



US00D416917S

United States Patent [19]

[11] **Patent Number: Des. 416,917**

Xie et al.

[45] **Date of Patent: ** Nov. 23, 1999**

[54] **POLYGONAL INDEXABLE CUTTING INSERT**

[75] Inventors: **Jeffrey Xie**, Troy; **Tony Lowe**, Royal Oak; **Thomas Bernadic**, Madison Heights, all of Mich.

[73] Assignee: **Valenite Inc.**, Madison Heights, Mich.

[**] Term: **14 Years**

[21] Appl. No.: **29/086,049**

[22] Filed: **Apr. 3, 1998**

[51] **LOC (6) Cl.** **15-09**

[52] **U.S. Cl.** **D15/139**

[58] **Field of Search** D15/139; 407/42, 407/113-117

5,222,843	6/1993	Katbi et al. .	
5,230,591	7/1993	Katbi et al. .	
5,265,985	11/1993	Boppana et al. .	
5,282,703	2/1994	Itaba et al. .	
5,324,144	6/1994	Katbi et al. .	
5,330,296	7/1994	Beeghly et al. .	
5,350,258	9/1994	Beeghly et al.	407/114 X
5,449,255	9/1995	Katbi et al. .	
5,476,025	12/1995	Beeghly et al. .	
5,503,507	4/1996	Lowe et al. .	
5,584,616	12/1996	Katbi et al. .	
5,599,141	2/1997	Katbi et al. .	

FOREIGN PATENT DOCUMENTS

4437093 A1 4/1996 Germany .

OTHER PUBLICATIONS

Widia Valenite Heinlein, Widia Extra 80, Widaselect-Geometrie-SH, Brochure 080100W 0897 2 pages.

Primary Examiner—Antoine Duval Davis
Attorney, Agent, or Firm—Mary K. Cameron

[56] **References Cited**

U.S. PATENT DOCUMENTS

D. 307,149	4/1990	Niebauer	D15/139
D. 308,975	7/1990	Niebauer	D15/139
3,786,541	1/1974	Lundgren .	
4,214,845	7/1980	Yoshikatsu .	
4,318,645	3/1982	McCreery .	
4,340,324	7/1982	McCreery .	
4,629,371	12/1986	Maeda et al. .	
4,787,784	11/1988	Bernadic et al. .	
4,846,609	7/1989	Bernadic et al. .	
4,856,942	8/1989	Bernadic et al. .	
4,859,122	8/1989	Patterson et al. .	
4,880,338	11/1989	Stashko .	
4,915,548	4/1990	Fouquer et al. .	
4,934,879	6/1990	van Barneveld .	
4,941,780	7/1990	Takashashi .	
4,963,061	10/1990	Katbi et al. .	
5,141,367	8/1992	Beeghly et al. .	
5,147,159	9/1992	Lowe et al. .	
5,192,171	3/1993	Ther et al. .	
5,193,947	3/1993	Bernadic et al. .	
5,203,649	4/1993	Katbi et al. .	
5,207,748	5/1993	Katbi et al. .	

