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(12) **United States Design Patent**  
**Lyon**

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(54) **DRILL BIT FOR A DOWN-THE-HOLE DRILL HAMMER**

(71) Applicant: **Center Rock Inc.**, Berlin, PA (US)

(72) Inventor: **Leland H. Lyon**, Roanoke, VA (US)

(73) Assignee: **Center Rock Inc.**, Berlin, PA (US)

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

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**Related U.S. Application Data**

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(51) **LOC (12) Cl.** ..... **15-09**

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

(58) **Field of Classification Search**  
USPC ..... D8/6; D15/28, 131, 132, 138, 139  
CPC ..... E21B 10/36; E21B 10/38; E21B 10/46;  
E21B 10/56  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

|           |      |         |               |       |                       |
|-----------|------|---------|---------------|-------|-----------------------|
| 3,918,538 | A *  | 11/1975 | Bender        | ..... | E21B 10/26<br>175/417 |
| 4,073,354 | A    | 2/1978  | Rowley et al. |       |                       |
| 4,323,130 | A    | 4/1982  | Dennis        |       |                       |
| 4,919,221 | A *  | 4/1990  | Pascale       | ..... | E21B 10/36<br>173/132 |
| 5,890,551 | A *  | 4/1999  | Liljebrand    | ..... | E21B 10/56<br>175/414 |
| 6,039,127 | A *  | 3/2000  | Myers         | ..... | E21B 10/38<br>175/425 |
| 6,435,288 | B1 * | 8/2002  | Dobran        | ..... | E21B 10/38<br>175/393 |

|              |      |         |             |       |                         |
|--------------|------|---------|-------------|-------|-------------------------|
| D496,948     | S *  | 10/2004 | Charland    | ..... | D15/139                 |
| 7,117,939    | B1 * | 10/2006 | Hawley      | ..... | E21B 10/36<br>166/99    |
| 7,290,626    | B2 * | 11/2007 | Terlet      | ..... | E21B 10/38<br>175/296   |
| D611,512     | S *  | 3/2010  | Sundin      | ..... | D15/139                 |
| D611,970     | S *  | 3/2010  | Sundin      | ..... | D15/139                 |
| D705,827     | S *  | 5/2014  | Hammargren  | ..... | D15/139                 |
| D831,714     | S *  | 10/2018 | Osterholm   | ..... | D15/139                 |
| 2002/0153174 | A1 * | 10/2002 | Linden      | ..... | E21B 10/56<br>175/426   |
| 2004/0040752 | A1 * | 3/2004  | Brandenberg | ..... | B22D 19/06<br>175/420.1 |
| 2006/0060389 | A1 * | 3/2006  | Hadin       | ..... | E21B 10/38<br>175/415   |
| 2006/0162965 | A1 * | 7/2006  | Hadin       | ..... | E21B 10/36<br>175/296   |

(Continued)

