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

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(54) **CLEANING ROBOT**

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15/383, 363, 340.4, 246.2, 384, 388, 392,  
15/49.1; 180/6.2; 318/568.12; 901/1;  
701/2

See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D527,854	S	*	9/2006	Marzynski	.....	D32/21
D548,411	S	*	8/2007	Schroter	.....	D32/21
D548,902	S	*	8/2007	Chun et al.	.....	D32/21
D556,961	S	*	12/2007	Swyst et al.	.....	D32/21
7,441,298	B2	*	10/2008	Svendsen et al.	.....	15/49.1
D586,959	S	*	2/2009	Geringer et al.	.....	D32/21
D593,265	S	*	5/2009	Carr et al.	.....	D32/21
D596,815	S	*	7/2009	Baek	.....	D32/21

7,832,048	B2	*	11/2010	Harwig et al.	.....	15/320
D658,341	S	*	4/2012	Nam et al.	.....	D32/21
D659,920	S	*	5/2012	Lee et al.	.....	D32/21
D661,032	S	*	5/2012	Lee et al.	.....	D32/21
D661,439	S	*	6/2012	Lee et al.	.....	D32/21
D661,440	S	*	6/2012	Lee et al.	.....	D32/21
D665,547	S	*	8/2012	Nam et al.	.....	D32/21
D669,235	S	*	10/2012	Bassett et al.	.....	D32/21
D670,877	S	*	11/2012	Geringer et al.	.....	D32/21
8,370,985	B2	*	2/2013	Schnittman et al.	.....	15/41.1
8,438,695	B2	*	5/2013	Gilbert et al.	.....	15/319
D690,478	S	*	9/2013	Li et al.	.....	D32/21
D691,337	S	*	10/2013	Kim et al.	.....	D32/21
8,584,307	B2	*	11/2013	Won et al.	.....	15/319
8,627,542	B2	*	1/2014	Kim et al.	.....	15/319
2006/0288519	A1	*	12/2006	Jaworski et al.	.....	15/340.1
2007/0266508	A1	*	11/2007	Jones et al.	.....	15/49.1
2011/0191976	A1	*	8/2011	Yan	.....	15/319

(Continued)

**OTHER PUBLICATIONS**

Notification of Reason for Refusal from Japanese Patent Office dated Dec. 13, 2013 with English translation of relevant parts.

(Continued)

