

US00D737288S

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

(10) **Patent No.:** **US D737,288 S**  
(45) **Date of Patent:** **\*\* Aug. 25, 2015**

(54) **ELECTRONIC CAMERA**

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

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

(73) Assignee: **FUJIFILM CORPORATION**, Tokyo (JP)

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

(21) Appl. No.: **29/500,918**

(22) Filed: **Aug. 29, 2014**

**Related U.S. Application Data**

(62) Division of application No. 29/477,528, filed on Dec. 23, 2013, now Pat. No. Des. 714,813, which is a division of application No. 29/448,035, filed on Mar. 8, 2013, now Pat. No. Des. 700,193, which is a division

(Continued)

(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, 961-972, 978; 345/757, 782, 345/848, 852, 850, 809, 837, 798, 752, 163, 345/156, 537, 474, 836, 419, 649, 656, 659, 345/426, 427, 582, 428, 440, 660, 634, 902, 345/418, 629, 700, 744, 747, 473, 60, 326; 705/10, 5; 709/223; 348/207.1, 348/E5.024, E5.042, E5.047, 333.12, 348/333.02, 333.01, 373, 207.11, 207.2, 348/211.1, 376, 231.99, 323, 333.05, 231.5, 348/E5.045, E5.055, 333.11; 396/299, 291, 396/311; 710/35, 36, 38

CPC ..... G06F 3/048-3/04897; G06F 3/011; G06F 9/4443; G06F 9/4551; G06F 2203/04806; G06F 2203/04807; G06F 8/34; G06F 8/38; G06F 11/3664; H04N 5/4403; H04N 5/44543; H04N 2005/4408-2005/4414; H04N 2005/4456-2005/44595; G06Q 30/02; G05B 19/0426; G05B 2219/23258; G09G 5/14; G09G 1/16; G09G 1/165  
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D3,430 S \* 3/1869 Wilhelm ..... D20/26  
D270,271 S \* 8/1983 Steele ..... D18/27  
4,431,288 A \* 2/1984 Iwata et al. .... 396/89  
4,574,364 A \* 3/1986 Tabata et al. .... 715/798  
D289,532 S \* 4/1987 Ivie ..... D21/362

(Continued)

*Primary Examiner* — Susan Moon Lee

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

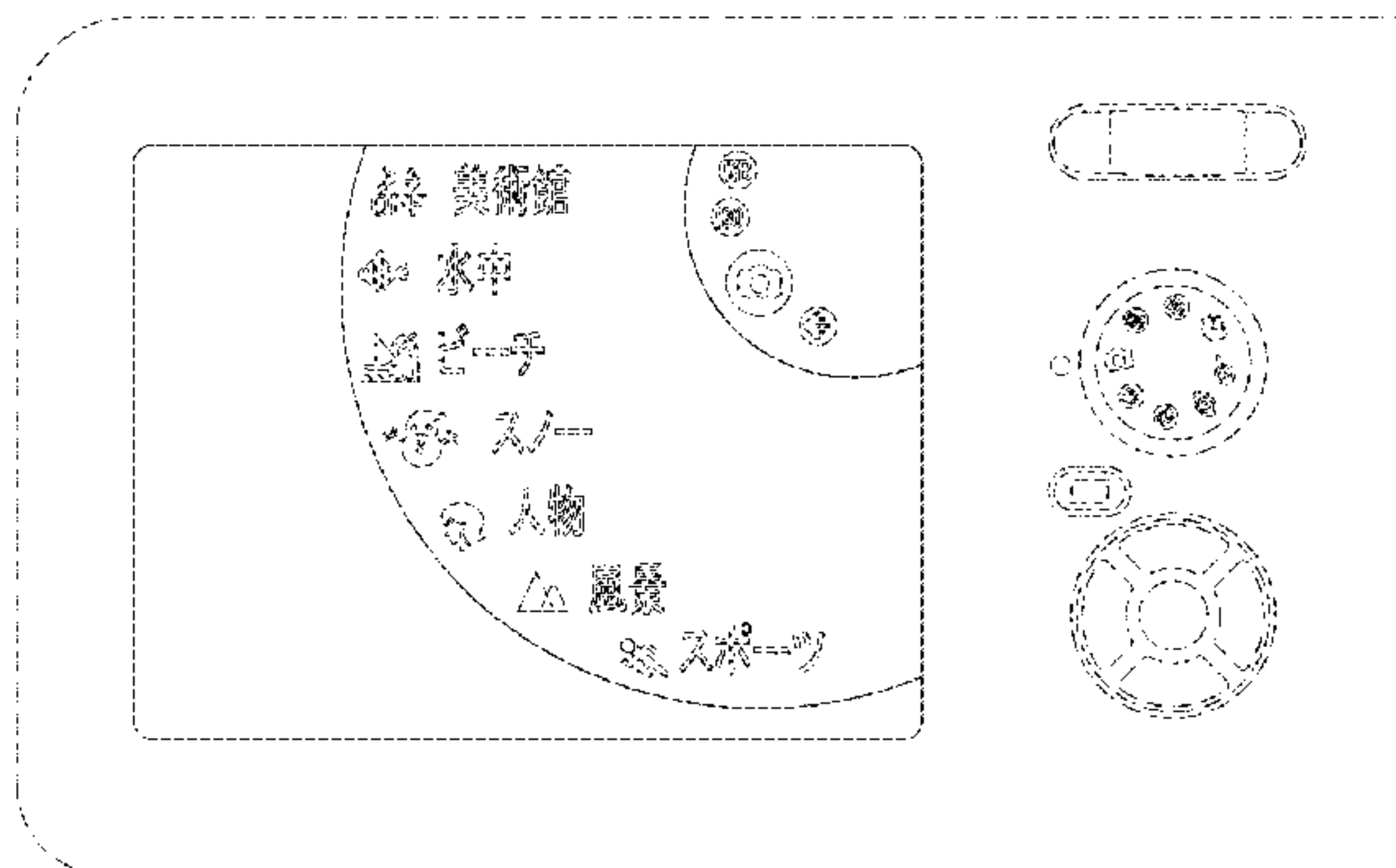
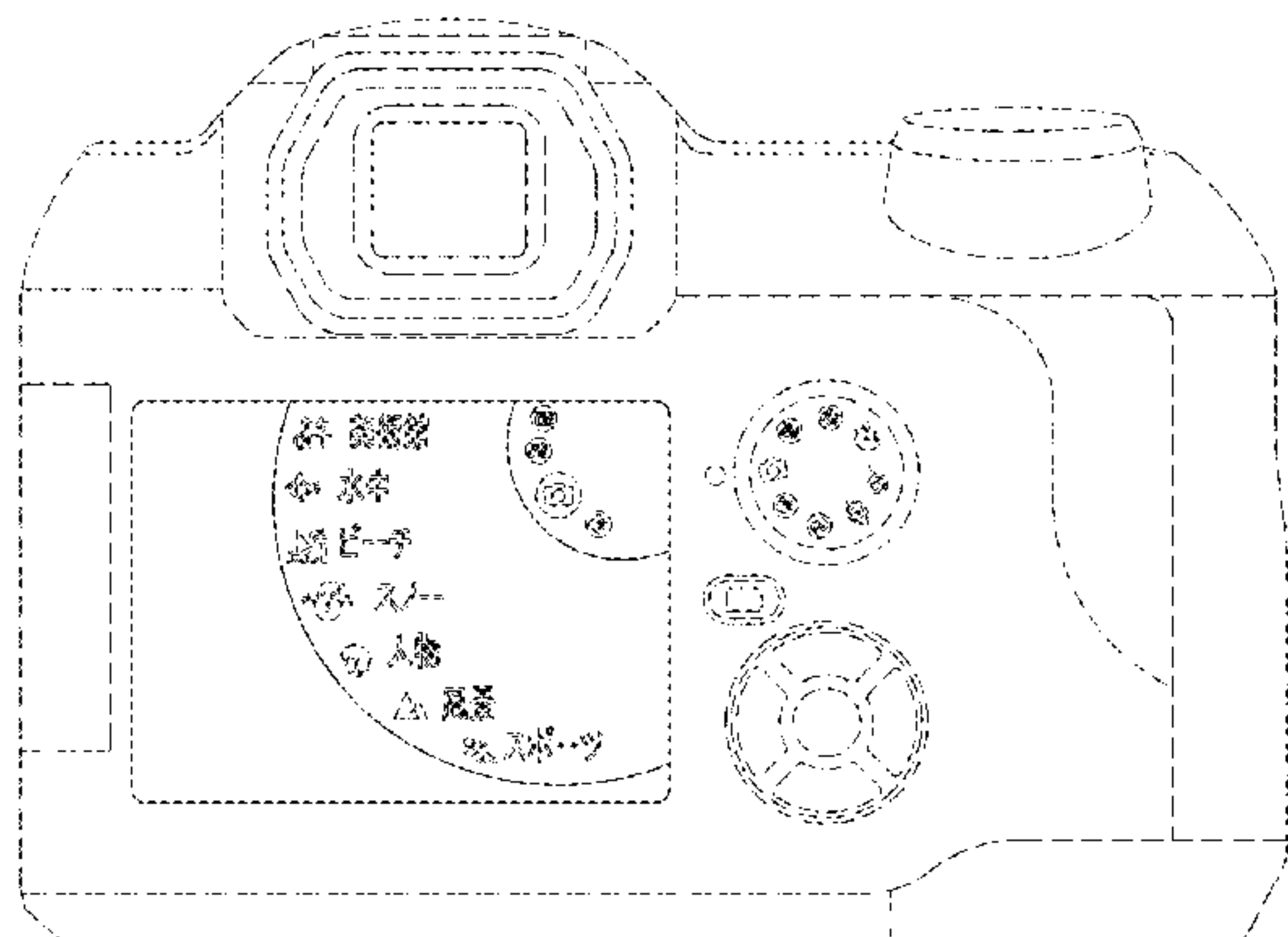
(57) **CLAIM**

The ornamental design for an electronic camera, as shown and described.

**DESCRIPTION**

FIG. 1 is a front view of an 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 left side view thereof;  
FIG. 6 is a right 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 left side view thereof; and,  
FIG. 12 is a right side view thereof.  
Broken lines and unshaded portions contained within broken lines are not claimed.

**1 Claim, 6 Drawing Sheets**





**Related U.S. Application Data**

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.

(56)

