	S	4/2008	Shek
6,857,538	B2	2/2005	Lin	D566,923	S	4/2008	Lin
6,859,005	B2	2/2005	Boliver	D567,468	S	4/2008	Yang et al.
				D568,572	S	5/2008	Yang et al.
				D569,720	S	5/2008	Lablaine
				7,374,060	B2	5/2008	Yang et al.
				D571,520	S	6/2008	Lin



(56)

## References Cited

## U.S. PATENT DOCUMENTS

D574,119	S	7/2008	Sofy	D644,807	S	9/2011	Yang et al.
7,395,990	B1	7/2008	Stevens	D649,728	S	11/2011	Campbell
7,398,913	B2	7/2008	McClure	8,074,833	B2	12/2011	Yang et al.
7,404,499	B1	7/2008	Ramsey	8,096,445	B2	1/2012	Yang et al.
D574,569	S	8/2008	Yang et al.	D655,061	S	2/2012	Scaturro
D576,371	S	9/2008	Zimmerman	8,136,688	B2	3/2012	Lee et al.
D578,265	S	10/2008	Presnell	D657,108	S	4/2012	Yang et al.
D578,266	S	10/2008	Yang et al.	D657,109	S	4/2012	Liao
D578,268	S	10/2008	Yang et al.	8,297,470	B2	10/2012	Yang et al.
D578,722	S	10/2008	Yang et al.	8,317,055	B2	11/2012	Zawrotny et al.
7,438,199	B1	10/2008	Tidrick	D672,520	S	12/2012	Yang et al.
D580,120	S	11/2008	Lin	D673,750	S	1/2013	Quan
D580,613	S	11/2008	Yang et al.	D675,802	S	2/2013	Yang et al.
D580,615	S	11/2008	Yang et al.	D675,803	S	2/2013	Yang et al.
D581,622	S	11/2008	Presnell et al.	8,393,489	B1	3/2013	Stravitz
D582,121	S	12/2008	Wang et al.	8,418,869	B2	4/2013	Yang et al.
D584,470	S	1/2009	Bizzell et al.	D684,741	S	6/2013	Harris
D585,171	S	1/2009	Bizzell et al.	D689,255	S	9/2013	Sun Ting Kung et al.
D585,172	S	1/2009	Lin	8,567,630	B2	10/2013	Yang et al.
D585,618	S	1/2009	Yang et al.	8,569,980	B2	10/2013	Yang et al.
D586,065	S	2/2009	Lin	8,575,537	B2	11/2013	Yao et al.
D586,066	S	2/2009	Lin	8,607,932	B2	12/2013	Cooper et al.
D586,069	S	2/2009	Lin	8,672,171	B2	3/2014	Wynn et al.
D586,070	S	2/2009	Lin	8,678,219	B1	3/2014	Wang et al.
7,494,021	B2	2/2009	Yang et al.	8,686,676	B2	4/2014	Yang et al.
D587,874	S	3/2009	Lin	D704,406	S	5/2014	Kern
D588,321	S	3/2009	Schoofs	8,716,969	B2	5/2014	Yang et al.
D589,670	S	3/2009	Smeets	8,720,728	B2	5/2014	Yang et al.
D593,271	S	5/2009	Yang et al.	D709,662	S	7/2014	Yang et al.
7,530,578	B2	5/2009	Niemeyer et al.	8,766,582	B2	7/2014	Yang et al.
7,540,396	B2	6/2009	Yang et al.	8,807,378	B2	8/2014	Kaberna
7,543,716	B2	6/2009	Lin	8,807,379	B1	8/2014	Hammond
D596,820	S	7/2009	Yang et al.	D714,510	S	9/2014	Yang et al.
7,559,433	B2	7/2009	Yang et al.	D715,575	S	10/2014	Williams et al.
D599,074	S	8/2009	Bizzell et al.	D716,015	S	10/2014	van de Leest
D599,971	S	9/2009	Lin	8,851,316	B2	10/2014	Barrett et al.
D603,119	S	10/2009	Yang et al.	8,872,459	B2	10/2014	Yang et al.
7,607,552	B2	10/2009	Efstathiou	D717,012	S	11/2014	Han
D604,472	S	11/2009	Blanks et al.	D717,013	S	11/2014	Han
7,614,519	B2	11/2009	Krauth et al.	D717,014	S	11/2014	Han
7,621,420	B2	11/2009	Bandoh et al.	D717,015	S	11/2014	Han
D608,069	S	1/2010	Schoofs	D719,313	S	12/2014	Kao
7,656,109	B2	2/2010	Yang et al.	D725,860	S	3/2015	Spivey et al.
D611,216	S	3/2010	Yang et al.	D725,861	S	3/2015	Yang et al.
D611,217	S	3/2010	Bizzell et al.	D730,008	S	5/2015	Yang et al.
D611,671	S	3/2010	Yang et al.	9,051,093	B2	6/2015	Yang et al.
7,694,838	B2	4/2010	Yang et al.	D755,461	S	5/2016	Wall
7,703,622	B1	4/2010	Bynoe	D758,686	S	6/2016	Beumer
D615,270	S	5/2010	Yang et al.	D759,934	S	6/2016	Yang et al.
D615,722	S	5/2010	Yang et al.	D762,037	S	7/2016	Chen
7,712,285	B2	5/2010	Stravitz et al.	D765,937	S	9/2016	Chen
7,741,801	B2	6/2010	Fukuizumi	D766,998	S	9/2016	Kao et al.
7,748,556	B2	7/2010	Yang et al.	9,434,538	B2	9/2016	Yang et al.
7,781,995	B2	8/2010	Yang et al.	D770,121	S	10/2016	Chen
D623,817	S	9/2010	Yang et al.	D771,344	S	11/2016	Yang et al.
D625,068	S	10/2010	Shannon	D773,145	S	11/2016	Yang et al.
7,806,285	B2	10/2010	Yang et al.	9,481,515	B2	11/2016	Yang et al.
D627,533	S	11/2010	Yang et al.	D773,769	S	12/2016	Chen
D627,944	S	11/2010	Wang et al.	9,573,759	B2	2/2017	Yang et al.
D629,172	S	12/2010	Liao	9,586,755	B1	3/2017	Yang et al.
D629,579	S	12/2010	Lin	D787,828	S	5/2017	Thoma et al.
D630,404	S	1/2011	Yang et al.	D790,145	S	6/2017	Chen
D631,221	S	1/2011	Yang et al.	D793,642	S	8/2017	Yang et al.
D632,039	S	2/2011	Yang et al.	D798,016	S	9/2017	Yang et al.
D632,864	S	2/2011	Yang et al.	D804,133	S	9/2017	Yang et al.
D634,911	S	3/2011	Yang et al.	9,751,692	B2	9/2017	Yang et al.
D635,319	S	3/2011	Meyerhoffer	9,790,025	B2	10/2017	Yang et al.
7,896,187	B2	3/2011	Haibel	9,856,080	B2	1/2018	Yang et al.
7,922,024	B2	4/2011	Yang et al.	D820,544	S	6/2018	Joseph
7,950,543	B2	5/2011	Yang et al.	D825,876	S	8/2018	Chen
D639,520	S	6/2011	Lin	D827,968	S	9/2018	Chen
D644,390	S	8/2011	Smeets et al.	D829,400	S	9/2018	Yang et al.
7,992,742	B1	8/2011	Kim	D830,029	S	10/2018	Greenspoon et al.
8,006,857	B2	8/2011	Lin	D835,374	S	12/2018	Yang et al.
D644,806	S	9/2011	Yang et al.	D835,376	S	12/2018	Yang et al.
				D836,278	S	12/2018	Berberet et al.
				D840,628	S	2/2019	Chang
				D845,576	S	4/2019	Lu
				10,279,996	B2	5/2019	Yang et al.



