



US00D858594S

(12) **United States Design Patent** (10) **Patent No.:** **US D858,594 S**
Sharivker et al. (45) **Date of Patent:** **** Sep. 3, 2019**

(54) **SOLID END MILL**

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

(Continued)

Primary Examiner — Khawaja Anwar

(21) Appl. No.: **29/608,362**

(74) *Attorney, Agent, or Firm* — Matthew S. Bedsole

(22) Filed: **Jun. 21, 2017**

(57) **CLAIM**

(30) **Foreign Application Priority Data**

We claim the ornamental design for a solid end mill, as shown and described.

Dec. 20, 2016 (IL) 249676

DESCRIPTION

(51) **LOC (12) Cl.** **15-03**

FIG. 1 is a perspective top view of a solid end mill showing the first embodiment of our new design;

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

FIG. 2 is a side view of the solid end mill of FIG. 1;

USPC **D15/139**

FIG. 3 is a top view of the solid end mill of FIG. 1;

(58) **Field of Classification Search**

FIG. 4 is a bottom view of the cutting insert and bolster of FIG. 1;

USPC D15/21, 138, 139; D8/1, 3, 8, 98

FIG. 5 is a perspective top view of a solid end mill showing the second embodiment of our new design;

CPC B23K 26/032; B23K 11/0026; B23K

FIG. 6 is a side view of the solid end mill of FIG. 5;

11/062; B23K 11/066; B23K 11/0873;

FIG. 7 is a top view of the solid end mill of FIG. 5;

B23K 11/0876; B23K 11/115; B23K

FIG. 8 is a bottom view of the cutting insert and bolster of FIG. 5;

11/24; B23K 11/248; B23K 11/252;

FIG. 9 is a perspective top view of a solid end mill showing the third embodiment of our new design;

B23K 11/257; B23K 11/3018; B23K

FIG. 10 is a side view of the solid end mill of FIG. 9;

11/3054; B23K 11/36; B23K 15/0013;

FIG. 11 is a top view of the solid end mill of FIG. 9; and,

B23K 15/02; B23K 15/08; B23K 15/085;

FIG. 12 is a bottom view of the cutting insert and bolster of FIG. 9.

B23K 1/0014; B23K 1/0018; B23K

The broken line showings of FIGS. 1-12 are included for the purposes of illustrating portions of the solid end mill and form no part of the claimed design.

1/0056; B23K 20/12;

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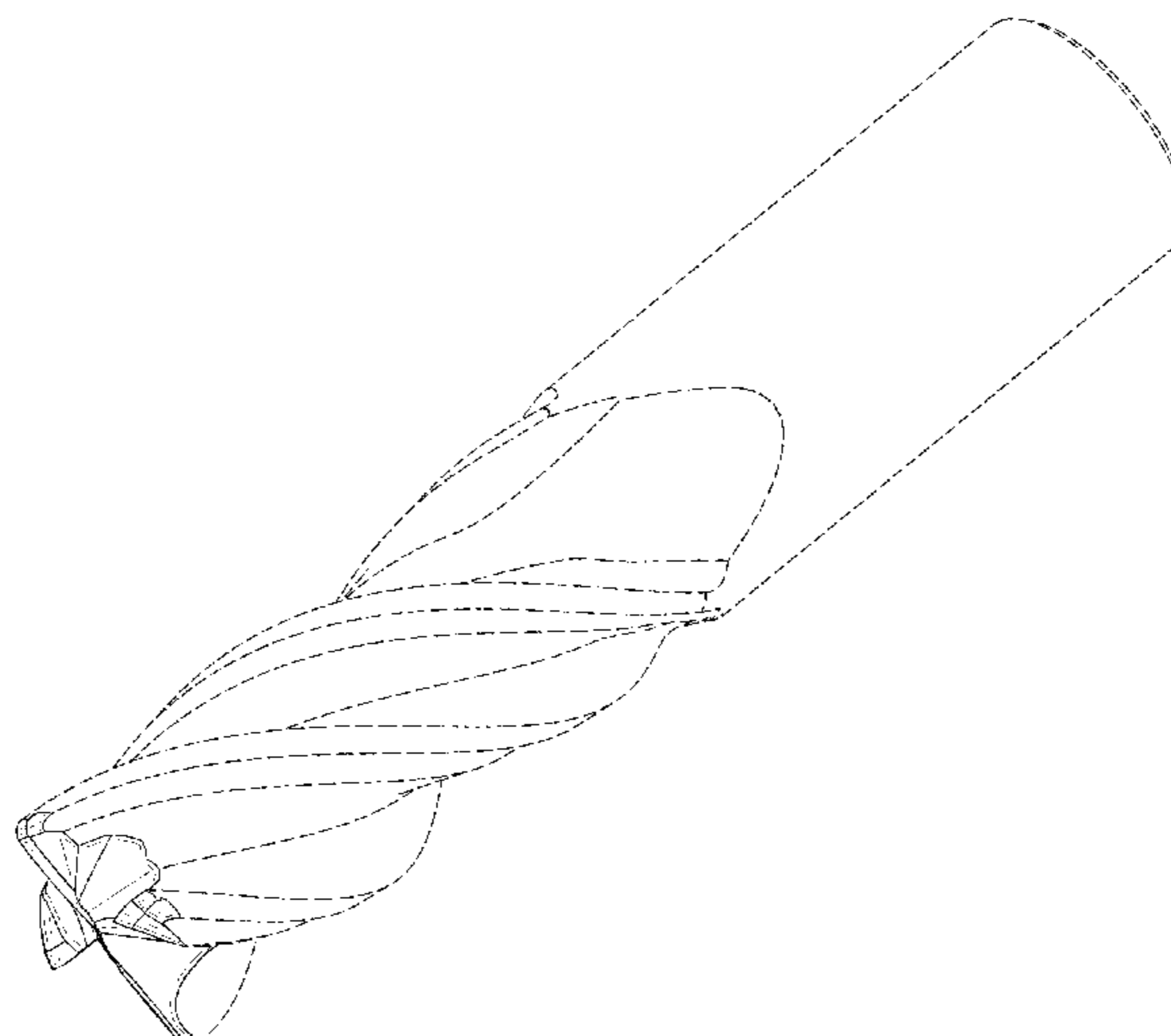
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1 Claim, 9 Drawing Sheets



