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(12) **United States Design Patent** (10) **Patent No.:** **US D970,041 S**
Guzman et al. (45) **Date of Patent:** **** Nov. 15, 2022**

(54) **COMBINED MICRO VALVE AND PRESSING MEMBER FOR CONTROLLING PATH OF FLUIDS IN MINIATURIZED CAPILLARY CONNECTIONS**

5,202,010 A	4/1993	Guzman	
6,190,616 B1	2/2001	Jovanovich et al.	
D558,889 S	1/2008	Doll et al.	
D603,525 S	11/2009	Foreman et al.	
8,007,725 B2	8/2011	Guzman	
D874,959 S	2/2020	Buie et al.	
D895,140 S *	9/2020	Heron	D24/225
D919,833 S *	5/2021	Guzman	B01L 3/567 D24/232

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2009/0301885 A1	12/2009	Guzman	
2018/0280972 A1	10/2018	Guzman et al.	
2021/0060552 A1 *	3/2021	El-Atab	B01L 3/502715

* cited by examiner

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

Primary Examiner — Anhdao Doan

(21) Appl. No.: **29/769,253**

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Related U.S. Application Data

(57) **CLAIM**

(62) Division of application No. 29/682,566, filed on Mar. 6, 2019, now Pat. No. Des. 919,833.

