



US00D700193S

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

(10) **Patent No.:** **US D700,193 S**
(45) **Date of Patent:** **** Feb. 25, 2014**

(54) **ELECTRONIC CAMERA**

348/231.5, E5.045, E5.055, 333.11;
396/299, 291, 311; 710/35, 36, 38

(71) Applicant: **FUJIFILM Corporation**, Tokyo (JP)

See application file for complete search history.

(72) Inventors: **Akemi Oda**, Tokyo (JP); **Chinatsu Watanabe**, Tokyo (JP); **Yuuki Okabe**, Tokyo (JP); **Atsushi Misawa**, Tokyo (JP)

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,574,364 A 3/1986 Tabata et al.
4,775,898 A * 10/1988 Akabane et al. 348/333.11

(Continued)

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

(21) Appl. No.: **29/448,035**

FOREIGN PATENT DOCUMENTS

(22) Filed: **Mar. 8, 2013**

JP 2000-066281 3/2000
JP 2004-112790 4/2004

Related U.S. Application Data

Primary Examiner — Susan Moon Lee

(62) Division of application No. 29/415,561, filed on Mar. 12, 2012, now Pat. No. Des. 681,652, which is a division of application No. 29/384,841, filed on Feb. 4, 2011, now Pat. No. Des. 659,152, which is a division of application No. 29/363,591, filed on Jun. 11, 2010, now Pat. No. Des. 633,509, which is a division of application No. 29/350,551, filed on Nov. 18, 2009, now Pat. No. Des. 622,729, which is a division of application No. 29/274,033, filed on Mar. 22, 2007, now Pat. No. Des. 609,714.

(74) *Attorney, Agent, or Firm* — Young & Thompson

(57) **CLAIM**

We claim the ornamental design for an electronic camera, as shown and described.

(51) **LOC (10) Cl.** **32-00**

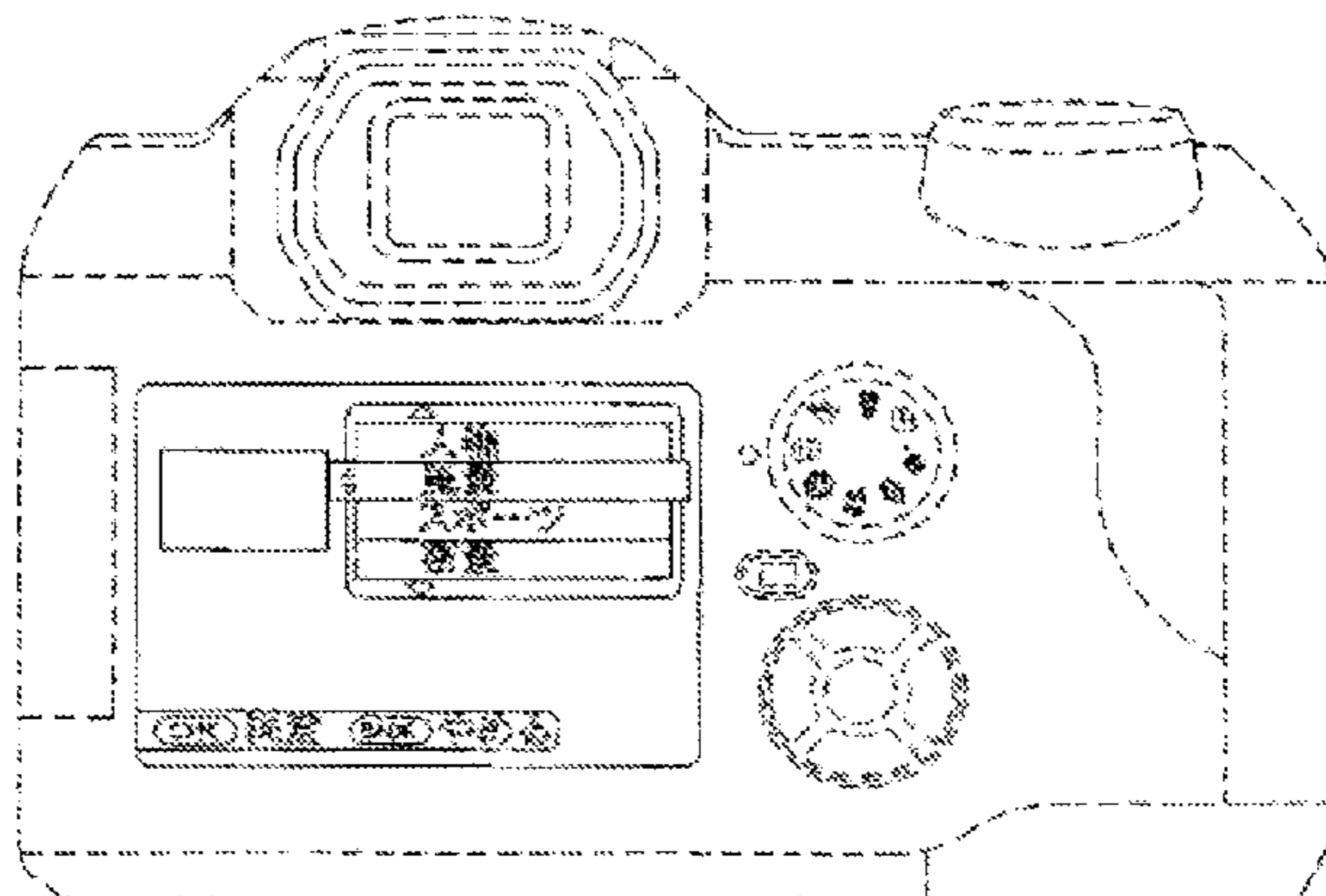
(52) **U.S. Cl.**
USPC **D14/485**

(58) **Field of Classification Search**
USPC D14/485-495; D18/24-33; D19/6, 52; D20/11; D21/324-333; 715/700-867, 715/973-977; 345/757, 782, 848, 852, 850, 345/809, 837, 798, 752, 163, 156, 537, 474, 345/836, 419, 649, 656, 659, 426, 427, 582, 345/428, 440, 660, 634, 902, 418, 629, 700, 345/744, 747, 473, 60; 705/10, 5; 709/223; 348/207.1, E5.024, E5.042, E5.047, 348/333.12, 333.02, 333.01, 373, 207.11, 348/207.2, 211.1, 376, 231.99, 323, 333.05,

DESCRIPTION

FIG. 1 is a front view of the electronic camera, according to a first embodiment of the present design;
FIG. 2 is a rear view thereof;
FIG. 3 is a top view thereof;
FIG. 4 is a bottom view thereof;
FIG. 5 is a right side view thereof; and
FIG. 6 is a left side view thereof.
FIG. 7 is a front view of the electronic camera, according to a second embodiment of the present design;
FIG. 8 is a rear view thereof;
FIG. 9 is a top view thereof;
FIG. 10 is a bottom view thereof;
FIG. 11 is a right side view thereof; and,
FIG. 12 is a left side view thereof.
Broken lines and portions contained within broken lines are not claimed.