**References Cited**

## U.S. PATENT DOCUMENTS

- |           |      |         |                    |       |            |
|-----------|------|---------|--------------------|-------|------------|
| D294,043  | S *  | 2/1988  | Haines             | ..... | D21/362    |
| 4,747,093 | A *  | 5/1988  | Benne et al.       | ..... | 369/280    |
| 4,775,898 | A *  | 10/1988 | Akabane et al.     | ..... | 348/333.11 |
| 4,860,218 | A *  | 8/1989  | Sleator            | ..... | 715/790    |
| 4,868,765 | A *  | 9/1989  | Diefendorff        | ..... | 715/797    |
| 4,939,507 | A *  | 7/1990  | Beard et al.       | ..... | 345/156    |
| 5,235,380 | A *  | 8/1993  | Yamada et al.      | ..... | 396/289    |
| 5,265,202 | A *  | 11/1993 | Krueger et al.     | ..... | 715/797    |
| 5,301,301 | A *  | 4/1994  | Kodosky et al.     | ..... | 716/119    |
| 5,305,435 | A *  | 4/1994  | Bronson            | ..... | 715/777    |
| 5,363,482 | A *  | 11/1994 | Victor et al.      | ..... | 715/804    |
| 5,371,847 | A *  | 12/1994 | Hargrove           | ..... | 715/788    |
| 5,390,295 | A *  | 2/1995  | Bates et al.       | ..... | 715/789    |
| 5,392,388 | A *  | 2/1995  | Gibson             | ..... | 715/837    |
| D361,079  | S *  | 8/1995  | Ono                | ..... | D16/202    |
| 5,459,825 | A *  | 10/1995 | Anderson et al.    | ..... | 715/815    |
| 5,471,578 | A *  | 11/1995 | Moran et al.       | ..... | 715/863    |
| 5,487,143 | A *  | 1/1996  | Southgate          | ..... | 715/790    |
| 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    |
| D369,818  | S *  | 5/1996  | Ono                | ..... | D16/202    |
| 5,515,496 | A *  | 5/1996  | Kaehler et al.     | ..... | 715/762    |
| 5,526,341 | A *  | 6/1996  | Shiba et al.       | ..... | 369/275.1  |
| 5,528,744 | A *  | 6/1996  | Vaughton           | ..... | 715/772    |
| 5,530,795 | A *  | 6/1996  | Wan                | ..... | 715/759    |
| 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    |
| 5,638,523 | A *  | 6/1997  | Mullet et al.      | ..... | 715/855    |
| 5,644,740 | A *  | 7/1997  | Kiuchi             | ..... | 715/853    |
| 5,666,186 | A *  | 9/1997  | Meyerhoefer et al. | ..... | 396/281    |
| 5,675,570 | A *  | 10/1997 | Ohira et al.       | ..... | 369/275.1  |
| 5,701,424 | A *  | 12/1997 | Atkinson           | ..... | 715/808    |
| 5,706,448 | A *  | 1/1998  | Blades             | ..... | 715/834    |
| 5,708,786 | A *  | 1/1998  | Teruuchi           | ..... | 715/788    |
| 5,727,174 | A *  | 3/1998  | Aparicio et al.    | ..... | 715/837    |
| 5,751,283 | A *  | 5/1998  | Smith              | ..... | 715/798    |
| 5,754,230 | A *  | 5/1998  | Tsuruta            | ..... | 348/333.12 |
| D395,296  | S *  | 6/1998  | Kaye et al.        | ..... | D14/492    |
| D395,643  | S *  | 6/1998  | Ryan               | ..... | D14/488    |
| 5,760,772 | A *  | 6/1998  | Austin             | ..... | 715/798    |
| 5,768,616 | A *  | 6/1998  | Teterwak           | ..... | 710/5      |
| D395,877  | S *  | 7/1998  | Ryan               | ..... | D14/488    |
| D396,225  | S *  | 7/1998  | Ryan               | ..... | D14/488    |
| D396,241  | S *  | 7/1998  | Shigeri            | ..... | D16/202    |
| D396,455  | S *  | 7/1998  | Bier               | ..... | D14/489    |
| 5,798,760 | A *  | 8/1998  | Vayda et al.       | ..... | 715/834    |
| 5,828,360 | A *  | 10/1998 | Anderson et al.    | ..... | 715/834    |
| 5,862,419 | A *  | 1/1999  | Goto et al.        | ..... | 396/121    |
| D407,389  | S *  | 3/1999  | Ryan               | ..... | D14/488    |
| 5,903,309 | A *  | 5/1999  | Anderson           | ..... | 348/333.02 |
| 5,920,313 | A *  | 7/1999  | Diedrichsen et al. | ..... | 715/767    |
| 5,940,076 | A *  | 8/1999  | Sommers et al.     | ..... | 715/834    |
| D414,505  | S *  | 9/1999  | Yatabe             | ..... | D16/208    |
| 5,966,126 | A *  | 10/1999 | Szabo              | ..... | 715/762    |
| 5,986,703 | A *  | 11/1999 | O'Mahony           | ..... | 348/333.12 |
| 6,006,038 | A *  | 12/1999 | Kosako             | ..... | 396/29     |
| 6,011,542 | A *  | 1/2000  | Durrani et al.     | ..... | 345/156    |
| D422,291  | S *  | 4/2000  | Senda              | ..... | D16/202    |
| D422,611  | S *  | 4/2000  | Katayama et al.    | ..... | D16/202    |
| D423,484  | S *  | 4/2000  | Dangelmaier et al. | ..... | D14/485    |
| D425,499  | S *  | 5/2000  | Millington         | ..... | D14/488    |
| 6,075,531 | A *  | 6/2000  | DeStefano          | ..... | 715/788    |
| D430,885  | S *  | 9/2000  | Coleman            | ..... | D14/486    |
| D432,150  | S *  | 10/2000 | Senda              | ..... | D16/202    |
| 6,144,378 | A *  | 11/2000 | Lee                | ..... | 715/767    |
| 6,154,210 | A *  | 11/2000 | Anderson           | ..... | 715/840    |
| D435,257  | S *  | 12/2000 | Woods              | ..... | D14/485    |
| D439,584  | S *  | 3/2001  | Wang et al.        | ..... | D14/486    |
| 6,232,970 | B1 * | 5/2001  | Bodnar et al.      | ..... | 715/708    |
| D443,623  | S *  | 6/2001  | Nijima             | ..... | D14/485    |
| 6,243,076 | B1 * | 6/2001  | Hatfield           | ..... | 345/156    |
| 6,249,689 | B1 * | 6/2001  | Aizawa             | ..... | 455/566    |
| 6,285,367 | B1 * | 9/2001  | Abrams et al.      | ..... | 715/854    |
| 6,292,173 | B1 * | 9/2001  | Rambaldi et al.    | ..... | 345/157    |
| 6,300,951 | B1 * | 10/2001 | Filetto et al.     | ..... | 715/797    |
| 6,310,648 | B1 * | 10/2001 | Miller et al.      | ..... | 348/333.05 |
| D450,072  | S *  | 11/2001 | Katayama           | ..... | D16/202    |
| D451,115  | S *  | 11/2001 | Sumita             | ..... | D16/202    |
| 6,313,877 | B1 * | 11/2001 | Anderson           | ..... | 348/333.05 |
| D452,692  | S *  | 1/2002  | Fukuda             | ..... | D14/489    |
| D453,167  | S *  | 1/2002  | Hasegawa et al.    | ..... | D14/489    |
| 6,378,234 | B1 * | 4/2002  | Luo                | ..... | 341/22     |
| D457,902  | S *  | 5/2002  | Porsche et al.     | ..... | D16/202    |
| 6,411,337 | B2 * | 6/2002  | Cove et al.        | ..... | 348/563    |
| D461,822  | S *  | 8/2002  | Okuley             | ..... | D14/489    |
| 6,448,987 | B1 * | 9/2002  | Easty et al.       | ..... | 715/834    |
| D466,129  | S *  | 11/2002 | Bungert            | ..... | D14/489    |
| D468,331  | S *  | 1/2003  | Horikiri           | ..... | D16/202    |
| 6,519,003 | B1 * | 2/2003  | Swayze             | ..... | 348/375    |
| 6,522,342 | B1 * | 2/2003  | Gagnon et al.      | ..... | 715/716    |
| D473,886  | S *  | 4/2003  | Katayama           | ..... | D16/202    |
| 6,542,168 | B2 * | 4/2003  | Negishi et al.     | ..... | 715/781    |
| 6,549,304 | B1 * | 4/2003  | Dow et al.         | ..... | 358/473    |
| D474,195  | S *  | 5/2003  | Kates et al.       | ..... | D14/485    |
| D474,197  | S *  | 5/2003  | Nguyen             | ..... | D14/486    |
| D476,488  | S *  | 7/2003  | White, Jr.         | ..... | D5/63      |
| 6,597,358 | B2 * | 7/2003  | Miller             | ..... | 345/427    |
| 6,603,708 | B2 * | 8/2003  | Tamagawa et al.    | ..... | 368/10     |
| D479,846  | S *  | 9/2003  | Kreikemeier et al. | ..... | D14/486    |
| D480,092  | S *  | 9/2003  | Kreikemeier et al. | ..... | D14/486    |
| 6,636,264 | B1 * | 10/2003 | Nakao et al.       | ..... | 348/375    |
| D482,368  | S *  | 11/2003 | den Toonder et al. | ..... | D14/486    |
| 6,650,319 | B1 * | 11/2003 | Hurst et al.       | ..... | 345/173    |
| 6,654,559 | B2 * | 11/2003 | Aoyama             | ..... | 396/266    |
| D483,783  | S *  | 12/2003 | Yoshida            | ..... | D16/202    |
| D485,279  | S *  | 1/2004  | DeCombe            | ..... | D14/486    |
| 6,680,749 | B1 * | 1/2004  | Anderson et al.    | ..... | 348/231.99 |
| 6,683,653 | B1 * | 1/2004  | Miyake et al.      | ..... | 348/373    |
| D486,171  | S *  | 2/2004  | Nishiura           | ..... | D16/219    |
| 6,686,529 | B2 * | 2/2004  | Kim                | ..... | 84/464 R   |
| 6,710,771 | B1 * | 3/2004  | Yamaguchi et al.   | ..... | 345/184    |
| 6,724,370 | B2 * | 4/2004  | Dutta et al.       | ..... | 345/169    |
| D493,177  | S *  | 7/2004  | Retuta et al.      | ..... | D14/486    |
| D493,471  | S *  | 7/2004  | McIntosh           | ..... | D14/485    |
| D494,186  | S *  | 8/2004  | Johnson            | ..... | D14/485    |
| D496,370  | S *  | 9/2004  | Gildred            | ..... | D14/486    |
| D497,173  | S *  | 10/2004 | Ogura              | ..... | D16/202    |
| D497,617  | S *  | 10/2004 | Decombe et al.     | ..... | D14/486    |
| 6,819,344 | B2 * | 11/2004 | Robbins            | ..... | 715/848    |
| D500,766  | S *  | 1/2005  | Hanisch et al.     | ..... | D14/489    |
| D501,211  | S *  | 1/2005  | Ligameri et al.    | ..... | D14/486    |
| 6,854,088 | B2 * | 2/2005  | Massengale et al.  | ..... | 715/764    |
| D502,721  | S *  | 3/2005  | Horikiri           | ..... | D16/202    |
| D502,954  | S *  | 3/2005  | Ogura              | ..... | D16/202    |
| 6,870,545 | B1 * | 3/2005  | Smith et al.       | ..... | 345/619    |
| 6,870,567 | B2 * | 3/2005  | Funston et al.     | ..... | 348/333.04 |
| D504,441  | S *  | 4/2005  | Sapp et al.        | ..... | D14/486    |
| D504,452  | S *  | 4/2005  | Yoshida            | ..... | D16/219    |
| D505,135  | S *  | 5/2005  | Sapp et al.        | ..... | D14/489    |
| D507,002  | S *  | 7/2005  | Retuta et al.      | ..... | D14/486    |
| 6,919,927 | B1 * | 7/2005  | Hyodo              | ..... | 348/333.02 |
| D511,524  | S *  | 11/2005 | Retuta et al.      | ..... | D14/486    |
| D512,091  | S *  | 11/2005 | Zapf               | ..... | D18/27     |
| 6,981,228 | B1 * | 12/2005 | Chen et al.        | ..... | 715/853    |
| 6,996,783 | B2 * | 2/2006  | Brown et al.       | ..... | 715/790    |
| D519,519  | S *  | 4/2006  | Vong               | ..... | D14/488    |
| 7,034,881 | B1 * | 4/2006  | Hyodo et al.       | ..... | 348/333.12 |



(56)

