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(12) **United States Design Patent**  
**Qin**

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(45) **Date of Patent:** **\*\* Jul. 14, 2020**

- (54) **DETECTOR FOR METAL**
- (71) Applicant: **Shanghai tymex tools Ltd.**, Shanghai (CN)
- (72) Inventor: **Xiaolin Qin**, Shanghai (CN)
- (\*\*) Term: **15 Years**
- (21) Appl. No.: **29/726,690**
- (22) Filed: **Mar. 5, 2020**
- (51) **LOC (12) Cl.** ..... **10-04**
- (52) **U.S. Cl.**  
USPC ..... **D10/47**
- (58) **Field of Classification Search**  
USPC ..... D10/47  
CPC ... G01V 3/00; G01V 3/02; G01V 3/04; G01V 3/06; G01V 3/08; G01V 3/081; G01V 3/082; G01V 3/083; G01V 2003/084; G01V 2003/085; G01V 2003/086; G01V 3/087; G01V 3/088; G01V 3/10; G01V 3/101; G01V 3/102; G01V 3/104; G01V 3/105; G01V 3/107; G01V 3/108; G01V 3/12; G01V 3/14; G01V 3/15; G01V 3/16; G01V 3/165; G01V 3/17; G01V 3/175; G01V 3/18; G01V 3/20; G01V 3/22; G01V 3/24; G01V 3/26; G01V 3/265; G01V 3/28; G01V 3/30; G01V 3/32; G01V 3/34; G01V 3/36; G01V 3/38; G01V 3/40  
See application file for complete search history.

- 7,940,049 B2 \* 5/2011 Loubet ..... G01V 3/15 324/326
- 8,842,035 B2 \* 9/2014 Duvoisin, III ..... G01S 13/885 342/22
- 9,021,661 B2 \* 5/2015 Andel ..... B25G 1/04 16/429
- D756,247 S \* 5/2016 Pollock ..... G01S 13/878 D10/47
- 9,395,462 B2 \* 7/2016 Walsh ..... G01V 3/10
- 9,664,809 B2 \* 5/2017 Fry ..... G01V 3/104
- 9,733,353 B1 \* 8/2017 Carlson ..... G01S 13/878
- 9,864,089 B2 \* 1/2018 Andel ..... F41H 11/136
- D844,462 S \* 4/2019 Griffin ..... D10/47

(Continued)

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(57) **CLAIM**

The ornamental design for a detector for metal, as shown and described.

