



US00D963012S

(12) **United States Design Patent** (10) **Patent No.:** **US D963,012 S**
Nienaber et al. (45) **Date of Patent:** **** *Sep. 6, 2022**

(54) **ROBOT END EFFECTOR**
(71) Applicant: **3M INNOVATIVE PROPERTIES COMPANY**, St. Paul, MN (US)

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(*) Notice: This patent is subject to a terminal disclaimer.

(57) **CLAIM**

The ornamental design for a robot end effector, as shown and described.

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

(21) Appl. No.: **29/715,098**

DESCRIPTION

(22) Filed: **Nov. 27, 2019**

(51) **LOC (13) Cl.** **15-99**

(52) **U.S. Cl.**
USPC **D15/199**

(58) **Field of Classification Search**
USPC D8/59, 71-74, 394-399; D15/199;
D21/578-583, 621, 622
CPC .. B23P 19/006; B25J 15/0253; B25J 17/0208;
H05K 13/0408; Y10T 29/53039
See application file for complete search history.

FIG. 1 is a perspective view of a first embodiment of a new design for a robot end effector;
FIG. 2 is a front view thereof;
FIG. 3 is a top view thereof;
FIG. 4 is a bottom view thereof;
FIG. 5 is a rear view thereof;
FIG. 6 is a left side view thereof;
FIG. 7 is a right side view thereof;
FIG. 8 is a perspective view of a second embodiment thereof;
FIG. 9 is a front view thereof;
FIG. 10 is a top view thereof;
FIG. 11 is a bottom view thereof;
FIG. 12 is a rear view thereof;
FIG. 13 is a left side view thereof; and
FIG. 14 is a right side view thereof.

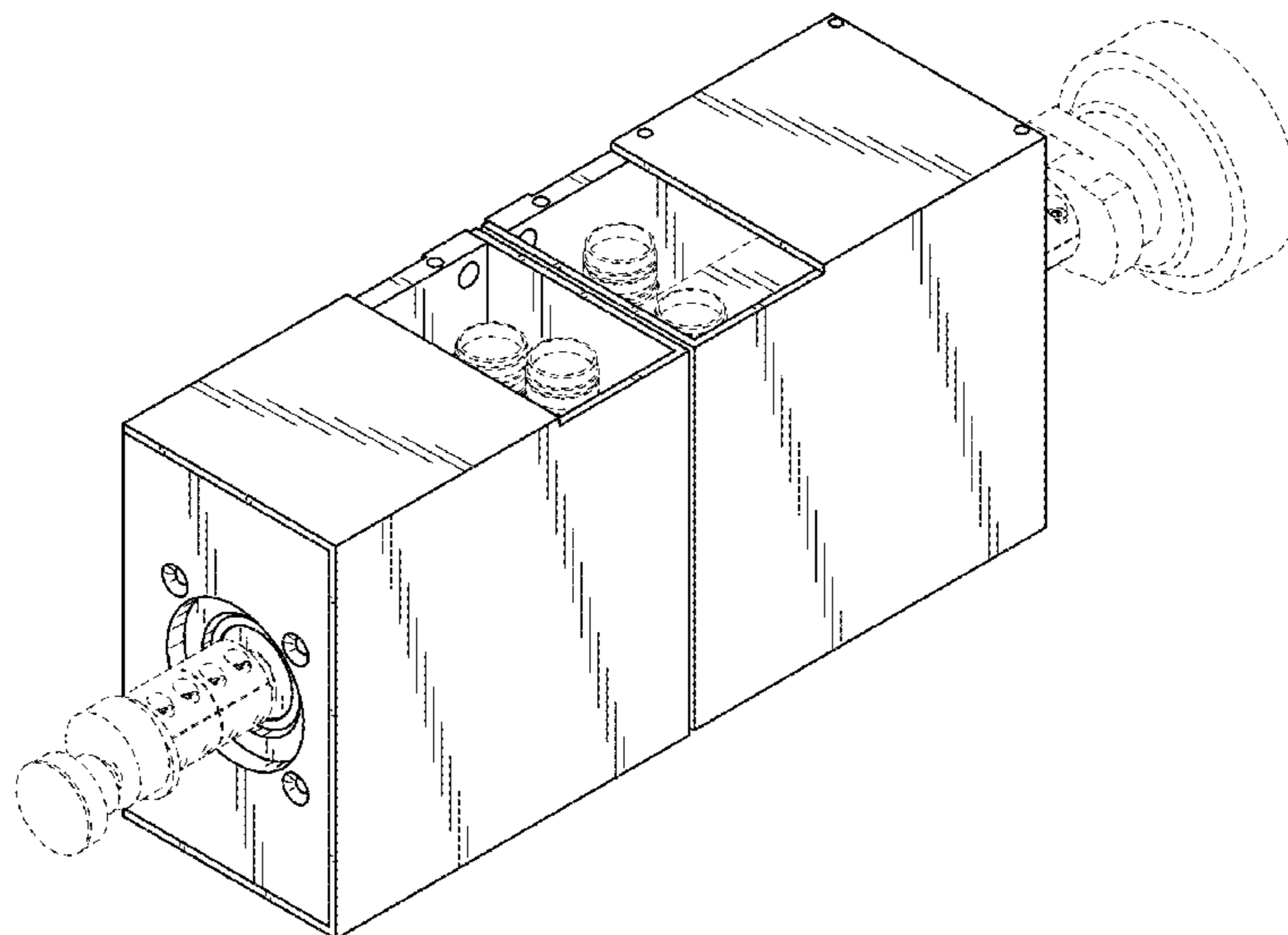
The broken lines in the drawings depict unclaimed environmental subject matter.

