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(12) **United States Design Patent**
Burch, V et al.

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(54) **WHEEL ANGLE SENSOR ADAPTER PUCK**

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(52) **U.S. Cl.**
USPC **D12/179**

(58) **Field of Classification Search**
USPC D12/114, 174, 177, 178, 179, 406, 407;
D8/88, 300, 303, 308, 359; D6/710
CPC F16C 1/10; F16C 1/101; F16H 59/0204;
F16H 59/0217; F16H 59/0278; F16H
59/042; F16H 61/30; G05G 1/06; G05G
19/00; G05G 9/02
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 3,507,979 A * 4/1970 Gunduz H01B 17/14
174/176
- 3,579,859 A * 5/1971 Malenge A63F 9/06
40/437
- 4,804,733 A * 2/1989 Bataille B29C 61/0608
138/177

- 5,249,478 A * 10/1993 Moroto F16H 59/0204
74/473.18
 - 5,745,626 A * 4/1998 Duck G02B 6/3803
385/51
 - 5,943,836 A * 8/1999 Kassardjian E04C 5/161
248/523
 - D532,674 S * 11/2006 Schwalie D8/331
 - D578,952 S * 10/2008 Badillo D12/406
- (Continued)

OTHER PUBLICATIONS

D-Shaft Sprocket for No. 25 Pitch Chain, image post date May 3, 2016, site visited Sep. 16, 2017, (online), <<https://web.archive.org/web/20160503060826/http://www.superdroidrobots.com:80/shop/item.aspx/steel-d-shaft-sprocket-for-25-pitch-chain-15-teeth/2209/>>.*

