



US00D813918S

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

(10) **Patent No.: US D813,918 S**  
(45) **Date of Patent: \*\* Mar. 27, 2018**

(54) **THREE DIMENSIONAL (3D) DELTA PRINTER**

(71) Applicant: **Autodesk, Inc.**, San Rafael, CA (US)

(72) Inventors: **James Sherwood Page**, Berkeley, CA (US); **Cory Mark Bloome**, San Francisco, CA (US)

(73) Assignee: **Autodesk, Inc.**, San Rafael, CA (US)

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

(21) Appl. No.: **29/553,141**

(22) Filed: **Jan. 28, 2016**

(51) **LOC (11) Cl.** ..... **15-09**

(52) **U.S. Cl.**  
USPC ..... **D15/122**

(58) **Field of Classification Search**  
USPC ..... D15/122, 135, 138, 145, 146; D18/6-7, D18/14, 19, 50, 54, 54.1, 55, 59  
CPC .. B29C 47/12; B29C 67/0059; B29C 67/6659  
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,829,268	A	8/1974	Gill	
5,473,852	A	12/1995	Lindsey	
5,509,631	A *	4/1996	De Salvo	A63G 31/16 248/370
6,418,811	B1 *	7/2002	Rosheim	B25J 17/0266 414/729
6,467,826	B2 *	10/2002	Stromberg	B21J 15/10 294/106
6,577,093	B1 *	6/2003	Hvittfeldt	B25J 17/0266 318/568.11
D478,921	S *	8/2003	Kullborg	D15/199
7,063,300	B2 *	6/2006	Billet	G02B 7/005 248/476
D619,632	S *	7/2010	Feng	D15/199

7,837,458	B2 *	11/2010	Perret	B29C 64/153 264/113
D650,819	S *	12/2011	Liu	D15/199
8,134,324	B2 *	3/2012	Nishida	B25J 9/1623 318/567
D737,870	S *	9/2015	Houston	D15/122
D739,885	S *	9/2015	Lee	D15/122

(Continued)

FOREIGN PATENT DOCUMENTS

EP	0 256 853	11/1990
WO	WO 90/06831	6/1990

OTHER PUBLICATIONS

Unknown Author, "3D Printers and Components—by Grabercars," (Aug. 31, 2015) [online] (retrieved from <http://3d.grabercars.com/?p=125>), 3 pages.

(Continued)

*Primary Examiner* — Patricia A Palasik  
(74) *Attorney, Agent, or Firm* — Fish & Richardson P.C.

