



US00D799041S

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

(10) **Patent No.:** **US D799,041 S**

(45) **Date of Patent:** **\*\* Oct. 3, 2017**

(54) **PALATE EXPANDER**

(71) Applicant: **Universal Orthodontic Lab, Inc.,**  
Whittier, CA (US)

(72) Inventor: **Paul Kim,** Whittier, CA (US)

(73) Assignee: **Universal Orthodontic Lab, Inc.,**  
Norwalk, CA (US)

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

(21) Appl. No.: **29/566,586**

(22) Filed: **Jun. 1, 2016**

(51) **LOC (10) Cl.** ..... **24-02**

(52) **U.S. Cl.**  
USPC ..... **D24/152; D24/180**

(58) **Field of Classification Search**  
USPC ..... D24/152, 154, 176-182  
CPC ..... A61C 7/10; A61C 7/00; A61C 7/08  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

3,835,540	A *	9/1974	Biederman	.....	A61C 7/10 433/7
5,439,377	A *	8/1995	Milanovich	.....	A61C 7/10 433/7
5,885,290	A *	3/1999	Guerrero	.....	A61C 7/10 433/7
7,384,265	B2 *	6/2008	Hanks	.....	A61C 7/10 433/7
D592,752	S *	5/2009	Kawata	.....	D24/180
7,837,465	B2 *	11/2010	Forster	.....	A61C 7/10 433/7
8,821,156	B2 *	9/2014	Ehrenberger	.....	A61C 7/10 433/18
9,351,810	B2 *	5/2016	Moon	.....	A61C 7/10

9,642,679	B2 *	5/2017	Montalban	.....	A61C 7/10
2004/0214126	A1 *	10/2004	Forster	.....	A61C 7/10 433/7
2015/0024333	A1 *	1/2015	Montalban	.....	A61C 7/10 433/7
2016/0008098	A1 *	1/2016	Dolfi	.....	A61C 7/10 433/7

\* cited by examiner

*Primary Examiner* — Wan Laymon

(74) *Attorney, Agent, or Firm* — Bishop Diehl & Lee,  
Ltd.