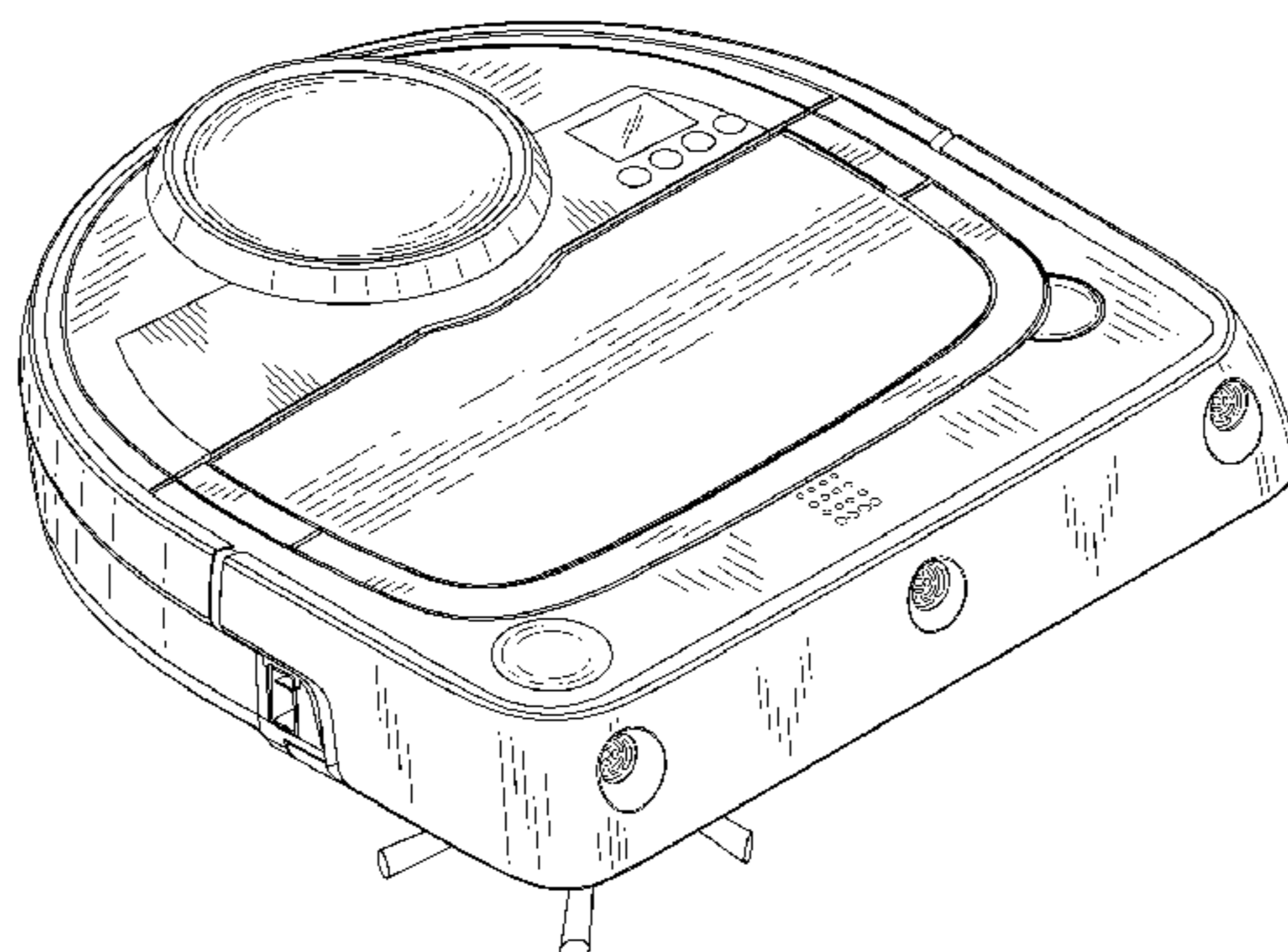
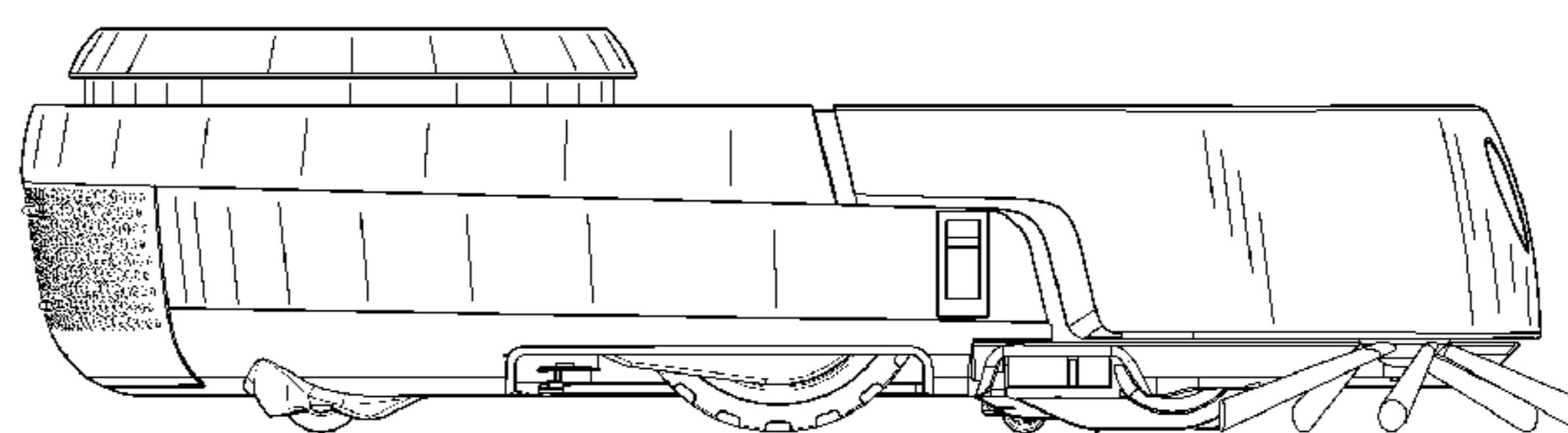
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(57) **CLAIM**  
The ornamental design for a cleaning robot, as shown and described.

**DESCRIPTION**

FIG. 1 is a top view of a cleaning robot showing our new design;  
FIG. 2 is a left side view thereof;  
FIG. 3 is a right side view thereof;  
FIG. 4 is a rear view thereof;  
FIG. 5 is a front view thereof; and,  
FIG. 6 is a top, left and rear perspective view thereof.

