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(12) **United States Design Patent** (10) **Patent No.:** **US D848,673 S**  
**Xu** (45) **Date of Patent:** **\*\* May 14, 2019**

(54) **MICROVAPORIZER CARTRIDGE**  
(71) Applicant: **Avail Vapor LLC**, N. Chesterfield, VA  
(US)  
(72) Inventor: **Yongjie James Xu**, Richmond, VA  
(US)  
(73) Assignee: **Avail Vapor LLC**, N. Chesterfield, VA  
(US)

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D19/115-123, 161-169; D24/110;  
D23/366  
CPC ..... A24F 47/008; A24F 47/002; A24F 7/02;  
A61M 15/06  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D652,571 S \* 1/2012 Shenassa ..... D27/163  
D724,264 S \* 3/2015 Chambers ..... D27/101  
D729,440 S \* 5/2015 Liu ..... D27/101  
D749,261 S \* 2/2016 Chen ..... D27/162  
D774,247 S \* 12/2016 Chen ..... D27/101  
D775,762 S \* 1/2017 Chen ..... D27/101  
D776,867 S \* 1/2017 Rado ..... D27/162  
D788,362 S \* 5/2017 Qiu ..... D27/101  
D792,022 S \* 7/2017 Li ..... D27/167  
D800,382 S \* 10/2017 Mathias ..... D27/167  
9,795,170 B1 \* 10/2017 Zhu ..... F16K 3/0281

D802,834 S \* 11/2017 Mathias ..... D27/163  
D804,718 S \* 12/2017 Mathias ..... D27/162  
D805,248 S \* 12/2017 Chen ..... D27/170  
D811,652 S \* 2/2018 Liu ..... D27/167  
D813,445 S \* 3/2018 Scott ..... D27/101  
(Continued)

**OTHER PUBLICATIONS**

Avail Vapor Cartridges by Avail Vapor. dated 2018. found online [Aug. 22, 2018].<https://www.availvapor.com/devices/abze-1gnd-mini-cartr.html>.\*

*Primary Examiner* — Marissa J Cash  
(74) *Attorney, Agent, or Firm* — Nixon & Vanderhye P.C.

