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

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(45) **Date of Patent:** **** Sep. 18, 2018**

(54) **HEAT EXCHANGER**

(71) Applicant: **Danfoss Micro Channel Heat Exchanger (Jiaying) Co., Ltd.**, Zhejiang (CN)

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(73) Assignee: **Danfoss Micro Channel Heat Exchanger (Jiaying) Co., Ltd.**, Zhejiang (CN)

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

(21) Appl. No.: **29/588,651**

(22) Filed: **Dec. 22, 2016**

(30) **Foreign Application Priority Data**

Jul. 7, 2016 (CN) 2016 3 0307687

(51) **LOC (11) Cl.** **23-03**

(52) **U.S. Cl.**
USPC **D23/323**

(58) **Field of Classification Search**
USPC D23/323, 322, 324, 386, 325, 327, 354, D23/330; D7/407; D13/179
CPC F28F 1/06; F28F 1/16; F28F 1/21; F28F 9/02; F28D 1/047; F28D 13/12; F28D 7/06; F28D 7/10; F28D 2001/0266; B21D 53/02; F28B 1/06

See application file for complete search history.

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(Continued)

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(57) **CLAIM**

The ornamental design for a heat exchanger, substantially as shown and described.

DESCRIPTION

FIG. 1 is a front, right side and top perspective view of a heat exchanger comprising a new, original and ornamental design;

FIG. 2 is a front view thereof;

FIG. 3 is a rear view thereof;

FIG. 4 is a left side view thereof;

FIG. 5 is a right side view thereof;

FIG. 6 is a top view thereof;

FIG. 7 is a bottom view thereof;

FIG. 8 is a front, right side and top perspective view of the heat exchanger in accordance with a second embodiment;

FIG. 9 is a front view thereof;

FIG. 10 is a rear view thereof;

FIG. 11 is a left side view thereof;

FIG. 12 is a right side view thereof;

FIG. 13 is a top view thereof;

FIG. 14 is a bottom view thereof; and

FIG. 15 is a front, right side and top perspective view of the heat exchanger in accordance with a third embodiment;

FIG. 16 is a front view thereof;

FIG. 17 is a rear view thereof;

FIG. 18 is a left side view thereof;

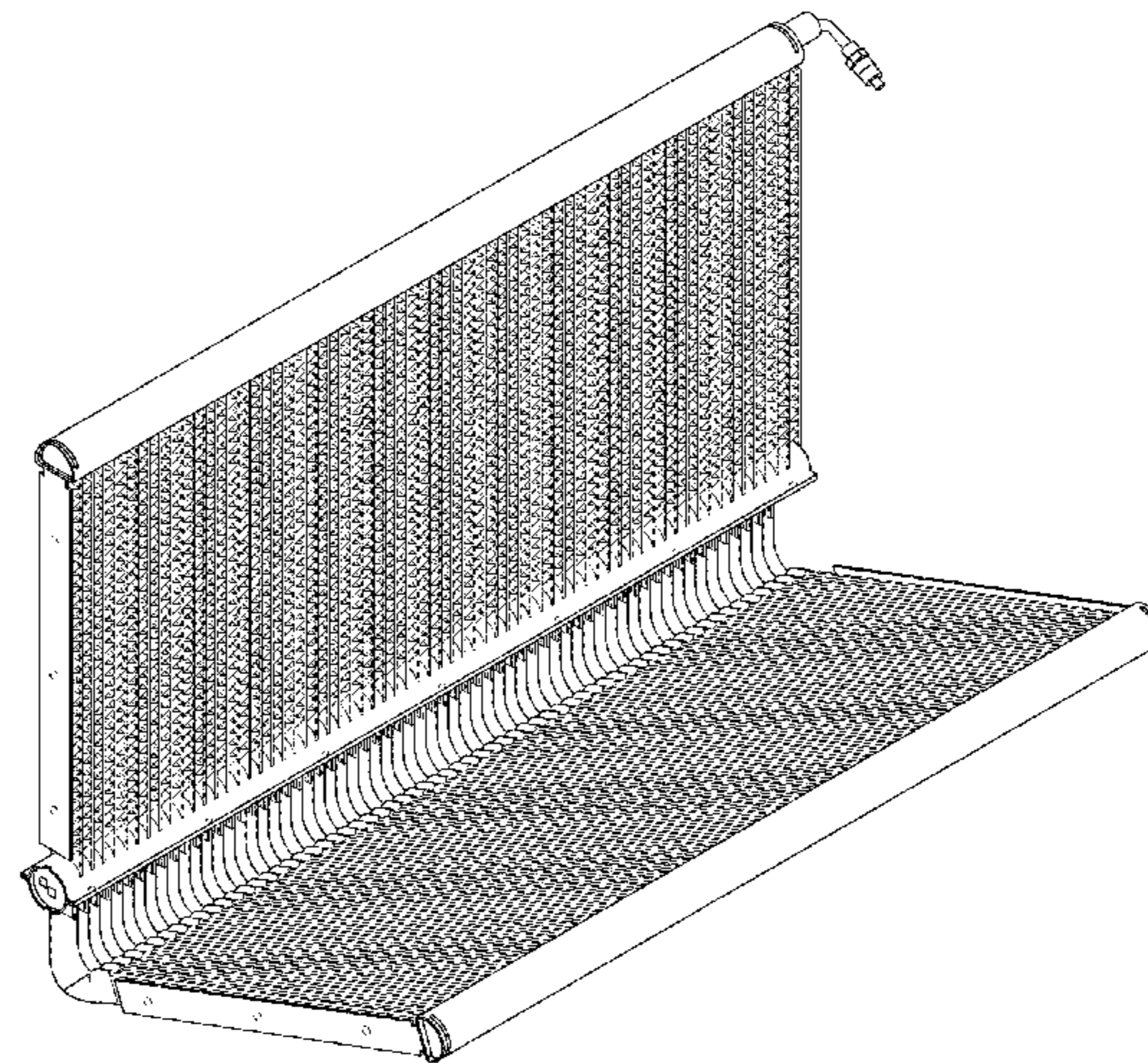
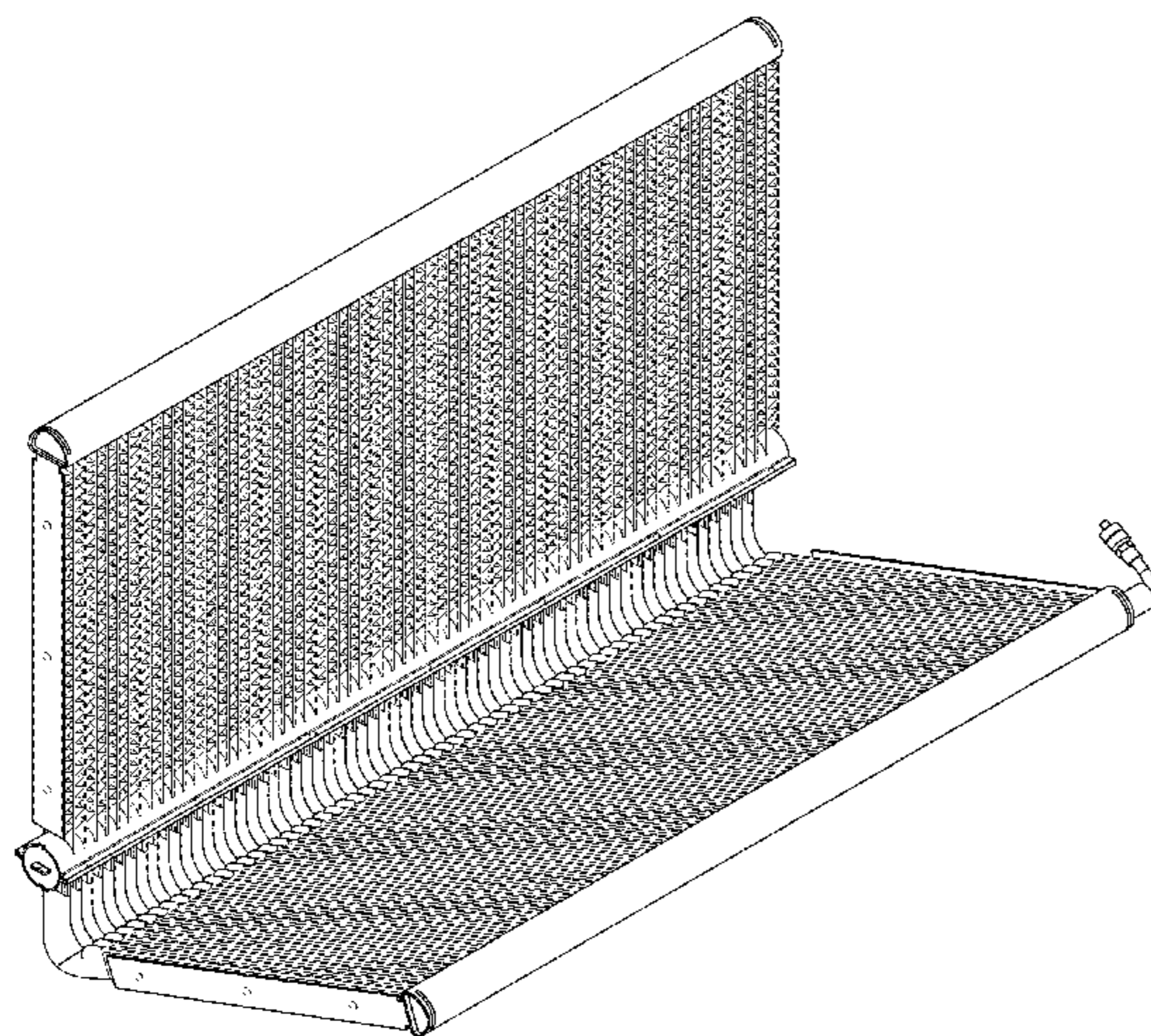
FIG. 19 is a right side view thereof;

FIG. 20 is a top view thereof; and,

FIG. 21 is a bottom view thereof.

The broken lines show portions of the heat exchanger embodiments that form no part of the claimed design.

