



US0D1008232S

(12) **United States Design Patent** (10) **Patent No.:** **US D1,008,232 S**  
**Deuchst et al.** (45) **Date of Patent:** **\*\* Dec. 19, 2023**

(54) **DIRECT RADIATING ARRAY ANTENNA**  
(71) Applicant: **MacDonald, Dettwiler and Associates Corporation**, Sainte-Anne-de-Bellevue (CA)

D492,251 S \* 6/2004 Cameron ..... D13/110  
D798,856 S \* 10/2017 Menendez ..... D14/313  
D904,362 S \* 12/2020 Menendez ..... D14/240  
D966,241 S \* 10/2022 Kim ..... D14/230  
2022/0376403 A1\* 11/2022 Deuchst ..... H01Q 1/28

(72) Inventors: **Guillaume Deuchst**, Sainte-Anne-de-Bellevue (CA); **Billy Marquez**, Sainte-Anne-de-Bellevue (CA); **Stephen Wilson**, Sainte-Anne-de-Bellevue (CA)

**FOREIGN PATENT DOCUMENTS**

CN 3621349 \* 3/2007  
CN 307390729 \* 6/2022  
CN 307500573 \* 8/2022  
CN 307680770 \* 11/2022

\* cited by examiner

(73) Assignee: **MacDonald, Dettwiler and Associates Corporation**, Sainte-Anne de-Bellevue (CA)

*Primary Examiner* — Daniel J Domino

*Assistant Examiner* — Samina Vieth

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

(74) *Attorney, Agent, or Firm* — Own Innovation Inc.; James W. Hinton; Kent C. Howe

(21) Appl. No.: **29/776,043**

(22) Filed: **Mar. 26, 2021**

(57) **CLAIM**

(51) **LOC (14) Cl.** ..... **14-03**

The ornamental design for a direct radiating array antenna, as shown and described.

(52) **U.S. Cl.**

USPC ..... **D14/230**

(58) **Field of Classification Search**

USPC ..... D14/230, 231–239, 241, 223, 206, 155, D14/159; D10/281, 53, 56, 96; D8/32, D8/377; D25/41.1, 43, 119; D23/227, D23/219, 136, 266, 267  
CPC ..... H01Q 21/0025; H01Q 1/02; H01Q 1/288; H04R 1/02; H04R 1/025; H04R 1/026; H04R 1/028; H04R 1/40; H04R 1/323; H04R 1/403; G06R 1/1688; G10K 9/02; G10K 11/004

**DESCRIPTION**

See application file for complete search history.

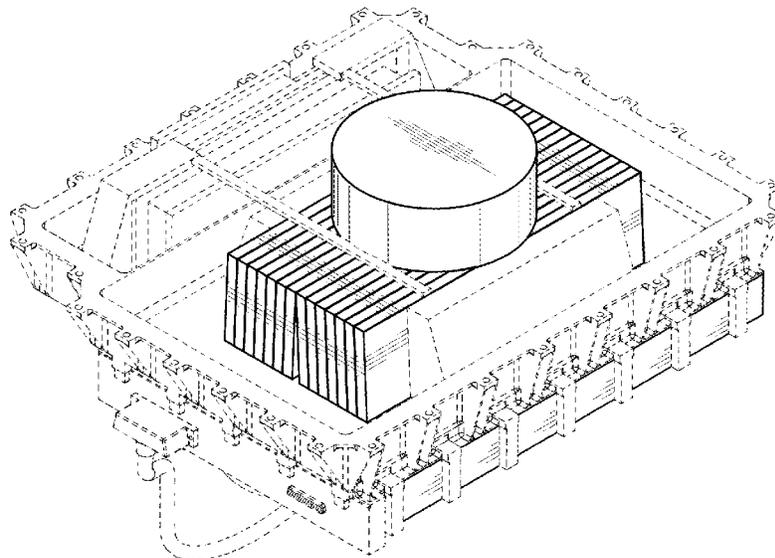
FIG. 1 is a top perspective view of a direct radiating array antenna.  
FIG. 2 is a bottom perspective view thereof.  
FIG. 3 is a top view thereof.  
FIG. 4 is a bottom view thereof.  
FIG. 5 is a left side view thereof.  
FIG. 6 is a right side view thereof.  
FIG. 7 is a rear view thereof; and,  
FIG. 8 is a front view thereof.  
The broken lines illustrate portions of the article and form no part of the claimed design.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D427,180 S \* 6/2000 Humes ..... D14/230  
D435,251 S \* 12/2000 Overton ..... D14/230

