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# (12) United States Design Patent

Fletcher et al.

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(54) **LED LUMINAIRE HAVING A MOUNTING SYSTEM**

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(73) Assignee: **ECOSENSE LIGHTING INC.**, Los Angeles, CA (US)

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

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(52) **U.S. Cl.**
USPC ..... **D26/65**

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CPC ..... F21V 21/14; F21V 15/01; F21V 14/02; F21V 21/30; F21V 21/00; F21V 14/00; F21S 8/00; F21S 8/003; F21S 8/043; F21Y 2105/001
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

| | | | | |
|---|---|---|---|---|
| D122,711 | S | | 9/1940 | May |
| 2,458,967 | A | | 1/1949 | Wiedenhoeft |
| 3,220,471 | A | | 11/1965 | Coe |
| D205,082 | S | | 6/1966 | Morgan |
| 3,435,891 | A | | 4/1969 | Parrish |
| D214,582 | S | * | 7/1969 | Routh ..... D26/63 |
| D231,559 | S | | 4/1974 | Darling |
| D234,712 | S | | 4/1975 | Kennedy |
| 4,090,210 | A | | 5/1978 | Wehling et al. |
| 4,138,716 | A | | 2/1979 | Muhlethaler et al. |
| D251,500 | S | | 4/1979 | Aigner |

(Continued)

FOREIGN PATENT DOCUMENTS

| | | | |
|---|---|---|---|
| CA | 2623604 | A1 | 8/2009 |
| CN | 1536686 | A | 10/2004 |

(Continued)

OTHER PUBLICATIONS

Petluri et al., U.S. Appl. No. 14/526,504, filed Oct. 28, 2014, entitled "Lighting Systems Having Multiple Light Sources," 92pp.

(Continued)

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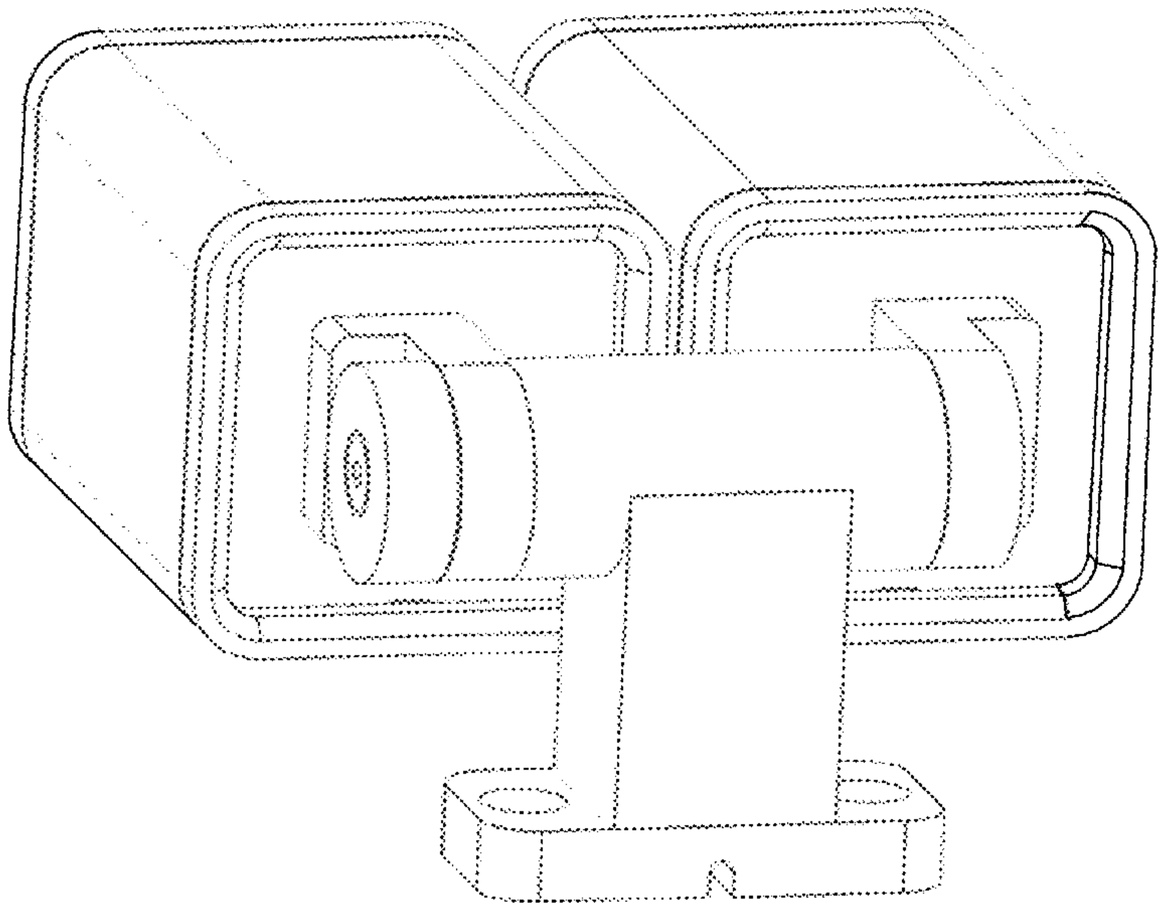
(57) **CLAIM**

The ornamental design for a LED luminaire having a mounting system, as shown and described.

**DESCRIPTION**

FIG. **1** is a front elevational view of the LED luminaire having a mounting system, of the present invention, wherein the elements that are shown in broken lines are disclaimed;
FIG. **2** is a back elevational view thereof;
FIG. **3** is a top, back, left perspective view thereof;
FIG. **4** is a top, back, right perspective view thereof;
FIG. **5** is a left elevational view thereof;
FIG. **6** is a right elevational view thereof;
FIG. **7** is a top plan view thereof; and,
FIG. **8** is a bottom plan view thereof, wherein the elements that are shown in broken lines are disclaimed.

**1 Claim, 8 Drawing Sheets**



(56) **References Cited**

U.S. PATENT DOCUMENTS

| | | | |
|---|---|---|---|
| D258,314 | S | 2/1981 | Leon |
| 4,258,413 | A | 3/1981 | Mausser |
| 4,345,306 | A | 8/1982 | Summey |
| 4,423,471 | A | 12/1983 | Gordin et al. |
| 4,445,164 | A | 4/1984 | Giles, III |
| 4,453,203 | A | 6/1984 | Pate |
| 4,467,403 | A | 8/1984 | May |
| 4,473,873 | A | 9/1984 | Quiogue |
| 4,564,888 | A | 1/1986 | Lewin |
| 4,578,742 | A | 3/1986 | Klein |
| 4,580,859 | A | 4/1986 | Frano |
| 4,609,979 | A | 9/1986 | Kristofek |
| 4,727,648 | A | 3/1988 | Savage |
| 4,733,335 | A | 3/1988 | Serizawa |
| D296,244 | S | 6/1988 | Donato |
| D296,717 | S | 7/1988 | Kane |
| 4,755,918 | A | 7/1988 | Pristash |
| 4,757,431 | A | 7/1988 | Cross |
| 4,761,721 | A | 8/1988 | Willing |
| D300,876 | S | 4/1989 | Sakai |
| 4,833,579 | A | 5/1989 | Skegin |
| 4,837,927 | A | 6/1989 | Savage |
| 4,872,097 | A | 10/1989 | Miller |
| 4,882,667 | A | 11/1989 | Skegin |
| 4,918,497 | A | 4/1990 | Edmond |
| D307,640 | S | 5/1990 | Titmarsh |
| D308,114 | S | 5/1990 | Shemitz |
| D308,260 | S | 5/1990 | Shemitz |
| 4,966,862 | A | 10/1990 | Edmond |
| D315,030 | S | 2/1991 | Jacobs |
| D316,303 | S | 4/1991 | Layne |
| D316,306 | S | 4/1991 | Shemitz |
| 5,027,168 | A | 6/1991 | Edmond |
| D319,512 | S | 8/1991 | Lettenmayer |
| D322,862 | S | 12/1991 | Miller |
| 5,087,212 | A | 2/1992 | Hanami |
| D325,645 | S | 4/1992 | Grange |
| 5,140,507 | A | 8/1992 | Harwood |
| D330,944 | S | 11/1992 | Wereley |
| 5,174,649 | A | 12/1992 | Alston |
| 5,210,051 | A | 5/1993 | Carter, Jr. |
| D336,536 | S | 6/1993 | Shaanan |
| 5,235,470 | A | 8/1993 | Cheng |
| D340,514 | S | 10/1993 | Liao |
| 5,282,364 | A | 2/1994 | Cech |
| 5,303,124 | A | 4/1994 | Wrobel |
| 5,324,213 | A | 6/1994 | Frantz |
| 5,325,281 | A | 6/1994 | Harwood |
| D348,744 | S | 7/1994 | Johnson |
| 5,335,159 | A | 8/1994 | Chen et al. |
| 5,337,225 | A | 8/1994 | Brookman |
| 5,338,944 | A | 8/1994 | Edmond et al. |
| 5,359,345 | A | 10/1994 | Hunter |
| 5,367,229 | A | 11/1994 | Yang |
| 5,381,323 | A | 1/1995 | Osteen et al. |
| 5,387,901 | A | 2/1995 | Hardt |
| 5,393,993 | A | 2/1995 | Edmond et al. |
| 5,410,462 | A | 4/1995 | Wolfe |
| 5,416,342 | A | 5/1995 | Edmond et al. |
| 5,436,809 | A | 7/1995 | Brassier |
| 5,450,303 | A | 9/1995 | Markiewicz et al. |
| 5,490,048 | A | 2/1996 | Brassier |
| 5,504,665 | A | 4/1996 | Osteen et al. |
| 5,515,253 | A | 5/1996 | Sjobom |
| 5,516,390 | A | 5/1996 | Tomita et al. |
| 5,523,589 | A | 6/1996 | Edmond et al. |
| D373,437 | S | 9/1996 | Kira |
| 5,584,574 | A | 12/1996 | Haddad |
| 5,599,091 | A | 2/1997 | Kira |
| 5,628,557 | A | 5/1997 | Huang |
| 5,632,551 | A | 5/1997 | Roney |
| 5,634,822 | A | 6/1997 | Gunell |
| 5,658,066 | A | 8/1997 | Hirsch |
| D383,236 | S | 9/1997 | Krogman |
| D384,336 | S | 9/1997 | Gerber |
| 5,713,662 | A | 2/1998 | Kira |
| 5,757,144 | A | 5/1998 | Nilssen |
| 5,788,533 | A | 8/1998 | Alvarado-Rodriguez |
| 5,794,685 | A | 8/1998 | Dean |
| 5,800,050 | A | 9/1998 | Leadford |
| D408,823 | S | 4/1999 | Kirby |
| 5,890,793 | A | 4/1999 | Stephens |
| 5,894,196 | A | 4/1999 | McDermott |
| 5,898,267 | A | 4/1999 | McDermott |
| 5,909,955 | A | 6/1999 | Roorda |
| 5,912,477 | A | 6/1999 | Negley |
| 5,938,316 | A | 8/1999 | Yan |
| 6,022,130 | A | 2/2000 | Donato |
| 6,051,940 | A | 4/2000 | Arun |
| 6,072,160 | A | 6/2000 | Bahl |
| 6,079,851 | A | 6/2000 | Altman |
| 6,083,021 | A | 7/2000 | Lau |
| 6,120,600 | A | 9/2000 | Edmond et al. |
| 6,124,673 | A | 9/2000 | Bishop |
| 6,149,112 | A | 11/2000 | Thieltges |
| 6,149,288 | A | 11/2000 | Huang |
| 6,176,594 | B1 | 1/2001 | Yarconi |
| D437,449 | S | 2/2001 | Soller |
| D437,652 | S | 2/2001 | Uhler |
| 6,187,606 | B1 | 2/2001 | Edmond et al. |
| 6,198,233 | B1 | 3/2001 | McConaughy |
| 6,201,262 | B1 | 3/2001 | Edmond et al. |
| D443,710 | S | 6/2001 | Chiu |
| 6,244,877 | B1 | 6/2001 | Asao |
| 6,249,375 | B1 | 6/2001 | Silhengst |
| D445,936 | S | 7/2001 | Mier-Langner et al. |
| 6,260,981 | B1 | 7/2001 | Fiene |
| D446,592 | S | 8/2001 | Leen |
| 6,273,588 | B1 | 8/2001 | Arakelian |
| D448,508 | S | 9/2001 | Benghozi |
| 6,312,787 | B1 | 11/2001 | Hayashi et al. |
| 6,318,883 | B1 | 11/2001 | Sugiyama et al. |
| D452,843 | S | 1/2002 | Henrici |
| 6,341,523 | B2 | 1/2002 | Lynam |
| D457,673 | S | 5/2002 | Martinson |
| 6,386,723 | B1 | 5/2002 | Eberlein et al. |
| 6,390,646 | B1 | 5/2002 | Yan |
| 6,392,360 | B2 | 5/2002 | McConaughy |
| 6,426,704 | B1 | 7/2002 | Hutchison |
| 6,435,693 | B1 | 8/2002 | Fiene |
| 6,439,736 | B1 | 8/2002 | Fiene |
| 6,439,743 | B1 | 8/2002 | Hutchison |
| 6,439,749 | B1 | 8/2002 | Miller et al. |
| 6,441,943 | B1 | 8/2002 | Roberts |
| D462,801 | S | 9/2002 | Huang |
| 6,450,662 | B1 | 9/2002 | Hutchison |
| 6,450,664 | B1 | 9/2002 | Kelly |
| D464,455 | S | 10/2002 | Fong |
| D464,939 | S | 10/2002 | Chuang |
| D465,046 | S | 10/2002 | Layne |
| 6,473,002 | B1 | 10/2002 | Hutchison |
| 6,474,839 | B1 | 11/2002 | Hutchison |
| 6,478,453 | B2 | 11/2002 | Lammers |
| 6,488,386 | B1 | 12/2002 | Yan |
| 6,508,567 | B1 | 1/2003 | Fiene |
| D470,962 | S | 2/2003 | Chen |
| 6,525,939 | B2 | 2/2003 | Liang |
| D472,339 | S | 3/2003 | Russello et al. |
| 6,527,422 | B1 | 3/2003 | Hutchison |
| 6,530,674 | B2 | 3/2003 | Grierson et al. |
| D473,529 | S | 4/2003 | Feinbloom |
| 6,540,382 | B1 | 4/2003 | Simon |
| 6,561,690 | B2 | 5/2003 | Balestriero et al. |
| D476,439 | S | 6/2003 | O'Rourke |
| 6,600,175 | B1 | 7/2003 | Baretz et al. |
| 6,601,970 | B2 | 8/2003 | Ueda |
| 6,618,231 | B2 | 9/2003 | McConaughy |
| 6,632,006 | B1 | 10/2003 | Rippel |
| 6,636,003 | B2 | 10/2003 | Rahm et al. |
| D482,476 | S | 11/2003 | Kwong |
| 6,641,284 | B2 | 11/2003 | Stopa et al. |
| 6,662,211 | B1 | 12/2003 | Weller |
| 6,682,211 | B2 | 1/2004 | English |
| 6,683,419 | B2 | 1/2004 | Kriparos |

