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(12) **United States Design Patent** (10) **Patent No.:** **US D851,387 S**  
**Chavarria et al.** (45) **Date of Patent:** **\*\* Jun. 18, 2019**

(54) **TRUNK AND HIP ASSEMBLY FOR EXOSKELETON APPARATUS**

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

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(51) **LOC (11) Cl.** ..... **03-03**

(52) **U.S. Cl.**  
USPC ..... **D3/7**

(58) **Field of Classification Search**  
USPC ..... D3/5, 6, 7, 8, 9, 10

(Continued)

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(57) **CLAIM**

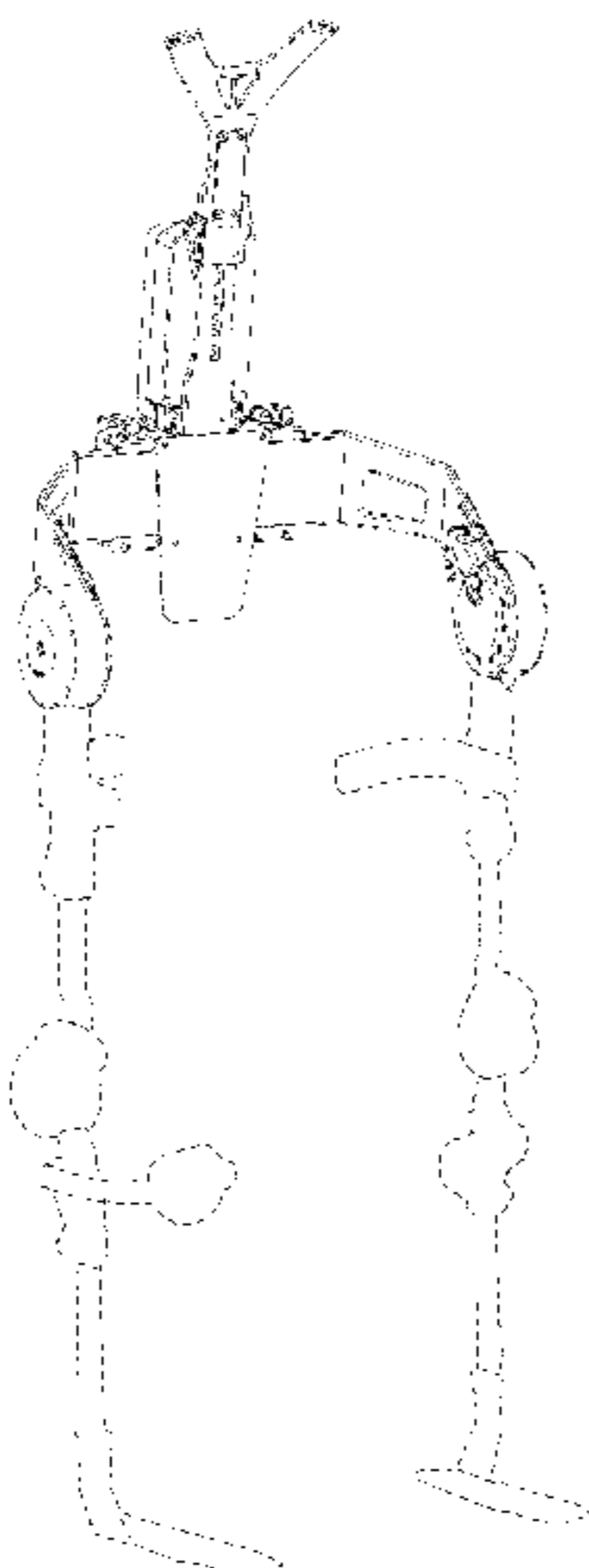
The ornamental design for a trunk and hip assembly for exoskeleton apparatus, as shown and described.

**DESCRIPTION**

FIG. 1 is a front view of a trunk and hip assembly for exoskeleton apparatus;

FIG. 2 is a rear view thereof;  
FIG. 3 is a left side view thereof;  
FIG. 4 is a right side view thereof;  
FIG. 5 is a top view thereof;  
FIG. 6 is a bottom view thereof;  
FIG. 7 is a perspective view thereof showing rear, top, and left sides;  
FIG. 8 is a perspective view thereof showing rear, top, and right sides;  
FIG. 9 is a perspective view thereof showing rear, bottom, and left sides;  
FIG. 10 is a perspective view thereof showing rear, bottom, and right sides;  
FIG. 11 is another perspective view of a trunk and hip assembly for exoskeleton apparatus showing rear, bottom, and right sides;  
FIG. 12 is another perspective view of a trunk and hip assembly for exoskeleton apparatus showing rear, bottom, and left sides;  
FIG. 13 is an enlarged fragmentary perspective view of that shown in FIG. 12 showing notches located on a portion of the trunk and hip assembly in greater detail, it being understood that the opposite side is a mirror image of that shown;  
FIG. 14 is a perspective view of a trunk and hip assembly for exoskeleton apparatus showing top, front, and right sides;  
FIG. 15 is an enlarged fragmentary perspective view of that shown in FIG. 14 showing a latch mechanism located on a spine portion of the trunk and hip assembly in greater detail;  
FIG. 16 is a perspective view of a trunk and hip assembly for exoskeleton apparatus showing top, front, and left sides;  
FIG. 17 is an enlarged fragmentary perspective view of that shown in FIG. 16 showing a light located on the right hip portion of the trunk and hip assembly in greater detail, it being understood that the opposite side is a mirror image of that shown;  
FIG. 18 is a front view of the trunk and hip assembly for exoskeleton apparatus, shown with environment;  
FIG. 19 is a rear view thereof; and,  
FIG. 20 is a front right perspective view thereof.  
The broken lines depict environment and portions of the article that form no part of the claimed design.

**1 Claim, 19 Drawing Sheets**



(58) **Field of Classification Search**

CPC ..... A61H 3/00; A61H 3/0277; A61H  
 2201/1418; A61H 2201/1215; A61H  
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See application file for complete search history.

