



US00D663016S

(12) **United States Design Patent**
Figurski et al.

(10) **Patent No.:** **US D663,016 S**
(45) **Date of Patent:** **** Jul. 3, 2012**

(54) **LAVATORY SYSTEM WITH INTEGRATED
HAND DRYER**

(75) Inventors: **Mark A. Figurski**, Hartland, WI (US);
Jason M. Renner, Greenfield, WI (US);
John M. Loberger, Germantown, WI
(US); **Kevin M. Kohlwew**, Port
Washington, WI (US); **Cory R.**
Boudreau, Madison, WI (US); **Scott I.**
Biba, Highland, WI (US); **Nicholas S.**
Reback, Madison, WI (US)

(73) Assignee: **Bradley Fixtures Corporation**,
Menomonee Falls, WI (US)

(**) Term: **14 Years**

(21) Appl. No.: **29/400,281**

(22) Filed: **Aug. 25, 2011**

(51) **LOC (9) Cl.** **23-02**

(52) **U.S. Cl.** **D23/291; D23/271; D28/54.1**

(58) **Field of Classification Search** **D23/271,**
D23/284, 286, 308; 4/662, 619, 630, 638;
D28/54.1; D24/185

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

540,235 A	6/1895	Clifford et al.
D30,136 S	2/1899	Eckerson
D36,574 S	10/1903	Zipp
D36,575 S	10/1903	Zipp
D36,595 S	10/1903	Peet
937,509 A	10/1909	Carpenter
1,069,972 A	8/1913	Metzaer
1,323,398 A	12/1919	Leland
1,616,313 A	2/1927	Farmer
1,659,851 A	2/1928	Brewington
D81,754 S	8/1930	Mabee

2,008,183 A	2/1934	McCord
D100,310 S	7/1936	Blu
2,202,107 A	5/1940	Korn
2,470,187 A	5/1949	Price
2,498,699 A	2/1950	Mullett et al.
D170,204 S	8/1953	Long
2,908,019 A	10/1959	Lyon, Jr.
2,965,906 A	12/1960	Mullett et al.

(Continued)

FOREIGN PATENT DOCUMENTS

AT 141398 8/1996

(Continued)

OTHER PUBLICATIONS

U.S. Appl. No. 29/306,946, filed Oct. 2, 2008, Thielke et al.

(Continued)

Primary Examiner — Robert Delehanty

(74) *Attorney, Agent, or Firm* — Boyle Fredrickson, S.C.

(57) **CLAIM**

The ornamental design for a lavatory system with integrated hand dryer, substantially as shown and described.

DESCRIPTION

This application claims priority from U.S. patent application Ser. No. 13/088,793, filed on Apr. 18, 2011, the entirety of which is expressly incorporated by reference herein.

FIG. 1 is a raised perspective view of a first embodiment of a lavatory system;

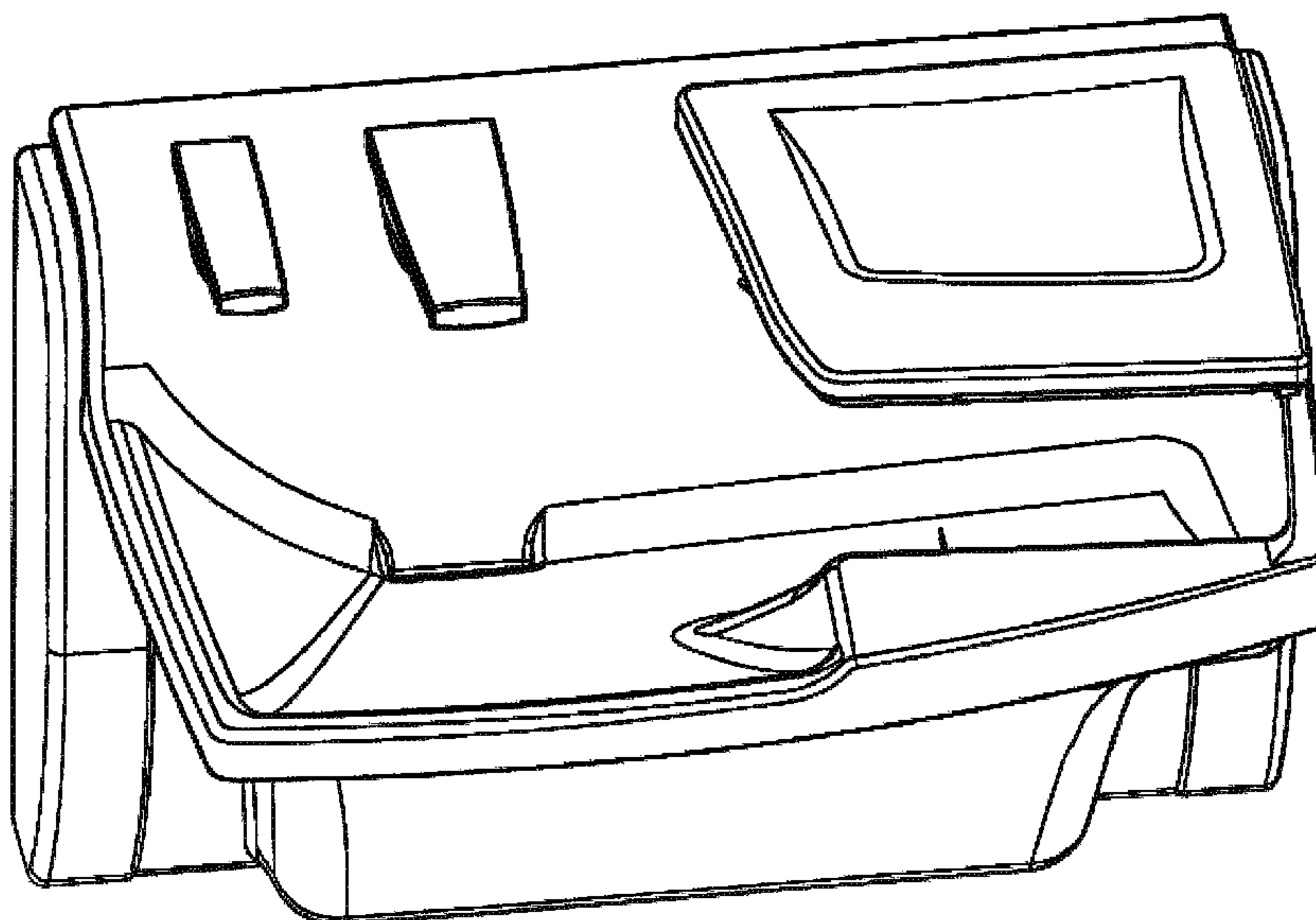
FIG. 2 is a front perspective view of the lavatory system of FIG. 1;

FIG. 3 is a left-side elevation view of the lavatory of FIG. 1;

FIG. 4 is right-side elevation view of the lavatory of FIG. 1; and,

FIG. 5 is a top plan view of the lavatory of FIG. 1.

