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(12) **United States Design Patent**
Miyazaki et al.

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(54) **ROLLER SHAFT FOR SUBSTRATE
CLEANING**

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(**) Term: **14 Years**

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(30) **Foreign Application Priority Data**

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Sep. 24, 2013 (JP) 2013-21977

(51) **LOC (10) Cl.** **15-05**

(52) **U.S. Cl.**
USPC **D32/25**

(58) **Field of Classification Search**
USPC D32/1, 5, 25; 15/77, 88.2, 88.3, 102,
15/230, 230.12, 230.14, 230.16; 134/6;
451/194
CPC B08B 1/00; B08B 1/04; B24D 13/08;
B24D 13/10
See application file for complete search history.

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(57) **CLAIM**

The ornamental design for a roller shaft for substrate cleaning, as shown and described.

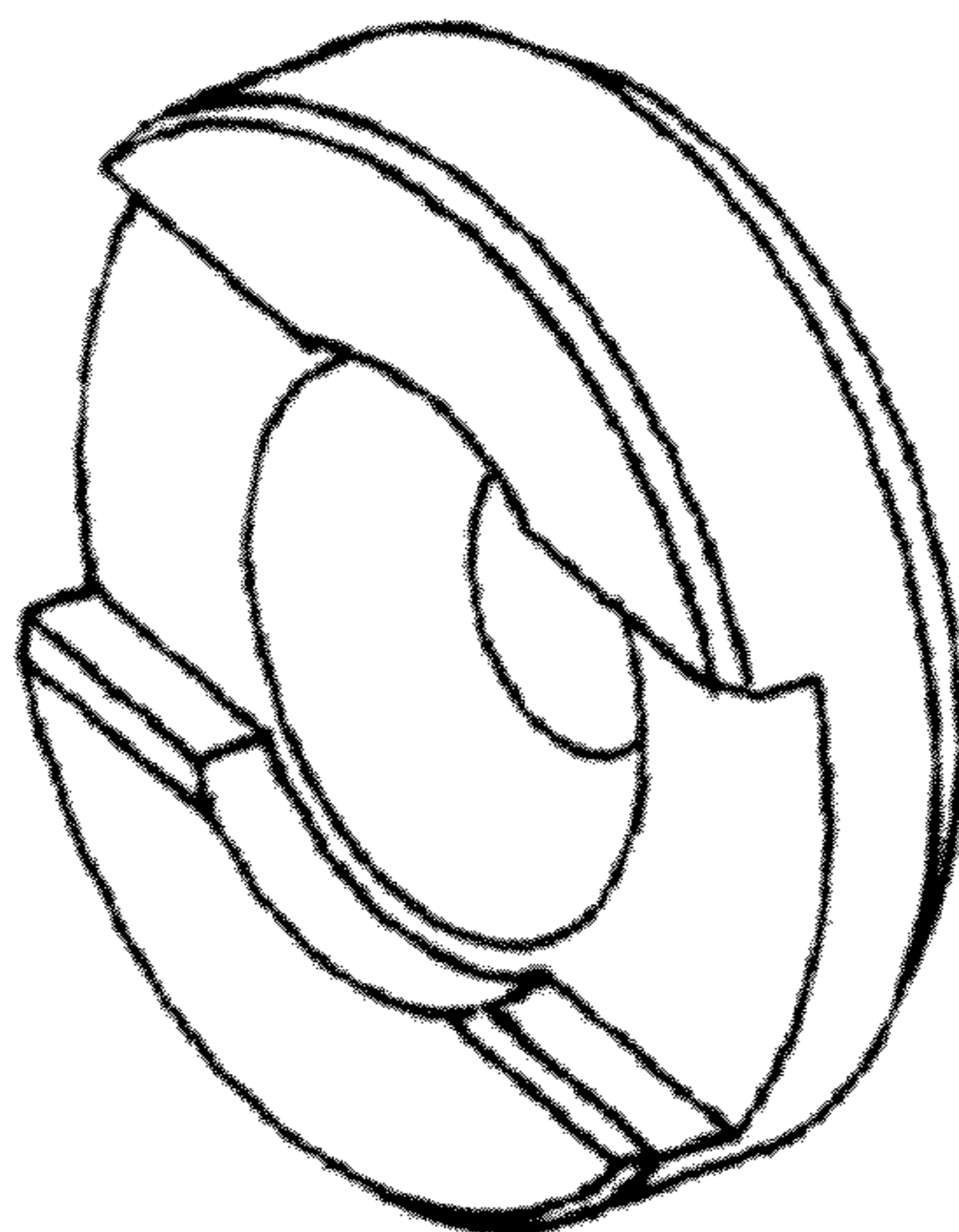
DESCRIPTION

FIG. 1 is a left side view of a roller shaft for substrate cleaning showing our new design attached to a roller;
FIG. 2 is a right side view thereof;
FIG. 3 is a top view thereof, including a detail view of a portion thereof;
FIG. 4 is a front view thereof, including a detail view of portion thereof;
FIG. 5 is a cross-section view thereof, taken along the line 5-5 of FIG. 1;
FIG. 6 is an enlarged top perspective view;
FIG. 7 is an enlarged left side view thereof;
FIG. 8 is a left side view of a second embodiment thereof;
FIG. 9 is a right side view thereof;
FIG. 10 is a top view thereof;
FIG. 11 is a front view thereof;
FIG. 12 is a cross-section view thereof, taken along the line 12-12 of FIG. 8;
FIG. 13 is an enlarged top perspective view thereof; and,
FIG. 14 is an enlarged left side view thereof.