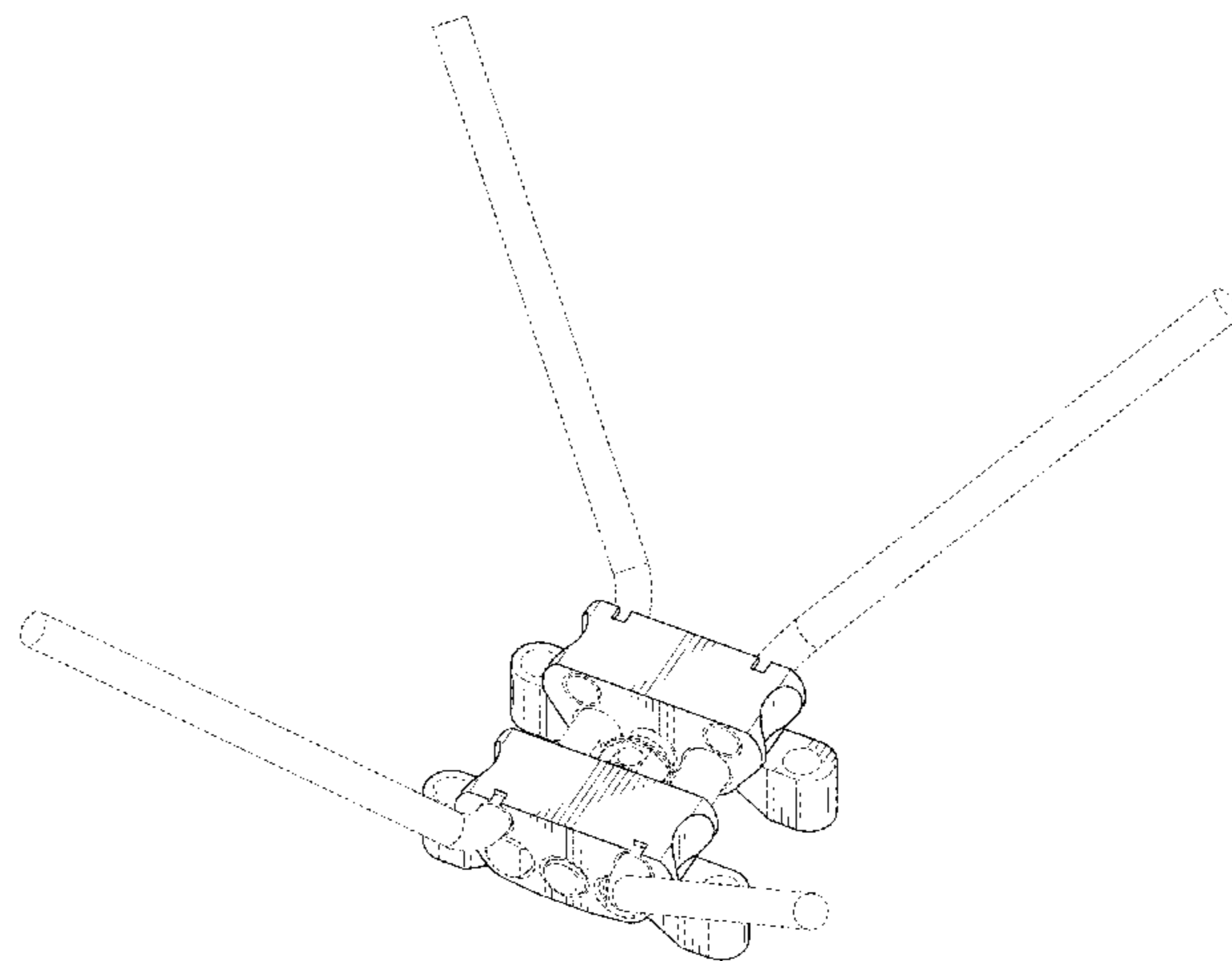
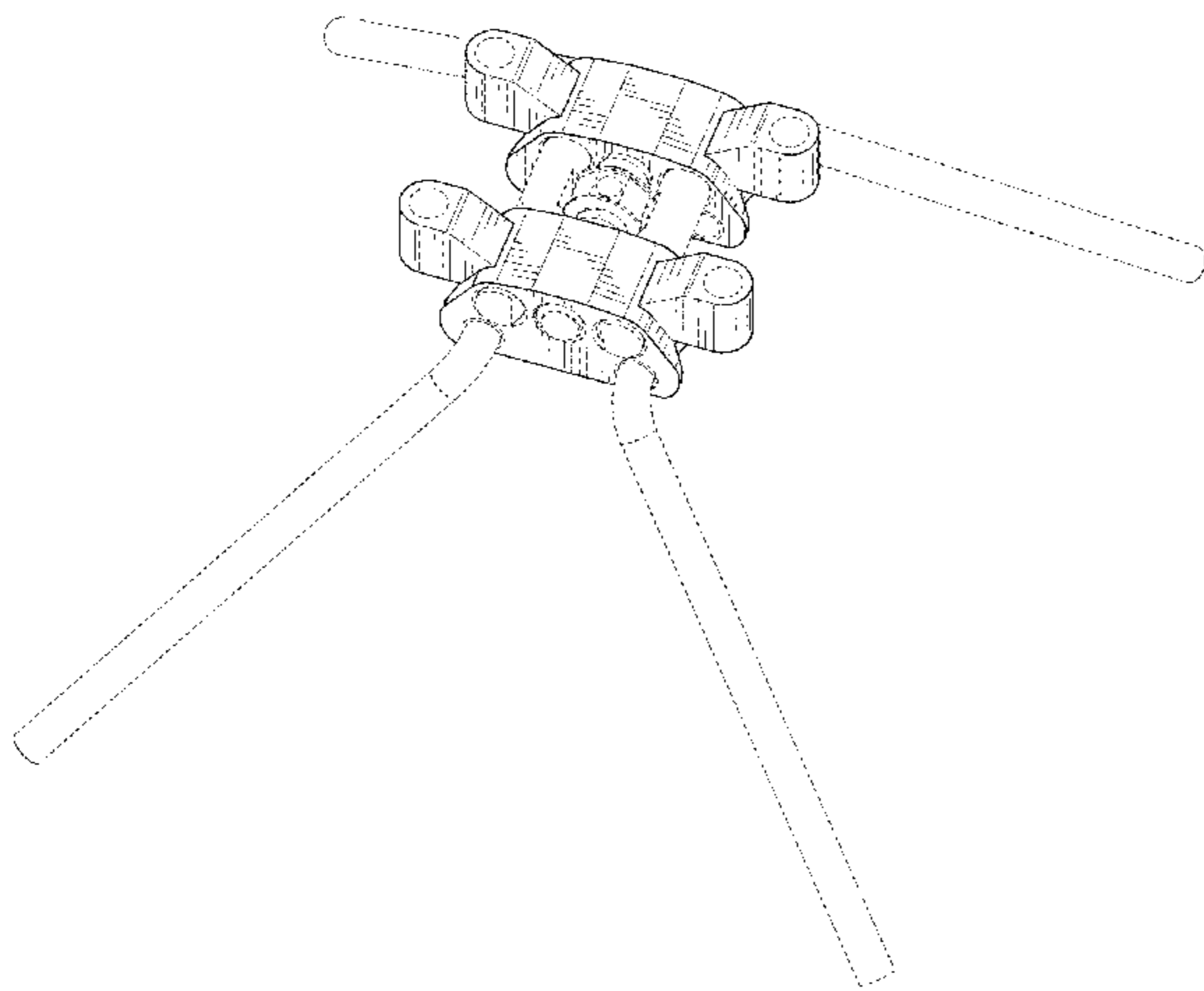
(57) **CLAIM**

The ornamental design for a palate expander, as shown and described.

**DESCRIPTION**

FIG. 1 is an elevated top isometric view of a palate expander showing the new design;  
 FIG. 2 is a bottom isometric view of the palate expander as shown in FIG. 1;  
 FIG. 3 is a front view of the palate expander as shown in FIG. 1;  
 FIG. 4 is a rear view of the palate expander shown in FIG. 1;  
 FIG. 5 is a left side view of the palate expander as shown in FIG. 1;  
 FIG. 6 is a right side view of the palate expander as shown in FIG. 1;  
 FIG. 7 is a top plan view of the palate expander as shown in FIG. 1; and,  
 FIG. 8 is a bottom plan view of the palate expander as shown in FIG. 1.  
 The broken lines shown in the figures are included for the purpose of illustrating portions of the palate expander and form no part of the claimed design.