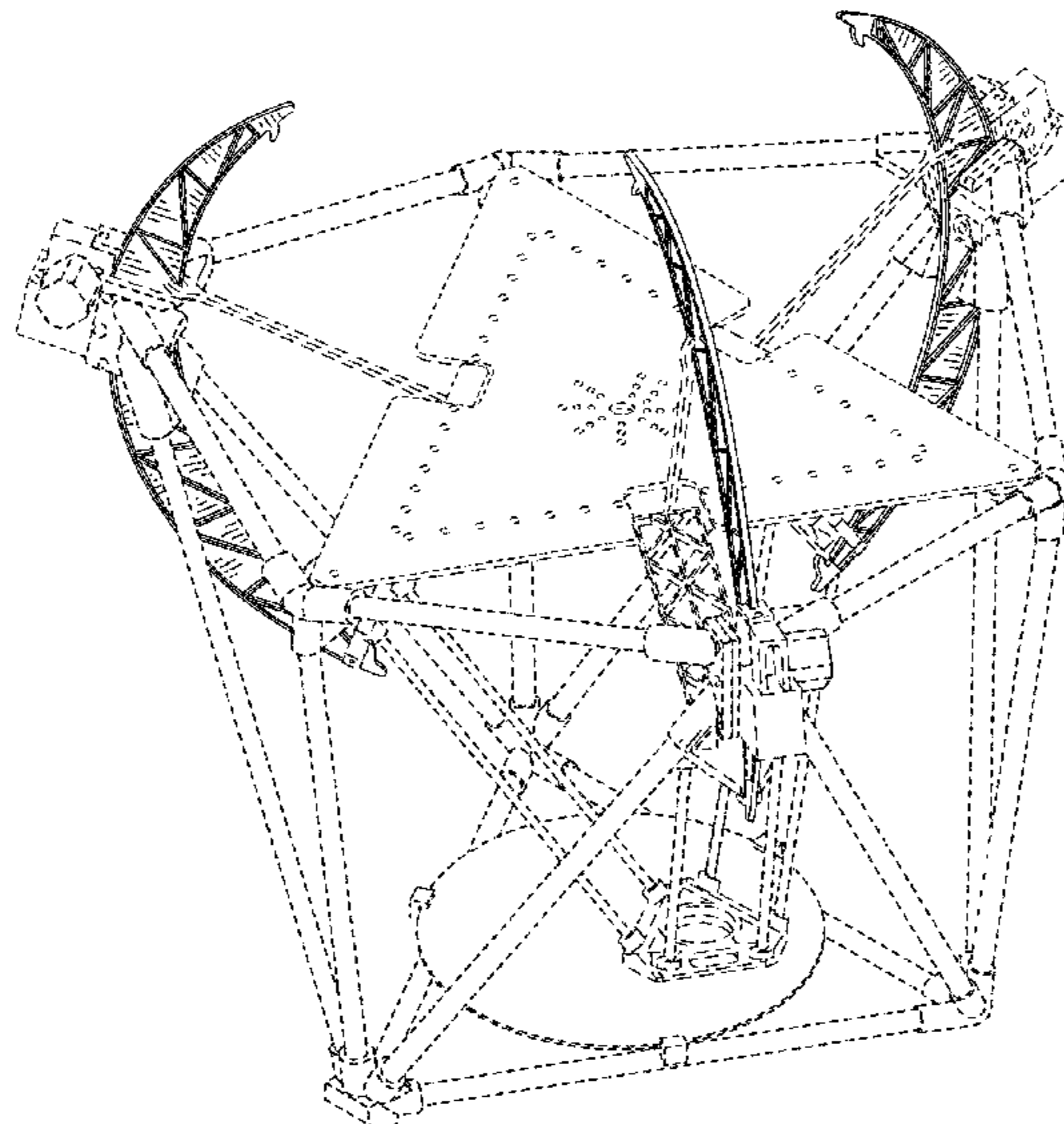
(57) **CLAIM**

The ornamental design for a three dimensional (3D) delta printer, substantially as shown and described.

**DESCRIPTION**

FIG. 1 is a top perspective view of the three dimensional (3D) delta printer.  
FIG. 2 is a bottom perspective view thereof.  
FIG. 3 is a front side view thereof.  
FIG. 4 is a back side view thereof.  
FIG. 5 is a right side view thereof.  
FIG. 6 is a left side view thereof.  
FIG. 7 is a top view thereof; and,  
FIG. 8 is a bottom view thereof.  
The broken lines in the drawings depict unclaimed environmental subject matter.

**1 Claim, 8 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

D765,745 S \* 9/2016 Cheung ..... D15/122  
2006/0182602 A1 \* 8/2006 Schuler ..... B23Q 1/5456  
414/735  
2012/0281053 A1 \* 11/2012 Kubota ..... B41J 3/4075  
347/211  
2016/0096329 A1 \* 4/2016 Ko ..... B33Y 30/00  
264/129  
2017/0050278 A1 \* 2/2017 Jaster ..... B23Q 1/017  
2017/0056970 A1 \* 3/2017 Chin ..... B33Y 30/00  
2017/0144379 A1 \* 5/2017 Sung ..... B29C 67/0088

OTHER PUBLICATIONS

Unknown Author, "Delta Tower," (Aug. 31, 2015) [online] (retrieved from <http://hypecask.com/portfolio-item/deltatower/>), 5 pages.

Unknown Author, "Space frame—Wikipedia, the free encyclopedia," (Jun. 5, 2015) [online] (retrieved from [http://en.wikipedia.org/wiki/Space\\_frame](http://en.wikipedia.org/wiki/Space_frame)), 6 pages.

Unknown Author, "Truss—Wikipedia, the free encyclopedia," (Jun. 5, 2015) [online] (retrieved from <http://en.wikipedia.org/wiki/Truss>), 12 pages.

