

US00D862547S

(12) **United States Design Patent** (10) **Patent No.:** **US D862,547 S**  
**Xie** (45) **Date of Patent:** **\*\* Oct. 8, 2019**

(54) **SOLDERING IRON**  
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(72) Inventor: **Chengcan Xie**, Changsha (CN)  
(\*\*) Term: **15 Years**  
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(51) **LOC (12) Cl.** ..... **15-09**  
(52) **U.S. Cl.**  
USPC ..... **D15/144.2; D8/30**  
(58) **Field of Classification Search**  
USPC ..... D8/20, 70; D15/144, 144.1, 144.2;  
D24/144  
CPC ..... B23K 3/021; B23K 3/022; B23K 3/023;  
B23K 3/033; B23K 3/3023; B23K 3/0346  
See application file for complete search history.

D847,233 S \* 4/2019 Gou ..... D15/144  
D847,234 S \* 4/2019 Gou ..... D15/144  
D847,235 S \* 4/2019 Gou ..... D15/144

(Continued)

**OTHER PUBLICATIONS**

“LDK Soldering Iron Kit Electric 60W 110V Adjustable Temperature Soldering Gun Welding Tools, 5pcs Soldering Iron Replacement Tips, Soldering Stand and Rosin Core Solder Wire Tube”, Retrieved Jul. 5, 2019]. Retrieved from Internet, <https://www.amazon.com/LDK-Soldering-Adjustable-Temperature-Replacement/dp/B07G5BT4ZD/>.

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*Primary Examiner* — Patricia A Palasik

(57) **CLAIM**

The ornamental design for a soldering iron, as shown and described.

**DESCRIPTION**

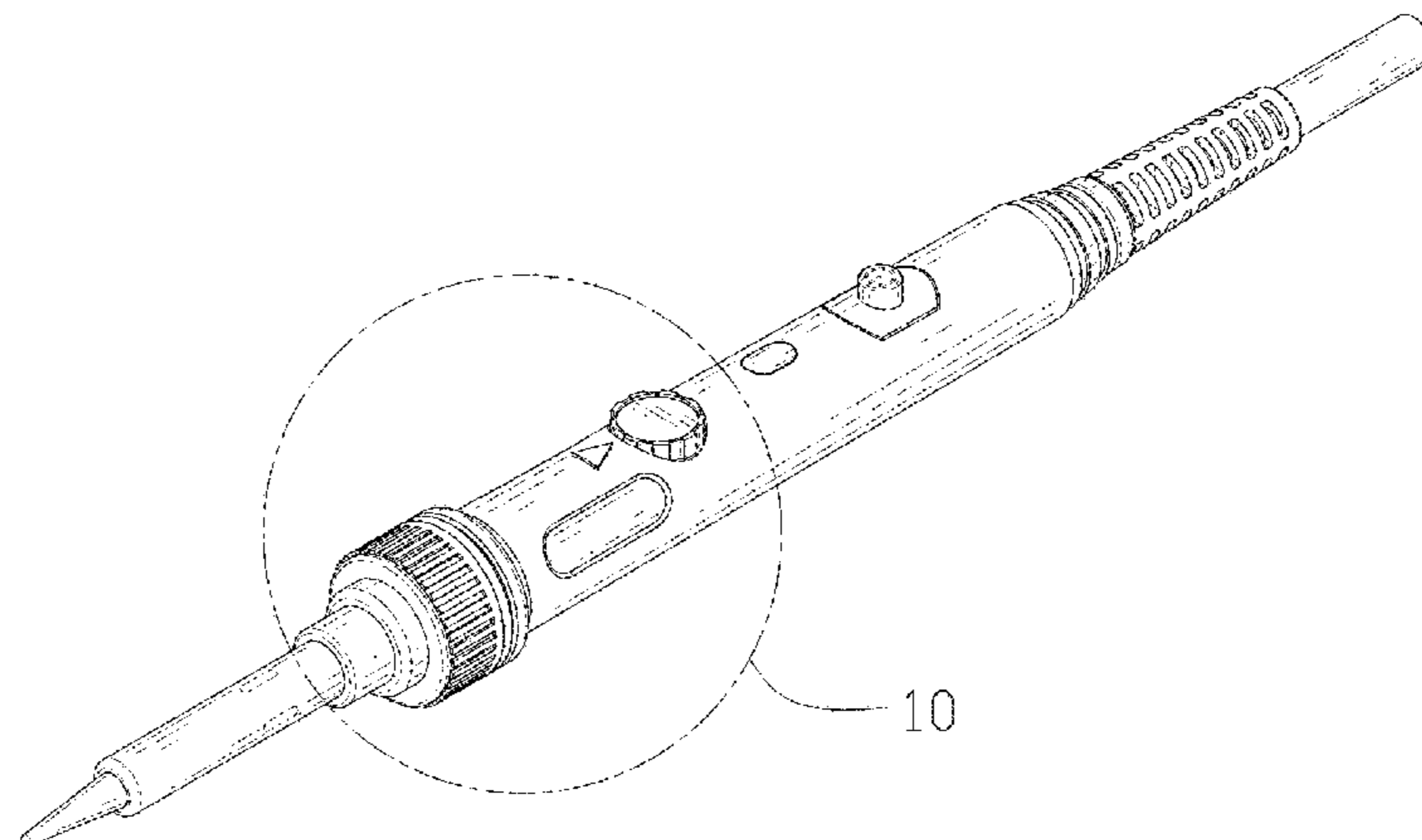
FIG. 1 is a perspective view of a soldering iron showing my new design;  