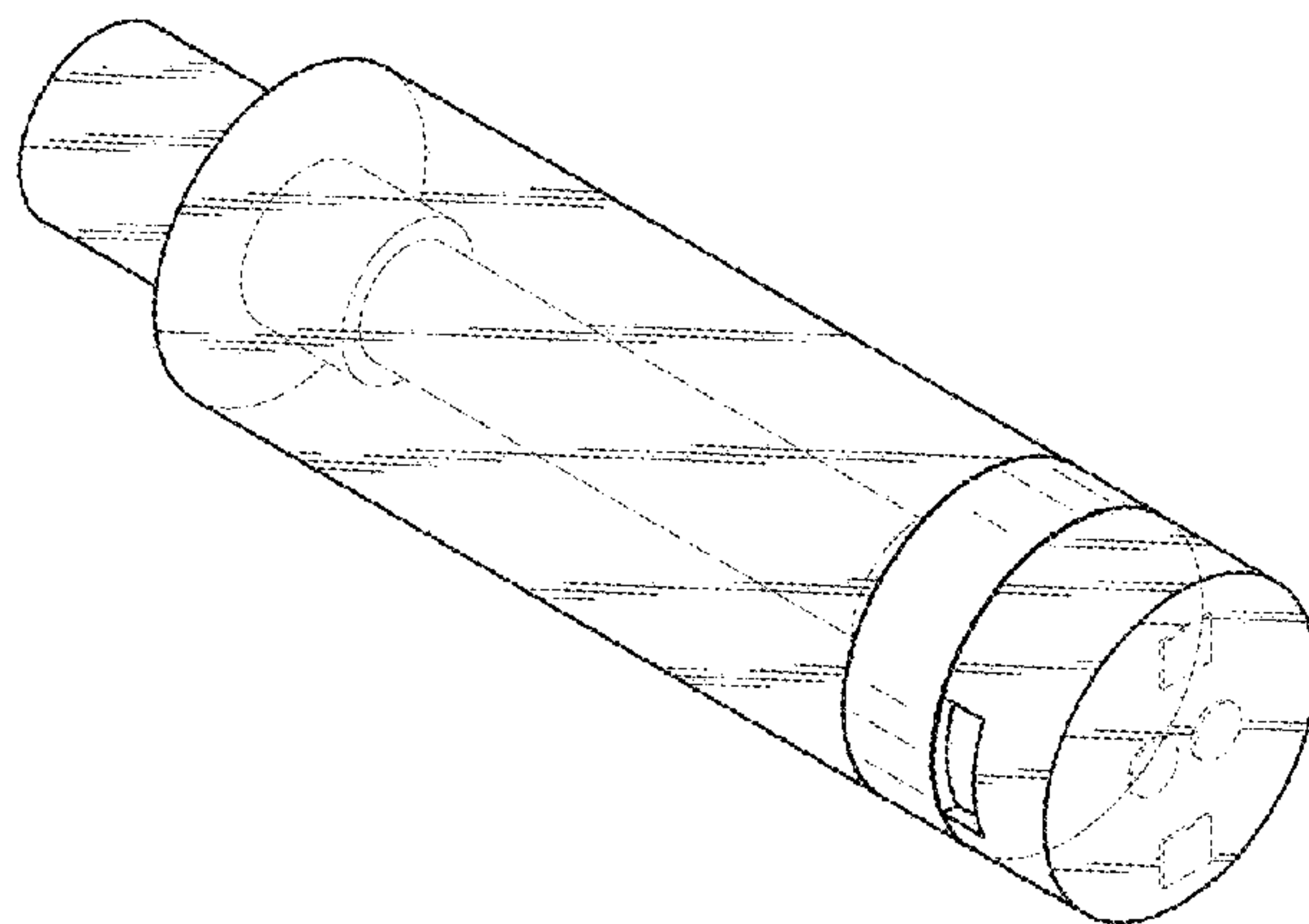
(57) **CLAIM**

The ornamental design for a microvaporizer cartridge, as shown and described.

**DESCRIPTION**

FIG. 1 is a front, top and right side perspective view of a microvaporizer cartridge showing my new design;  
FIG. 2 is another front, to and right side perspective view of the microvaporizer cartridge removed from the environment for clarity of disclosure;  
FIG. 3 is a right side view of the microvaporizer cartridge;  
FIG. 4 is a left view of the microvaporizer cartridge;  
FIG. 5 is a front view the microvaporizer cartridge thereof;  
FIG. 6 is a rear side view the microvaporizer cartridge thereof;  
FIG. 7 is a top view the microvaporizer cartridge;  
FIG. 8 is a bottom view the microvaporizer cartridge; and,  
FIG. 9 is a rear, bottom and left side perspective view of the microvaporizer cartridge.  
The broken lines shown in FIG. 1 represent environmental subject matter that forms no part of the claim; all other broken lines represent portions of the microvaporizer cartridge that forms no part of the claimed design.

**1 Claim, 4 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

D814,103 S \* 3/2018 Levinson ..... D27/101  
 D817,544 S \* 5/2018 Chen ..... D27/167  
 D819,262 S \* 5/2018 Lin ..... D27/101  
 9,980,517 B2 \* 5/2018 Zhu ..... A24F 47/008  
 D819,880 S \* 6/2018 Qiu ..... D27/101  
 D821,639 S \* 6/2018 Dai ..... D27/162  
 10,004,271 B2 \* 6/2018 Li ..... A24F 47/008  
 10,004,275 B2 \* 6/2018 Li ..... F16L 55/115  
 D823,535 S \* 7/2018 Xu ..... D27/163  
 D825,840 S \* 8/2018 Xu ..... D27/163  
 D825,841 S \* 8/2018 Xu ..... D27/163  
 D825,842 S \* 8/2018 Xu ..... D27/163  
 D827,152 S \* 8/2018 Ou ..... D24/224  
 D828,623 S \* 9/2018 Fornarelli ..... D27/194  
 2013/0180533 A1 \* 7/2013 Kim ..... A24F 47/008  
 131/273  
 2014/0360514 A1 \* 12/2014 Zhu ..... A24F 47/008  
 131/329  
 2015/0136124 A1 \* 5/2015 Aronie ..... A24F 47/008  
 128/202.21  
 2015/0257444 A1 \* 9/2015 Chung ..... A24F 47/008  
 131/329  
 2015/0257446 A1 \* 9/2015 Chung ..... A24F 47/008  
 131/329  
 2015/0282530 A1 \* 10/2015 Johnson ..... A61M 15/06  
 392/387  
 2015/0335073 A1 \* 11/2015 Li ..... A24F 47/008  
 131/329  
 2015/0374039 A1 \* 12/2015 Zhu ..... A24F 47/008  
 131/329  
 2016/0000145 A1 \* 1/2016 Liu ..... A61M 15/06  
 131/329

