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

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(45) **Date of Patent:** **** May 17, 2011**

(54) **INDUSTRIAL ROBOT**

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(73) Assignees: **Denso Corporation**, Kariya (JP); **Denso Wave Incorporated**, Tokyo (JP)

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

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(30) **Foreign Application Priority Data**

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(51) **LOC (9) Cl.** **15-99**

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

(58) **Field of Classification Search** D15/122,
D15/199; D24/176; 74/490.01, 490.02,
74/490.03, 490.05; 219/124.34, 639; 318/560;
700/150

See application file for complete search history.

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(57) **CLAIM**

The design for an industrial robot, as shown and described.

DESCRIPTION

FIG. 1 is a front view of an industrial robot of a new design; FIG. 2 is a back view of the industrial robot shown in FIG. 1; FIG. 3 is a left side view of the industrial robot shown in FIG. 1; FIG. 4 is a right side view of the industrial robot shown in FIG. 1; FIG. 5 is a top view of the industrial robot shown in FIG. 1; FIG. 6 is a bottom view of the industrial robot shown in FIG. 1; FIG. 7 is a front perspective view of the industrial robot shown in FIG. 1; FIG. 8 is a front view of a second embodiment of the industrial robot; FIG. 9 is a back view of the industrial robot shown in FIG. 8; FIG. 10 is a left side view of the industrial robot shown in FIG. 8; FIG. 11 is a right side view of the industrial robot shown in FIG. 8; FIG. 12 is a top view of the industrial robot shown in FIG. 8; FIG. 13 is a bottom view of the industrial robot shown in FIG. 8; and, FIG. 14 is a front perspective view of the industrial robot shown in FIG. 8.

The article of the present designs relate to an industrial robot having multi-joints capable of performing various processing operations.