(56)

## References Cited

## U.S. PATENT DOCUMENTS

10,279,997	B2	5/2019	Yang et al.	2006/0186121	A1	8/2006	Yang et al.
D851,350	S	6/2019	Lu	2006/0196874	A1	9/2006	Yang
D853,067	S	7/2019	Chen	2006/0213910	A1	9/2006	Yang et al.
D855,919	S	8/2019	Yang et al.	2006/0226149	A1	10/2006	Yang et al.
D858,024	S	8/2019	Yang et al.	2006/0237641	A1	10/2006	Moeller et al.
D858,923	S	9/2019	Yang et al.	2006/0249510	A1	11/2006	Lin
D861,076	S	9/2019	Chen	2006/0255033	A1	11/2006	Yang et al.
10,472,170	B2	11/2019	Yang et al.	2006/0261071	A1	11/2006	Yang et al.
10,494,175	B2	12/2019	Yang et al.	2006/0278643	A1	12/2006	Chiou
D874,776	S	2/2020	Spadotto	2007/0012699	A1	1/2007	Yang et al.
10,683,165	B2	6/2020	Yang et al.	2007/0029323	A1	2/2007	Yang et al.
10,723,549	B2	7/2020	Yang et al.	2007/0034334	A1	2/2007	Ramsey et al.
D901,815	S	11/2020	Yang et al.	2007/0045326	A1	3/2007	Tramontina et al.
10,906,738	B2	2/2021	Barry	2007/0090112	A1	4/2007	Kalman et al.
11,027,916	B2	6/2021	Yang et al.	2007/0114847	A1	5/2007	Ichimaru et al.
D925,153	S	7/2021	Busch	2007/0181579	A1	8/2007	Kuo et al.
D930,933	S	9/2021	Yang et al.	2007/0182551	A1	8/2007	Yang et al.
11,136,186	B2	10/2021	Yang et al.	2007/0205195	A1	9/2007	Yang et al.
D936,927	S *	11/2021	Zeng ..... D34/7	2007/0209846	A1	9/2007	Wilson
D938,125	S *	12/2021	Zhang ..... D34/7	2007/0215622	A1	9/2007	Perez
D939,174	S *	12/2021	Zeng ..... D34/7	2007/0241109	A1	10/2007	Lin
11,279,555	B2	3/2022	Yang et al.	2007/0266637	A1	11/2007	McGowan
2001/0002690	A1	6/2001	Rosky	2007/0272691	A1	11/2007	Wang et al.
2001/0020619	A1	9/2001	Pfeifer et al.	2007/0289972	A1	12/2007	Wynn et al.
2001/0045512	A1	11/2001	Brent	2008/0011754	A1	1/2008	Ramsey
2002/0009567	A1	1/2002	Brand	2008/0011910	A1	1/2008	Ramsey
2002/0066736	A1	6/2002	Pyles	2008/0041863	A1	2/2008	Forest
2002/0079315	A1	6/2002	Yang	2008/0083756	A1	4/2008	Daniels
2002/0092853	A1	7/2002	Wang	2008/0083757	A1	4/2008	Parker et al.
2002/0096523	A1	7/2002	Pyles	2008/0099274	A1	5/2008	Seel
2002/0096524	A1	7/2002	Hardesty	2008/0128428	A1	6/2008	Beckerman
2002/0100758	A1	8/2002	Pyles	2008/0164257	A1	7/2008	Boll et al.
2002/0104266	A1	8/2002	Ranaudo	2008/0236275	A1	10/2008	Breed et al.
2002/0116924	A1	8/2002	Winkelmann et al.	2008/0237234	A1	10/2008	Yang et al.
2002/0185199	A1	12/2002	Myers et al.	2008/0257889	A1	10/2008	Kovacevich et al.
2003/0089719	A1	5/2003	Berger	2008/0257890	A1	10/2008	Kovacevich et al.
2003/0102316	A1	6/2003	Forest	2008/0257891	A1	10/2008	Kovacevich et al.
2003/0201265	A1	10/2003	Lin	2008/0264948	A1	10/2008	Kovacevich et al.
2003/0201267	A1	10/2003	Yang et al.	2008/0264950	A1	10/2008	Kovacevich et al.
2003/0205979	A1	11/2003	Papari et al.	2008/0272119	A1	11/2008	Efstathiou
2003/0230576	A1	12/2003	Lin	2008/0272127	A1	11/2008	Kovacevich et al.
2004/0004080	A1	1/2004	Yang et al.	2009/0071959	A1	3/2009	Cheung
2004/0016756	A1	1/2004	Lin	2009/0084788	A1	4/2009	Yang et al.
2004/0020927	A1	2/2004	Yang et al.	2009/0136341	A1	5/2009	Kenyon
2004/0028572	A1	2/2004	Sham et al.	2009/0194532	A1	8/2009	Yang et al.
2004/0134924	A1	7/2004	Hansen et al.	2009/0214606	A1	8/2009	Bujard et al.
2004/0140782	A1	7/2004	Okabe et al.	2009/0230131	A1	9/2009	McDuffie et al.
2004/0164077	A1	8/2004	Kuo	2009/0261105	A1	10/2009	Cunningham et al.
2004/0174268	A1	9/2004	Scott et al.	2009/0266836	A1	10/2009	Mobley
2004/0175303	A1	9/2004	Lin	2010/0006572	A1	1/2010	Chiou
2004/0199401	A1	10/2004	Wagner	2010/0084235	A1	4/2010	Lu
2004/0200938	A1	10/2004	Forlivio	2010/0096894	A1	4/2010	Fukai
2004/0206758	A1	10/2004	Lin	2010/0122985	A1	5/2010	Peters et al.
2004/0206760	A1	10/2004	Gagnebin	2010/0147865	A1	6/2010	Yang et al.
2004/0250711	A1	12/2004	Ernst	2010/0170904	A1	7/2010	Kalman et al.
2004/0251746	A1	12/2004	Ichimaru et al.	2010/0176126	A1	7/2010	Shikano
2005/0017006	A1	1/2005	Kuo	2010/0178105	A1	7/2010	Monneret
2005/0017010	A1	1/2005	Siegel et al.	2010/0193518	A1	8/2010	Tontarelli
2005/0029281	A1	2/2005	Westermann et al.	2010/0219191	A1	9/2010	Prosa
2005/0103788	A1	5/2005	Yang et al.	2010/0224627	A1	9/2010	Yang et al.
2005/0129803	A1	6/2005	Umeda et al.	2010/0237074	A1	9/2010	Yang et al.
2005/0133506	A1	6/2005	Yang et al.	2010/0252557	A1	10/2010	Clements
2005/0230396	A1	10/2005	Yang et al.	2010/0294769	A1	11/2010	Lee et al.
2005/0230397	A1	10/2005	Yang et al.	2010/0308049	A1	12/2010	Yang et al.
2005/0258177	A1	11/2005	Woodson	2011/0017735	A1	1/2011	Wang et al.
2005/0258794	A1	11/2005	Fukuizumi	2011/0049149	A1	3/2011	Shih
2005/0284870	A1	12/2005	Yang et al.	2011/0056952	A1	3/2011	Borowski et al.
2006/0027579	A1	2/2006	Yang et al.	2011/0139781	A1	6/2011	Jin et al.
2006/0056741	A1	3/2006	Yang et al.	2011/0220646	A1	9/2011	Yang et al.
2006/0103086	A1	5/2006	Niemeyer et al.	2011/0220647	A1	9/2011	Yang et al.
2006/0110537	A1	5/2006	Huang et al.	2011/0220648	A1	9/2011	Yang et al.
2006/0138149	A1	6/2006	Tracy	2011/0220655	A1	9/2011	Yang et al.
2006/0156948	A1	7/2006	Hendriks et al.	2011/0272409	A1	11/2011	Kasbohm
2006/0163257	A1	7/2006	Golbert	2012/0145932	A1	6/2012	Yao et al.
2006/0175336	A1	8/2006	Wang	2012/0234849	A1	9/2012	Hughes et al.
				2012/0261423	A1	10/2012	Zawrotny et al.
				2013/0048641	A1	2/2013	Romano
				2013/0097809	A1	4/2013	Weber et al.
				2013/0098913	A1	4/2013	Yang et al.



(56)

References Cited

U.S. PATENT DOCUMENTS

2013/0105487	A1	5/2013	Baik
2013/0193145	A1	8/2013	Yang et al.
2013/0233853	A1	9/2013	Yang et al.
2013/0233857	A1	9/2013	Yang et al.
2013/0240592	A1	9/2013	Woodruff
2013/0248532	A1	9/2013	Yang et al.
2013/0248535	A1	9/2013	Wolfe et al.
2013/0300119	A1	11/2013	Anzalon et al.
2014/0183193	A1	7/2014	Hammond et al.
2014/0238989	A1	8/2014	Wang et al.
2014/0240964	A1	8/2014	Adachi et al.
2014/0246432	A1	9/2014	Yang et al.
2014/0246434	A1	9/2014	Yang et al.
2014/0305946	A1	10/2014	Han
2014/0345453	A1	11/2014	Oh et al.
2015/0251849	A1	9/2015	Yang et al.
2015/0259139	A1	9/2015	Yang et al.
2015/0259140	A1	9/2015	Yang et al.
2015/0321841	A1	11/2015	Salas et al.
2016/0137411	A1	5/2016	Rogers
2016/0200508	A1	7/2016	Thoma et al.
2017/0050404	A1	2/2017	Henken et al.
2017/0073158	A1	3/2017	Yang et al.
2017/0096299	A1	4/2017	Yang et al.
2017/0127669	A1	5/2017	Yang et al.
2017/0166167	A1	6/2017	Heller et al.
2017/0176986	A1	6/2017	High et al.
2017/0253429	A1	9/2017	Yang et al.
2018/0093827	A1	4/2018	Yang et al.
2018/0178978	A1	6/2018	Yang et al.
2018/0305120	A1	10/2018	Yang et al.
2019/0077595	A1	3/2019	Wang et al.
2019/0185263	A1	6/2019	Yang et al.
2019/0276232	A1	9/2019	Yang et al.
2020/0148467	A1	5/2020	Yang et al.
2020/0307907	A1	10/2020	Yang et al.
2020/0407159	A1	12/2020	Yang et al.

