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

(10) **Patent No.:** **US D667,108 S**

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(54) **SYRINGE PLUNGER ROD**

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(73) **Assignee:** **Becton, Dickinson and Company**, Franklin Lakes, NJ (US)

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

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(51) **LOC (9) Cl.** **24-02**

(52) **U.S. Cl.** **D24/130**

(58) **Field of Classification Search** D24/112, D24/127, 130; 604/218, 232, 224, 228, 110, 604/195; 222/390

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,543,093	A *	9/1985	Christinger	604/228
5,075,057	A	12/1991	Hoedl		
5,129,884	A	7/1992	Dysarz		
5,226,897	A	7/1993	Nevens		
5,271,500	A	12/1993	Szacon		
5,277,869	A	1/1994	Glazer et al.		
5,328,484	A	7/1994	Somers et al.		
5,350,562	A	9/1994	Anthony		
5,395,681	A	3/1995	Hargarter et al.		
5,427,737	A	6/1995	Glazer et al.		
5,462,794	A	10/1995	Lindemann et al.		
5,508,004	A	4/1996	Held et al.		
5,520,642	A	5/1996	Bigagli et al.		
5,557,905	A	9/1996	Harding		
5,558,280	A	9/1996	Morgan		
5,582,793	A	12/1996	Glazer et al.		
5,686,527	A	11/1997	Laurin et al.		

(Continued)

FOREIGN PATENT DOCUMENTS

DE 4319989 12/1994

(Continued)

OTHER PUBLICATIONS

Zhao, Ruixiang et al., "Emerging Biodegradable Materials: starch- and protein-based bio-nanocomposites", *J Mater Sci* (2008) 43:3058-3071 Mar. 15, 2008, 14 pgs.

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(57) **CLAIM**

The ornamental designs for a syringe plunger rod, substantially as shown and described.

DESCRIPTION

FIG. 1 is a top right rear perspective view of a syringe plunger rod;

FIG. 2 is a right view of a syringe plunger rod;

FIG. 3 is a left view of a syringe plunger rod;

FIG. 4 is a top view of a syringe plunger rod;

FIG. 5 is a bottom view of a syringe plunger rod;

FIG. 6 is a back view of a syringe plunger rod;

FIG. 7 is a front view of a syringe plunger rod;

FIG. 8 is a top right rear perspective view of a second embodiment of a syringe plunger rod;

FIG. 9 is a right view of FIG. 8;

FIG. 10 is a left view of FIG. 8;

FIG. 11 is a top view of FIG. 8;

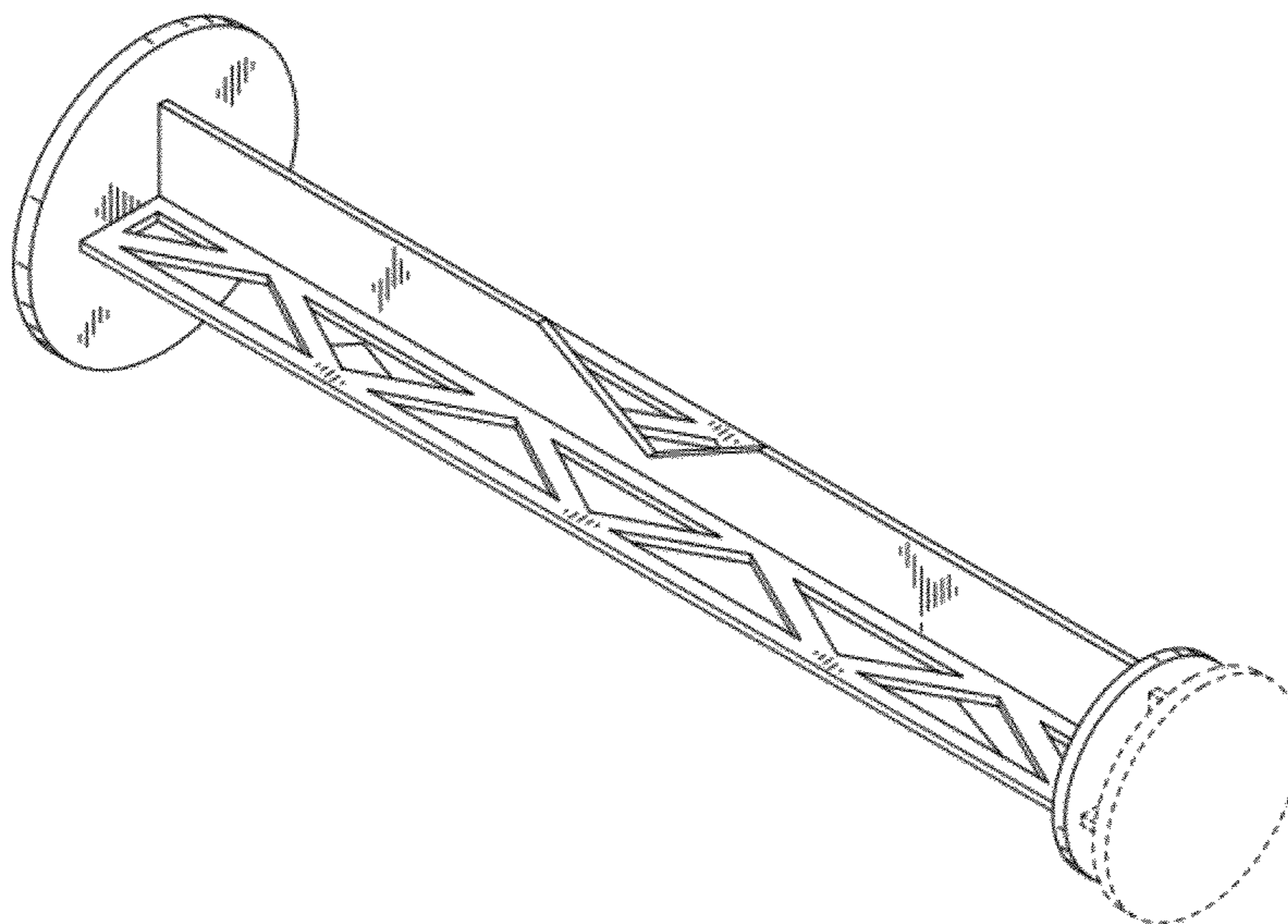
FIG. 12 is a bottom view of FIG. 8;

FIG. 13 is a back view of FIG. 8; and,

FIG. 14 is a front view of FIG. 8.

