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Menssen et al.

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(54) **AIR FILTER**

B01D 46/0023; B01D 46/2414; B01D
2271/027

See application file for complete search history.

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

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Related U.S. Application Data

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8, 2012.

(30) **Foreign Application Priority Data**

Feb. 8, 2012 (CN) 2012 3 0024218

(51) **LOC (10) Cl.** **15-01**

(52) **U.S. Cl.**
USPC **D15/5**

(58) **Field of Classification Search**

USPC D15/1-6; 55/495, 345, 337, 321, 324,
55/482; D23/365

CPC B01D 46/521; B01D 46/0005; B01D
46/2411; B01D 46/10; B01D 50/002;
B01D 46/526; B01D 46/0002; B01D
2265/06; B01D 46/0004; B01D 2271/022;

(56) **References Cited**

U.S. PATENT DOCUMENTS

8,012,227 B2 * 9/2011 Greif B01D 45/16
55/337
8,157,880 B2 * 4/2012 Muenkel B01D 46/0021
123/198 E
8,216,334 B2 * 7/2012 Nelson B01D 46/0004
55/431

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Assistant Examiner — Ania Aman

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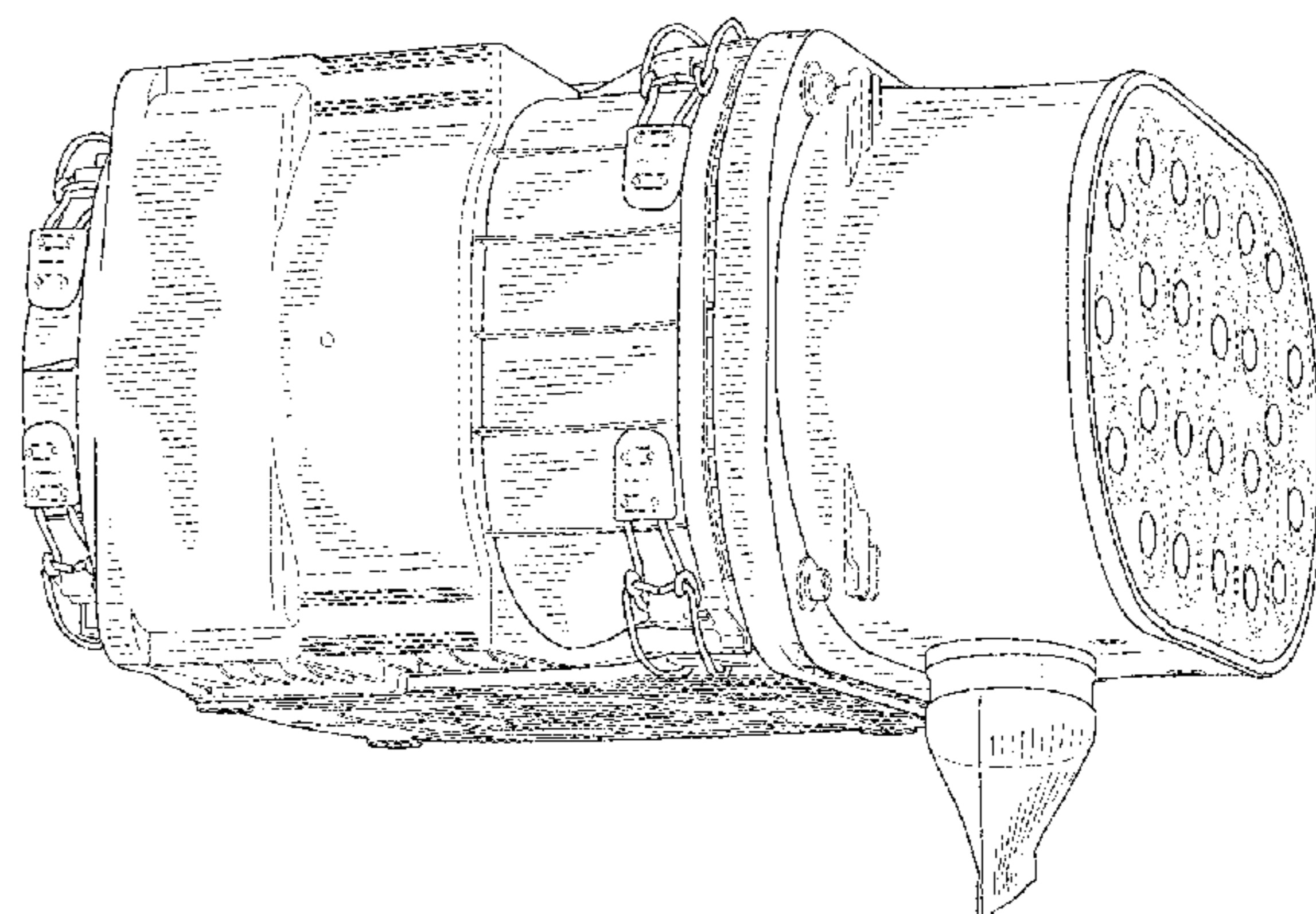
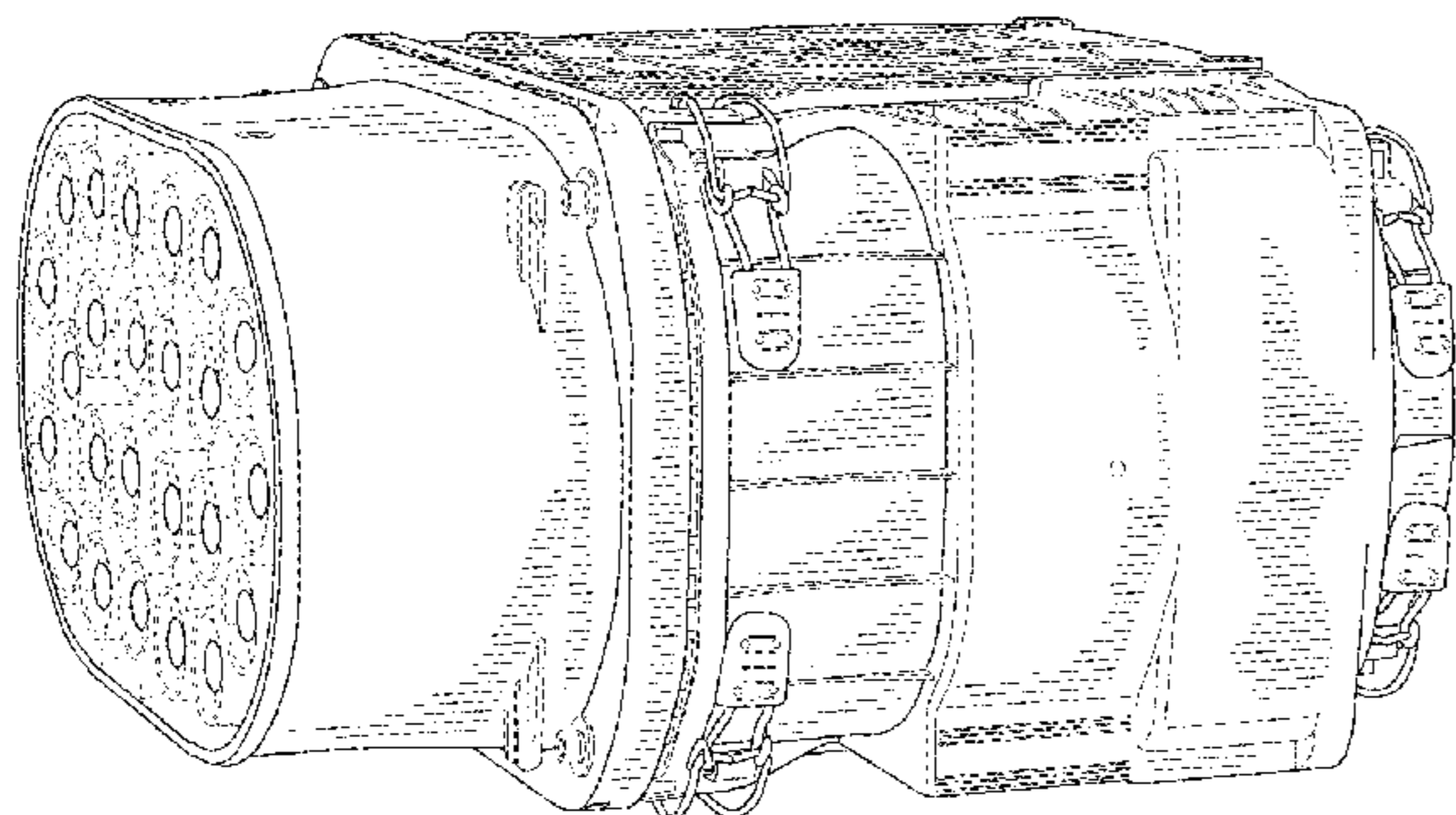
(57) **CLAIM**

We claim the ornamental design for an air filter, as shown
and described.