**1 Claim, 7 Drawing Sheets**



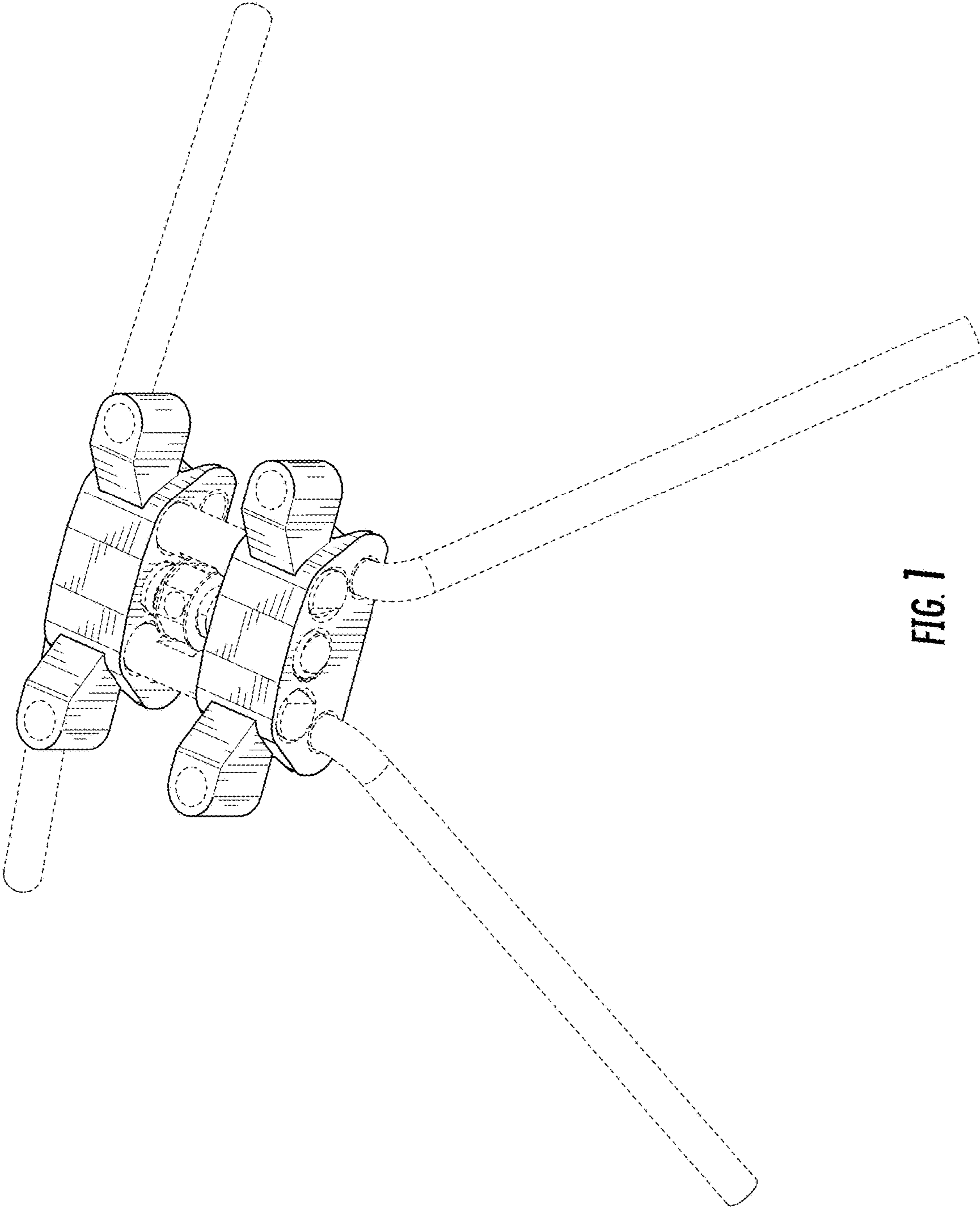