**DESCRIPTION**

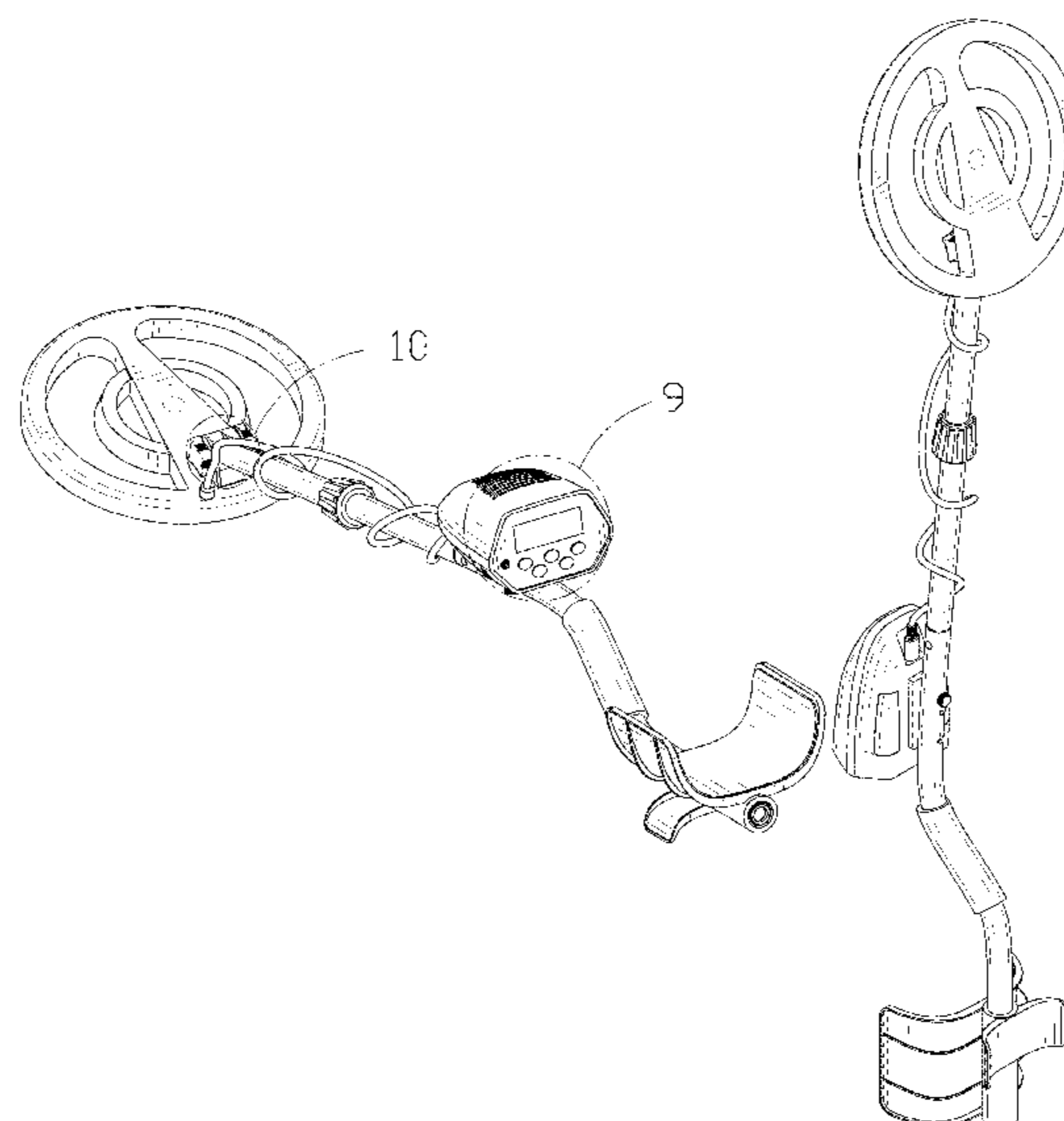
FIG. 1 is a front perspective view of a detector for metal, showing my new design;  
 FIG. 2 is a rear perspective view thereof;  
 FIG. 3 is a front elevational view thereof;  
 FIG. 4 is a rear elevational view thereof;  
 FIG. 5 is a left side elevational view thereof;  
 FIG. 6 is a right side elevational view thereof;  
 FIG. 7 is a top plan view thereof;  
 FIG. 8 is a bottom plan view thereof;  
 FIG. 9 is an enlarged view of a portion indicated with numeric 9 in FIG. 1; and,  
 FIG. 10 is an enlarged view of a portion indicated with numeric 10 in FIG. 1.  
 The broken lines in the figures illustrate portions of the detector for metal that form no part of the claimed design. The dash dot dash lines in FIGS. 1, 9 and 10 are for the purpose of depicting the cut line of the enlarged view and form no part of the claim.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 5,721,489 A \* 2/1998 Weaver ..... G01V 3/15 324/233
- D486,080 S \* 2/2004 Hu ..... G01S 13/885 D10/47
- D533,792 S \* 12/2006 Johnson ..... G01S 13/885 D10/47

**1 Claim, 10 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

D846,411 S	*	4/2019	Zhang	.....	F41H 11/136
					D10/47
D867,170 S	*	11/2019	Deng	.....	D10/47
D881,033 S	*	4/2020	Zhang	.....	G01V 3/15
					D10/47
D881,034 S	*	4/2020	Zhang	.....	G01V 3/10
					D10/47
D881,035 S	*	4/2020	Zhang	.....	G01V 3/15
					D10/47
D881,037 S	*	4/2020	Zhang	.....	D10/47
D881,727 S	*	4/2020	Deng	.....	D10/47