1 Claim, 6 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

4,860,218	A	8/1989	Sleator				
4,868,765	A	9/1989	Diefendorff				
4,939,507	A	7/1990	Beard et al.				
5,235,380	A	8/1993	Yamada et al.				
5,265,202	A	11/1993	Krueger et al.				
5,301,301	A	4/1994	Kodosky et al.				
5,305,435	A	4/1994	Bronson				
5,363,482	A	11/1994	Victor et al.				
5,371,847	A	12/1994	Hargrove				
5,390,295	A	2/1995	Bates et al.				
5,459,825	A	10/1995	Anderson et al.				
5,471,578	A	11/1995	Moran et al.				
5,487,143	A	1/1996	Southgate				
5,497,454	A *	3/1996	Bates et al.	715/799			
5,506,937	A *	4/1996	Ford et al.	706/11			
5,513,342	A *	4/1996	Leong et al.	715/798			
5,515,496	A *	5/1996	Kaehler et al.	715/762			
5,528,744	A *	6/1996	Vaughton	715/772			
5,530,795	A	6/1996	Wan				
5,577,187	A *	11/1996	Mariani	715/792			
5,610,828	A *	3/1997	Kodosky et al.	716/139			
5,617,114	A *	4/1997	Bier et al.	345/634			
5,644,740	A *	7/1997	Kiuchi	715/853			
5,666,186	A *	9/1997	Meyerhoefer et al.	396/281			
5,708,786	A	1/1998	Teruuchi				
5,727,174	A	3/1998	Aparicio et al.				
5,751,283	A *	5/1998	Smith	715/798			
5,754,230	A	5/1998	Tsuruta				
5,760,772	A *	6/1998	Austin	715/798			
5,796,402	A *	8/1998	Ellison-Taylor	715/792			
5,802,514	A *	9/1998	Huber	715/769			
5,808,610	A *	9/1998	Benson et al.	715/788			
5,812,804	A *	9/1998	Bates et al.	715/799			
5,815,151	A *	9/1998	Argiolas	715/800			
5,838,318	A *	11/1998	Porter et al.	715/790			
5,862,419	A	1/1999	Goto et al.				
5,874,962	A *	2/1999	de Judicibus et al.	715/789			
5,880,733	A *	3/1999	Horvitz et al.	715/850			
5,903,309	A	5/1999	Anderson				
5,912,668	A *	6/1999	Sciammarella et al.	715/788			
5,920,313	A	7/1999	Diedrichsen et al.				
5,986,703	A	11/1999	O'Mahony				
6,006,038	A	12/1999	Kosako				
6,008,809	A *	12/1999	Brooks	715/792			
6,043,817	A *	3/2000	Bolnick et al.	715/788			
D423,484	S	4/2000	Dangelmaier et al.				
6,075,531	A	6/2000	DeStefano				
D430,885	S	9/2000	Coleman				
6,118,480	A *	9/2000	Anderson et al.	348/207.99			
6,133,898	A *	10/2000	Ludolph et al.	715/790			
6,133,914	A *	10/2000	Rogers et al.	345/661			
6,133,918	A *	10/2000	Conrad et al.	715/804			
6,154,210	A	11/2000	Anderson				
6,215,490	B1 *	4/2001	Kaply	715/788			
6,232,970	B1	5/2001	Bodnar et al.				
6,300,951	B1	10/2001	Filetto et al.				
6,310,648	B1	10/2001	Miller et al.				
6,313,877	B1	11/2001	Anderson				
6,411,337	B2	6/2002	Cove et al.				
6,429,883	B1 *	8/2002	Plow et al.	715/768			
6,473,102	B1 *	10/2002	Rodden et al.	715/788			
6,496,652	B1 *	12/2002	Mikami et al.	396/299			
D469,442	S *	1/2003	Bohlen et al.	D14/485			
D470,857	S *	2/2003	Anderson et al.	D14/485			
6,519,003	B1 *	2/2003	Swayze	348/375			
6,542,168	B2	4/2003	Negishi				
6,549,222	B1 *	4/2003	Skoll	715/856			
6,549,304	B1	4/2003	Dow et al.				
6,597,358	B2	7/2003	Miller				
6,597,383	B1 *	7/2003	Saito	715/860			
6,636,244	B1 *	10/2003	Kelley et al.	715/781			
6,636,264	B1	10/2003	Nakao et al.				
6,654,036	B1 *	11/2003	Jones	715/798			
6,654,559	B2	11/2003	Aoyama				
6,677,965	B1 *	1/2004	Ullmann et al.	715/786			
6,680,749	B1	1/2004	Anderson et al.				
6,683,653	B1	1/2004	Miyake et al.				
6,710,805	B1 *	3/2004	Gennetten et al.	348/333.02			
6,714,222	B1 *	3/2004	Bjorn et al.	715/839			
D496,370	S	9/2004	Gildred				
6,806,892	B1 *	10/2004	Plow et al.	715/781			
6,806,905	B1 *	10/2004	Morimoto et al.	348/333.02			
6,829,009	B2	12/2004	Sugimoto				
6,832,355	B1 *	12/2004	Duperrouzel et al.	715/788			
D501,211	S	1/2005	Ligameri et al.				
6,870,567	B2	3/2005	Funston et al.				
6,915,490	B1 *	7/2005	Ewing	715/794			
6,919,927	B1	7/2005	Hyodo				
6,996,783	B2	2/2006	Brown et al.				
7,007,241	B2 *	2/2006	Boeuf	715/802			
7,015,899	B2 *	3/2006	Kim	345/169			
7,034,881	B1	4/2006	Hyodo et al.				
7,057,658	B1	6/2006	Shioji et al.				
7,061,535	B2	6/2006	Misawa et al.				
7,106,375	B2 *	9/2006	Venturino et al.	348/333.02			
7,110,032	B2	9/2006	Furukawa				
7,155,682	B2 *	12/2006	Rodden et al.	715/788			
D535,657	S *	1/2007	Ording	D14/487			
D535,659	S *	1/2007	Hally et al.	D14/485			
7,171,618	B2 *	1/2007	Harrington et al.	715/229			
D537,449	S *	2/2007	Hoefnagels et al.	D14/485			
7,216,302	B2 *	5/2007	Rodden et al.	715/815			
D543,987	S *	6/2007	Rimas-Ribikauskas et al.	D14/485			
7,227,576	B2 *	6/2007	Umeyama	348/333.11			
7,233,356	B2 *	6/2007	Nagao	348/333.02			
7,239,350	B2 *	7/2007	Ban	348/333.02			
D548,743	S *	8/2007	Takahashi et al.	D14/486			
D550,682	S *	9/2007	Viegers et al.	D14/486			
D551,673	S *	9/2007	Wirz	D14/485			
7,265,786	B2	9/2007	Venturino et al.				
7,265,851	B2	9/2007	Kinjo et al.				
7,274,400	B2	9/2007	Hyodo et al.				
D552,114	S *	10/2007	Tolle et al.	D14/485			
D552,115	S *	10/2007	Suzuki	D14/485			
D553,625	S *	10/2007	Burns et al.	D14/485			
D554,652	S *	11/2007	Shen et al.	D14/485			
7,295,239	B2 *	11/2007	Battles et al.	348/333.02			
7,298,409	B1	11/2007	Misawa				
7,317,479	B2 *	1/2008	Cazier et al.	348/240.99			
7,317,485	B1	1/2008	Miyake et al.				
7,319,490	B2	1/2008	Kanamori et al.				
D562,833	S *	2/2008	Evans et al.	D14/485			
7,346,855	B2 *	3/2008	Hellyar et al.	715/783			
D565,627	S *	4/2008	Kase	D16/219			
D569,871	S *	5/2008	Anastasopoulos et al.	D14/485			
D569,872	S *	5/2008	Suzuki	D14/485			
D573,600	S *	7/2008	Kaminaga	D14/486			
7,401,297	B2 *	7/2008	Hori et al.	715/781			
D576,634	S *	9/2008	Clark et al.	D14/485			
7,430,008	B2	9/2008	Ambiru et al.				
7,437,005	B2 *	10/2008	Drucker et al.	382/224			
D580,450	S *	11/2008	Chen et al.	D14/486			
D580,941	S *	11/2008	Scott et al.	D14/485			
D580,942	S *	11/2008	Oshiro et al.	D14/485			
D580,946	S *	11/2008	Chen et al.	D14/486			
7,450,169	B2	11/2008	Jeon et al.				
D582,932	S *	12/2008	Blankenship et al.	D14/485			
D582,937	S *	12/2008	Chen et al.	D14/488			
7,479,984	B2	1/2009	Tanaka et al.				
7,480,873	B2	1/2009	Kawahara				
D589,528	S *	3/2009	Koh	D14/486			
7,509,592	B1 *	3/2009	Martinez	715/862			
D590,407	S *	4/2009	Watanabe et al.	D14/485			
D590,408	S *	4/2009	Evans et al.	D14/485			
7,515,190	B2	4/2009	Kobayashi et al.				
D593,107	S *	5/2009	Shimoda et al.	D14/485			
D593,108	S *	5/2009	Danton	D14/485			
D594,020	S *	6/2009	Ball et al.	D14/486			
D594,872	S *	6/2009	Akimoto	D14/485			
D595,726	S *	7/2009	Akimoto	D14/485			
D598,026	S *	8/2009	Makoski et al.	D14/486			
D598,466	S *	8/2009	Hirsch et al.	D14/485			
7,576,779	B2	8/2009	Tanaka et al.				

(56)