(58) **Field of Classification Search**

CPC B23K 20/1215; B23K 2201/001; B23K 2201/04; B23K 2201/125; B23K 2203/04; B23K 2203/10; B23K 2203/16; B23K 2203/26; B23K 2203/42; B23K 2203/52; B23K 26/03; B23K 26/034; B23K 26/044; B23K 26/0619; B23K 26/123; B23K 26/1429; B23K 26/20; B23K 26/28; B23K 26/362; B23K 26/38; B23K 26/382; B23K 31/02; B23K 31/12; B23K 35/0222; B23K 35/0244; B23K 35/025; B23K 35/0261; B23K 35/286; B23K 35/3006; B23K 35/3013; B23K 35/302; B23K 35/3033; B23K 35/3046; B23K 35/327; B23K 35/36; B23K 35/3603; B23K 35/3605; B23K 35/3613; B23K 35/365; B23K 37/04; B23K 9/02; B23K 9/073; B23K 9/091; B23K 9/092; B23K 9/095; B23K 9/0956; B23K 9/1006

See application file for complete search history.

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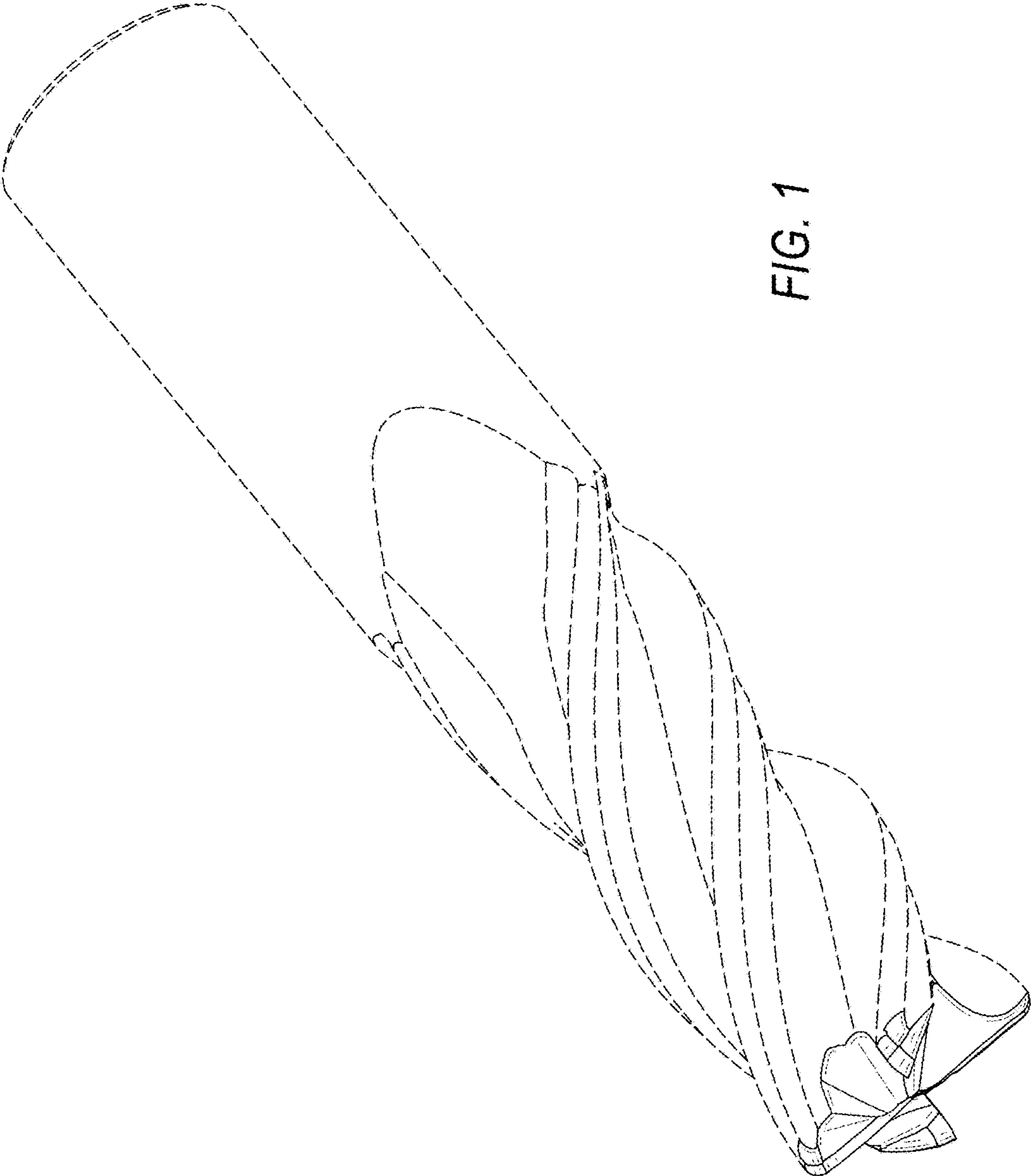