The portions of the roller shaft and the roller shown in broken lines are provided for illustrative purposes only and form no part of the claimed design.

The cross-section views are provided illustrative purposes only and the internal details of the roller shaft form no part of the claimed design. The hatching pattern used in these views does not represent any particular material.

1 Claim, 14 Drawing Sheets



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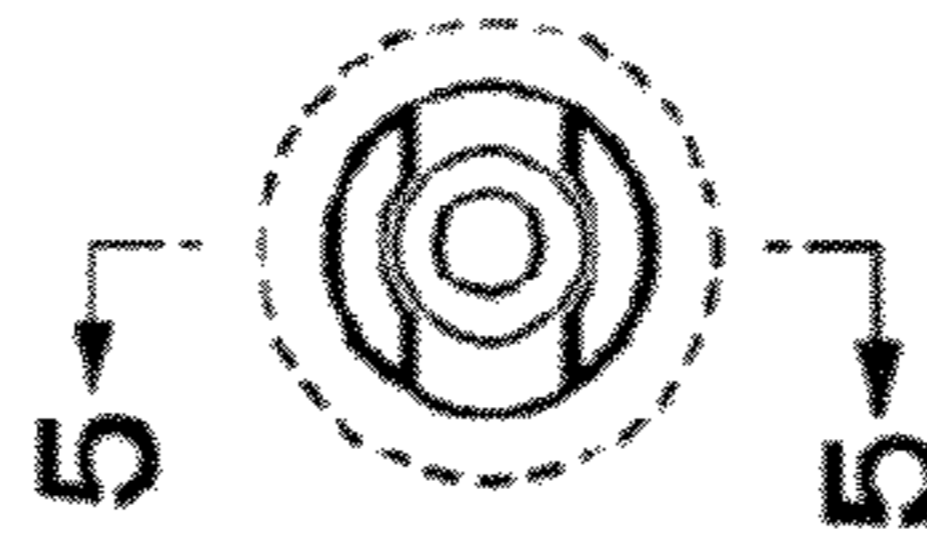


