



US00D804007S

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

(10) **Patent No.:** **US D804,007 S**

(45) **Date of Patent:** **** Nov. 28, 2017**

(54) **AIR CIRCULATOR**

(71) Applicant: **VORNADO AIR LLC**, Andover, KS
(US)

(72) Inventors: **Brian M. Cartwright**, Wichita, KS
(US); **Glen W. Ediger**, North Newton,
KS (US); **Timothy Holub**, Cheney, KS
(US); **Gary P. Israel**, Andover, KS
(US); **Gregory Pease**, Andover, KS
(US); **Joshua S. Weed**, Wichita, KS
(US)

(73) Assignee: **Vornado Air LLC**, Andover, KS (US)

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

(21) Appl. No.: **29/546,774**

(22) Filed: **Nov. 25, 2015**

(51) **LOC (10) Cl.** **23-04**

(52) **U.S. Cl.**
USPC **D23/370**

(58) **Field of Classification Search**
USPC D23/370, 355, 314, 414; 415/121.1
CPC F04D 29/329; F04D 29/526; F04D 25/082;
F04D 29/325; F04D 29/703; F04D
29/547

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D486,218 S *	2/2004	Shapiro	.....	D23/381
D487,140 S *	2/2004	Gao	.....	D23/335
D519,196 S *	4/2006	Blateri	.....	D23/335
D525,691 S *	7/2006	Russak	.....	D23/364
D529,160 S *	9/2006	Li	.....	D23/364
7,156,616 B2 *	1/2007	Lee	.....	F04D 25/166 415/127
D581,038 S *	11/2008	Boswell	.....	D23/378

D594,110 S *	6/2009	Bucher	.....	D23/382
D598,532 S *	8/2009	Dyson	.....	D23/370
D602,144 S *	10/2009	Dyson	.....	D23/370
D634,834 S *	3/2011	Shapiro	.....	D23/314
D638,114 S *	5/2011	Li	.....	D23/370
D643,098 S *	8/2011	Wallace	.....	D23/342
8,167,542 B1 *	5/2012	Owusu	.....	F04D 17/04 415/127
D672,023 S *	12/2012	Wallace	.....	D23/332
D678,493 S *	3/2013	Lacotta	.....	D23/355
D683,006 S *	5/2013	Spiegel	.....	D23/364
D685,078 S *	6/2013	Sidell	.....	D23/378

(Continued)

Primary Examiner — Cynthia Underwood

(74) *Attorney, Agent, or Firm* — Milligan PC LLO

(57) **CLAIM**

The ornamental design for an air circulator, as shown and described.

DESCRIPTION

FIG. 1 is a front, left, top perspective view of the air circulator;

FIG. 2 is a front, right, top perspective view of the air circulator of FIG. 1;

FIG. 3 is a rear, right, top perspective view of the air circulator of FIG. 1;

FIG. 4 is a rear, left, top perspective view of the air circulator of FIG. 1;

FIG. 5 is a front elevation view of the air circulator of FIG. 1;

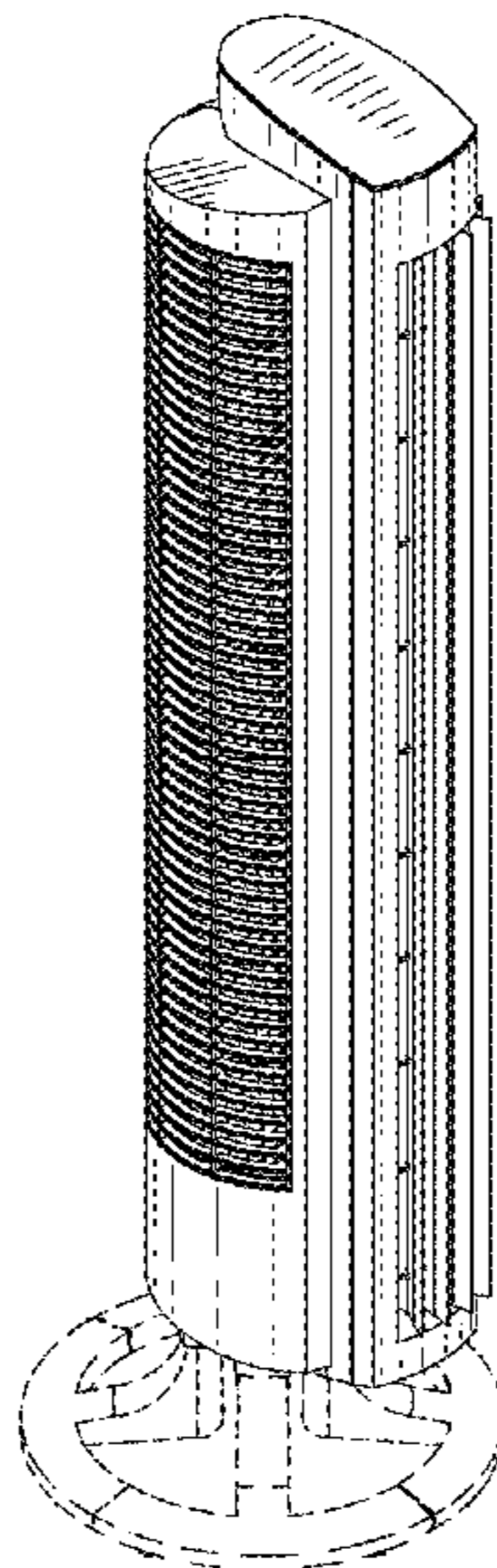
FIG. 6 is a rear elevation view of the air circulator of FIG. 1;