2016/0007654 A1 \* 1/2016 Zhu ..... A24F 47/008  
 131/328  
 2016/0106153 A1 \* 4/2016 Zhu ..... A24F 47/008  
 131/329  
 2016/0113327 A1 \* 4/2016 Wu ..... H05B 3/06  
 131/329  
 2016/0165955 A1 \* 6/2016 Home ..... A45F 5/02  
 131/328  
 2016/0192707 A1 \* 7/2016 Li ..... A24F 47/008  
 131/329  
 2016/0213866 A1 \* 7/2016 Tan ..... A61M 11/005  
 2016/0262452 A1 \* 9/2016 Zhu ..... A24F 47/008  
 2016/0295920 A1 \* 10/2016 Liu ..... H05B 3/0014  
 2016/0353800 A1 \* 12/2016 Di Carlo ..... A24F 47/008  
 2017/0006923 A1 \* 1/2017 Li ..... B67D 99/00  
 2017/0013881 A1 \* 1/2017 Liu ..... A24F 47/008  
 2017/0049153 A1 \* 2/2017 Guo ..... A24F 47/008  
 2017/0079327 A1 \* 3/2017 Wu ..... A24F 47/008  
 2017/0105451 A1 \* 4/2017 Fornarelli ..... A24F 47/008  
 2017/0105453 A1 \* 4/2017 Li ..... A24F 47/008  
 2017/0202268 A1 \* 7/2017 Li ..... A24F 7/02  
 2017/0208869 A1 \* 7/2017 Li ..... F16L 55/115  
 2017/0280770 A1 \* 10/2017 Wang ..... A24F 47/008  
 2017/0311384 A1 \* 10/2017 Wu ..... A61M 11/042  
 2017/0367404 A1 \* 12/2017 Li ..... H05B 1/0244  
 2018/0000156 A1 \* 1/2018 Qiu ..... A24F 47/008  
 2018/0027881 A1 \* 2/2018 Chen ..... A24F 47/008  
 2018/0049470 A1 \* 2/2018 Chen ..... A24F 47/008  
 2018/0064172 A1 \* 3/2018 Qiu ..... A24F 47/008  
 2018/0071465 A1 \* 3/2018 Zhao ..... A61M 11/042  
 2018/0116295 A1 \* 5/2018 Qiu ..... A24F 47/008  
 2018/0146716 A1 \* 5/2018 Chen ..... H05B 3/44  
 2018/0168236 A1 \* 6/2018 Qiu ..... A24F 47/008