**1 Claim, 4 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

2012/0023699 A1\* 2/2012 Shim et al. .... 15/319  
2012/0047676 A1\* 3/2012 Jung et al. .... 15/319  
2012/0084934 A1\* 4/2012 Li ..... 15/319  
2012/0317744 A1\* 12/2012 Gilbert et al. .... 15/319  
2012/0317745 A1\* 12/2012 Jung et al. .... 15/319  
2013/0025085 A1\* 1/2013 Kim et al. .... 15/319  
2013/0061417 A1\* 3/2013 Vanderstegen-Drake  
et al. .... 15/319  
2013/0086760 A1\* 4/2013 Han et al. .... 15/49.1

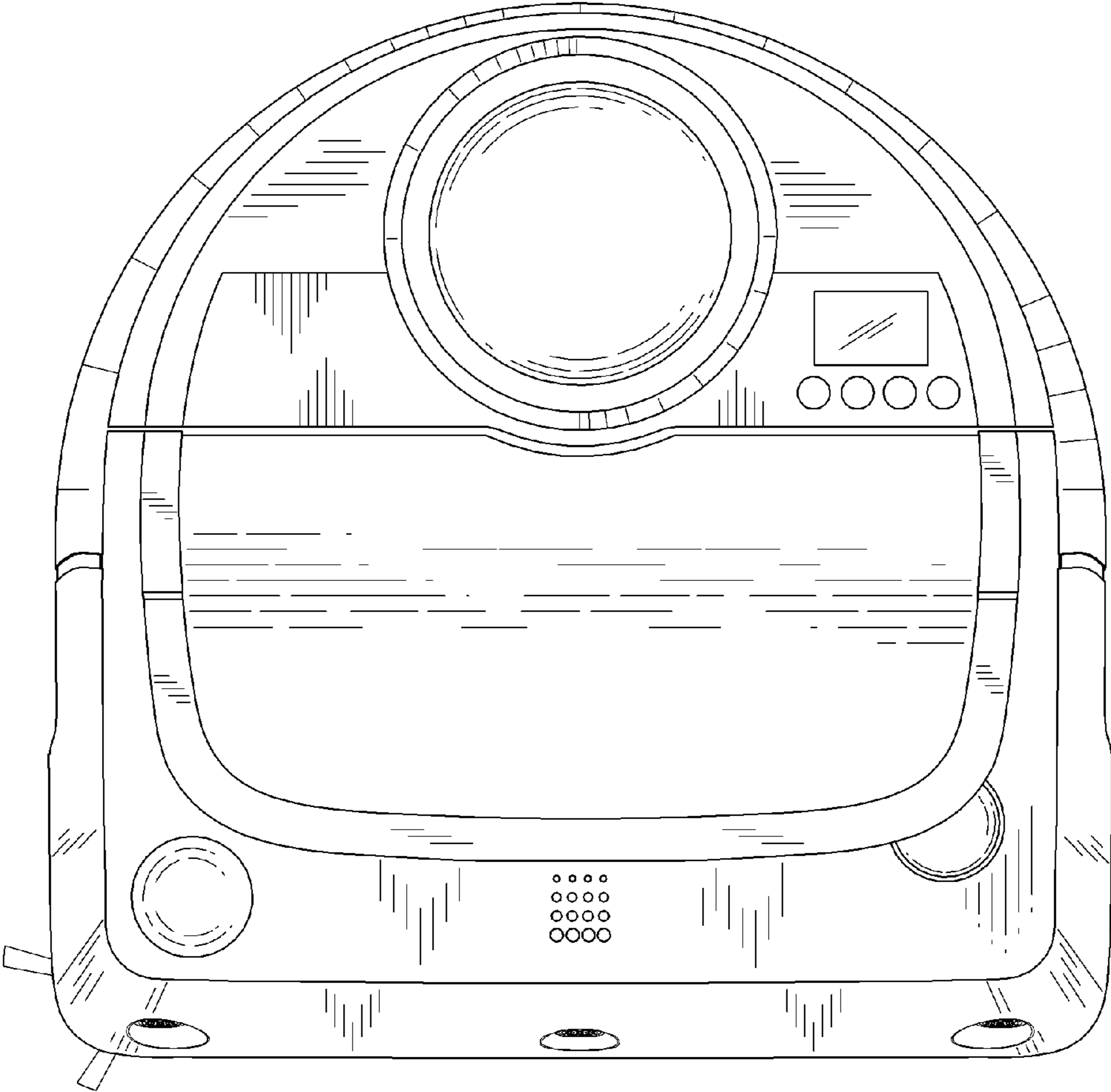
2013/0152332 A1\* 6/2013 Jang ..... 15/319  
2013/0305484 A1\* 11/2013 Dyson et al. .... 15/353  
2013/0340201 A1\* 12/2013 Jang et al. .... 15/319