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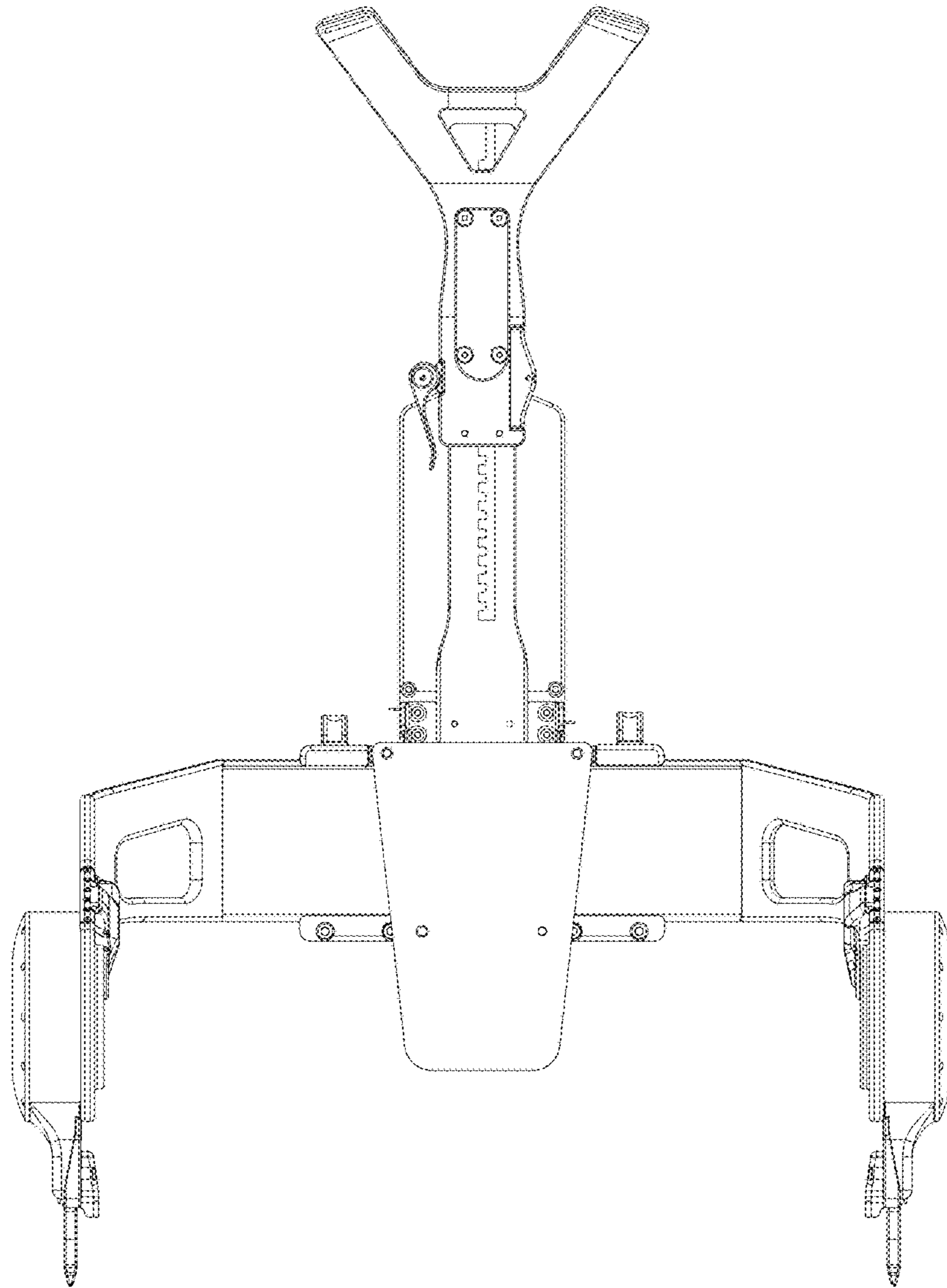
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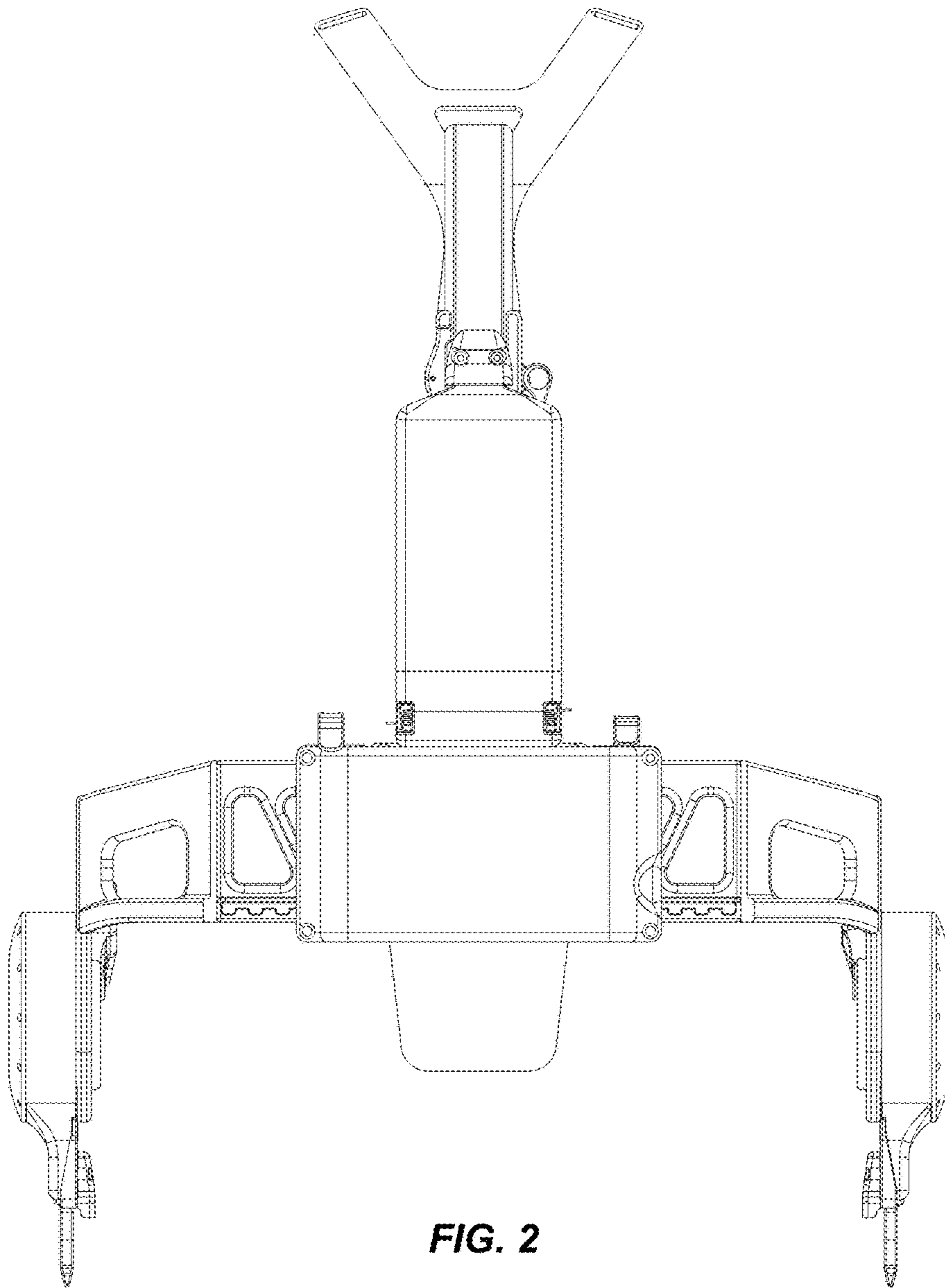
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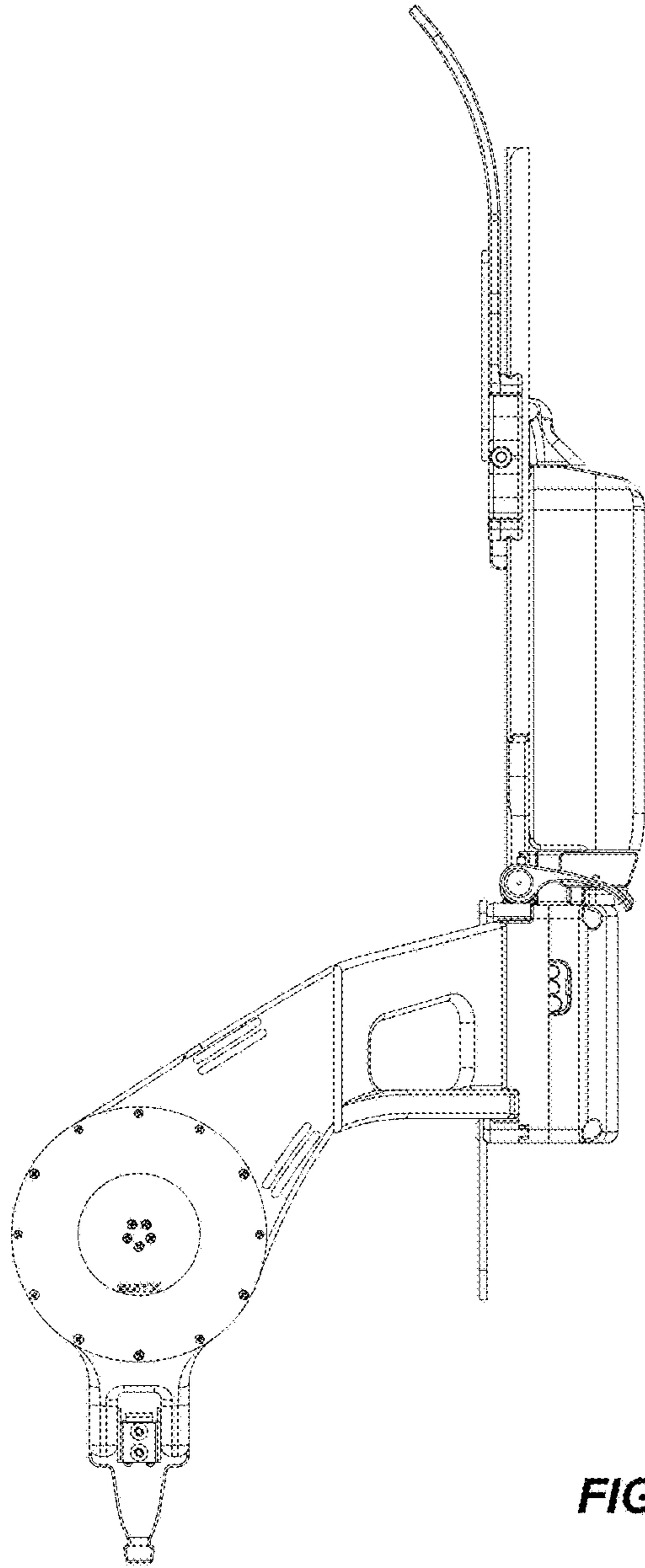
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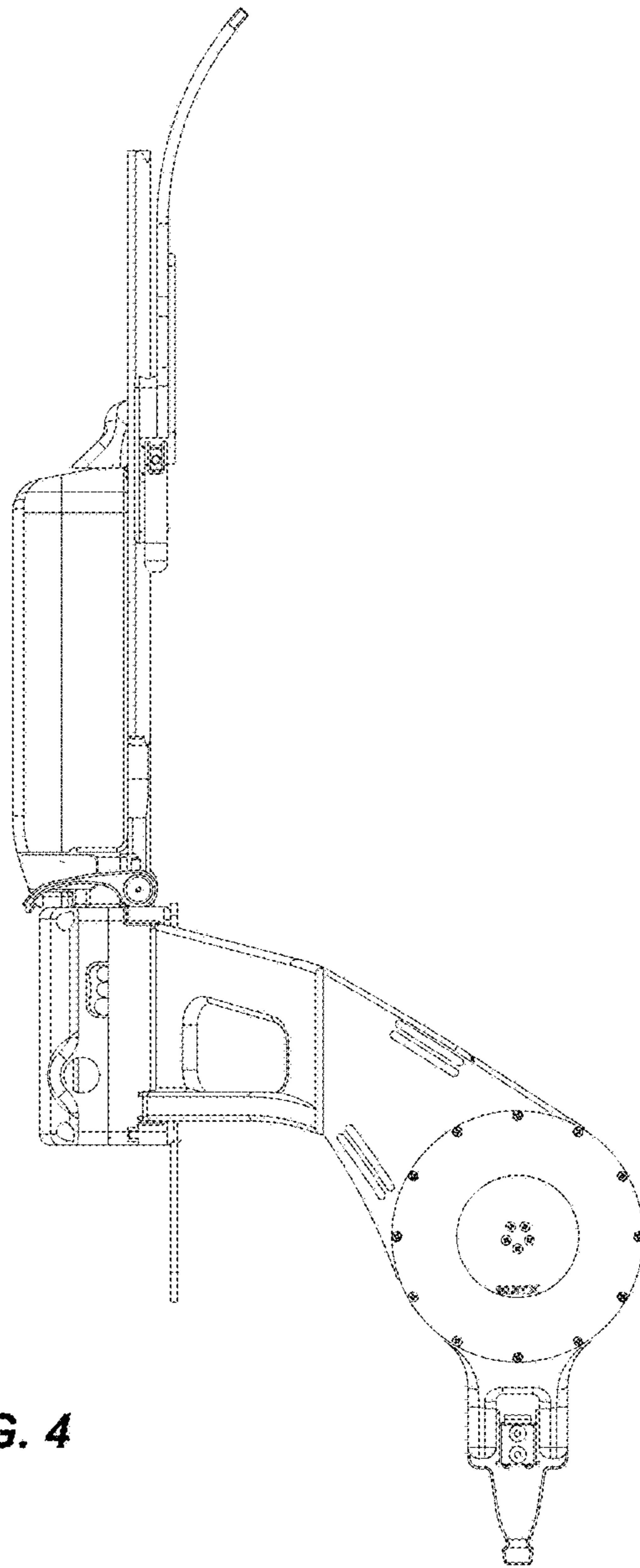
**FIG. 1**