FIG. 2 is another perspective view thereof;  
FIG. 3 is a front elevational view thereof;  
FIG. 4 is a rear elevational view thereof;  
FIG. 5 is a left side elevational view thereof;  
FIG. 6 is a right side elevational view thereof;  
FIG. 7 is a top plan view thereof;  
FIG. 8 is a bottom plan view thereof;  
FIG. 9 is a perspective view of the soldering iron where for ease of illustration a button is separated from the soldering iron;  
FIG. 10 is an enlarged view of portion 10 shown in FIG 1;  
FIG. 11 is an enlarged view of FIG. 5; and,  
FIG. 12 is an enlarged view of FIG. 6.  
The broken lines in the drawings depict portions of the soldering iron that form no part of the claimed design.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D243,147 S \* 1/1977 Sylvester ..... D8/30  
4,688,552 A \* 8/1987 Tsai ..... B23K 3/022  
126/414  
D300,200 S \* 3/1989 Arehart ..... D8/30  
D300,297 S \* 3/1989 Arehart ..... D8/30  
D317,704 S \* 6/1991 Zaborowski ..... D8/30  
D330,998 S \* 11/1992 Watmore ..... D8/30  
5,803,061 A \* 9/1998 Kao ..... B23K 3/022  
126/413  
5,928,536 A \* 7/1999 Lee ..... B23K 3/033  
219/229  
D481,278 S \* 10/2003 Murillo ..... D8/30  
6,874,671 B2 \* 4/2005 Hirano ..... B23K 3/022  
126/414  
D660,669 S \* 5/2012 Teraoka ..... D8/30  
9,314,863 B2 \* 4/2016 Teraoka ..... B23K 3/033  
D810,532 S \* 2/2018 Tsai ..... D8/30  
D813,628 S \* 3/2018 Tsai ..... D8/30  
D813,629 S \* 3/2018 Tsai ..... D8/30

