



US00D934321S

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

(10) **Patent No.:** **US D934,321 S**

(45) **Date of Patent:** **** Oct. 26, 2021**

- (54) **GRIPPER**
- (71) Applicant: **Evodyne Robotics Corporation**,
Mountain View, CA (US)
- (72) Inventors: **Raghav Gupta**, Saratoga, CA (US);
Brandon Kane Tarter, San Jose, CA
(US)
- (73) Assignee: **EVODYNE ROBOTICS**
CORPORATION, Mountain View, CA
(US)
- (**) Term: **15 Years**
- (21) Appl. No.: **29/718,759**
- (22) Filed: **Dec. 27, 2019**
- (51) **LOC (13) Cl.** **15-99**
- (52) **U.S. Cl.**
USPC **D15/199**
- (58) **Field of Classification Search**
USPC D8/51; D15/122, 199; D21/578-583;
D24/129, 133, 158, 161, 185; D32/21
CPC ... B25J 1/04; B25J 9/1065; B25J 9/042; B25J
9/12; B25J 11/0045; B25J 15/08; B25J
15/0213; B25J 15/024; B25J 15/026;
B25J 15/0475; B25J 15/0042; A61F
2/586; B65G 47/90; H05K 13/02; Y10S
294/902
See application file for complete search history.

- 5,199,845 A * 4/1993 Hirashima B25J 15/10
294/86.4
- 5,520,501 A * 5/1996 Kouno H01L 21/68707
414/741
- D496,378 S * 9/2004 Stahl D15/199
- 8,602,474 B2 * 12/2013 Xie B25J 15/0052
294/207

(Continued)

OTHER PUBLICATIONS

Eugene Demaitre. "6 advances in robotic grippers to watch." The Robot Report., Mar. 4, 2019 [online], [retrieved on Jun. 15, 2021]. Retrieved from the Internet <URL: <https://www.therobotreport.com/robot-grippers-advance/>>.*

(Continued)

Primary Examiner — Darlington Ly

(74) *Attorney, Agent, or Firm* — Daylight Law, P.C.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 4,479,673 A * 10/1984 Inaba B25J 15/10
269/118
- 4,579,380 A * 4/1986 Zaremsky B25J 13/082
294/119.1
- 4,653,794 A * 3/1987 Atlas H05K 13/0408
294/207
- 4,766,775 A * 8/1988 Hodge B25J 9/08
74/490.01
- D334,581 S * 4/1993 Yoshikawa D15/199