OTHER PUBLICATIONS

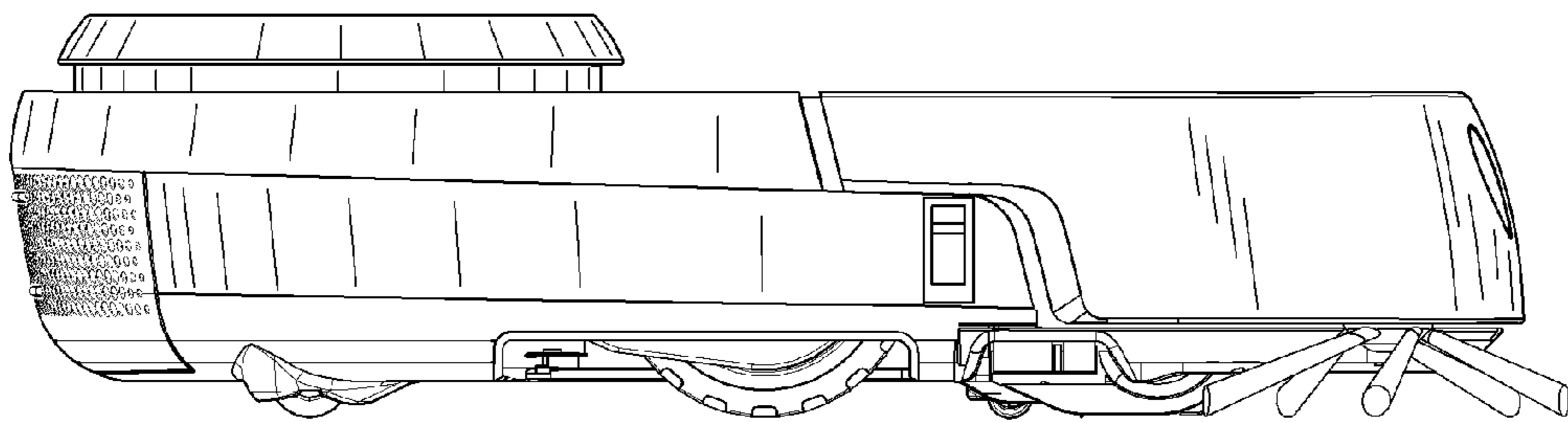
Design of a battery charger for robotic cleaner Disclosed on p. 234 of No. 6 issue of the magazine titled "Pen" issued by Hankyu Communications Co., Ltd., on Mar. 15, 2013. Received by National Center for Industrial Property Information and Training on Mar. 19, 2013 (JPO Design Division document card No. HA25002644).

