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

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- (54) **ELECTRIC ROTARY ACTUATOR**
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- (\*\*) Term: **15 Years**
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(52) **U.S. Cl.**  
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D23/233  
CPC .... F15B 11/076; F15B 11/0413; F15B 15/24;  
F15B 15/065; F15B 15/149; F15B  
15/1433; F16H 19/04  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

- 5,094,143 A \* 3/1992 Andersen, Jr. .... F15B 15/1433  
137/884
- 5,477,774 A \* 12/1995 Ikumi ..... F15B 15/1428  
92/161
- D375,508 S \* 11/1996 Shiino ..... D15/143
- 5,787,786 A \* 8/1998 Zeuner ..... A01D 34/38  
56/296

- 6,014,924 A \* 1/2000 Stoll ..... B23Q 1/58  
92/13
- 6,029,561 A \* 2/2000 Naslund ..... F15B 15/1433  
91/394
- 6,152,015 A \* 11/2000 Migliori ..... F15B 15/1419  
92/177
- 6,170,384 B1 \* 1/2001 Stoll ..... F03C 1/02  
92/136
- 6,276,257 B1 \* 8/2001 Hellemann ..... F15B 11/08  
91/442
- D480,405 S \* 10/2003 Kleffmann ..... D15/143
- D554,164 S \* 10/2007 Naruse ..... D15/143
- D572,282 S \* 7/2008 Yaegashi ..... D15/143
- D597,111 S \* 7/2009 Takeuchi ..... D15/143
- D597,112 S \* 7/2009 Takeuchi ..... D15/143
- D628,219 S \* 11/2010 Fukano ..... D15/143
- D660,333 S \* 5/2012 Takeuchi ..... D15/143
- D660,334 S \* 5/2012 Takeuchi ..... D15/143

(Continued)

