



US00D789171S

(12) **United States Design Patent** (10) **Patent No.:** **US D789,171 S**  
**Eisinger** (45) **Date of Patent:** **\*\* Jun. 13, 2017**

(54) **RIGHT ANGLE DRIVE**

FOREIGN PATENT DOCUMENTS

(71) Applicant: **Darren P. Eisinger**, Carpentersville, IL (US)

CN 1302712 A 7/2001  
DE 3634734 A1 4/1988

(Continued)

(72) Inventor: **Darren P. Eisinger**, Carpentersville, IL (US)

OTHER PUBLICATIONS

(73) Assignee: **Nomis LLC**, Palatine, IL (US)

Milescraft, Universal Power Tool Attachments & Accessories—Drills & Drivers—Drive 90, pages printed from website, <http://www.milescraft.com/product/1302.html>, 3 pages, date last visited Jun. 1, 2010, known prior to filing of application on Mar. 19, 2010.

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

*Primary Examiner* — Darlington Ly

(21) Appl. No.: **29/552,358**

(74) *Attorney, Agent, or Firm* — Reinhart Boerner Van Deuren P.C.

(22) Filed: **Jan. 21, 2016**

(51) **LOC (10) Cl.** ..... **08-05**

(57) **CLAIM**

(52) **U.S. Cl.**

The ornamental design for a right angle driver, as shown and described.

USPC ..... **D8/70**

(58) **Field of Classification Search**

**DESCRIPTION**

USPC ..... D8/61, 62, 66-70; D4/102; D32/15, 17, D32/19

FIG. 1 is a front and left side perspective view of a right angle drive showing my new design with a chuck and handle bar attached;

CPC ..... B25B 21/00; B25B 23/141; B25B 23/147; B25F 5/001

FIG. 2 is a front and left side perspective view of the right angle drive shown in FIG. 1 without the chuck and handle bar attachments;

See application file for complete search history.

FIG. 3 is a left side elevation view thereof;

