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(12) **United States Design Patent**
Van Wingerden

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(54) **ENGAGEMENT DEVICE FOR A
HYDROPONIC GROWING SYSTEM**

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(52) **U.S. Cl.**
USPC **D99/99; D11/143**

(58) **Field of Classification Search**
USPC D99/99; 264/401; 269/117; D8/381;
D13/102

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D24,929 S *	11/1895	Nichols	D8/381
D32,585 S *	4/1900	Pessano	D8/363
1,601,259 A	9/1926	Pettigrew	
1,690,910 A	11/1928	Shapiro	
1,778,150 A	10/1930	Sture	
D82,957 S	12/1930	Rachlin	
D99,441 S *	4/1936	Levy	D8/363
D99,442 S *	4/1936	Levy	D8/381
D102,968 S	1/1937	Farber	
2,090,325 A *	8/1937	Deubel	B26F 1/46 428/599
2,164,060 A *	6/1939	Garner	B21D 53/44 29/896.412
2,205,303 A	6/1940	Munsell	
2,231,749 A *	2/1941	Damerell	B21K 3/04 29/889.61

RE21,820 E	6/1941	Munsell	
2,276,376 A *	3/1942	Deubel	B26F 1/44 420/105
2,312,582 A *	3/1943	Patrick	B32B 15/011 428/602

(Continued)

FOREIGN PATENT DOCUMENTS

DE 4020116101516-0001	*	2/2017
EM 001257786-0001	*	2/2011

(Continued)

OTHER PUBLICATIONS

Large and Small Mask Clicker Dies from ScrapWorksArmory on
Etsy Studio, website 2017, <https://www.etsystudio.com/listing/231288759/large-and-small-mask-clicker-dies>, site visited Sep. 11,
2017.*