FIG. 1

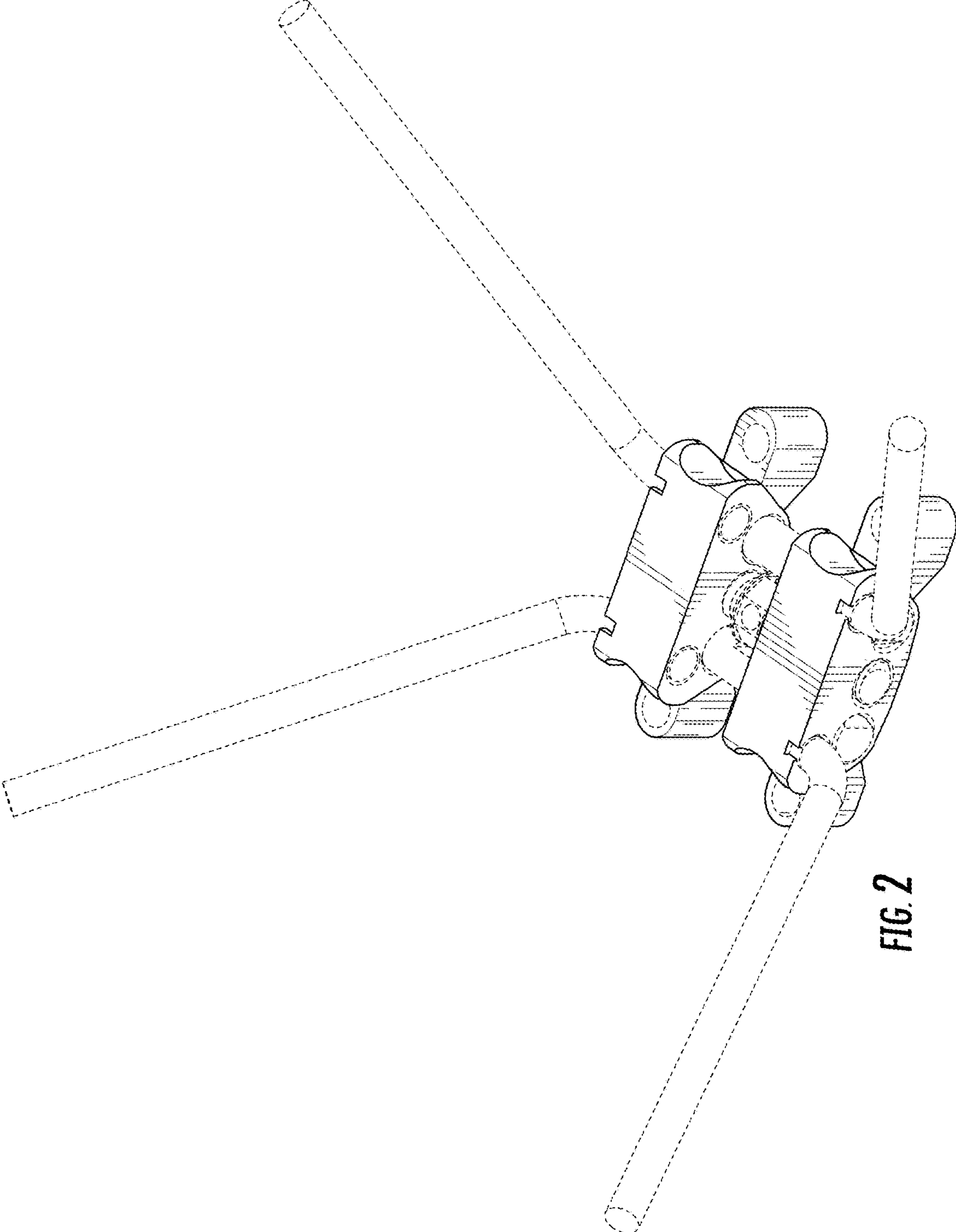