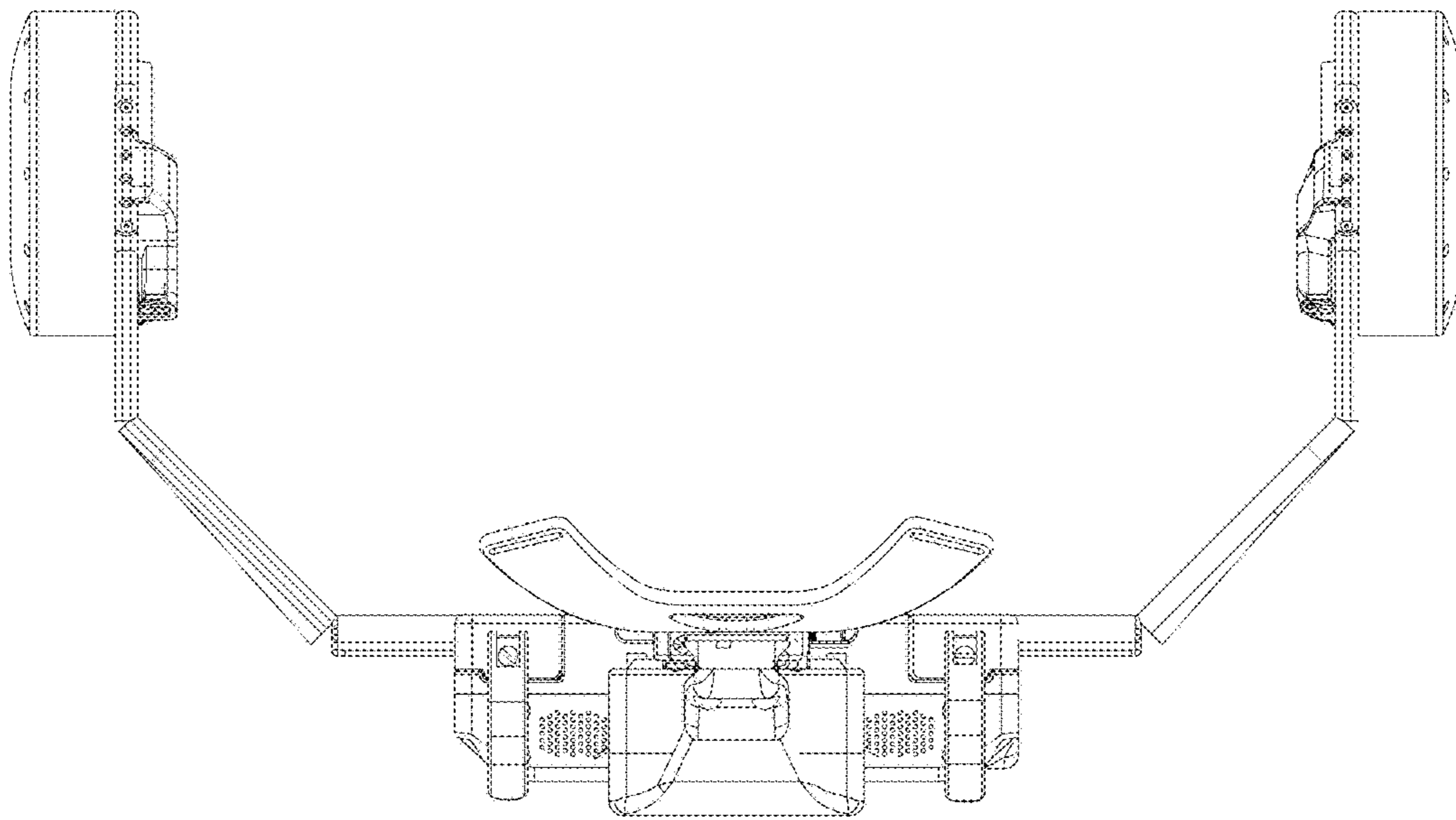




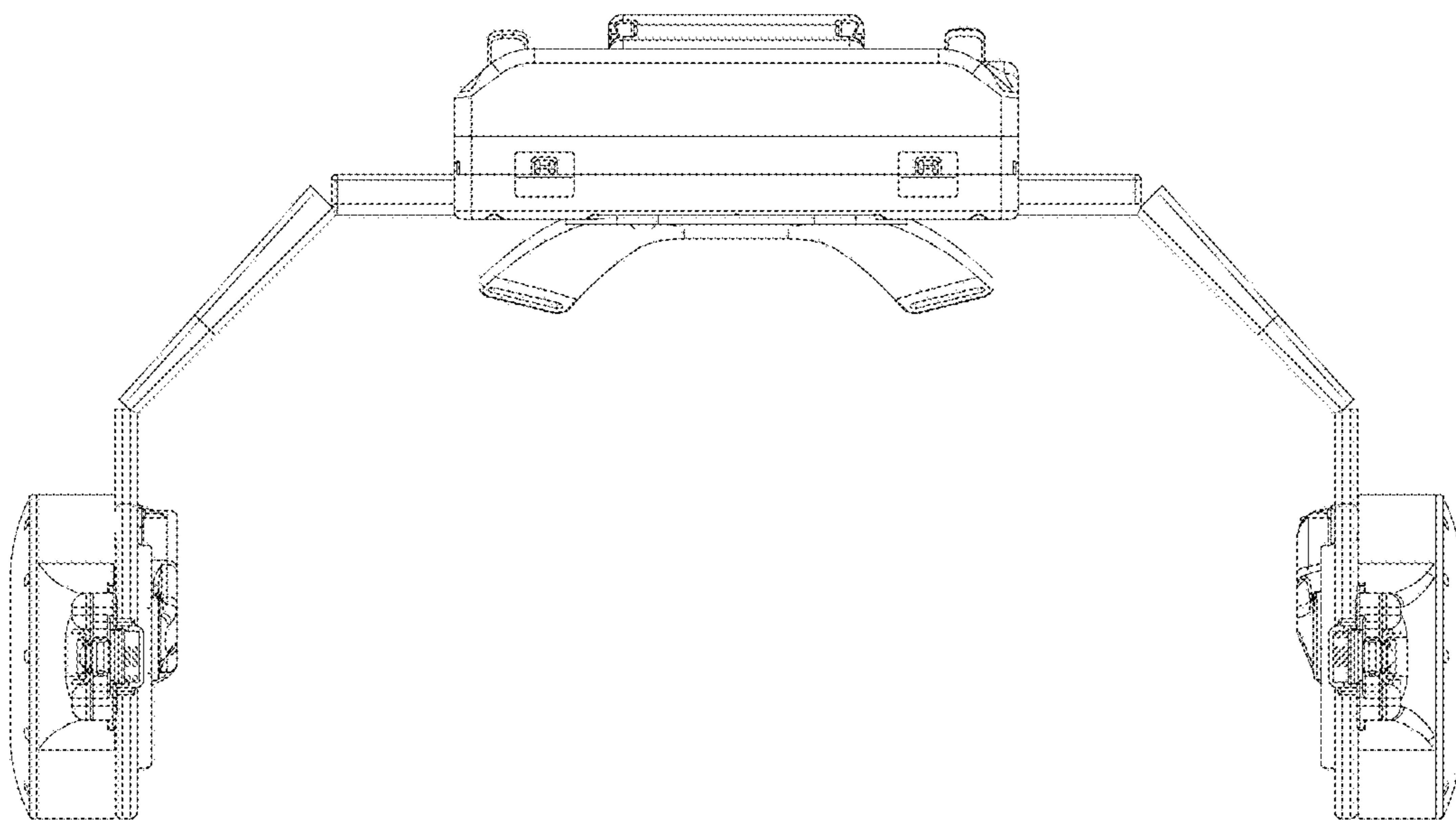
**FIG. 3**



**FIG. 4**



**FIG. 