*Primary Examiner* — Patricia A Palasik

(74) *Attorney, Agent, or Firm* — Kim IP Law Group PLLC

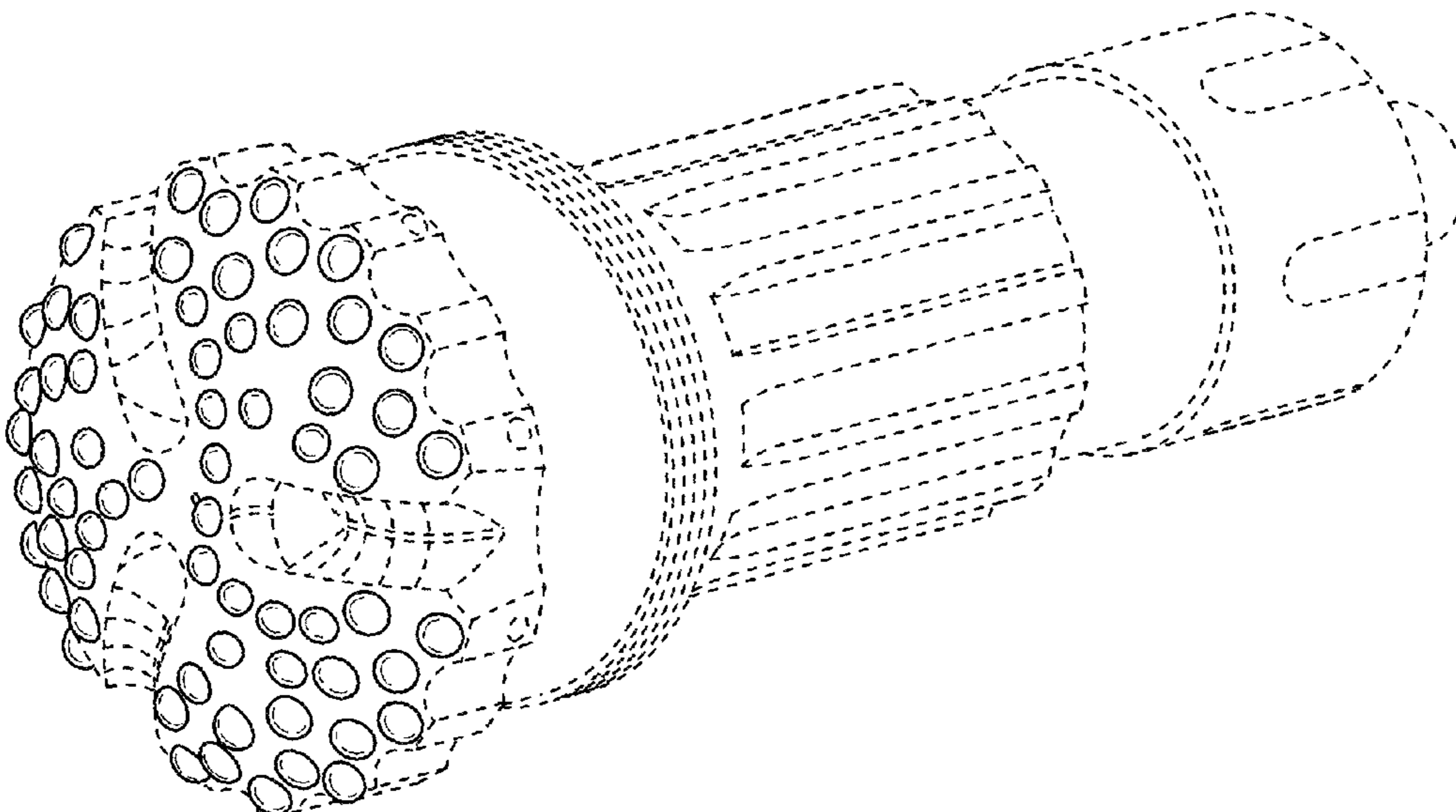
(57) **CLAIM**

The ornamental design for a drill bit for a down-the-hole drill hammer, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of a drill bit in accordance with the new design;  
FIG. 2 is a bottom plan view of the drill bit of FIG. 1;  
FIG. 3 is a right side elevation view of the drill bit of FIG. 1;  
FIG. 4 is a front side elevation view of the drill bit of FIG. 1;  
FIG. 5 is a left side elevation view of the drill bit of FIG. 1; and,  
FIG. 6 is a rear side elevation view of the drill bit of FIG. 1.  
The broken lines in FIGS. 1-6 illustrate portions of the drill bit which form no part of the claimed design.

**1 Claim, 3 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

2007/0137900 A1\* 6/2007 Bjork ..... E21B 10/38  
175/414  
2009/0321143 A1 12/2009 Lyon  
2011/0240373 A1 10/2011 Lyon et al.

