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

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(54) **ATOMIZER**
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(73) Assignee: **Hamworthy Combustion Engineering Limited, Poole (GB)**

5,121,608 A 6/1992 Willis et al.
5,176,325 A * 1/1993 Vidusek B05B 7/0483
239/419.3
5,253,807 A * 10/1993 Newbegin A01G 25/023
239/11

(Continued)

FOREIGN PATENT DOCUMENTS

CN 2685718 Y 3/2005
JP S5021742 U 3/1975

(Continued)

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

OTHER PUBLICATIONS

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DDZ-GA-80—TinEye, image post date Oct. 16, 2014, site visited Jul. 4, 2018, (online), <https://www.tineye.com/search/e8602bda4afdb417ae521be8804ff06d98677023/?sort=crawl_date&order=asc>.*

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(30) **Foreign Application Priority Data**

(Continued)

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Primary Examiner — Kevin K Rudzinski

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

(57)

CLAIM

(52) **U.S. Cl.**
USPC **D23/418**

The ornamental design for an atomizer, as shown and described.

(58) **Field of Classification Search**
USPC D23/387, 390, 415, 418, 419, 499
CPC B01F 5/0256; B01J 4/002; B05B 1/14; B05B 1/26; B05B 1/34; B05B 7/0441; B05B 7/0483; B05B 7/02; B05B 7/06; B05B 7/066; B05B 7/08; B05B 7/0892; B05B 7/12; B05B 7/14; B05B 7/1486; C21C 5/4606; F23D 11/108; F23D 17/002; F23R 3/36; Y10S 261/09

DESCRIPTION

See application file for complete search history.

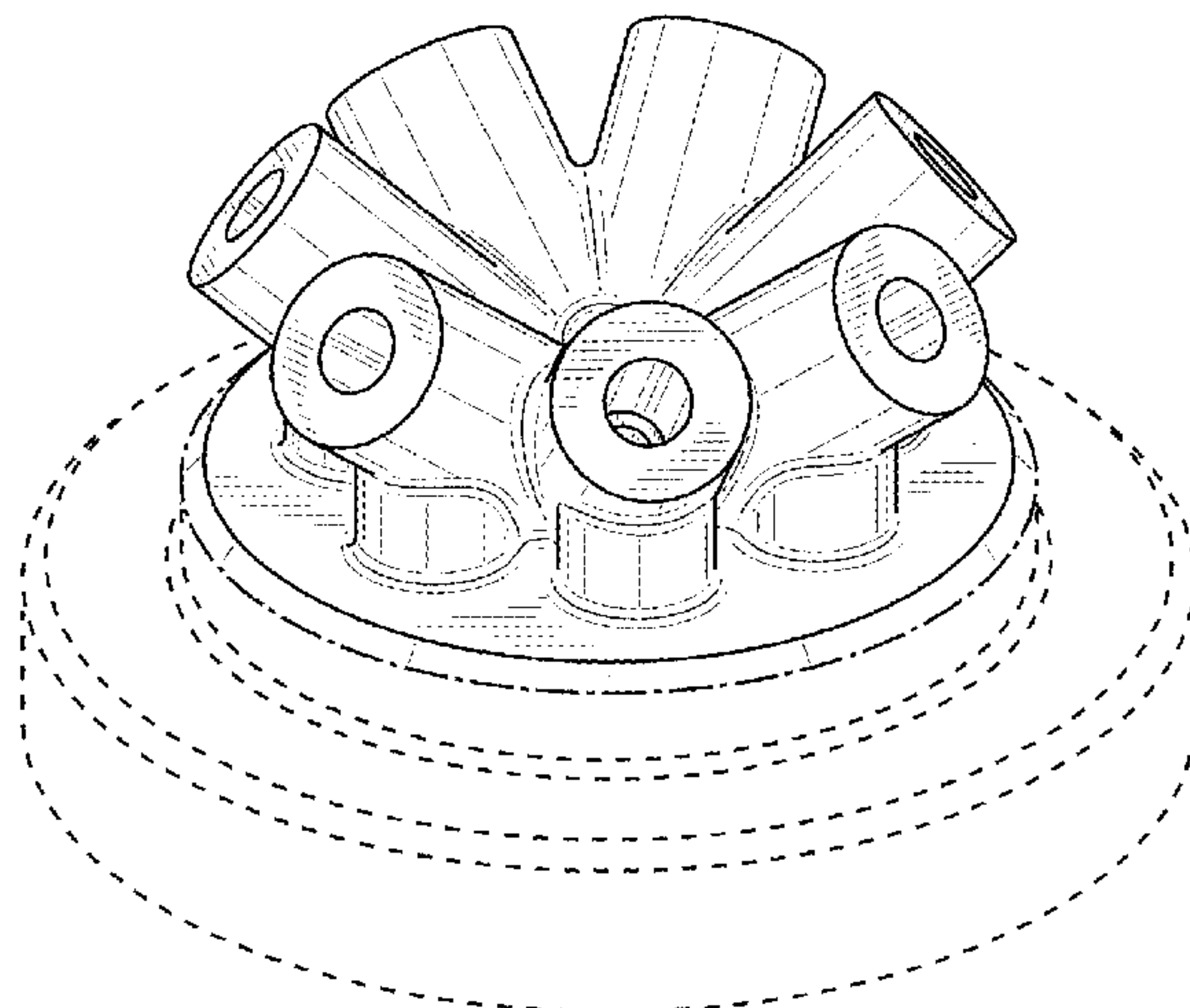
FIG. 1 is a front, top perspective view of an atomizer showing the new design;
FIG. 2 is a front, bottom, left perspective view thereof;
FIG. 3 is a top plan view thereof;
FIG. 4 is a bottom plan view thereof;
FIG. 5 is a front elevation view thereof;
FIG. 6 is a left side view thereof;
FIG. 7 is a right side view thereof; and,
FIG. 8 is a cross-sectional view along line 8-8 of FIG. 3.
The even length broken lines shown in the drawings illustrate portions of the atomizer that form no part of the claimed design. The uneven length broken lines illustrate the boundary of the claimed design, and form no part of the claimed design.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,304,014 A * 2/1967 Hancock F23D 14/04
239/556
4,518,120 A * 5/1985 Johnson B05B 1/14
239/424