\* cited by examiner

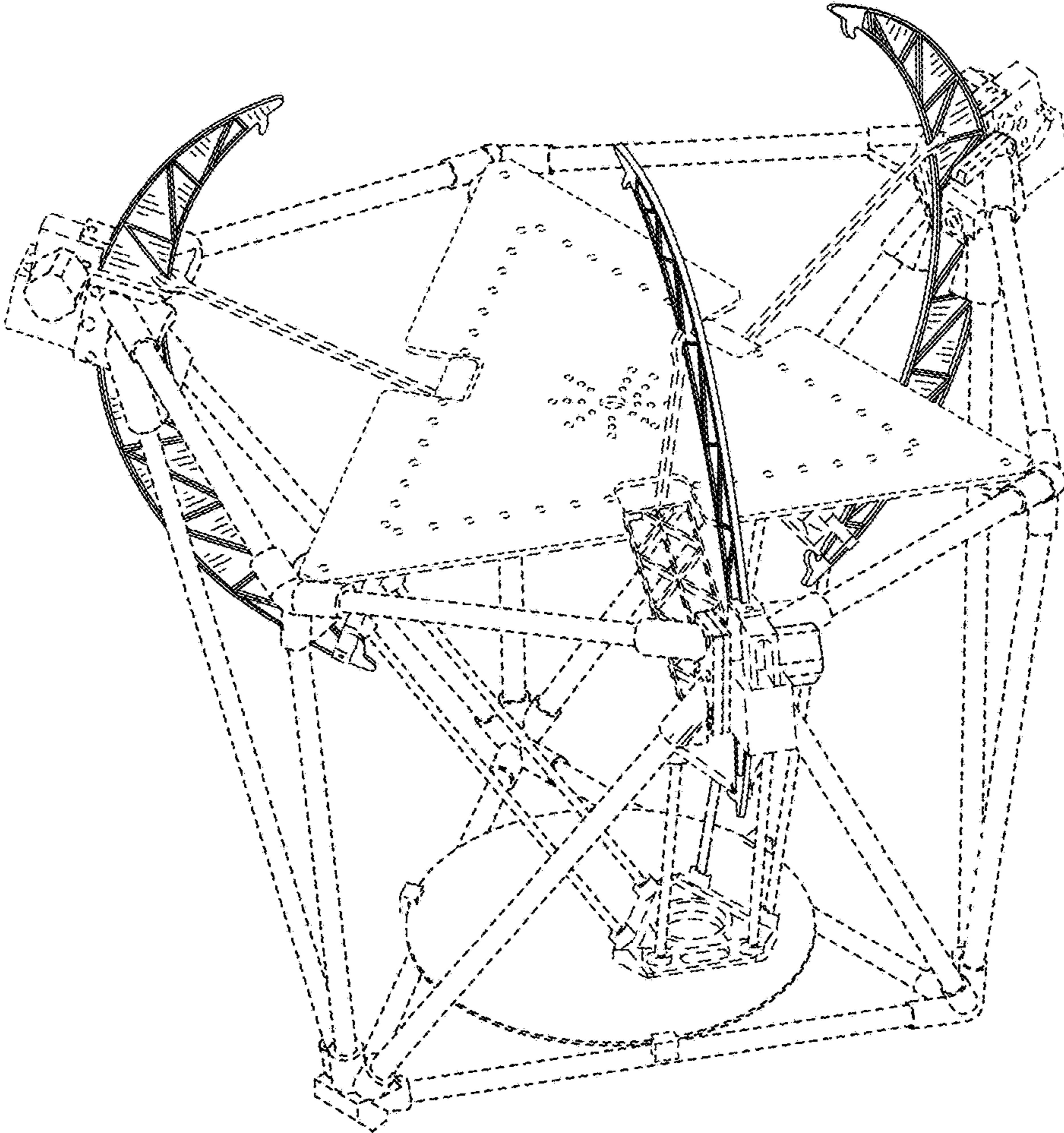


FIG. 1

