



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

(10) **Patent No.:** **US D860,010 S**
(45) **Date of Patent:** **** Sep. 17, 2019**

(54) **CONSTANT TEMPERATURE LIQUID CIRCULATOR**

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

(21) Appl. No.: **29/647,348**

(22) Filed: **May 11, 2018**

(30) **Foreign Application Priority Data**

Nov. 17, 2017 (JP) 2017-025774

(51) **LOC (12) CL.** **10-04**

(52) **U.S. CL.**
USPC **D10/49; D13/162.1; D13/164**

(58) **Field of Classification Search**

USPC D10/49, 50; D13/162, 162.1, 164

CPC H01H 2223/00; H01H 2223/002; H01H

2223/003; H01H 2223/004; H01H

2223/006; H01H 2223/008; H01H

2223/01; H01H 2223/012; H01H

2223/014; H01H 2223/016; H01H

2223/018; H01H 2223/02; H01H

2223/022; H01H 2223/024; H01H

2223/026; H01H 2223/028; H01H

2223/03; H01H 2223/032; H01H

2223/034; H01H 2223/0345; H01H

2223/036; H01H 2223/038; H01H

2223/04; H01H 2223/042; H01H

2223/044; H01H 2223/046; H01H

2223/048; H01H 2223/05; H01H

2223/052; H01H 2223/054; H01H

2223/056; H01H 2223/058; H01H

2223/06; H01H 2223/062; H01H 37/04;

H01H 37/08; H01H 37/12; H01H 37/14;

H01H 37/16; H01H 37/18; H01H 37/20;
H01H 37/22; H01H 37/24; H01H 37/26;
H01H 37/28; H01H 37/30

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,308,519 B1 * 10/2001 Bielinski F24F 5/0042

136/203

8,140,195 B2 * 3/2012 Matteson G06F 1/206

700/299

8,490,413 B2 * 7/2013 Blackway F25B 21/02

62/3.62

D707,187 S * 6/2014 Mauchle D13/162

9,585,290 B2 * 2/2017 Herman H05K 7/1489

* cited by examiner

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(57) **CLAIM**

The ornamental design for a constant temperature liquid circulator, as shown and described.

DESCRIPTION

FIG. 1 is a front, top, and left side perspective view of a constant temperature liquid circulator;

FIG. 2 is a rear, bottom, and right side perspective view thereof;

FIG. 3 is a front elevational view thereof;

FIG. 4 is a rear elevational view thereof;

FIG. 5 is a top plan view thereof;

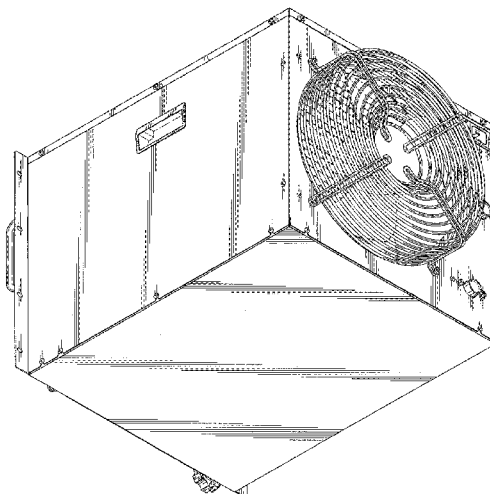
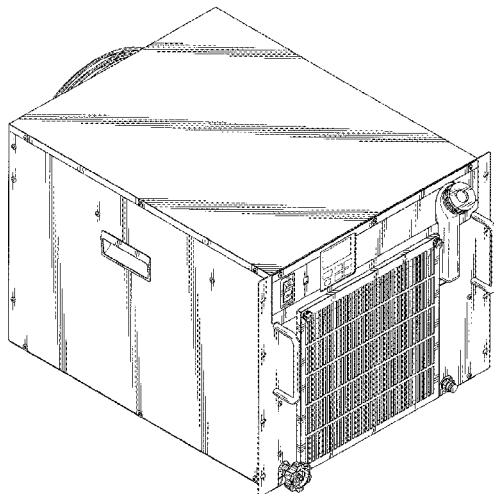
FIG. 6 is a bottom plan view thereof;

FIG. 7 is a left side elevational view thereof; and,

FIG. 8 is a right side elevational view thereof.

The broken lines shown in the figures are for the purpose of illustrating portions of the constant temperature liquid circulator that form no part of the claimed design.