1 Claim, 5 Drawing Sheets



US D663,016 S

Page 2

U.S. PATENT DOCUMENTS

D200,896	S	*	4/1965	Gallup	D28/54.1	5,253,376	A	10/1993	Fait	
D201,493	S		6/1965	Sundberg et al.		D341,724	S	11/1993	Hines	
D210,131	S		2/1968	Rourke		5,259,410	A	11/1993	Trueb et al.	
3,502,384	A		3/1970	Gipson		5,265,284	A	* 11/1993	Dottori et al.	4/630
3,556,158	A		1/1971	Schneider		D342,175	S	12/1993	Hines	
3,575,583	A		4/1971	Brown		D342,177	S	12/1993	Hanna et al.	
3,643,346	A		2/1972	Lester		D342,992	S	1/1994	Robertson	
D225,403	S	*	12/1972	Brendgord	D23/284	5,280,679	A	1/1994	Edelman	
D238,075	S		12/1975	Harris		5,363,517	A	11/1994	Botsolas	
4,144,596	A		3/1979	MacFarlane et al.		5,367,442	A	11/1994	Frost et al.	
4,145,769	A		3/1979	MacFarlane et al.		5,369,818	A	12/1994	Barnum et al.	
D251,795	S		5/1979	McCann		5,377,427	A	1/1995	Mashata	
4,193,209	A		3/1980	Lovison et al.		5,412,818	A	5/1995	Chen	
4,239,555	A		12/1980	Scharlack et al.		D361,372	S	8/1995	Enthoven	
4,256,133	A		3/1981	Coward et al.		5,438,763	A	8/1995	Yang	
D260,678	S		9/1981	Hiller		5,442,867	A	8/1995	Robinson	
4,295,233	A		10/1981	Hinkel et al.		D362,901	S	10/1995	Dannenberg et al.	
4,336,619	A		6/1982	Hinkel et al.		5,459,944	A	10/1995	Tatsutani et al.	
4,375,874	A		3/1983	Leotta et al.		D364,675	S	11/1995	Tebbe	
4,398,310	A		8/1983	Lienhard		5,497,135	A	3/1996	Wisskirchen et al.	
D272,263	S		1/1984	Lienhard		5,514,346	A	5/1996	Fujita	
4,497,999	A		2/1985	Postbeschild		5,522,411	A	6/1996	Johnson	
D279,404	S		6/1985	Hiller		5,561,871	A	10/1996	Laughton	
4,541,563	A		9/1985	Uetsuhara		5,588,636	A	12/1996	Eichholz et al.	
4,594,797	A		6/1986	Houck		5,610,591	A	3/1997	Gallagher	
4,606,085	A		8/1986	Davies		5,611,093	A	3/1997	Barnum et al.	
4,611,768	A		9/1986	Voss et al.		5,625,908	A	5/1997	Shaw	
4,644,256	A		2/1987	Farias et al.		5,651,384	A	7/1997	Rudrich	
4,685,222	A		8/1987	Houck		D387,144	S	* 12/1997	Flaherty	D23/308
4,707,933	A		11/1987	Keck et al.		5,701,929	A	12/1997	Helmsderfer	
4,742,583	A		5/1988	Yoshida et al.		5,727,579	A	3/1998	Chardack	
4,744,515	A		5/1988	Watanabe		D393,700	S	4/1998	Trueb et al.	
4,765,003	A		8/1988	Chang		D394,495	S	5/1998	Hauser, II	
4,769,863	A		9/1988	Tegg et al.		5,781,942	A	7/1998	Allen et al.	
4,839,039	A		6/1989	Parsons et al.		D398,969	S	9/1998	Barnum et al.	
4,852,802	A		8/1989	Iggulden et al.		5,813,047	A	9/1998	Teichroeb	
4,857,705	A		8/1989	Blevins		5,819,335	A	10/1998	Hennessy	
4,876,435	A		10/1989	Hawkins		D402,358	S	12/1998	Bonnell	
4,914,833	A		4/1990	Pilolla et al.		5,868,311	A	2/1999	Cretu-Petra	
4,916,382	A		4/1990	Kent		5,873,178	A	2/1999	Johnson	
4,959,603	A		9/1990	Yamamoto et al.		5,915,851	A	6/1999	Wattrick et al.	
4,967,425	A		11/1990	Kawamura et al.		D411,876	S	7/1999	Hafner et al.	
4,980,574	A		12/1990	Cirrito		5,924,148	A	7/1999	Flowers, Sr.	
5,008,963	A		4/1991	Stein		5,945,913	A	8/1999	Gallagher	
5,031,258	A		7/1991	Shaw		5,954,069	A	9/1999	Foster	
5,031,337	A		7/1991	Pilolla et al.		5,966,753	A	10/1999	Gauthier et al.	
5,063,955	A		11/1991	Sakakibara		5,974,685	A	11/1999	Hironaka	
5,074,322	A		12/1991	Jaw		5,992,430	A	11/1999	Chardack et al.	
5,099,587	A		3/1992	Jarosch		D420,727	S	2/2000	Hundley	
D326,711	S		6/1992	Lotito et al.		6,038,786	A	3/2000	Aisenberg et al.	
5,144,757	A		9/1992	Sasso		D422,346	S	4/2000	Svendsen	
5,146,695	A		9/1992	Yang		D428,477	S	7/2000	O'Connell et al.	
5,158,114	A		10/1992	Botsolas		D431,288	S	9/2000	Helmsderfer	
5,163,234	A		11/1992	Tsukamoto et al.		6,119,285	A	9/2000	Kim	
D332,194	S		1/1993	Hines		D433,109	S	10/2000	Wilke et al.	
D332,195	S		1/1993	Hines		6,128,826	A	10/2000	Robinson	
D332,196	S		1/1993	Hines		6,131,587	A	10/2000	Chardack et al.	
D332,365	S		1/1993	Hines		6,161,227	A	12/2000	Bargenquast	
D332,366	S		1/1993	Hines		D435,893	S	1/2001	Helmsderfer	
D332,369	S		1/1993	Hanna et al.		6,185,838	B1	2/2001	Moore	
D332,370	S		1/1993	Hanna et al.		6,189,230	B1	2/2001	Huen	
D332,542	S		1/1993	Hines		6,212,707	B1	4/2001	Thompson et al.	
D332,679	S		1/1993	Hines		6,250,601	B1	6/2001	Kolar et al.	
D332,849	S		1/1993	Hines		6,257,264	B1	7/2001	Sturman et al.	
5,177,879	A		1/1993	Muta		D446,664	S	8/2001	Petri	
5,181,328	A		1/1993	Bouverie		D447,224	S	8/2001	Barnum et al.	
D332,889	S		2/1993	Hines		6,286,153	B1	9/2001	Keller	
5,186,360	A		2/1993	Mease et al.		6,295,410	B1	9/2001	Helms et al.	
D334,266	S		3/1993	Hines		D448,585	S	10/2001	Petri	
5,193,563	A		3/1993	Melech		D453,882	S	2/2002	Petri	
5,199,118	A		4/1993	Cole et al.		6,363,549	B2	4/2002	Humpert et al.	
D336,572	S		6/1993	Gunderson et al.		6,386,390	B1	5/2002	Tinker	
5,224,685	A		7/1993	Chiang et al.		6,393,634	B1	5/2002	Kodaira et al.	
5,230,109	A		7/1993	Zaccai et al.		6,426,701	B1	7/2002	Levy et al.	
D338,361	S		8/1993	Hines		6,431,189	B1	8/2002	Deibert	
D340,374	S		10/1993	Hines		D462,195	S	9/2002	Wang	
D340,375	S		10/1993	Hines		6,523,193	B2	2/2003	Saraya	
5,251,872	A		10/1993	Kodaira		6,572,207	B2	6/2003	Hase et al.	
						D477,060	S	7/2003	Loberger et al.	