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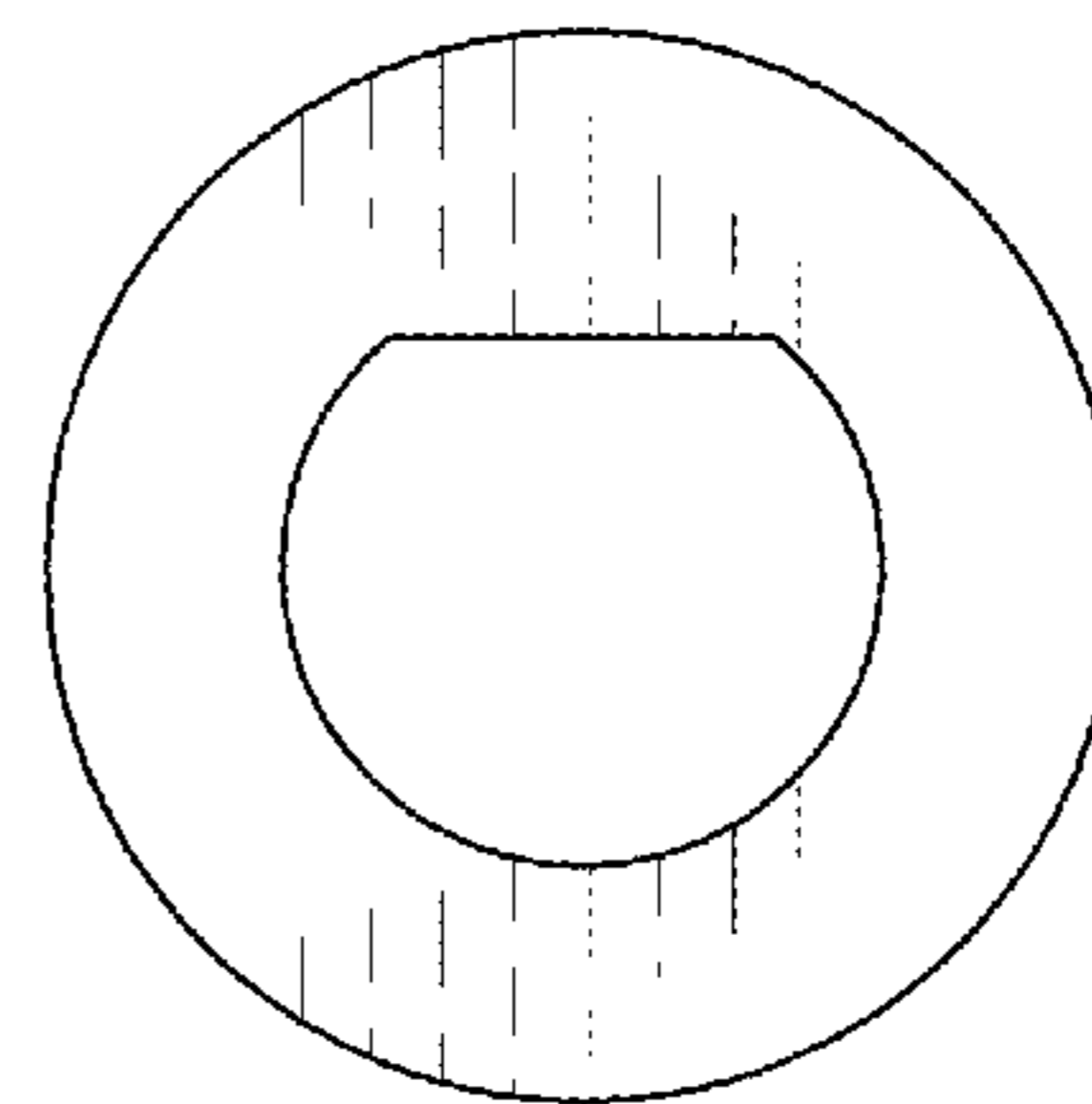
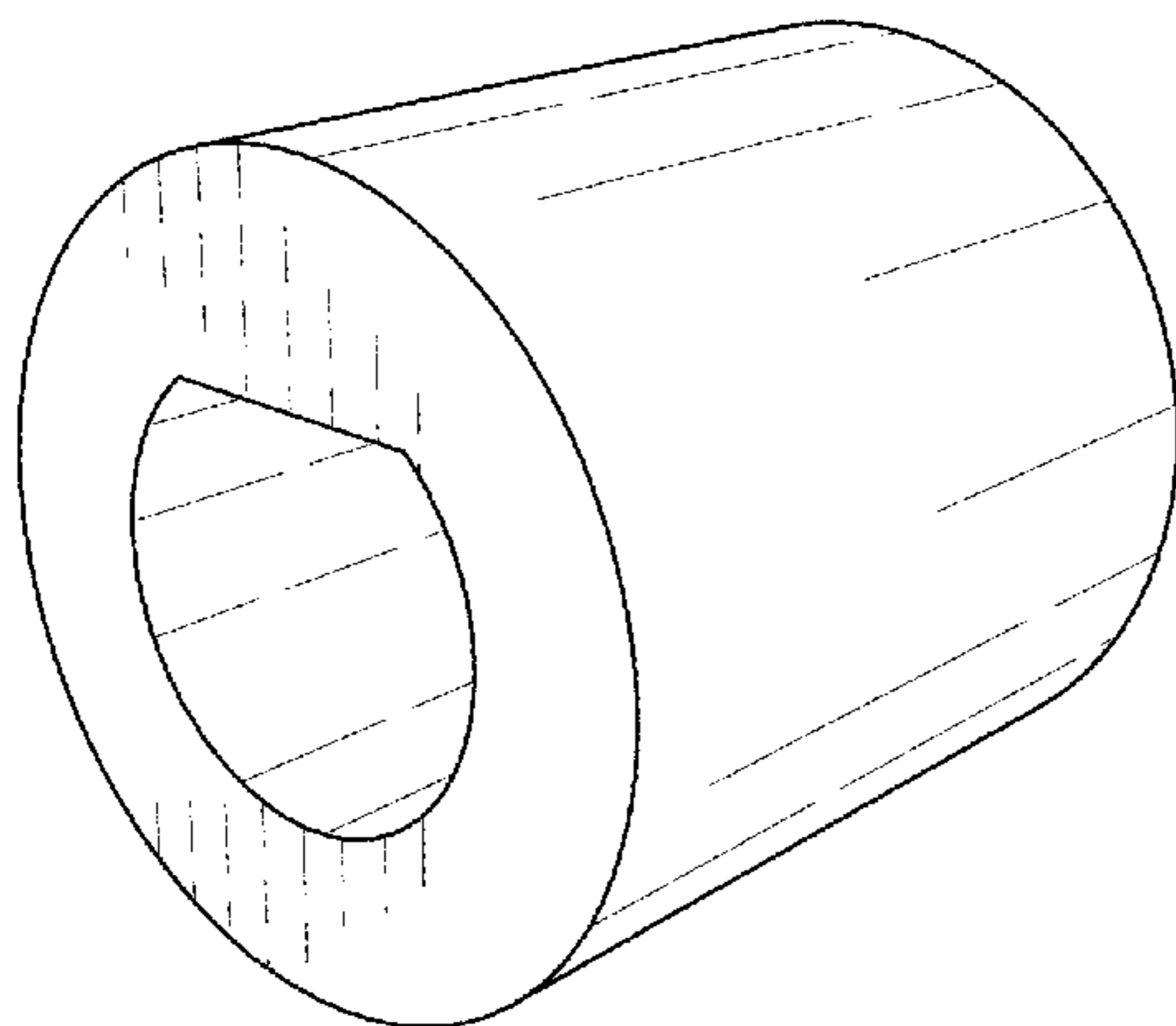
(57) **CLAIM**

The ornamental design for wheel angle sensor adapter puck, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a wheel angle sensor adapter puck showing our new design;
FIG. 2 is a frontal view of the wheel angle sensor adapter puck shown in FIG. 1;
FIG. 3 is a rear view of the wheel angle sensor adapter puck shown in FIG. 1;
FIG. 4 is a side view thereof as viewed from the left-hand side of the wheel angle sensor adapter puck shown in FIG. 2;
FIG. 5 is a side view thereof as viewed from the right-hand side of the wheel angle sensor adapter puck shown in FIG. 2;
FIG. 6 is a top view thereof; and,
FIG. 7 is a bottom view thereof.