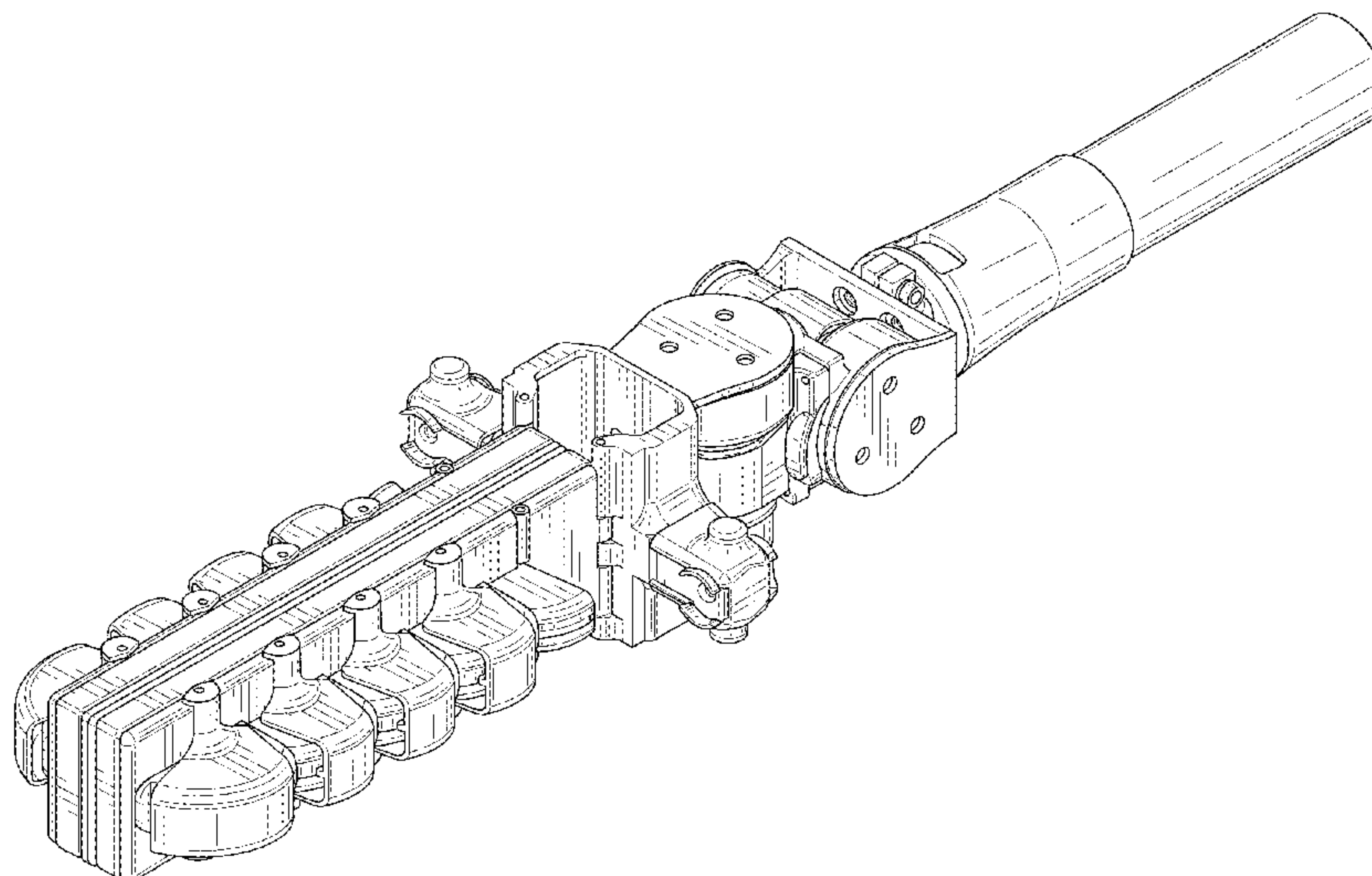
(57) **CLAIM**

The ornamental design for a gripper, as shown and described.

DESCRIPTION

FIG. 1 is a top and right side perspective view of a gripper embodying our new design;
FIG. 2 is a front elevation view thereof;
FIG. 3 is a rear elevation view thereof;
FIG. 4 is a right side elevation view thereof;
FIG. 5 is a left side elevation view thereof;
FIG. 6 is a top plan view thereof;
FIG. 7 is a bottom plan view thereof;
FIG. 8 is a bottom and left side perspective view thereof;
and,
FIG. 9 is a bottom, rear, and left side perspective view thereof.
The broken lines in FIG. 3 depict portions of the gripper that form no part of the claimed design.

1 Claim, 6 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

8,794,685 B2 * 8/2014 Murakami B25J 15/10
294/119.1
8,931,817 B2 * 1/2015 Murakami B25J 15/10
294/119.1
9,486,925 B1 * 11/2016 Stroop A61F 2/586
D811,491 S * 2/2018 Lee D21/528
D870,170 S * 12/2019 Hatano D15/199
D900,182 S * 10/2020 Haddadin D15/199
10,799,803 B2 * 10/2020 Hu A63G 7/00
D903,011 S * 11/2020 Lee D21/578
D910,186 S * 2/2021 McBrien D24/185
D913,350 S * 3/2021 Gupta D15/199
2003/0070468 A1 * 4/2003 Butscher B33Y 50/00
72/295
2004/0078114 A1 * 4/2004 Cordell G05B 19/425
700/258

OTHER PUBLICATIONS

Premier Tech Systems and Automation. "Robotic Modular Palletizer With Vacuum Gripper (RPM Series)." YouTube., Feb. 7, 2017 [online], [retrieved on Jun. 15, 2021]. Retrieved from the Internet <URL: <https://www.youtube.com/watch?v=Jc0JILqwRtk>>.*

"Unloading & Sortation of Sheet Metal Cut Parts with Robotic Arm Gripper." HVR MAG., Dec. 21, 2020 [online], [retrieved on Jun. 15, 2021]. Retrieved from the Internet <URL: <https://www.hvrmagnet.com/case/unloading-sorting-sheet-metal-with-robotic-arm-gripper-34.html>>.*