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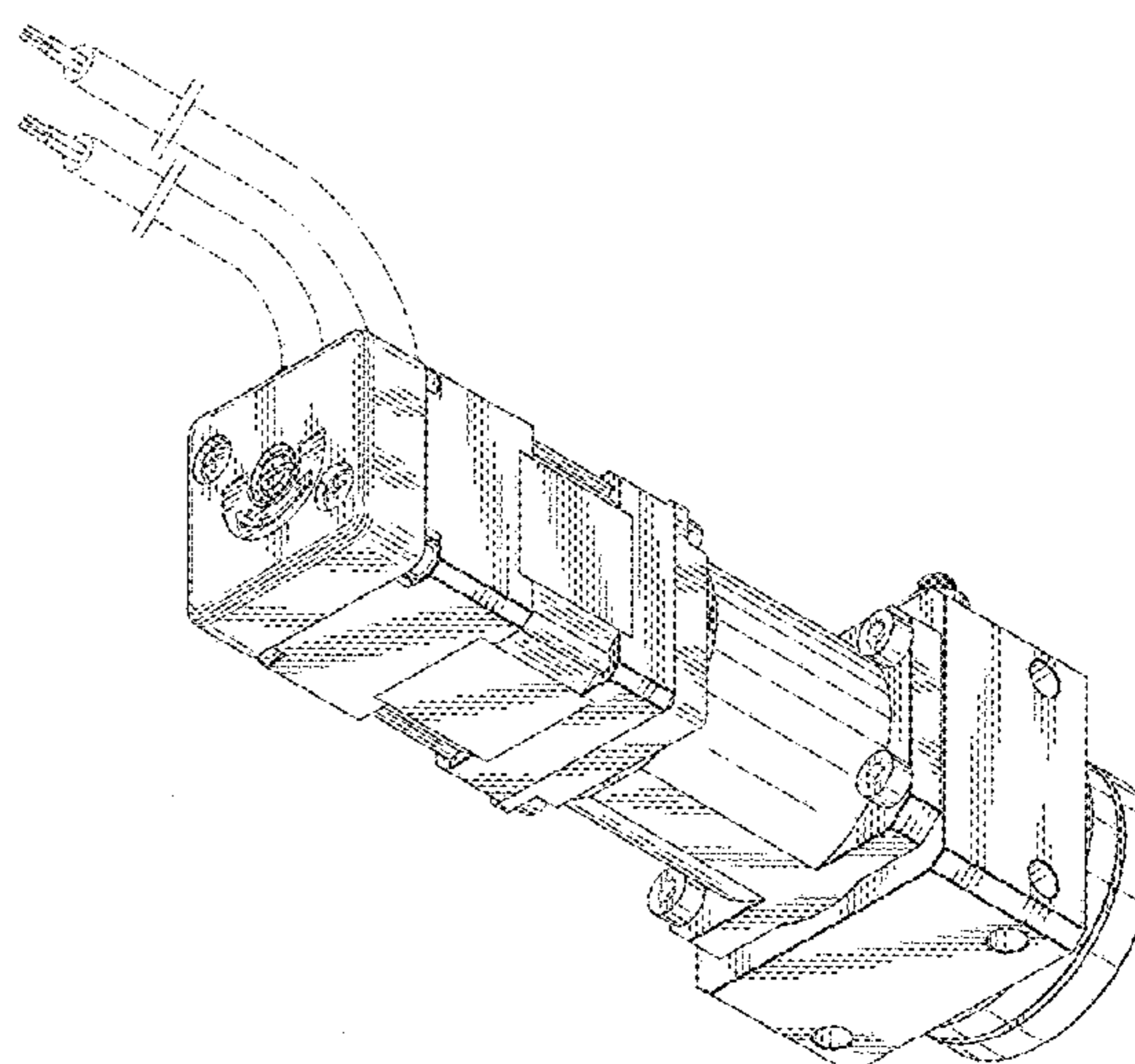