**1 Claim, 8 Drawing Sheets**



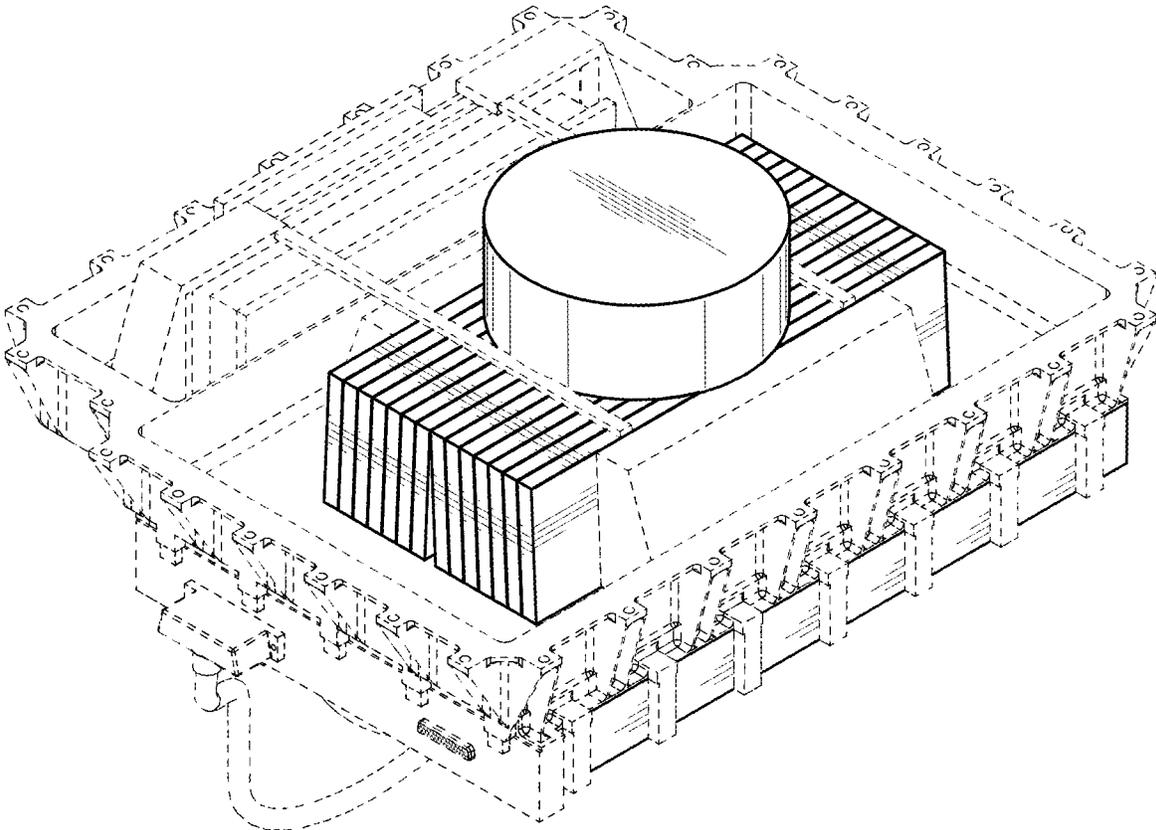