* cited by examiner

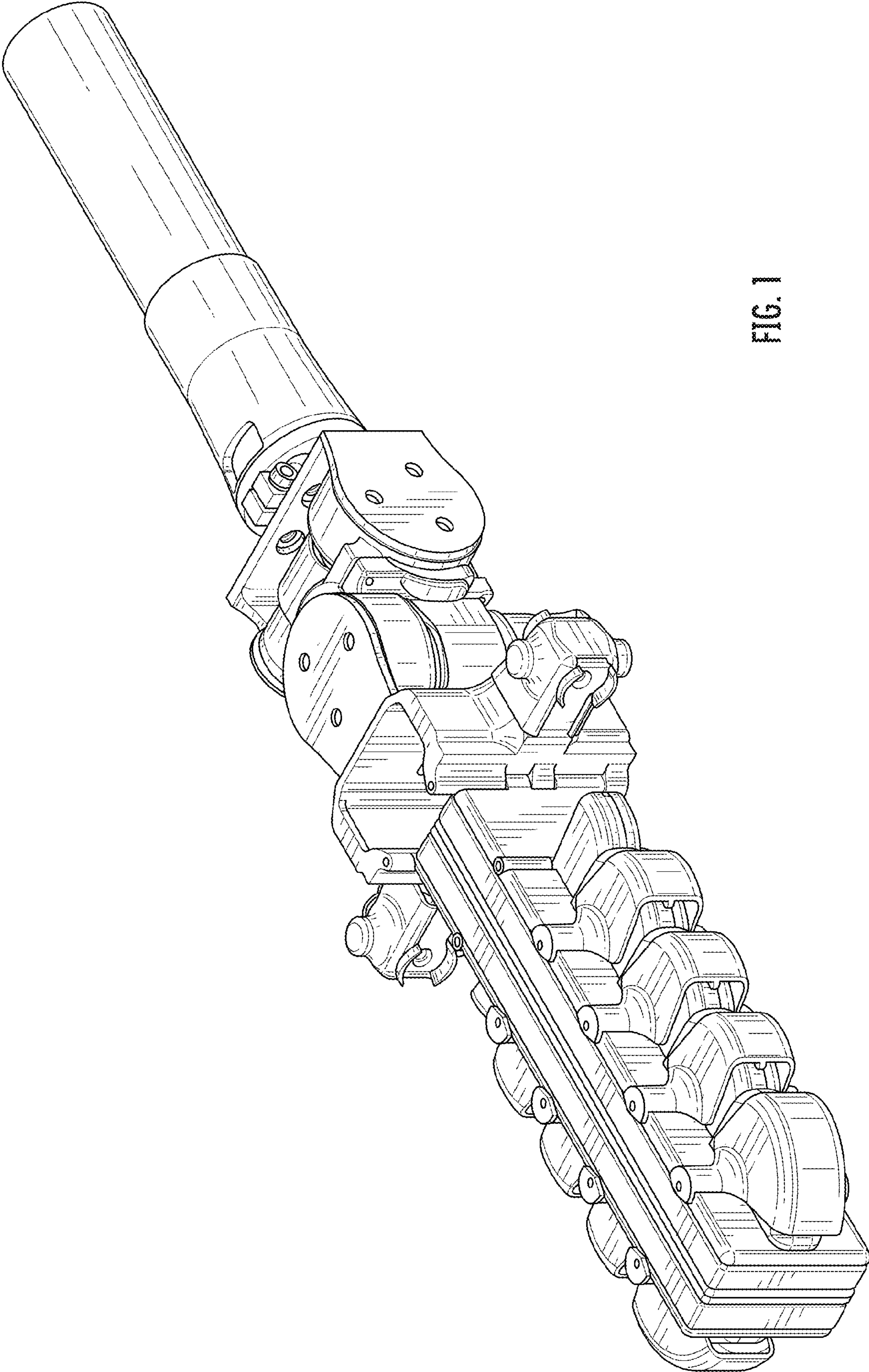


FIG. 1

