



US00D798921S

(12) **United States Design Patent**
Frota de Souza Filho

(10) **Patent No.:** **US D798,921 S**
(45) **Date of Patent:** **** Oct. 3, 2017**

(54) **CUTTING HEAD FOR MODULAR DRILL**

(71) Applicant: **Kennametal Inc.**, Latrobe, PA (US)

(72) Inventor: **Ruy Frota de Souza Filho**, Latrobe, PA (US)

(73) Assignee: **KENNAMETAL INC.**, Latrobe, PA (US)

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

(21) Appl. No.: **29/541,762**

(22) Filed: **Oct. 7, 2015**

(51) **LOC (10) Cl.** **15-09**

(52) **U.S. Cl.**
USPC **D15/139; D8/70**

(58) **Field of Classification Search**
USPC D8/86, 70; D15/138, 139, 140;
76/108.6; 83/845; 403/331, 381; 407/9,
407/33, 34, 42, 54, 63, 110, 113, 114,
407/115; 408/119, 224, 226-230
CPC E23B 51/00; E21B 10/54; E21B 10/55;
E21B 10/567; E21B 10/5673; E21B
10/602

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

22,394 A	12/1858	White
273,388 A	3/1883	Peatt
329,600 A	11/1885	Lord
658,216 A	9/1900	Munger
690,093 A	12/1901	Beach
756,339 A	4/1904	Down
932,071 A	8/1909	Urbscheit
1,461,548 A	7/1923	West
2,158,120 A	5/1939	Hirschberg
2,289,583 A	7/1942	Malone
2,294,969 A	9/1942	Engvall

3,140,749 A *	7/1964	Dionisotti	E21B 10/58	175/418
3,153,356 A	10/1964	Dearborn			
3,293,727 A	12/1966	Simms			
3,359,837 A	12/1967	Andreasson			
3,410,749 A	11/1968	Chmiel			
3,434,553 A *	3/1969	Weller	E21B 10/38	175/418
3,548,688 A	12/1970	Kuch			
3,765,496 A *	10/1973	Flores	E21B 10/633	175/383
4,293,253 A	10/1981	Ott			

(Continued)

FOREIGN PATENT DOCUMENTS

AT	9431 B	10/1902
CN	1204976 A	1/1999

(Continued)

OTHER PUBLICATIONS

Mar. 10, 2017 Office action (3 months).
(Continued)

Primary Examiner — Darlington Ly
(74) *Attorney, Agent, or Firm* — Ian K. Samways