US D663,016 S

Page 3

6,624,606 B2	9/2003	Kushida et al.	2006/0185074 A1	8/2006	Loberger et al.
D481,826 S *	11/2003	Martinuzzo et al. D28/54.1	2006/0225200 A1	10/2006	Wierenga
6,643,865 B2	11/2003	Bork et al.	2007/0023565 A1	2/2007	Babikian
D483,152 S	12/2003	Martinuzzo et al.	2007/0079524 A1	4/2007	Sato et al.
D484,958 S	1/2004	Loberger et al.	2007/0144034 A1	6/2007	Kameishi
6,766,589 B1	7/2004	Bory et al.	2007/0263994 A1	11/2007	Diez et al.
6,769,197 B1	8/2004	Tai	2008/0005833 A1	1/2008	Bayley et al.
D496,450 S	9/2004	Loberger et al.	2008/0083786 A1	4/2008	Marin
6,882,278 B2	4/2005	Winings et al.	2008/0098950 A1	5/2008	Gudjohnsen et al.
D507,634 S	7/2005	Loberger et al.	2008/0109956 A1	5/2008	Bayley et al.
6,912,864 B2	7/2005	Roche et al.	2008/0185396 A1	8/2008	Yang et al.
D508,117 S	8/2005	Loberger et al.	2008/0185398 A1	8/2008	Yang et al.
D509,577 S	9/2005	Loberger et al.	2008/0185399 A1	8/2008	Yang et al.
D511,205 S	11/2005	Loberger et al.	2008/0209760 A1	9/2008	French et al.
D511,821 S	11/2005	Loberger et al.	2008/0216343 A1	9/2008	Churchill et al.
6,986,171 B1	1/2006	Perrin	2008/0216344 A1	9/2008	Churchill et al.
7,007,318 B1	3/2006	Bork et al.	2008/0222910 A1	9/2008	Churchill et al.
7,025,227 B2	4/2006	Oliver et al.	2008/0271527 A1	11/2008	Hewitt
7,039,301 B1	5/2006	Aisenberg et al.	2008/0285134 A1	11/2008	Closset et al.
7,039,963 B2	5/2006	Loberger et al.	2008/0289098 A1	11/2008	Kunkel
7,079,037 B2	7/2006	Ross, Jr. et al.	2008/0301970 A1	12/2008	Hackwell et al.
D526,394 S	8/2006	Loberger et al.	2008/0313918 A1	12/2008	Dyson et al.
D527,085 S	8/2006	Loberger et al.	2008/0313919 A1	12/2008	Churchill et al.
D527,809 S	9/2006	Loberger et al.	2008/0317448 A1	12/2008	Brown et al.
D537,927 S	3/2007	Loberger et al.	2009/0000024 A1	1/2009	Louis et al.
D538,898 S *	3/2007	Trepanier D23/286	2009/0000142 A1	1/2009	Churchill et al.
D539,400 S	3/2007	Loberger et al.	2009/0034946 A1	2/2009	Caine et al.
D542,474 S	5/2007	Churchill et al.	2009/0058666 A1	3/2009	Clabaugh
D561,315 S	2/2008	Loberger et al.	2009/0077736 A1	3/2009	Loberger et al.
7,364,053 B2	4/2008	Ophardt	2009/0113746 A1	5/2009	Churchill et al.
7,437,833 B2	10/2008	Sato et al.	2009/0113748 A1	5/2009	Dyson et al.
7,443,305 B2	10/2008	Verdiramo	2009/0119942 A1	5/2009	Aisenberg et al.
D588,676 S *	3/2009	Loberger et al. D23/271	2009/0126103 A1	5/2009	Dietrich et al.
D591,839 S	5/2009	Loberger et al.	2010/0132112 A1	6/2010	Bayley et al.
7,555,209 B2	6/2009	Pradas Diez et al.	2010/0154239 A1	6/2010	Hutchinson
7,588,168 B2	9/2009	Bagwell et al.	2010/0168926 A1	7/2010	Bayley et al.
7,596,883 B2	10/2009	Kameishi	2010/0192399 A1	8/2010	Sawabe et al.
7,607,442 B2	10/2009	Barnhill et al.	2010/0213208 A1	8/2010	Bem et al.
7,607,443 B2	10/2009	Barnhill et al.	2010/0231392 A1	9/2010	Sherron
7,614,096 B2	11/2009	Vincent	2010/0236092 A1	9/2010	Causier
7,614,160 B2	11/2009	Kameishi et al.	2010/0269364 A1	10/2010	Liu
7,617,830 B2	11/2009	Barnhill et al.	2010/0296799 A1	11/2010	Liu
7,627,909 B2	12/2009	Esche	2011/0006083 A1	1/2011	Walters et al.
7,641,740 B2	1/2010	Barnhill et al.	2011/0171083 A1	7/2011	Swistak
D610,242 S	2/2010	Loberger et al.			
7,657,162 B2	2/2010	Itoigawa et al.			
7,659,824 B2	2/2010	Prodanovich et al.			
7,682,464 B2	3/2010	Glenn et al.			
D614,273 S	4/2010	Loberger et al.			
7,690,395 B2	4/2010	Jonte et al.			
7,698,770 B2	4/2010	Barnhill et al.			