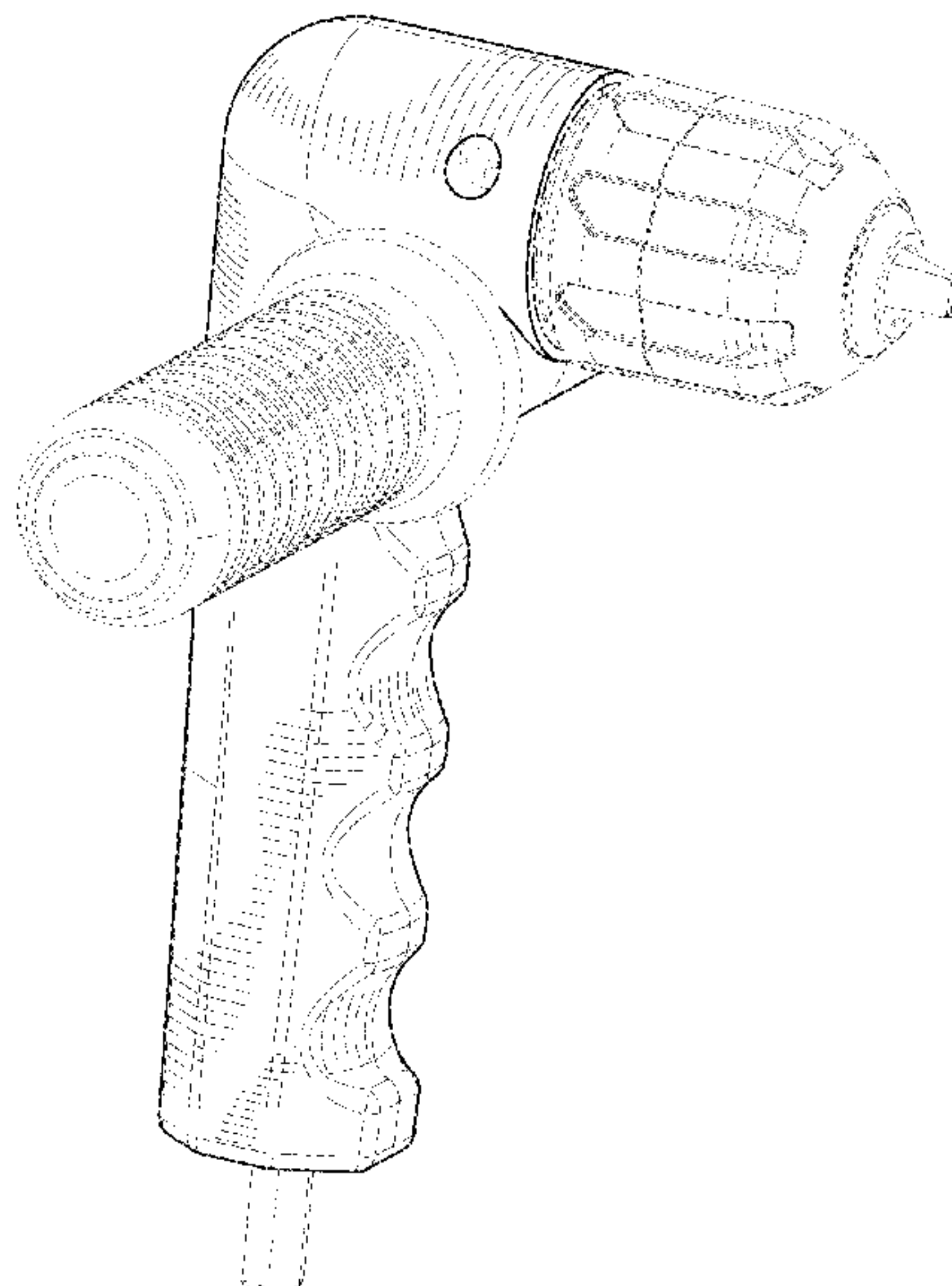
(56) **References Cited**

U.S. PATENT DOCUMENTS

1,379,880 A	5/1921	Seaborn
1,414,207 A	4/1922	Reed
1,525,091 A	2/1925	Savidge
1,688,410 A	10/1928	Chayes et al.
1,750,957 A	3/1930	Fowler
1,907,904 A	5/1933	Van Emburg et al.
2,155,082 A	4/1939	Decker
2,194,062 A	3/1940	Albertson et al.
2,262,706 A	11/1941	Benda
2,348,266 A	5/1944	Selby
2,465,309 A	3/1949	Happe et al.
2,545,659 A	3/1951	Ginter

(Continued)

**1 Claim, 7 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

2,553,416 A 5/1951 Koett  
 2,563,582 A 8/1951 Colucci et al.  
 2,589,822 A 3/1952 Kostka  
 2,604,795 A 7/1952 Ristow  
 2,620,840 A 12/1952 Schafer  
 2,669,162 A 2/1954 Arliss  
 2,780,942 A 2/1957 Babcock  
 2,804,957 A 9/1957 Pechin, Jr.  
 2,906,567 A 9/1959 Runton et al.  
 3,158,883 A 12/1964 Barr  
 3,333,481 A 8/1967 Kulig  
 3,456,458 A 7/1969 Dixon  
 3,719,254 A 3/1973 Snider  
 3,724,561 A 4/1973 Merrels  
 3,783,955 A 1/1974 Gill  
 3,901,098 A 8/1975 Jinkins  
 4,276,675 A 7/1981 Pioch  
 4,321,838 A 3/1982 Feldman  
 4,332,147 A 6/1982 Grech  
 4,368,566 A 1/1983 Miller  
 4,403,679 A 9/1983 Snider  
 4,441,564 A 4/1984 Castillo  
 4,474,007 A 10/1984 Kronogård et al.  
 4,643,052 A 2/1987 Badiali  
 4,645,388 A 2/1987 Abrahamsen  
 RE32,415 E 5/1987 Grech  
 4,685,848 A 8/1987 Langer  
 4,696,199 A 9/1987 Fabbri  
 4,758,970 A 7/1988 Keary et al.  
 4,820,090 A 4/1989 Chen  
 4,838,108 A 6/1989 Flanhardt et al.  
 4,840,082 A 6/1989 Terashima et al.  
 4,881,294 A 11/1989 Riedl  
 4,885,963 A 12/1989 Nishikawa  
 4,947,942 A 8/1990 Lightle et al.  
 D323,961 S \* 2/1992 Fushiya ..... D8/61  
 5,188,189 A 2/1993 Hummel  
 5,251,706 A 10/1993 Evans  
 5,363,723 A 11/1994 Hoffman  
 5,404,775 A 4/1995 Abe  
 5,482,413 A 1/1996 Argaud  
 5,533,581 A 7/1996 Barth et al.  
 5,636,698 A 6/1997 Estep et al.  
 5,725,422 A 3/1998 Leweck  
 5,788,903 A 8/1998 Allgaier  
 5,863,159 A 1/1999 Lasko  
 D414,093 S \* 9/1999 Zurwelle ..... D8/61  
 6,009,776 A 1/2000 Warren  
 6,089,331 A 7/2000 Christ  
 6,102,632 A \* 8/2000 Potter ..... B25F 5/001  
 173/217  
 6,112,621 A 9/2000 Ochiai  
 6,125,721 A 10/2000 Yang  
 6,241,594 B1 6/2001 Lepold  
 6,296,427 B1 10/2001 Potter et al.  
 6,352,127 B1 3/2002 Yorde  
 6,463,824 B1 10/2002 Prell et al.  
 D476,870 S \* 7/2003 Hayakawa ..... D8/61  
 D479,455 S \* 9/2003 Waldron ..... D8/68  
 6,814,156 B2 11/2004 Dieterle et al.  
 6,820,336 B2 11/2004 Laitinen et al.  
 6,863,479 B2 3/2005 Frauhammer et al.