FIG. 1

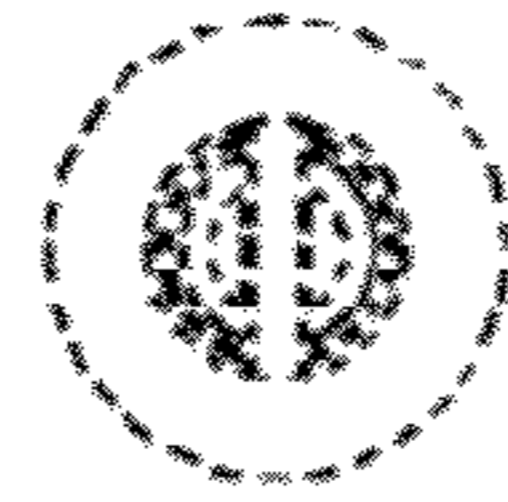


FIG. 2

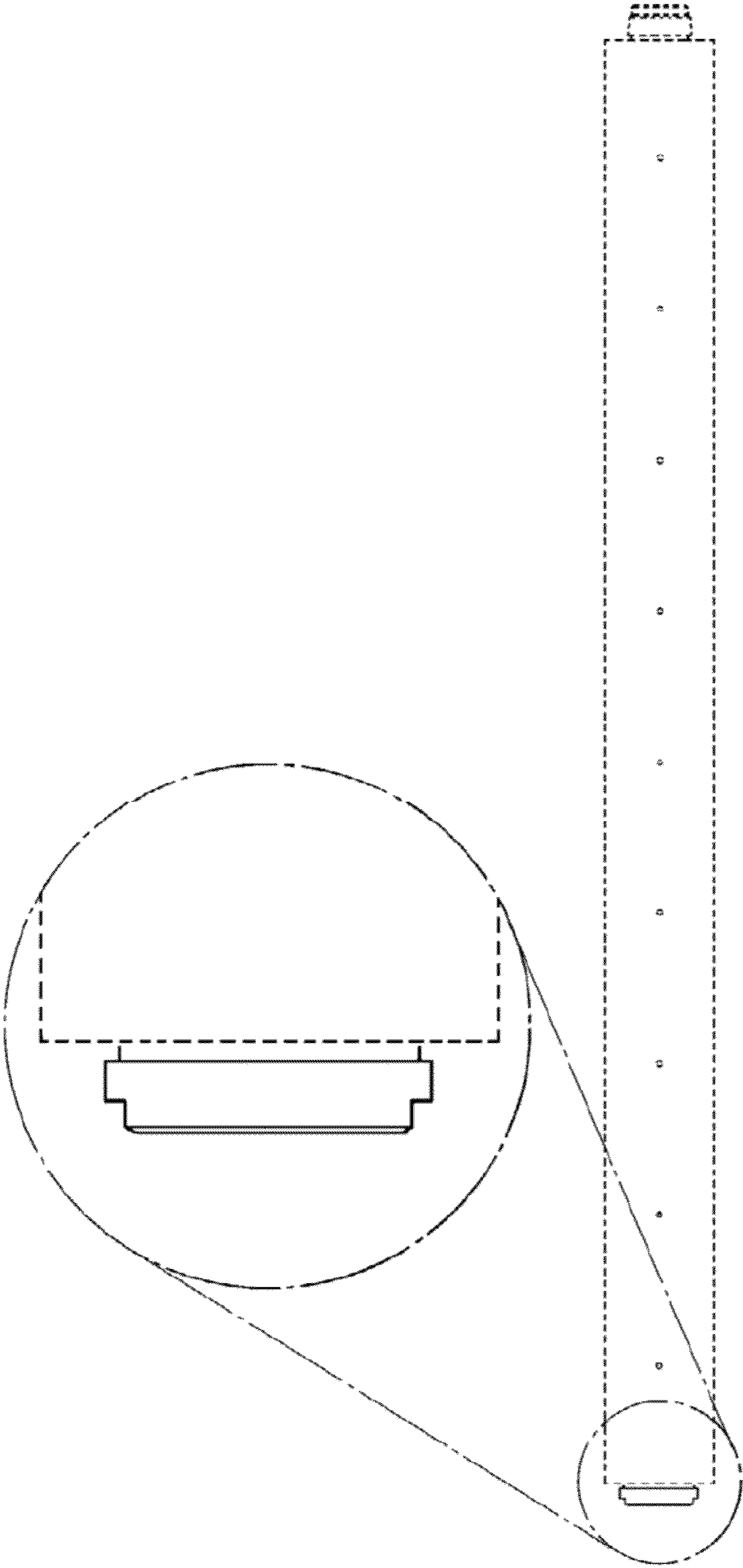


FIG.3