**1 Claim, 12 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

D848,232 S \* 5/2019 Tsai ..... D8/30

OTHER PUBLICATIONS

“Quimat ESD Thermostatic Electric Soldering Iron Kit, Welding Iron Gun Set with Adjustable Temperature LED Digital Display, On/Off Button, Temperature Correction, Automatic Hibernation”, Retrieved Jul. 5, 2019]. Retrieved from Internet, <https://www.amazon.com/Quimat-Thermostatic-Adjustable-Temperature-Hibernation/dp/B074P225BK/>.

\* cited by examiner

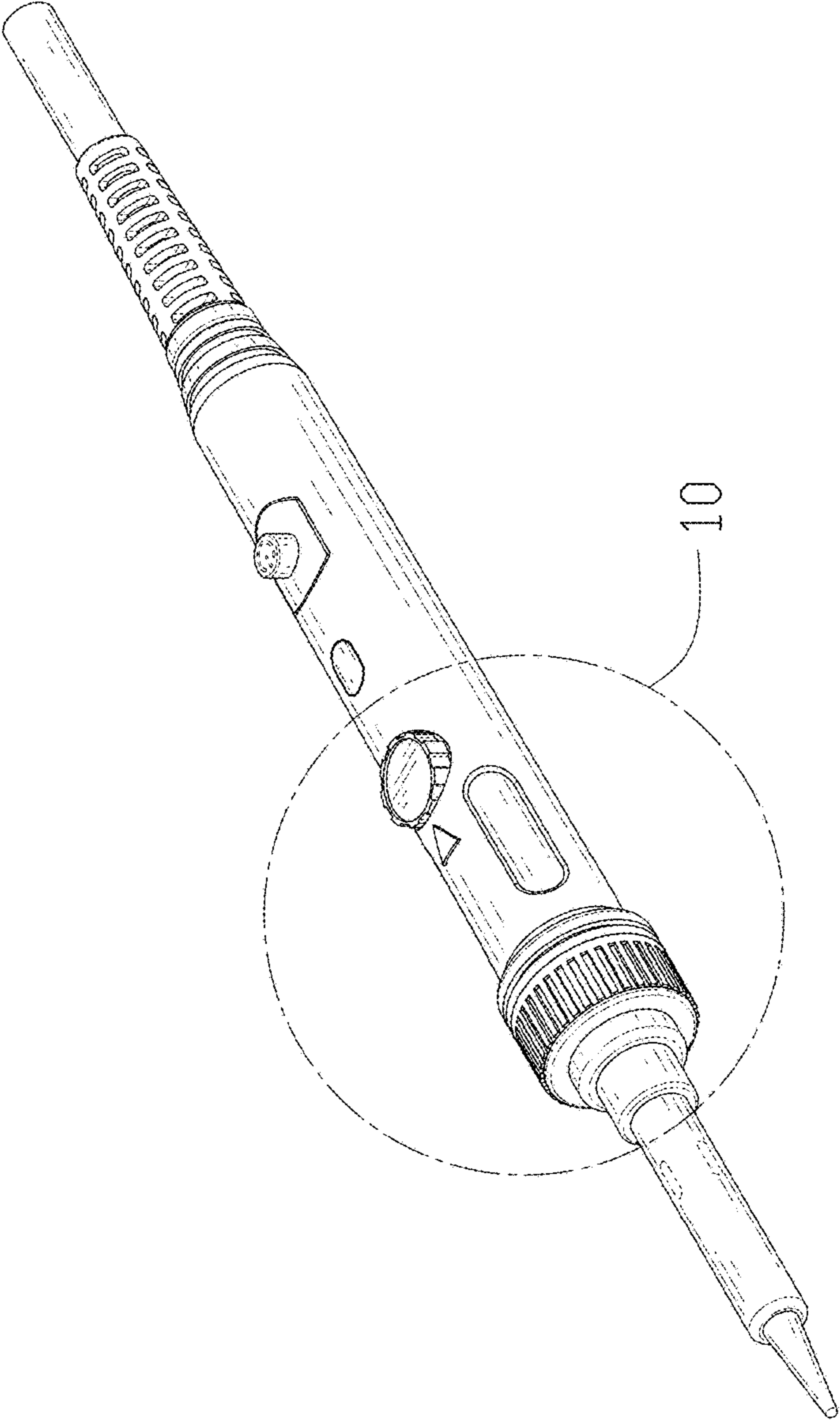


FIG. 1