We claim, the ornamental design for a combined micro valve and pressing member for controlling path of fluids in miniaturized capillary connections, as shown and described.

(51) **LOC (13) Cl.** **24-01**

(52) **U.S. Cl.**
USPC **D24/232**

DESCRIPTION

(58) **Field of Classification Search**
USPC D24/107, 186, 216, 232, 223, 224, 225, D24/227, 231, 169, 219; D10/81
CPC G01N 27/447; G01N 27/44743; G01N 27/44765; G01N 33/543; B01L 2200/026; B01L 2200/0642; B01L 2200/0663
See application file for complete search history.

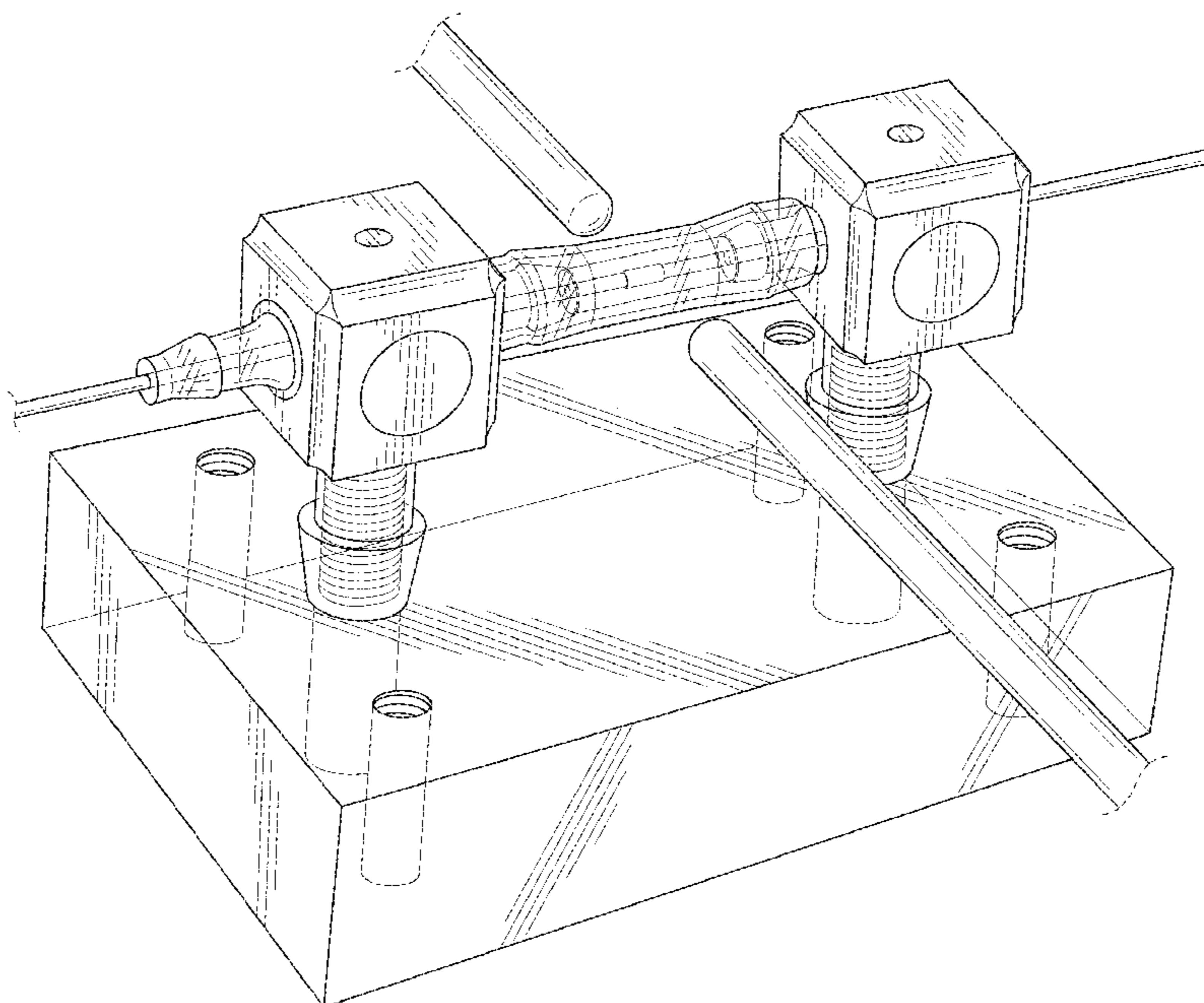
FIG. 1 is a perspective view of a combined micro valve and pressing member for controlling path of fluids in miniaturized capillary connections showing our new design;
FIG. 2 is a front view of FIG. 1;
FIG. 3 is a rear view of FIG. 1;
FIG. 4 is a right side view of FIG. 1;
FIG. 5 is a left side view of FIG. 1;
FIG. 6 is a top view of FIG. 1; and,
FIG. 7 is a bottom view of FIG. 1.
The broken lines indicate the bounds of the claim and form no part of the claimed design.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,006,705 A *	2/1977	Golias	G01N 27/44743 118/506
D271,570 S	11/1983	Cain	