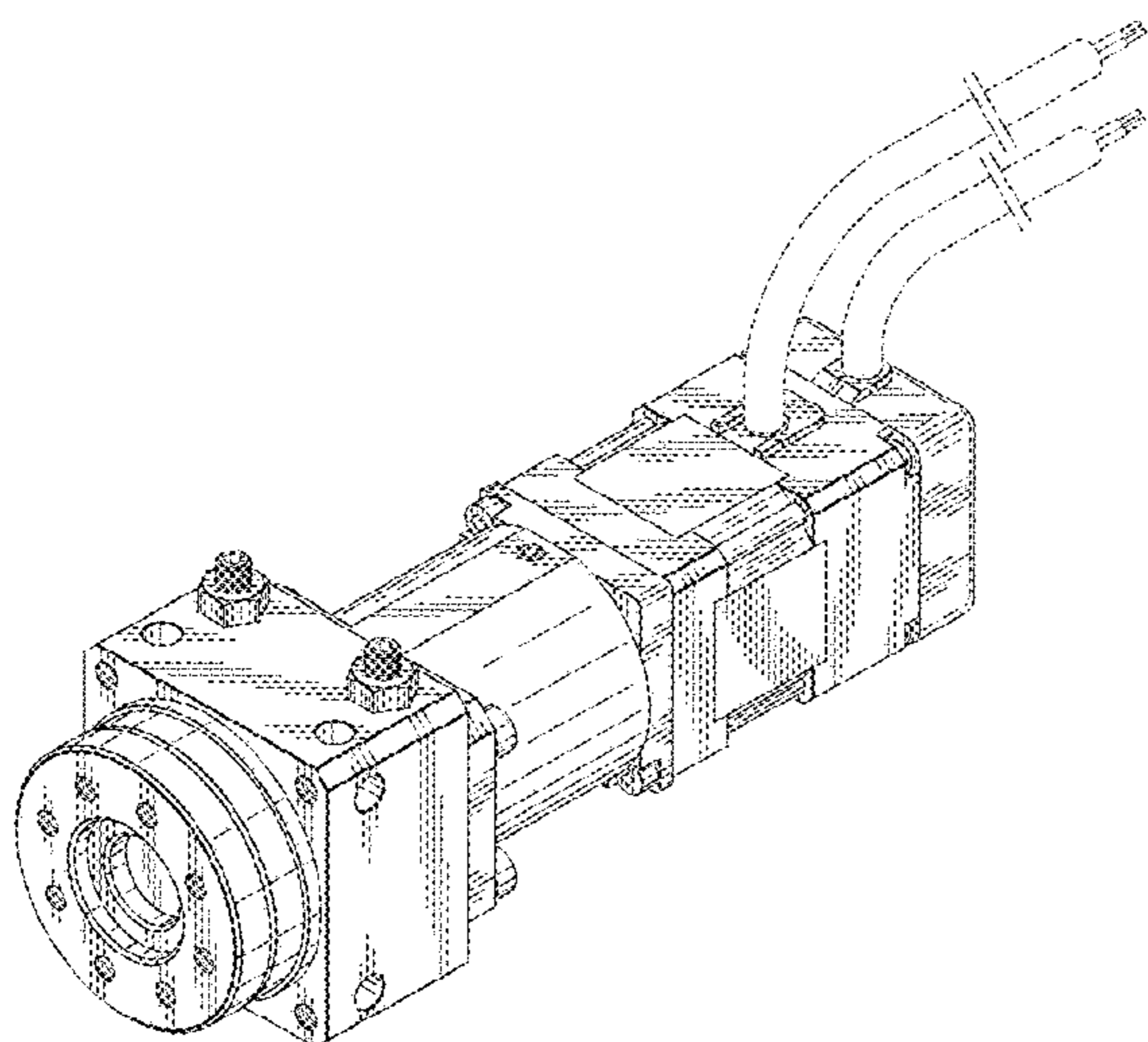
(57) **CLAIM**