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1 Claim, 8 Drawing Sheets



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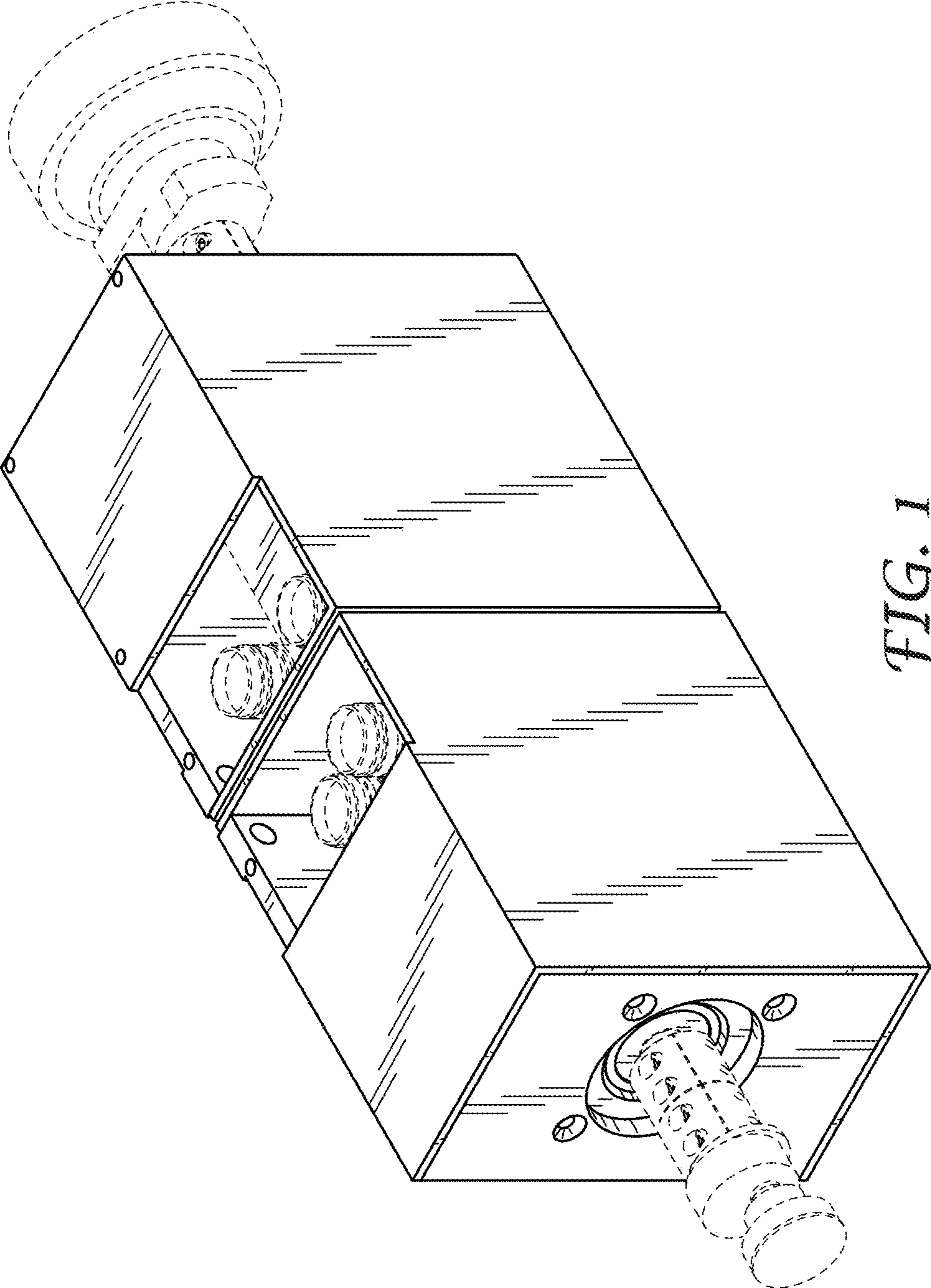