The broken line showing in FIGS. 1-7 is for the purpose of illustrating portions of the article and form no part of the claimed design.

1 Claim, 8 Drawing Sheets



US D667,108 S

U.S. PATENT DOCUMENTS			
5,693,026	A	12/1997	Spinello
5,693,278	A	12/1997	Clements
5,785,260	A	7/1998	Morgan
5,824,745	A	10/1998	Brown
5,830,396	A	11/1998	Higgins et al.
D403,762	S *	1/1999	Gabbard et al. D24/113
D412,206	S	7/1999	Basile et al.
6,004,297	A	12/1999	Steenfeldt-Jensen et al.
6,030,367	A *	2/2000	Balestracci 604/218
6,053,314	A	4/2000	Pittman
D427,676	S *	7/2000	Balestracci D24/114
D432,231	S *	10/2000	Balestracci D24/114
D437,050	S *	1/2001	Balestracci D24/114
6,168,862	B1	1/2001	Rosenbaum et al.
6,242,525	B1	6/2001	Raetzsch
6,261,655	B1	7/2001	Rosenbaum et al.
6,293,856	B1	9/2001	Hertz et al.
6,297,322	B1	10/2001	Ding et al.
6,348,272	B1	2/2002	Haveaux
6,391,008	B1	5/2002	Tsai
6,402,721	B1	6/2002	Lo
6,416,323	B1	7/2002	Grenfell et al.
6,478,780	B1	11/2002	Shields
6,494,866	B1 *	12/2002	Robinson 604/228
6,500,129	B1	12/2002	Mahurkar
6,712,207	B2	3/2004	Panek, Jr. et al.
6,764,465	B2	7/2004	Chen
6,792,662	B2	9/2004	Samuel
6,808,820	B2	10/2004	Lee et al.
6,878,131	B2	4/2005	Novacek et al.
6,881,493	B2	4/2005	Haveaux et al.
6,881,790	B1	4/2005	Laurin
6,997,904	B2	2/2006	Sculati
7,191,777	B2	3/2007	Brand et al.
7,226,956	B2	6/2007	Wilkes et al.
7,243,792	B2	7/2007	Panek, Jr. et al.
7,531,226	B2	5/2009	Lee et al.
7,592,408	B2	9/2009	Wilson, Jr. et al.
7,596,844	B2	10/2009	Japuntich et al.
7,600,639	B2	10/2009	Japuntich et al.
7,877,849	B2	2/2011	Panek, Jr. et al.
D638,122	S *	5/2011	Kosinski et al. D24/130
D638,123	S *	5/2011	Kosinski et al. D24/130
D638,538	S *	5/2011	Kosinski et al. D24/130
2001/0056259	A1	12/2001	Skinkle et al.
2003/0038046	A1	2/2003	Panek, Jr. et al.
2003/0040701	A1	2/2003	Dalmose
2003/0213714	A1	11/2003	Moats et al.
2004/0099555	A1	5/2004	Panek, Jr. et al.
2004/0235970	A1	11/2004	Smith et al.
2005/0121343	A1	6/2005	Miller et al.
2005/0192534	A1	9/2005	Wolbring et al.
2005/0218142	A1	10/2005	Finnestad et al.
2005/0228682	A1	10/2005	Firestone, III
2006/0052748	A1 *	3/2006	Coelho et al. 604/110
2006/0161106	A1	7/2006	Wu
2007/0016145	A1	1/2007	Berler
2007/0068832	A1	3/2007	Anderson et al.
2007/0068834	A1	3/2007	Smudde et al.
2007/0069490	A1	3/2007	Japuntich et al.
2007/0078402	A1	4/2007	Yang
2007/0299307	A1	12/2007	Lew et al.
2008/0058736	A1	3/2008	Reshamwala
2008/0065027	A1	3/2008	Sharp
2008/0067093	A1	3/2008	Japuntich et al.
2008/0067094	A1	3/2008	Japuntich et al.
2008/0067100	A1	3/2008	Japuntich et al.
2008/0073231	A1	3/2008	Clayton et al.
2008/0073232	A1	3/2008	Reshamwala et al.
2008/0073251	A1	3/2008	Reshamwala et al.
2008/0076879	A1	3/2008	Resemdes et al.
2008/0140032	A1	6/2008	O'Malley
2008/0183140	A1	7/2008	Paproski et al.
2008/0300550	A1 *	12/2008	Schiller et al. 604/220
2009/0032423	A1	2/2009	Japuntich
2009/0048560	A1	2/2009	Caizza et al.
2009/0068412	A1	3/2009	Nahmias et al.
2009/0076450	A1	3/2009	Caizza et al.
2009/0120821	A1	5/2009	Japuntich et al.
2009/0131869	A1	5/2009	Caizza et al.
2009/0145901	A1	6/2009	Finnestad et al.
2009/0230008	A1	9/2009	Miller et al.
2010/0030159	A1	2/2010	Li
2010/0041937	A1	2/2010	Gonzalez
2010/0062921	A1	3/2010	Veiseh
2010/0155400	A1	6/2010	Finnestad et al.
2010/0282623	A1	11/2010	Reshamwala
2011/0068036	A1	3/2011	Ji et al.
2011/0071230	A1	3/2011	Ji
2011/0092903	A1 *	4/2011	Caizza et al. 604/110
FOREIGN PATENT DOCUMENTS			
DE	19726105	12/1998	
EP	0665327	8/1995	
EP	1702637	9/2006	
EP	2000164	12/2008	
JP	2002059082	2/2002	
JP	2009286106	12/2009	
WO	WO-91/01396	2/1991	
WO	WO-00/54885	9/2000	
WO	WO-01/34230	5/2001	
WO	WO-2006/097105	9/2006	
WO	WO-2008/018921	2/2008	
WO	WO-2008/018920	2/2008	
WO	WO-2008/039438	4/2008	
WO	WO-2008/106759	9/2008	
WO	WO-2011/035119	3/2011	