References Cited

U.S. PATENT DOCUMENTS

D599,358	S *	9/2009	Hoefnagels et al.	D14/485	D646,292	S *	10/2011	Thai et al.	D14/486
D599,364	S *	9/2009	Mays	D14/485	D648,344	S *	11/2011	Arnold	D14/486
D599,365	S *	9/2009	Brown et al.	D14/485	D648,733	S *	11/2011	Chou et al.	D14/485
D599,367	S *	9/2009	Mays et al.	D14/485	D649,154	S *	11/2011	Vance et al.	D14/486
D599,368	S *	9/2009	Kanga et al.	D14/485	8,059,182	B2 *	11/2011	Ota et al.	348/333.02
D599,369	S *	9/2009	Murchie et al.	D14/485	8,081,251	B2 *	12/2011	Kido et al.	348/333.11
D599,370	S *	9/2009	Murchie et al.	D14/485	D651,608	S *	1/2012	Allen et al.	D14/485
D599,806	S *	9/2009	Brown et al.	D14/485	D651,609	S *	1/2012	Pearson et al.	D14/486
D599,811	S *	9/2009	Watanabe et al.	D14/486	D652,049	S *	1/2012	Chou et al.	D14/485
D603,415	S *	11/2009	Lin et al.	D14/485	D653,259	S *	1/2012	Vance et al.	D14/486
D603,418	S *	11/2009	Magnani et al.	D14/486	8,089,549	B2 *	1/2012	Yasuda et al.	348/333.02
7,616,248	B2 *	11/2009	Parulski et al.	348/333.11	8,089,551	B2 *	1/2012	Uehara et al.	348/333.11
D605,652	S *	12/2009	Plaisted et al.	D14/485	8,120,624	B2 *	2/2012	Jetha et al.	345/647
D606,080	S *	12/2009	Murchie et al.	D14/485	8,127,248	B2 *	2/2012	Ording et al.	715/790
7,639,300	B2	12/2009	Yumiki		D655,303	S *	3/2012	Shallcross et al.	D14/486
D607,894	S *	1/2010	Prater et al.	D14/486	D656,505	S *	3/2012	Jones et al.	D14/485
D608,365	S *	1/2010	Walsh et al.	D14/485	D656,506	S *	3/2012	Jones et al.	D14/485
7,649,563	B2	1/2010	Lee		D656,511	S *	3/2012	Hally et al.	D14/486
D609,714	S *	2/2010	Oda et al.	D14/485	D656,514	S *	3/2012	Thai et al.	D14/487
D611,053	S *	3/2010	Kanga et al.	D14/485	D656,941	S *	4/2012	Jones et al.	D14/485
D611,484	S *	3/2010	Mays et al.	D14/485	D656,942	S *	4/2012	Jones et al.	D14/485
D612,861	S *	3/2010	Lee	D14/485	D656,943	S *	4/2012	Hally et al.	D14/485
D612,862	S *	3/2010	Fletcher et al.	D14/488	D657,367	S *	4/2012	Allen et al.	D14/485
7,675,530	B2 *	3/2010	Koresawa et al.	345/690	D658,194	S *	4/2012	Hally et al.	D14/485
D614,633	S *	4/2010	Watanabe et al.	D14/486	D658,196	S *	4/2012	Wood et al.	D14/486
D614,638	S *	4/2010	Viegers et al.	D14/486	8,154,473	B2 *	4/2012	Engel et al.	345/4
D614,643	S *	4/2010	Viegers et al.	D14/486	D658,677	S *	5/2012	Gleasman et al.	D14/488
7,701,500	B2	4/2010	Aizawa et al.		D659,151	S *	5/2012	Loken et al.	D14/485
D616,895	S *	6/2010	Ehrler et al.	D14/486	D659,152	S *	5/2012	Oda et al.	D14/485
D617,805	S *	6/2010	Scalisi et al.	D14/485	8,174,605	B2 *	5/2012	Yamada	348/333.02
D617,808	S *	6/2010	Thompson et al.	D14/486	D661,313	S *	6/2012	Nenoki	D14/487
7,747,965	B2 *	6/2010	Holecsek et al.	715/781	D664,550	S *	7/2012	Lee et al.	D14/485
D619,612	S *	7/2010	Pueyo et al.	D14/487	D664,554	S *	7/2012	Nenoki	D14/487
7,750,967	B2 *	7/2010	Koike et al.	348/333.02	D664,561	S *	7/2012	Gleasman et al.	D14/488
D622,729	S *	8/2010	Oda et al.	D14/485	8,214,760	B2 *	7/2012	Matthews et al.	715/795
D623,655	S *	9/2010	Jewitt et al.	D14/485	8,228,412	B2 *	7/2012	Hiratsuka	348/333.02
D624,088	S *	9/2010	Salay et al.	D14/486	D664,967	S *	8/2012	Lee et al.	D14/485
D626,131	S *	10/2010	Kruzeniski et al.	D14/485	D664,968	S *	8/2012	Lee et al.	D14/485
D626,132	S *	10/2010	McLaughlin et al.	D14/485	D664,986	S *	8/2012	Lee et al.	D14/488
D626,133	S *	10/2010	Murphy et al.	D14/485	D664,988	S *	8/2012	Gleasman et al.	D14/488
RE41,922	E *	11/2010	Gough et al.	715/803	D665,394	S *	8/2012	Duggan et al.	D14/485
D627,361	S *	11/2010	Lew et al.	D14/485	D665,395	S *	8/2012	Lee et al.	D14/485
D627,790	S *	11/2010	Chaudhri	D14/486	8,248,503	B2 *	8/2012	Sogoh et al.	348/333.02
7,827,508	B2 *	11/2010	Venturino	715/864	8,253,837	B2 *	8/2012	Ono	348/333.02
7,830,441	B2 *	11/2010	Tsukatani	348/333.11	D666,630	S *	9/2012	LeVee et al.	D14/486
7,834,924	B2 *	11/2010	Uehara et al.	348/333.02	8,259,208	B2 *	9/2012	Ciurea et al.	348/333.02
D630,641	S *	1/2011	Bamford	D14/485	D668,671	S *	10/2012	Zaman et al.	D14/488
D631,886	S *	2/2011	Vance et al.	D14/486	D669,492	S *	10/2012	Guss et al.	D14/487
D632,698	S *	2/2011	Judy et al.	D14/486	D669,908	S *	10/2012	Shallcross et al.	D14/486
D632,700	S *	2/2011	Brinda	D14/488	8,279,319	B2 *	10/2012	Date	348/333.02
D633,509	S *	3/2011	Oda et al.	D14/485	8,294,805	B2 *	10/2012	Kita	348/333.02
D633,917	S *	3/2011	Poling et al.	D14/485	D670,308	S *	11/2012	Vance et al.	D14/486
D634,750	S *	3/2011	Loretan et al.	D14/486	D671,135	S *	11/2012	Arnold et al.	D14/487
D634,751	S *	3/2011	McLaughlin et al.	D14/488	8,312,374	B2 *	11/2012	Ozawa et al.	715/702
D634,753	S *	3/2011	Loretan et al.	D14/488	D672,362	S *	12/2012	Zurawski et al.	D14/485
7,903,163	B2 *	3/2011	Ojima et al.	348/333.02	D672,363	S *	12/2012	Reyna et al.	D14/486
7,924,339	B2 *	4/2011	Inukai	348/333.02	D672,364	S *	12/2012	Reyna et al.	D14/486
D637,604	S *	5/2011	Brinda	D14/488	8,330,844	B2 *	12/2012	Reid et al.	348/333.02
D637,606	S *	5/2011	Luke et al.	D14/488	D674,809	S *	1/2013	Furue et al.	D14/485
D638,432	S *	5/2011	Flik et al.	D14/486	D675,241	S *	1/2013	Oda	D16/219
D640,266	S *	6/2011	Furuya et al.	D14/486	8,373,787	B2 *	2/2013	Kikuchi	348/333.02
D640,710	S *	6/2011	Brouwers et al.	D14/486	D677,686	S *	3/2013	Reyna et al.	D14/486
7,969,496	B2 *	6/2011	Pilu	348/333.02	D678,316	S *	3/2013	Chang et al.	D14/486
D641,372	S *	7/2011	Gardner et al.	D14/486	8,395,690	B2 *	3/2013	Nakano	348/333.02
D641,373	S *	7/2011	Gardner et al.	D14/486	8,405,753	B2 *	3/2013	Wakabayashi et al.	348/333.02
D642,192	S *	7/2011	Arnold	D14/487	8,421,899	B2 *	4/2013	Ojima et al.	348/333.02
D643,438	S *	8/2011	Gardner et al.	D14/486	8,432,474	B2 *	4/2013	Nagoya	348/333.02
D643,850	S *	8/2011	Arnold et al.	D14/487	D681,652	S *	5/2013	Oda et al.	D14/485
D643,851	S *	8/2011	Arnold et al.	D14/487	D682,844	S *	5/2013	Friedlander et al.	D14/485
7,990,456	B2 *	8/2011	Inoue et al.	348/333.02	D682,857	S *	5/2013	Friedlander et al.	D14/486
7,992,107	B2 *	8/2011	Martinez	715/862	D683,355	S *	5/2013	Ridl et al.	D14/486
8,004,592	B2 *	8/2011	Abe	348/333.02	8,437,623	B2 *	5/2013	Ohnishi	386/328
8,004,593	B2 *	8/2011	Kusaka	348/333.02	8,441,568	B2 *	5/2013	Tabata	348/333.02
D645,877	S *	9/2011	Cavanaugh et al.	D14/488	D684,162	S *	6/2013	Aoshima	D14/485
D646,285	S *	10/2011	Thai et al.	D14/486	8,482,649	B2 *	7/2013	Suehiro	348/333.02
					8,488,039	B2 *	7/2013	Kim	348/333.02
					D687,445	S *	8/2013	Fuhrmann	D14/485
					D689,060	S *	9/2013	Tamura et al.	D14/485
					D690,312	S *	9/2013	Cherian et al.	D14/486

(56)