1 Claim, 8 Drawing Sheets



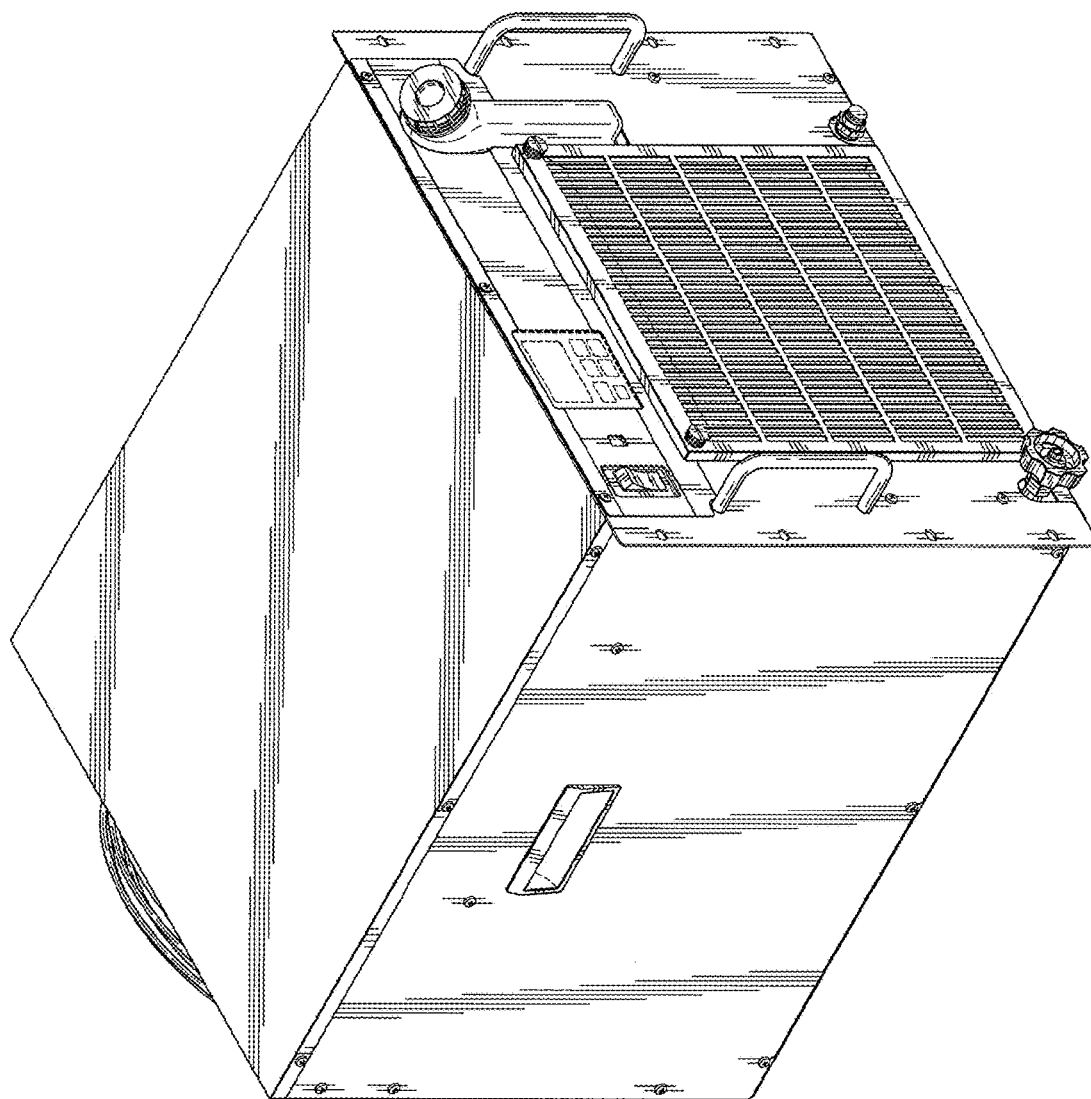