\* cited by examiner

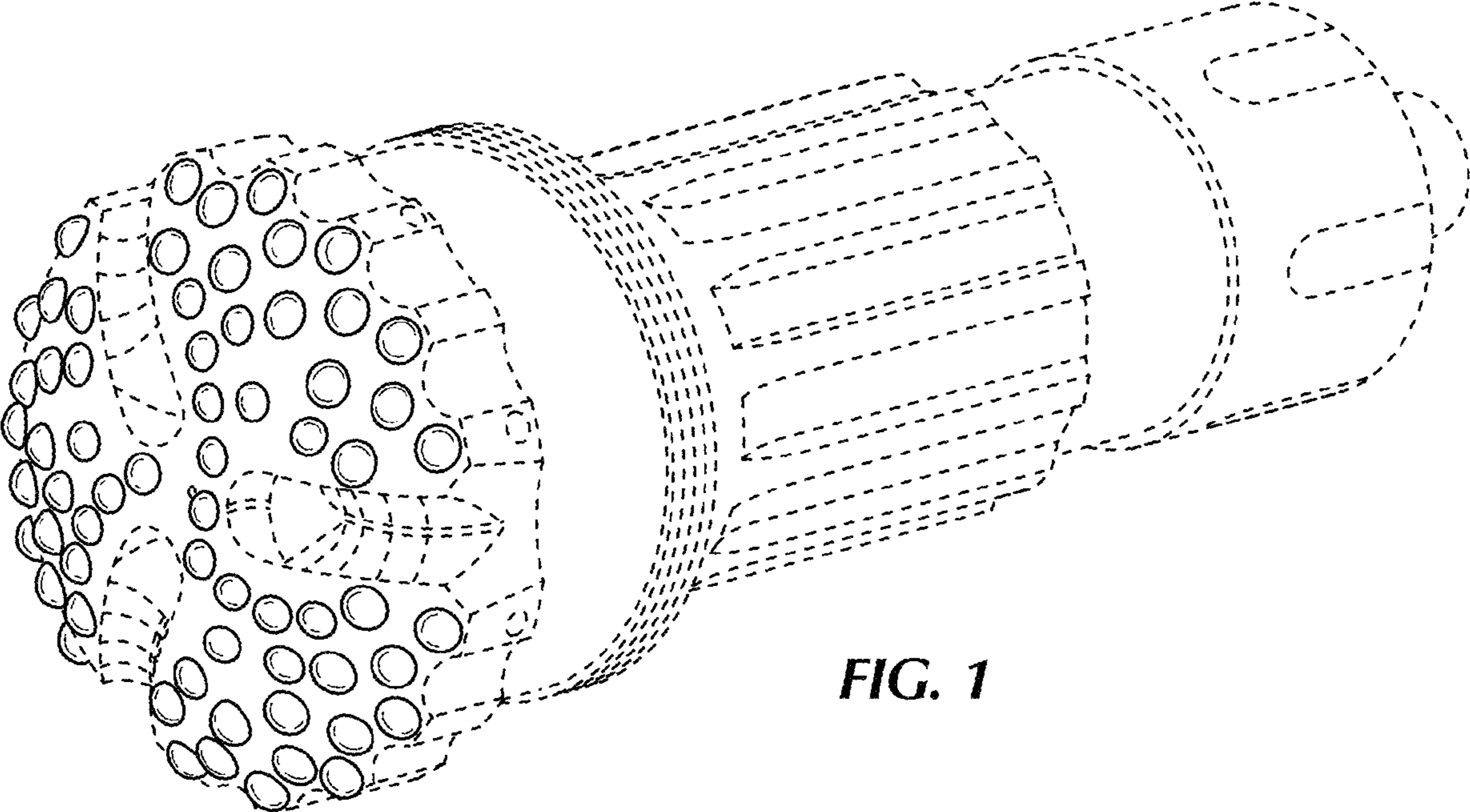