1 Claim, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D582,689	S *	12/2008	Thornbury	.....	D6/361
D622,207	S *	8/2010	Pelini	.....	D12/400
8,403,124	B2 *	3/2013	Dimig	.....	B60N 2/442
					192/84.1
D764,674	S *	8/2016	Quinn	.....	D11/27
9,498,091	B2 *	11/2016	Yamada	.....	B65D 75/5894
D777,567	S *	1/2017	Diener	.....	D8/356
2007/0097697	A1 *	5/2007	Huang	.....	B60Q 1/076
					362/465
2010/0212119	A1 *	8/2010	Dendo	.....	B60N 3/046
					24/453

OTHER PUBLICATIONS

D hole gear, image post date 2010, site visited Sep. 16, 2017, (online), <<https://www.aliexpress.com/item/25GA370-motor-output-shaft-Gear-D-hole-gear-For-JGA25-370-GA25-310-Powder-metallurgy-gear/32811986091.html?spm=2114.search0306.4.97.e4QNh3>>.*

Hexagonal adapter D-shaped shaft, image post date Nov. 2, 2012, site visited Sep. 16, 2017, (online), <<http://www.cnczone.com/forums/mechanical-calculations-engineering-design/166652-tormach.html>>.*

Turck Valve Position Sensor Accessories, image post date 2011, site visited Sep. 16, 2017, (online), <<http://www.clrwtr.com/TURCK-Valve-Position-Sensors.htm>>.*

Cylinder with D hole—SketchUp Community, image post date Jan. 2016, site visited Sep. 15, 2017, (online), <<https://forums.sketchup.com/t/holes-in-cylinders/18710/6>>.*

