



US00D588617S

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

(10) **Patent No.:** **US D588,617 S**
(45) **Date of Patent:** **** Mar. 17, 2009**

(54) **NOZZLE ASSEMBLY**

(75) Inventors: **Thomas Burmester**, Bleckede (DE);
Hubert Kufner, Luneburg (DE)

(73) Assignee: **Nordson Corporation**, Westlake, OH
(US)

(**) Term: **14 Years**

(21) Appl. No.: **29/306,666**

(22) Filed: **Apr. 14, 2008**

(51) **LOC (9) Cl.** **15-09**

(52) **U.S. Cl.** **D15/144**

(58) **Field of Classification Search** D15/144,

D15/144.1, 14.2; D23/229; 222/52, 54-55,

222/146.5, 239, 320, 325, 389, 566, 567;

239/1, 11, 29, 71, 135, 296, 423, 536, 539

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,031,387 A	2/1936	Schwarz
2,212,448 A	8/1940	Modigliani
2,297,726 A	10/1942	Stephanoff
2,628,386 A	2/1953	Tomberg
3,032,008 A	5/1962	Land et al.
3,038,202 A	6/1962	Harkenrider
3,176,345 A	4/1965	Powell
3,178,770 A	4/1965	Willis
3,181,738 A	5/1965	Hartvig-Johanson
3,192,562 A	7/1965	Powell
3,192,563 A	7/1965	Crompton
3,204,290 A	9/1965	Crompton
3,213,170 A	10/1965	Erdmenger et al.
3,253,301 A	5/1966	McGlaughlin
3,334,792 A	8/1967	Vries et al.
3,379,811 A	4/1968	Hartmann et al.
3,380,128 A	4/1968	Cremer et al.
3,488,806 A	1/1970	De Cecco et al.
3,492,692 A	2/1970	Soda et al.
3,501,805 A	3/1970	Douglas, Jr. et al.

3,613,170 A	10/1971	Soda et al.
3,650,866 A	3/1972	Prentice
3,704,198 A	11/1972	Prentice
3,730,662 A	5/1973	Nunning
3,755,527 A	8/1973	Keller et al.

(Continued)

FOREIGN PATENT DOCUMENTS

DE 3543469 A1 12/1985

(Continued)

OTHER PUBLICATIONS

Nordson Corporation, Today's Idea, Nordson Unveils Diaper Elastic System, Oct. 1988, 1 pg.

(Continued)

Primary Examiner—Sandra Snapp

Assistant Examiner—Patricia Palasik

(74) *Attorney, Agent, or Firm*—Wood, Herron & Evans, L.L.P.

(57) **CLAIM**

The ornamental design for a nozzle assembly, as shown and described.

DESCRIPTION

FIG. 1 is a front perspective view of the nozzle assembly.

FIG. 2 is a front view of the nozzle assembly.

FIG. 3 is a rear view of the nozzle assembly.

FIG. 4 is a left side view of the nozzle assembly.

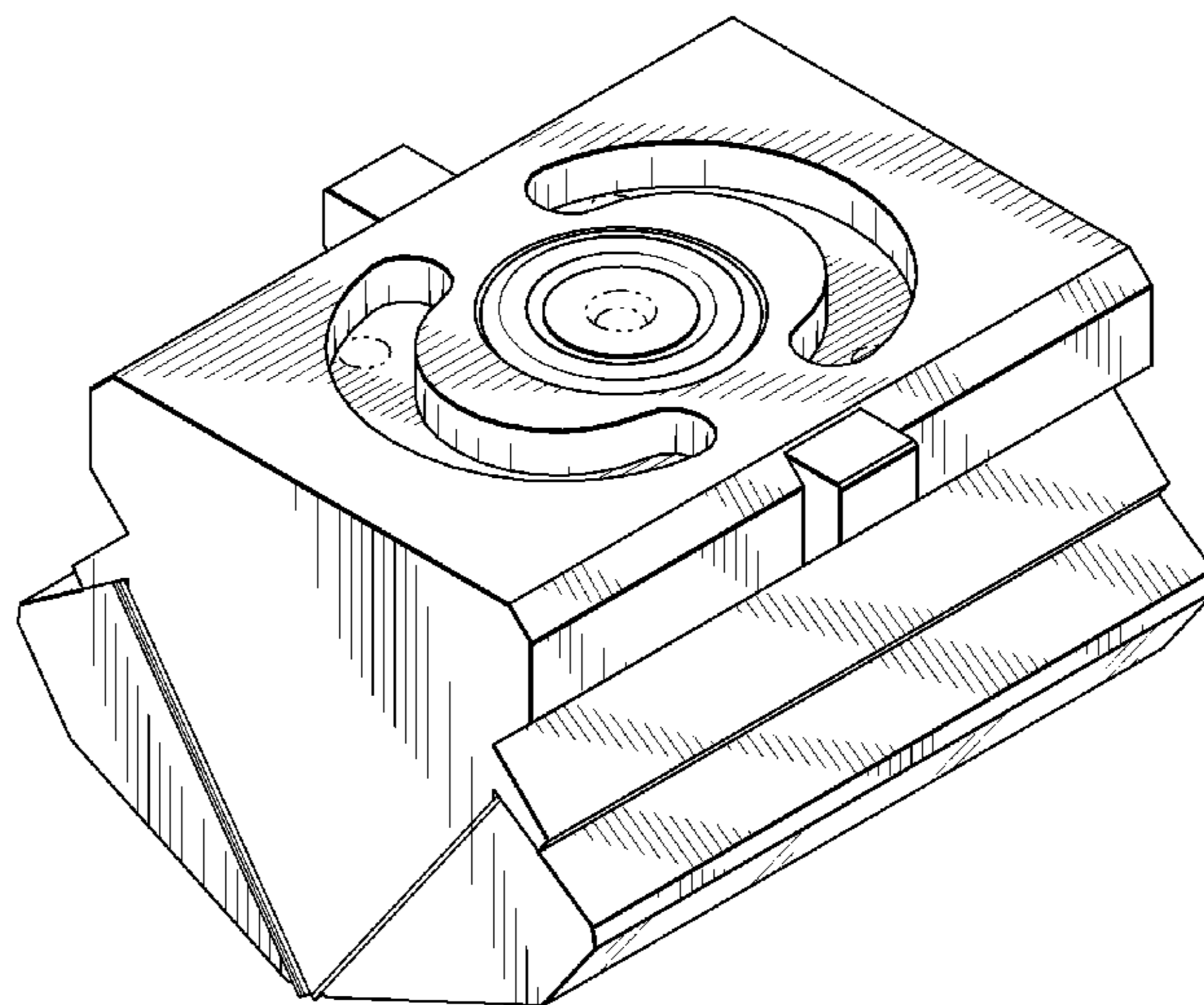
FIG. 5 is a right side view of the nozzle assembly.