* cited by examiner

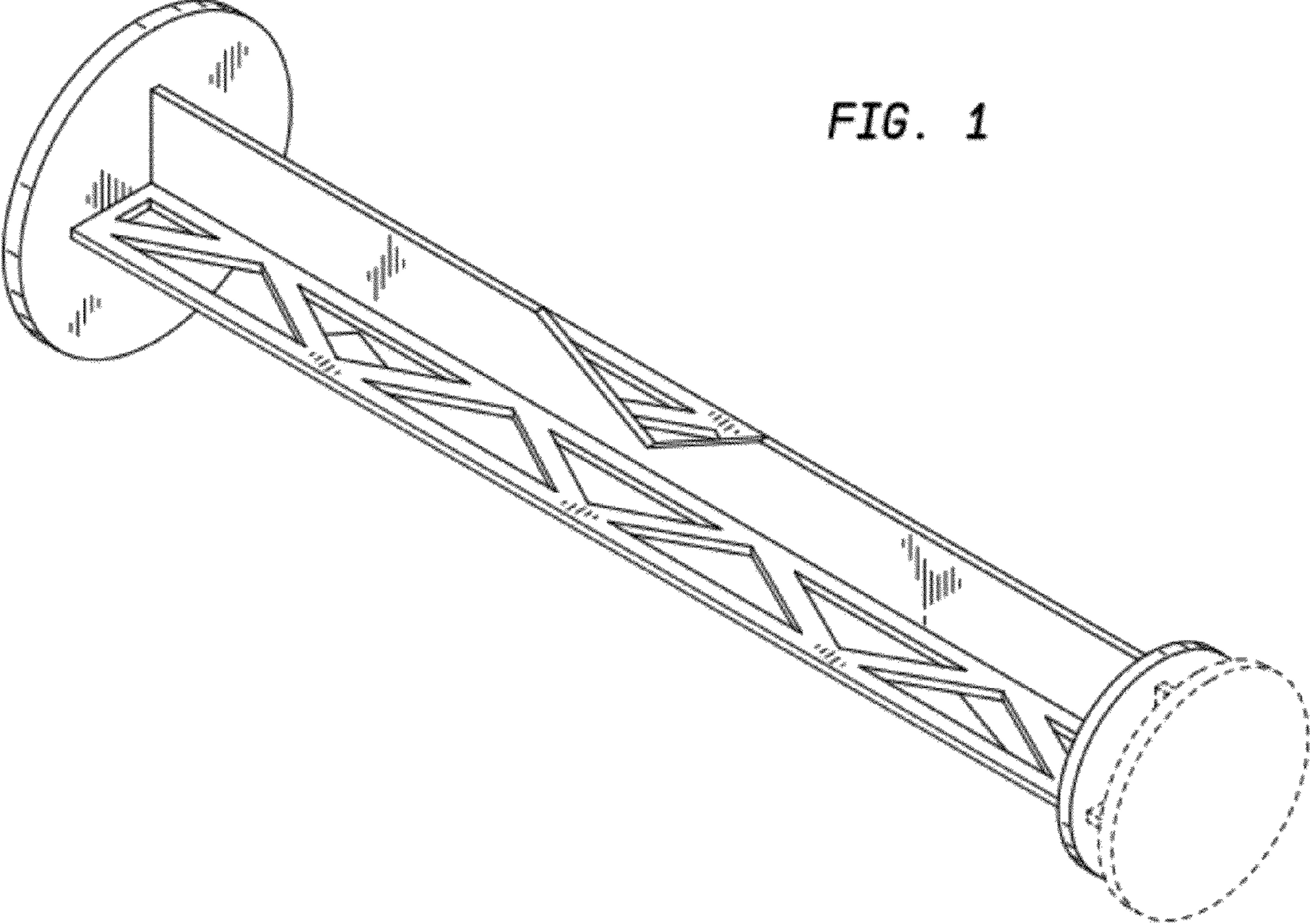


FIG. 1

FIG. 2

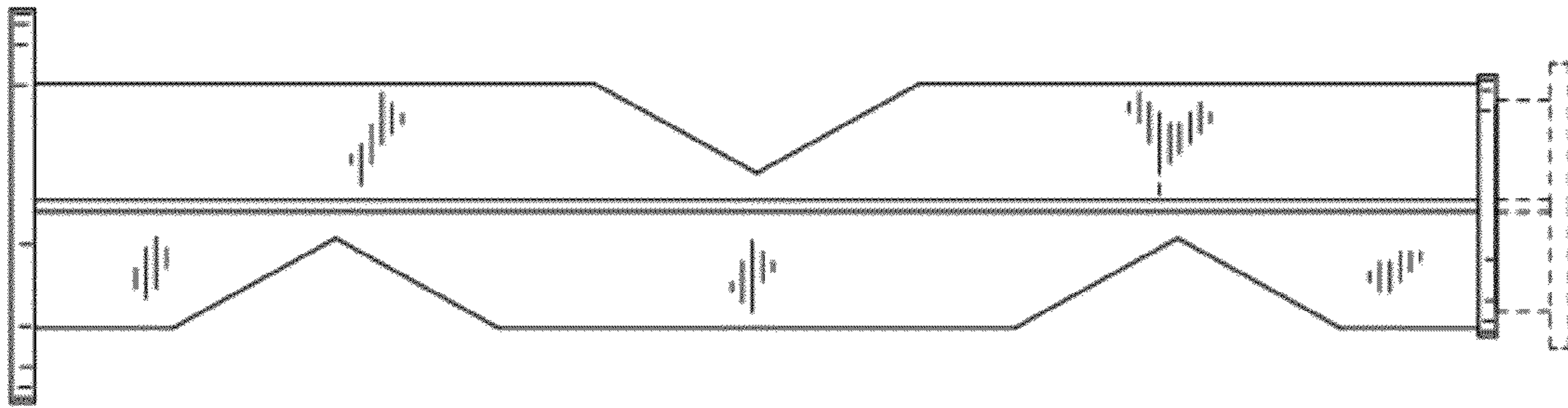