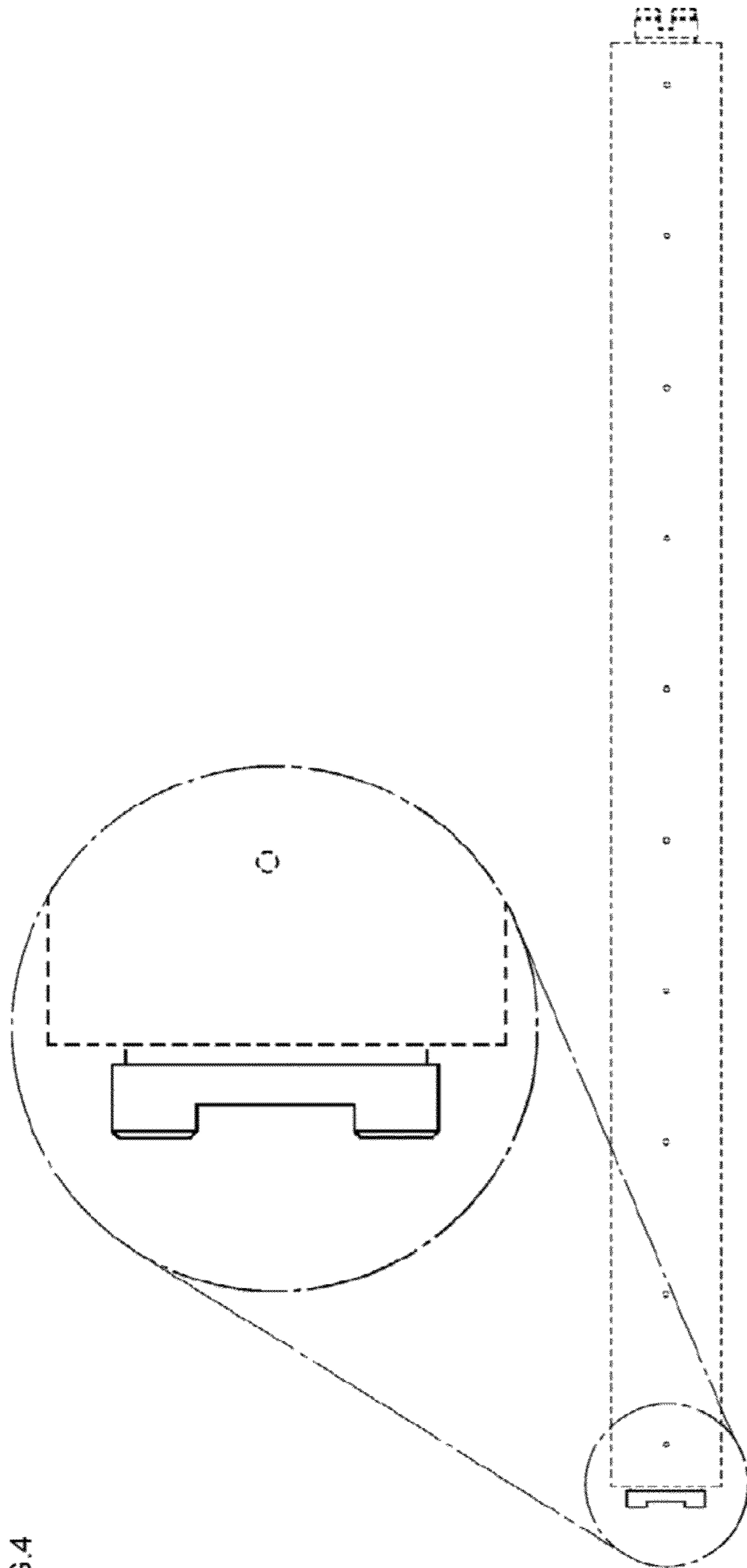


FIG.4

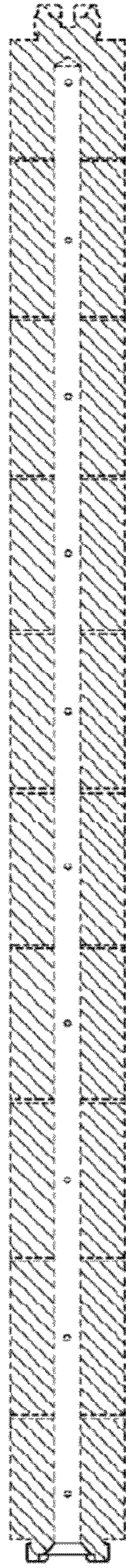


FIG.5