FIG. 1

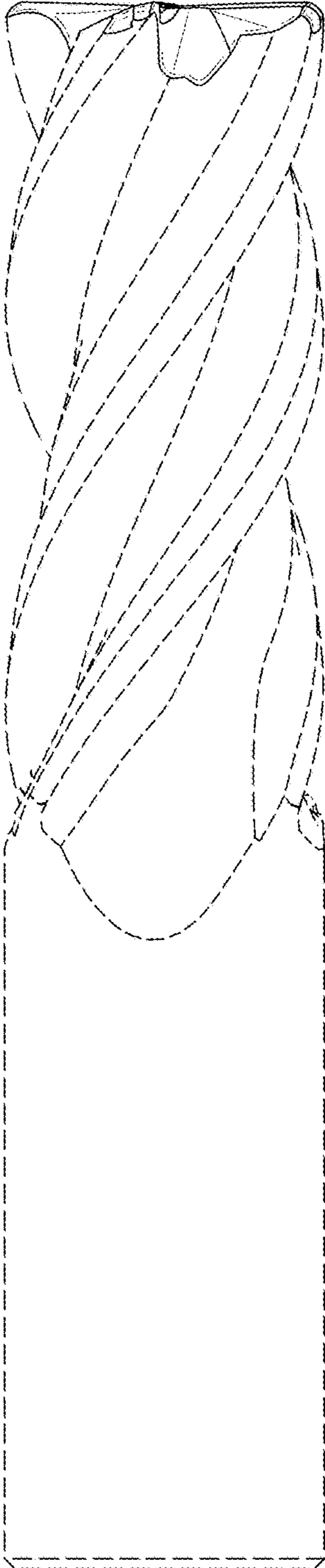


FIG. 2

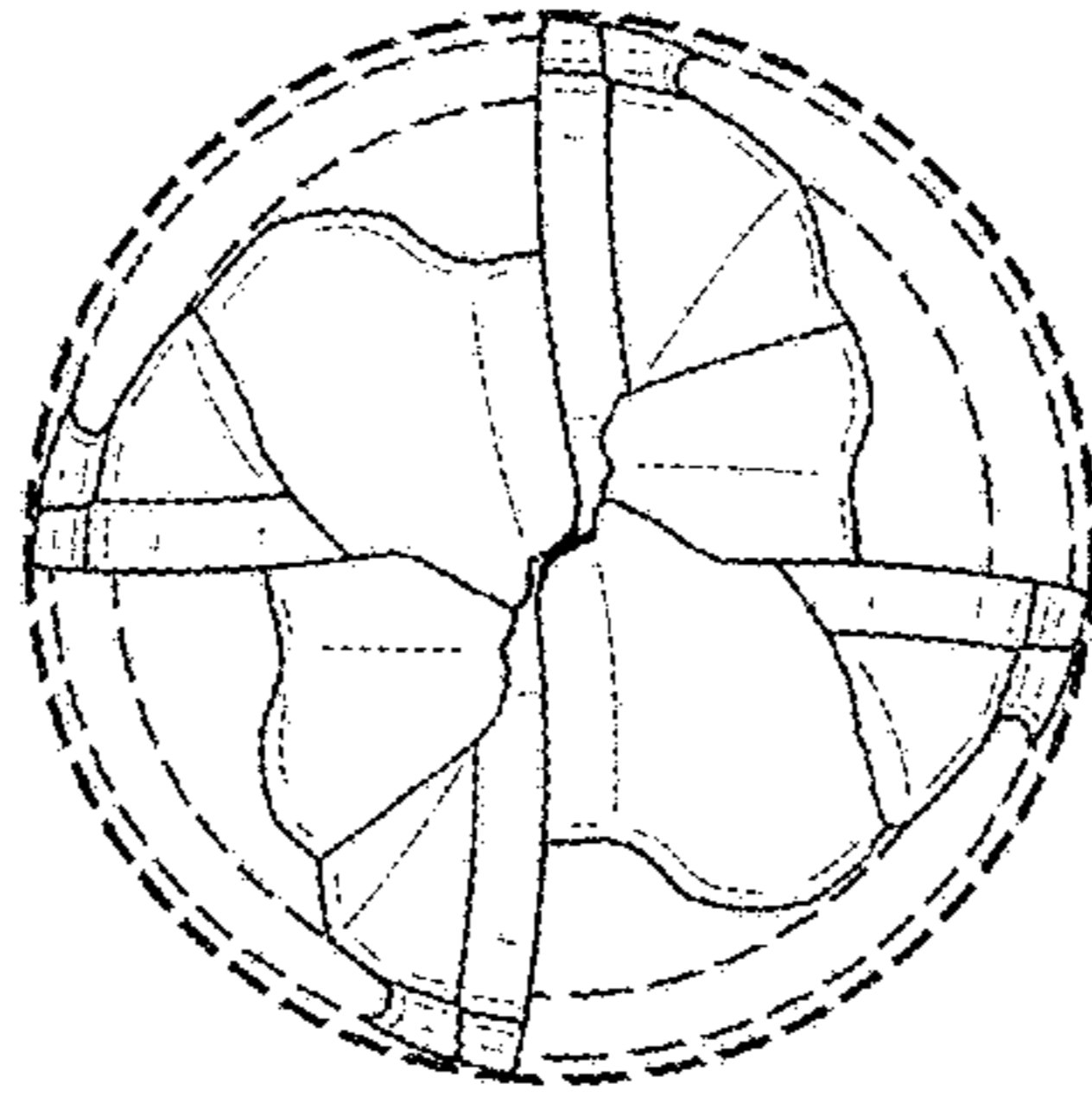