The ornamental design for an electric rotary actuator, as shown and described.

**DESCRIPTION**

FIG. 1 is a front, top, and left side perspective view of an electric rotary actuator;  
FIG. 2 is a rear, bottom, and right side perspective view thereof;  
FIG. 3 is a front elevational view thereof;  
FIG. 4 is a rear elevational view thereof;  
FIG. 5 is a top plan view thereof;  
FIG. 6 is a bottom plan view thereof  
FIG. 7 is a left side elevational view thereof; and,  
FIG. 8 is a right side elevational view thereof.  
The broken lines in the drawings depict unclaimed environmental subject matter.

**1 Claim, 5 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

D674,423	S *	1/2013	Mangold .....	D15/143
D792,916	S *	7/2017	Kobayashi .....	D15/148
9,810,247	B2 *	11/2017	Tabuchi .....	F15B 15/065
2002/0152826	A1 *	10/2002	Mitsui .....	F15B 13/081 74/422
2004/0094032	A1 *	5/2004	Doleschel .....	F15B 15/082 92/88
2007/0204707	A1 *	9/2007	Maffeis .....	F15B 15/065 74/25
2010/0018387	A1 *	1/2010	Miyazawa .....	F15B 15/065 92/136
2010/0064834	A1 *	3/2010	Takeuchi .....	F15B 15/065 74/422
2016/0061231	A1 *	3/2016	Tabuchi .....	F15B 15/065 92/136