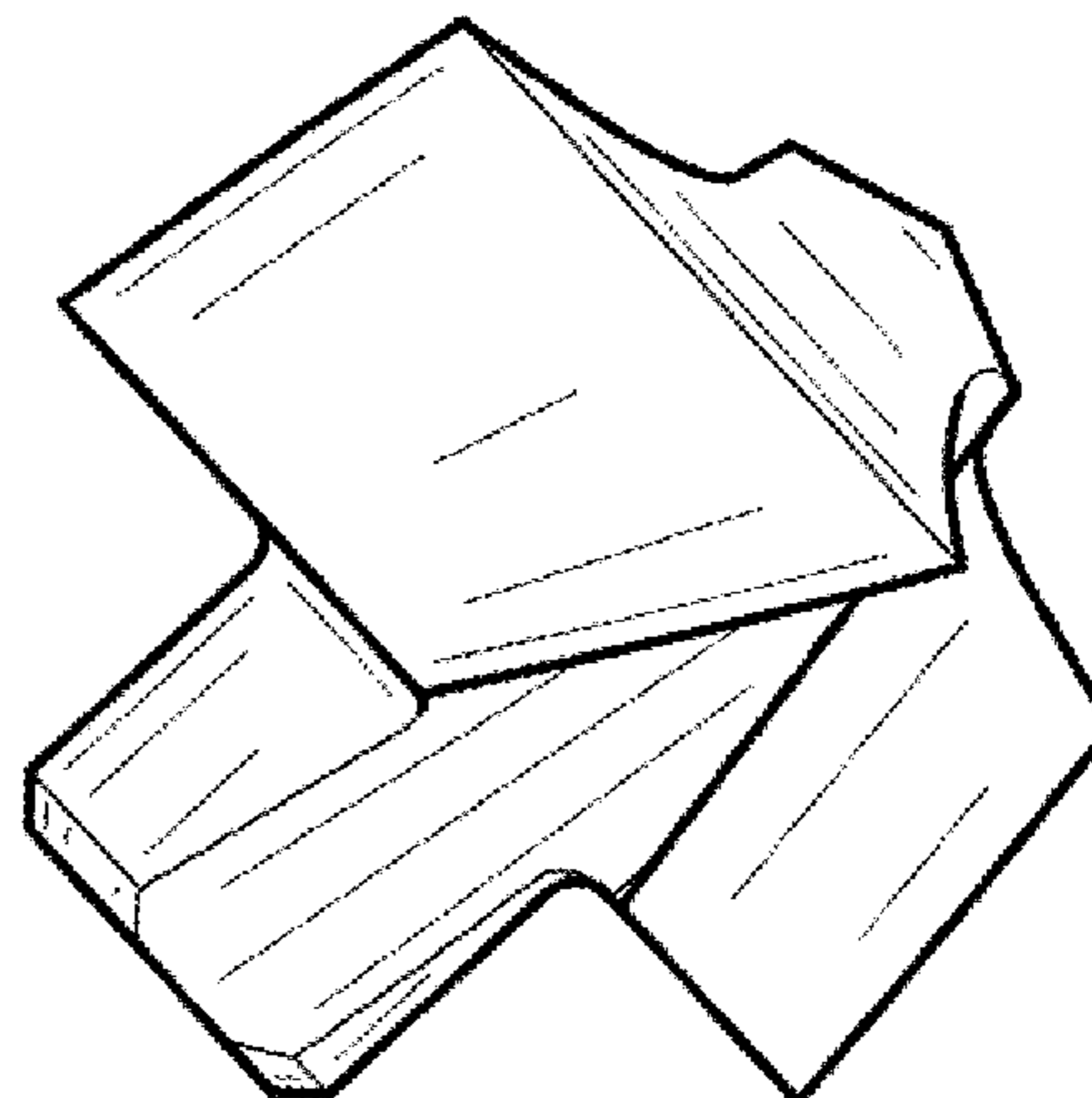
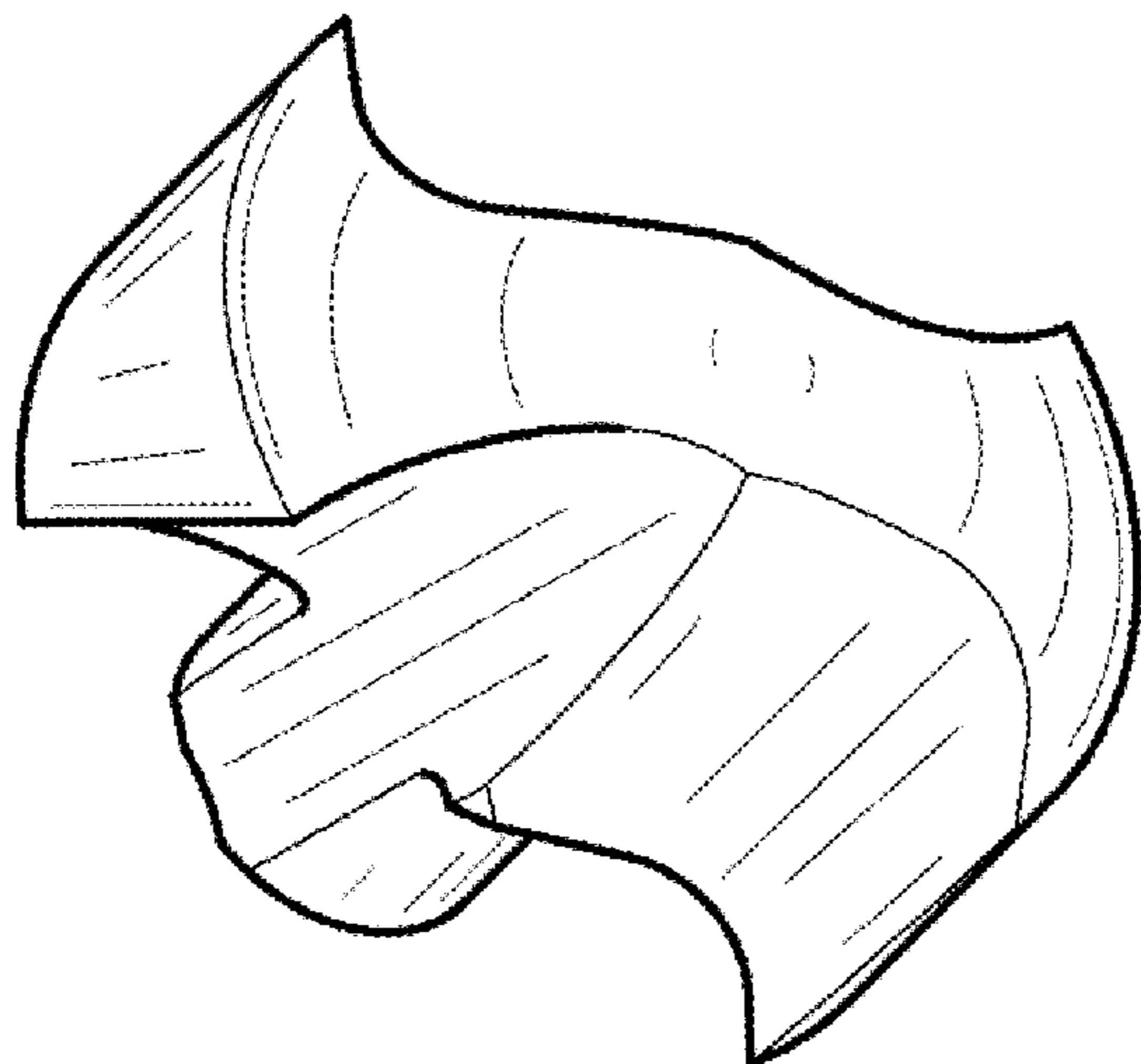
(57) **CLAIM**

The ornamental design for a cutting head for modular drill, as shown and described.