\* cited by examiner

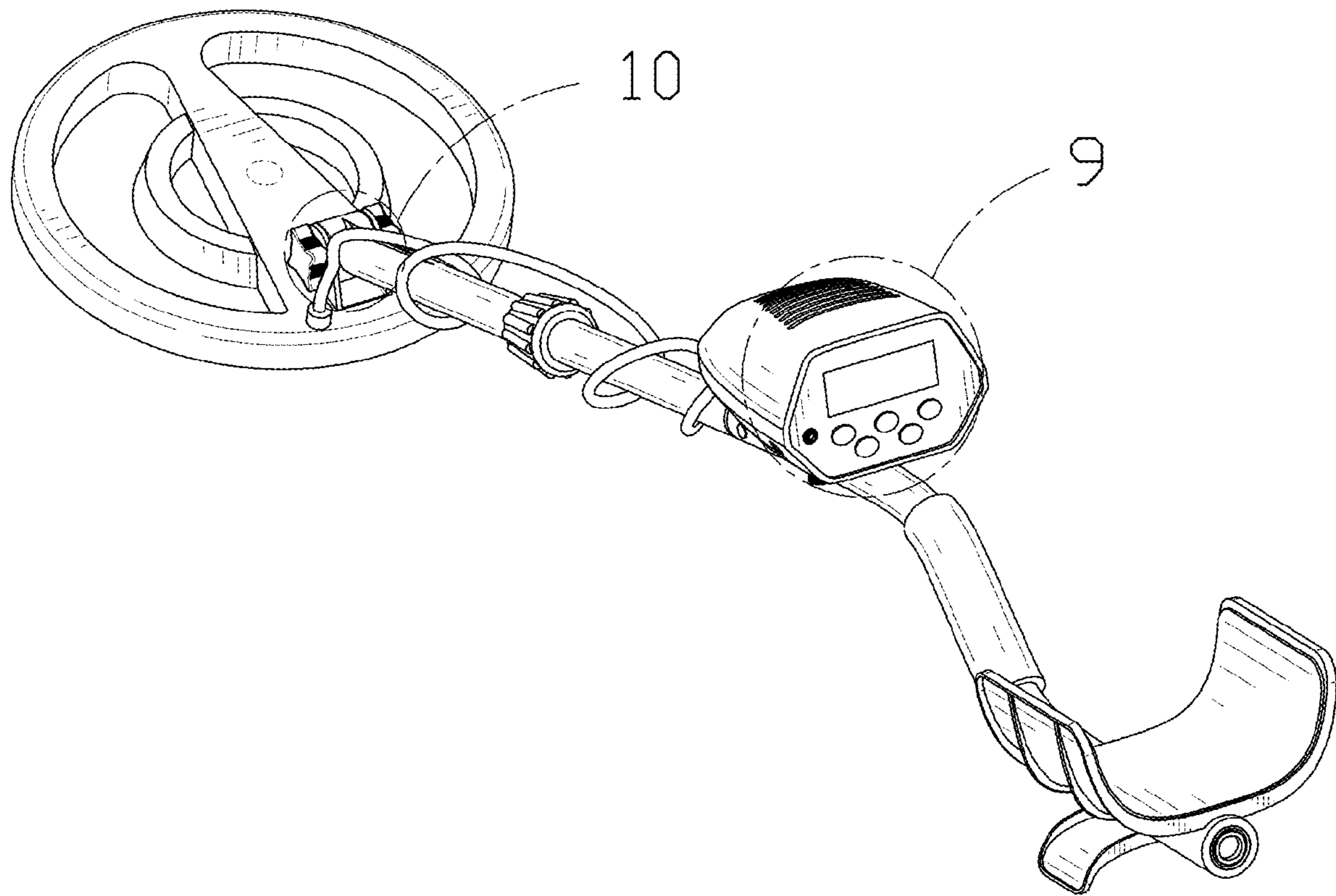


FIG. 1