## References Cited

## U.S. PATENT DOCUMENTS

- 7,036,091 B1 \* 4/2006 Nguyen ..... 715/834  
D520,544 S \* 5/2006 Senda ..... D16/202  
D522,014 S \* 5/2006 Gibson ..... D14/485  
7,046,248 B1 \* 5/2006 Perttunen ..... 345/440  
D522,559 S \* 6/2006 Naito et al. .... D16/219  
D523,441 S \* 6/2006 Sapp et al. .... D14/486  
7,057,658 B1 \* 6/2006 Shioji et al. .... 348/333.12  
7,061,535 B2 \* 6/2006 Misawa et al. .... 348/375  
D528,549 S \* 9/2006 McLees et al. .... D14/485  
D529,035 S \* 9/2006 McLees et al. .... D14/485  
D529,038 S \* 9/2006 Sapp et al. .... D14/486  
7,109,975 B2 \* 9/2006 Fedorak et al. .... 345/173  
7,110,032 B2 \* 9/2006 Furukawa ..... 348/333.02  
7,111,239 B2 \* 9/2006 Morris-Yates ..... 715/709  
D529,506 S \* 10/2006 McLees et al. .... D14/485  
7,119,818 B2 \* 10/2006 Takiguchi ..... 715/764  
D532,030 S \* 11/2006 Yoshida ..... D16/202  
D534,541 S \* 1/2007 Retuta et al. .... D14/486  
D534,915 S \* 1/2007 Retuta et al. .... D14/486  
D542,301 S \* 5/2007 Harvey ..... D14/489  
D542,822 S \* 5/2007 Senda ..... D16/202  
D542,826 S \* 5/2007 Ina et al. .... D16/219  
D544,495 S \* 6/2007 Evans et al. .... D14/488  
D547,343 S \* 7/2007 Sato ..... D16/202  
D547,782 S \* 7/2007 Sato ..... D16/202  
D547,783 S \* 7/2007 Sakai ..... D16/202  
7,239,737 B2 \* 7/2007 Luque et al. .... 382/141  
D549,713 S \* 8/2007 Lewin et al. .... D14/485  
D549,721 S \* 8/2007 Ito et al. .... D14/488  
D549,722 S \* 8/2007 Ito et al. .... D14/488  
D550,696 S \* 9/2007 Kortum et al. .... D14/491  
7,265,851 B2 \* 9/2007 Kinjo ..... 358/1.1  
7,274,400 B2 \* 9/2007 Hyodo et al. .... 348/333.02  
D552,121 S \* 10/2007 Carl et al. .... D14/488  
7,281,214 B2 \* 10/2007 Fadell ..... 715/745  
D554,659 S \* 11/2007 Hoover et al. .... D14/487  
D554,660 S \* 11/2007 Hoover et al. .... D14/487  
D554,661 S \* 11/2007 Hoover et al. .... D14/487  
D555,164 S \* 11/2007 Sergio ..... D14/486  
7,298,409 B1 \* 11/2007 Misawa ..... 348/333.01  
D556,806 S \* 12/2007 Horikiri et al. .... D16/212  
7,312,718 B2 \* 12/2007 Lenneman et al. .... 340/691.6  
D559,292 S \* 1/2008 Imai et al. .... D16/202  
D560,225 S \* 1/2008 Park et al. .... D14/485  
D560,236 S \* 1/2008 Yoshida ..... D16/202  
D560,237 S \* 1/2008 Yoshida ..... D16/202  
D560,238 S \* 1/2008 Sato ..... D16/202  
7,317,479 B2 \* 1/2008 Cazier et al. .... 348/240.99  
7,317,485 B1 \* 1/2008 Miyake et al. .... 348/333.02  
7,319,490 B2 \* 1/2008 Kanamori et al. .... 348/375  
D561,221 S \* 2/2008 Ogura et al. .... D16/212  
D563,445 S \* 3/2008 Sakai ..... D16/202  
D563,968 S \* 3/2008 Lewin et al. .... D14/485  
D567,276 S \* 4/2008 Sato et al. .... D16/202  
D567,277 S \* 4/2008 Imai ..... D16/202  
D567,836 S \* 4/2008 Sato ..... D16/212  
7,353,457 B2 \* 4/2008 Scheu et al. .... 715/764  
D568,362 S \* 5/2008 Horikiri et al. .... D16/212  
D568,899 S \* 5/2008 Byeon ..... D14/487  
D573,072 S \* 7/2008 Nakajima et al. .... D12/192  
7,398,477 B2 \* 7/2008 Accot ..... 715/786  
7,406,661 B2 \* 7/2008 Vaananen et al. .... 715/700  
D574,395 S \* 8/2008 Loretan et al. .... D14/487  
D576,192 S \* 9/2008 Isozaki ..... D16/202  
7,450,169 B2 \* 11/2008 Jeon et al. .... 348/333.11  
D582,935 S \* 12/2008 Lee et al. .... D14/486  
D582,954 S \* 12/2008 Imai ..... D16/202  
7,460,122 B1 \* 12/2008 Smolders et al. .... 345/440  
7,479,984 B2 \* 1/2009 Tanaka et al. .... 348/207.2  
7,480,873 B2 \* 1/2009 Kawahara ..... 715/848  
D586,360 S \* 2/2009 Kwag ..... D14/486  
D588,148 S \* 3/2009 Stone et al. .... D14/485  
D588,154 S \* 3/2009 Bouchard et al. .... D14/489  
D588,178 S \* 3/2009 Sakai ..... D16/212  
D589,968 S \* 4/2009 Park et al. .... D14/485  
D590,838 S \* 4/2009 Bisig et al. .... D14/492  
D591,305 S \* 4/2009 Shimoda ..... D14/485  
7,515,190 B2 \* 4/2009 Kobayashi et al. .... 348/333.01  
7,516,416 B2 \* 4/2009 Viswanathan et al. .... 715/781  
7,516,419 B2 \* 4/2009 Petro et al. .... 715/834  
D593,107 S \* 5/2009 Shimoda et al. .... D14/485  
D593,111 S \* 5/2009 Danton ..... D14/485  
D593,142 S \* 5/2009 Yoshida ..... D16/202  
7,536,653 B2 \* 5/2009 Badovinac et al. .... 715/810  
D593,571 S \* 6/2009 Ball et al. .... D14/485  
D595,310 S \* 6/2009 Sands et al. .... D14/488  
D595,727 S \* 7/2009 Koes et al. .... D14/485  
D597,101 S \* 7/2009 Chaudhri et al. .... D14/488  
7,561,934 B2 \* 7/2009 Terada et al. .... 700/94  
D597,554 S \* 8/2009 Danton ..... D14/491  
D598,464 S \* 8/2009 Hirsch et al. .... D14/485  
D598,466 S \* 8/2009 Hirsch et al. .... D14/485  
D598,927 S \* 8/2009 Hirsch et al. .... D14/485  
7,576,779 B2 \* 8/2009 Tanaka et al. .... 348/211.4  
D599,810 S \* 9/2009 Scalisi et al. .... D14/485  
D600,704 S \* 9/2009 LaManna et al. .... D14/492  
D602,033 S \* 10/2009 Vu et al. .... D14/485  
D602,945 S \* 10/2009 Watanabe et al. .... D14/489  
D602,968 S \* 10/2009 Sato ..... D16/212  
D603,886 S \* 11/2009 Sakai ..... D16/202  
D604,742 S \* 11/2009 Nagata et al. .... D14/486  
7,616,764 B2 \* 11/2009 Varghese et al. .... 380/255  
D605,200 S \* 12/2009 Sakai ..... D14/486  
D606,091 S \* 12/2009 O'Donnell et al. .... D14/489  
D606,104 S \* 12/2009 Sato ..... D16/202  
D607,007 S \* 12/2009 Kocmick ..... D14/489  
7,639,300 B2 \* 12/2009 Yumiki ..... 348/333.12  
D609,714 S \* 2/2010 Oda et al. .... D14/485  
7,664,743 B2 \* 2/2010 Okawa ..... 707/769  
7,675,530 B2 \* 3/2010 Koresawa et al. .... 345/690  
D613,301 S \* 4/2010 Lee et al. .... D14/489  
D613,324 S \* 4/2010 Sato ..... D16/202  
D614,192 S \* 4/2010 Takano et al. .... D14/486  
7,692,635 B2 \* 4/2010 Iwamura ..... 345/172  
7,701,500 B2 \* 4/2010 Aizawa et al. .... 348/333.01  
7,705,838 B2 \* 4/2010 Kinerk et al. .... 345/184  
D618,697 S \* 6/2010 Jones et al. .... D14/486  
D618,698 S \* 6/2010 Kang et al. .... D14/486  
D619,593 S \* 7/2010 Fujioka et al. .... D14/485  
D619,596 S \* 7/2010 Maitlen et al. .... D14/485  
D622,281 S \* 8/2010 Maitlen et al. .... D14/485  
D622,729 S \* 8/2010 Oda et al. .... D14/485  
D625,318 S \* 10/2010 Jasinski ..... D14/485  
D625,328 S \* 10/2010 Fitzmaurice et al. .... D14/489  
D625,733 S \* 10/2010 Anzures ..... D14/486  
D626,131 S \* 10/2010 Kruzeniski et al. .... D14/485  
D626,561 S \* 11/2010 Batchelder et al. .... D14/488  
D627,360 S \* 11/2010 Aarseth ..... D14/485  
D629,410 S \* 12/2010 Ray et al. .... D14/485  
7,860,536 B2 \* 12/2010 Jobs et al. .... 455/566  
D630,643 S \* 1/2011 Wilson ..... D14/486  
D630,644 S \* 1/2011 Wilson ..... D14/486  
D630,646 S \* 1/2011 Wilson ..... D14/487  
D630,647 S \* 1/2011 Wilson ..... D14/487  
D631,060 S \* 1/2011 Flik et al. .... D14/486  
D633,509 S \* 3/2011 Oda et al. .... D14/485  
D634,751 S \* 3/2011 McLaughlin et al. .... D14/488  
D634,752 S \* 3/2011 McLaughlin et al. .... D14/488  
7,898,529 B2 \* 3/2011 Fitzmaurice et al. .... 345/173  
D635,582 S \* 4/2011 Okumura et al. .... D14/492  
D635,988 S \* 4/2011 Mays et al. .... D14/487  
D636,786 S \* 4/2011 Sepulveda ..... D14/492  
D637,196 S \* 5/2011 Ray et al. .... D14/486  
D637,197 S \* 5/2011 Ray et al. .... D14/486  
D637,200 S \* 5/2011 Fletcher et al. .... D14/489  
D638,027 S \* 5/2011 Towbin et al. .... D14/488  
D638,433 S \* 5/2011 Urdan et al. .... D14/488  
D638,436 S \* 5/2011 Cavanaugh et al. .... D14/488  
7,941,765 B2 \* 5/2011 Fleck et al. .... 715/834  
D639,838 S \* 6/2011 Imai ..... D16/202  
D640,300 S \* 6/2011 Sato et al. .... D16/202  
D641,374 S \* 7/2011 Fletcher et al. .... D14/489  
7,975,234 B2 \* 7/2011 Hamadi et al. .... 715/763  
7,982,630 B2 \* 7/2011 Kim ..... 340/815.4



(56)