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

1 Claim, 12 Drawing Sheets

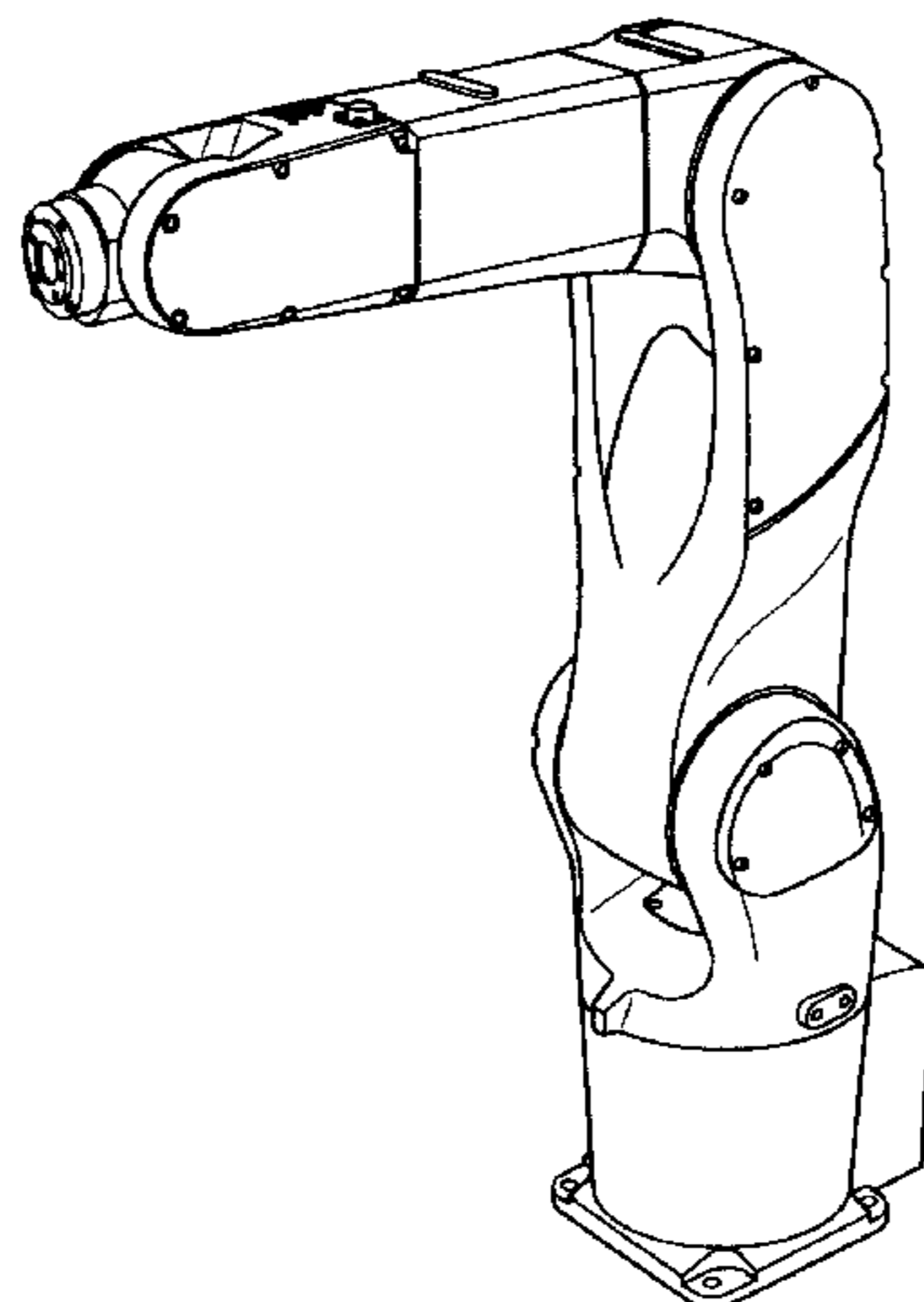