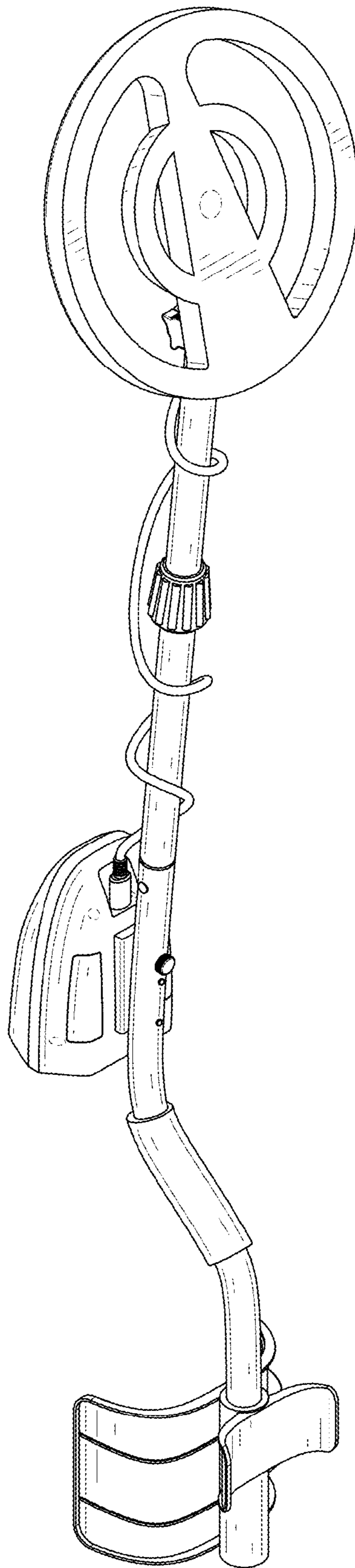


FIG. 2

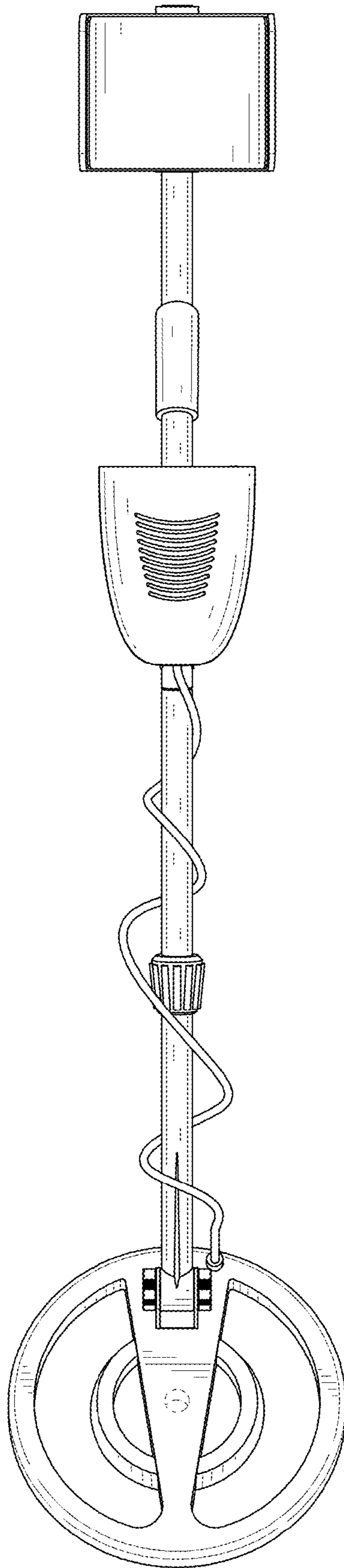


FIG. 3