## References Cited

## U.S. PATENT DOCUMENTS

D642,588	S *	8/2011	Anzures	D14/486	D681,649	S *	5/2013	Fletcher et al.	D14/485
D644,242	S *	8/2011	Matas	D14/489	D681,652	S *	5/2013	Oda et al.	D14/485
D644,243	S *	8/2011	Matas	D14/489	D681,662	S *	5/2013	Fletcher et al.	D14/488
8,006,198	B2 *	8/2011	Okuma et al.	715/810	D681,669	S *	5/2013	Phelan	D14/489
D644,654	S *	9/2011	Maitlen et al.	D14/488	D682,304	S *	5/2013	Mierau et al.	D14/488
D644,662	S *	9/2011	Gardner et al.	D14/495	D682,880	S *	5/2013	Koehn et al.	D14/491
D645,470	S *	9/2011	Matas	D14/489	D684,583	S *	6/2013	Brinda et al.	D14/485
D646,696	S *	10/2011	Loken et al.	D14/492	D684,585	S *	6/2013	Plesnicher et al.	D14/486
D647,102	S *	10/2011	Tokunaga et al.	D14/485	D684,586	S *	6/2013	Plesnicher et al.	D14/486
D647,914	S *	11/2011	Brouwers et al.	D14/486	D684,587	S *	6/2013	Plesnicher et al.	D14/486
D647,915	S *	11/2011	Urdan et al.	D14/488	8,472,671	B2 *	6/2013	Kubota	382/103
D649,045	S *	11/2011	Kopulos et al.	D9/434	D685,375	S *	7/2013	Steinberger	D14/436
D649,159	S *	11/2011	Viggers et al.	D14/492	D685,391	S *	7/2013	Blissenbach et al.	D14/492
D649,997	S *	12/2011	Imai	D16/202	D686,218	S *	7/2013	Anzures et al.	D14/486
D650,793	S *	12/2011	Impas et al.	D14/489	D686,241	S *	7/2013	Steele et al.	D14/489
D650,799	S *	12/2011	Wantland et al.	D14/493	D686,244	S *	7/2013	Moriya et al.	D14/489
8,082,499	B2 *	12/2011	Hudson et al.	715/702	D687,043	S *	7/2013	Matas et al.	D14/485
D651,611	S *	1/2012	Ouilhet et al.	D14/489	D687,045	S *	7/2013	Plitkins et al.	D14/485
D651,613	S *	1/2012	Ouilhet	D14/491	D687,046	S *	7/2013	Plitkins et al.	D14/485
D652,053	S *	1/2012	Impas et al.	D14/489	D687,047	S *	7/2013	Hales et al.	D14/485
D652,854	S *	1/2012	Imai	D16/219	D687,056	S *	7/2013	Matas et al.	D14/488
8,091,093	B2 *	1/2012	Huntsman	719/318	D687,057	S *	7/2013	Plitkins	D14/488
D654,415	S *	2/2012	Mizuno	D12/192	D687,059	S *	7/2013	Bruck et al.	D14/488
D654,925	S *	2/2012	Nishizawa et al.	D14/488	D687,066	S *	7/2013	Jang et al.	D14/492
D656,950	S *	4/2012	Shallcross et al.	D14/488	D687,067	S *	7/2013	Jang et al.	D14/492
D658,203	S *	4/2012	Hally et al.	D14/488	D687,460	S *	8/2013	Tyler et al.	D14/489
D659,152	S *	5/2012	Oda et al.	D14/485	D687,859	S *	8/2013	Oda et al.	D14/492
D659,153	S *	5/2012	Thoreson et al.	D14/486	D688,703	S *	8/2013	Phelan	D14/492
8,185,824	B1 *	5/2012	Mitchell et al.	715/734	D689,091	S *	9/2013	Impas et al.	D14/489
D662,108	S *	6/2012	Okumura et al.	D14/487	D690,322	S *	9/2013	Matas et al.	D14/492
8,193,437	B2 *	6/2012	Mizuhiki	84/622	D690,717	S *	10/2013	Thomsen et al.	D14/485
D662,944	S *	7/2012	Quandt	D14/492	D690,718	S *	10/2013	Thomsen et al.	D14/485
8,223,127	B2 *	7/2012	Park et al.	345/169	D690,719	S *	10/2013	Thomsen et al.	D14/485
8,230,339	B2 *	7/2012	Watanabe et al.	715/713	D690,720	S *	10/2013	Waldman	D14/485
D664,981	S *	8/2012	Rai et al.	D14/488	D690,728	S *	10/2013	Brinda	D14/488
D664,982	S *	8/2012	Rai et al.	D14/488	D690,731	S *	10/2013	Yang et al.	D14/489
D665,412	S *	8/2012	Rai et al.	D14/488	D690,734	S *	10/2013	Tseng	D14/489
D665,417	S *	8/2012	Okumura et al.	D14/490	D691,171	S *	10/2013	Brinda et al.	D14/488
D665,422	S *	8/2012	Morrow et al.	D14/492	D691,629	S *	10/2013	Matas et al.	D14/488
D665,423	S *	8/2012	Impas et al.	D14/493	8,548,431	B2 *	10/2013	Teng et al.	455/411
D667,423	S *	9/2012	Nagamine	D14/488	8,572,509	B2 *	10/2013	Gobeil	715/834
D667,429	S *	9/2012	Wujcik et al.	D14/489	D693,365	S *	11/2013	Gardner et al.	D14/489
D667,432	S *	9/2012	Phelan	D14/491	D693,834	S *	11/2013	Ito et al.	D14/486
D667,444	S *	9/2012	Phelan	D14/492	D695,761	S *	12/2013	Tagliabue et al.	D14/486
D667,446	S *	9/2012	Phelan	D14/492	D695,766	S *	12/2013	Tagliabue et al.	D14/486
D667,455	S *	9/2012	Eby et al.	D14/492	D696,677	S *	12/2013	Corcoran et al.	D14/486
D667,457	S *	9/2012	Wujcik et al.	D14/492	D697,071	S *	1/2014	Brinda	D14/485
D669,497	S *	10/2012	Lee et al.	D14/489	D697,072	S *	1/2014	Ouilhet	D14/485
D669,499	S *	10/2012	Gardner et al.	D14/495	D697,076	S *	1/2014	Oda et al.	D14/486
D671,583	S *	11/2012	Sakai	D16/202	D697,518	S *	1/2014	Thomsen et al.	D14/485
D672,784	S *	12/2012	Clanton et al.	D14/485	D697,519	S *	1/2014	Thomsen et al.	D14/485
D674,406	S *	1/2013	Frost et al.	D14/488	D697,523	S *	1/2014	Oda et al.	D14/486
D675,225	S *	1/2013	Frost et al.	D14/488	D697,929	S *	1/2014	Hyunjung et al.	D14/486
D675,226	S *	1/2013	Frost et al.	D14/488	D697,935	S *	1/2014	Lee et al.	D14/486
D675,227	S *	1/2013	Frost et al.	D14/488	8,627,236	B2 *	1/2014	Jung et al.	715/863
D675,228	S *	1/2013	Frost et al.	D14/488	8,631,070	B2 *	1/2014	Vance et al.	709/204
D675,241	S *	1/2013	Oda	D16/219	8,640,052	B2 *	1/2014	Dasgupta et al.	715/848
8,352,881	B2 *	1/2013	Champion et al.	715/834	D699,248	S *	2/2014	Pearson et al.	D14/485
8,359,548	B2 *	1/2013	Vance et al.	715/834	D699,251	S *	2/2014	Rao et al.	D14/486
D675,640	S *	2/2013	Frost et al.	D14/488	D699,730	S *	2/2014	Brinda et al.	D14/485
D675,641	S *	2/2013	Frost et al.	D14/488	D699,737	S *	2/2014	Pearson et al.	D14/486
D675,642	S *	2/2013	Frost et al.	D14/488	D699,745	S *	2/2014	Pearson et al.	D14/488
D675,643	S *	2/2013	Frost et al.	D14/488	D699,746	S *	2/2014	Pearson et al.	D14/488
D675,644	S *	2/2013	Frost et al.	D14/488	D699,747	S *	2/2014	Pearson et al.	D14/488
D675,646	S *	2/2013	Frost et al.	D14/489	D699,748	S *	2/2014	Pearson et al.	D14/488
D675,647	S *	2/2013	Frost et al.	D14/489	D699,749	S *	2/2014	Pearson et al.	D14/488
D676,057	S *	2/2013	Lee	D14/487	D699,750	S *	2/2014	Pearson et al.	D14/488
D676,059	S *	2/2013	Frost et al.	D14/489	D700,193	S *	2/2014	Oda et al.	D14/485
D676,060	S *	2/2013	Frost et al.	D14/490	D700,197	S *	2/2014	Akcasu et al.	D14/486
D676,457	S *	2/2013	Frost et al.	D14/488	D700,198	S *	2/2014	Akcasu et al.	D14/486
D676,870	S *	2/2013	Steele et al.	D14/492	D700,201	S *	2/2014	Kim et al.	D14/486
8,370,769	B2 *	2/2013	Vance et al.	715/834	D700,207	S *	2/2014	Pearson et al.	D14/488
8,370,770	B2 *	2/2013	Vance et al.	715/834	D700,618	S *	3/2014	Hwang et al.	D14/486
D677,276	S *	3/2013	Eby et al.	D14/492	D700,912	S *	3/2014	Kim	D14/485
D677,277	S *	3/2013	Eby et al.	D14/492	D701,217	S *	3/2014	Kim	D14/485
					D701,226	S *	3/2014	Jung	D14/486
					D701,238	S *	3/2014	Lai et al.	D14/488
					D701,515	S *	3/2014	Matas et al.	D14/486
					D701,525	S *	3/2014	Oh et al.	D14/486



(56)

## References Cited

## U.S. PATENT DOCUMENTS

8,677,280	B2 *	3/2014	Carmichael et al.	715/854	D727,336	S *	4/2015	Allison et al.	D14/485
D701,869	S *	4/2014	Matas et al.	D14/486	2001/0012021	A1 *	8/2001	Nishiyama et al.	345/763
D701,879	S *	4/2014	Foit et al.	D14/488	2002/0030754	A1 *	3/2002	Sugimoto	348/333.02
D702,251	S *	4/2014	Kotler et al.	D14/487	2002/0080185	A1 *	6/2002	Boeuf	345/802
D702,257	S *	4/2014	Wantland et al.	D14/489	2002/0085037	A1 *	7/2002	Leavitt et al.	345/765
D702,706	S *	4/2014	Kotler et al.	D14/487	2002/0089541	A1 *	7/2002	Orbanes et al.	345/764
D702,707	S *	4/2014	Kotler et al.	D14/487	2002/0118227	A1 *	8/2002	Salvatore	345/764
D703,221	S *	4/2014	Park et al.	D14/486	2002/0122031	A1 *	9/2002	Maglio et al.	345/184
D703,222	S *	4/2014	Myung et al.	D14/486	2002/0122072	A1 *	9/2002	Selker	345/834
D703,693	S *	4/2014	Brinda et al.	D14/488	2002/0149621	A1 *	10/2002	Yamaguchi et al.	345/764
8,707,211	B2 *	4/2014	Yasui et al.	715/834	2002/0154003	A1 *	10/2002	Ueda	340/425.5
D704,211	S *	5/2014	Agnew et al.	D14/486	2002/0171682	A1 *	11/2002	Frank et al.	345/790
D704,220	S *	5/2014	Lim et al.	D14/492	2003/0011639	A1 *	1/2003	Webb	345/808
8,719,729	B2 *	5/2014	Smith et al.	715/834	2003/0076306	A1 *	4/2003	Zadesky et al.	345/173
8,726,169	B2 *	5/2014	Payne et al.	715/751	2003/0076369	A1 *	4/2003	Resner et al.	345/864
D706,283	S *	6/2014	Pedraza Padilla et al.	D14/486	2003/0095096	A1 *	5/2003	Robbin et al.	345/156
D707,697	S *	6/2014	Ranz et al.	D14/486	2003/0117427	A1 *	6/2003	Haughawout et al.	345/710
D708,195	S *	7/2014	Kavett	D14/486	2003/0142143	A1 *	7/2003	Brown et al.	345/836
D708,203	S *	7/2014	Johnson	D14/487	2003/0164856	A1 *	9/2003	Prager et al.	345/764
D708,206	S *	7/2014	Wang et al.	D14/488	2003/0169298	A1 *	9/2003	Ording	345/810
D709,077	S *	7/2014	Jonsson et al.	D14/485	2003/0189597	A1 *	10/2003	Anderson et al.	345/778
D709,078	S *	7/2014	Jonsson et al.	D14/485	2003/0197732	A1 *	10/2003	Gupta	345/764
D709,092	S *	7/2014	Mariet et al.	D14/489	2003/0197736	A1 *	10/2003	Murphy	345/780
D710,381	S *	8/2014	Souza dos Santos	D14/492	2003/0226115	A1 *	12/2003	Wall et al.	715/526
D710,862	S *	8/2014	Wang et al.	D14/485	2003/0231208	A1 *	12/2003	Hanon et al.	345/764
D711,420	S *	8/2014	Agnew	D14/488	2004/0017481	A1 *	1/2004	Takasumi et al.	348/207.99
D711,904	S *	8/2014	Sundy et al.	D14/486	2004/0017499	A1 *	1/2004	Ambiru	348/333.12
D711,905	S *	8/2014	Morrison et al.	D14/486	2004/0032522	A1 *	2/2004	Koeda et al.	348/333.12
D712,912	S *	9/2014	Gee et al.	D14/486	2004/0046795	A1 *	3/2004	Josephson et al.	345/764
D712,914	S *	9/2014	Lee et al.	D14/486	2004/0046886	A1 *	3/2004	Ambiru et al.	348/333.12
D712,915	S *	9/2014	Lee et al.	D14/486	2004/0046887	A1 *	3/2004	Ikehata et al.	348/333.12
D712,916	S *	9/2014	Lee et al.	D14/486	2004/0051803	A1 *	3/2004	Venturino et al.	348/333.02
D712,917	S *	9/2014	Lee et al.	D14/486	2004/0070567	A1 *	4/2004	Longe et al.	345/156
D713,412	S *	9/2014	Gall et al.	D14/485	2004/0090315	A1 *	5/2004	Mackjust et al.	340/426.13
D713,413	S *	9/2014	Lee et al.	D14/486	2004/0104896	A1 *	6/2004	Suraqui	345/168
D713,414	S *	9/2014	Lee et al.	D14/486	2004/0111507	A1 *	6/2004	Villado et al.	709/224
D713,415	S *	9/2014	Lee et al.	D14/486	2004/0141010	A1 *	7/2004	Fitzmaurice et al.	345/810
D713,416	S *	9/2014	Lee et al.	D14/486	2004/0150664	A1 *	8/2004	Baudisch	345/740
D714,316	S *	9/2014	Pereira	D14/485	2004/0155888	A1 *	8/2004	Padgitt et al.	345/619
D714,317	S *	9/2014	Pereira	D14/485	2004/0201679	A1 *	10/2004	Carcia	348/207.1
D714,324	S *	9/2014	Barling et al.	D14/485	2004/0227835	A1 *	11/2004	Seki	348/333.02
D714,325	S *	9/2014	Pereira	D14/485	2004/0239792	A1 *	12/2004	Shibutani et al.	348/333.12
D714,813	S *	10/2014	Oda et al.	D14/485	2004/0255254	A1 *	12/2004	Weingart et al.	715/804
D714,818	S *	10/2014	Wang et al.	D14/486	2005/0001902	A1 *	1/2005	Brogan et al.	348/207.1
D714,819	S *	10/2014	Wang et al.	D14/486	2005/0010955	A1 *	1/2005	Elia et al.	725/88
D715,317	S *	10/2014	Pearce	D14/486	2005/0024515	A1 *	2/2005	Ikehata et al.	348/333.02
D715,810	S *	10/2014	Tsukamoto	D14/485	2005/0052425	A1 *	3/2005	Zadesky et al.	345/173
D715,811	S *	10/2014	Tsukamoto	D14/485	2005/0064936	A1 *	3/2005	Pryor	463/36
D716,317	S *	10/2014	Behzadi et al.	D14/485	2005/0081164	A1 *	4/2005	Hama et al.	715/830
D716,318	S *	10/2014	Fan et al.	D14/485	2005/0083406	A1 *	4/2005	Cozier	348/207.1
D716,319	S *	10/2014	Fan et al.	D14/485	2005/0083425	A1 *	4/2005	Cozier et al.	348/333.02
D716,320	S *	10/2014	Fan et al.	D14/485	2005/0120312	A1 *	6/2005	Nguyen	715/863
D716,321	S *	10/2014	Fan et al.	D14/485	2005/0134578	A1 *	6/2005	Chambers et al.	345/184
D716,334	S *	10/2014	Lee et al.	D14/486	2005/0195294	A1 *	9/2005	Kim et al.	348/239
D716,340	S *	10/2014	Bresin et al.	D14/488	2005/0212915	A1 *	9/2005	Karasaki et al.	348/207.2
D716,819	S *	11/2014	Kotler et al.	D14/485	2005/0212943	A1 *	9/2005	Karasaki et al.	348/333.02
D717,334	S *	11/2014	Sakuma	D14/487	2005/0219386	A1 *	10/2005	Stavely et al.	348/240.3
D717,335	S *	11/2014	Sakuma	D14/487	2005/0225658	A1 *	10/2005	Ikehata	348/333.01
D717,822	S *	11/2014	Brotman et al.	D14/486	2005/0231625	A1 *	10/2005	Parulski et al.	348/333.12
D717,823	S *	11/2014	Brotman et al.	D14/486	2005/0237411	A1 *	10/2005	Watanabe	348/333.02
D718,325	S *	11/2014	Schoger et al.	D14/486	2005/0240879	A1 *	10/2005	Law et al.	715/773
D719,174	S *	12/2014	Madgett et al.	D14/485	2006/0001757	A1 *	1/2006	Sawachi	348/333.12
D719,175	S *	12/2014	Nguyen	D14/485	2006/0022955	A1 *	2/2006	Kennedy	345/173
D719,180	S *	12/2014	Liang	D14/486	2006/0026535	A1 *	2/2006	Hotelling et al.	715/863
D721,084	S *	1/2015	Kimball et al.	D14/485	2006/0028454	A1 *	2/2006	Branton et al.	345/173
D721,088	S *	1/2015	Barling et al.	D14/485	2006/0053389	A1 *	3/2006	Michelman	715/775
D722,082	S *	2/2015	Roberts et al.	D14/492	2006/0085757	A1 *	4/2006	Andre et al.	715/771
D722,606	S *	2/2015	Stroupe et al.	D14/485	2006/0087578	A1 *	4/2006	Hong et al.	348/333.01
D723,050	S *	2/2015	Minsung et al.	D14/486	2006/0098112	A1 *	5/2006	Kelly	348/333.12
D725,663	S *	3/2015	Yoneda et al.	D14/486	2006/0101350	A1 *	5/2006	Scott	715/779
D726,219	S *	4/2015	Chaudhri et al.	D14/489	2006/0103751	A1 *	5/2006	Lee	348/333.02
D726,741	S *	4/2015	Lee et al.	D14/485	2006/0107232	A1 *	5/2006	Salt et al.	715/810
D726,747	S *	4/2015	Yoneda et al.	D14/486	2006/0112354	A1 *	5/2006	Park et al.	715/835
D726,748	S *	4/2015	Maekawa	D14/486	2006/0146166	A1 *	7/2006	Abe et al.	348/333.01
D727,335	S *	4/2015	Allison et al.	D14/485	2006/0150120	A1 *	7/2006	Dresti et al.	715/810
					2006/0161870	A1 *	7/2006	Hotelling et al.	715/863
					2006/0161871	A1 *	7/2006	Hotelling et al.	715/863
					2006/0187331	A1 *	8/2006	Watanabe et al.	348/333.01
					2006/0200776	A1 *	9/2006	Godfrey et al.	715/769