5**



**FIG. 6**

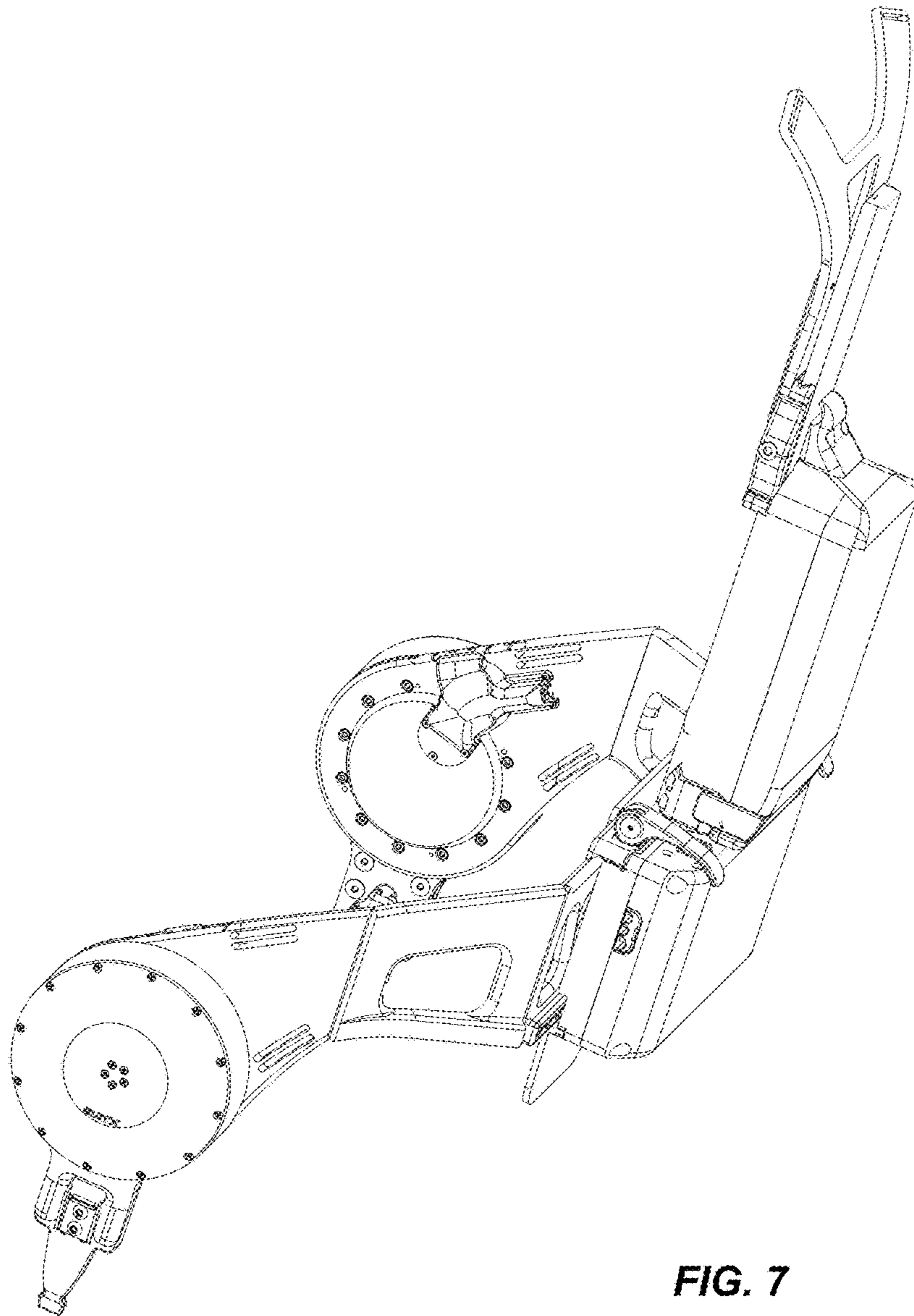


FIG. 7



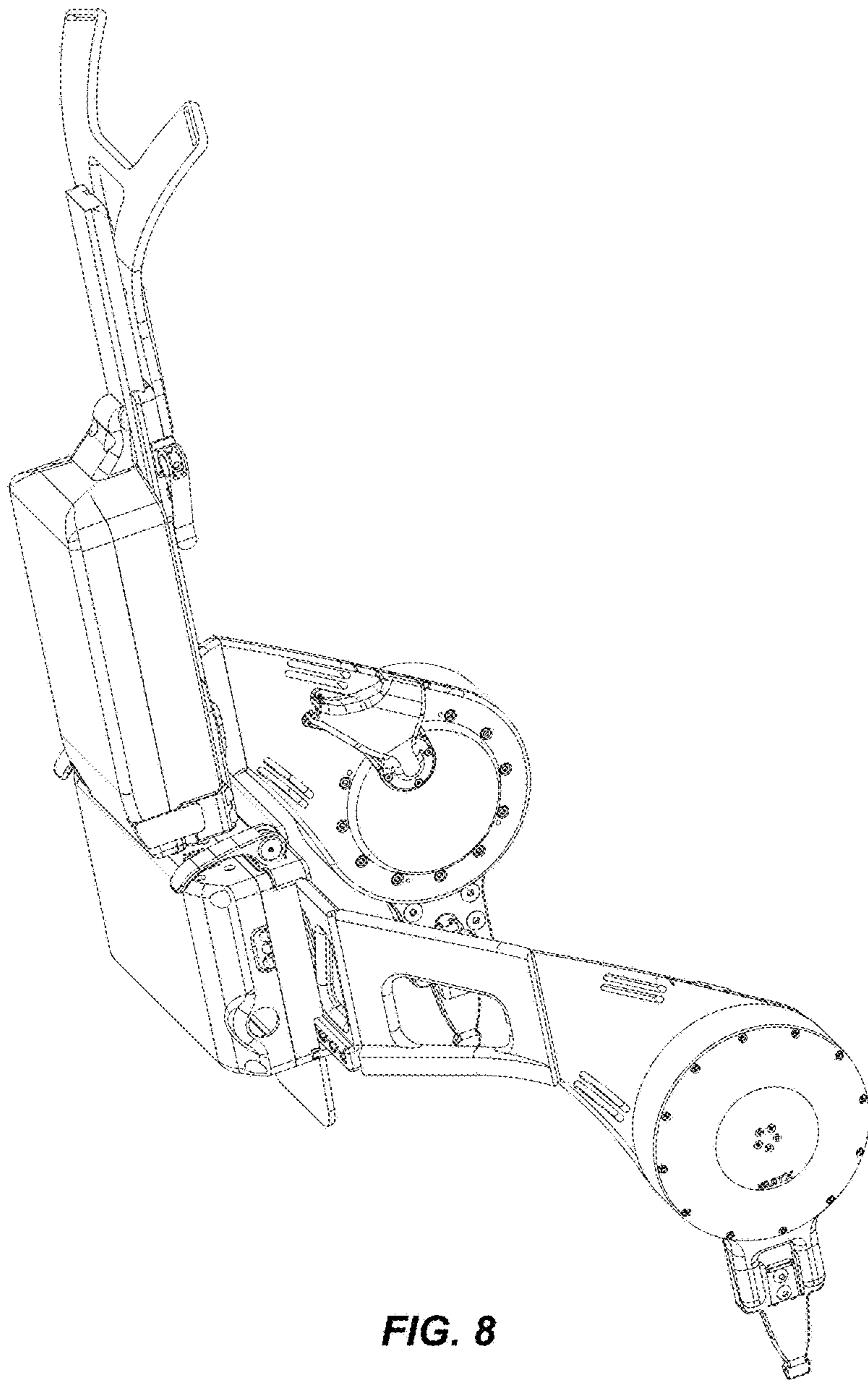