FIG. 1

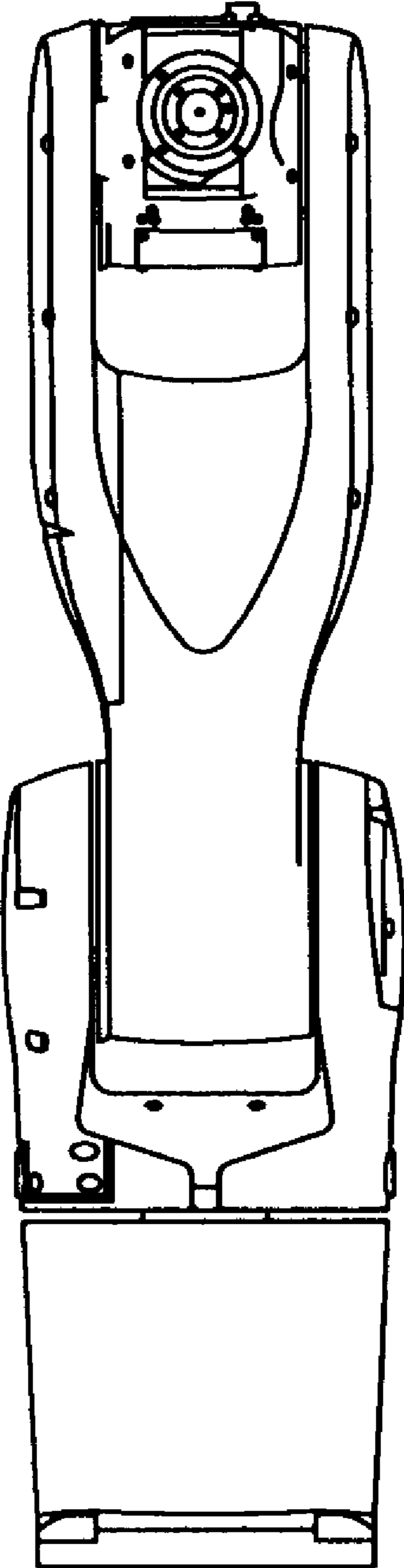


FIG. 2

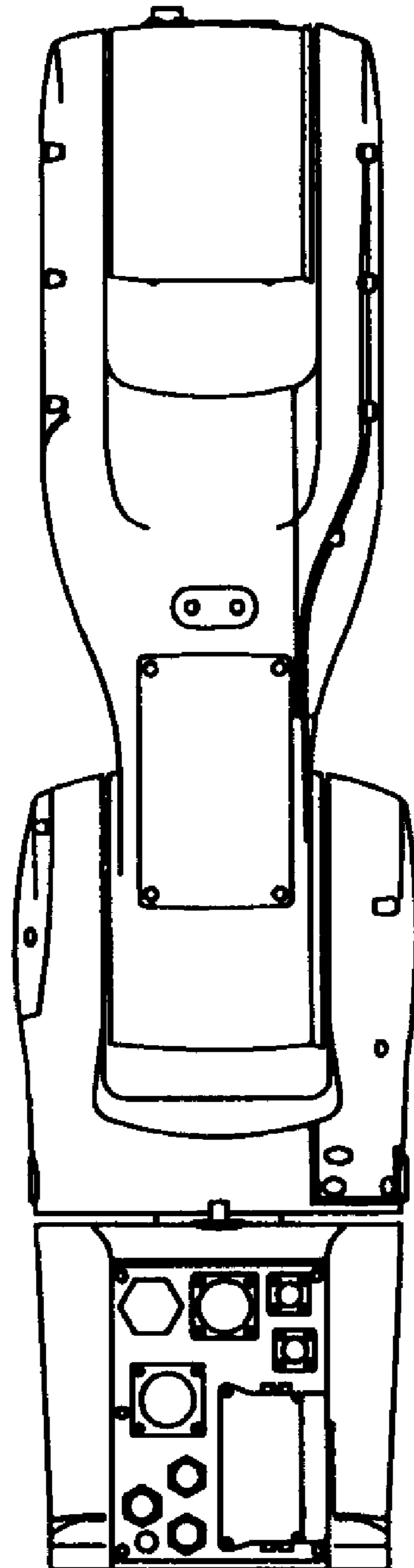