(56)

## References Cited

## U.S. PATENT DOCUMENTS

2006/0221223	A1 *	10/2006	Terada	348/333.05
2007/0024736	A1 *	2/2007	Matsuda et al.	348/333.12
2007/0052832	A1 *	3/2007	Bae et al.	348/333.12
2007/0058064	A1 *	3/2007	Hara et al.	348/333.01
2007/0070203	A1 *	3/2007	Yang et al.	348/207.1
2007/0086648	A1 *	4/2007	Hayashi	382/154
2007/0126877	A1 *	6/2007	Yang	348/207.99
2007/0136679	A1 *	6/2007	Yang	715/772
2007/0136690	A1 *	6/2007	MacLaurin et al.	715/822
2007/0159533	A1 *	7/2007	Ayaki	348/207.99
2007/0168890	A1 *	7/2007	Zhao et al.	715/863
2007/0192739	A1 *	8/2007	Hunleth et al.	715/823
2007/0200945	A1 *	8/2007	Inukai	348/333.02
2007/0211157	A1 *	9/2007	Humpoletz et al.	348/333.01
2007/0222768	A1 *	9/2007	Geurts et al.	345/173
2007/0236475	A1 *	10/2007	Wherry	345/173
2007/0263092	A1 *	11/2007	Fedorovskaya et al.	348/207.1
2007/0268371	A1 *	11/2007	Misawa et al.	348/207.99
2007/0271528	A1 *	11/2007	Park et al.	715/810
2008/0005690	A1 *	1/2008	Van Vugt	715/765
2008/0022228	A1 *	1/2008	Kwon et al.	715/838
2008/0024463	A1 *	1/2008	Pryor	345/175
2008/0055454	A1 *	3/2008	Yumiki	348/333.12
2008/0062297	A1 *	3/2008	Sako et al.	348/333.02
2008/0068484	A1 *	3/2008	Nam	348/333.01
2008/0068486	A1 *	3/2008	Kusaka	348/333.02
2008/0074499	A1 *	3/2008	Niimura	348/207.1
2008/0117312	A1 *	5/2008	Kokubun	348/231.7
2008/0168386	A1 *	7/2008	Brinda et al.	715/786
2008/0170150	A1 *	7/2008	Kojima et al.	348/333.01
2008/0175579	A1 *	7/2008	Kawakami	396/155
2008/0211779	A1 *	9/2008	Pryor	345/173
2008/0225154	A1 *	9/2008	Pan et al.	348/333.02
2008/0239083	A1 *	10/2008	Kusaka et al.	348/207.1
2008/0250349	A1 *	10/2008	Peiro et al.	715/810
2008/0279425	A1 *	11/2008	Tang	382/118
2008/0297607	A1 *	12/2008	Minatogawa	348/207.1
2008/0304816	A1 *	12/2008	Ebato	396/53
2008/0313540	A1 *	12/2008	Dirks et al.	715/710
2009/0006328	A1 *	1/2009	Lindberg et al.	707/3
2009/0006993	A1 *	1/2009	Tuli et al.	715/764
2009/0019397	A1 *	1/2009	Buffet et al.	715/837
2009/0083850	A1 *	3/2009	Fadell et al.	726/19
2009/0096875	A1 *	4/2009	Yoshimaru et al.	348/207.1
2009/0147123	A1 *	6/2009	Fujii	348/333.12
2009/0207254	A1 *	8/2009	Tomat et al.	348/207.1
2009/0251587	A1 *	10/2009	Kim	348/333.12
2009/0256947	A1 *	10/2009	Ciurea et al.	348/333.12
2009/0263773	A1 *	10/2009	Kotlyar et al.	434/262
2009/0267909	A1 *	10/2009	Chen et al.	345/173
2009/0267921	A1 *	10/2009	Pryor	345/177
2009/0268038	A1 *	10/2009	Matsumoto	348/207.1
2009/0276439	A1 *	11/2009	Rosenblatt et al.	707/10
2009/0278973	A1 *	11/2009	Sogoh et al.	348/333.02
2009/0282370	A1 *	11/2009	Rainwater et al.	715/863
2009/0293008	A1 *	11/2009	Fujii et al.	715/769
2009/0303373	A1 *	12/2009	Yamada	348/333.02
2009/0303375	A1 *	12/2009	Ohyama	348/333.12
2010/0002084	A1 *	1/2010	Hattori et al.	348/207.1
2010/0020181	A1 *	1/2010	Kuroda	348/207.1
2010/0020220	A1 *	1/2010	Sugita et al.	348/333.01
2010/0026815	A1 *	2/2010	Yamamoto	348/207.1
2010/0060743	A1 *	3/2010	Sato	348/207.1
2010/0066889	A1 *	3/2010	Ueda et al.	348/333.01
2010/0073487	A1 *	3/2010	Sogoh et al.	348/207.1
2010/0088594	A1 *	4/2010	Kim et al.	715/274
2010/0095235	A1 *	4/2010	Bennett et al.	715/781
2010/0138763	A1 *	6/2010	Kim	715/765
2010/0175022	A1 *	7/2010	Diehl et al.	715/784
2010/0192105	A1 *	7/2010	Kim et al.	715/834
2010/0223569	A1 *	9/2010	Vuong et al.	715/772
2010/0231506	A1 *	9/2010	Pryor	345/156
2010/0257490	A1 *	10/2010	Lyon et al.	715/863
2010/0281413	A1 *	11/2010	Lundback et al.	715/771
2010/0299637	A1 *	11/2010	Chmielewski et al.	715/834
2010/0306693	A1 *	12/2010	Brinda	715/784
2010/0306705	A1 *	12/2010	Nilsson	715/835
2011/0035691	A1 *	2/2011	Kim	715/765
2011/0041102	A1 *	2/2011	Kim	715/863
2011/0202838	A1 *	8/2011	Han et al.	715/702
2011/0209074	A1 *	8/2011	Gill et al.	715/760
2011/0264582	A1 *	10/2011	Kim et al.	705/40
2012/0050329	A1 *	3/2012	Borchardt et al.	345/636
2012/0069231	A1 *	3/2012	Chao	348/333.01
2012/0096383	A1 *	4/2012	Sakamoto et al.	715/772
2012/0124520	A1 *	5/2012	Samp et al.	715/834
2012/0240064	A1 *	9/2012	Ramsay et al.	715/762
2012/0306788	A1 *	12/2012	Chen et al.	345/173
2013/0019175	A1 *	1/2013	Kotler et al.	715/728
2013/0019208	A1 *	1/2013	Kotler et al.	715/835
2013/0063380	A1 *	3/2013	Wang et al.	345/173
2013/0069893	A1 *	3/2013	Brinda et al.	345/173
2013/0086522	A1 *	4/2013	Shimazu et al.	715/810
2013/0096819	A1 *	4/2013	Tarnok	701/428
2013/0198691	A1 *	8/2013	Akita	715/834
2013/0227450	A1 *	8/2013	Na et al.	715/764
2013/0335767	A1 *	12/2013	Ha et al.	358/1.13
2014/0047389	A1 *	2/2014	Aarabi	715/834
2014/0058844	A1 *	2/2014	Jadeja et al.	705/14.66

