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

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(54) **BROADBAND DUAL POLARIZATION HORN ANTENNA**

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

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(51) **LOC (12) Cl.** **14-03**

(52) **U.S. Cl.**
USPC **D14/230**

(58) **Field of Classification Search**
USPC D14/343, 230; D13/101, 117, 118, 154, D13/155, 173, 182, 184, 199; 333/137, 333/21 R; 343/785, 786, 772, 756, 729, 343/755, 776, 781, 854, 730, 835, 784, 343/789
CPC .. G01S 13/4409; G01S 13/4481; H01P 1/161; H01Q 13/0208; H01Q 13/10; H01Q 13/00; H01Q 13/02; H01Q 13/0241; H01Q 19/13; H01Q 3/08
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 3,089,102 A * 5/1963 Rowland H01P 1/161 333/137
- 3,173,146 A * 3/1965 Carson H01Q 13/0241 343/786
- 3,205,499 A * 9/1965 Raburn H01Q 13/0241 343/730
- 4,258,366 A * 3/1981 Frosch H01P 1/161 343/755
- 4,872,211 A * 10/1989 Chen H01Q 13/18 343/778
- 5,109,232 A * 4/1992 Monte H01O 25/04 333/126

- D357,020 S * 4/1995 Raymond D14/230
- 5,614,916 A * 3/1997 Mizuguchi H01Q 13/0225 333/21 A
- D435,251 S * 12/2000 Overton D14/230
- D479,208 S * 9/2003 Takahashi D13/182
- 7,116,278 B2 * 10/2006 Marsan H01Q 1/28 343/705
- 7,852,277 B2 * 12/2010 Lam H01Q 13/02 343/785
- 8,698,683 B2 * 4/2014 Syed H01P 1/161 343/756
- D750,051 S * 2/2016 Podduturi D14/230
- 9,297,893 B2 * 3/2016 Granet G01S 13/4409
- D798,845 S * 10/2017 Nair H01Q 1/48 D14/230
- D813,210 S * 3/2018 Benedetti D14/230
- D823,284 S * 7/2018 Zhang D14/230
- D823,837 S * 7/2018 Zhang D14/230
- D843,980 S * 3/2019 Yang D14/230
- D845,936 S * 4/2019 Benedetti D14/230

* cited by examiner

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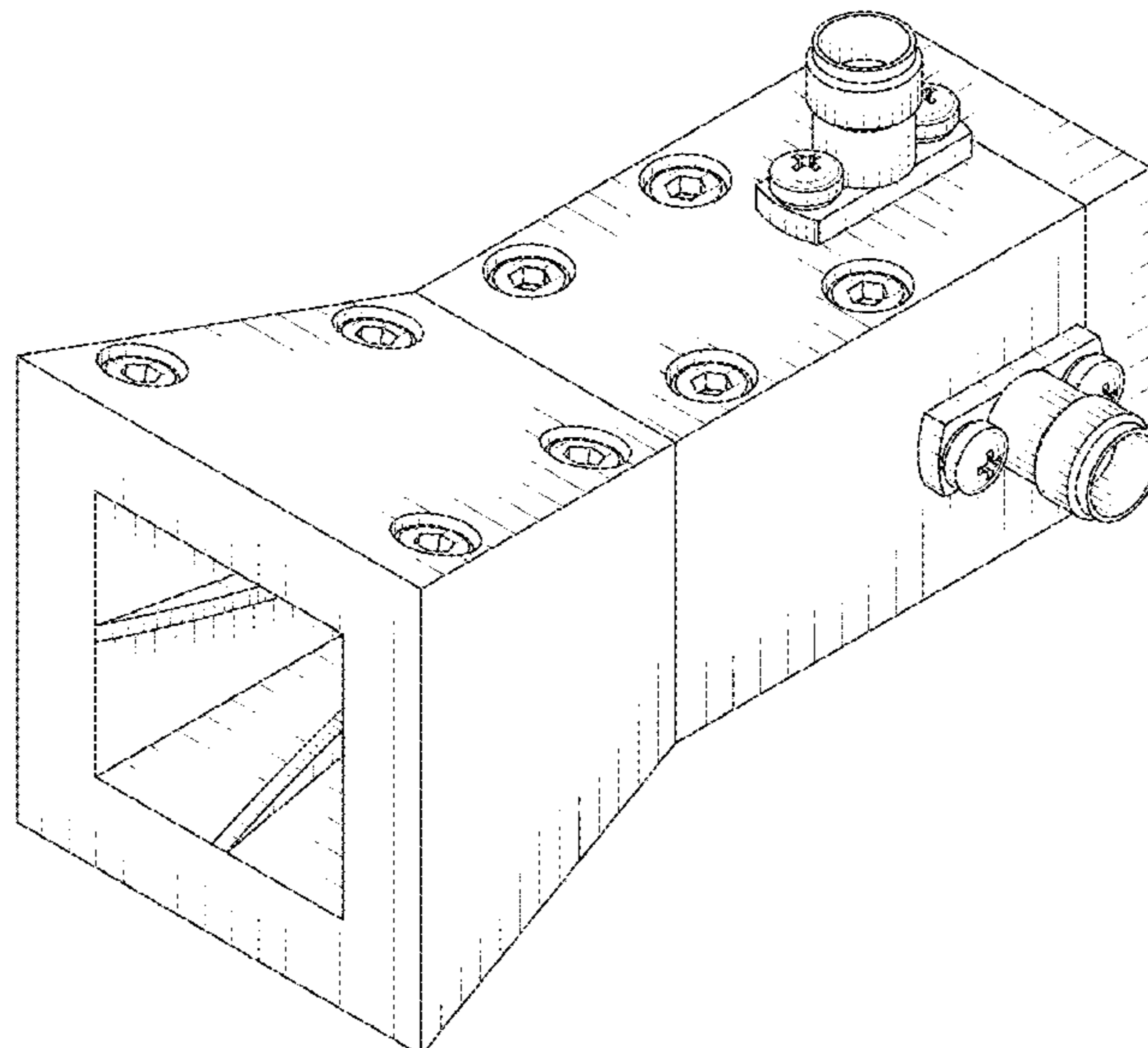
(57) **CLAIM**