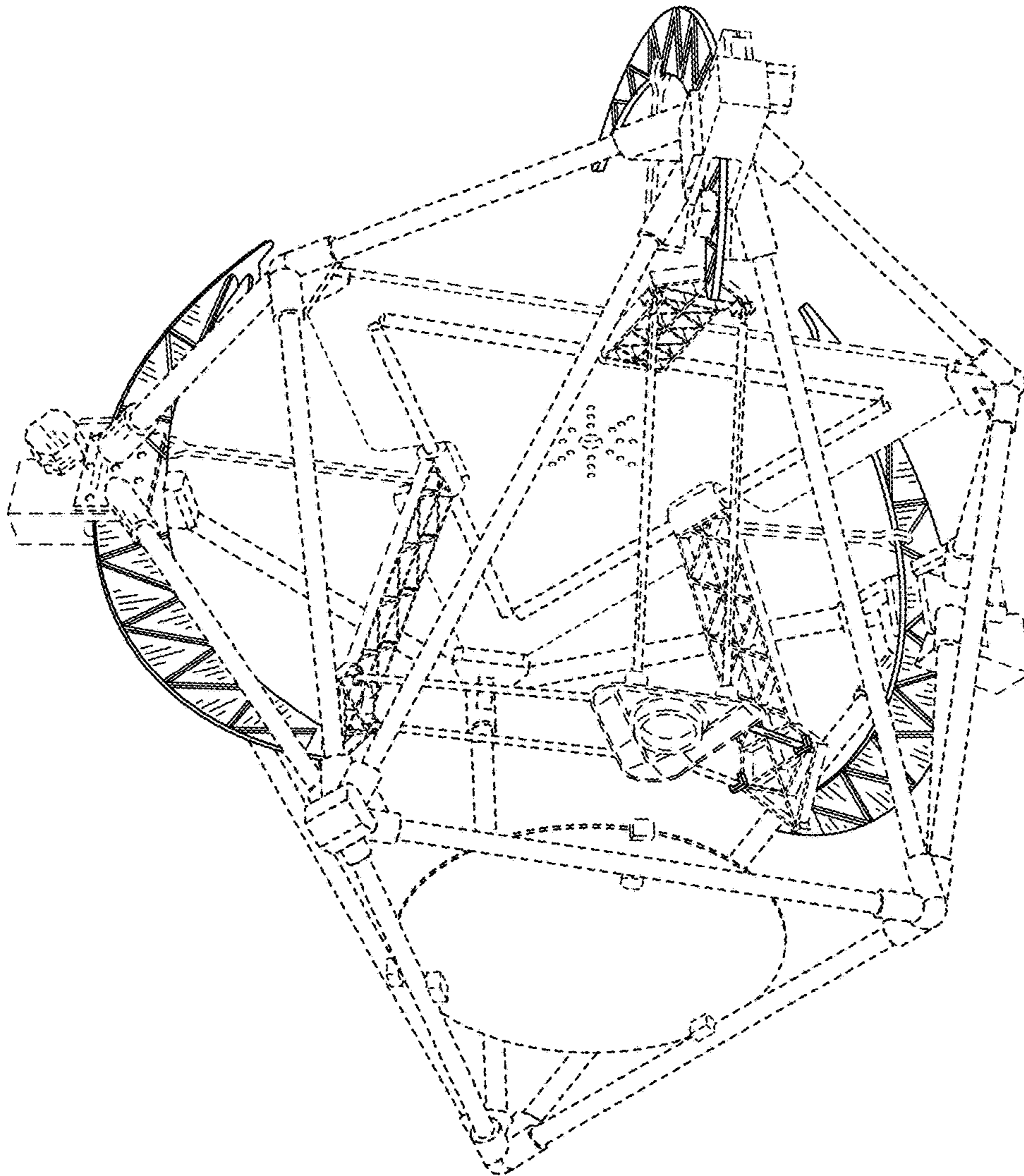


FIG. 2