\* cited by examiner

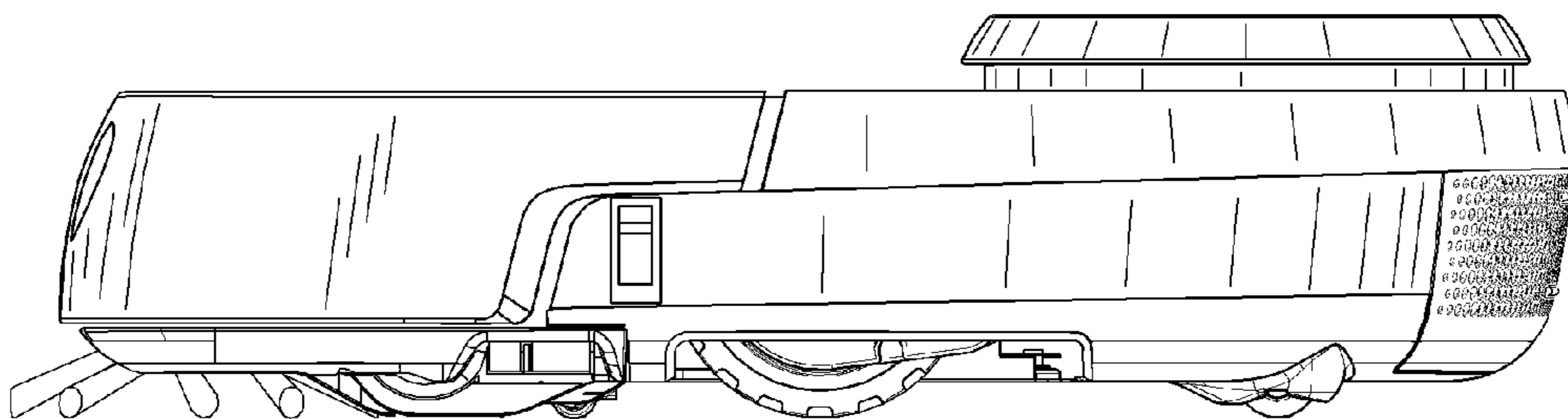
***Fig. 1***



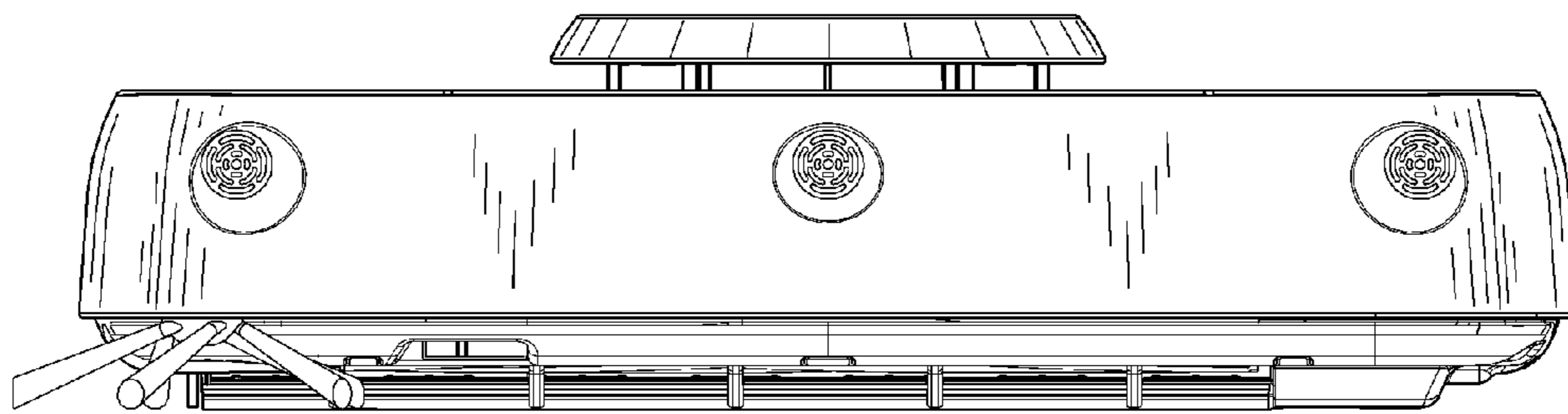
***Fig. 2***



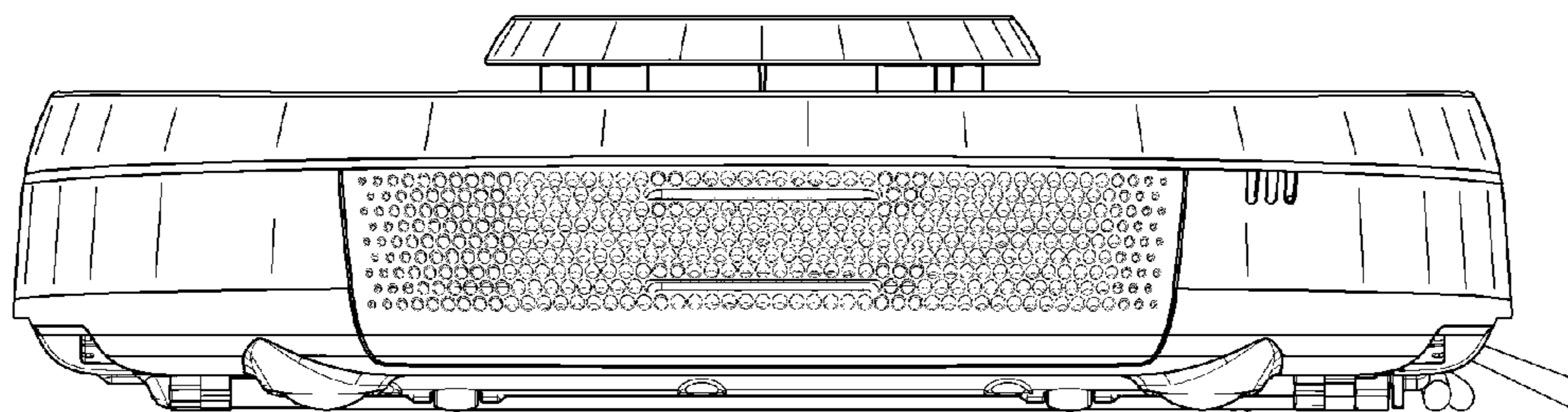
***Fig. 3***



***Fig. 4***



***Fig. 5***





***Fig. 6***