FOREIGN PATENT DOCUMENTS

AU	201614908	11/2016
AU	201614909	11/2016
CA	2182840	9/1997
CA	2519295	3/2007
CA	132181	6/2010
CA	2695086	9/2010
CA	136938	5/2011
CA	141819	4/2012
CA	146601	2/2013
CA	152797	4/2014
CA	158595	4/2015
CA	158685	4/2015
CA	164264	10/2016
CA	164265	10/2016
CA	167073	10/2016
CA	170360	3/2017
CA	170399	3/2017
CA	168936	10/2017
CA	174731	7/2018
CA	178712	11/2018
CA	2808811	9/2020
CN	2075182	4/1991
CN	2378327	5/2000
CN	2467467	12/2001
CN	1570196	1/2005
CN	1918002	2/2007
CN	200964993	10/2007
CN	101177946	5/2008
CN	201105898	8/2008
CN	101509131	8/2009
CN	201330049	10/2009
CN	201367221	12/2009
CN	201372076	12/2009
CN	201447201	5/2010
CN	201512253	6/2010

CN	301252792	S	6/2010
CN	201597962	U	10/2010
CN	201907743		7/2011
CN	102190144		9/2011
CN	202213911		5/2012
CN	301947175		6/2012
CN	103072348		5/2013
CN	103207416		7/2013
CN	103300590		9/2013
CN	103303618		9/2013
CN	103381944		11/2013
CN	302771721		3/2014
CN	104016030		9/2014
CN	303188855		4/2015
CN	303206241		5/2015
CN	204587817		8/2015
CN	105015986		11/2015
CN	303611394		3/2016
CN	303622098		3/2016
CN	205169479		4/2016
CN	106103299		11/2016
CN	303967208		12/2016
CN	304018339		1/2017
CN	304018340		1/2017
CN	103381944	B	3/2017
CN	106546203	A	3/2017
CN	107032015	A	8/2017
CN	ZL 201310076306.0		12/2017
CN	ZL 201580000648.1		1/2018
CN	ZL 201730168630.4		2/2018
CN	304710097	S	7/2018
CN	304938760	S	12/2018
CN	ZL 201410074431.2		3/2019
CN	ZL 201580014369.0		8/2019
DE	1610087		7/1950
DE	822376		11/1951
DE	1283741		7/1966
DE	8436939		3/1985
DE	9108341		10/1991
DE	4225936		2/1994
DE	19525885		3/1997
DE	19617823		11/1997
DE	19809331		5/1999
DE	19811991	A1	9/1999
DE	29918687		3/2000
DE	19933180		1/2001
DE	10036259		11/2001
DE	10148997		4/2003
DE	20305521	U1	6/2003
DE	20217561		3/2004
DE	10337806	A1	3/2005
EP	0582240		7/1993
EP	0903305	A1	3/1999
EP	0906876	A2	4/1999
EP	1094017	A1	4/2001
EP	1162161		12/2001
EP	1361176		11/2003
EP	1136393	B1	4/2004
EP	1447342	A2	8/2004
EP	1600373	A2	11/2005
EP	1647503	A1	4/2006
EP	1686073	A1	8/2006
EP	1918223	A1	5/2008
EP	1700799	B1	8/2009
EP	001164826-0001		9/2009
EP	001232904-0001		10/2010
EP	2343250	A1	7/2011
EP	001908575-0001		8/2011
EP	001317416-0001		4/2012
EP	001317416-0002		4/2012
EP	001335285-0001		7/2012
EP	001335293-0001		7/2012
EP	001381636-0001		8/2013
EP	001381792-0001		8/2013
EP	2636611	A1	9/2013
EP	3144251	A1	3/2014
EP	001420590-0001		9/2014
EP	2772454	A2	9/2014
EP	2636613	B1	3/2015



(56)

## References Cited

## OTHER PUBLICATIONS

## FOREIGN PATENT DOCUMENTS

EP	2915763	A1	9/2015	U.S. Appl. No. 3/040,786, filed Mar. 4, 2011, Yang et al.
EP	2918518	A2	9/2015	U.S. Appl. No. 3/040,709, filed Mar. 4, 2011, Yang et al.
EP	002766782-0001		11/2015	U.S. Appl. No. 13/047,662, filed Mar. 14, 2011, Yang et al.
EP	002766782-0002		11/2015	U.S. Appl. No. 29/386,880, filed Mar. 4, 2011, Yang et al.
EP	002766881-0001		11/2015	U.S. Appl. No. 13/787,084, filed Mar. 6, 2013, Yang et al.
EP	2364932	B1	4/2016	U.S. Appl. No. 29/411,482, filed Mar. 9, 2012, Yang et al.
EP	3042864	A1	7/2016	U.S. Appl. No. 29/411,491, filed Jan. 20, 2012, Yang et al.
EP	003177500-0001		9/2016	U.S. Appl. No. 29/411,490, filed Jan. 20, 2012, Yang et al.
EP	003177500-0002		9/2016	U.S. Appl. No. 13/417,084, filed Mar. 9, 2012, Yang et al.
EP	003362235-0001		10/2016	U.S. Appl. No. 13/783,149, filed Mar. 1, 2013, Yang et al.
EP	003362052-0001		11/2016	U.S. Appl. No. 29/447,313, filed Mar. 1, 2013, Yang et al.
EP	003996339-0001		5/2017	U.S. Appl. No. 29/484,903, filed Mar. 13, 2014, Yang et al.
EP	3214019	A1	9/2017	U.S. Appl. No. 29/484,764, filed Mar. 1, 2013, Yang et al.
EP	004554889-0001		12/2017	U.S. Appl. No. 14/198,460, filed Mar. 5, 2014, Yang et al.
EP	3549886	A2	10/2019	U.S. Appl. No. 14/637,270, filed Mar. 4, 2015, Yang et al.
FR	2887152		12/2006	U.S. Appl. No. 14/639,049, filed Mar. 4, 2015, Yang et al.
GB	191004921		6/1910	U.S. Appl. No. 14/639,862, filed Mar. 5, 2015, Yang et al.
GB	1555543	A	11/1979	U.S. Appl. No. 29/519,549, filed Mar. 5, 2015, Yang et al.
GB	2384418		7/2003	U.S. Appl. No. 29/519,551, filed Mar. 5, 2015, Yang et al.
JP	02-152670		6/1990	U.S. Appl. No. 14/856,309, filed Sep. 26, 2015, Yang et al.
JP	H06-56011		8/1994	U.S. Appl. No. 29/548,018, filed Dec. 9, 2015, Yang et al.
JP	06-272888		9/1994	U.S. Appl. No. 29/557,032, filed Mar. 4, 2016, Yang et al.
JP	2004-106713		4/2004	U.S. Appl. No. 29/557,088, filed Mar. 4, 2016, Yang et al.
JP	2004-231237		8/2004	U.S. Appl. No. 29/563,650, filed May 6, 2016, Yang et al.
JP	D1300450		5/2007	U.S. Appl. No. 15/265,455, filed Sep. 14, 2016, Yang et al.
JP	D1300451		5/2007	U.S. Appl. No. 29/584,385, filed Nov. 14, 2016, Yang et al.
JP	D1322056		2/2008	U.S. Appl. No. 15/448,245, filed Mar. 2, 2017, Yang et al.
JP	D1398668		10/2010	U.S. Appl. No. 15/476,285, filed Mar. 31, 2017, Yang et al.
JP	D1550907		4/2016	U.S. Appl. No. 29/583,627, filed Jun. 22, 2017, Yang et al.
JP	D1551184		4/2016	U.S. Appl. No. 29/608,587, filed Jun. 22, 2017, Yang et al.
JP	1585339		8/2017	U.S. Appl. No. 29/610,345, filed Jul. 11, 2017, Yang et al.
JP	1614455		8/2018	U.S. Appl. No. 15/783,370, filed Oct. 13, 2017, Yang et al.
KR	20040087306	A	10/2004	U.S. Appl. No. 15/809,218, filed Nov. 10, 2017, Yang et al.
KR	3003841370000		6/2005	U.S. Appl. No. 29/633,369, filed Jan. 12, 2018, Yang et al.
KR	3004095430000		3/2006	U.S. Appl. No. 29/633,372, filed Jan. 12, 2018, Yang et al.
KR	3004095430001		7/2006	U.S. Appl. No. 16/284,996, filed Feb. 25, 2019, Yang et al.
NL	6908550		12/1970	U.S. Appl. No. 16/293,463, filed Mar. 5, 2019, Yang et al.
TW	183920		5/1992	U.S. Appl. No. 29/747,968, filed Aug. 26, 2020, Yang et al.
TW	230977		9/1994	U.S. Appl. No. 29/747,945, filed Aug. 26, 2020, Yang et al.
TW	395392		6/2000	Complaint for Patent Infringement, Filed in Case No. CV 09-1373-DSF-AJW, <i>Simplehuman, LLC v. Cuisinart Corporation, Lifetime Brands, Inc., and M. Kamenstein, Inc.</i> dated Feb. 26, 2009.
TW	D112733		9/2006	U.S. Appl. No. 60/595,868 (Ramsey).
TW	D129485		7/2009	U.S. Appl. No. 60/595,920 (Ramsey).
TW	D133382		2/2010	Entire File History of U.S. Pat. No. 7,243,811, including Rule 131 Declaration signed Feb. 12, 2007.
TW	D133678		3/2010	Exhibits A, B1, B2, C1, C2 cited in Dec. 12, 2006 IDS in U.S. Pat. No. 7,243,811.
TW	145989		3/2012	First Amended Complaint for Patent Infringement, Filed in Case No. CV 09-1373-DSF-AJW, <i>Simplehuman, LLC v. Conair Corporation and Lifetime Brands, Inc.</i> , dated Mar. 17, 2009.
TW	D147147		5/2012	Trento Corner 23 Trash Can, Hailo product webpage, May 2008, <a href="http://www.hailo.de/html/default.asp?site=12_71_107&amp;lang=en">http://www.hailo.de/html/default.asp?site=12_71_107&amp;lang=en</a> .
TW	D154797		7/2013	alzashop.com, Simplehuman 45L Pedal Rectangular White Plastic Stainless Steel Trash Can, <a href="https://www.alzashop.com/simplehuman-45l-pedal-rectangular-white-plastic-stainless-steel-d5841987.htm">https://www.alzashop.com/simplehuman-45l-pedal-rectangular-white-plastic-stainless-steel-d5841987.htm</a> , site visited Jul. 20, 2021, in 3 pages.
TW	D158187		1/2014	Schaefer, <a href="http://www.schaeferco.com/about_rollcoaters.html">http://www.schaeferco.com/about_rollcoaters.html</a> , 2007, in 12 pages.
TW	D161587		7/2014	Simplehuman Liner Rim Dual Bucket Rectangular Recycler with Liner Pocket, Stainless Steel, 58 Liter/ 15 Gallon, Item No. CW2025, <a href="http://www.amazon.com">www.Amazon.com</a> , site visited Dec. 29, 2015.
TW	D162495		8/2014	Web page showing picture of Hero Bullet trash can, archived Nov. 17, 2004, downloaded from <a href="http://web.archive.org/web/20041117003115/http://www.simplehuman.com/images/hero_bullet.jpg">http://web.archive.org/web/20041117003115/http://www.simplehuman.com/images/hero_bullet.jpg</a> .
TW	D168957		7/2015	Agion Material Safety Data Sheet; Agion Antimicrobial Type AC; publicly available at least as early as Oct. 2015 (in three pages).
TW	D170334		9/2015	U.S. District Court Civil Docket for <i>Simplehuman, LLC, v. Conair Corporation and Lifetime Brands, Inc.</i> , Filed in Case No. CV 09-1373-DSF-AJW.
TW	201538406		10/2015	
TW	201544405		12/2015	
TW	D176312		6/2016	
TW	D176313		6/2016	
TW	201720729		6/2017	
TW	D183552		6/2017	
TW	D184449		7/2017	
TW	D193369		10/2018	
TW	D194575		12/2018	
TW	D194576		12/2018	
TW	I670213		9/2019	
WO	WO 92/02430	A1	2/1992	
WO	WO 96/33671		10/1996	
WO	WO 2005/080232	A1	9/2005	
WO	WO 2006/079263	A1	8/2006	
WO	WO 2007/139570		12/2007	
WO	WO 2009/114495	A1	9/2009	
WO	WO 2015/134902	A1	9/2015	
WO	WO 2015/138625	A1	9/2015	
WO	WO 2016/054109	A1	4/2016	