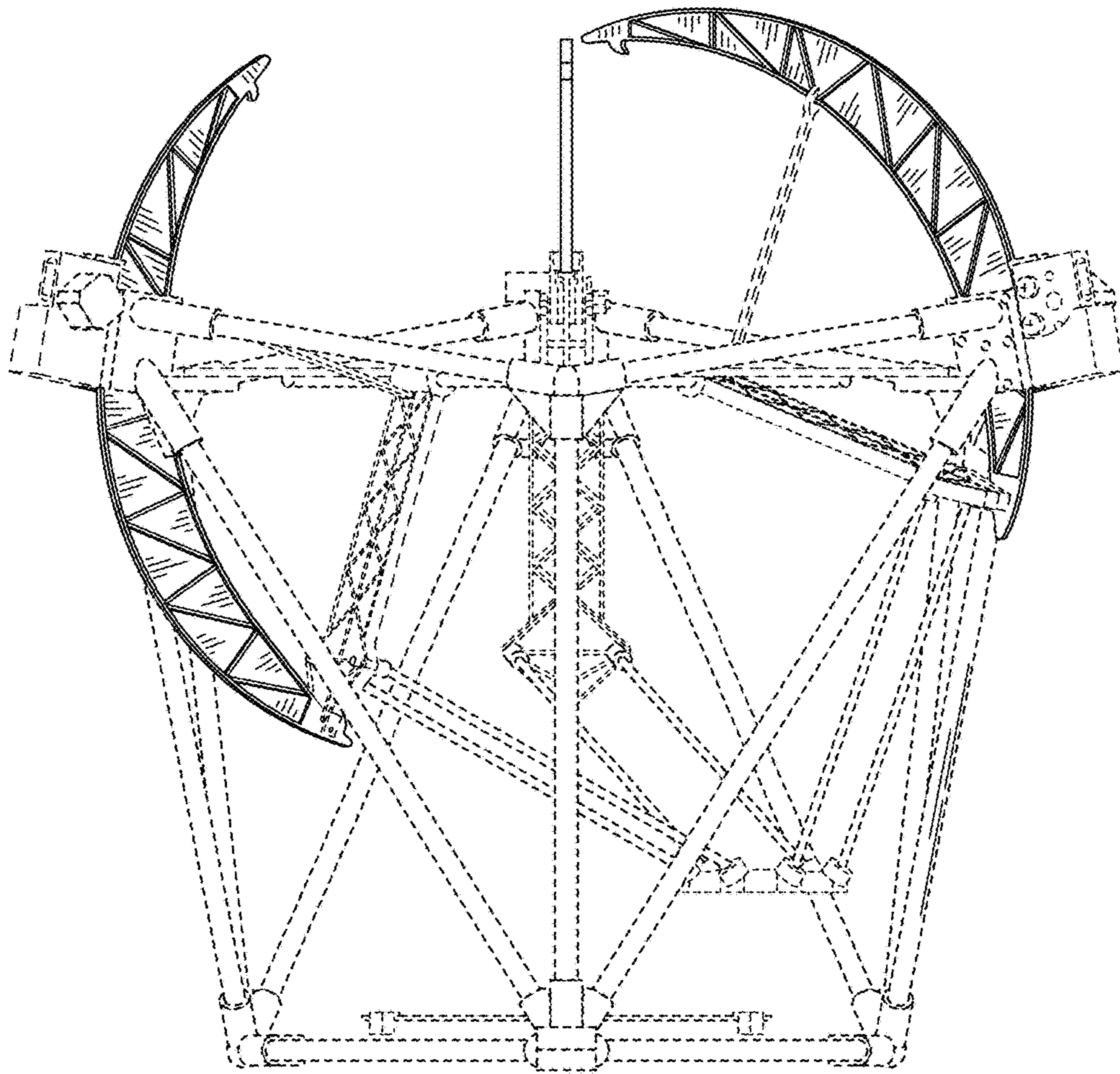


FIG. 3

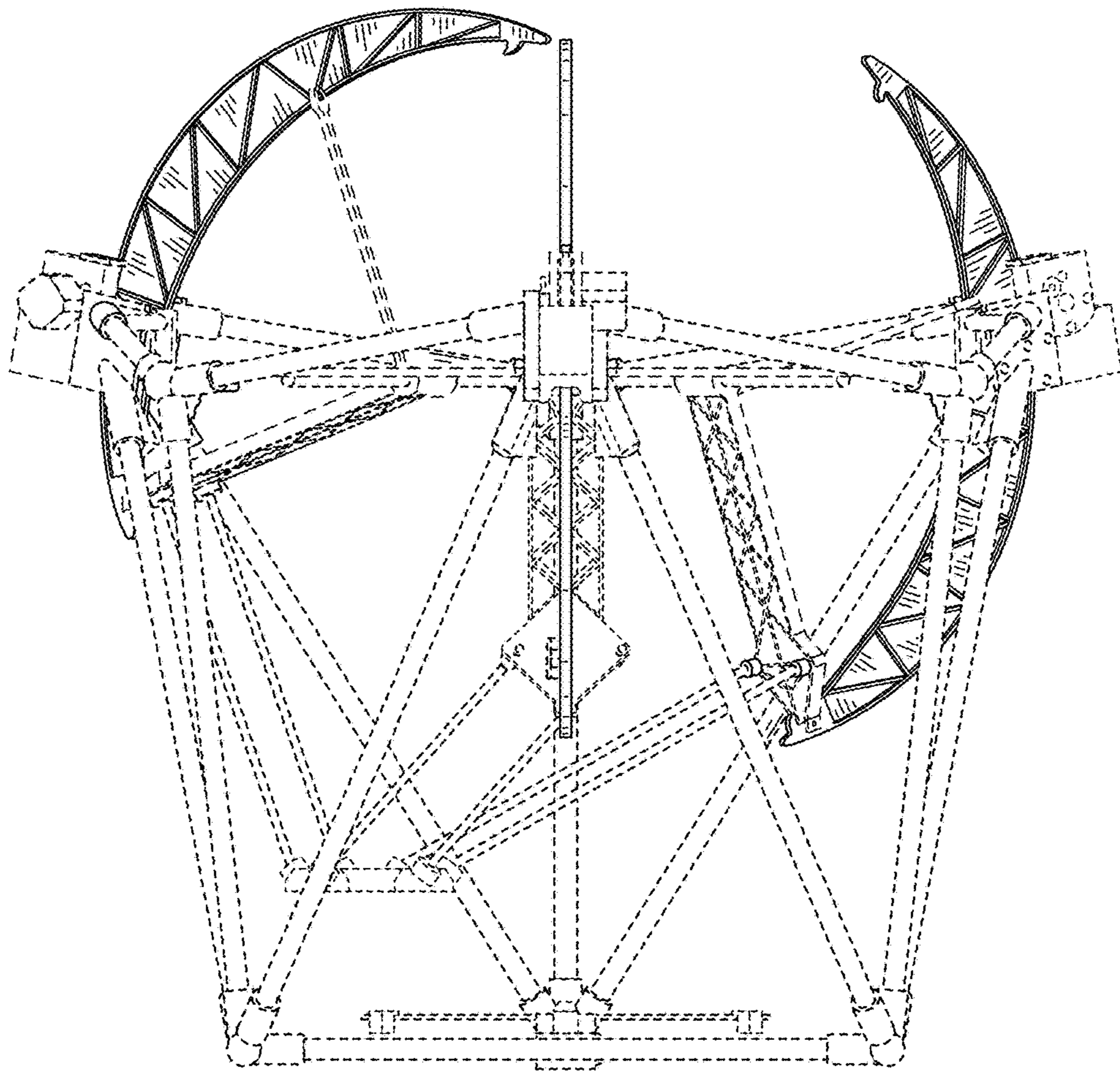