FIG. 7 is a right elevation view of the air circulator of FIG. 1; and,

FIG. 8 is a left elevation view of the air circulator of FIG. 1.

The broken lines in the above referenced drawings represent portions of the structure that forms no part of the claim.

1 Claim, 6 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

8,783,663	B2 *	7/2014	Fitton	.....	F24F 1/01	261/116	2012/0031509	A1 *	2/2012	Wallace	.....	F04D 15/0218	137/338
D716,425	S *	10/2014	Tai	.....	D23/314		2012/0033952	A1 *	2/2012	Wallace	.....	F04D 25/08	392/367
8,932,028	B2 *	1/2015	Fitton	.....	F04D 25/08	239/568	2012/0034108	A1 *	2/2012	Wallace	.....	F04D 25/08	417/313
D728,092	S *	4/2015	Poulton	.....	D23/342		2013/0028763	A1 *	1/2013	Staniforth	.....	F04D 25/08	417/423.5
9,004,858	B2 *	4/2015	Nicolas	.....	F04D 25/08	415/220	2013/0028766	A1 *	1/2013	Staniforth	.....	F04F 5/16	417/423.14
D728,769	S *	5/2015	Dyson	.....	D23/342		2013/0129490	A1 *	5/2013	Dos Reis	.....	F24F 7/007	415/182.1
D729,372	S *	5/2015	McPherson	.....	D23/370		2013/0142676	A1 *	6/2013	Zou	.....	F04F 5/16	417/313
D729,925	S *	5/2015	McPherson	.....	D23/370		2013/0234346	A1 *	9/2013	Staniforth	.....	F04F 5/16	261/72.1
D744,628	S *	12/2015	Alexander	.....	D23/370		2013/0234347	A1 *	9/2013	Staniforth	.....	F24F 1/01	261/78.2
D757,922	S *	5/2016	Tang	.....	D23/364		2013/0249122	A1 *	9/2013	Staniforth	.....	F04F 5/16	261/78.2
D757,923	S *	5/2016	Tang	.....	D23/364		2013/0249124	A1 *	9/2013	Staniforth	.....	F24F 3/16	261/128
9,366,449	B2 *	6/2016	Staniforth	.....	F04F 5/16		2013/0249126	A1 *	9/2013	Staniforth	.....	F24F 13/26	261/141
D773,028	S *	11/2016	Tang	.....	D23/364		2013/0272858	A1 *	10/2013	Stickney	.....	F04D 25/08	415/182.1
D776,248	S *	1/2017	Lewis	.....	D23/370		2013/0280061	A1 *	10/2013	Stickney	.....	F04D 25/08	415/211.2
2004/0118289	A1 *	6/2004	Chang	.....	B01D 46/0023	96/417	2013/0309065	A1 *	11/2013	Johnson	.....	F04D 29/665	415/119
2005/0123392	A1 *	6/2005	Belsito	.....	F04D 25/166	415/53.1	2013/0309080	A1 *	11/2013	Johnson	.....	F04D 29/665	415/208.1
2007/0180801	A1 *	8/2007	Paterson	.....	F24F 3/166	55/413	2013/0323100	A1 *	12/2013	Poulton	.....	F04F 5/16	417/423.14
2007/0221061	A1 *	9/2007	Steiner	.....	B03C 3/32	96/63	2013/0336771	A1 *	12/2013	Dyson	.....	F04D 25/08	415/126
2008/0028733	A1 *	2/2008	Paterson	.....	B01D 46/0002	55/471	2014/0017069	A1 *	1/2014	Peters	.....	F04D 29/462	415/126
2009/0060710	A1 *	3/2009	Gammack	.....	F04D 25/06	415/90	2014/0077398	A1 *	3/2014	Staniforth	.....	F04F 5/16	261/32
2010/0225012	A1 *	9/2010	Fitton	.....	F24F 1/01	261/116	2014/0084492	A1 *	3/2014	Staniforth	.....	F04D 25/08	261/31
2010/0226752	A1 *	9/2010	Gammack	.....	F04D 25/08	415/90	2014/0210114	A1 *	7/2014	Staniforth	.....	F04D 25/08	261/30
2010/0226769	A1 *	9/2010	Helps	.....	F04D 25/08	415/208.1	2014/0210115	A1 *	7/2014	Staniforth	.....	F24F 13/26	261/78.2
2010/0226771	A1 *	9/2010	Crawford	.....	F04D 25/08	415/230							
2010/0226797	A1 *	9/2010	Fitton	.....	F04D 25/08	417/313							
2010/0226801	A1 *	9/2010	Gammack	.....	F04F 5/16	417/423.1							
2011/0110805	A1 *	5/2011	Gammack	.....	F04D 25/08	417/423.1							

