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

(10) **Patent No.:** **US D928,987 S**

(45) **Date of Patent:** **** Aug. 24, 2021**

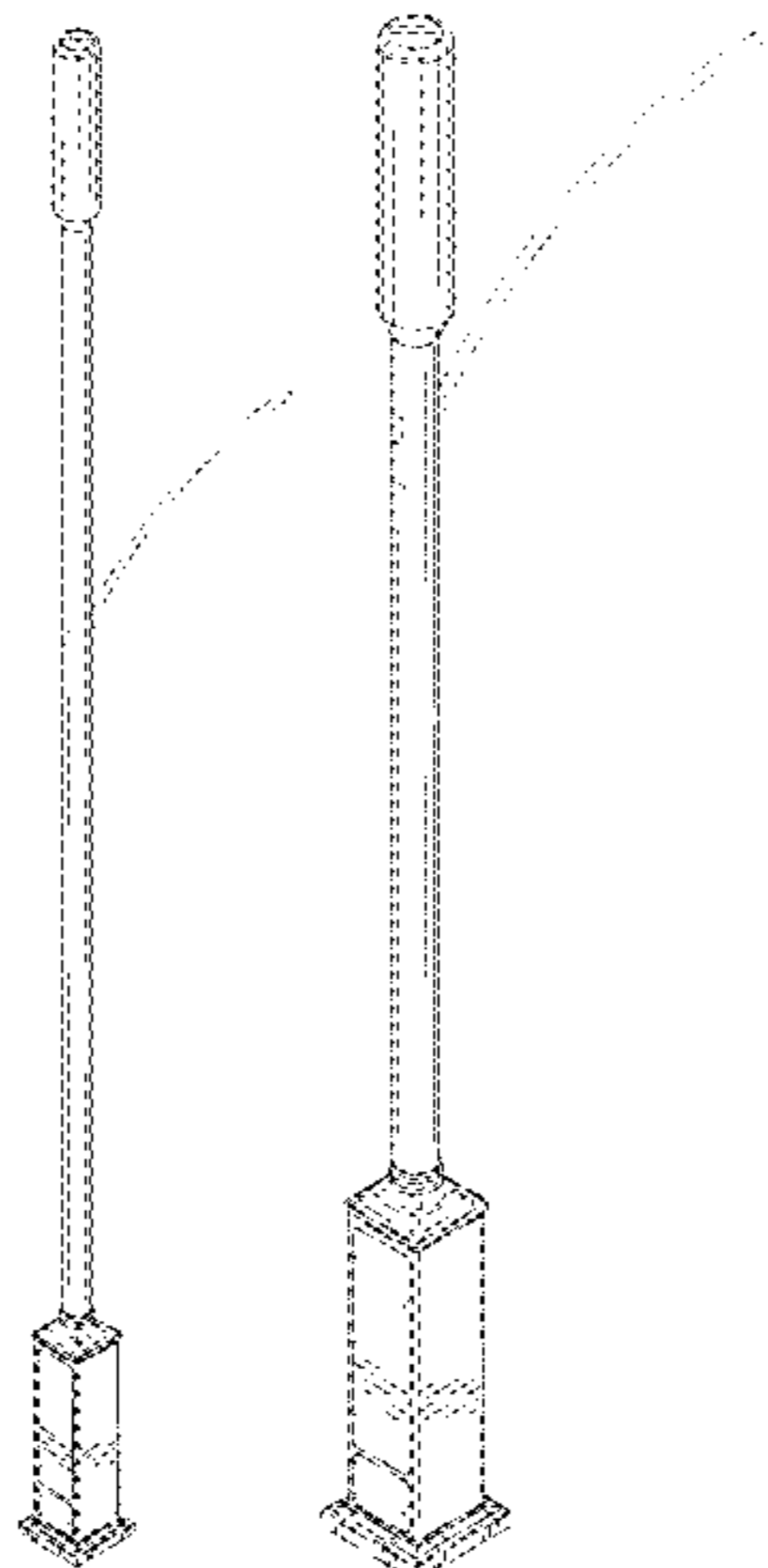
- (54) **MUNICIPAL INFRASTRUCTURE POLE**
- (71) Applicant: **Labyrinth Technologies, LLC**,
Hazelwood, MO (US)
- (72) Inventor: **Theodore J. Stegeman**, Hazelwood,
MO (US)
- (73) Assignee: **Labyrinth Technologies, LLC**,
Hazelwood, MO (US)
- (**) Term: **15 Years**
- (21) Appl. No.: **29/680,947**
- (22) Filed: **Feb. 21, 2019**
- (51) **LOC (13) Cl.** **26-05**
- (52) **U.S. Cl.**
USPC **D25/126**
- (58) **Field of Classification Search**
USPC D25/126-129, 134; D26/67, 68, 93, 138,
D26/153
CPC F21V 21/00; F21V 21/002; F21V 21/10;
F21V 21/116; F21V 21/13; F21V 21/32;
F21S 8/08; F21S 8/085; F21S 8/086;
F21S 8/088
See application file for complete search history.

6,462,775	B1	10/2002	Loyd et al.	
D480,158	S *	9/2003	Ludwig	D25/126
D488,084	S *	4/2004	Cooper	D10/115
D495,445	S *	8/2004	Cooper	D26/67
6,811,444	B2	11/2004	Geyer	
7,406,298	B2	7/2008	Luglio et al.	
D583,081	S *	12/2008	Ryan	D25/126
D583,487	S *	12/2008	Hackett	D25/126
D599,036	S *	8/2009	Baxter	D25/122
D604,866	S *	11/2009	Randazzo	D25/126
7,706,757	B2	4/2010	Luglio et al.	
7,723,862	B1	5/2010	Spillman et al.	
7,828,463	B1	11/2010	Willis	
8,120,280	B2	2/2012	Yi et al.	
8,140,276	B2	3/2012	Walters et al.	
D663,862	S *	7/2012	Leadford	D25/126
8,382,387	B1	2/2013	Sandoval	
8,442,785	B2	5/2013	Walters et al.	
8,502,408	B2	8/2013	Schneider et al.	
8,558,413	B1	10/2013	Lepard	
8,588,942	B2	11/2013	Agrawal	
D695,923	S *	12/2013	Macura	D25/126
D695,924	S *	12/2013	Macura	D25/126
D696,796	S *	12/2013	Macura	D25/126
8,693,965	B2	4/2014	McKay et al.	
8,866,582	B2	10/2014	Verfuert et al.	
D735,362	S *	7/2015	Kurtz	D25/126
9,148,934	B2	9/2015	Matsuki	
9,175,954	B2	11/2015	Koemer et al.	
9,198,264	B2	11/2015	Challapali et al.	
9,226,368	B2	12/2015	Agrawal	
9,301,365	B2	3/2016	Reed	
9,326,359	B2	4/2016	Bosua	
9,338,862	B2	5/2016	Noesner et al.	
9,387,928	B1	7/2016	Gentry et al.	
9,526,142	B2	12/2016	Schroder et al.	
9,593,843	B2	3/2017	McRory	
9,651,420	B2	5/2017	Weber	
9,795,003	B2	10/2017	Johnson	
D806,902	S *	1/2018	Morales	D25/126
9,907,147	B2	2/2018	Chen et al.	
10,094,546	B2	10/2018	Agrawal et al.	
10,154,571	B2	12/2018	Lai et al.	
10,205,345	B2	2/2019	Tuerk et al.	
10,697,620	B2 *	6/2020	Stegeman	F21S 8/085
2003/0152423	A1	8/2003	Wu	
2004/0100793	A1	5/2004	Monitto	
2004/0105264	A1	6/2004	Spero	
2005/0168169	A1	8/2005	Kurachi et al.	
2006/0044789	A1	3/2006	Curtis	
2007/0013513	A1	1/2007	Tang et al.	
2008/0106892	A1	5/2008	Griffiths et al.	
2008/0175216	A1	7/2008	Nasco	

(56) **References Cited**

U.S. PATENT DOCUMENTS

D8,296	S *	4/1875	Tweeddale	D25/126
D11,204	S *	5/1879	Wiard et al.	D25/126
D45,785	S *	5/1914	Blake	D26/69
D153,247	S *	3/1949	Winters	D25/128
D259,513	S *	6/1981	Whatley	D25/129
D260,184	S *	8/1981	Whatley	D25/129
4,731,551	A	3/1988	Gibbs et al.	
5,235,252	A	8/1993	Blake	
D357,988	S *	5/1995	Sosa	D25/126
D374,941	S *	10/1996	Venegas, Jr.	D25/126
5,651,612	A	7/1997	Braun	
5,895,986	A	4/1999	Walters et al.	
D417,014	S *	11/1999	Tormanen	D25/126
D430,312	S *	8/2000	Beachy	D25/126
6,452,339	B1	9/2002	Morrissey et al.	