FIG. 4

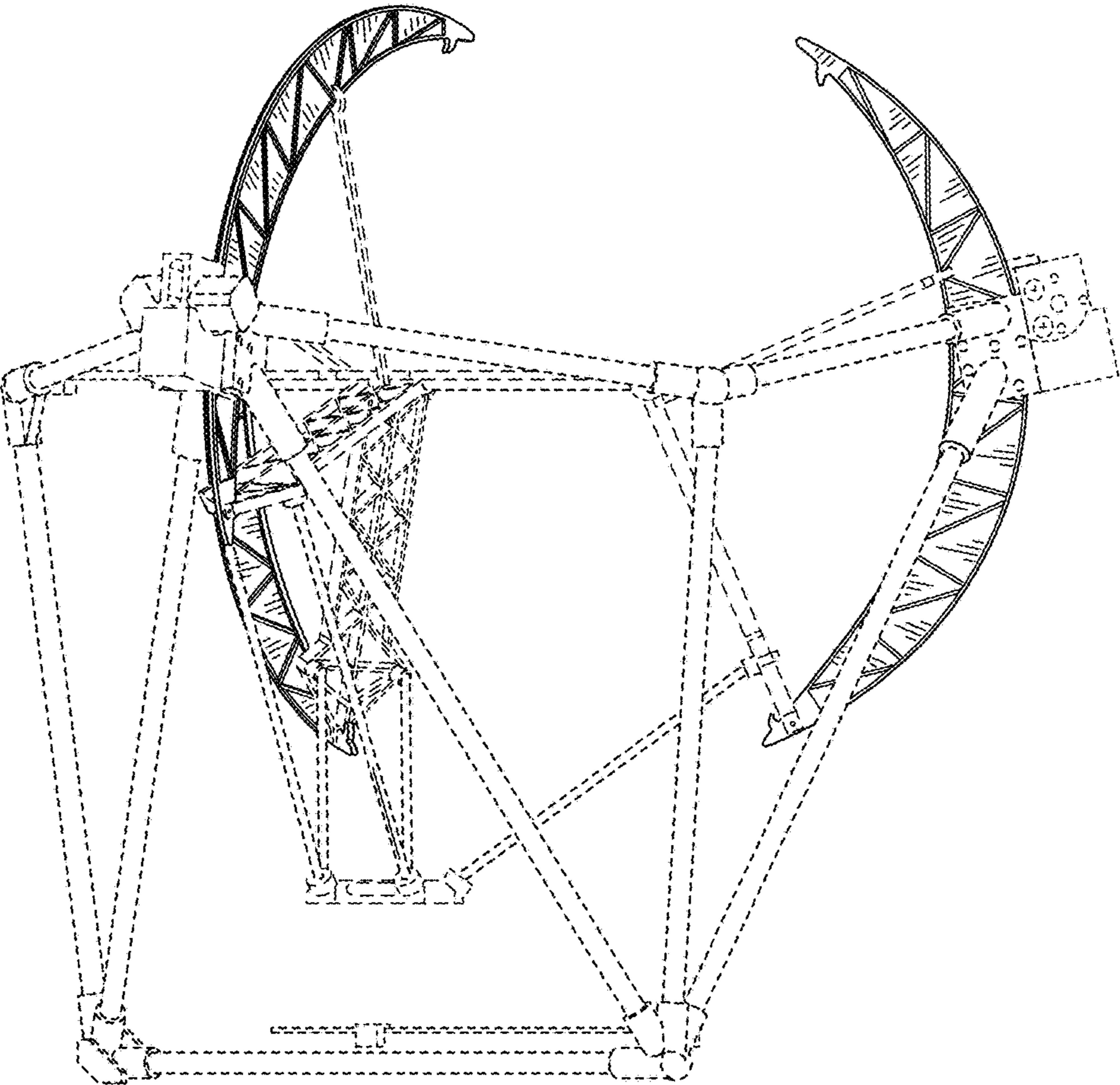


FIG. 5