FIG. 3

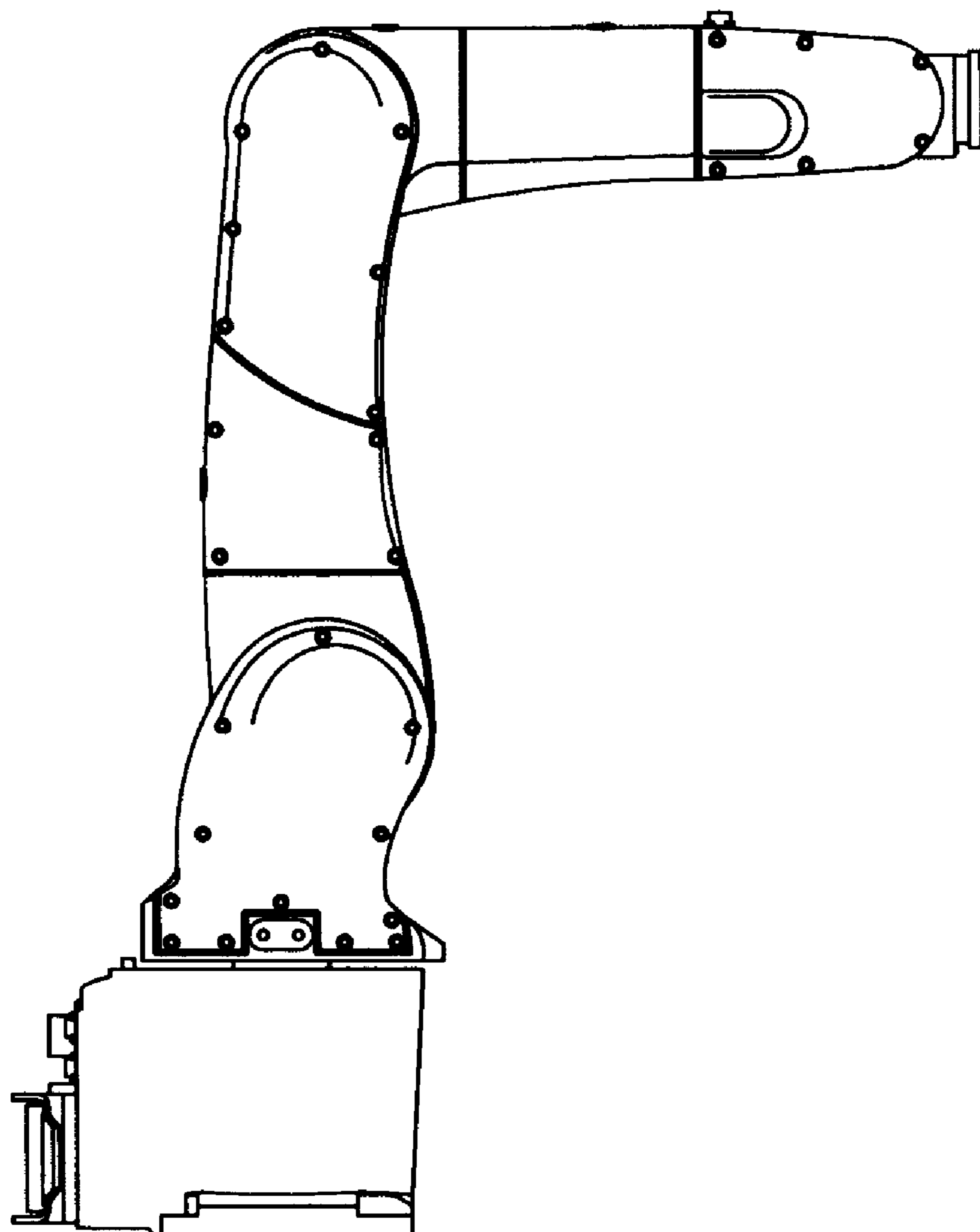


FIG. 4

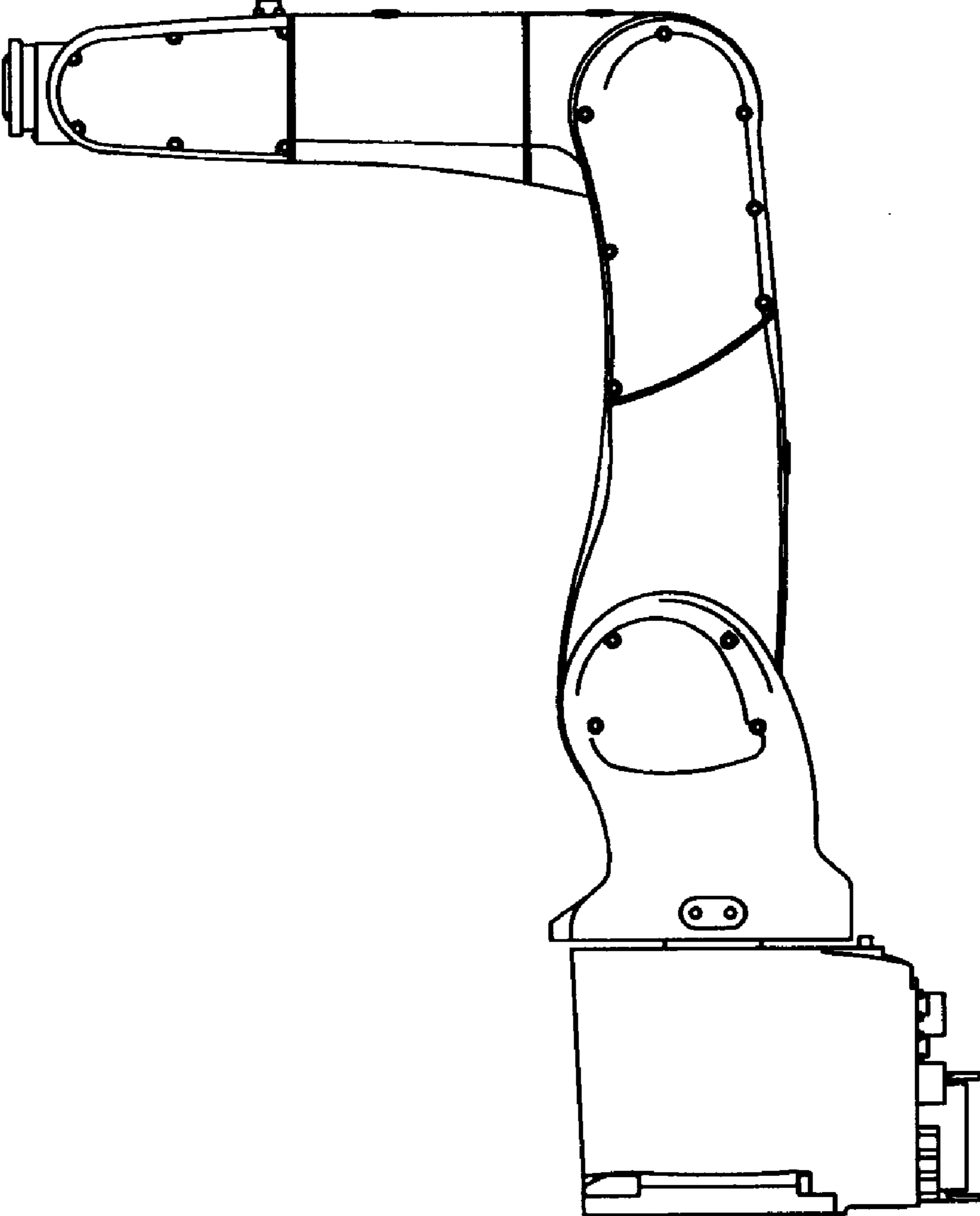


FIG. 5