\* cited by examiner

FIG. 1

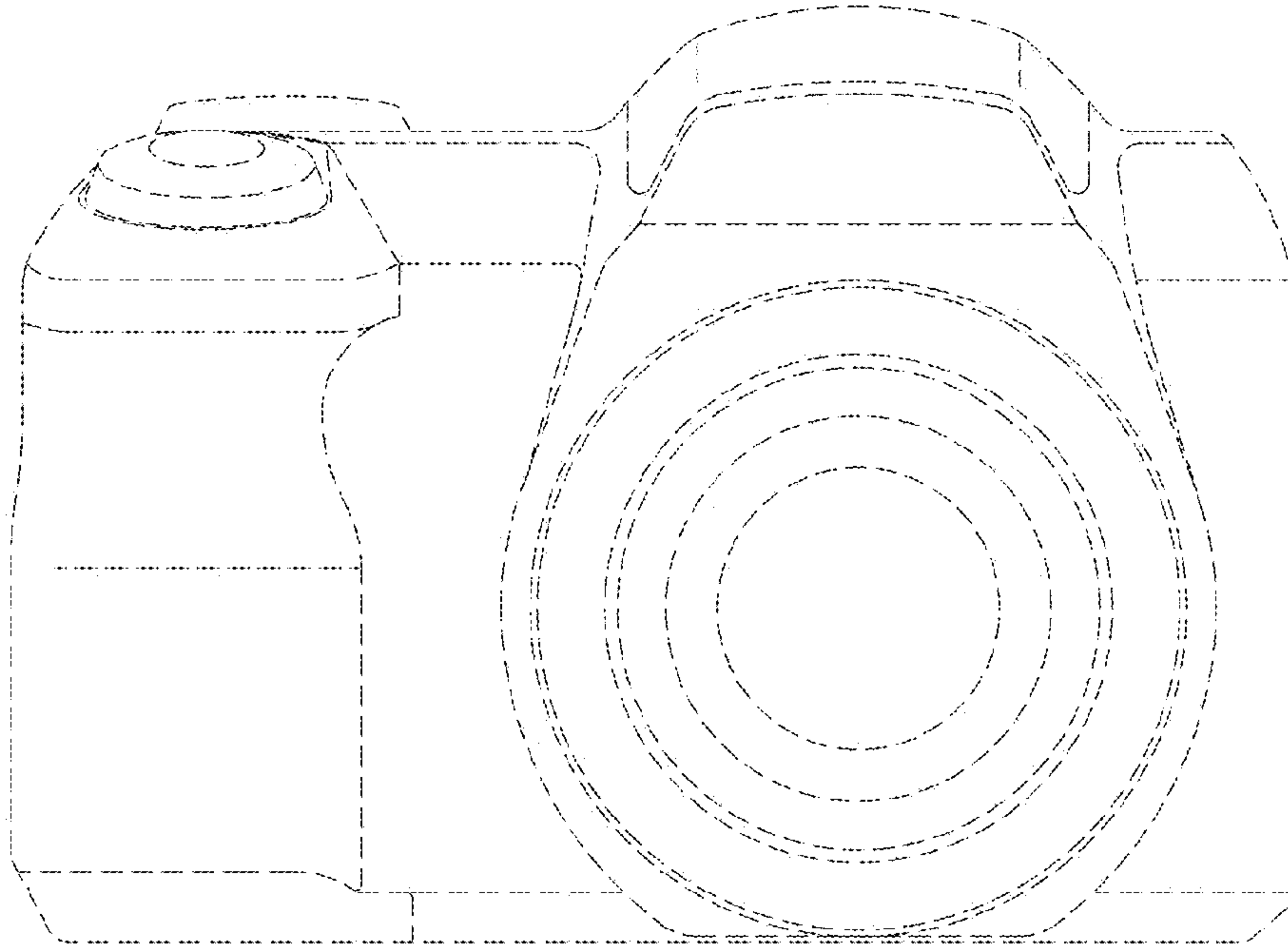


FIG. 2

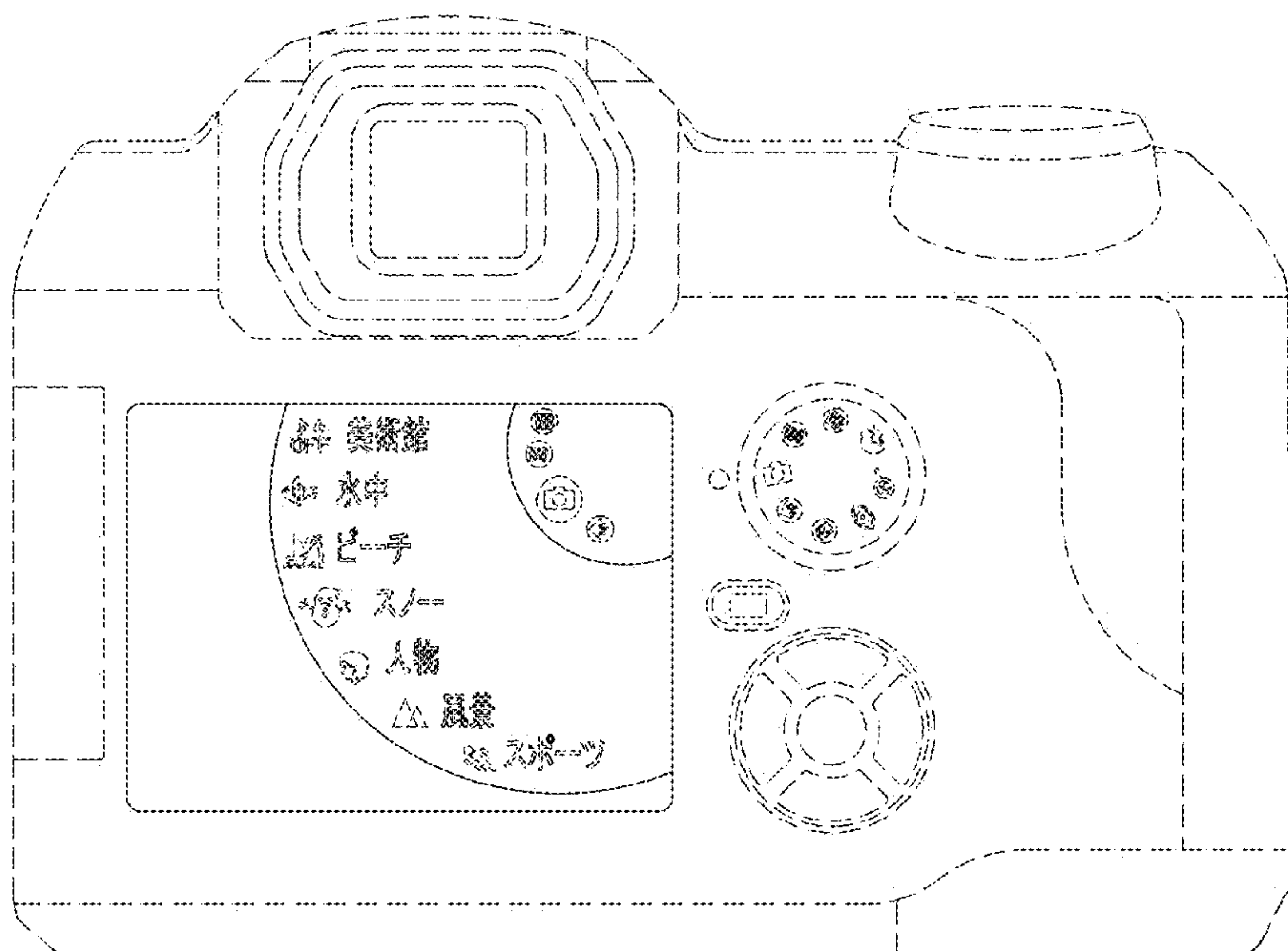


FIG. 3

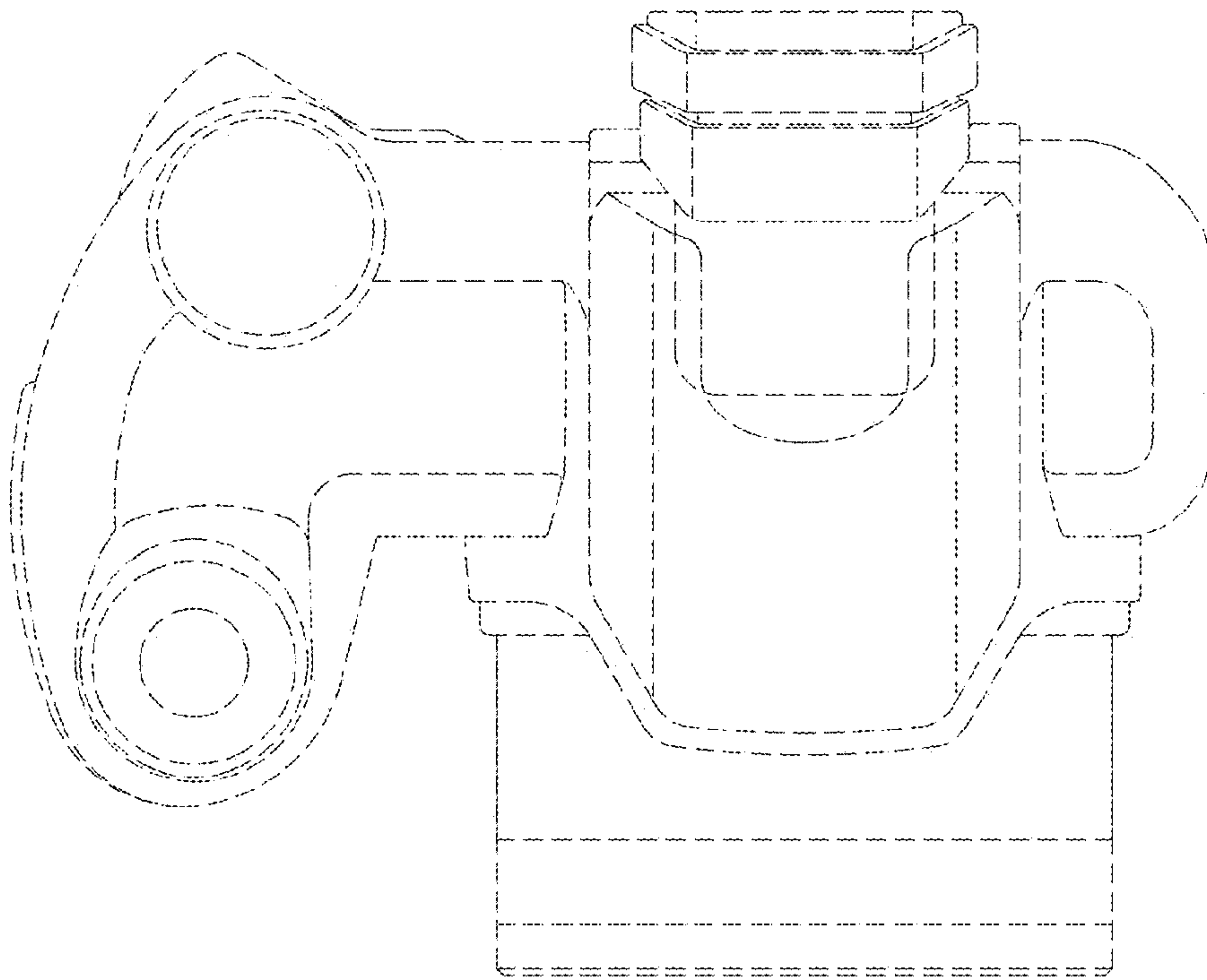


FIG. 4