FIG. 8

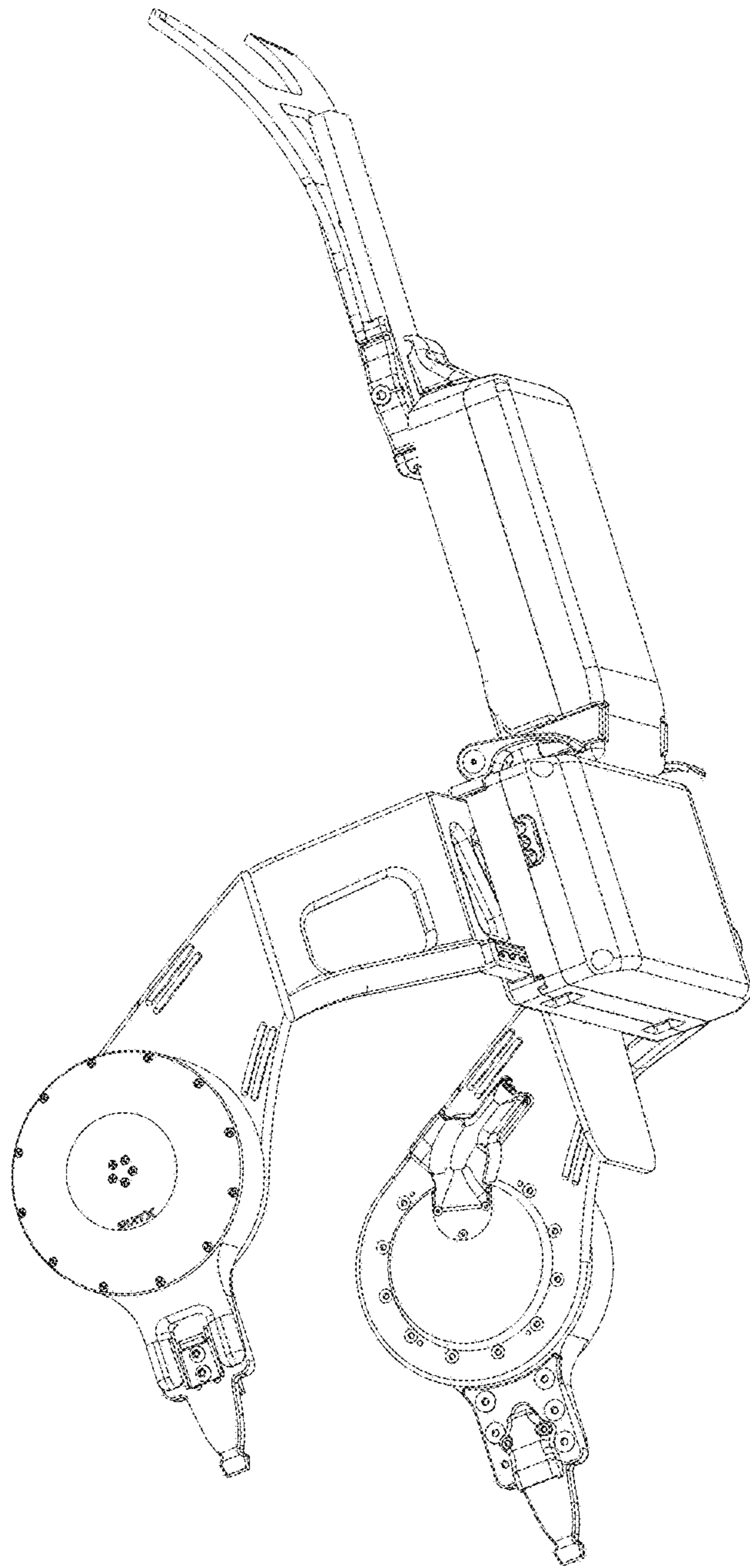


FIG. 9

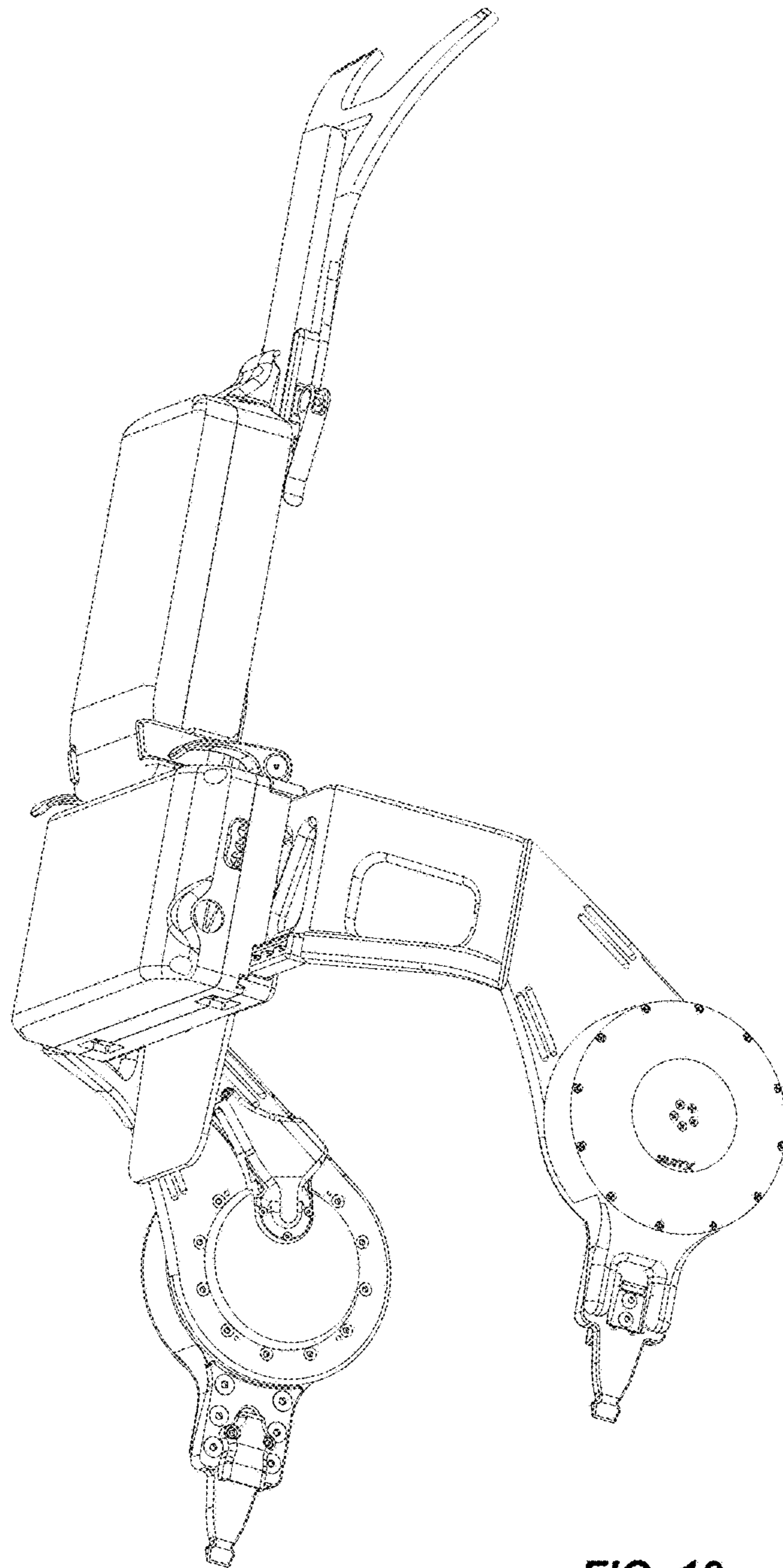


FIG. 10