1 Claim, 6 Drawing Sheets



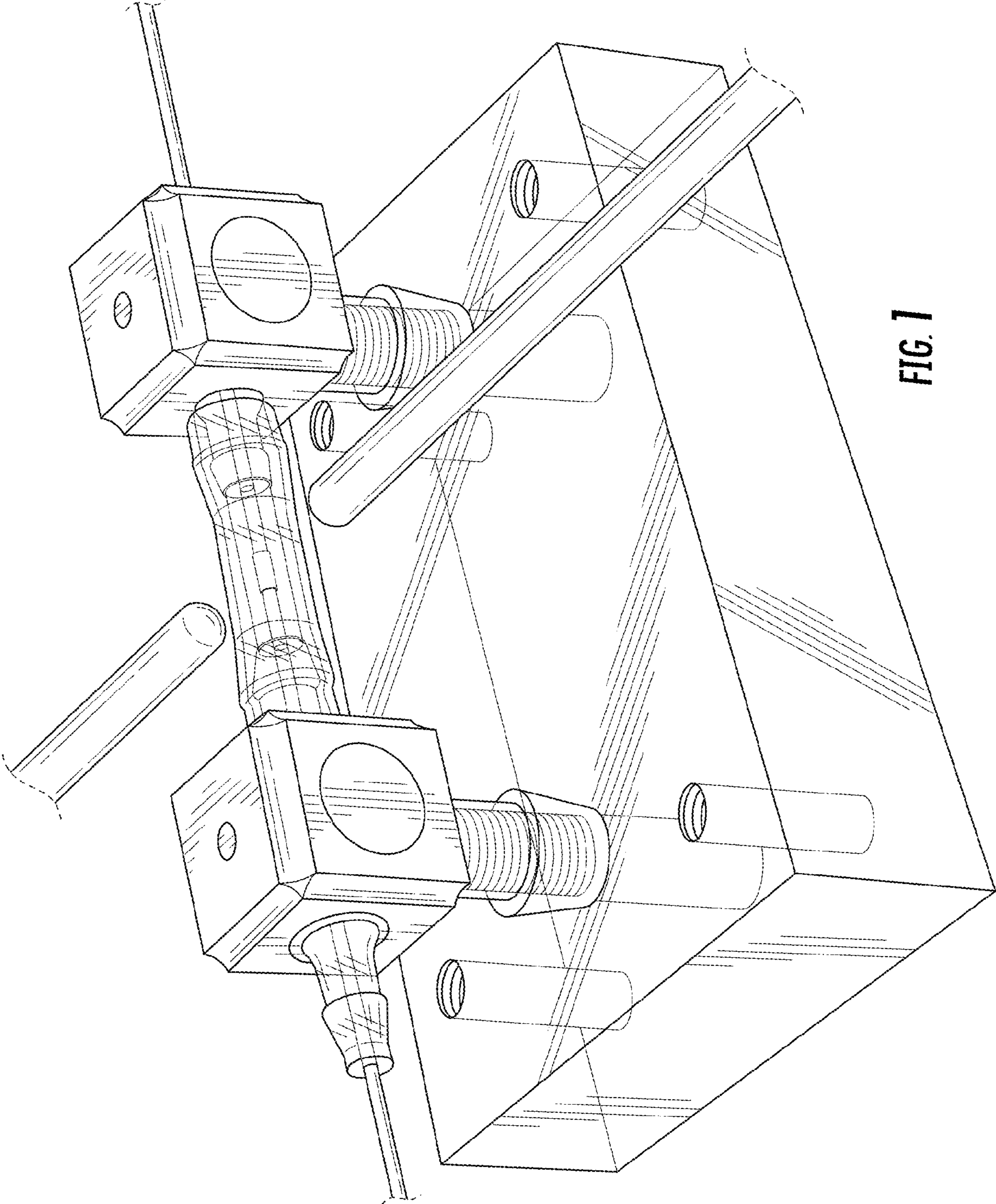