6,929,074 B1 \* 8/2005 Lai ..... B25B 21/00  
 173/178  
 7,052,382 B2 5/2006 Baker  
 D527,970 S \* 9/2006 Vui ..... D8/68  
 D529,353 S \* 10/2006 Wong ..... D8/61  
 D533,041 S \* 12/2006 Pozgay ..... D8/68  
 7,153,133 B1 12/2006 Chia et al.  
 7,156,187 B1 1/2007 Townsan  
 7,191,494 B2 3/2007 Badiali  
 7,191,677 B2 3/2007 Barkdoll  
 7,346,992 B2 3/2008 Hunger  
 D567,046 S \* 4/2008 Henssler ..... D8/61  
 D582,741 S \* 12/2008 Wise ..... D8/68  
 7,475,740 B2 1/2009 Kozina et al.  
 D588,891 S \* 3/2009 Hayakawa ..... D8/61  
 D598,260 S \* 8/2009 Jerome ..... D8/61  
 D633,768 S \* 3/2011 Adkins ..... D8/70  
 D636,245 S \* 4/2011 Adkins ..... D8/70  
 7,963,346 B2 6/2011 Brodin  
 D648,997 S \* 11/2011 Allan ..... D8/61  
 D653,922 S \* 2/2012 Henssler ..... D8/61  
 D658,464 S \* 5/2012 Kawase ..... D8/61  
 D663,181 S \* 7/2012 Zhou ..... D8/61  
 8,281,690 B2 10/2012 Badiali  
 D692,742 S \* 11/2013 Wenchel ..... D8/70  
 D701,441 S \* 3/2014 Yaschur ..... D8/61  
 8,707,816 B2 4/2014 Adkins  
 D712,224 S \* 9/2014 Zhang ..... D8/61  
 D714,609 S \* 10/2014 Beukema ..... D8/61  
 D718,108 S \* 11/2014 Beukema ..... D8/61  
 D730,136 S \* 5/2015 Lichtensteiger ..... D8/61  
 D764,248 S \* 8/2016 Eisinger ..... D8/70  
 2002/0185289 A1 12/2002 Yorde, Jr.  
 2003/0010158 A1 \* 1/2003 Listl ..... B25B 21/00  
 81/57.13  
 2004/0014004 A1 1/2004 Garrison et al.  
 2004/0016082 A1 1/2004 Yi  
 2004/0065178 A1 4/2004 Anderson et al.  
 2004/0067813 A1 4/2004 Komine  
 2004/0159172 A1 8/2004 Barkdoll  
 2005/0009458 A1 1/2005 Uzumcu et al.  
 2005/0034276 A1 2/2005 Badiali  
 2007/0102178 A1 5/2007 Kozina et al.  
 2008/0003070 A1 1/2008 Hor  
 2009/0272556 A1 11/2009 Young et al.  
 2011/0011609 A1 1/2011 Simm et al.  
 2011/0272172 A1 \* 11/2011 Lau ..... B25F 3/00  
 173/170  
 2012/0014958 A1 1/2012 Borrás et al.  
 2013/0154205 A1 6/2013 Santamarina et al.  
 2014/0196921 A1 7/2014 Kondo et al.

FOREIGN PATENT DOCUMENTS

DE 4326652 A1 4/1994  
 DE 29512161 U1 11/1996  
 DE 10001091 A1 7/2001  
 EP 0799671 A1 10/1997  
 EP 1 129 825 A2 9/2001  
 EP 2 604 392 A2 6/2013  
 EP 2 604 393 A2 6/2013  
 JP 05-123915 A 5/1993  
 JP 2004-261959 A 9/2004  
 WO WO 01/81053 A1 11/2001  
 WO WO 2005/032769 A1 4/2005