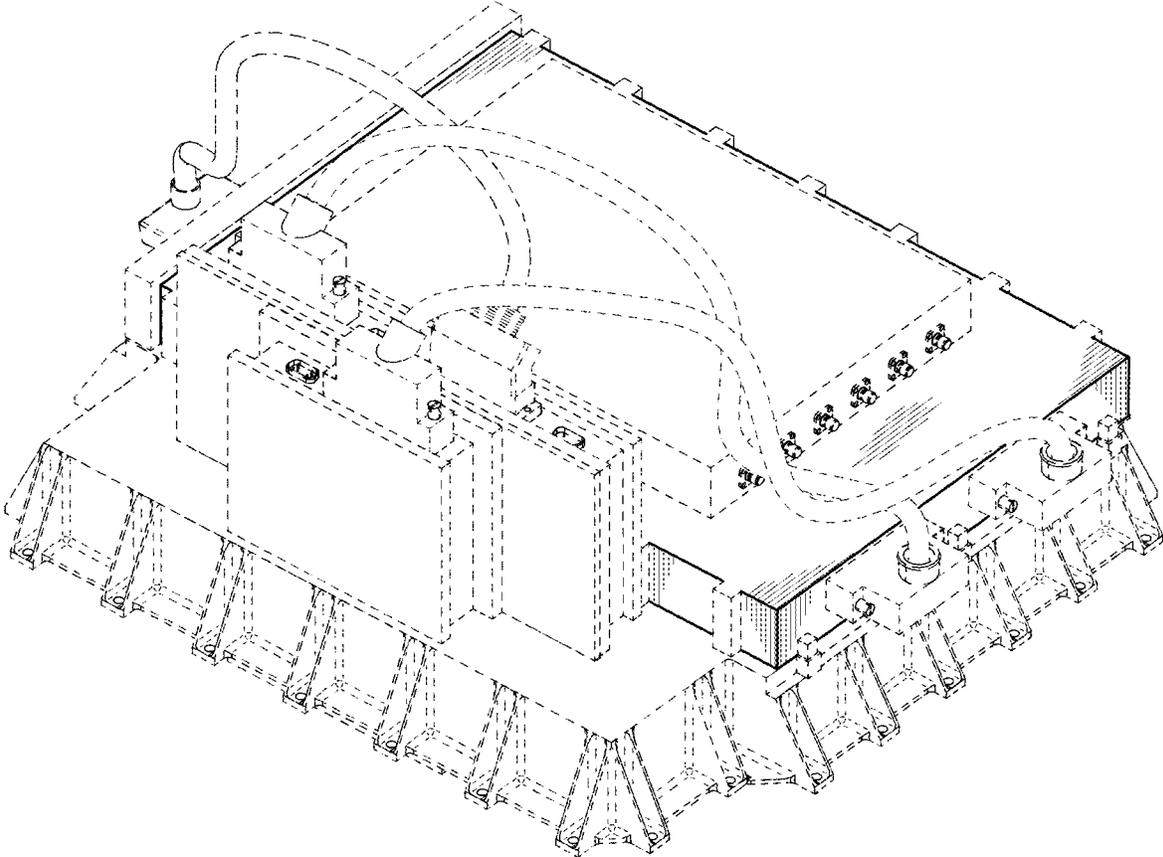
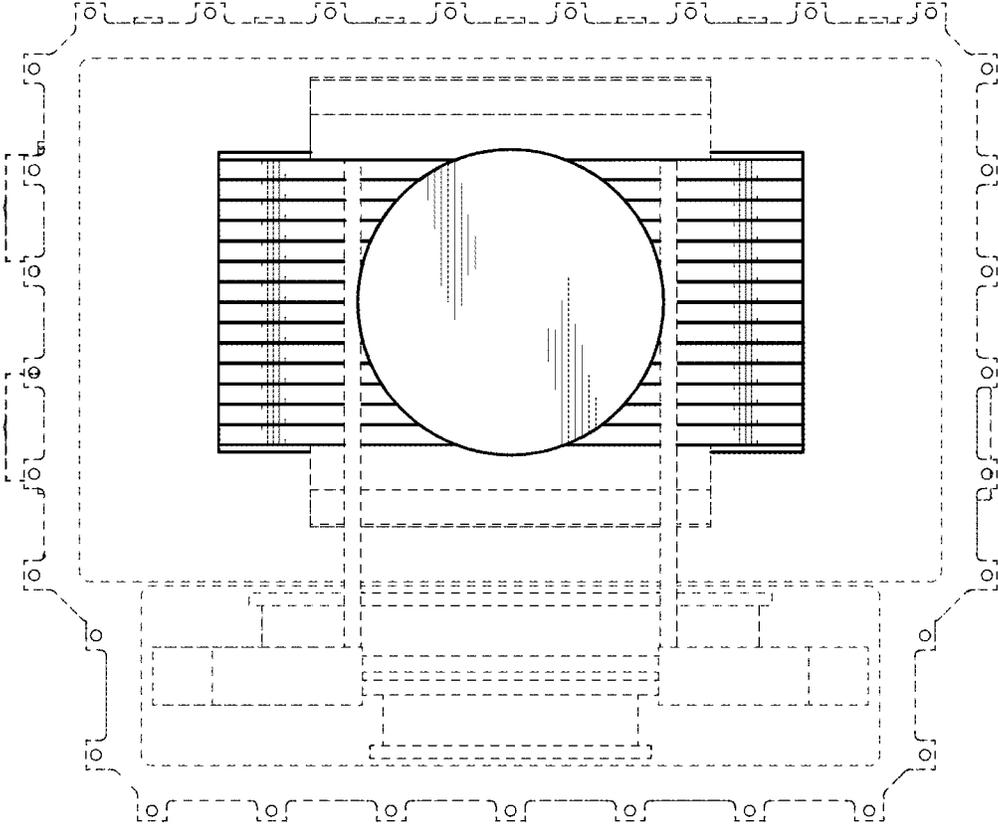