1 Claim, 8 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

5,271,562 A 12/1993 Myers et al.
 5,921,472 A 7/1999 Haruch
 6,199,768 B1 3/2001 Koveal et al.
 6,276,615 B1* 8/2001 Scholz B05B 7/066
 239/419
 6,951,454 B2* 10/2005 Sarv F23D 1/00
 110/262
 7,290,426 B2* 11/2007 Landvatter B05B 1/14
 72/342.3
 7,429,173 B2* 9/2008 Lanary F23C 9/00
 431/116
 7,500,849 B2 3/2009 Dudill et al.
 7,547,002 B2* 6/2009 Mao B01F 3/04049
 261/78.1
 7,588,199 B2* 9/2009 Huffman B05B 1/34
 239/290
 D657,014 S * 4/2012 Seiz D23/213
 8,584,467 B2* 11/2013 Khosla F23D 11/38
 60/39.26
 8,820,664 B2* 9/2014 Sawalski B67D 7/00
 239/548
 9,352,340 B2* 5/2016 Bourrilhon A62C 31/05

9,393,579 B2* 7/2016 Ponomarev B05B 7/0093
 D763,670 S * 8/2016 Monsees D8/382
 9,623,423 B2* 4/2017 Erickson E03C 1/084
 D789,513 S * 6/2017 Nilssen D23/415
 D820,055 S * 6/2018 Chen D8/1
 2005/0100846 A1 5/2005 Gutmark et al.
 2011/0207064 A1* 8/2011 Salani F23G 7/085
 431/13

FOREIGN PATENT DOCUMENTS

KR 20020051067 A 6/2002
 WO WO2014024842 A1 2/2014

OTHER PUBLICATIONS

Oil burner nozzles—Alibaba, image post date 1999, site visited Jul. 4, 2018, (online), <https://guide.alibaba.com/shopping-guides/china_oil-burner-nozzle.html>.*

Food equipment cast iron gas nozzles jets burner, image post date 2010, site visited Jul. 4, 2018, (online), <https://www.aliexpress.com/item/Food-equipment-cast-iron-gas-nozzles_jets-burner-20-nozzle-tips-burner_jet-burner-with-LPG/32543727356.html>.*