1 Claim, 21 Drawing Sheets



(56)

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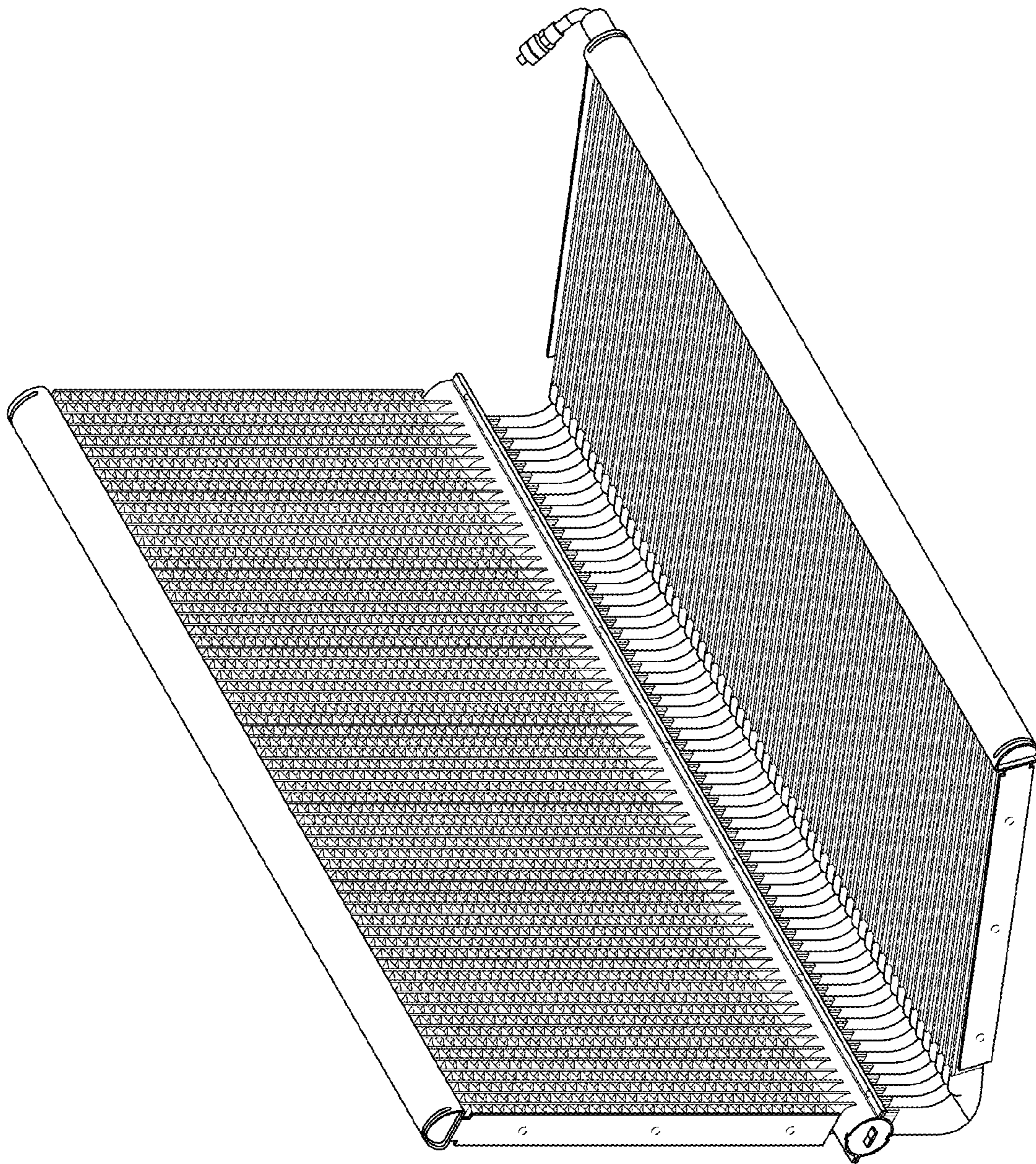