(56)

**References Cited**

## OTHER PUBLICATIONS

European Search Report for European Application No. 06010394, dated Aug. 24, 2006, in 1 page.

International Search Report and Written Opinion in corresponding International Application No. PCT/US2006/34282, dated Jun. 13, 2008, 14 pages.

Office Action for Canadian Patent Application No. 2695086, dated Jan. 29, 2016, in 3 pages.

European Search Report for Application No. EP 10002273, dated Jan. 4, 2011, in 9 pages.

Partial European Search Report for Application No. EP 10002273, dated Jul. 2, 2010, in 4 pages.

Search Report for Taiwan Design Patent Application No. 097304453, dated Apr. 22, 2009.

Office Action for Canadian Design Patent Application No. 132181, dated Dec. 23, 2009, in 2 pages.

Office Action for Canadian Patent Application No. 2733460, dated Jun. 19, 2017, in 4 pages.

Office Action for Chinese Patent Application No. 201110060533.5, dated Jan. 23, 2013, in 13 pages.

Office Action for Chinese Patent Application No. 201110060533.5, dated Sep. 9, 2014, in 8 pages.

Office Action for Chinese Patent Application No. 201110060533.5, dated Mar. 9, 2015, in 7 pages.

Extended Search Report for European Patent Application No. 11157823.3, dated Mar. 28, 2013, in 5 pages.

Examination Report for European Patent Application No. 11157823.3, dated Oct. 28, 2014, in 5 pages.

Office Action for Canadian Design Patent Application No. 136938, dated Sep. 29, 2010, in 2 pages.

Office Action for Chinese Design Patent Application No. 201030509403.1, dated Apr. 6, 2011, in 2 pages.

Search Report for Taiwan Design Patent Application No. 099304439, dated Jul. 1, 2011, in 1 page.

Office Action for Taiwan Design Patent Application No. 099304439, dated Jul. 21, 2011, in 6 pages.

Office Action for Canadian Design Patent Application No. 141819, dated Oct. 13, 2011, in 2 pages.

Office Action for Chinese Design Patent Application No. 201130284559.9, dated Nov. 10, 2011, in 2 pages.

Office Action for Chinese Application No. 201310076306.0, dated Dec. 23, 2015, in 14 pages.

Office Action for Chinese Application No. 201310076306.0, dated Aug. 30, 2016, in 17 pages.

Office Action for Chinese Application No. 201310076306.0, dated Jan. 25, 2017, in 18 pages.

Extended European Search Report for European Application No. 13158229.8, dated Jul. 2, 2013, in 8 pages.

Office Action for European Application No. 13158229.8, dated Jul. 12, 2018, in 5 pages.

Office Action for European Application No. 13158229.8, dated Jun. 27, 2019, in 5 pages.

Search Report for Taiwanese Design Application No. 102302061, dated Jun. 20, 2013, in 1 page.

Office Action for Chinese Application No. 201310076770.X, dated Dec. 30, 2015, in 3 pages.

Extended European Search Report for European Application No. 13158479.9, dated Jun. 20, 2013, in 8 pages.

Office Action for Canadian Design Patent Application No. 146602, dated Nov. 27, 2012, in 1 page.

Office Action in corresponding Canadian Application No. 2842987, dated Dec. 11, 2019, in 8 pages.

Office Action in corresponding Canadian Application No. 2842987, dated May 29, 2020, in 3 pages.

Office Action for Chinese Application No. 201410074431.2, dated Feb. 28, 2017, in 18 pages.

Office Action for Chinese Application No. 201410074431.2, dated Nov. 3, 2017, in 21 pages.

Partial European Search Report for European Application No. 14156599.4, dated Jun. 3, 2014, in 5 pages.

Extended European Search Report for European Application No. 14156599.4, dated Oct. 24, 2014, in 10 pages.

Office Action in corresponding European Application No. 14156599.4, dated Aug. 3, 2018, in 7 pages.

Office Action in corresponding European Application No. 14156599.4, dated Aug. 9, 2019, in 6 pages.

International Search Report and Written Opinion in corresponding International Application No. PCT/US2015/053037, dated Feb. 5, 2016, in 12 pages.

International Preliminary Report on Patentability in corresponding International Application No. PCT/US2015/053037, dated Apr. 13, 2017, in 9 pages.

Search Report for Taiwanese Design Application No. 103305382, dated May 12, 2015, in 4 pages.

International Search Report and Written Opinion in corresponding International Application No. PCT/US2015/19997, dated Jul. 28, 2015, 12 pages.

International Preliminary Report on Patentability in corresponding International Application No. PCT/US2015/19997, dated Sep. 22, 2016, 9 pages.

Office Action in corresponding Canadian Application No. 2941643, dated Apr. 22, 2021, 5 pages.

Partial Supplementary European Search Report in corresponding European Application No. 15761922.2, dated Sep. 26, 2017, 14 pages.