* cited by examiner

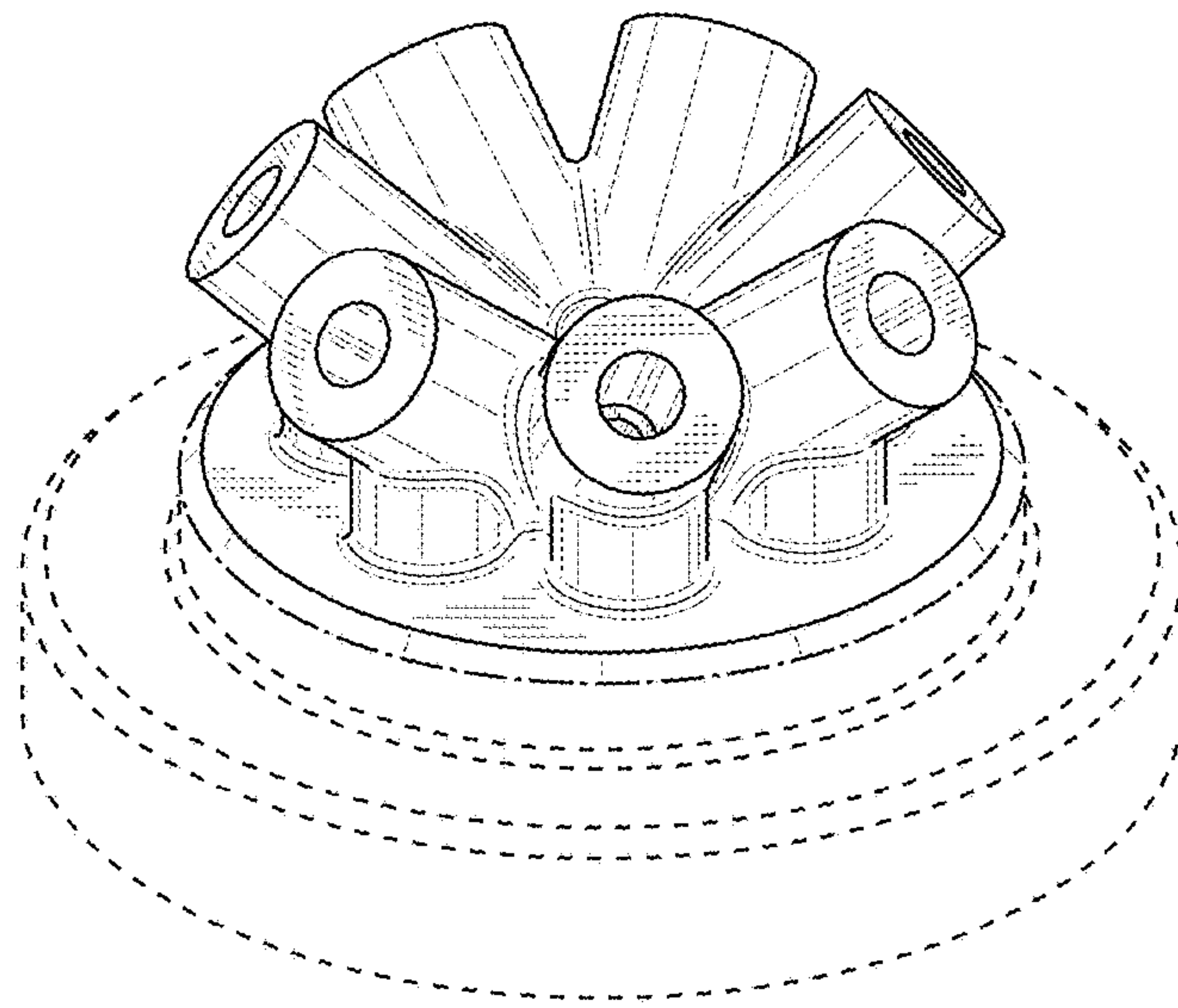


FIG. 1