FIG. 3

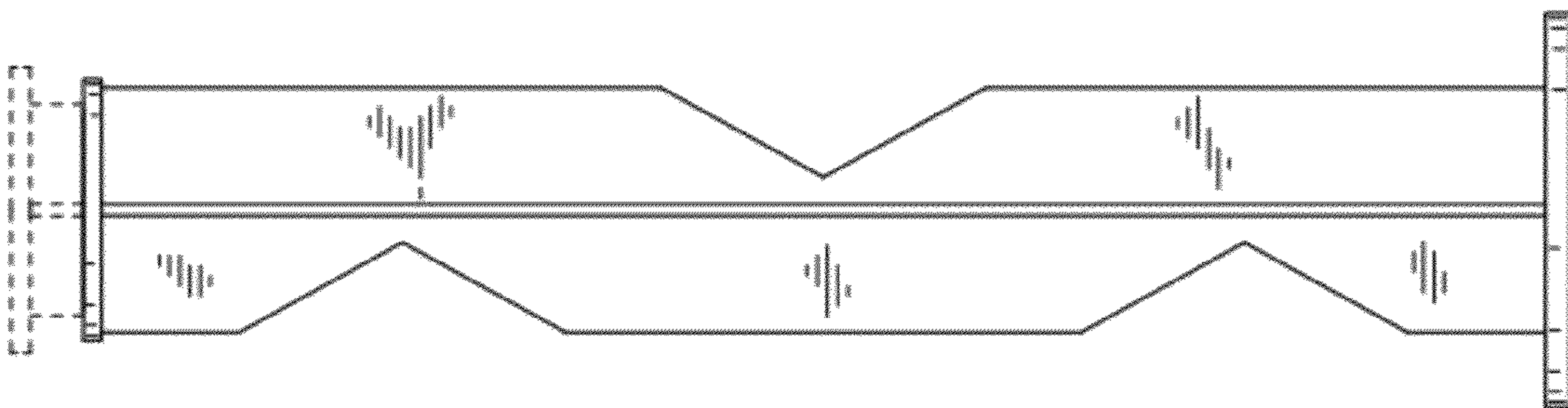


FIG. 4

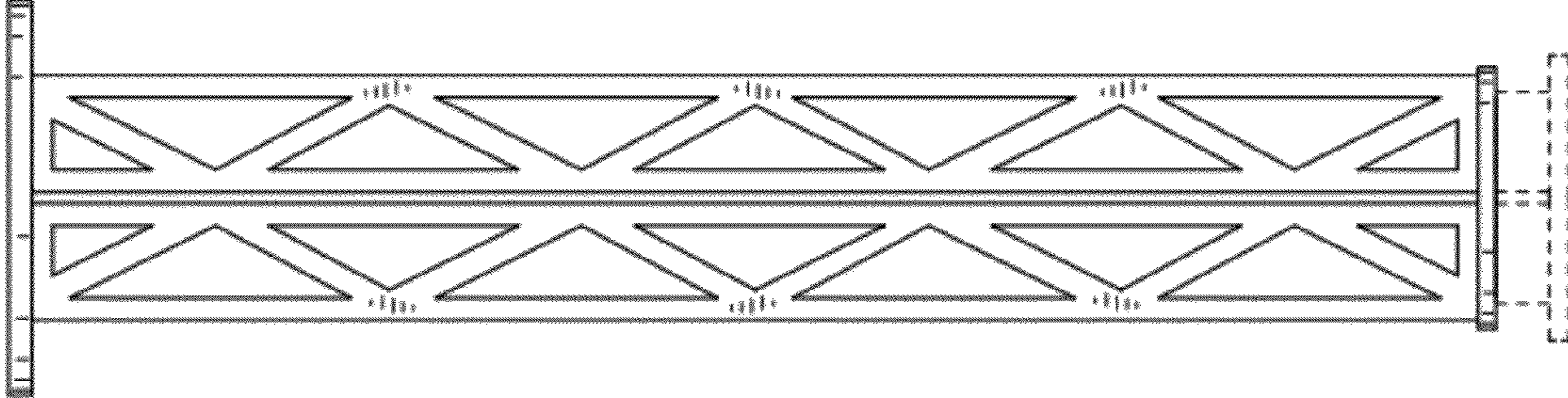


FIG. 5