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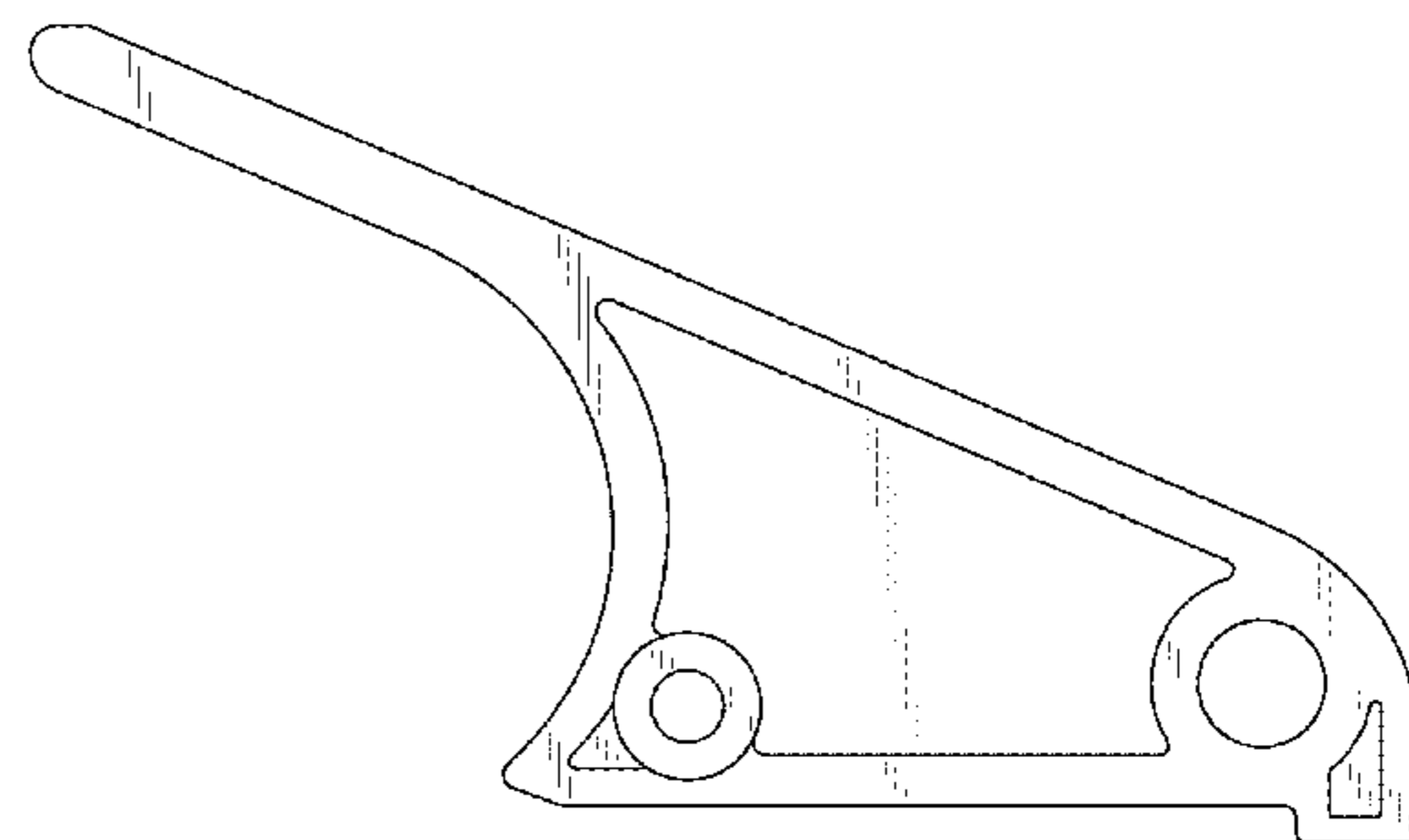
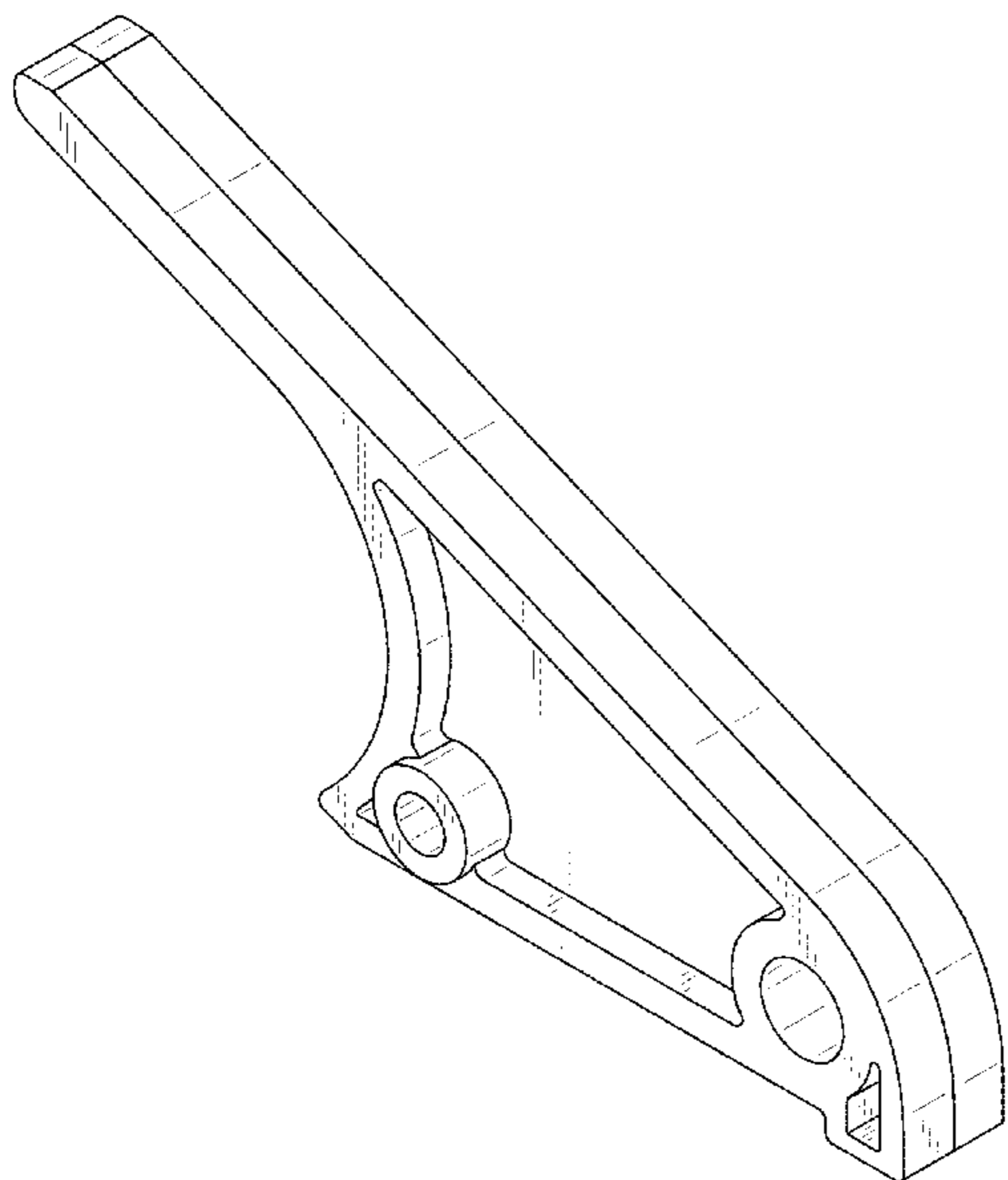
(57) **CLAIM**

The ornamental design for an engagement device for a
hydroponic growing system, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of my design for an engagement
device for a hydroponic growing system;
FIG. 2 is a front side view of the design shown in FIG. 1;
FIG. 3 is a back side view of the design shown in FIG. 1;
FIG. 4 is a left side view of the design shown in FIG. 1;
FIG. 5 is a right side view of the design shown in FIG. 1;
FIG. 6 is a top view of the design shown in FIG. 1; and,
FIG. 7 is a bottom view of the design shown in FIG. 1.