FIG. 3

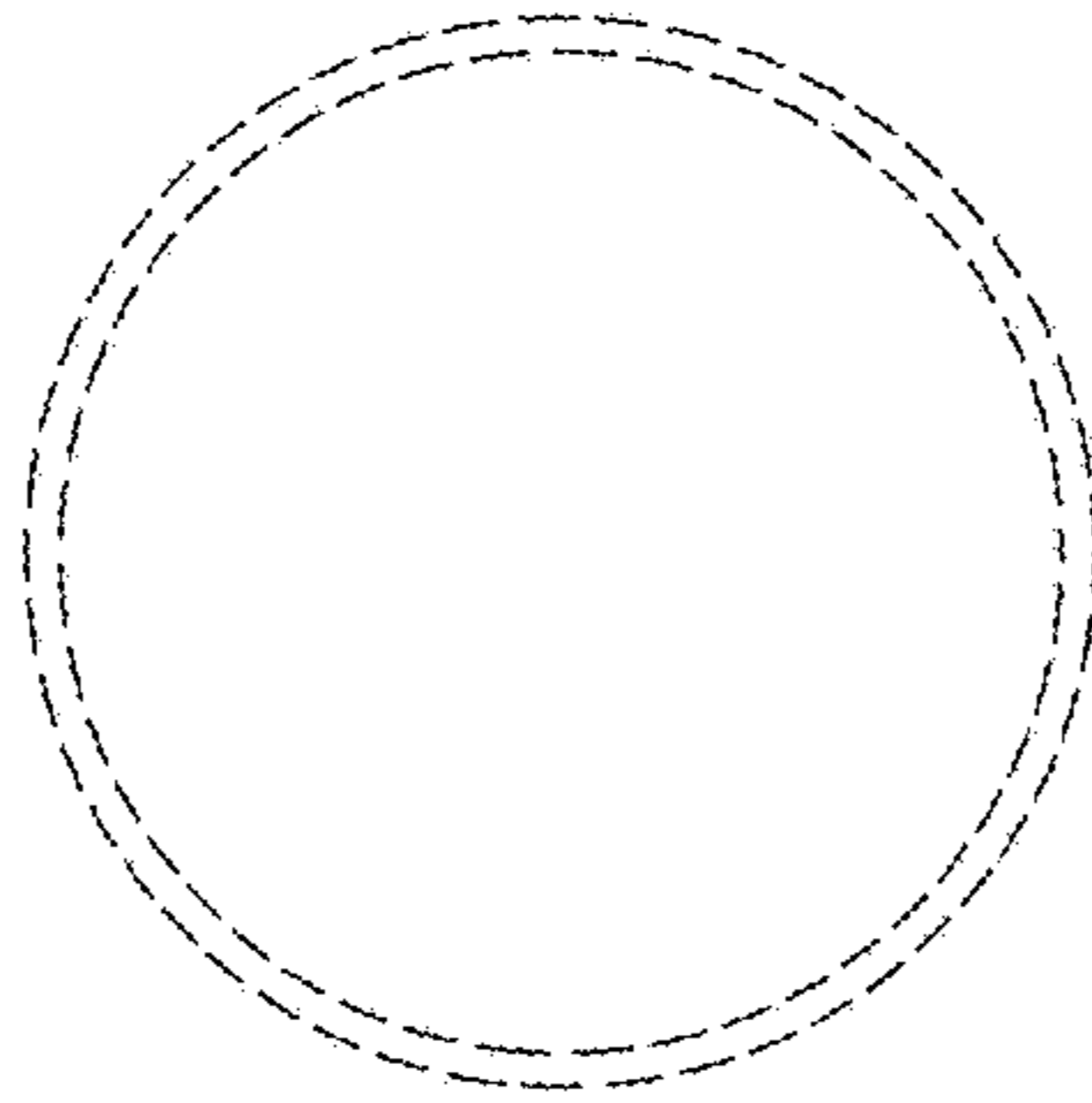


FIG. 4

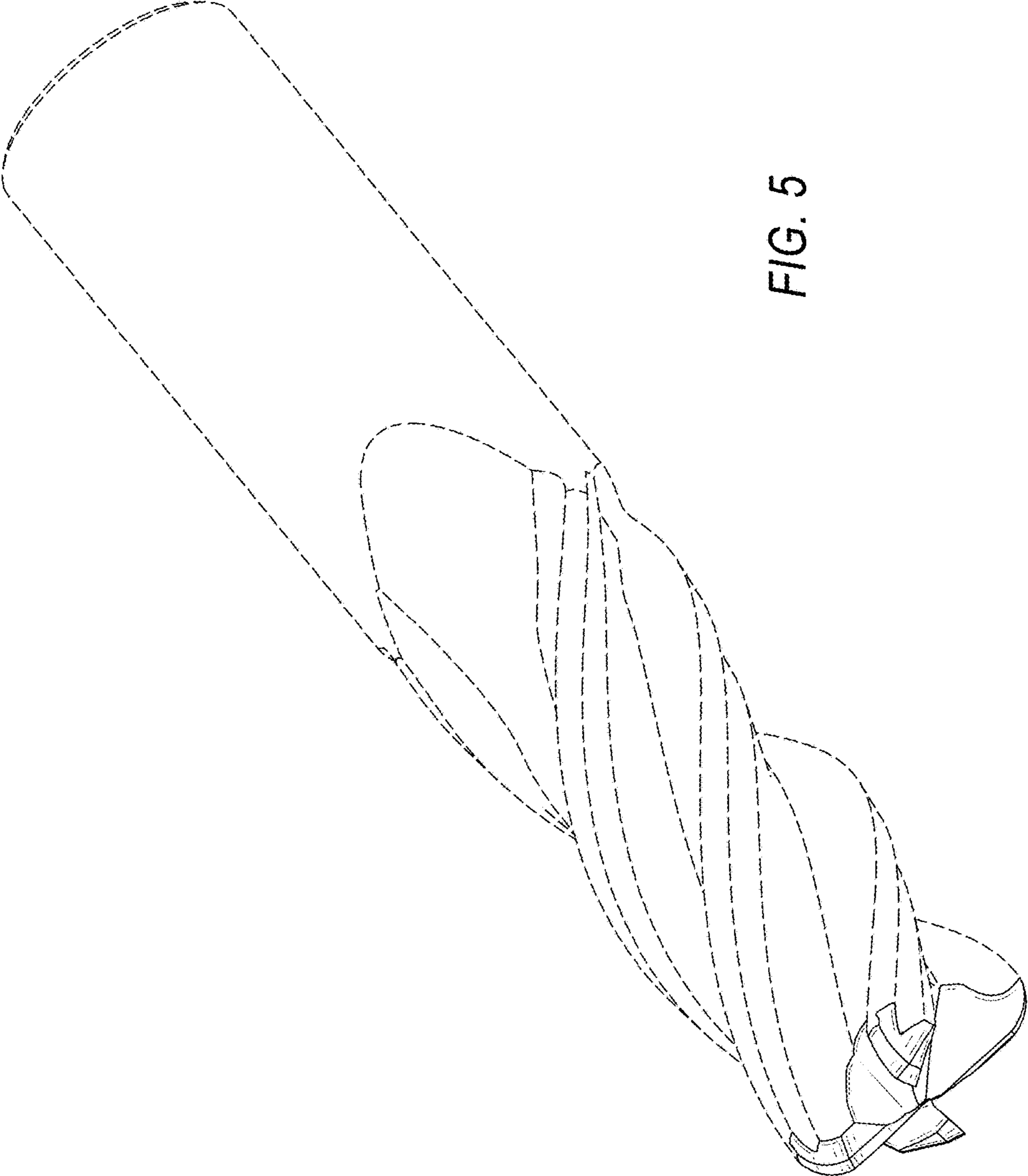