2009/0206670	A1	8/2009	Ivhitted et al.	
2011/0058358	A1	3/2011	Soo et al.	
2011/0171080	A1	7/2011	Lo	
2012/0020060	A1	1/2012	Myer et al.	
2012/0051050	A1	3/2012	Lee et al.	
2012/0143383	A1*	6/2012	Cooperrider	H02J 13/00004 700/295
2012/0327639	A1	12/2012	Chen	
2013/0040471	A1	2/2013	Gervais et al.	
2013/0064136	A1	3/2013	Apostolakis	
2013/0077327	A1	3/2013	Butler et al.	
2013/0107520	A1	5/2013	O’Kane	
2013/0142372	A1	6/2013	Harwood	
2013/0193876	A1	8/2013	Cleland et al.	
2014/0016356	A1	1/2014	Furmanczyk et al.	
2014/0028200	A1	1/2014	Van Wagoner et al.	
2014/0052390	A1	2/2014	Kim et al.	
2014/0071677	A1	3/2014	Pickard et al.	
2014/0312776	A1	10/2014	Park et al.	
2015/0016159	A1	1/2015	Deboy	
2015/0264776	A1	9/2015	Amarin et al.	
2015/0362172	A1	12/2015	Gabriel et al.	
2015/0369618	A1	12/2015	Barnard et al.	
2016/0095182	A1	3/2016	Bjorn et al.	
2016/0286629	A1	9/2016	Chen et al.	
2016/0318568	A1	11/2016	Hosoda et al.	
2016/0320049	A1	11/2016	Bears	
2017/0310232	A1	10/2017	De Hoog et al.	
2018/0031213	A1	2/2018	Stegeman et al.	
2018/0045388	A1	2/2018	McDowell et al.	
2018/0116040	A1	4/2018	Mann et al.	
2018/0279429	A1	9/2018	Sadwick	
2018/0288860	A1	10/2018	Vendetti et al.	
2018/0295703	A1	10/2018	Xue et al.	
2019/0017667	A1	1/2019	Mitchell et al.	
2019/0277050	A1*	9/2019	Lockwood	F21V 33/00

FOREIGN PATENT DOCUMENTS

CA	176170	*	5/2018
CN	104520636	A	4/2015
DE	7723862	U1	12/1978
DE	3812785	U1	10/1988
EM	002060111-0001	*	6/2012
EP	3018977	A1	5/2016
EP	3290788	A1	3/2018
FR	2399019	A1	2/1979
GB	2444734	A	6/2008
KR	101585531	B1	1/2016
WO	2014066298	A1	5/2014
WO	20140184166	A2	11/2014
WO	2016053034	A1	4/2016
WO	2016075116	A2	5/2016
WO	2017139089	A1	8/2017

OTHER PUBLICATIONS

Labyrinth Technologies—4G & 5G Poles <https://labyrinth-tech.com/solutions/small-cell-facilites.html> Apr. 2019 (Year: 2019).*

International Search Report and Written Opinion for related application No. PCT/US2020/013523, dated Jul. 6, 2020, 16 pages.

Brunhuber, Kim, “In San Diego, a lamppost can tell you where to park,” CBC News website, Technology & Science, <https://www.cbc.ca/news/technology/san-diego-smart-city-parking-1.4498964>, dated Feb. 7, 2018, printed on Sep. 18, 2019 (5 pages).

Bigelow, Bruce V., “GE Plans a Sale as San Diego Smart City Project Nears Completion,” Xconomy website, San Diego, <https://xconomy.com/san-diego/2018/06/14/ge-plans-a-sale-as-san-diegosmart-city-project-nears-completion/>, dated Jun. 14, 2018, printed on Sep. 18, 2019 (2 pages).

Maddox, Teena, “New smart city traffic project takes off in Portland, OR,” TechRepublic website, dated Jun. 20, 2018, printed on Sep. 18, 2019 (4 pages).

Goldstein, Phil, “Portland Turns to Smart Sensors to Enhance Traffic Safety,” StateTech Magazine website, <https://www.techrepublic.com/article/new-smart-city-traffic-project-takes-off-in-portland-or/>, dated Jul. 30, 2018, printed on Sep. 18, 2019 (3 pages).

“GE smart lighting technology expected to save City of San Diego more than \$250K annually,” LEDs Magazine, <https://www.ledsmagazine.com/company-newsfeed/article/16684696/ge-smart-lighting-expected-to-save-city-of-san-diego-more-than-250k-annually>, dated Jan. 29, 2014, printed on Jan. 24, 2020 (16 pages).

Wright, Maury, “Oceanside installs GPS-enabled LED street lights from GE Lighting,” LEDs Magazine, <https://www.ledsmagazine.com/architectural-lighting/outdoor-lighting/article/16696766/oceanside-installs-gps-enabled-led-street-lights-from-ge-lighting>, dated Jul. 20, 2015, printed on Jan. 24, 2020 (22 pages).

“GE Lighting talks controls and networks at Lightfair International 2013,” LEDs Magazine, <https://www.ledsmagazine.com/leds-ssl-design/networks-controls/article/16697295/ge-lighting-talks-controls-and-networks-at-lightfair-international-2013>, dated Apr. 24, 2013, printed on Jan. 24, 2020 (19 pages).

“LightGrid Outdoor Wireless Control System,” <https://facilityexecutive.com/2018/lightgrid-outdoor-wireless-control-system/>, dated Mar. 30, 2018, printed on Jan. 24, 2020 (5 pages).

Perry, Tekla S., “San Diego’s Smart Streetlights Yield a Firehose of Data,” Spectrum IEEE website, <https://pectrum.ieee.org/view-from-the-valley/computing/networks/sandiegos-smart-streetlight-network-yielding-a-firehose-of-data>, dated Jan. 16, 2019, printed on Sep. 18, 2019 (4 pages).

* cited by examiner

Primary Examiner — Leanne Was-Englehart
(74) Attorney, Agent, or Firm — Lewis Rice LLC

(57) CLAIM

The ornamental design for a municipal infrastructure pole, as shown and described.

DESCRIPTION

FIG. 1 is a top back left perspective view of a municipal infrastructure pole showing my new design;

FIG. 2 is a front side elevation view thereof;

FIG. 3 is a back side elevation view thereof;

FIG. 4 is a right side elevation view thereof, the left side elevation view being the mirror image of the left side elevation view;

FIG. 5 is top detail view thereof;

FIG. 6 is a bottom detail view thereof;

FIG. 7 is a top back left perspective view of a second embodiment of municipal infrastructure pole;

FIG. 8 is a front side elevation view thereof;

FIG. 9 is a back side elevation view thereof;

FIG. 10 is a right side elevation view thereof, the left side elevation view being the mirror image of the left side elevation view;

FIG. 11 is top detail view thereof;

FIG. 12 is a bottom detail view thereof;

FIG. 13 is a top back left perspective view of a third embodiment of municipal infrastructure pole;

FIG. 14 is a front side elevation view thereof;

FIG. 15 is a back side elevation view thereof;

FIG. 16 is a right side elevation view thereof, the left side elevation view being the mirror image of the left side elevation view;

FIG. 17 is top detail view thereof;

FIG. 18 is a bottom detail view thereof;

FIG. 19 is a top back left perspective view of a fourth embodiment of municipal infrastructure pole;

FIG. 20 is a front side elevation view thereof;

FIG. 21 is a back side elevation view thereof;

FIG. 22 is a right side elevation view thereof, the left side elevation view being the mirror image of the left side elevation view;

FIG. 23 is top detail view thereof;

FIG. 24 is a bottom detail view thereof;

FIG. 25 is a detail front side view of the cabinet and flanges of FIGS. 1-24.

FIG. 26 is a detail right side view thereof;

FIG. 27 is a detail back side view thereof;

FIG. 28 is a top back left perspective view thereof; and,

FIG. 29 is a top right perspective detail view of the antenna of FIGS. 1-24, the antenna being cylindrical and having the same appearance from all directions in such perspective.

The broken lines in the drawings depict portions of the municipal infrastructure pole that form no part of the claimed design. The dot-dash lines depict the limits of the enlarged views, and form no part of the claimed design.