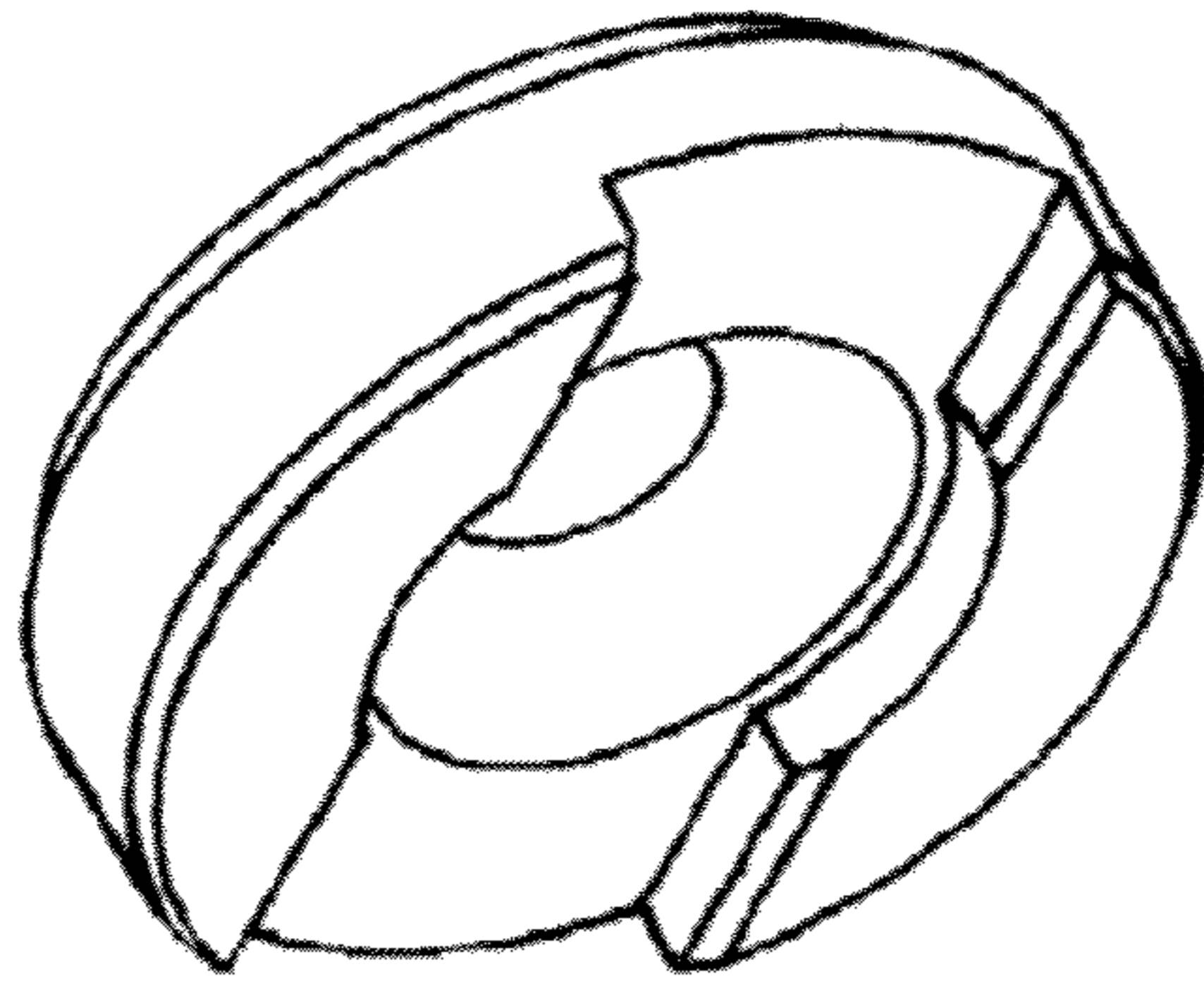


FIG.6

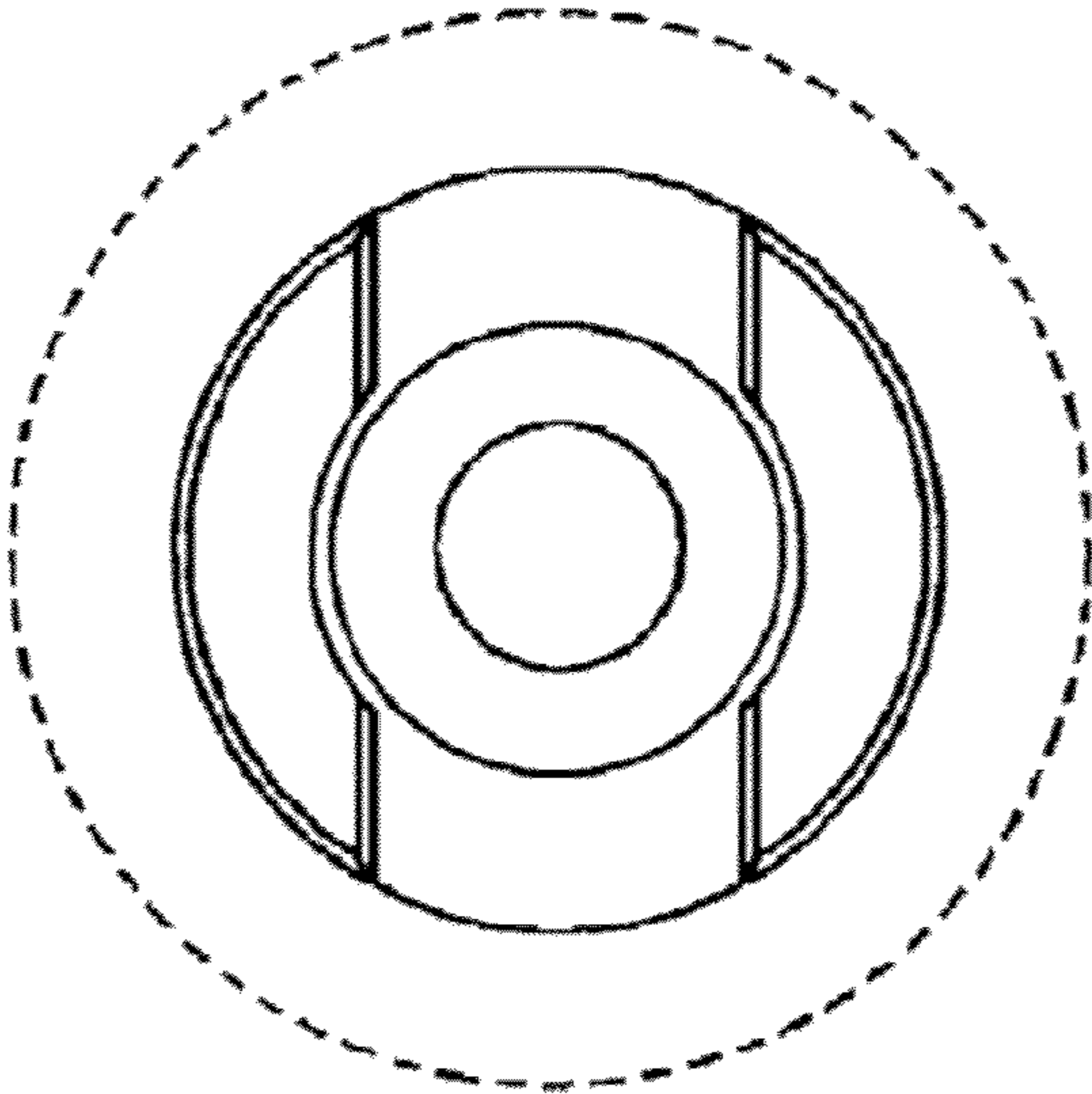


FIG.7

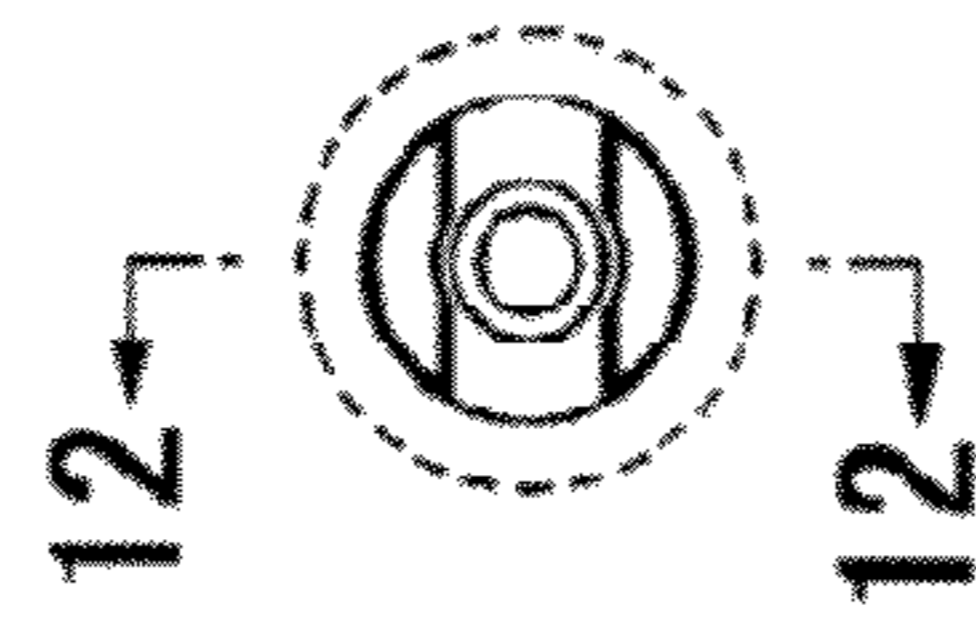