DESCRIPTION

FIG. 1 is a perspective view of an air filter showing our new
design configured vertically;
FIG. 2 is a front elevational view thereof;
FIG. 3 is a rear elevational view thereof;
FIG. 4 is a right side elevational view thereof;
FIG. 5 is a left side elevational view thereof;
FIG. 6 is a bottom plan view thereof; and
FIG. 7 is a top plan view thereof.
FIG. 8 is a perspective view of the variation of the air filter
showing our new design having a horizontal configuration;
FIG. 9 is a front elevational view thereof;
FIG. 10 is a rear elevational view thereof;
FIG. 11 is a left side elevational view thereof, rotated 180
degrees in the plane of the page;
FIG. 12 is a right side elevational view thereof, rotated 180
degrees in the plane of the page;
FIG. 13 is a top plan view thereof; and,
FIG. 14 is a bottom plan view thereof.

(Continued)



The broken lines shown in the drawings are for the purpose of illustrating portions of the article that form no part of the claimed design.

1 Claim, 8 Drawing Sheets

(56) **References Cited**

U.S. PATENT DOCUMENTS

8,657,900	B2 *	2/2014	Menssen	B01D 45/16 123/198 E
8,784,522	B2 *	7/2014	Menssen	B01D 46/2411 55/321
8,790,431	B2 *	7/2014	Muenkel	B01D 46/0021 55/337
2007/0289265	A1 *	12/2007	Coulonvaux	B01D 46/0023 55/324
2010/0162673	A1 *	7/2010	Grosche	B01D 46/0004 55/482
2010/0186353	A1 *	7/2010	Ackermann	B01D 46/0021 55/321
2012/0198802	A1 *	8/2012	Menssen	B01D 45/16 55/337
2013/0031878	A1 *	2/2013	Menssen	B01D 45/16 55/345
2014/0033666	A1 *	2/2014	Menssen	B01D 46/2418 55/495
2014/0047808	A1 *	2/2014	Menssen	B01D 46/2411 55/502