FIG. 1

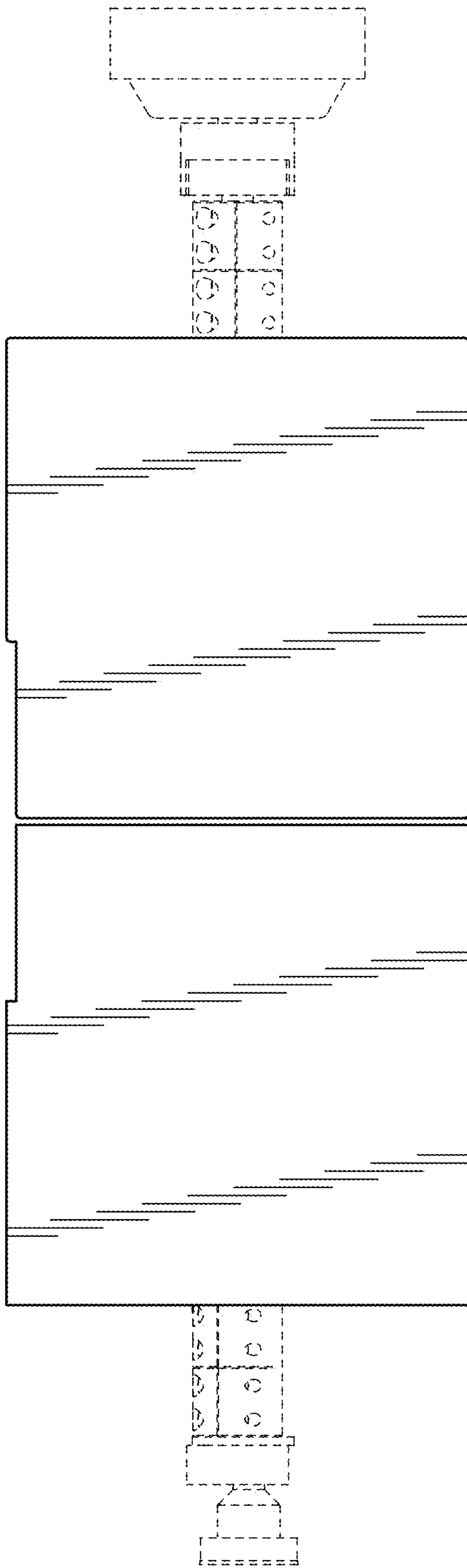


FIG. 2

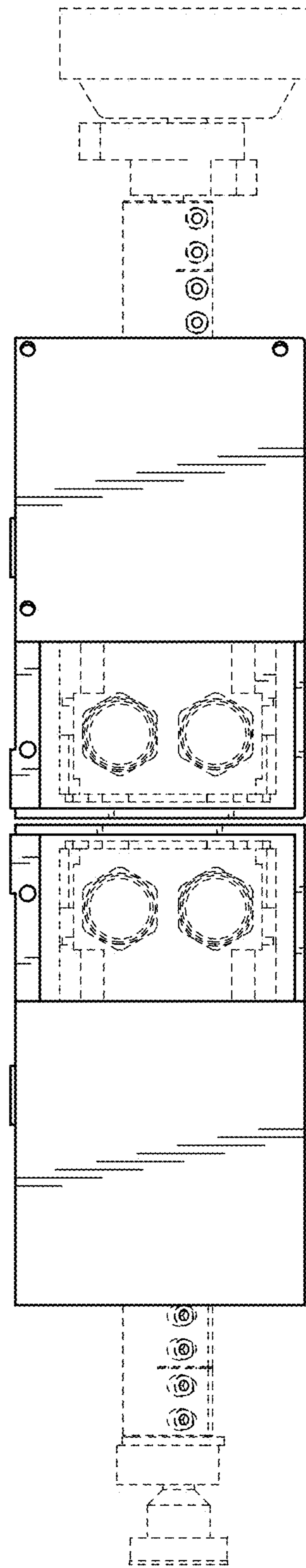


FIG. 3