* cited by examiner

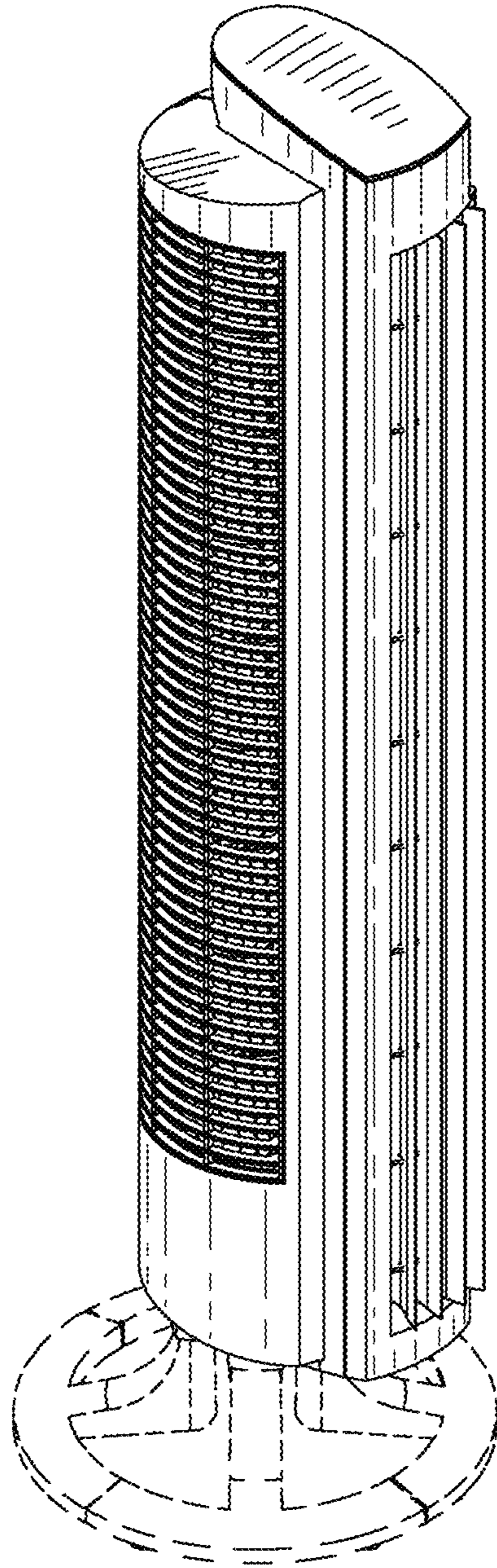


FIG. 1