DESCRIPTION

FIG. 1 is a front isometric view from above of the cutting head for modular drill showing my new design; FIG. 2 is a top isometric view thereof; FIG. 3 is a right side elevation view thereof; FIG. 4 is a left side elevation view thereof; FIG. 5 is a front elevation view thereof; FIG. 6 is a bottom plan view thereof; and, FIG. 7 is a top plan view thereof.

1 Claim, 1 Drawing Sheet



(56)

References Cited

U.S. PATENT DOCUMENTS

2014/0023449 A1 1/2014 Jonsson et al.
 2014/0301799 A1 10/2014 Schwaegerl
 2014/0348602 A1 11/2014 Schwaegerl

FOREIGN PATENT DOCUMENTS

CN 1258240 A 6/2000
 CN 2438535 Y 7/2001
 CN 1616170 A 5/2005
 CN 1689740 A 11/2005
 CN 101048251 A 10/2007
 CN 101605622 A 12/2009
 CN 102307693 A 1/2012
 CN 104588739 A 5/2015
 CN 204565232 U 7/2015
 CN 104759664 A 8/2015
 CN 204545517 U 8/2015
 DE 94340 10/1897
 DE 384720 C 11/1923
 DE 524677 5/1931
 DE 118806 9/1984
 DE 3733298 C2 4/1992
 DE 19605157 9/1996
 DE 19543233 5/1997
 DE 29809638 U1 8/1998
 DE 29809638 9/1998
 DE 19945097 3/2001
 DE 102004022747 A1 11/2005
 DE 112009002001 T5 2/2013
 DE 102012200690 7/2013
 DE 102012200690 A1 7/2013
 DE 102012212146 1/2014
 DE 102013205889 5/2014
 EP 0599393 B1 2/1996
 EP 1136161 9/2001
 EP 1476269 10/2009
 EP 1996358 11/2011
 EP 2524755 11/2012
 FR 907980 3/1946
 GB 17961 0/1915
 GB 1396855 5/1975
 JP 11019812 A 1/1999
 JP 2002501441 A 1/2002
 JP 2002113606 A 4/2002
 JP 2003291044 A 10/2003

JP 2004255533 A 9/2004
 JP 2005169542 6/2005
 JP 2006167871 A 6/2006
 JP 2008500195 A 1/2008
 JP 2011036977 A 2/2011
 WO WO8403241 8/1984
 WO WO9627469 9/1996
 WO WO03031104 A1 4/2003
 WO WO2007107294 A1 9/2007
 WO WO2008072840 A2 6/2008
 WO WO2009128775 A1 10/2009
 WO WO2010102793 A1 9/2010
 WO 2015/064904 A1 9/2014

OTHER PUBLICATIONS

Mar. 21, 2017 Office action (3 months).
 Apr. 6, 2017 First office action.
 Mar. 22, 2017 First office action.
 Apr. 6, 2017 Second Office Action.
 Apr. 1, 2017 First office action.
 May 9, 2017 Second Office Action.
 Sep. 2, 2015 First office action.
 Jul. 7, 2015 Office action (3 months).
 Jul. 17, 2015 International Search Report Transmitted.
 Oct. 22, 2015 Office action (3 months).
 Nov. 3, 2015 Final Office Action.
 Nov. 6, 2015 Final Office Action.
 Nov. 12, 2016 First office action.
 Dec. 8, 2015 Office action (3 months).
 Feb. 23, 2016 Office action (3 months).
 May 13, 2014 Office Action.
 Mar. 7, 2016 Final Office Action.
 Mar. 23, 2016 First office action.
 Apr. 8, 2016 Office action (2 months).
 Apr. 12, 2016 Second Office Action.
 Jun. 16, 2016 Office action (3 months).
 Jul. 29, 2016 Office action (3 months).
 Jul. 30, 2016 First office action.
 Sep. 27, 2016 First office action.
 Sep. 25, 2016 Office action (3 months).
 Nov. 15, 2016 EPO Notitcation R161(1) & R.162.
 Nov. 23, 2016 Final Office Action.
 Nov. 16, 2016 Second Office Action.
 Dec. 30, 2016 Final Office Action.