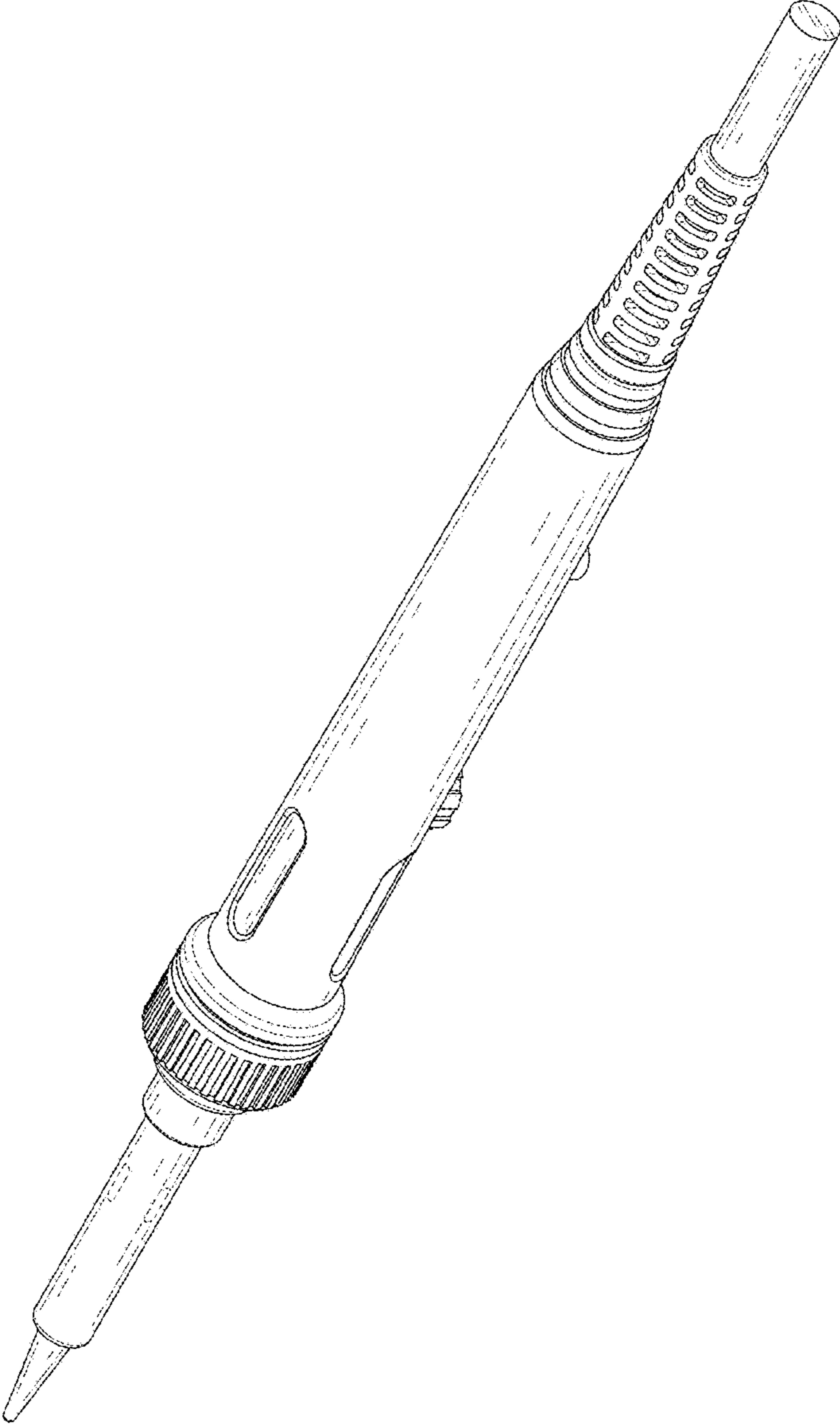


FIG. 2

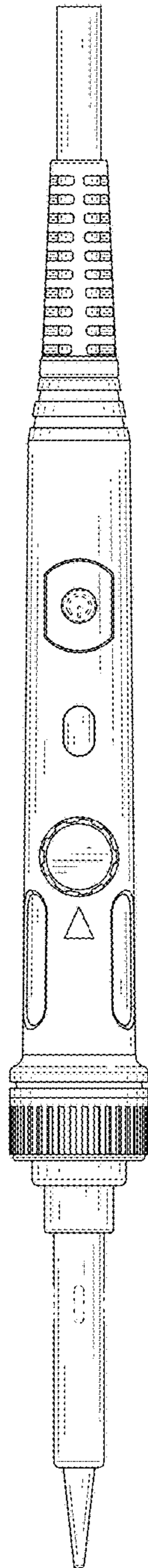


FIG. 3

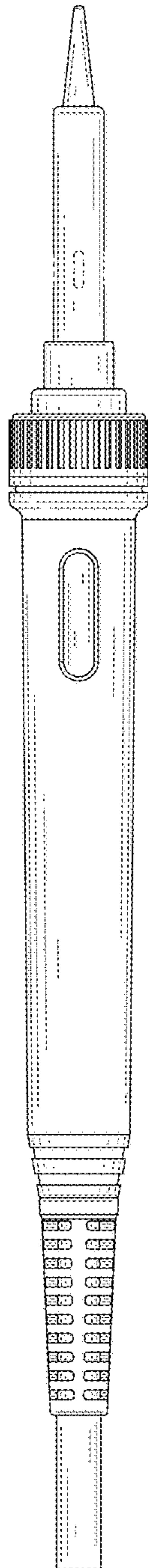


FIG. 4

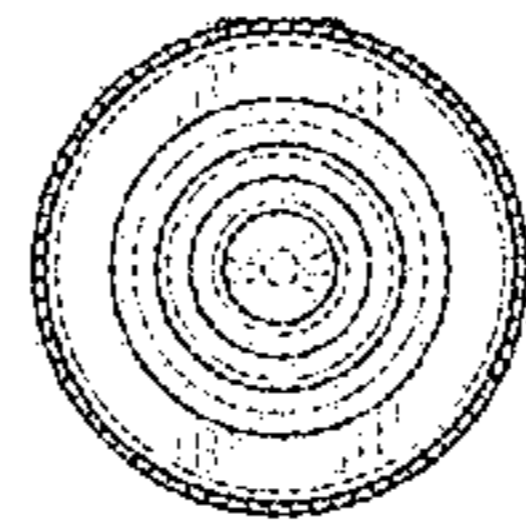