FIG. 1

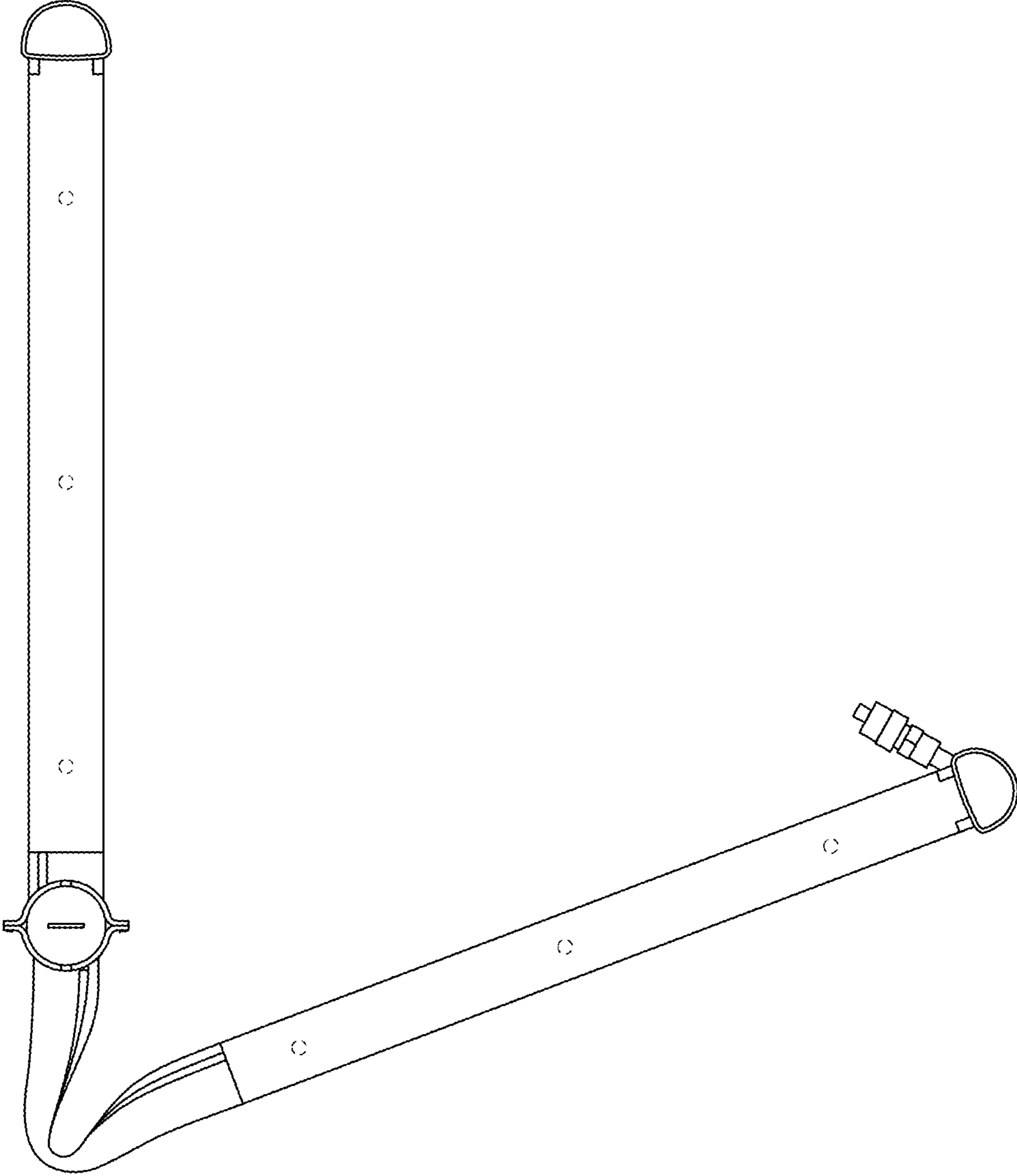


FIG. 2

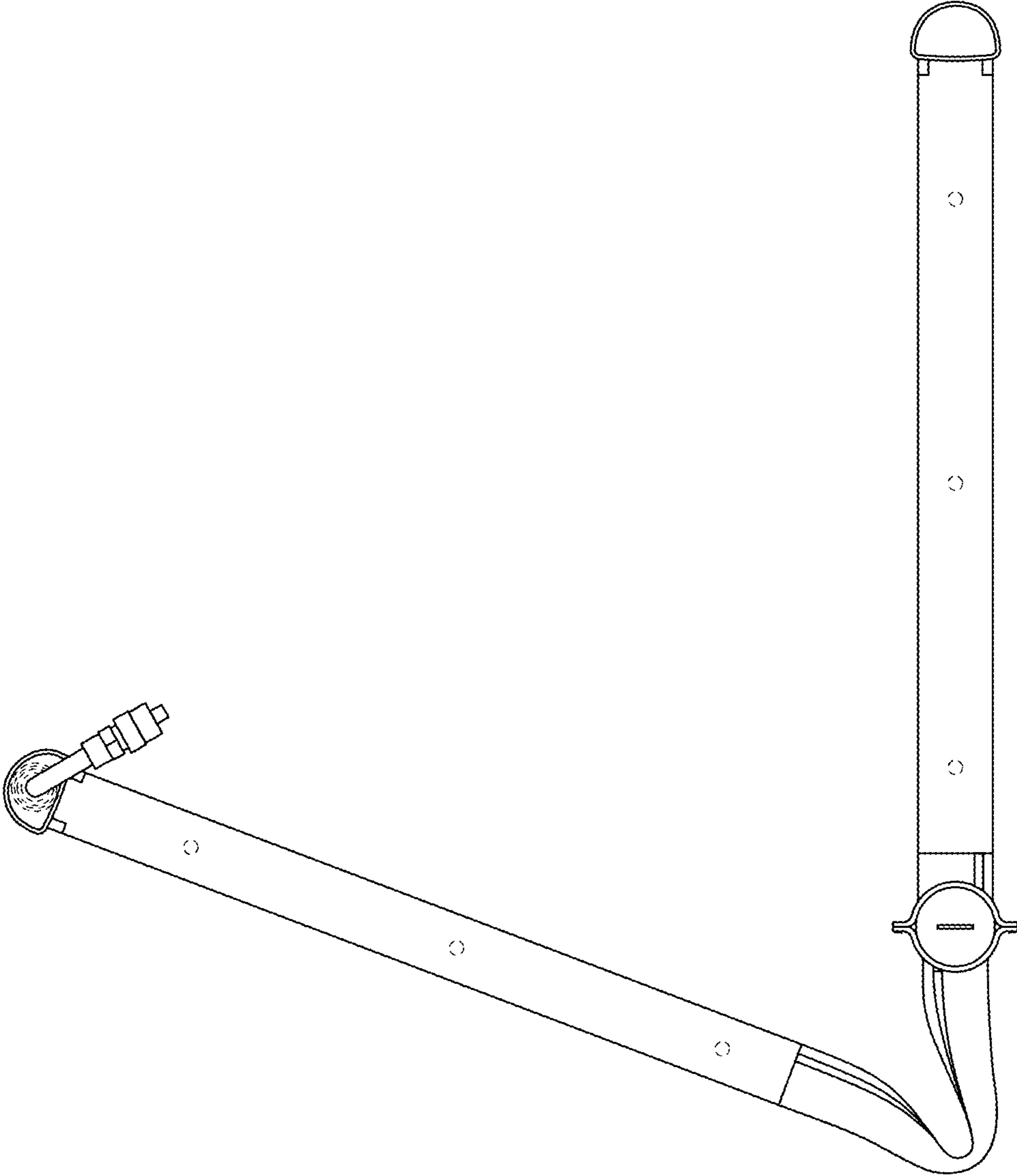


FIG. 3

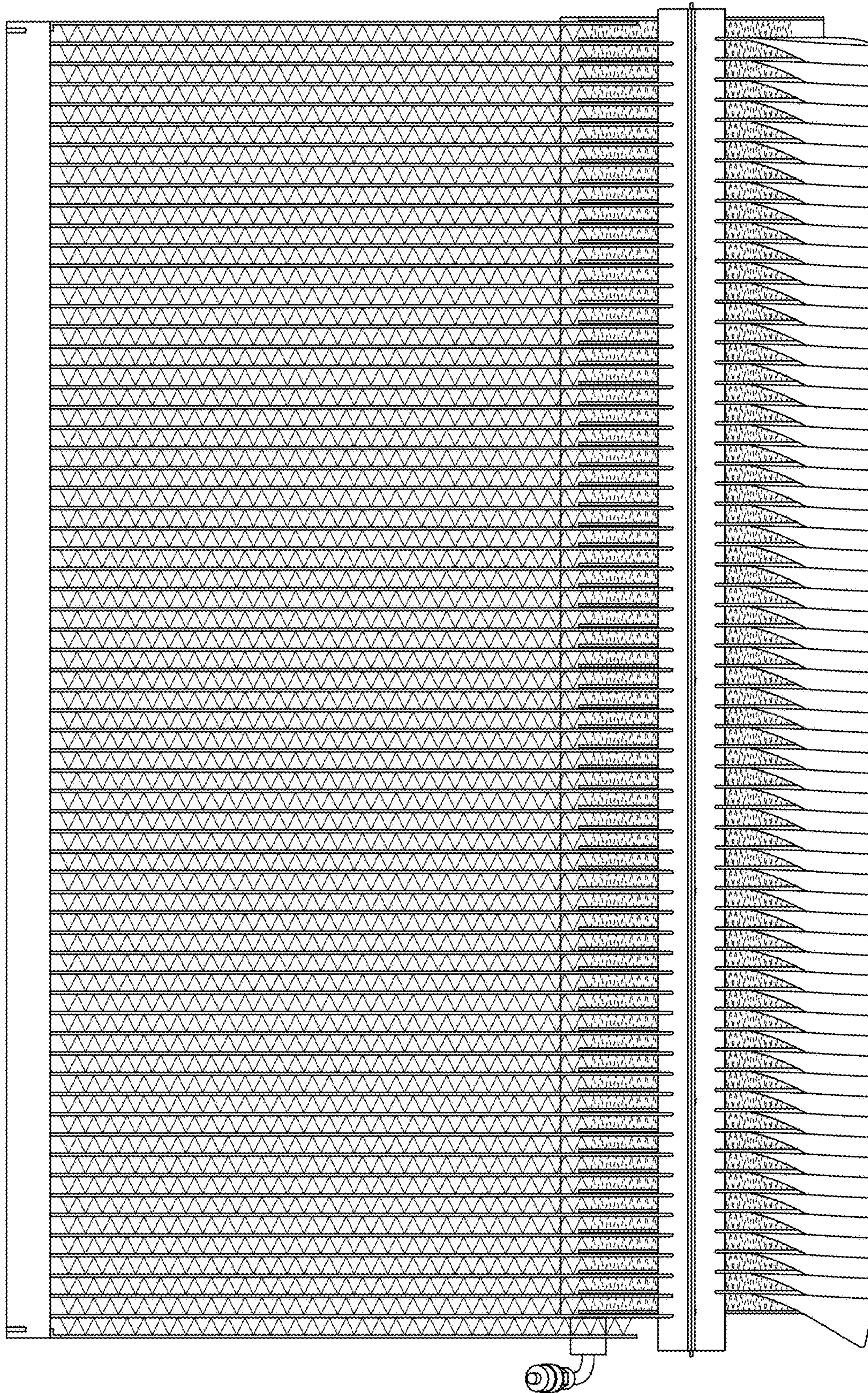


FIG. 4