1 Claim, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

2,548,910	A *	4/1951	Rylander	B26F 1/46 76/107.8	D385,507	S	10/1997	Hulsebus
2,639,549	A	5/1953	Wubben et al.		5,761,848	A	6/1998	Manlove
2,747,331	A	5/1956	Steiner		D395,822	S	7/1998	Keal et al.
2,770,957	A	11/1956	Bronson		5,806,241	A	9/1998	Byland et al.
2,791,273	A *	5/1957	Brownell	A43D 27/00 83/652	5,826,375	A	10/1998	Black
D187,184	S	2/1960	Tangney		5,911,659	A	6/1999	Serano
3,199,250	A	8/1965	Sawyer		5,930,951	A	8/1999	Wong
3,288,340	A	11/1966	Shapiro et al.		D414,413	S	9/1999	Brown
3,300,895	A	1/1967	Dosedla et al.		6,070,360	A	6/2000	Liao et al.
D217,247	S	4/1970	Brown		6,138,411	A	10/2000	Lin
3,581,880	A	6/1971	Iversen		6,161,332	A	12/2000	Avot
3,650,521	A *	3/1972	Meli	E04G 13/025 249/219.1	6,233,870	B1	5/2001	Horibata
3,717,953	A	2/1973	Kuhn et al.		D446,157	S	8/2001	Glenn
3,766,684	A *	10/1973	Kato	A01G 31/02 47/62 R	D448,862	S	10/2001	Kieffer
3,826,349	A	7/1974	Stevenson		6,298,600	B1	10/2001	Feldman
3,850,287	A	11/1974	Petro		6,336,292	B1 *	1/2002	Boxsell
3,879,889	A	4/1975	Schmid		D454,180	S	3/2002	Wessels
3,911,632	A	10/1975	Bryfogle et al.		D468,812	S	1/2003	Doyle et al.
3,913,758	A	10/1975	Faircloth et al.		6,526,693	B2	3/2003	Cochran
3,965,616	A	6/1976	Ridgeway		6,574,917	B2	6/2003	Boxsell
3,975,860	A	8/1976	Harned et al.		D483,443	S	12/2003	Forsberg
3,973,353	A	10/1976	Dedolph		D489,209	S	5/2004	Goldberg
4,006,557	A	2/1977	Sawyer		6,814,250	B1	11/2004	Madsen
4,028,847	A	6/1977	Davis et al.		D507,204	S	7/2005	Chang
4,035,950	A	7/1977	Anselm		6,928,772	B2	8/2005	Bai et al.
4,044,886	A	8/1977	Sender		6,948,349	B2	9/2005	Gorski et al.
4,048,754	A	9/1977	Laux		6,964,128	B2	11/2005	Yasuda
4,057,931	A	11/1977	Stutelberg et al.		D512,877	S	12/2005	Vovan
4,118,891	A	10/1978	Kehl et al.		7,000,351	B2	2/2006	Baumann
4,145,841	A	3/1979	Woolpert		7,076,921	B2	7/2006	Spradlin
4,160,342	A	7/1979	Dryer		7,171,781	B1	2/2007	Southern
4,179,846	A	12/1979	Carlisle		7,171,783	B1	2/2007	Fidotti
4,198,784	A	4/1980	Sukert		D541,148	S	4/2007	Gross et al.
4,216,618	A	8/1980	Davis et al.		7,210,266	B2	5/2007	Henry et al.
4,236,353	A	12/1980	Sorenson		7,263,781	B2	9/2007	Sielemann
4,279,101	A	7/1981	Leroux		D552,218	S	10/2007	Allredge
4,312,152	A	1/1982	Drury et al.		7,340,863	B1	3/2008	Dressler
4,315,382	A	2/1982	Kay et al.		7,412,798	B2 *	8/2008	Boxsell
D263,291	S	3/1982	Paton					A01G 31/02 47/39
4,324,069	A	4/1982	Flagg		7,506,472	B2	3/2009	Leyns et al.
D266,482	S *	10/1982	Goldstein	D8/381	7,533,493	B2	5/2009	Brusatore
4,407,092	A	10/1983	Ware		7,587,930	B2	9/2009	Leclerc et al.
4,476,651	A	10/1984	Drury		7,610,717	B2	11/2009	Luken et al.
4,557,070	A	12/1985	Oyama		7,624,535	B2	12/2009	Schmidt
4,578,898	A	4/1986	Greenbaum		D612,732	S	3/2010	Takata et al.
4,604,837	A	8/1986	Beam		7,690,150	B2	4/2010	Orschulik
D286,742	S *	11/1986	Gohrig	D6/572	D614,994	S	5/2010	Dipaolo et al.
4,715,144	A	12/1987	Lee		7,730,672	B2	6/2010	Knudson et al.
4,837,973	A	6/1989	Snekkenes		7,832,144	B2	11/2010	Corradi
D311,589	S	10/1990	Benchimol et al.		D628,443	S	12/2010	McTaggart
4,978,023	A	12/1990	Behlmann et al.		7,874,102	B2	1/2011	Hilbert
4,989,365	A	2/1991	Roger		D631,683	S	2/2011	Ash et al.
5,010,686	A	4/1991	Rivest		7,972,840	B2	7/2011	Hasegawa et al.
5,048,434	A	9/1991	Forster et al.		D666,524	S	9/2012	Aoyama
5,117,581	A	6/1992	Green et al.		D673,054	S	12/2012	Kim et al.
5,125,184	A	6/1992	Anderson		D674,889	S	1/2013	Mims
5,131,185	A	7/1992	Van Wingerden		D677,156	S	3/2013	Wu
5,168,664	A	12/1992	Deutschmann, Sr.		D684,857	S	6/2013	Zhen
5,201,141	A	4/1993	Ahm		8,474,179	B2	7/2013	Jung
5,225,342	A	7/1993	Farrell		D688,891	S	9/2013	Caruso
5,282,335	A	2/1994	Holtkamp, Jr.		8,549,788	B2	10/2013	Bryan, III
D346,735	S *	5/1994	Glisch	D8/367	D694,586	S	12/2013	Miller et al.
5,323,567	A	6/1994	Nakayama et al.		D697,801	S	1/2014	Rapparini
D351,668	S	10/1994	Lim et al.		D706,122	S *	6/2014	Cayouette
5,385,589	A	1/1995	Kratky		D708,506	S *	7/2014	Wu
5,459,960	A	10/1995	Manlove		D718,847	S	12/2014	Haley et al.
5,491,998	A	2/1996	Hansen		D718,876	S	12/2014	Smedberg
D369,293	S *	4/1996	Gusdorf	D8/381	D719,084	S *	12/2014	Kruse; Darin
5,533,299	A	7/1996	Kratky		8,984,807	B2	3/2015	Hansen et al.
D376,307	S *	12/1996	Burgasser	D8/349	D726,888	S	4/2015	Johansen
5,586,656	A	12/1996	Abrums		9,038,312	B2	5/2015	Harbaugh
					D736,900	S	8/2015	Frelier
					9,220,207	B2 *	12/2015	Storey
					9,266,517	B2	2/2016	Knechtges et al.
					9,341,266	B1	5/2016	Vivatson
					9,510,524	B2 *	12/2016	Anderson
					9,534,391	B2	1/2017	Haley et al.
					9,534,842	B1	1/2017	Rivera et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