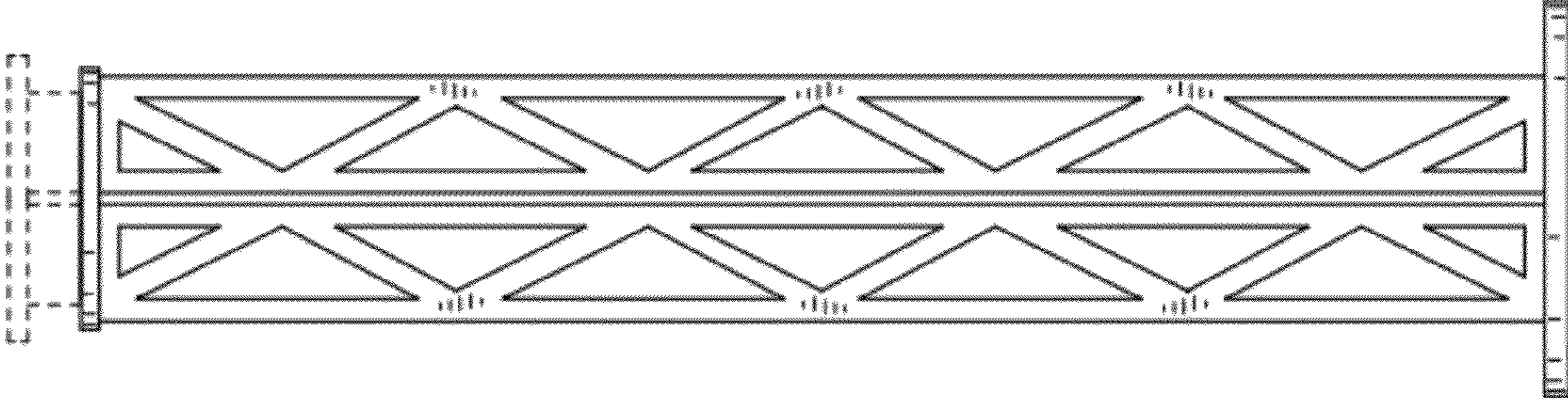


FIG. 6

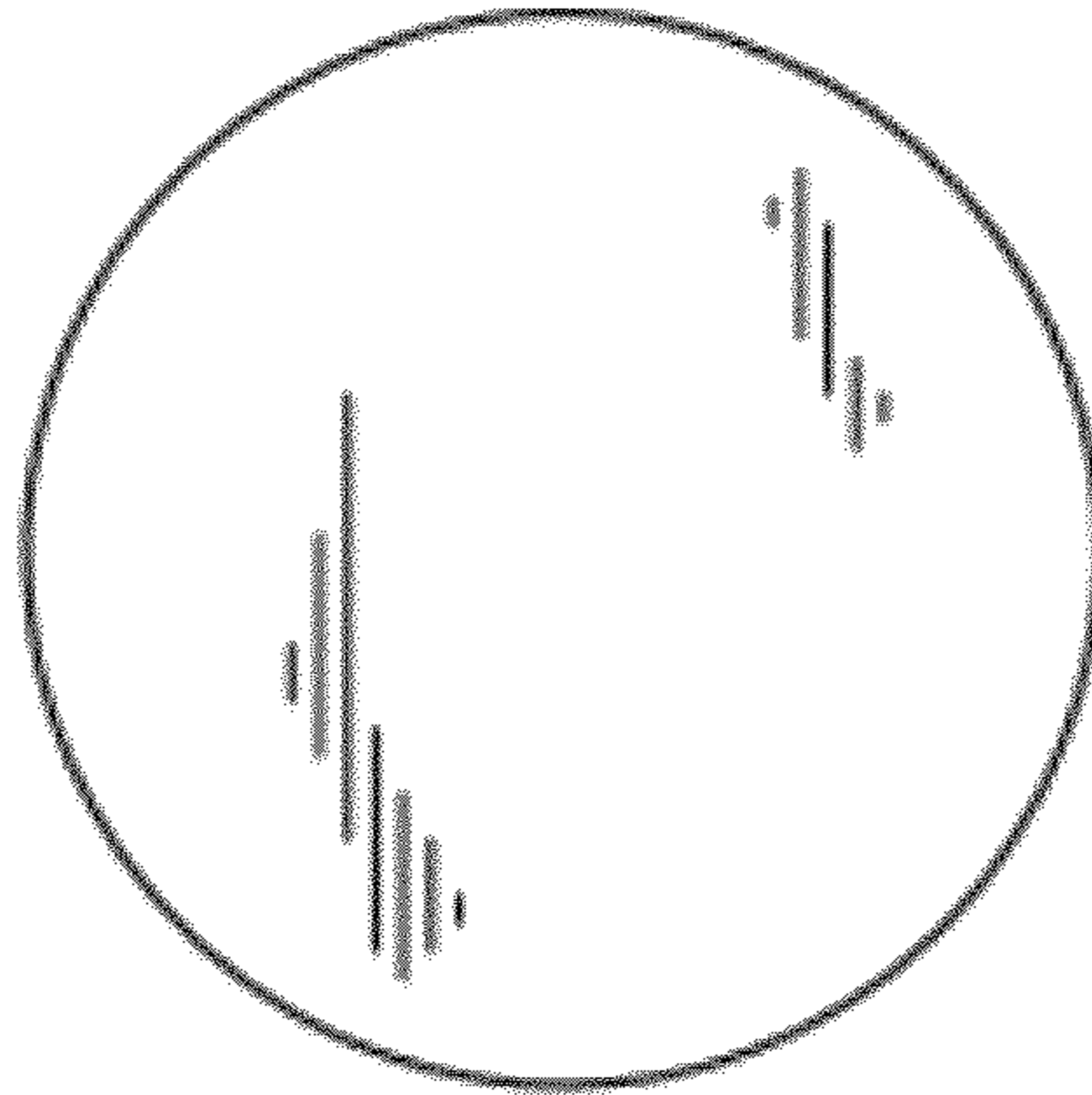
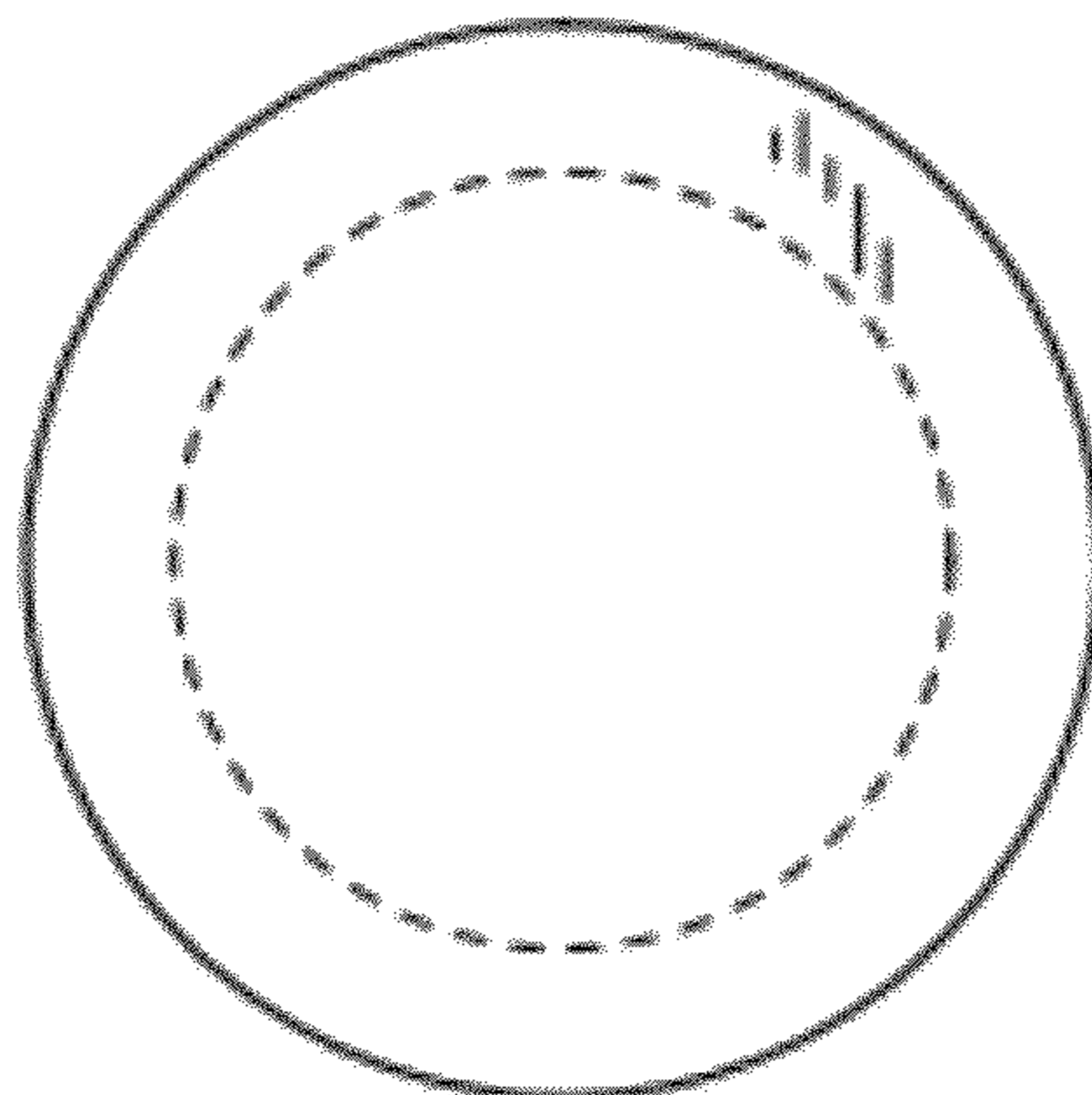