* cited by examiner

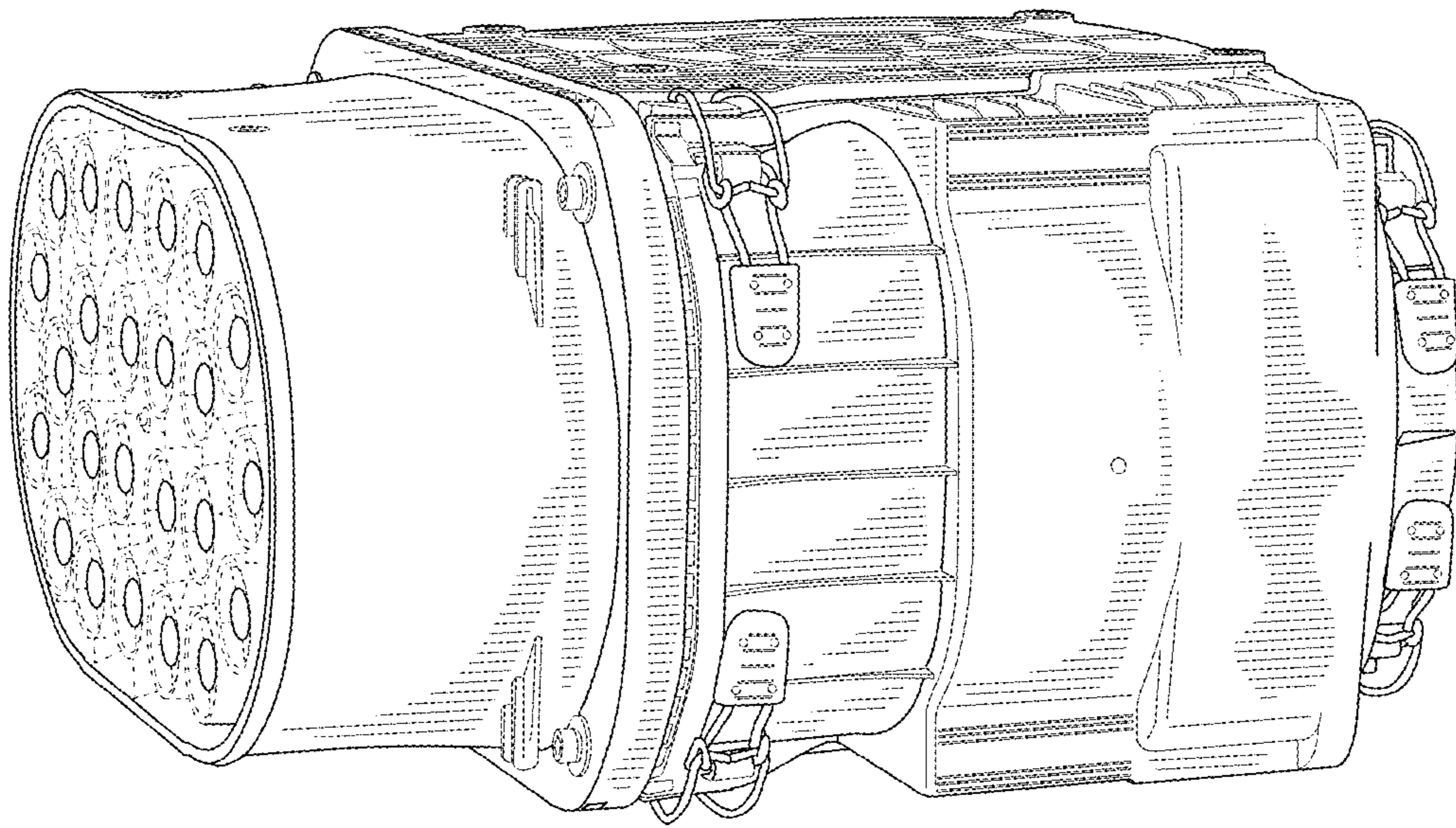


FIG. 1

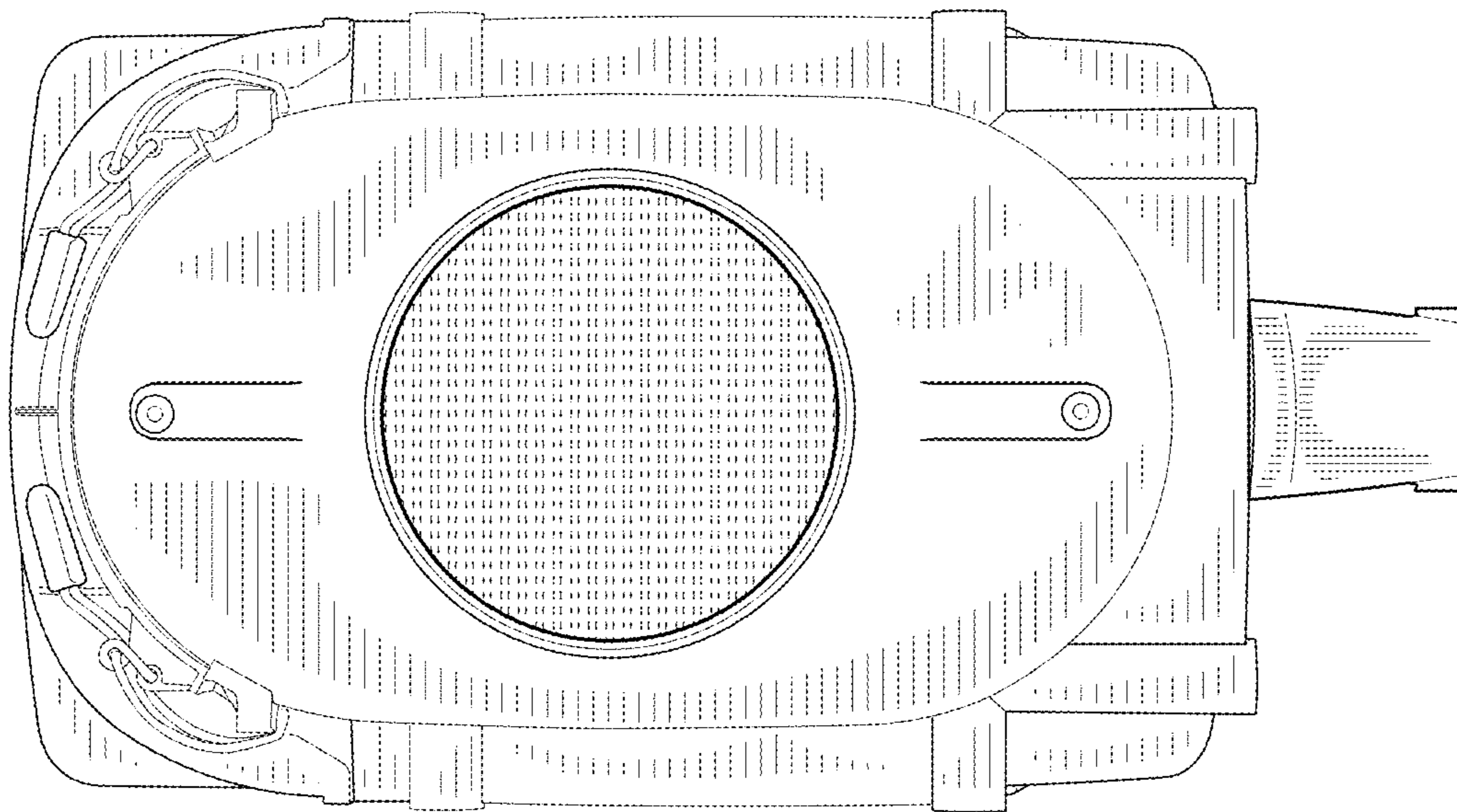


FIG. 2