7,754,021 B2	7/2010	Barnhill et al.			
7,754,022 B2	7/2010	Barnhill et al.			
7,757,700 B2	7/2010	Barnhill et al.			
7,758,701 B2	7/2010	Barnhill et al.			
7,774,953 B1	8/2010	Duran			
7,789,095 B2	9/2010	Barnhill et al.			
D625,792 S	10/2010	Rundberg et al.			
7,818,083 B2	10/2010	Glenn et al.			
D628,280 S	11/2010	Loberger et al.			
7,825,564 B2	11/2010	Croft et al.			
RE42,005 E	12/2010	Jost et al.			
D629,877 S	12/2010	Rundberg et al.			
7,856,736 B2	12/2010	Churchill et al.			
D633,992 S	3/2011	Rundberg et al.			
D637,350 S	5/2011	Kato et al.			
7,944,116 B2	5/2011	Causier			
7,946,055 B2	5/2011	Churchill et al.			
7,971,368 B2	7/2011	Fukaya et al.			
2002/0019709 A1	2/2002	Segal			
2002/0157176 A1	10/2002	Wawrla et al.			
2002/0171056 A1	11/2002	Paese et al.			
2003/0188380 A1	10/2003	Loberger et al.			
2004/0083547 A1	5/2004	Mercier			
2004/0128755 A1	7/2004	Loberger et al.			
2004/0149779 A1	8/2004	Boll et al.			
2005/0087557 A1	4/2005	Oliver et al.			
2005/0205818 A1	9/2005	Bayley et al.			
2006/0101575 A1	5/2006	Louis			
FOREIGN PATENT DOCUMENTS					
AU	2006274708	2/2007			
AU	2006274715	2/2007			
DE	2304815	8/1974			
DE	4218658	12/1992			
DE	9304270	9/1993			
DE	9304160	7/1994			
DE	19608157	7/1997			
DE	10210474	9/2002			
DE	69821140	11/2004			
EP	0 274 785 A	7/1988			
EP	1057942	12/2000			
EP	1241301	9/2002			
EP	1250878	10/2002			
EP	1258568	11/2002			
EP	1057441	9/2006			
EP	1912549	3/2010			
EP	2177142	4/2010			
EP	2277424	1/2011			
JP	1256632	10/1989			
JP	9242155	9/1997			
JP	2000282528	10/2000			
JP	2010-046238	3/2010			
JP	2010-110450	5/2010			
JP	2011-066869	3/2011			
KR	10-0711544	4/2007			
WO	WO 01/16436	3/2001			
WO	WO 2007/011747 A2	1/2007			
WO	WO 2007/015046	2/2007			
WO	WO 2006/055681	5/2008			
WO	WO 2009/039290	3/2009			
WO	WO 2009/062546	5/2009			
WO	WO 2010/089927	8/2010			
WO	WO 2010/095250	8/2010			

WO	WO 2010/095251	8/2010
WO	WO 2010/119536	10/2010
WO	WO 2011/009156	1/2011
WO	WO 2011/077625	6/2011

OTHER PUBLICATIONS

Bradley Corporation, "Plumbing Fixtures," believed to be publicly available by Mar. 2006, 3 pages.

U.S. Appl. No. 61/198,293 of William M. Louis, Dispenser That Cantilevers Flexible Sheet Material for Horizontal Presentation, filing date unavailable, 16 pages.

U.S. Appl. No. 61/206,768 of William M. Louis, "Swingarm Loading Mechanism For Paper Towel Dispensing Systems," filing date unavailable, 13 pages.

Bradley Corporation, "Bradpack Preassembled Wash Centers," dated Jan. 1986, 12 pages.

"Innovative Applications in Solid Surface," The Journal of the Solid Surface Industry, Jan./Feb. 2002, vol. 8, No. 1, 3 pages.

Brueton advertisement for Undulatus bench, Home Design—The New York Times magazine, 2 pages.

Bradley Corporation, The Bradley Express Lavatory System: "A look, a feel, an idea as solid as granite," bearing a designation "© 1996 Bradley Corporation," 4 pages.

Bradley Corporation, Terreon: "Shaping your designs," bearing a designation "© 1998 Bradley Fixtures Corporation," 8 pages.

Bradley Corporation, "Plumbing Fixtures," bearing a designation "2001," 11 pages.

International Search Report for International Application No. PCT/US2004/07675 including written opinion of the International Searching Authority, mail date Aug. 6, 2004, 7 pages.

International Search Report and Written Opinion for Application No. PCT/US2005/002194, date of mailing May 12, 2005, 9 pages.