The ornamental design for a broadband dual polarization horn antenna, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a broadband dual polarization horn antenna, showing my new design; FIG. 2 is a front view thereof; FIG. 3 is a rear view thereof; FIG. 4 is a left side view thereof; FIG. 5 is a right side view thereof; FIG. 6 is a top view thereof; and, FIG. 7 is a bottom view thereof.

1 Claim, 7 Drawing Sheets



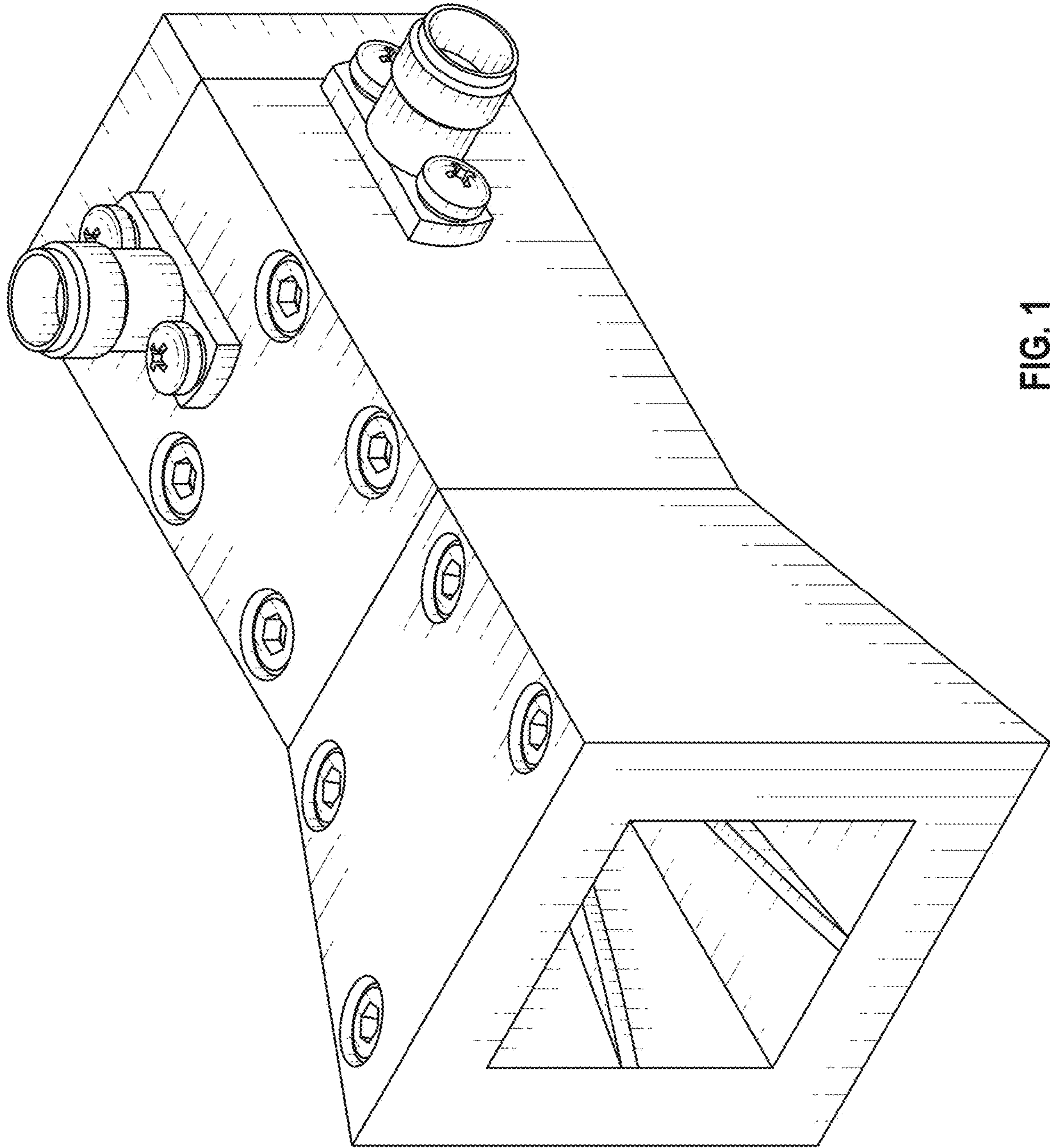