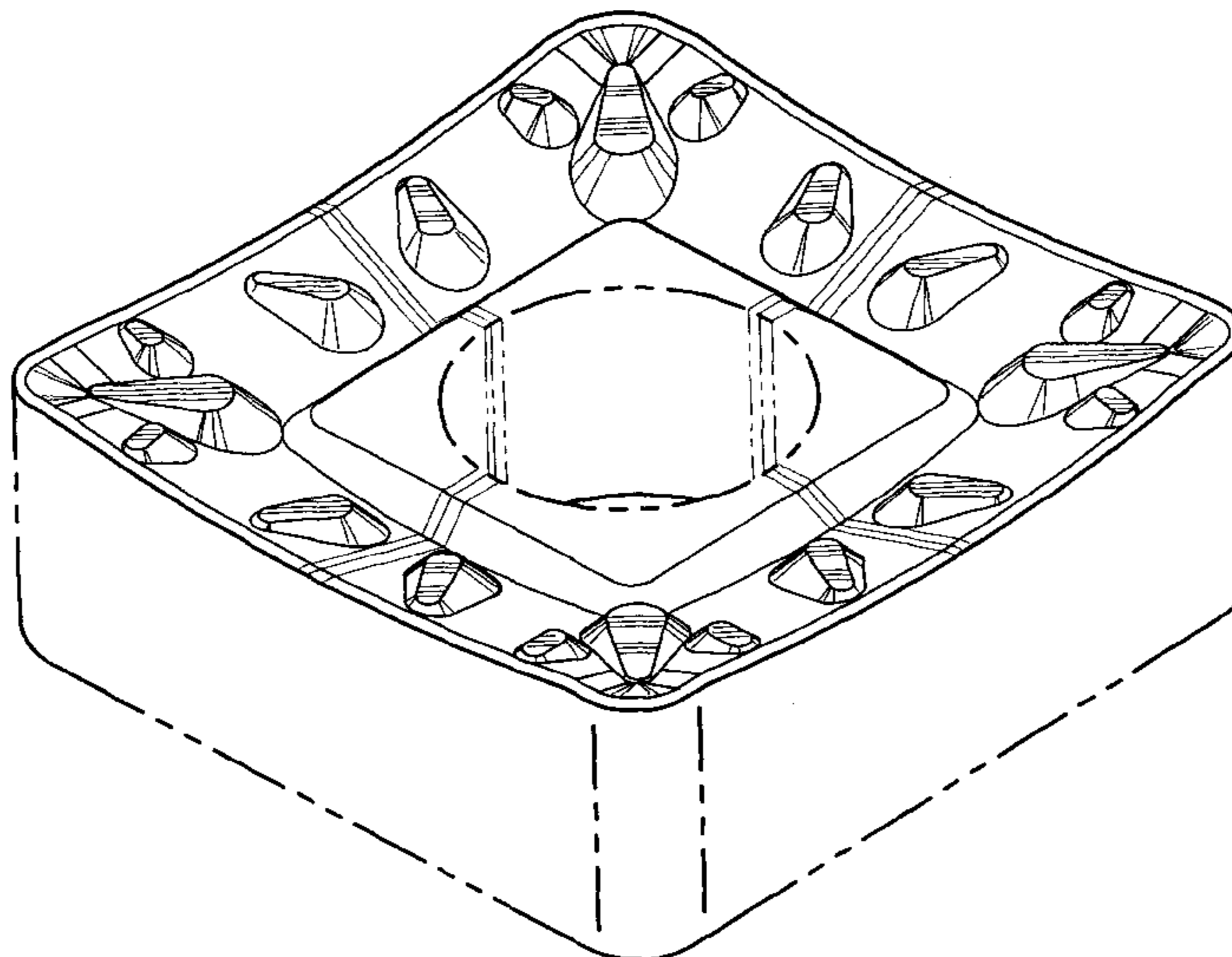
[57] **CLAIM**

The ornamental design for a polygonal indexable cutting insert, as shown.

DESCRIPTION

FIG. 1 is a perspective view of an polygonal indexable cutting insert showing a first form of our new design; FIG. 2 is a top plan view of the insert of FIG. 1; FIG. 3 is a side view of the insert of FIG. 1; FIG. 4 is a sectional view of the insert of FIG. 2 taken along the line 4—4; FIG. 5 is a sectional view of the insert of FIG. 2 taken along the line 5—5; FIG. 6 is a view of an indexable cutting insert showing a second form of our new design; FIG. 7 is a view of an indexable cutting insert showing a third form of our new design.