(56) **References Cited**

U.S. PATENT DOCUMENTS

| | | | | |
|---|---|---|---|---|
| 6,691,768 | B2 | 2/2004 | Hsieh | |
| 6,703,640 | B1 | 3/2004 | Hembree | |
| 6,733,164 | B1 | 5/2004 | Smith, Jr. | |
| D491,306 | S | 6/2004 | Zucker | |
| 6,744,693 | B2 | 6/2004 | Brockmann | |
| 6,752,645 | B2 | 6/2004 | Nakamura | |
| 6,773,138 | B2 | 8/2004 | Coushaine | |
| 6,787,999 | B2 | 9/2004 | Stimac | |
| 6,788,510 | B2 | 9/2004 | McConaughy | |
| 6,791,119 | B2 | 9/2004 | Slater, Jr. et al. | |
| 6,814,462 | B1 | 11/2004 | Fiene | |
| 6,824,296 | B2 | 11/2004 | Souza | |
| 6,824,390 | B2 | 11/2004 | Brown | |
| 6,827,469 | B2 | 12/2004 | Coushaine | |
| 6,853,010 | B2 | 2/2005 | Slater, Jr. et al. | |
| 6,860,617 | B2 | 3/2005 | Fiene | |
| 6,863,424 | B2 | 3/2005 | Smith | |
| 6,864,513 | B2 | 3/2005 | Lin | |
| 6,869,206 | B2 | 3/2005 | Zimmerman | |
| 6,871,993 | B2 | 3/2005 | Hecht | |
| D504,967 | S | 5/2005 | Kung | |
| 6,893,144 | B2 | 5/2005 | Fan | |
| D506,065 | S | 6/2005 | Sugino | |
| 6,902,200 | B1 | 6/2005 | Beadle | |
| 6,902,291 | B2 | 6/2005 | Rizkin | |
| 6,903,380 | B2 | 6/2005 | Barnett | |
| 6,905,232 | B2 | 6/2005 | Lin | |
| 6,946,806 | B1 | 9/2005 | Choi | |
| 6,958,497 | B2 | 10/2005 | Emerson et al. | |
| 6,966,677 | B2 | 11/2005 | Galli | |
| 6,979,097 | B2 | 12/2005 | Elam | |
| D516,020 | S | 2/2006 | Wong | |
| D516,229 | S | 2/2006 | Tang | |
| 6,998,650 | B1 | 2/2006 | Wu | |
| 7,040,774 | B2 | 5/2006 | Beeson et al. | |
| 7,063,130 | B2 | 6/2006 | Huang | |
| 7,063,440 | B2 | 6/2006 | Mohacsi et al. | |
| 7,066,617 | B2 | 6/2006 | Mandy | |
| D524,975 | S | 7/2006 | Oas | |
| 7,070,301 | B2 | 7/2006 | Magarill | |
| 7,077,546 | B2 | 7/2006 | Yamauchi | |
| D527,119 | S | 8/2006 | Maxik | |
| D527,131 | S | 8/2006 | McCarthy, III | |
| 7,093,958 | B2 | 8/2006 | Coushaine | |
| 7,095,056 | B2 | 8/2006 | Vitta et al. | |
| 7,097,332 | B2 | 8/2006 | Vamberi | |
| 7,098,397 | B2 | 8/2006 | Lange | |
| 7,111,963 | B2 | 9/2006 | Zhang | |
| 7,111,971 | B2 | 9/2006 | Coushaine | |
| 7,112,916 | B2 | 9/2006 | Goh | |
| D530,683 | S | 10/2006 | Rivas | |
| 7,131,749 | B2 | 11/2006 | Wimberly | |
| 7,132,804 | B2 | 11/2006 | Lys | |
| 7,138,667 | B2 | 11/2006 | Barnett | |
| 7,149,089 | B2 | 12/2006 | Blasko | |
| 7,150,553 | B2 | 12/2006 | English | |
| D535,774 | S | 1/2007 | Weston et al. | |
| 7,159,997 | B2 | 1/2007 | Reo et al. | |
| 7,160,004 | B2 | 1/2007 | Peck | |
| 7,172,319 | B2 | 2/2007 | Holder et al. | |
| D538,951 | S | 3/2007 | Maxik | |
| D539,459 | S | 3/2007 | Benghozi | |
| 7,198,386 | B2 | 4/2007 | Zampini | |
| 7,207,696 | B1 | 4/2007 | Lin | |
| D541,957 | S | 5/2007 | Wang | |
| 7,210,957 | B2 | 5/2007 | Mrakovich et al. | |
| 7,213,940 | B1 | 5/2007 | Van De Ven et al. | |
| 7,221,374 | B2 | 5/2007 | Dixon | |
| D544,110 | S | 6/2007 | Hooker | |
| D545,457 | S | 6/2007 | Chen | |
| 7,234,950 | B1 | 6/2007 | Wickett | |
| 7,237,930 | B2 | 7/2007 | Onishi et al. | |
| D548,691 | S | 8/2007 | Krieger | |
| D551,372 | S | 9/2007 | Korpi | |
| 7,273,299 | B2 | 9/2007 | Parkyn et al. | |
| D552,779 | S * | 10/2007 | Starck | D26/63 |
| D552,782 | S | 10/2007 | Korpi | |
| 7,282,840 | B2 | 10/2007 | Chih | |
| 7,288,902 | B1 | 10/2007 | Melanson | |
| 7,293,908 | B2 | 11/2007 | Beeson et al. | |
| 7,303,301 | B2 | 12/2007 | Koren | |
| D561,924 | S | 2/2008 | Yiu | |
| D563,013 | S | 2/2008 | Levine | |
| 7,329,907 | B2 | 2/2008 | Pang et al. | |
| D564,119 | S | 3/2008 | Metlen | |
| 7,344,279 | B2 | 3/2008 | Mueller | |
| 7,344,296 | B2 | 3/2008 | Matsui | |
| 7,357,534 | B2 | 4/2008 | Snyder | |
| 7,358,657 | B2 | 4/2008 | Koelger | |
| 7,358,679 | B2 | 4/2008 | Lys et al. | |
| 7,360,925 | B2 | 4/2008 | Coushaine | |
| D568,829 | S | 5/2008 | Yamashita | |
| 7,369,386 | B2 | 5/2008 | Rasmussen | |
| D570,505 | S | 6/2008 | Maxik | |
| 7,381,942 | B2 | 6/2008 | Chin et al. | |
| D574,095 | S | 7/2008 | Hill | |
| 7,396,139 | B2 | 7/2008 | Savage | |
| 7,396,146 | B2 | 7/2008 | Wang | |
| D574,987 | S | 8/2008 | Waldmann | |
| 7,413,326 | B2 | 8/2008 | Tain | |
| D576,545 | S | 9/2008 | Mandel | |
| D576,964 | S | 9/2008 | Shaner | |
| D577,453 | S | 9/2008 | Metlen | |
| D577,836 | S | 9/2008 | Engebrigtsen | |
| 7,422,347 | B2 | 9/2008 | Miyairi et al. | |
| D579,421 | S | 10/2008 | Chu | |
| D581,080 | S | 11/2008 | Mier-Langner | |
| D581,554 | S | 11/2008 | To | |
| D581,583 | S | 11/2008 | Peng | |
| 7,452,115 | B2 | 11/2008 | Alcelik | |
| 7,456,499 | B2 | 11/2008 | Loh et al. | |
| D583,975 | S | 12/2008 | Kushinskaya | |
| 7,458,820 | B2 | 12/2008 | Ohta | |
| 7,467,888 | B2 | 12/2008 | Fiene | |
| D585,588 | S | 1/2009 | Alexander | |
| D585,589 | S | 1/2009 | Alexander | |
| 7,481,552 | B2 | 1/2009 | Mayfield, III et al. | |
| D586,498 | S | 2/2009 | Wu | |
| D587,389 | S | 2/2009 | Benensohn | |
| 7,494,248 | B2 | 2/2009 | Li | |
| 7,497,581 | B2 | 3/2009 | Beeson et al. | |
| D590,085 | S | 4/2009 | Irvine | |
| 7,513,675 | B2 | 4/2009 | Mier-Langner | |
| D591,894 | S | 5/2009 | Flank | |
| D592,799 | S | 5/2009 | Scott | |
| 7,532,324 | B2 | 5/2009 | Liu et al. | |
| 7,537,464 | B2 | 5/2009 | Brandenburg | |
| 7,539,028 | B2 | 5/2009 | Baurle et al. | |
| D593,512 | S | 6/2009 | Lin | |
| 7,540,761 | B2 | 6/2009 | Weber | |
| 7,549,786 | B2 | 6/2009 | Higley | |
| D597,246 | S | 7/2009 | Meyer, IV | |
| D597,247 | S | 7/2009 | Meyer, IV | |
| 7,559,784 | B2 | 7/2009 | Hsiao | |
| 7,564,180 | B2 | 7/2009 | Brandes | |
| D597,704 | S | 8/2009 | Peng | |
| D599,040 | S | 8/2009 | Alexander | |
| 7,575,332 | B2 | 8/2009 | Cok | |
| 7,575,338 | B1 | 8/2009 | Verfuerth | |
| 7,580,192 | B1 | 8/2009 | Chu | |
| D601,276 | S | 9/2009 | Grajcar | |
| 7,591,572 | B1 | 9/2009 | Levine | |
| 7,594,738 | B1 | 9/2009 | Lin | |
| D602,868 | S | 10/2009 | Vogt | |
| 7,604,365 | B2 | 10/2009 | Chang | |
| 7,607,802 | B2 | 10/2009 | Kang | |
| 7,626,345 | B2 | 12/2009 | Young | |
| 7,628,506 | B2 | 12/2009 | Verfuerth | |
| 7,637,635 | B2 | 12/2009 | Xiao | |
| D608,043 | S | 1/2010 | Ko | |
| D610,543 | S | 2/2010 | Coushaine | |
| D610,723 | S | 2/2010 | Grajcar | |
| D610,729 | S | 2/2010 | Kushinskaya | |
| 7,665,862 | B2 | 2/2010 | Villard | |