* cited by examiner

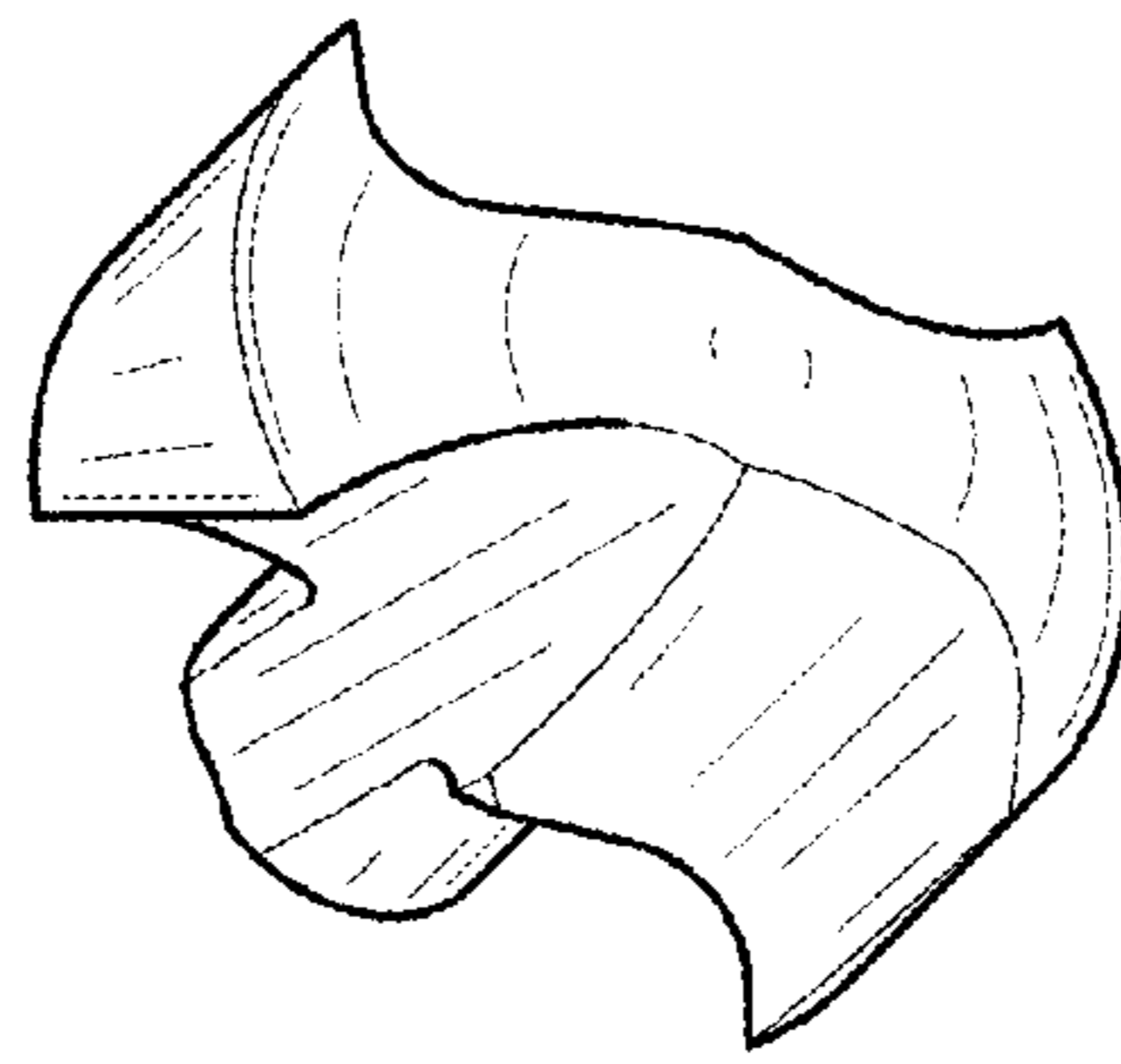


FIG. 1