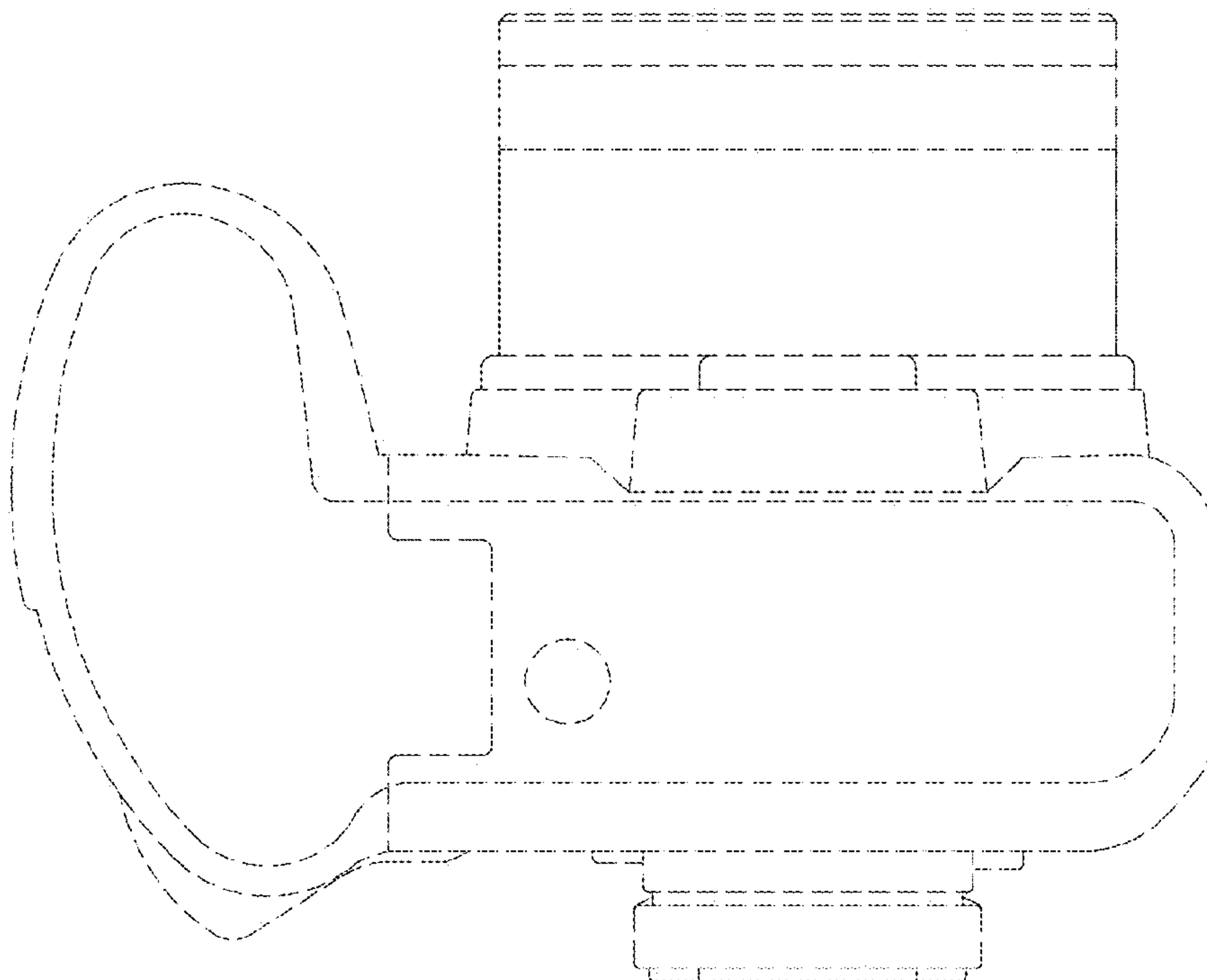




FIG. 5

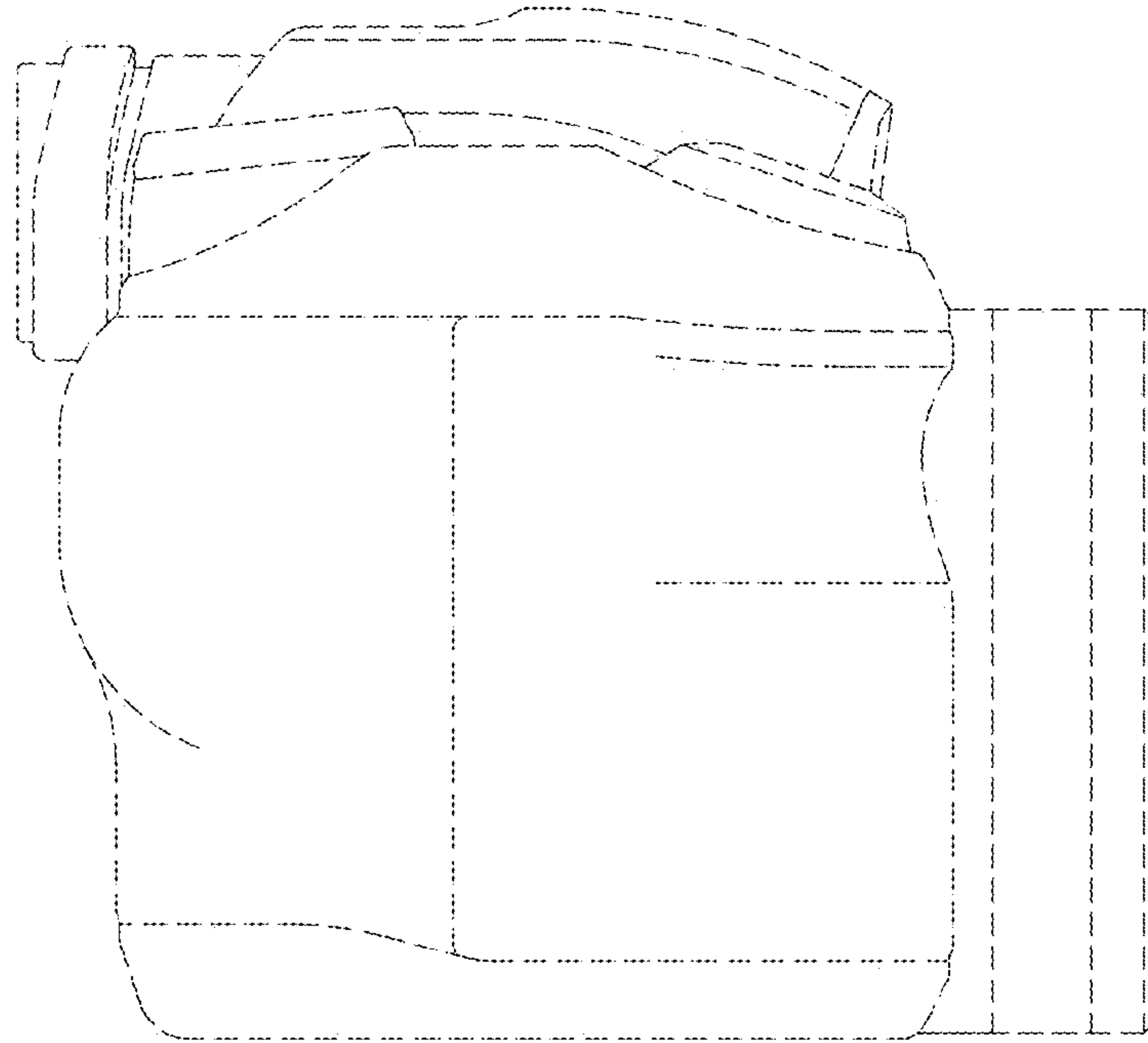


FIG. 6

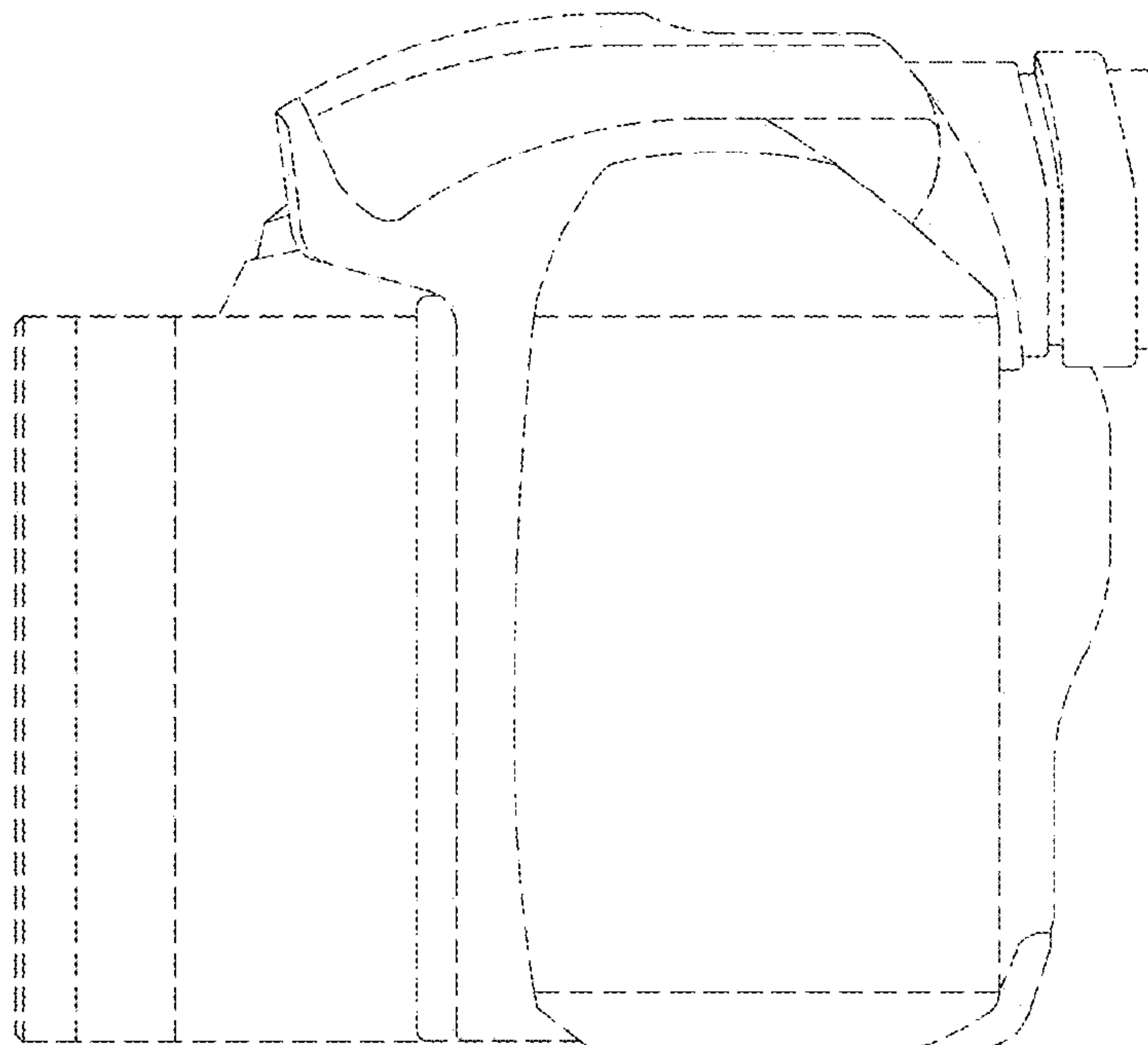




FIG. 7

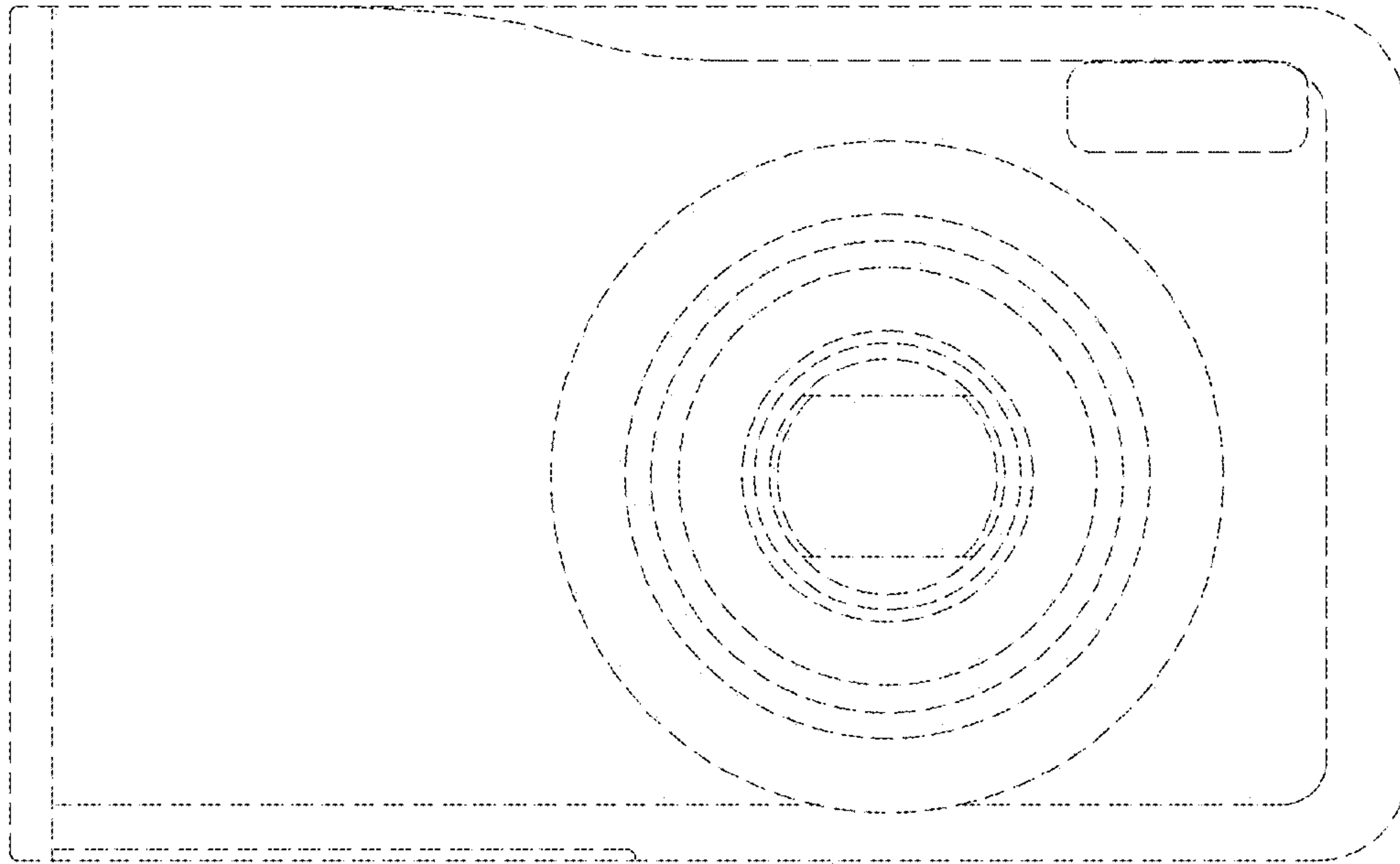


FIG. 8