FIG. 1

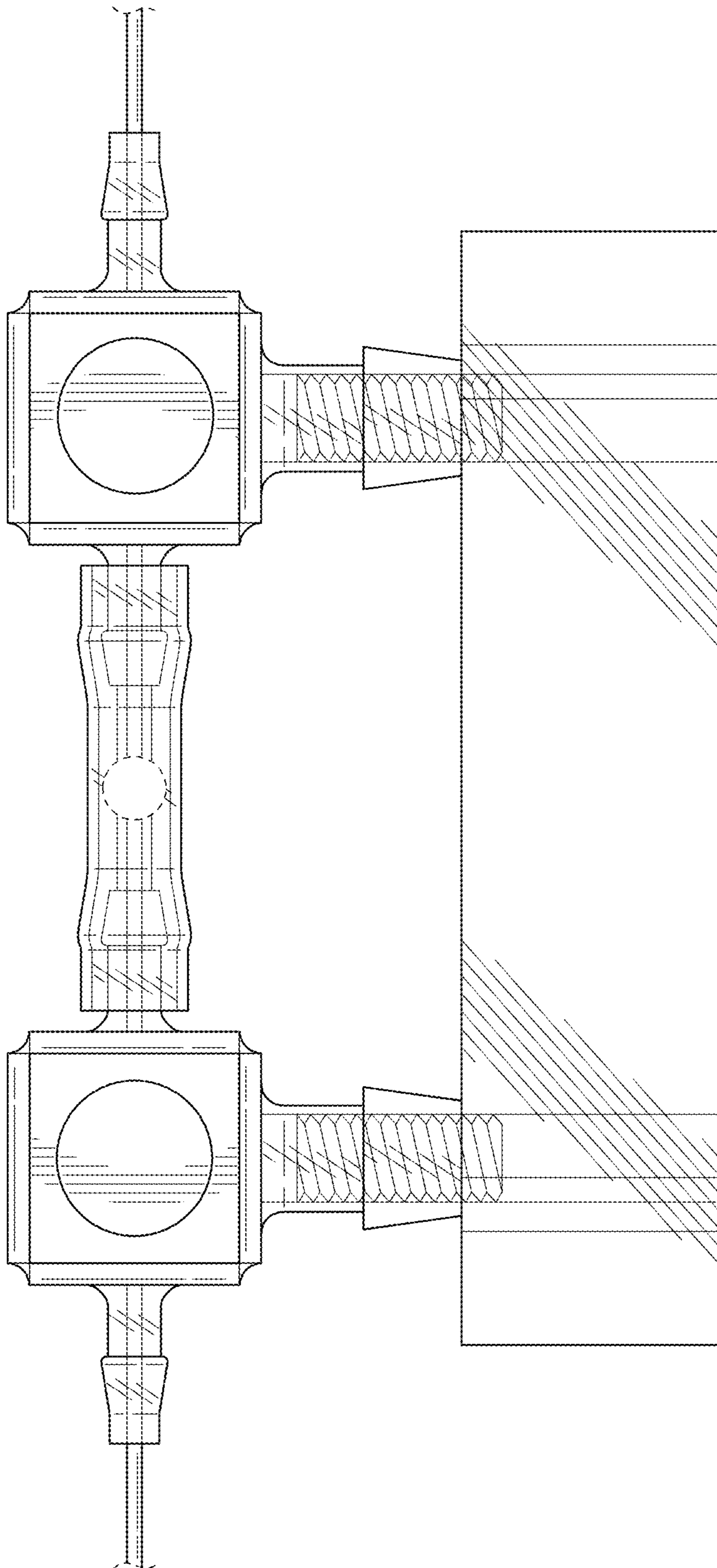


FIG. 2