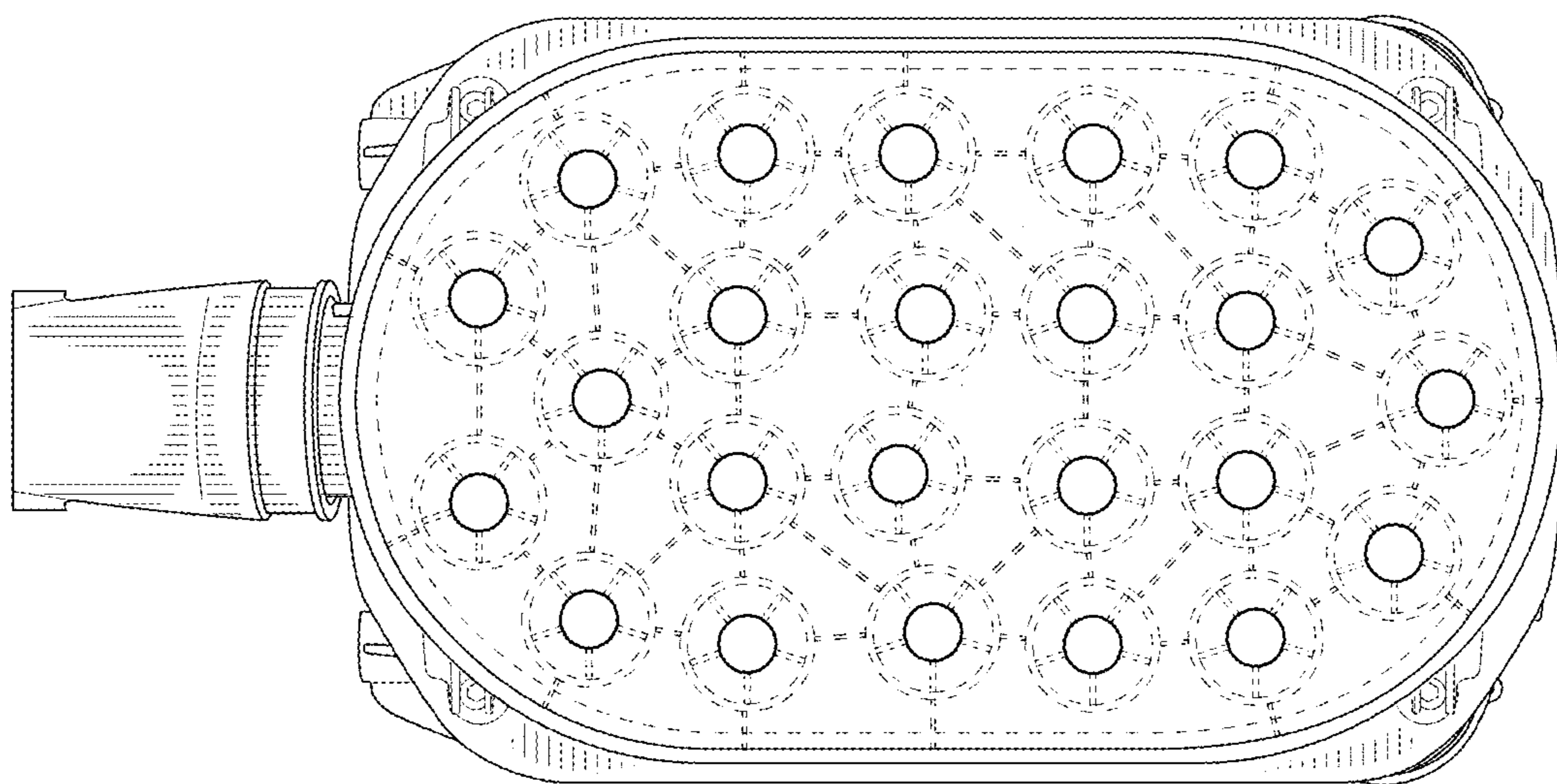


FIG. 3

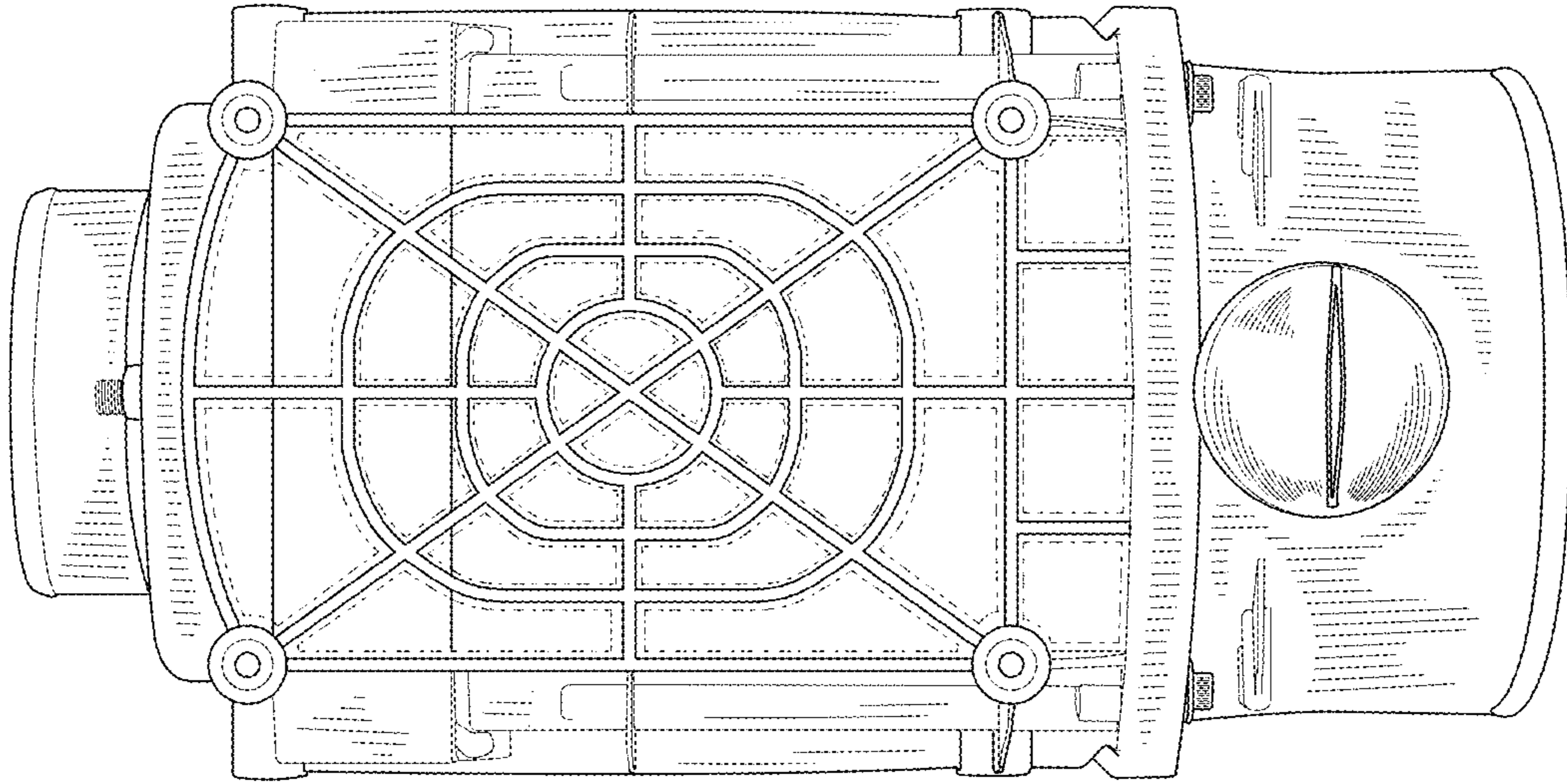


FIG. 4

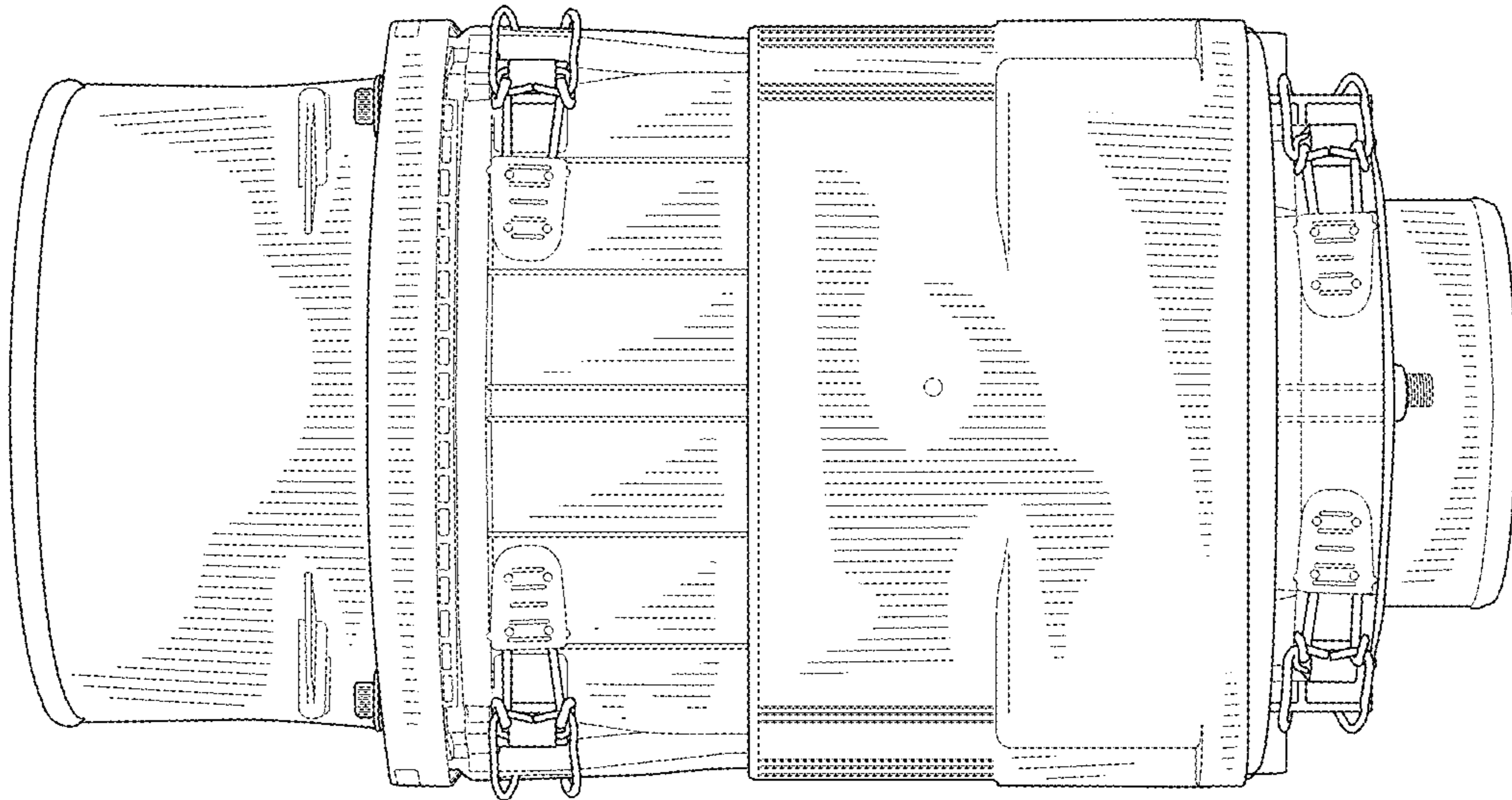