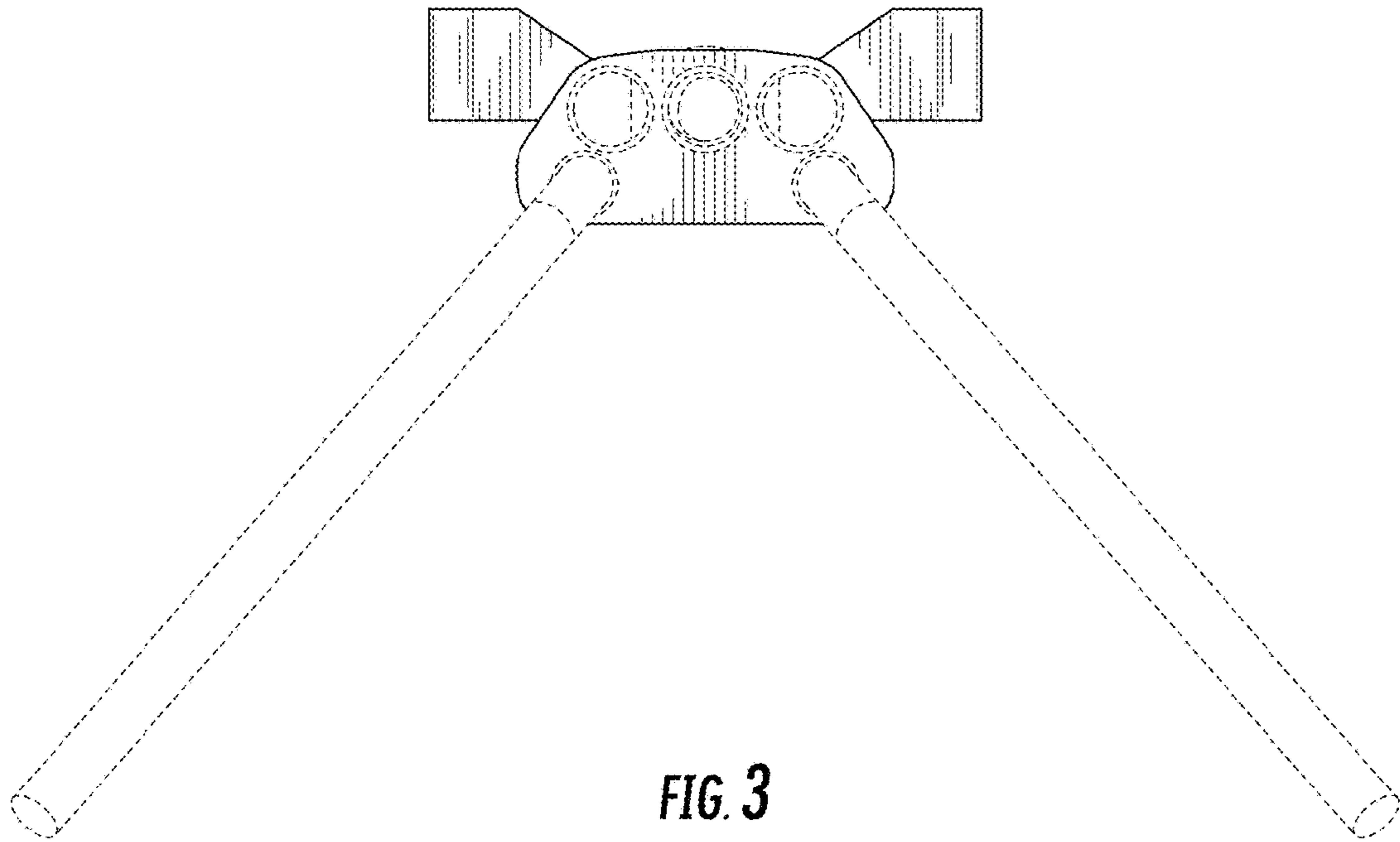
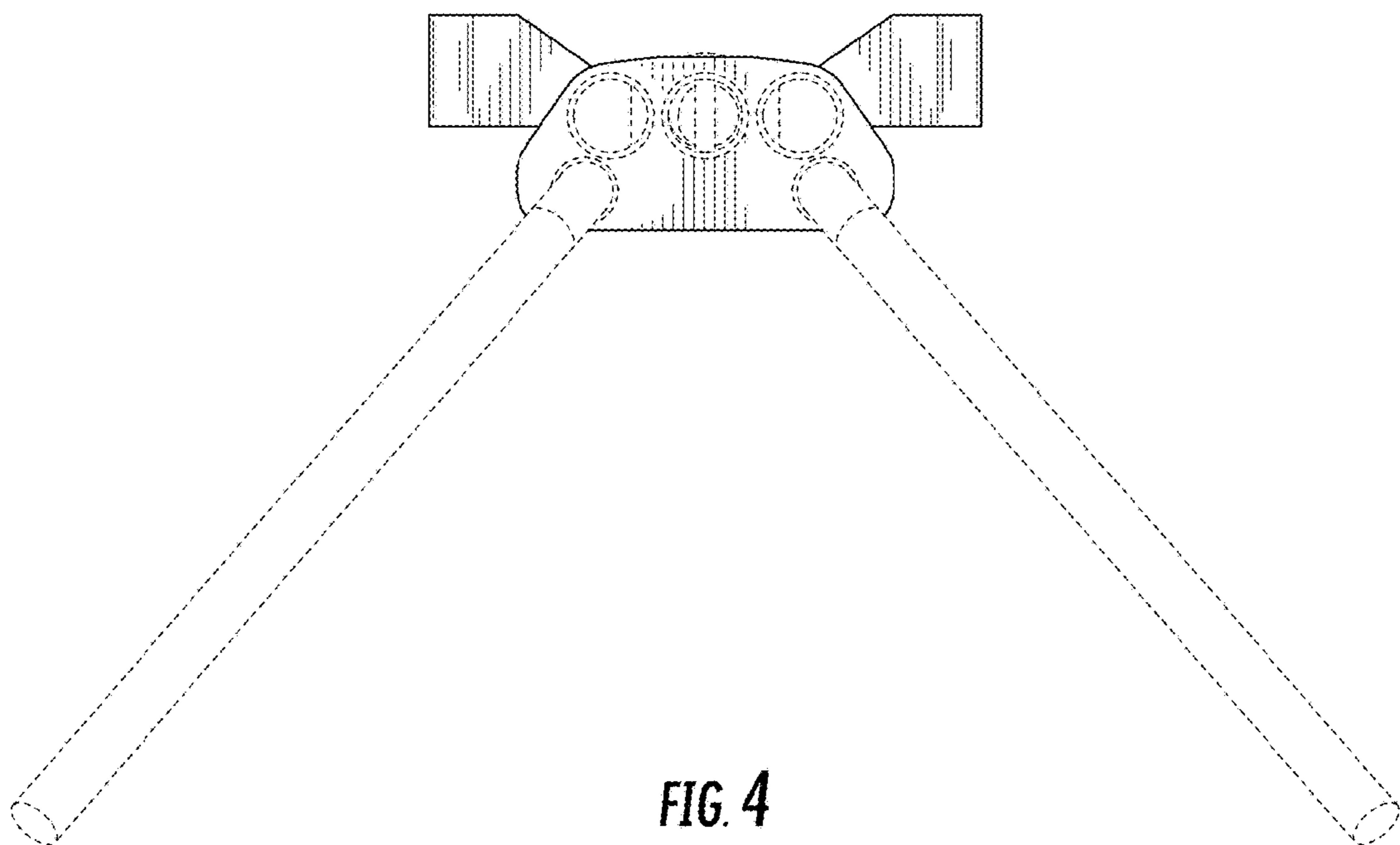