Bradley Corporation, "School Solutions. A higher Dedication to your Design Needs," © 1999 Bradley Corporation, 6 pages.

Bradley Corporation. "Frequency Lavatory Systems," © Bradley Corp 2005, 4 pages.

Bradley Corporation, "Plumbing Fixtures," publicly available by Feb. 14, 2008, 12 pages.

Bradley Corporation, The ndite™ story, publicly available by Feb. 14, 2008, 2 pages.

Bobrick Technical Data, "Contura™ Series Surface-Mounted Soap Dispenser B-4112," dated May 2006, 1 page.

Bradley Corporation, Total Terreon Concept, © Bradley Corp 2004, 2 pages.

Bradley Corporation, Terreon Lav Decks, © Bradley Corp 2004, 2 pages.

Bradley Corporation, "Express Lavatory Systems," © Bradley Corp 2004, 4 pages.

Bradley Corporation, "Frequency Lavatory Systems," ® Bradley Corp 2004, 4 pages.

Bradley Corporation, "Terreon Washfountains," © Bradley Corp 2004, 2 pages.

Bradley Corporation, "Sentry Washfountains," © Bradley Corp 2004, 2 pages.

Bradley Corporation, "Classic Washfountains," © Bradley Corp 2004, 2 pages.

Bradley Corporation, "Multi-Fount Washfountains," © Bradley Corp 2004, 2 pages.

Bradley Corporation, "Application Guide," © Bradley Corp 2004, 2 pages.

Bradley Corporation, Washroom Accessories, believed to be publicly available by Jul. 2007, 4 pages.

Bradley Corporation, Commercial Washroom Solutions, believed to be publicly available by Jan. 2006, 4 pages.

Bradley Corporation, Washroom Accessories, believed to be publicly available by Aug. 2003, 8 pages.

Bradley Corporation, Washroom Accessories, believed to be publicly available by Jan. 2006, 4 pages.

Bradley Corporation, Plumbing Fixtures, believed to be publicly available by Aug. 2002, 12 pages.

Bradley Corporation, Washroom Accessories, believed to be publicly available by Jan. 2008, 4 pages.

Bradley Corporation, "Installation Instructions 2483 Surface-Mounted Towel Dispenser," dated Sep. 4, 2003, 1 page.

Bradley Corporation, "Installation 270 Towel Dispenser/Waste Receptacle," dated Jun. 15, 2008, 2 pages.

Bradley Corporation, "Towel Dispenser/Waste Receptacle Model 227," believed to be publicly available by Jun. 2002, 2 pages.

Bradley Corporation, "Towel Dispenser—Center Pull/ Waste Receptacle Model 236," dated Feb. 11, 2005, 1 page.

Bradley Corporation, "Installation 236 Towel/Waste Unit with Center Pull," dated Mar. 9, 2005, 2 pages.

Bradley Corporation, Towel Dispenser Model 2481, dated Dec. 21, 2004, 2 pages.

Bradley Corporation, Towel Dispenser Model 2479-000000, dated Mar. 31, 2006, 1 page.

Bradley Corporation, Towel Dispenser Model 2479-110000, dated Feb. 11, 2005, 1 page.

Bradley Corporation, Installation Instructions 2479 Recess-Mounted Towel Dispenser, dated Mar. 3, 2004, 1 page.

Bradley Corporation, "Installation Instructions 2479-11 Surface-Mounted Towel Dispenser," dated Feb. 27, 2004, 2 pages.

Bradley Corporation, Towel Dispenser Model 2490, dated Nov. 21, 2005, 3 pages.

Bobrick Technical Data, "Contura™ Series Surface-Mounted Paper Towel Dispenser B-4262," dated Jun. 2006, 1 page.

Bobrick Technical Data, "Contura™ Series Surface-Mounted Multi-Roll Toilet Tissue Dispenser B4288," dated May 2006, 1 page.

Bobrick Technical Data, "Contura™ Series Recessed Multi-Roll Toilet Tissue Dispenser B-4388," dated May 2006, 1 page.

Bobrick Technical Data, "Contura™ Series Recessed Paper Towel Dispenser B-4362," dated Nov. 2006, 1 page.

Bobrick Technical Data, "Contura™ Series Recessed Waste Receptacle B-43644," dated Nov. 2006, 1 page.

Bobrick Technical Data, "Contura™ Series Recessed Paper Towel Dispenser And Waste Receptacle B-43944," dated Nov. 2006, 2 pages.

Bobrick Technical Data, "Contura™ Series Surface-Mounted Sanitary Napkin Disposal B-270," dated May 2006, 1 page.

Bobrick Technical Data, "Contura™ Series Recessed Soap Dispenser B-4063," accessed on Mar. 28, 2007, 1 page.

International Search Report for International Application No. PCT/US2008/076875, dated Apr. 3, 2009, 4 pages.

International Search Report and Written Opinion for International Application No. PCT/US2008/076875, mail date Jul. 6, 2009, 21 pages.

PCT/International Search Report and Written Opinion—(Application No. PCT/US2010/051647) 11 pages.