FIG. 1

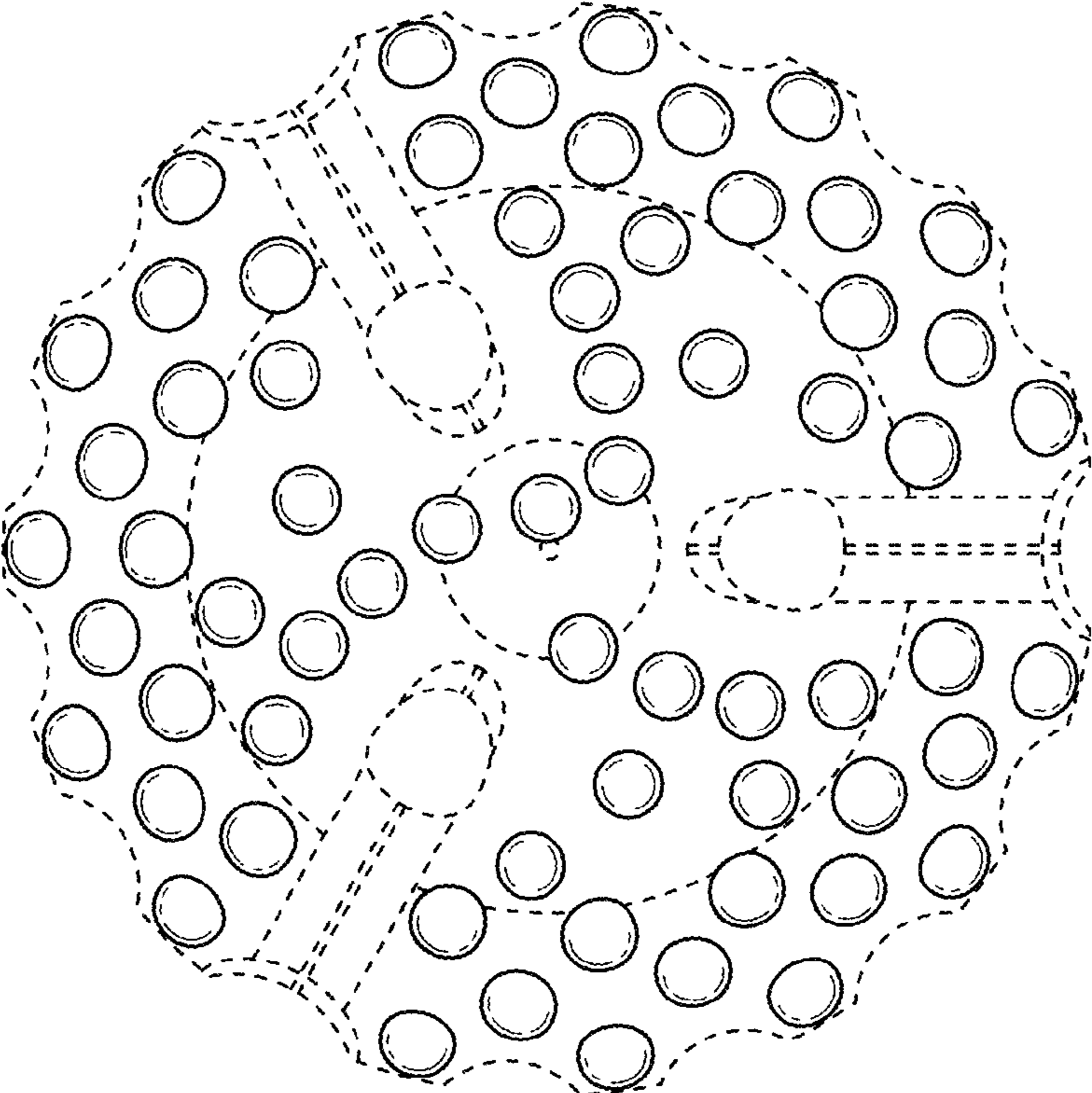


FIG. 2