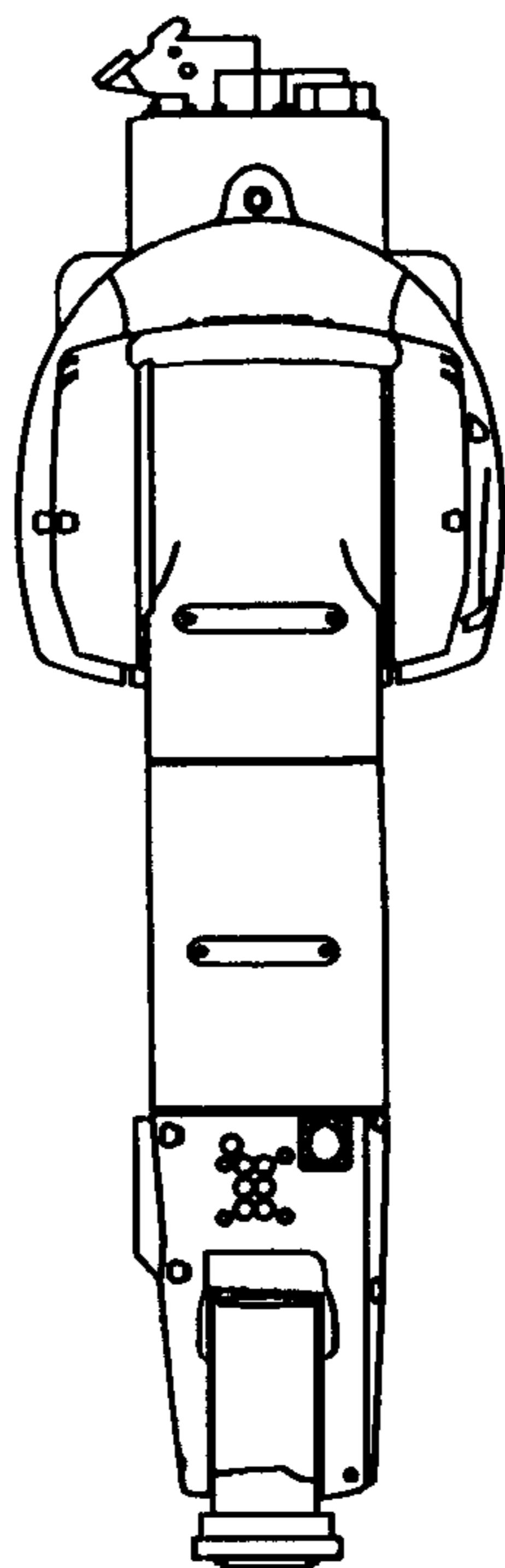


FIG. 6

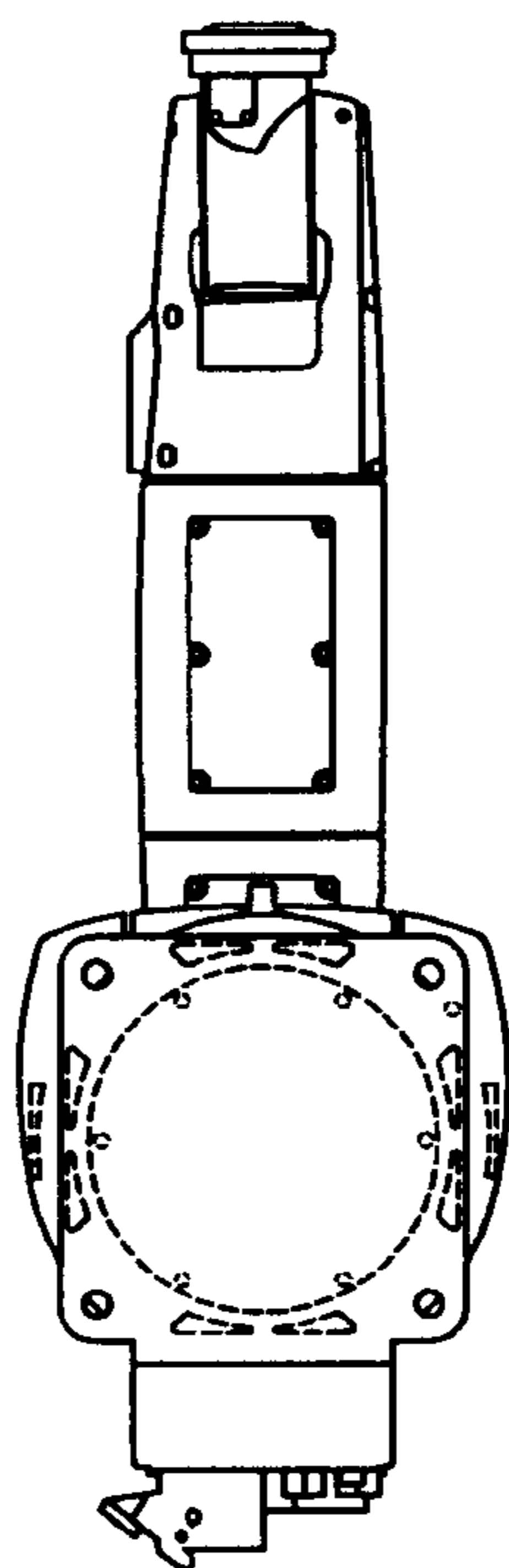


FIG. 7