References Cited

U.S. PATENT DOCUMENTS

8,525,913	B2 *	9/2013	Kim et al.	348/333.02	2006/0221223	A1 *	10/2006	Terada	348/333.05
8,531,428	B2 *	9/2013	Glynn et al.	345/173	2006/0256225	A1 *	11/2006	Kawamura et al.	348/333.02
8,542,199	B2 *	9/2013	Ooba	345/173	2007/0024736	A1 *	2/2007	Matsuda et al.	348/333.12
D690,714	S *	10/2013	Talbot et al.	D14/485	2007/0052832	A1 *	3/2007	Bae et al.	348/333.12
8,547,467	B2 *	10/2013	Kouda et al.	348/333.02	2007/0058064	A1 *	3/2007	Hara et al.	348/333.01
8,547,469	B2 *	10/2013	Ejima et al.	348/333.11	2007/0067732	A1 *	3/2007	Kang et al.	715/767
2002/0030754	A1 *	3/2002	Sugimoto	348/333.02	2007/0070203	A1 *	3/2007	Yang et al.	348/207.1
2002/0073424	A1 *	6/2002	Ward et al.	725/42	2007/0081090	A1 *	4/2007	Singh	348/333.11
2002/0080185	A1 *	6/2002	Boeuf	345/802	2007/0086648	A1 *	4/2007	Hayashi	382/154
2002/0093582	A1 *	7/2002	Aoki et al.	348/333.02	2007/0097090	A1 *	5/2007	Battles	345/173
2002/0118227	A1 *	8/2002	Salvatore	345/764	2007/0098394	A1 *	5/2007	Baggs	396/299
2002/0158983	A1 *	10/2002	Fellegara et al.	348/333.11	2007/0098395	A1 *	5/2007	Battles et al.	396/299
2002/0171682	A1 *	11/2002	Frank et al.	345/790	2007/0101300	A1 *	5/2007	Rodden et al.	715/864
2003/0011639	A1 *	1/2003	Webb	345/808	2007/0103578	A1 *	5/2007	Fredlund et al.	348/333.11
2003/0081135	A1 *	5/2003	Boll	348/333.01	2007/0104477	A1 *	5/2007	Misawa	396/299
2003/0103156	A1 *	6/2003	Brake et al.	348/333.01	2007/0115383	A1 *	5/2007	Tsukatani	348/333.11
2003/0122950	A1 *	7/2003	Anderson	348/333.02	2007/0126877	A1 *	6/2007	Yang	348/207.99
2003/0142143	A1 *	7/2003	Brown et al.	345/836	2007/0153111	A1 *	7/2007	Kato	348/333.11
2003/0164856	A1 *	9/2003	Prager et al.	345/764	2007/0159533	A1 *	7/2007	Ayaki	348/207.99
2003/0169298	A1 *	9/2003	Ording	345/810	2007/0159549	A1 *	7/2007	Matsumoto	348/333.11
2003/0189597	A1 *	10/2003	Anderson et al.	345/778	2007/0188646	A1 *	8/2007	Kobayashi et al.	348/333.11
2003/0197732	A1 *	10/2003	Gupta	345/764	2007/0188647	A1 *	8/2007	Ikeda	348/333.11
2003/0206239	A1 *	11/2003	Battles	348/333.02	2007/0195185	A1 *	8/2007	Onuki	348/333.02
2003/0226115	A1 *	12/2003	Wall et al.	715/526	2007/0195186	A1 *	8/2007	Okada	348/333.02
2004/0017481	A1 *	1/2004	Takasumi et al.	348/207.99	2007/0200945	A1 *	8/2007	Inukai	348/333.02
2004/0017499	A1 *	1/2004	Ambiru	348/333.12	2007/0211157	A1 *	9/2007	Humpoletz et al.	348/333.01
2004/0027473	A1 *	2/2004	Suzuki	348/333.02	2007/0211158	A1 *	9/2007	Icho	348/333.02
2004/0032522	A1 *	2/2004	Koeda et al.	348/333.12	2007/0258005	A1 *	11/2007	Koike et al.	348/333.11
2004/0046886	A1 *	3/2004	Ambiru et al.	348/333.12	2007/0263092	A1 *	11/2007	Fedorovskaya et al. ...	348/207.1
2004/0046887	A1 *	3/2004	Ikehata et al.	348/333.12	2007/0268371	A1 *	11/2007	Misawa et al.	348/207.99
2004/0051741	A1 *	3/2004	Venturino	345/812	2007/0268392	A1 *	11/2007	Paalasmaa et al.	348/333.02
2004/0051803	A1 *	3/2004	Venturino et al.	348/333.02	2008/0043275	A1 *	2/2008	Morton et al.	358/1.15
2004/0080619	A1 *	4/2004	Cazier et al.	348/207.2	2008/0055201	A1 *	3/2008	Kajiwara	345/60
2004/0095373	A1 *	5/2004	Schmidt et al.	345/716	2008/0055454	A1 *	3/2008	Yumiki	348/333.12
2004/0150738	A1 *	8/2004	Sakimoto et al.	348/333.11	2008/0062297	A1 *	3/2008	Sako et al.	348/333.02
2004/0179122	A1 *	9/2004	Morimoto et al.	348/333.01	2008/0068484	A1 *	3/2008	Nam	348/333.01
2004/0196400	A1 *	10/2004	Stavely et al.	348/333.01	2008/0068486	A1 *	3/2008	Kusaka	348/333.02
2004/0201679	A1 *	10/2004	Carcia	348/207.1	2008/0074499	A1 *	3/2008	Niimura	348/207.1
2004/0212640	A1 *	10/2004	Mann et al.	345/792	2008/0084398	A1 *	4/2008	Ito et al.	345/173
2004/0218080	A1 *	11/2004	Stavely et al.	348/333.11	2008/0100712	A1 *	5/2008	Hayes et al.	348/207.99
2004/0223067	A1 *	11/2004	Seki et al.	348/333.11	2008/0117312	A1 *	5/2008	Kokubun	348/231.7
2004/0227835	A1 *	11/2004	Seki	348/333.02	2008/0170150	A1 *	7/2008	Kojima et al.	348/333.01
2004/0233316	A1 *	11/2004	Battles et al.	348/333.02	2008/0175579	A1 *	7/2008	Kawakami	396/155
2004/0239792	A1 *	12/2004	Shibutani et al.	348/333.12	2008/0193121	A1 *	8/2008	Miyazaki	396/299
2004/0255254	A1 *	12/2004	Weingart et al.	715/804	2008/0225001	A1 *	9/2008	Martin et al.	345/158
2004/0257459	A1 *	12/2004	Shim	348/333.02	2008/0225154	A1 *	9/2008	Pan et al.	348/333.02
2004/0263662	A1 *	12/2004	Okisu et al.	348/333.02	2008/0239083	A1 *	10/2008	Kusaka et al.	348/207.1
2005/0001902	A1 *	1/2005	Brogan et al.	348/207.1	2008/0263229	A1 *	10/2008	Huster et al.	710/8
2005/0024515	A1 *	2/2005	Ikehata et al.	348/333.02	2008/0279425	A1 *	11/2008	Tang	382/118
2005/0041110	A1 *	2/2005	Liebenow	348/207.99	2008/0297607	A1 *	12/2008	Minatogawa	348/207.1
2005/0057678	A1 *	3/2005	Fujii	348/333.11	2008/0304816	A1 *	12/2008	Ebato	396/53
2005/0083406	A1 *	4/2005	Cozier	348/207.1	2009/0059054	A1 *	3/2009	Oishi et al.	348/333.11
2005/0083425	A1 *	4/2005	Cozier et al.	348/333.02	2009/0096875	A1 *	4/2009	Yoshimaru et al.	348/207.1
2005/0094014	A1 *	5/2005	Haas et al.	348/333.01	2009/0128680	A1 *	5/2009	Nagata	348/333.02
2005/0174462	A1 *	8/2005	Brost	348/333.09	2009/0147123	A1 *	6/2009	Fujii	348/333.12
2005/0195294	A1 *	9/2005	Kim et al.	348/239	2009/0207254	A1 *	8/2009	Tomat et al.	348/207.1
2005/0200738	A1 *	9/2005	Song	348/333.02	2009/0213141	A1 *	8/2009	Gao	345/629
2005/0212943	A1 *	9/2005	Karasaki et al.	348/333.02	2009/0251587	A1 *	10/2009	Kim	348/333.12
2005/0219386	A1 *	10/2005	Stavely et al.	348/240.3	2009/0256947	A1 *	10/2009	Ciurea et al.	348/333.12
2005/0225658	A1 *	10/2005	Ikehata	348/333.01	2009/0268038	A1 *	10/2009	Matsumoto	348/207.1
2005/0231625	A1 *	10/2005	Parulski et al.	348/333.12	2009/0278973	A1 *	11/2009	Sogoh et al.	348/333.02
2005/0237411	A1 *	10/2005	Watanabe	348/333.02	2009/0303373	A1 *	12/2009	Yamada	348/333.02
2006/0001757	A1 *	1/2006	Sawachi	348/333.12	2009/0303375	A1 *	12/2009	Ohyama	348/333.12
2006/0045514	A1 *	3/2006	Matsushita et al.	396/299	2009/0322893	A1 *	12/2009	Stallings et al.	348/222.1
2006/0062565	A1 *	3/2006	Tsuchida	396/299	2010/0002084	A1 *	1/2010	Hattori et al.	348/207.1
2006/0078324	A1 *	4/2006	Yasuda et al.	396/299	2010/0020181	A1 *	1/2010	Kuroda	348/207.1
2006/0087578	A1 *	4/2006	Hong et al.	348/333.01	2010/0020220	A1 *	1/2010	Sugita et al.	348/333.01
2006/0098112	A1 *	5/2006	Kelly	348/333.12	2010/0026815	A1 *	2/2010	Yamamoto	348/207.1
2006/0101350	A1 *	5/2006	Scott	715/779	2010/0033614	A1 *	2/2010	Yoo et al.	348/333.02
2006/0103751	A1 *	5/2006	Lee	348/333.02	2010/0045843	A1 *	2/2010	Ogawa et al.	348/333.11
2006/0112354	A1 *	5/2006	Park et al.	715/835	2010/0053410	A1 *	3/2010	Yoshii et al.	348/333.11
2006/0146166	A1 *	7/2006	Abe et al.	348/333.01	2010/0060743	A1 *	3/2010	Sato	348/207.1
2006/0159444	A1 *	7/2006	Mokunaka	396/299	2010/0066889	A1 *	3/2010	Ueda et al.	348/333.01
2006/0181631	A1 *	8/2006	Suzuki et al.	348/333.02	2010/0066891	A1 *	3/2010	Kawashima	348/333.11
2006/0187331	A1 *	8/2006	Watanabe et al.	348/333.01	2010/0073487	A1 *	3/2010	Sogoh et al.	348/207.1
					2010/0073544	A1 *	3/2010	Naruto et al.	348/333.02
					2010/0125786	A1 *	5/2010	Ozawa et al.	715/702
					2010/0182481	A1 *	7/2010	Kobayashi et al.	348/333.11
					2010/0328513	A1 *	12/2010	Ryu	348/333.02

(56)

References Cited

U.S. PATENT DOCUMENTS

2011/0043677	A1 *	2/2011	Muramatsu et al.	348/333.11	2012/0127357	A1 *	5/2012	Park et al.	348/333.02
2011/0050975	A1 *	3/2011	Chung	348/333.02	2012/0133817	A1 *	5/2012	Anderson	348/333.05
2011/0194010	A1 *	8/2011	Nakase et al.	348/333.11	2012/0140102	A1 *	6/2012	Park et al.	348/333.02
2011/0219292	A1 *	9/2011	Rapp	715/212	2012/0300110	A1 *	11/2012	Miyazaki	348/333.02
2011/0249165	A1 *	10/2011	Churei	348/333.02	2013/0002924	A1 *	1/2013	Nakajima et al.	348/333.02
2011/0271226	A1 *	11/2011	Janssen et al.	715/794	2013/0103775	A1 *	4/2013	Chang et al.	709/206
2012/0105703	A1 *	5/2012	Lee et al.	348/333.11	2013/0116007	A1 *	5/2013	Seguin et al.	455/556.1
					2013/0169850	A1 *	7/2013	Oyama et al.	348/333.02
					2013/0235248	A1 *	9/2013	Suzuki et al.	348/333.02