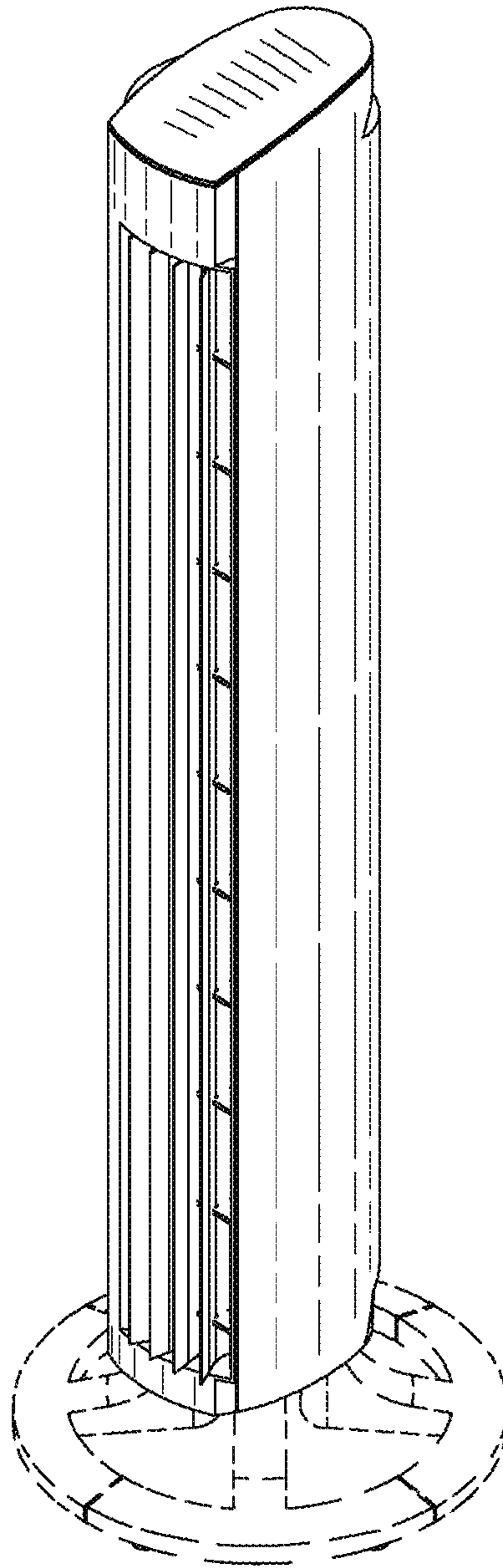


FIG. 2

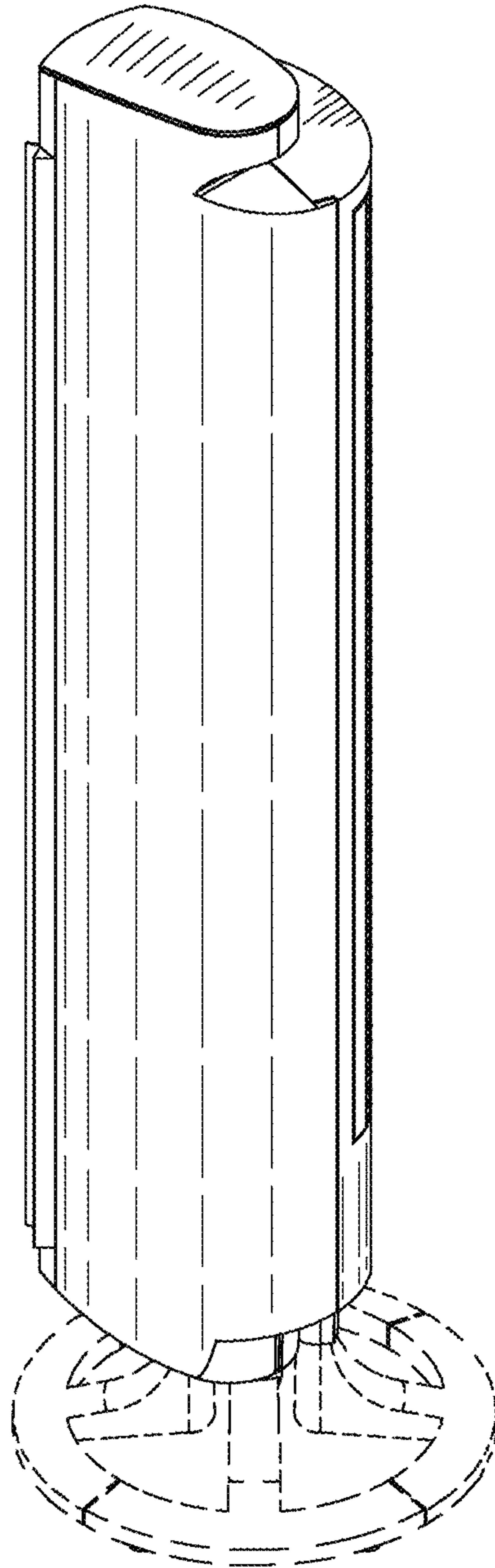


FIG. 3