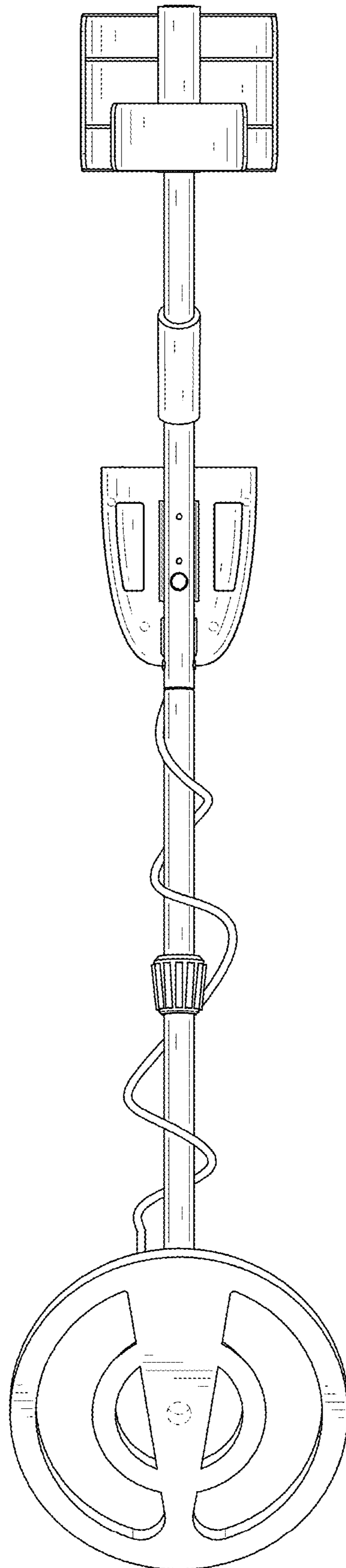


FIG. 4

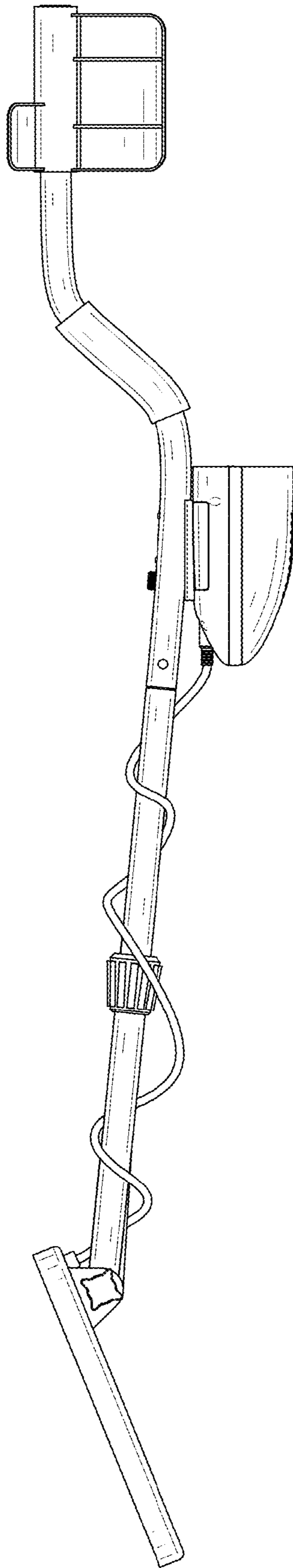