FIG. 1



**FIG. 2**



**FIG. 3**

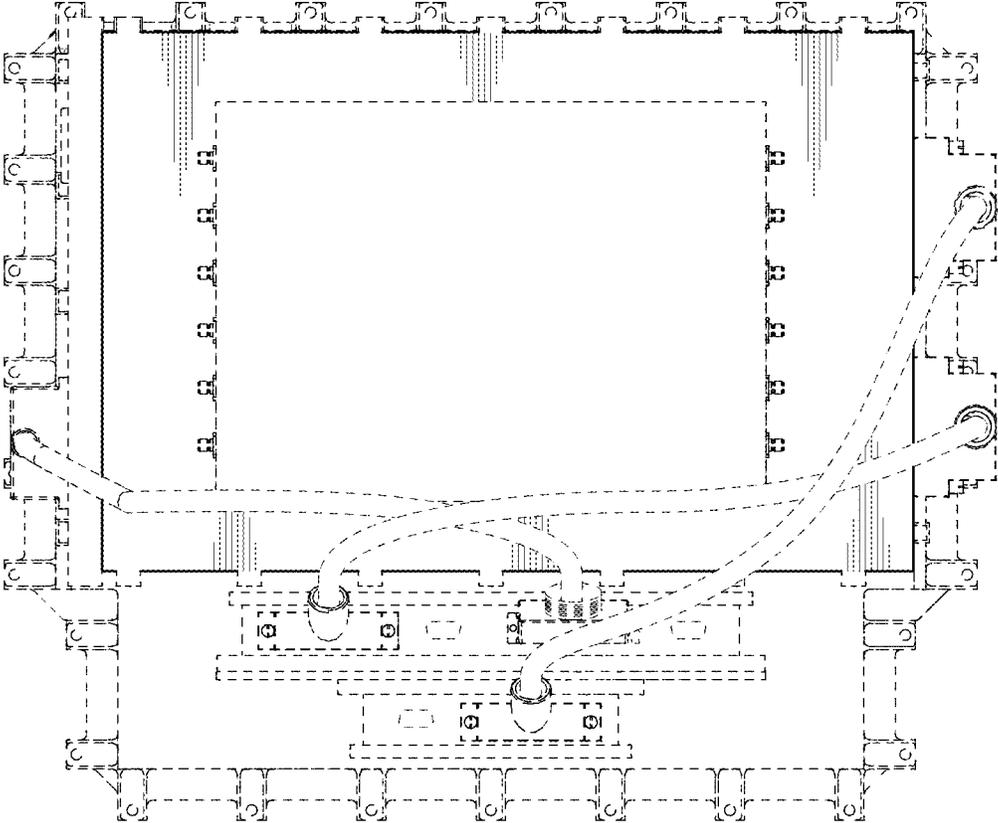


FIG. 4