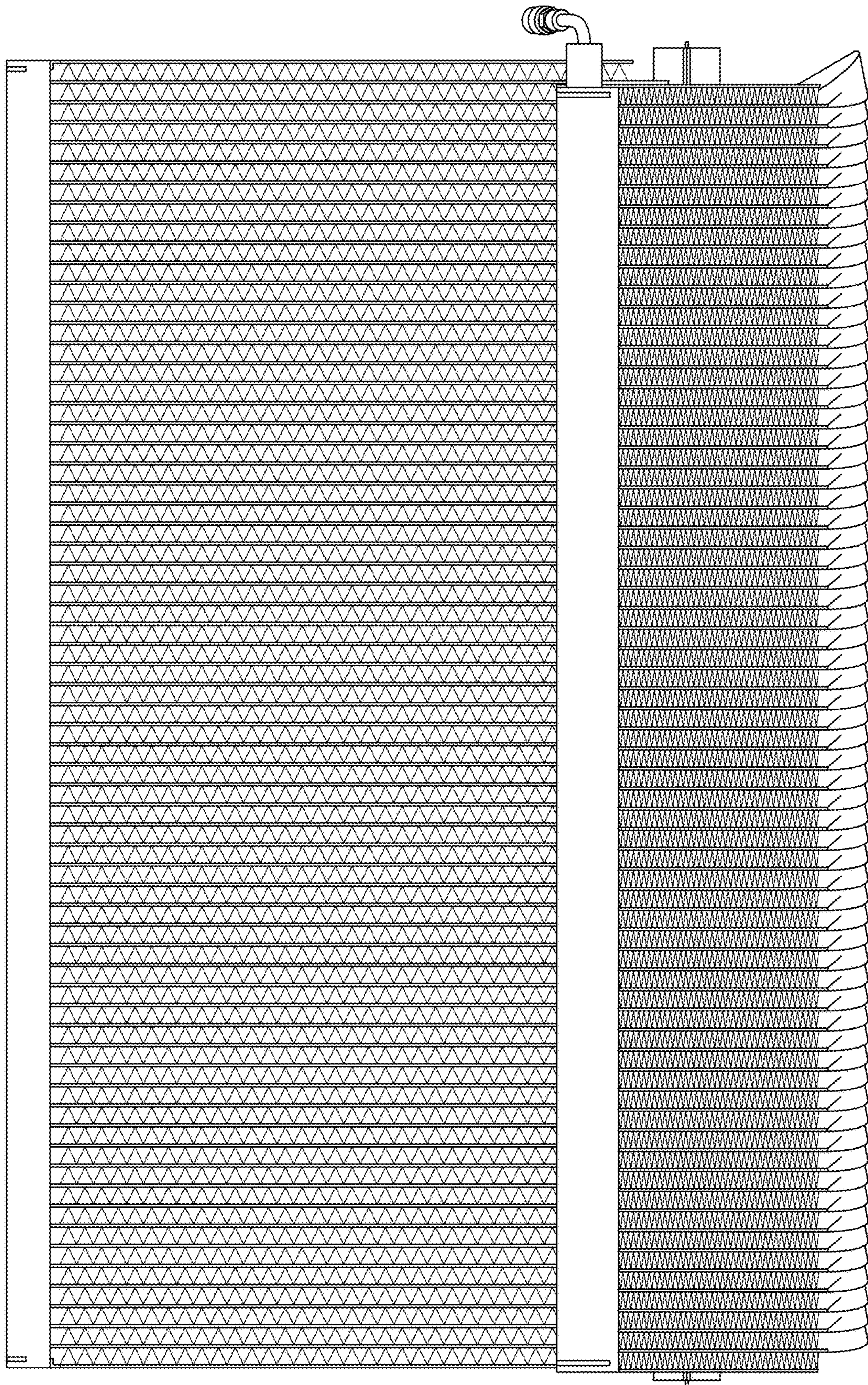


FIG. 5

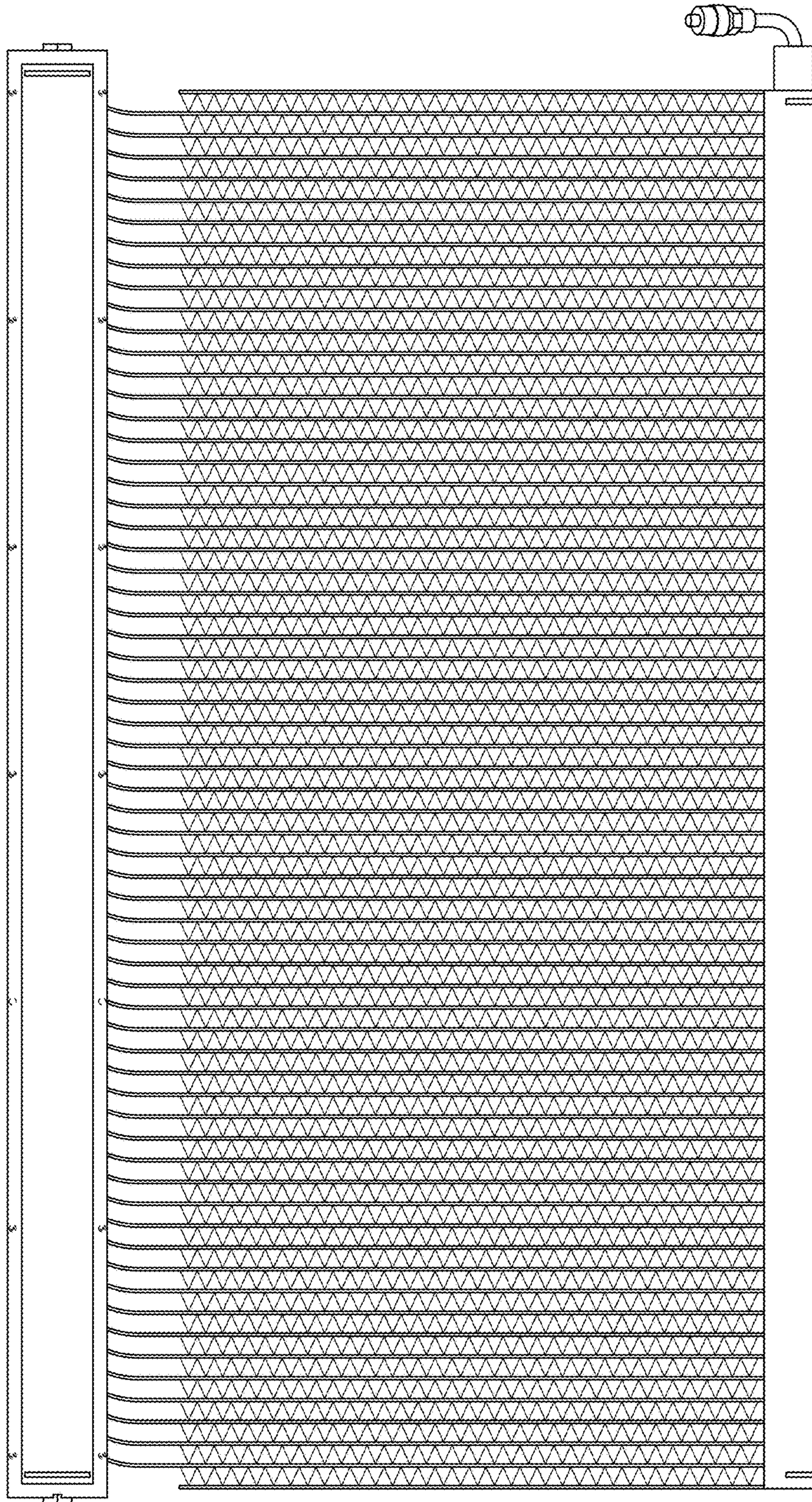


FIG. 6

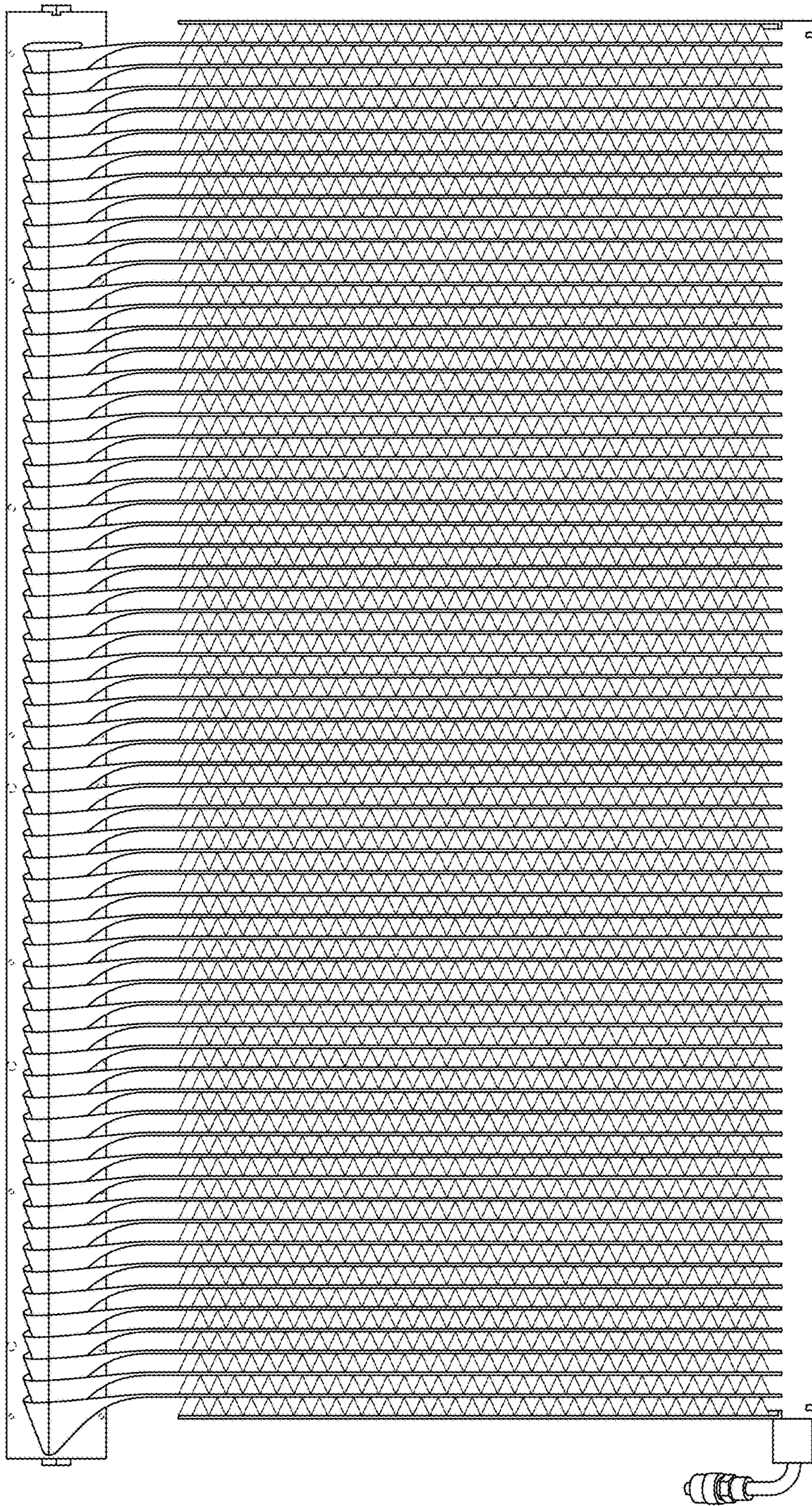


FIG. 7

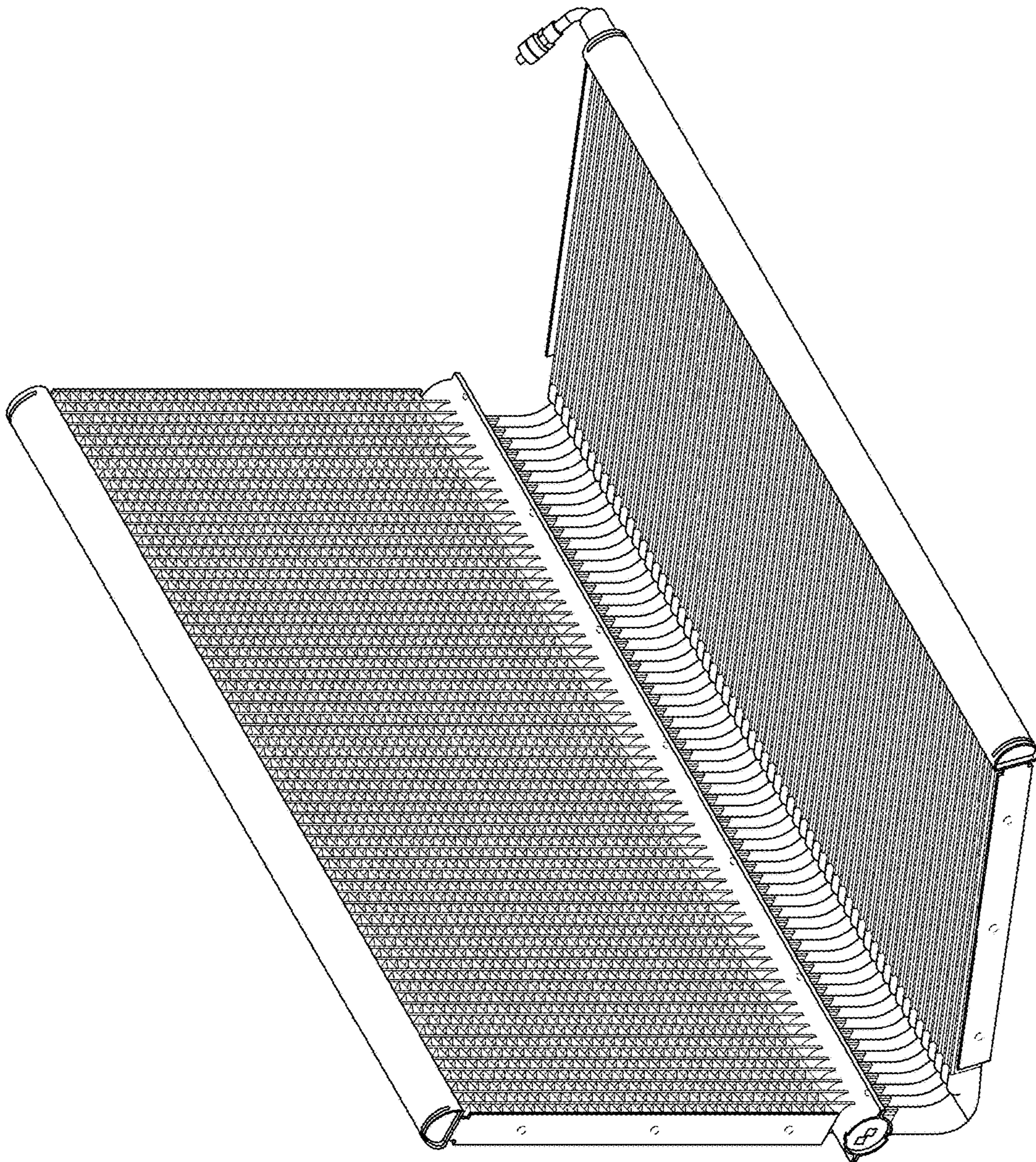