\* cited by examiner



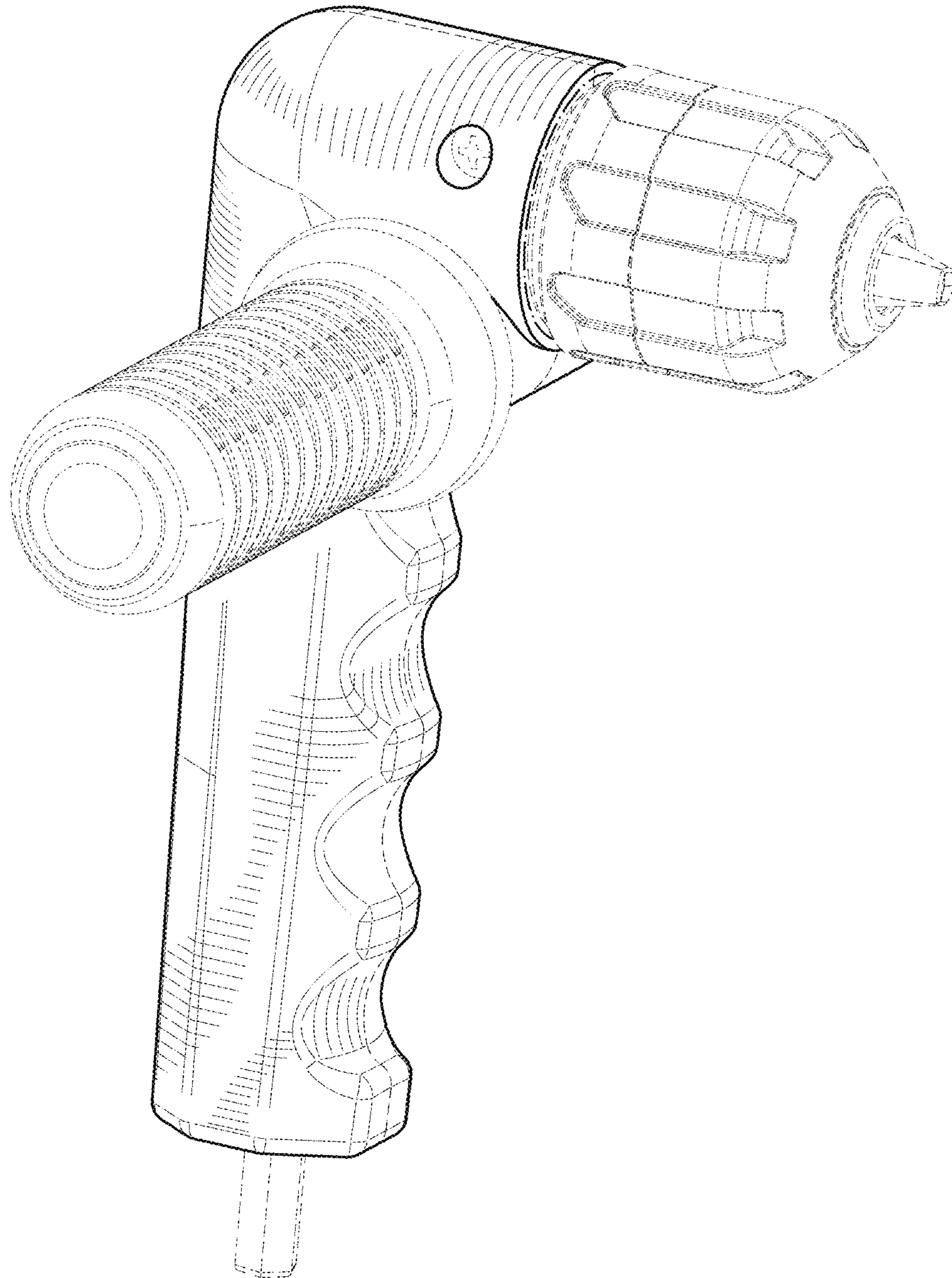


FIG. 1