Extended Search Report in corresponding European Application No. 15761922.2, dated Jan. 31, 2018, 15 pages.

Office Action in corresponding European Application No. 15761922.2, dated Apr. 12, 2021, in 7 pages.

Office Action for Canadian Patent Application No. 2,883,594, dated Apr. 7, 2021, in 5 pages.

Office Action for Chinese Patent Application No. 201580000648.1, dated Jun. 2, 2016, in 10 pages.

Office Action for Chinese Patent Application No. 201580000648.1, dated Feb. 13, 2017, in 10 pages.

Extended European Search Report for European Patent Application No. 15157795.4, dated Jul. 24, 2015, in 8 pages.

Office Action in corresponding European Patent Application No. 15157795.4, dated Aug. 9, 2018, in 6 pages.

Office Action in corresponding European Patent Application No. 15157795.4, dated Jan. 18, 2019, in 5 pages.

Office Action in corresponding Taiwanese Patent Application No. 104106689, dated Sep. 12, 2018, in 5 pages.

Office Action in corresponding Taiwanese Patent Application No. 104106689, dated Nov. 29, 2019, in 9 pages.

Office Action in corresponding Taiwanese Patent Application No. 104106689, dated Jun. 17, 2020, in 9 pages.

International Search Report and Written Opinion for International Patent Application No. PCT/US2015/019240, dated Jun. 18, 2015, in 7 pages.

International Preliminary Report on Patentability in corresponding International Patent Application No. PCT/US2015/019240, dated Sep. 22, 2016, in 6 pages.

Office Action in corresponding Canadian Patent Application No. 2883994, dated Apr. 21, 2021, in 4 pages.

Partial Search Report for European Application No. 15157649.3, dated Oct. 23, 2015, in 6 pages.

Extended European Search Report for European Application No. 15157649.3, dated Feb. 11, 2016, in 13 pages.

Office Action in corresponding European Application No. 15157649.3, dated Nov. 13, 2018, in 7 pages.

Office Action in corresponding European Application No. 15157649.3, dated Oct. 7, 2019, in 3 pages.

Office Action for Taiwanese Application No. 104106875, dated Sep. 17, 2018, in 20 pages.

Search Report for Taiwanese Application No. 103305380, date of research May 12, 2015, in 4 pages.

Office Action for Australian Application No. 201514705, dated Sep. 23, 2015, in 2 pages.

Office Action for Canadian Application No. 164265, dated Dec. 15, 2015, in 2 pages.

Search Report for Taiwanese Application No. 104304908, dated Feb. 15, 2016, in 2 pages.



(56)

**References Cited**

OTHER PUBLICATIONS

Search Report for Taiwanese Application No. 104304907, dated Feb. 15, 2016, in 2 pages.

Office Action for Canadian Application No. 164264, dated Dec. 15, 2015, in 1 pages.

Office Action for Canadian Application No. 164264, dated Apr. 6, 2016, in 11 pages.

Office Action for European Application No. 002766881-0001, dated Sep. 14, 2015, in 2 pages.

Office Action in corresponding Chinese Patent Application No. 201610830334.0, dated Nov. 5, 2019, in 16 pages.

Extended Search Report for European Patent Application No. 16188727.8, dated Jan. 30, 2017, in 10 pages.

Office Action for Canadian Design Patent Application No. 168936, dated May 26, 2017, in 2 pages.

Office Action for Taiwan Design Patent Application No. 105303316, dated Nov. 16, 2016, in 6 pages.

Office Action in corresponding Chinese Patent Application No. 201710123436.3, dated Feb. 1, 2021, in 19 pages.

Extended European Search Report for European Patent Application No. 17159265.2, dated Jun. 26, 2017, in 10 pages.

Office Action in corresponding European Patent Application No. 17159265.2, dated Nov. 16, 2018, in 6 pages.

Office Action in corresponding European Patent Application No. 17159265.2, dated Jul. 1, 2019, in 6 pages.

Office Action in corresponding Taiwanese Patent Application No. 106106934, dated Dec. 28, 2020, in 11 pages.

Search Report in corresponding Taiwanese Patent Application No. 106106934, dated Dec. 24, 2020, in 1 page.

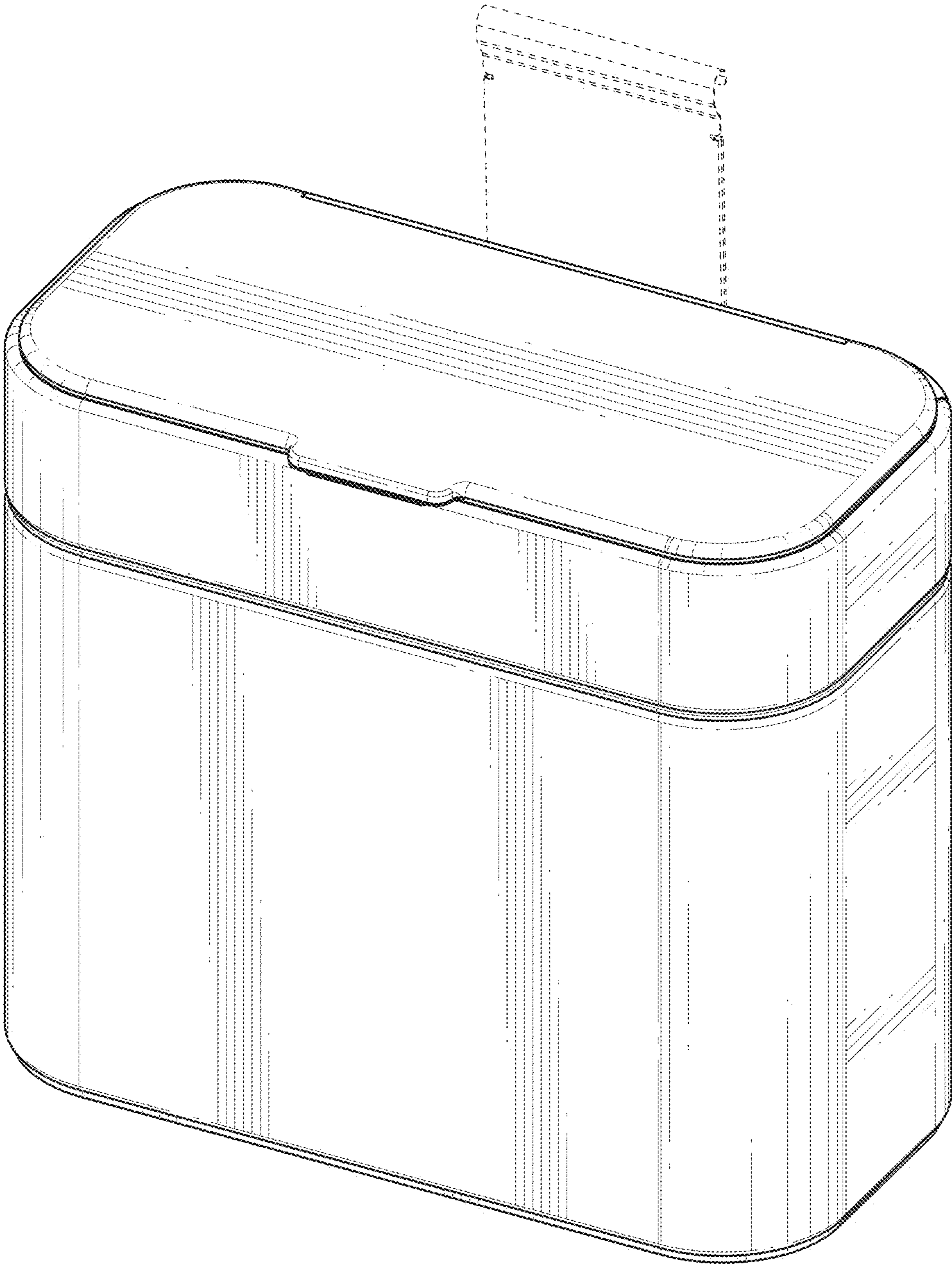
Office Action for Canadian Design Patent Application No. 174731 dated Nov. 8, 2017, in 2 pages.

Office Action for Taiwanese Design Patent Application No. 106302554 dated Dec. 28, 2017, in 7 pages.

Extended European Search Report in corresponding European Patent Application No. 19160903.1, dated Jan. 10, 2020, in 10 pages.