FIG. 5

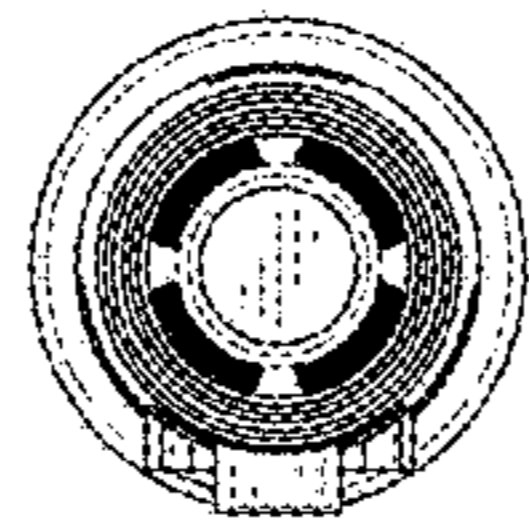


FIG. 6



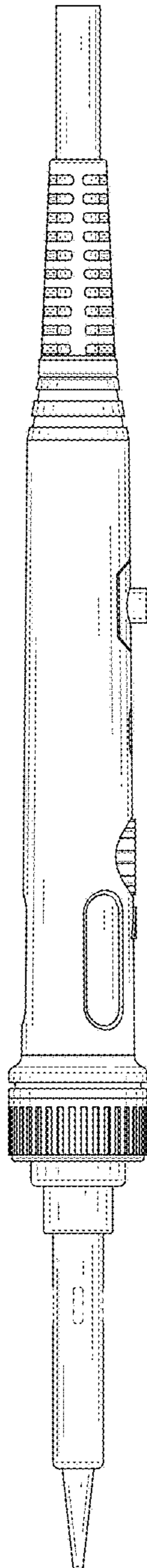


FIG. 7

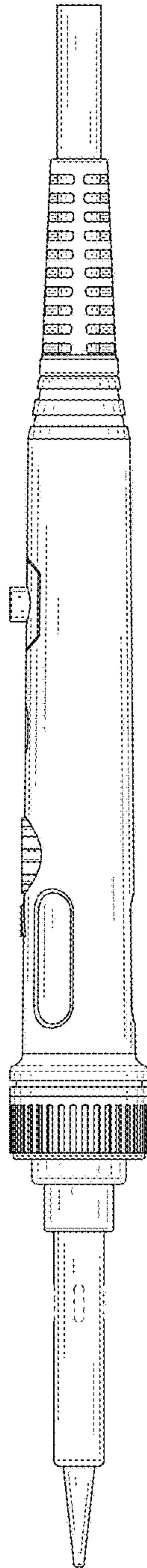


FIG. 8

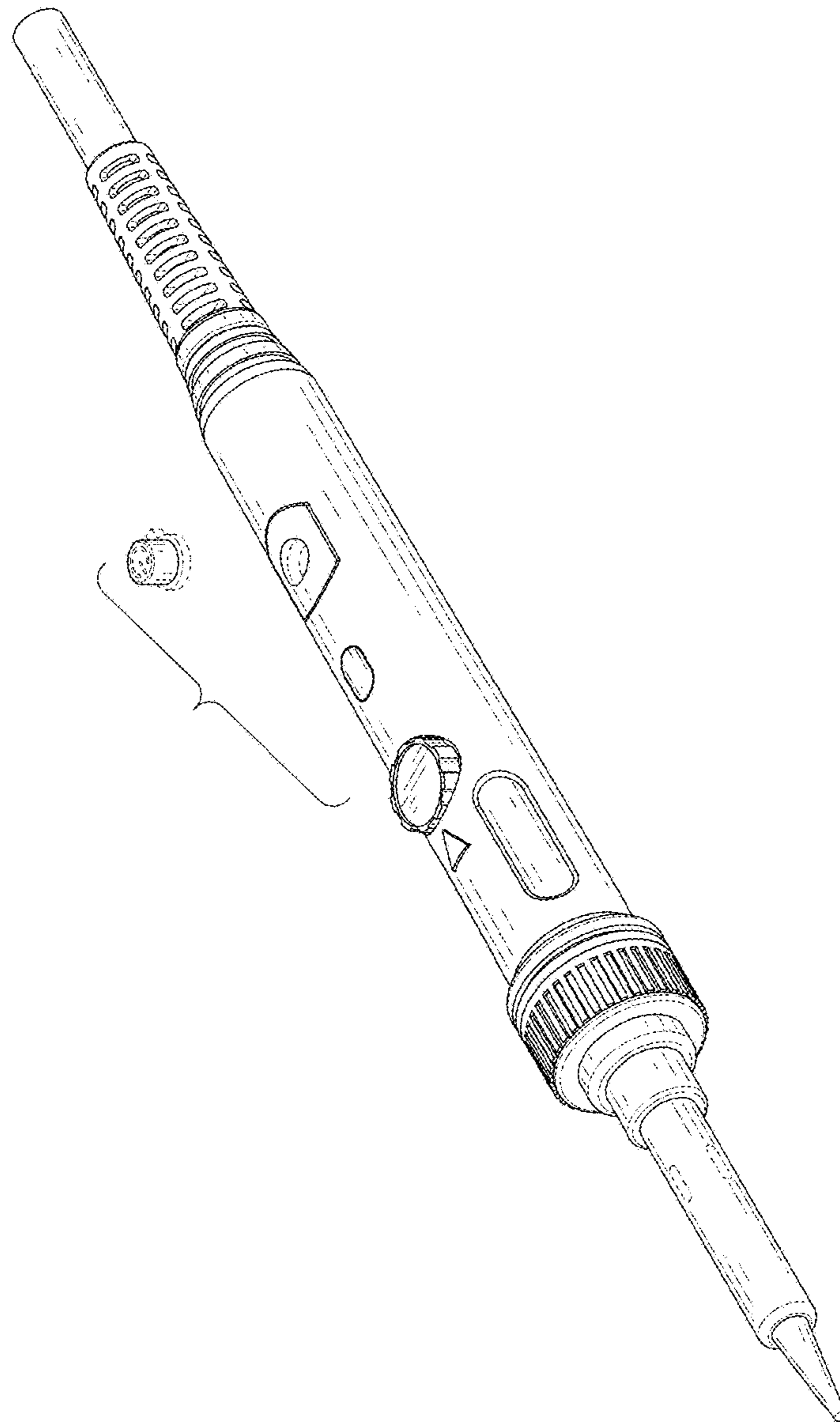