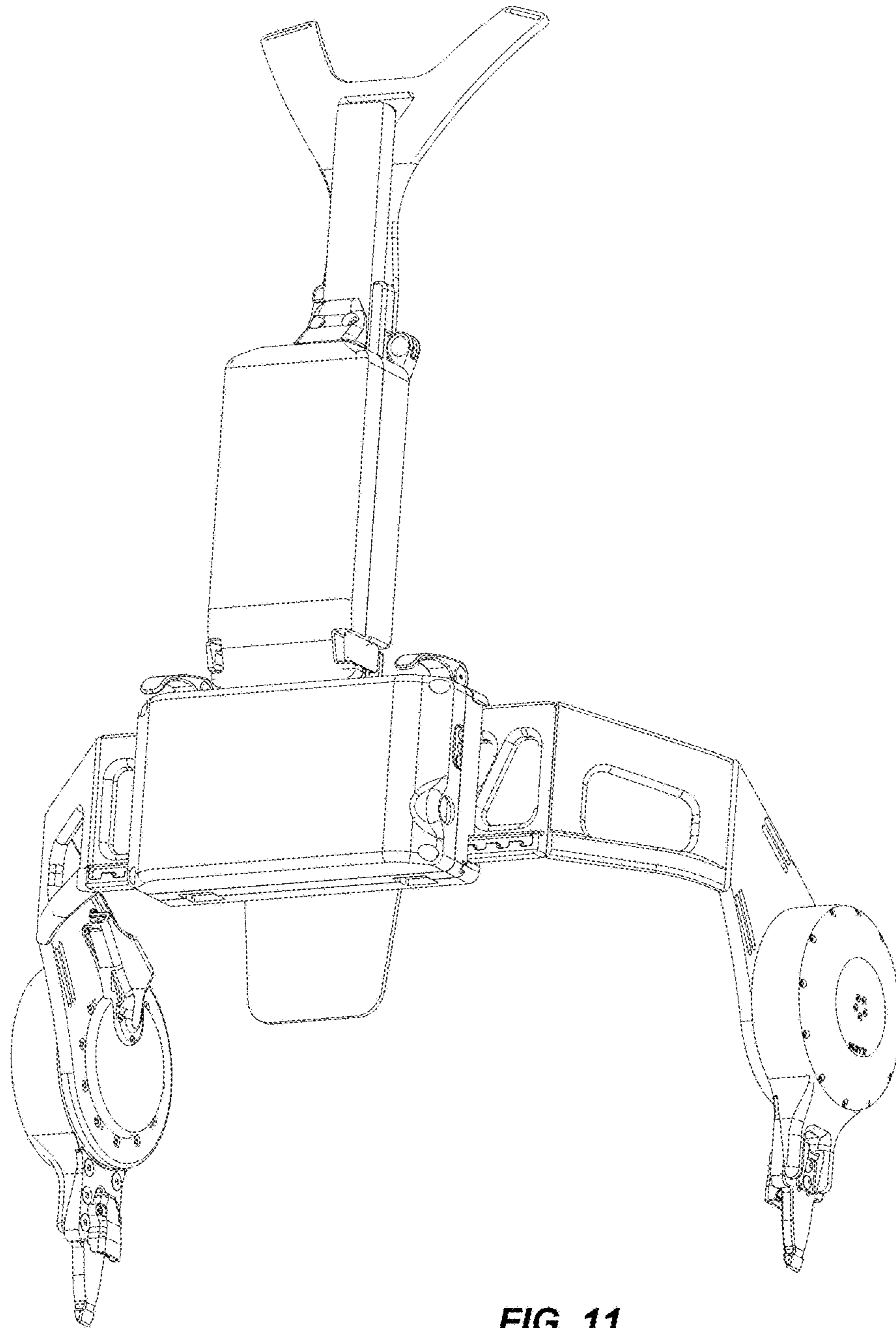
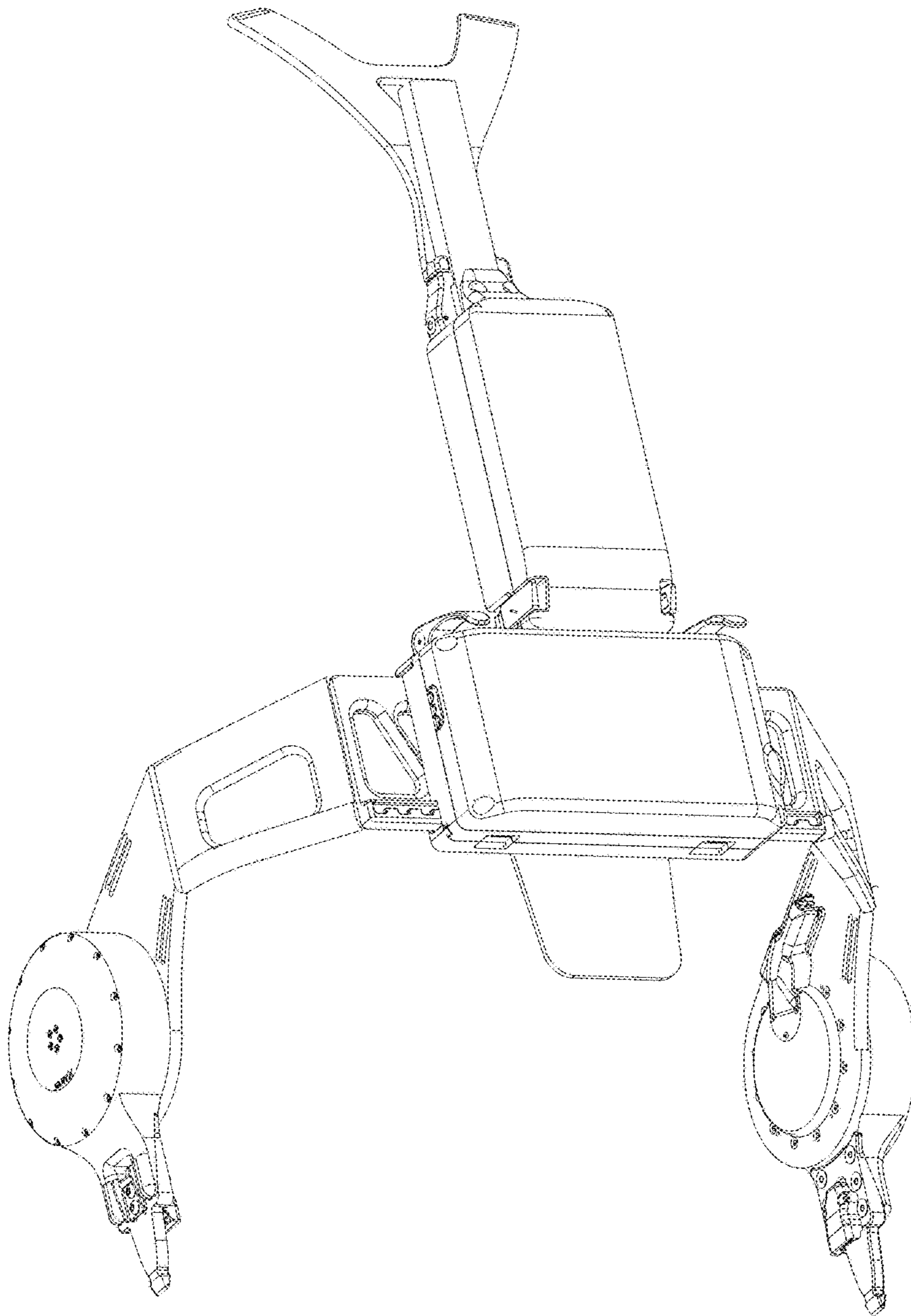
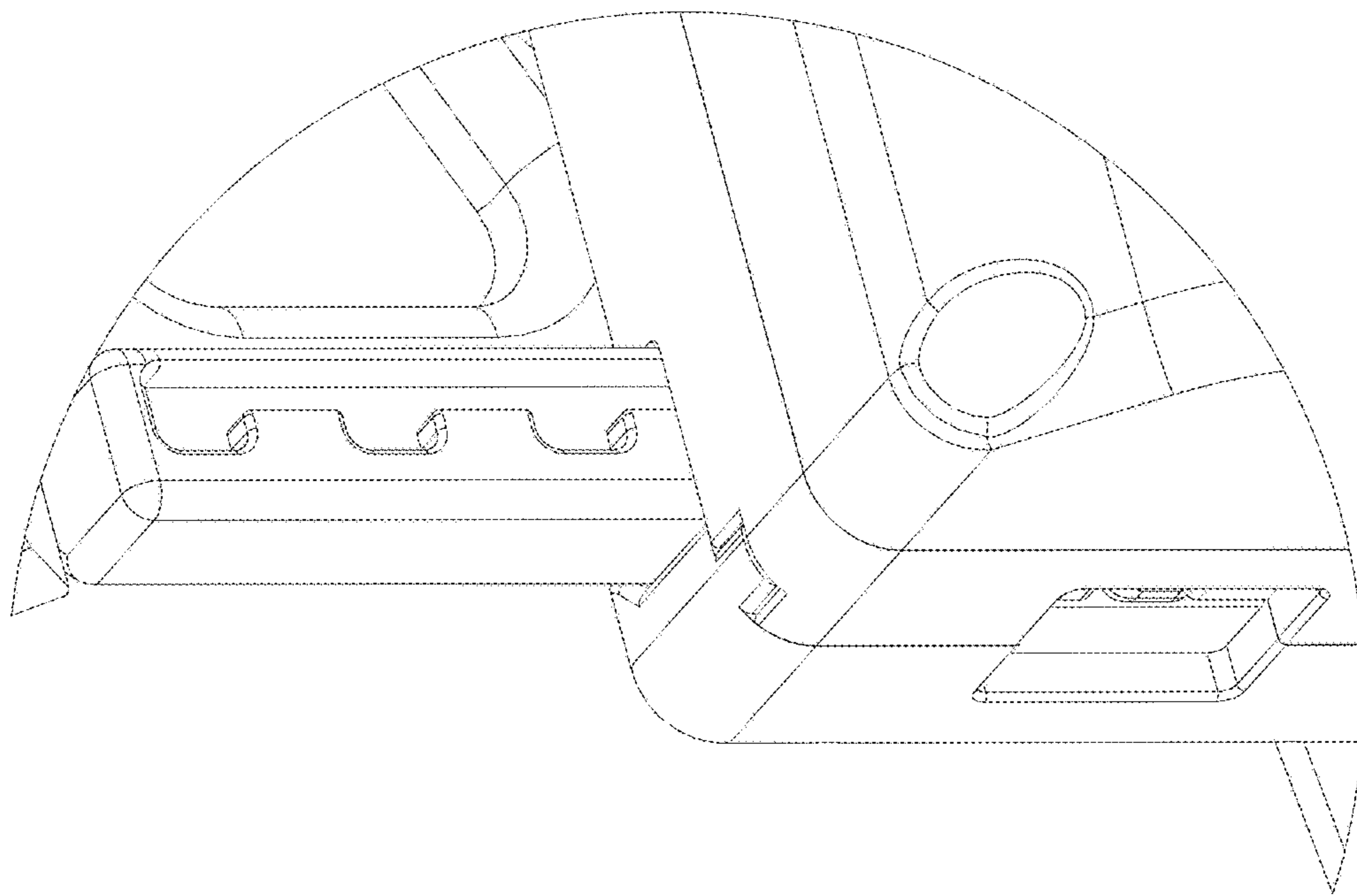