\* cited by examiner





**FIG. 1**



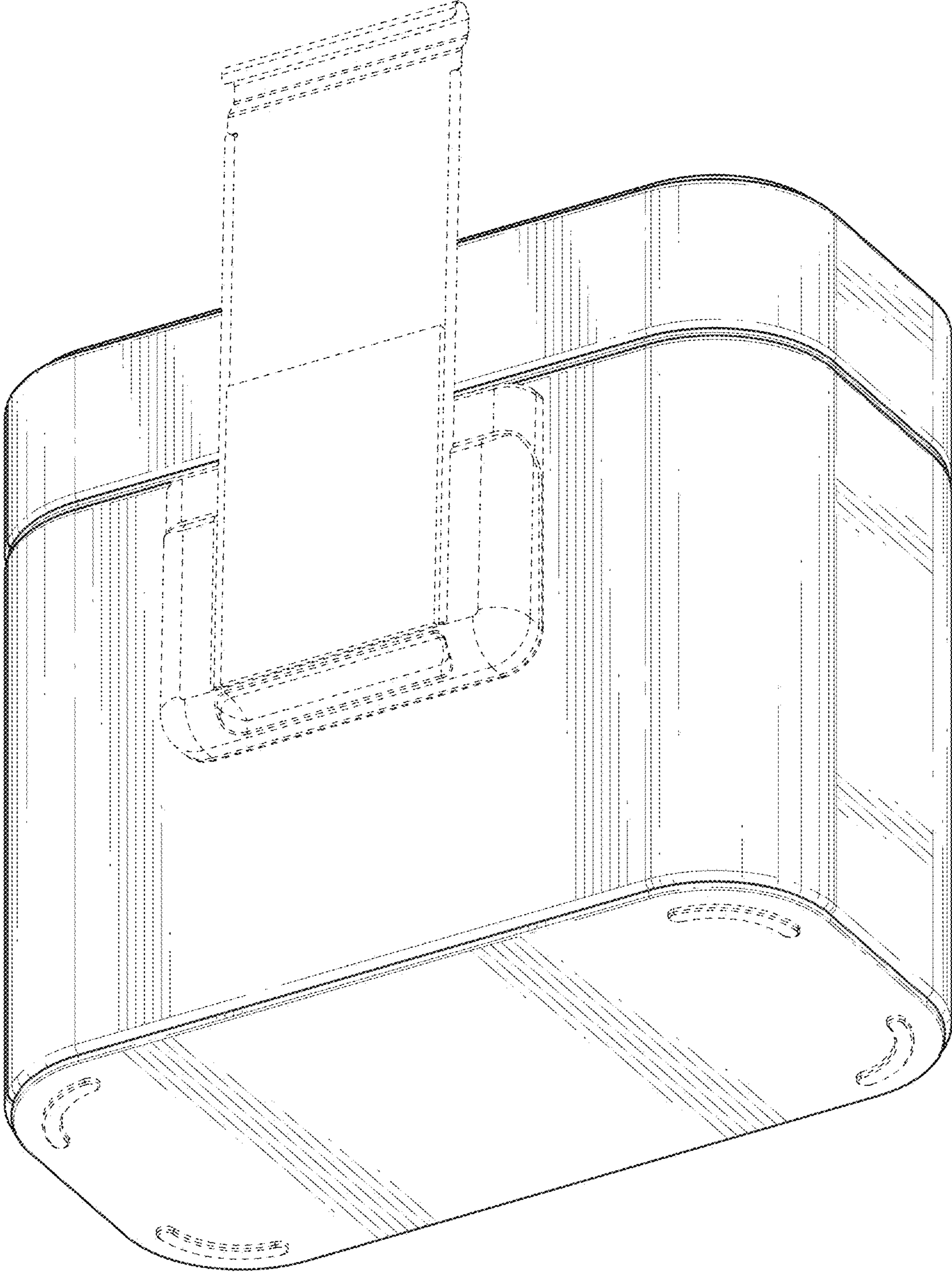
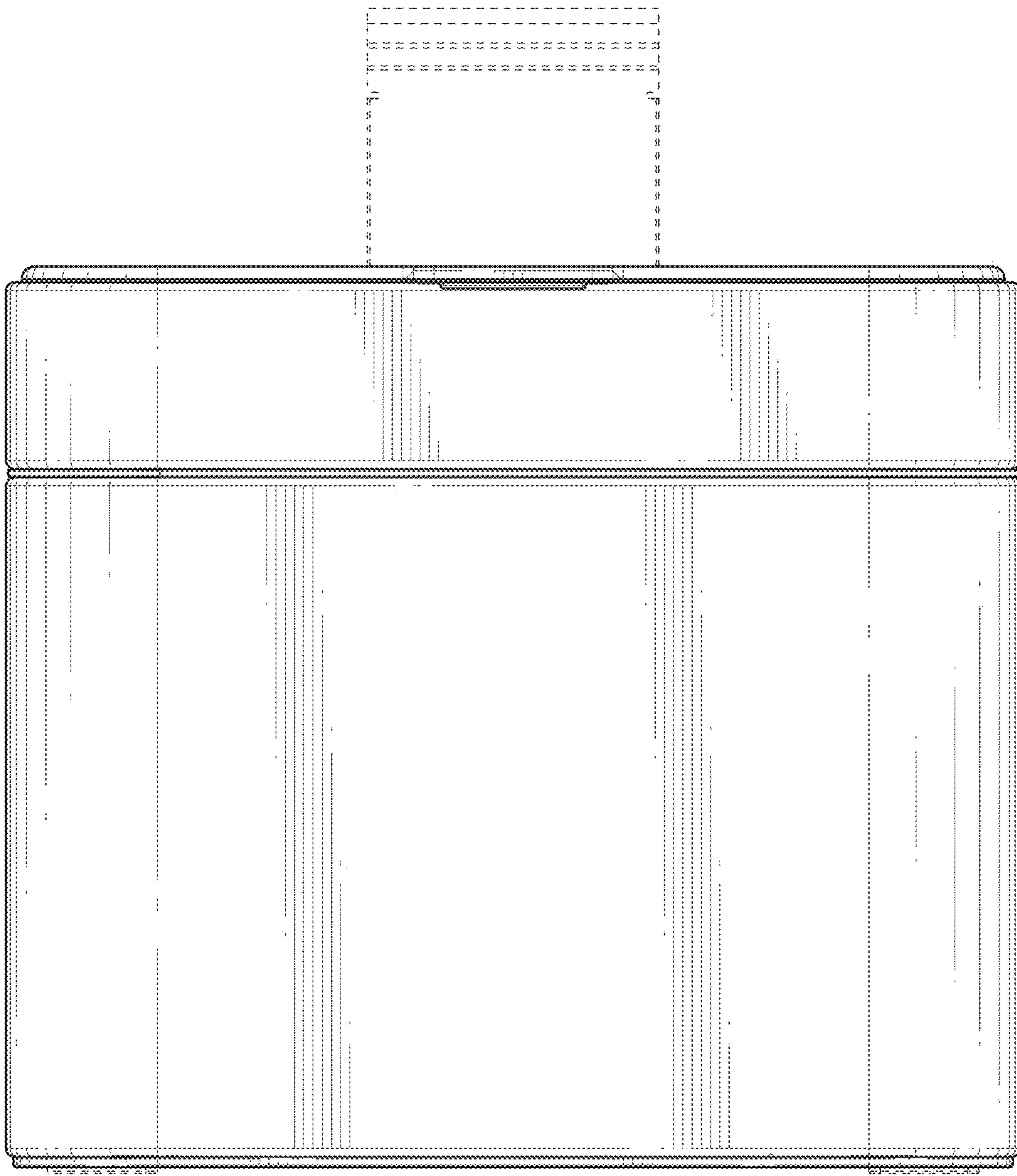