1 Claim, 3 Drawing Sheets



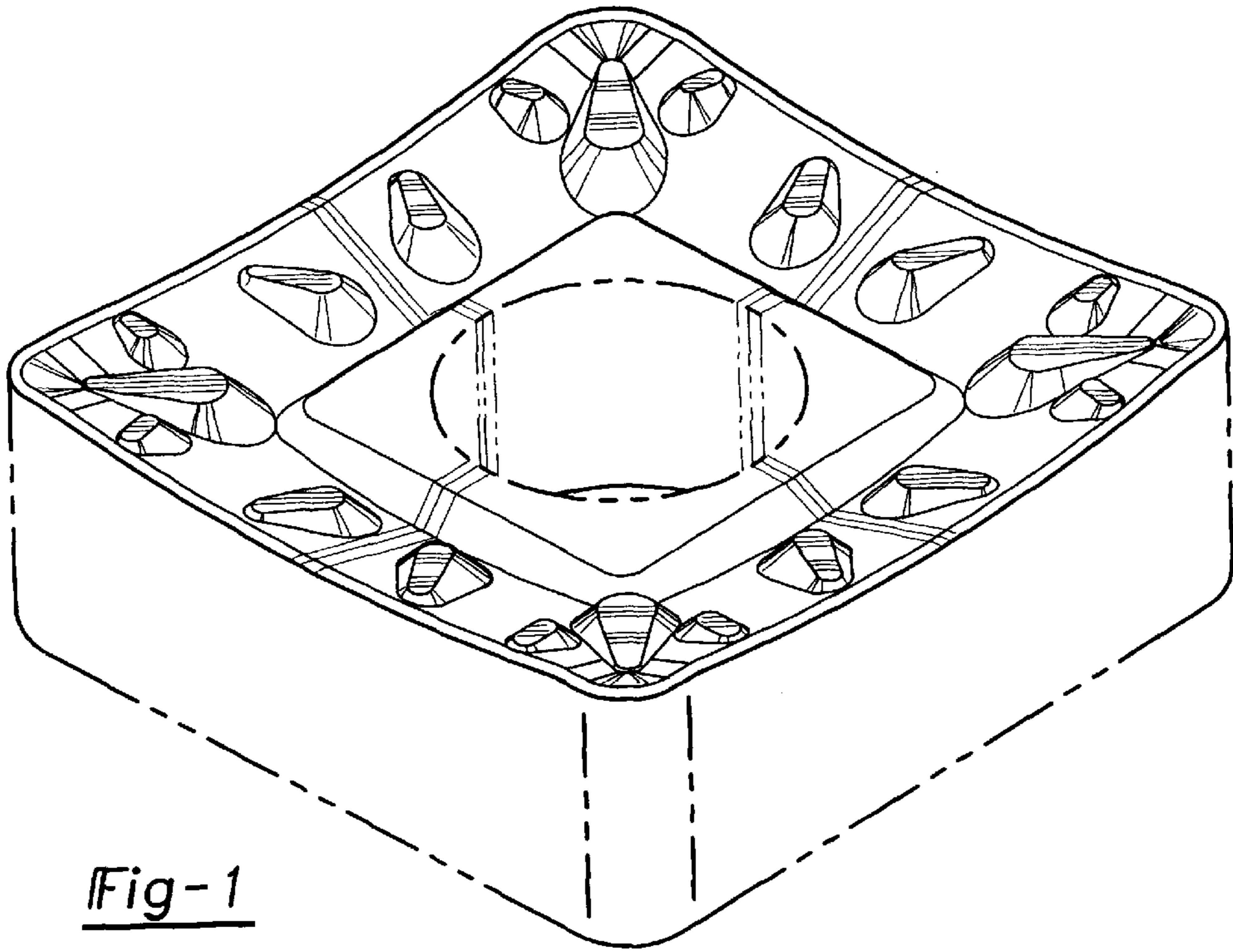