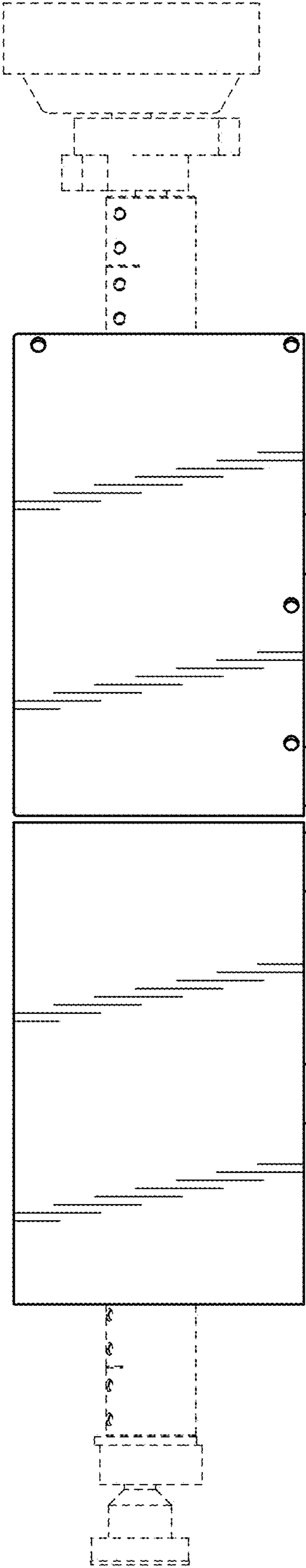


FIG. 4

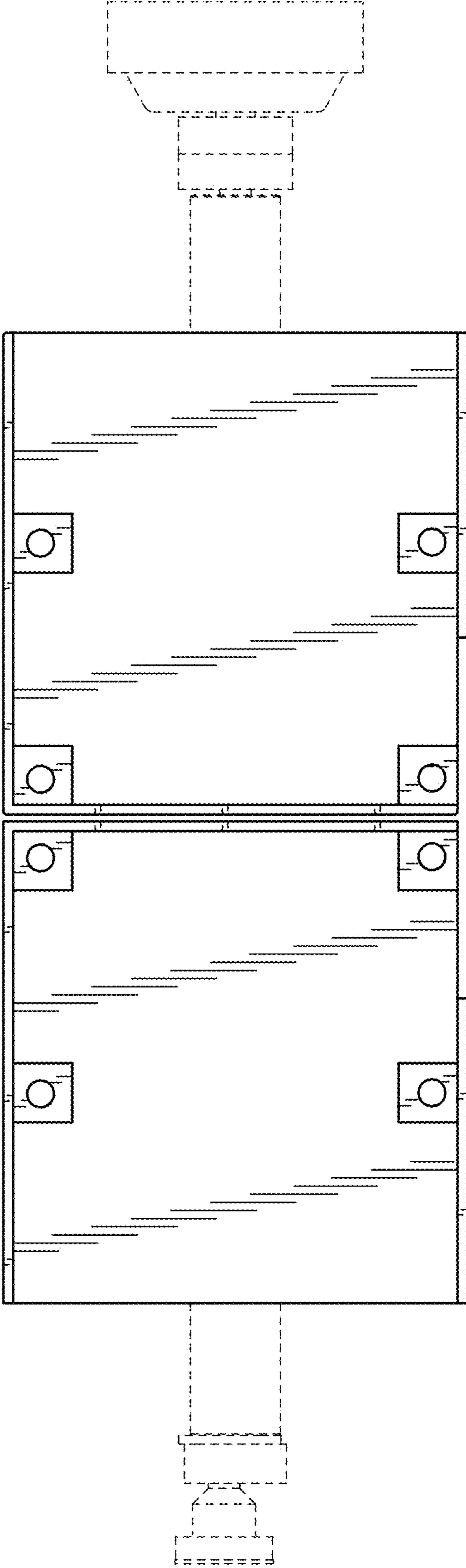


FIG. 5