\* cited by examiner

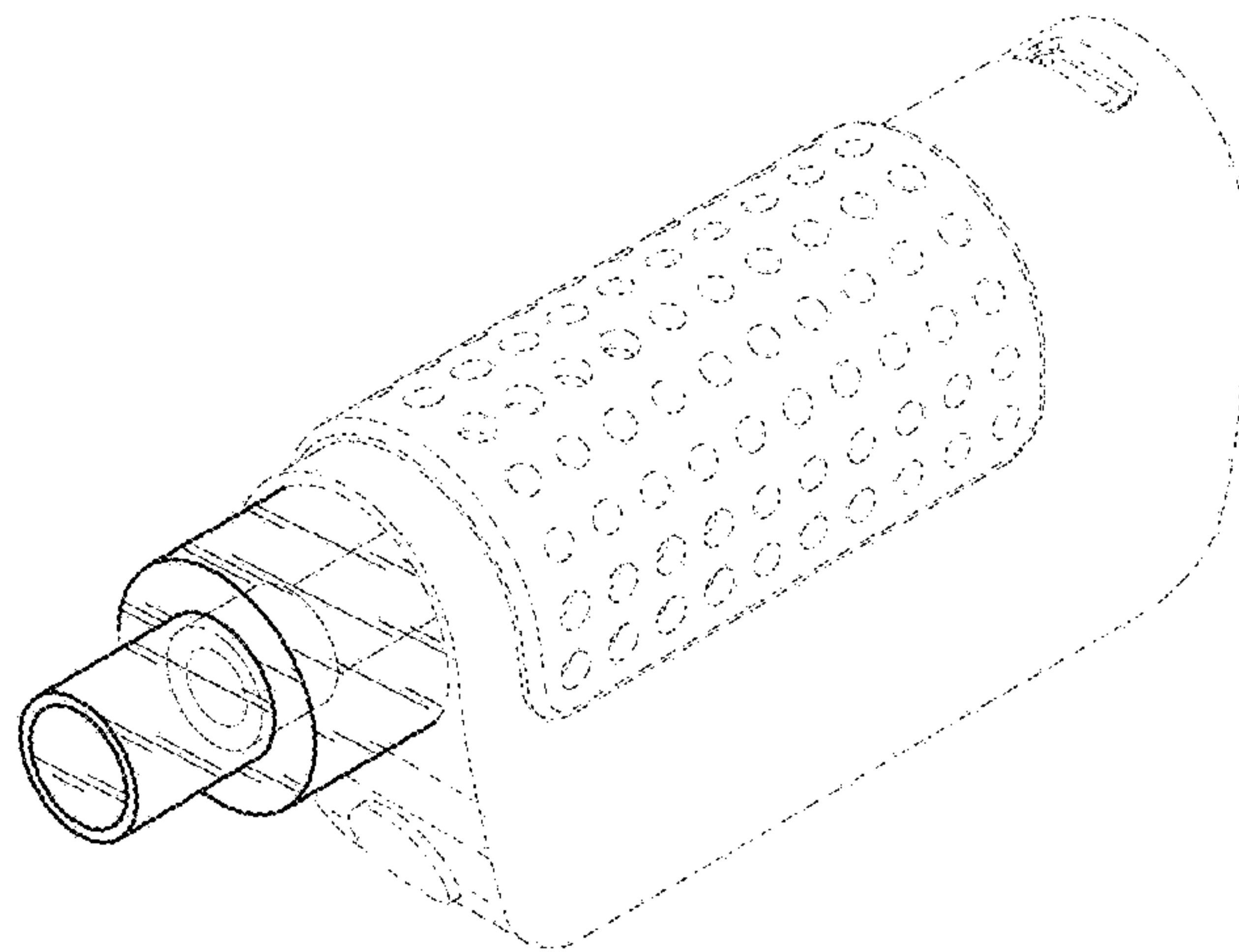


FIG. 1

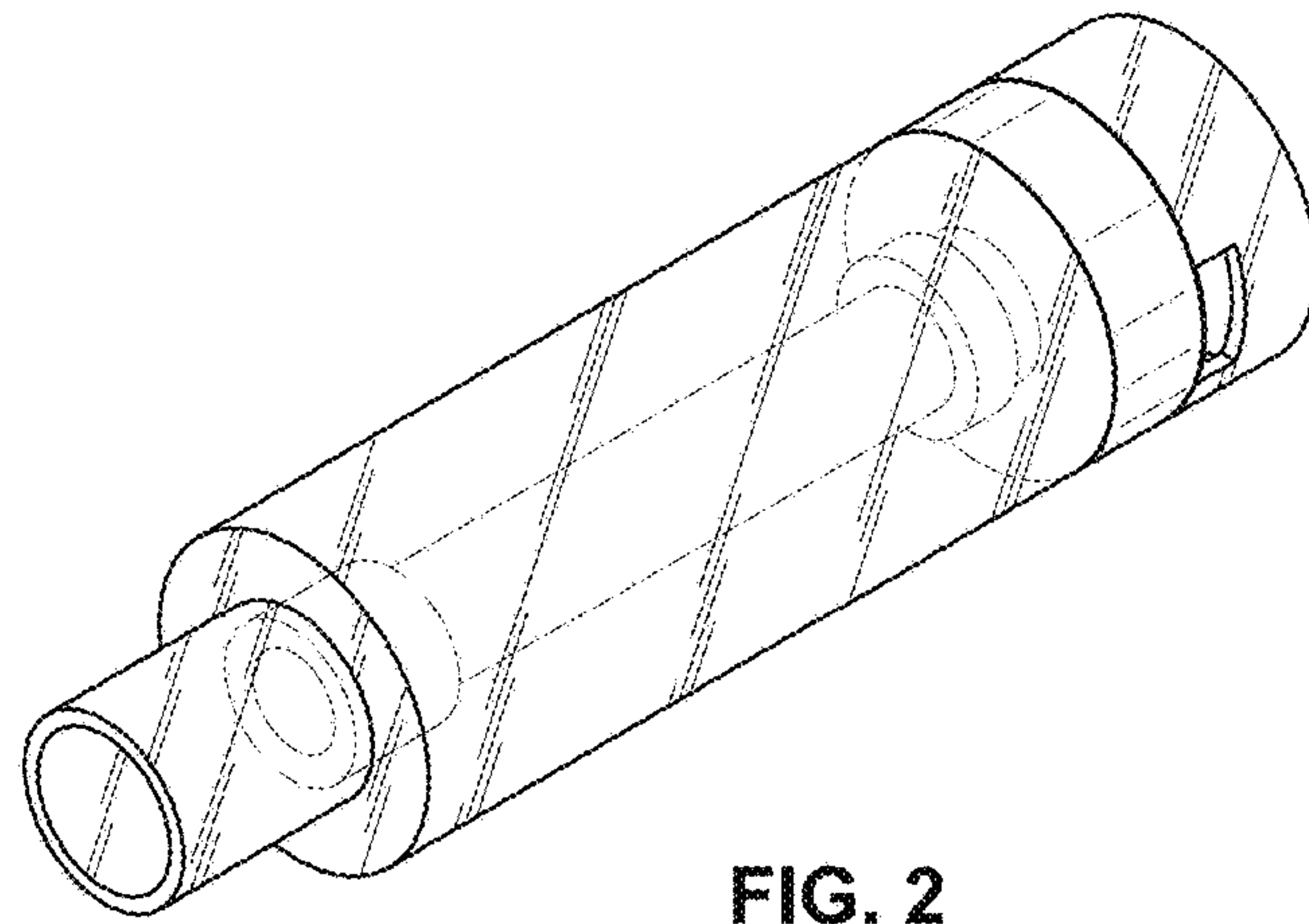