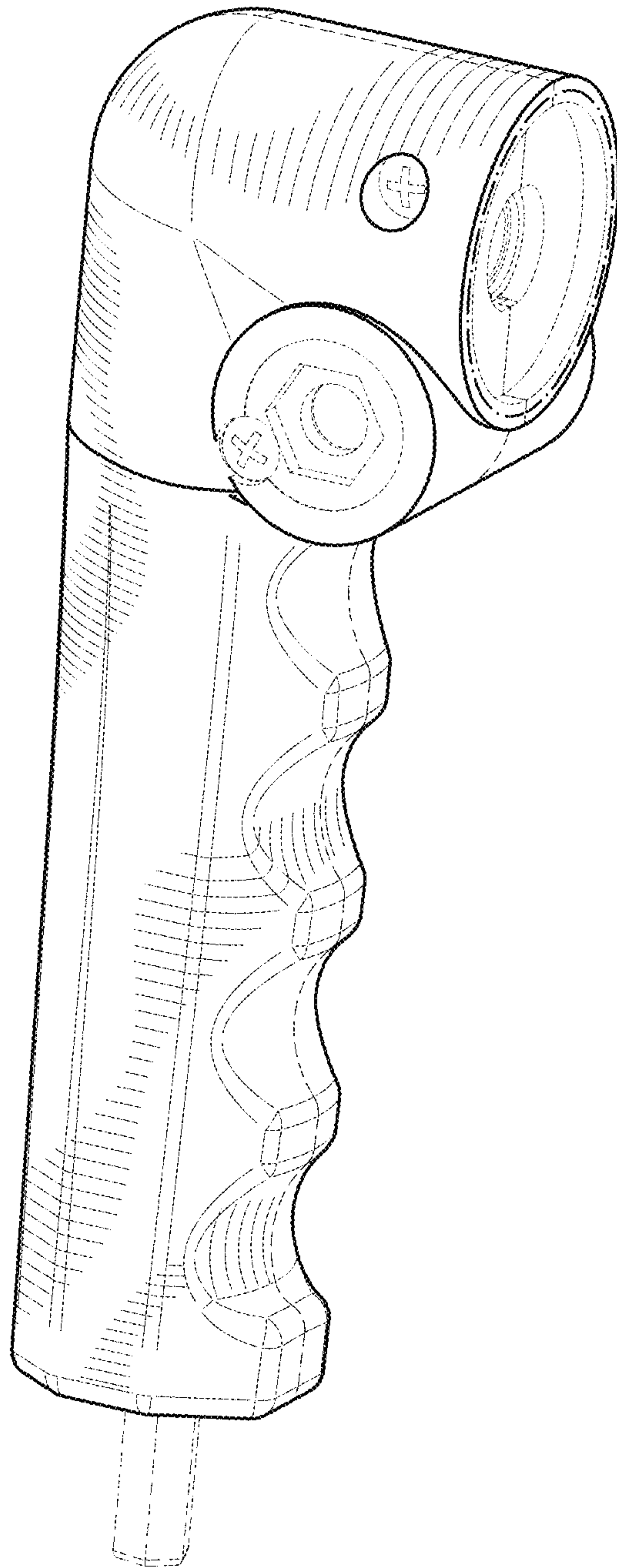


FIG. 2

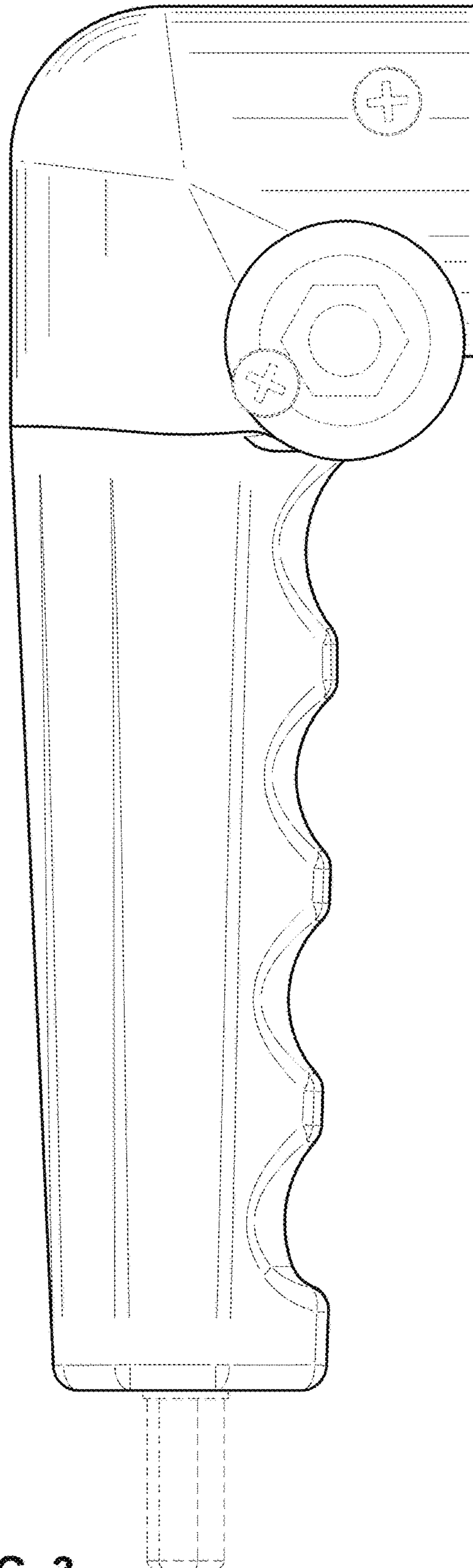