* cited by examiner

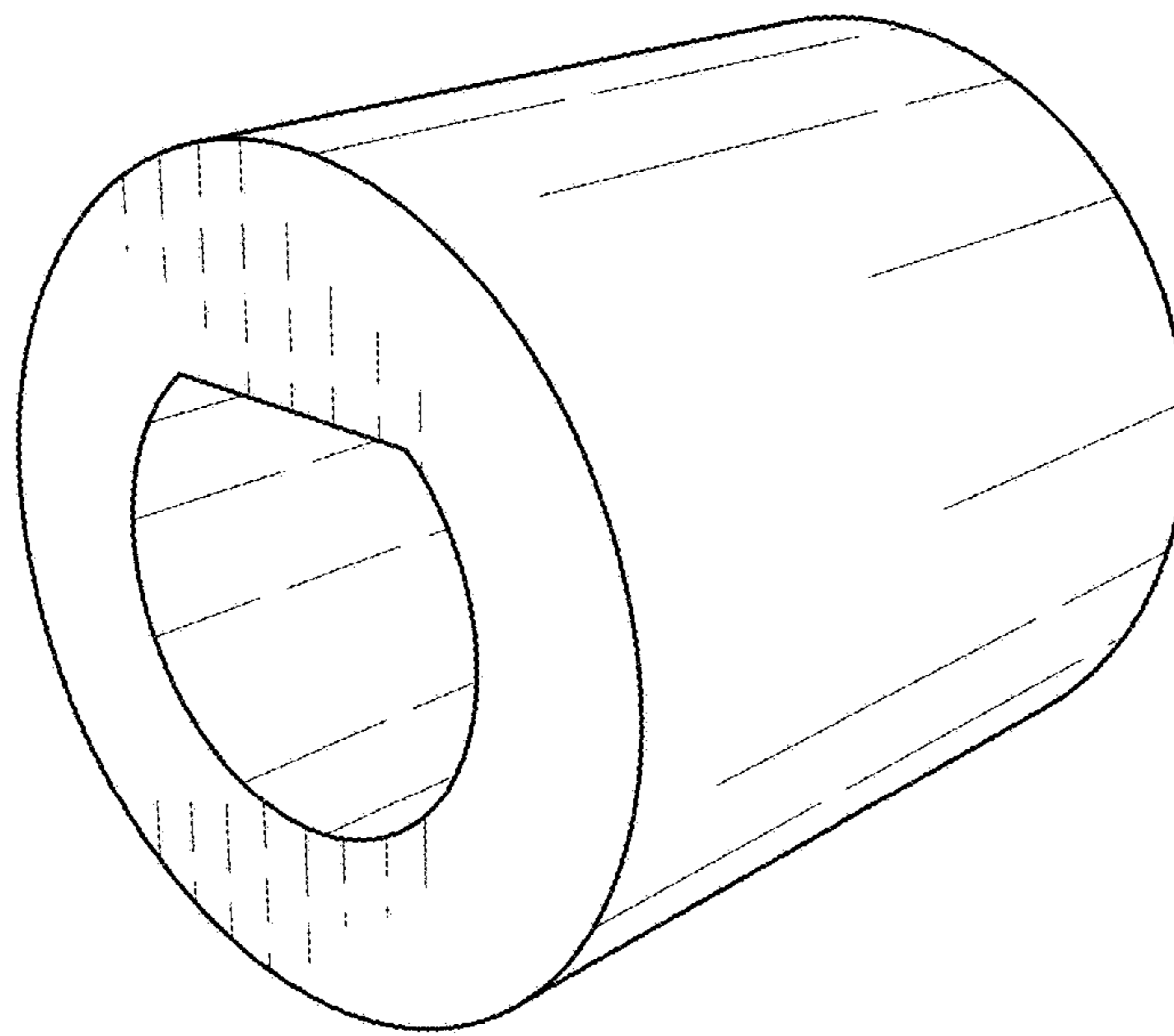


FIG. 1