(56) **References Cited**

U.S. PATENT DOCUMENTS

| | | | | |
|---|---|---|---|---|
| 7,674,018 | B2 | 3/2010 | Holder et al. | |
| 7,679,281 | B2 | 3/2010 | Kim et al. | |
| 7,686,481 | B1 | 3/2010 | Condon et al. | |
| 7,690,810 | B2 | 4/2010 | Saitoh et al. | |
| 7,703,951 | B2 | 4/2010 | Piepgras | |
| 7,722,227 | B2 | 5/2010 | Zhang | |
| D618,374 | S | 6/2010 | Guercio | |
| 7,727,009 | B2 | 6/2010 | Goto | |
| 7,731,395 | B2 | 6/2010 | Parkyn et al. | |
| 7,731,396 | B2 | 6/2010 | Fay | |
| 7,736,029 | B2 | 6/2010 | Chen et al. | |
| 7,737,634 | B2 | 6/2010 | Leng et al. | |
| 7,740,380 | B2 | 6/2010 | Thrailkill | |
| 7,744,259 | B2 | 6/2010 | Walczak | |
| 7,744,266 | B2 | 6/2010 | Higley | |
| 7,748,870 | B2 | 7/2010 | Chang | |
| 7,759,881 | B1 | 7/2010 | Melanson | |
| 7,766,508 | B2 | 8/2010 | Villard et al. | |
| 7,766,518 | B2 | 8/2010 | Piepgras | |
| 7,784,966 | B2 | 8/2010 | Verfuerth | |
| 7,785,124 | B2 | 8/2010 | Lin | |
| D625,870 | S * | 10/2010 | Feigenbaum | D26/63 |
| D626,094 | S | 10/2010 | Alexander | |
| 7,806,562 | B2 | 10/2010 | Behr | |
| 7,810,951 | B1 | 10/2010 | Lee et al. | |
| 7,810,955 | B2 | 10/2010 | Stimac et al. | |
| 7,810,995 | B2 | 10/2010 | Fadler et al. | |
| 7,813,111 | B2 | 10/2010 | Anderson | |
| 7,819,549 | B2 | 10/2010 | Narendran et al. | |
| D627,507 | S | 11/2010 | Lai | |
| D627,727 | S | 11/2010 | Alexander | |
| D628,156 | S | 11/2010 | Alexander | |
| 7,828,576 | B2 | 11/2010 | Lin | |
| 7,837,348 | B2 | 11/2010 | Narendran et al. | |
| 7,841,753 | B2 | 11/2010 | Liu | |
| D629,365 | S | 12/2010 | Garcia De Vicuna | |
| 7,845,393 | B2 | 12/2010 | Kao | |
| 7,857,482 | B2 | 12/2010 | Reo et al. | |
| 7,857,498 | B2 | 12/2010 | Smith | |
| 7,874,700 | B2 | 1/2011 | Patrick | |
| D633,244 | S | 2/2011 | Kramer et al. | |
| D633,248 | S | 2/2011 | Alexander | |
| 7,889,421 | B2 | 2/2011 | Narendran | |
| 7,896,517 | B2 | 3/2011 | Mandy | |
| 7,901,108 | B2 | 3/2011 | Kabuki et al. | |
| 7,914,162 | B1 | 3/2011 | Huang | |
| 7,914,198 | B2 | 3/2011 | Mier-Langner | |
| 7,918,581 | B2 | 4/2011 | Van De Ven | |
| 7,918,589 | B2 | 4/2011 | Mayfield, III et al. | |
| 7,922,364 | B2 | 4/2011 | Tessnow | |
| 7,923,907 | B2 | 4/2011 | Tessnow | |
| 7,942,559 | B2 | 5/2011 | Holder et al. | |
| 7,952,114 | B2 | 5/2011 | Gingrich, III | |
| 7,965,494 | B1 | 6/2011 | Morris | |
| 7,972,038 | B2 | 7/2011 | Albright | |
| 7,976,194 | B2 | 7/2011 | Wilcox et al. | |
| 7,988,336 | B1 | 8/2011 | Harbers | |
| 7,993,031 | B2 | 8/2011 | Grajcar | |
| 8,002,438 | B2 | 8/2011 | Ko | |
| 8,007,131 | B2 | 8/2011 | Liu et al. | |
| D645,007 | S | 9/2011 | Alexander | |
| D645,183 | S | 9/2011 | Cucinella | |
| D645,594 | S * | 9/2011 | Grawe | D26/63 |
| 8,021,008 | B2 | 9/2011 | Ramer | |
| 8,029,157 | B2 | 10/2011 | Li et al. | |
| 8,033,680 | B2 | 10/2011 | Sharrah | |
| 8,052,310 | B2 | 11/2011 | Gingrinch, III | |
| 8,066,403 | B2 | 11/2011 | Sanfilippo et al. | |
| D650,504 | S | 12/2011 | Kim et al. | |
| D650,935 | S | 12/2011 | Beghelli | |
| 8,080,819 | B2 | 12/2011 | Mueller et al. | |
| 8,083,364 | B2 | 12/2011 | Allen | |
| 8,096,668 | B2 | 1/2012 | Abu-Ageel | |
| 8,100,560 | B2 | 1/2012 | Ahland, III et al. | |
| 8,100,564 | B2 | 1/2012 | Ono | |
| 8,102,167 | B2 | 1/2012 | Irissou et al. | |
| 8,102,683 | B2 | 1/2012 | Gaknoki et al. | |
| D654,207 | S | 2/2012 | Fletcher | |
| D654,607 | S | 2/2012 | Kim et al. | |
| 8,118,450 | B2 | 2/2012 | Villard | |
| 8,118,454 | B2 | 2/2012 | Rains, Jr. et al. | |
| 8,123,376 | B2 | 2/2012 | Van De Ven et al. | |
| D655,432 | S | 3/2012 | Beghelli | |
| D655,840 | S | 3/2012 | Heaton | |
| D655,842 | S * | 3/2012 | Sabernig | D26/63 |
| 8,129,669 | B2 | 3/2012 | Chen et al. | |
| 8,136,958 | B2 | 3/2012 | Verfuerth | |
| 8,138,690 | B2 | 3/2012 | Chemel et al. | |
| 8,142,047 | B2 | 3/2012 | Acampora | |
| 8,143,803 | B2 | 3/2012 | Beij et al. | |
| 8,154,864 | B1 | 4/2012 | Nearman | |
| 8,162,498 | B2 | 4/2012 | Ramer et al. | |
| D659,871 | S | 5/2012 | Lee | |
| D660,229 | S | 5/2012 | Tseng | |
| 8,172,425 | B2 | 5/2012 | Wen et al. | |
| 8,172,436 | B2 | 5/2012 | Coleman | |
| 8,182,122 | B2 | 5/2012 | Chiu | |
| 8,191,613 | B2 | 6/2012 | Yuan | |
| 8,193,738 | B2 | 6/2012 | Chu et al. | |
| 8,201,965 | B2 | 6/2012 | Yamada | |
| 8,205,998 | B2 | 6/2012 | Ramer et al. | |
| 8,210,722 | B2 | 7/2012 | Holder et al. | |
| 8,212,469 | B2 | 7/2012 | Rains, Jr. et al. | |
| 8,215,798 | B2 | 7/2012 | Rains, Jr. et al. | |
| 8,232,745 | B2 | 7/2012 | Chemel et al. | |
| D665,340 | S | 8/2012 | Obata | |
| 8,242,766 | B2 | 8/2012 | Gaknoki et al. | |
| 8,292,482 | B2 | 10/2012 | Harbers | |
| 8,297,788 | B2 | 10/2012 | Bishop | |
| 8,297,792 | B1 | 10/2012 | Wang | |
| 8,297,808 | B2 | 10/2012 | Yuan | |
| 8,319,437 | B2 | 11/2012 | Carlin | |
| 8,324,838 | B2 | 12/2012 | Shah et al. | |
| 8,330,378 | B2 | 12/2012 | Maehara et al. | |
| 8,337,043 | B2 | 12/2012 | Verfuerth | |
| 8,344,602 | B2 | 1/2013 | Lai | |
| 8,360,609 | B2 | 1/2013 | Lee et al. | |
| 8,360,621 | B2 | 1/2013 | Avila | |
| 8,385,071 | B2 | 2/2013 | Lin | |
| 8,403,541 | B1 | 3/2013 | Rashidi | |
| 8,410,716 | B2 | 4/2013 | Yao et al. | |
| 8,434,898 | B2 | 5/2013 | Sanfilippo et al. | |
| 8,436,556 | B2 | 5/2013 | Eisele et al. | |
| 8,454,193 | B2 | 6/2013 | Simon et al. | |
| 8,459,841 | B2 | 6/2013 | Huang | |
| 8,462,523 | B2 | 6/2013 | Gaknoki et al. | |
| 8,469,542 | B2 | 6/2013 | Zampini, II et al. | |
| 8,503,083 | B2 | 8/2013 | Seo | |
| 8,529,102 | B2 | 9/2013 | Pickard et al. | |
| 8,531,134 | B2 | 9/2013 | Chemel et al. | |
| 8,536,802 | B2 | 9/2013 | Chemel et al. | |
| 8,536,805 | B2 | 9/2013 | Shah et al. | |
| 8,543,249 | B2 | 9/2013 | Chemel et al. | |
| D690,859 | S | 10/2013 | Mollaghaffari | |
| 8,545,045 | B2 | 10/2013 | Tress | |
| 8,545,049 | B2 | 10/2013 | Davis et al. | |
| 8,547,034 | B2 | 10/2013 | Melanson et al. | |
| 8,552,664 | B2 | 10/2013 | Chemel et al. | |
| 8,556,469 | B2 | 10/2013 | Pickard | |
| 8,558,518 | B2 | 10/2013 | Irissou et al. | |
| 8,569,972 | B2 | 10/2013 | Melanson | |
| 8,573,807 | B2 | 11/2013 | Borkar et al. | |
| 8,573,816 | B2 | 11/2013 | Negley et al. | |
| 8,575,858 | B2 | 11/2013 | Policy et al. | |
| 8,579,467 | B1 | 11/2013 | Szeto | |
| 8,581,504 | B2 | 11/2013 | Kost et al. | |
| 8,581,521 | B2 | 11/2013 | Welten et al. | |
| 8,585,245 | B2 | 11/2013 | Black et al. | |
| 8,587,211 | B2 | 11/2013 | Melanson | |
| 8,593,074 | B2 | 11/2013 | Hatley et al. | |
| 8,593,129 | B2 | 11/2013 | Gaknoki et al. | |
| 8,593,814 | B2 | 11/2013 | Ji | |
| D694,925 | S * | 12/2013 | Fukasawa | D26/63 |
| 8,598,809 | B2 | 12/2013 | Negley et al. | |

(56) **References Cited**

U.S. PATENT DOCUMENTS

| | | | | |
|---|---|---|---|---|
| 8,602,591 | B2 | | 12/2013 | Lee |
| 8,610,364 | B2 | | 12/2013 | Melanson et al. |
| 8,610,365 | B2 | | 12/2013 | King et al. |
| 8,611,106 | B2 | | 12/2013 | Fang |
| 8,616,724 | B2 | | 12/2013 | Pickard |
| 8,624,505 | B2 | | 1/2014 | Huang |
| D699,179 | S | | 2/2014 | Alexander |
| 8,646,944 | B2 | | 2/2014 | Villard |
| 8,646,949 | B2 | | 2/2014 | Brunt, Jr. et al. |
| 8,652,357 | B2 | | 2/2014 | Ryu |
| 8,653,750 | B2 | | 2/2014 | Deurenberg et al. |
| D700,728 | S | * | 3/2014 | Fukasawa ..... D26/63 |
| 8,684,556 | B2 | | 4/2014 | Negley et al. |
| 8,684,569 | B2 | | 4/2014 | Pickard et al. |
| 8,690,383 | B2 | | 4/2014 | Zampini, II et al. |
| 8,698,421 | B2 | | 4/2014 | Ludorf |
| D704,369 | S | | 5/2014 | Lindsley et al. |
| 8,723,427 | B2 | | 5/2014 | Collins et al. |
| 8,740,444 | B2 | | 6/2014 | Reynolds et al. |
| 8,742,684 | B2 | | 6/2014 | Melanson |
| 8,749,131 | B2 | | 6/2014 | Rains, Jr. et al. |
| 8,749,173 | B1 | | 6/2014 | Melanson et al. |
| 8,757,840 | B2 | | 6/2014 | Pickard et al. |
| 8,760,073 | B2 | | 6/2014 | Ko |
| 8,760,080 | B2 | | 6/2014 | Yu |
| 8,764,225 | B2 | | 7/2014 | Narendran et al. |
| 8,777,455 | B2 | | 7/2014 | Pickard et al. |
| 8,783,938 | B2 | | 7/2014 | Alexander |
| 8,786,201 | B2 | | 7/2014 | Hamamoto et al. |
| 8,786,210 | B2 | | 7/2014 | Delucia |
| 8,786,211 | B2 | | 7/2014 | Gilliom |
| 8,786,212 | B2 | | 7/2014 | Terazawa |
| 8,786,213 | B2 | | 7/2014 | Yang et al. |
| 8,791,642 | B2 | | 7/2014 | Van De Ven |
| 8,796,948 | B2 | | 8/2014 | Weaver |
| 8,810,227 | B2 | | 8/2014 | Flaibani et al. |
| 8,814,385 | B2 | | 8/2014 | Onaka et al. |
| 8,816,593 | B2 | | 8/2014 | Lys et al. |
| 8,876,322 | B2 | | 11/2014 | Alexander |
| 8,888,506 | B2 | | 11/2014 | Nishimura |
| 8,944,647 | B2 | | 2/2015 | Bueeler |
| D724,773 | S | * | 3/2015 | Ryu ..... D26/63 |
| 9,010,967 | B2 | | 4/2015 | Jensen |
| 9,052,100 | B2 | | 6/2015 | Blackstone |
| 2001/0006463 | A1 | | 7/2001 | Fischer |
| 2001/0053628 | A1 | | 12/2001 | Hayakawa |
| 2002/0046826 | A1 | | 4/2002 | Kao |
| 2002/0067613 | A1 | | 6/2002 | Grove |
| 2002/0106925 | A1 | | 8/2002 | Yamagishi |
| 2002/0117692 | A1 | | 8/2002 | Lin |
| 2003/0058658 | A1 | | 3/2003 | Lee |
| 2003/0072156 | A1 | | 4/2003 | Pohlert |
| 2003/0128543 | A1 | | 7/2003 | Rekow |
| 2003/0174517 | A1 | | 9/2003 | Kiraly et al. |
| 2003/0185005 | A1 | | 10/2003 | Sommers |
| 2003/0209963 | A1 | | 11/2003 | Altgilbers |
| 2004/0005800 | A1 | | 1/2004 | Hou |
| 2004/0090781 | A1 | | 5/2004 | Yeoh |
| 2004/0090784 | A1 | | 5/2004 | Ward |
| 2004/0212991 | A1 | | 10/2004 | Galli |
| 2004/0218372 | A1 | | 11/2004 | Hamasaki |
| 2005/0032402 | A1 | | 2/2005 | Takanashi |
| 2005/0047170 | A1 | | 3/2005 | Hilburger |
| 2005/0083698 | A1 | | 4/2005 | Zampini |
| 2005/0122713 | A1 | | 6/2005 | Hutchins |
| 2005/0146884 | A1 | | 7/2005 | Scheithauer |
| 2005/0174780 | A1 | | 8/2005 | Park |
| 2005/0205878 | A1 | | 9/2005 | Kan |
| 2005/0242362 | A1 | | 11/2005 | Shimizu |
| 2005/0269060 | A1 | | 12/2005 | Ku |
| 2005/0270775 | A1 | | 12/2005 | Harbers |
| 2005/0286265 | A1 | | 12/2005 | Zampini et al. |
| 2006/0001381 | A1 | | 1/2006 | Robinson |
| 2006/0039156 | A1 | | 2/2006 | Chen |
| 2006/0062019 | A1 | | 3/2006 | Young |
| 2006/0076672 | A1 | | 4/2006 | Petroski |
| 2006/0141851 | A1 | | 6/2006 | Matsui |
| 2006/0146531 | A1 | | 7/2006 | Reo et al. |
| 2006/0221272 | A1 | | 10/2006 | Negley et al. |
| 2006/0262544 | A1 | | 11/2006 | Piepgras |
| 2006/0262545 | A1 | | 11/2006 | Piepgras |
| 2007/0025103 | A1 | | 2/2007 | Chan |
| 2007/0064428 | A1 | | 3/2007 | Beauchamp |
| 2007/0096057 | A1 | | 5/2007 | Hampden-Smith |
| 2007/0109795 | A1 | | 5/2007 | Gabrius |
| 2007/0139923 | A1 | | 6/2007 | Negley et al. |
| 2007/0153521 | A1 | | 7/2007 | Konuma |
| 2007/0158668 | A1 | | 7/2007 | Tarsa et al. |
| 2007/0170447 | A1 | | 7/2007 | Negley et al. |
| 2007/0223219 | A1 | | 9/2007 | Medendorp, Jr. et al. |
| 2007/0238327 | A1 | | 10/2007 | Hsu |
| 2007/0242461 | A1 | | 10/2007 | Reisenauer |
| 2007/0253201 | A1 | | 11/2007 | Blincoe |
| 2007/0253202 | A1 | | 11/2007 | Wu |
| 2007/0253209 | A1 | | 11/2007 | Loh et al. |
| 2007/0268698 | A1 | | 11/2007 | Chen et al. |
| 2007/0269915 | A1 | | 11/2007 | Leong et al. |
| 2007/0275576 | A1 | | 11/2007 | Yang |
| 2007/0285028 | A1 | | 12/2007 | Tsinker et al. |
| 2007/0295969 | A1 | | 12/2007 | Chew et al. |
| 2007/0297177 | A1 | | 12/2007 | Wang |
| 2008/0012036 | A1 | | 1/2008 | Loh et al. |
| 2008/0013316 | A1 | | 1/2008 | Chiang |
| 2008/0043470 | A1 | | 2/2008 | Wimberly |
| 2008/0076272 | A1 | | 3/2008 | Hsu |
| 2008/0080190 | A1 | | 4/2008 | Walczak |
| 2008/0084700 | A1 | | 4/2008 | Van De Ven |
| 2008/0106907 | A1 | | 5/2008 | Trott |
| 2008/0112121 | A1 | | 5/2008 | Cheng |
| 2008/0117500 | A1 | | 5/2008 | Narendran et al. |
| 2008/0121921 | A1 | | 5/2008 | Loh et al. |
| 2008/0130275 | A1 | | 6/2008 | Higley |
| 2008/0142194 | A1 | | 6/2008 | Zhou |
| 2008/0157112 | A1 | | 7/2008 | He |
| 2008/0158887 | A1 | | 7/2008 | Zhu |
| 2008/0165530 | A1 | | 7/2008 | Hendrikus |
| 2008/0173884 | A1 | | 7/2008 | Chitnis et al. |
| 2008/0179611 | A1 | | 7/2008 | Chitnis et al. |
| 2008/0192478 | A1 | | 8/2008 | Chen |
| 2008/0198112 | A1 | | 8/2008 | Roberts |
| 2008/0219002 | A1 | | 9/2008 | Sommers et al. |
| 2008/0219303 | A1 | | 9/2008 | Chen et al. |
| 2008/0224598 | A1 | | 9/2008 | Baretz |
| 2008/0224631 | A1 | | 9/2008 | Melanson |
| 2008/0274641 | A1 | | 11/2008 | Weber |
| 2008/0308825 | A1 | | 12/2008 | Chakraborty et al. |
| 2009/0021936 | A1 | | 1/2009 | Stimac et al. |
| 2009/0026913 | A1 | | 1/2009 | Mrakovich |
| 2009/0034283 | A1 | | 2/2009 | Albright |
| 2009/0046464 | A1 | | 2/2009 | Liu |
| 2009/0050907 | A1 | | 2/2009 | Yuan et al. |
| 2009/0050908 | A1 | | 2/2009 | Yuan et al. |
| 2009/0052158 | A1 | | 2/2009 | Bierhuizen |
| 2009/0080185 | A1 | | 3/2009 | McMillan |
| 2009/0086474 | A1 | | 4/2009 | Chou |
| 2009/0091935 | A1 | | 4/2009 | Tsai |
| 2009/0103299 | A1 | | 4/2009 | Boyer et al. |
| 2009/0129084 | A1 | | 5/2009 | Tsao |
| 2009/0141500 | A1 | | 6/2009 | Peng |
| 2009/0154166 | A1 | | 6/2009 | Zhang |
| 2009/0167203 | A1 | | 7/2009 | Dahlman et al. |
| 2009/0184616 | A1 | | 7/2009 | Van De Ven et al. |
| 2009/0195168 | A1 | | 8/2009 | Greenfeld |
| 2009/0225551 | A1 | | 9/2009 | Chang et al. |
| 2009/0236997 | A1 | | 9/2009 | Liu |
| 2009/0294114 | A1 | | 12/2009 | Yang |
| 2009/0296388 | A1 | | 12/2009 | Wu et al. |
| 2009/0310354 | A1 | | 12/2009 | Zampini, II et al. |
| 2009/0317988 | A1 | | 12/2009 | Lin |
| 2010/0015821 | A1 | | 1/2010 | Hsu |
| 2010/0019697 | A1 | | 1/2010 | Korsunsky |
| 2010/0026158 | A1 | | 2/2010 | Wu |
| 2010/0027258 | A1 | | 2/2010 | Maxik |
| 2010/0060202 | A1 | | 3/2010 | Melanson et al. |