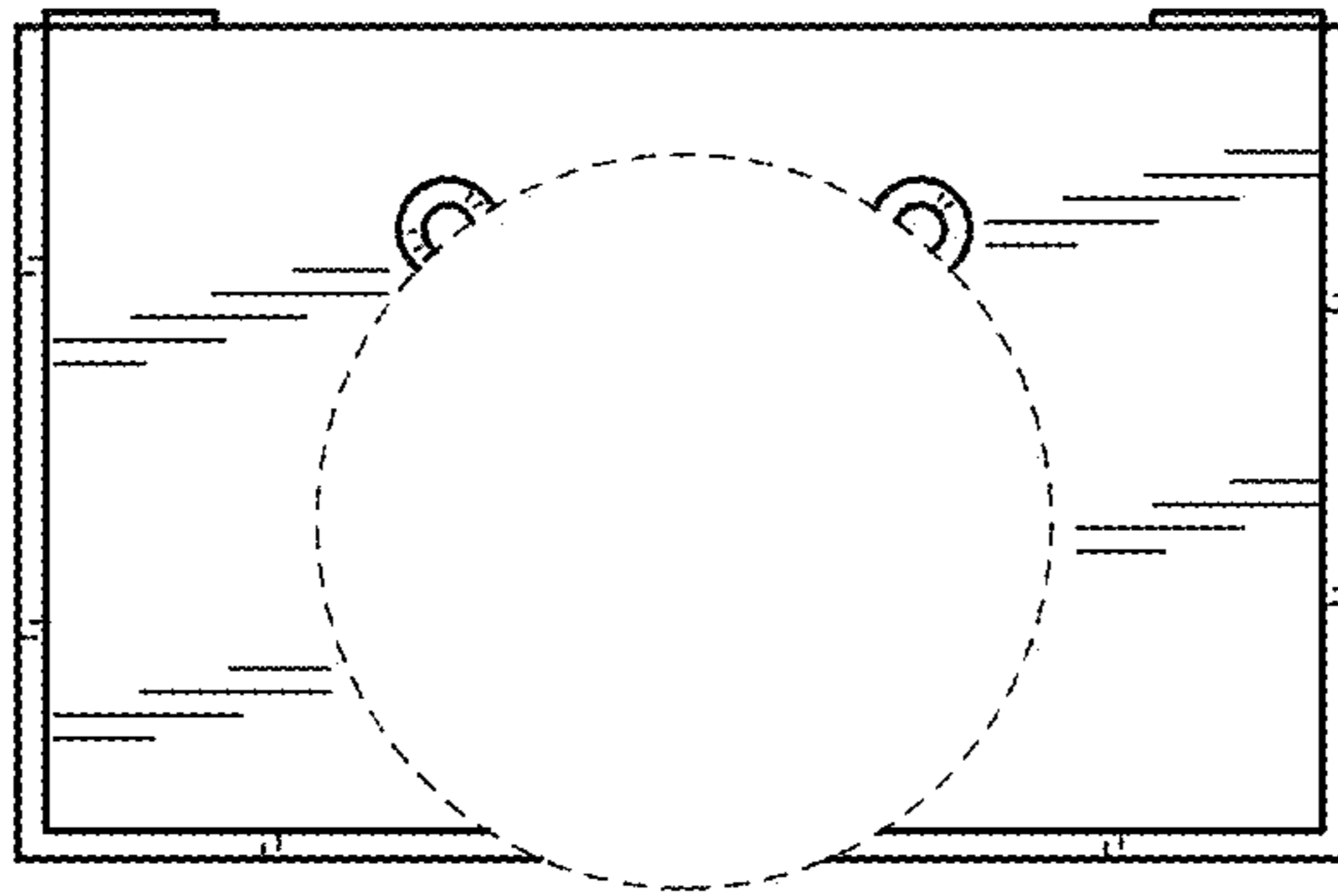


FIG. 7

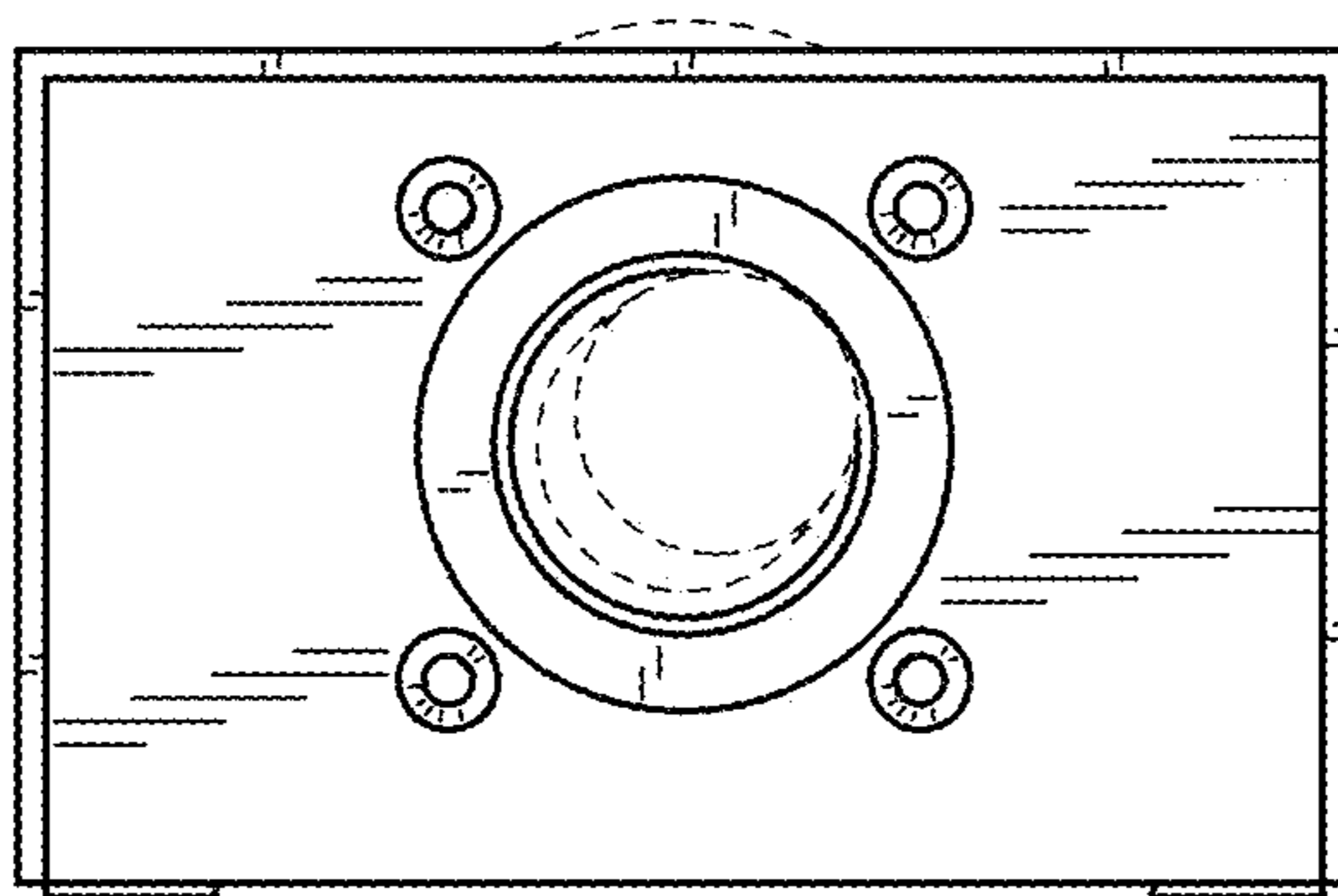


FIG. 6

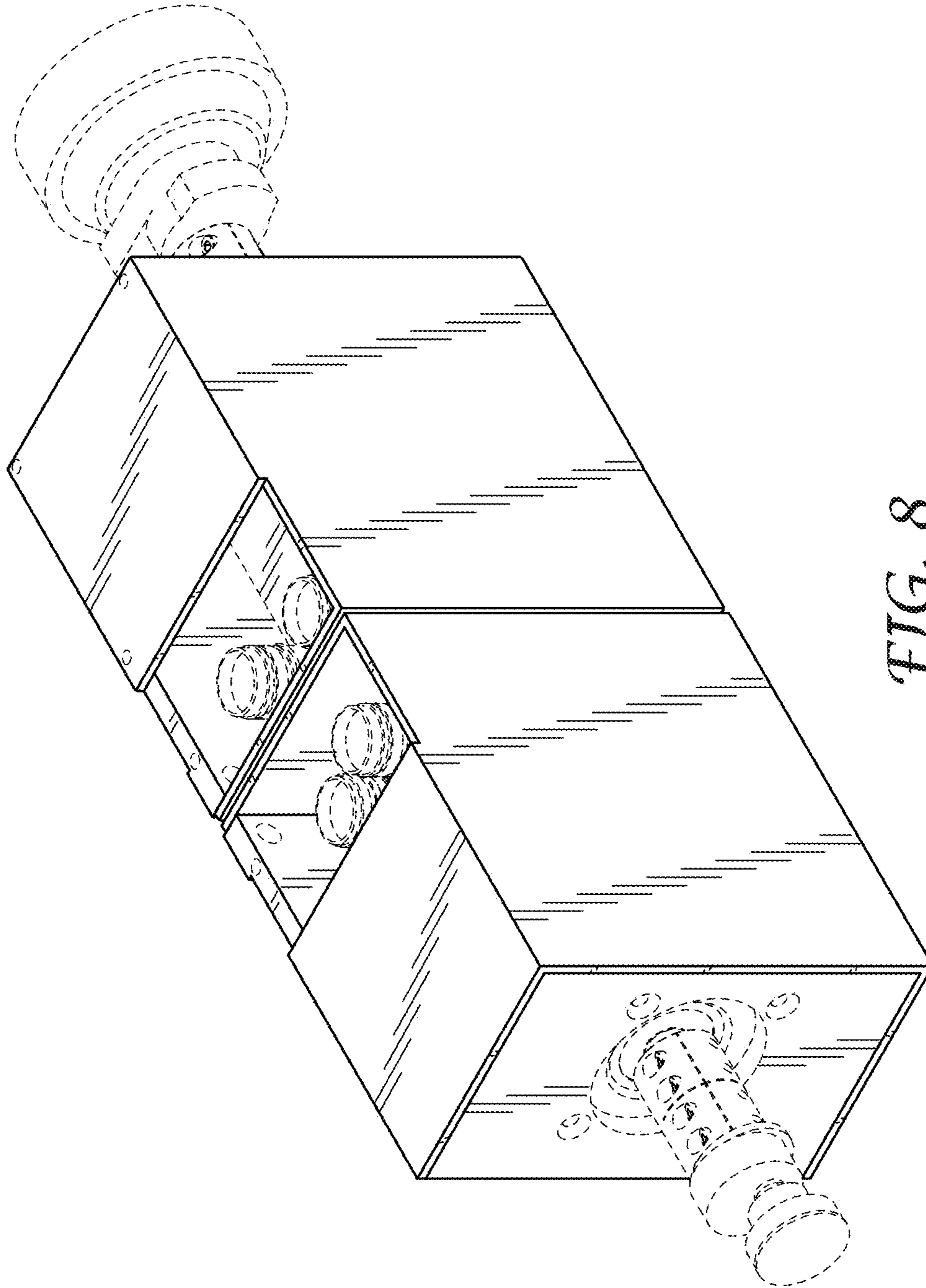