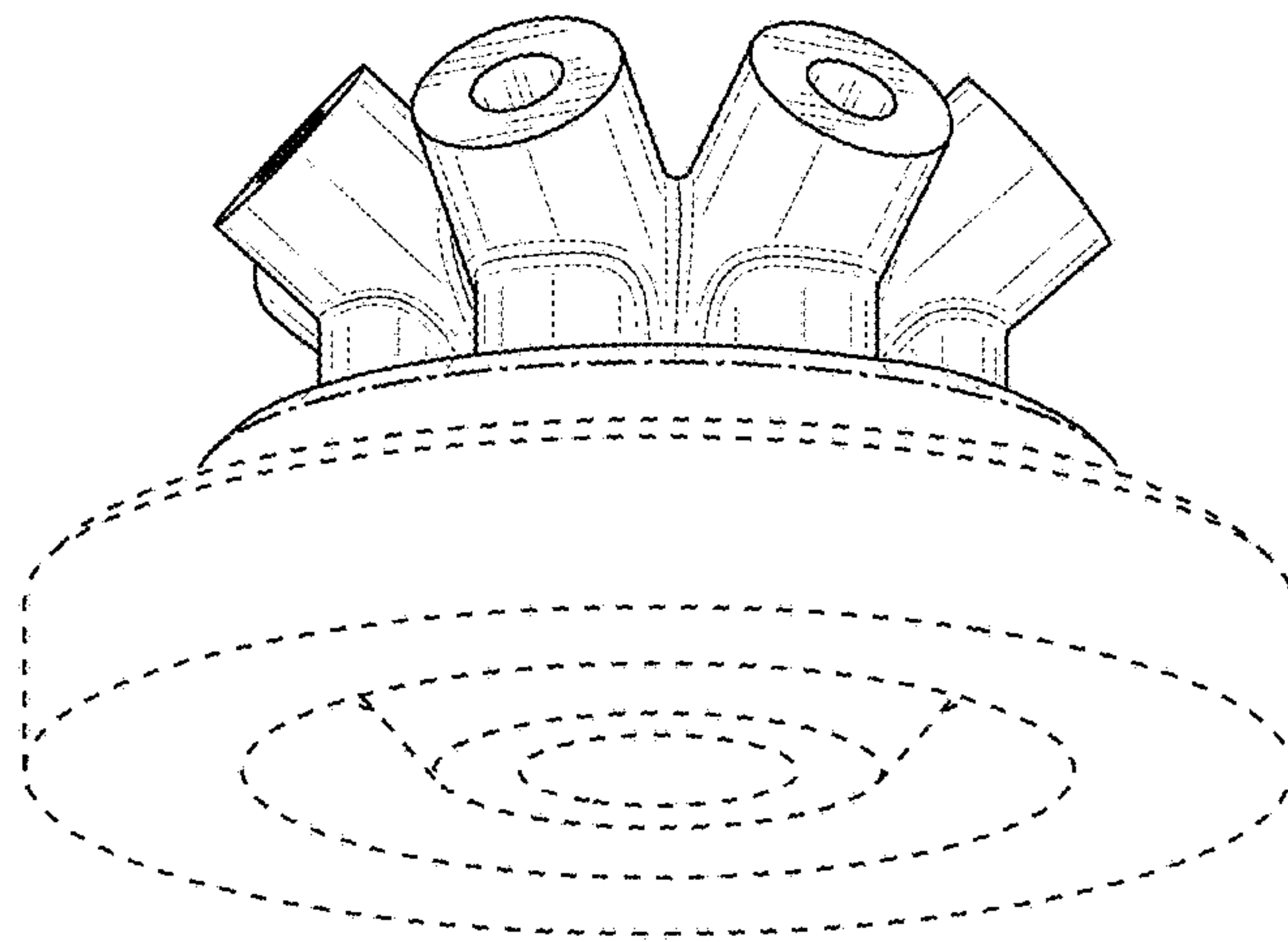


FIG. 2