FIG. 5

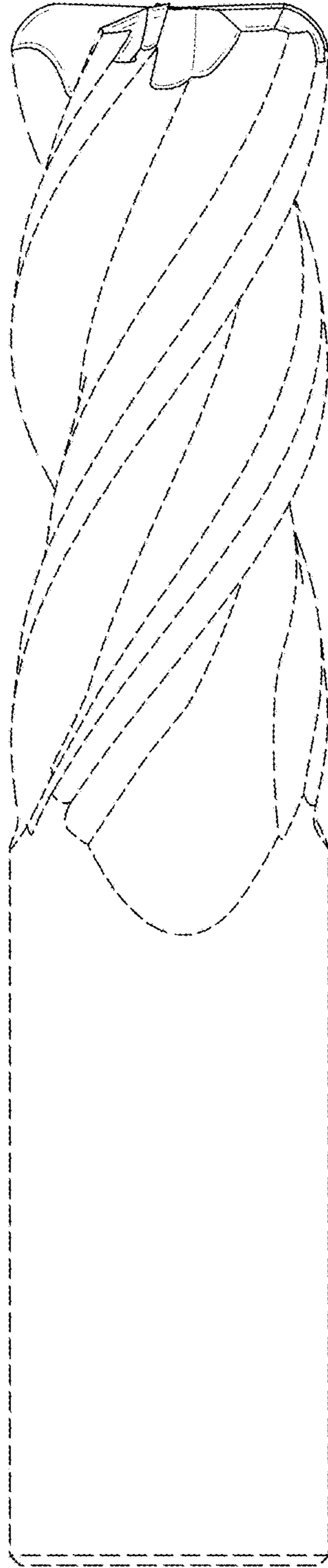


FIG. 6

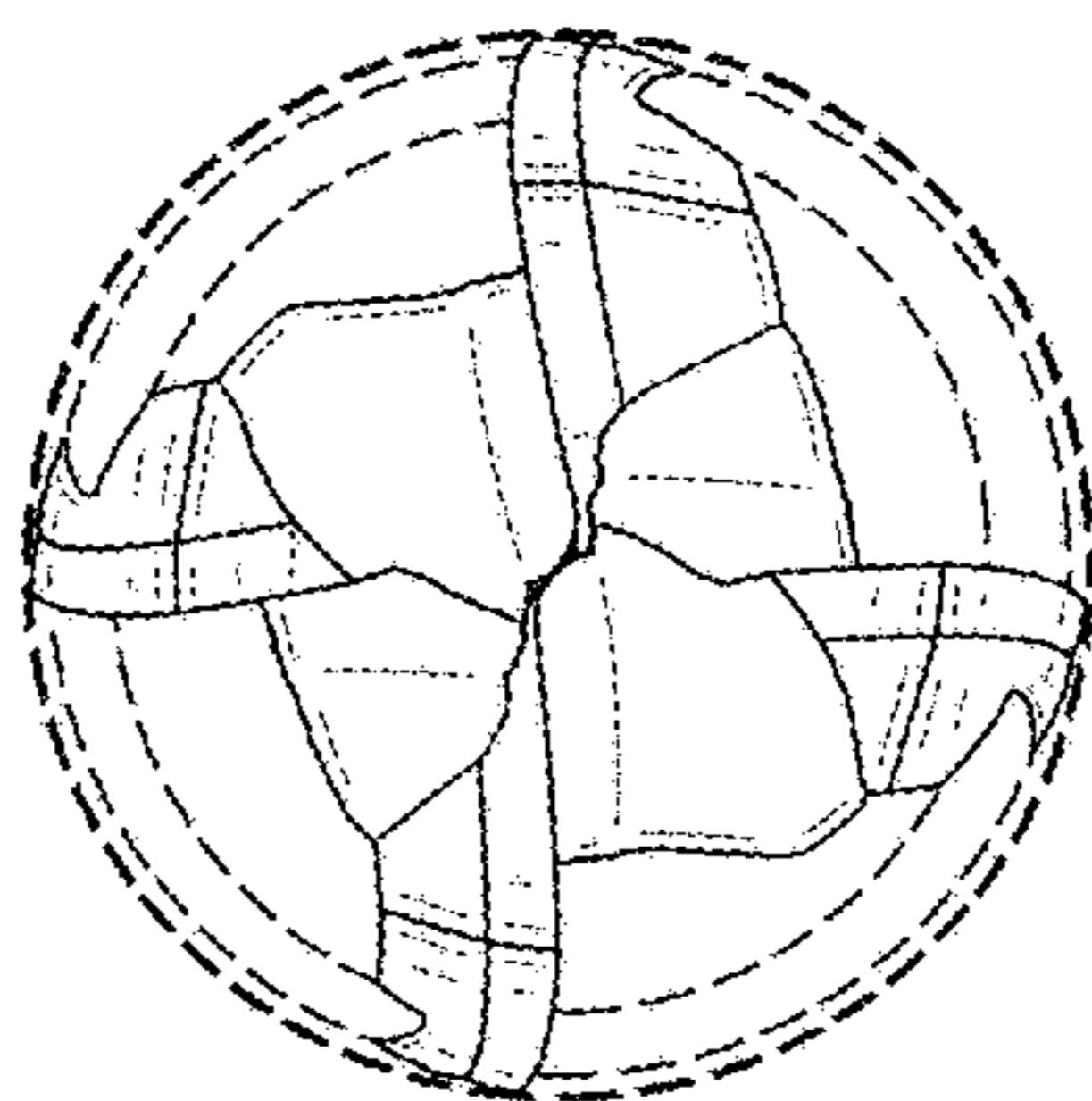