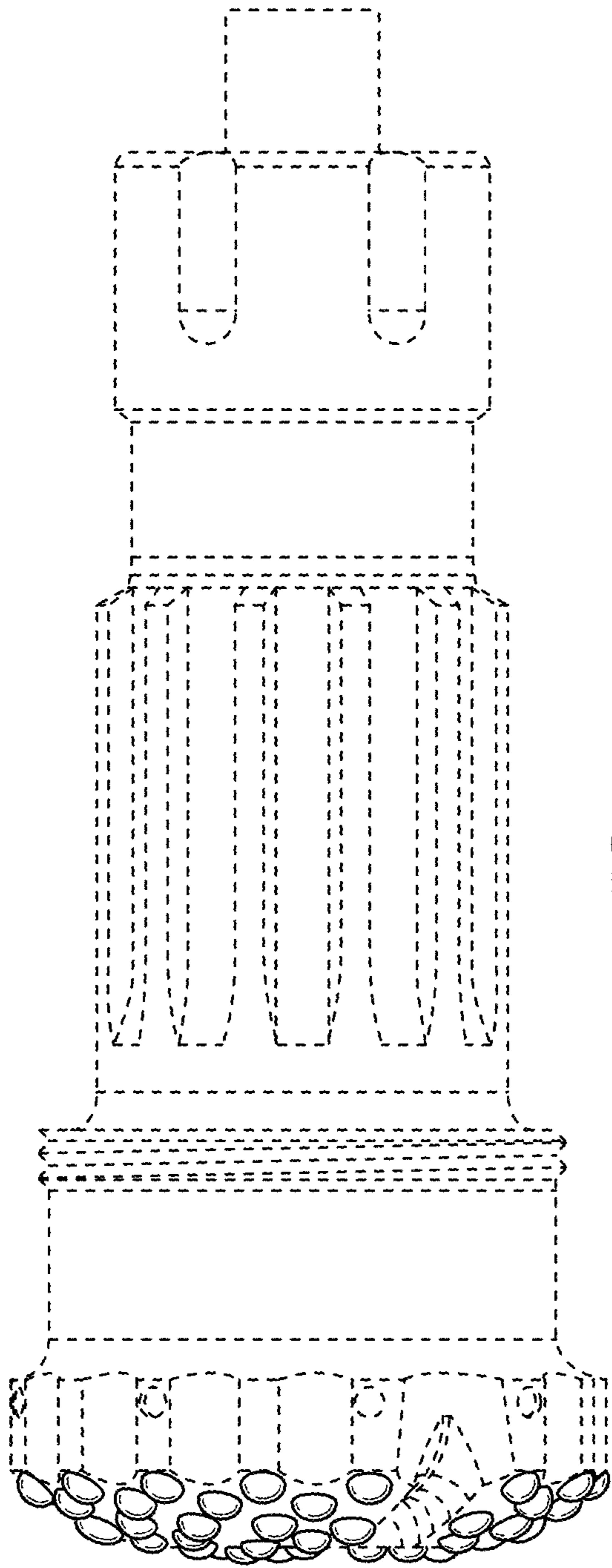


FIG. 3