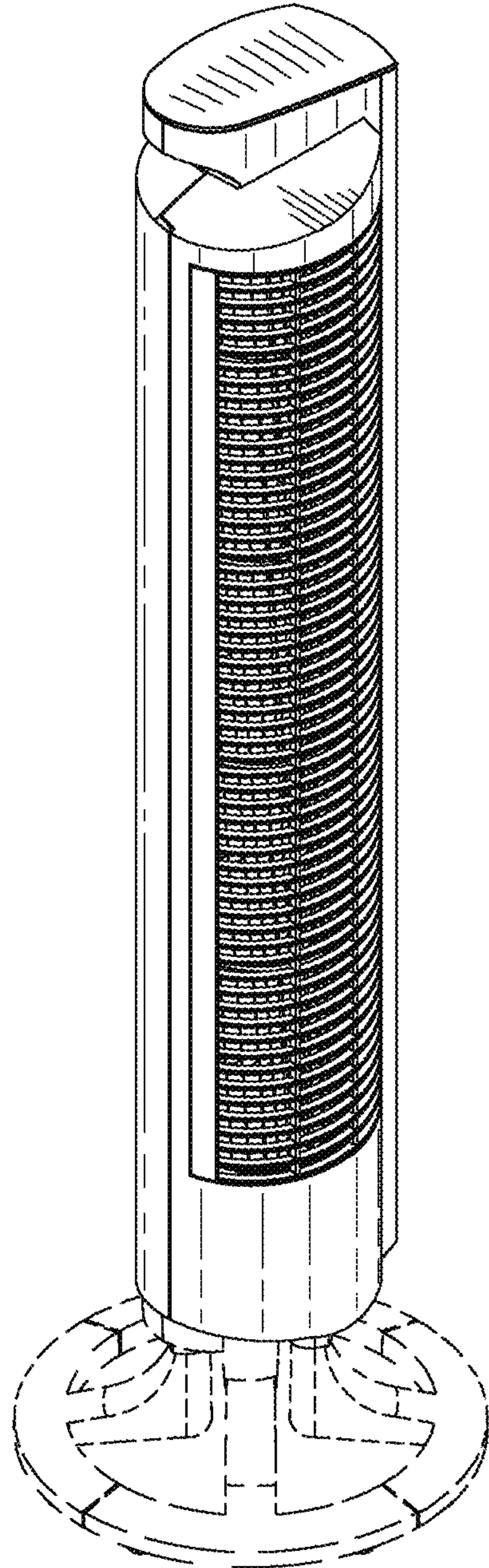


FIG. 4

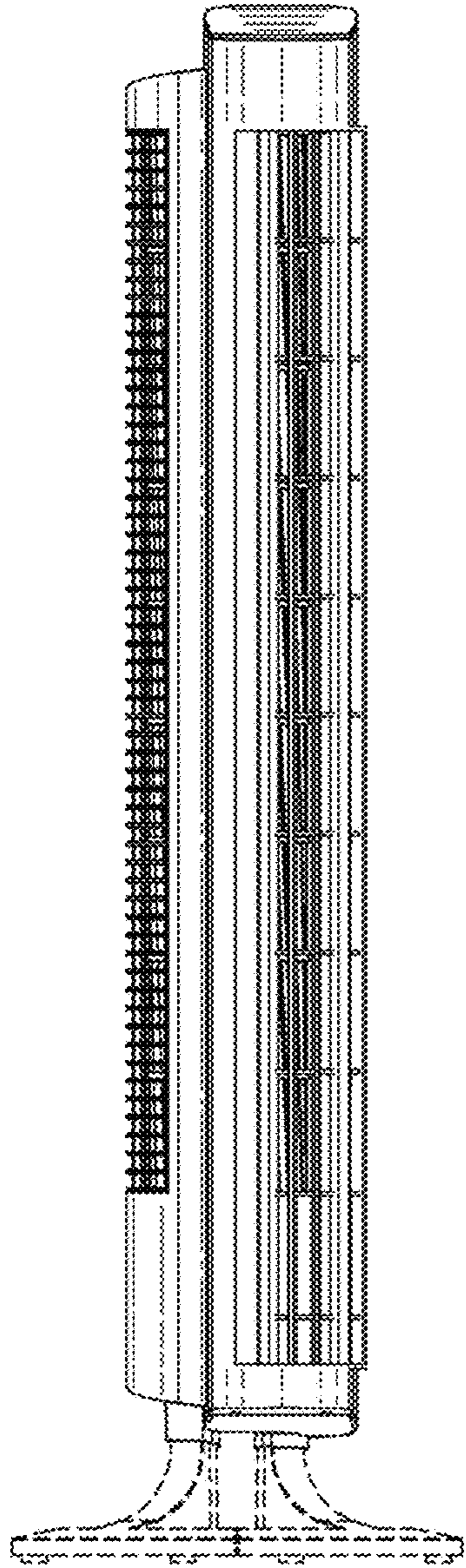