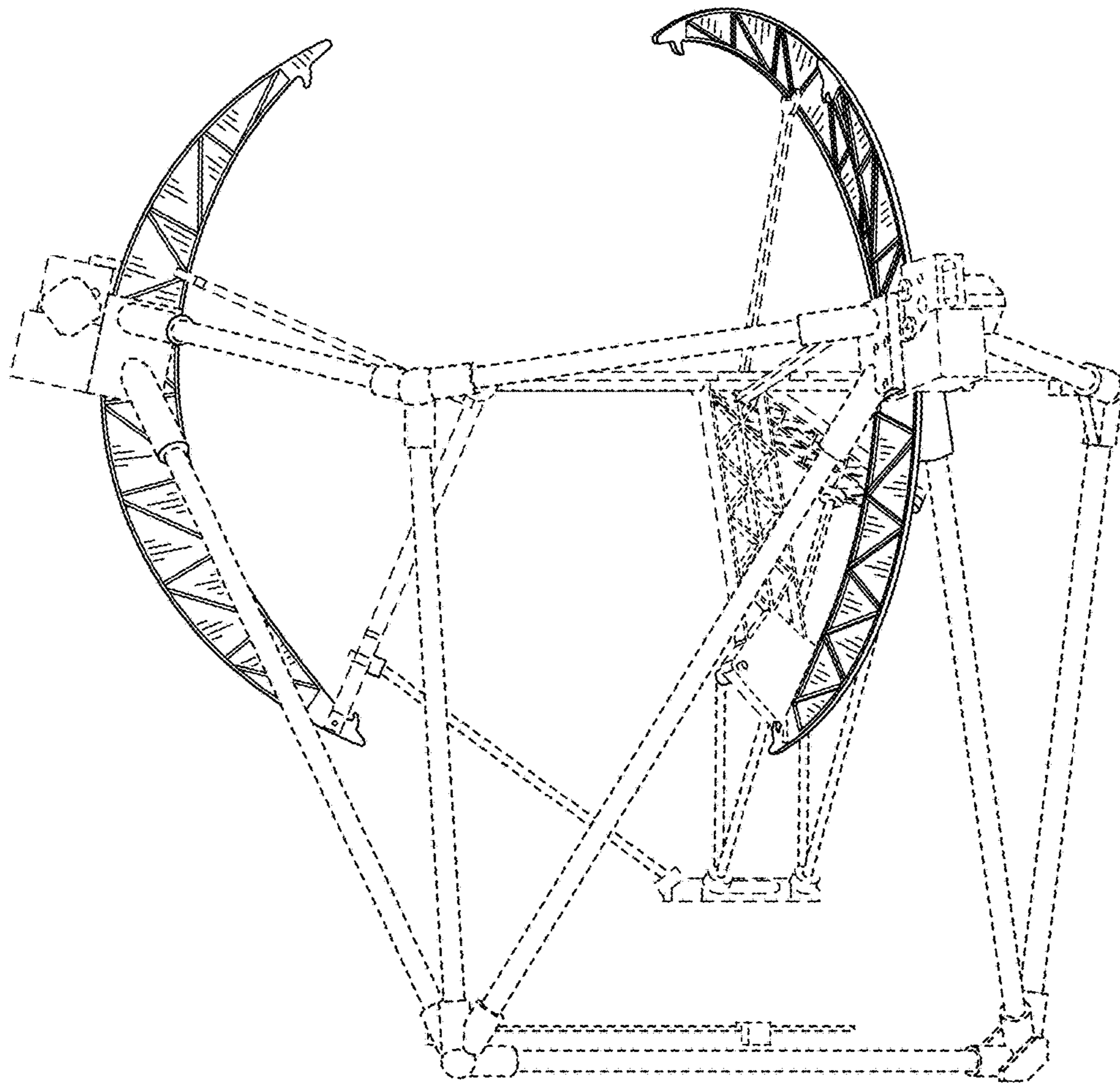


FIG. 6



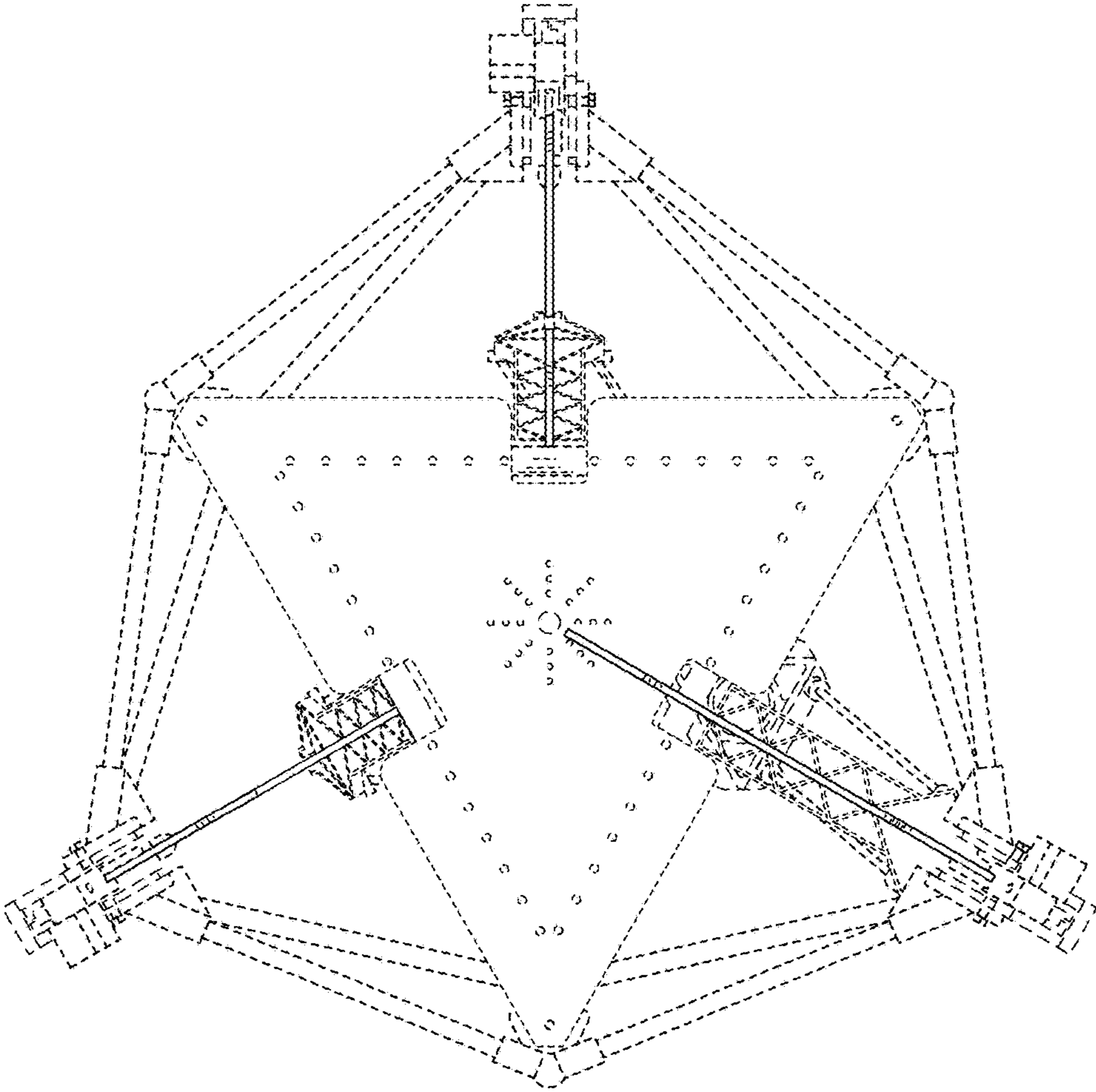