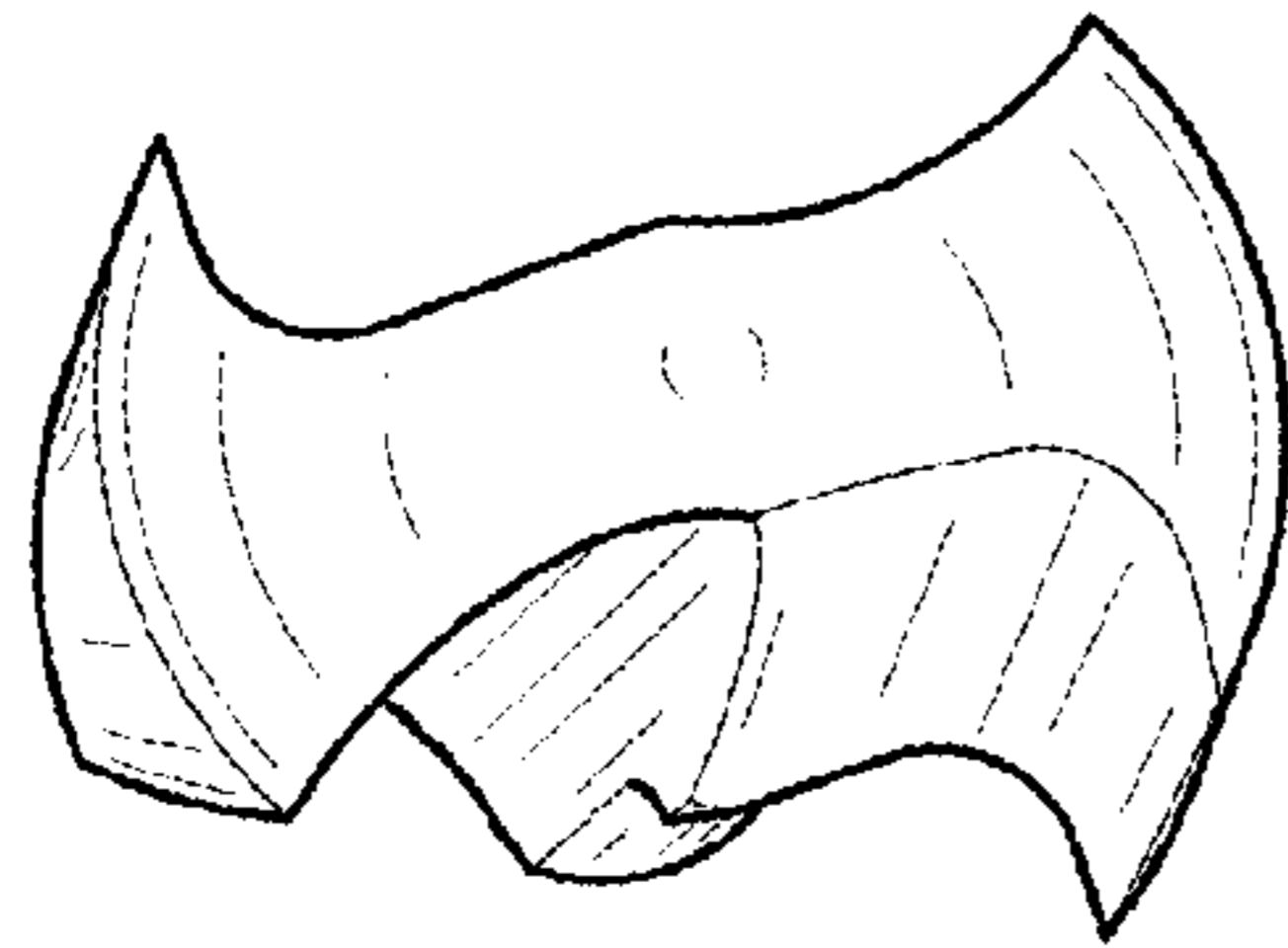


FIG. 2

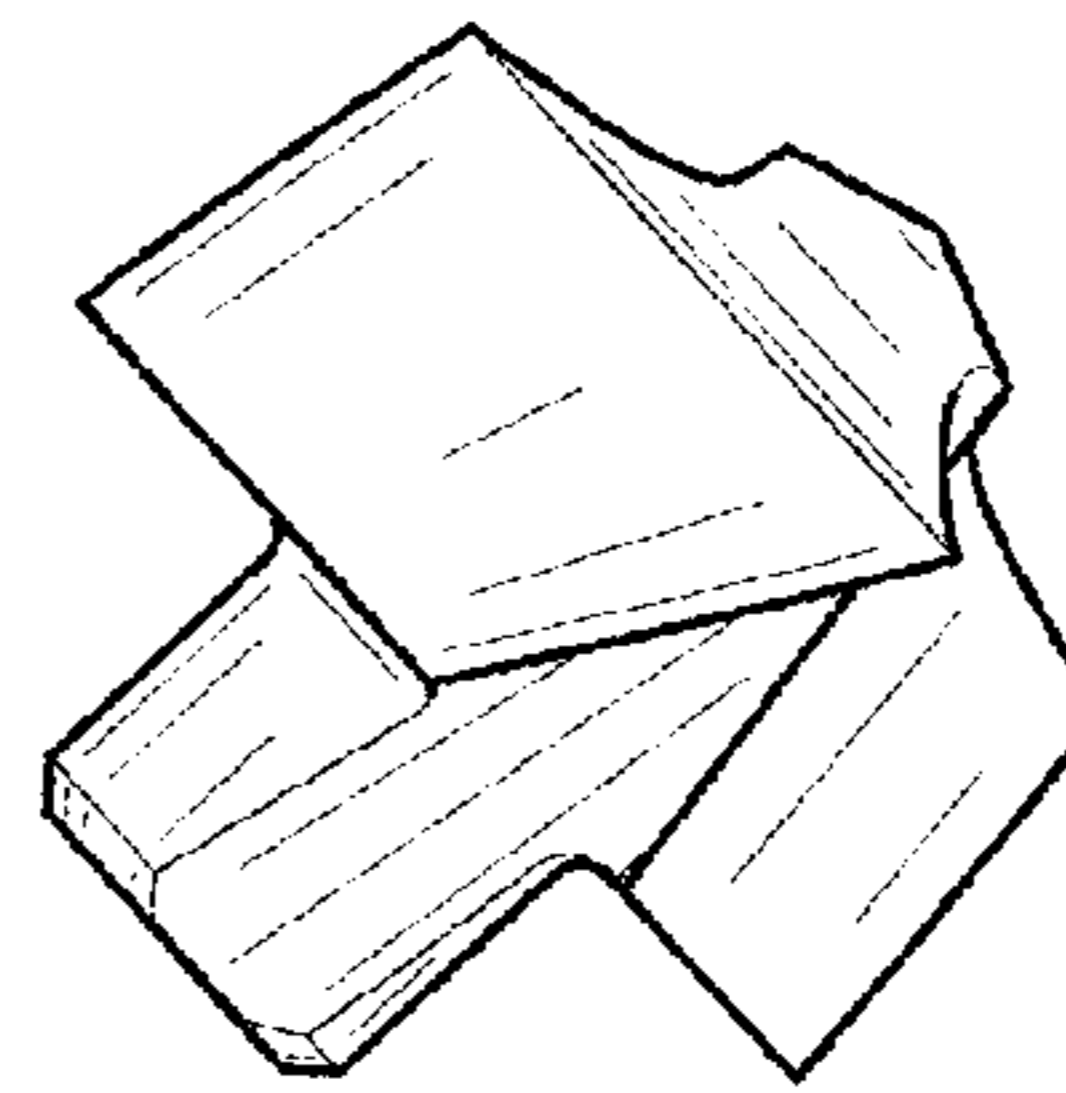