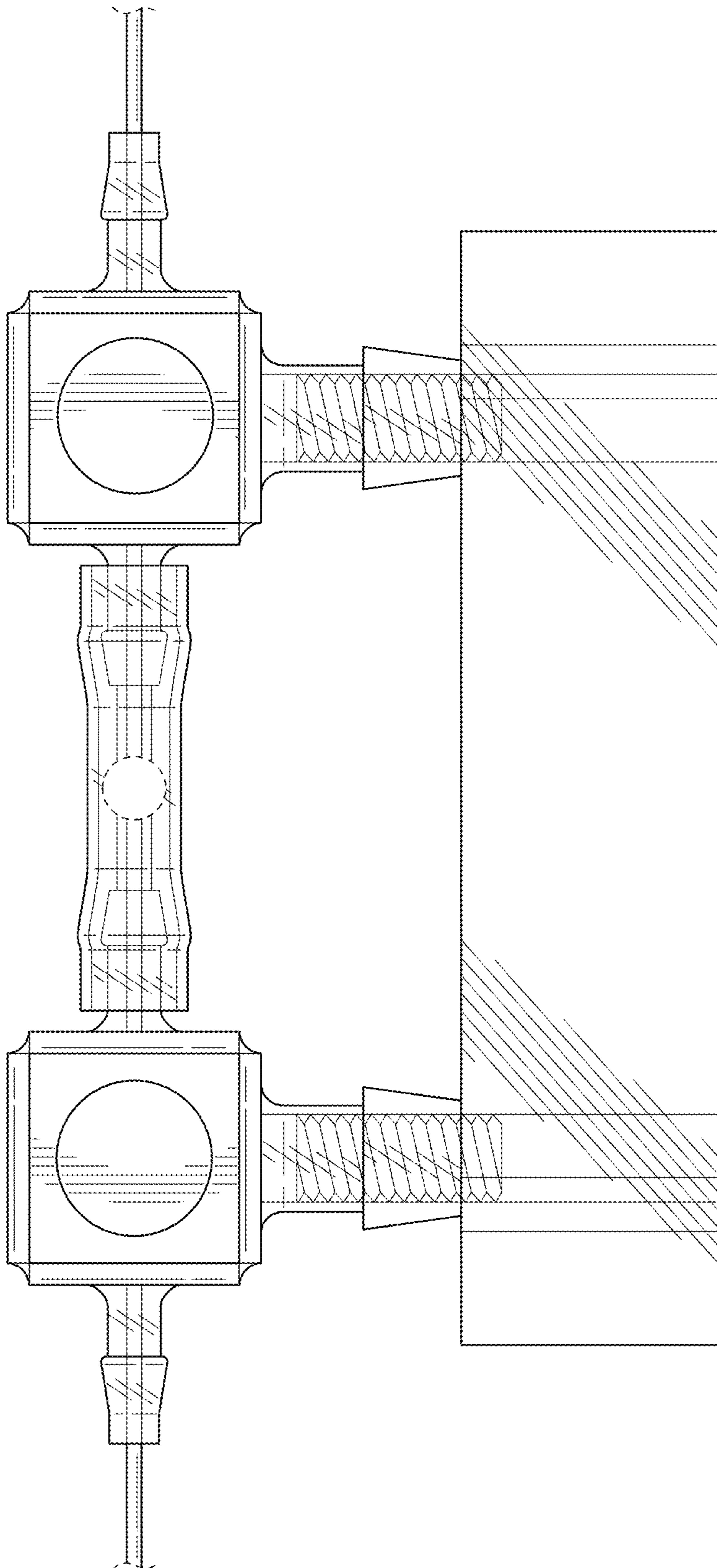


FIG. 3