* cited by examiner

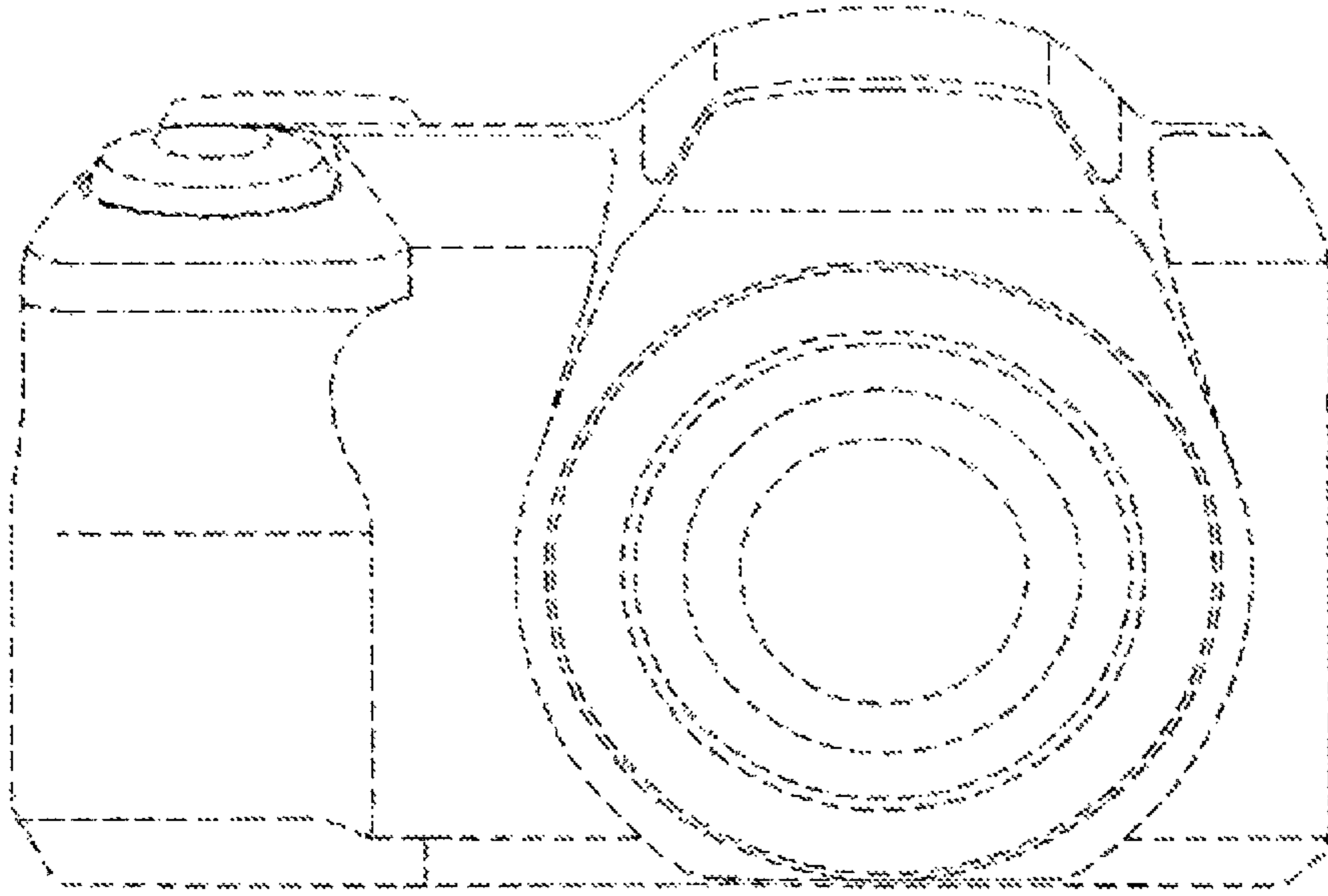


FIG. 1

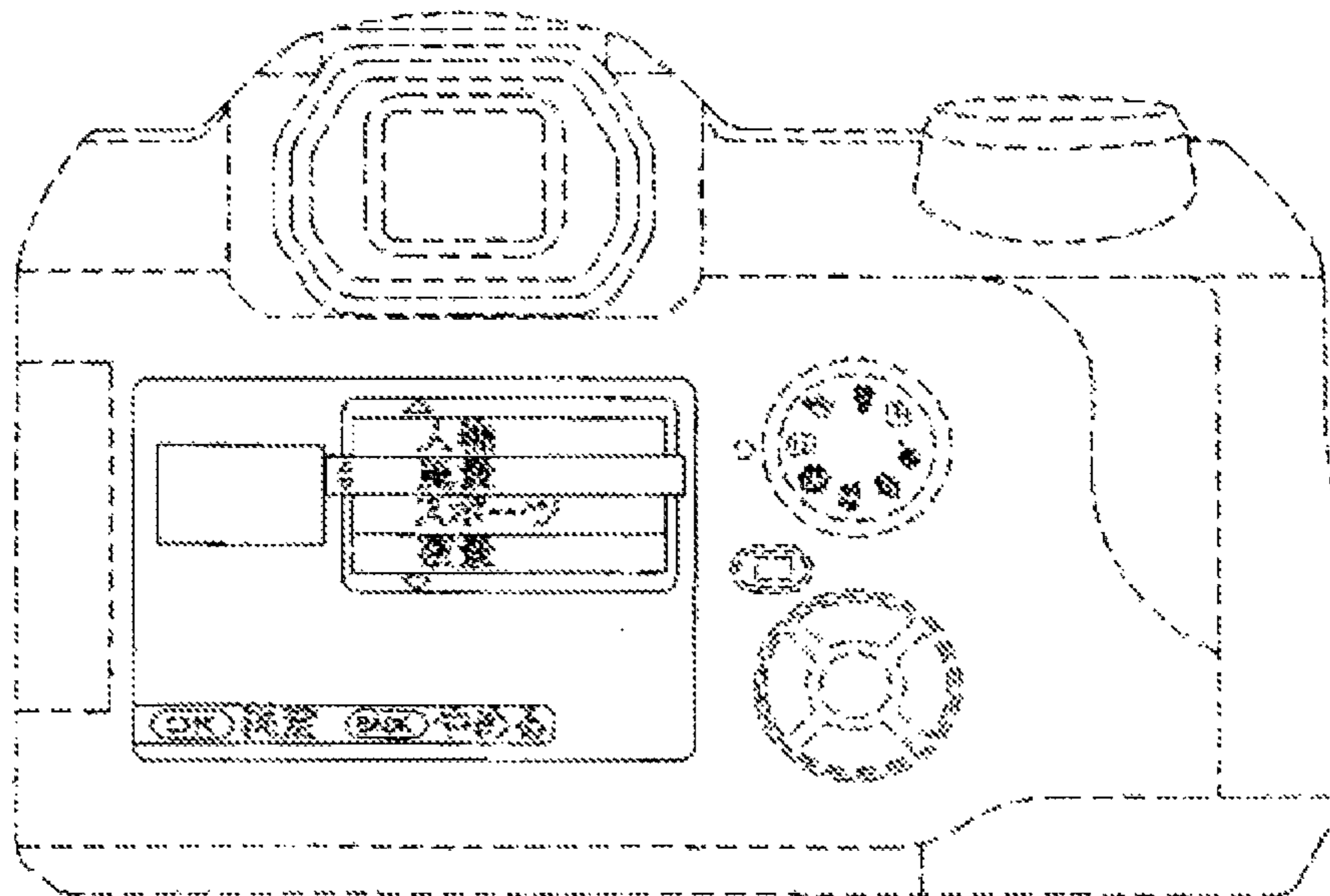


FIG. 2

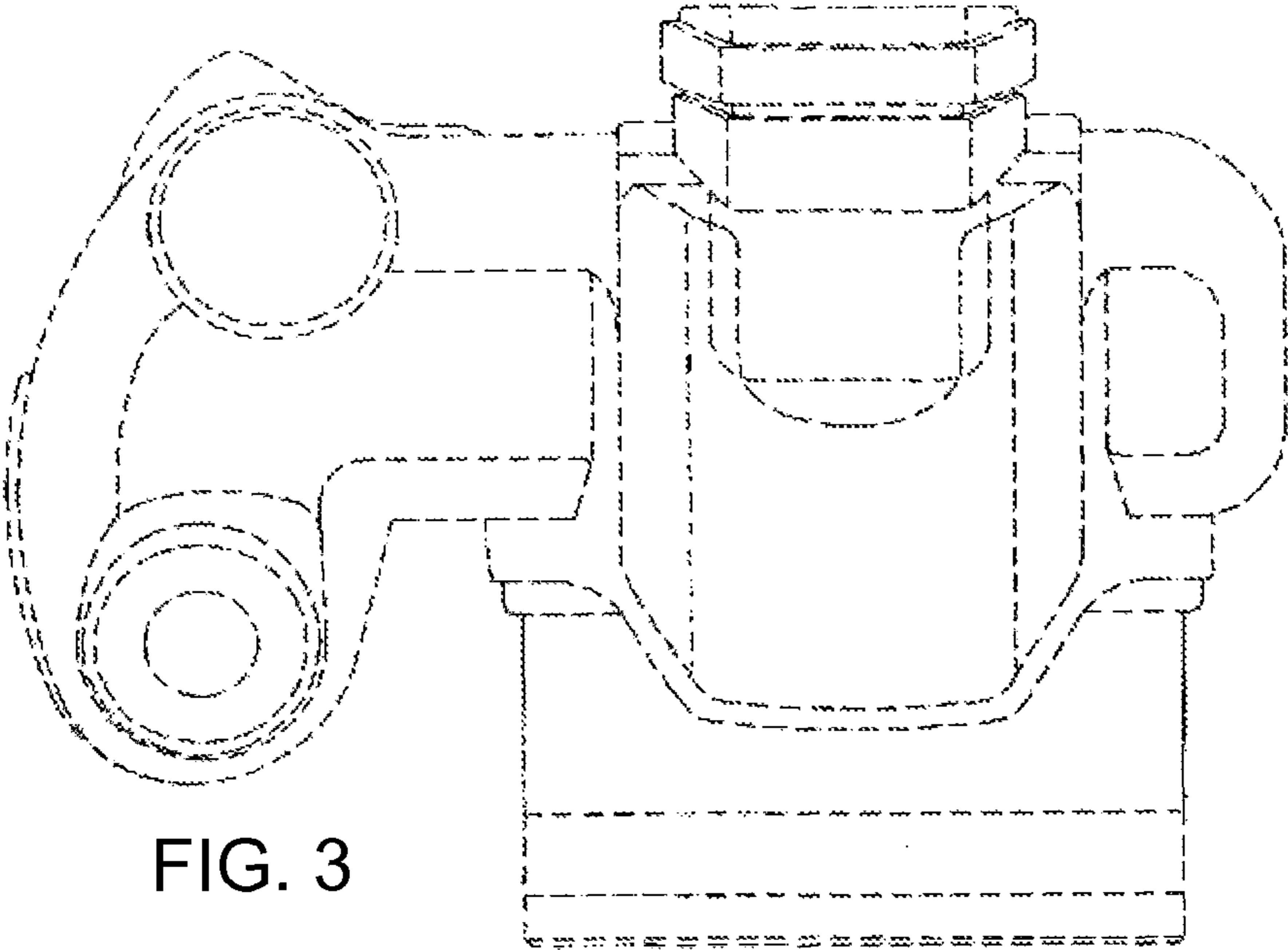