FIG. 9

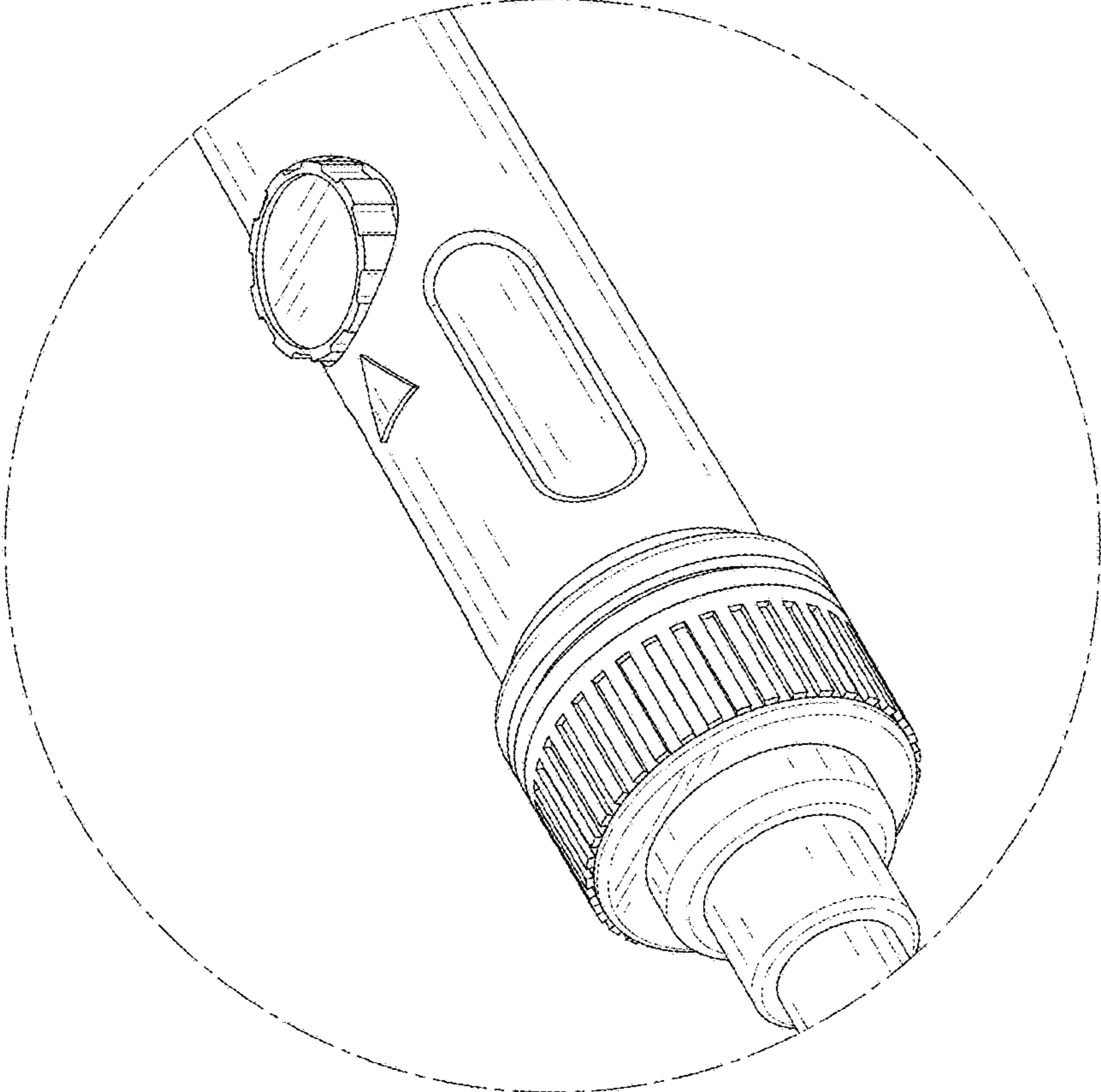


FIG. 10

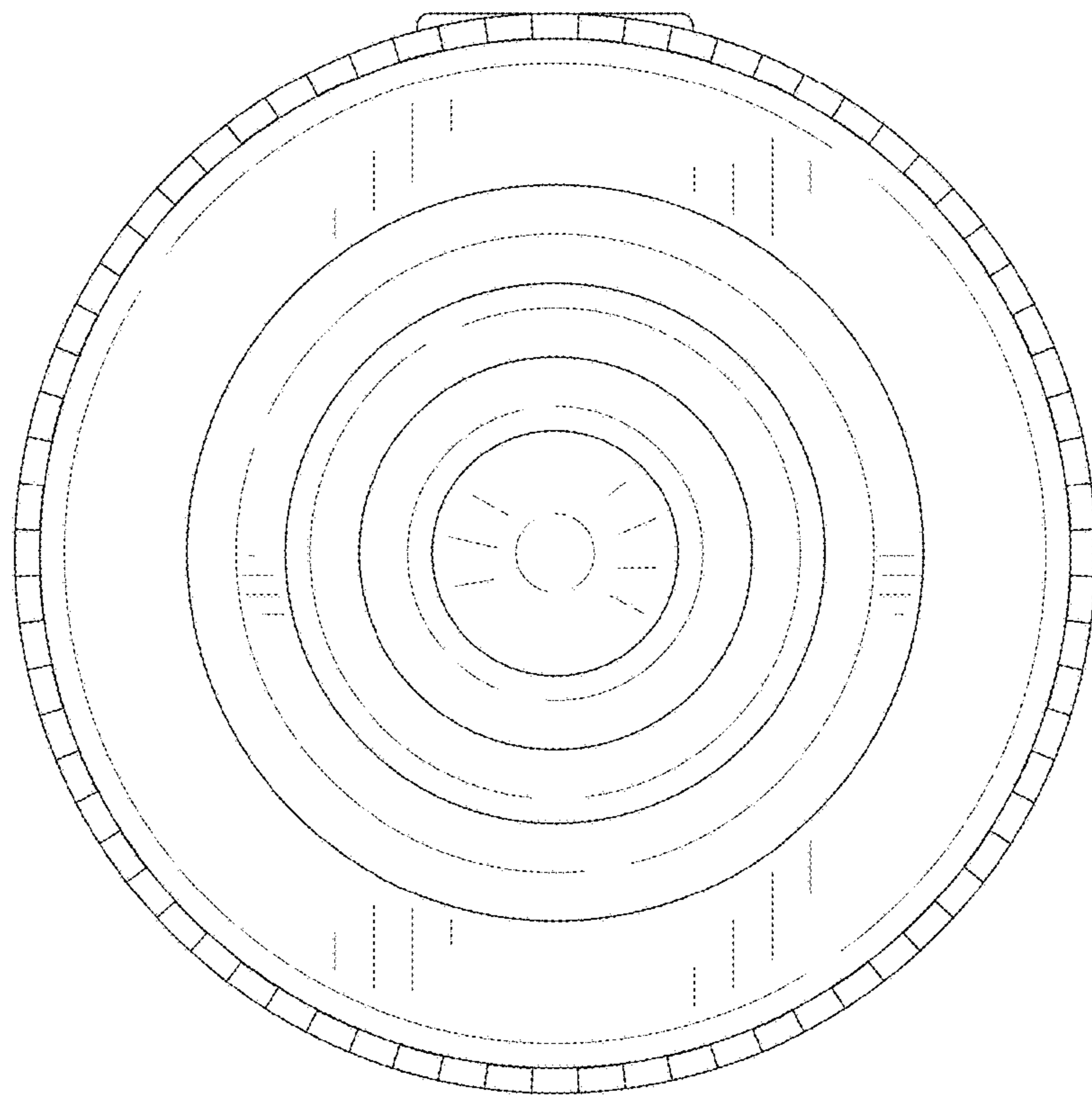


FIG. 11

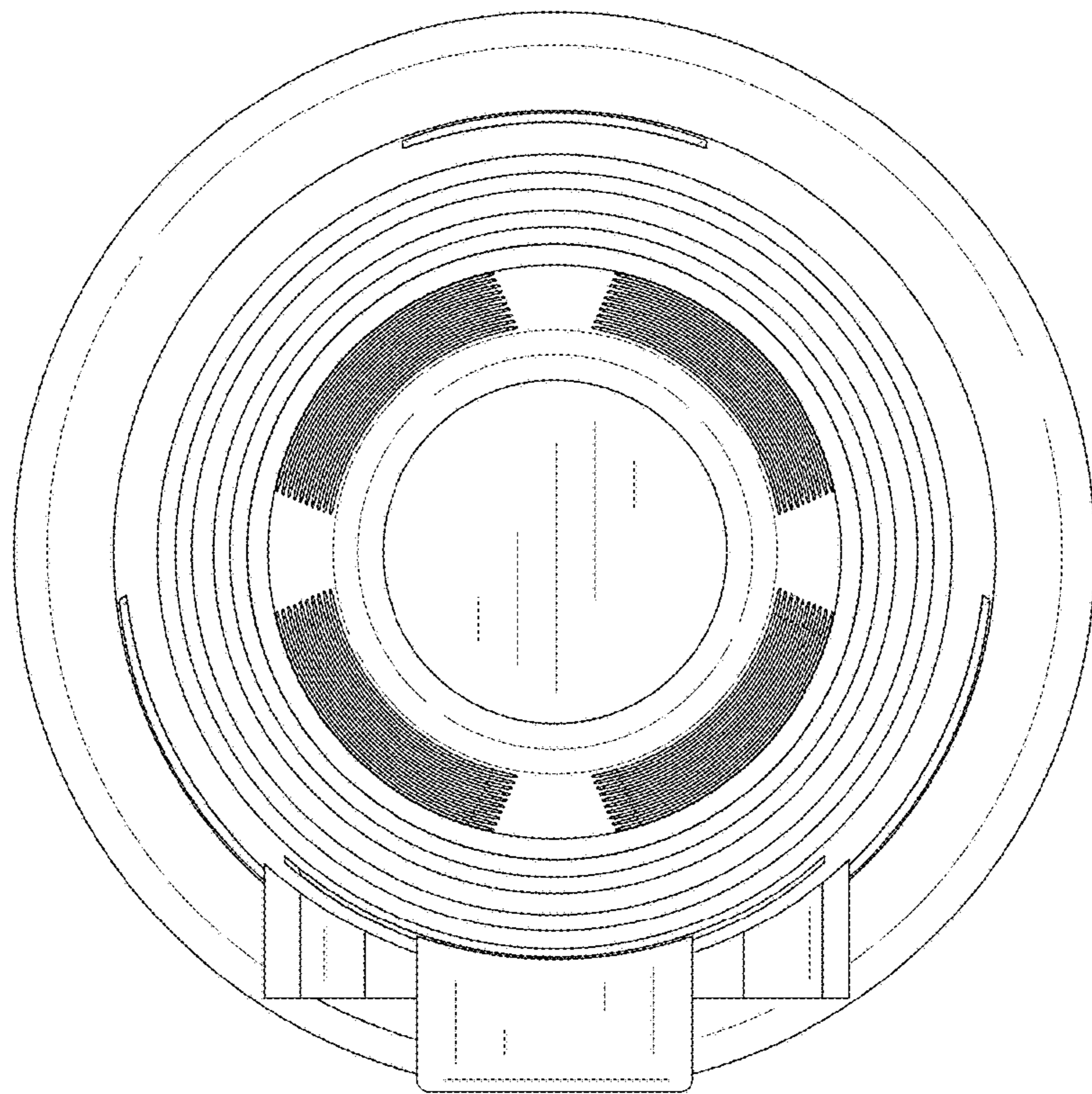


FIG. 12