FIG. 3

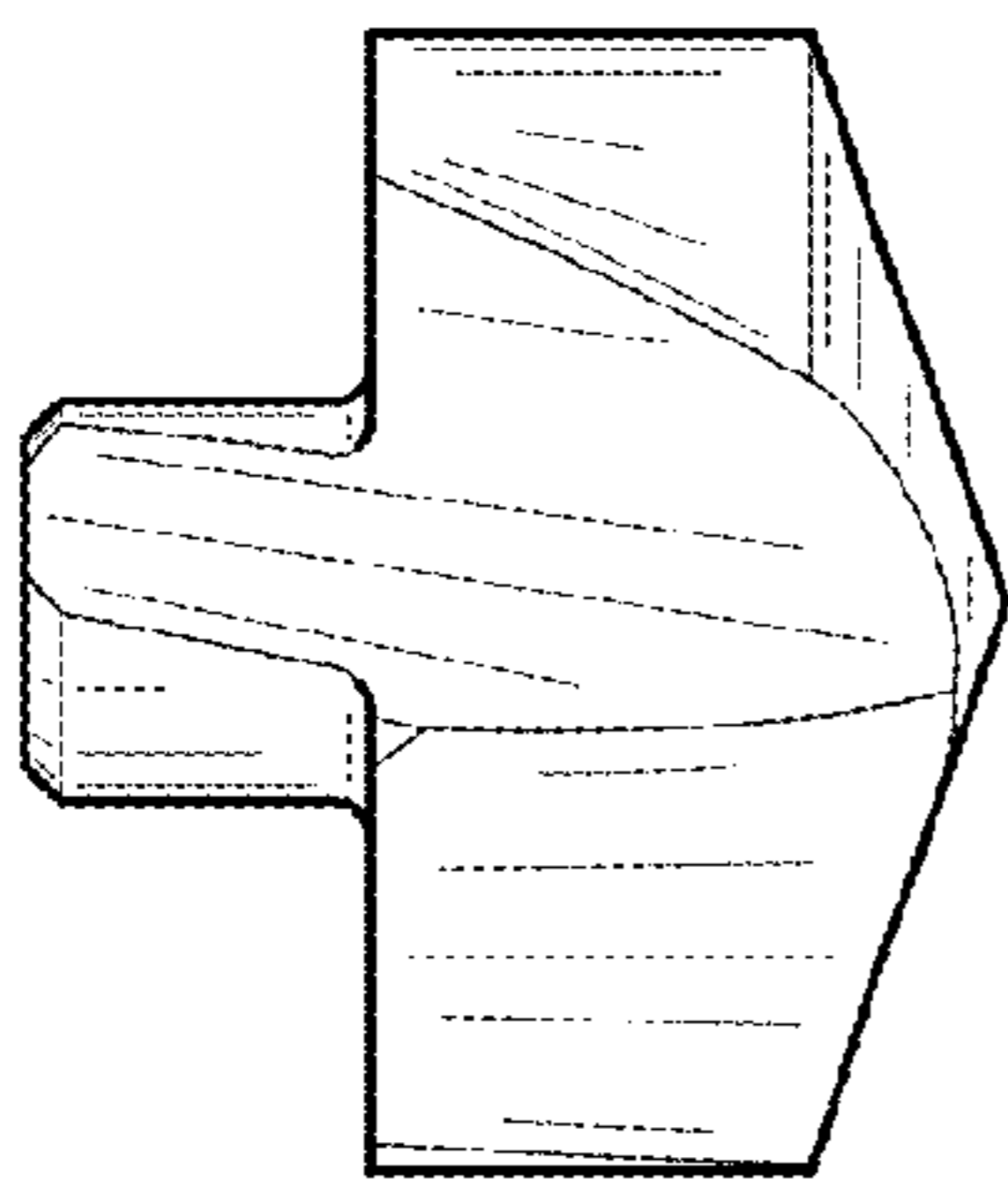


FIG. 4