(56) **References Cited**

U.S. PATENT DOCUMENTS

2010/0072505 A1 3/2010 Gingrich, III
2010/0073783 A1 3/2010 Sun
2010/0073884 A1 3/2010 Peloza
2010/0091487 A1 4/2010 Shin
2010/0091497 A1 4/2010 Chen
2010/0102696 A1 4/2010 Sun
2010/0110684 A1 5/2010 Abdelsamed et al.
2010/0110728 A1 5/2010 Dubrow et al.
2010/0128484 A1 5/2010 Peng
2010/0132918 A1 6/2010 Lin
2010/0141173 A1 6/2010 Negrete
2010/0142189 A1 6/2010 Hong
2010/0149818 A1 6/2010 Ruffin
2010/0157605 A1 6/2010 Chang
2010/0195323 A1 8/2010 Schaefer et al.
2010/0230709 A1 9/2010 Kanno
2010/0238630 A1 9/2010 Xu
2010/0243219 A1 9/2010 Yang
2010/0246179 A1 9/2010 Long
2010/0260945 A1 10/2010 Kites
2010/0284181 A1 11/2010 O'Brien et al.
2010/0296289 A1 11/2010 Villard et al.
2010/0301360 A1 12/2010 Van De Ven
2010/0301774 A1 12/2010 Chemel et al.
2010/0308742 A1 12/2010 Melanson
2010/0319953 A1 12/2010 Yochum
2011/0013397 A1 1/2011 Catone et al.
2011/0043129 A1 2/2011 Koolen
2011/0044046 A1 2/2011 Abu-Ageel
2011/0049749 A1 3/2011 Bailey
2011/0050100 A1 3/2011 Bailey
2011/0050101 A1 3/2011 Bailey
2011/0050124 A1 3/2011 Bailey
2011/0051407 A1 3/2011 St. Ives et al.
2011/0051414 A1 3/2011 Bailey
2011/0090684 A1 4/2011 Logan et al.
2011/0097921 A1 4/2011 Hsu
2011/0103070 A1 5/2011 Zhang et al.
2011/0115381 A1 5/2011 Carlin
2011/0122643 A1 5/2011 Spork
2011/0134634 A1 6/2011 Gingrich, III
2011/0136374 A1 6/2011 Mostoller
2011/0140620 A1 6/2011 Lin et al.
2011/0180841 A1 7/2011 Chang
2011/0193490 A1 8/2011 Kumar
2011/0222270 A1 9/2011 Porciatti
2011/0253358 A1 10/2011 Huang
2011/0255287 A1 10/2011 Li
2011/0285308 A1 11/2011 Crystal
2011/0285314 A1 11/2011 Carney et al.
2011/0292483 A1 12/2011 Pakhchyan et al.
2011/0306219 A1 12/2011 Swanger
2011/0316441 A1 12/2011 Huynh
2011/0316446 A1 12/2011 Kang et al.
2012/0002417 A1 1/2012 Li
2012/0014115 A1 1/2012 Park et al.
2012/0018754 A1 1/2012 Lowes
2012/0021623 A1 1/2012 Gorman
2012/0025729 A1 2/2012 Melanson et al.
2012/0038280 A1 2/2012 Zoorob et al.
2012/0038291 A1 2/2012 Hasnain
2012/0051048 A1 3/2012 Smit
2012/0051056 A1 3/2012 Derks
2012/0051068 A1 3/2012 Pelton
2012/0092860 A1 4/2012 Blackstone
2012/0106152 A1 5/2012 Zheng
2012/0119658 A1 5/2012 McDaniel
2012/0140468 A1 6/2012 Chang
2012/0140474 A1 6/2012 Jurik et al.
2012/0169242 A1 7/2012 Olson
2012/0175653 A1 7/2012 Weber
2012/0187830 A1 7/2012 Shum
2012/0223657 A1 9/2012 Van De Ven
2012/0224177 A1 9/2012 Harbers et al.
2012/0250309 A1 10/2012 Handsaker
2012/0268894 A1 10/2012 Alexander
2012/0286304 A1 11/2012 Letoquin
2012/0286319 A1 11/2012 Lee
2012/0287642 A1 11/2012 Zeng
2012/0292660 A1 11/2012 Kanno
2012/0307494 A1 12/2012 Zlotnikov et al.
2013/0003370 A1 1/2013 Watanabe
2013/0003388 A1 1/2013 Jensen
2013/0026942 A1 1/2013 Ryan
2013/0042510 A1 2/2013 Nall et al.
2013/0049603 A1 2/2013 Bradford
2013/0049627 A1 2/2013 Roberts
2013/0069561 A1 3/2013 Melanson et al.
2013/0070442 A1 3/2013 Negley
2013/0082612 A1 4/2013 Kim
2013/0094225 A1 4/2013 Leichner
2013/0095673 A1 4/2013 Brandon
2013/0140490 A1 6/2013 Fujinaga
2013/0162140 A1 6/2013 Shamoto et al.
2013/0170220 A1 7/2013 Bueeler
2013/0170221 A1 7/2013 Isogai et al.
2013/0176728 A1 7/2013 Bizzotto et al.
2013/0193869 A1 8/2013 Hong et al.
2013/0221489 A1 8/2013 Cao et al.
2013/0229114 A1 9/2013 Eisele et al.
2013/0229804 A1 9/2013 Holder et al.
2013/0235555 A1 9/2013 Tanaka
2013/0235579 A1 9/2013 Smith
2013/0235580 A1 9/2013 Smith
2013/0241392 A1 9/2013 Pickard et al.
2013/0241440 A1 9/2013 Gaknoki et al.
2013/0250573 A1 9/2013 Taskar et al.
2013/0250581 A1 9/2013 Tang et al.
2013/0265777 A1 10/2013 Zollers et al.
2013/0300303 A1 11/2013 Liu
2013/0301252 A1 11/2013 Hussell et al.
2013/0322072 A1 12/2013 Pu et al.
2014/0015419 A1 1/2014 Shah et al.
2014/0016318 A1 1/2014 Pokrajac
2014/0036510 A1 2/2014 Preston et al.
2014/0043813 A1 2/2014 Dube' et al.
2014/0048743 A1 2/2014 Le-Mercier
2014/0049241 A1 2/2014 Gaknoki et al.
2014/0049962 A1 2/2014 Holder et al.
2014/0055038 A1 2/2014 Cappitelli et al.
2014/0055054 A1 2/2014 Borkar et al.
2014/0062330 A1 3/2014 Neundorfer
2014/0063779 A1 3/2014 Bradford
2014/0071685 A1 3/2014 Black et al.
2014/0071696 A1 3/2014 Park, II et al.
2014/0078715 A1 3/2014 Pickard et al.
2014/0078722 A1 3/2014 Caldwell et al.
2014/0078746 A1 3/2014 Caldwell et al.
2014/0126205 A1 5/2014 Davis et al.
2014/0126224 A1 5/2014 Brunt, Jr. et al.
2014/0134880 A1 5/2014 Yeh
2014/0140052 A1 5/2014 Villard
2014/0159077 A1 6/2014 Kuenzler
2014/0167646 A1 6/2014 Zukauskas et al.
2014/0176016 A1 6/2014 Li
2014/0198531 A1 7/2014 Iwasaki
2014/0218909 A1 8/2014 Tetsuo et al.
2014/0225511 A1 8/2014 Pickard et al.
2014/0225532 A1 8/2014 Groeneveld
2014/0233193 A1 8/2014 Alexander
2014/0268631 A1 9/2014 Pickard
2014/0268724 A1 9/2014 Yanping
2014/0268737 A1 9/2014 Athalye et al.
2014/0286016 A1 9/2014 Montagne
2014/0286018 A1 9/2014 Zhang et al.
2014/0361701 A1 12/2014 Siessegger et al.
2014/0367633 A1 12/2014 Bibl
2015/0029717 A1 1/2015 Shen et al.
2015/0036339 A1 2/2015 Ashdown et al.
2015/0295144 A1 10/2015 Weiler
2016/0174319 A1 6/2016 Li