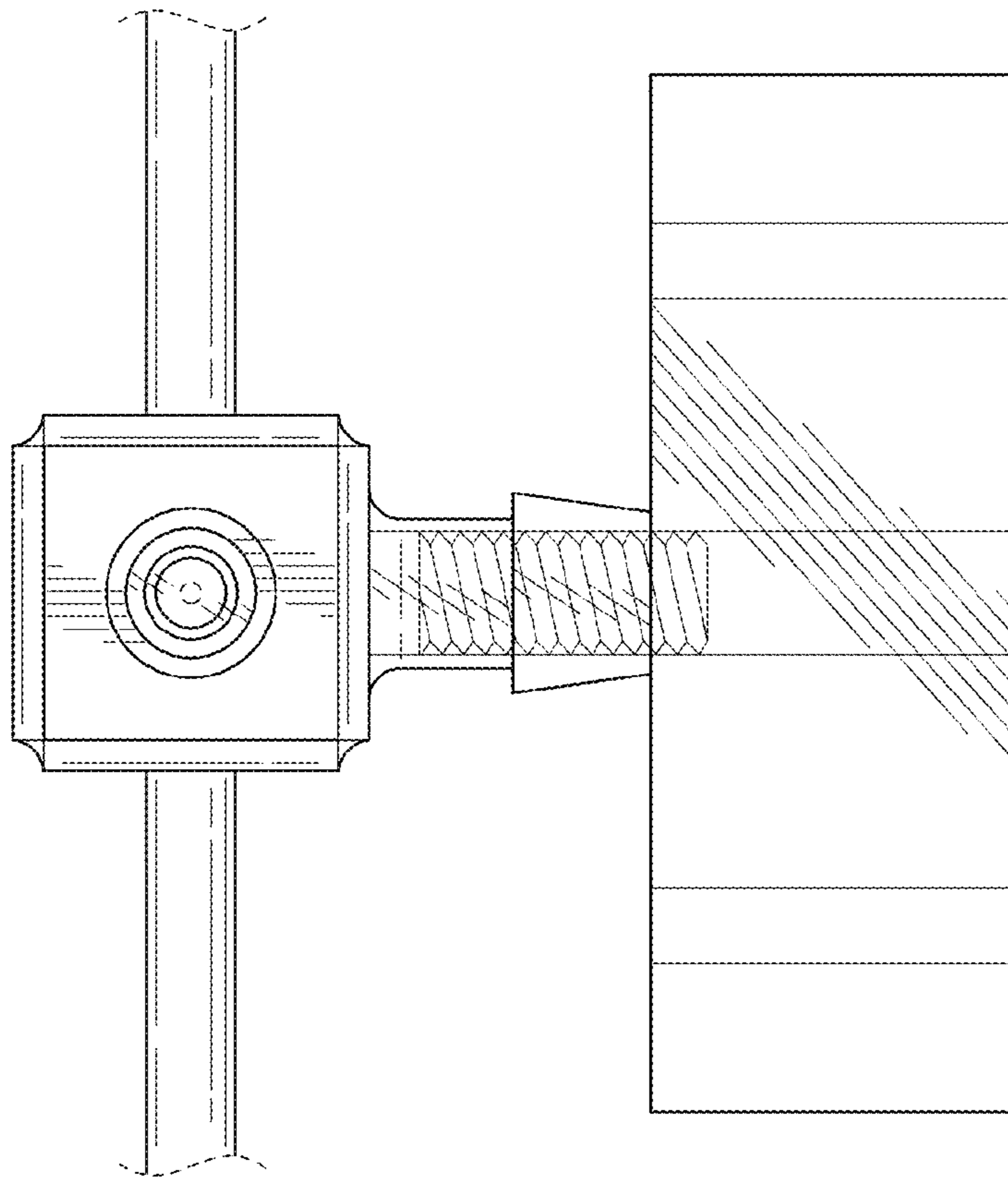


FIG. 5

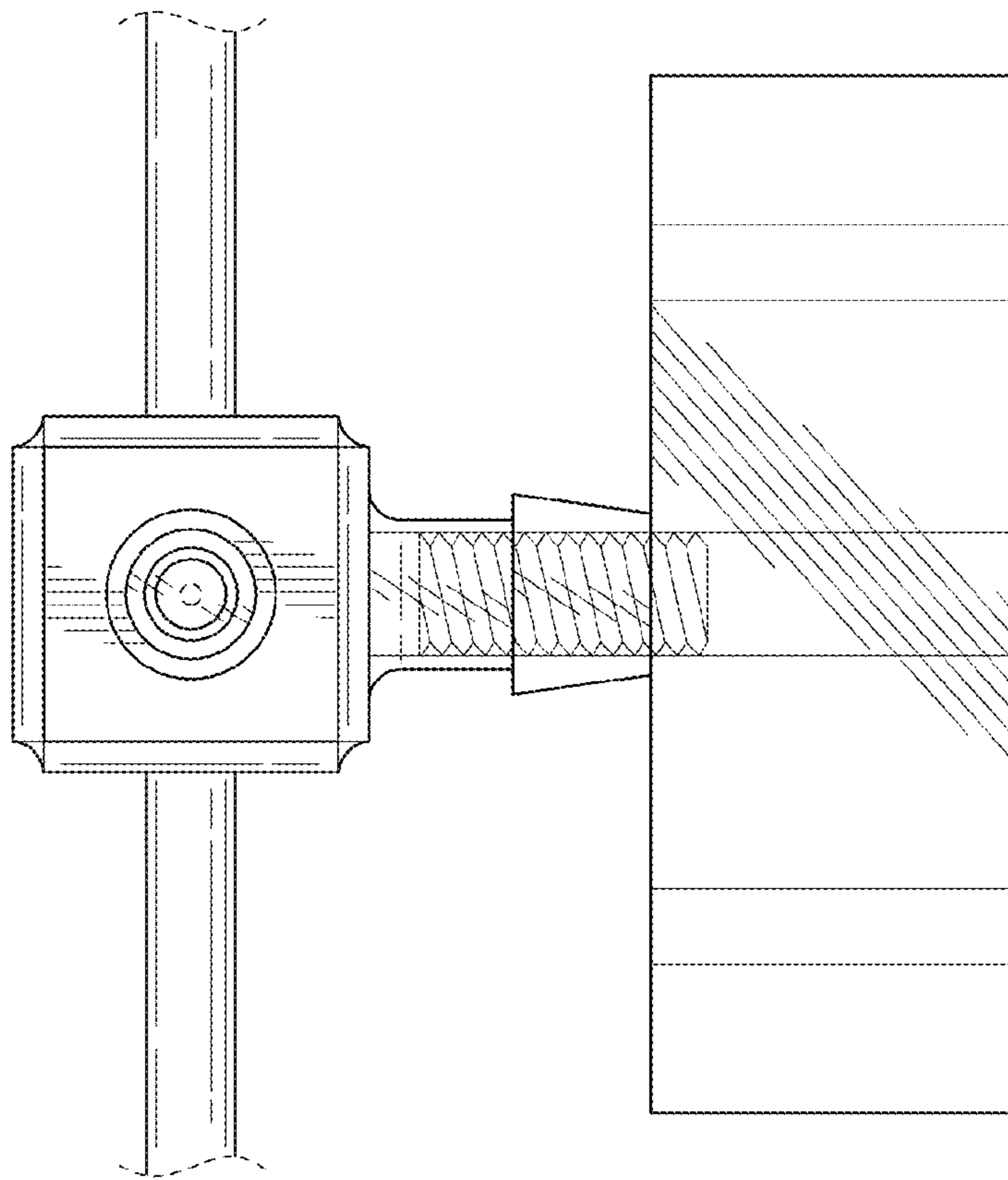