FIG. 7

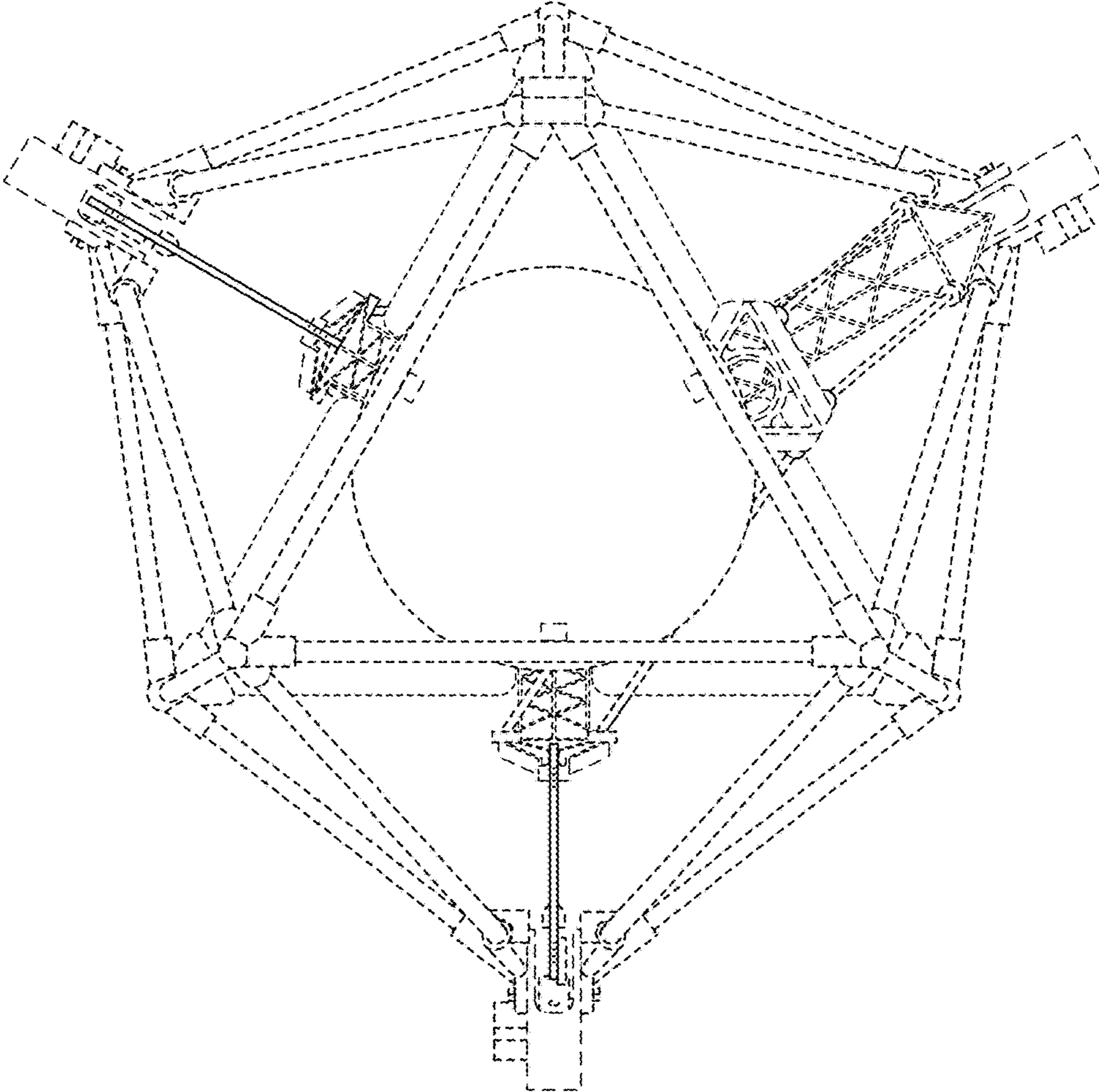


FIG. 8