FIG. 7



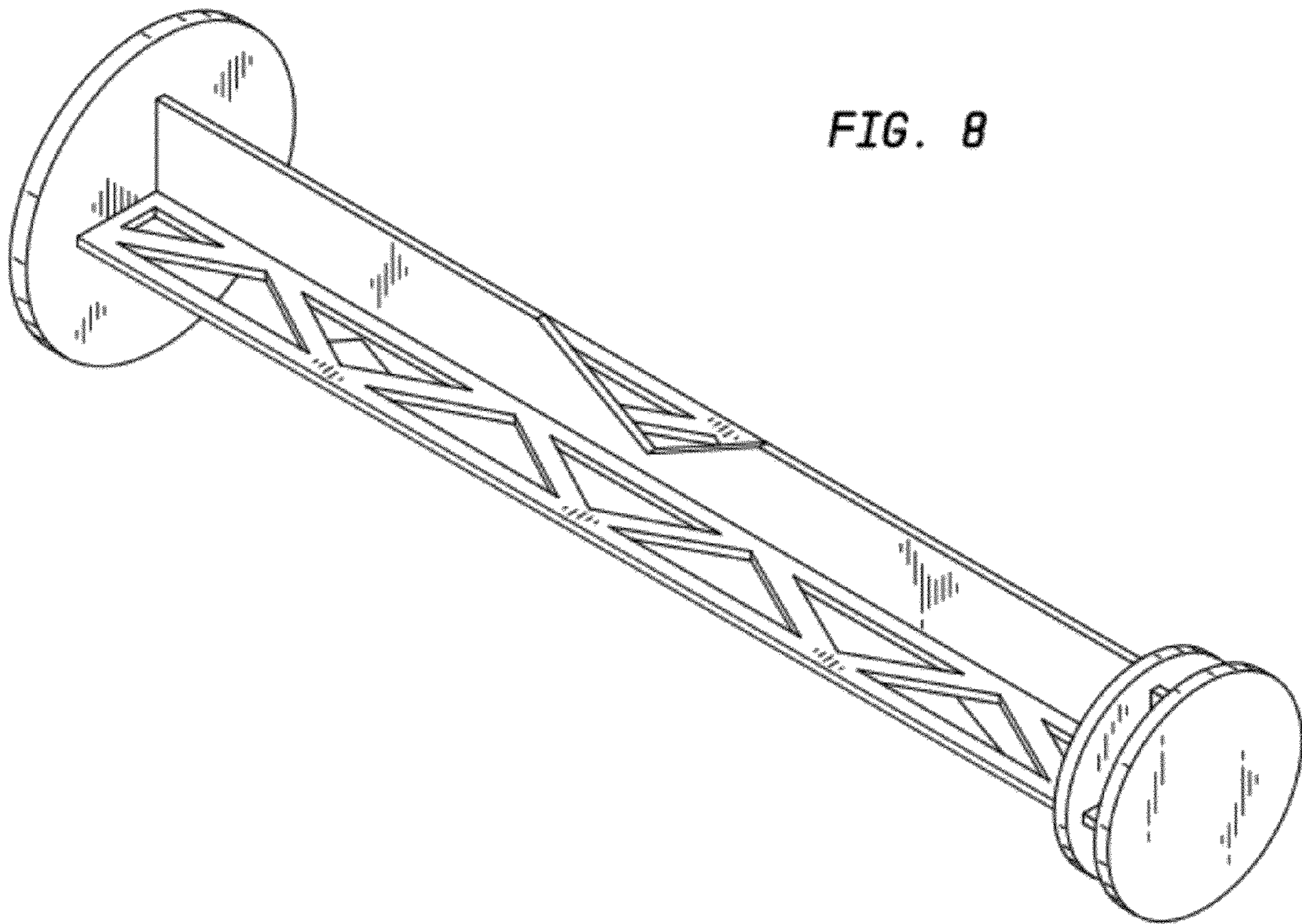


FIG. 8

FIG. 9

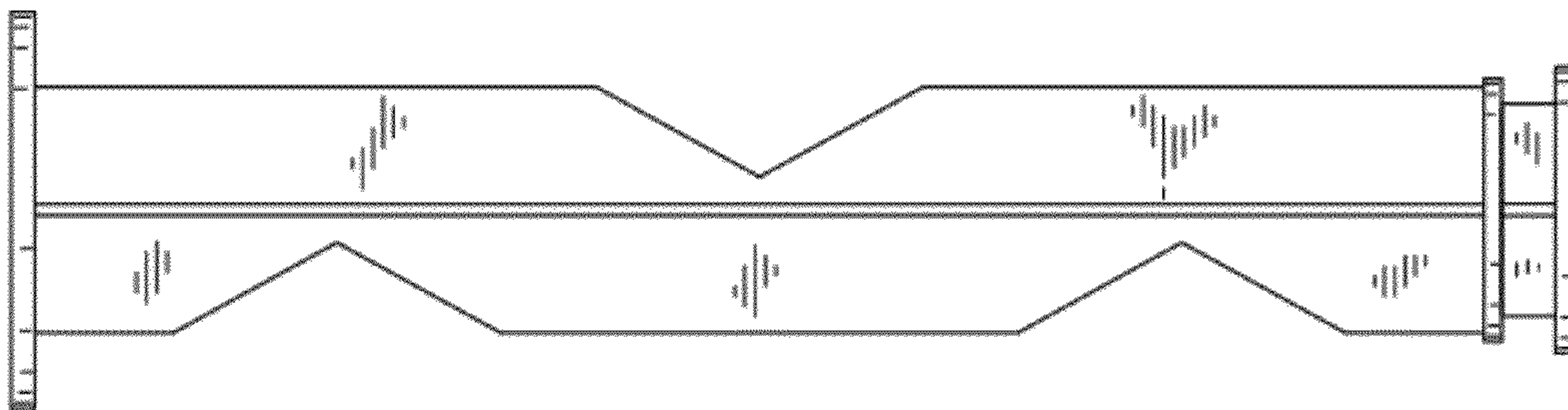