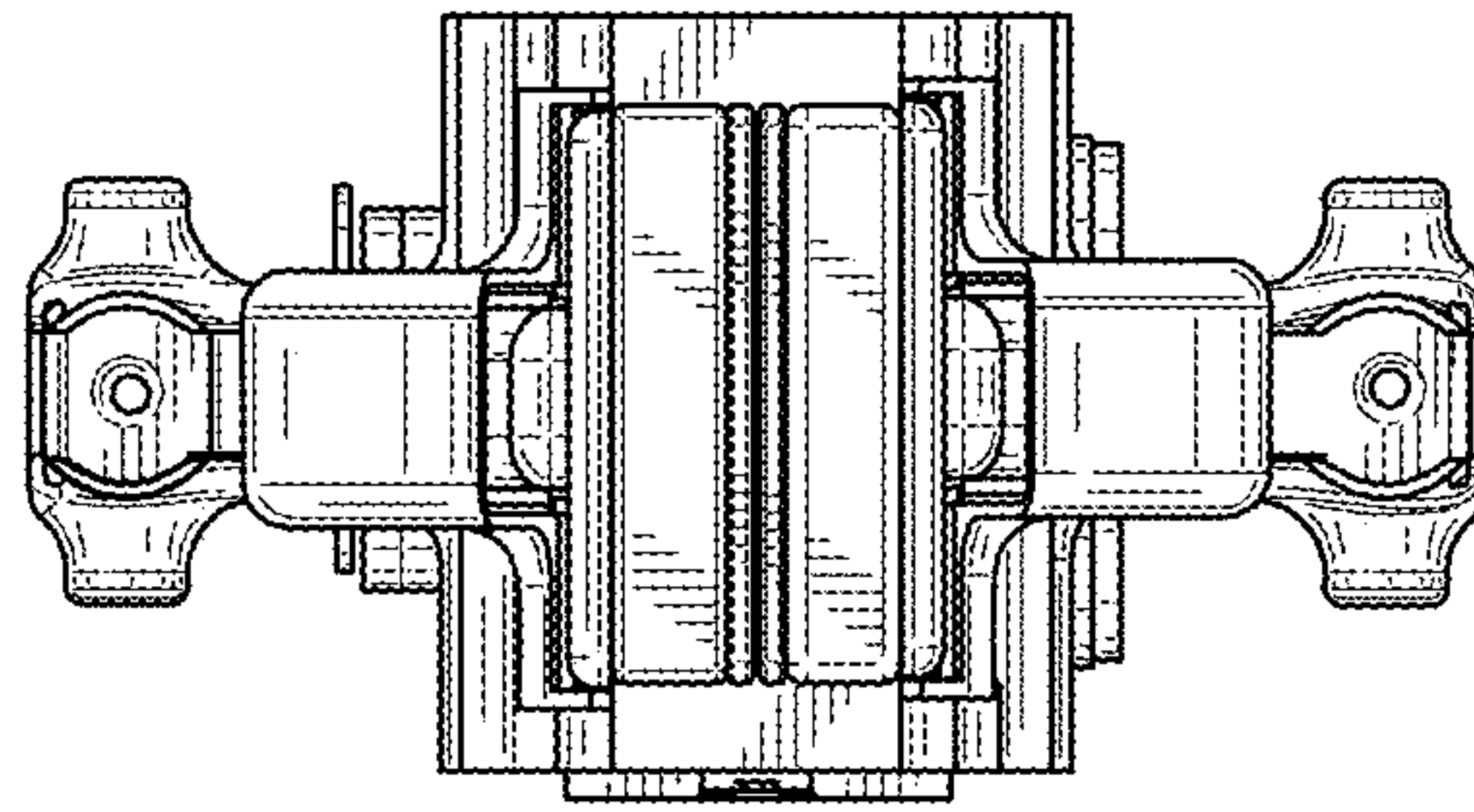


FIG. 2

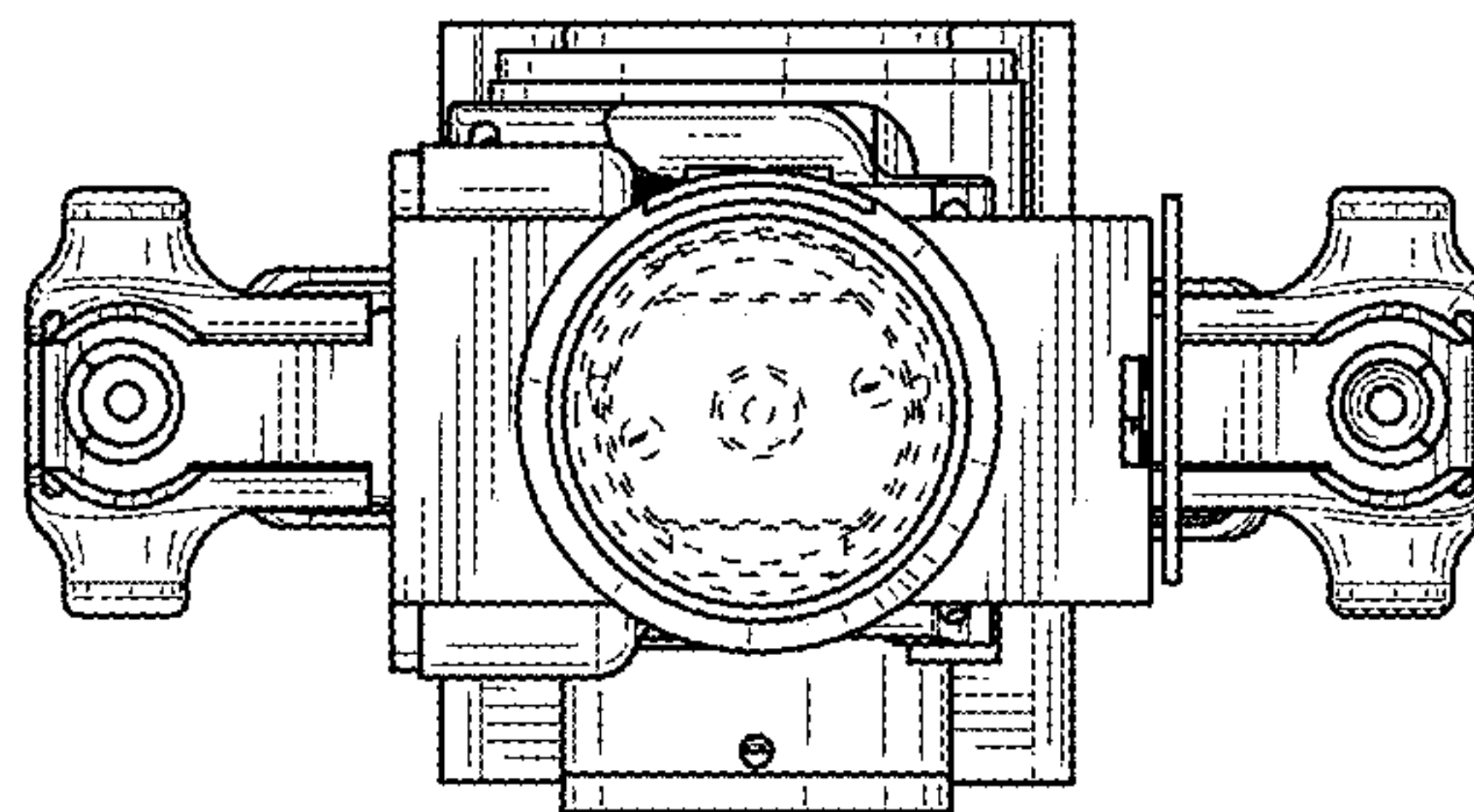