FIG. 1

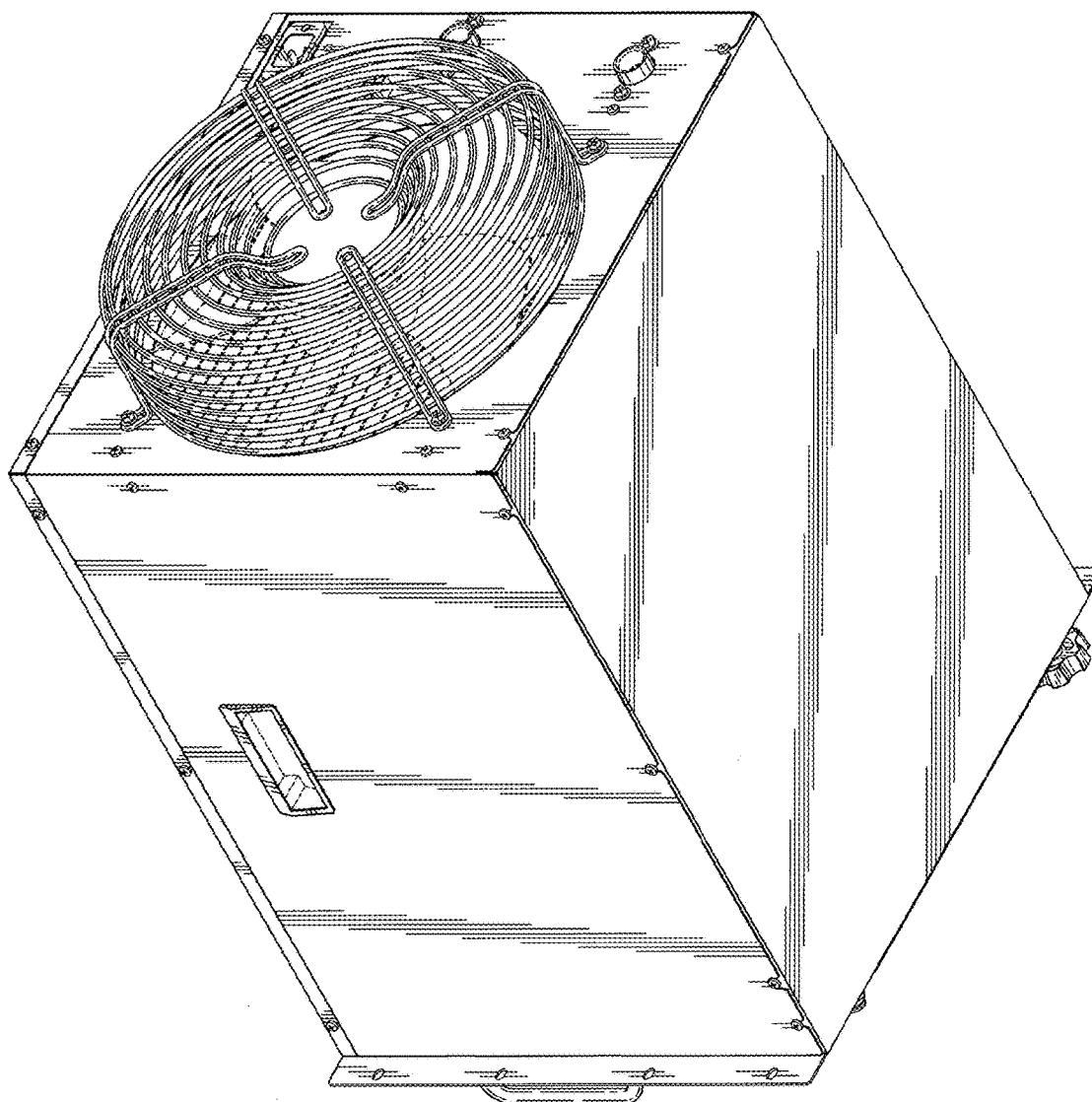


FIG. 2