* cited by examiner

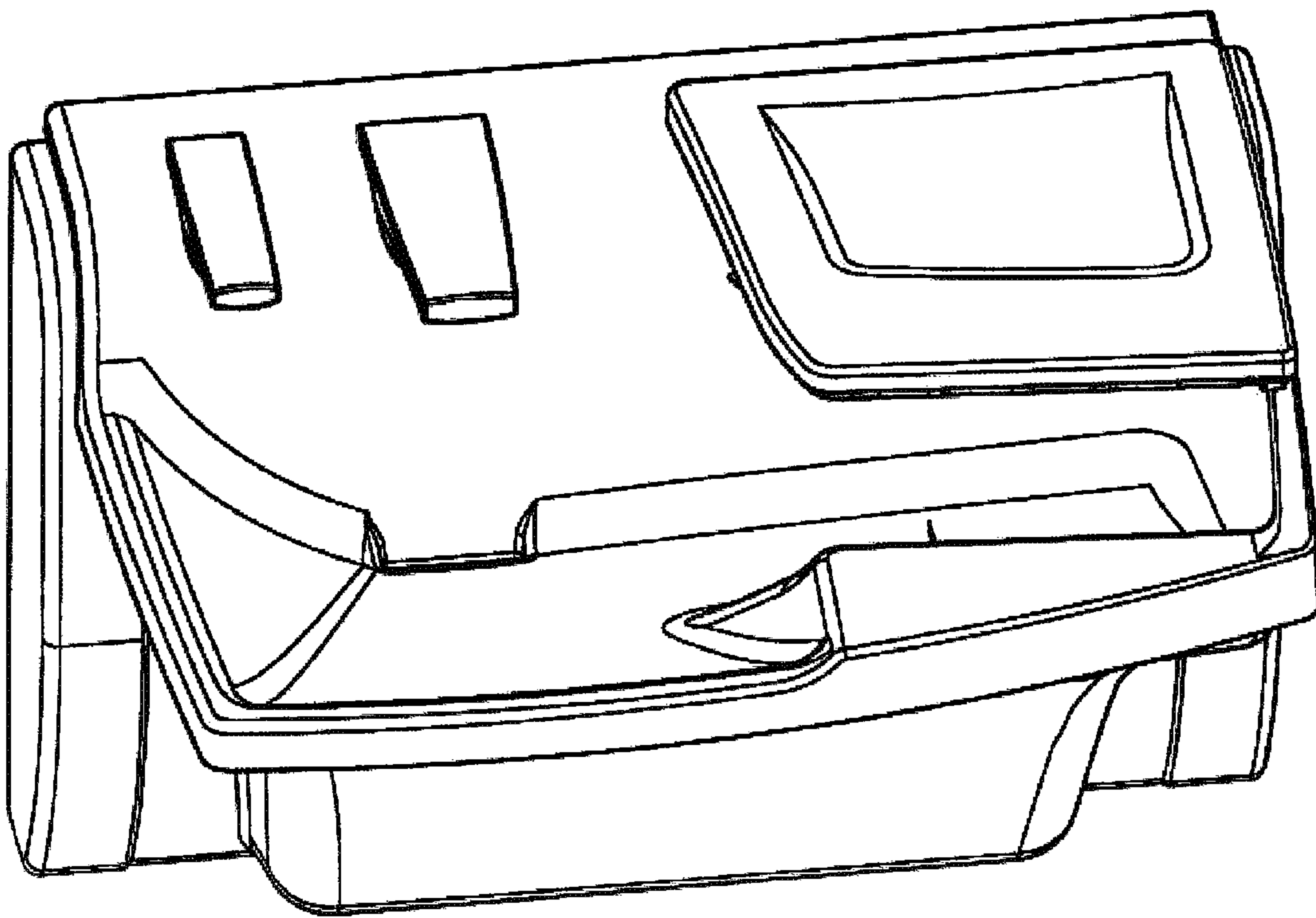


FIG 1