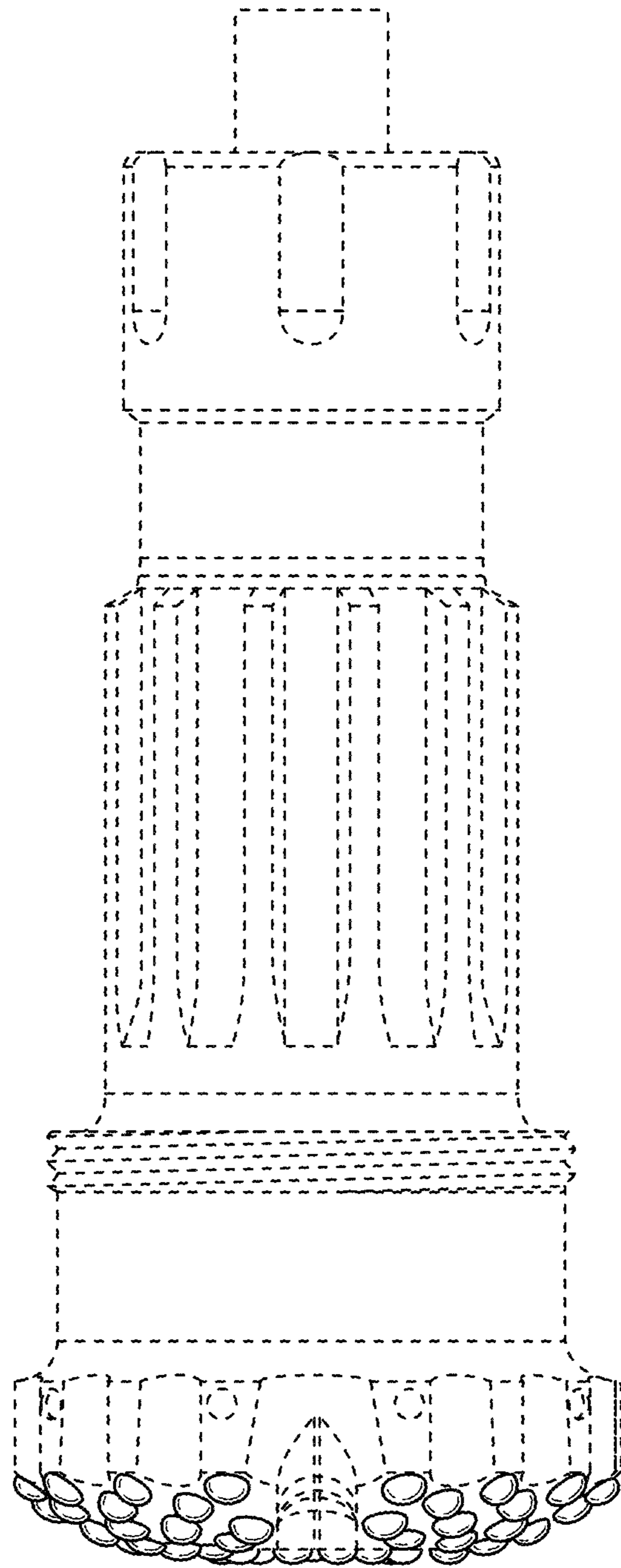


FIG. 4

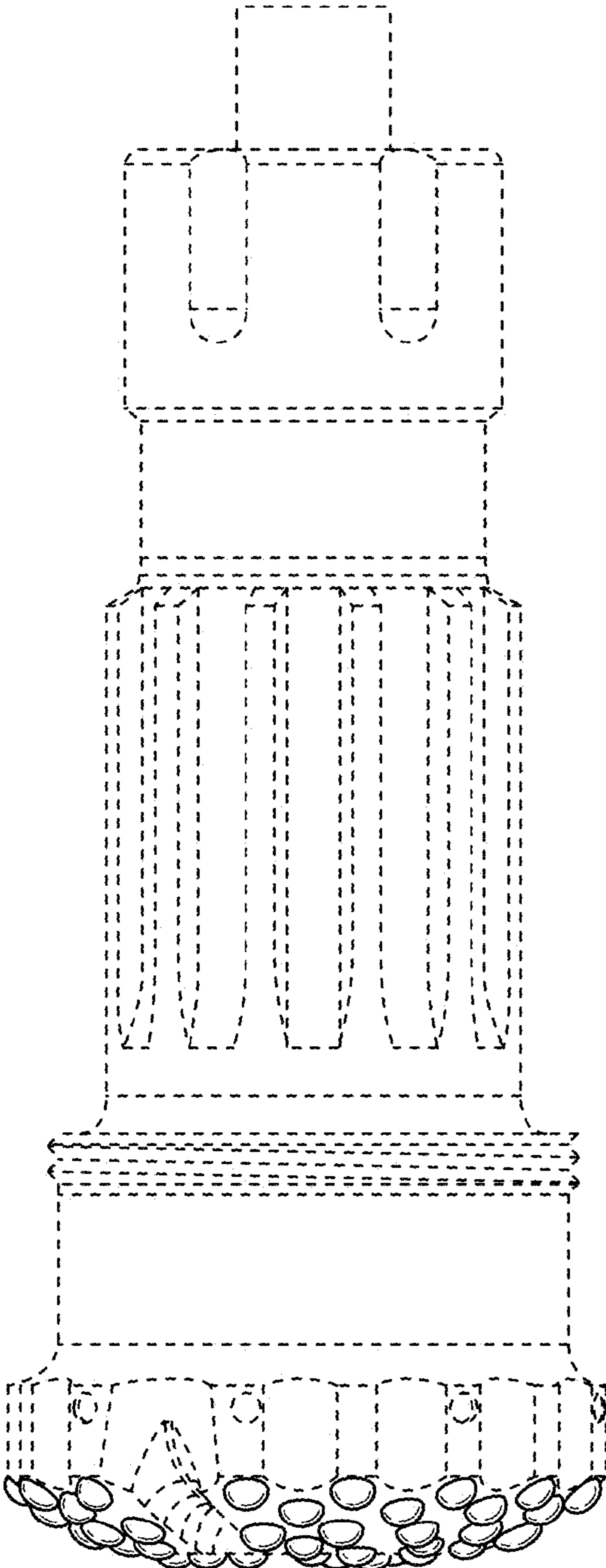