FIG. 7

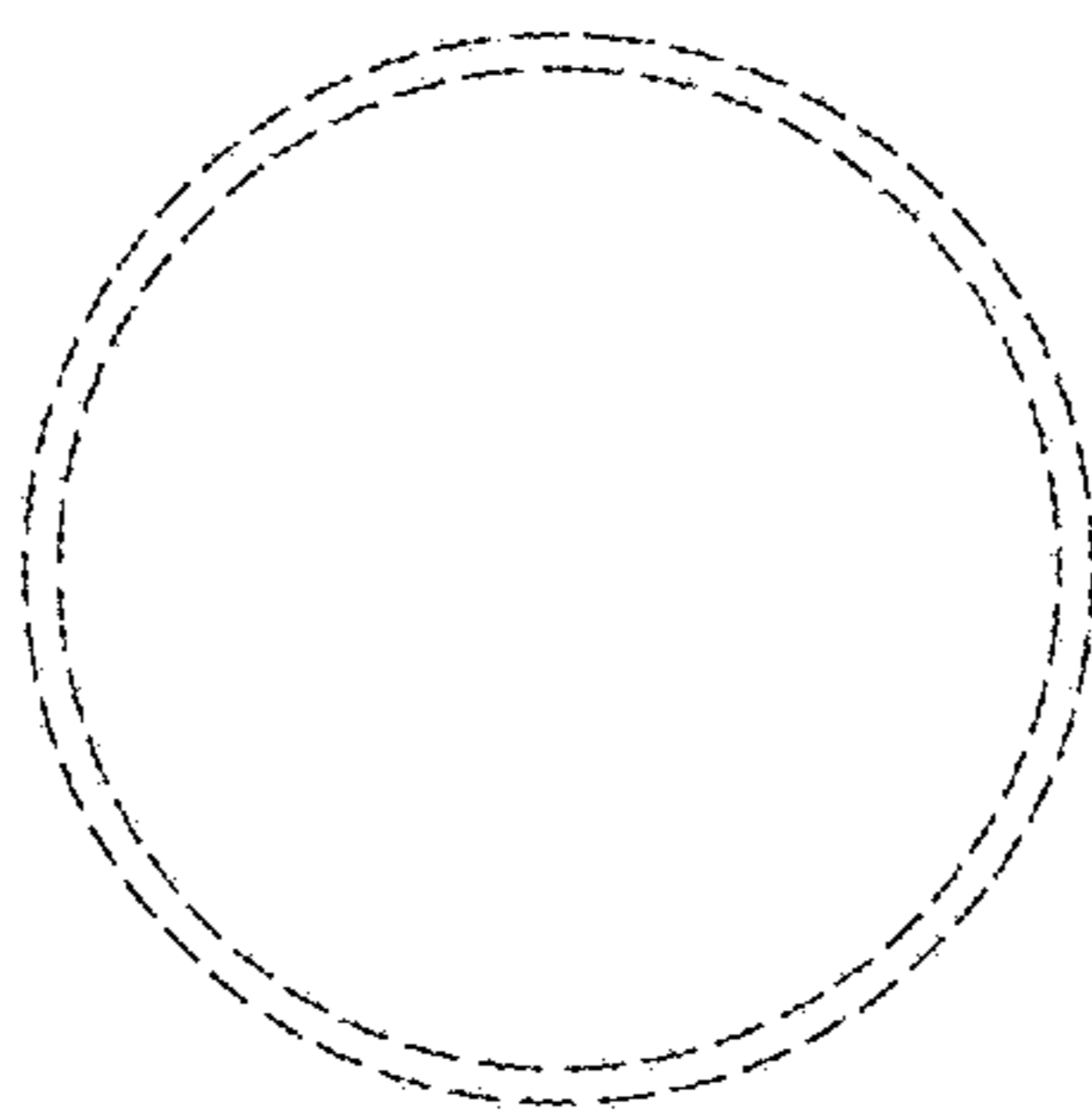


FIG. 8