FIG. 3

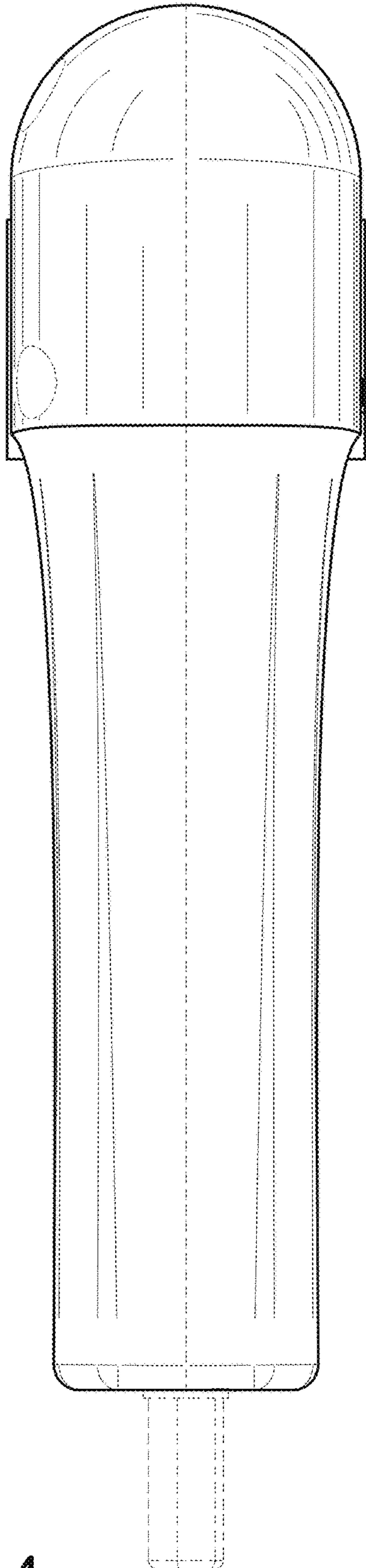


FIG. 4

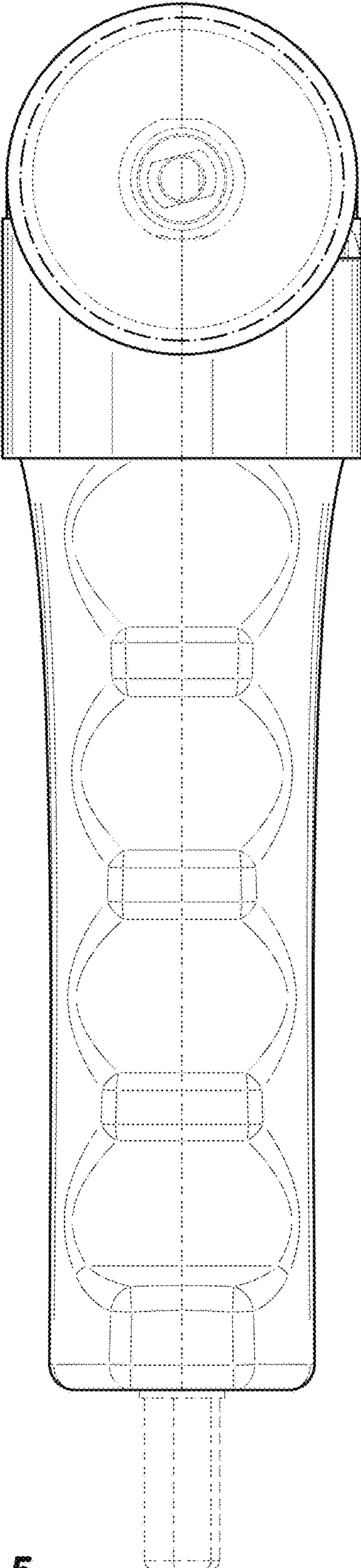