FIG. 3

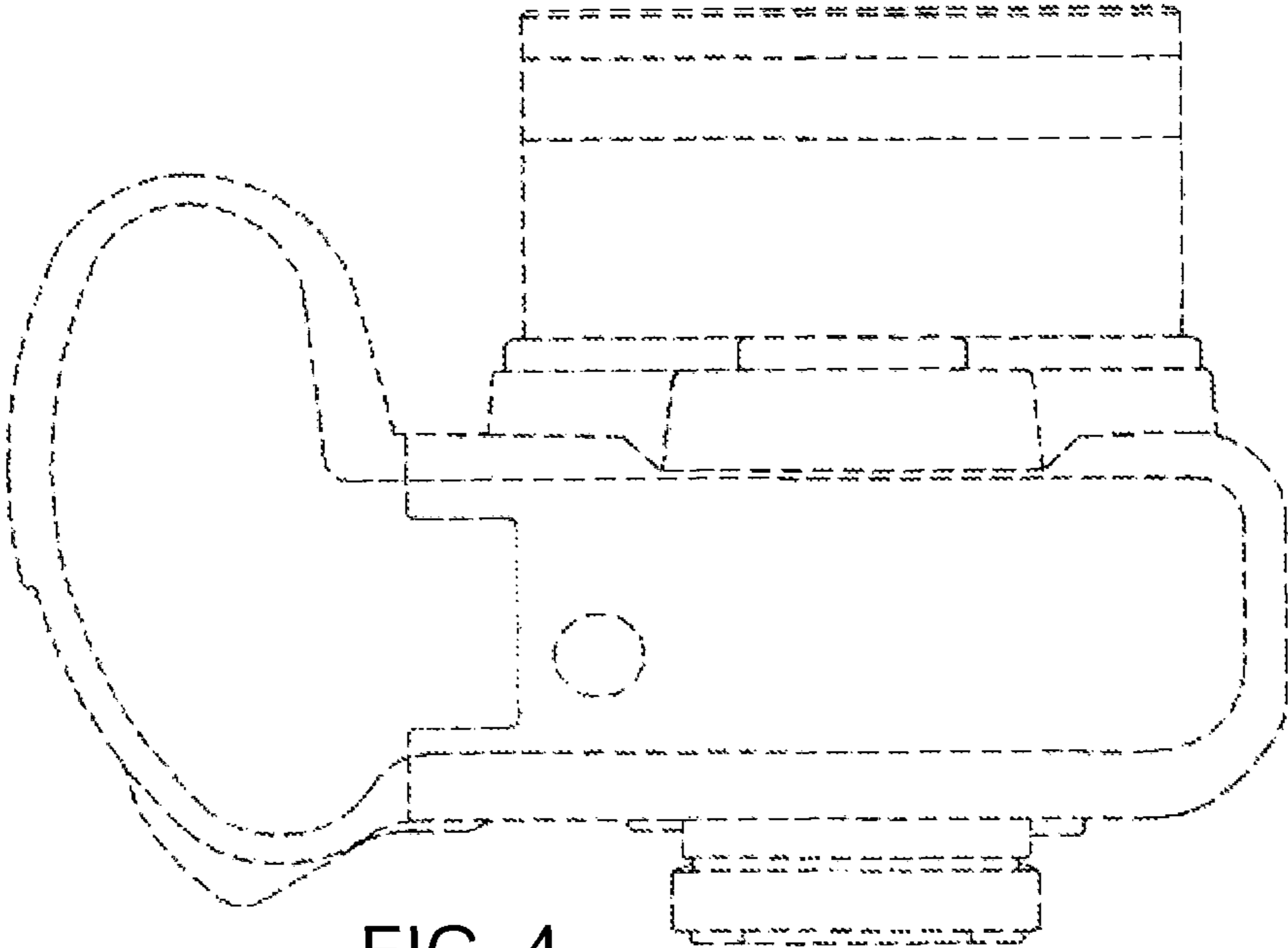


FIG. 4

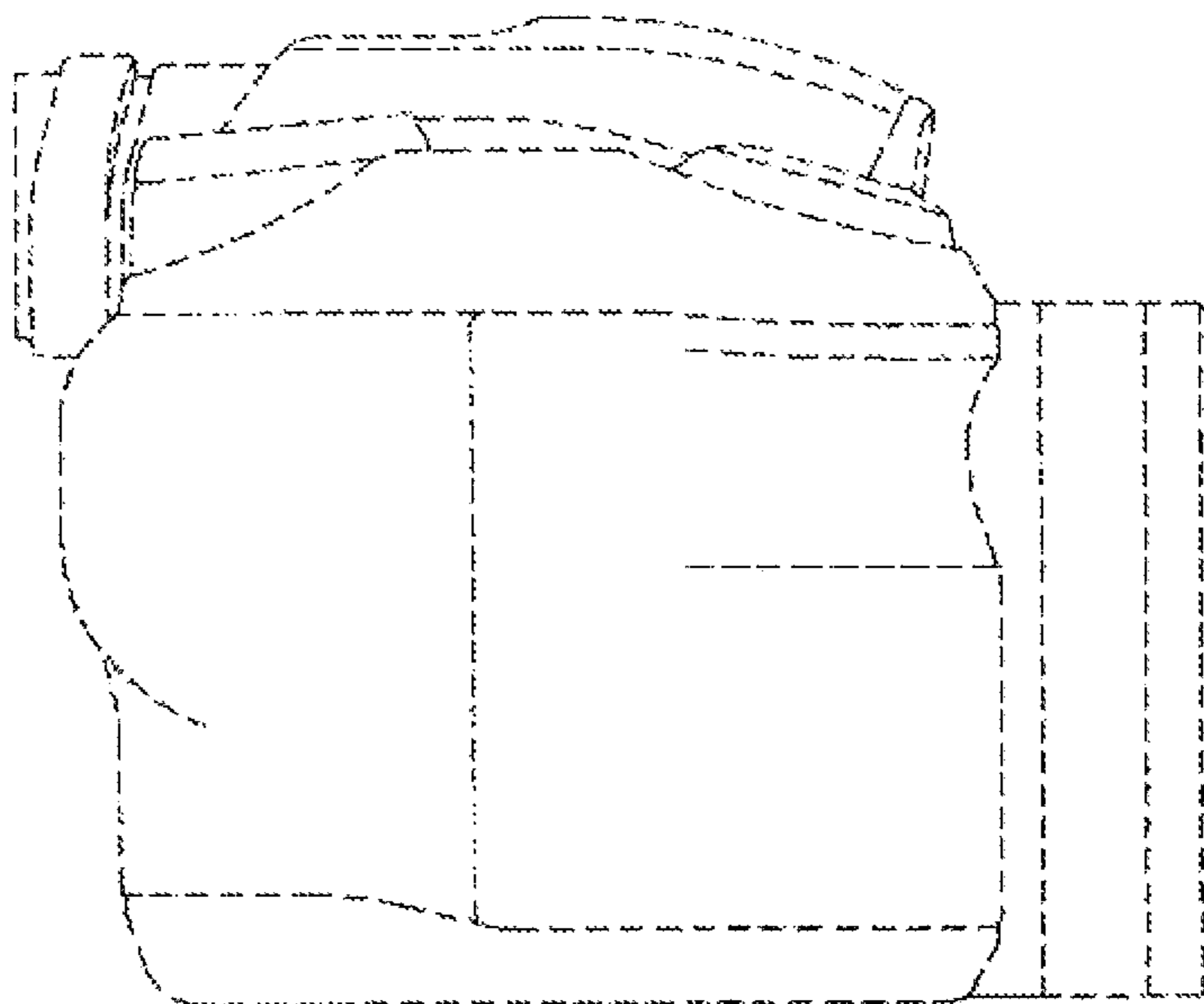


FIG. 5

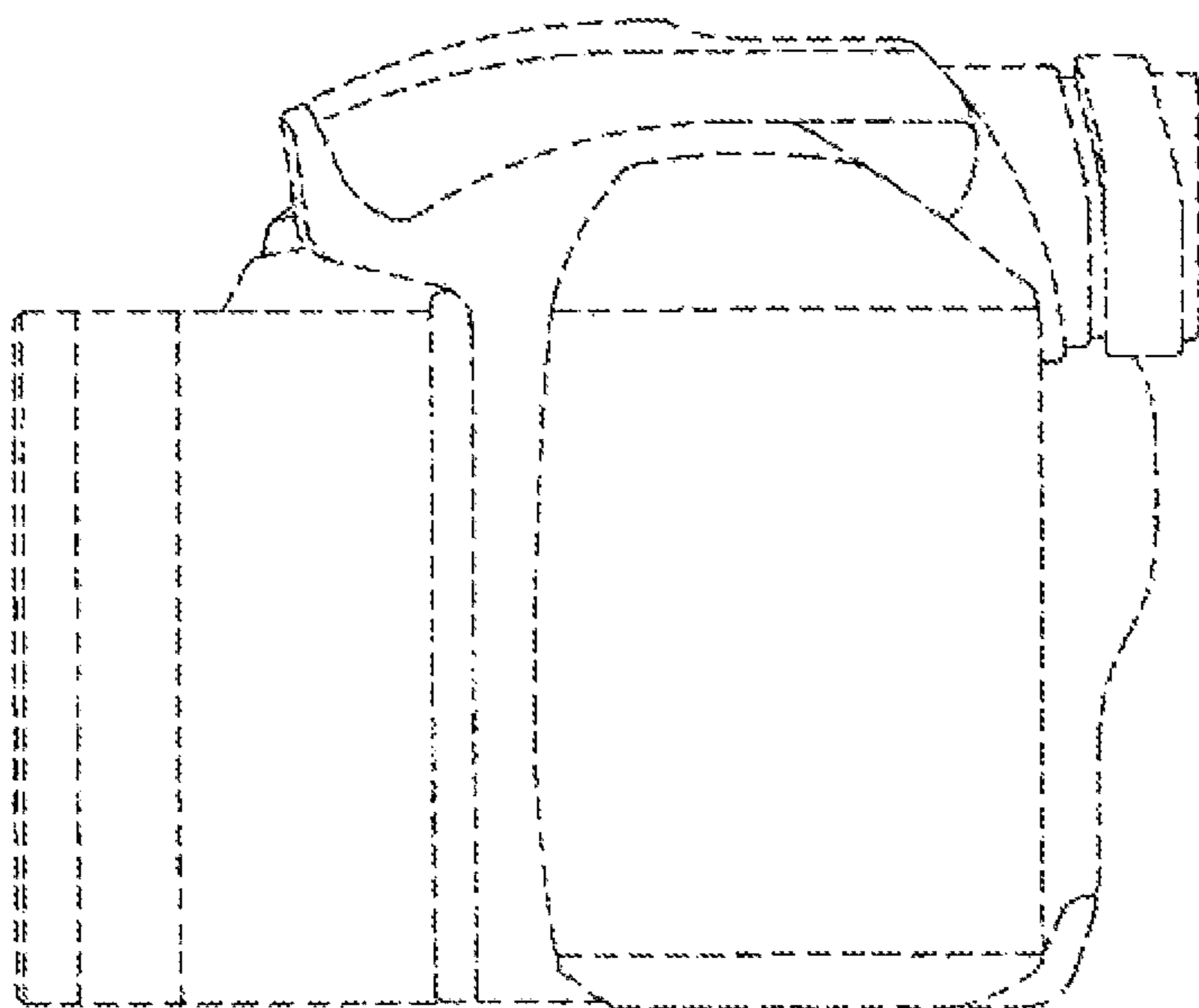