FIG. 2





**FIG. 3**

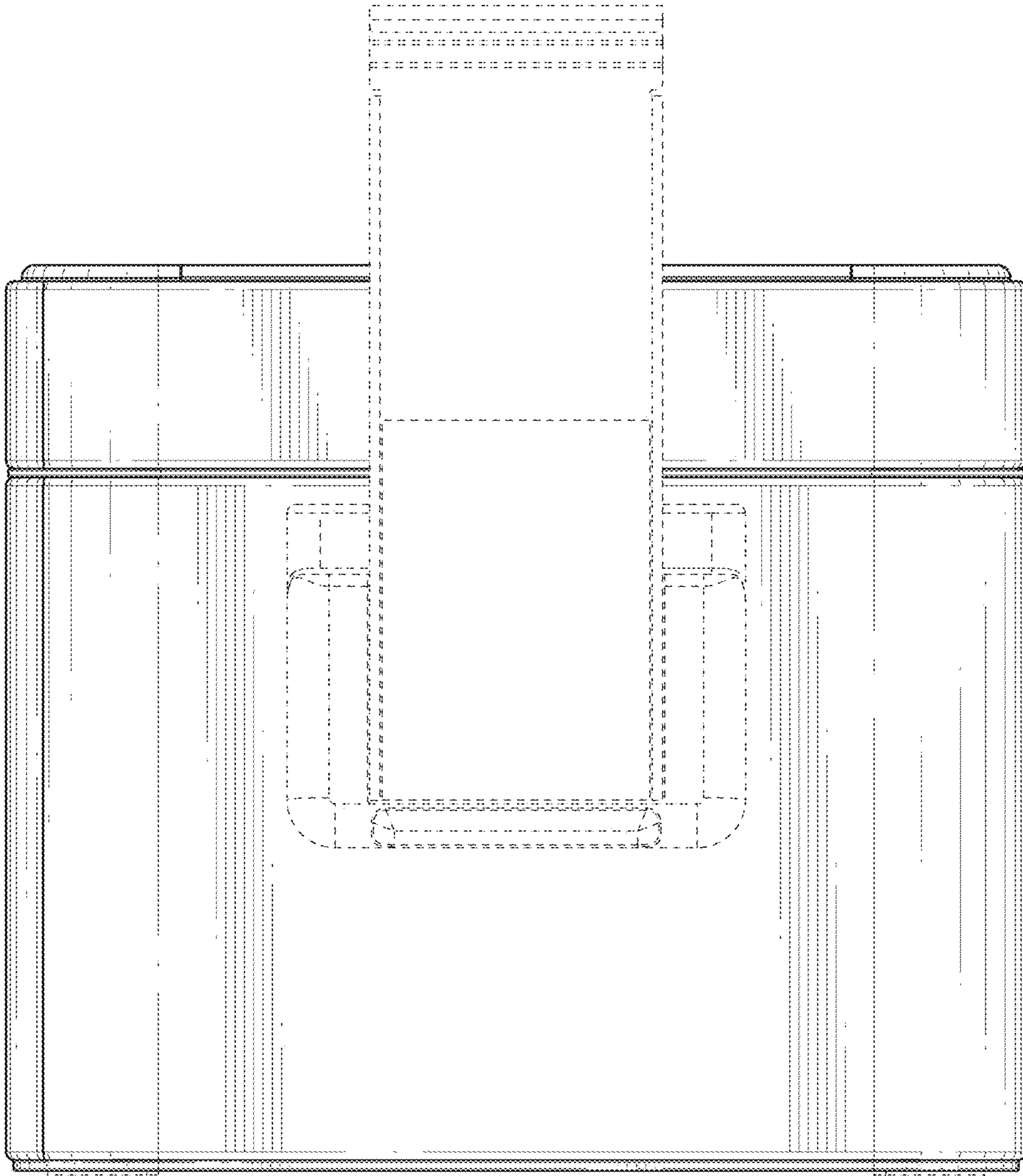
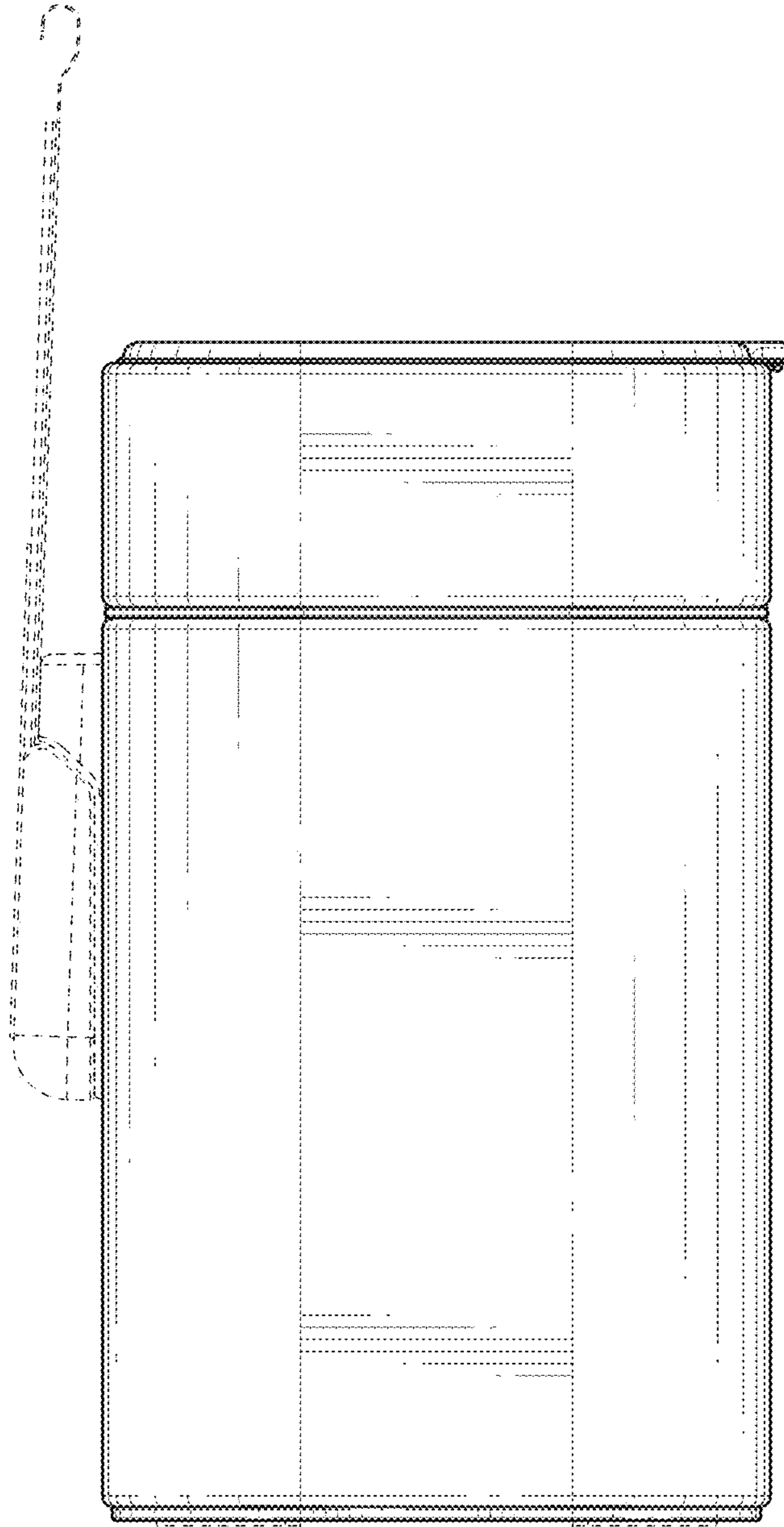
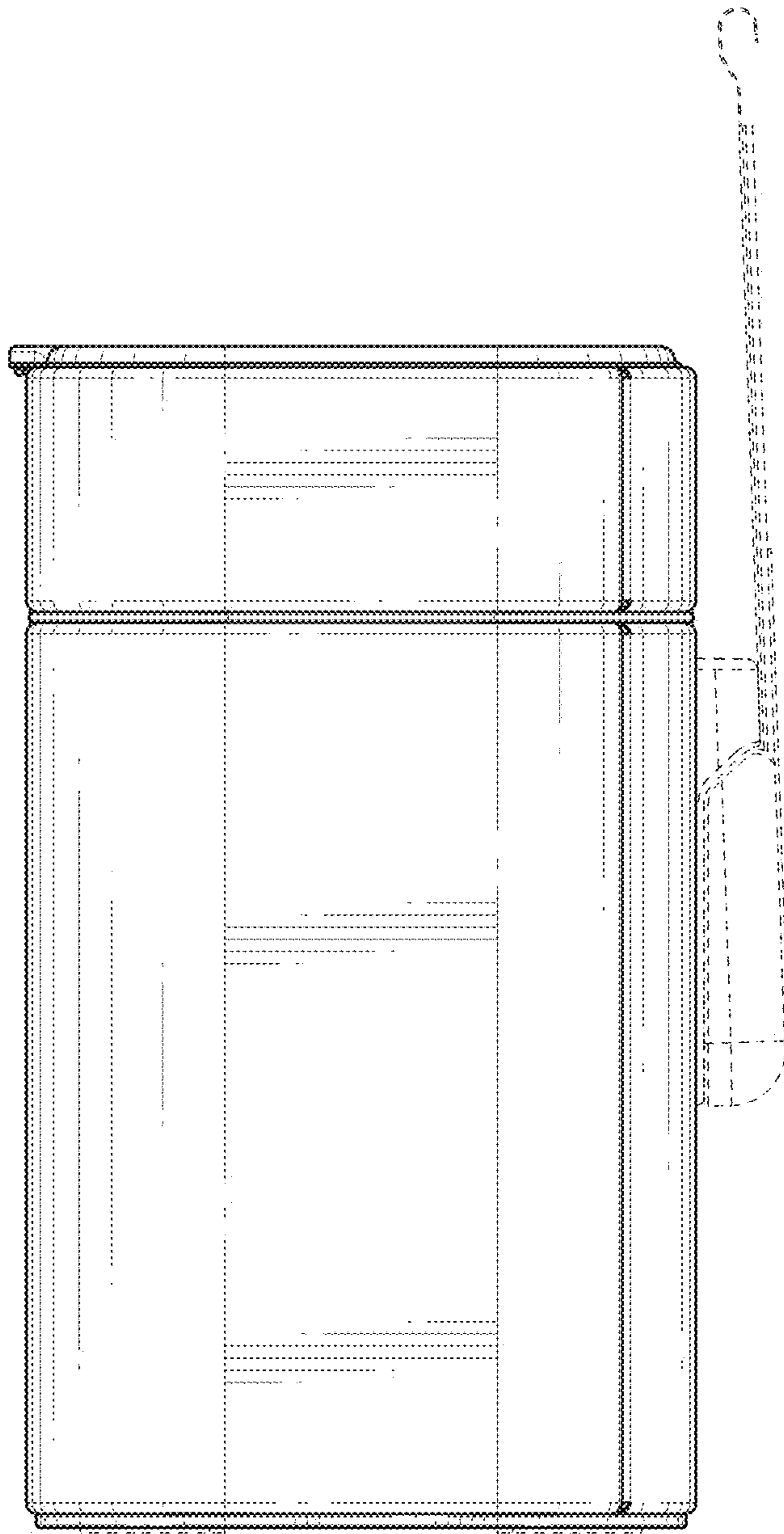