1 Claim, 17 Drawing Sheets

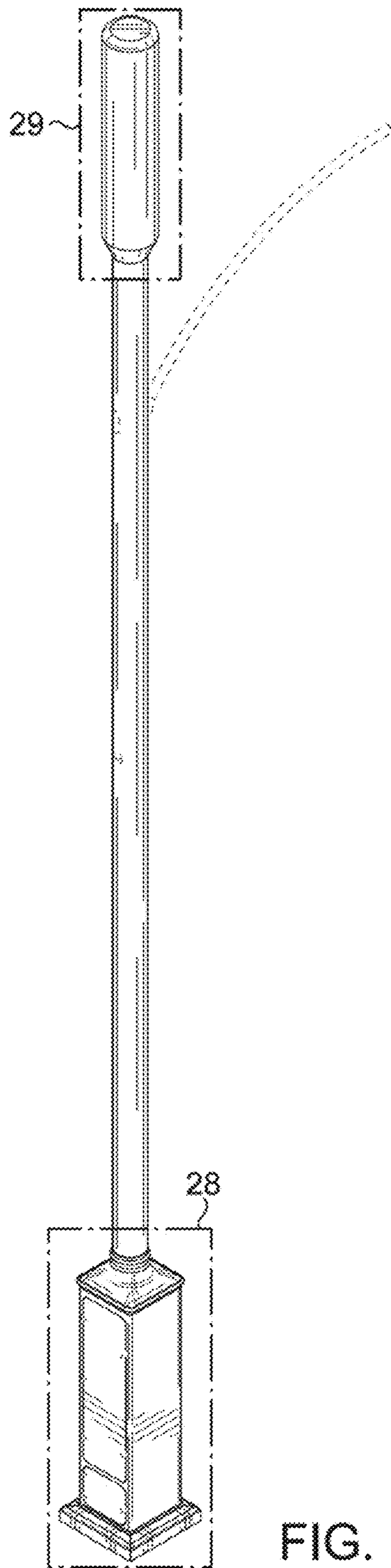


FIG. 1

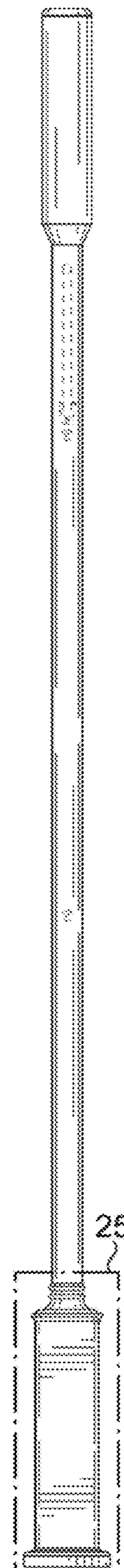


FIG. 2

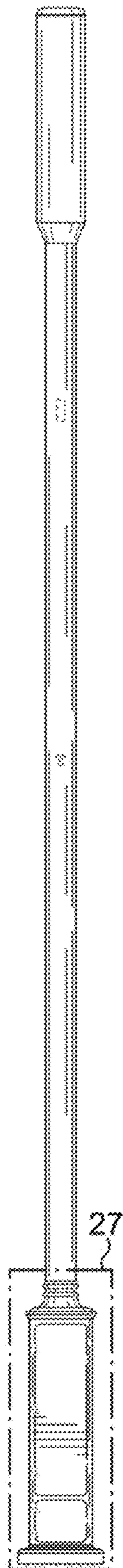


FIG. 3

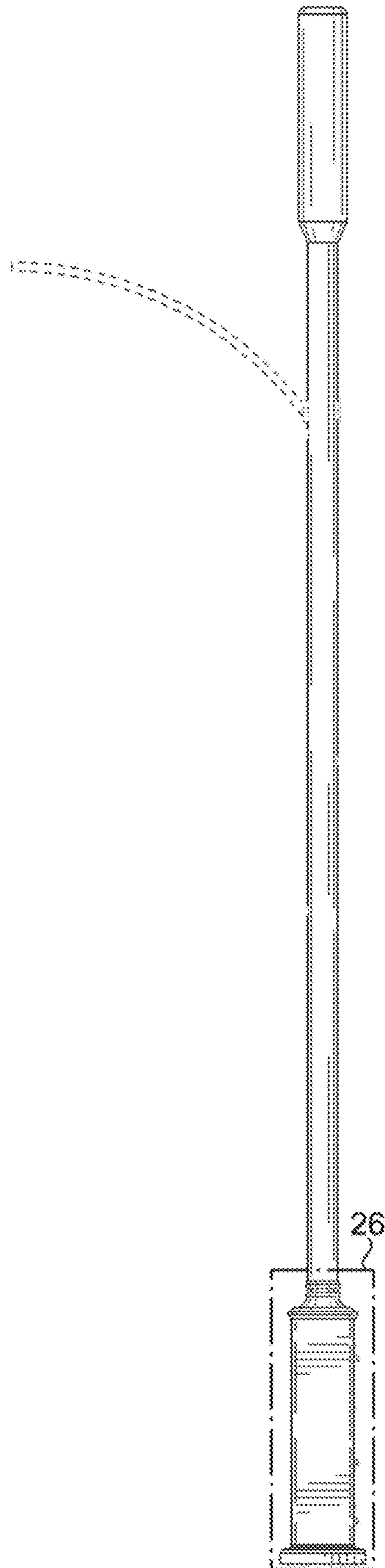


FIG. 4

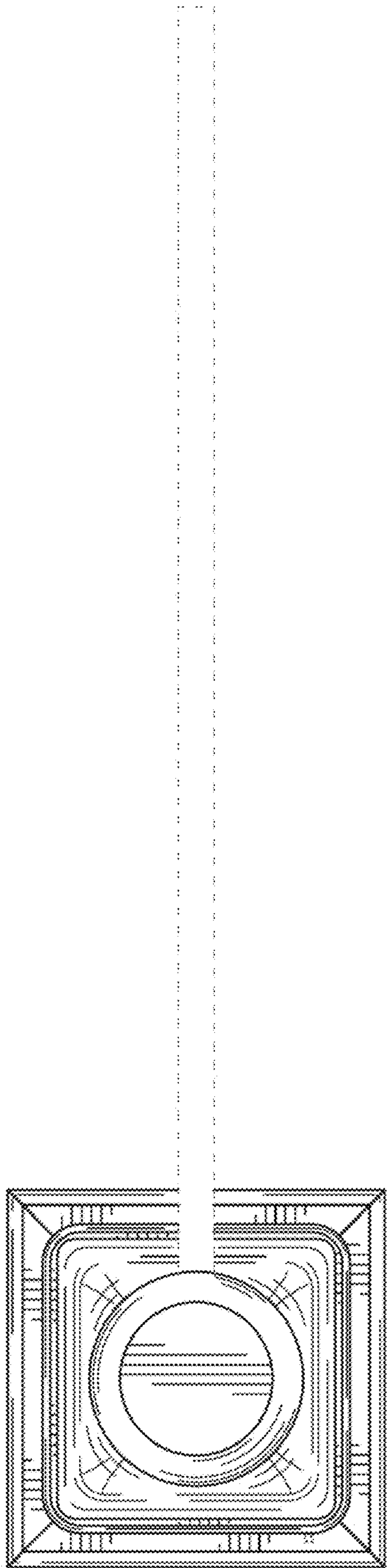


FIG. 5

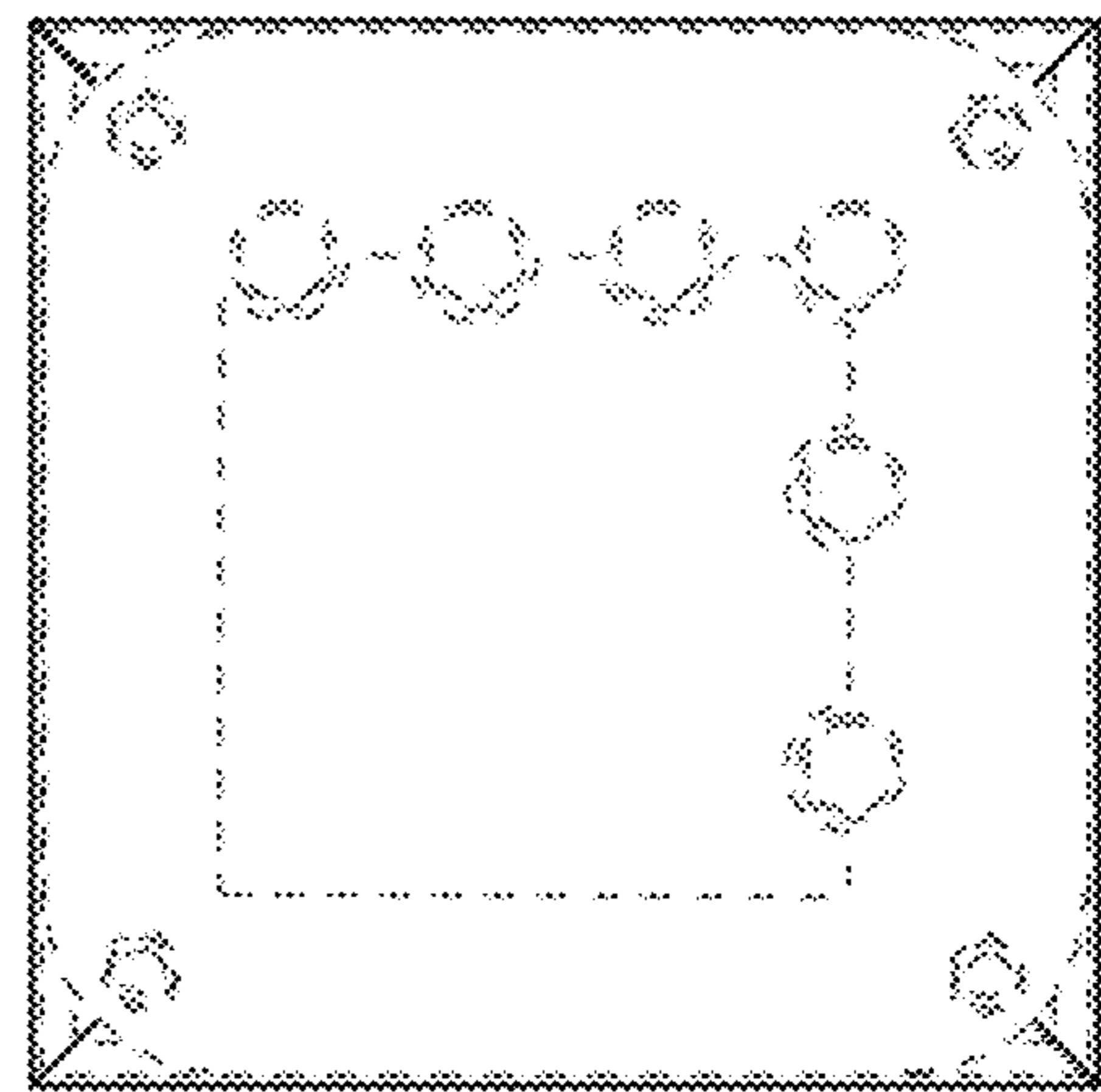


FIG. 6