FIG. 8

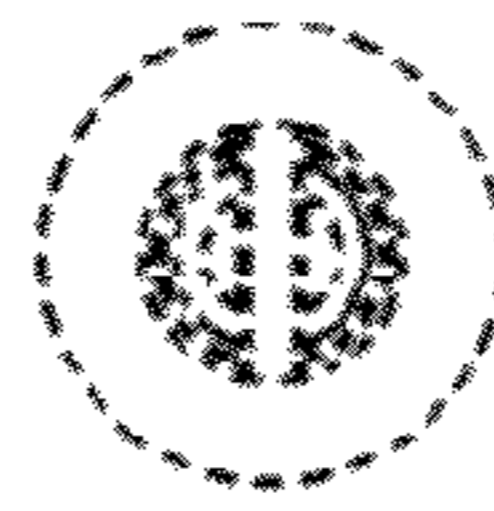


FIG.9

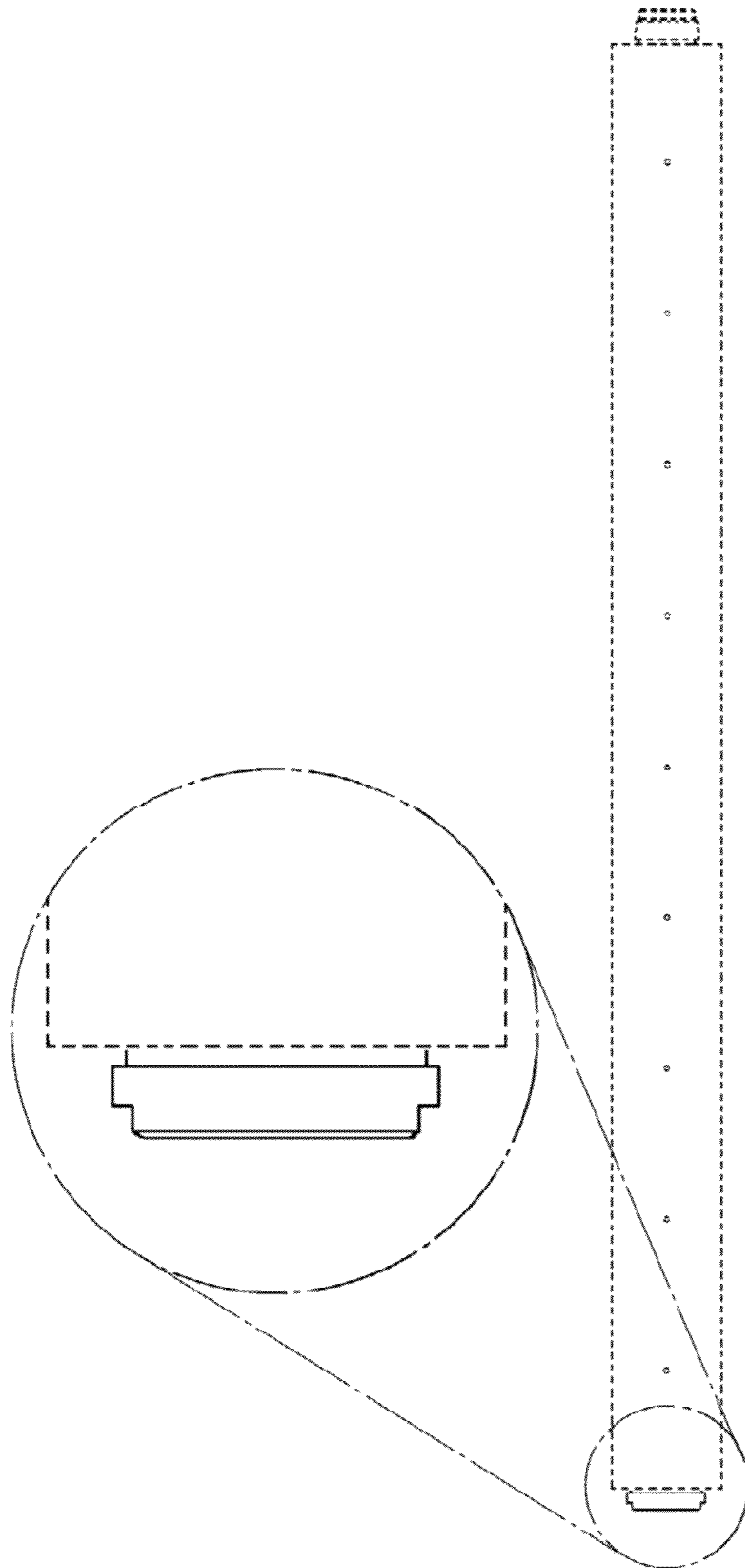