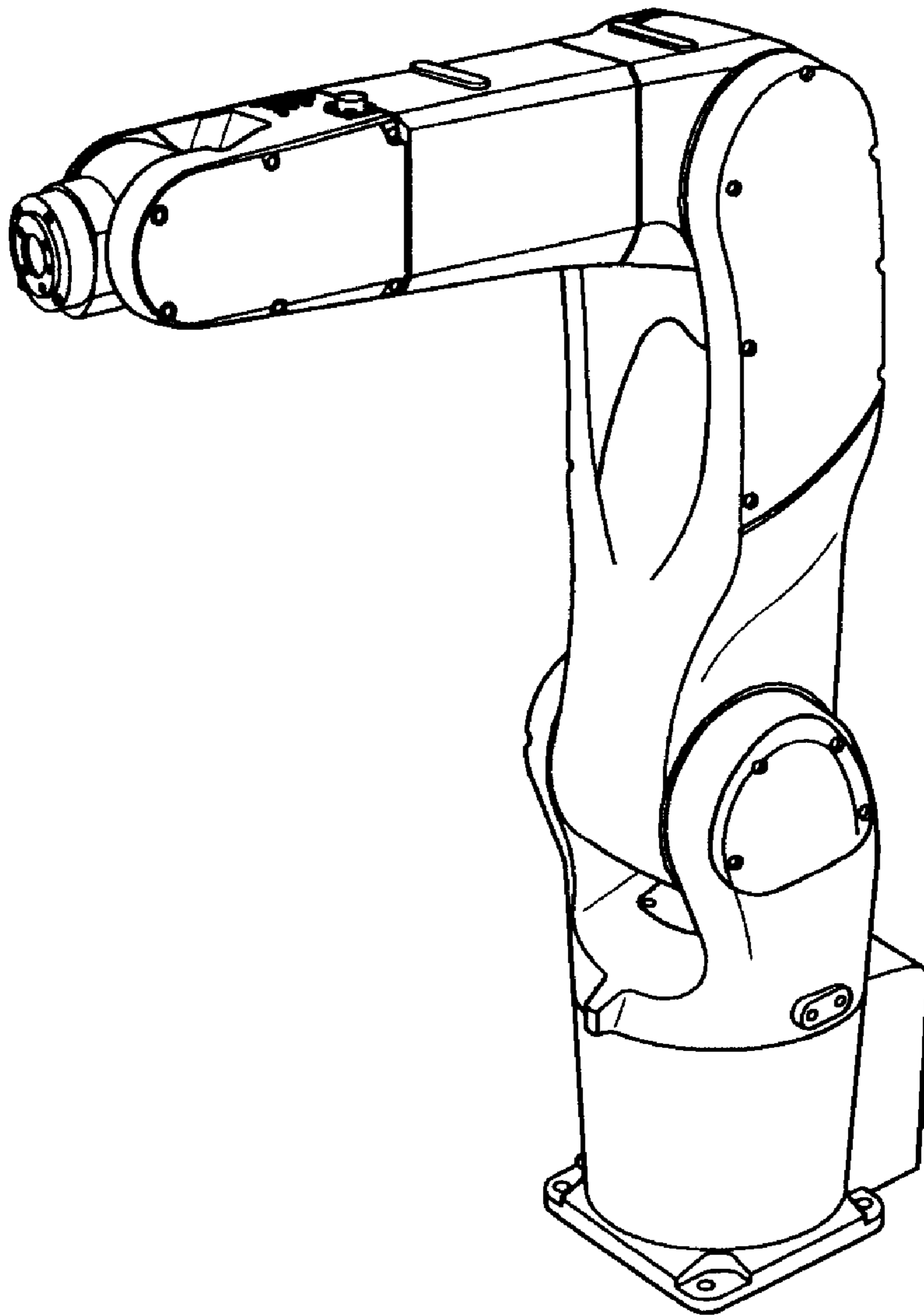


FIG. 8

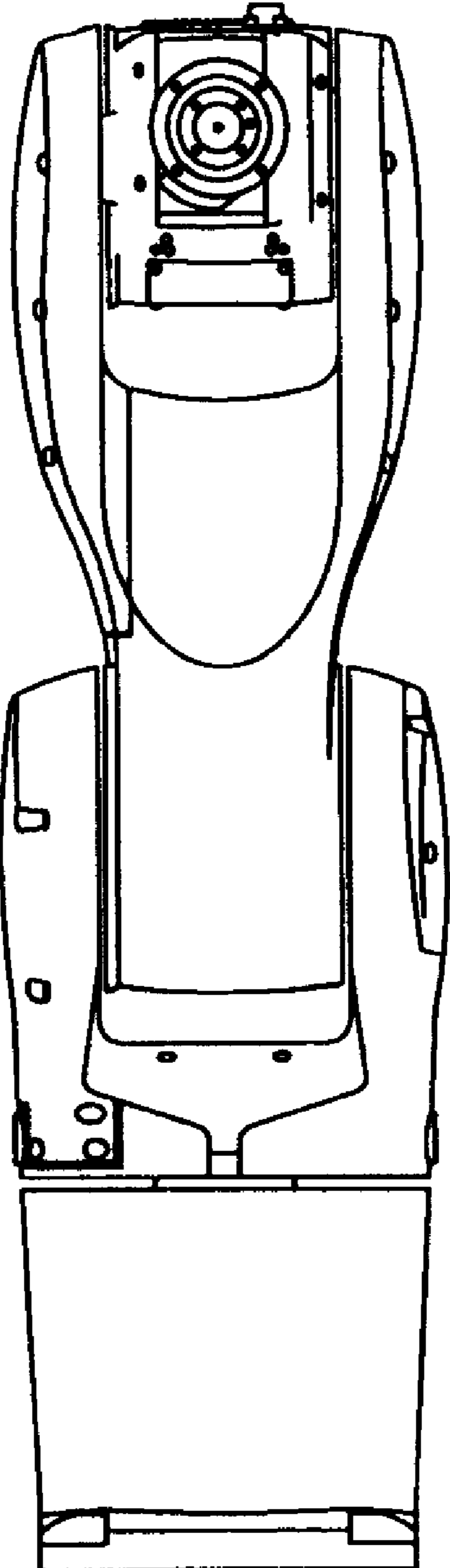


FIG. 9

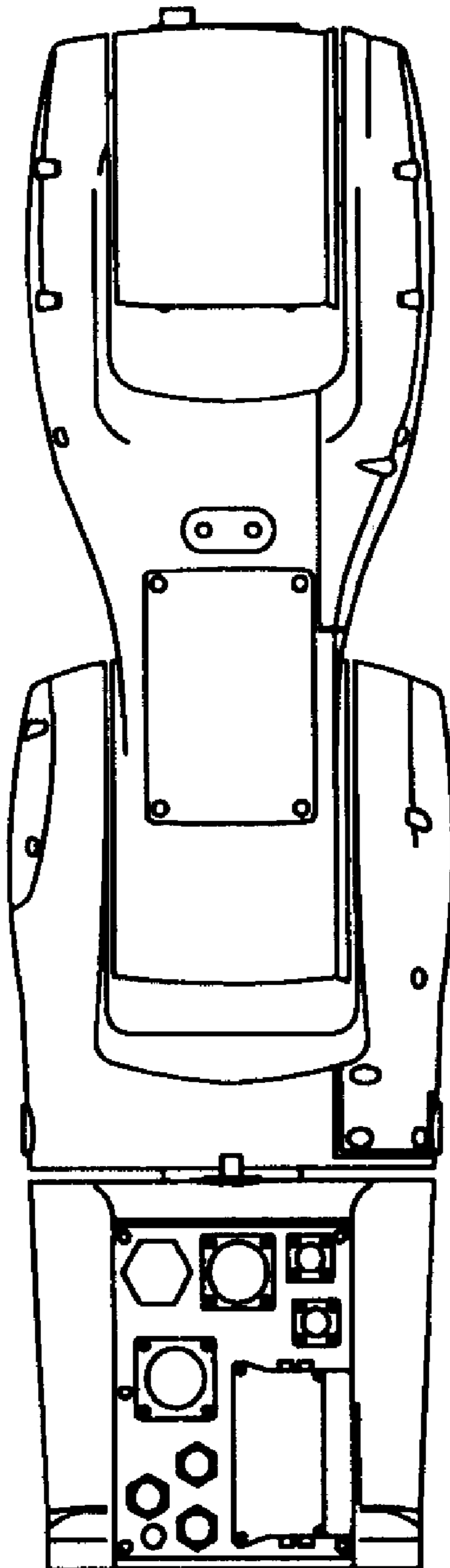