FIG. 5

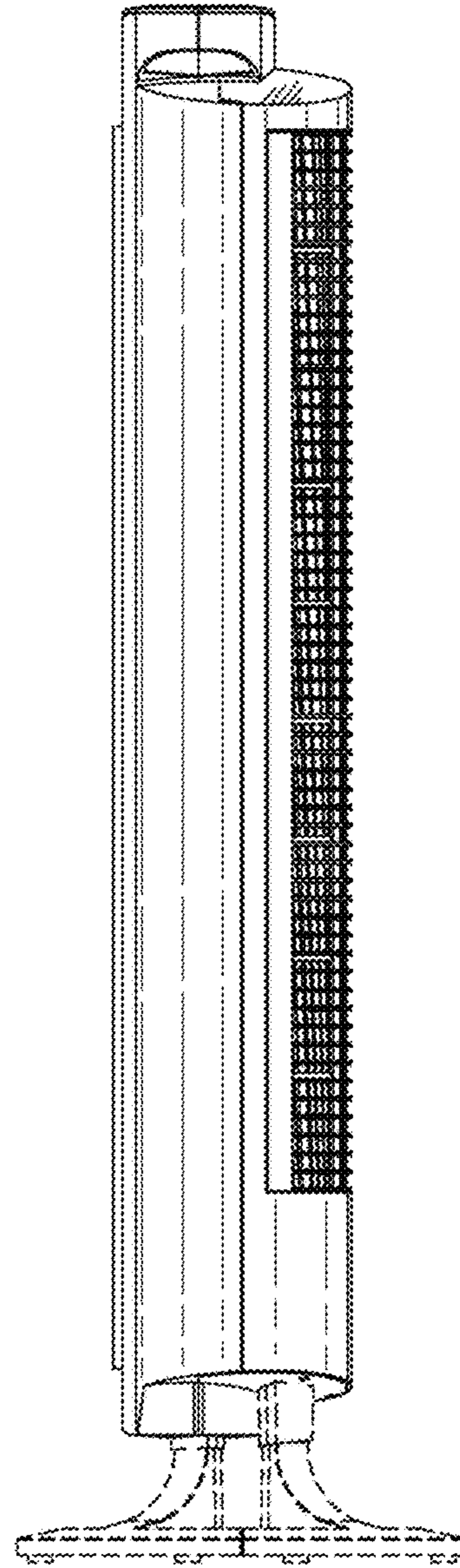


FIG. 6