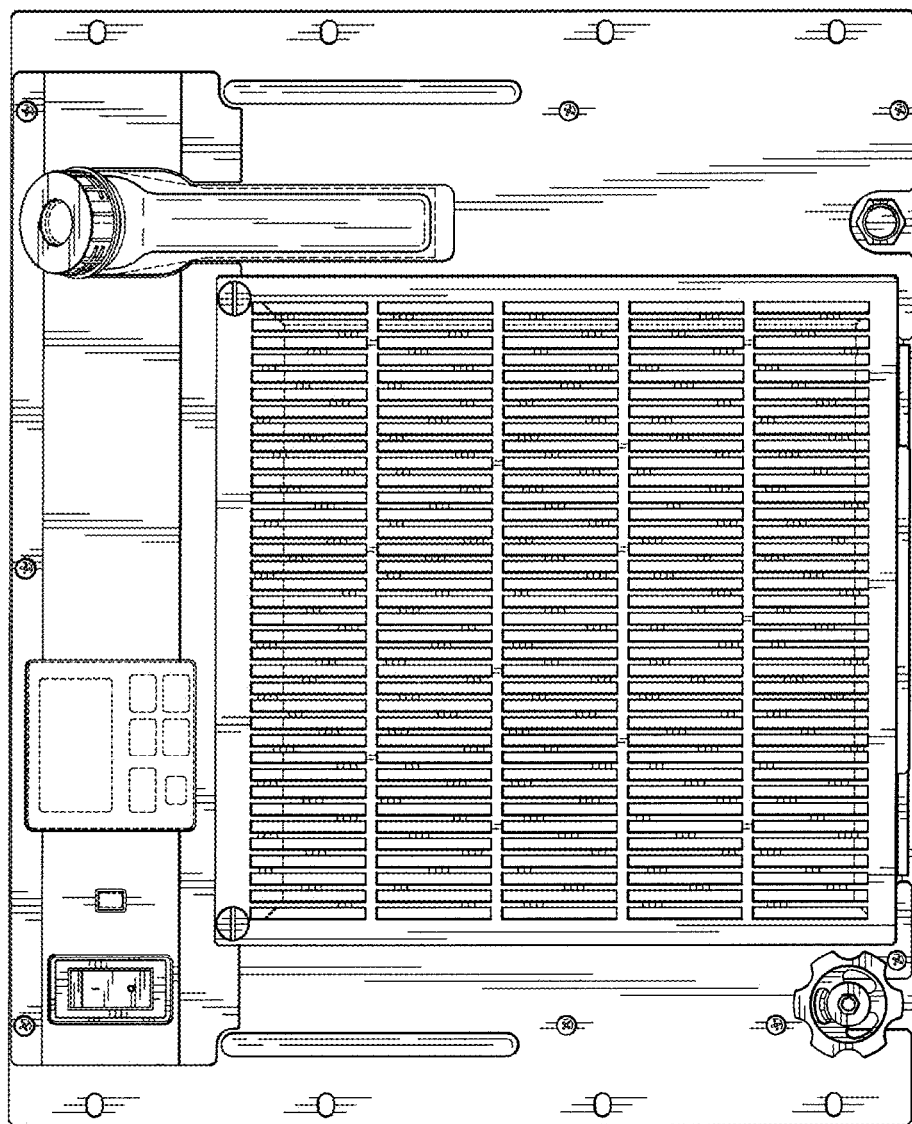


FIG. 3