FIG. 4

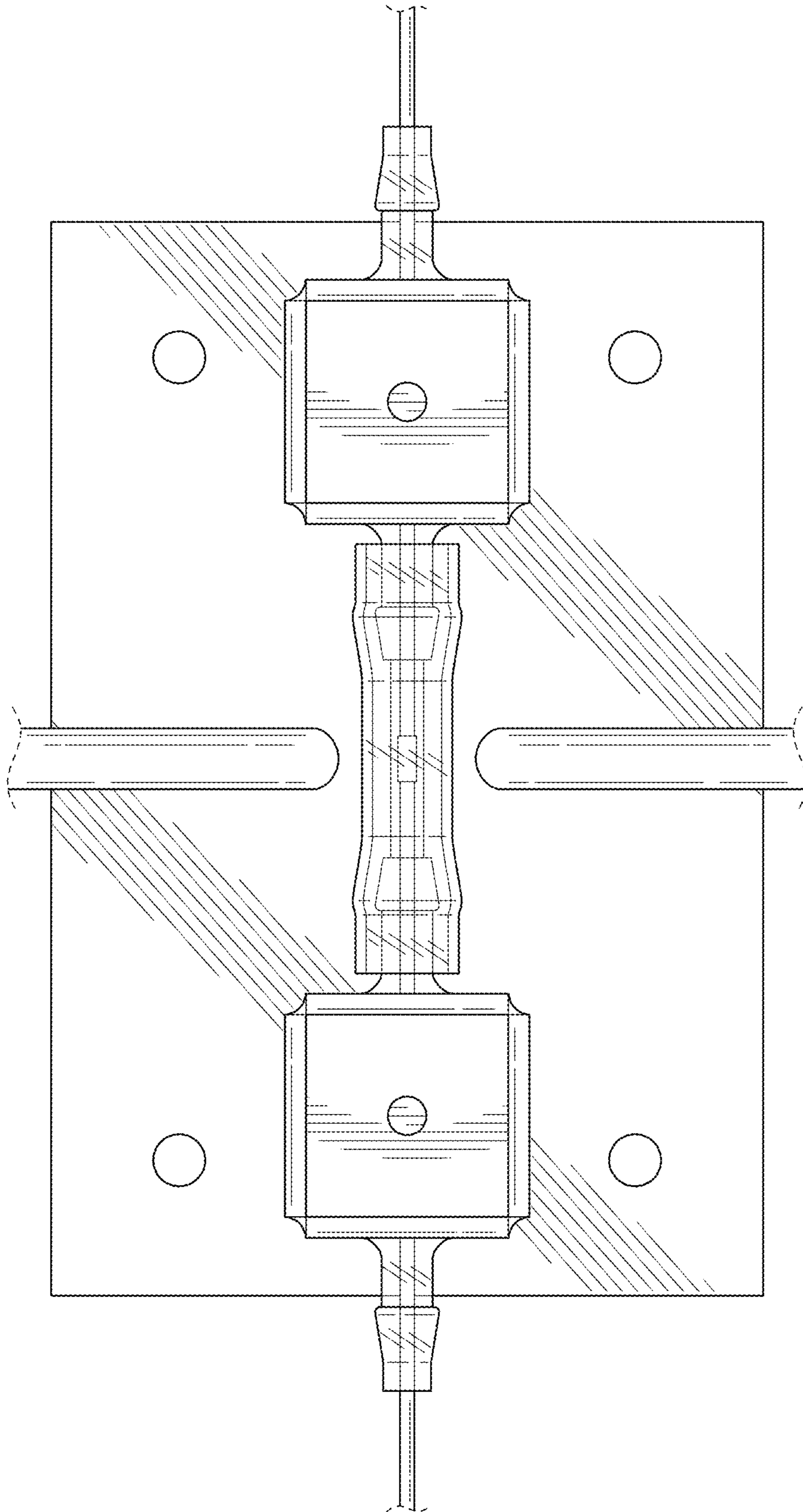