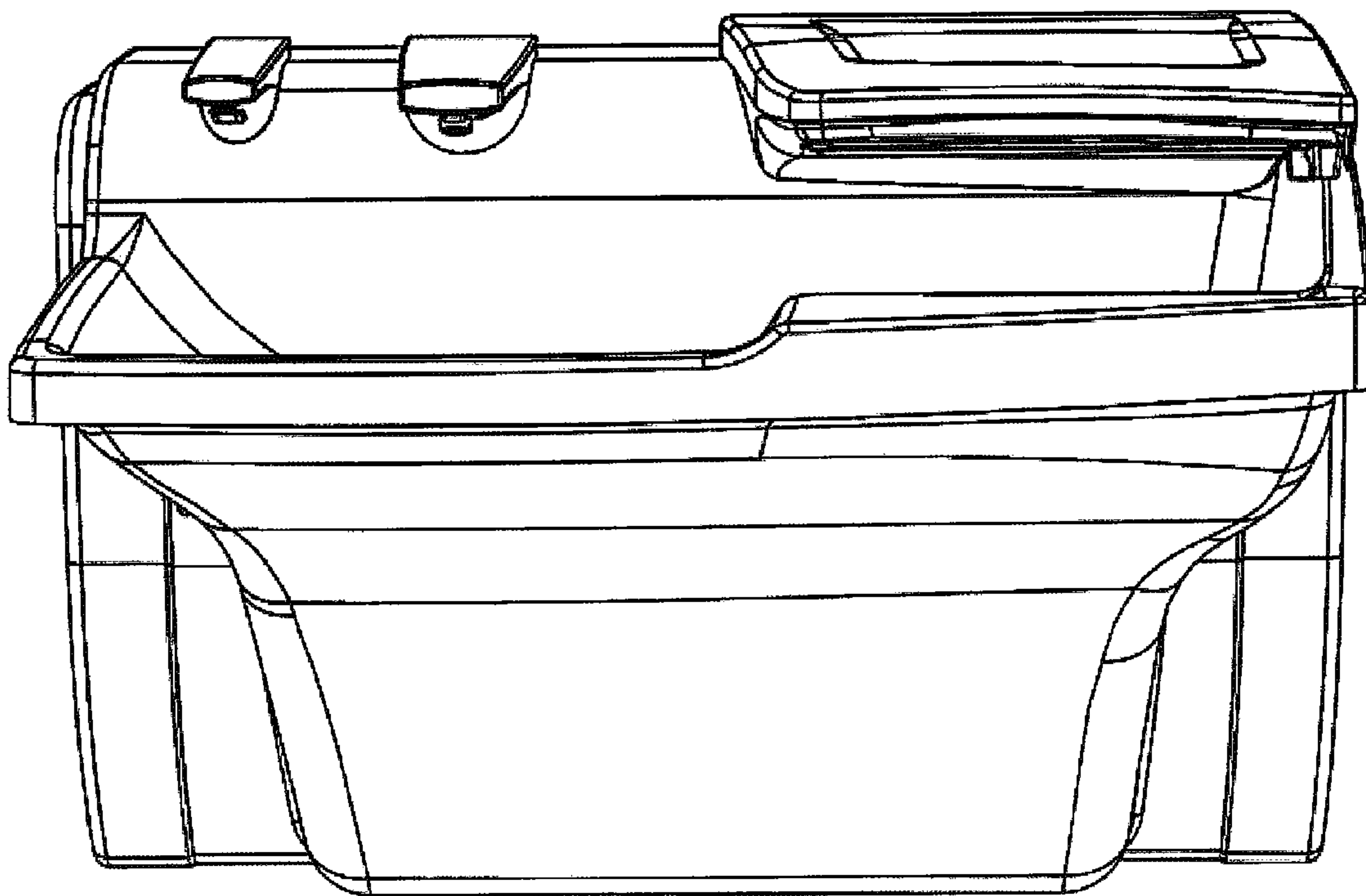


FIG 2

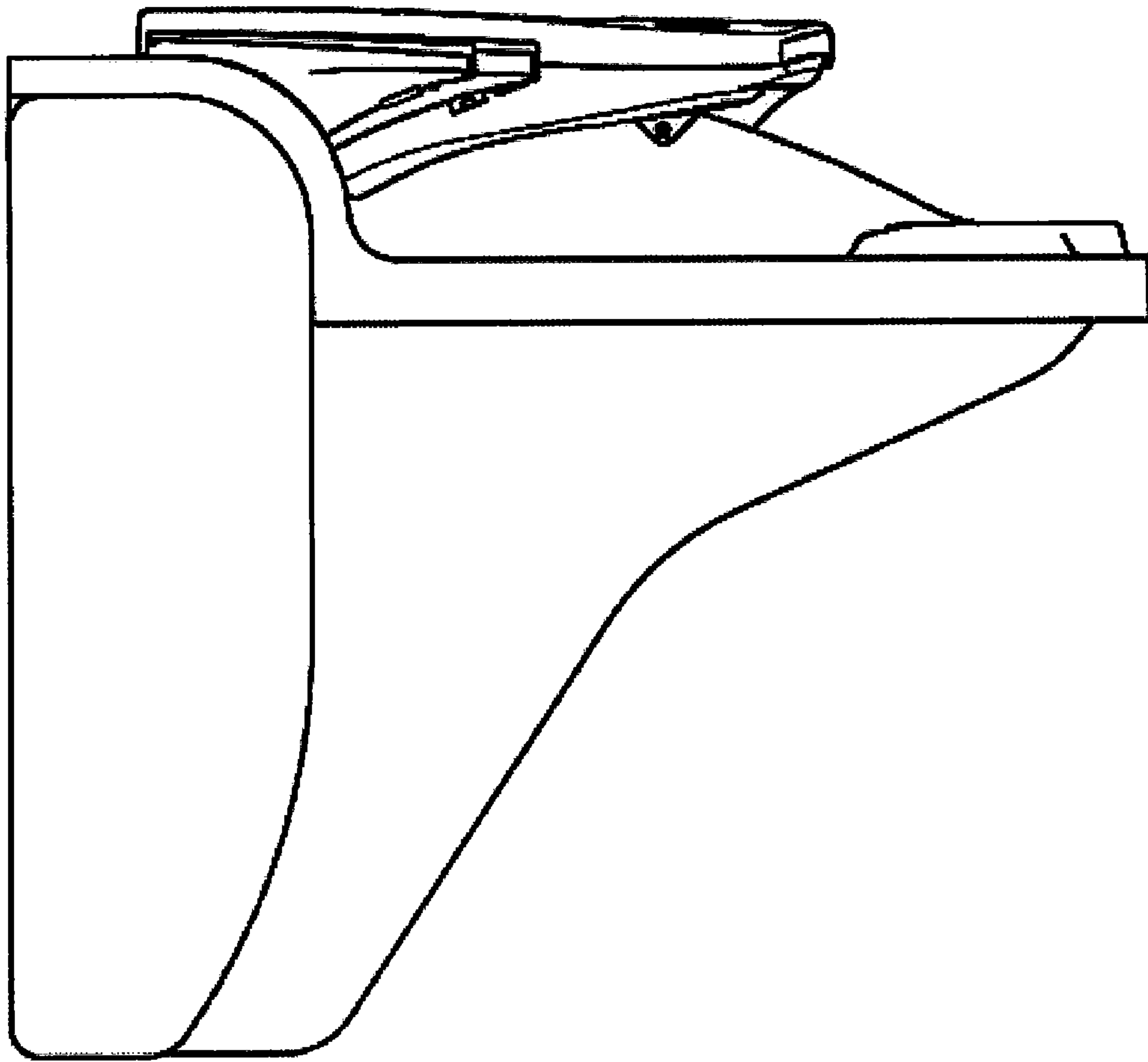


FIG 3