FIG. 10

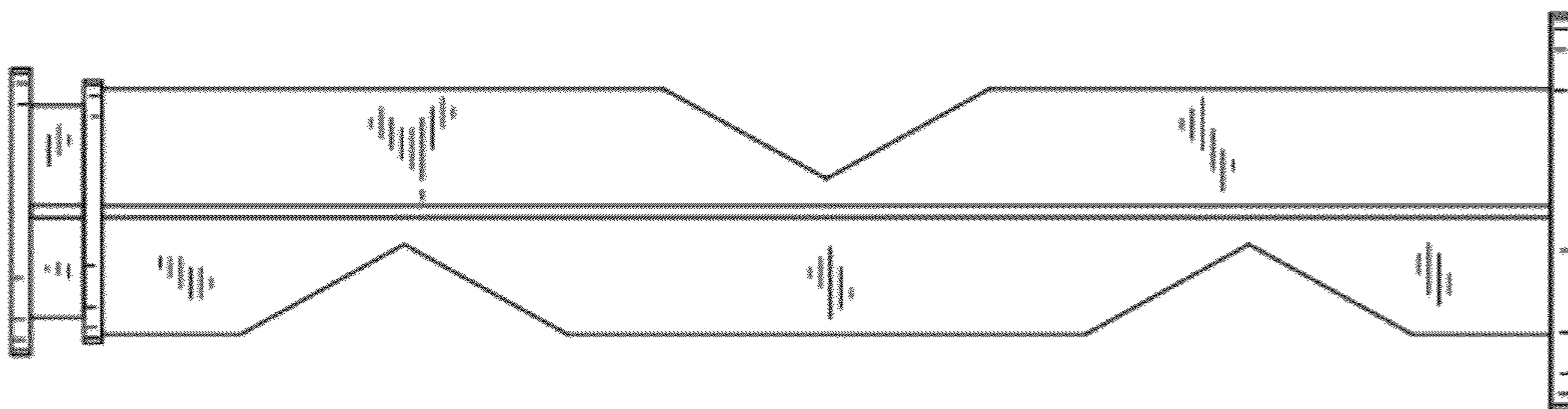


FIG. 11

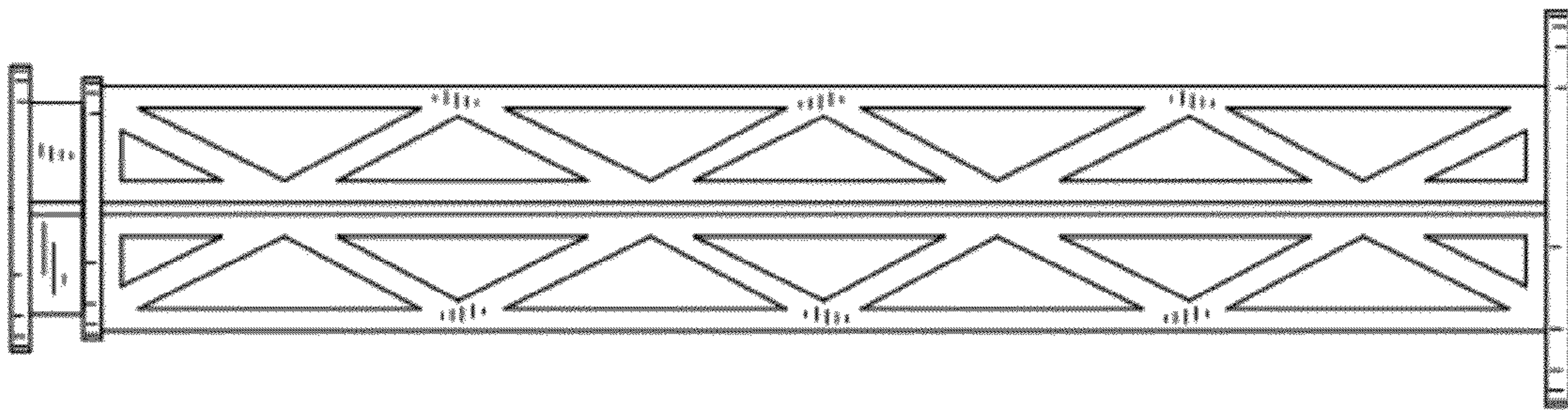