FIG. 11



**FIG. 12**





**FIG. 13**

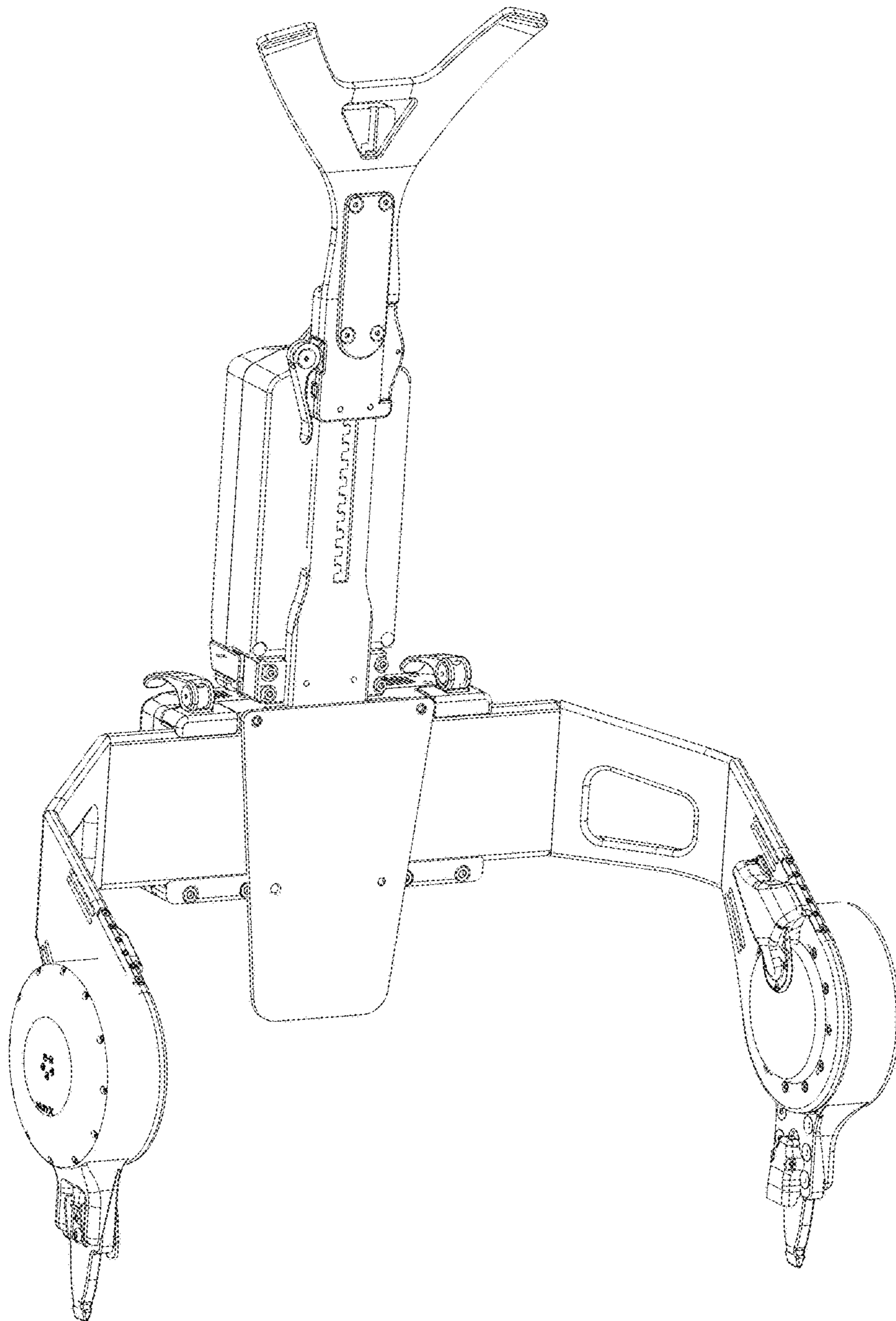


FIG. 14

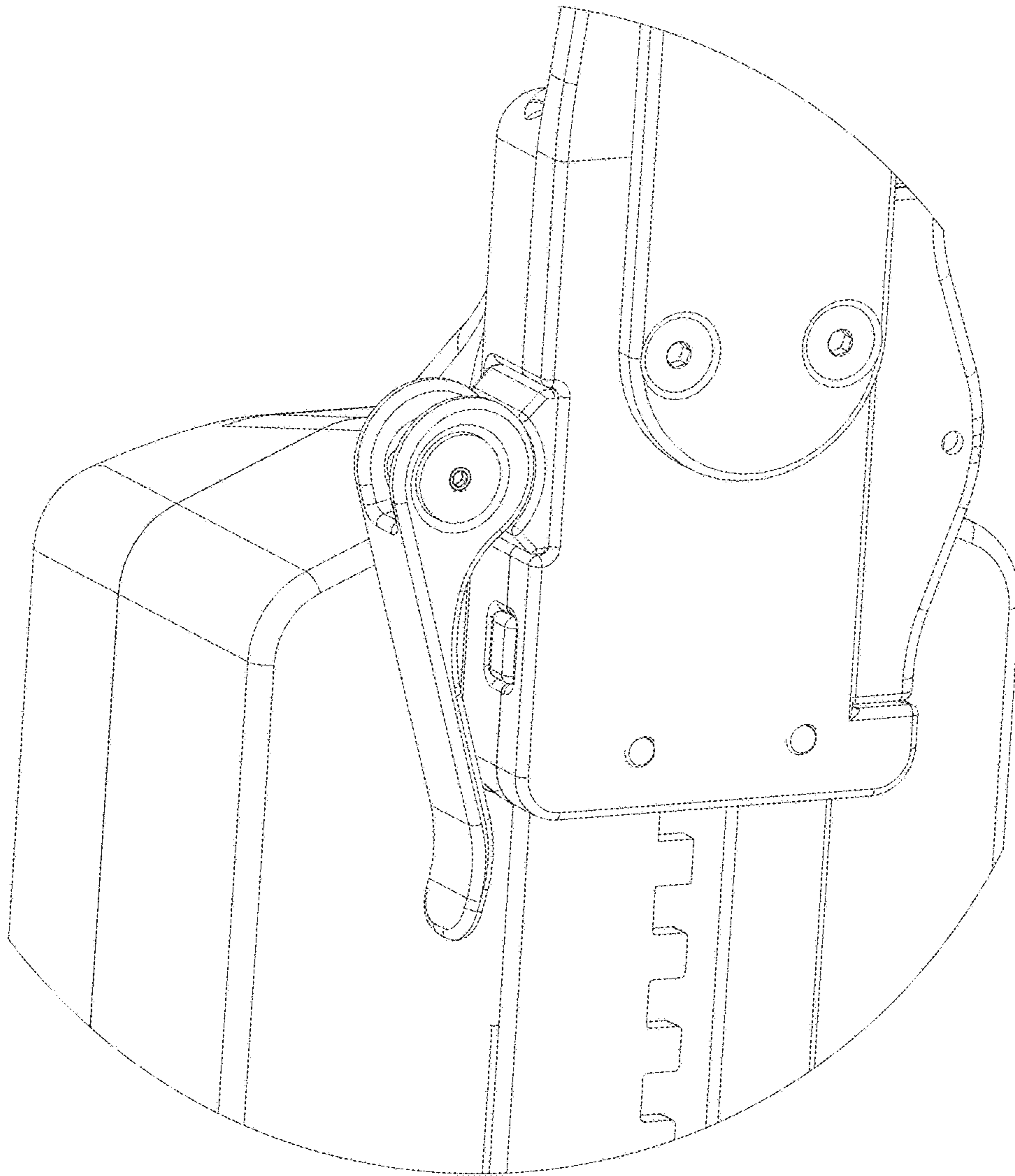


FIG. 15

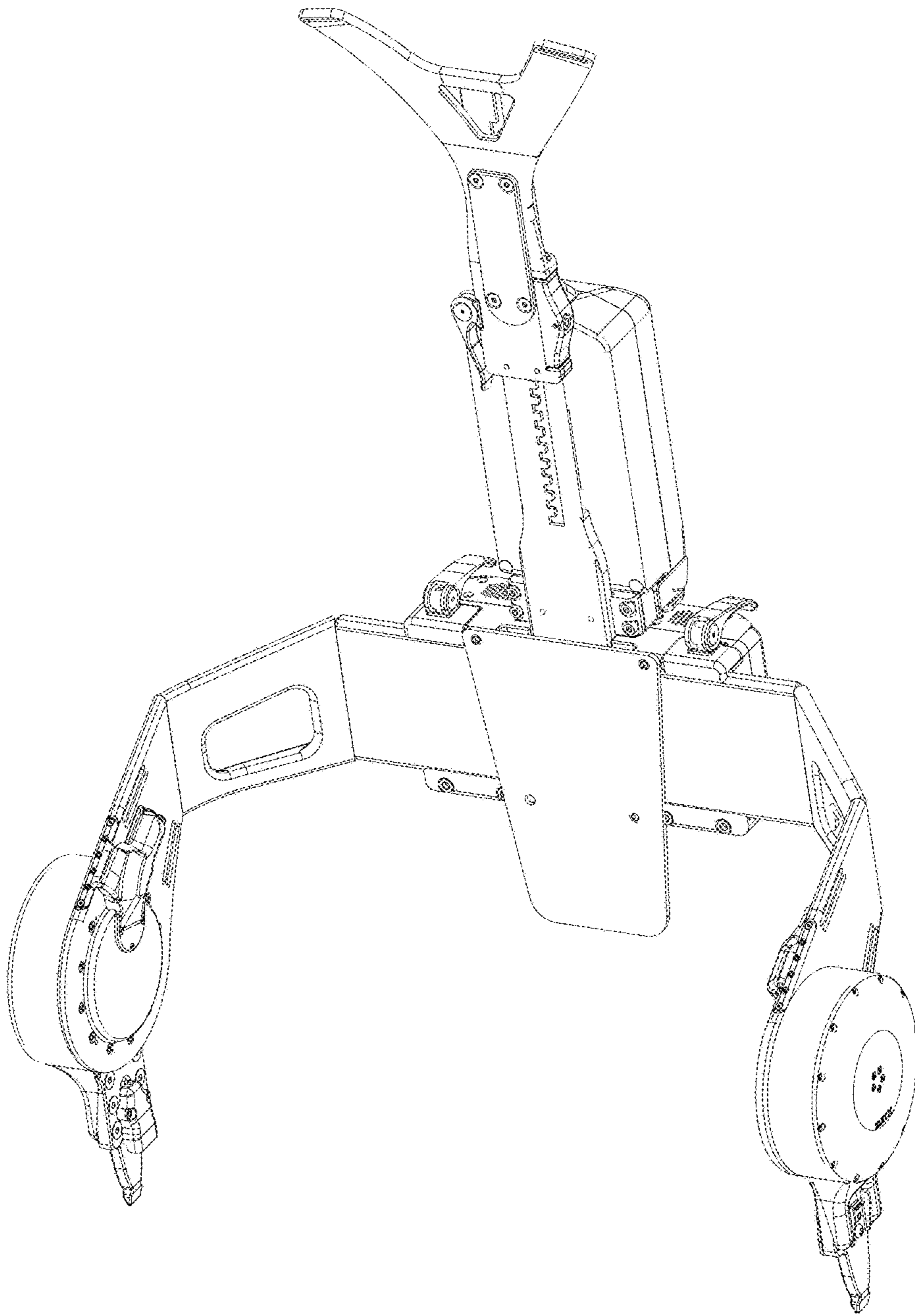


FIG. 16