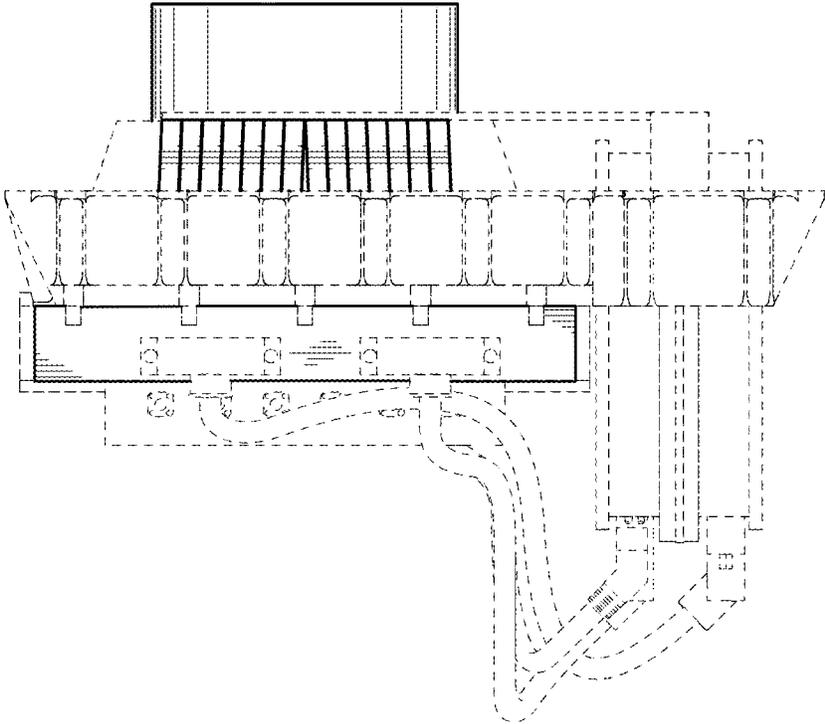
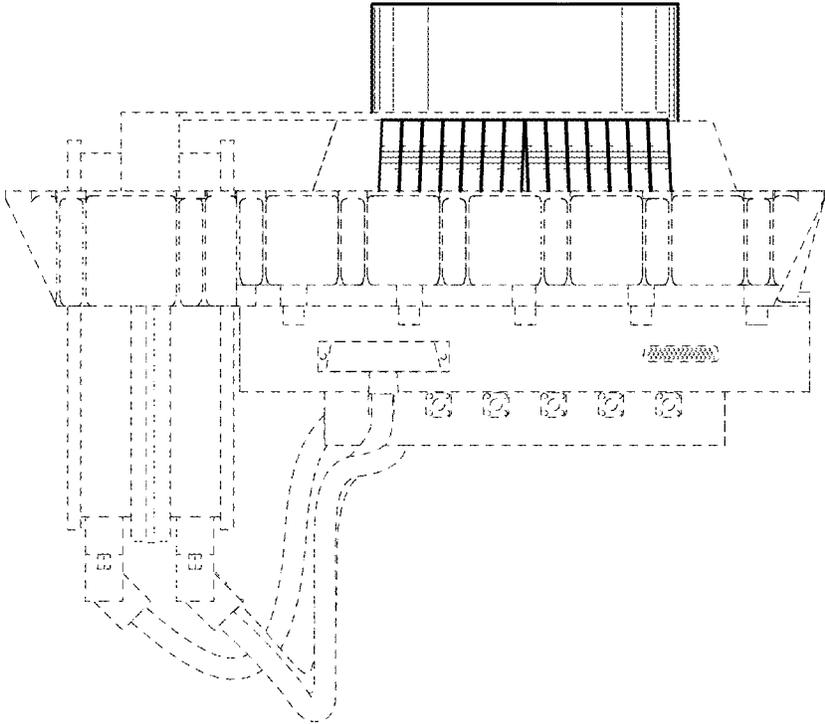