FIG. 2

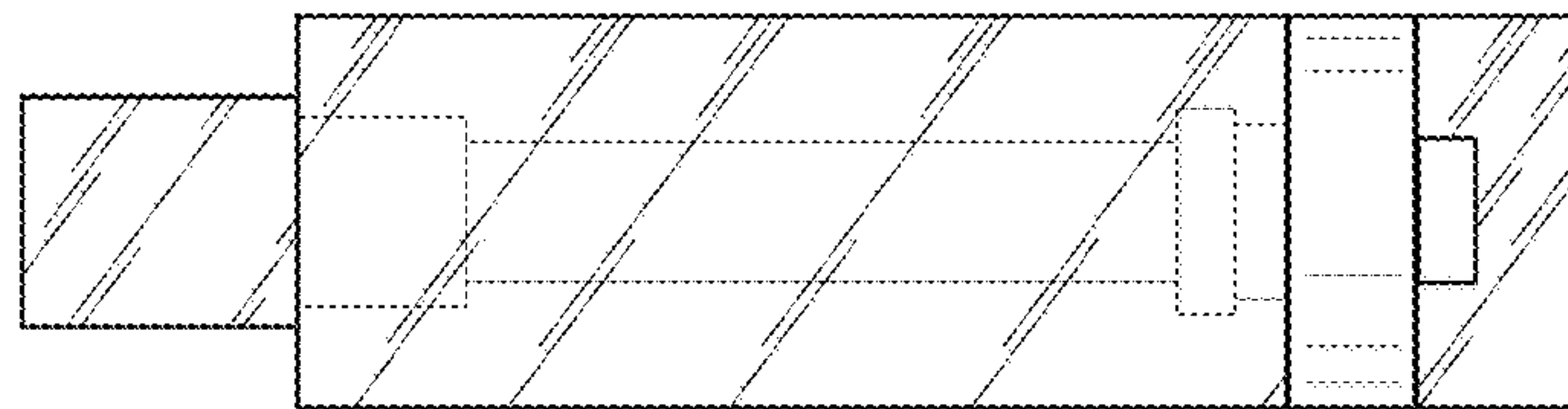


FIG. 3