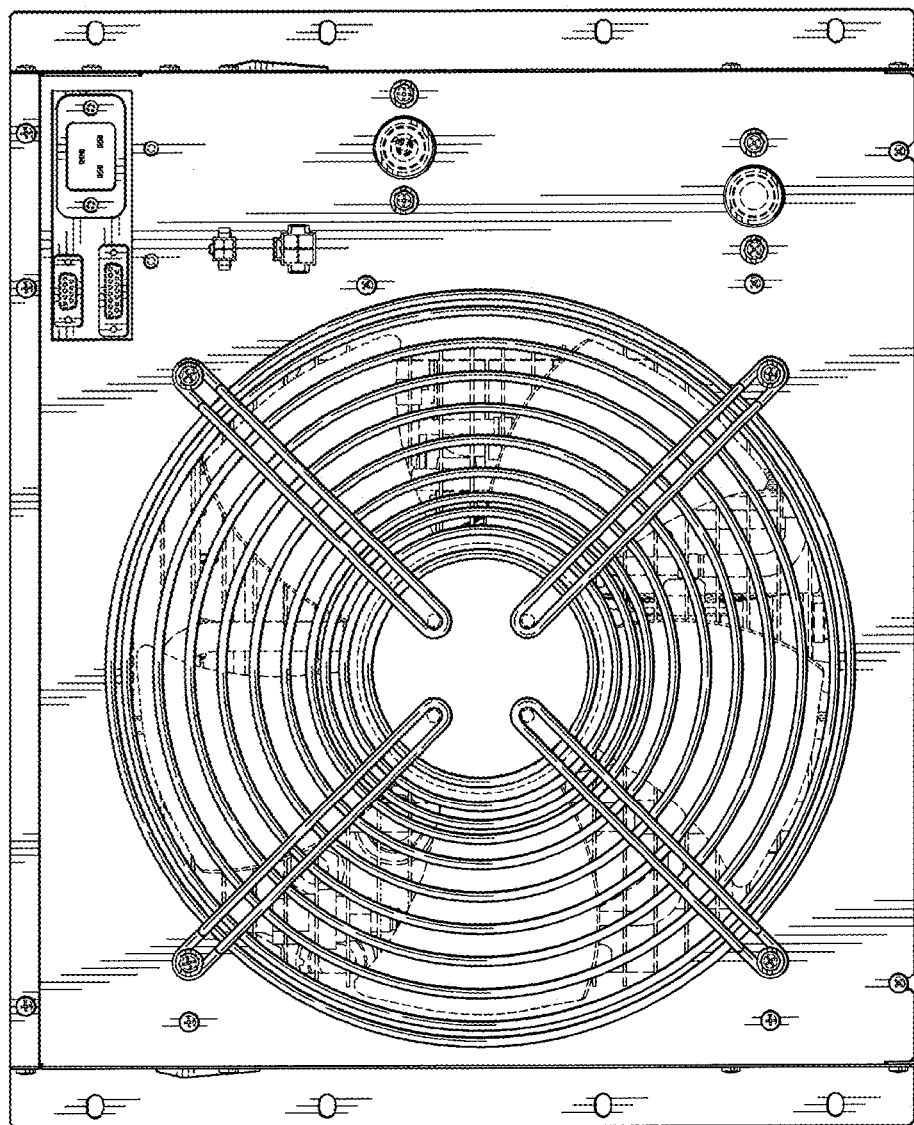


FIG. 4

FIG. 5