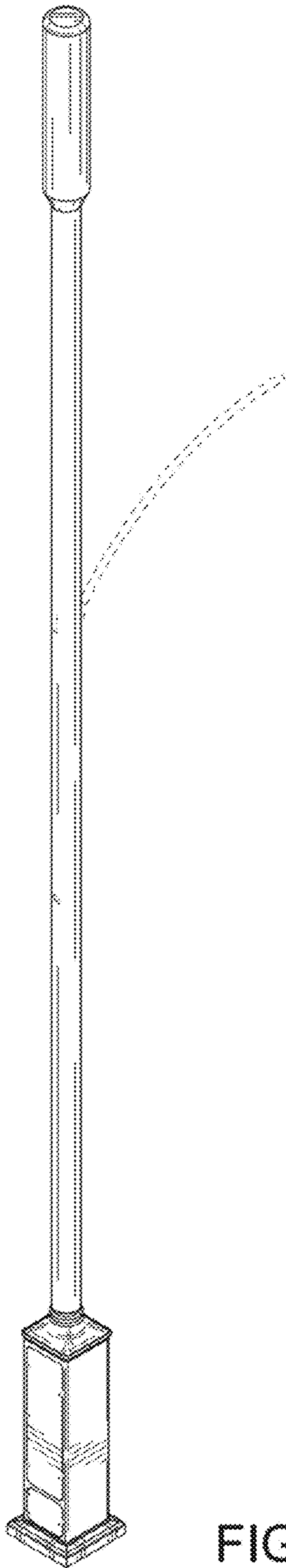


FIG. 7

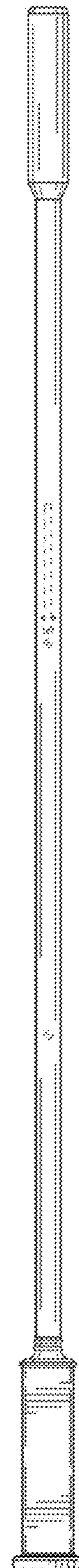


FIG. 8

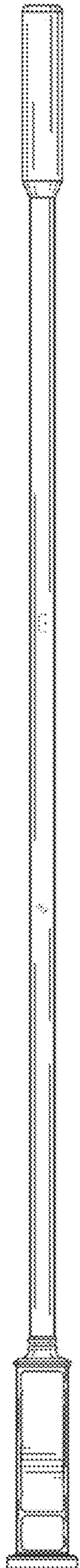


FIG. 9

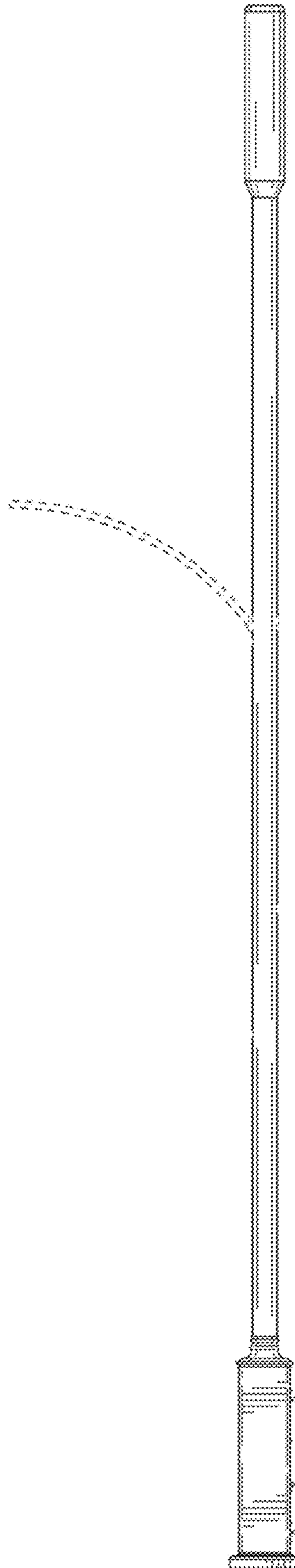


FIG. 10

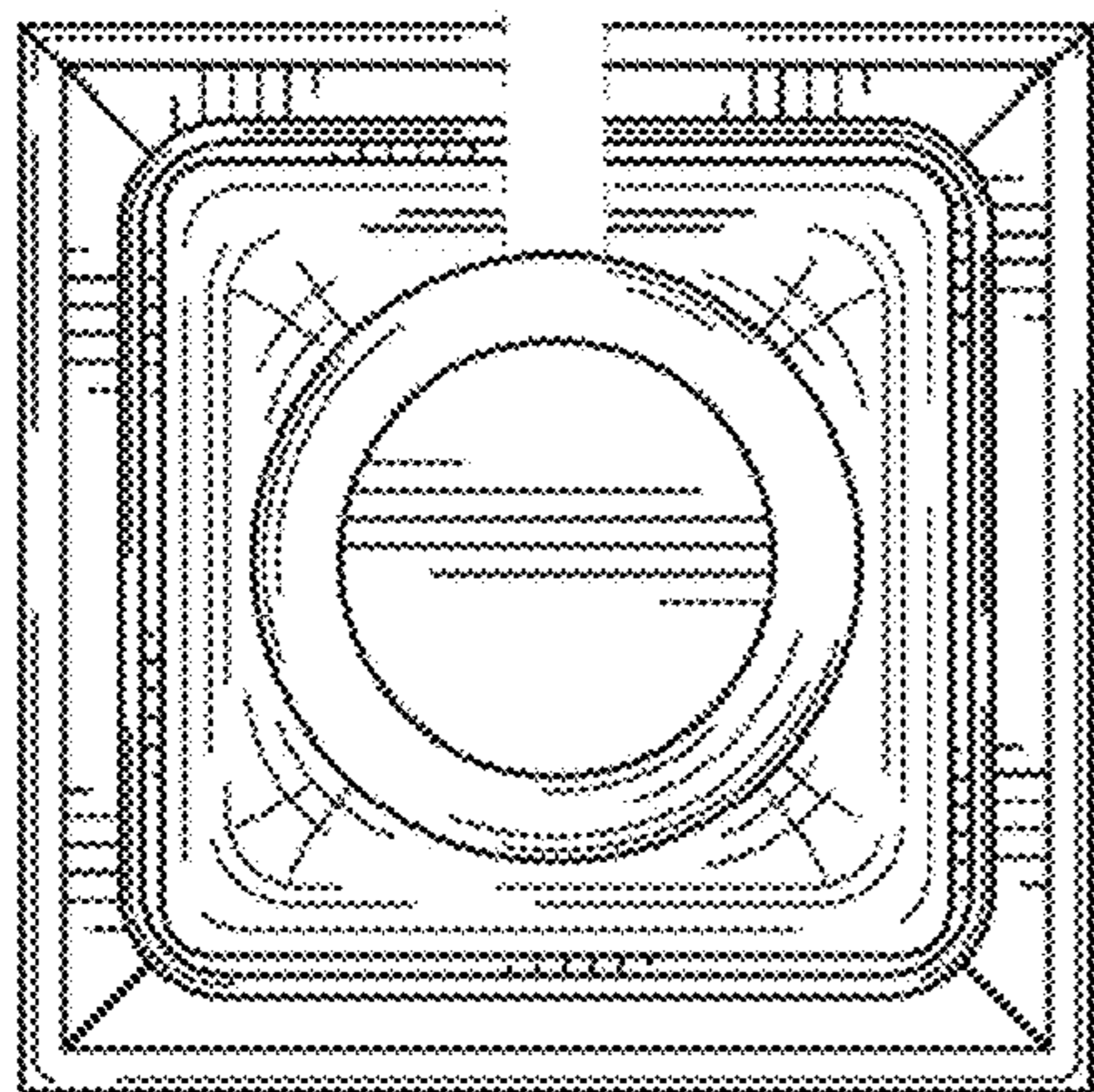


FIG. 11

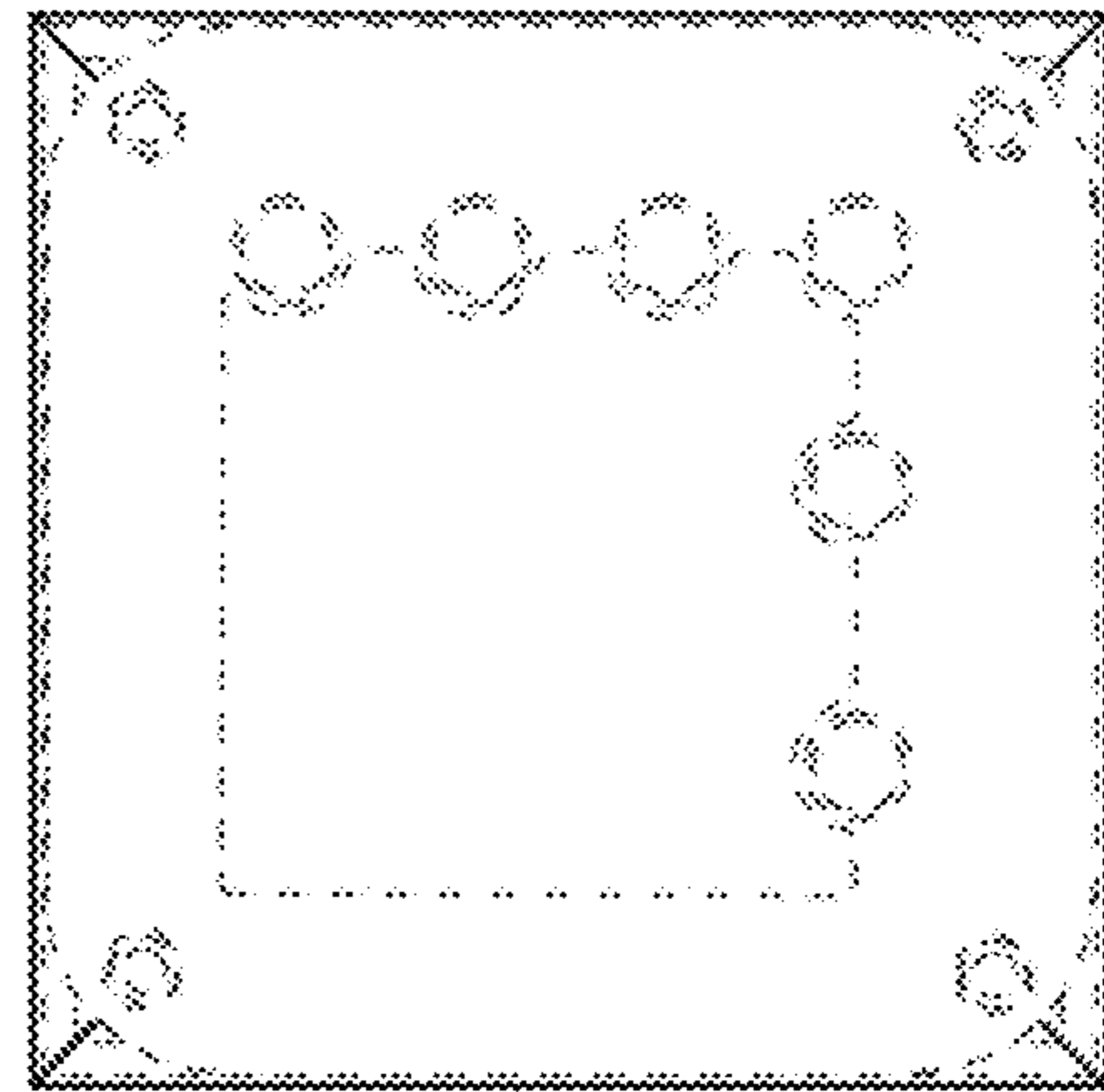


FIG. 12

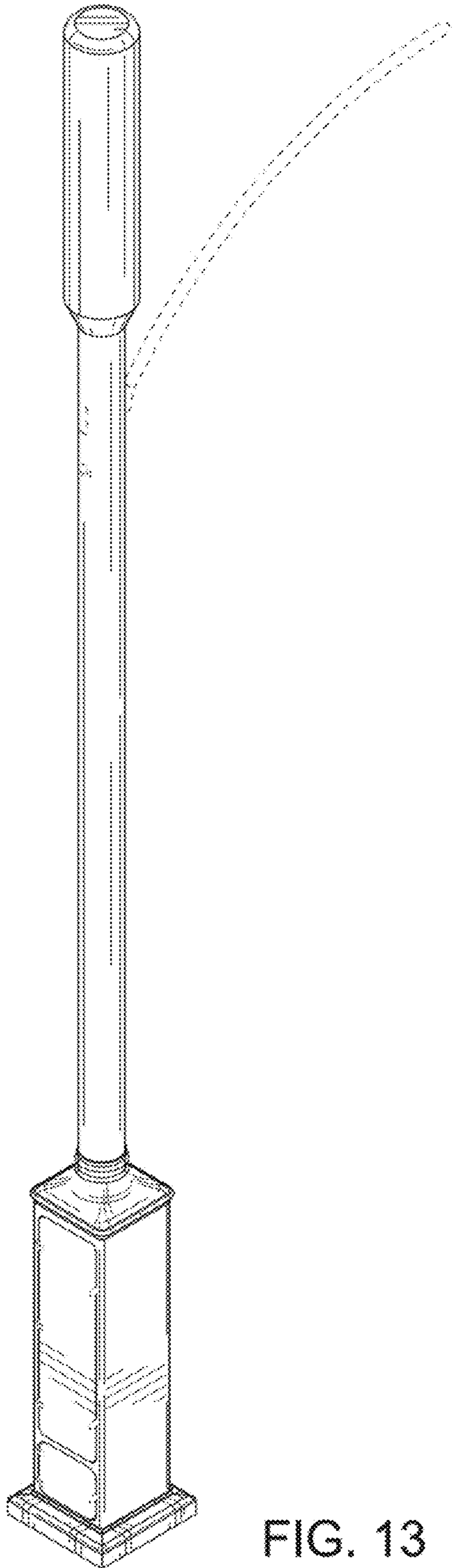