FIG. 2



**FIG. 3**



**FIG. 4**

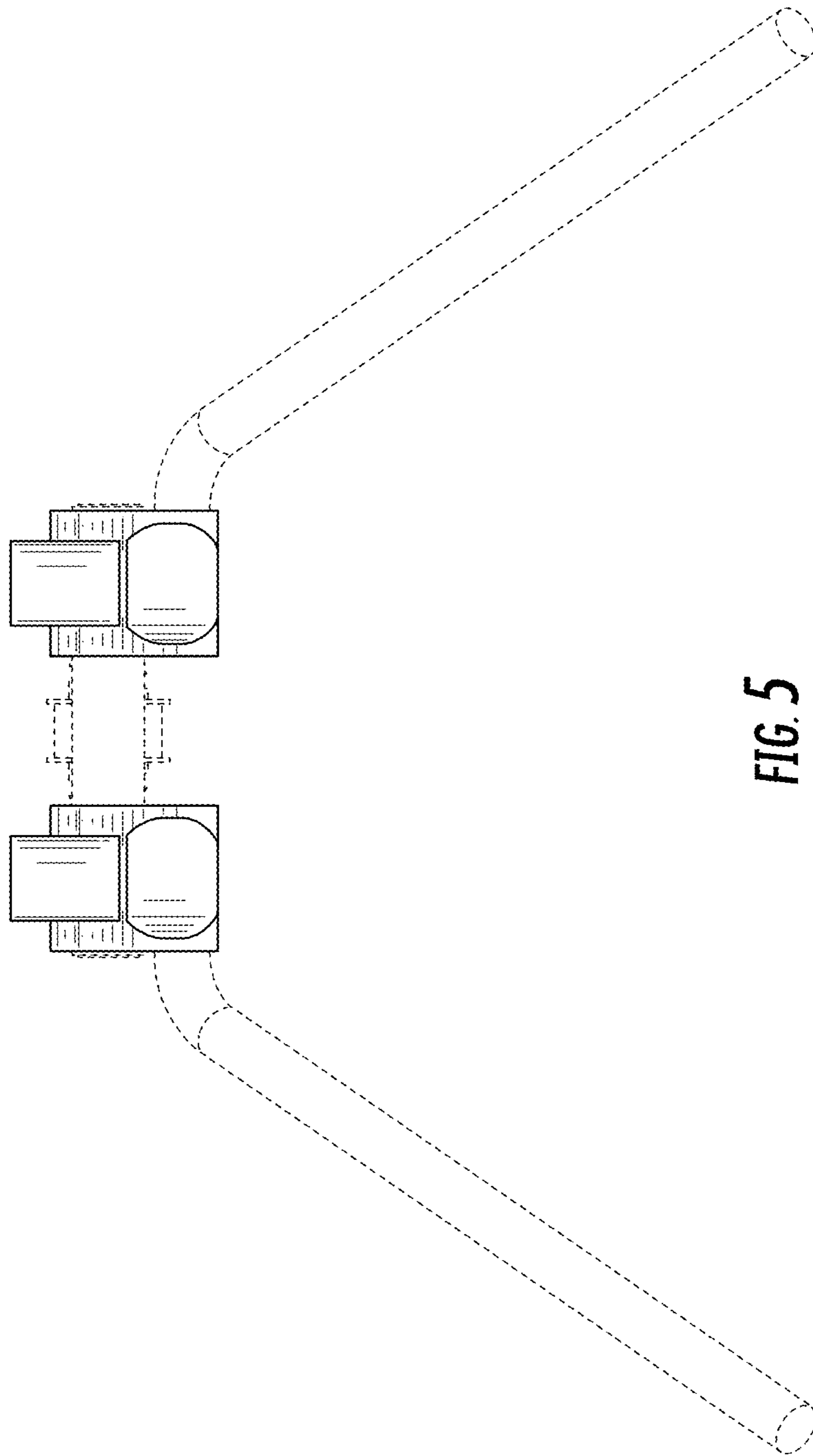