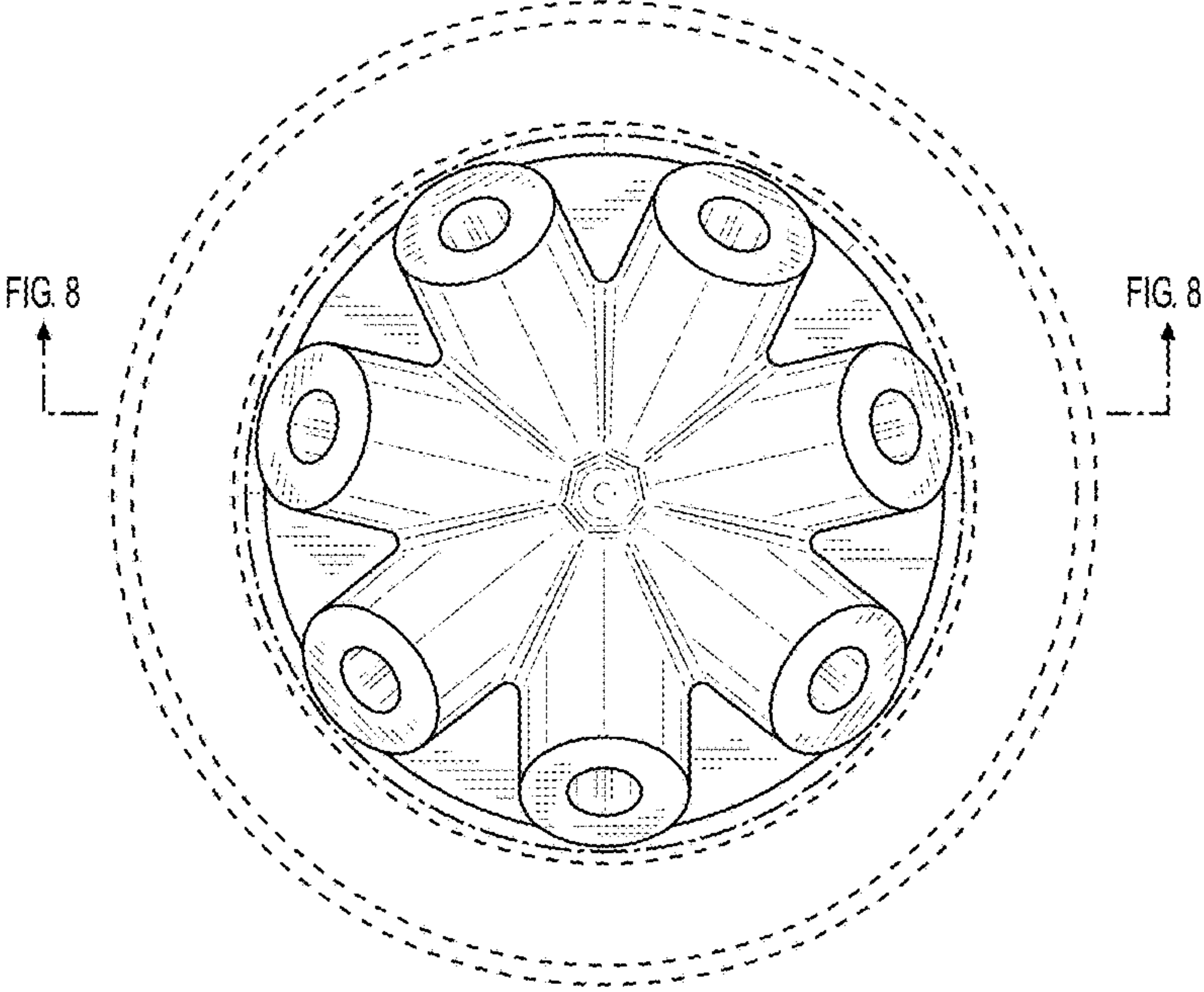


FIG. 3

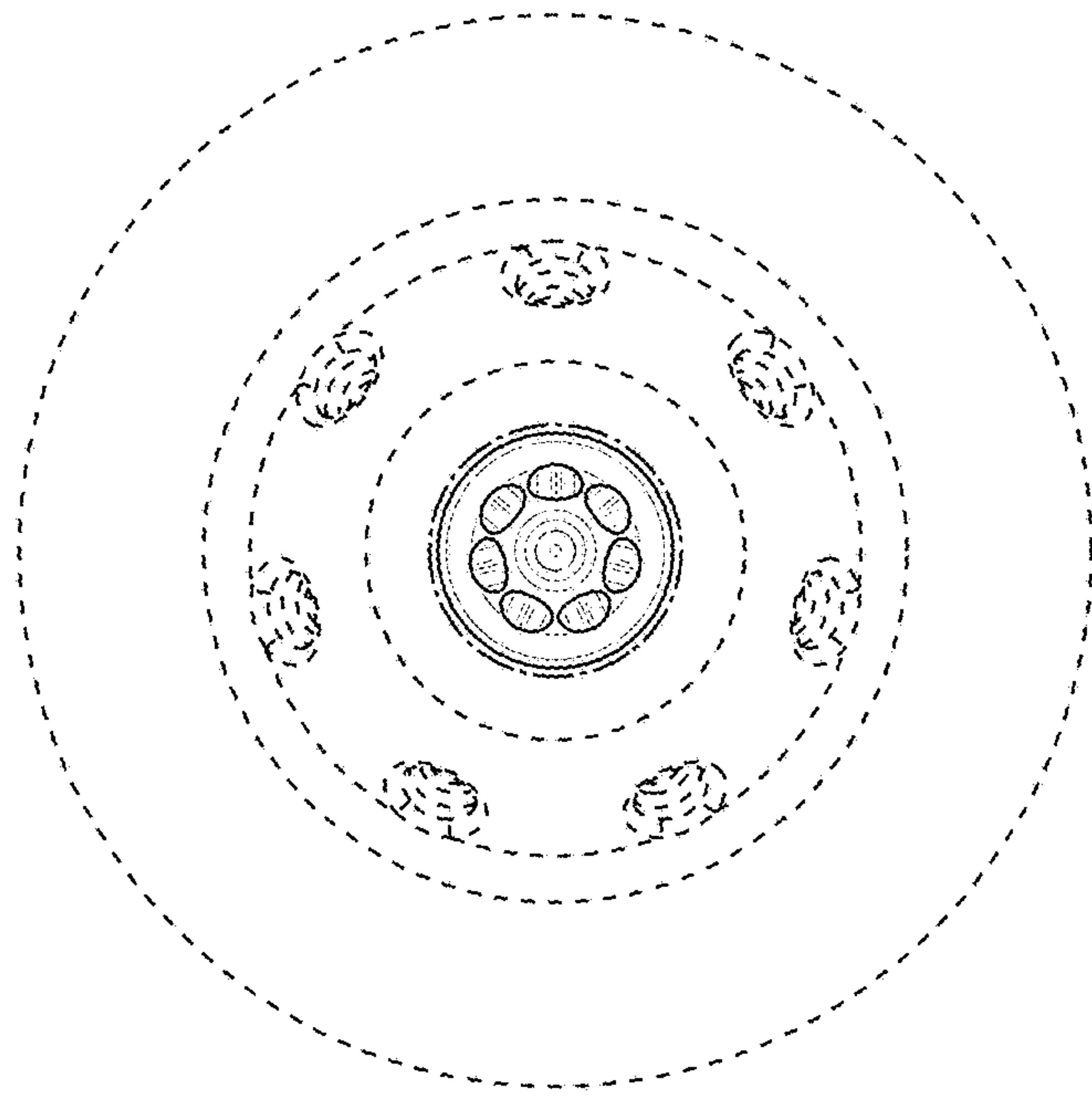