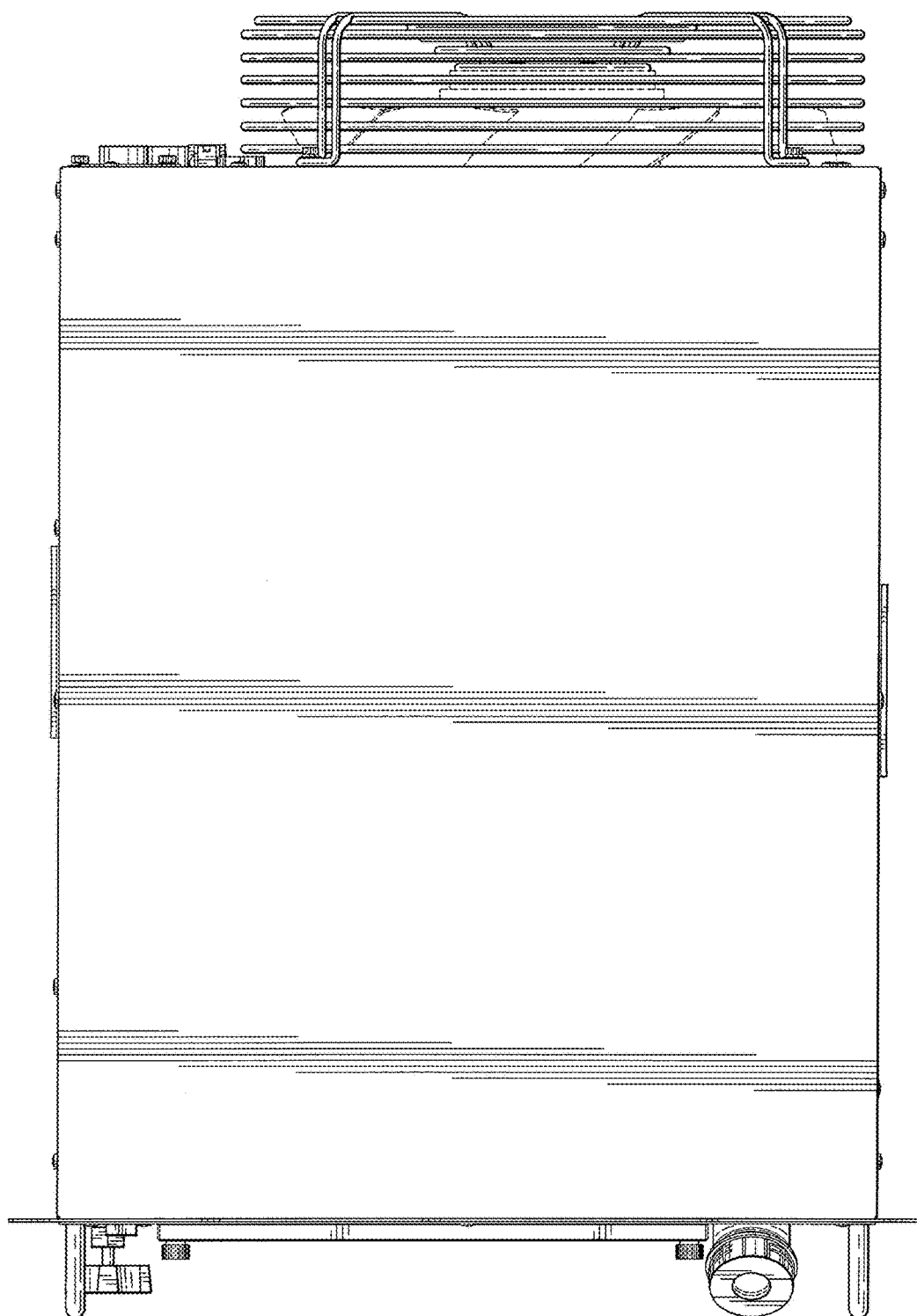
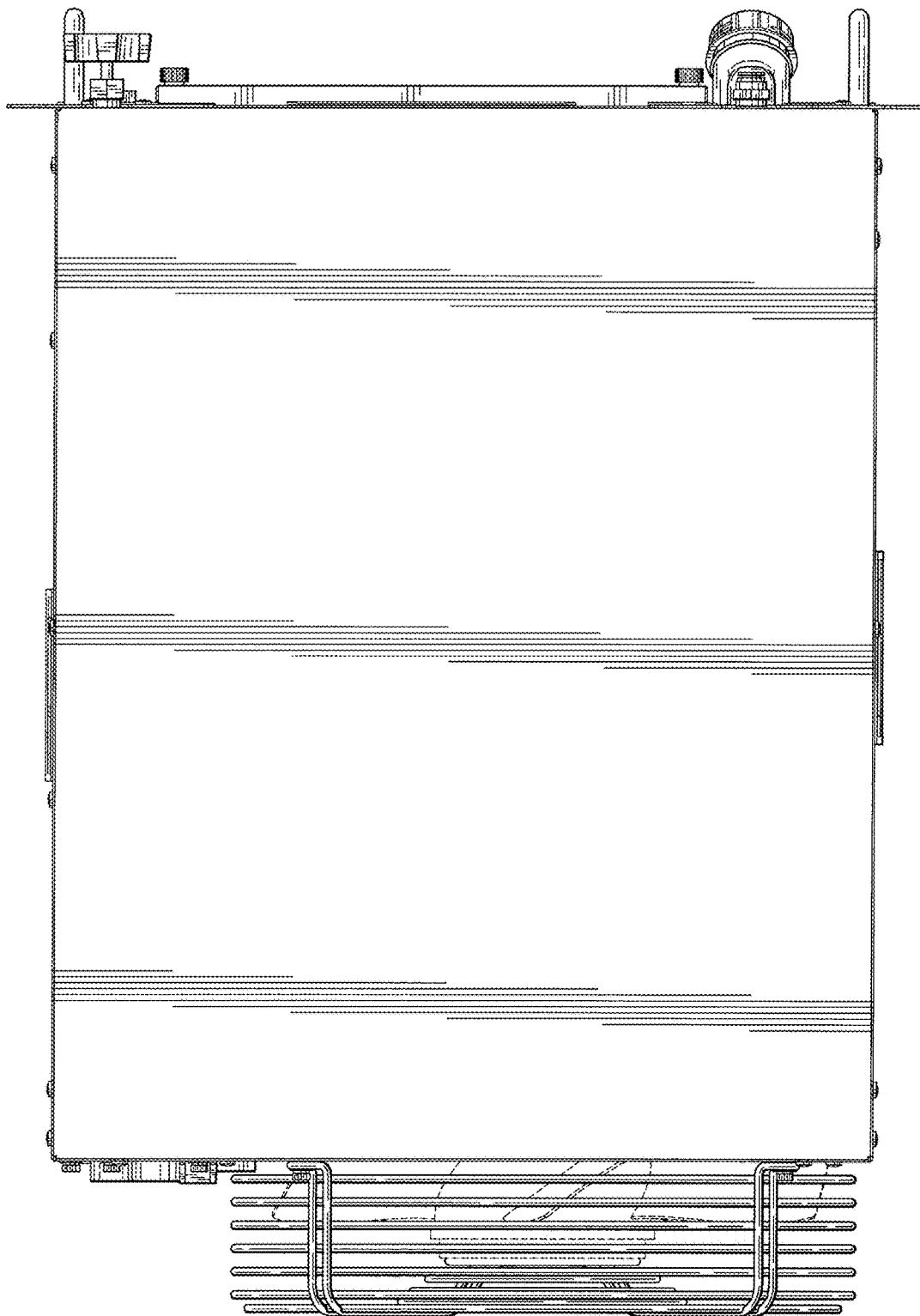