(56) **References Cited**

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

| | | | |
|---|---|---|---|
| CN | 201739849 | A | 2/2011 |
| CN | 202040752 | A | 11/2011 |
| CN | 102269351 | A | 12/2011 |
| GB | 2457016 | A | 8/2009 |
| JP | 61-070306 | U | 5/1986 |
| JP | 2003-092022 | A | 3/2003 |
| JP | 2004-179048 | A | 6/2004 |
| JP | 2004-265626 | A | 9/2004 |
| JP | 2005-017554 | A | 1/2005 |
| JP | 2005-071818 | A | 3/2005 |
| JP | 2005-235778 | A | 9/2005 |
| JP | 2005-267964 | A | 9/2005 |
| JP | 2006-236796 | A | 9/2006 |
| JP | 2006-253274 | A | 9/2006 |
| JP | 2006-310138 | A | 11/2006 |
| JP | D1307268 | B | 8/2007 |
| JP | D1307434 | B | 8/2007 |
| JP | 2007-273205 | A | 10/2007 |
| JP | 2007-273209 | A | 10/2007 |
| JP | 2011-508406 | A | 3/2011 |
| JP | 2011-204495 | A | 10/2011 |
| JP | 2011-204658 | A | 10/2011 |
| KR | 1020070039683 | A | 4/2007 |
| KR | 1020090013704 | A | 2/2009 |
| KR | 100974942 | B1 | 8/2010 |
| KR | 1020120050280 | A | 5/2012 |
| TW | 2004-25542 | A | 11/2004 |
| TW | 290967 | M | 5/2006 |
| TW | 296481 | M | 8/2006 |
| TW | 1273858 | B | 2/2007 |
| TW | 1318461 | B | 12/2009 |
| WO | DM/057383 | B | 9/2001 |
| WO | 02/12788 | A1 | 2/2002 |
| WO | 02/15281 | A2 | 2/2002 |
| WO | 2004/071143 | A1 | 8/2004 |
| WO | 2005/093862 | A2 | 10/2005 |
| WO | 2006/066531 | A1 | 6/2006 |
| WO | 2006066531 | A1 | 6/2006 |
| WO | 2007/128070 | A1 | 11/2007 |
| WO | 2008/108832 | A1 | 9/2008 |
| WO | 2009/044330 | A1 | 4/2009 |
| WO | 2009108799 | A1 | 9/2009 |
| WO | 2009/120555 | A1 | 10/2009 |
| WO | 2010/016002 | A1 | 2/2010 |
| WO | 2010059647 | A1 | 5/2010 |
| WO | 2011019945 | A1 | 2/2011 |
| WO | 2013059298 | A1 | 4/2013 |
| WO | 2013192014 | A2 | 12/2013 |
| WO | 2013192014 | A3 | 12/2013 |
| WO | 2014099681 | A2 | 6/2014 |
| WO | 2014099681 | A3 | 12/2014 |

OTHER PUBLICATIONS

Petluri et al., U.S. Appl. No. 14/636,204, filed Mar. 3, 2015, entitled "Lighting Systems Including Lens Modules For Selectable Light Distribution" 119pp.

Pickard et al., U.S. Appl. No. 14/617,849, filed Feb. 9, 2015, entitled "Lighting Systems Generating Controlled and Wavelength-Converted Light Emissions," 83pp.

Rodgers et al., U.S. Appl. No. 14/702,800, filed May 4, 2015, entitled "Lighting Systems Including Asymmetric Lens Modules for Selectable Light Distribution," 116pp.

Pickard et al., U.S. Appl. No. 14/636,205, filed Mar. 3, 2015, entitled "Low-Profile Lighting System Having Pivotable Lighting Enclosure," 56pp.

Fletcher et al., U.S. Appl. No. 14/702,765, filed May 4, 2015, entitled "Lighting System Having a Sealing System," 92pp.

Fletcher et al., U.S. Appl. No. 29/519,149, filed Mar. 3, 2015, entitled "LED Luminaire," 8pp.

Fletcher et al., U.S. Appl. No. 29/519,153, filed Mar. 3, 2015, entitled "LED Luminaire," 8pp.

Rodgers et al., U.S. Appl. No. 62/202,936, filed Aug. 10, 2015, entitled "Optical Devices and Systems Having a Converging Lens With Grooves," 133pp.

PCT/US2007/023110, Journee Lighting Inc., International Preliminary Report on Patentability Dated Sep. 8, 2009.

PCT/US2009/035321, Journee Lighting Inc., International Preliminary Report on Patentability Dated Aug. 31, 2010.

PCT/US2009/064858, Journee Lighting Inc., International Preliminary Report on Patentability Dated May 24, 2011.

PCT/US2010/045361, Journee Lighting Inc., International Preliminary Report on Patentability Dated Feb. 14, 2012.

PCT/US2012/060588, Ecosense Lighting Inc., Filed on Oct. 17, 2012.

PCT/US2012/060588, Ecosense Lighting Inc., International Search Report and Opinion Dated Mar. 29, 2013.

PCT/US2012/060588, Ecosense Lighting Inc., International Preliminary Report on Patentability Dated Apr. 22, 2014.

PCT/US2013/045708, Journee Lighting Inc., International Search Report and Opinion Dated Nov. 27, 2013.

PCT/US2013/045708, Journee Lighting Inc., International Preliminary Report on Patentability Dated May 12, 2015.

PCT/US2013/075172, Ecosense Lighting Inc., Filed on Dec. 13, 2013.

PCT/US2013/075172, Ecosense Lighting Inc., International Search Report and Opinion Dated Sep. 26, 2014.

PCT/US2013/075172, Ecosense Lighting Inc., International Preliminary Report on Patentability Dated Jun. 23, 2015.

PCT/US2016/020521, Ecosense Lighting Inc., Filed on Mar. 2, 2016.

PCT/US2016/020521, Ecosense Lighting Inc., International Search Report and Opinion Dated May 3, 2016.

PCT/US2016/016972, Ecosense Lighting Inc., Filed on Feb. 8, 2016.

PCT/US2016/016972, Ecosense Lighting Inc., International Search Report and Opinion Dated Apr. 11, 2016.

PCT/US2016/030613, Ecosense Lighting Inc., Filed on May 3, 2016.

PCT/US2016/020523, Ecosense Lighting Inc., Filed on Mar. 2, 2016.

PCT/US2016/020523, Ecosense Lighting Inc., International Search Report and Opinion Dated May 6, 2016.

PCT/US2016/015470, Ecosense Lighting Inc., Filed on Jan. 28, 2016, Entitled "Zoned Optical Cup".

Petluri et al., U.S. Appl. No. 62/288,368, filed Jan. 28, 2016, entitled "Multizone Mixing Cup".

PCT/US2016/015473, Ecosense Lighting Inc., Filed on Jan. 28, 2016, Entitled "Illuminating With a Multizone Mixing Cup".

PCT/US2016/015473, Ecosense Lighting Inc., International Search Report and Opinion Mailed On Apr. 22, 2016.

Petluri et al., U.S. Appl. No. 15/170,806, filed Jun. 1, 2016, entitled "Illuminating With a Multizone Mixing Cup.".

PCT/US2016/015318, Ecosense Lighting Inc., Filed on Jan. 28, 2016, Entitled "Compositions for LED Light Conversions.".

PCT/US2016/015318, Ecosense Lighting Inc., International Search Report and Opinion, Mailed on Apr. 11, 2016.

PCT/US2016/015348, Ecosense Lighting Inc., Filed on Jan. 28, 2016, Entitled "Systems for Providing Tunable White Light With High Color Rendering.".

PCT/US2016/015348, Ecosense Lighting Inc., International Search Report and Opinion Mailed on Apr. 11, 2016.

PCT/US2016/015368, Ecosense Lighting Inc., Filed on Jan. 28, 2016, Entitled "Systems for Providing Tunable White Light With High Color Rendering.".

PCT/US2016/015368, Ecosense Lighting Inc., International Search Report and Opinion Mailed On Apr. 19, 2016.

Petluri et al., U.S. Appl. No. 15/173,538, filed Jun. 3, 2016, entitled "System for Providing Tunable White Light With High Color Rendering.".

Petluri et al., U.S. Appl. No. 15/173,554, filed Jun. 3, 2016, entitled "System for Providing Tunable White Light With High Color Rendering.".

(56) **References Cited**

OTHER PUBLICATIONS

PCT/US2016/015385, Ecosense Lighting Inc., Filed on Jan. 28, 2016, Entitled "Methods for Generating Tunable White Light With High Color Rendering.".
PCT/US2016/015402, Ecosense Lighting Inc., Filed on Jan. 28, 2016, Entitled "Methods for Generating Tunable White Light With High Color Rendering.".
PCT/US2016/015435, Ecosense Lighting Inc., Filed on Jan. 28, 2016, Entitled "Methods for Generating Melatonin-Response-Tuned White Light With High Color Rendering.".
PCT/US2016/015437, Ecosense Lighting Inc., Filed on Jan. 28, 2016, Entitled "Methods for Generating Melatonin-Response-Tuned White Light With High Color Rendering.".
PCT/US2016/015441, Ecosense Lighting Inc., Filed on Jan. 28, 2016, Entitled "Methods for Generating Melatonin-Response-Tuned White Light With High Color Rendering.".
Petluri et al., U.S. Appl. No. 15/176,083, filed Jun. 7, 2016, entitled "Compositions for LED Light Conversions.".
Acuity Brands, "Acuity Brands Introduces Luminaire for Tunable White Technology," downloaded from http://news.acuitybrands.com/US/acuity-brands-introduces-luminaires-with-tunable-white-technology/s/54ae242f-1222-4b8b-be0d-36637bde8cd2 on May 28, 2014, 2pp.
Acuity Brands Lighting Inc. Product Catalog, downloaded from www.acuitybrands.com, dated Apr. 2013, 90pp.
Acuity Brands, "A Guided Tour of Area Light Sources—Past, Present and Future," downloaded from www.acuitybrands.com, version dated Jun. 20, 2013, 72pp.
Alanod GmbH, "WhiteOptics," downloaded from www.alanod.com, dated Apr. 2014, 12pp.
Altman Lighting, "Spectra Cube," downloaded from http://altmanstagelighting.com/altman-led-green-lighting/led-spectra-cube/Altman-Spectra-Cube-Data-Sheet-v3.pdf on May 28, 2014, 1p.
Bega Lighting, "In-ground luminaire RGBW IP 67 Product data sheet," downloaded from http://www.bega.com/download/datenblaetter/en/7926.pdf on May 28, 2014, 1p.
CORM 2011 Conference, Gaithersburg, MD, "Calculation of CCT and Duv and Practical Conversion Formulae," dated May 3-5, 2011, National Institute of Standards and Technology, 28pp.
Lumitronix, "Carclo lens for side emitting 360 degrees," downloaded from http://www.leds.de/en/High-Power-LEDs/Lenses-and-optics/Carclo-lens-for-side-emitting-360.html on May 28, 2014, 2pp.
"Introduction to Catmull-Rom Splines," downloaded on Aug. 7, 2015 from www.mvps.org/directx/articles/catmull/, 2pp.
Wikipedia, "CIE 1931 color space," version dated Apr. 23, 2014, downloaded from www.wikipedia.org, 12pp.
Osram Sylvania, "ColorCalculator User Guide", downloaded on Jun. 3, 2014 from www.sylvania.com, 44pp.
Osram Sylvania, "ColorCalculator User Guide", downloaded on Oct. 19, 2015 from www.sylvania.com, 50pp.
Kenneth Kelly, "Color Designations for Lights," U.S. Department of Commerce, National Bureau of Standards, Research Paper RP1565, Journal of Research of the National Bureau of Standards, vol. 31, Nov. 1943, pp. 271-278.
Philips Color Kinetics, "LED Cove Lighting," downloaded on May 28, 2014 from http://www.colorkinetics.com/ls/guides-brochures/pck-led-cove-lighting.pdf, 32pp.
Philips Color Kinetics, "IntelliWhite LED Lighting Systems," downloaded on May 28, 2014 from http://www.colorkinetics.com/ls/intelliwhite/, 2pp.
Philips Color Kinetics, "Color-Changing LED Lighting Systems," downloaded on May 27, 2014 from http://www.colorkinetics.com/ls/rgb/, 2pp.
Wikipedia, "Color temperature," version dated May 21, 2014, downloaded on Jun. 3, 2014 from www.wikipedia.org, 17pp.
Cree, "LED Color Mixing: Basics and Background," downloaded on Sep. 24, 2014 from www.cree.com, 24pp.
Cree, "Cree(r) LMH2 LED Modules," Product Family Data Sheet, downloaded on May 27, 2014 from http://www.cree.com/~/media/Files/Cree/LED%20Components%20and%20Modules/Modules/Data%20Sheets/LEDModules_LMH2.pdf, 18pp.
"Dialight ES Series RGB LED Luminaire," downloaded on May 28, 2014 from http://www.dialight.com/Assets/Brochures_And_Catalogs/Illumination/MDEXESTEMORGB_A.pdf, 2pp.
Naomi Miller, "Color Spaces and Planckian Loci: Understanding all those Crazy Color Metrics," U.S Department of Energy, Pacific Northwest National Laboratory, Portland, Oregon, downloaded on May 30, 2014, 49pp.
Kahen, Keith, "High-Efficiency Colloidal Quantum Dot Phosphors," University at Buffalo, SUNY, DOE SSL R&D Workshop, Long Beach, California, Jan. 29-31, 2013, 12pp.
Bush, Steve, "Chip gives dim-to-warm LED lighting without MCU," dated Apr. 1, 2014, downloaded from http://www.electronicsweekly.com/news/components/led-lighting/chip-gives-dim-warm-led-lighting-without-mcu-2014-04/, 6pp.
"Ecosense to reveal new TROV LED Linear Platform at 2015 Lighffair International in New York City," May 4, 2015, blog downloaded from www.ecosense.com, 3pp.
"Ecosense to reveal new TROV LED Linear Platform at 2015 Lighffair International in New York City," May 4, 2015, press release downloaded from www.ecosense.com, 2pp.
Freyssinier, Jean P. et al., "Class A Color Designation for Light Sources Used in General Illumination," J. Light & Vis. Env., vol. 37, Nos. 2-3, Nov. 7, 2013, pp. 10-14.
Freyssinier, Jean P. et al., "White Lighting: A Provisional Model for Predicting Perceived Tint in 'White' Illumination," Color Res. & App'n, vol. 39, No. 5, Oct. 2014, pp. 466-479.
Freyssinier, Jean P. et al., "The Class A Color Designation for Light Sources," Rensselaer Polytechnic Institute, 2013 DOE Solid-State Lighting R&D Workshop, Hilton Long Beach, California, Jan. 29-31, 2013, 26pp.
Freyssinier, Jean P. et al., "Class A Lighting," Rensselaer Polytechnic Institute, Strategies in Light 2012, 27 pp.
Freyssinier, Jean P. et al., "White Lighting," Color Res. & App'n, (vol. unknown), Sep. 3, 2011, downloaded from http://www.lrc.rpi.edu/programs/solidstate/assist/pdf/SIL-2012_FreyssinierRea_WhiteLighting.pdf, 12pp.
Rea et al., "White lighting for residential applications," Lighting Res. Technol., Mar. 27, 2012, downloaded from www.sagepublications.com at http://lrt.sagepub.com/content/early/2012/03/27/1477153512442936, 15pp.
Oh, Jeong et al., "Full down-conversion of amber-emitting phosphor-converted light-emitting diodes with powder phosphors and a long-wave pass filter," Optics Express, vol. 18, No. 11, May 24, 2010, pp. 11063-11072.
"Microcellular Reflective Sheet MCPET," downloaded on Feb. 3, 2015 from www.furukawa.co.jp/foam/, 6pp.
"Aculux—Black Body Dimming and Tunable White Responsive Technologies," downloaded on May 28, 2014 from http://www.junolightinggroup.com/literature/LIT-AX-LED-BBD-TW.pdf, 28pp.
"Khatod—Symmetric & Asymmetric STRIP LENS," downloaded on May 5, 2015 from www.khatod.com, 3pp.
"KKDC Catalog 2.0," downloaded on May 28, 2014 from http://www.kkdc.co.uk/media/kkdc-catalogue.pdf, 134pp.
"KKDC UK—Linear LED Lighting," downloaded from www.kkdc.co.uk/application/interior.php on Oct. 22, 2015, 5pp.
Overton, Gail, "LEDS: White LED comprises blue LED and inexpensive dye," LaserFocusWorld, Feb. 12, 2013, downloaded from http://www.laserfocusworld.com/articles/print/volume-49/issue-02/world-news/leds-white-led-comprises-blue-led-and-inexpensive-dye.html, 5pp.
"LEDIL TIR Lens Guide," downloaded from www.ledil.com on Jan. 22, 2015, 8pp.
"LED Linear—linear lighting solutions, product overview," downloaded on May 28, 2014 from http://www.led-linear.com/en/product-overview/system-catalogue/, 3pp.
"LEDnovation—BR30 Warm Dimming," downloaded on May 28, 2014 from www.lednovation.com/products/BR30_LED.asp, 2pp.