FIG. 5

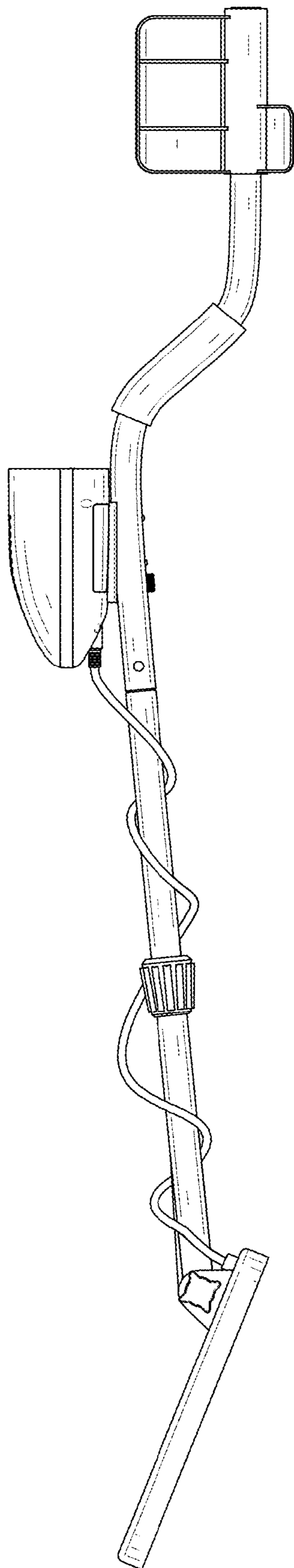


FIG. 6



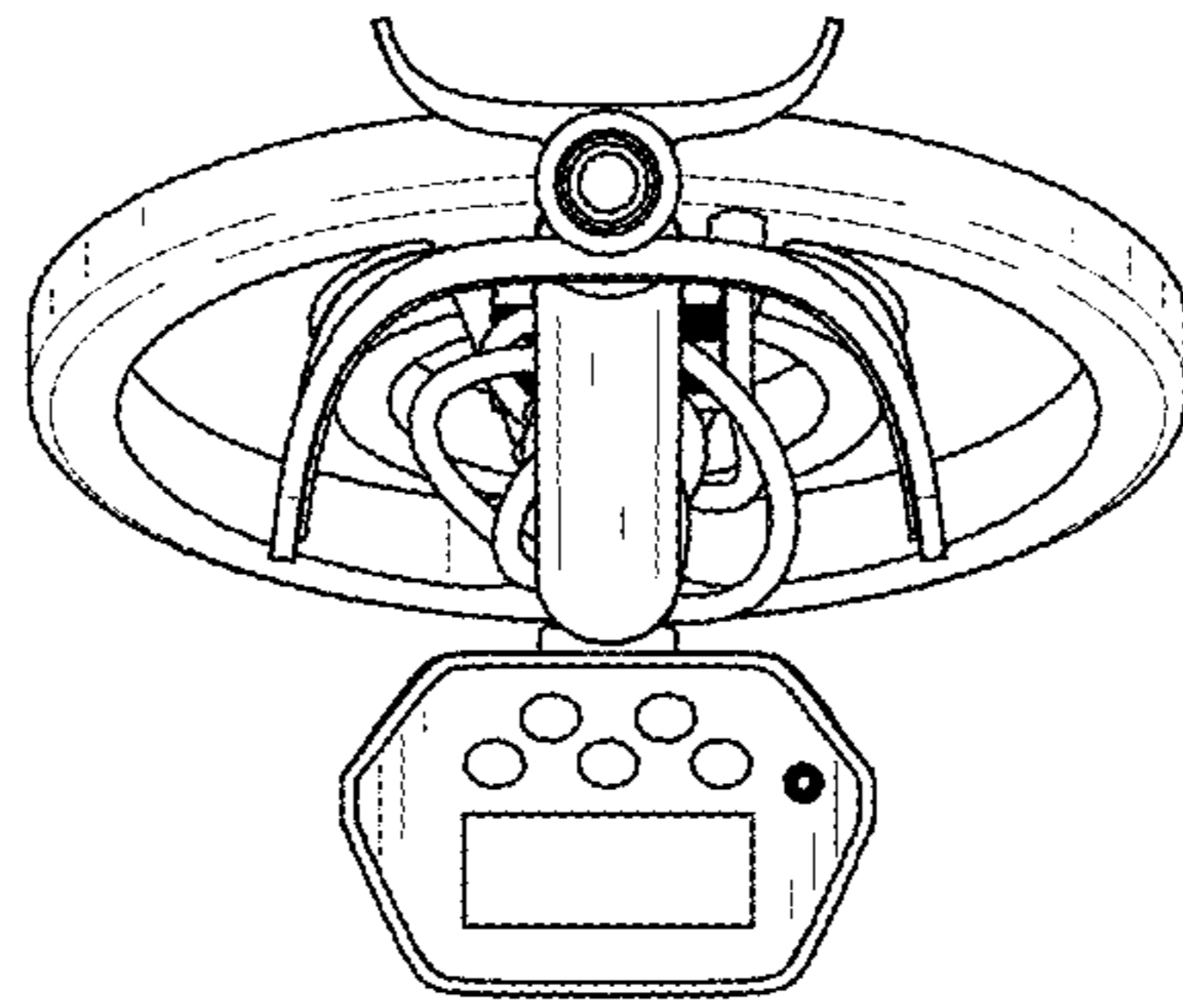