FIG. 10

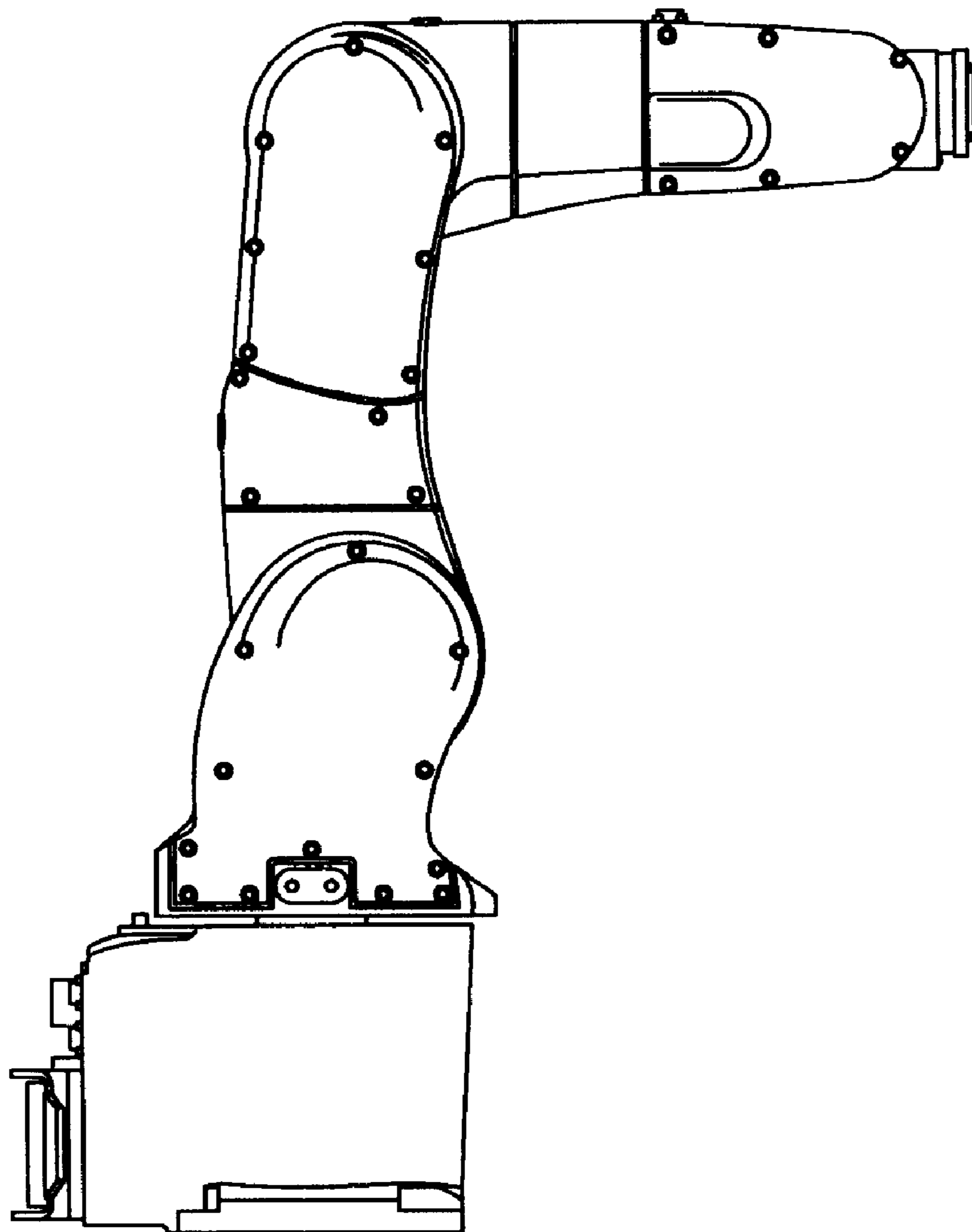


FIG. 11

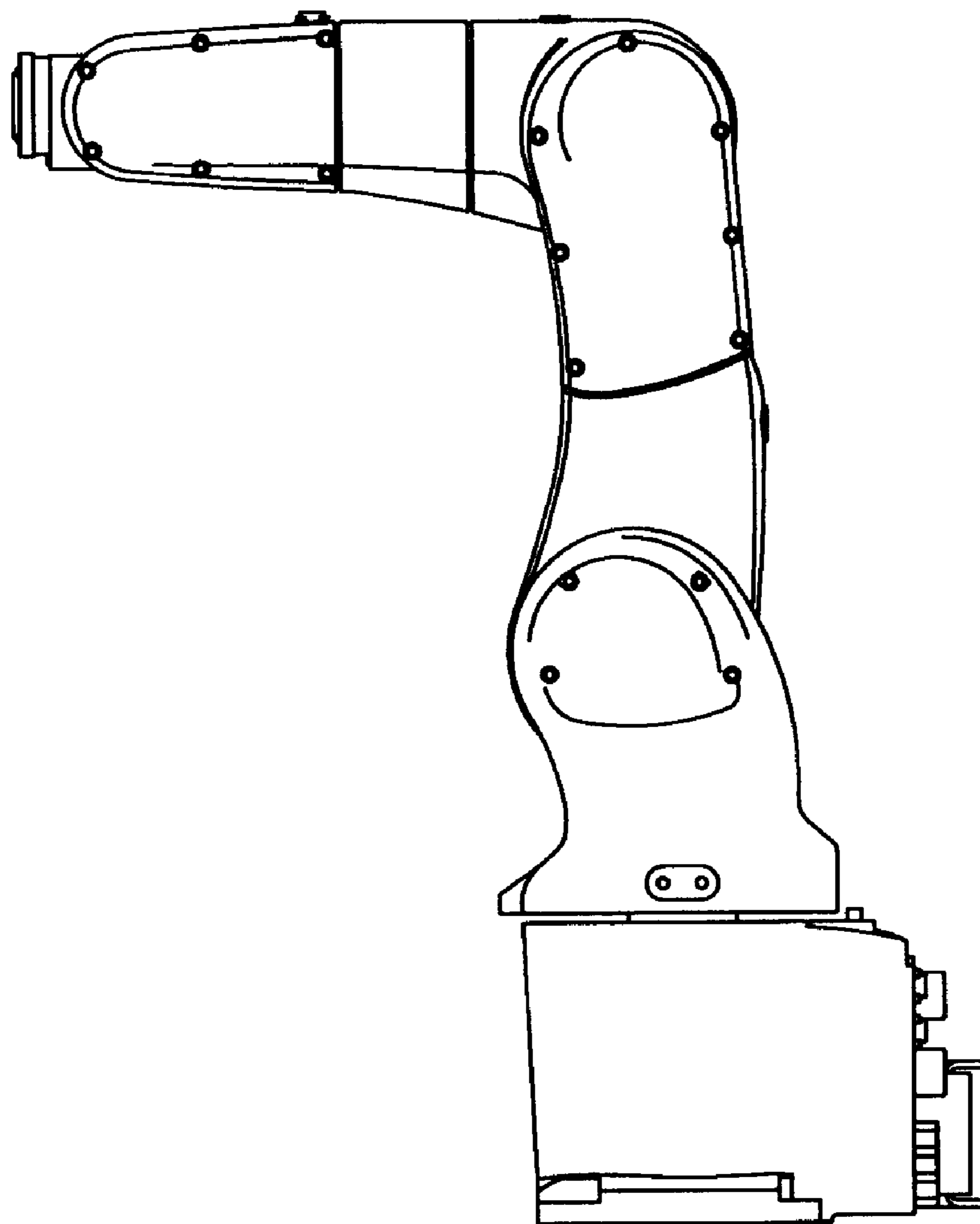