FIG. 6 is a top view of the nozzle assembly; and,

FIG. 7 is a bottom view of the nozzle assembly.

Portions of the nozzle assembly shown in broken lines in the figures are for illustrative purposes only and form no part of the claimed design.

1 Claim, 4 Drawing Sheets



US D588,617 S

Page 3

6,890,167	B1	5/2005	Kwok et al.	
6,938,795	B2	9/2005	Barton, Jr. et al.	
D519,536	S	4/2006	de Leeuw et al.	
D520,538	S	5/2006	de Leeuw et al.	
D521,035	S	5/2006	de Leeuw et al.	
D524,833	S	7/2006	Folk et al.	
D529,321	S	10/2006	Gould et al.	
D536,354	S	2/2007	Kufner et al.	
D550,261	S	9/2007	Bondeson et al.	
2005/0205689	A1 *	9/2005	Crane et al.	239/290
2008/0145530	A1	6/2008	Bondeson et al.	

FOREIGN PATENT DOCUMENTS

DE	19715740	A1	4/1997
EP	0893517	A2	1/1999
EP	0979885	A2	2/2000
EP	1155745	A2	11/2001
EP	0835952	B1	2/2003
EP	0872580	B1	6/2005
GB	756907		9/1956
GB	1392667		4/1975

WO	9207122	A1	4/1992
WO	9315895	A1	8/1993
WO	9904950	A1	2/1999

OTHER PUBLICATIONS

Nordson Corporation, Adhesive and Power Application Systems for the Nonwoven Industry, 1992, 7 pgs.

Edward K. McNalley et al., J&M Laboratories, Durafiber/Durastitch Adhesives Applications Methods Featuring Solid State Application Technology disclosed Sep. 8, 1997 at Inda-Tec 97 Meeting, Cambridge MA, pp. 26.1-26.8.

Rajiv S. Rao et al., Vibration and Stability in the Melt Blowing Process, Ind. Eng. Chem. Res., 1993, 32, 3100-3111.

Gregory F. Ward, Micro-Denier Nonwoven Process and Fabrics, on or about Oct. 17, 1997, pp. 1-9.

Scott R. Miller, Beyond Meltblowing: Process Refinement in Microfibre Hot Melt Adhesive Technology, Edana 1998 International Nonwovens Symposium, 11 pgs.

European Patent Office, European Search Report in EP Application No. 07122920, Aug. 27, 2008.