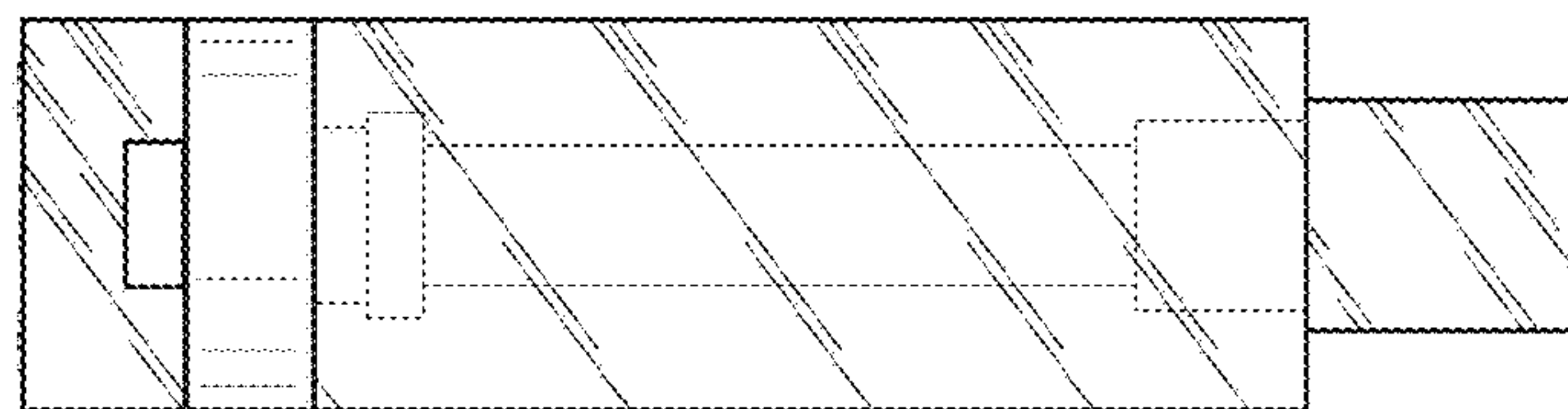


FIG. 4



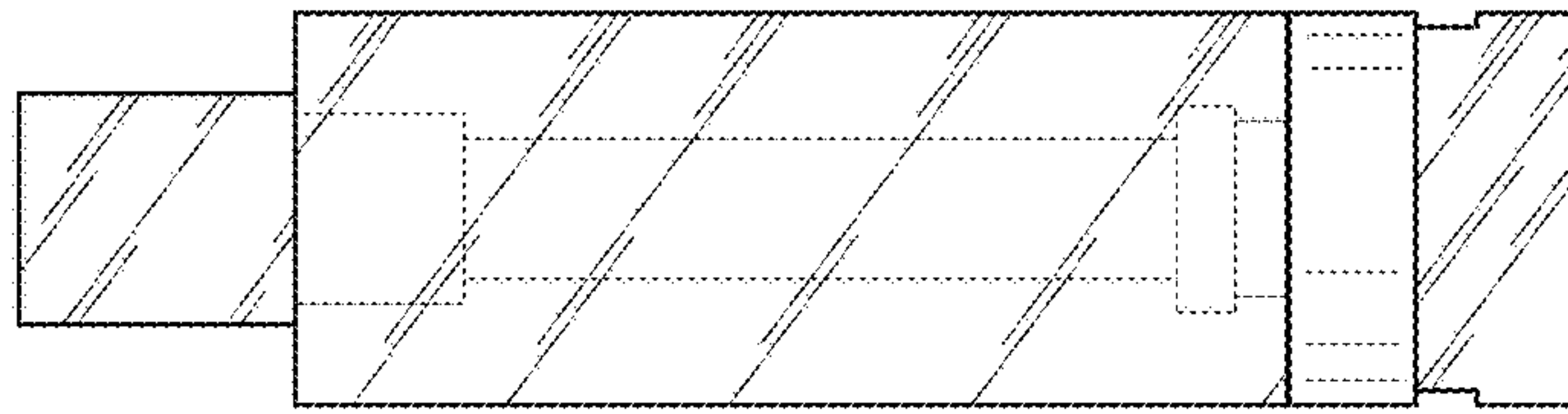


FIG. 5