FIG. 7

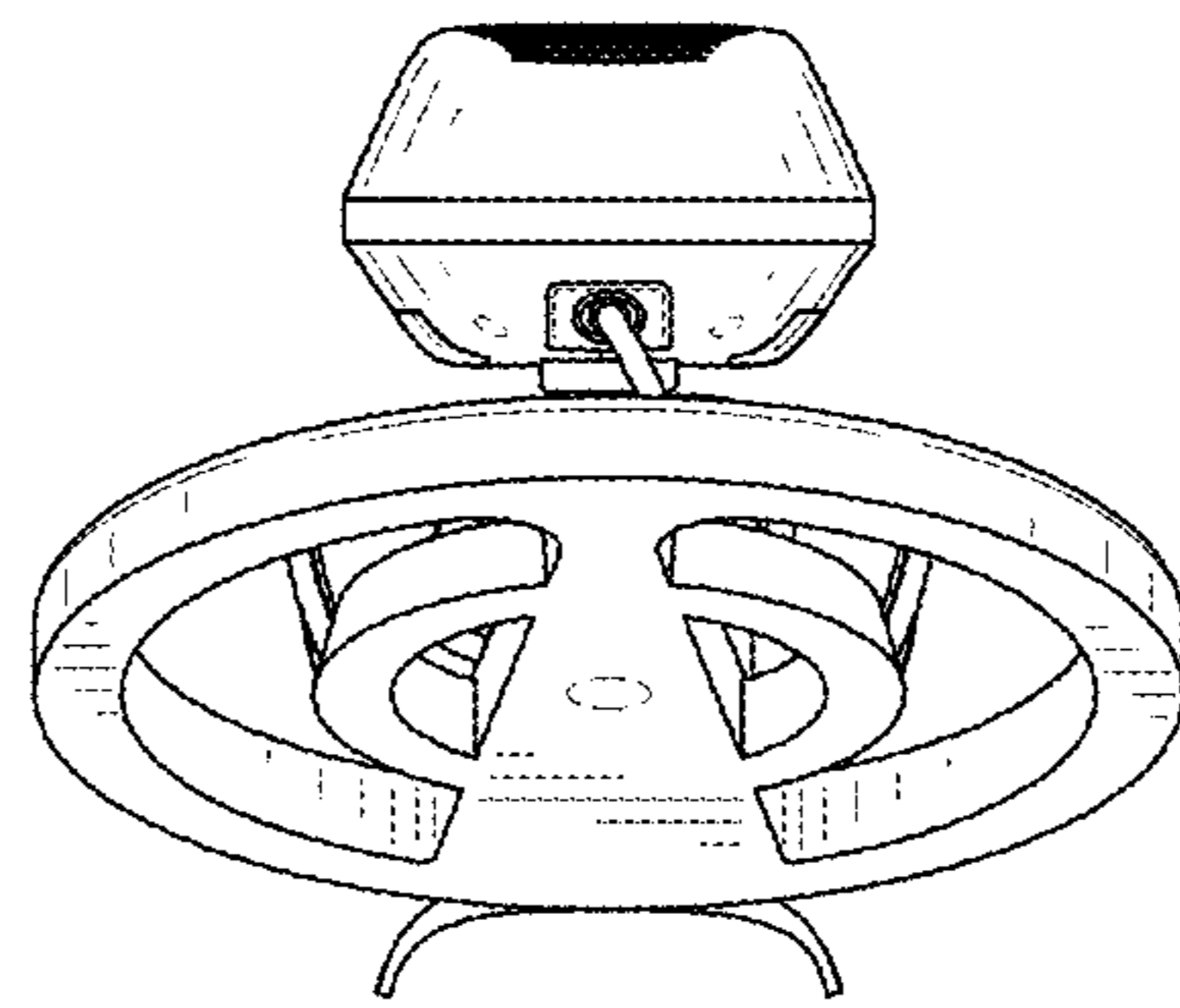


FIG. 8