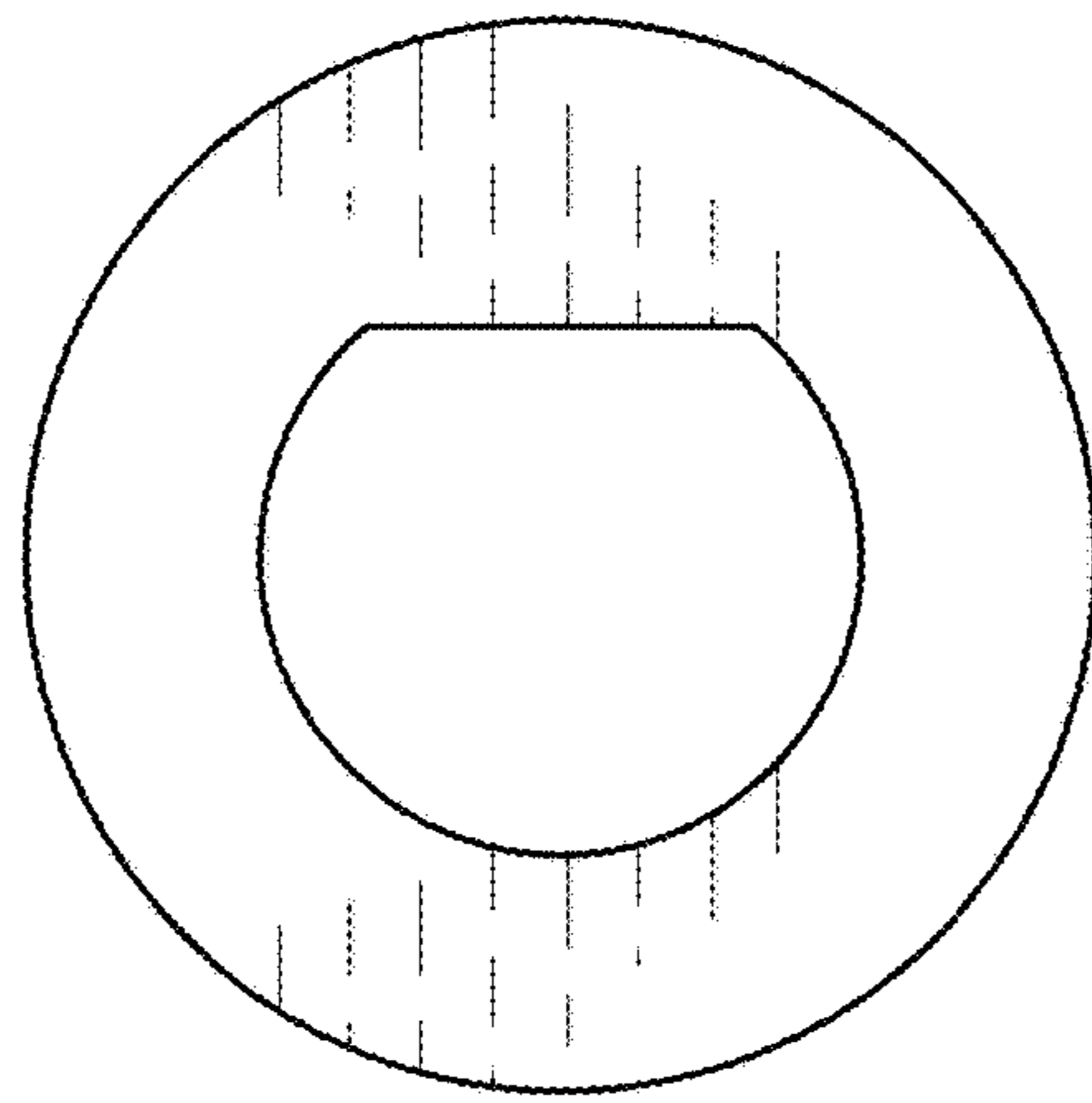


FIG. 2

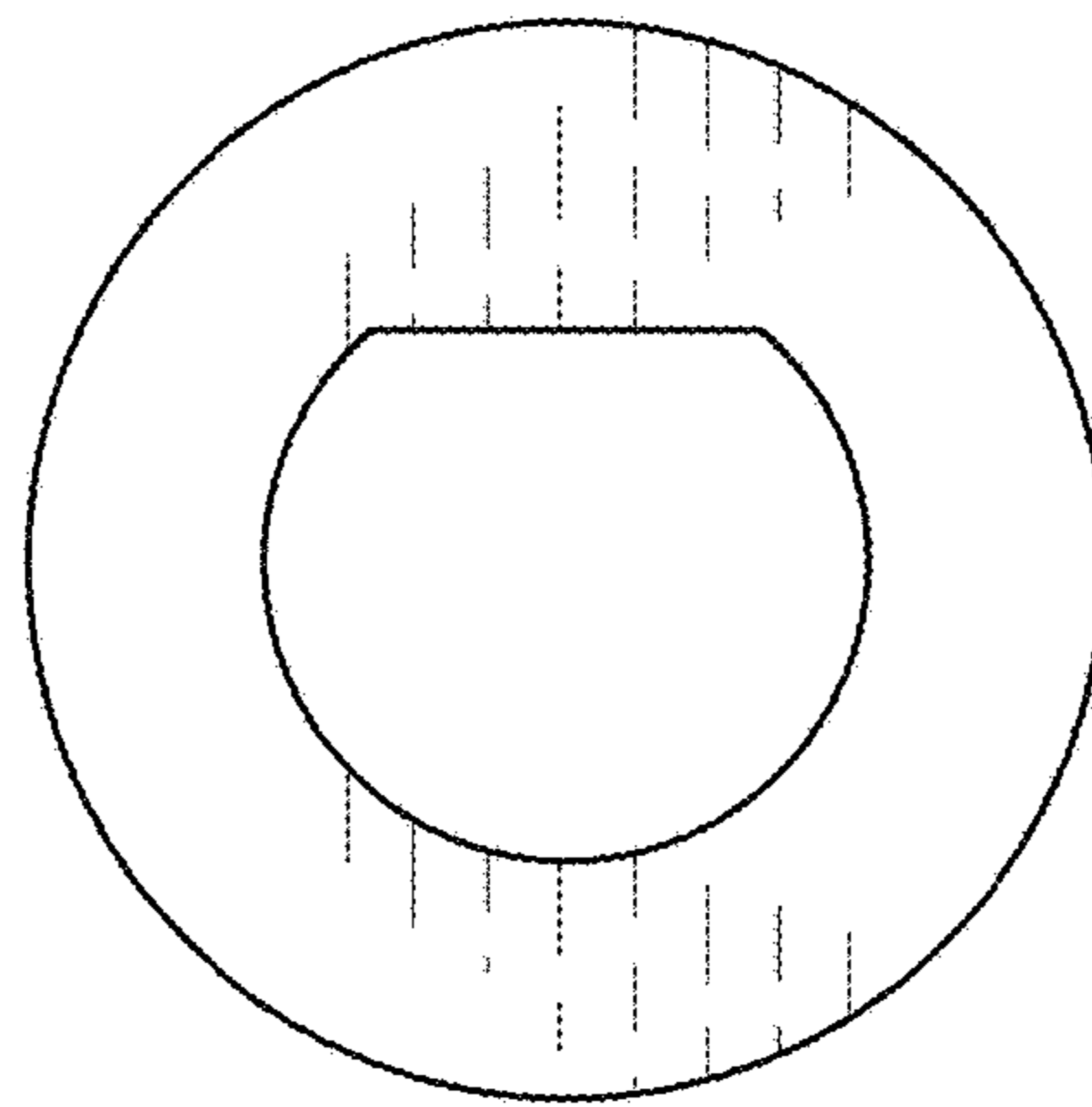