FIG. 5

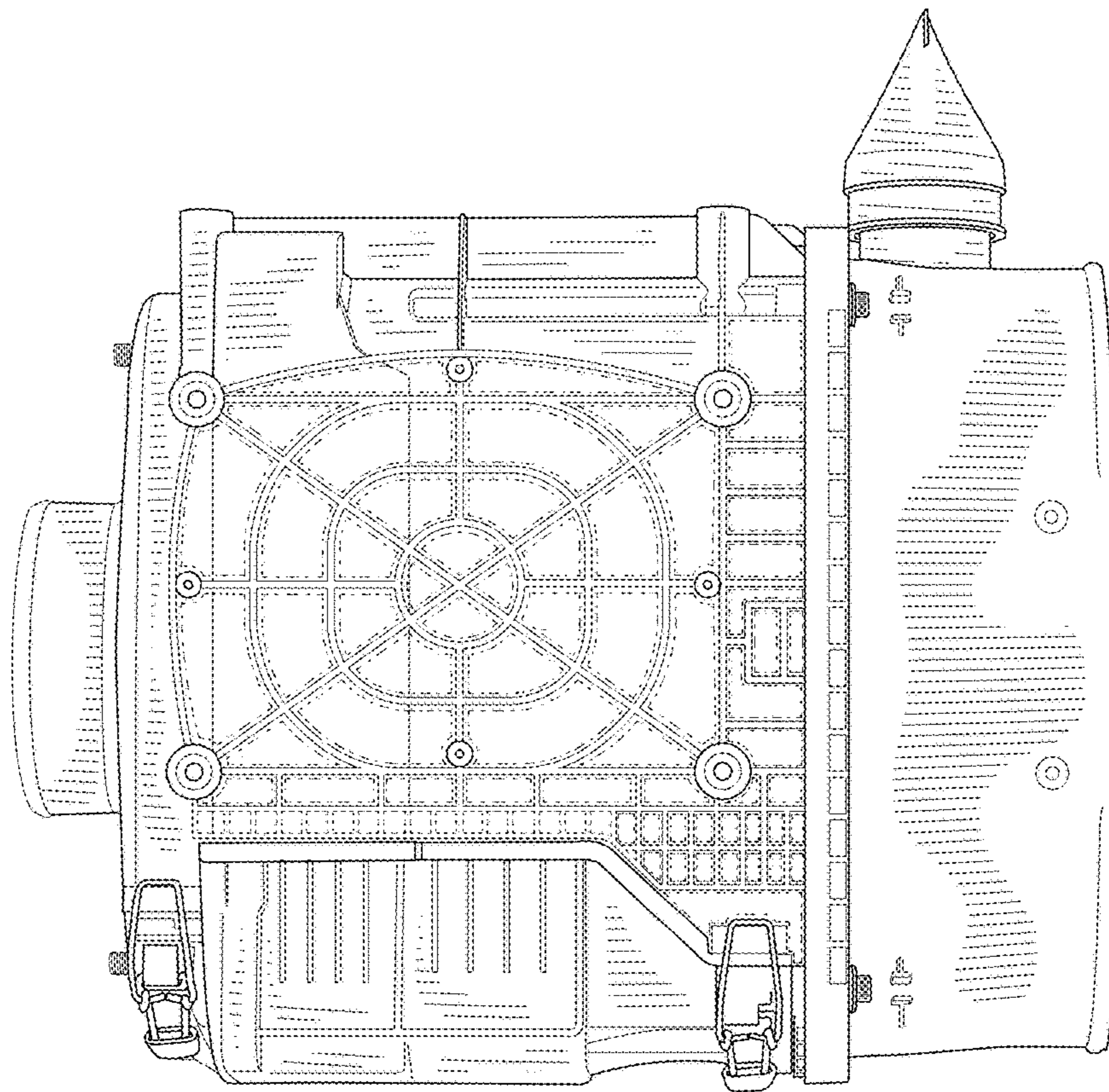


FIG. 6

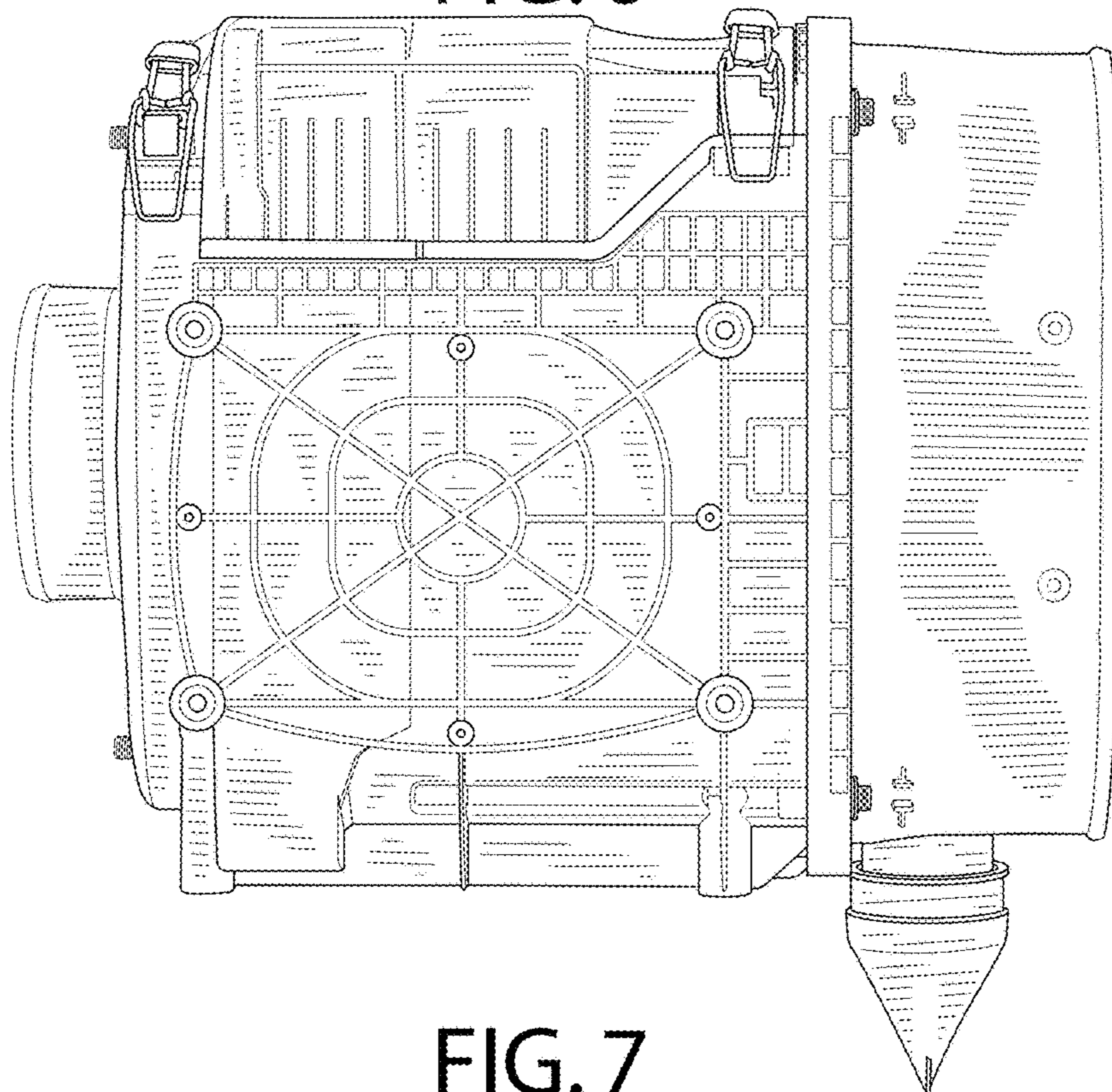