FIG. 5

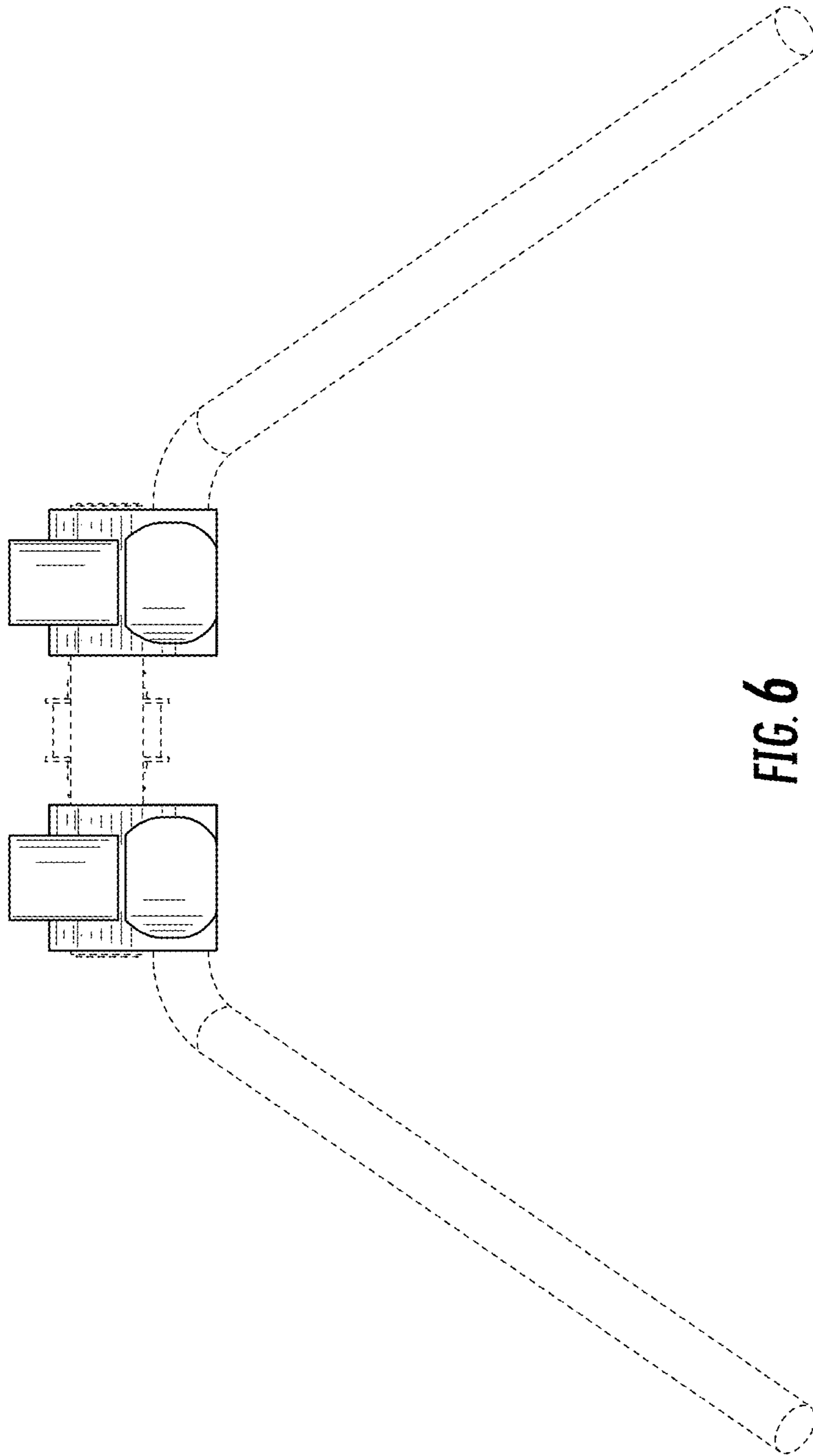


FIG. 6

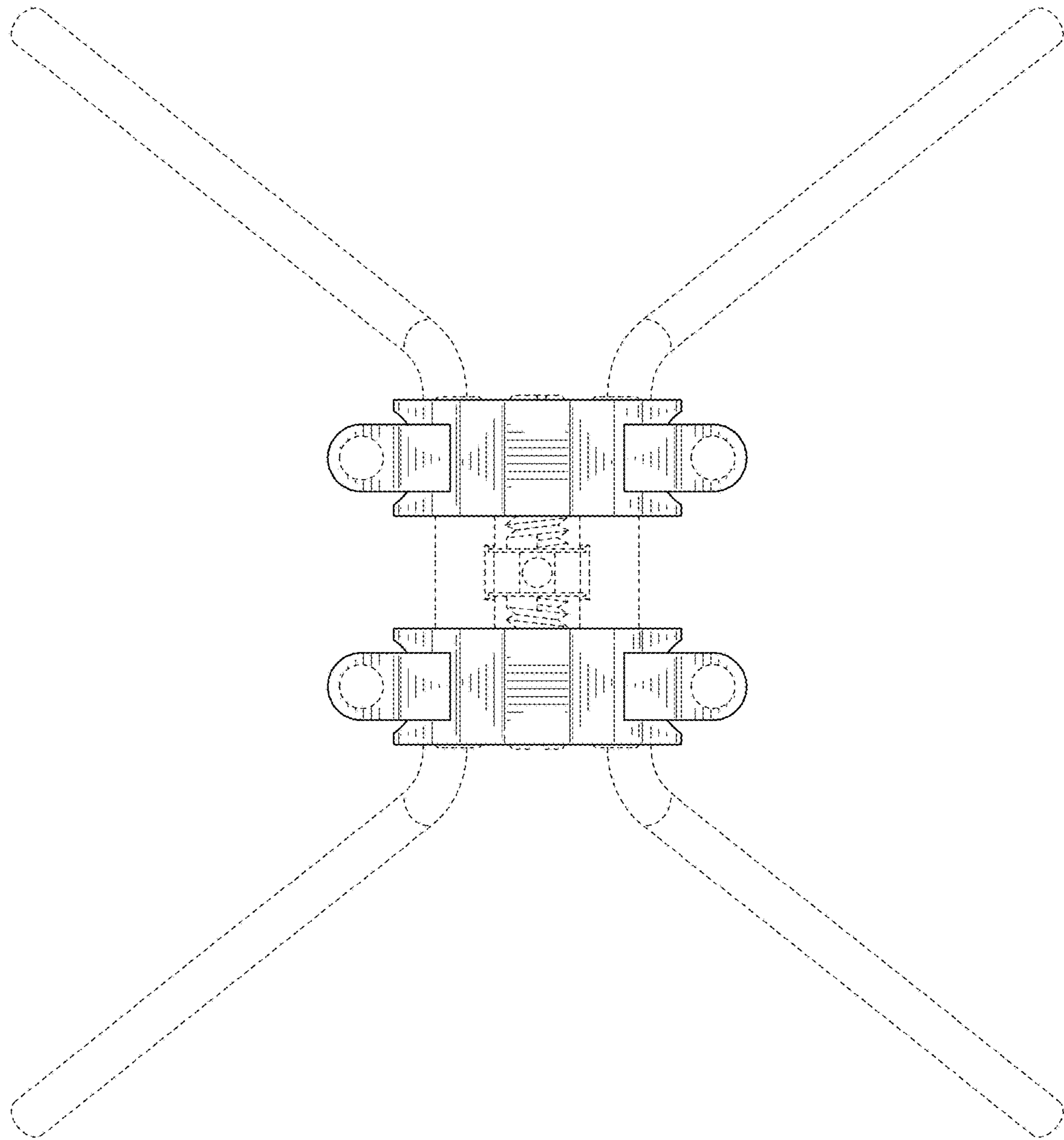