FIG. 8

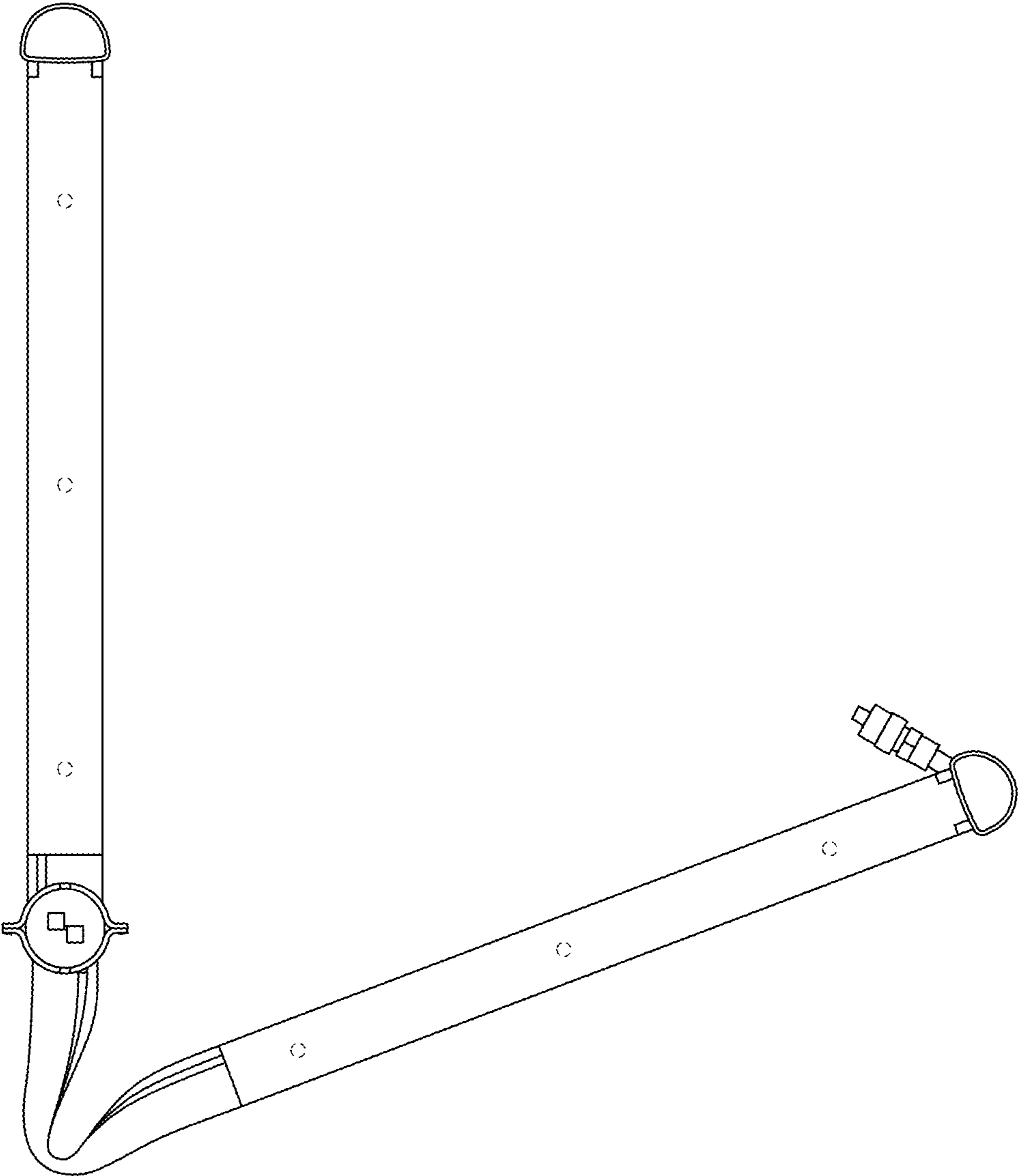


FIG. 9

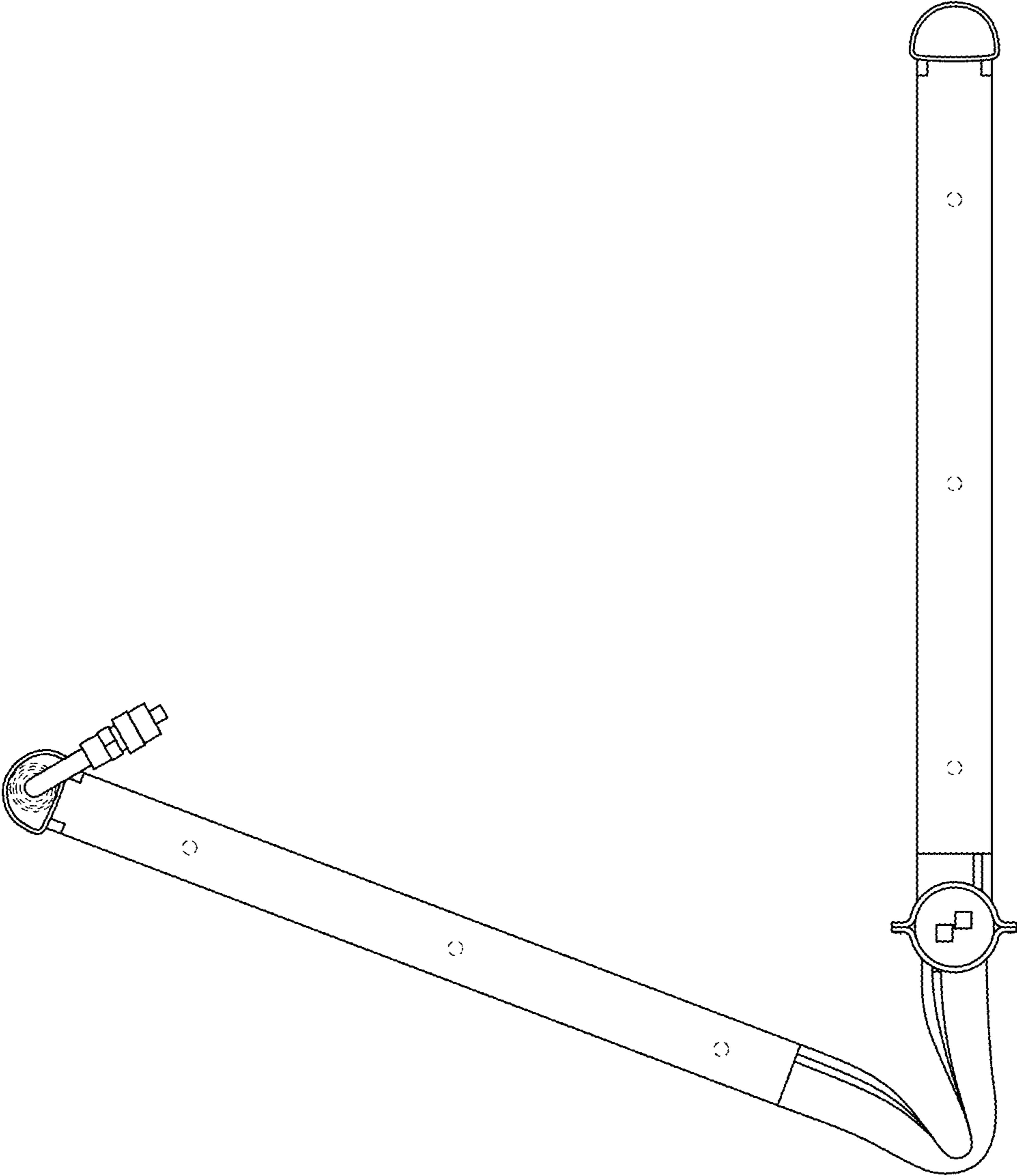


FIG. 10

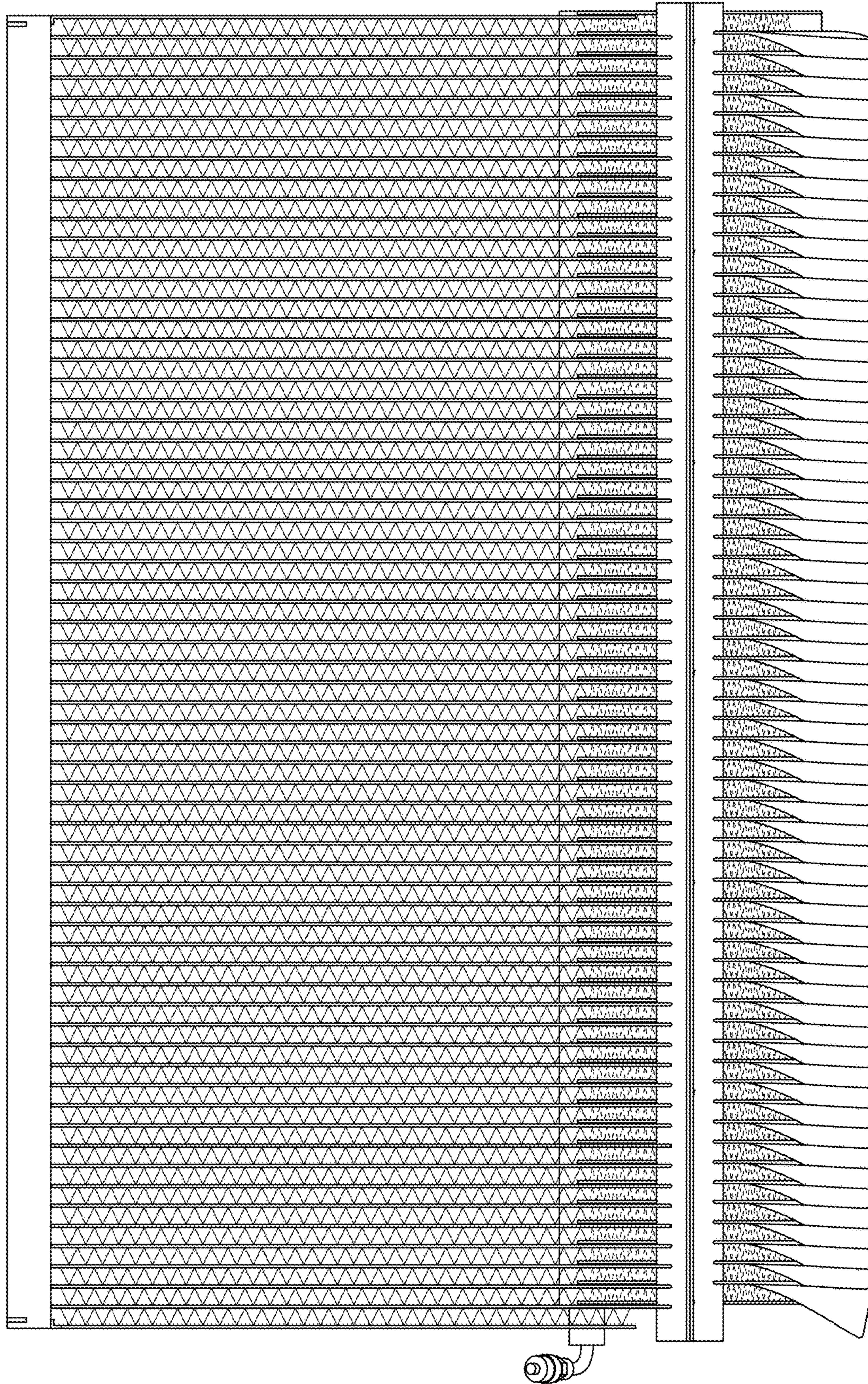


FIG. 11