FIG. 1

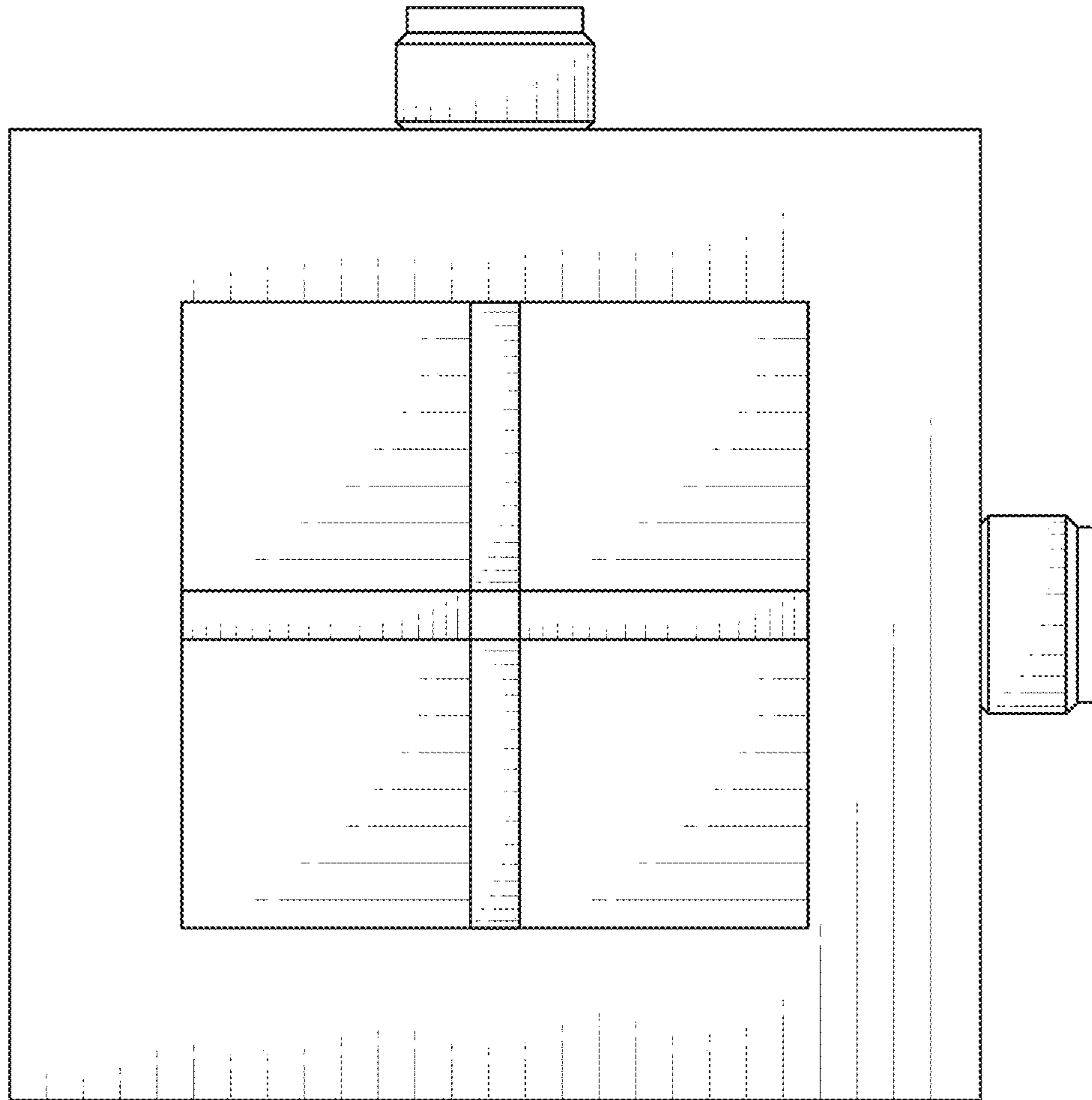


FIG. 2

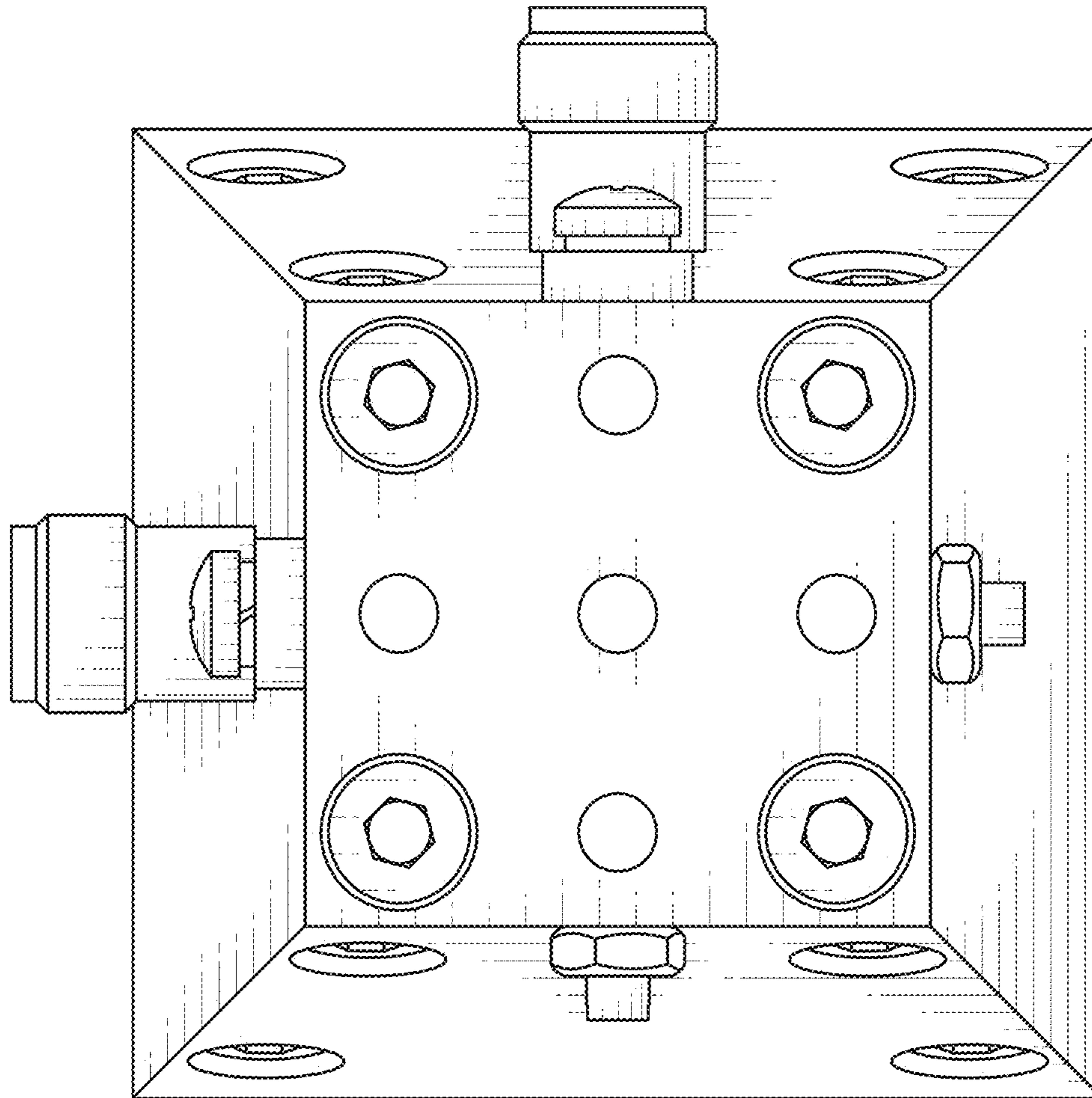