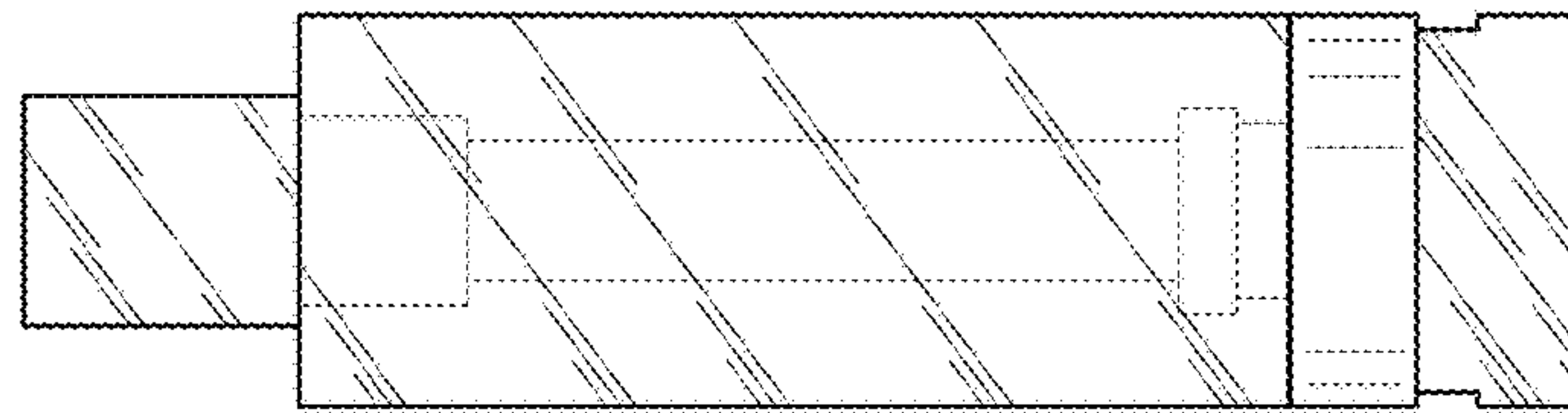


FIG. 6

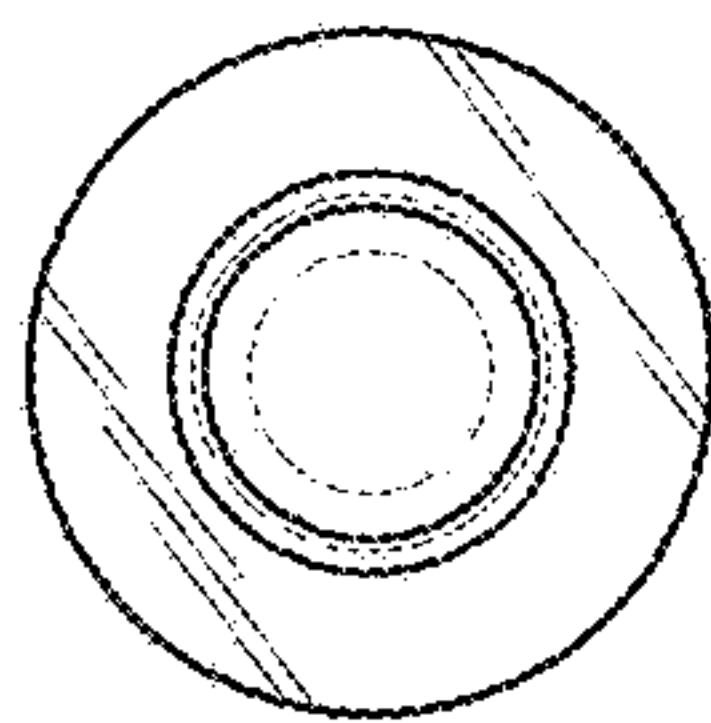


FIG. 7