FIG. 7

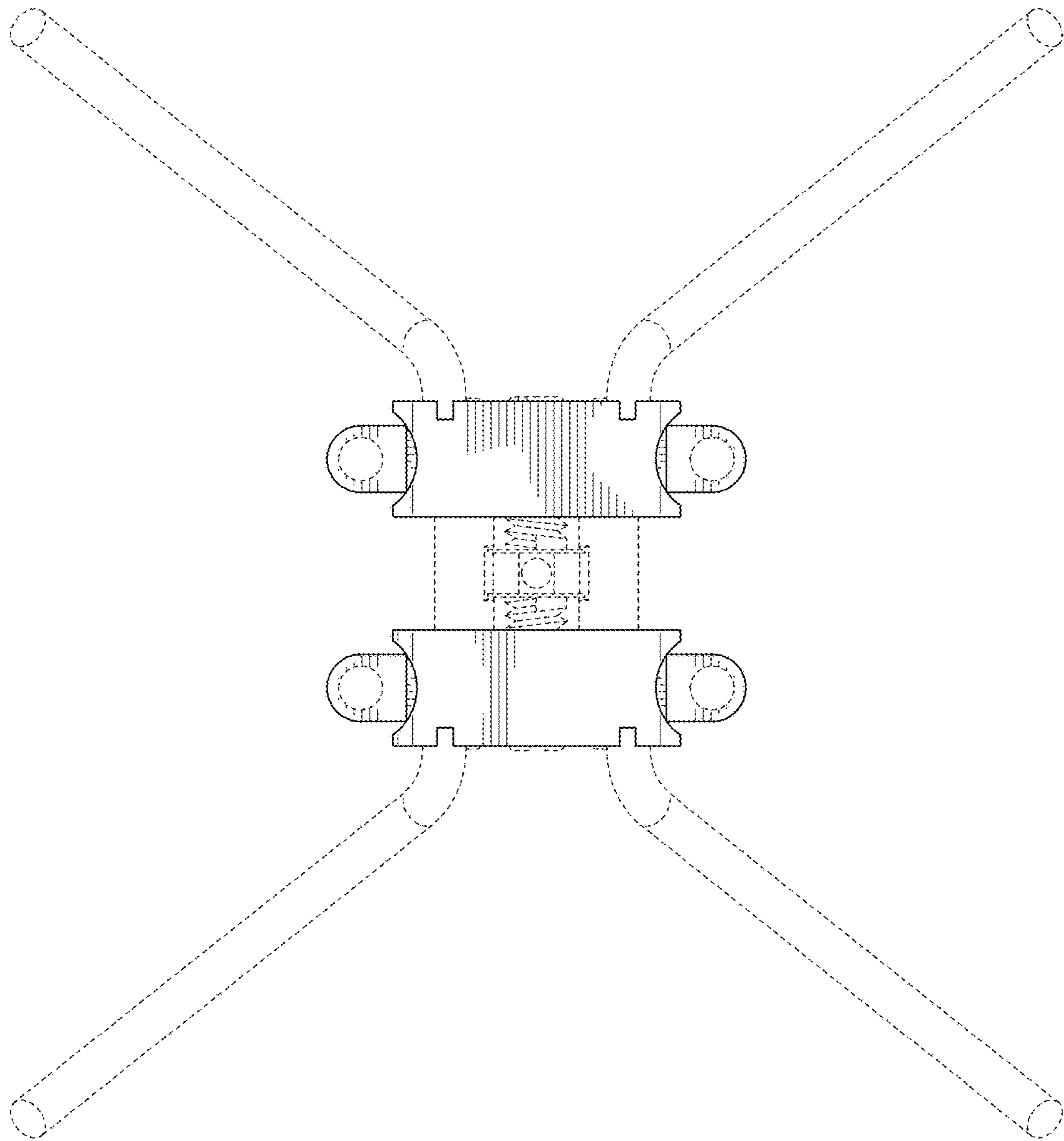


FIG. 8