FIG. 4

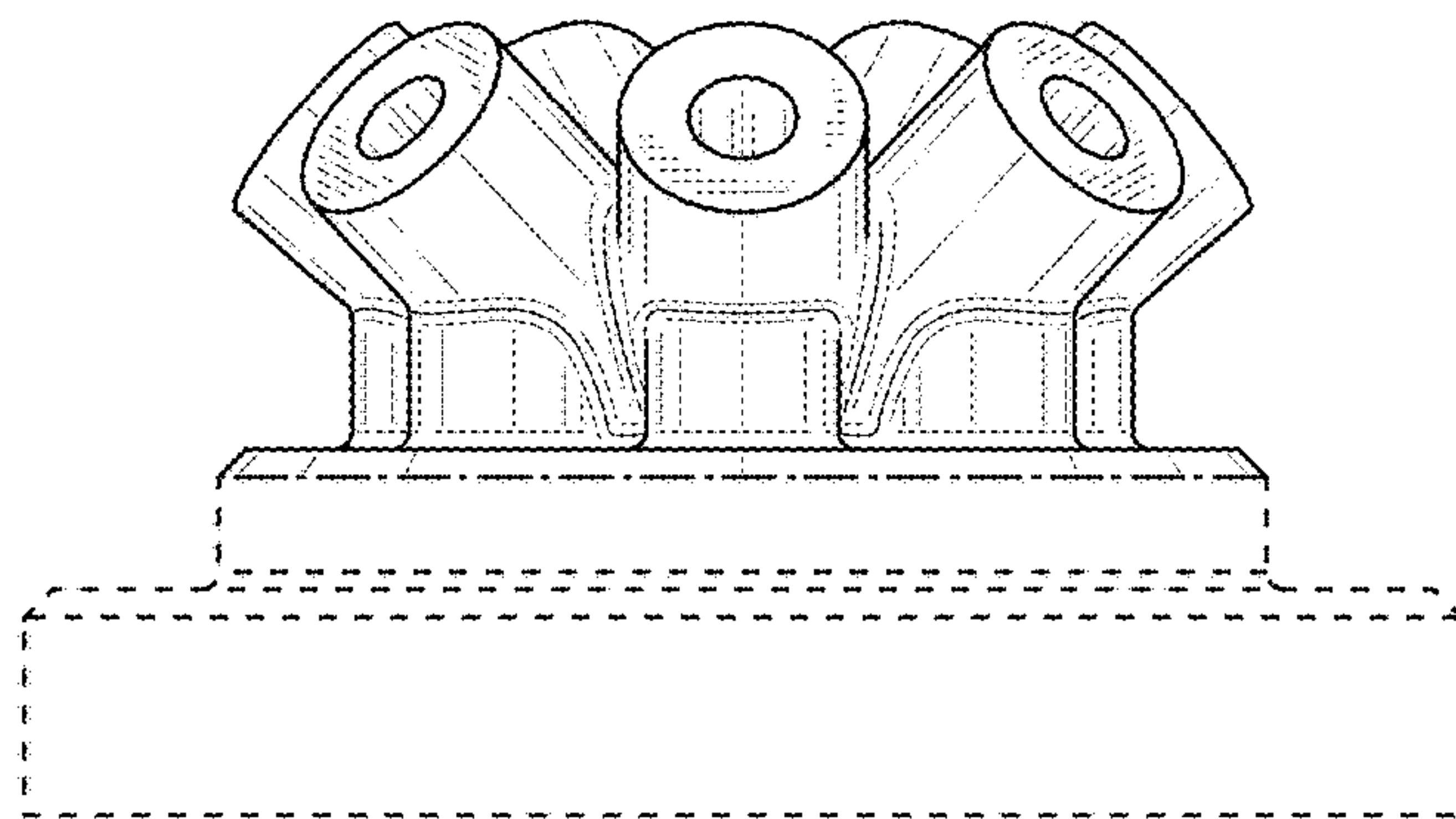


FIG. 5