(56) **References Cited**

OTHER PUBLICATIONS

Wikipedia, "Lenticular lens," downloaded on Feb. 18, 2015 from www.wikipedia.org, 5pp.
"Lenticular Sheets," downloaded on Feb. 24, 2015 from www.lenticular-sheets.Ipceurope.eu/, 2pp.
Unzner, Norbert, "Light Analysis in lighting technology," B&S Electronische Geralte GmbH, 2001, 14pp.
"Lightolier—Solid-State Lighting," downloaded on May 28, 2014 from http://www.lightolier.com/prospots/leds_solidstate.jsp, 1p.
Wikipedia, "Line of purples," downloaded on Oct. 20, 2015 from www.wikipedia.org, 2pp.
"Lumenbeam Catalog," downloaded on May 27, 2014 from 11_160_en_lumenpulse_lumenbeam_rgb_lbl_rgb_brochure.zip, 63pp.
"Lumenetix—Araya Technology," downloaded on May 28, 2014 from www.lumenetix.com/araya-technology, 3pp.
"Lumenpulse—Lumenbeam Large Color Changing,", downloaded on May 27, 2014 from www.lumenpulse.com/en/product/11/lumenbeam-large-color-changing, 4pp.
"Lumenpulse—Lumencove Family," downloaded on May 28, 2014 from http://www.lumenpulse.com/en/products#!3/0/0/0/0/0, 2pp.
Knight, Colette, "XICATO—Investigations on the use of LED modules for optimized color appearance in retail applications," downloaded on May 28, 2014 from http://www.xicato.com/sites/default/files/documents/Summary_Investigations_on_the_use_of_LED_modules_for_optimized_color_appearance_in_retail_applications.pdf, 5pp.
"Zumtobel—IYON Tunable White,", downloaded on Oct. 19, 2015 from http://www.zumtobel.com/tunablewhite/en/index.html#topic_04, 1p.
"Zumtobel—IYON LED Spotlight Catalog," downloaded on Oct. 19, 2015 from http://www.zumtobel.com/PDB/Ressource/teaser/en/com/Iyon.pdf, 40pp.
"Lumenpulse—Lumenbeam Large Pendant Dynamic White," downloaded on May 28, 2014 from http://www.lumenpulse.com/en/product/72/lumenbeam-large-pendant-dynamic-white, 1p.
"Lumileds Application Brief AB08—Optical Testing for SuperFlux, SnapLED and Luxeon Emitters," downloaded on Sep. 24, 2014 from www.lumileds.com, 15pp.
"CandlePowerForums—SOLD: Luxeon III side-emitter white LED," downloaded on May 28, 2014 from http://www.candlepowerforums.com/vb/showthread.php?140276-SOLD-Luxeon-III-side-emitter-white-LED, 4pp.
"Lumileds LUXEON Z,", downloaded on May 2, 2015 from www.lumileds.com, 2pp.
"Alanod MIRO Catalog," downloaded on Jan. 30, 2015 from www.alanod.com, 8pp.
"Nanoco Group—Cadmium Free Quantum Dots," downloaded on May 30, 2014 from www.nanocotechnologies.com/what-we-do/products/cadmium-free-quantum-dots, 3pp.
"Nanosys—Quantum Dots," downloaded on May 30, 2014 from www.nanosysinc.com/what-we-do/quantum-dots/, 3pp.
"Ocean NanoTech—Products," downloaded on May 30, 2014 from www.oceannanotech.com/Products.php, 1p.
"NNCrystal—blog post—May 17, 2010," downloaded from http://led-lights-led.blogspot.com/2010/05/nncrystal-us-corporation-to-supply.html, 4pp.
"A Warmer, Cozier White Light: NXP Transforms LED Color Quality," dated Jan. 9, 2013, downloaded from http://www.nxp.com/news/press-releases/2013/01/a-warmer-cozier-white-light-nxp-transforms-led-color-quality.html, 2pp.
"Lighting Global Technical Notes, Optical Control Techniques for Off-grid Lighting Products," Jul. 2011 and May 2012, 6pp.
"Pacific Light Technologies—Quantum Dots in Solid State Lighting," downloaded on Oct. 23, 2015 from www.pacificlighttech.com/quantum-dots-in-ssl/, 2pp.
"Philips Lighting—Dim Tone,", downloaded on May 27, 2014 from www.usa.lighting.philips.com/lightcommunity/trends/led/dimtone/, 1p.
"Philips—Dimmable to warm light for the perfect ambience," downloaded on May 27, 2014 from www.usa.lighting.philips.com, 2pp.
"Philips—Turn up Ambience and Tone Down Energy Use with Philips BR30 DimTone," downloaded on May 27, 2014 from www.usa.lighting.philips.com, 11pp.
Wikipedia, "Planckian locus," downloaded on May 30, 2014 from www.wikipedia.org, 5pp.
Wikipedia, "Quantum dot,", downloaded on May 30, 2014 from http://en.wikipedia.org/wiki/Quantum_dot, 15pp.
"Phosphortech—Flexible Phosphor Sheet—RadiantFlex Datasheet," Aug. 2014, downloaded from www.phosphortech.com, 10pp.
Wikipedia, "Reflectivity,", downloaded on Jan. 22, 2015 from www.wikipedia.org, 3pp.
"Refraction by lenses," downloaded on Feb. 17, 2015 from www.physicsclassroom.com, 5pp.
"RTLED—White Paper: Binning and LED," downloaded on Oct. 13, 2014 from www.rtled.com, 3pp.
Near, Al, "Seeing Beyond CRI," LED Testing & Application, Nov. 2011, downloaded from www.ies.org/lda/hottopics/led/4.pdf, 2pp.
"Selux—Olivio luminaire," press release dated Mar. 26, 2014, downloaded from http://www.selux.com/be/en/news/press/press-detail/article/evolutionary-progress-the-olivio-family-of-system-luminaires-now-with-premium-quality-white-and.html, 3pp.
"LEDIL—Strada-F Series," downloaded on May 5, 2015 from www.ledil.com, 7pp.
"Sylvania—Ultra SE(tm) LED Lamp Family," downloaded on May 27, 2014 from www.sylvania.com, 3pp.
"Sylvania Ultra SE(tm) LED Light Bulbs with Color Dimming Sunset Effects," downloaded on May 27, 2014 from https://www.youtube.com/watch?v=oZEc-VfJ8EU, 2pp.
Wikipedia, "Transmittance," downloaded on Jan. 22, 2015 from www.wikipedia.org, 4pp.
"United Lumen—A Volumetric Displaced Phosphor Light Engine which elegantly and efficiently distributes light in a pattern similar to an incandescent bulb," downloaded on Jul. 9, 2014 from www.unitedlumen.com, 1p.
"United Lumen—Solid State Volumetric Technology," downloaded on Jul. 9, 2014 from www.unitedlumen.com, 1p.
"United Lumen—High Brightness V-LED Technology," downloaded on May 15, 2014 from www.unitedlumen.com, 1p.
"USAI Lighting Catalog," downloaded on May 27, 2014 from http://www.usaillumination.com/pdf/Warm_Glow_Dimming.pdf, 50pp.
"Winona—Parata 700 Series Cove," downloaded on May 28, 2014 from www.acuitybrands.com, 2pp.
"Winona Parata Catalog," downloaded on May 28, 2014 from www.acuitybrands.com, 24pp.
Fletcher et al., U.S. Appl. No. 14/816,827, filed Aug. 3, 2015, entitled "Lighting System Having a Mounting Device," 126pp.
Fletcher et al., U.S. Appl. No. 29/532,383, filed Jul. 6, 2015, entitled "LED Luminaire Having a Mounting System," 10pp.
Fletcher et al., U.S. Appl. No. 29/533,635, filed Jul. 20, 2015, entitled "LED Luminaire Having a Mounting System," 10pp.
Fletcher et al., U.S. Appl. No. 29/533,666, filed Jul. 20, 2015, entitled "LED Luminaire Having a Mounting System," 10pp.
Fletcher et al., U.S. Appl. No. 15/268,781, filed Sep. 19, 2016, entitled "Lighting System Having a Mounting Device," 93pp.
Fletcher et al., U.S. Appl. No. 29/578,082, filed Sep. 19, 2016, entitled "LED Luminaire Having a Mounting System," 10pp.
Fletcher et al., U.S. Appl. No. 29/578,086, filed Sep. 19, 2016, entitled "LED Luminaire Having a Mounting System," 10pp.
Fletcher et al., U.S. Appl. No. 29/578,094, filed Sep. 19, 2016, entitled "LED Luminaire Having a Mounting System," 10pp.
Fletcher et al., U.S. Appl. No. 29/578,095, filed Sep. 19, 2016, entitled "LED Luminaire Having a Mounting System," 10pp.