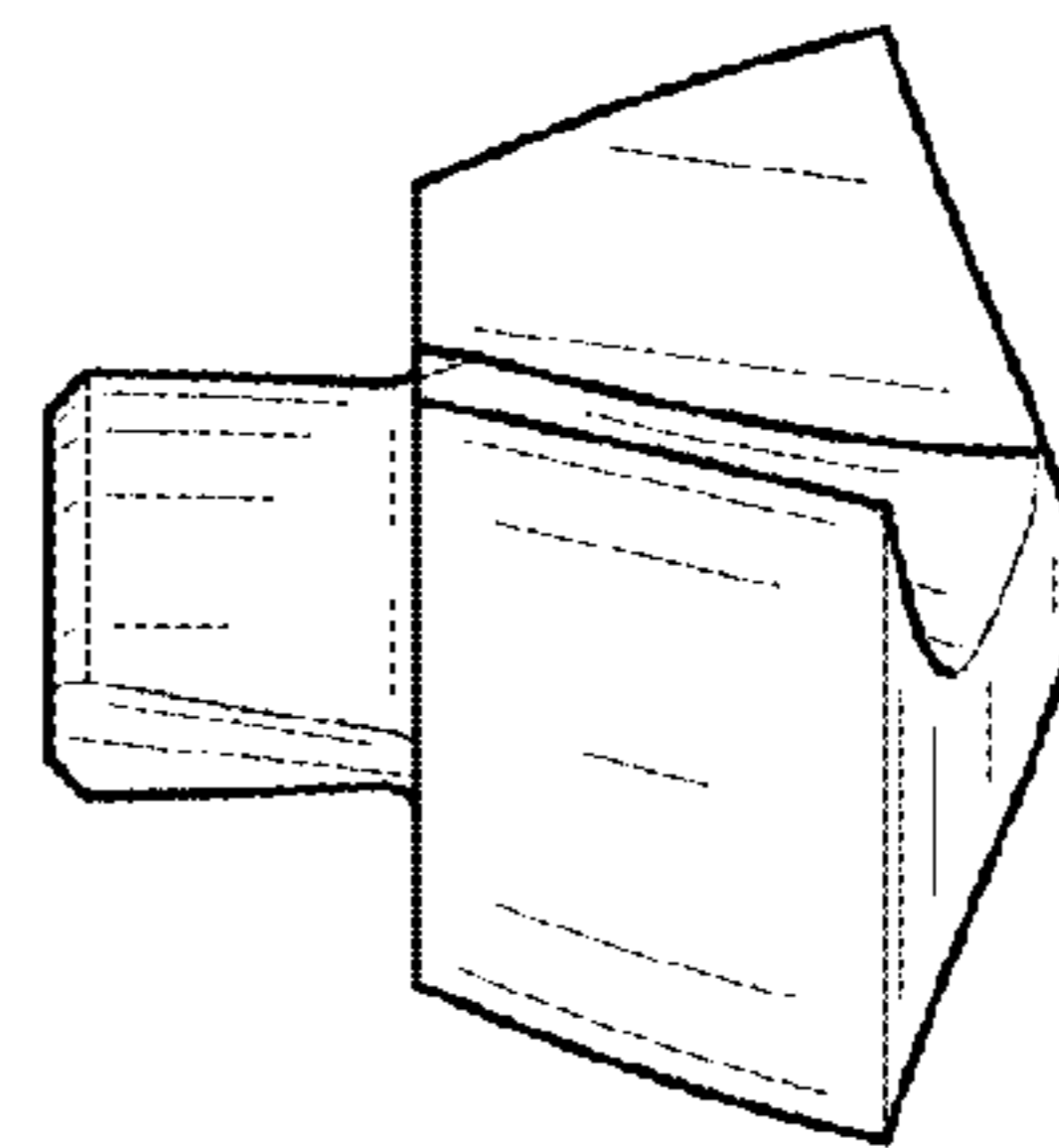


FIG. 5

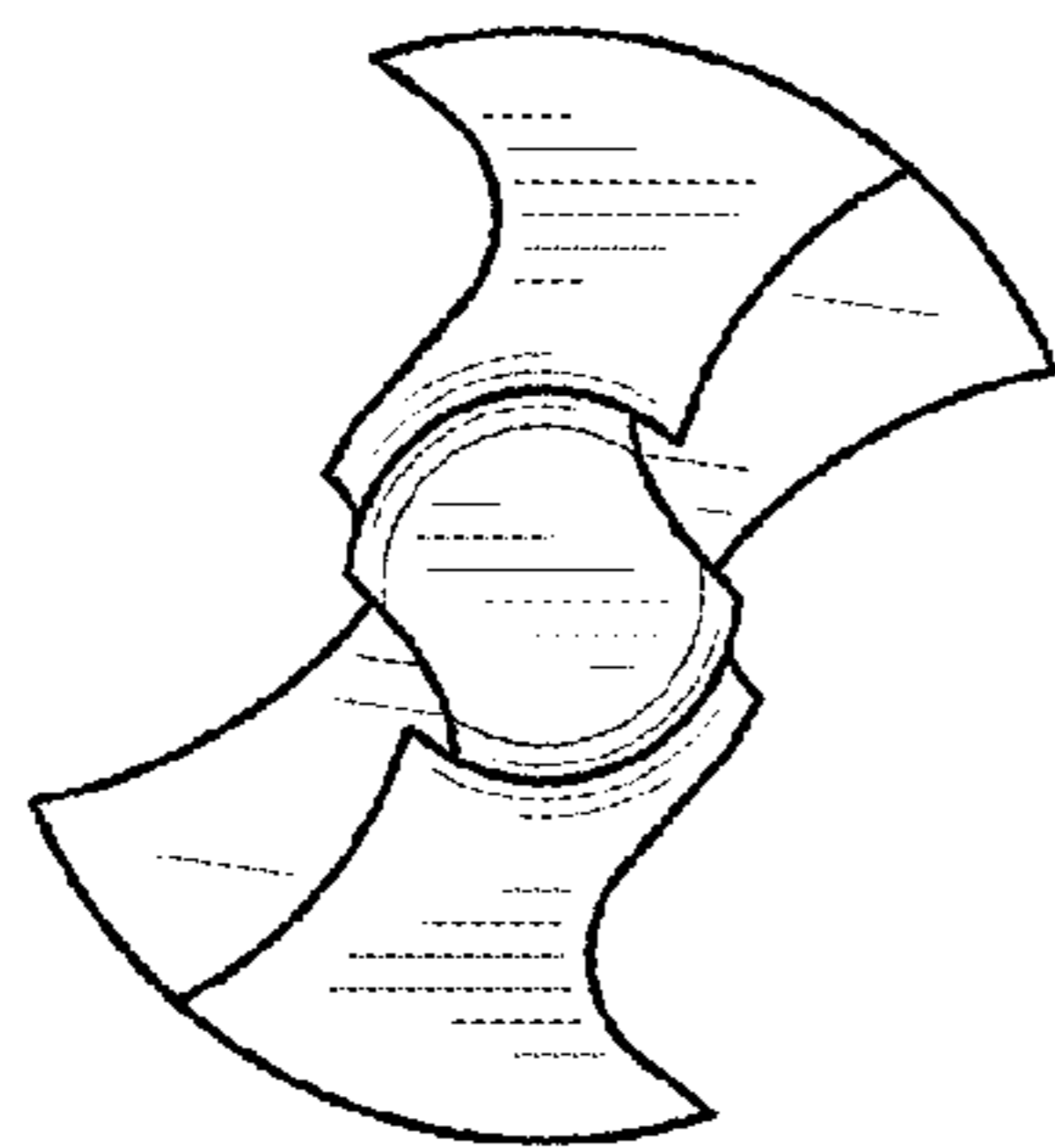