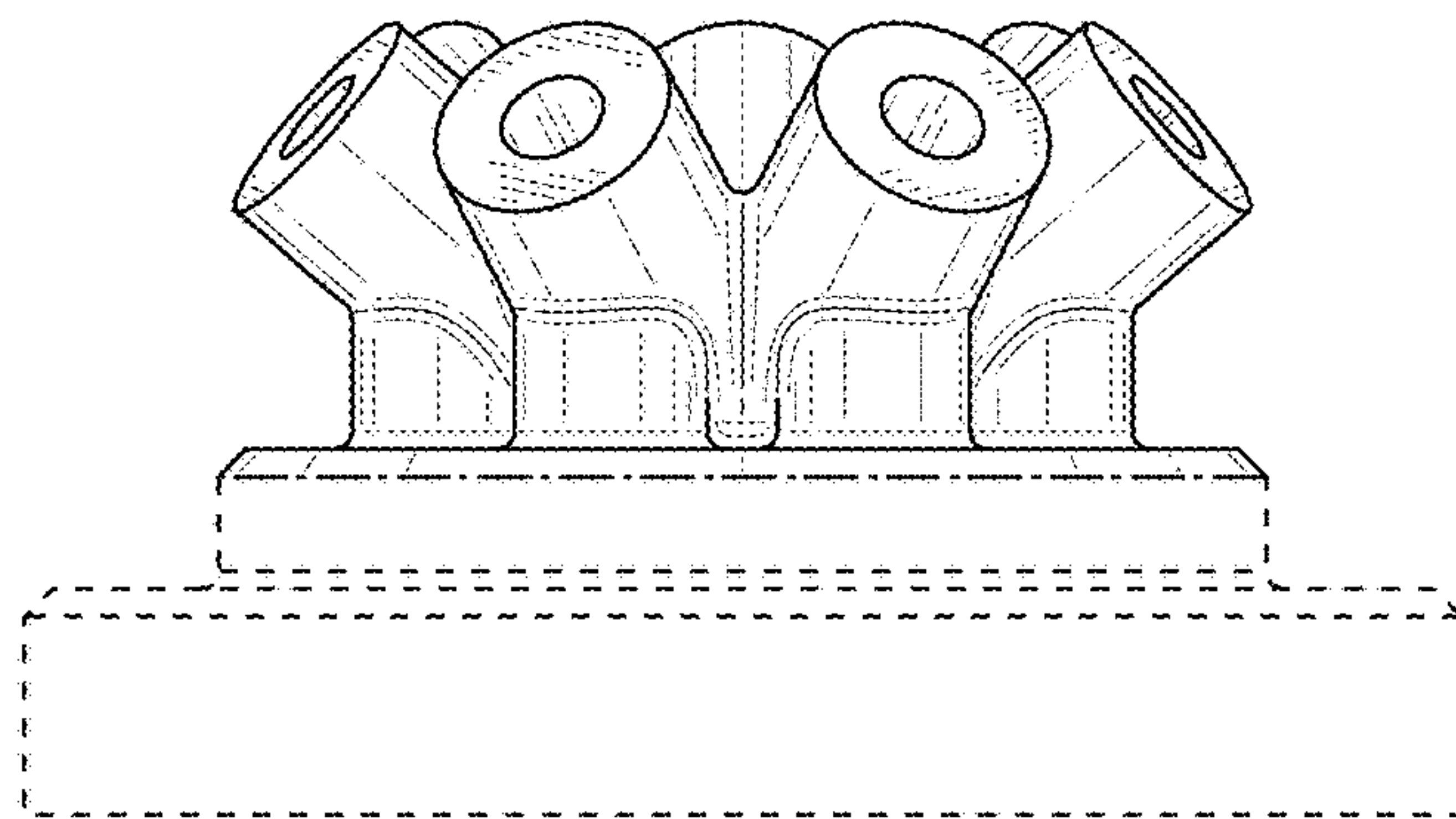


FIG. 6

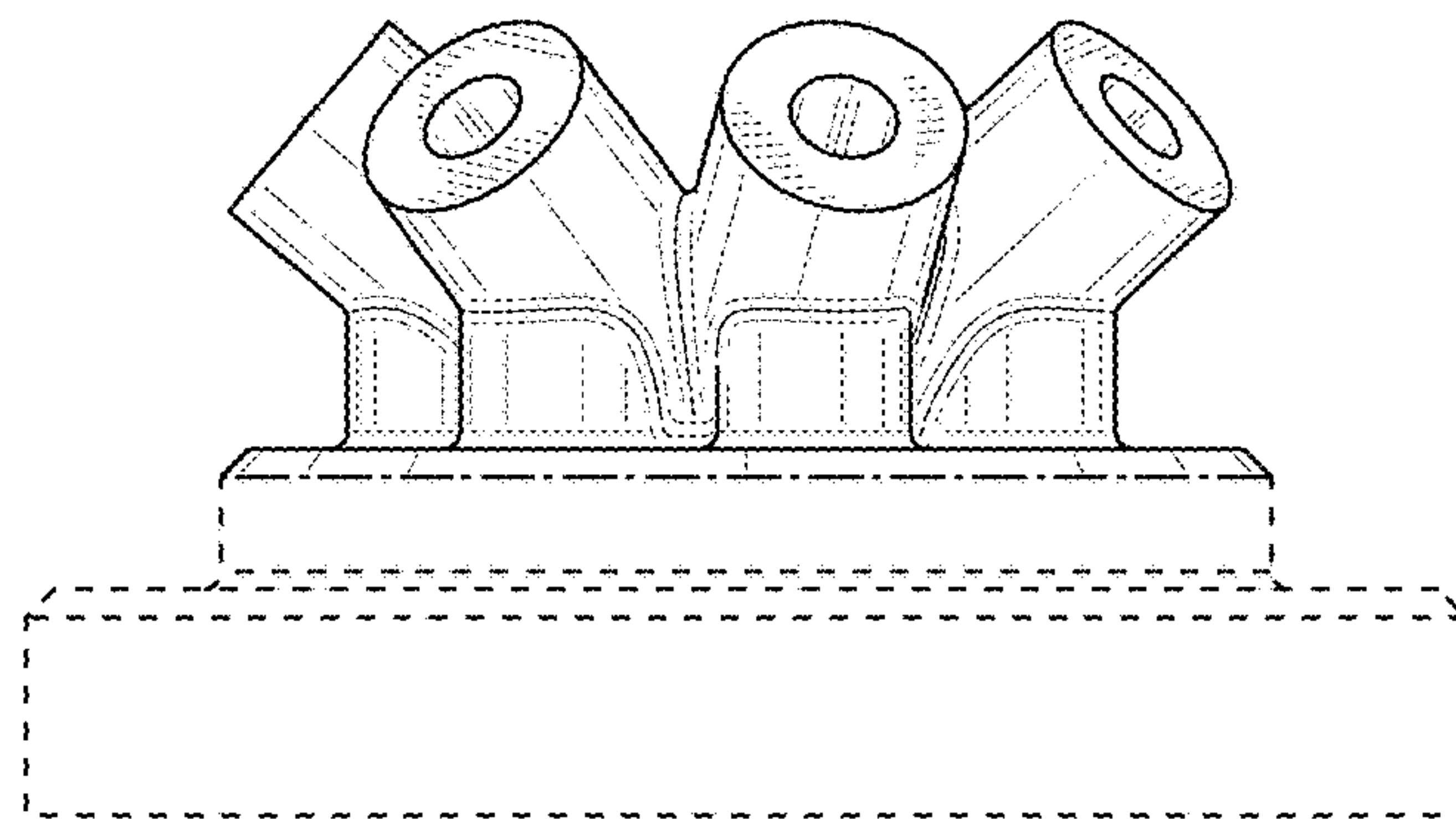