FIG. 3

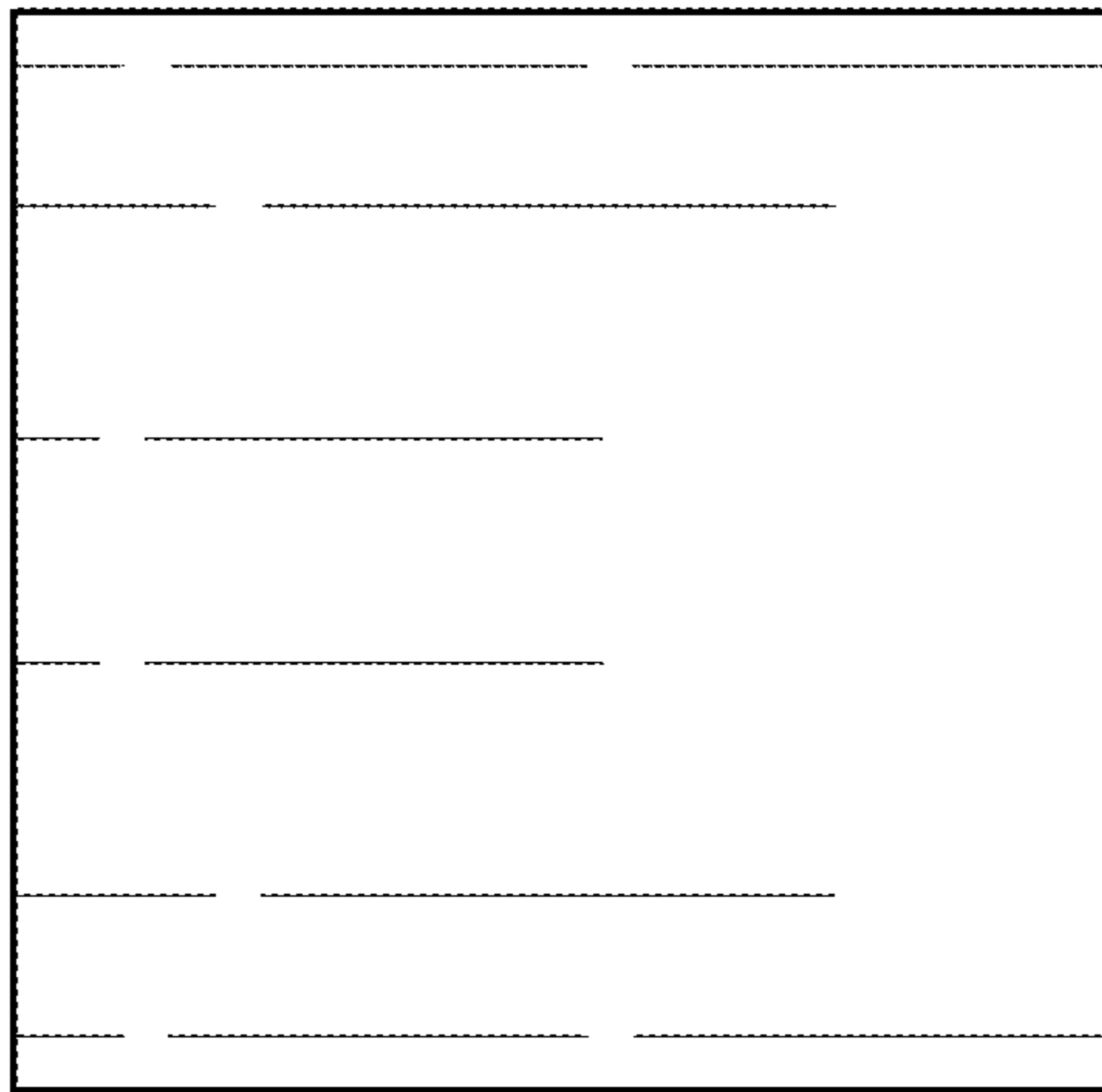


FIG. 4