FIG. 5

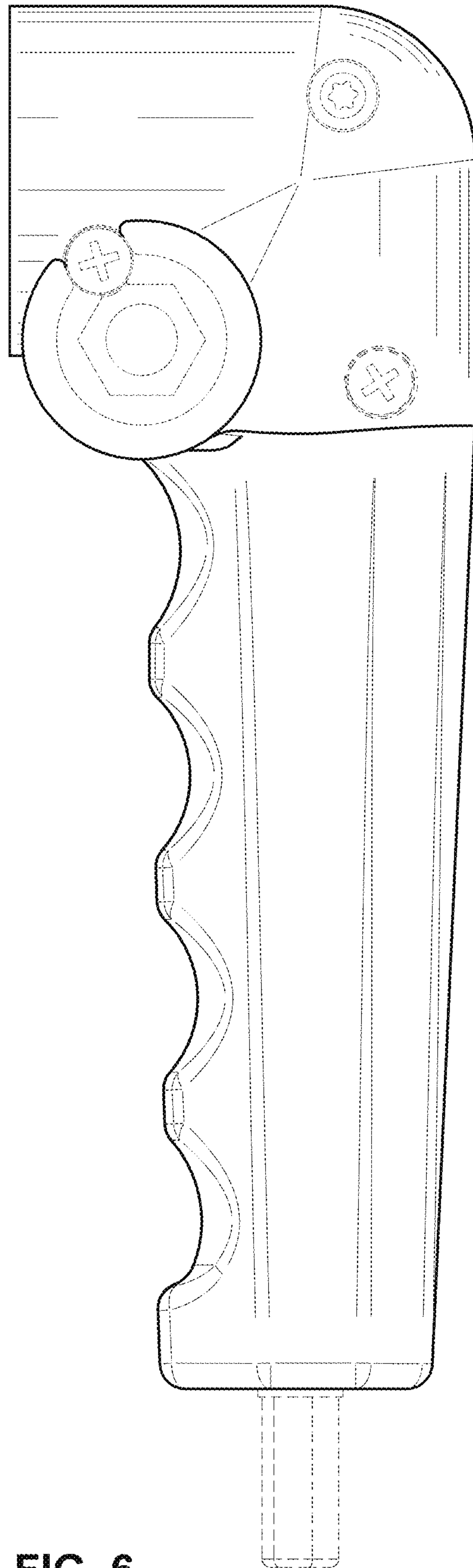


FIG. 6