FIG. 3

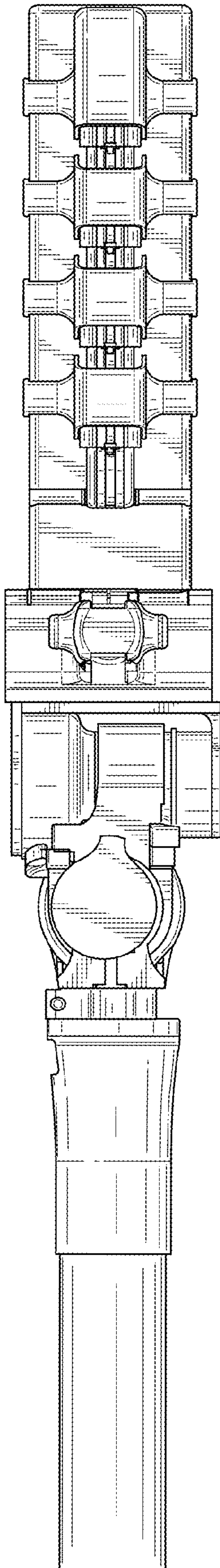


FIG. 4

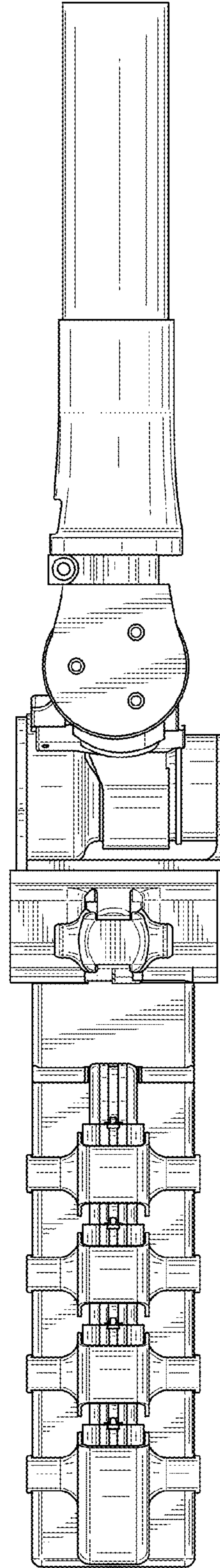


FIG. 5

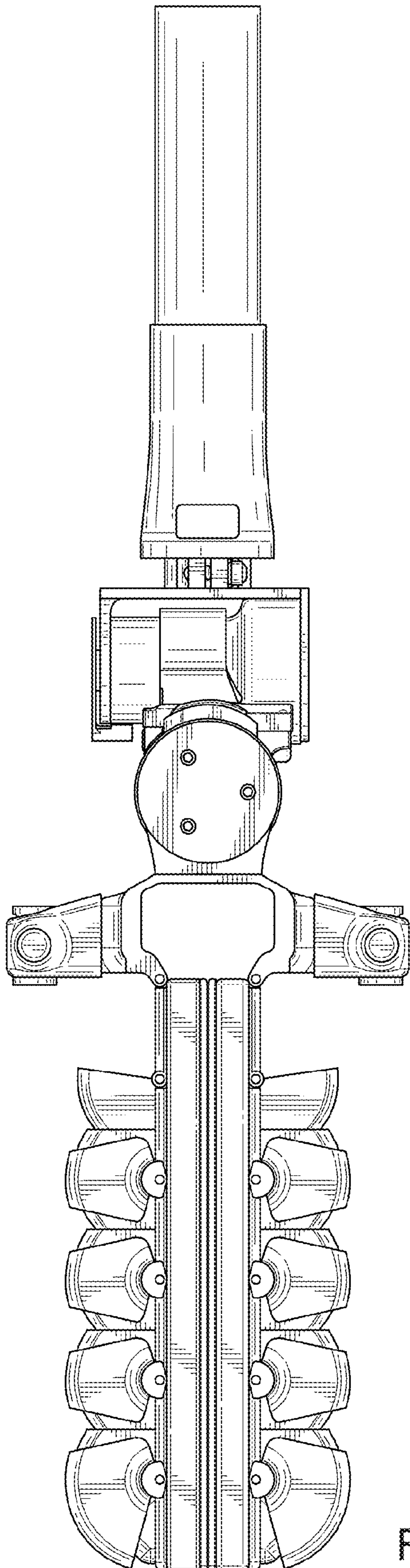