FIG. 6

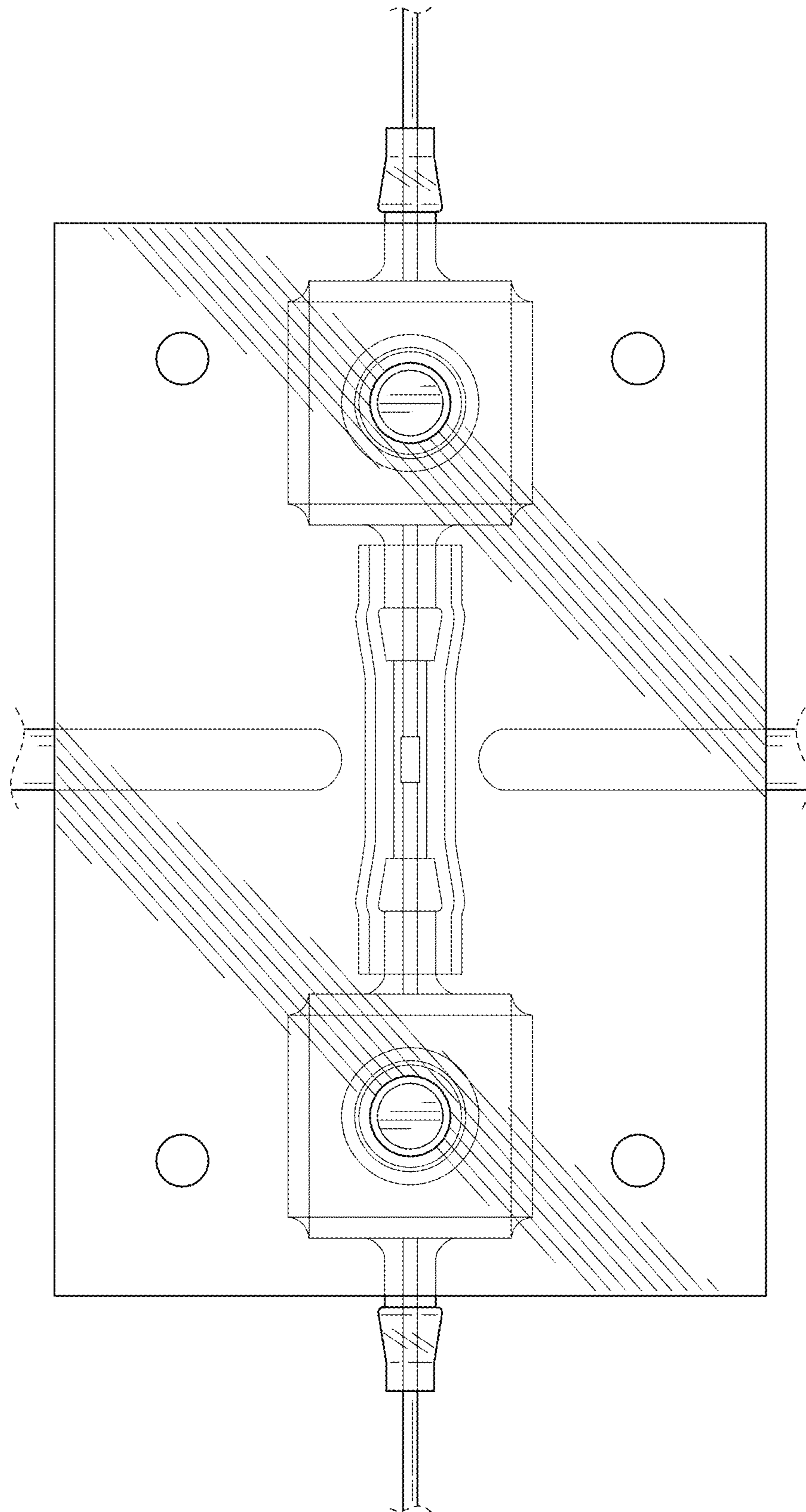


FIG. 7