FIG. 13

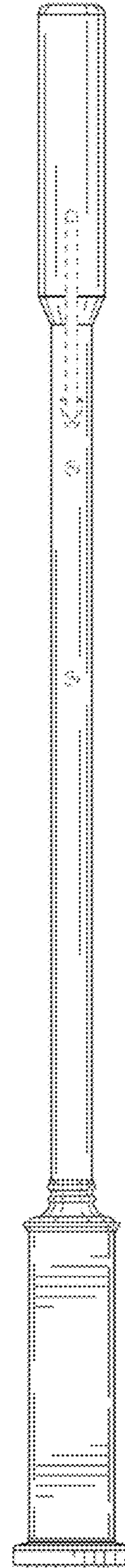


FIG. 14

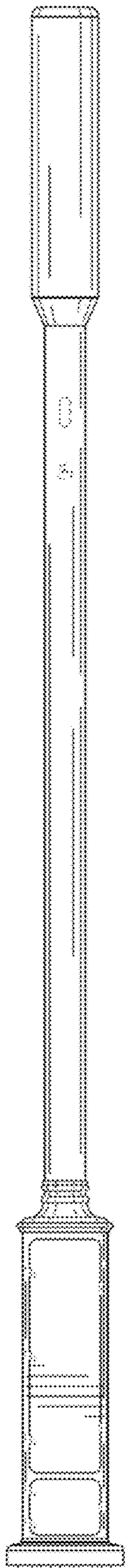


FIG. 15

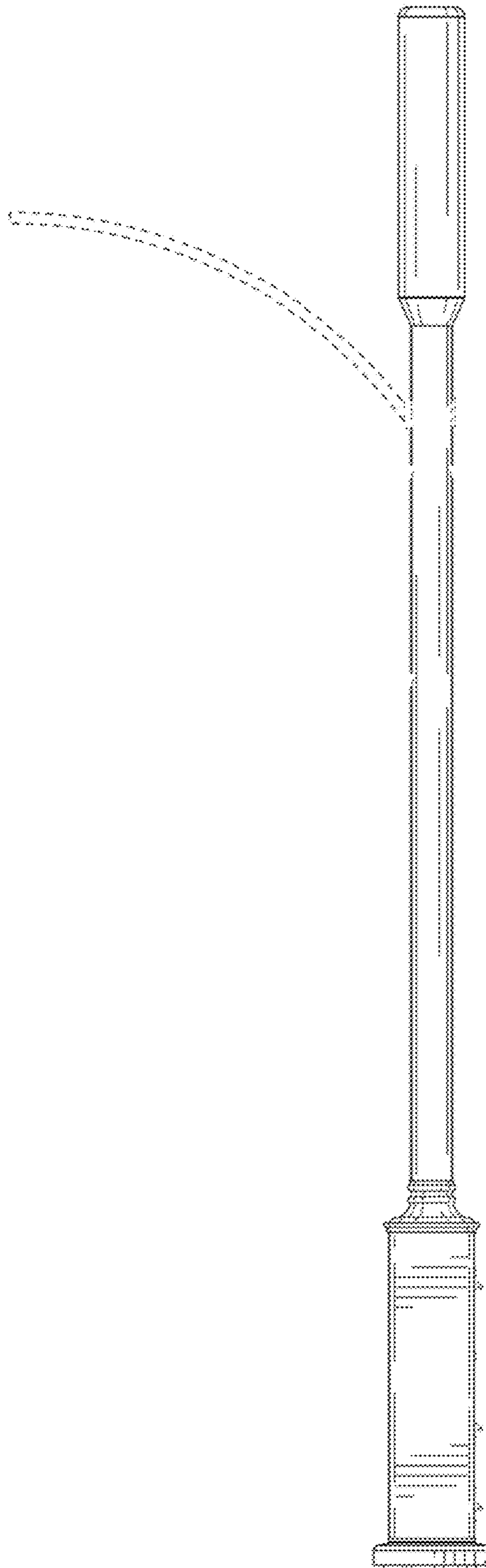


FIG. 16

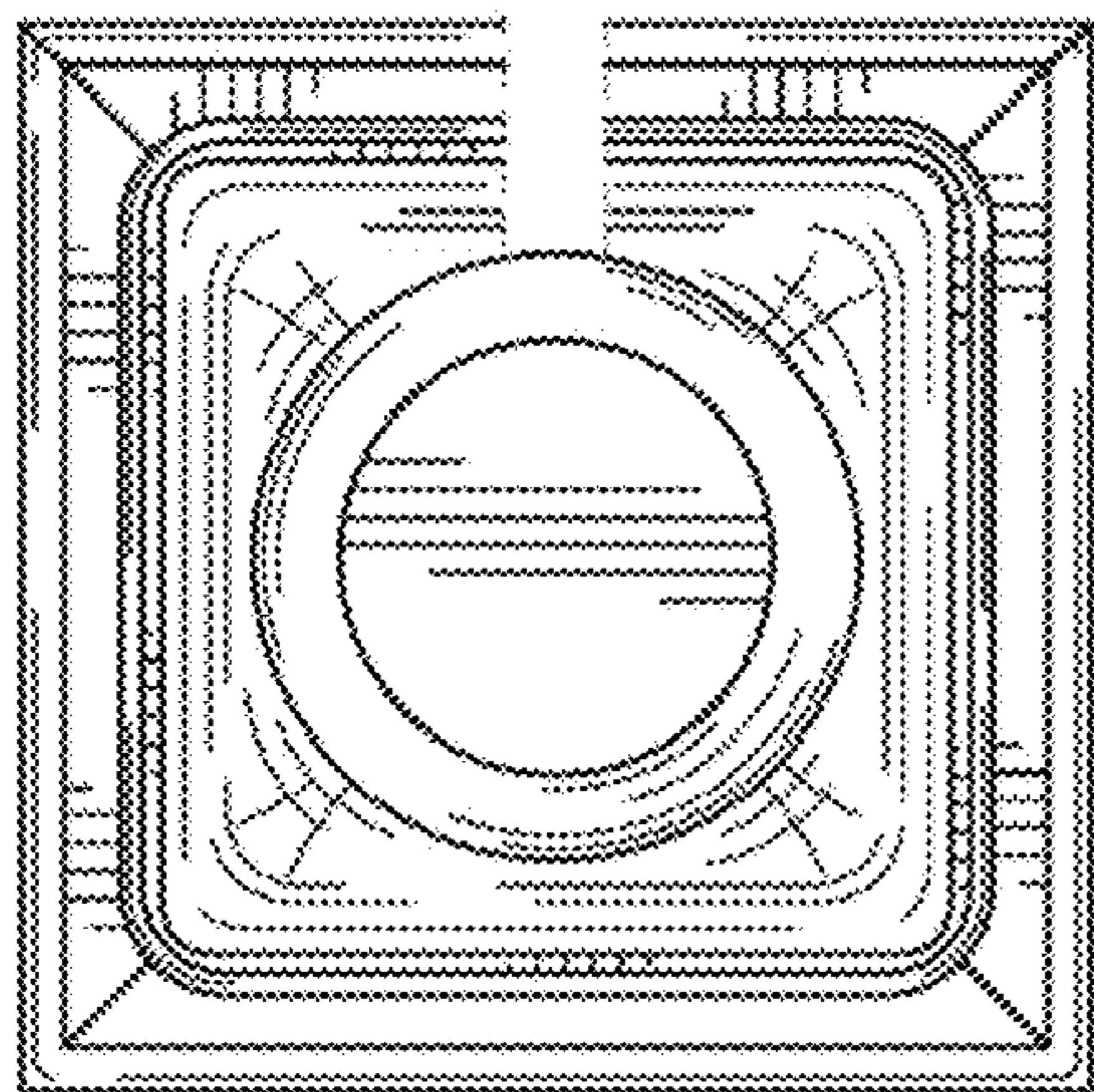


FIG. 17

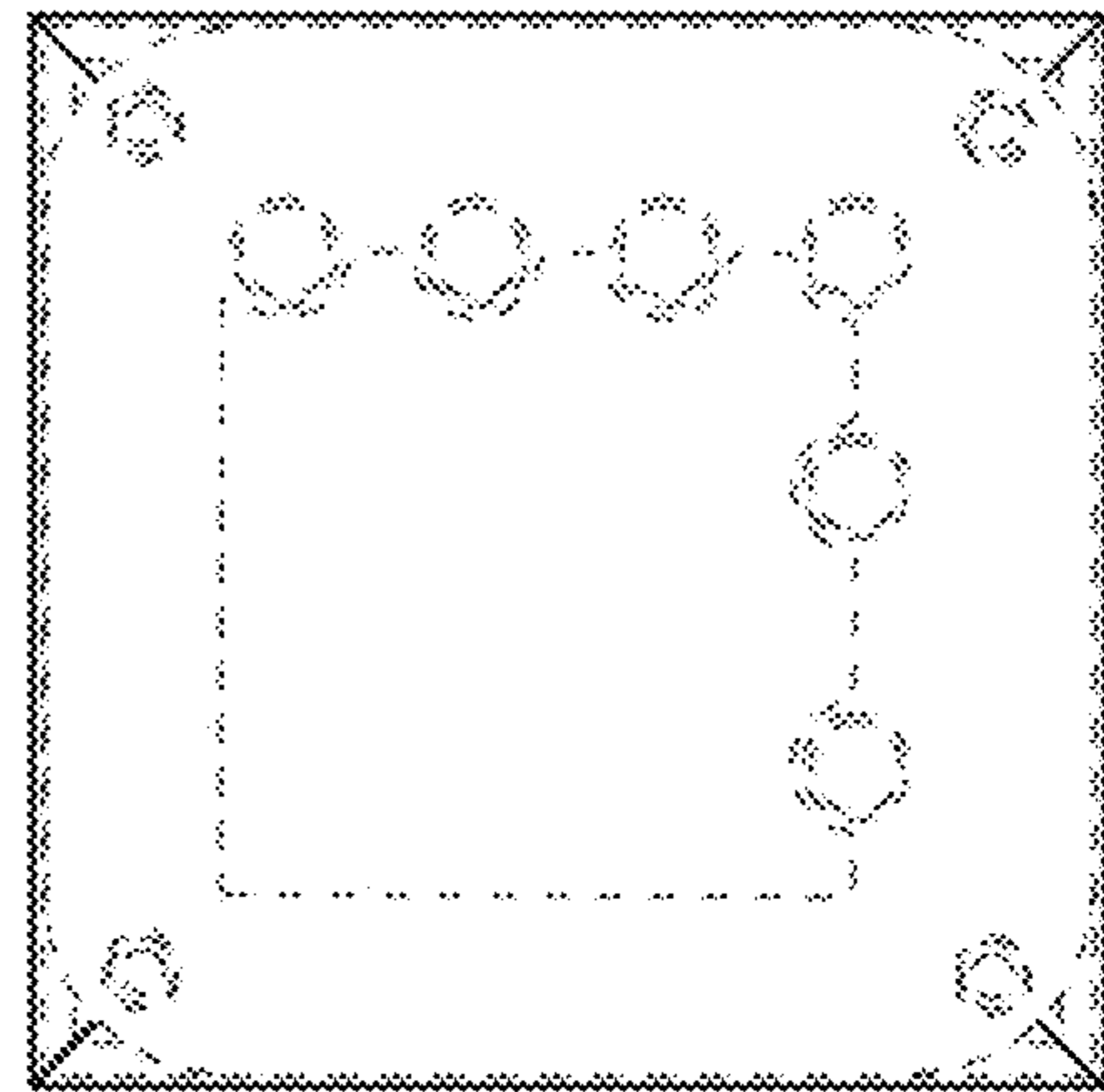


FIG. 18

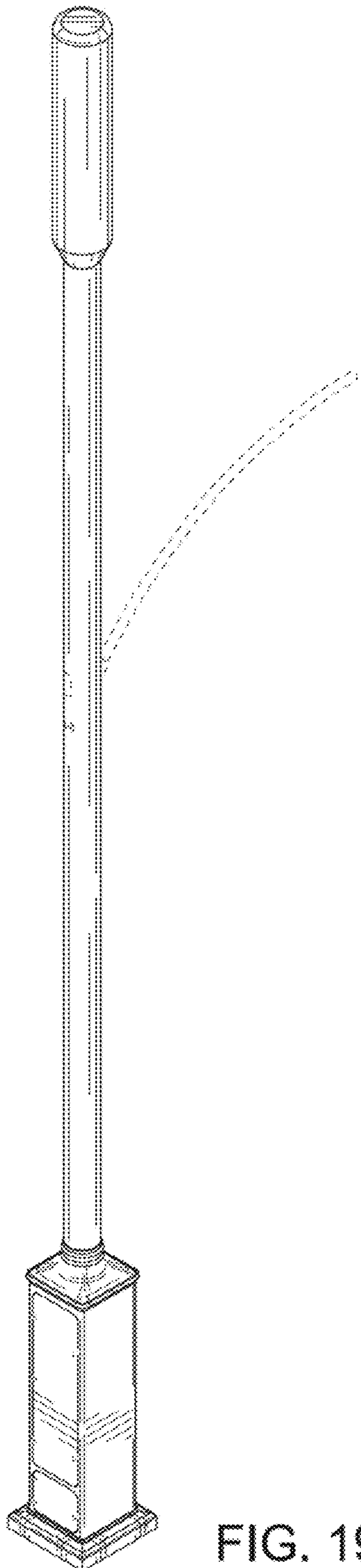


FIG. 19