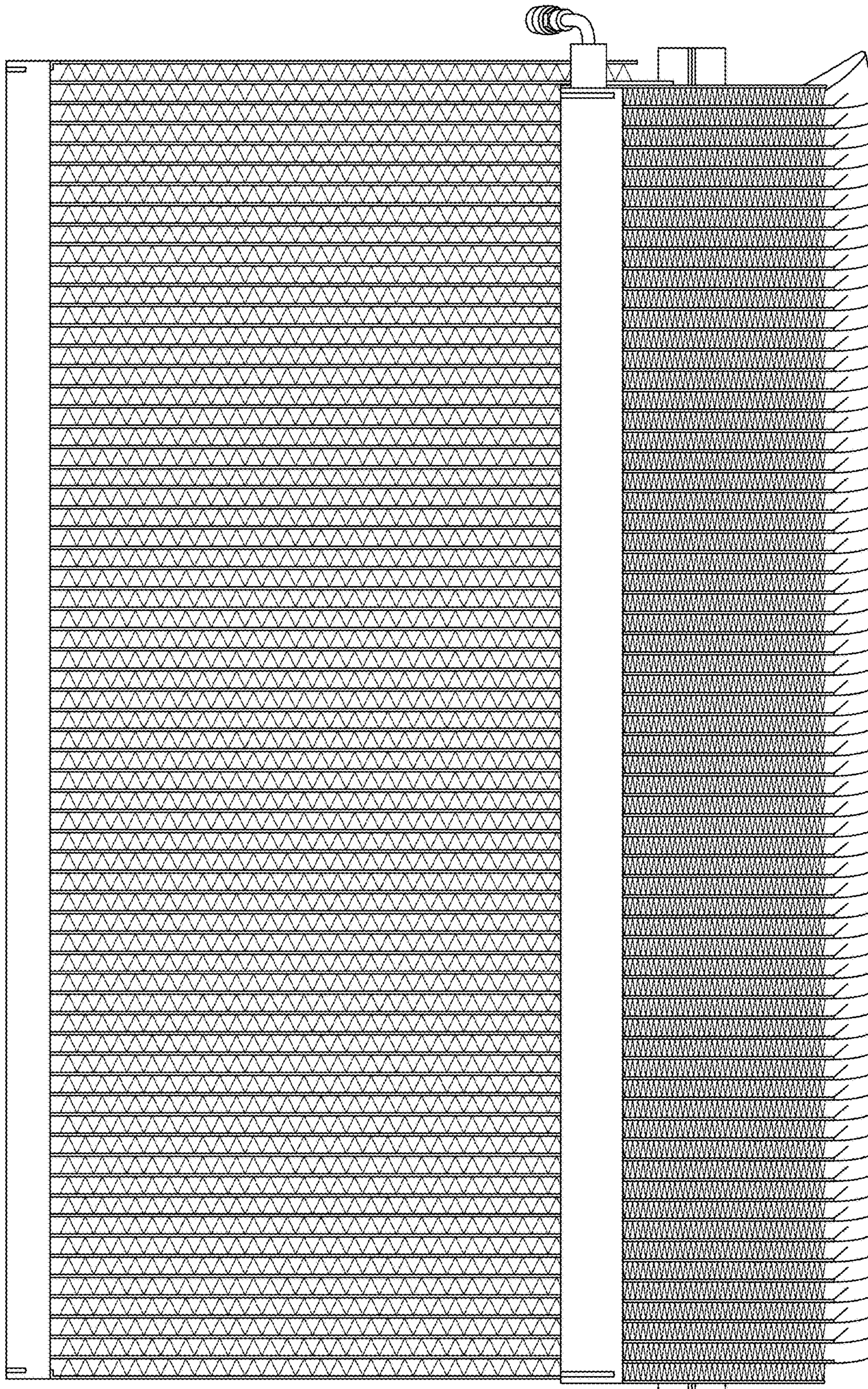


FIG. 12

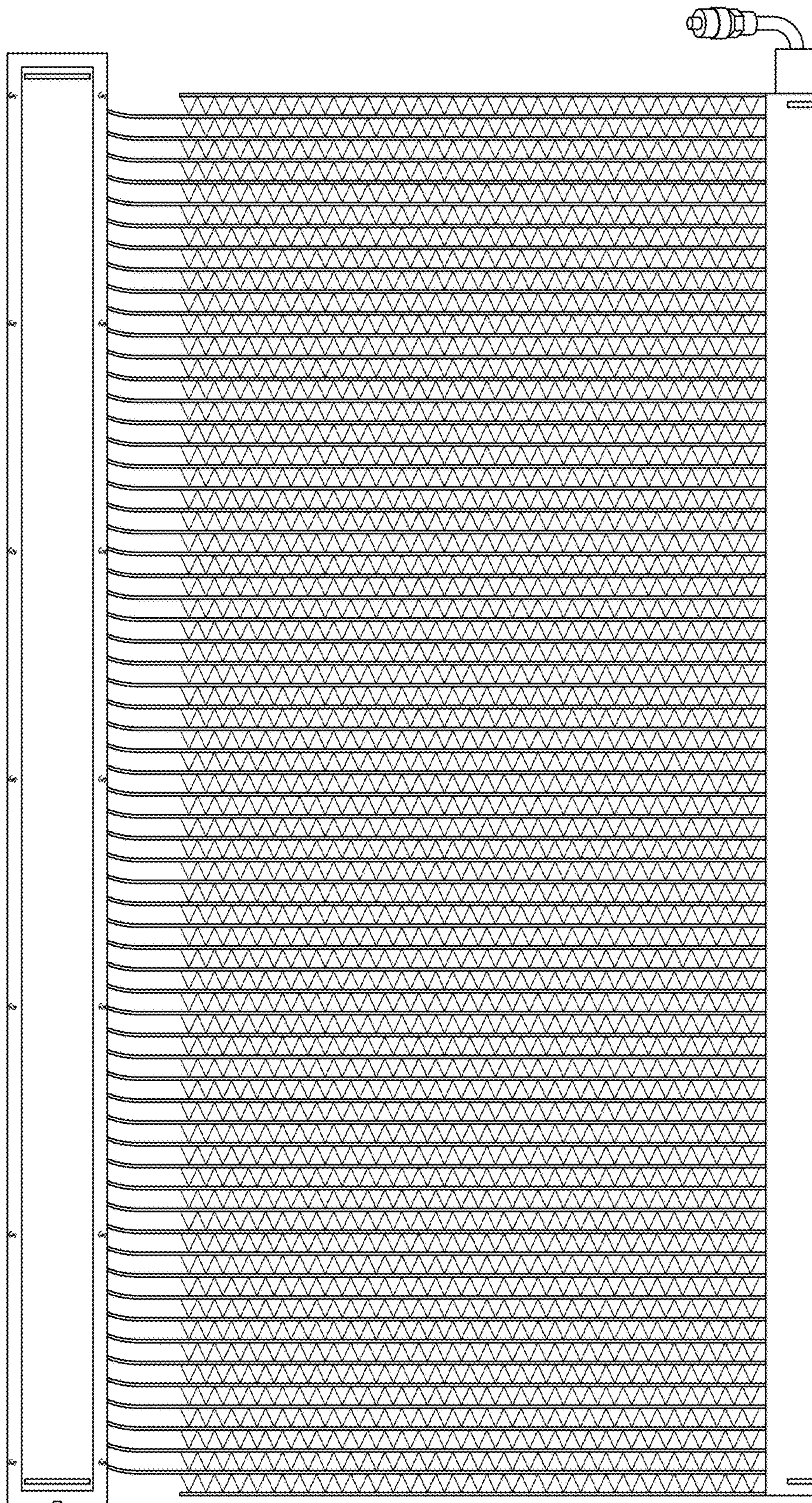


FIG. 13

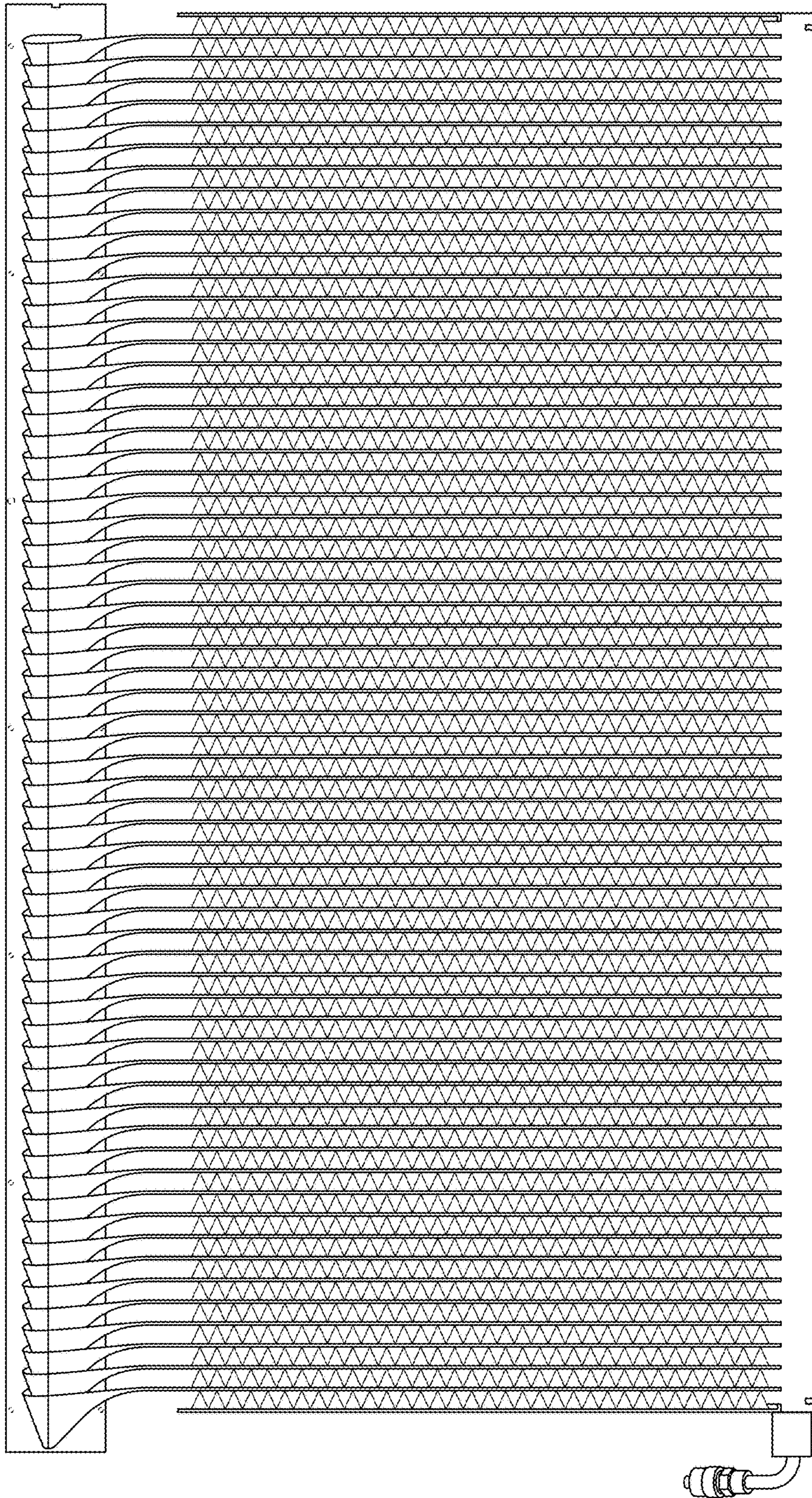


FIG. 14