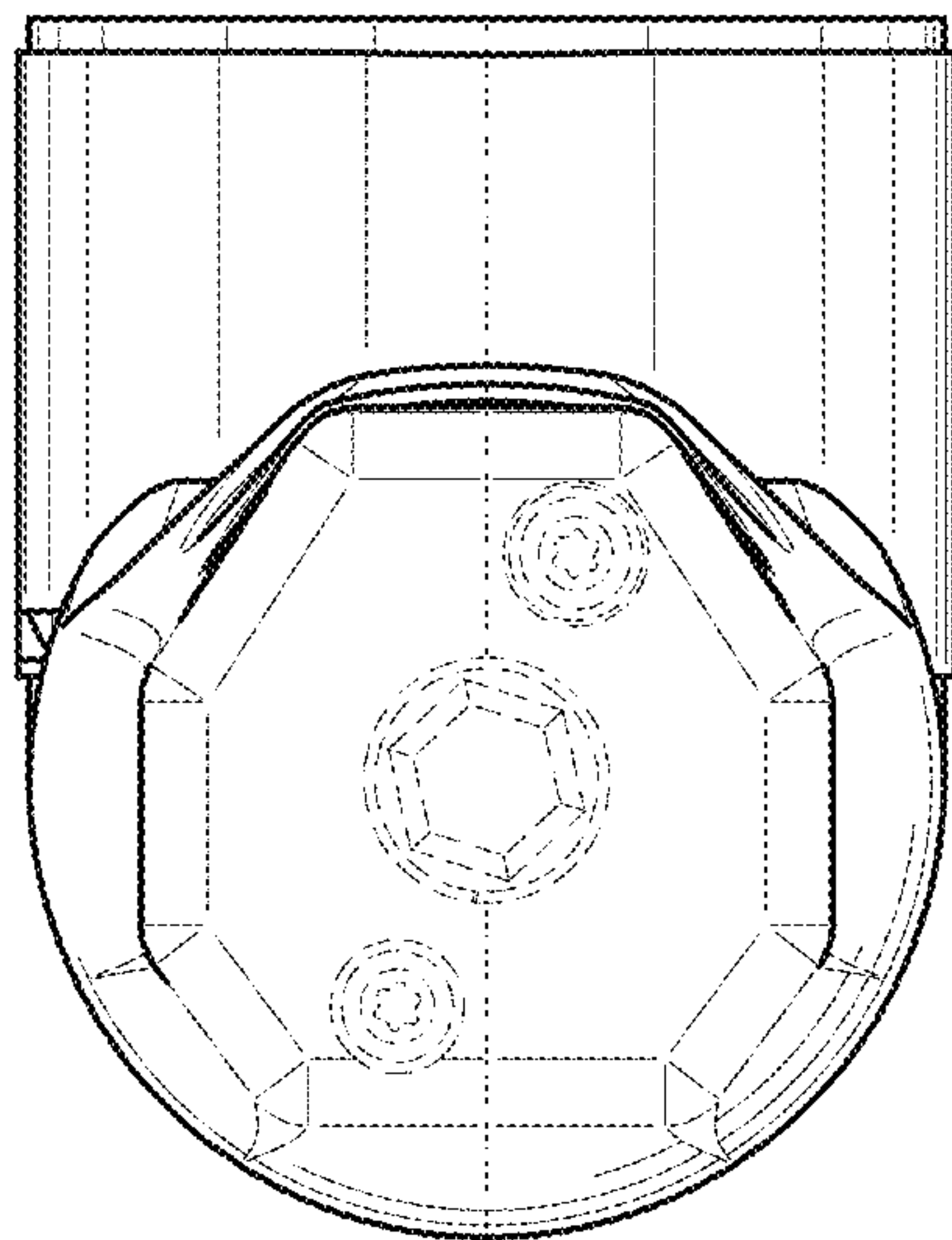


FIG. 7

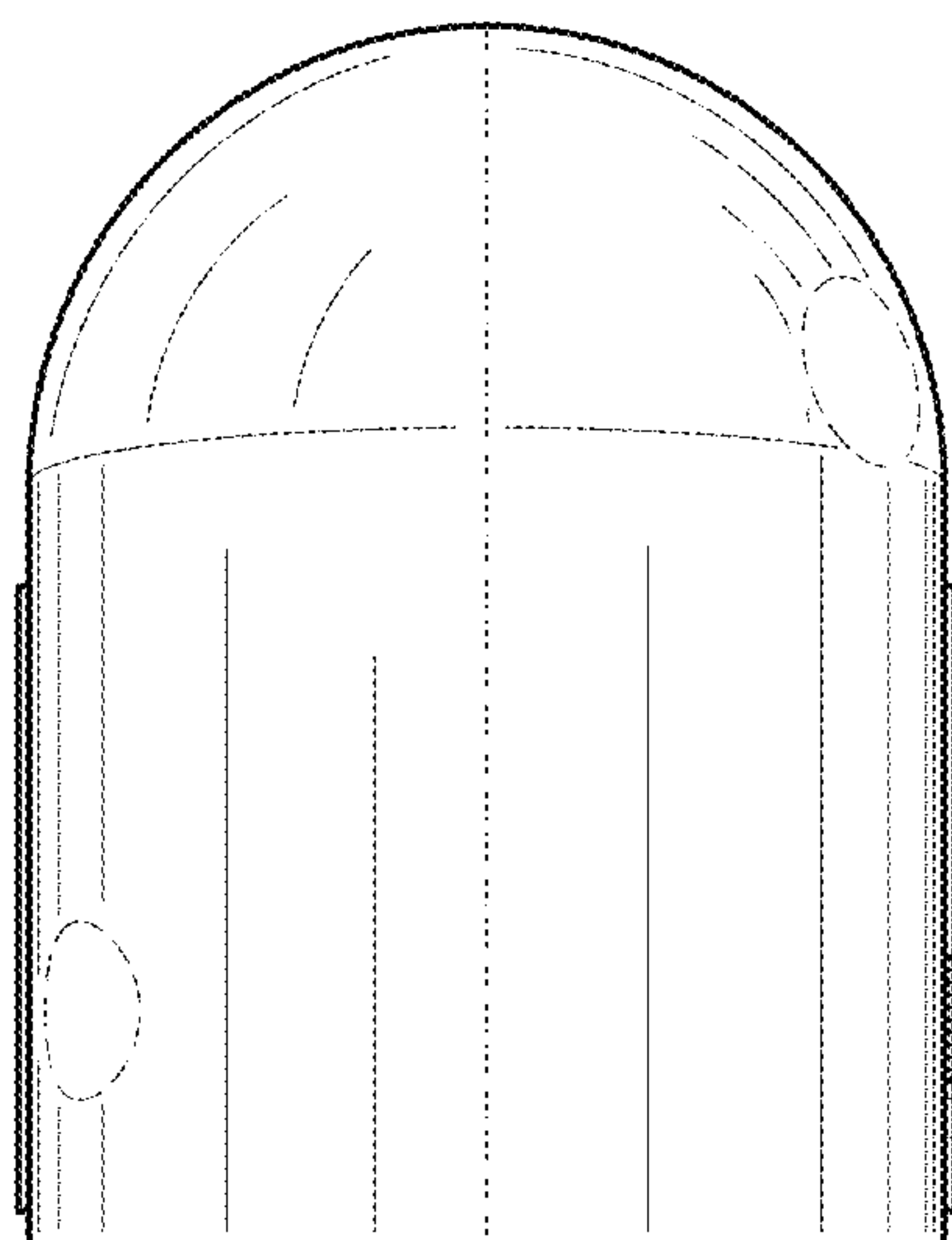


FIG. 8