D789,499 S 6/2017 Slorach
 9,795,089 B2 10/2017 Kantola et al.
 2005/0086861 A1 4/2005 Atchley
 2005/0274073 A1 12/2005 Brooke et al.
 2006/0150497 A1* 7/2006 Kaprielian A01G 31/02
 47/62 R
 2006/0288640 A1 12/2006 Leithold
 2008/0230010 A1 9/2008 Buck
 2008/0302010 A1 12/2008 Cordon
 2009/0056215 A1 3/2009 Yang
 2009/0151269 A1 6/2009 Eiger et al.
 2009/0166369 A1 7/2009 Savicki
 2009/0241417 A1 10/2009 Smith
 2009/0278641 A1 11/2009 Hedayat
 2010/0147848 A1 6/2010 Rider, Jr. et al.
 2010/0170154 A1 6/2010 Ahn
 2011/0114800 A1 5/2011 Gramling
 2011/0138698 A1 6/2011 Neumann
 2012/0180818 A1 7/2012 Janesky
 2012/0324787 A1 12/2012 Daas et al.
 2013/0056475 A1 3/2013 Buck
 2013/0133252 A1 5/2013 Harbaugh
 2014/0041297 A1 2/2014 Miel et al.
 2014/0215919 A1 8/2014 Harbaugh
 2014/0223818 A1 8/2014 Coghlan
 2015/0040474 A1 2/2015 Lee et al.
 2015/0068121 A1* 3/2015 Probst A01G 31/06
 47/59 R
 2015/0082692 A1* 3/2015 Wardenburg F21V 7/0016
 47/19.2
 2015/0184393 A1* 7/2015 Conner E04D 13/0725
 248/48.2
 2015/0216131 A1 8/2015 Van Wingerden
 2015/0223418 A1* 8/2015 Collins A01G 31/02
 47/62 R
 2015/0237807 A1 8/2015 Valiquette
 2015/0305261 A1 10/2015 Wilson et al.