FIG. 6

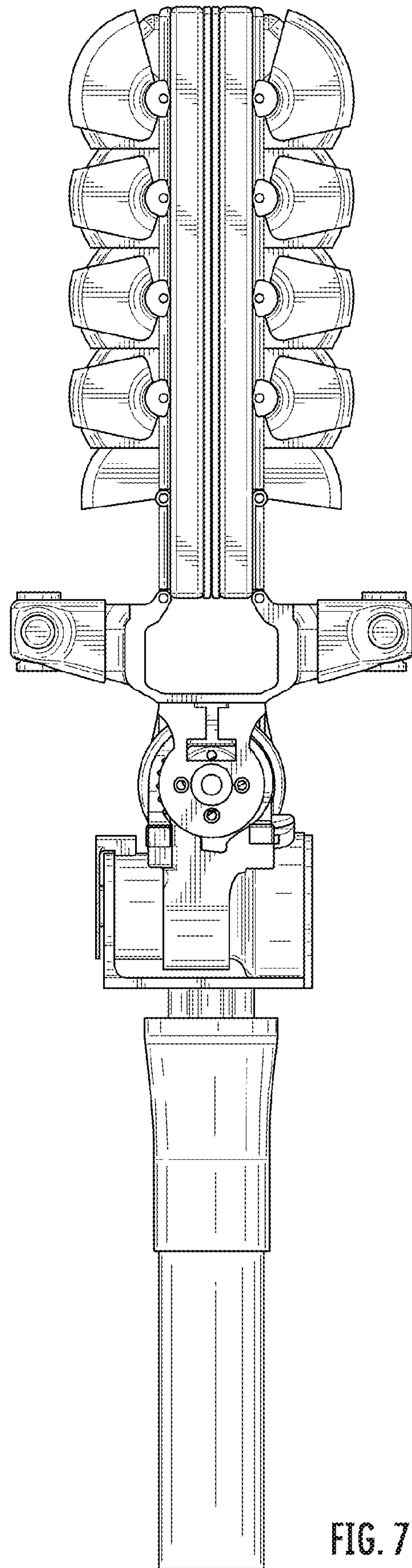


FIG. 7