FIG.10

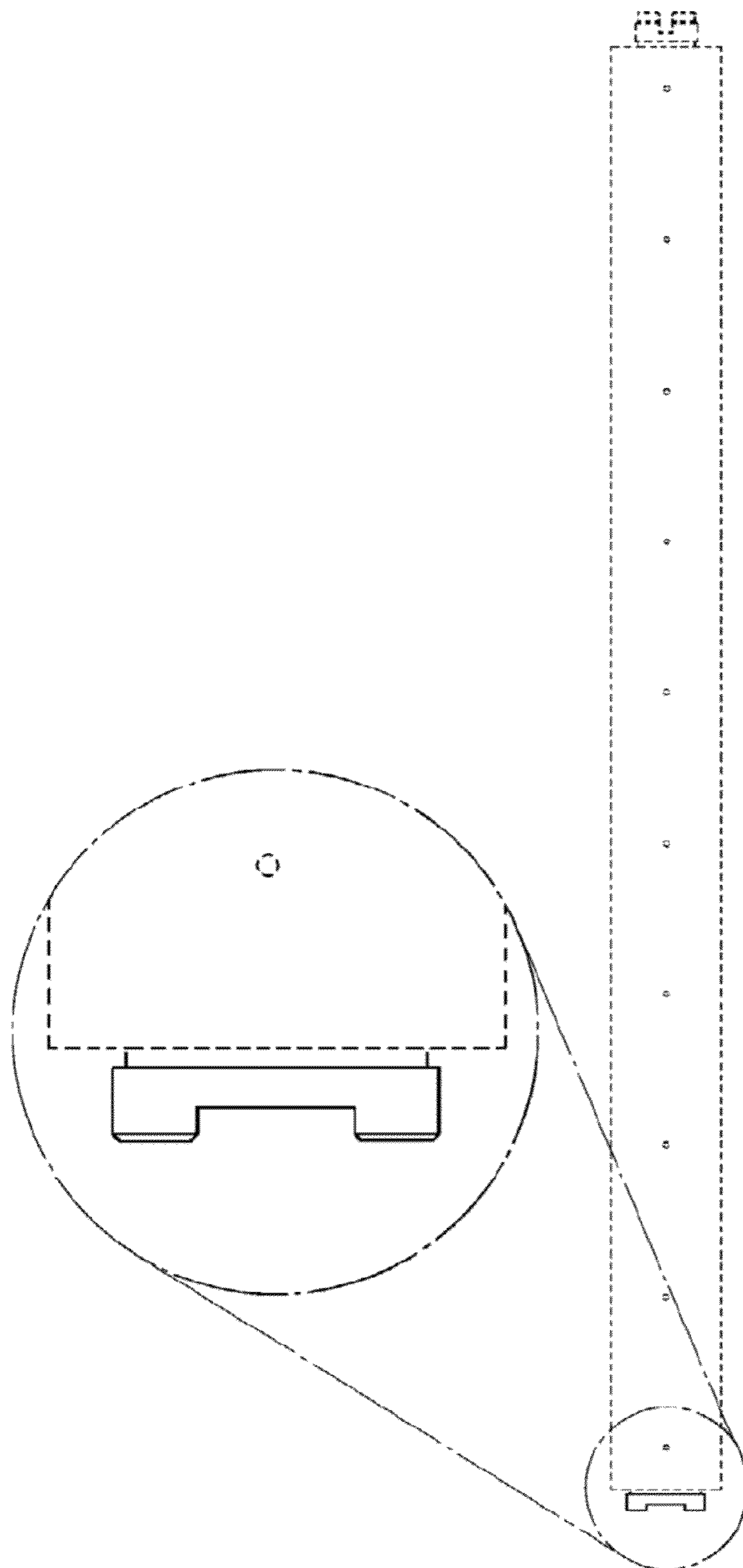


FIG.11

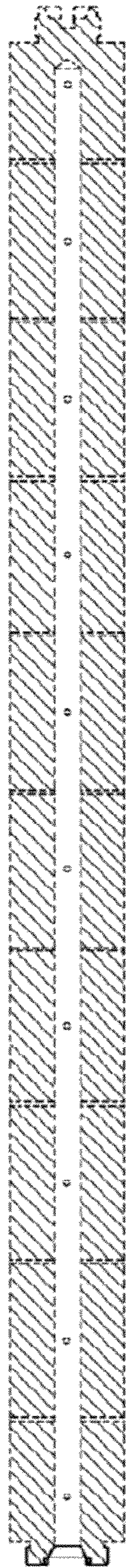