FIG. 12

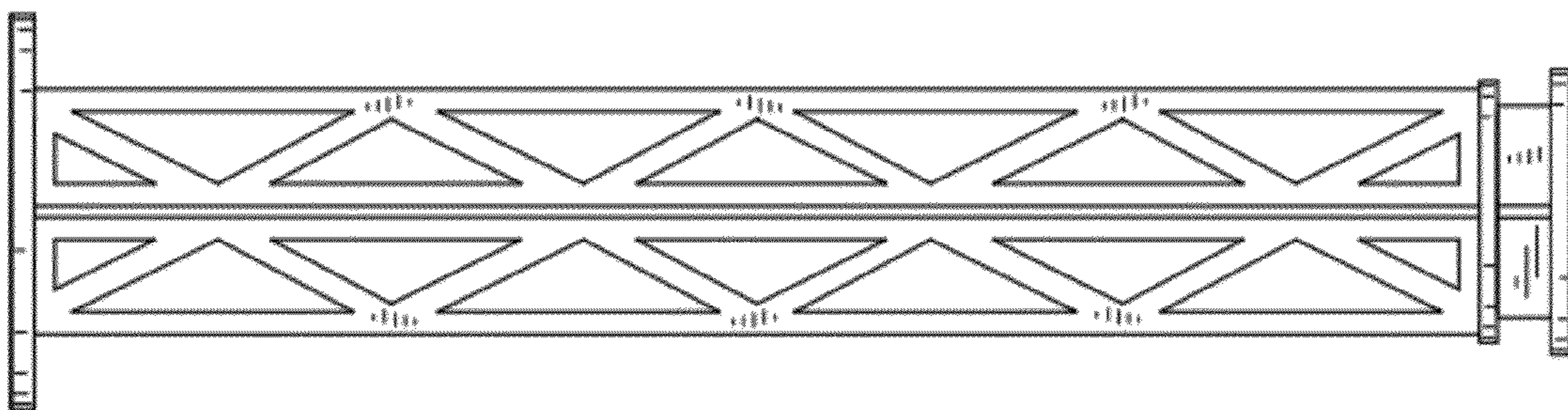


FIG. 13

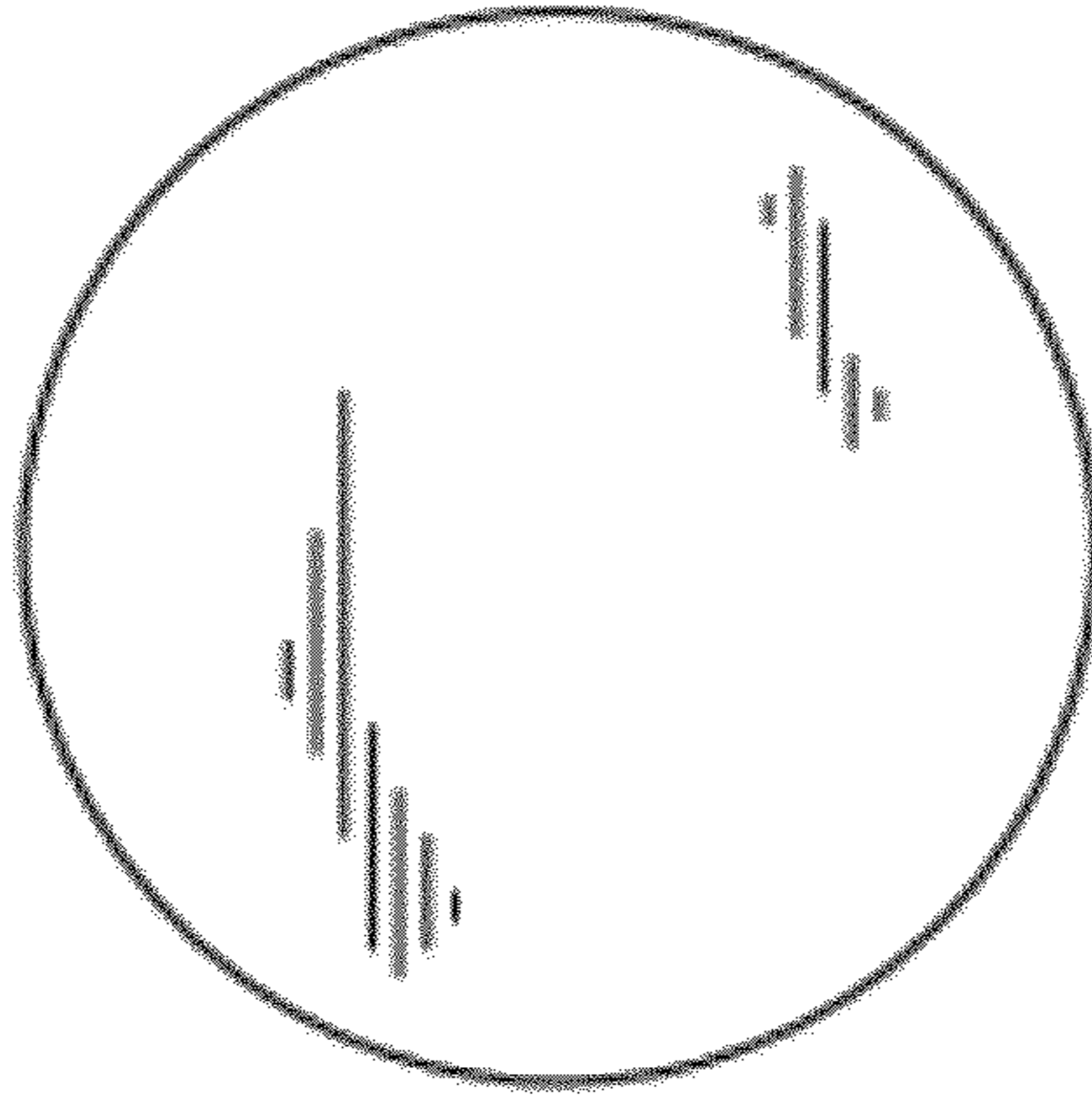


FIG. 14