Fig-1

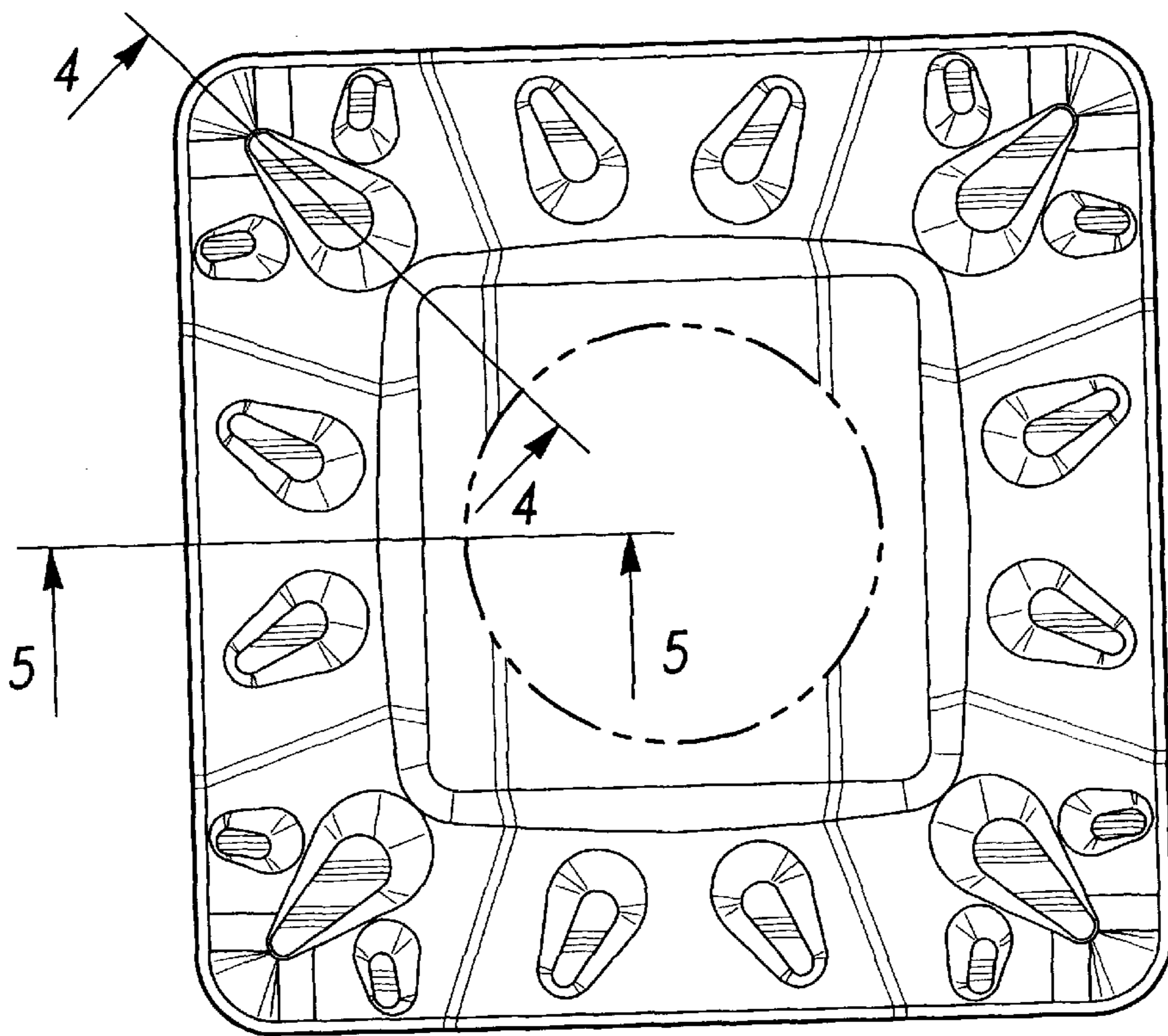


Fig-2