FIG. 8

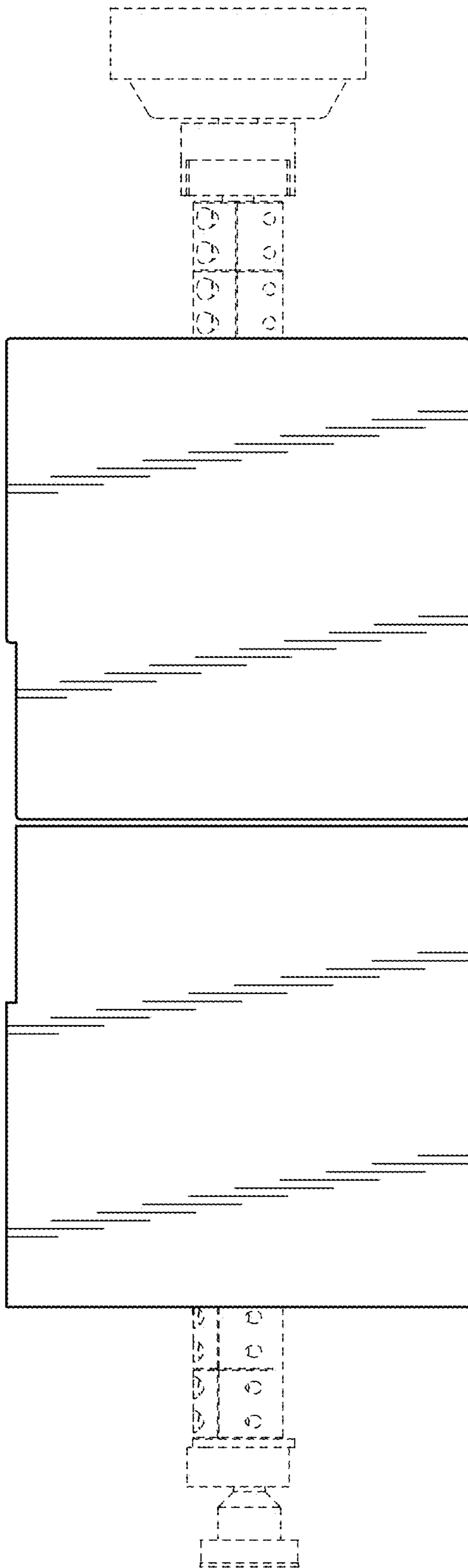


FIG. 9

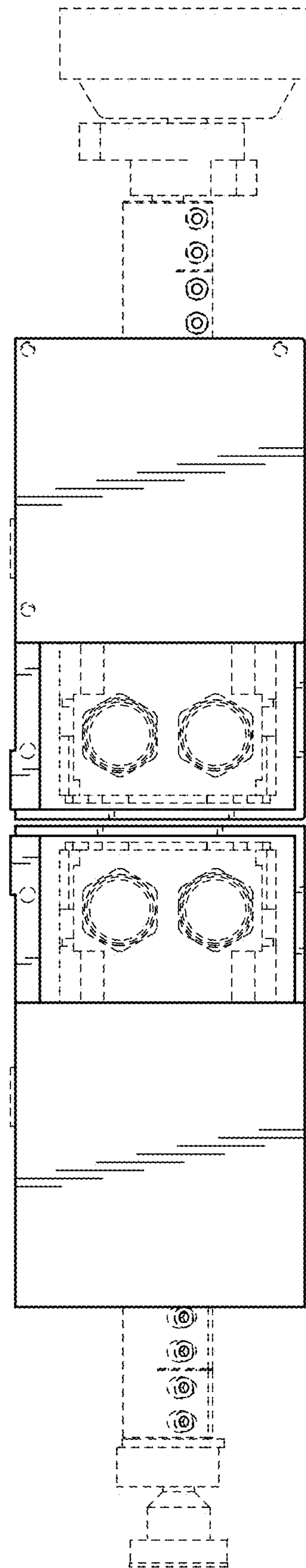