FIG. 7

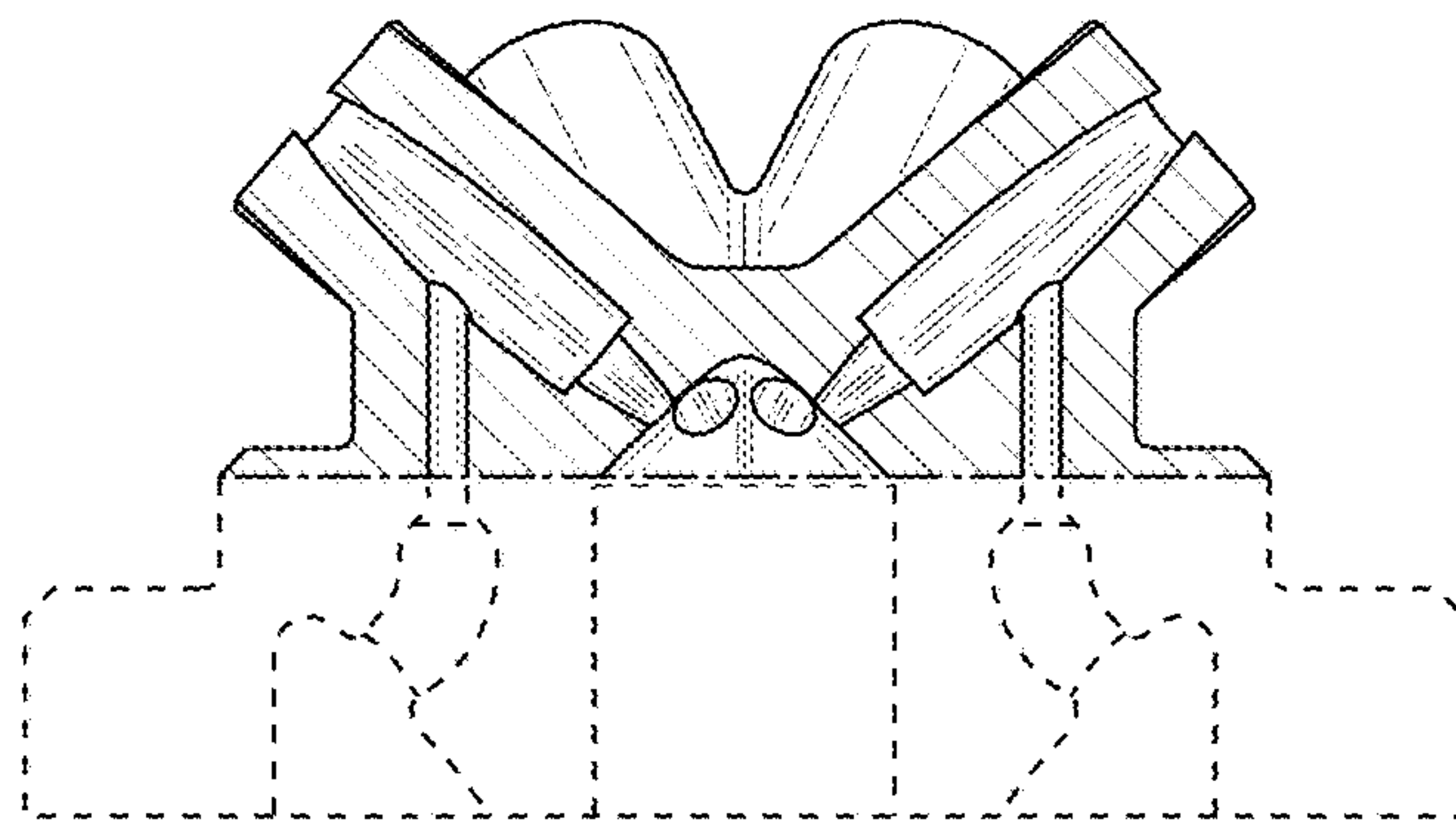


FIG. 8