FIG. 5



**FIG. 6**

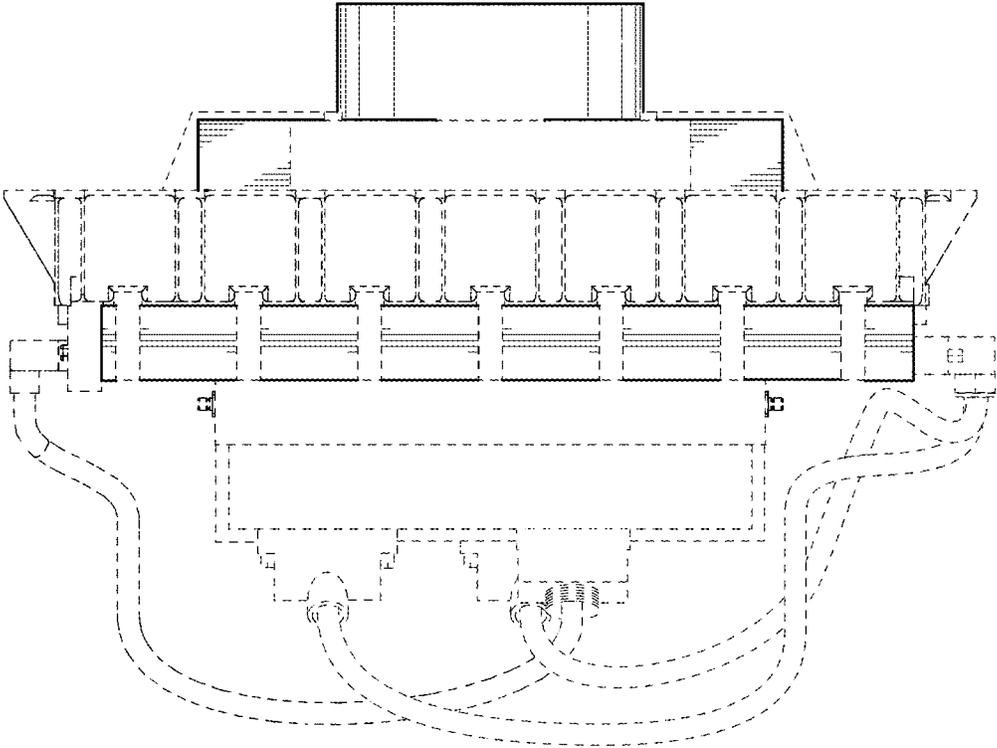
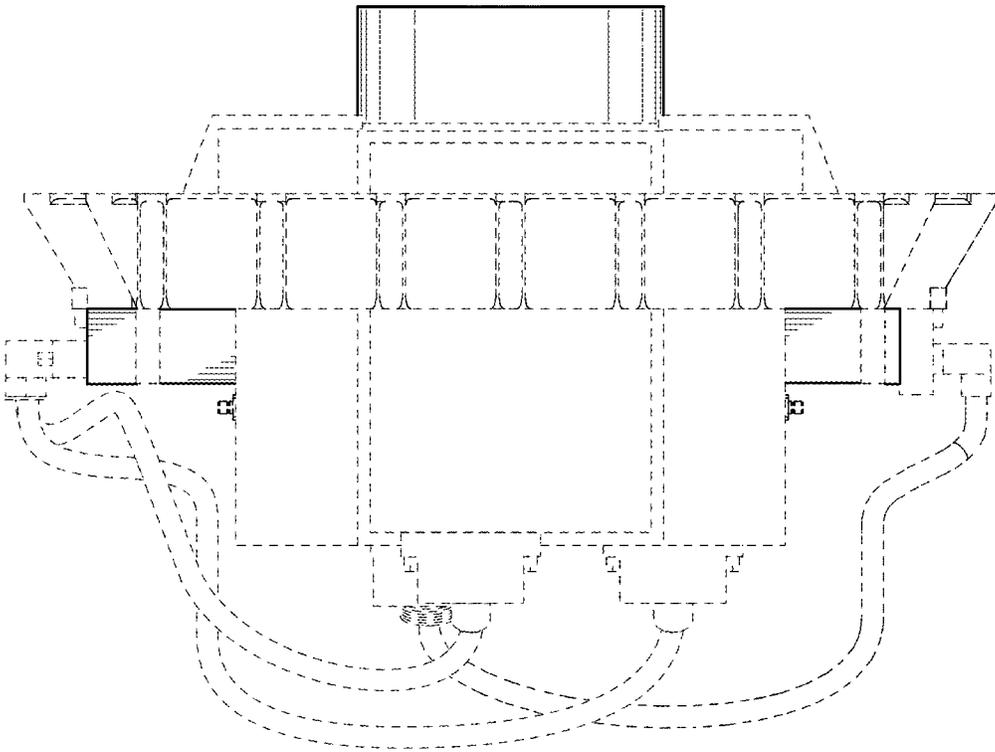


FIG. 7



**FIG. 8**