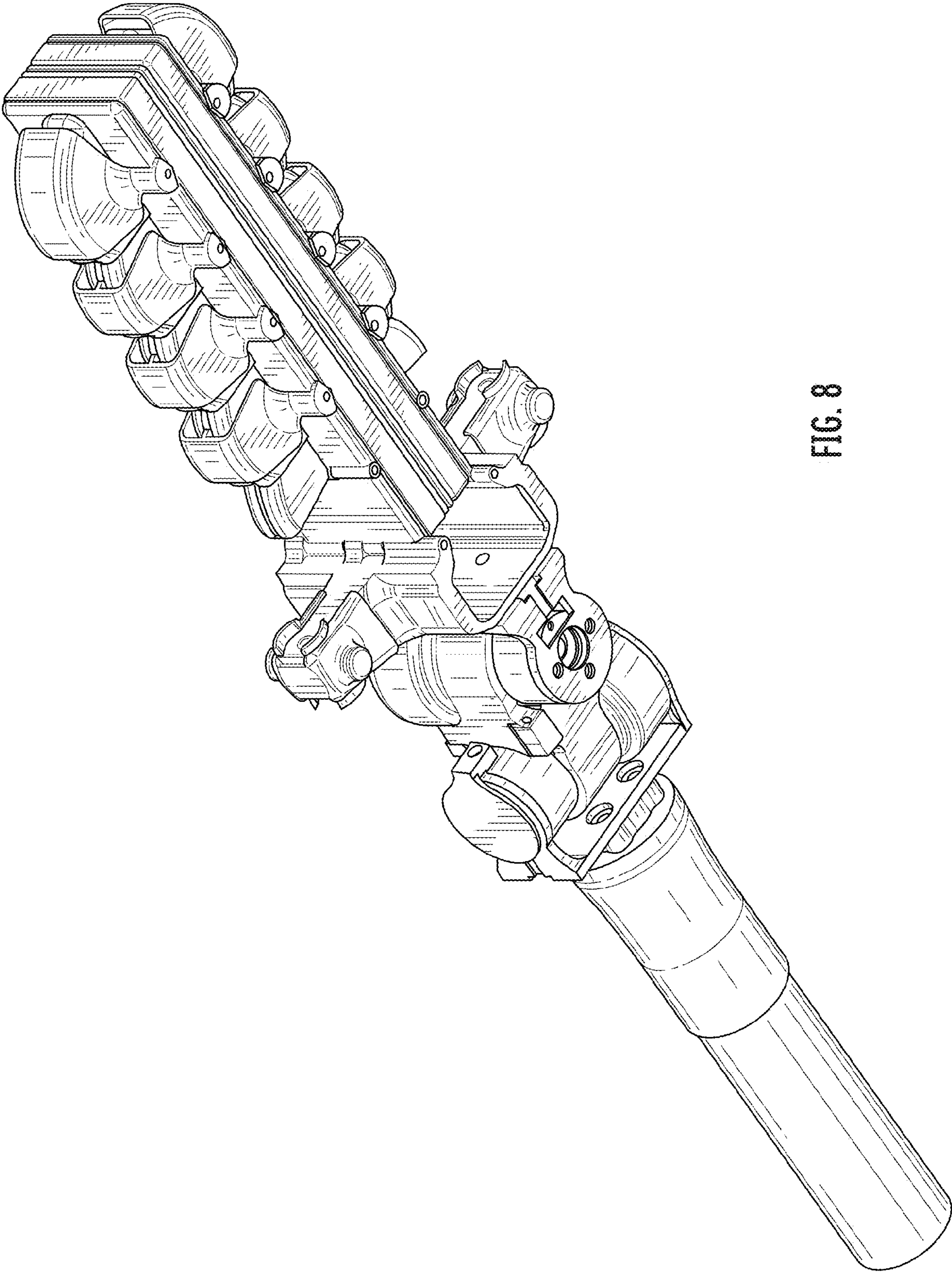


FIG. 8

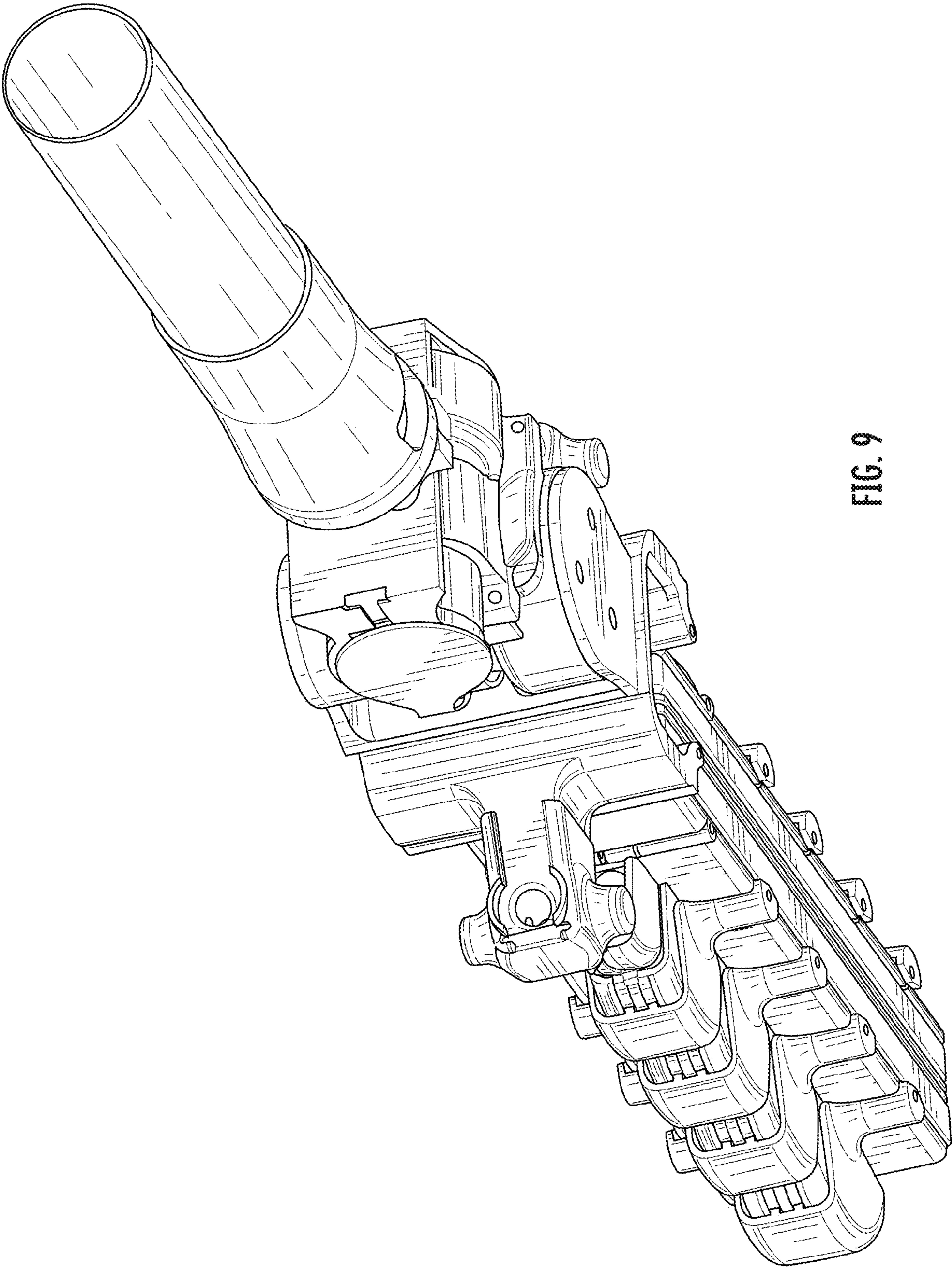


FIG. 9