* cited by examiner

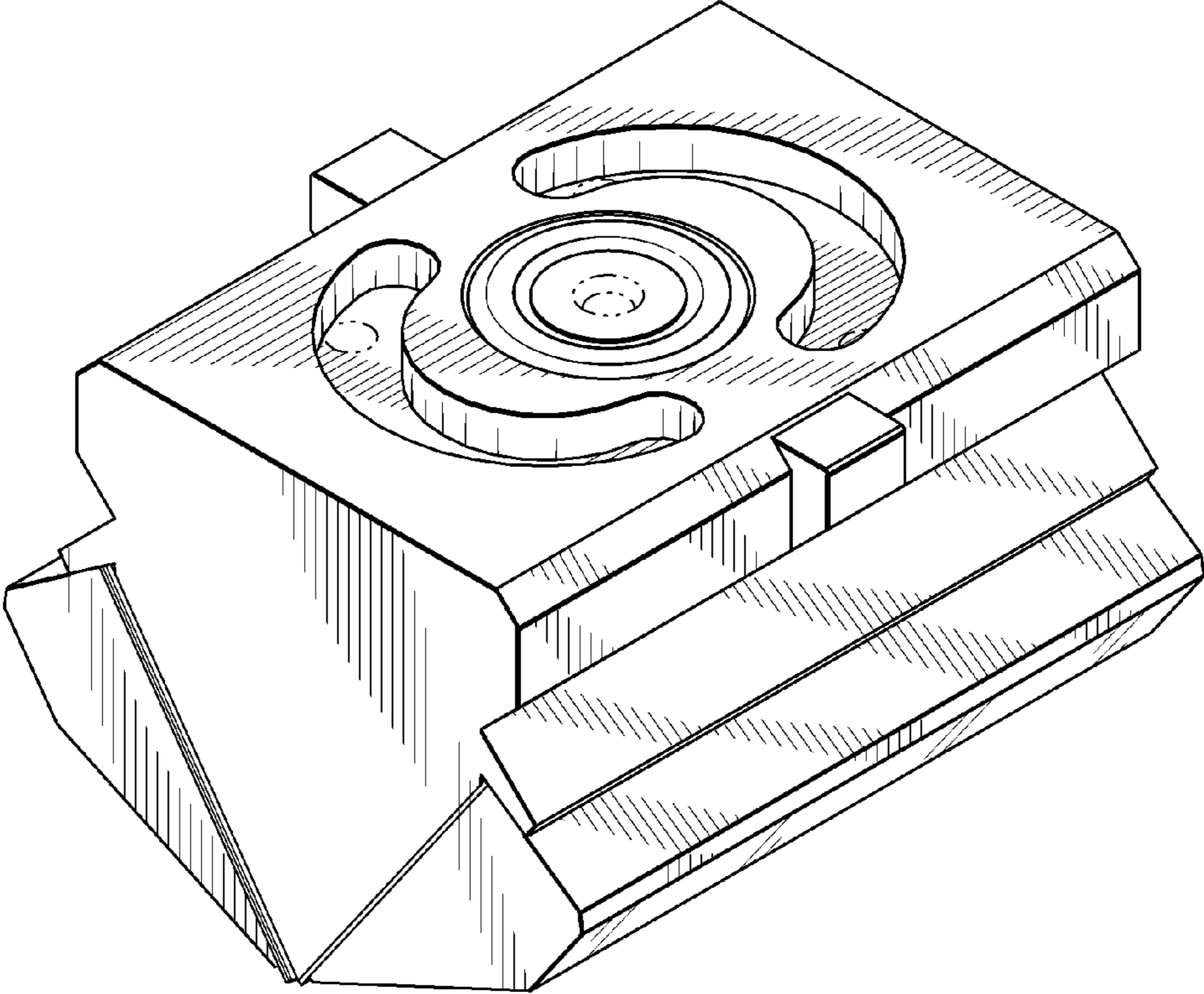


FIG. 1

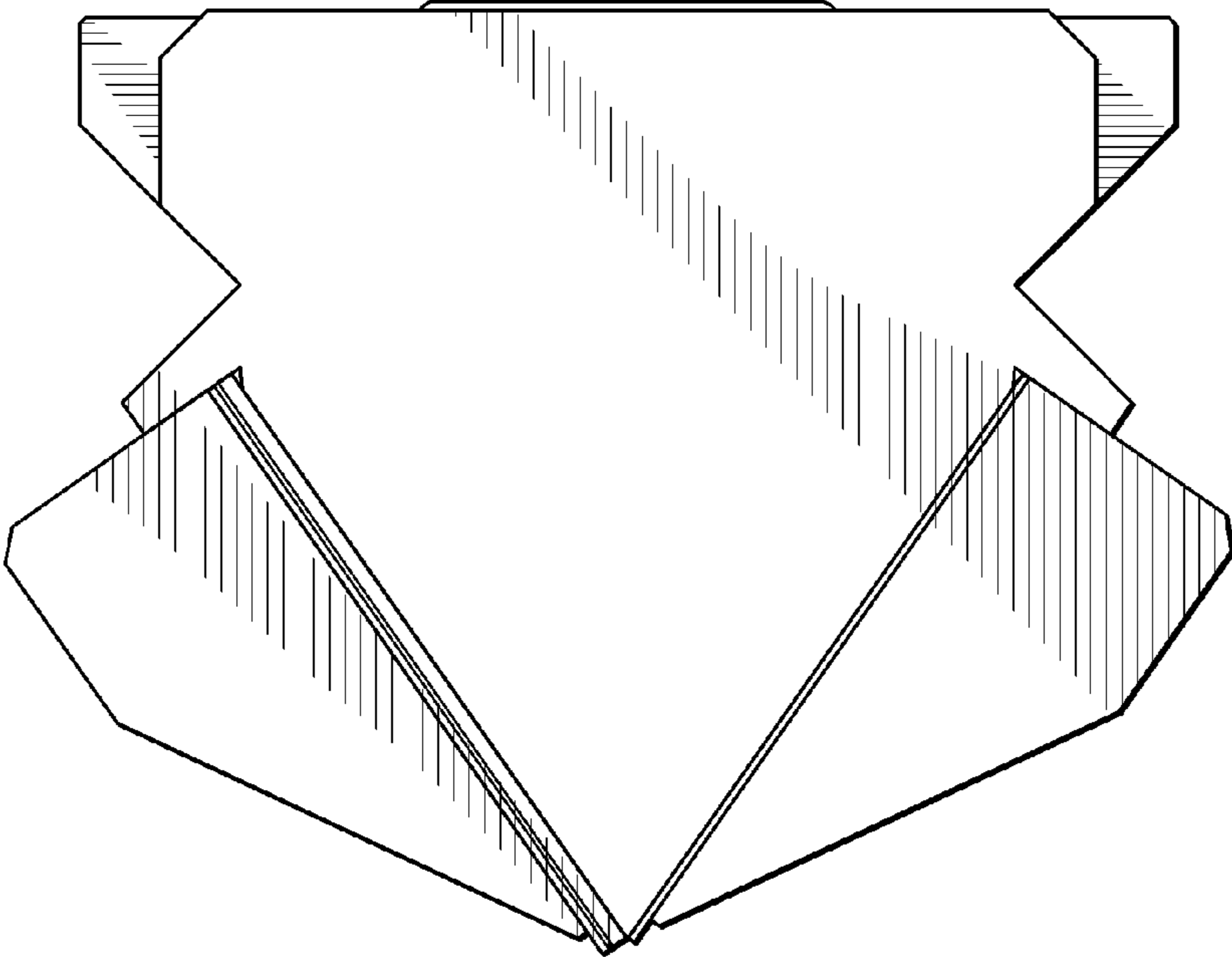


FIG. 2

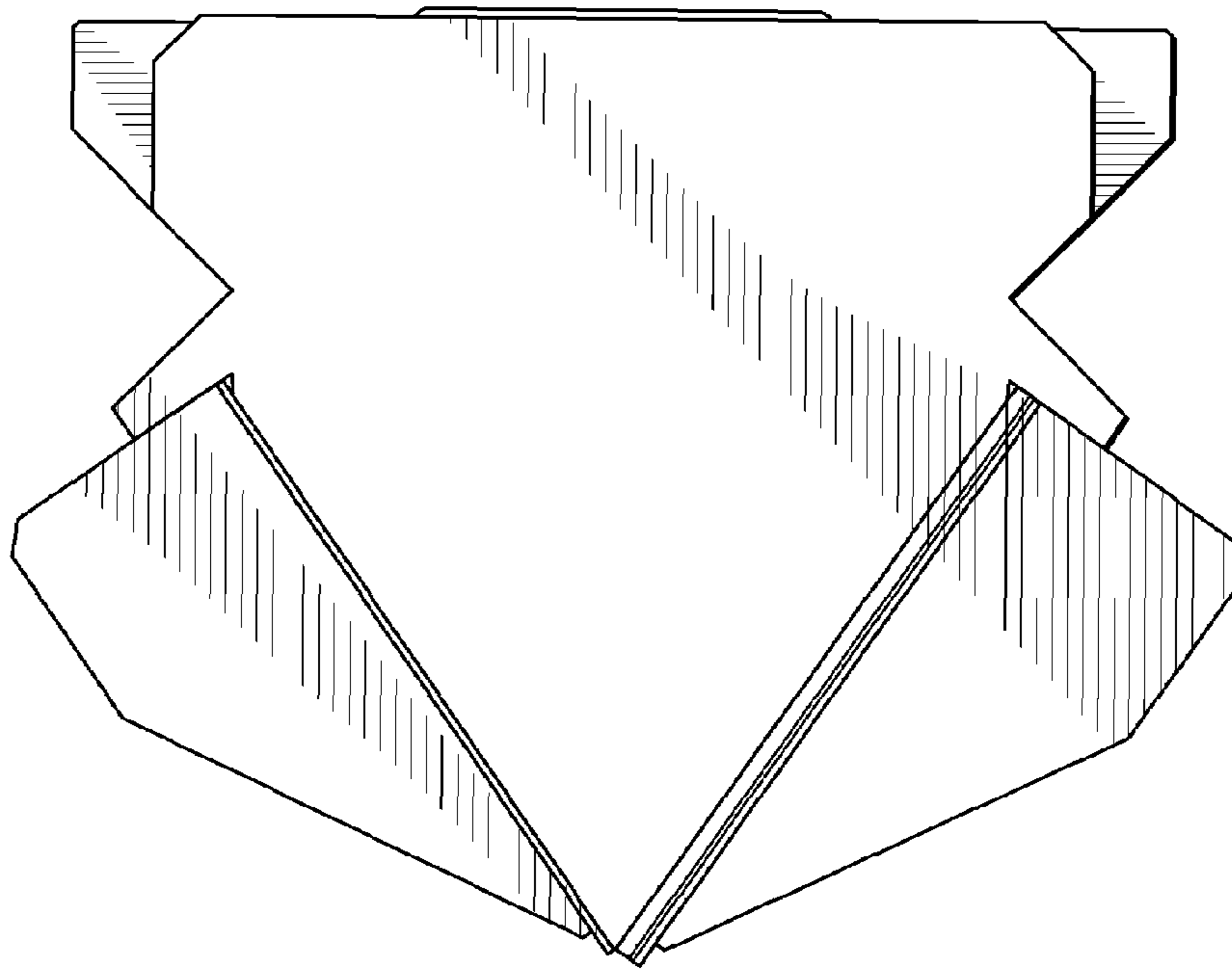


FIG. 3