FIG. 5

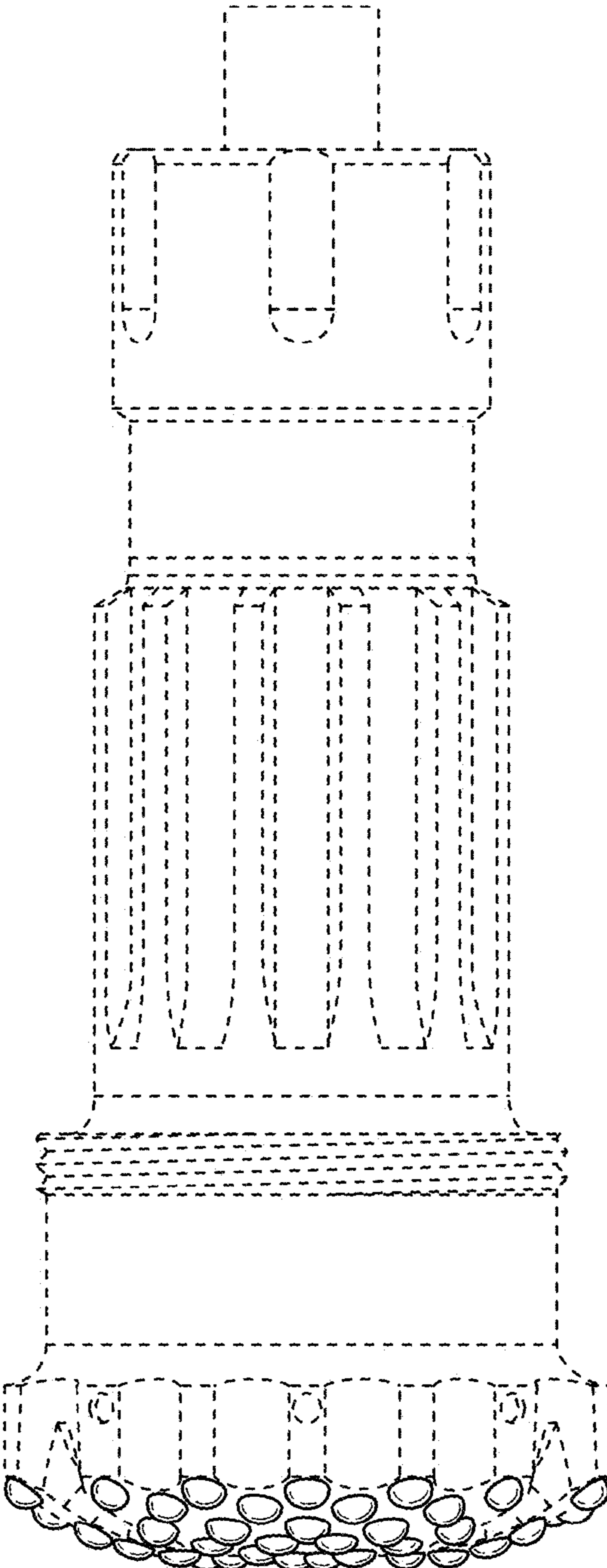


FIG. 6