* cited by examiner

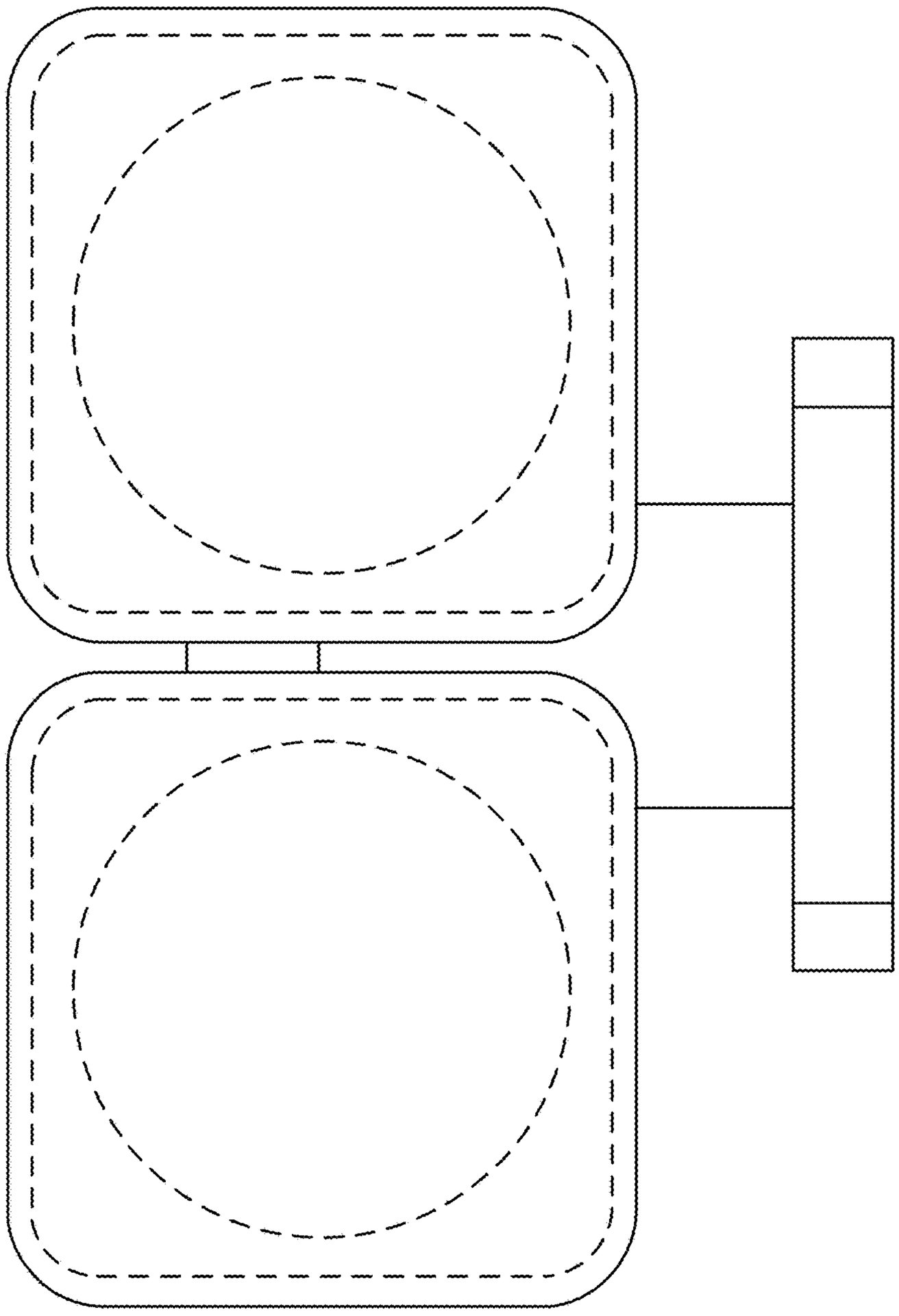


*FIG. 1*

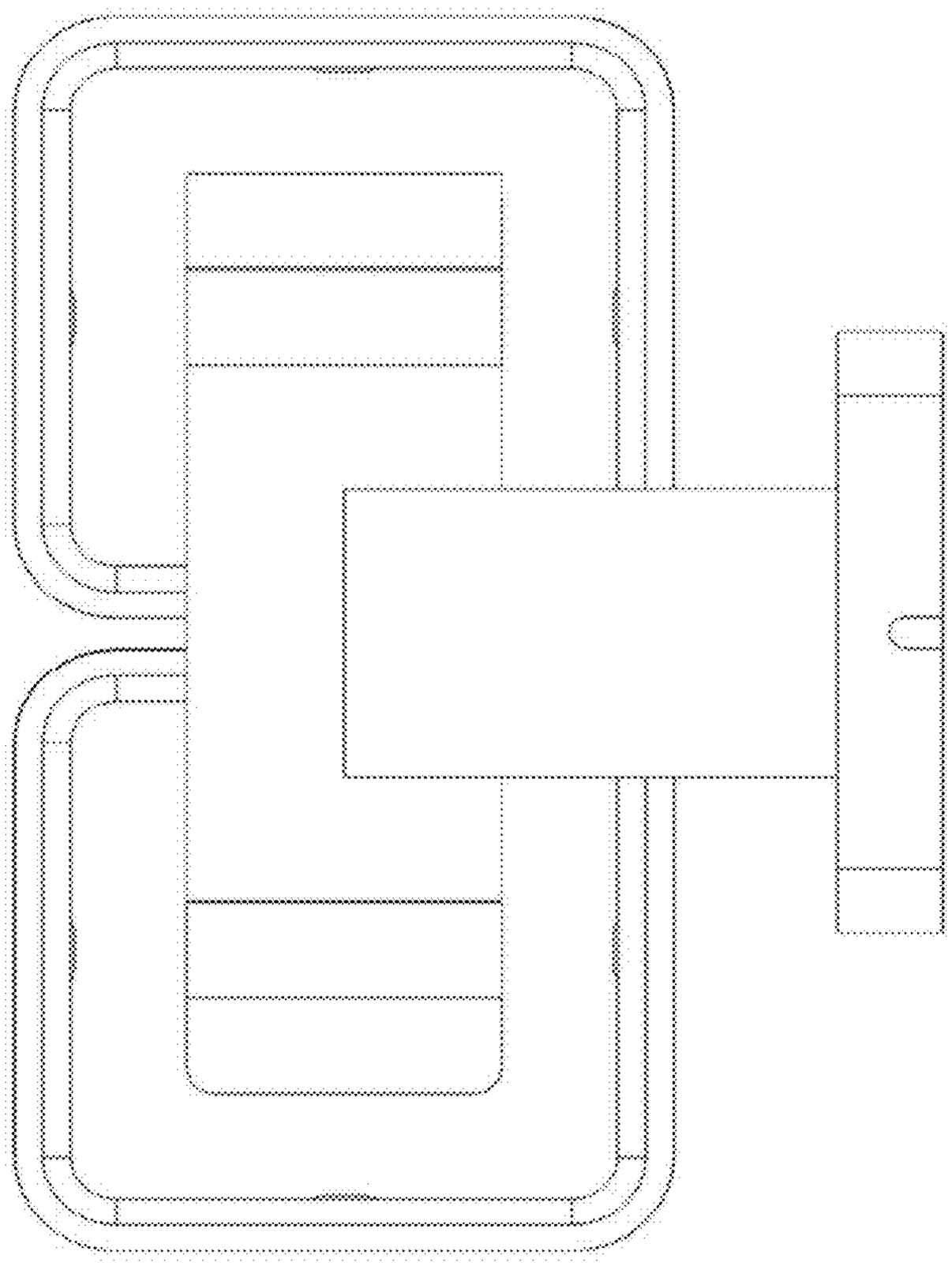


*FIG. 2*

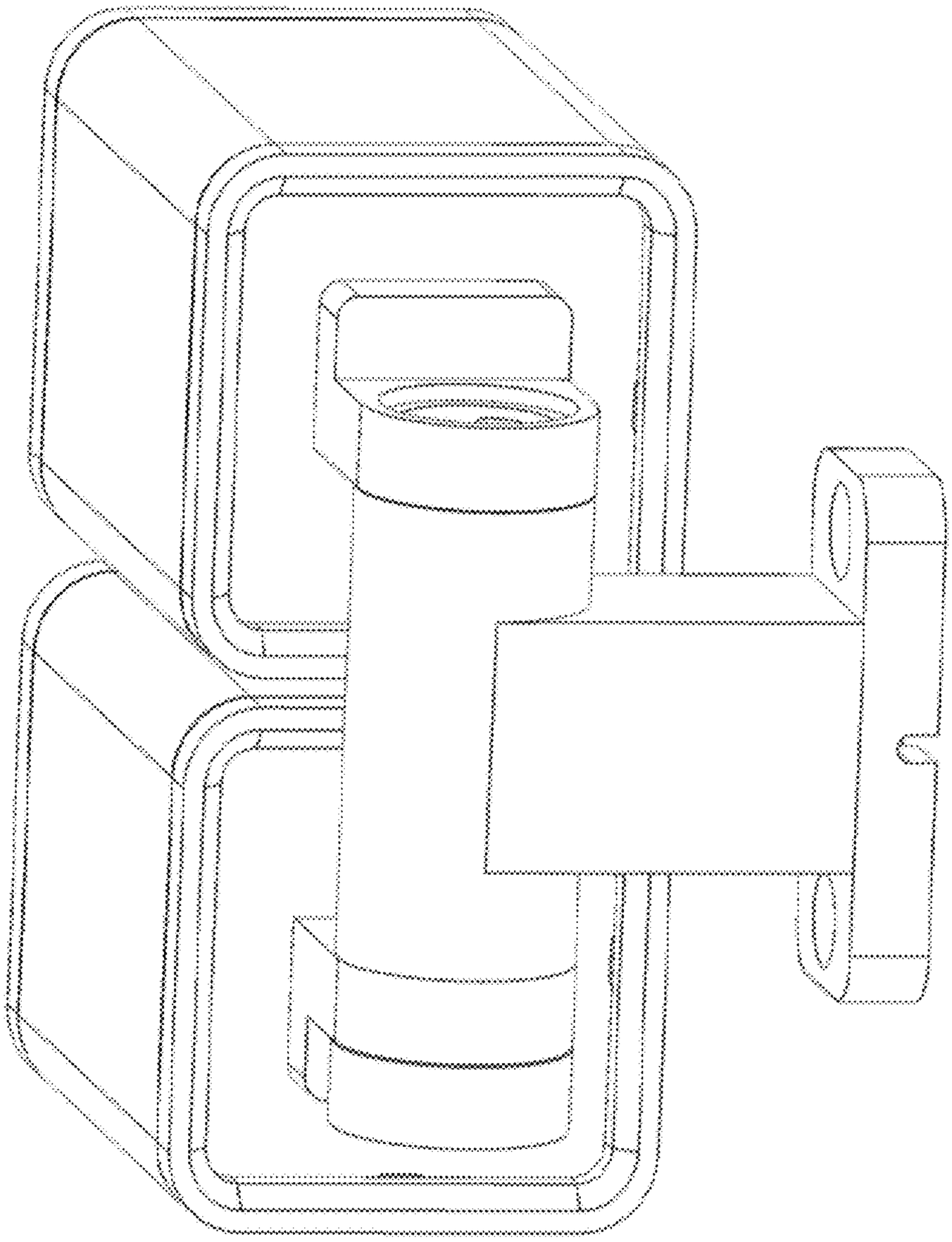


*FIG. 3*

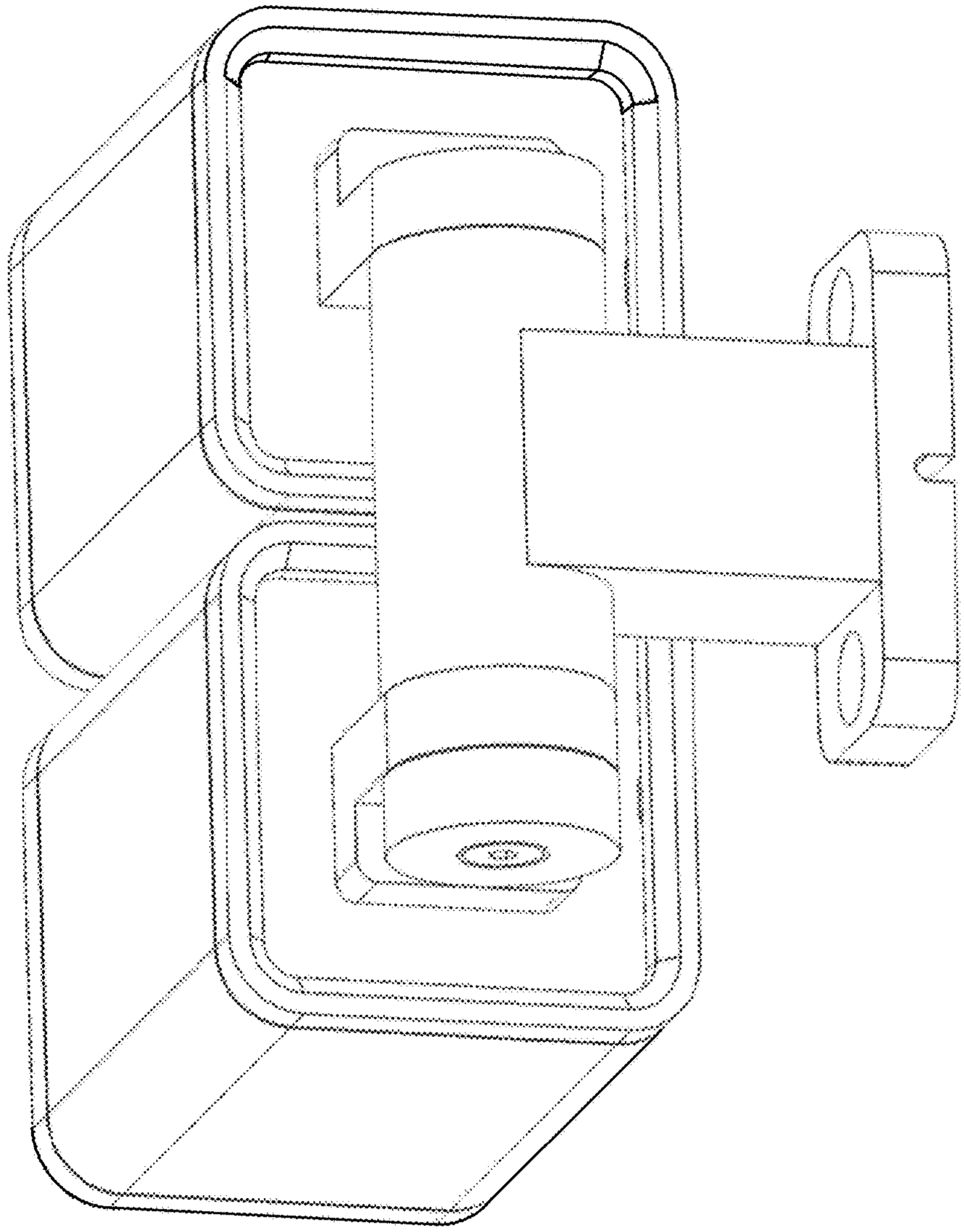