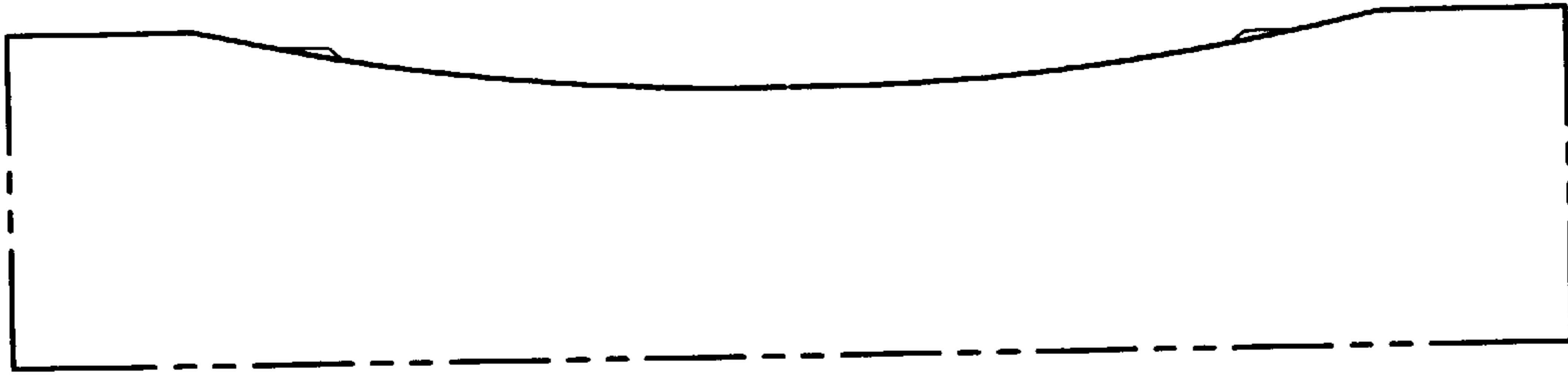


Fig-3