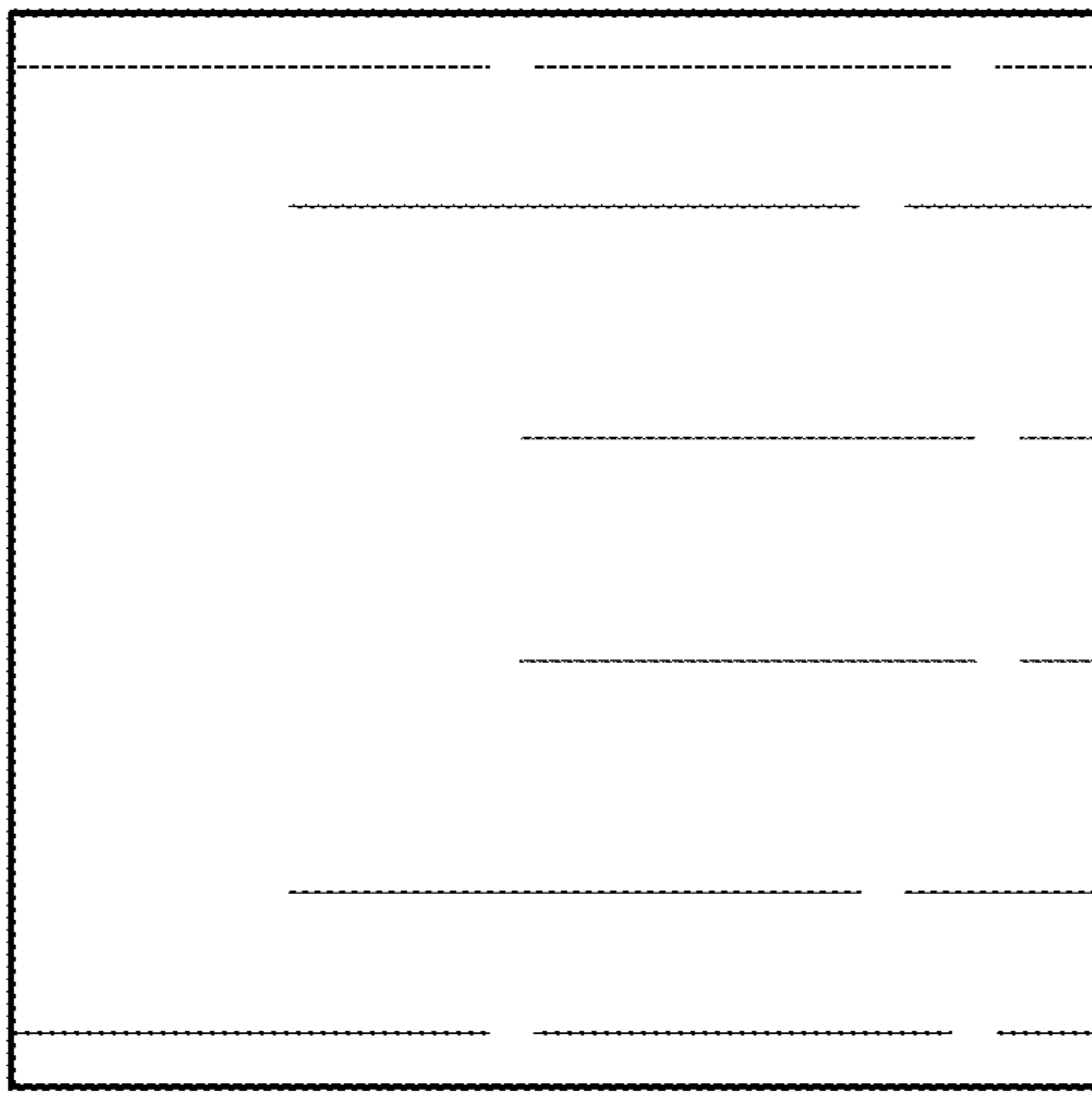


FIG. 5

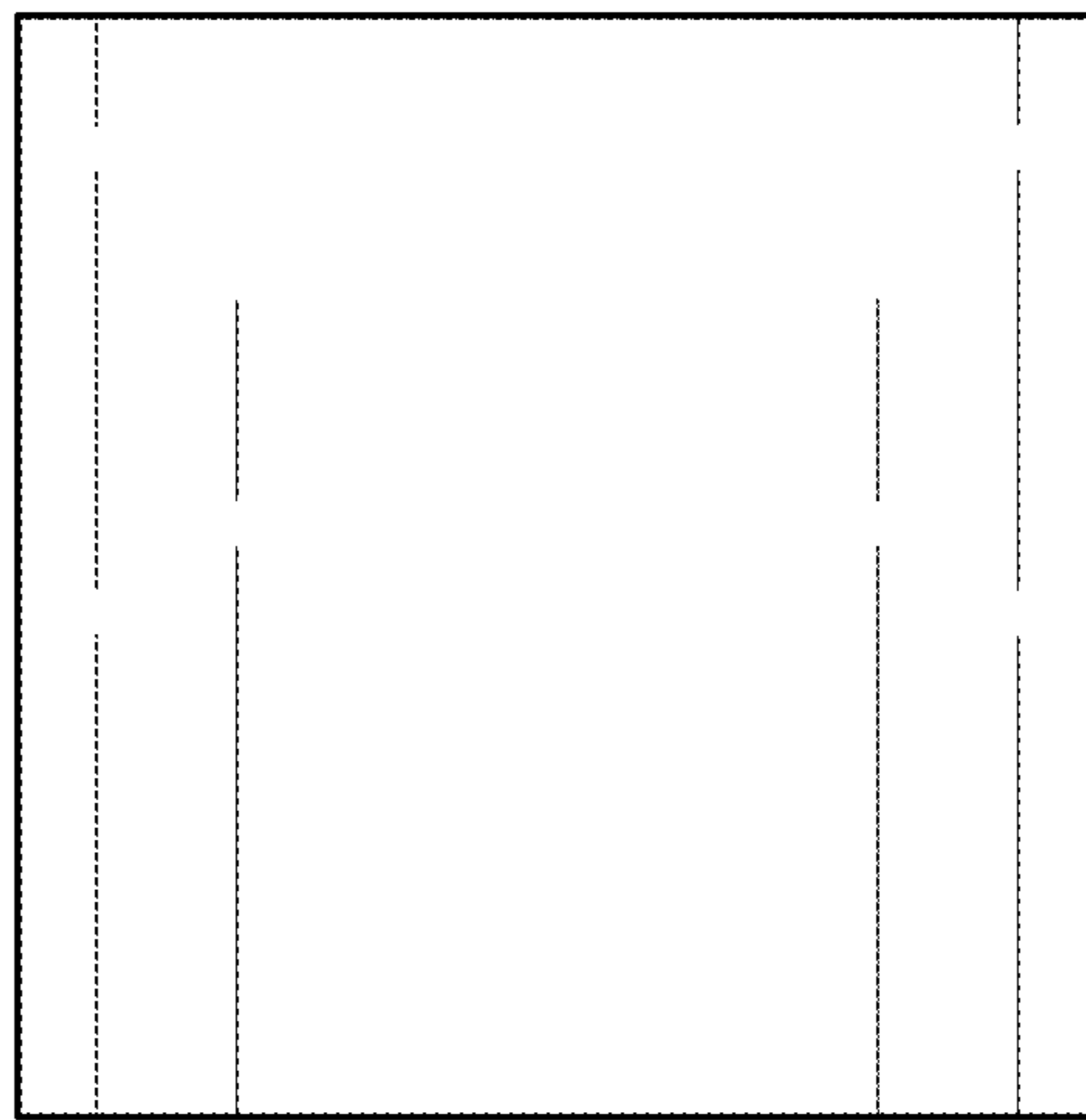