FIG. 6



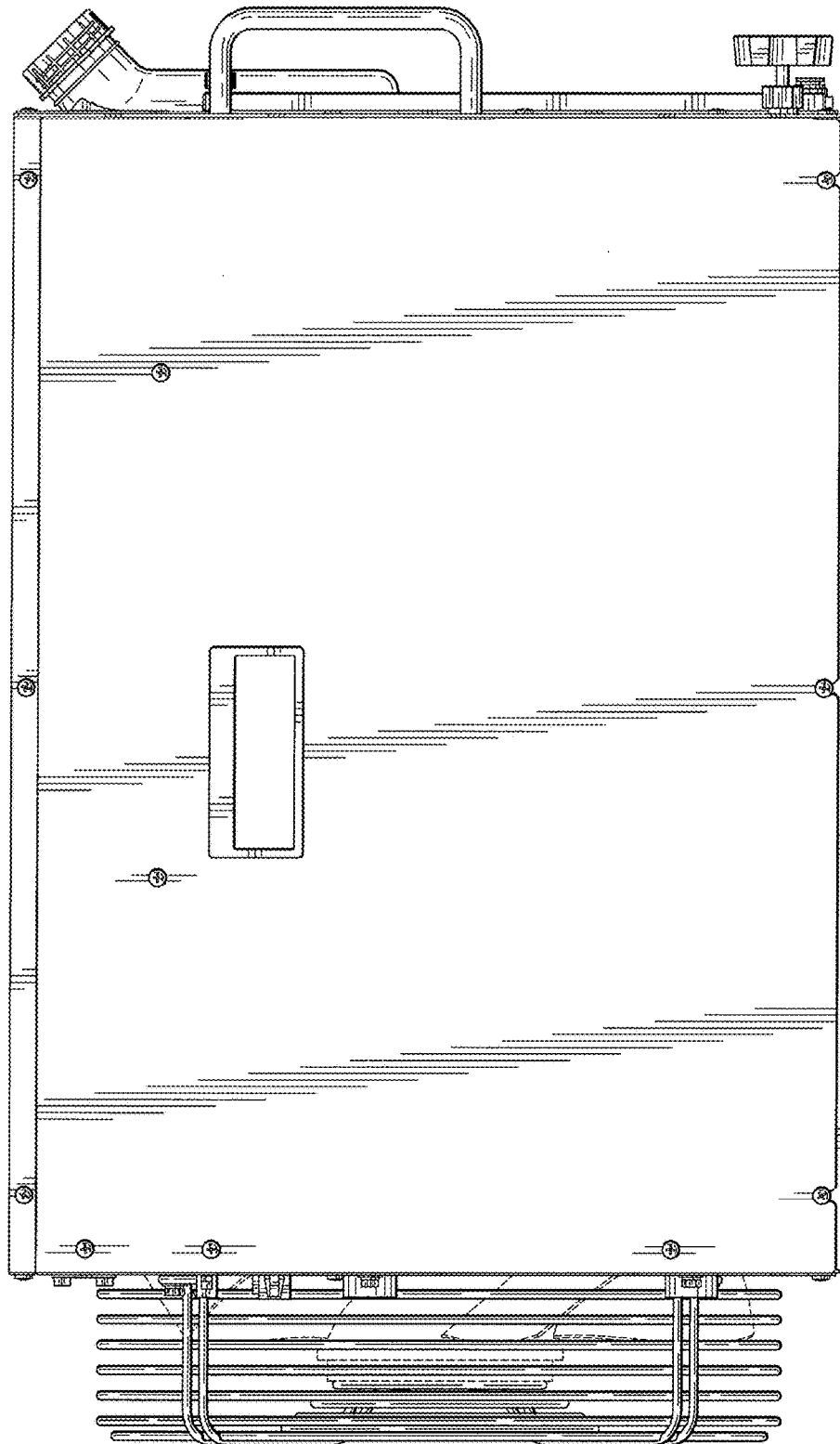