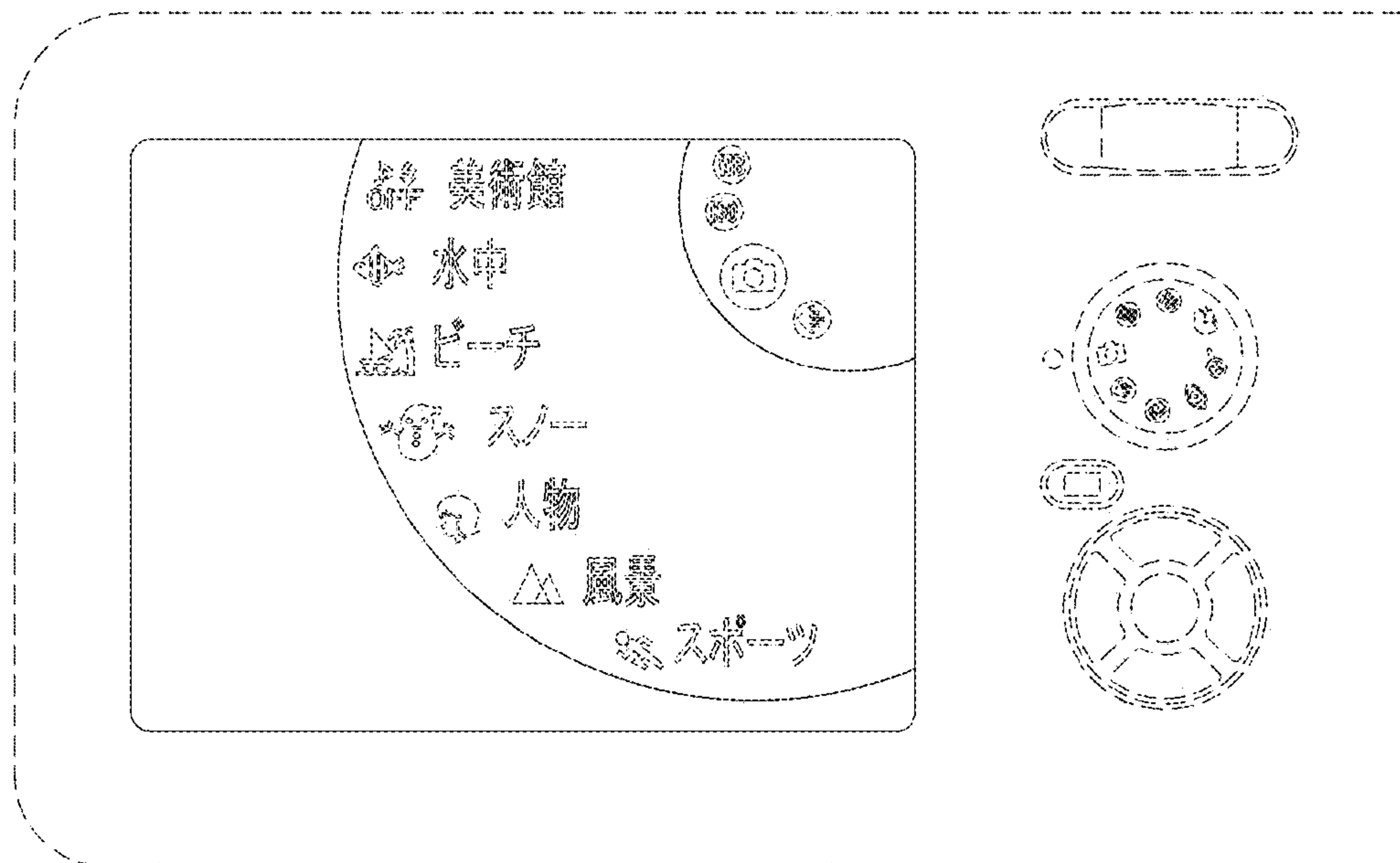




FIG. 9

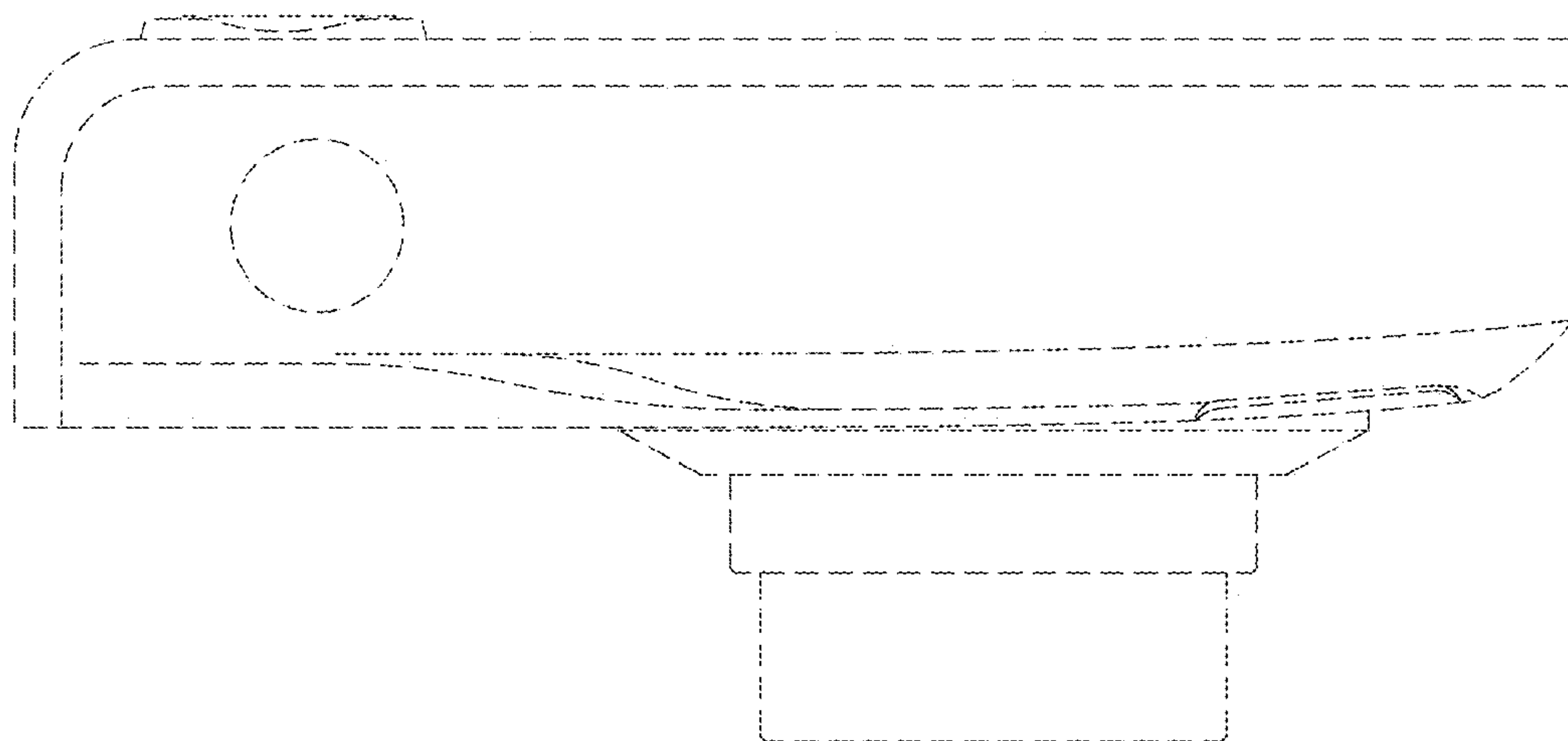


FIG. 10

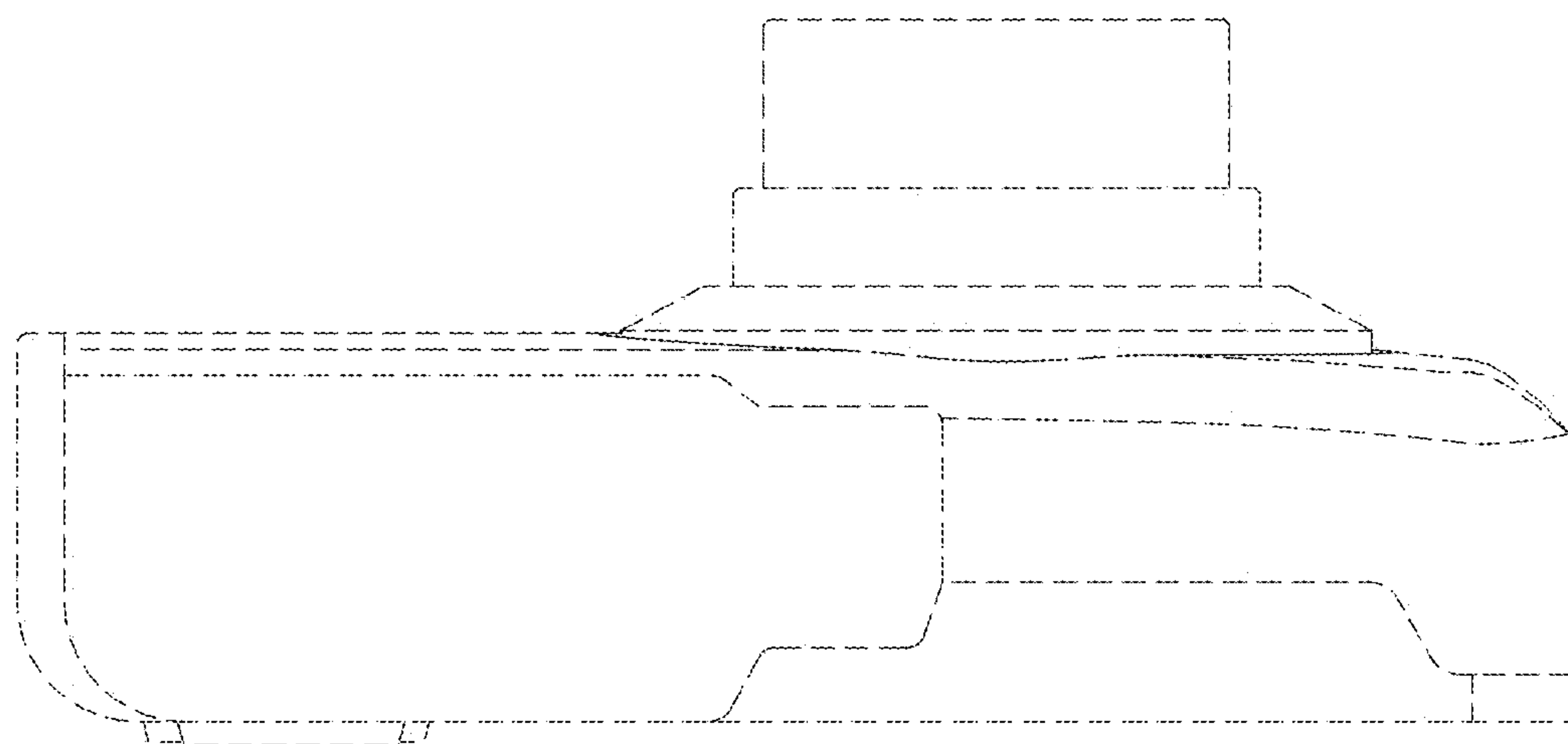




FIG. 11

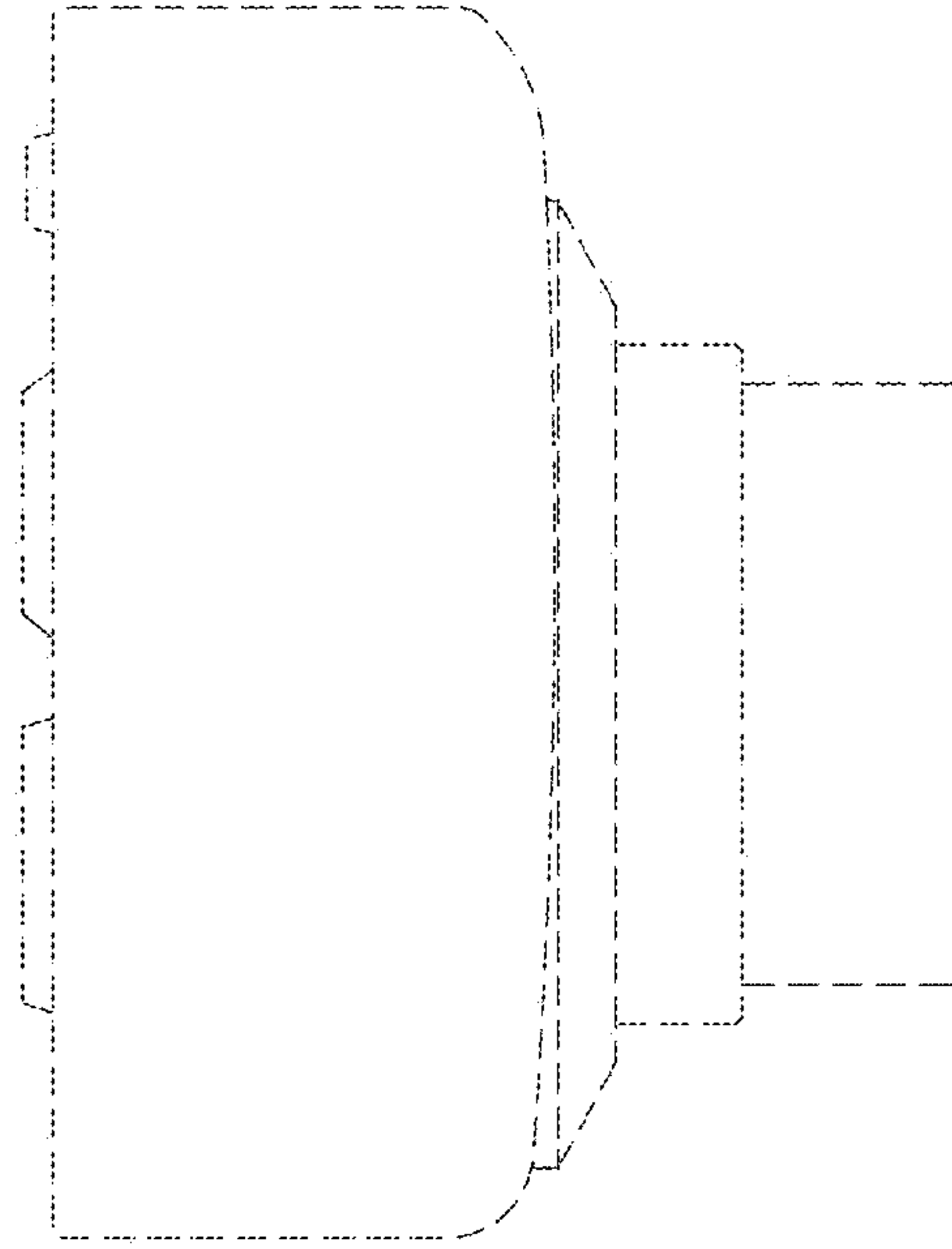


FIG. 12