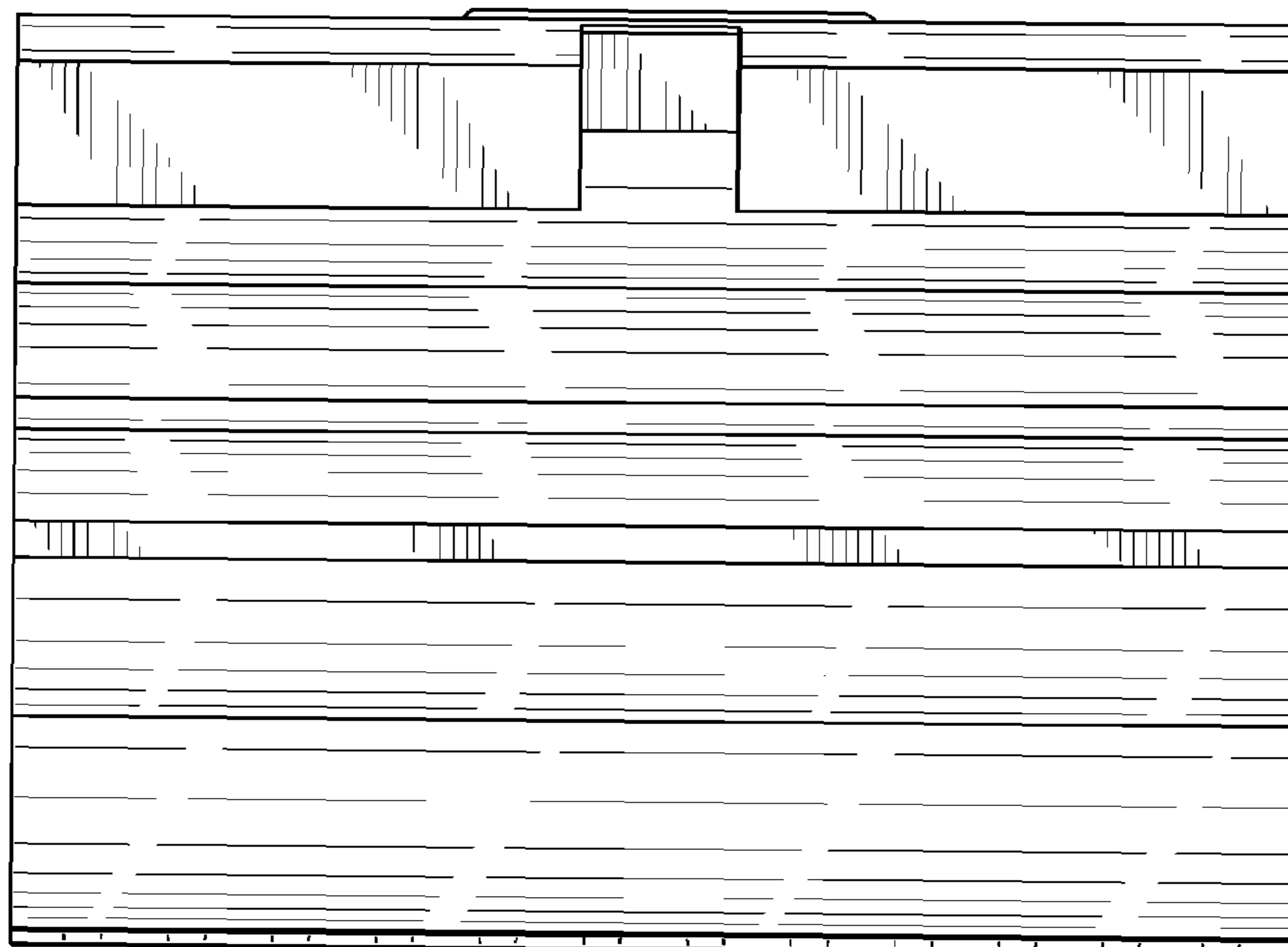


FIG. 4

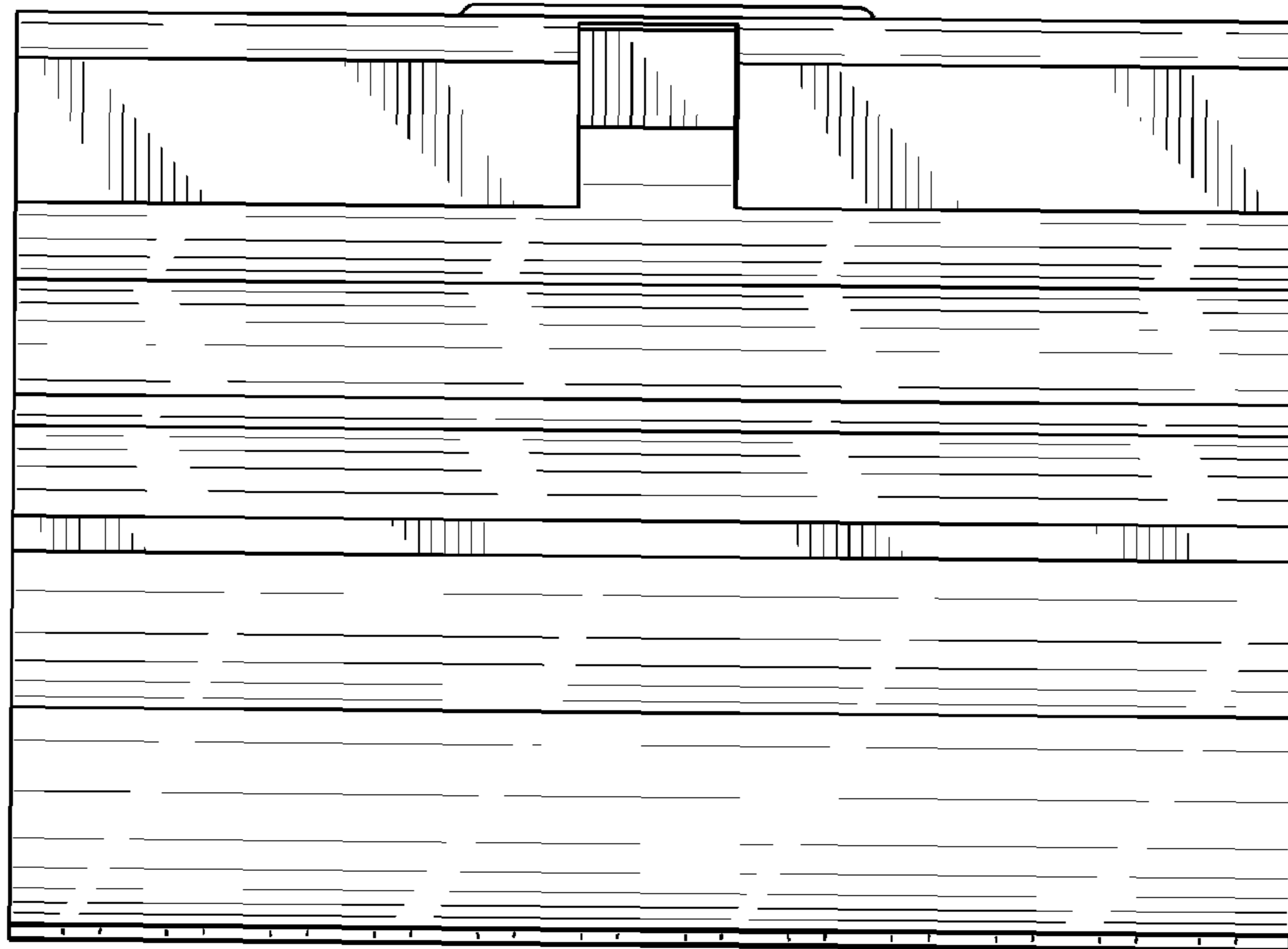


FIG. 5

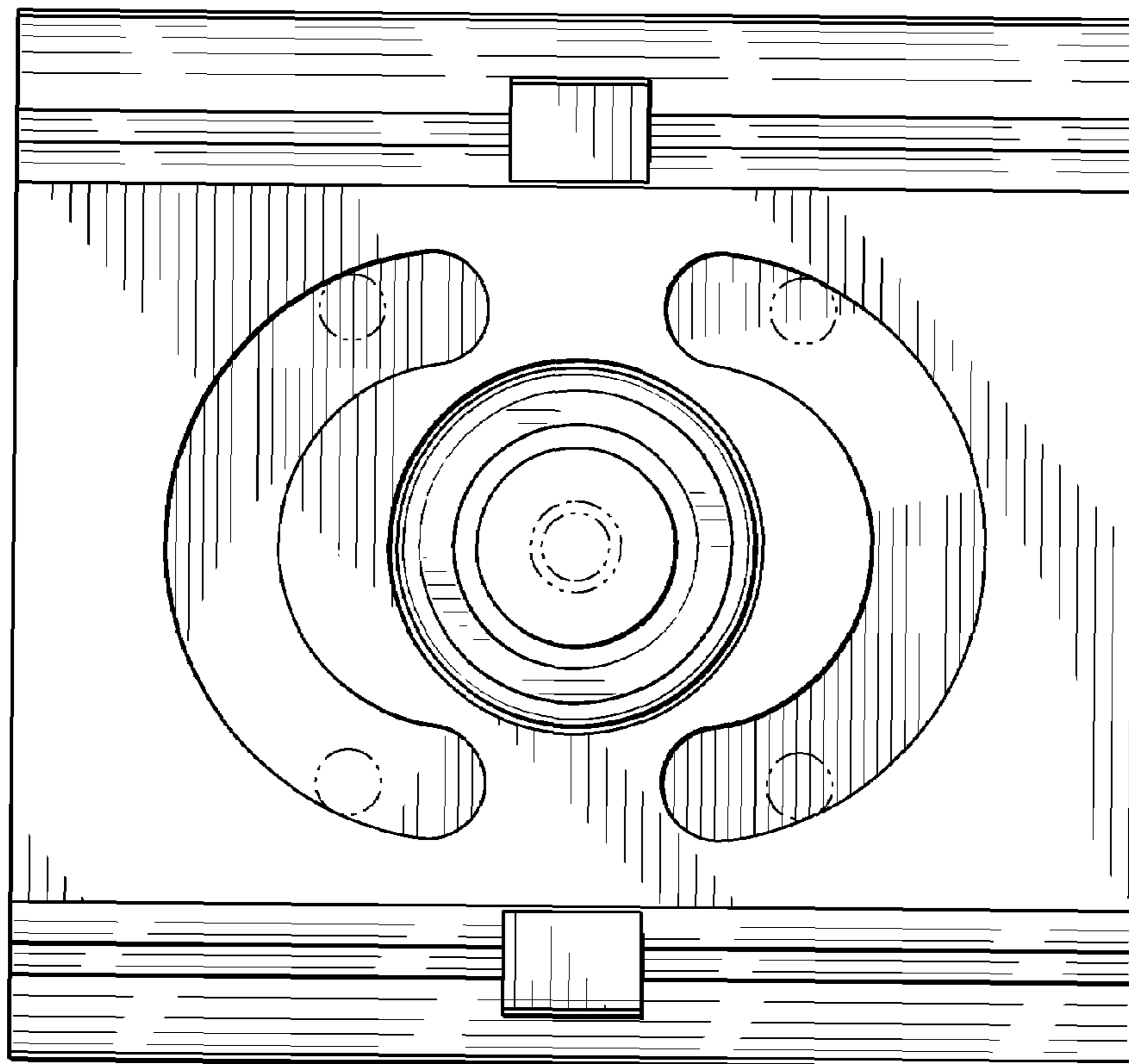


FIG. 6

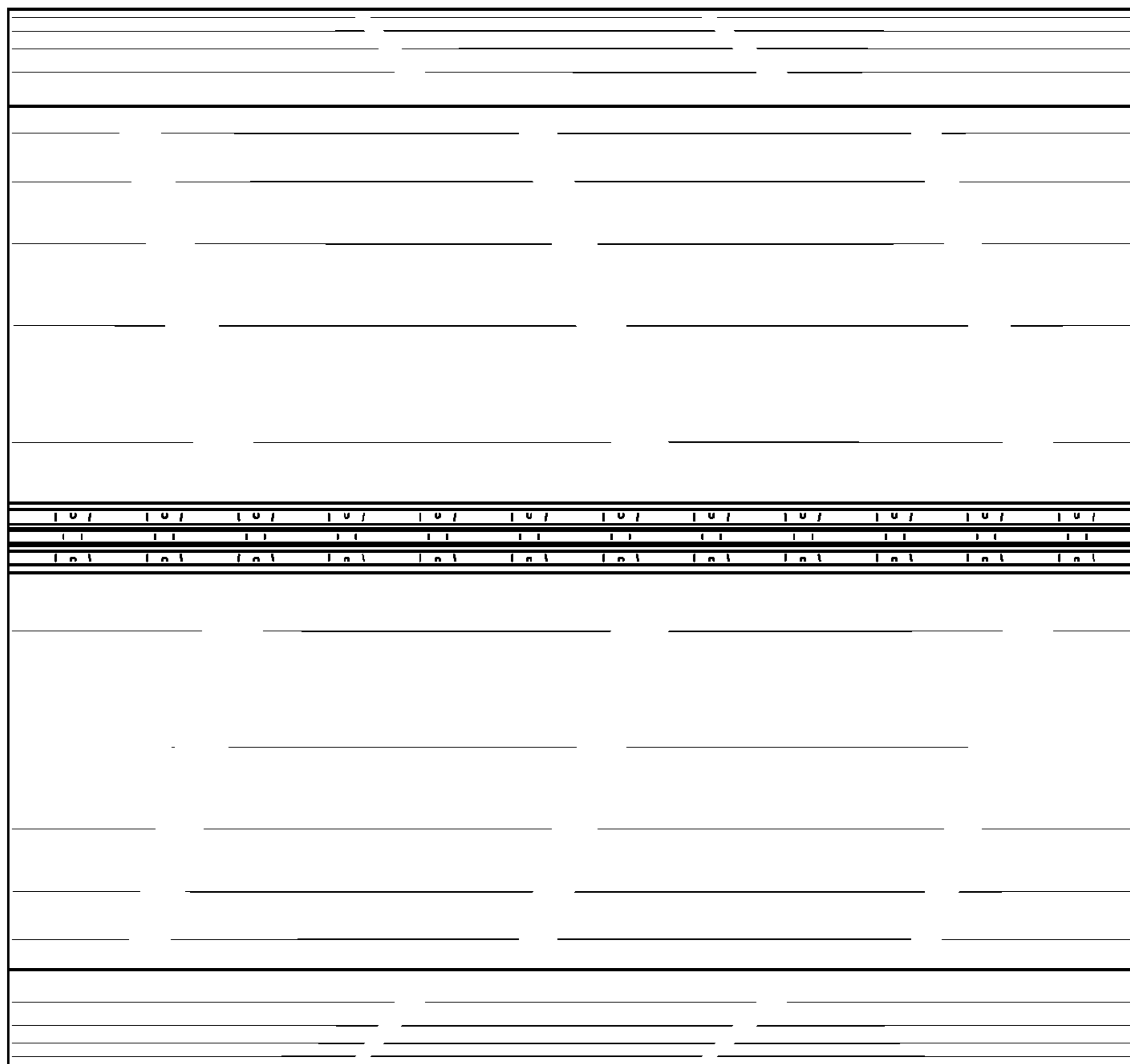