FIG. 7

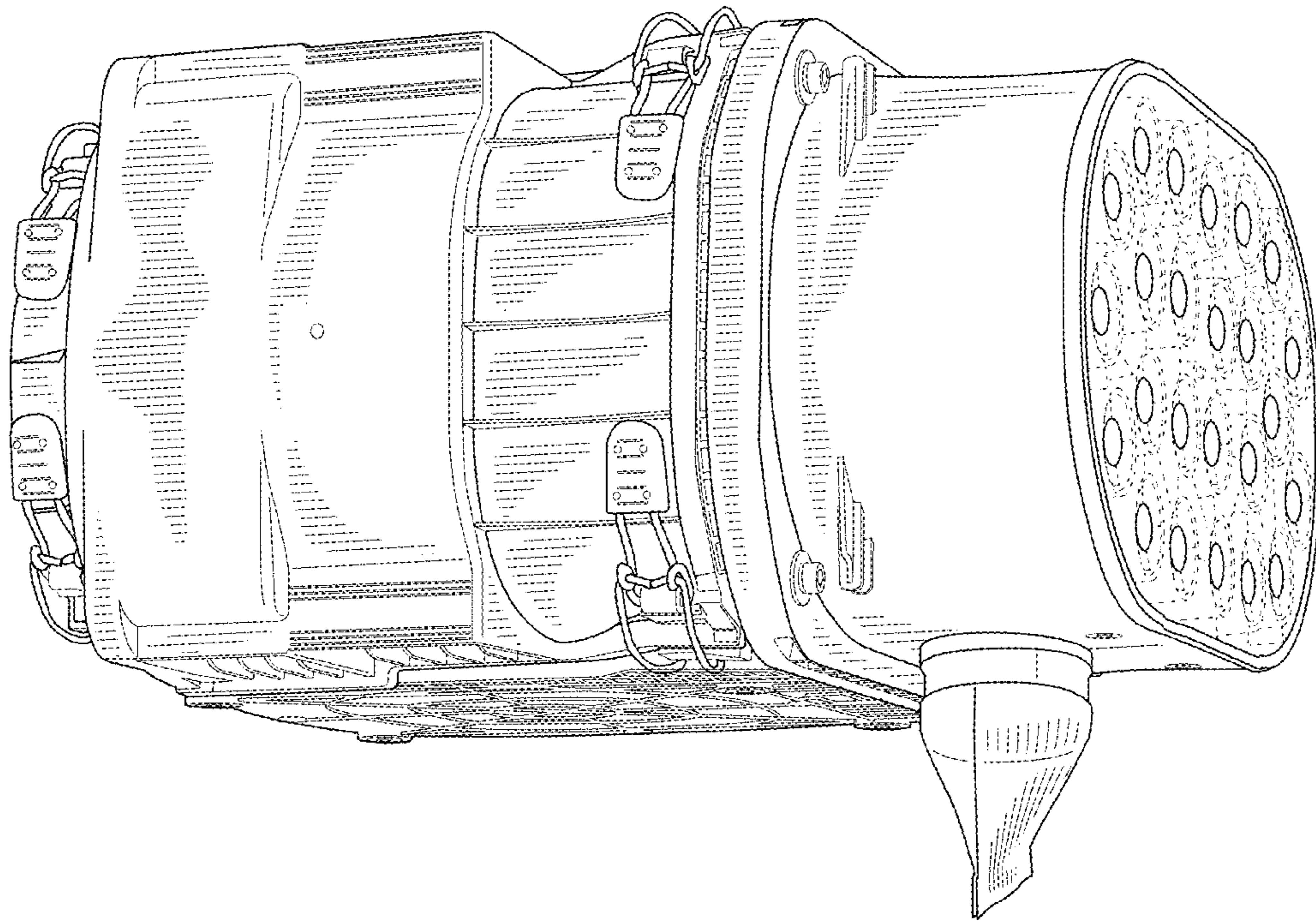


FIG. 8

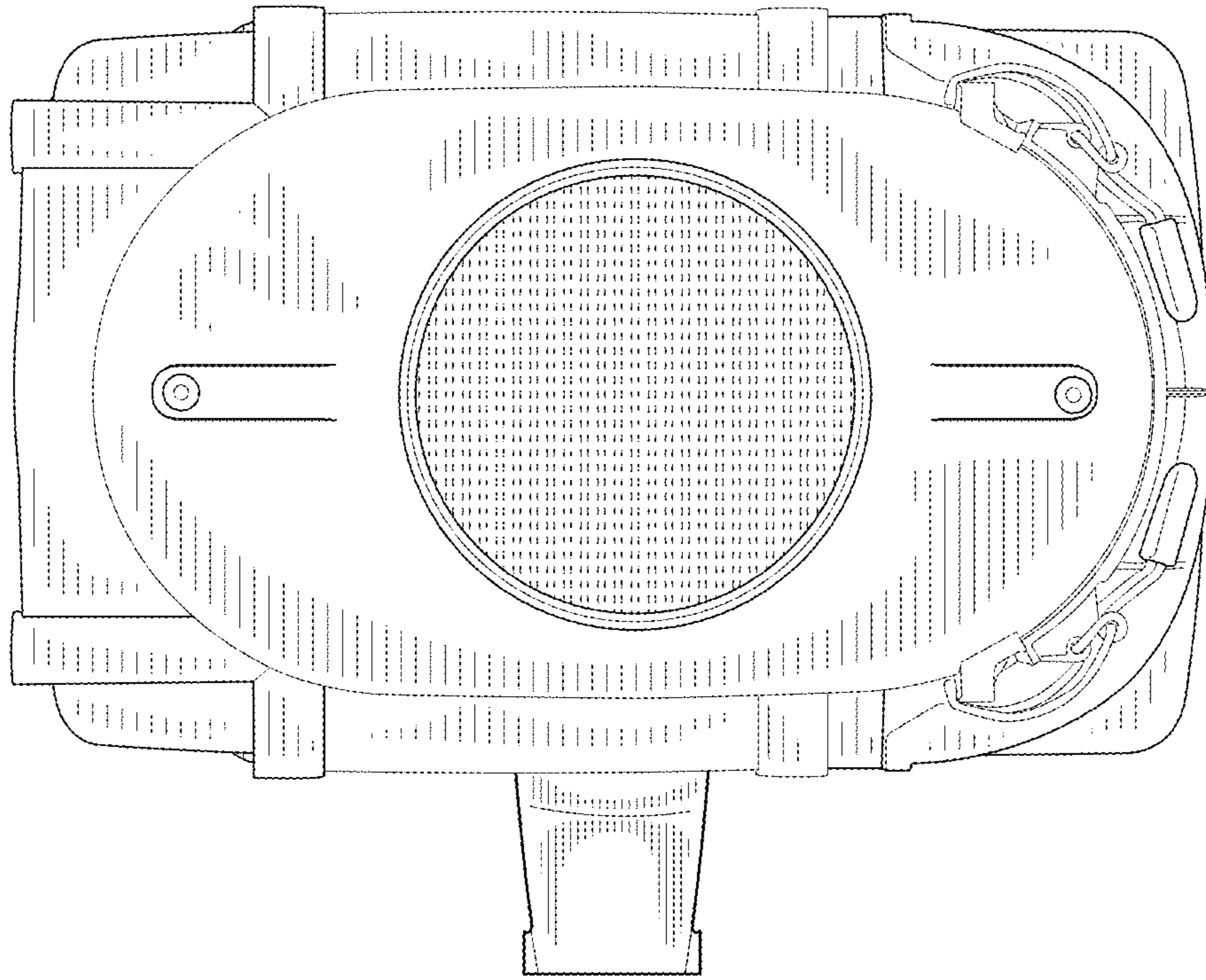


FIG. 9