FIG. 6

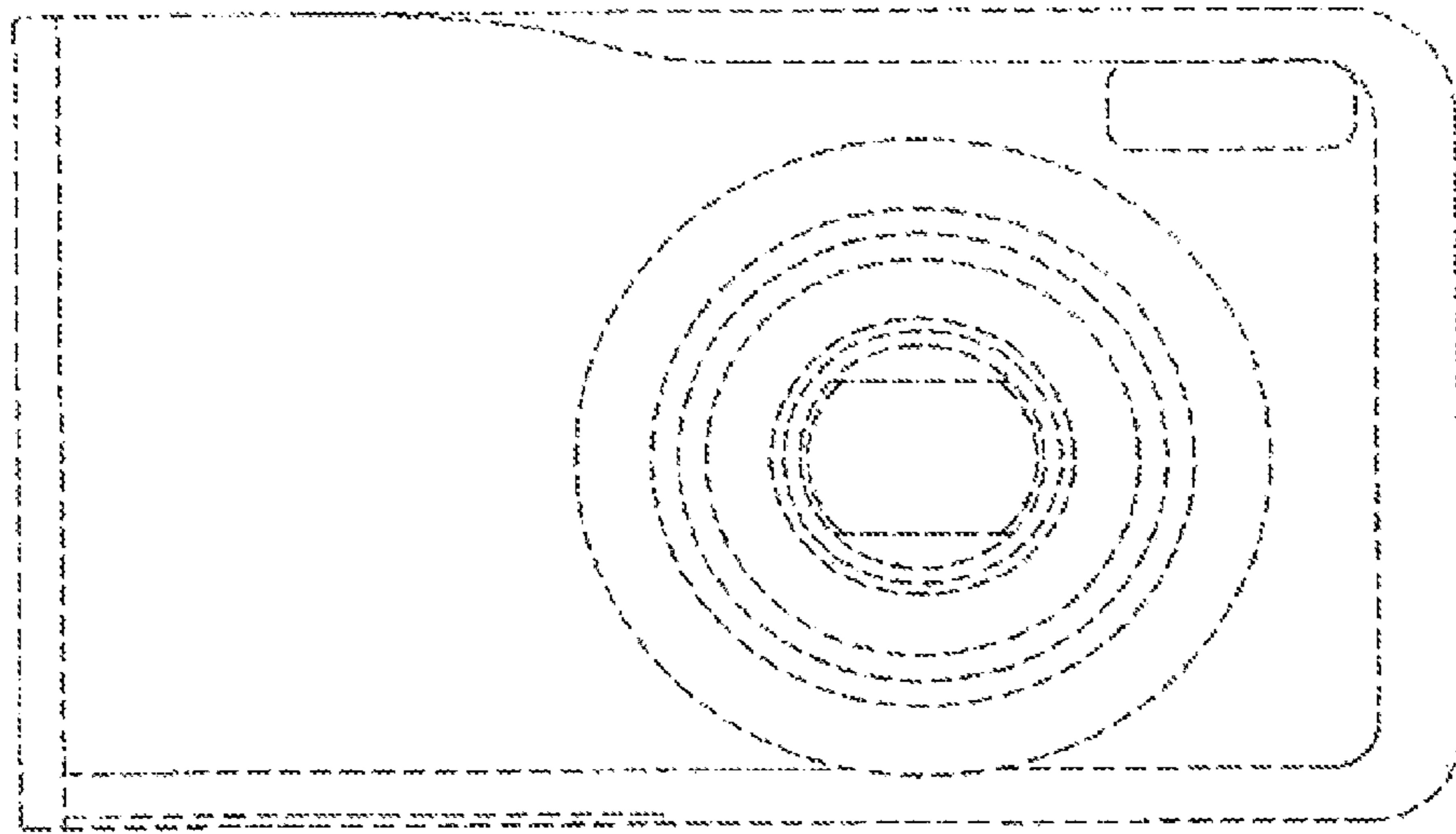


FIG. 7

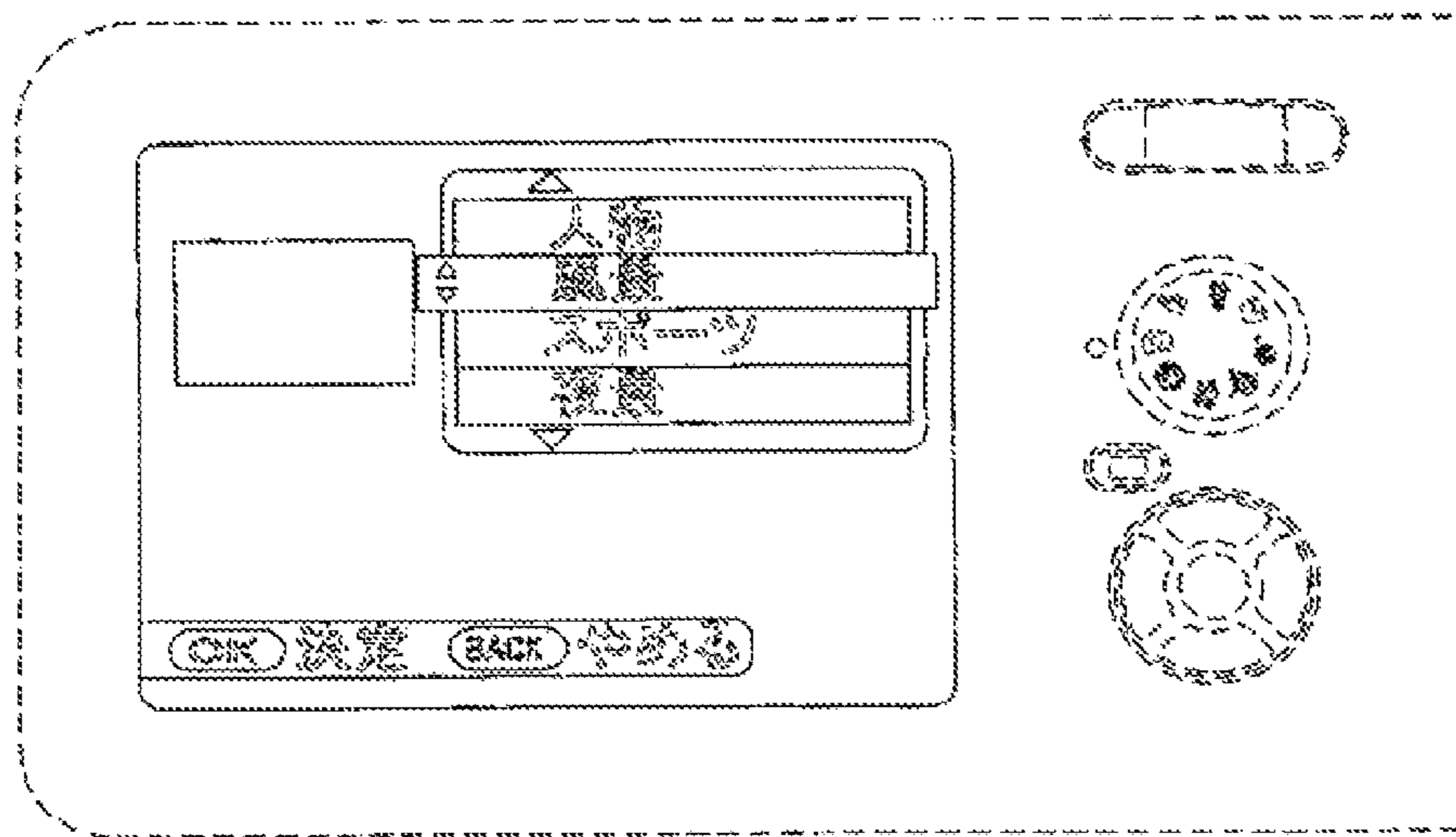


FIG. 8

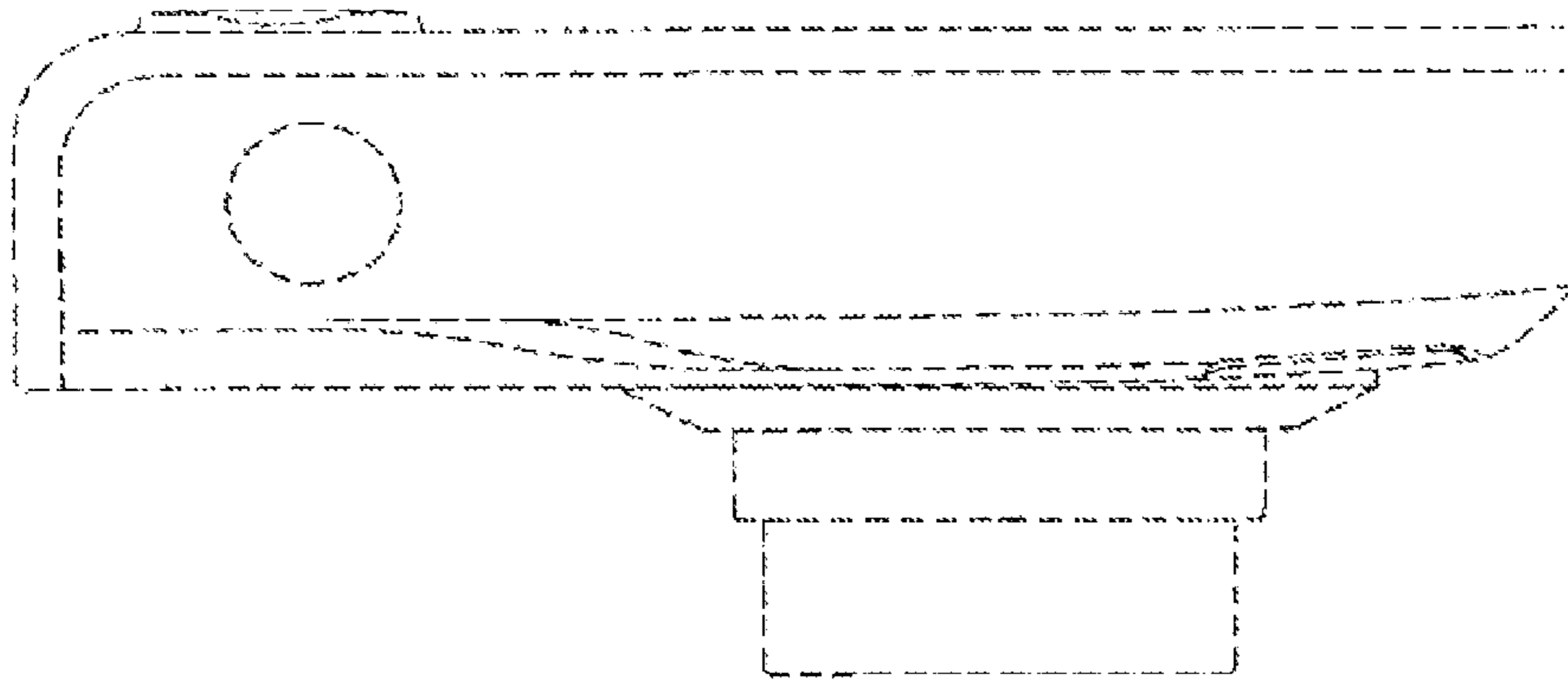