FIG. 7

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : Des. 588,617 S
APPLICATION NO. : 29/306666
DATED : March 17, 2009
INVENTOR(S) : Thomas Burmester et al.

Page 1 of 2

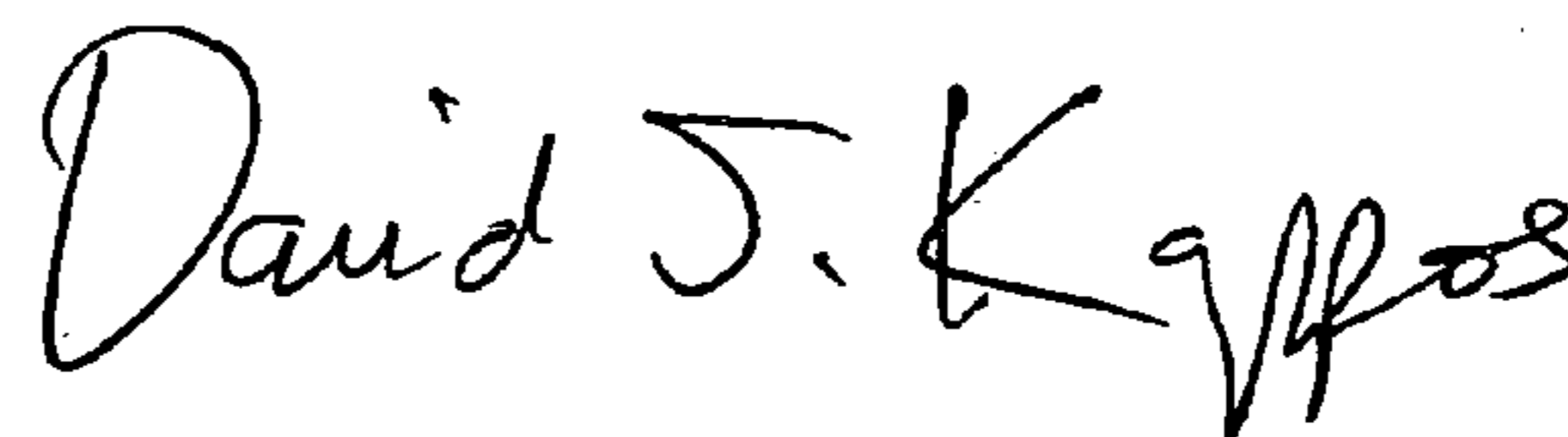
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Drawings

Substitute Fig. 5 as attached for Fig. 5 as shown in the above-identified patent.

Signed and Sealed this

Fifteenth Day of December, 2009

A handwritten signature in black ink that reads "David J. Kappos". The signature is written in a cursive, flowing style.