\* cited by examiner

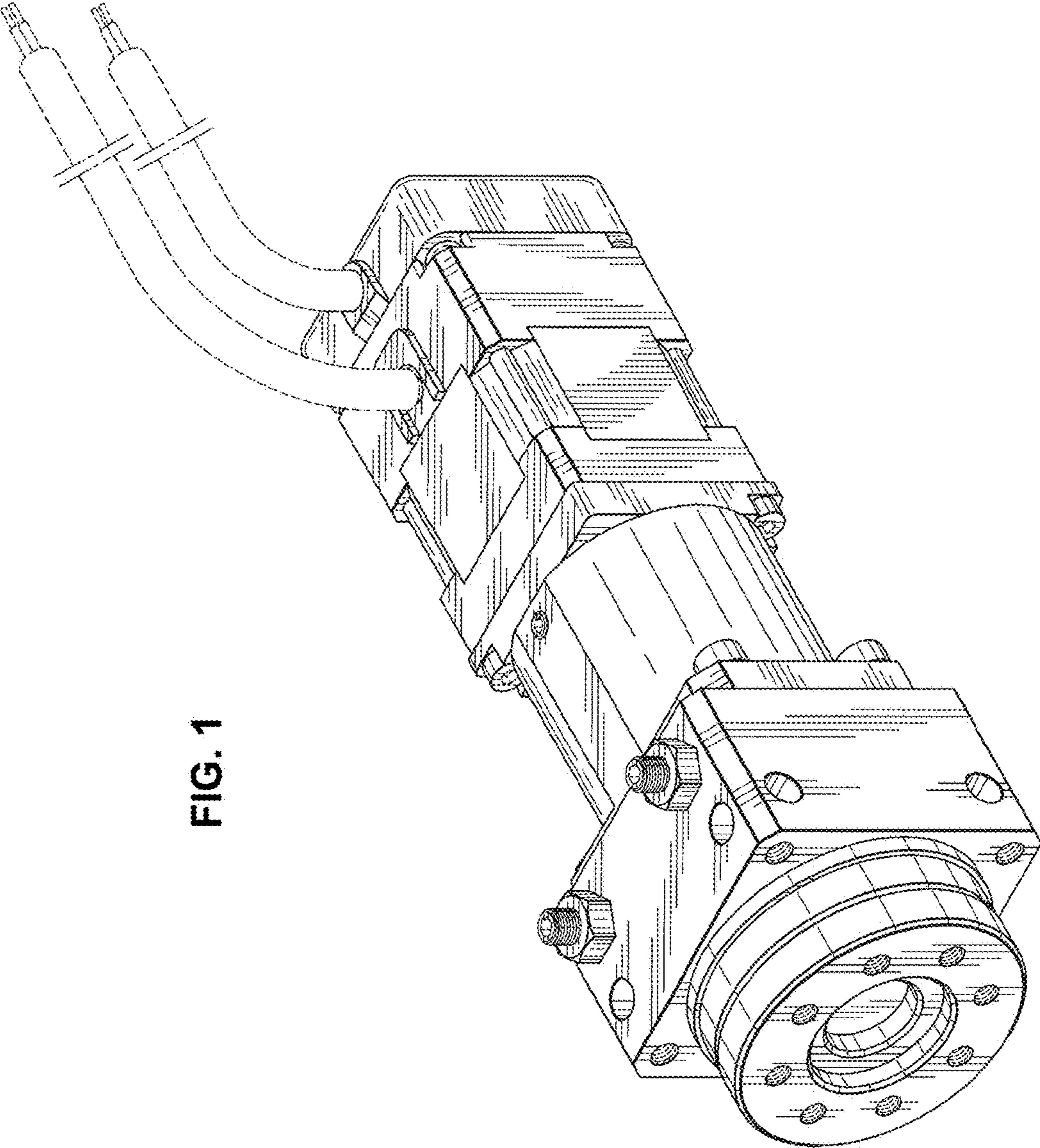
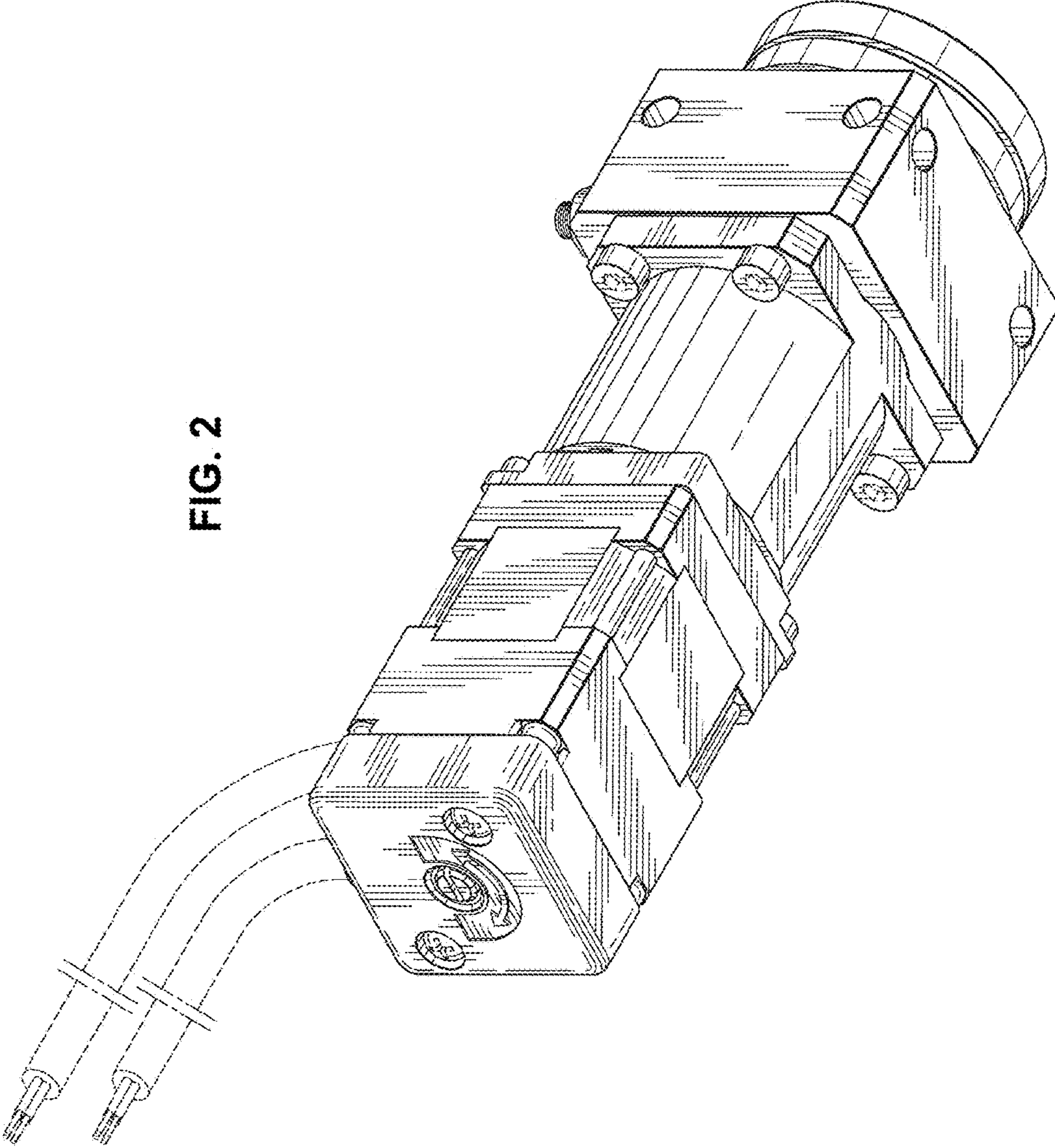