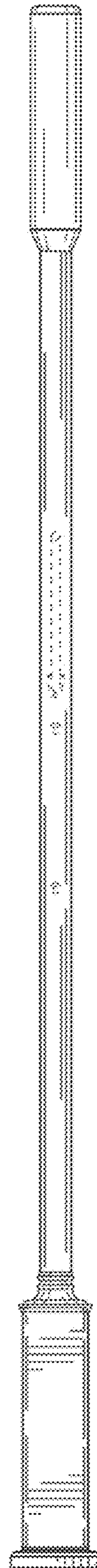


FIG. 20

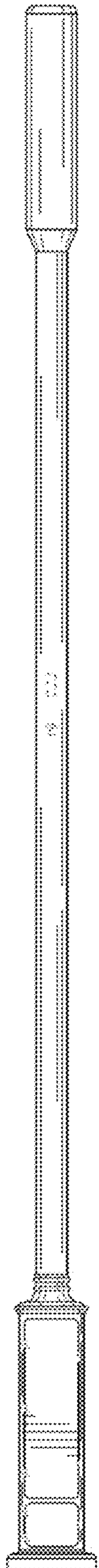


FIG. 21

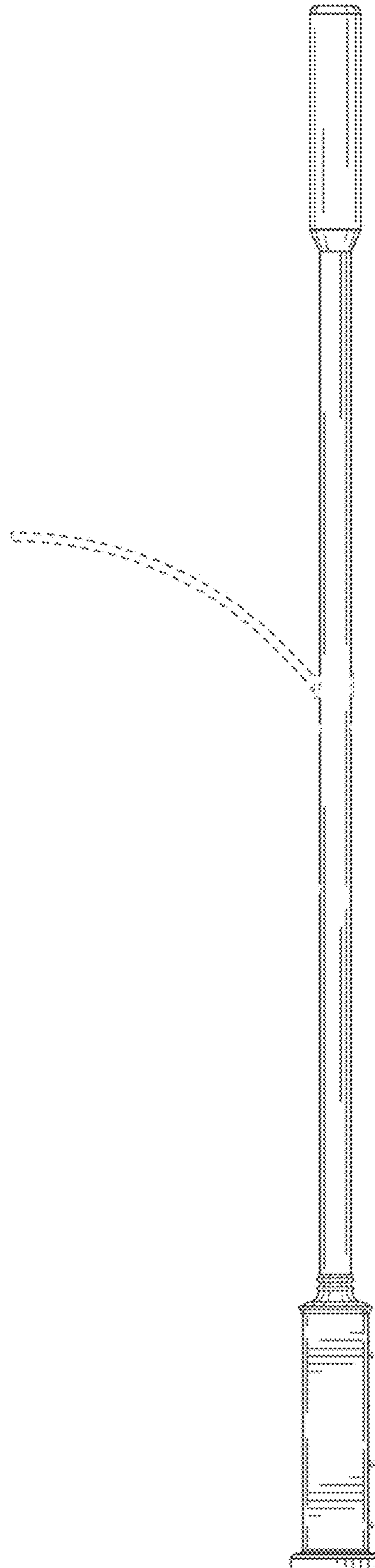


FIG. 22

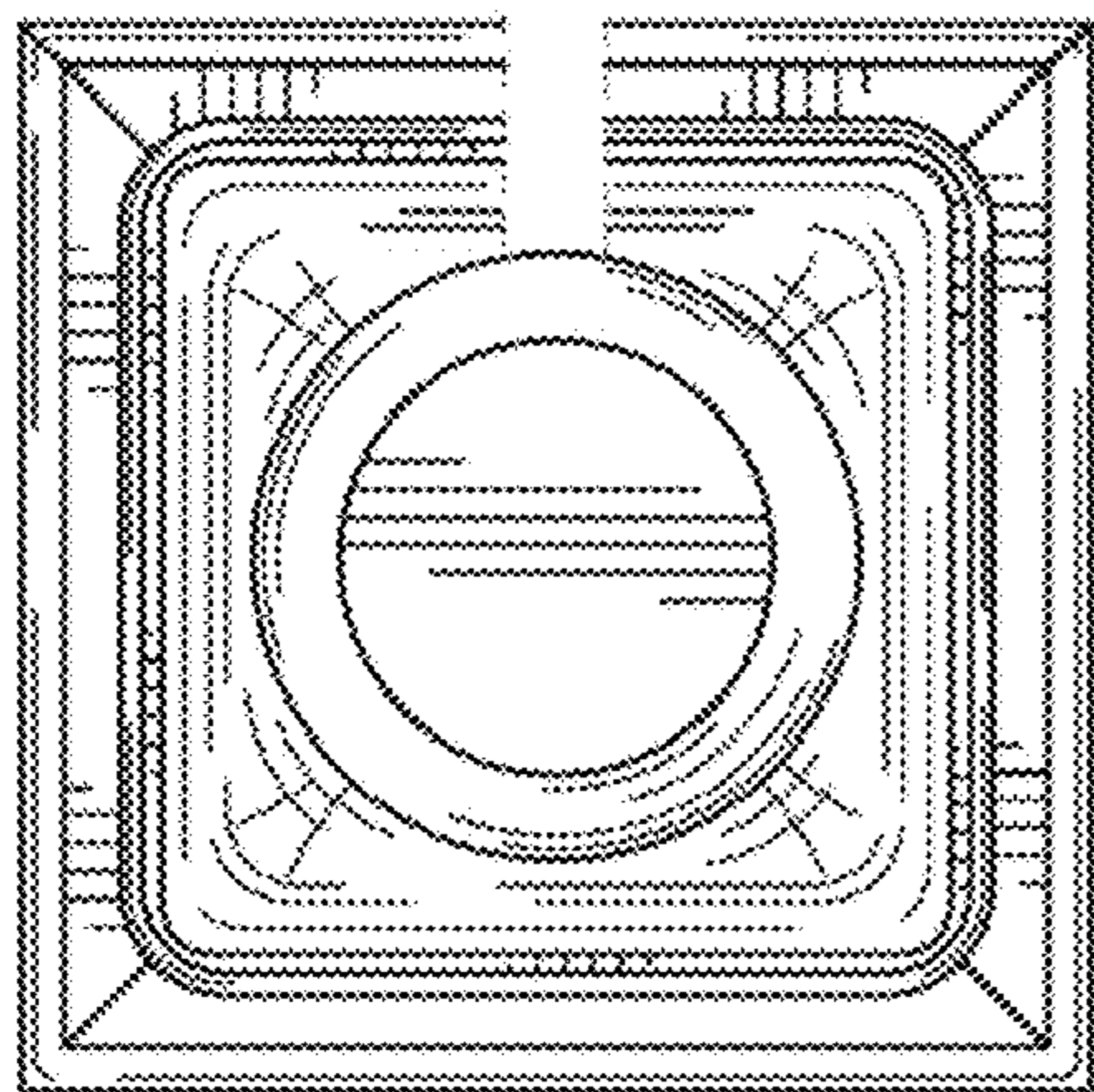


FIG. 23

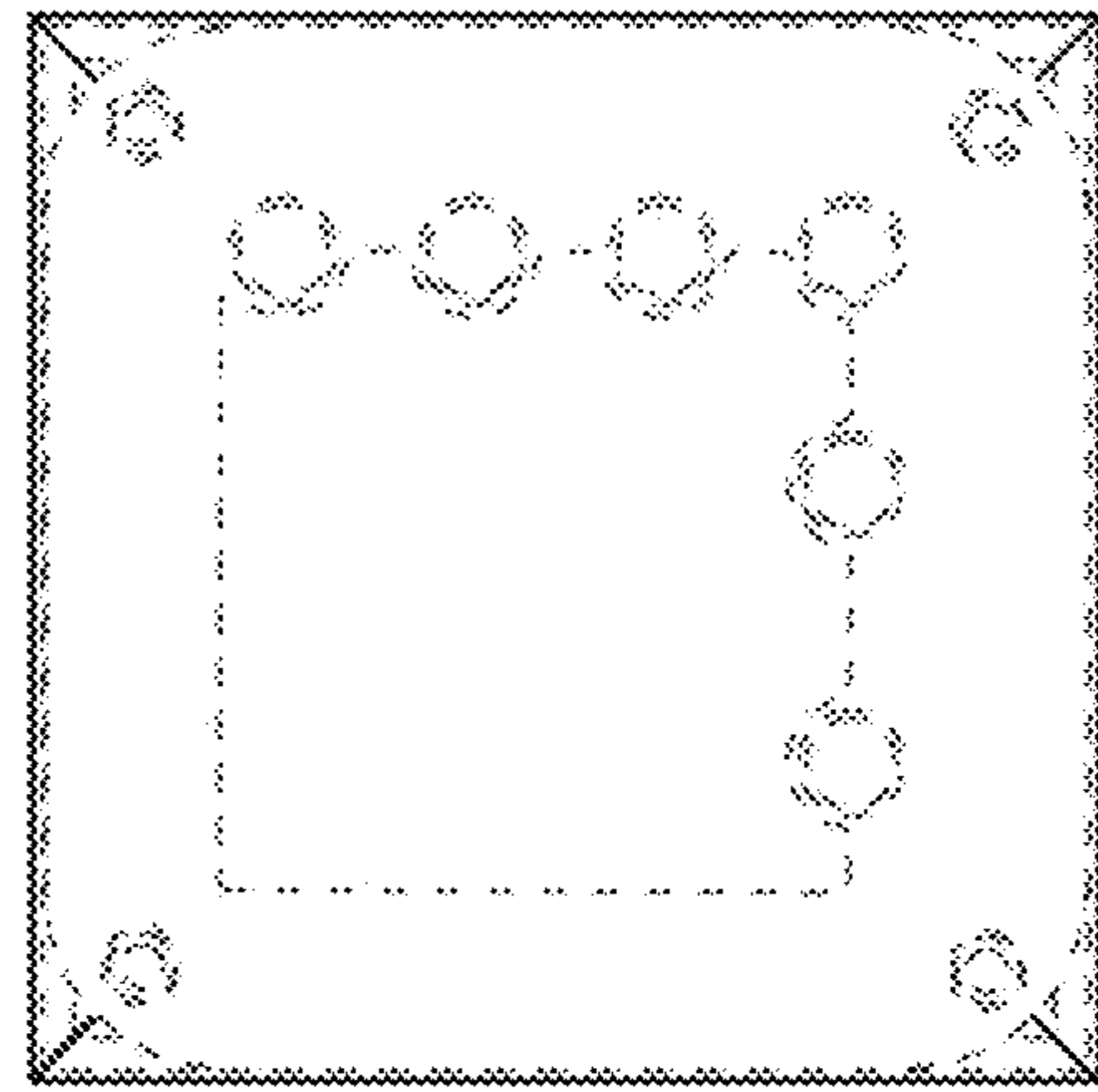


FIG. 24

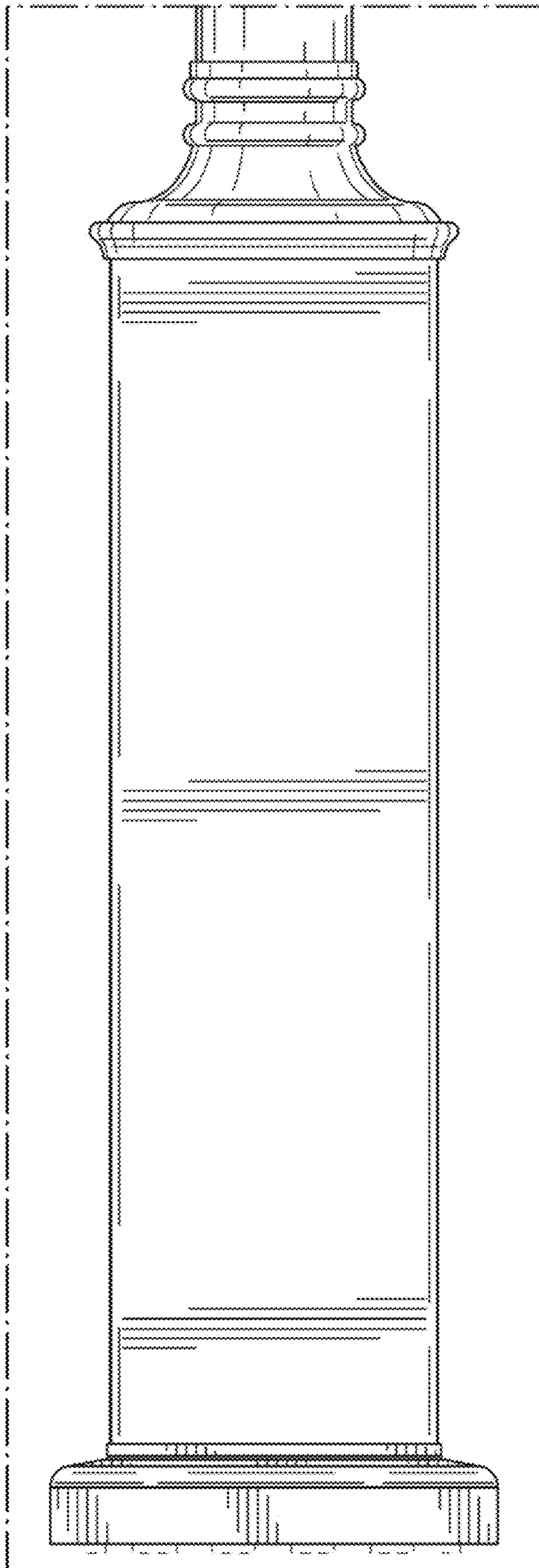


FIG. 25

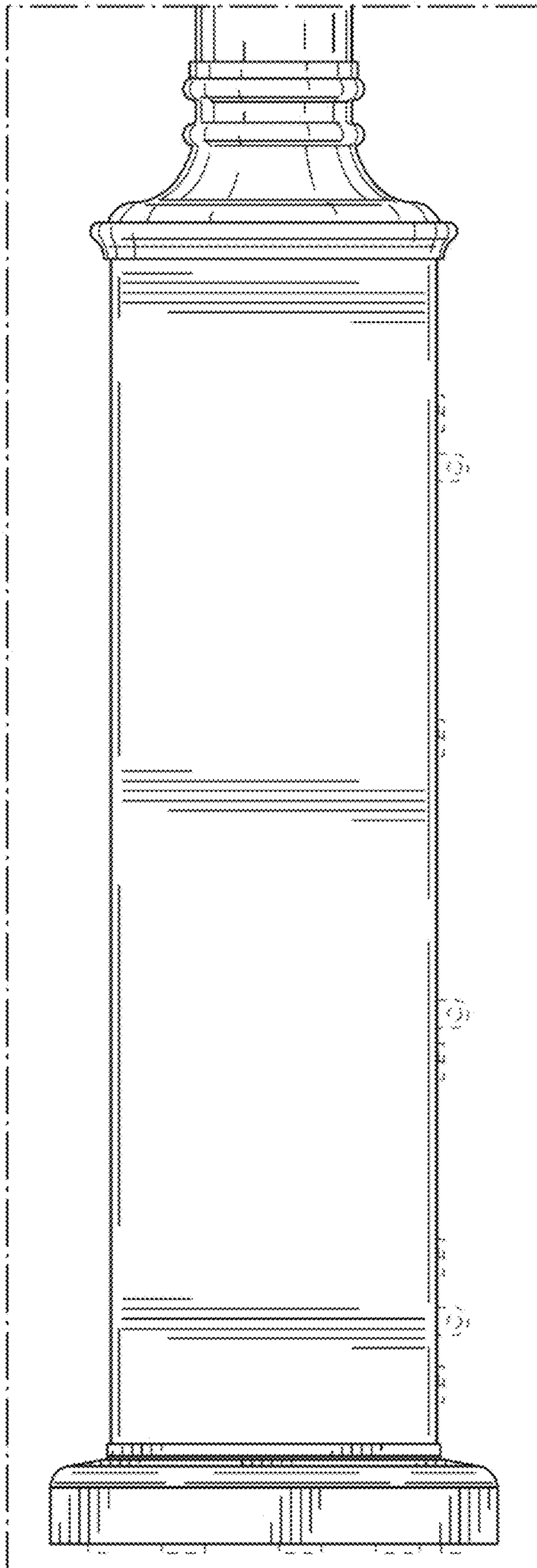