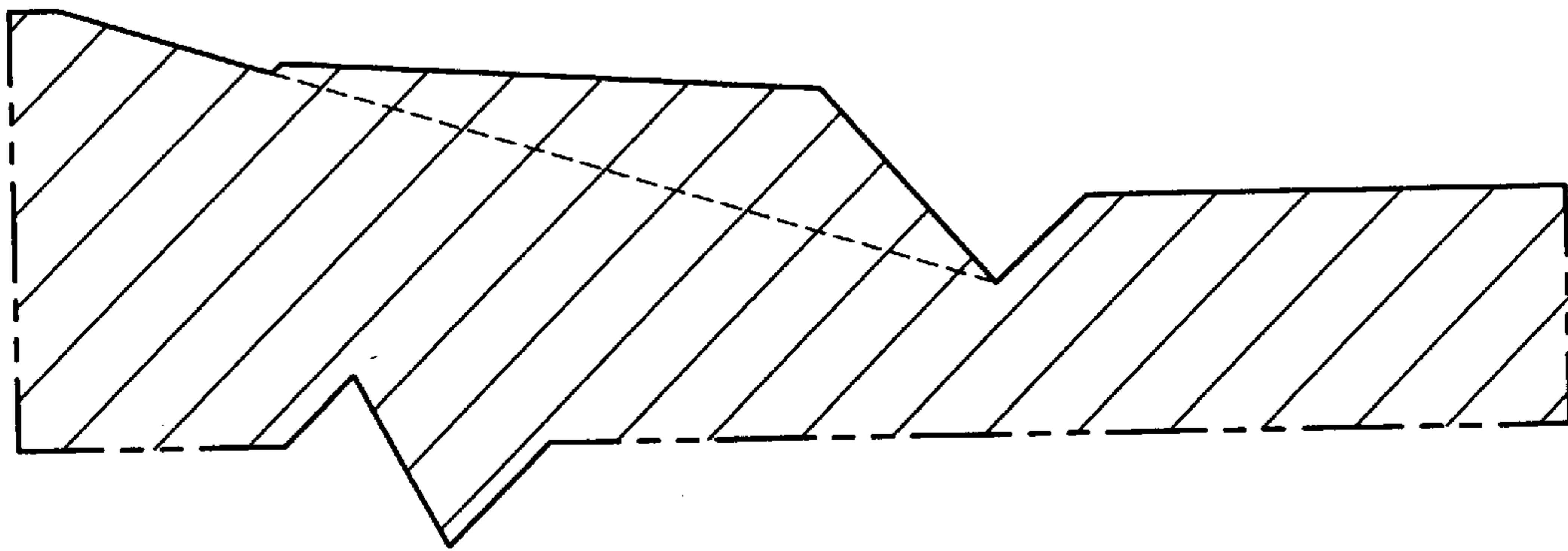


Fig-4

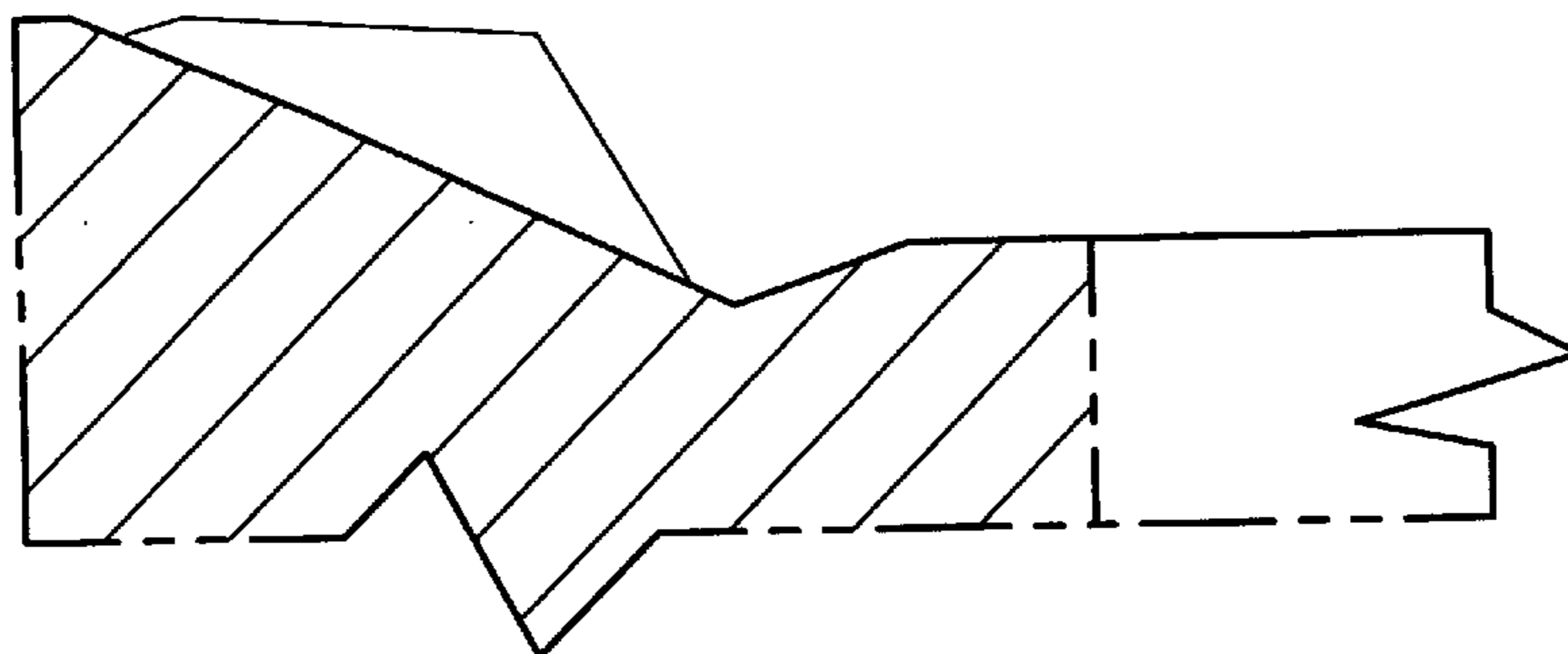