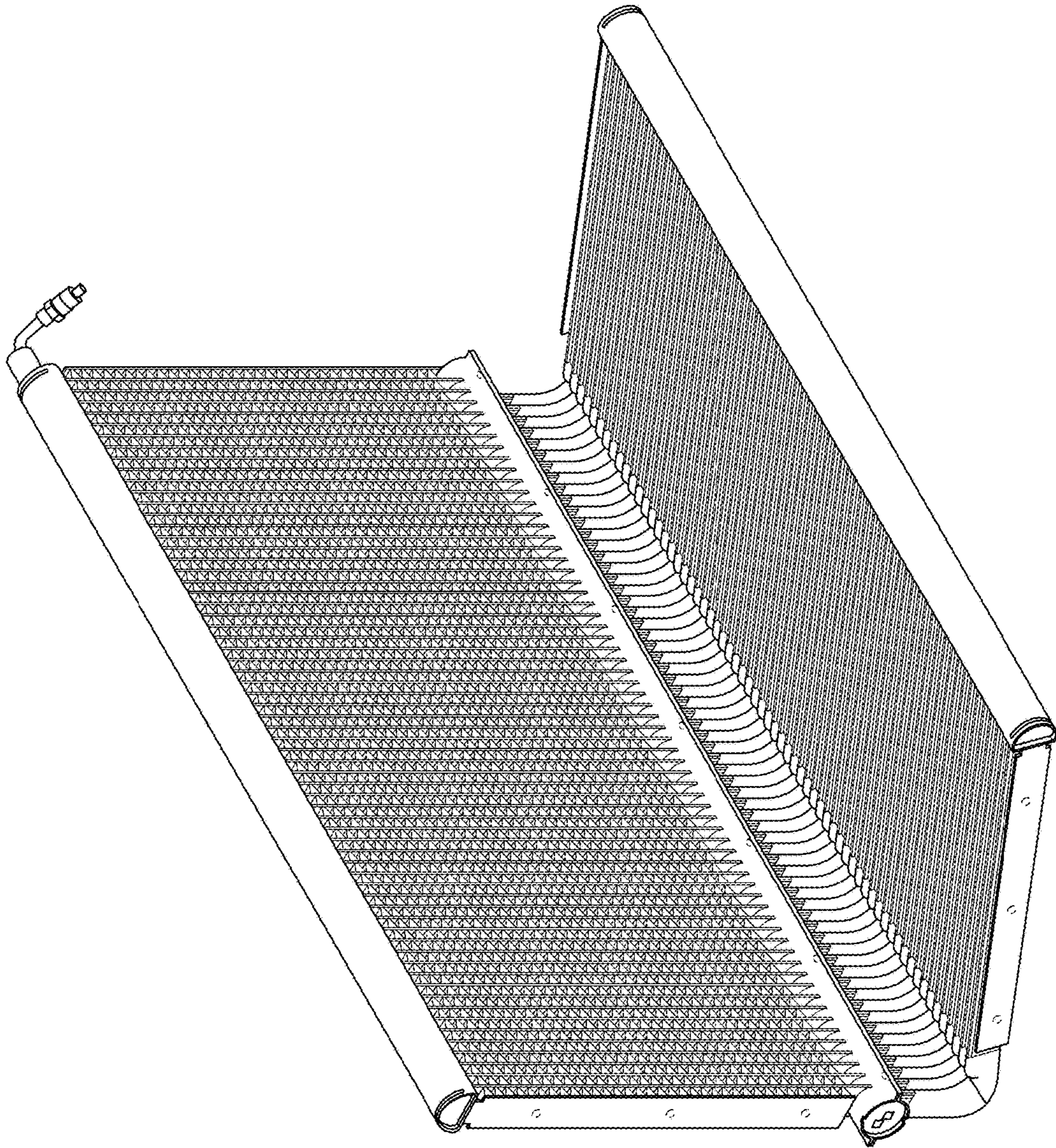


FIG. 15

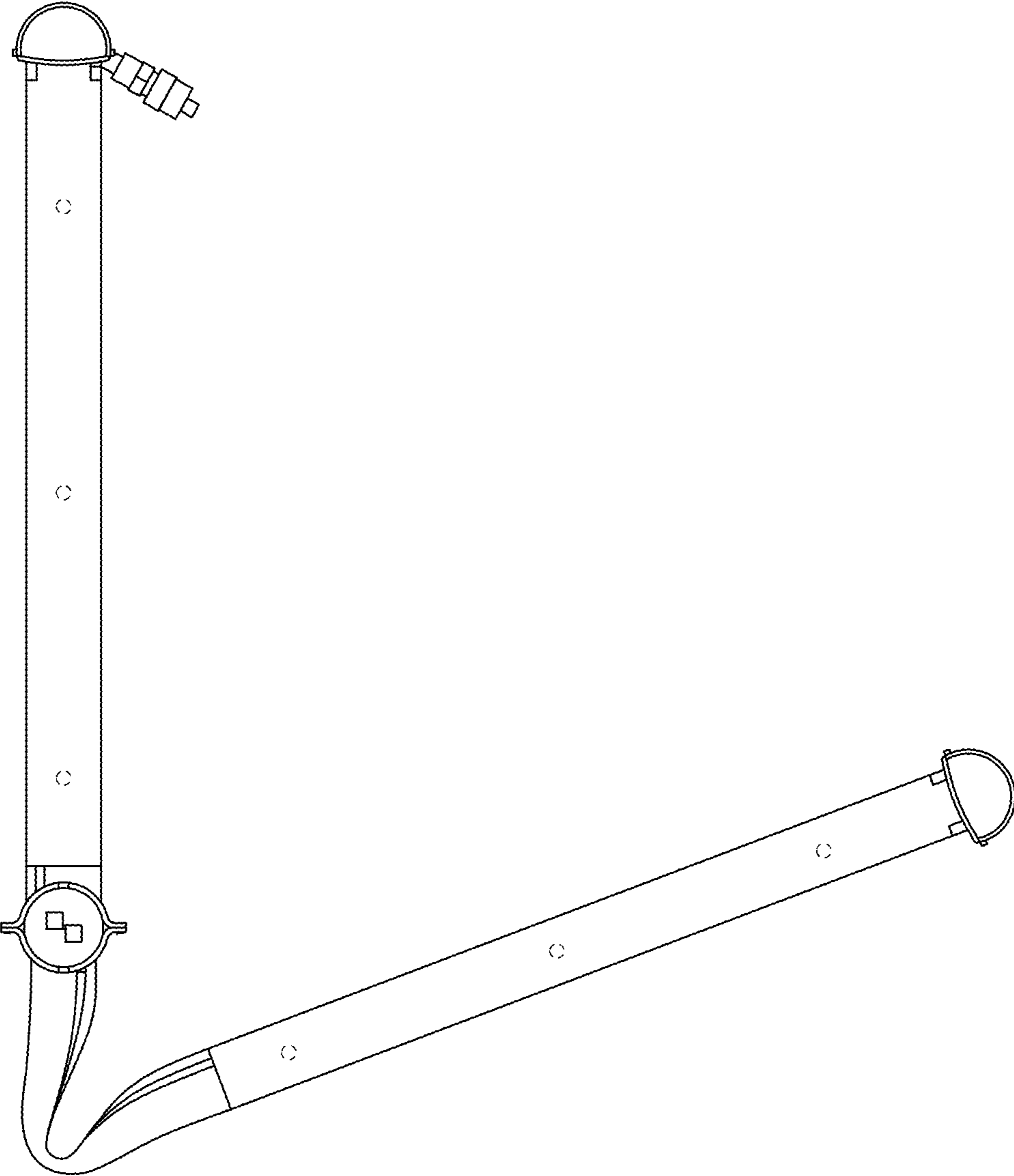


FIG. 16

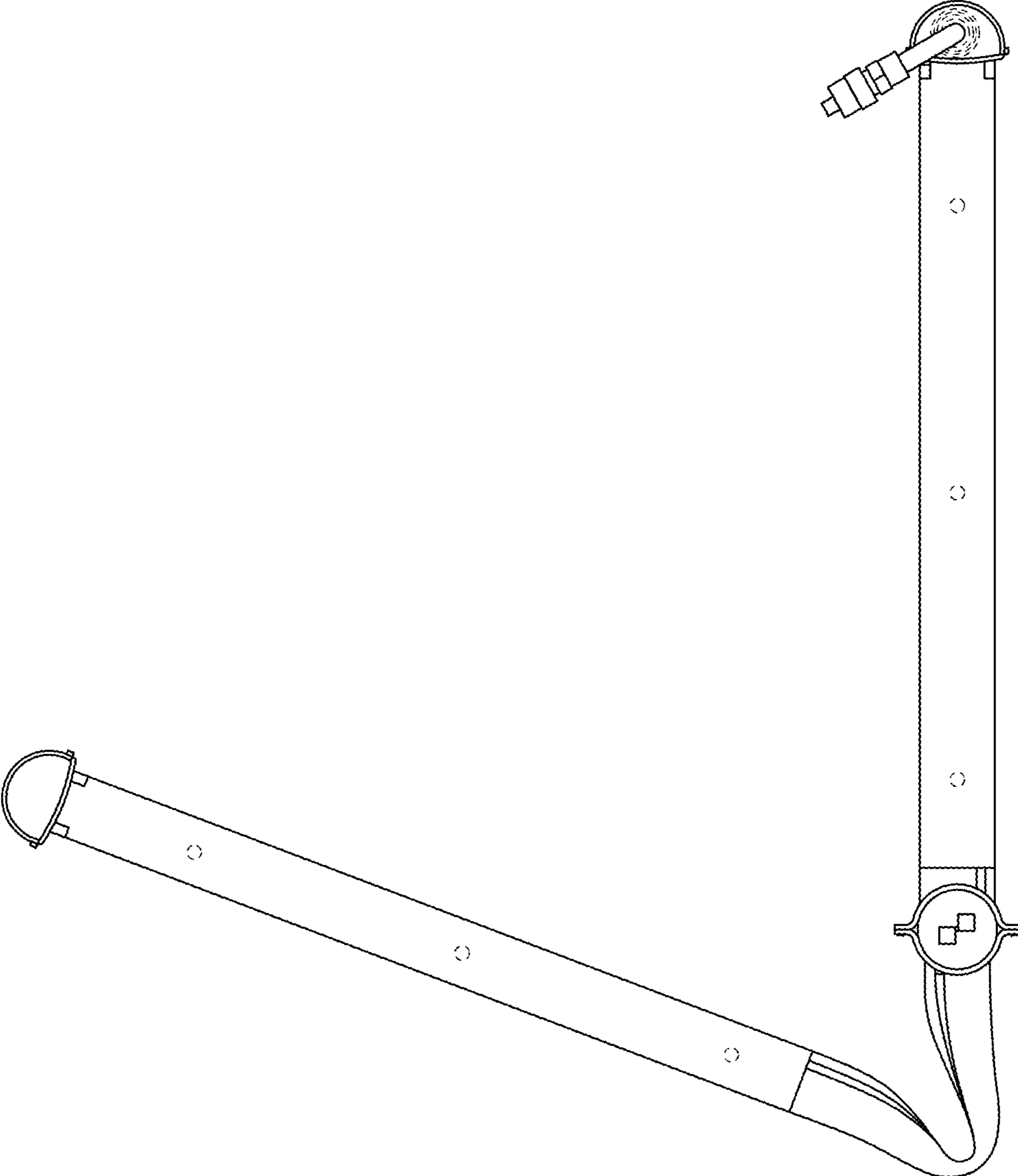


FIG. 17

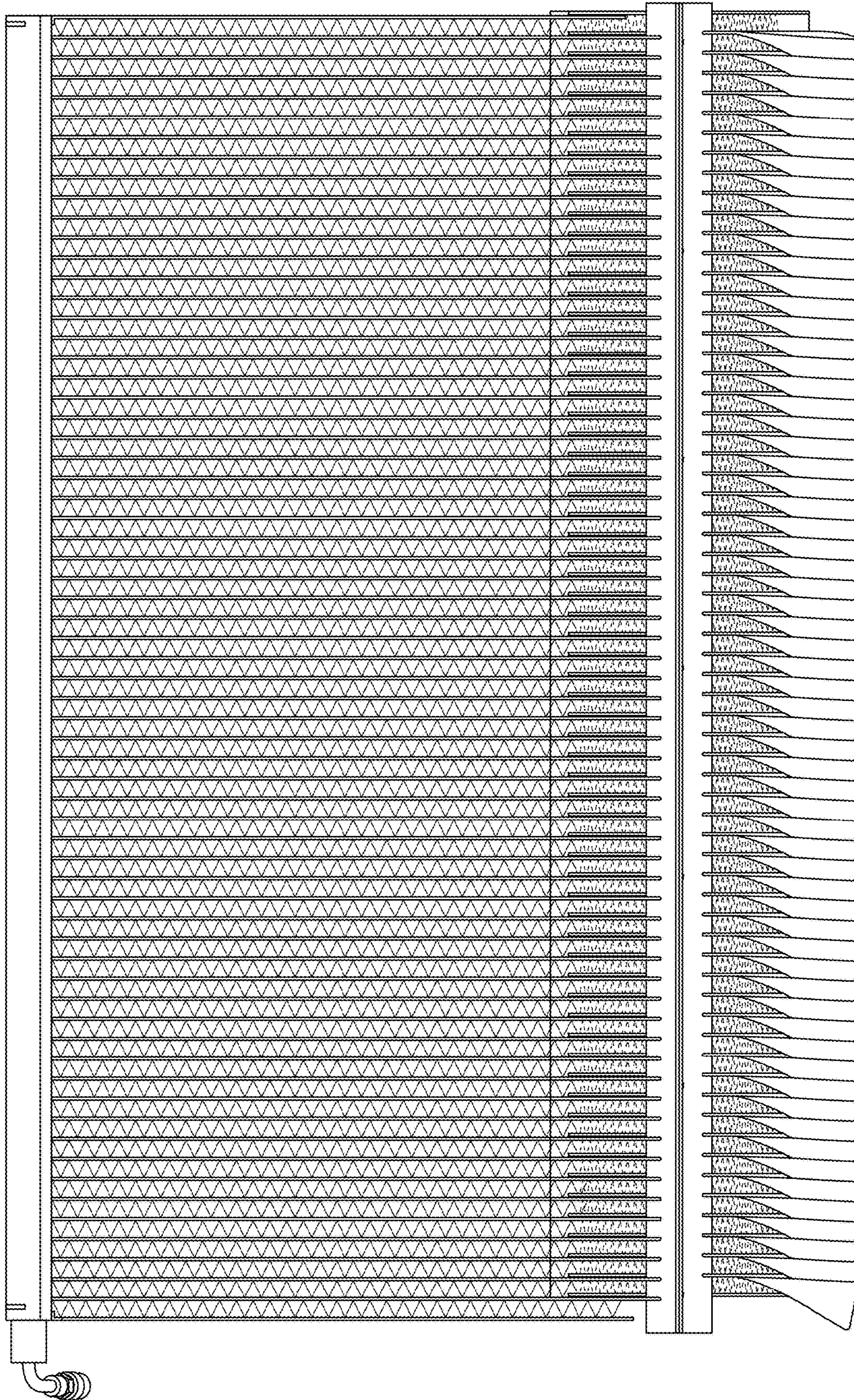