David J. Kappos
Director of the United States Patent and Trademark Office

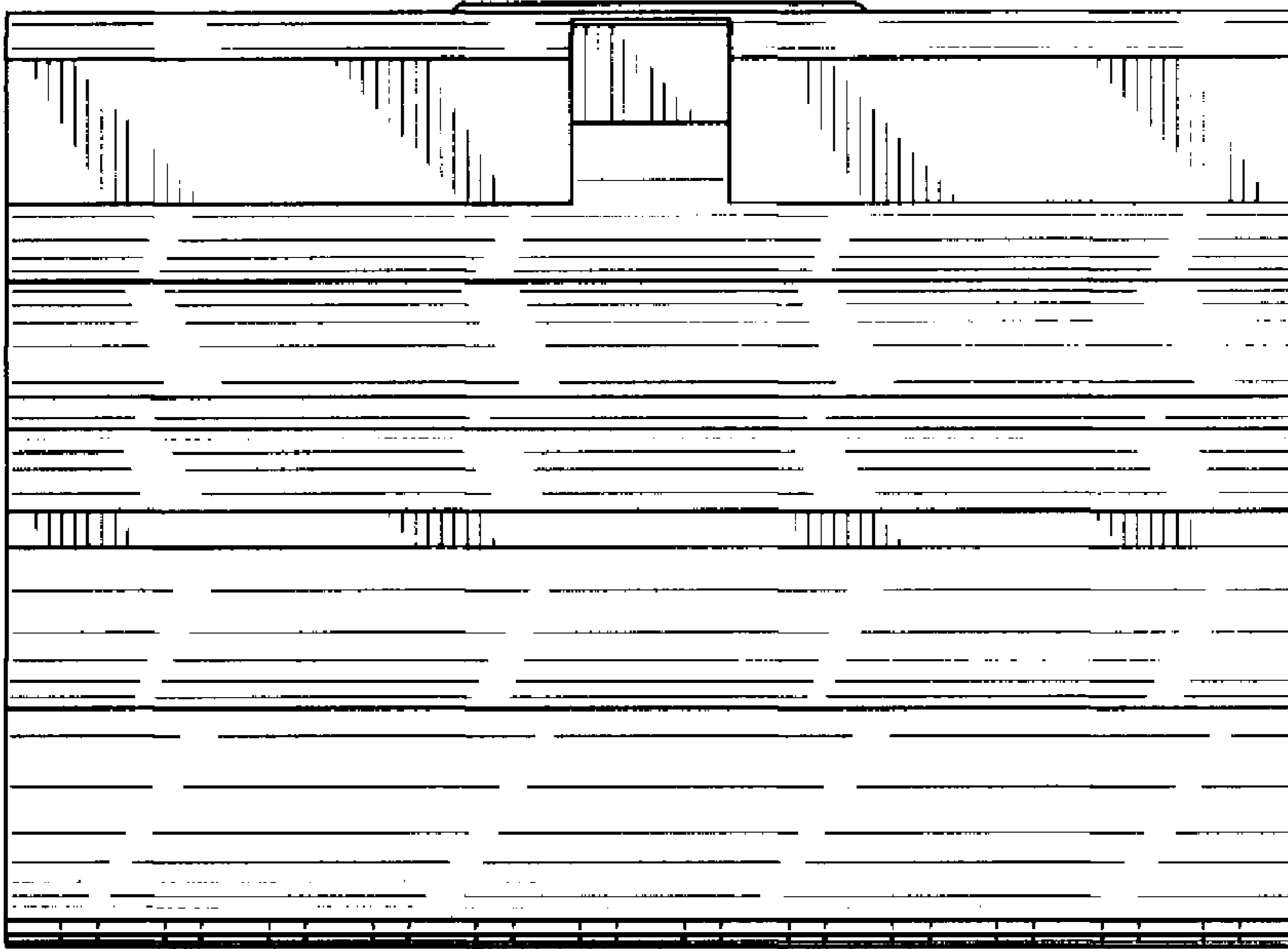


FIG. 5

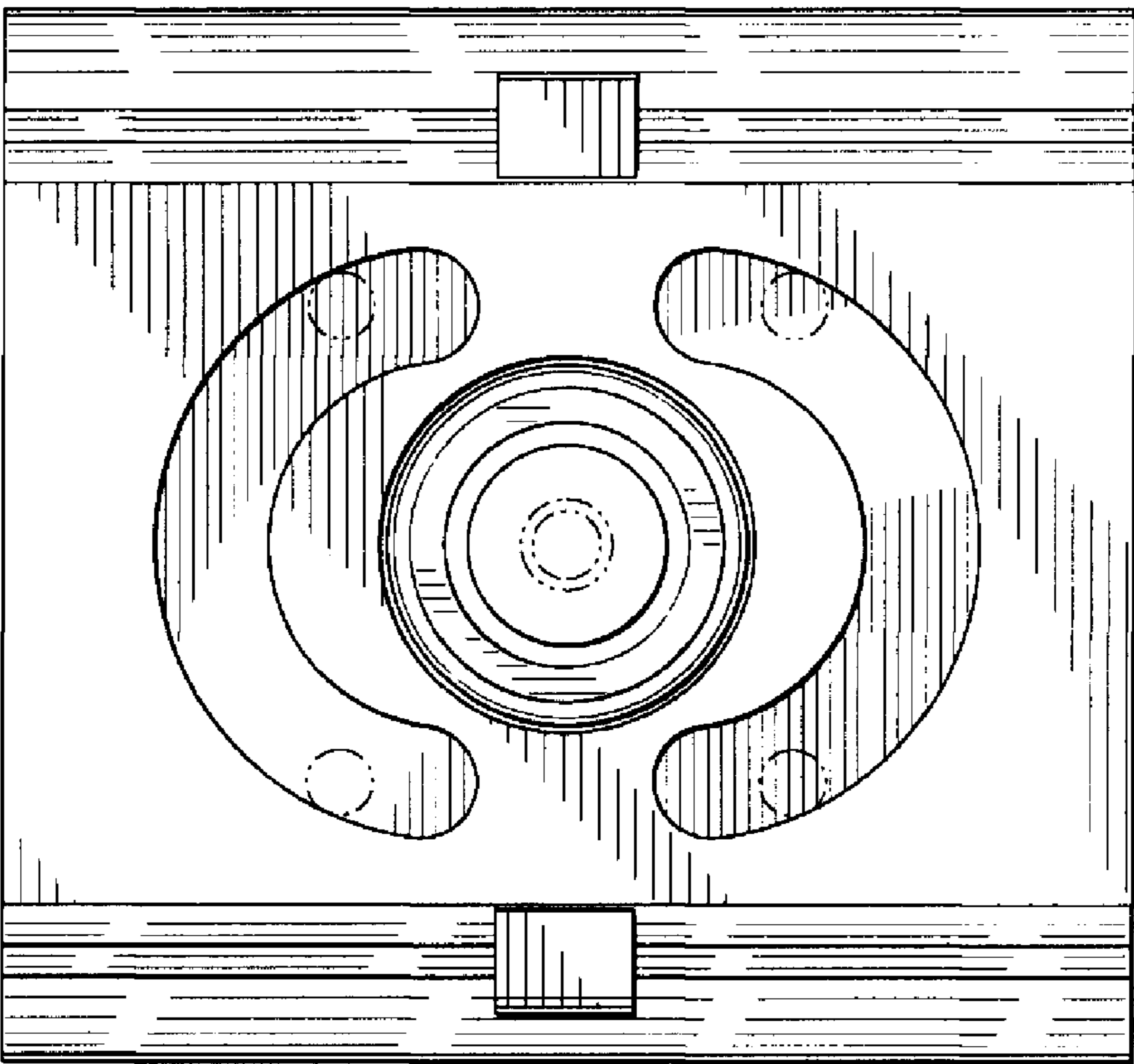


FIG. 6