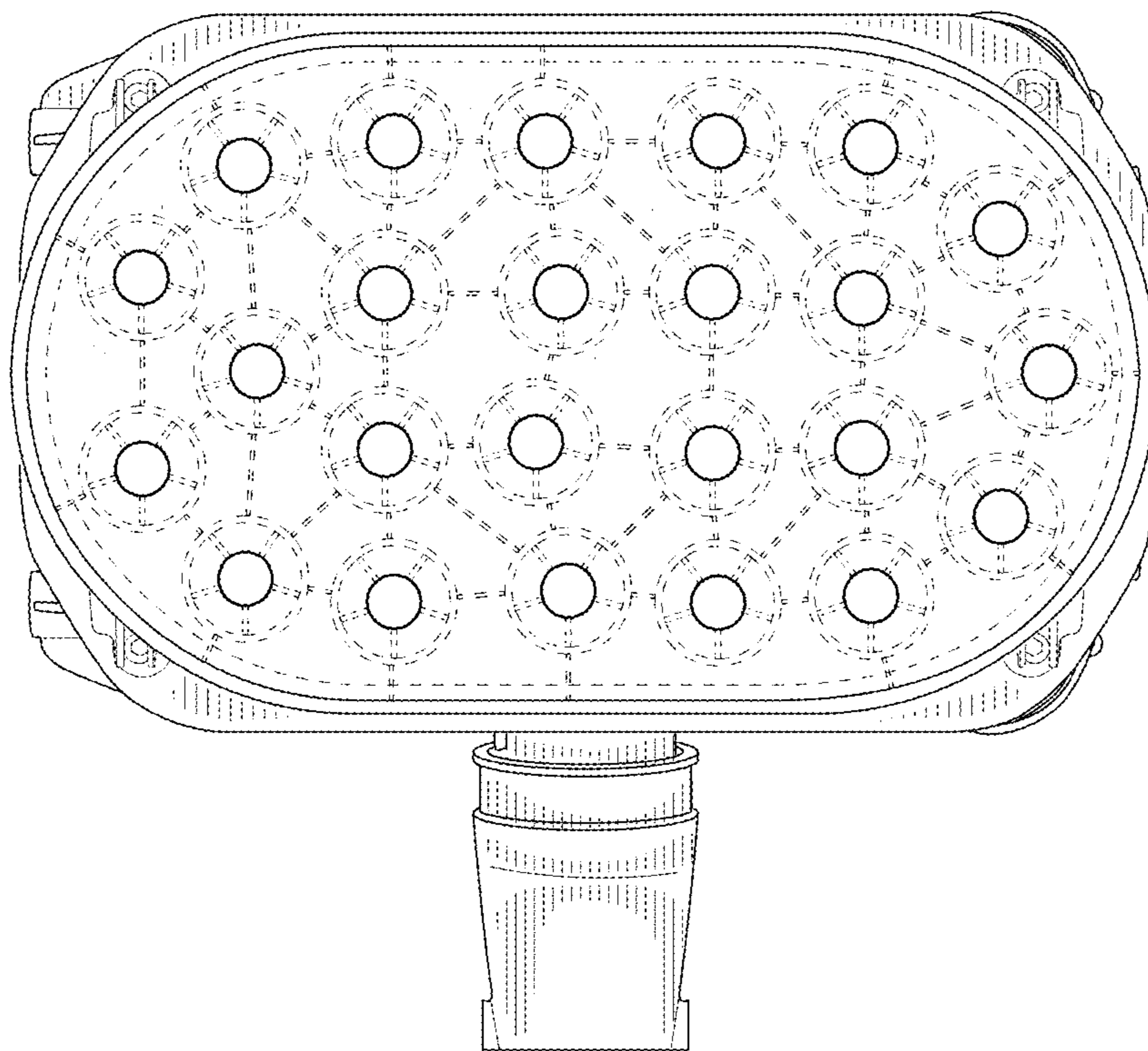


FIG. 10

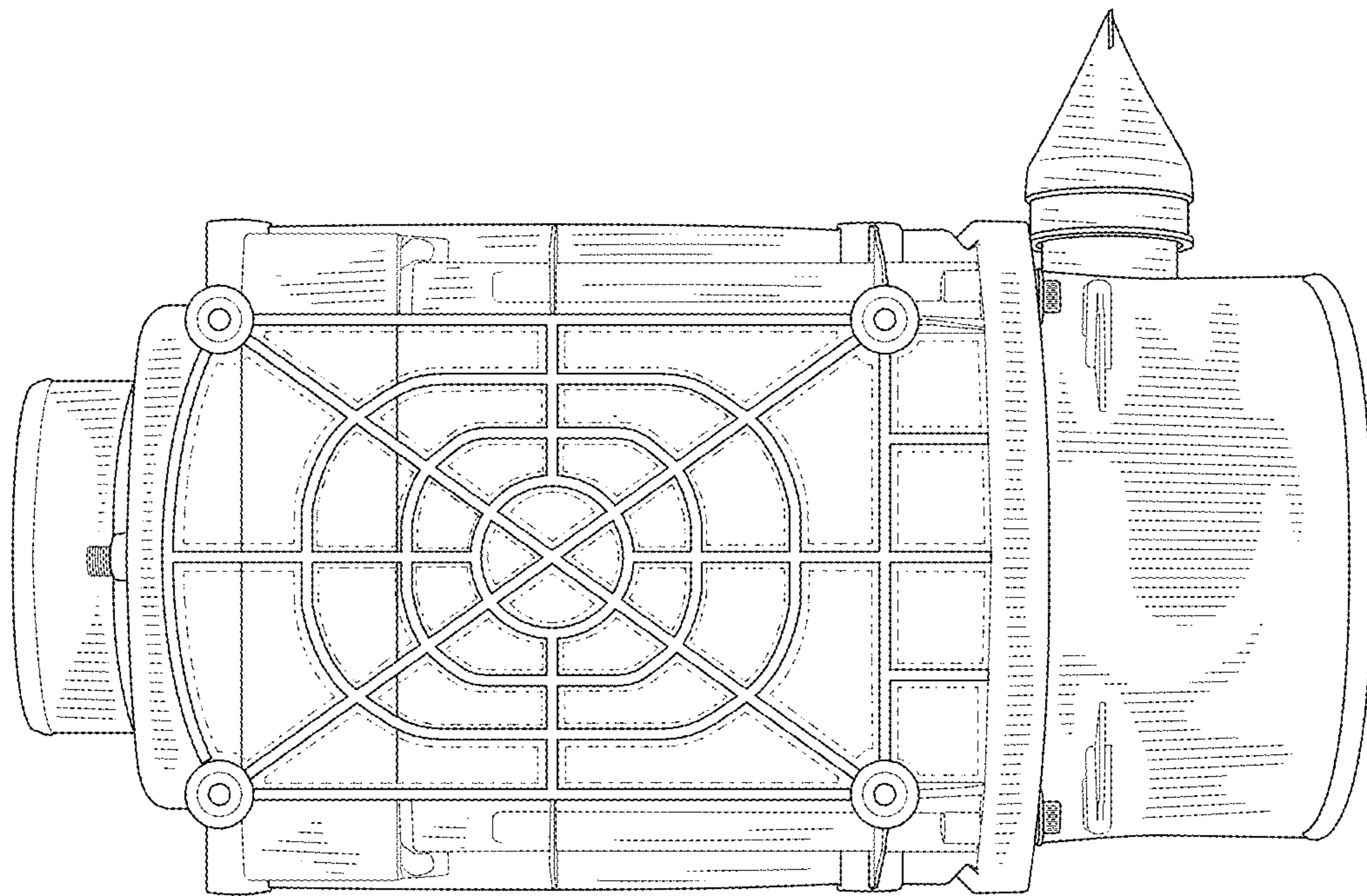


FIG. 11

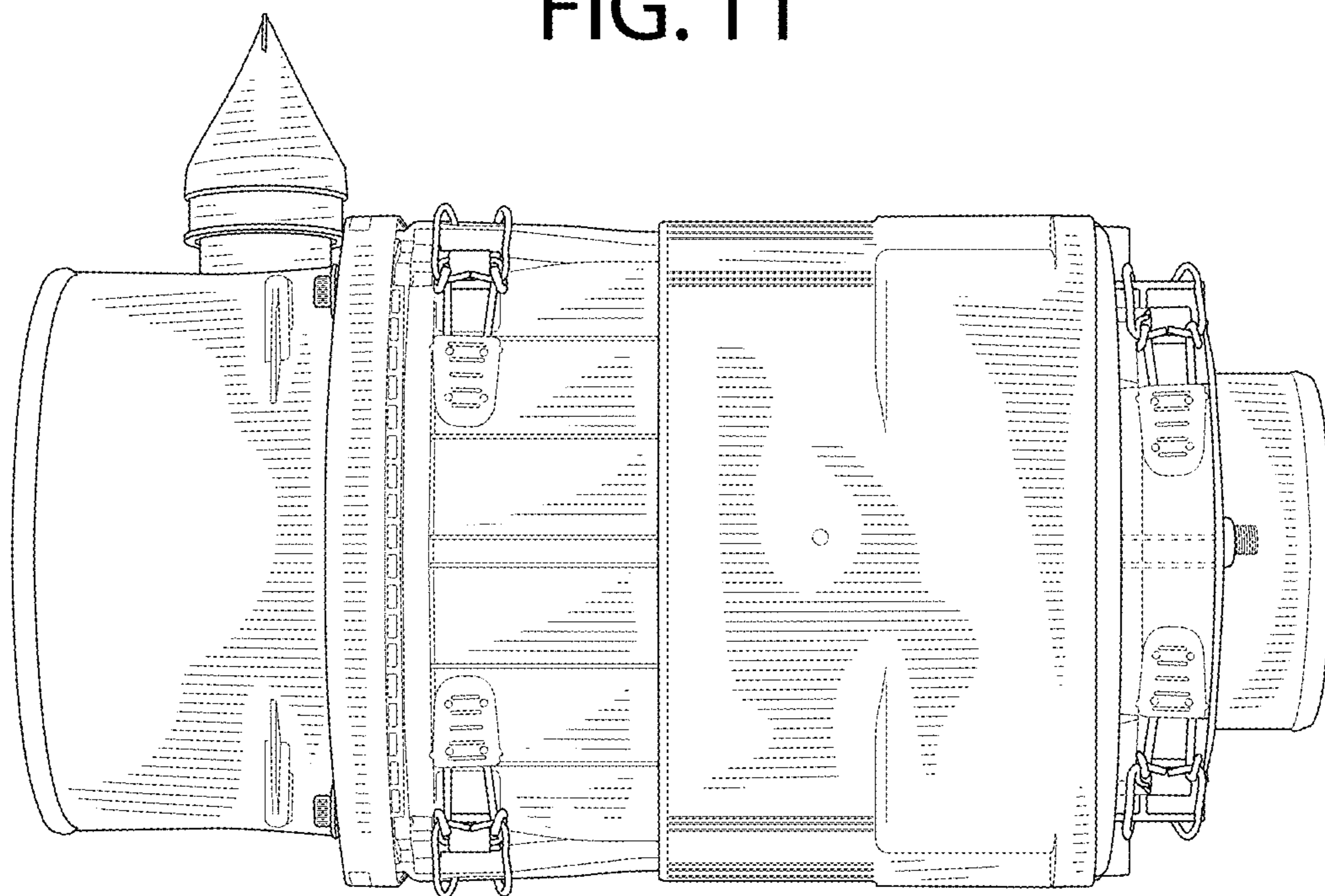