FIG.12

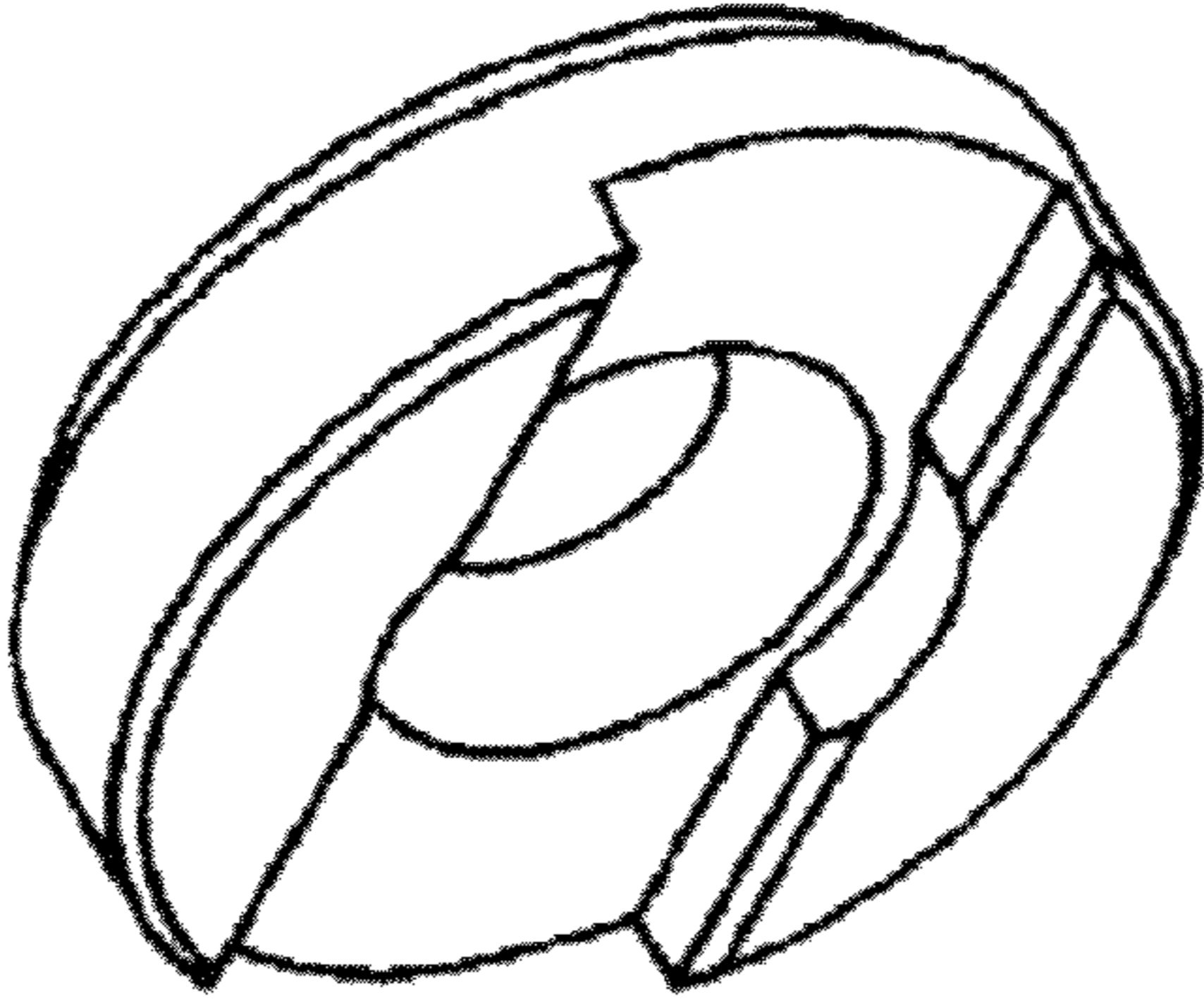


FIG.13

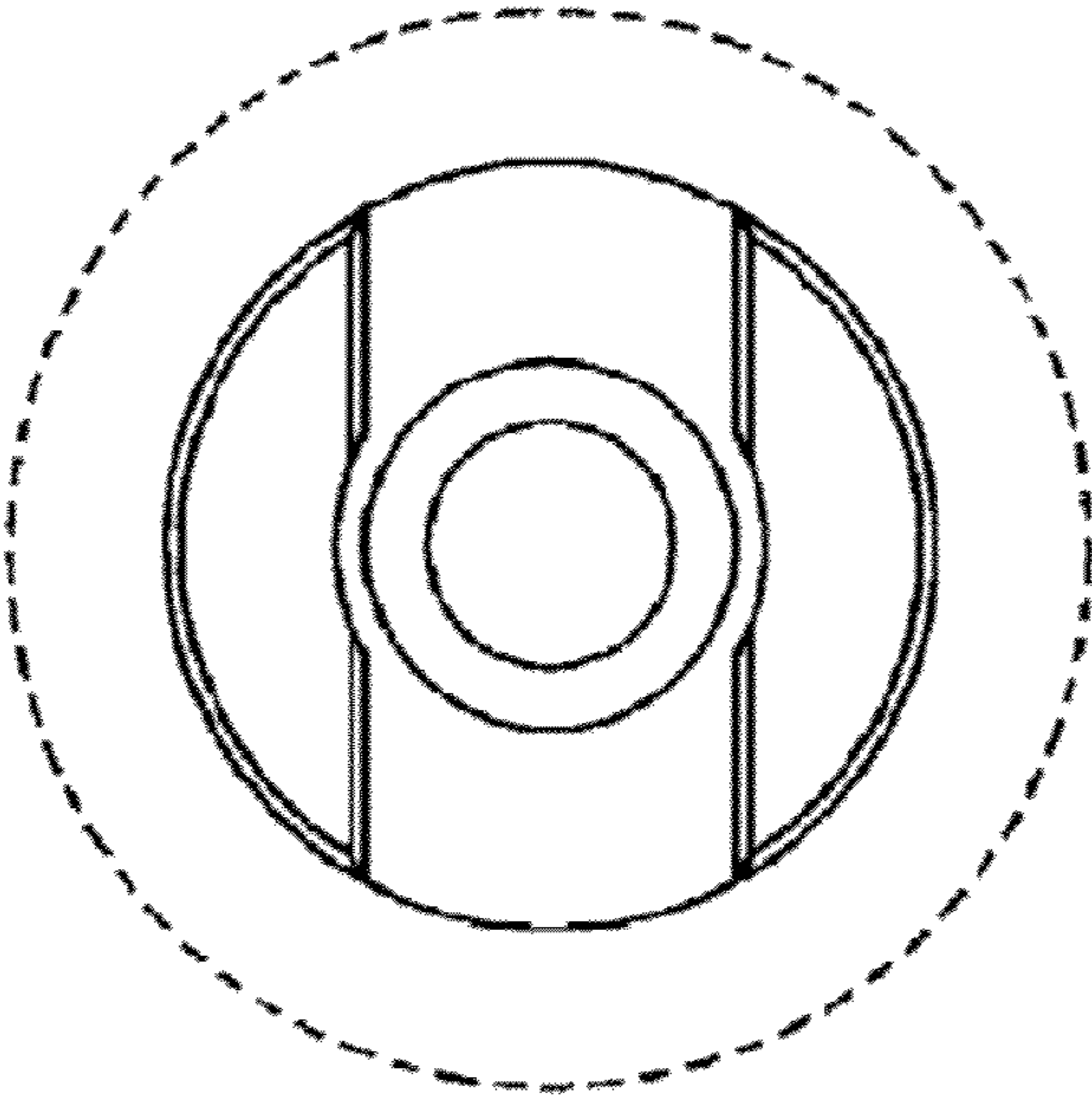


FIG.14