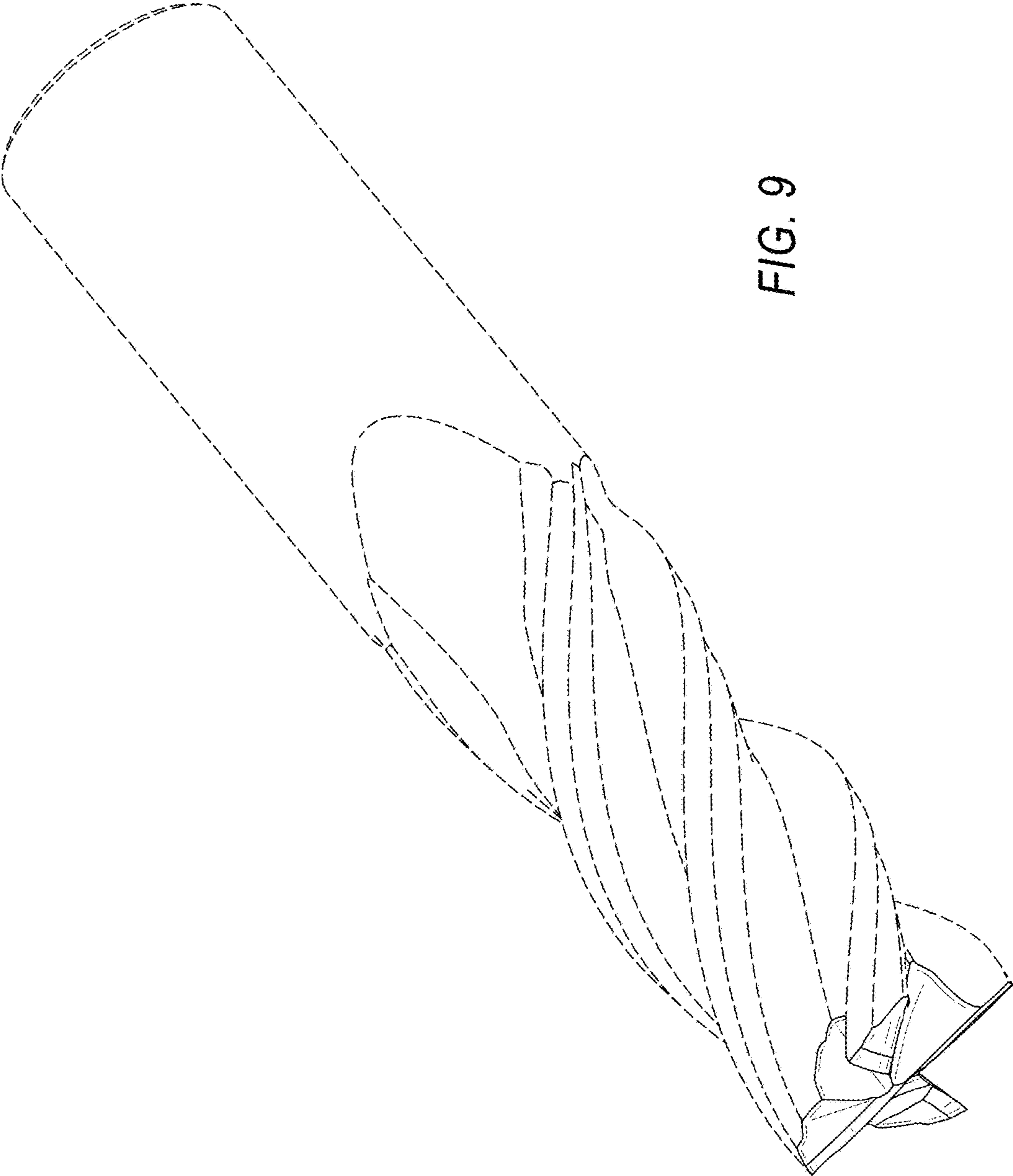


FIG. 9

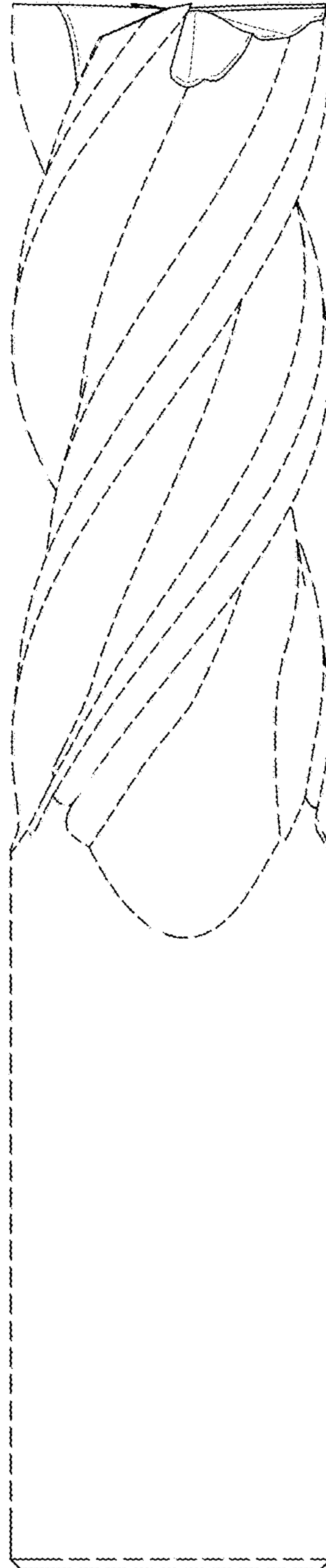


FIG. 10