FIG. 10

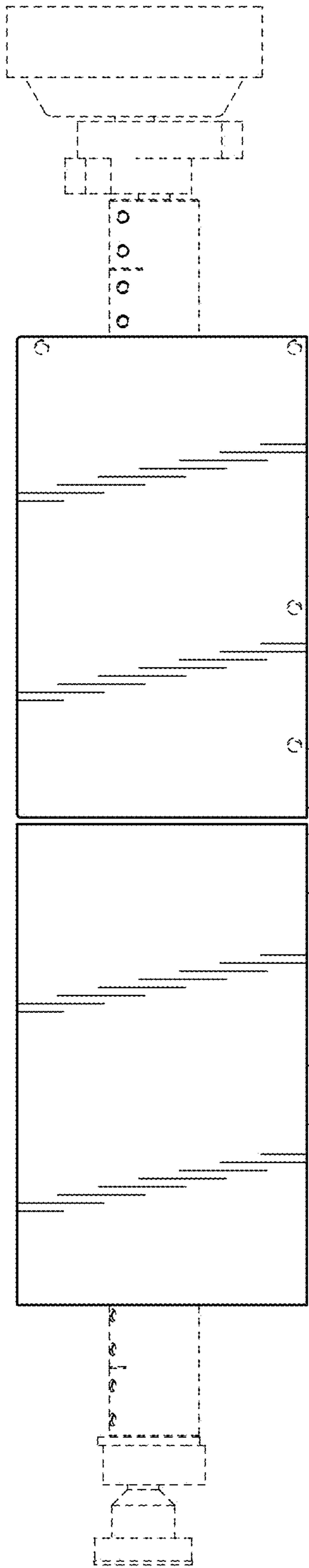


FIG. 11

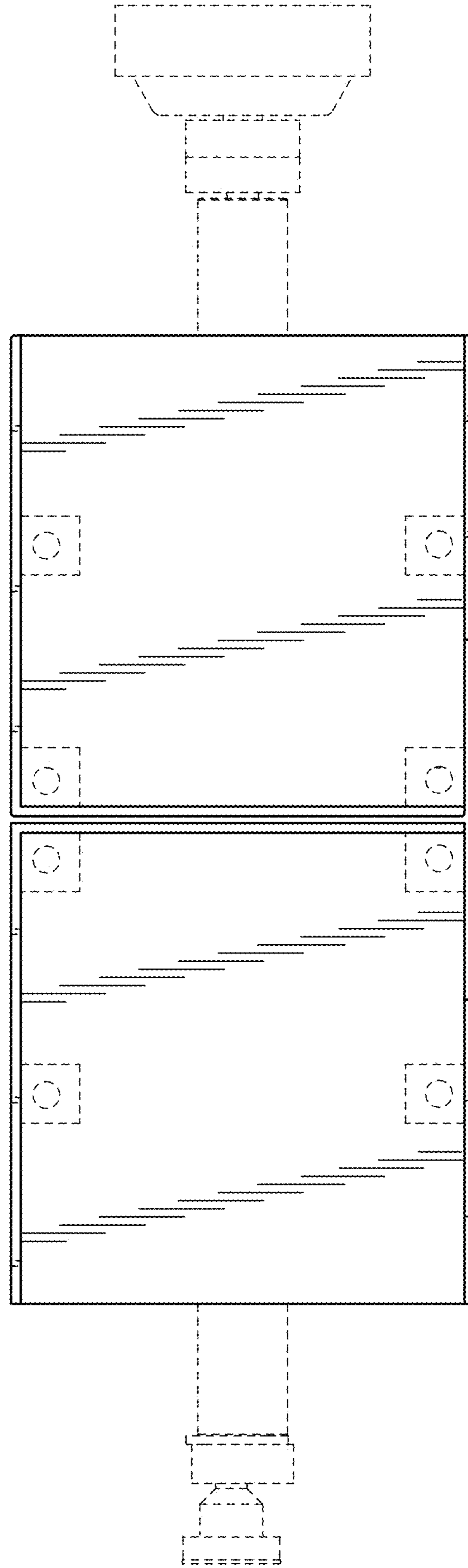