2015/0342127 A1 12/2015 Gallant
 2016/0100535 A1* 4/2016 Daugirdas A01G 31/001
 47/62 E
 2016/0136831 A1* 5/2016 Bonnet B26D 7/0006
 428/602
 2016/0183486 A1 6/2016 Kabakov
 2016/0192607 A1 7/2016 Kitagawa
 2016/0376790 A1 12/2016 Yildiz
 2017/0086399 A1 3/2017 Anderson et al.
 2017/0119971 A1* 5/2017 Marsh A61M 5/3157
 2017/0231167 A1 8/2017 Storey
 2017/0254088 A1 9/2017 Axford

FOREIGN PATENT DOCUMENTS

EP 1407987 A1 4/2004
 GB 2077082 A 12/1981
 JP H03 127919 A 5/1991
 WO WO-2014/199917 A1 12/2014

OTHER PUBLICATIONS

Old-Fashioned Cast Iron Shelf Bracket—Signature Hardware, <http://www.signaturehardware.com/old-fashioned-cast-iron-shelf-bracket.html#pr-header-back-to-top-link>, site visited Sep. 11, 2017 9:03:49 PM].*
 Steel Rule Dies & Clicker Dies, website 2006, <http://www.swansondie.com/clicker.htm>, [site visited Sep. 11, 2017 9:14:06 PM].*
 Autopot Irrigation Watering System Parts/Spare Accessories Connectors Hydro IWS | eBay, <http://www.ebay.com/itm/Autopot-Irrigation-Watering-System-Parts-Spare-Accessories-Connectors-Hydroponic-/121502209218>, [visited Sep. 15, 2017 5:52:54 PM].*
 “International Search Report and Written Opinion Issued in PCT Application No. PCT/US2017/044031”, dated Apr. 20, 2018, 14 Pages.
 English-language translation of WO 2014/199917 A1 (Year: 2014).