Fig-5

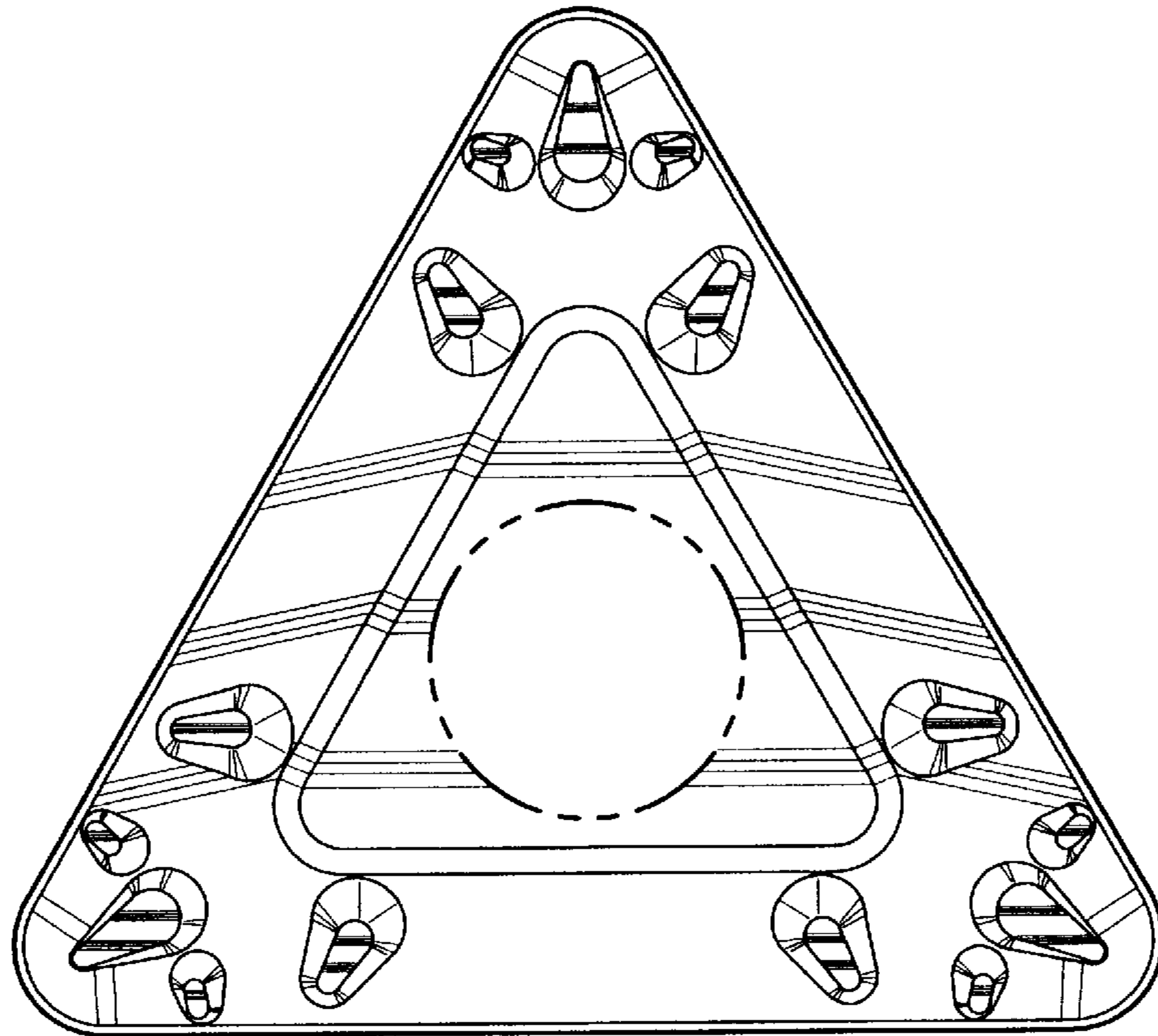