*FIG. 4*

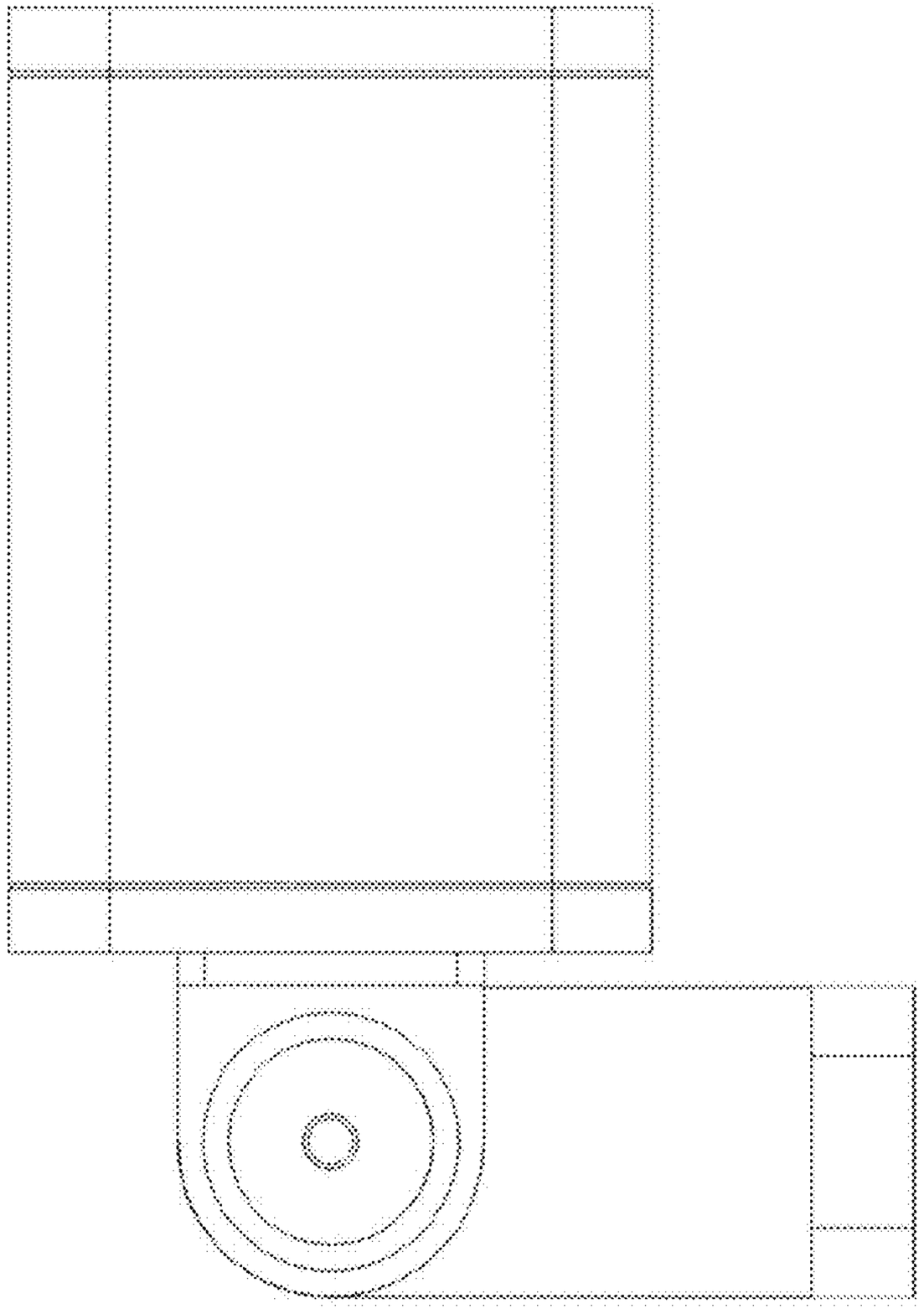


FIG. 5

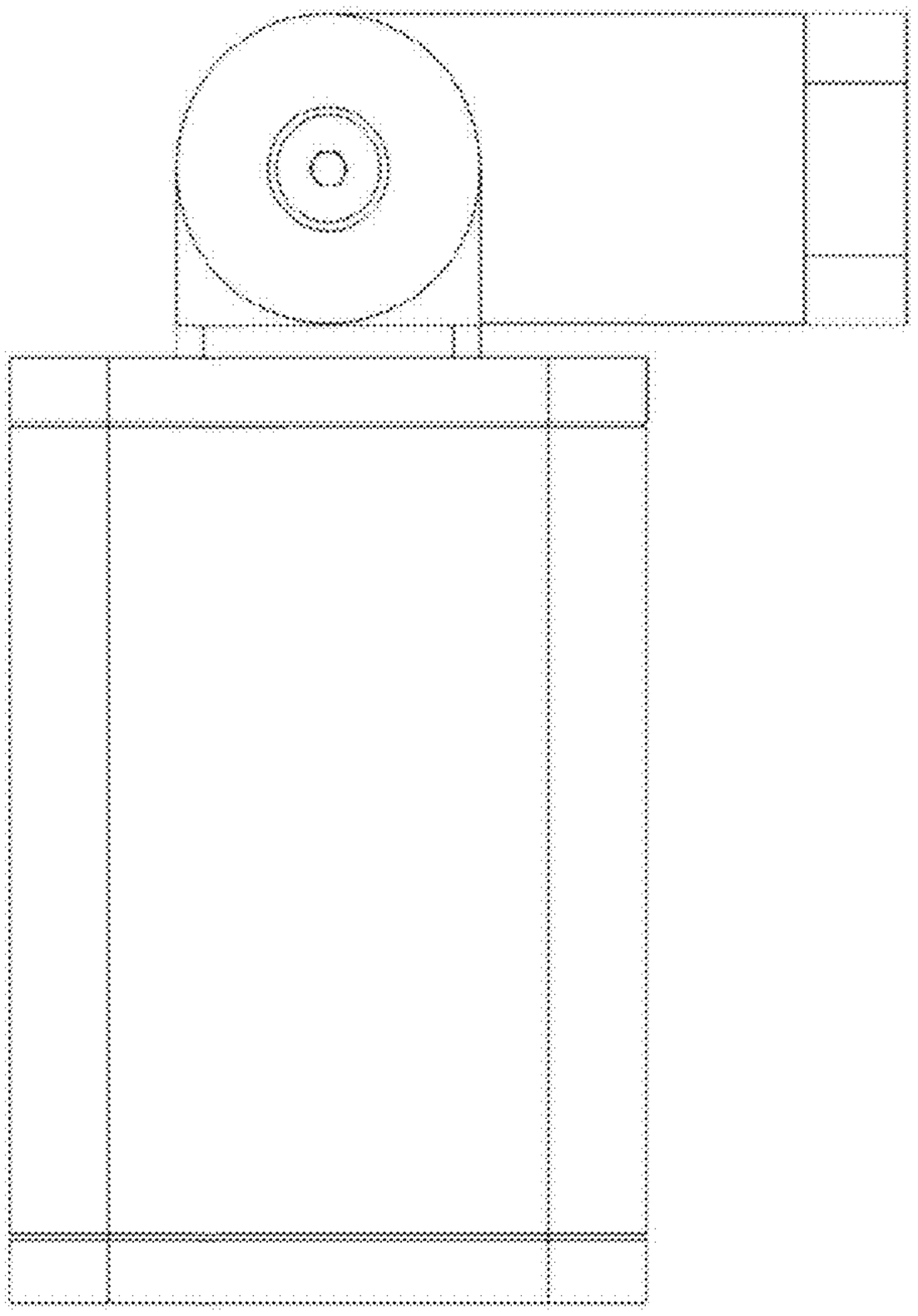


FIG. 6

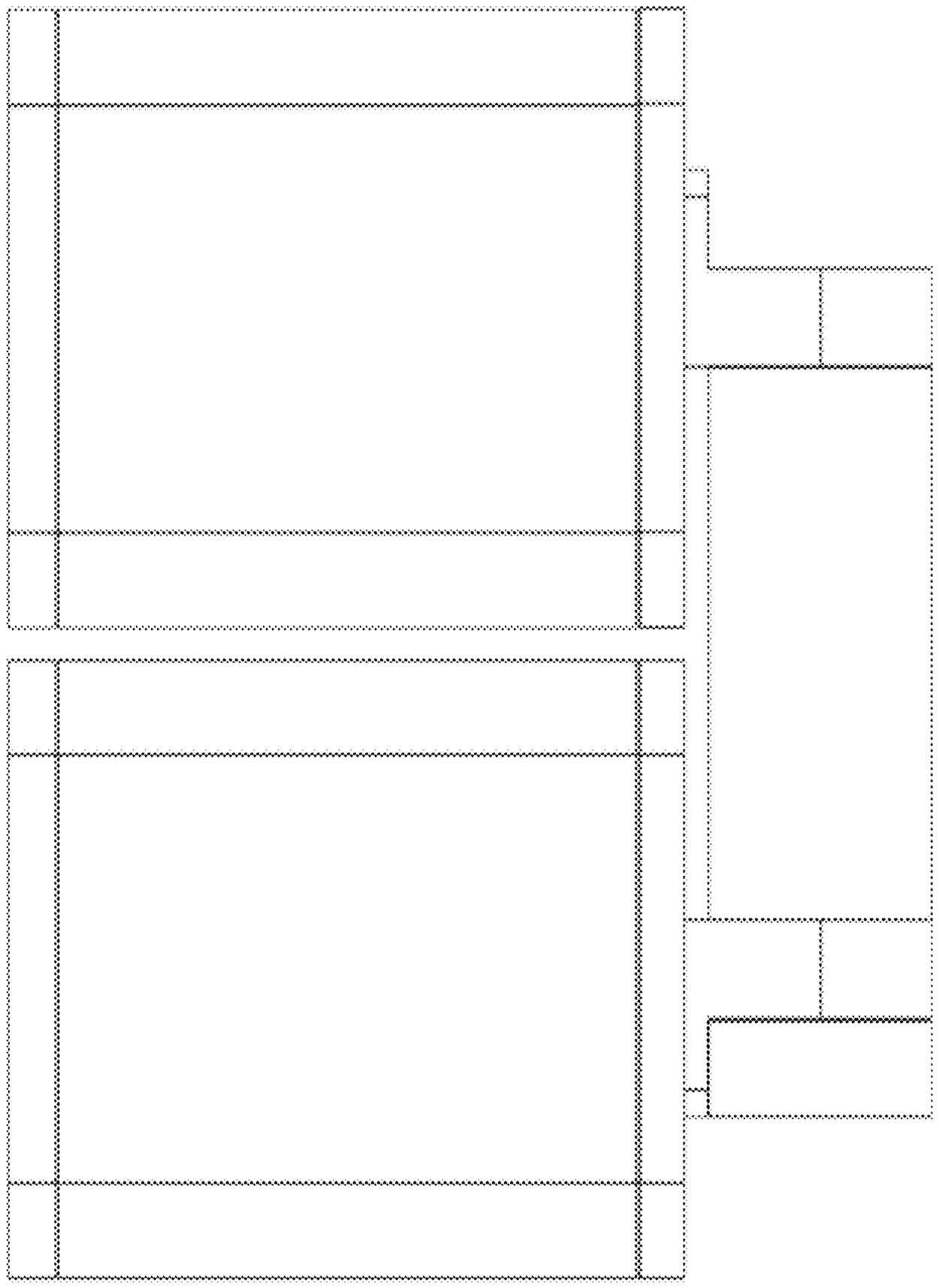


FIG. 7

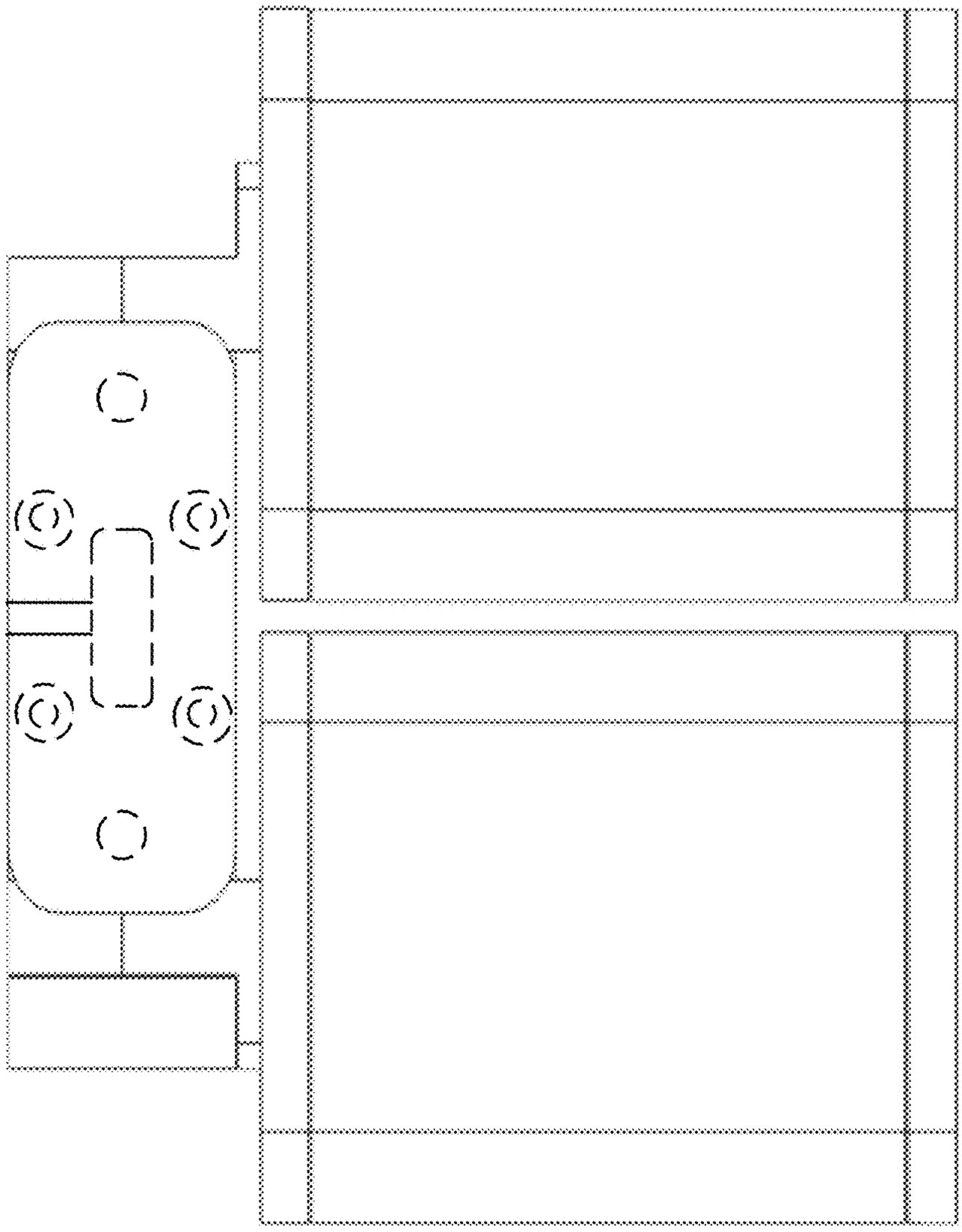


*FIG. 8*