* cited by examiner

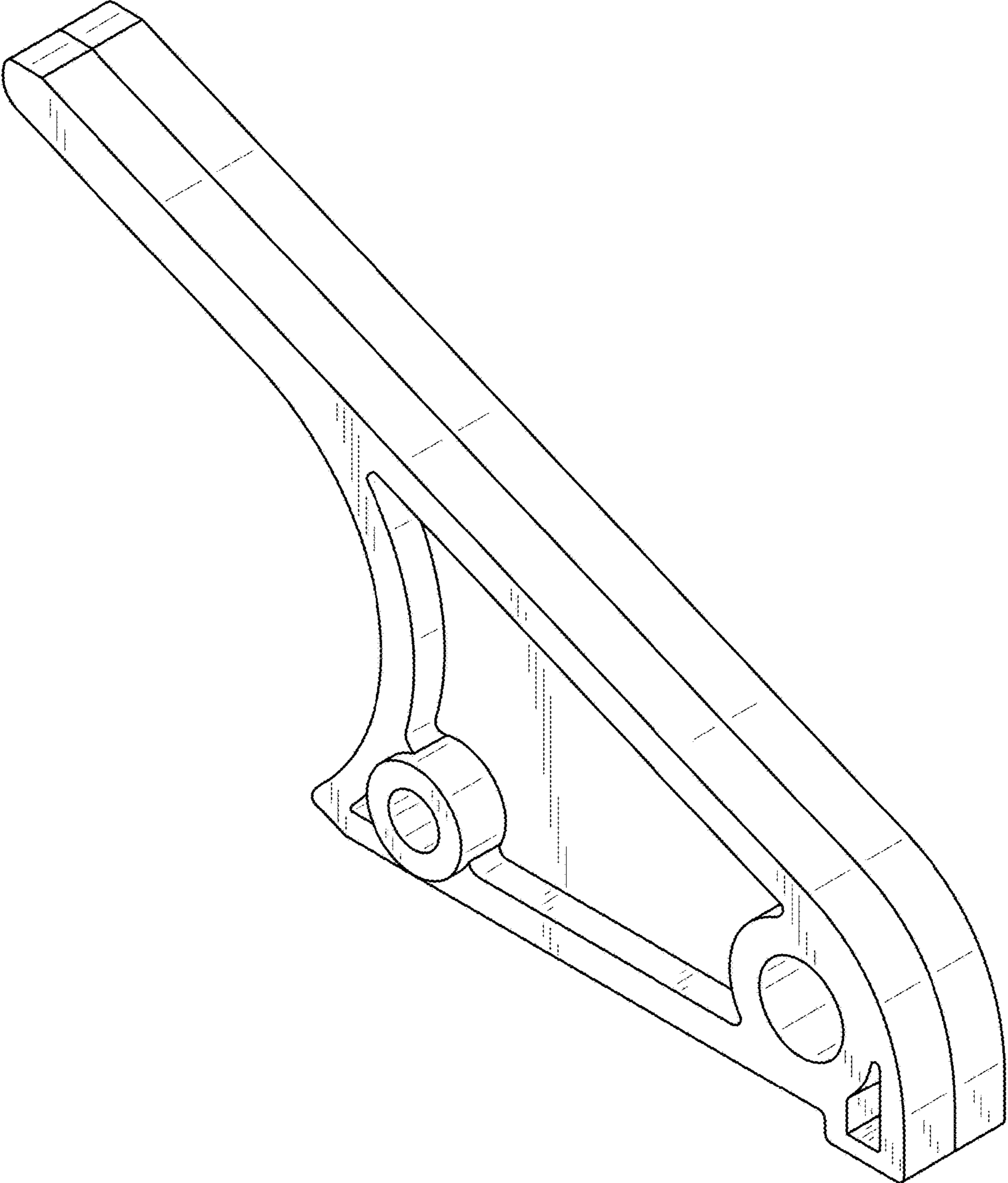


FIG. 1

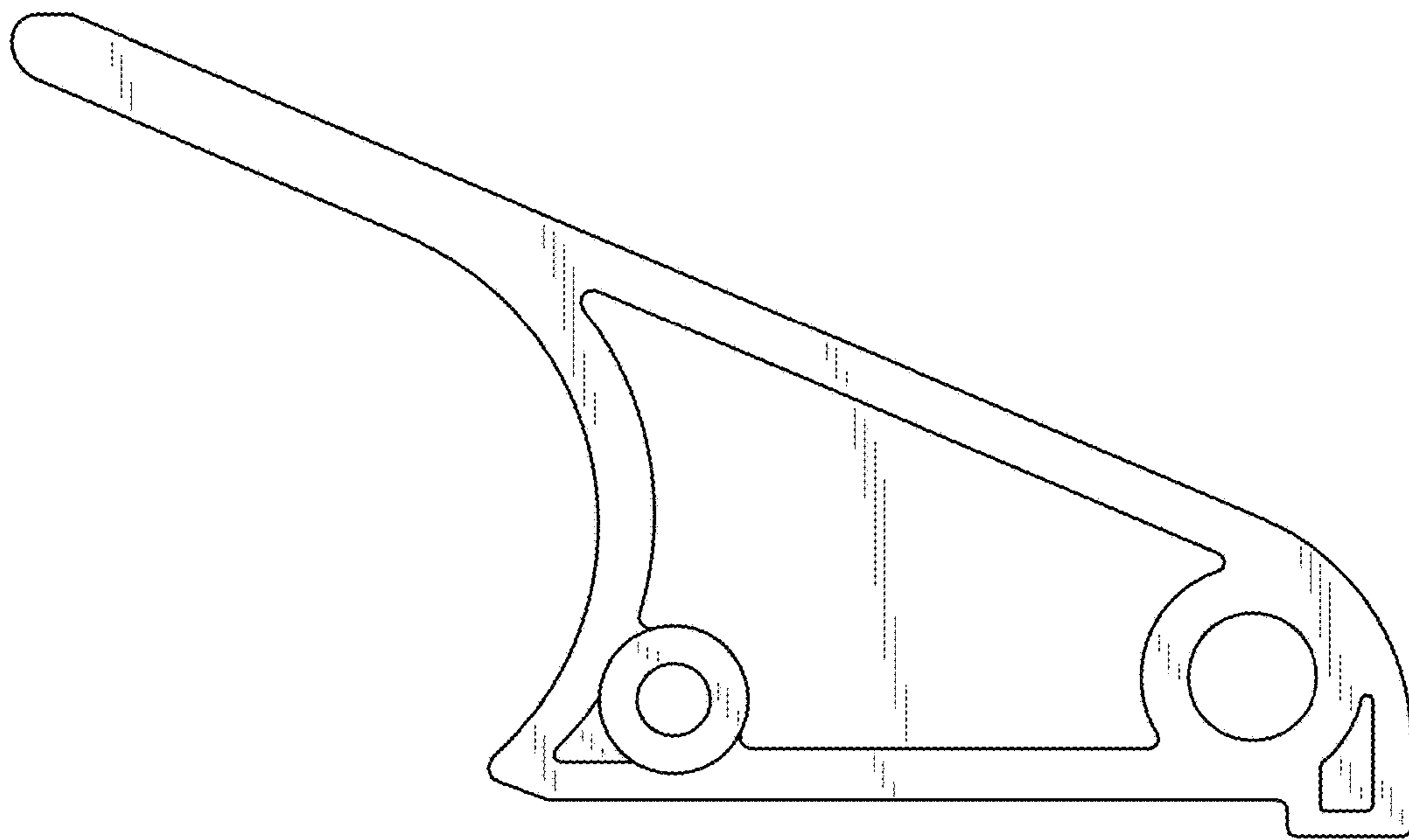


FIG. 2