FIG. 12

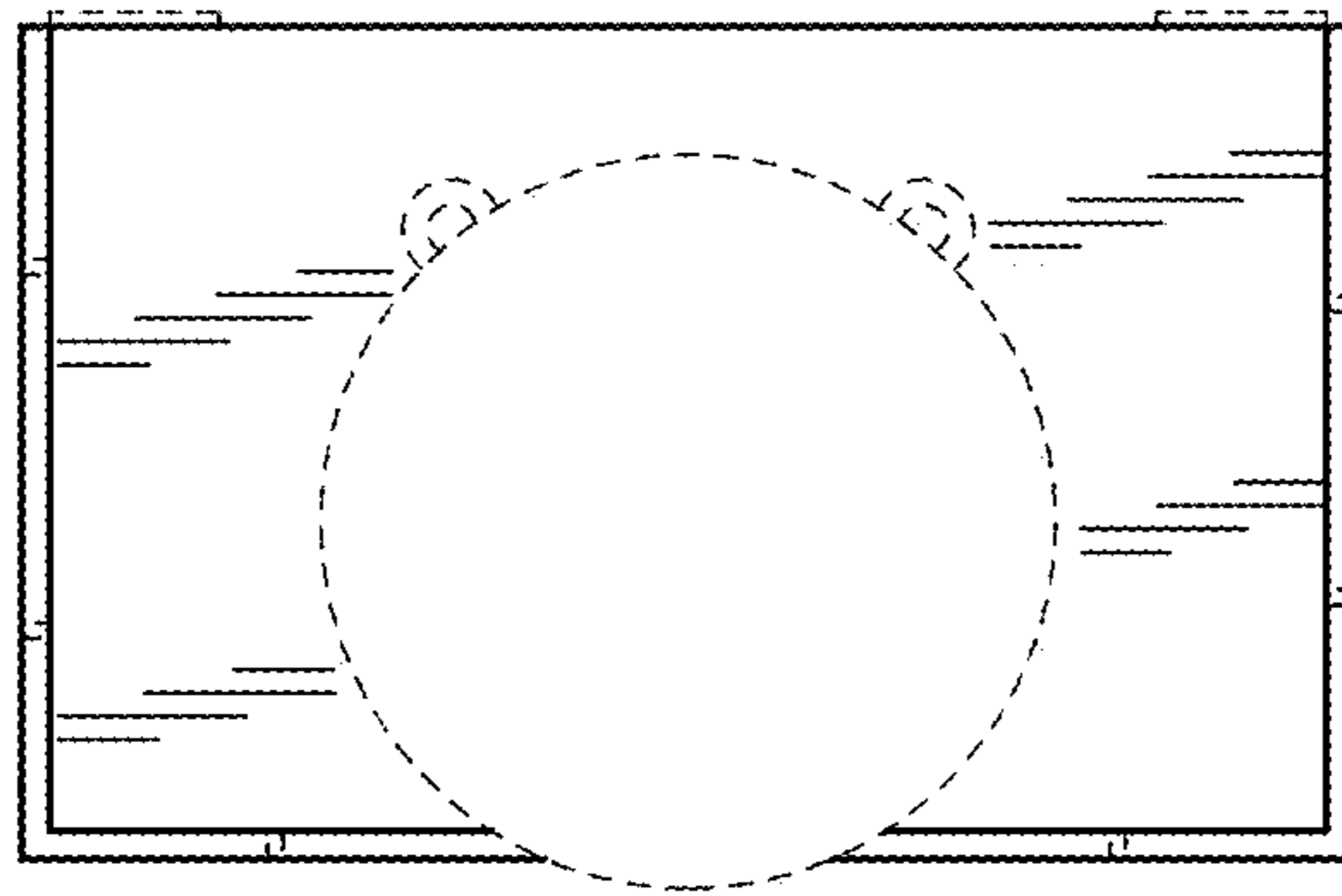


FIG. 14

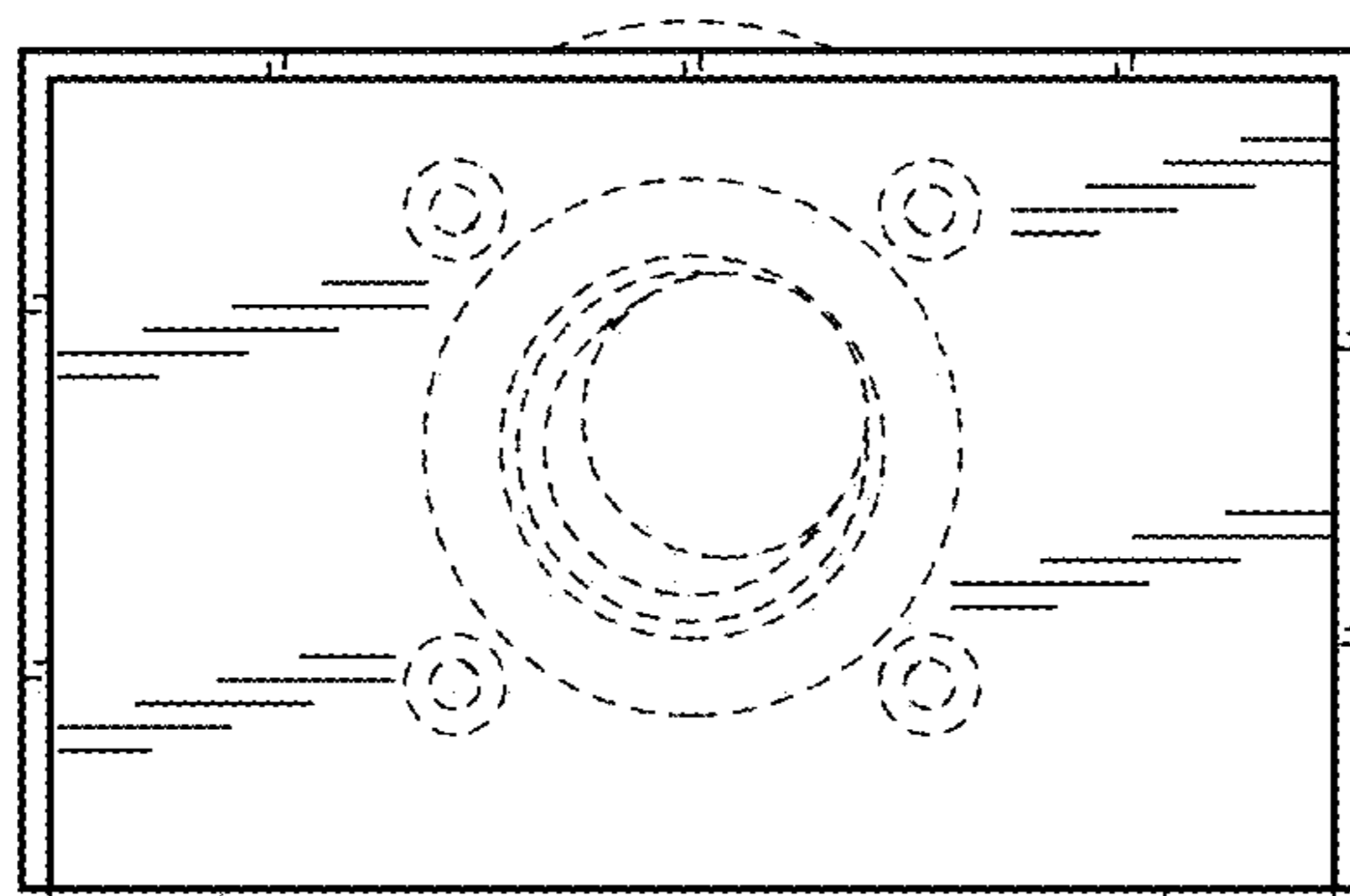


FIG. 13