FIG. 12

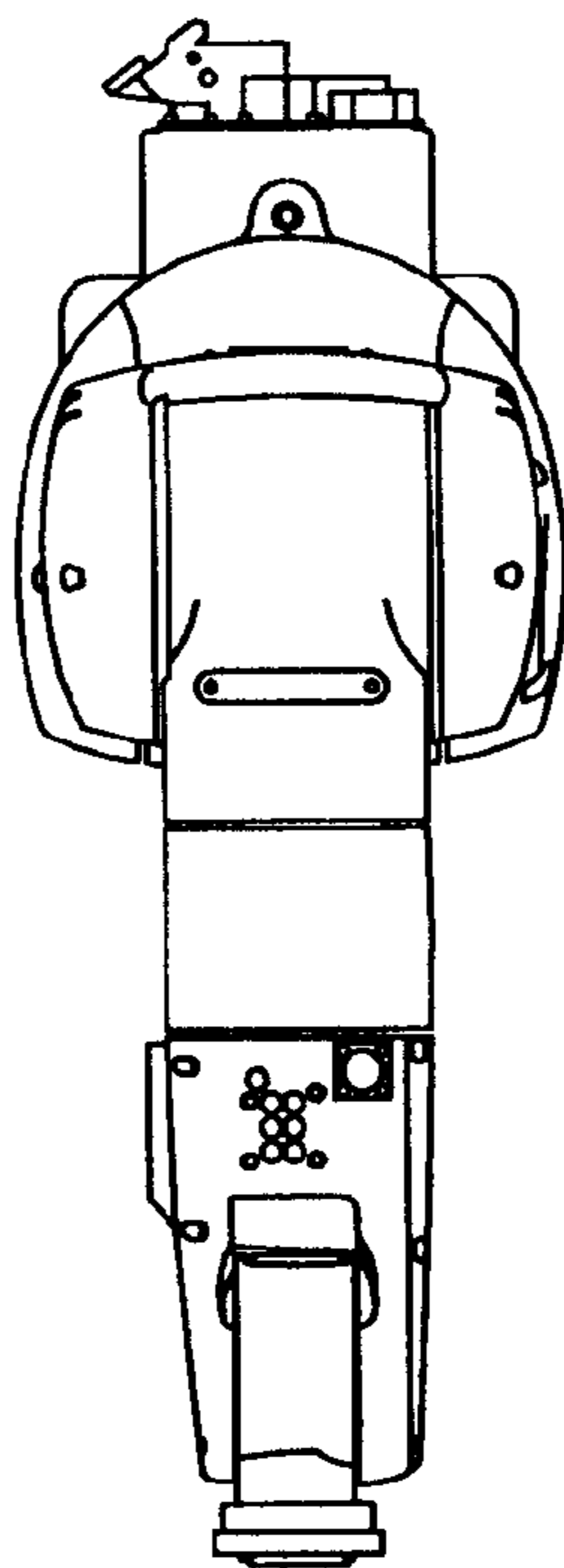


FIG. 13

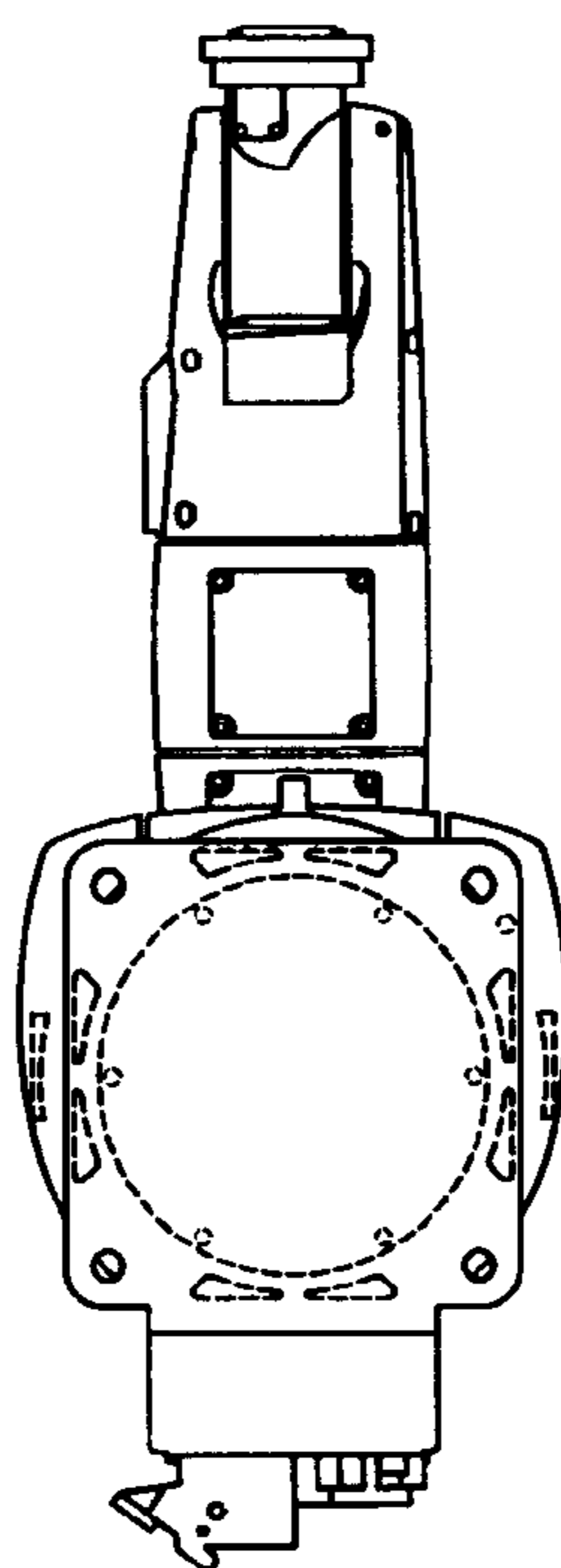


FIG. 14