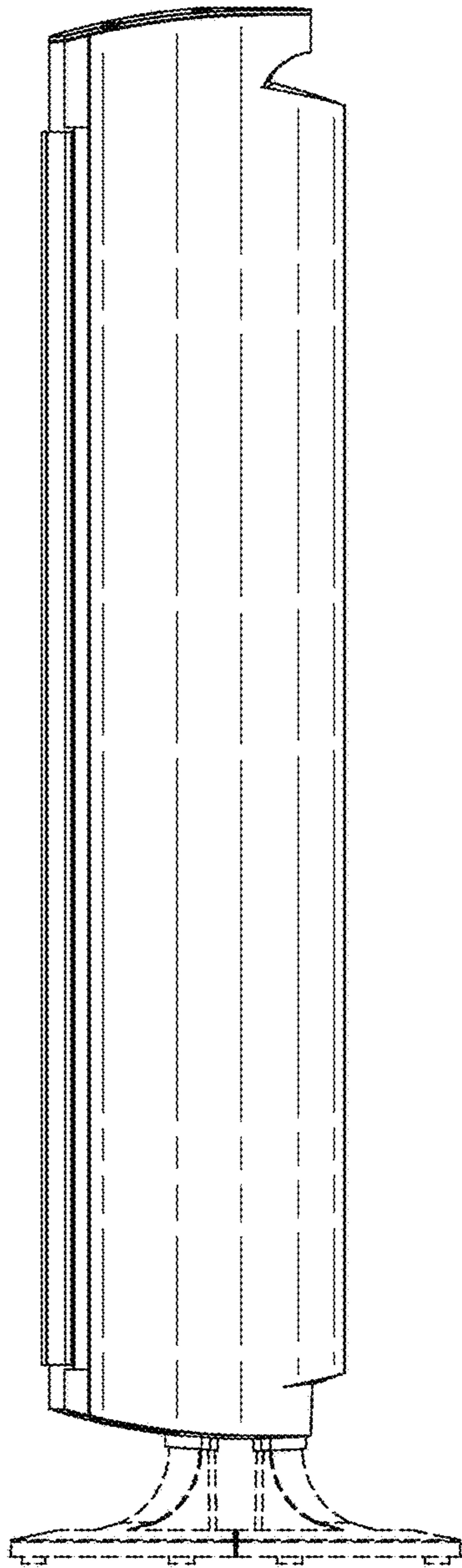


FIG. 7

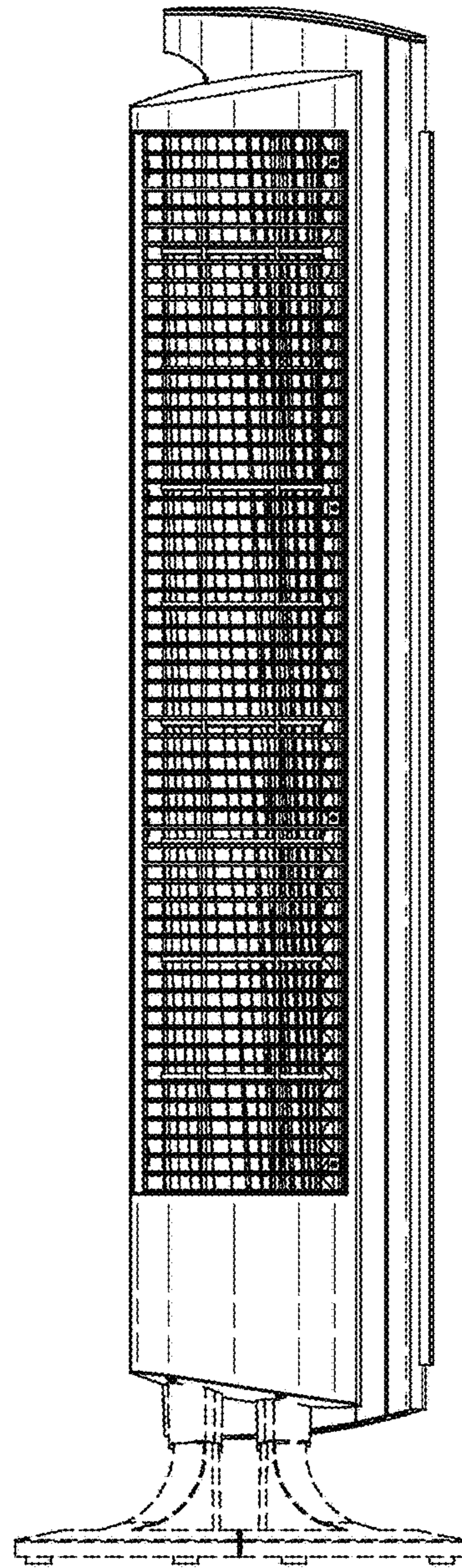


FIG. 8