FIG. 3

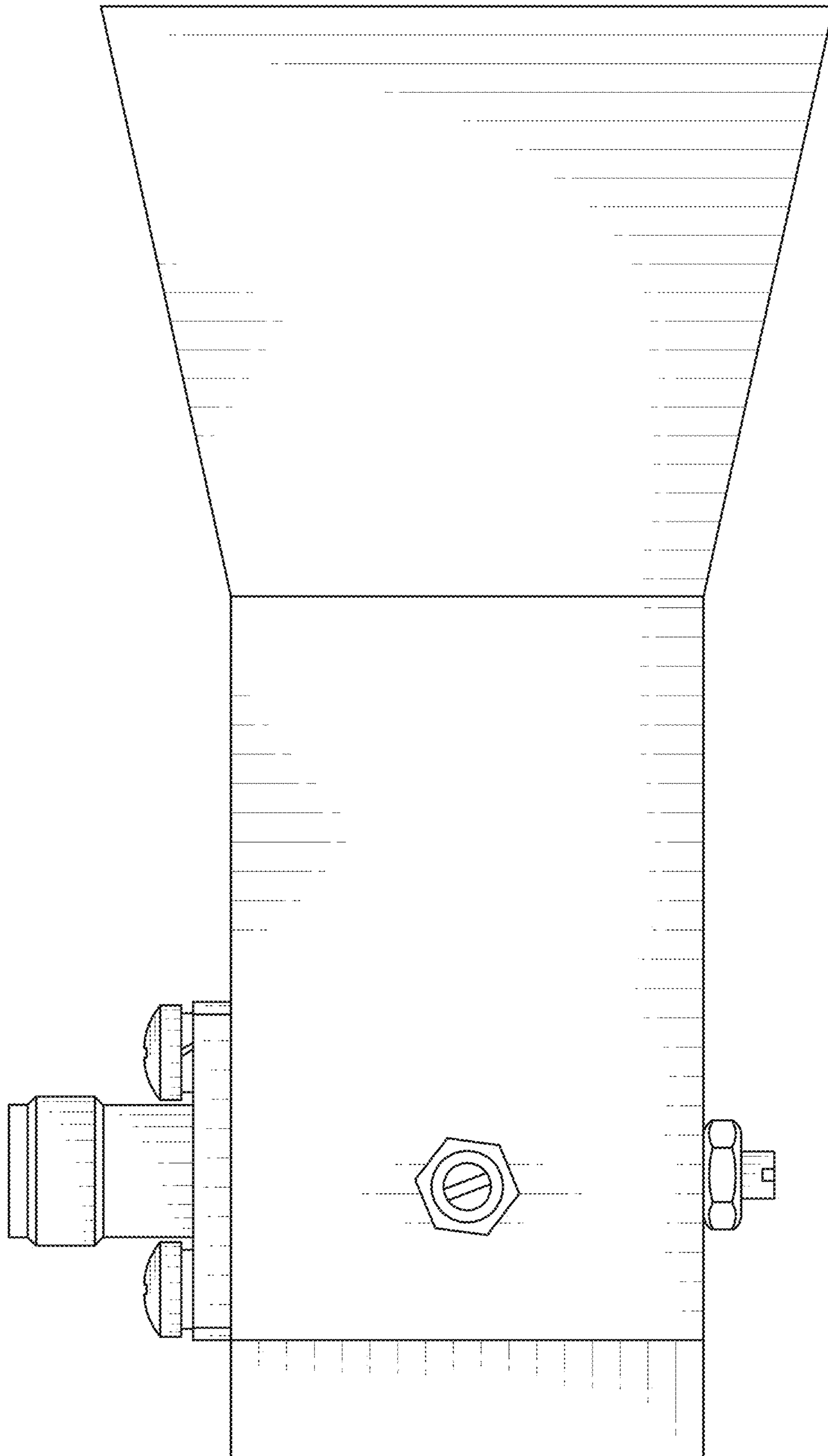


FIG. 4

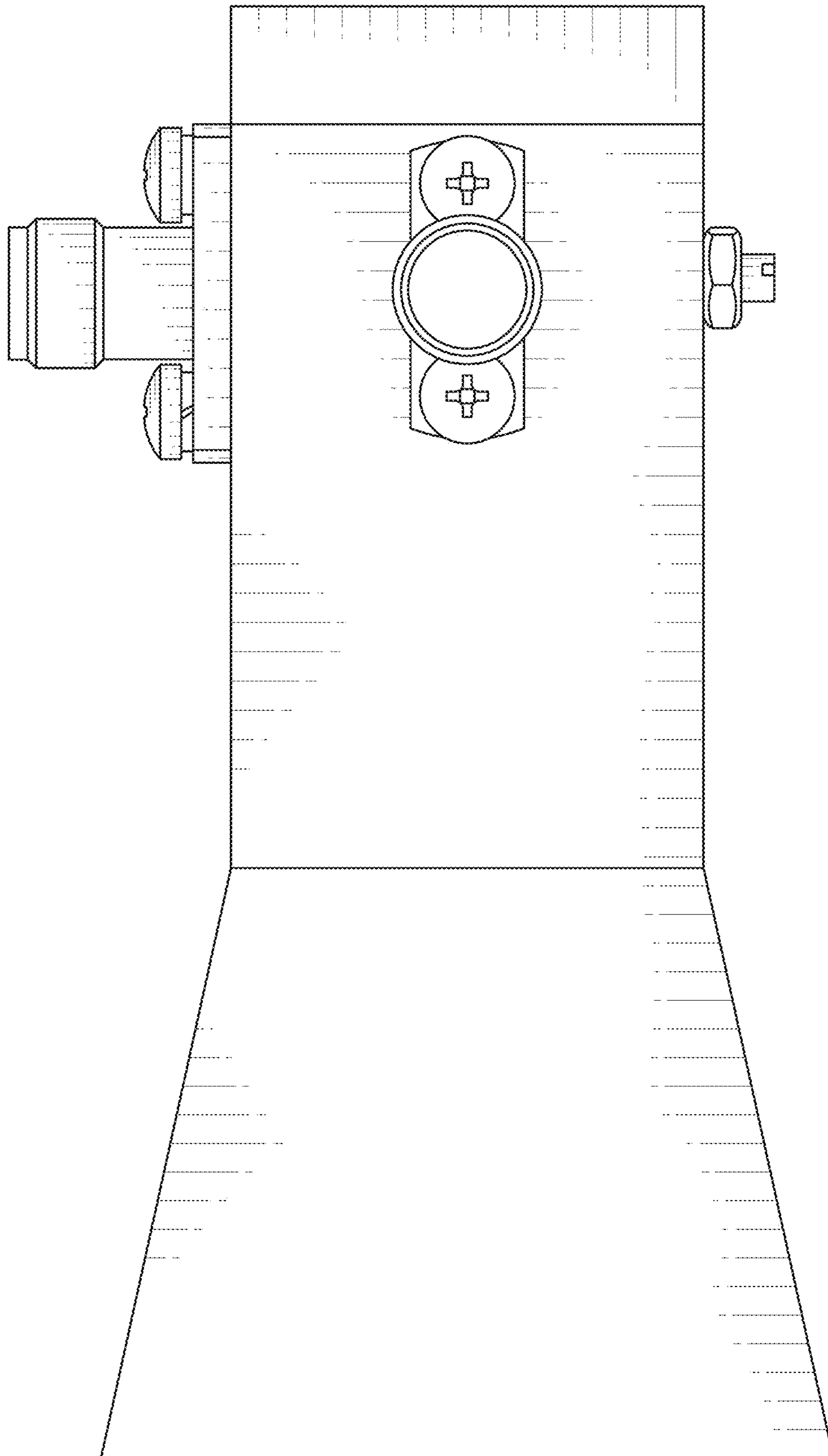