Fig-6

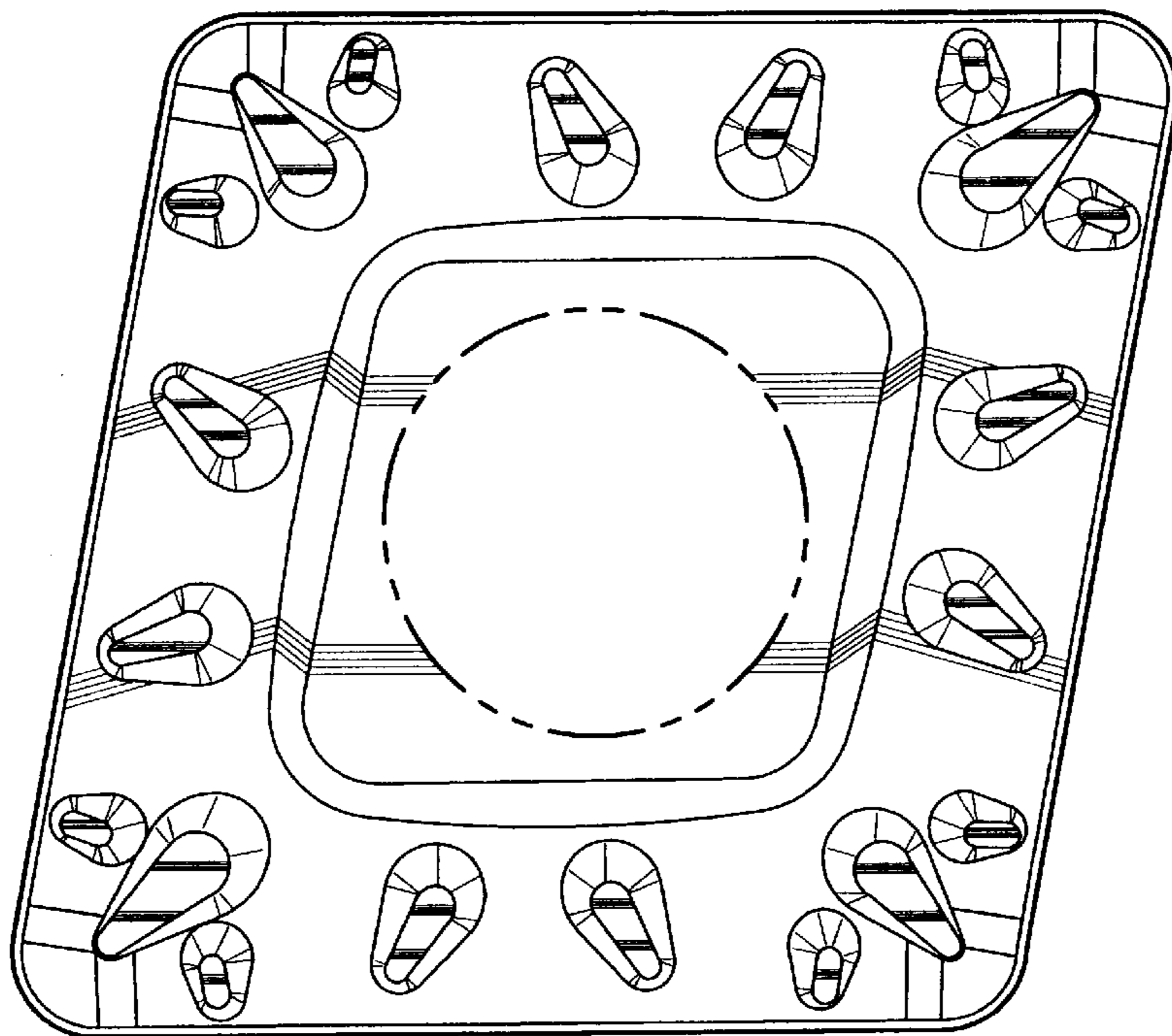


Fig-7