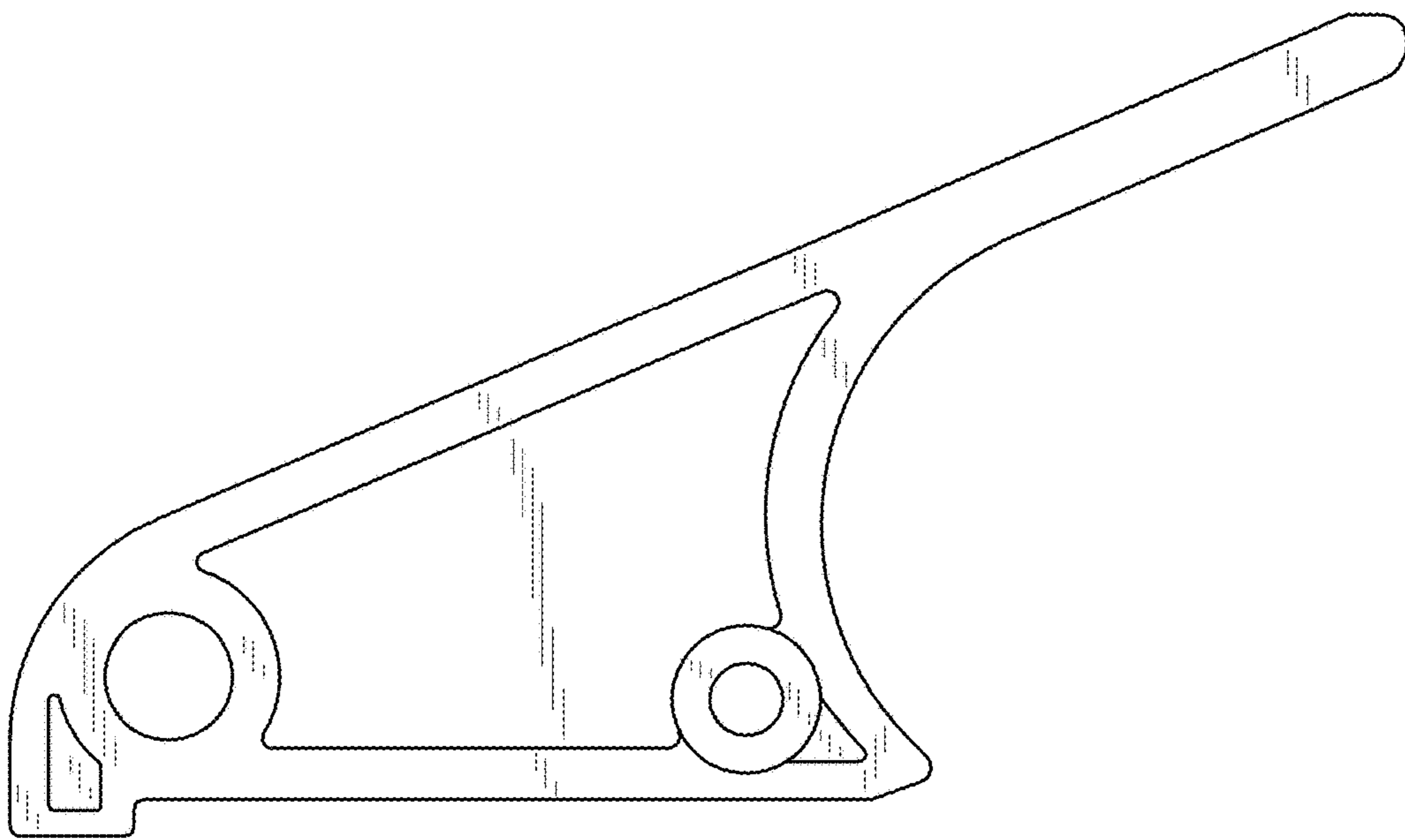


FIG. 3

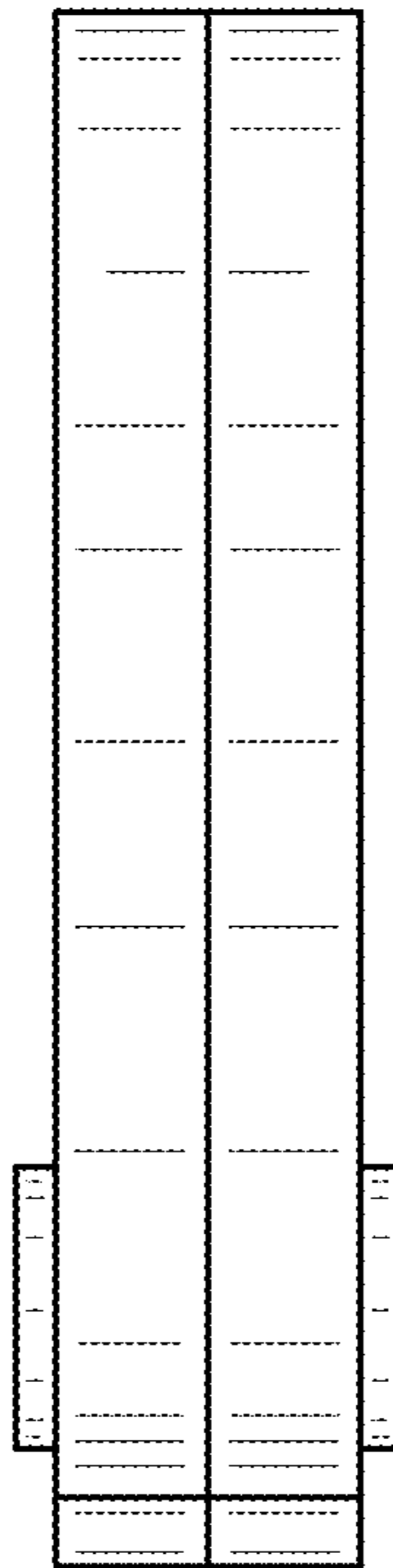


FIG. 4

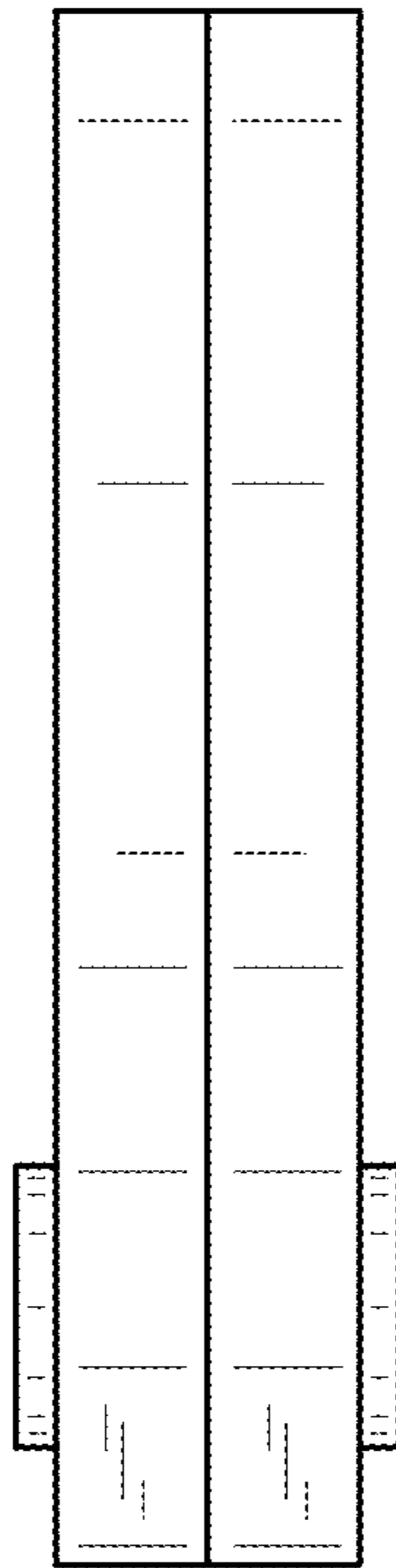