FIG. 5

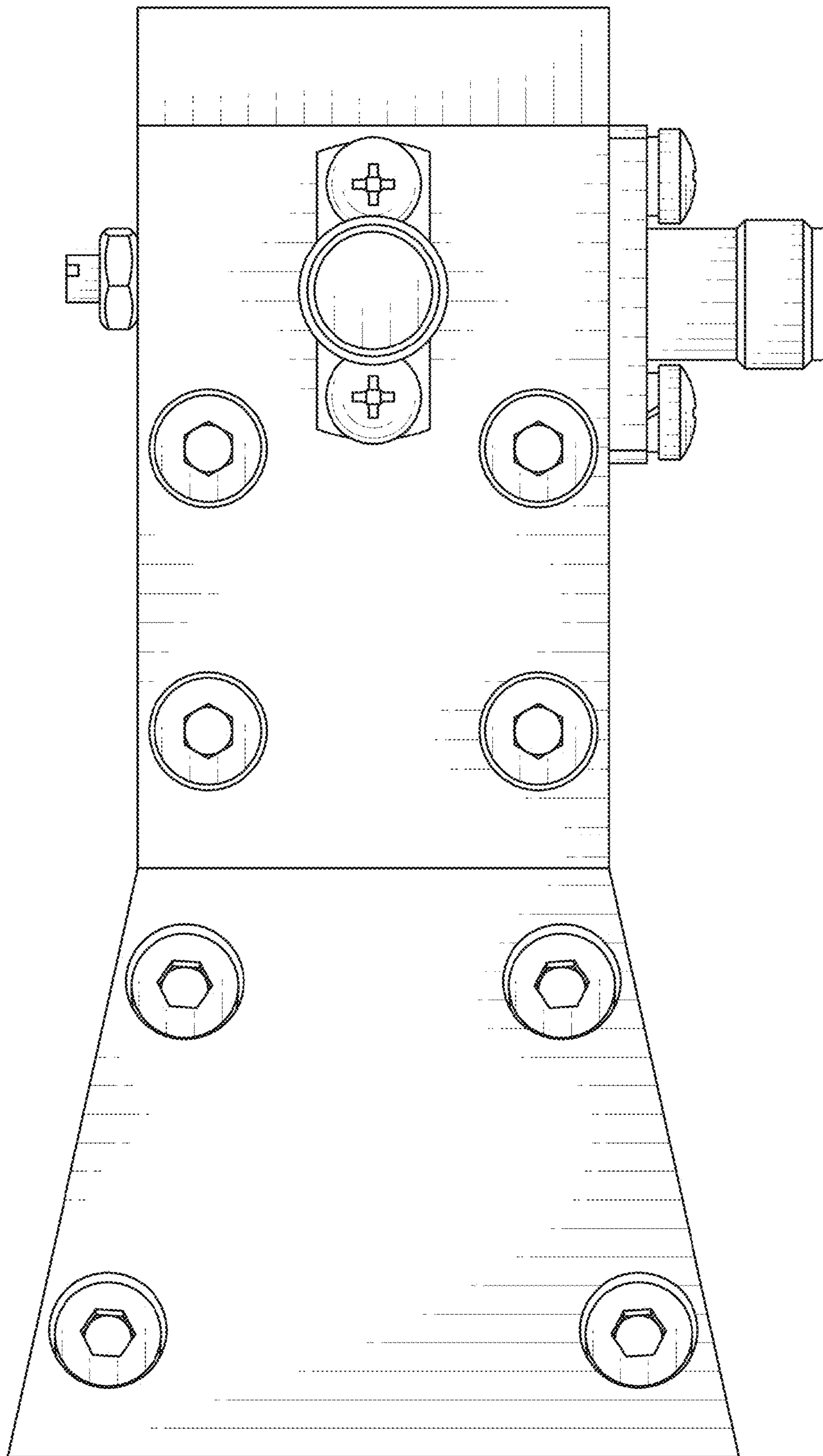


FIG. 6

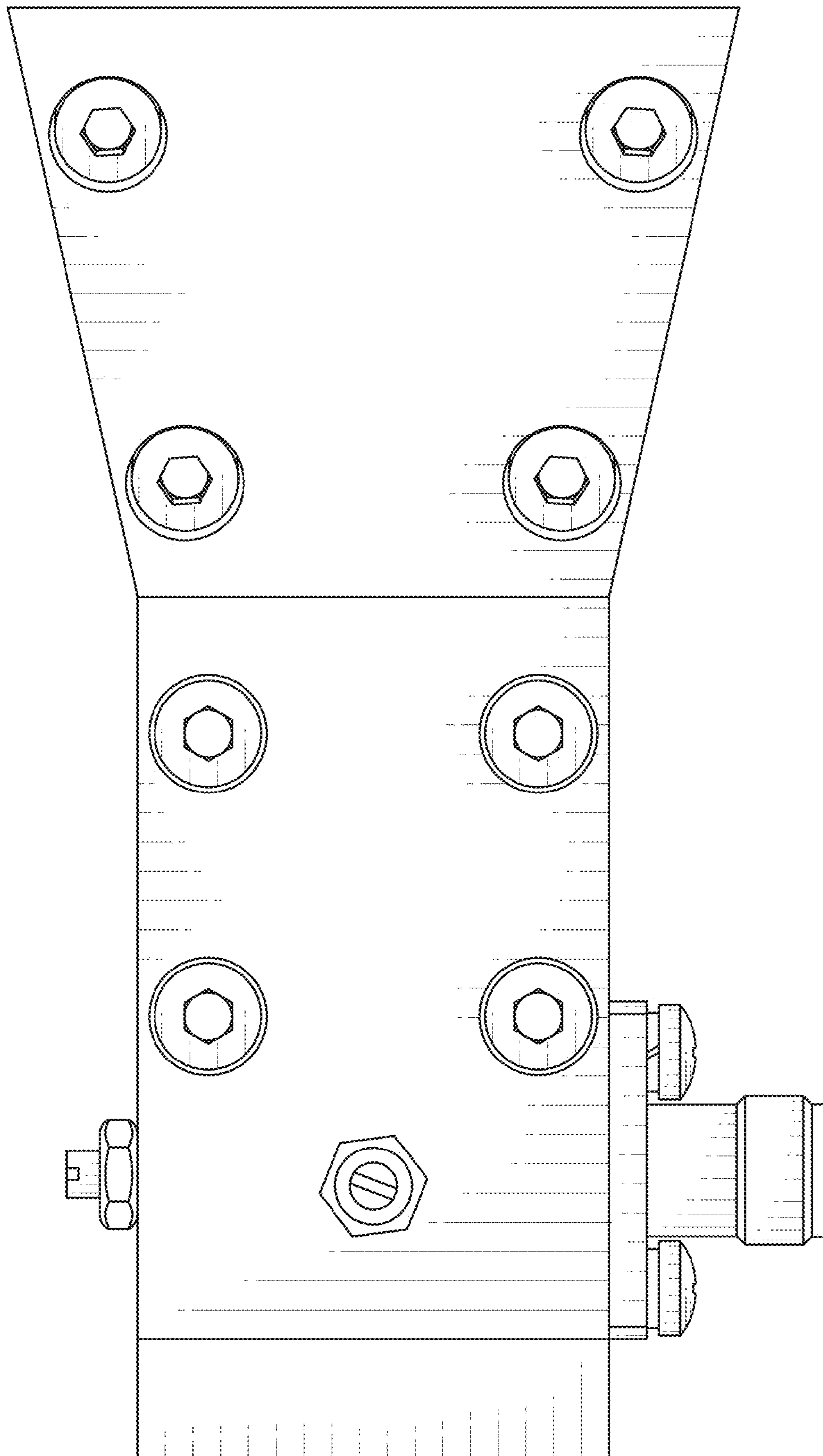


FIG. 7