FIG. 1

FIG. 2



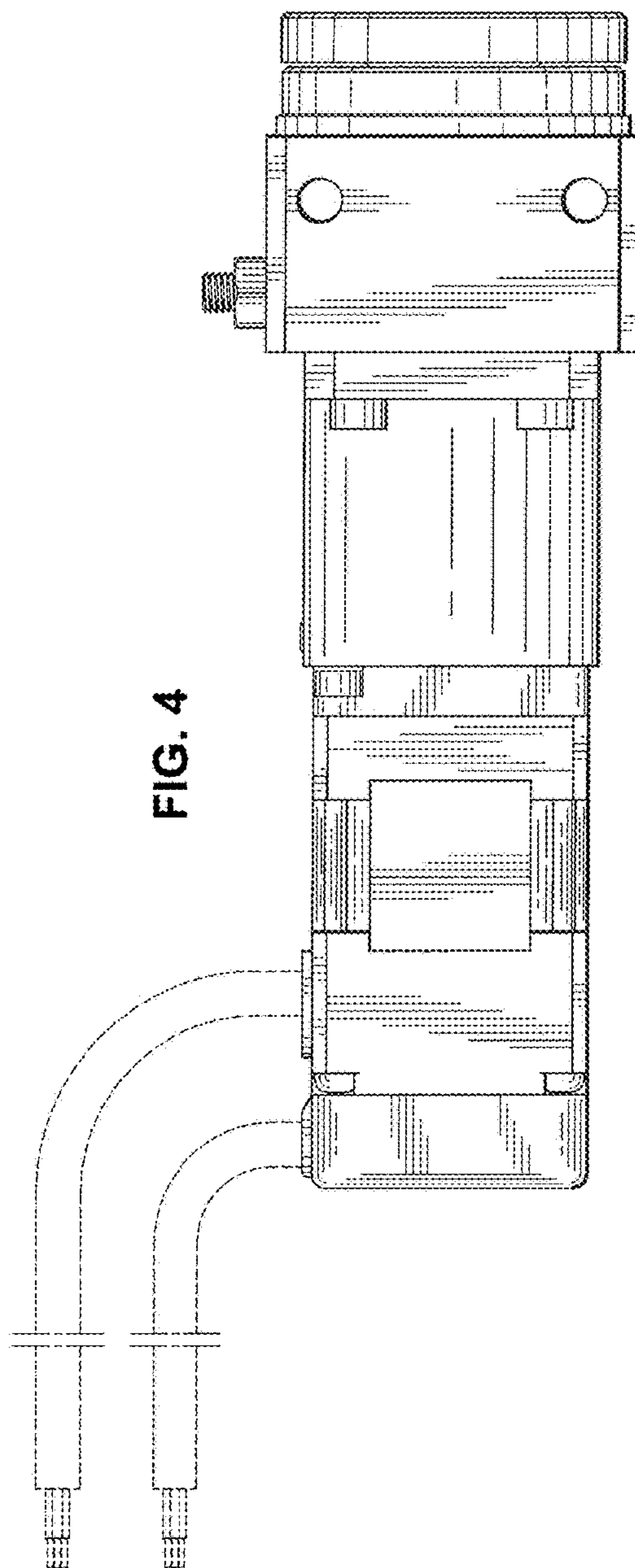
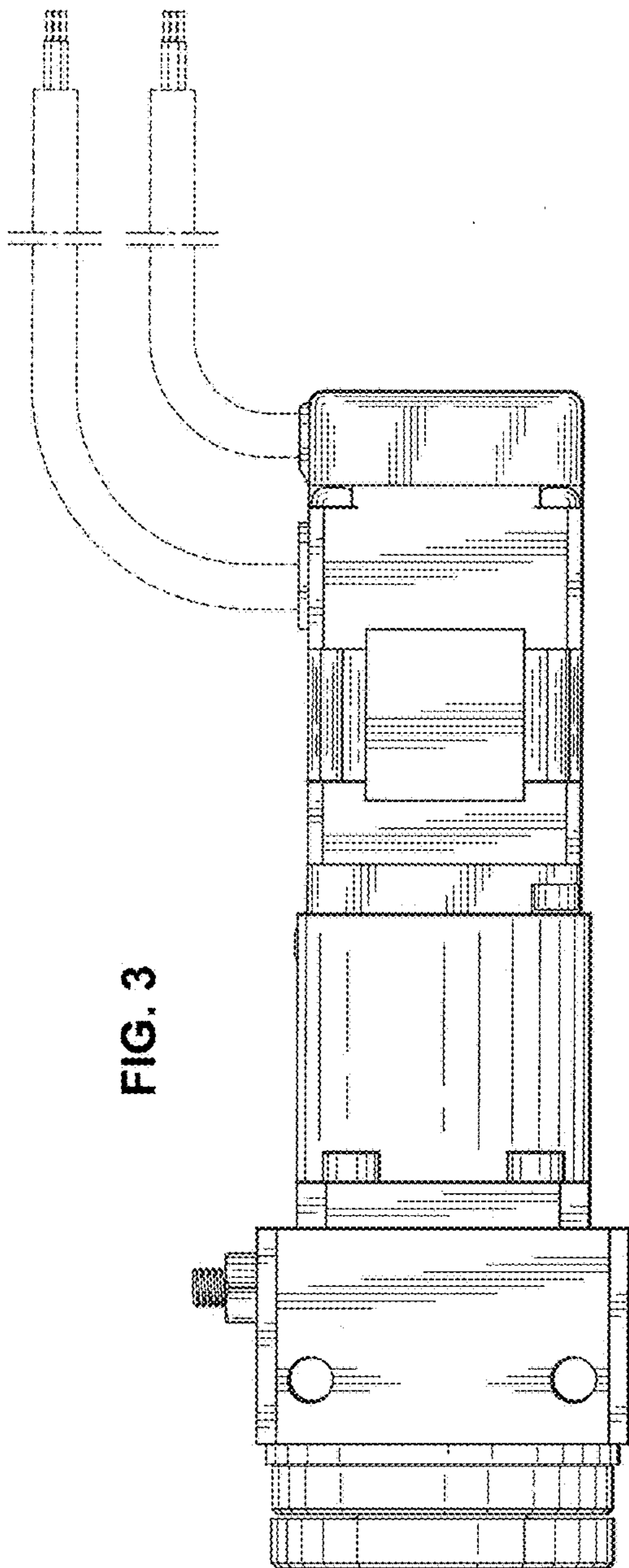