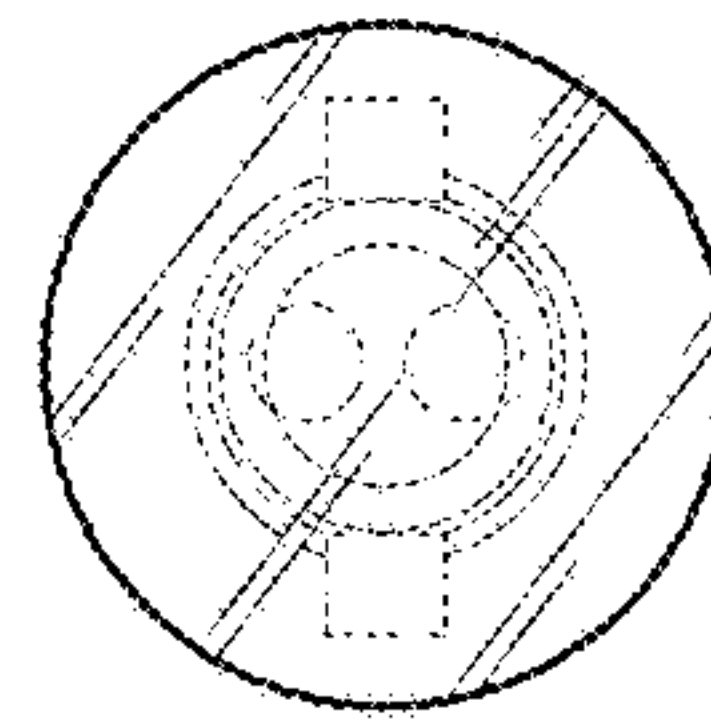


FIG. 8

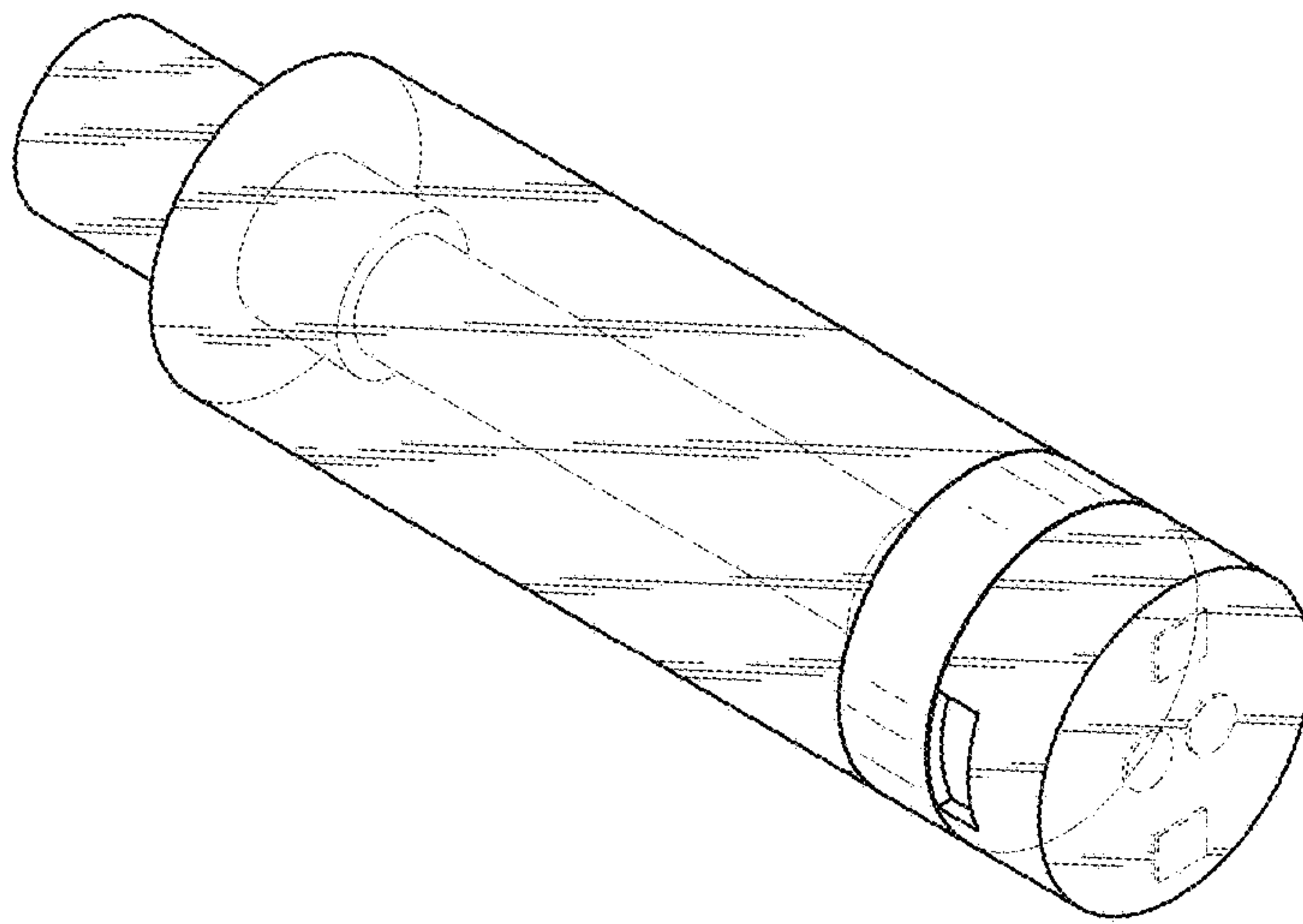


FIG. 9