FIG. 7

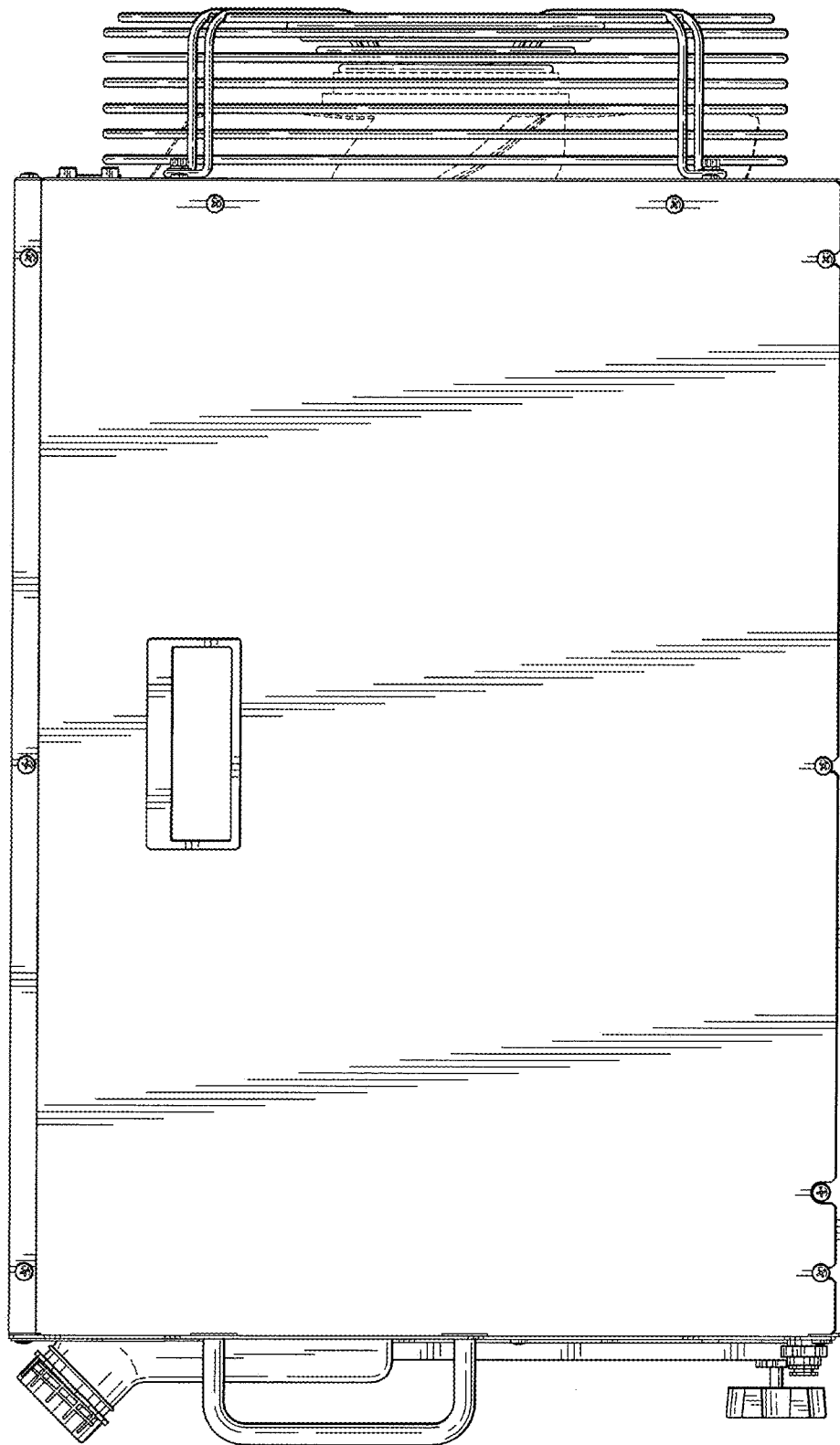


FIG. 8