FIG. 5

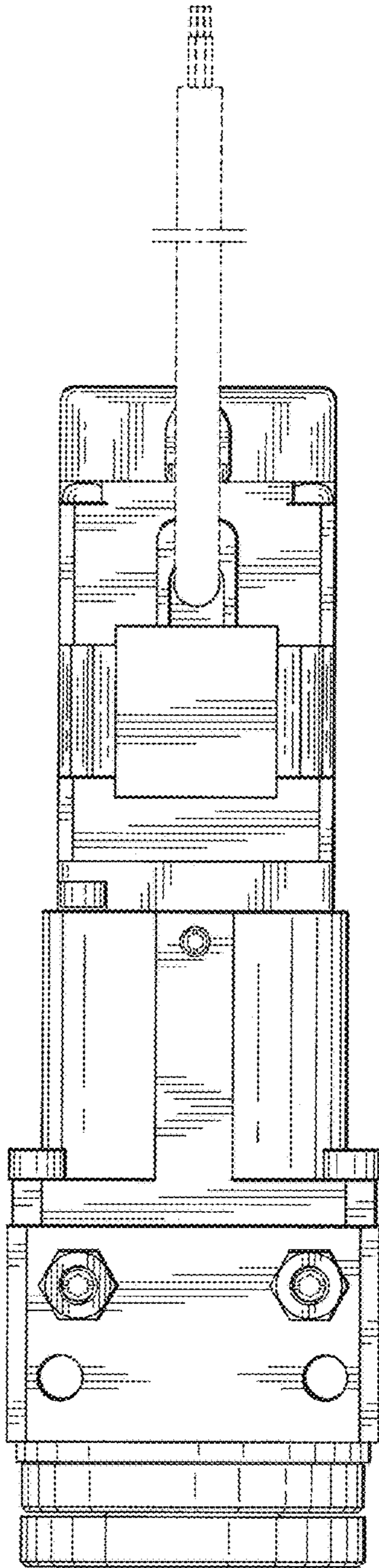


FIG. 6

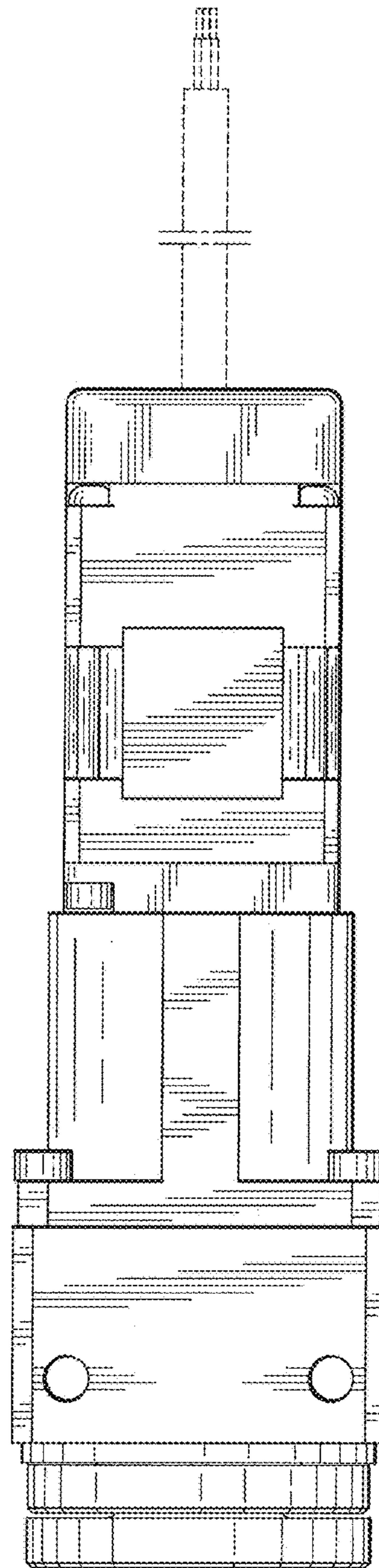