FIG. 5

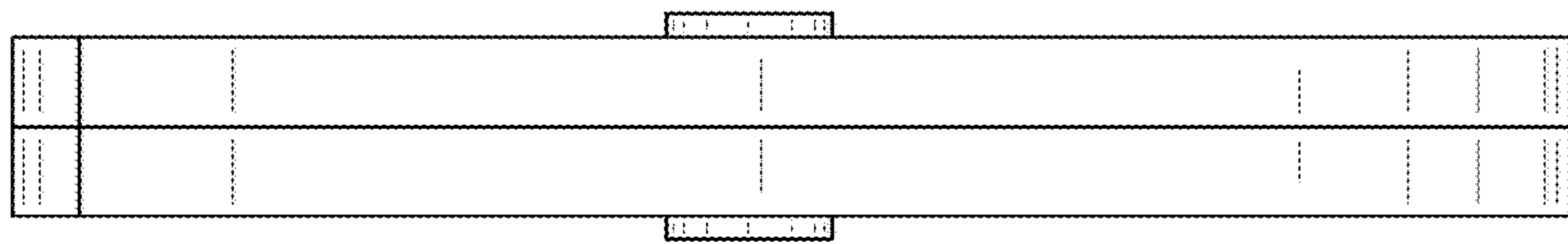


FIG. 6

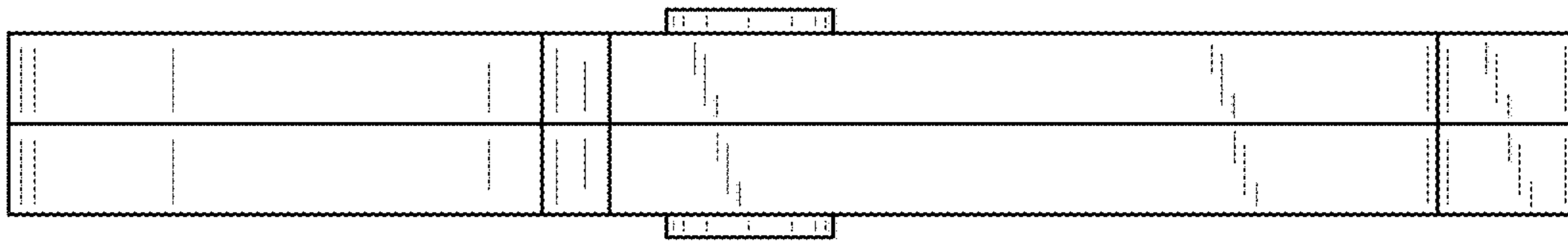


FIG. 7