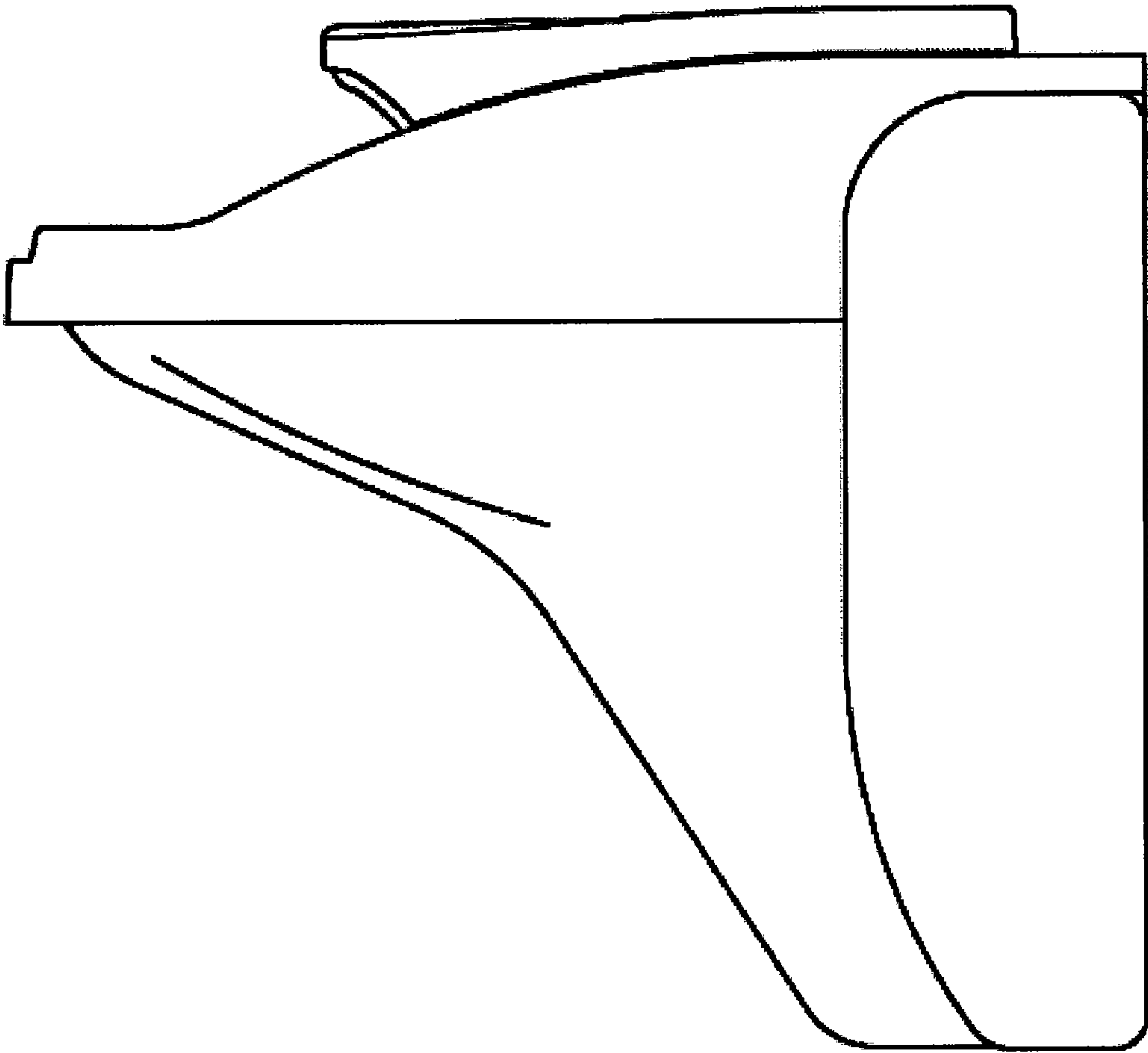


FIG 4

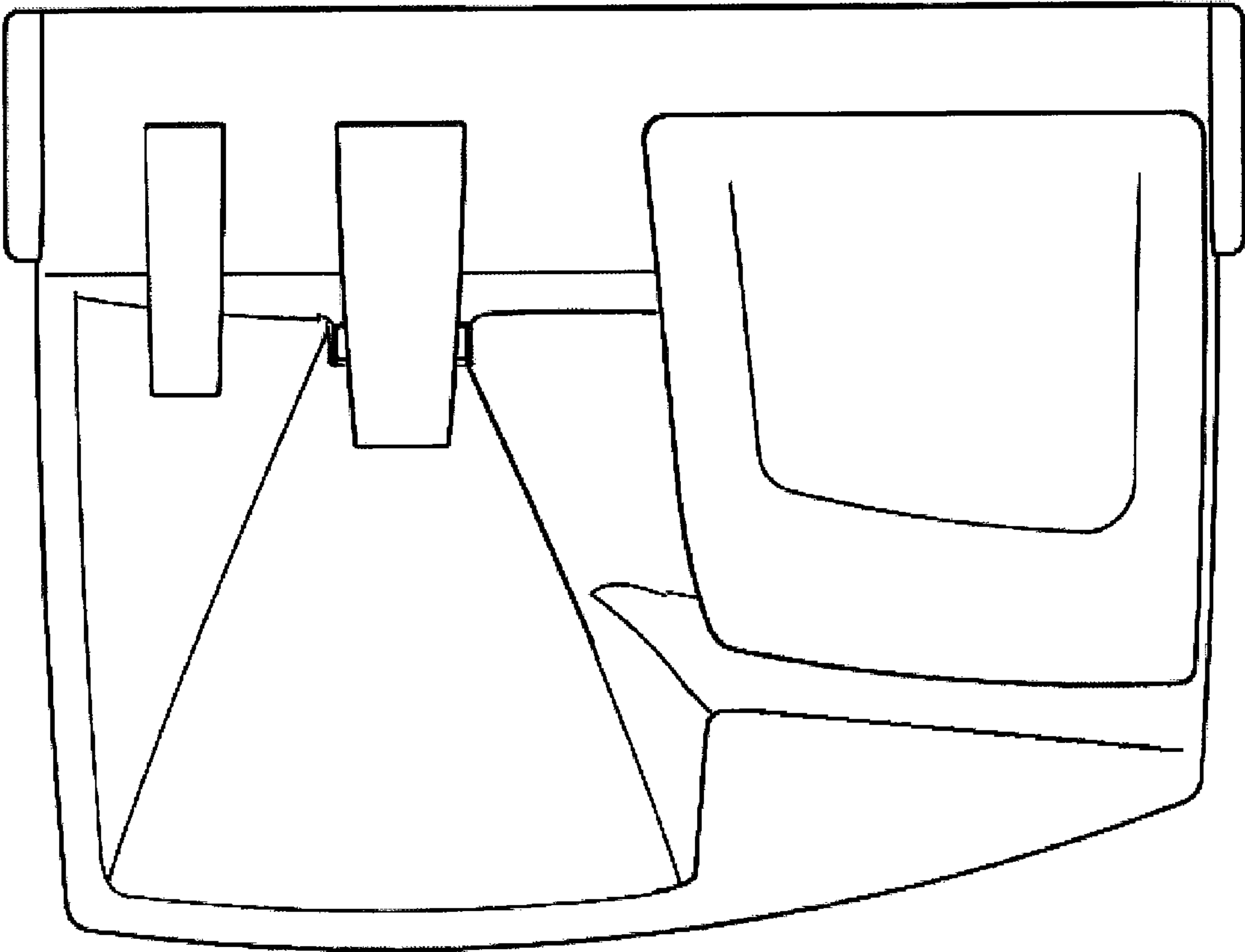


FIG 5