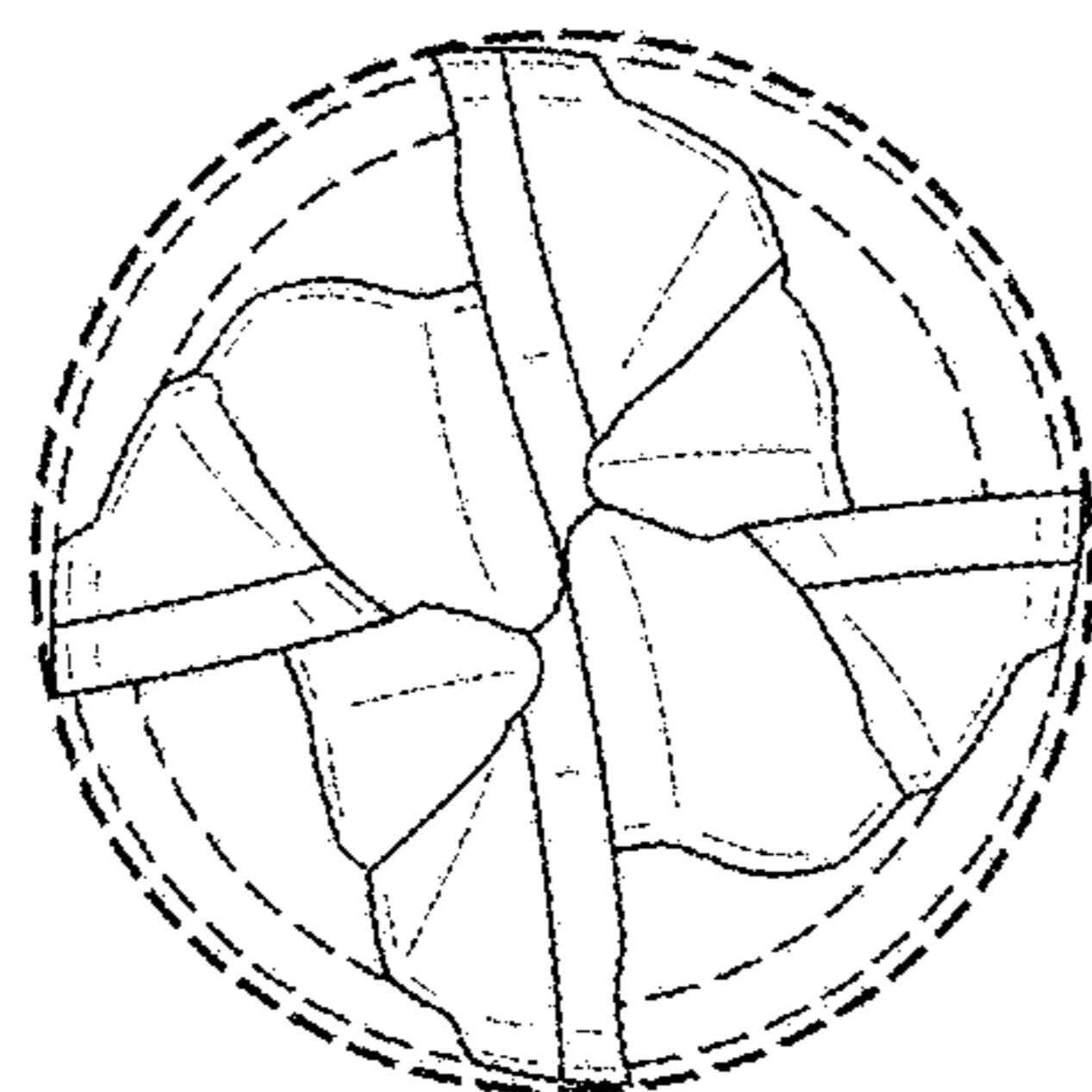


FIG. 11

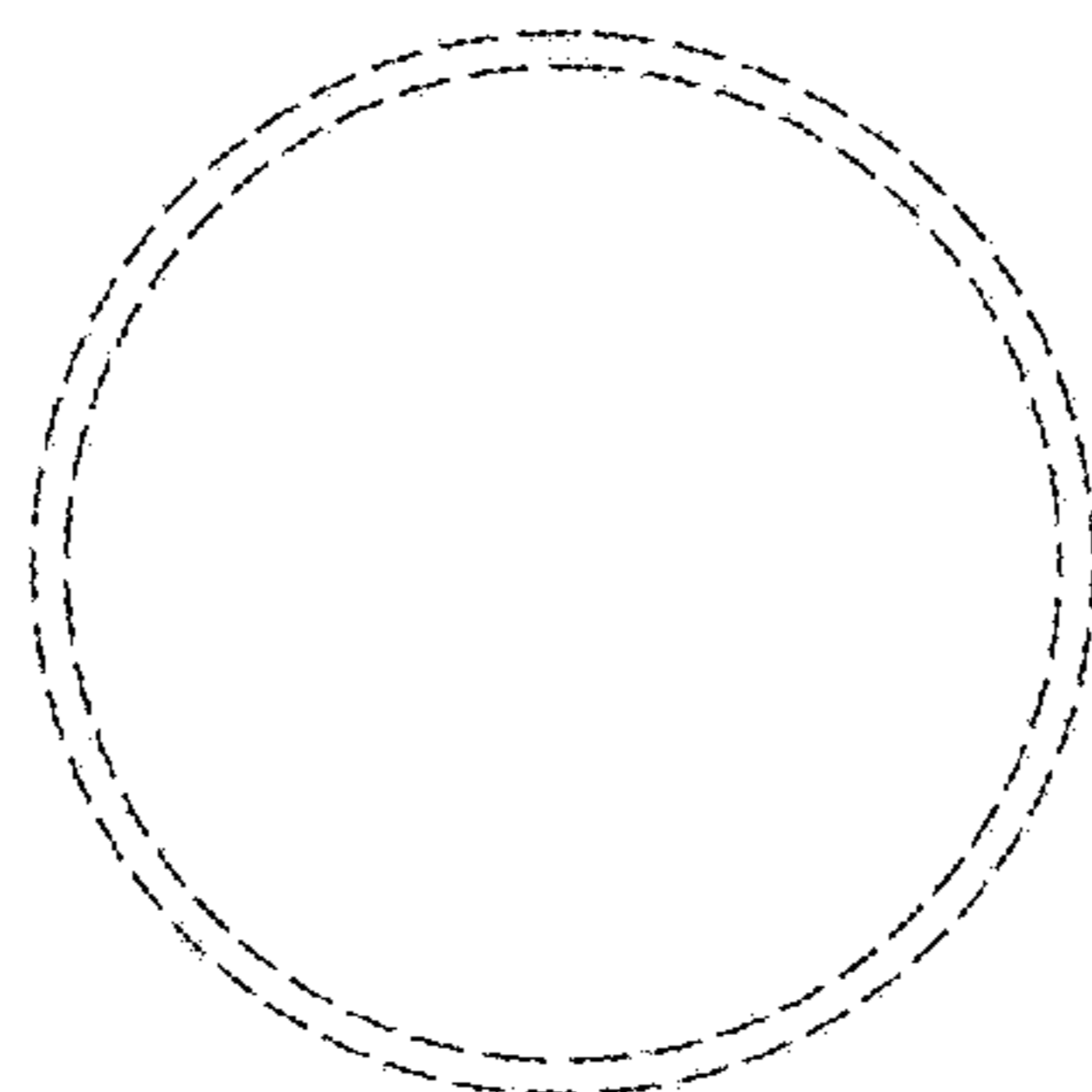


FIG. 12