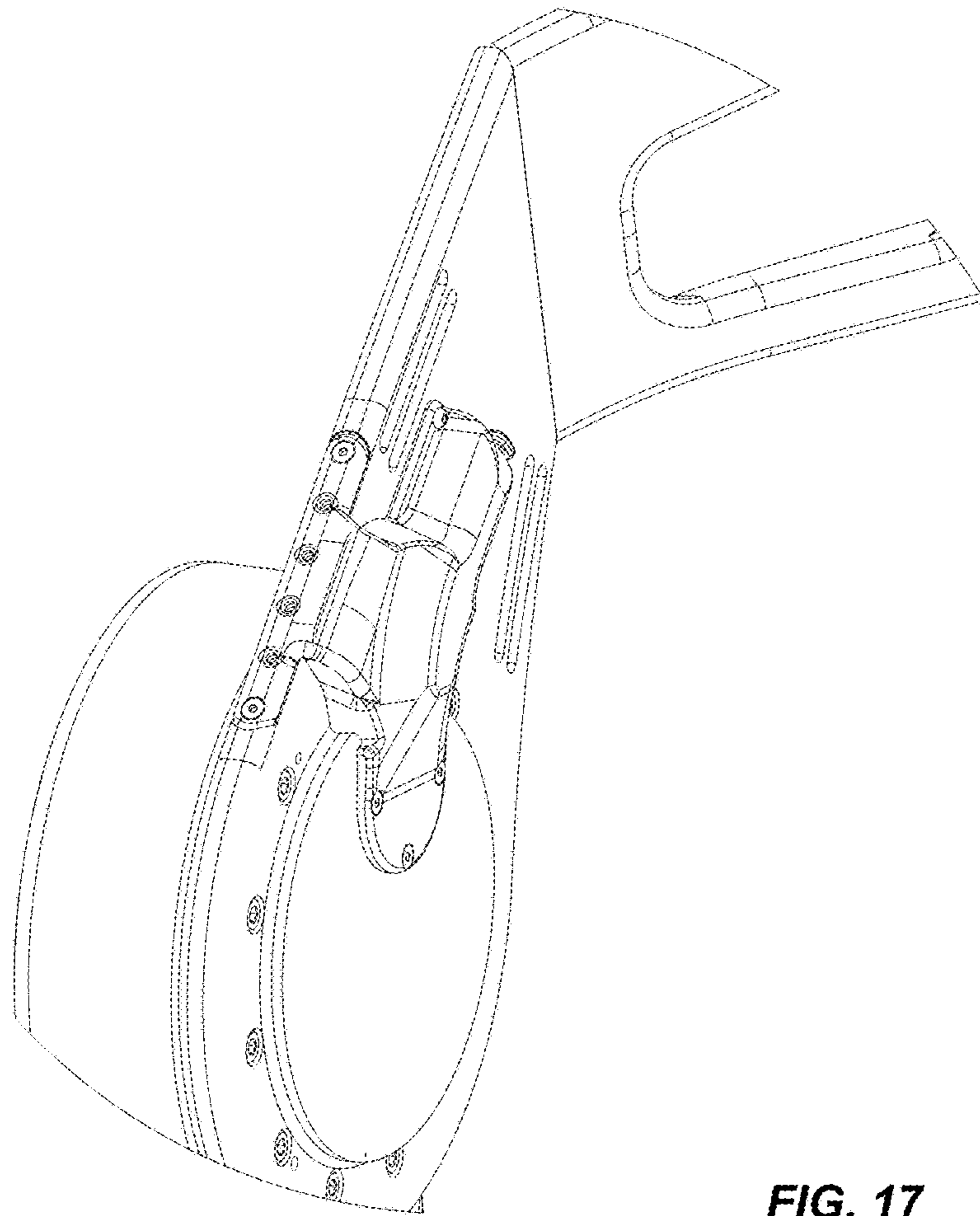
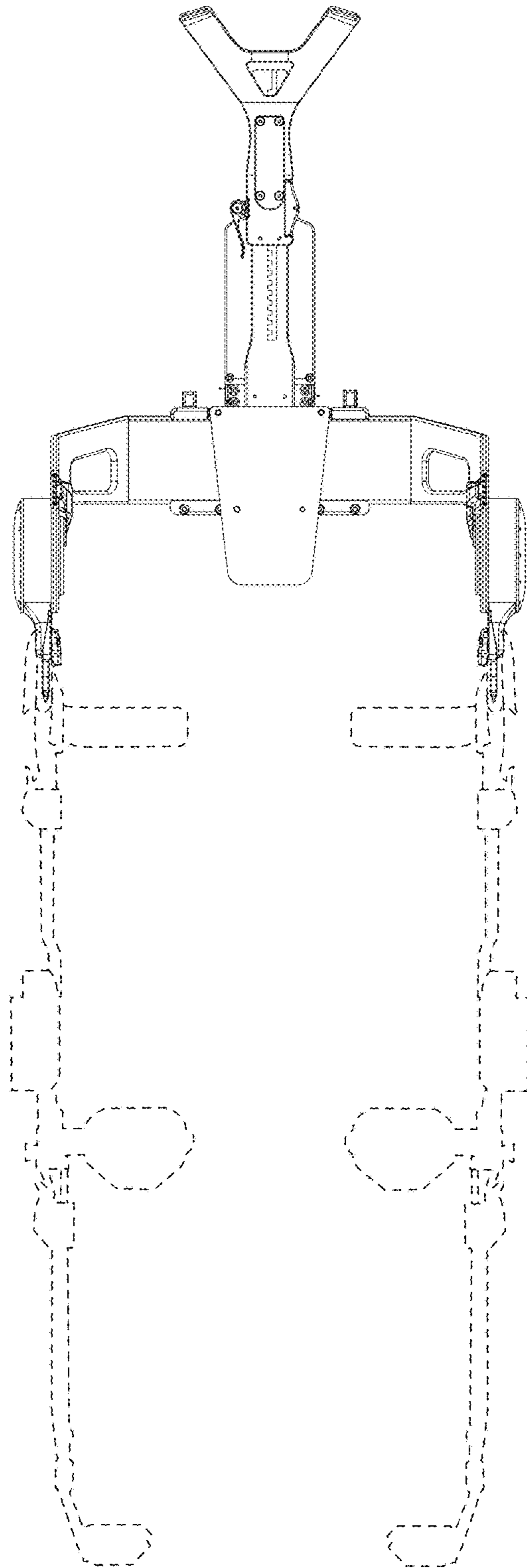
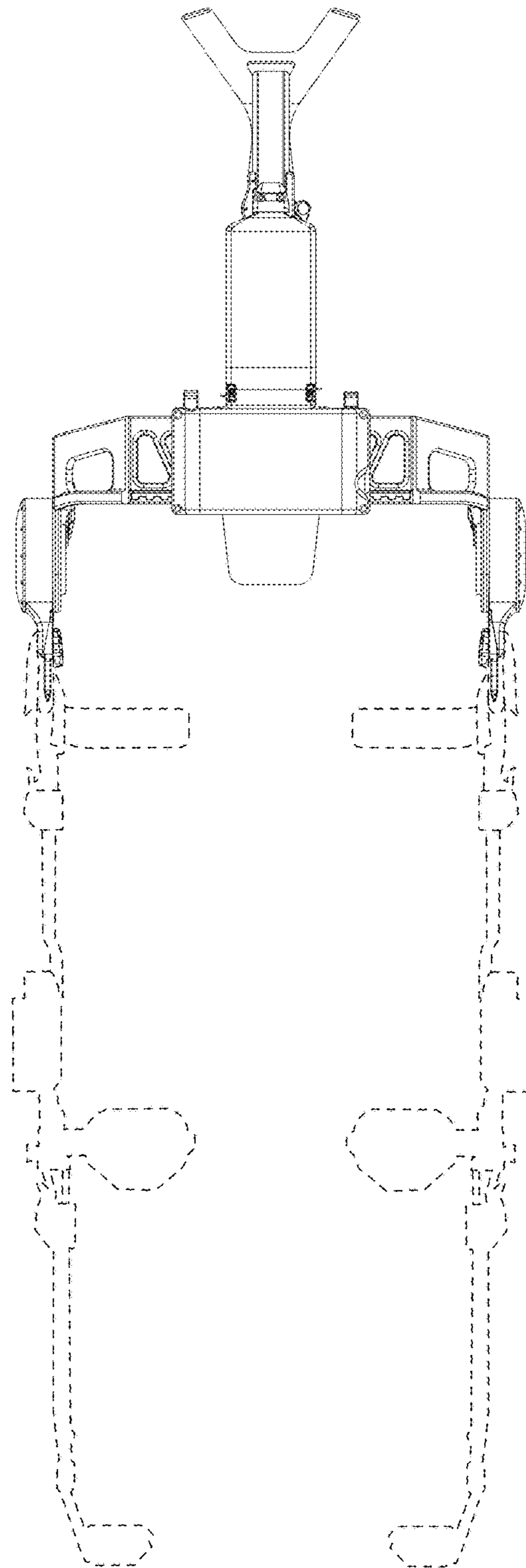


FIG. 17





**FIG. 18**



**FIG. 19**

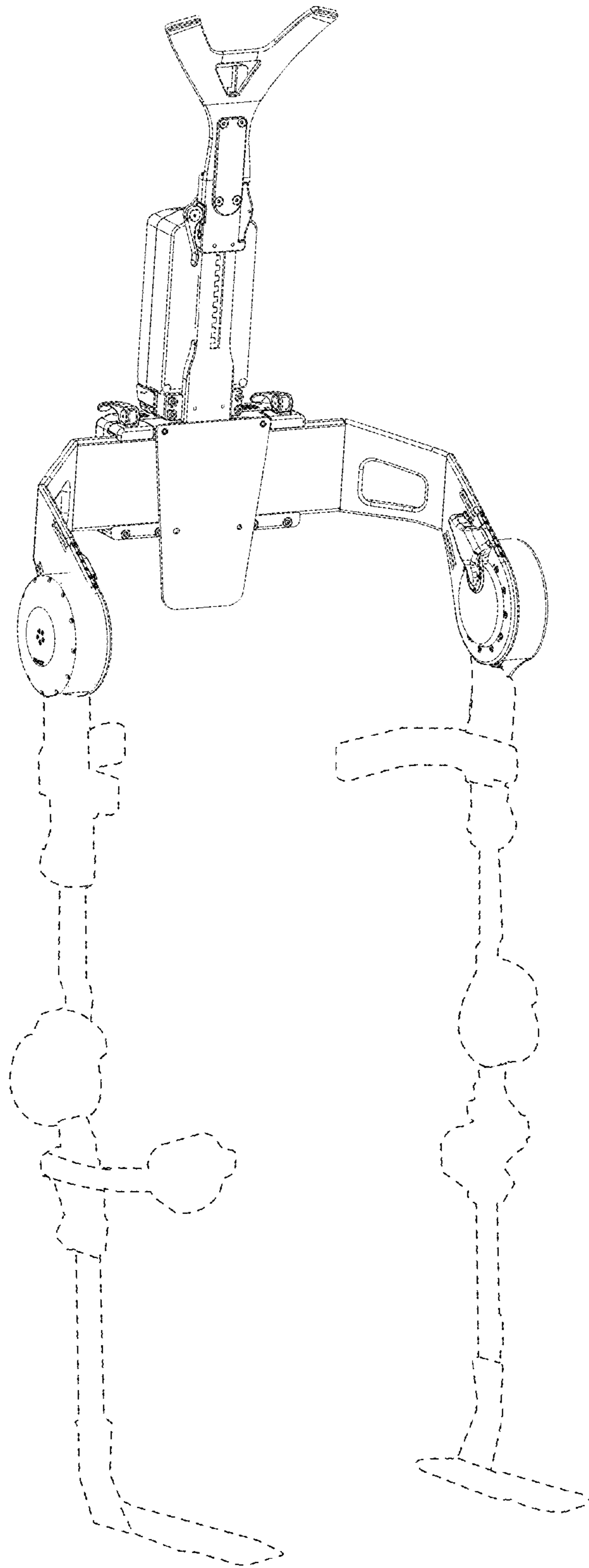


FIG. 20