FIG. 18

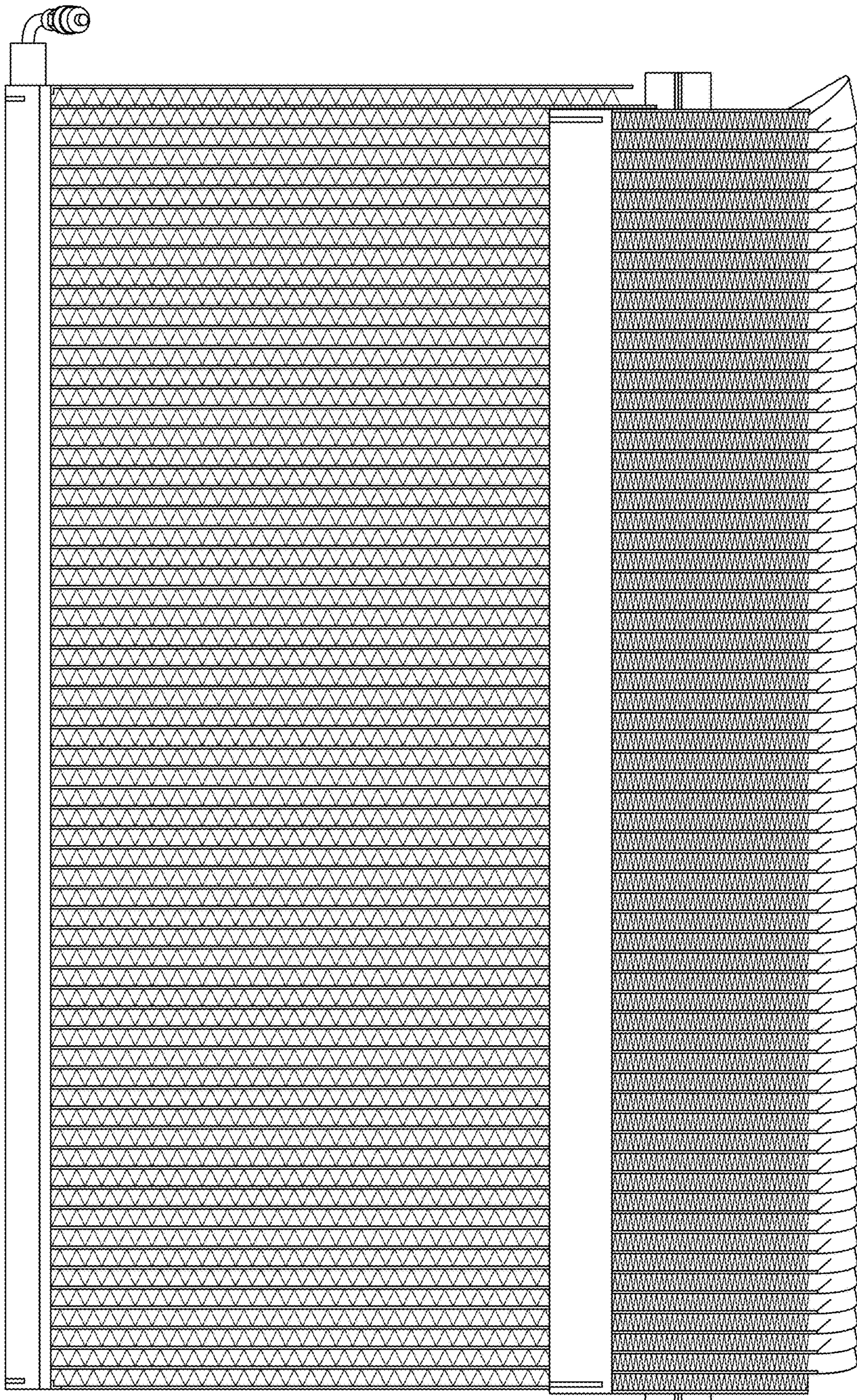


FIG. 19

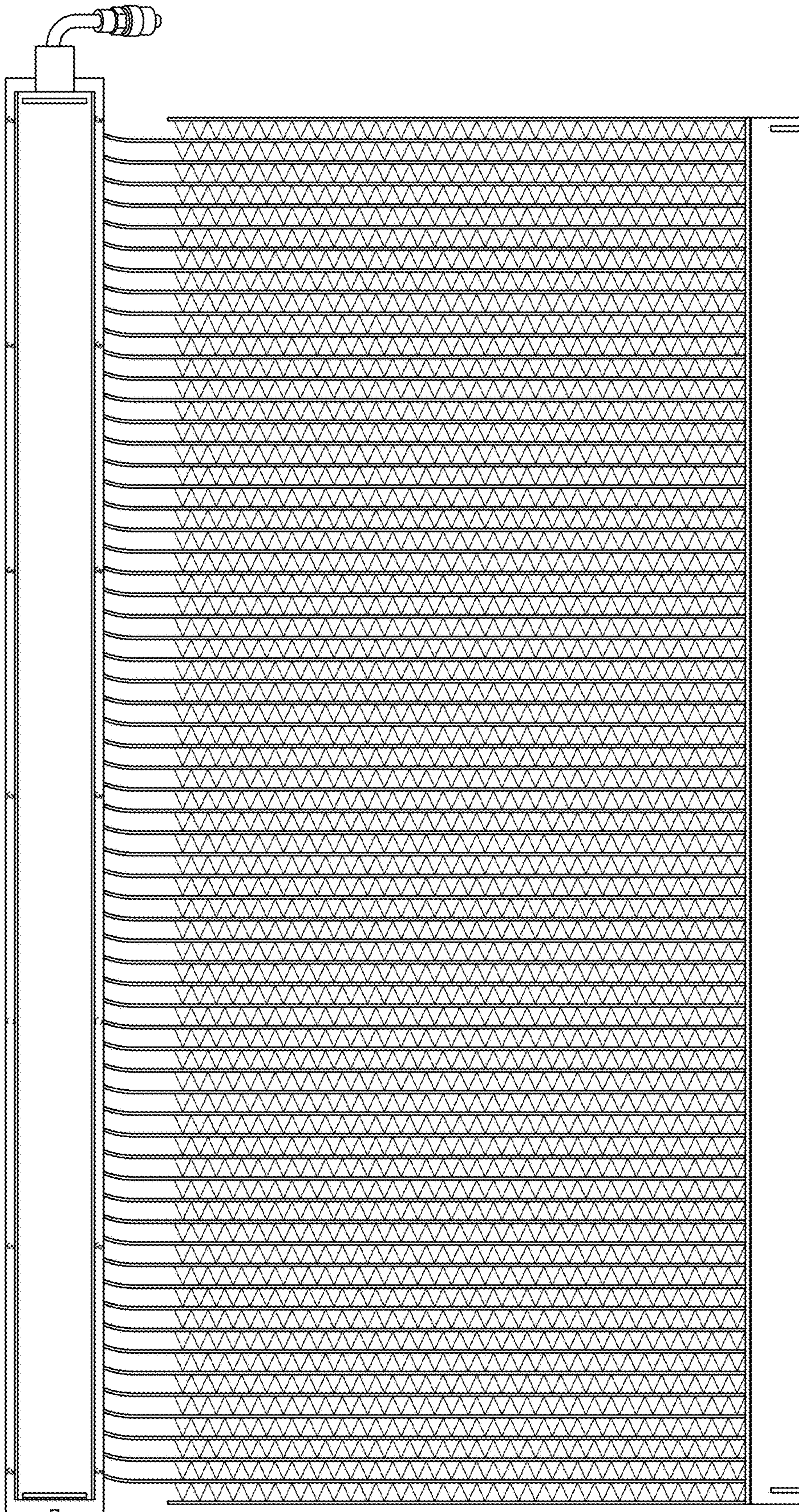


FIG. 20

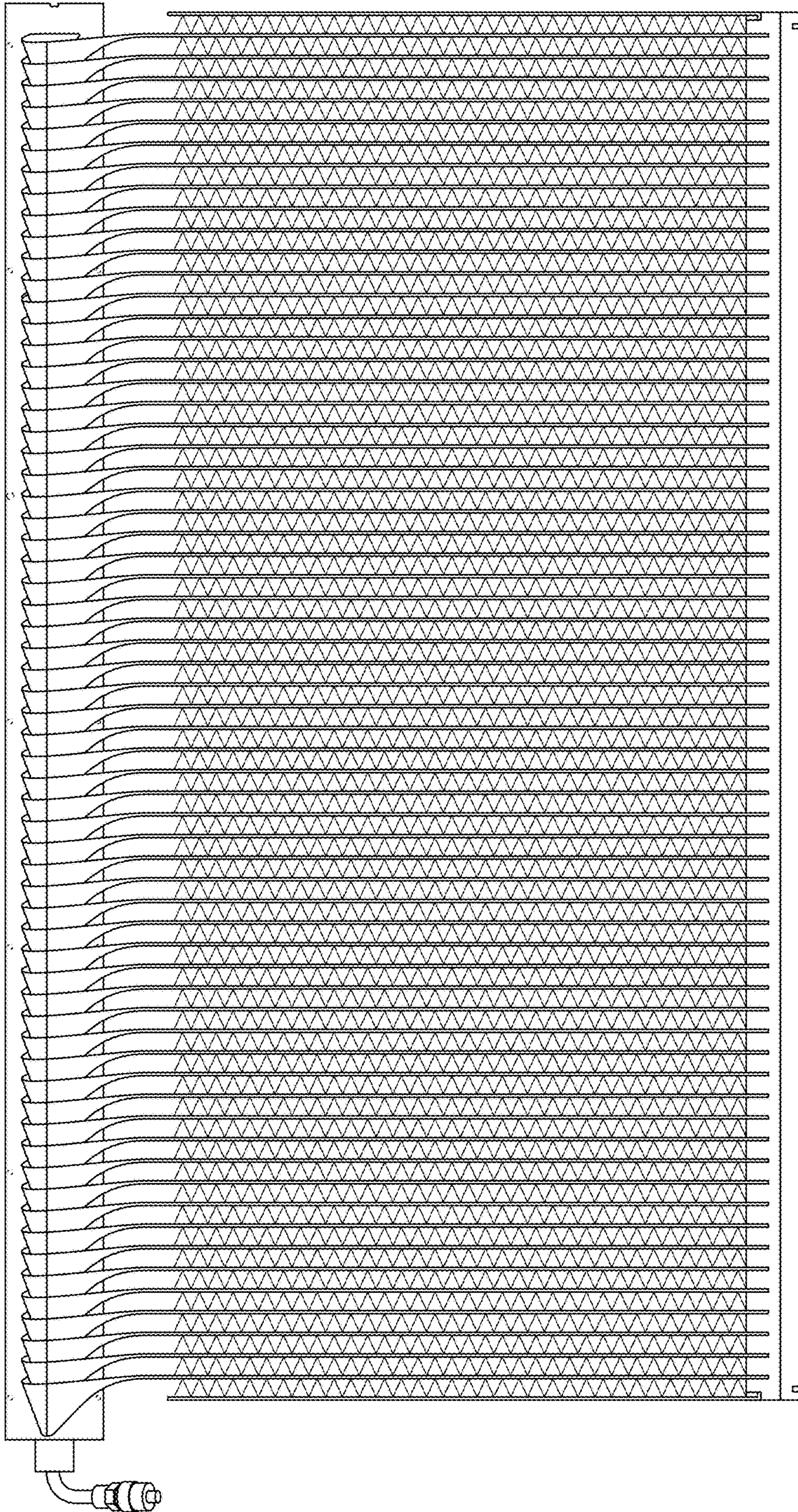


FIG. 21