FIG. 9

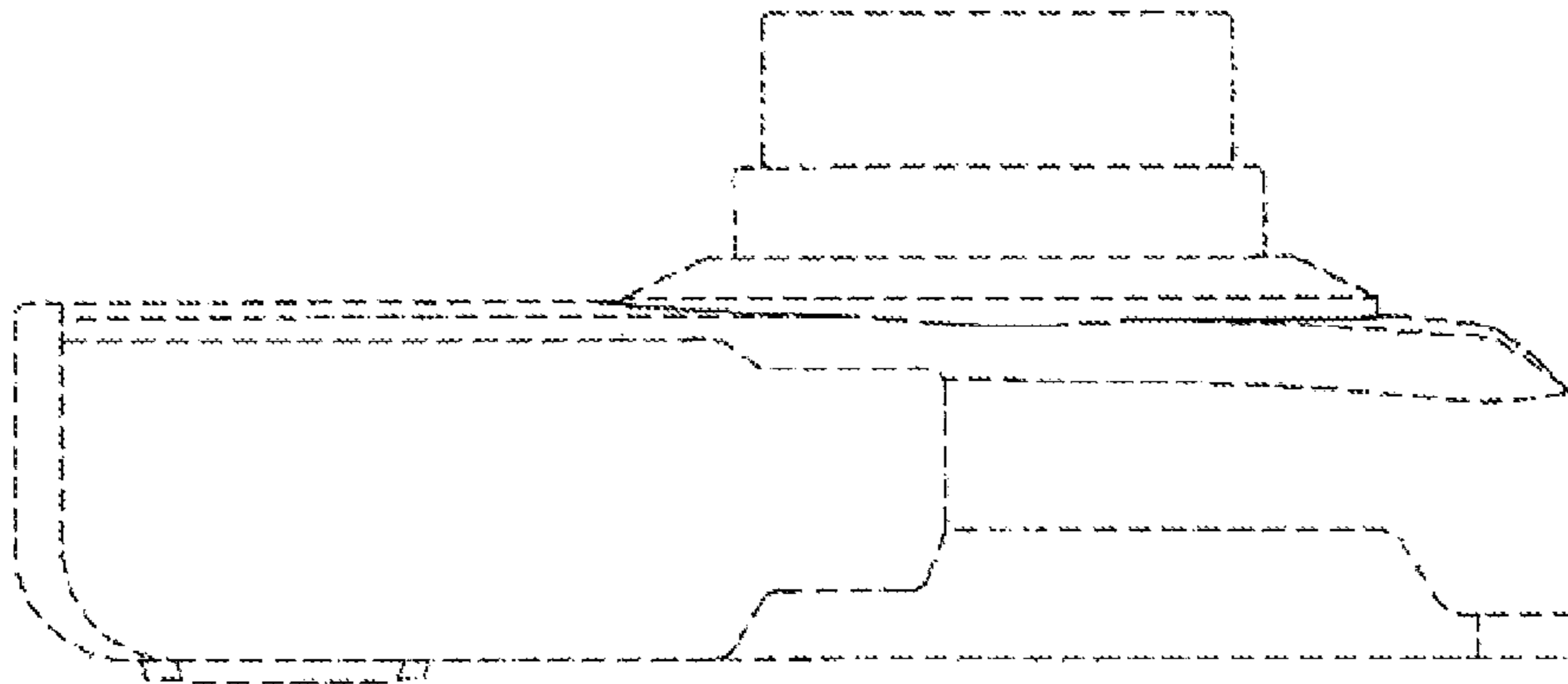


FIG. 10

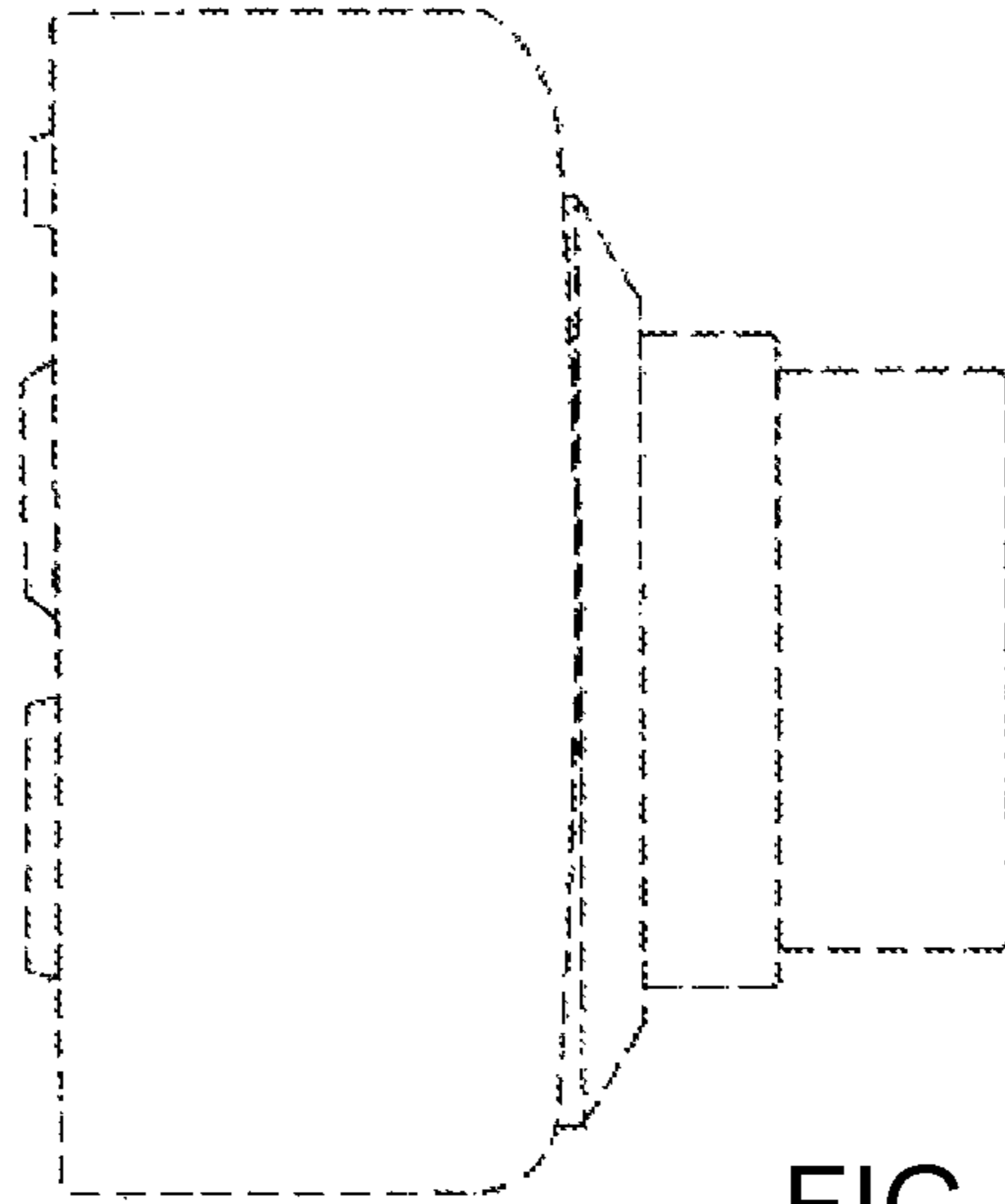


FIG. 11

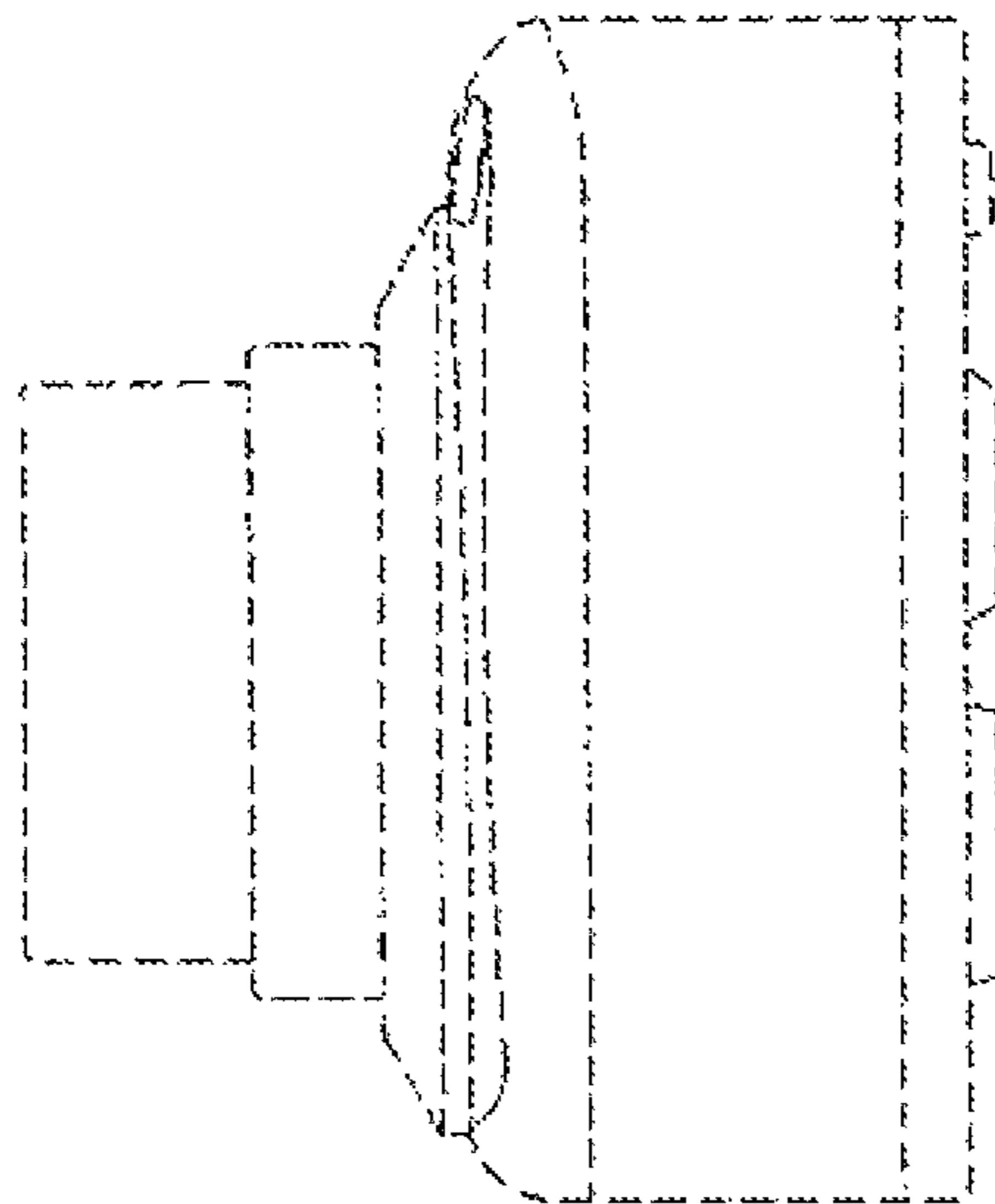


FIG. 12