FIG. 12

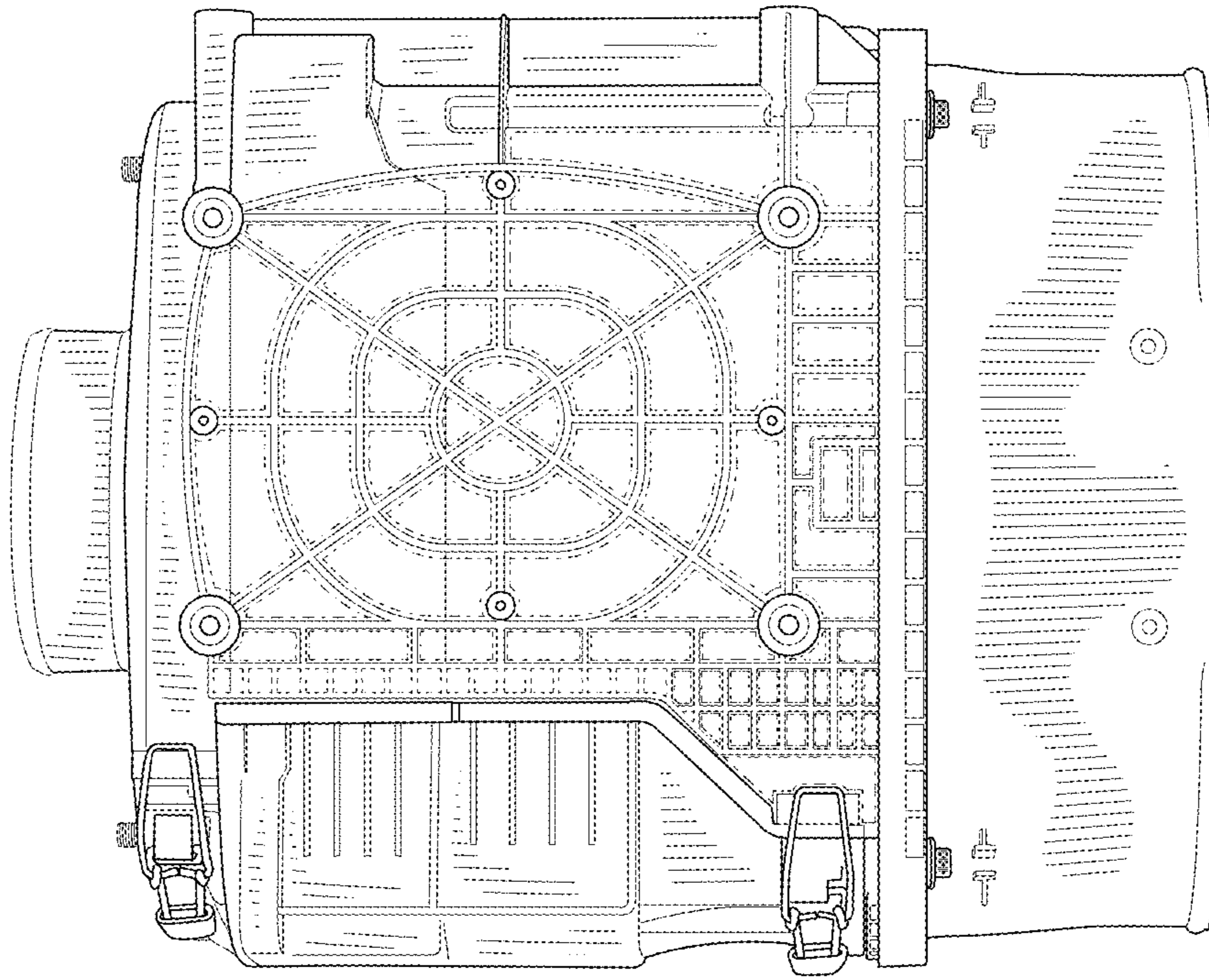


FIG. 13

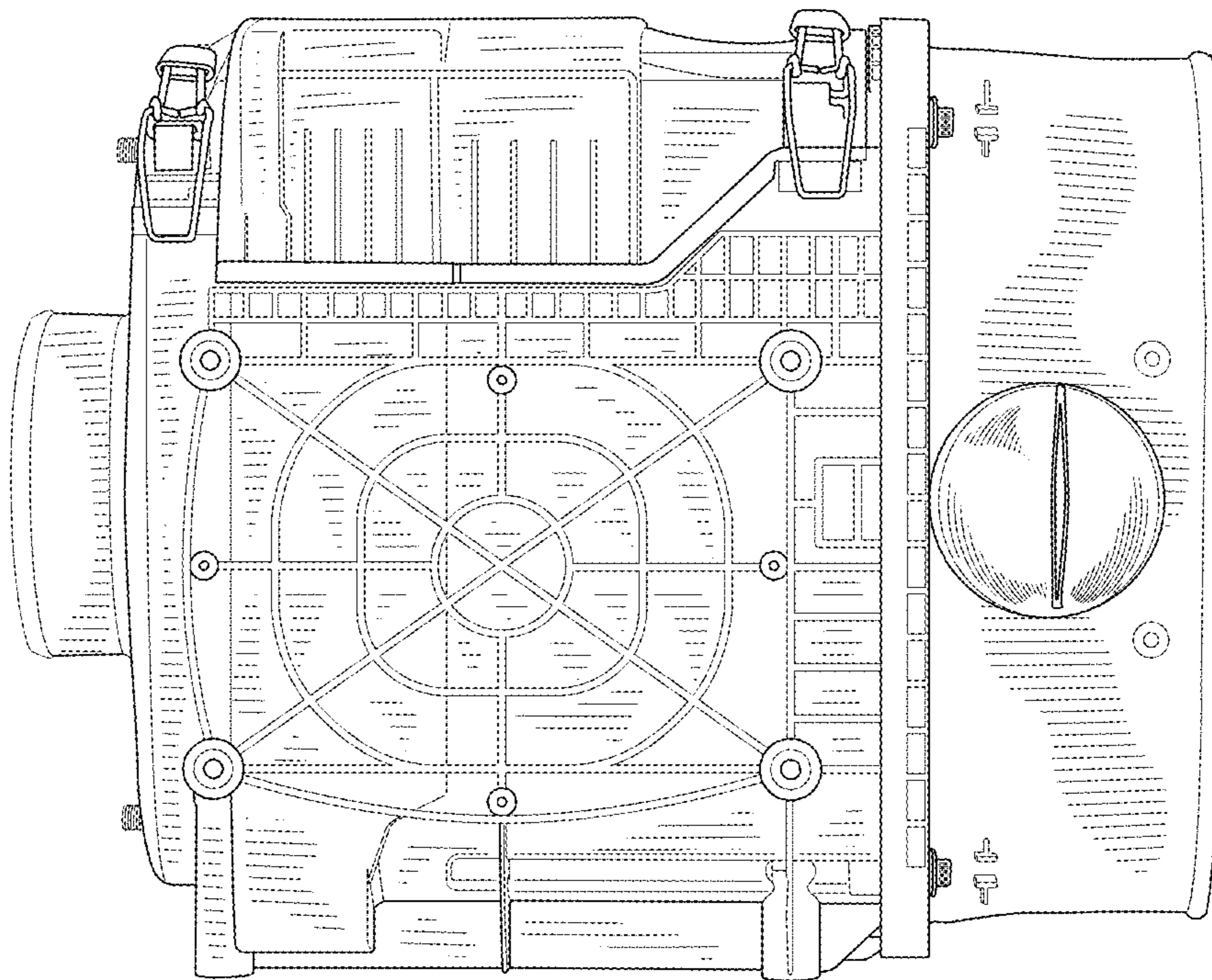


FIG. 14