FIG. 4



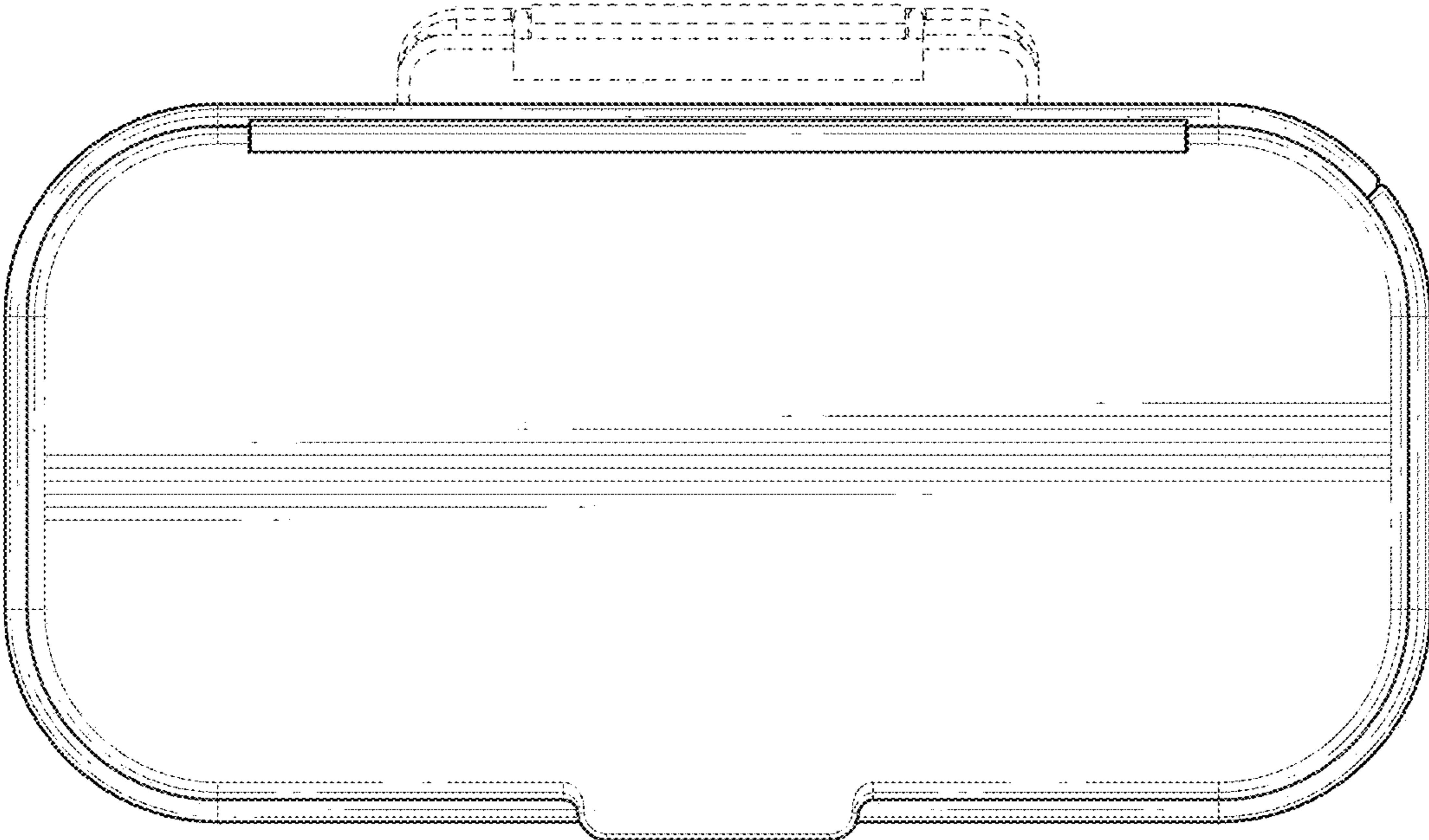


**FIG. 5**

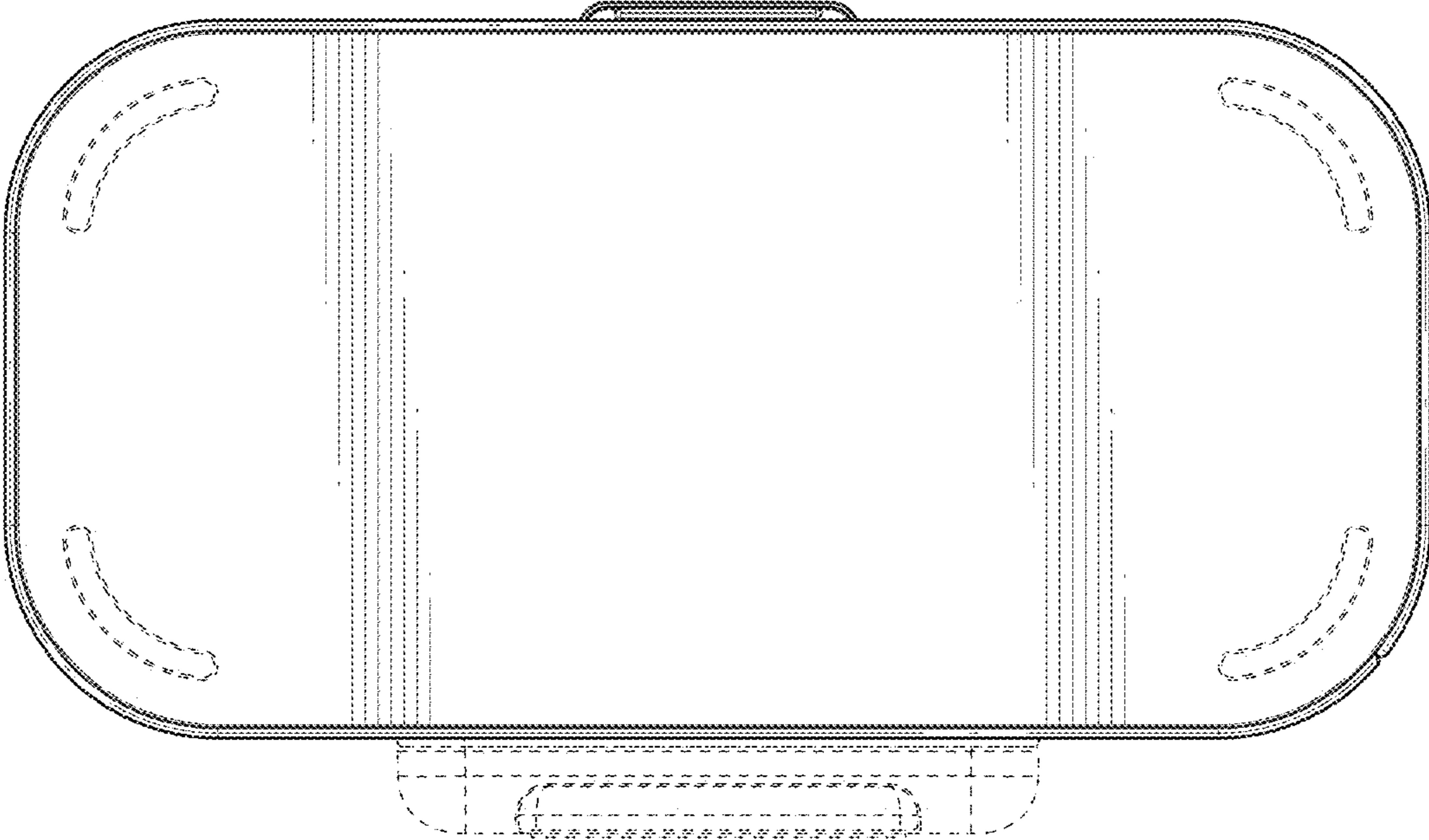


**FIG. 6**





**FIG. 7**



**FIG. 8**