FIG. 6

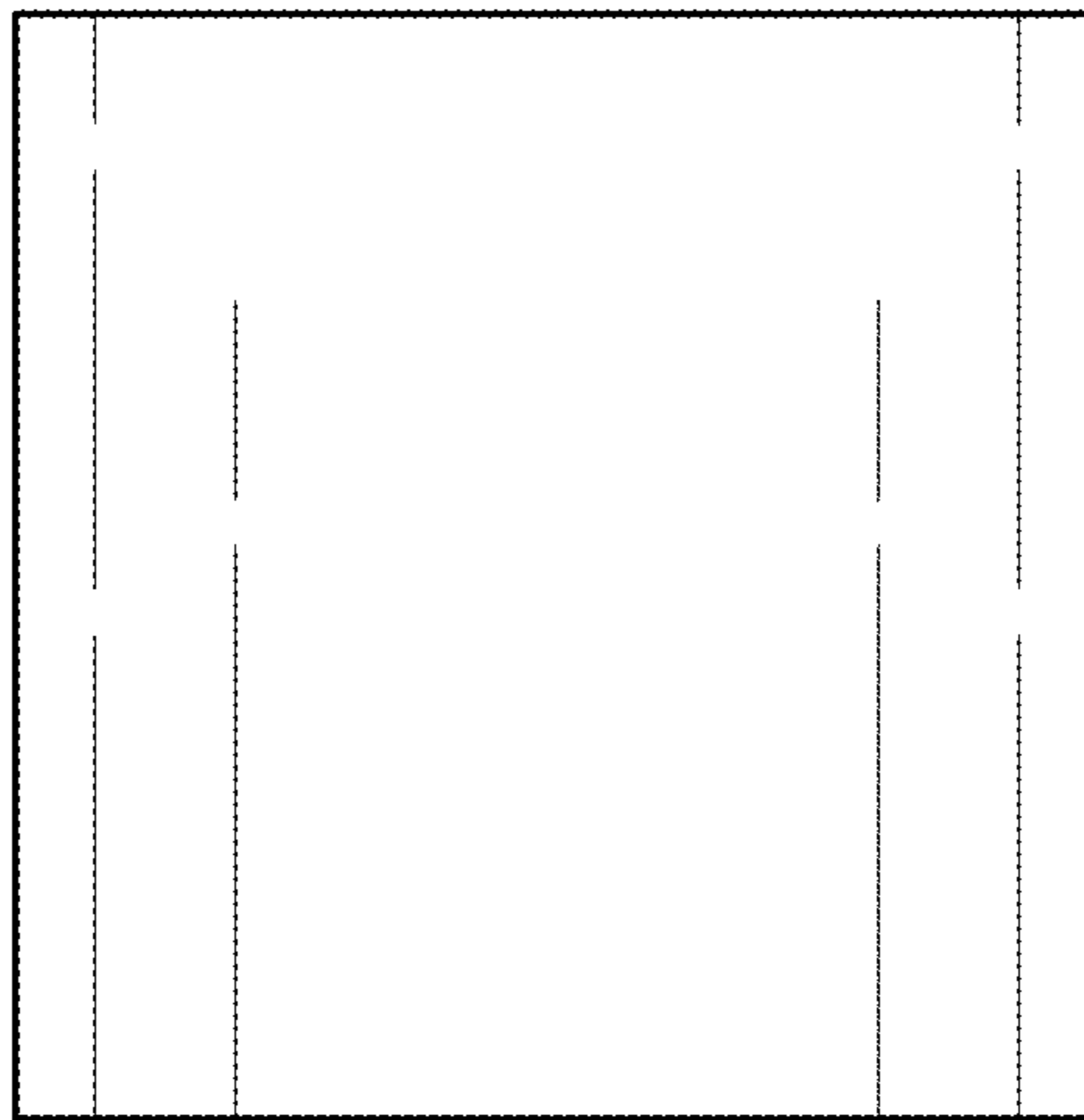


FIG. 7