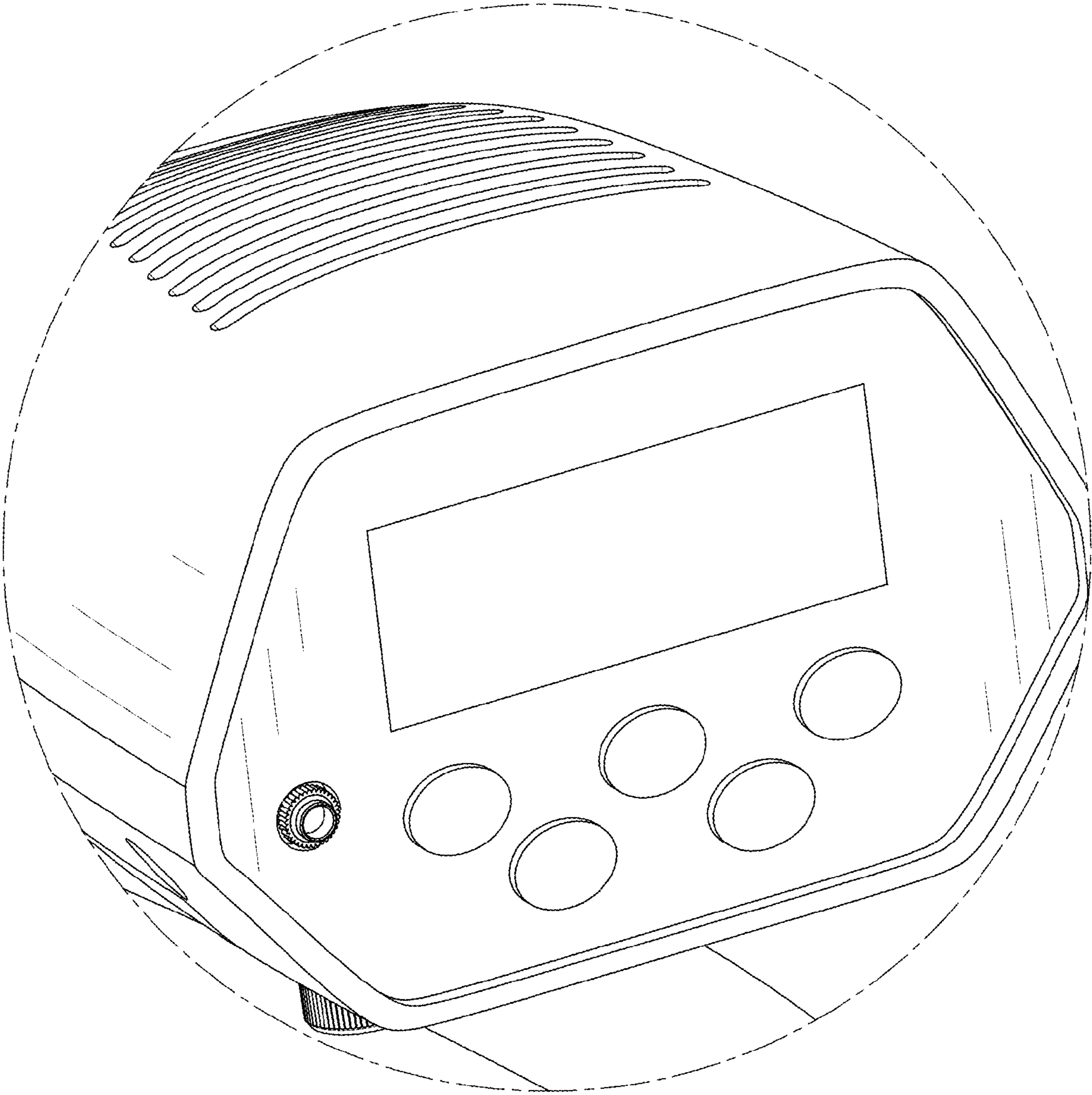


FIG. 9

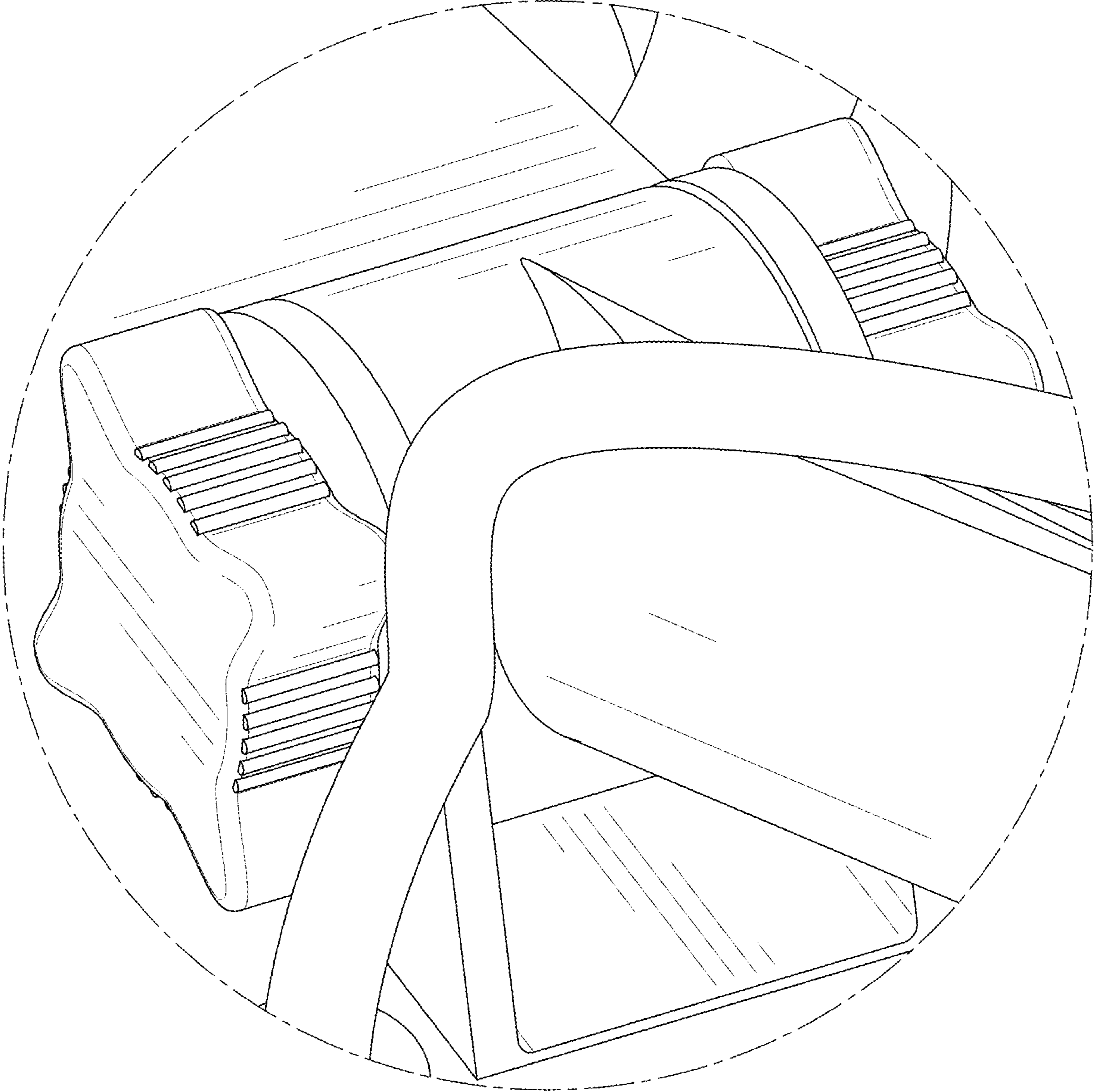


FIG. 10