FIG. 26

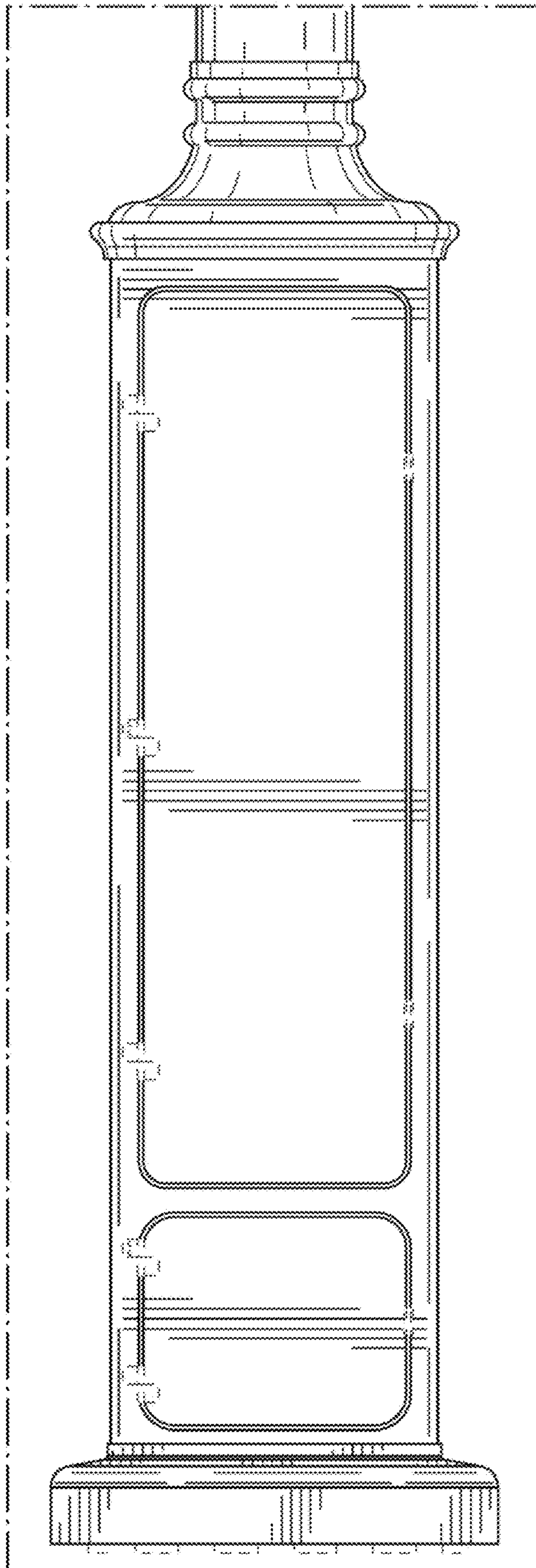


FIG. 27

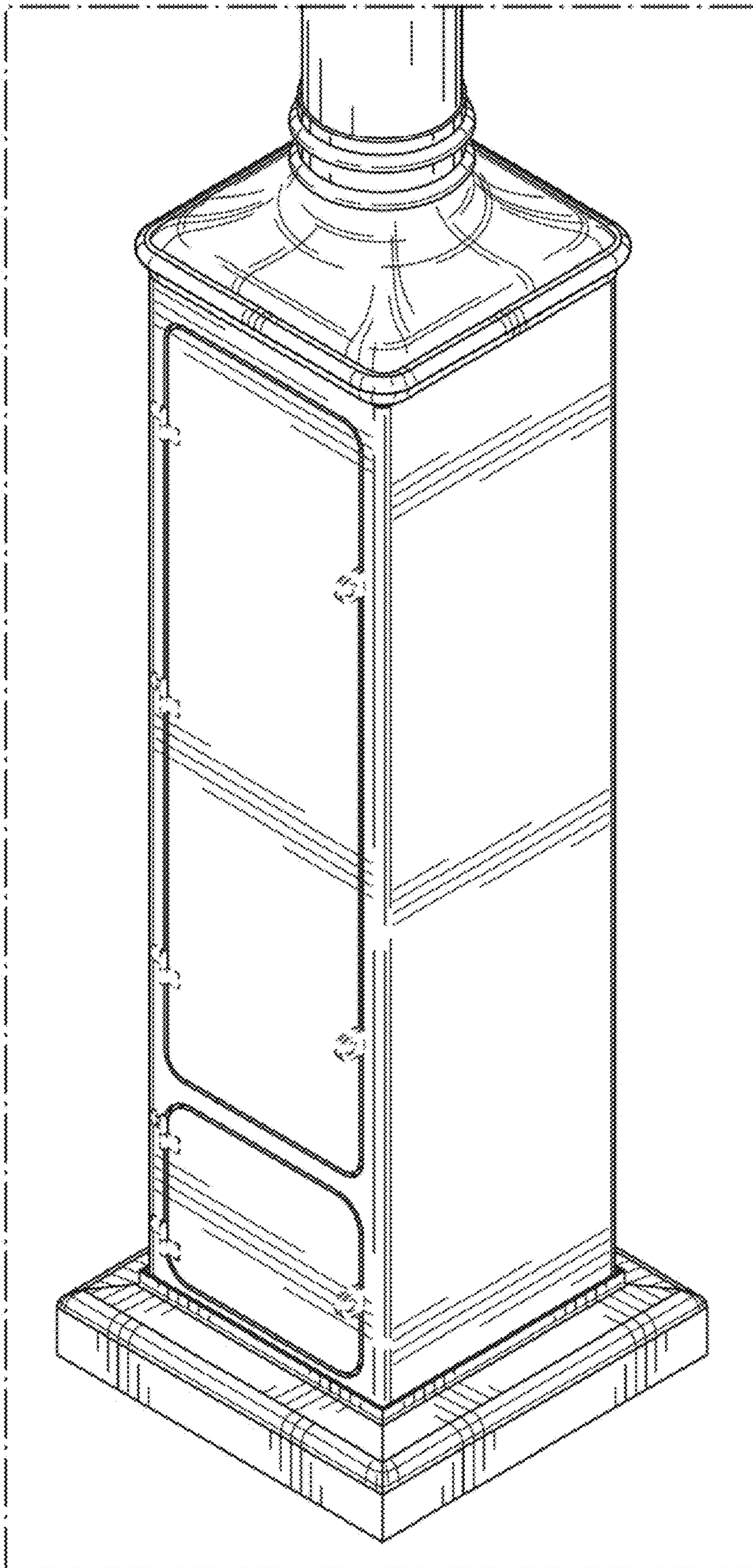


FIG. 28

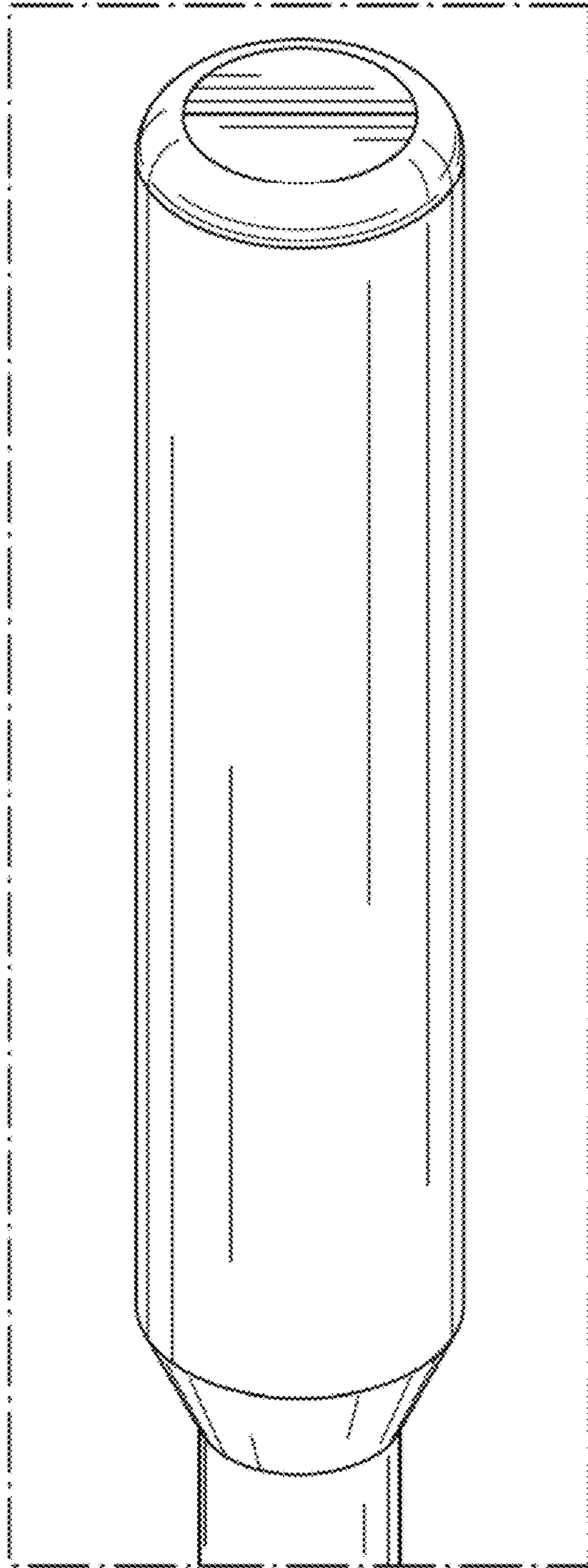


FIG. 29

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION


PATENT NO. : D928,987 S
APPLICATION NO. : 29/680947
DATED : August 24, 2021
INVENTOR(S) : Stegeman

Page 1 of 1

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

On the Title Page

Page 2 Description: "FIG. 9 is a hack side elevation view thereof;" should read -- FIG. 9 is a back side elevation view thereof; --.

Signed and Sealed this
Ninth Day of August, 2022

Katherine Kelly Vidal
Director of the United States Patent and Trademark Office