FIG. 6

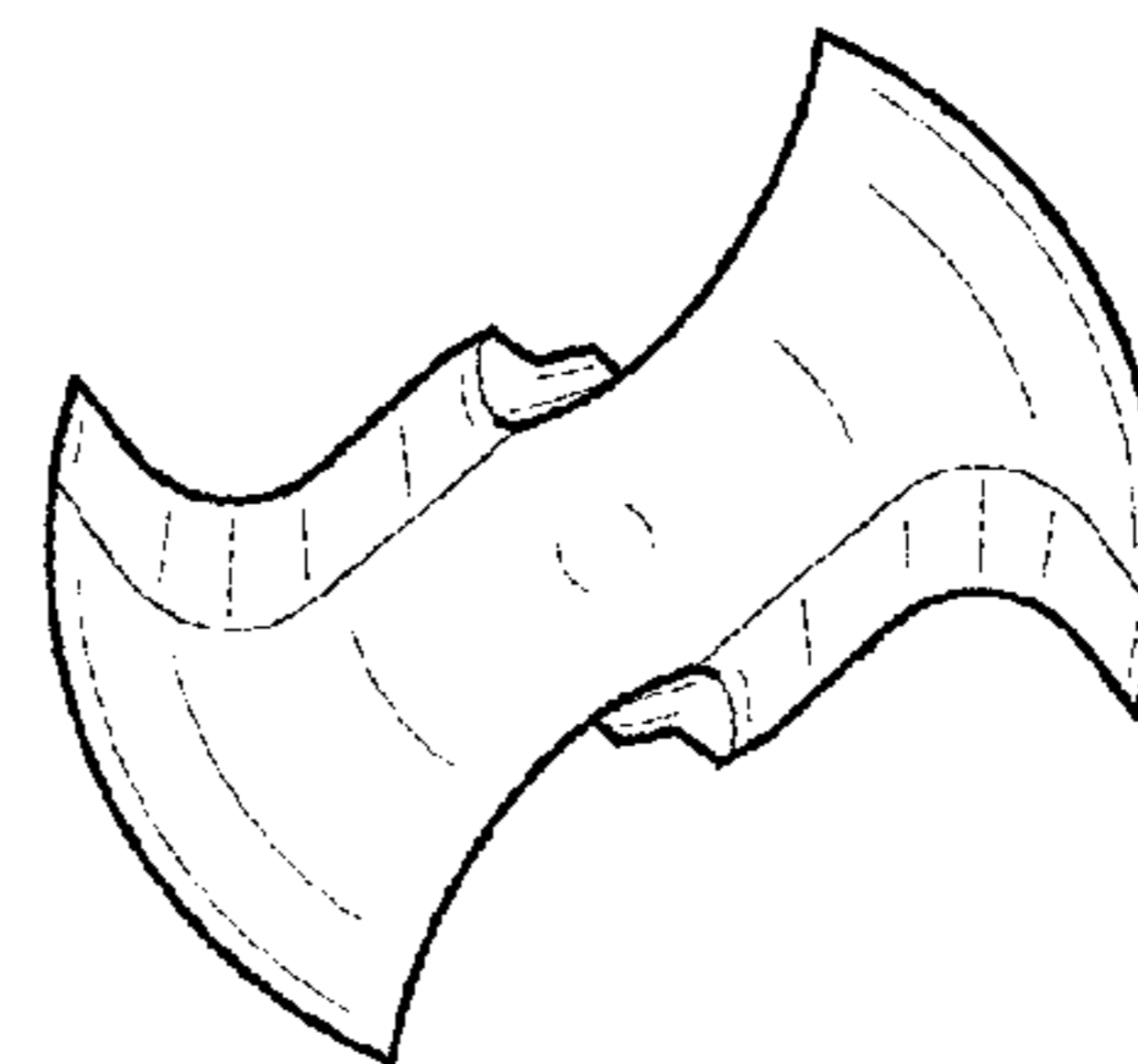


FIG. 7