FIG. 8

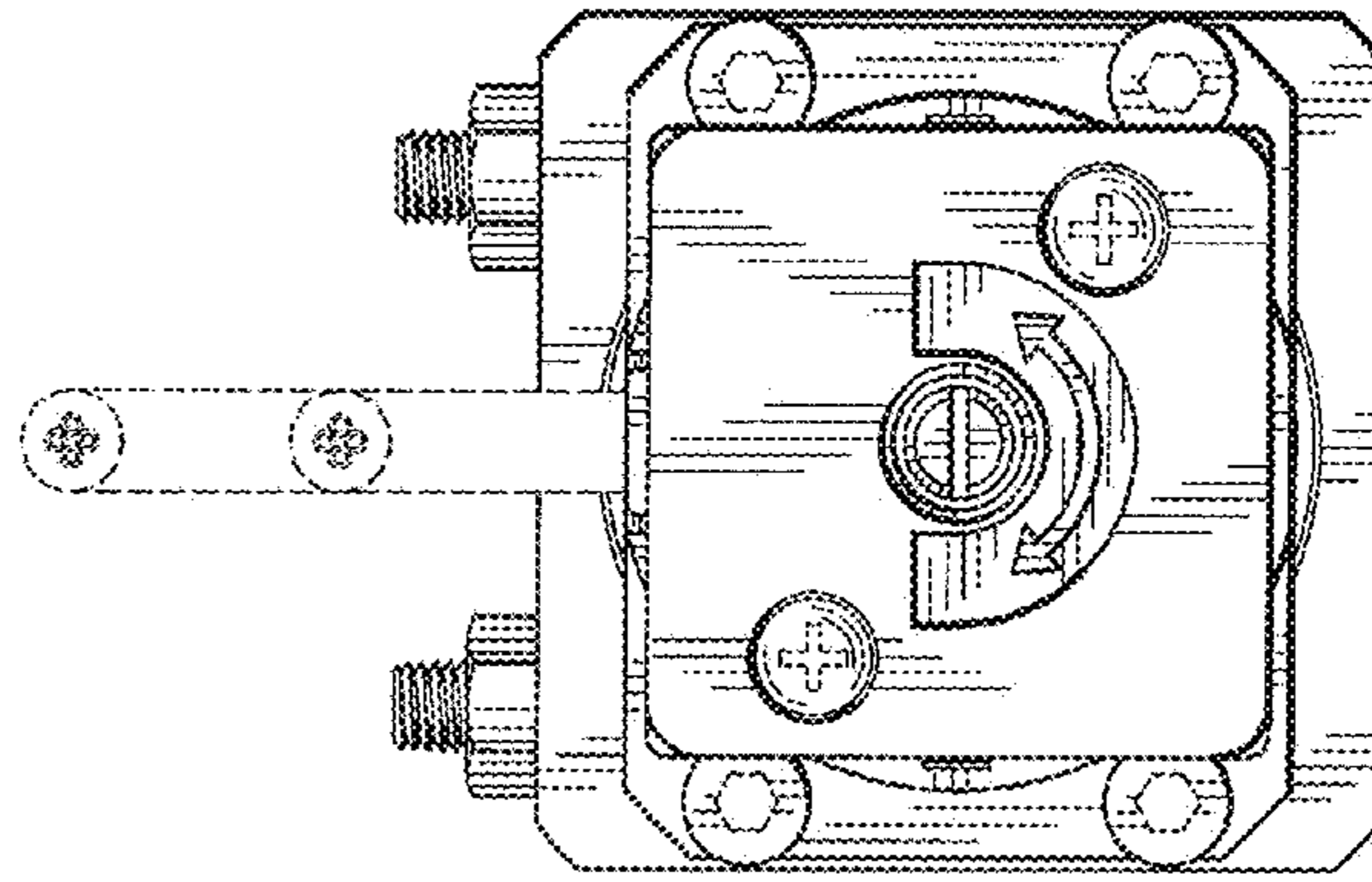


FIG. 7

