



US00D446295S

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

(10) **Patent No.:** **US D446,295 S**

(45) **Date of Patent:** **** Aug. 7, 2001**

(54) **RING-TYPE COOLING FAN**

(75) Inventors: **Eugene E. Williams**, Frankfort;
Jonathan B. Stagg, Greencastle, both
of IN (US)

(73) Assignee: **BorgWarner Inc.**, Troy, MI (US)

(**) Term: **14 Years**

(21) Appl. No.: **29/129,829**

(22) Filed: **Sep. 21, 2000**

Related U.S. Application Data

(62) Division of application No. 09/549,436, filed on Apr. 14,
2000.

(51) **LOC (7) Cl.** **23-04**

(52) **U.S. Cl.** **D23/370**

(58) **Field of Search** 416/189, 191,
416/195, 196 A, 244 R; D23/370

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,842,902	10/1974	Postesny .	
3,883,264	* 5/1975	Rao	416/189
4,189,281	2/1980	Katagiri et al. .	
4,222,710	9/1980	Katagiri et al. .	
4,265,596	5/1981	Katagiri et al. .	
4,406,581	9/1983	Robb et al. .	
4,566,852	1/1986	Hauser .	
5,769,607	* 6/1998	Neely et al.	416/189
6,065,937	* 5/2000	Hunt	416/189

* cited by examiner

Primary Examiner—Lisa Lichtenstein

(74) *Attorney, Agent, or Firm*—Greg Dziegielewski

(57) **CLAIM**

The ornamental design for a ring-type cooling fan, as shown and described.

DESCRIPTION

FIG. 1 is a top elevational view of a ring-type cooling fan in accordance with the design of the present invention.

FIG. 2 is a bottom perspective view of the ring-type cooling fan of FIG. 1.

FIG. 3 is a bottom plan view of the ring-type cooling fan of FIG. 1.

FIG. 4 is a side elevational view of the ring-type cooling fan of FIGS. 1 and 2 and views at all other angles are the same.

FIG. 5 is a side, cross-sectional view of the ring-type cooling fan depicted in FIG. 1, taken along line 5—5 as viewed in direction of the arrows.

FIG. 6 is a bottom perspective view of a fan blade of the ring-type cooling fan of FIG. 1, shown separately for clarity of illustration.

FIG. 7 is a top plan view of FIG. 6.

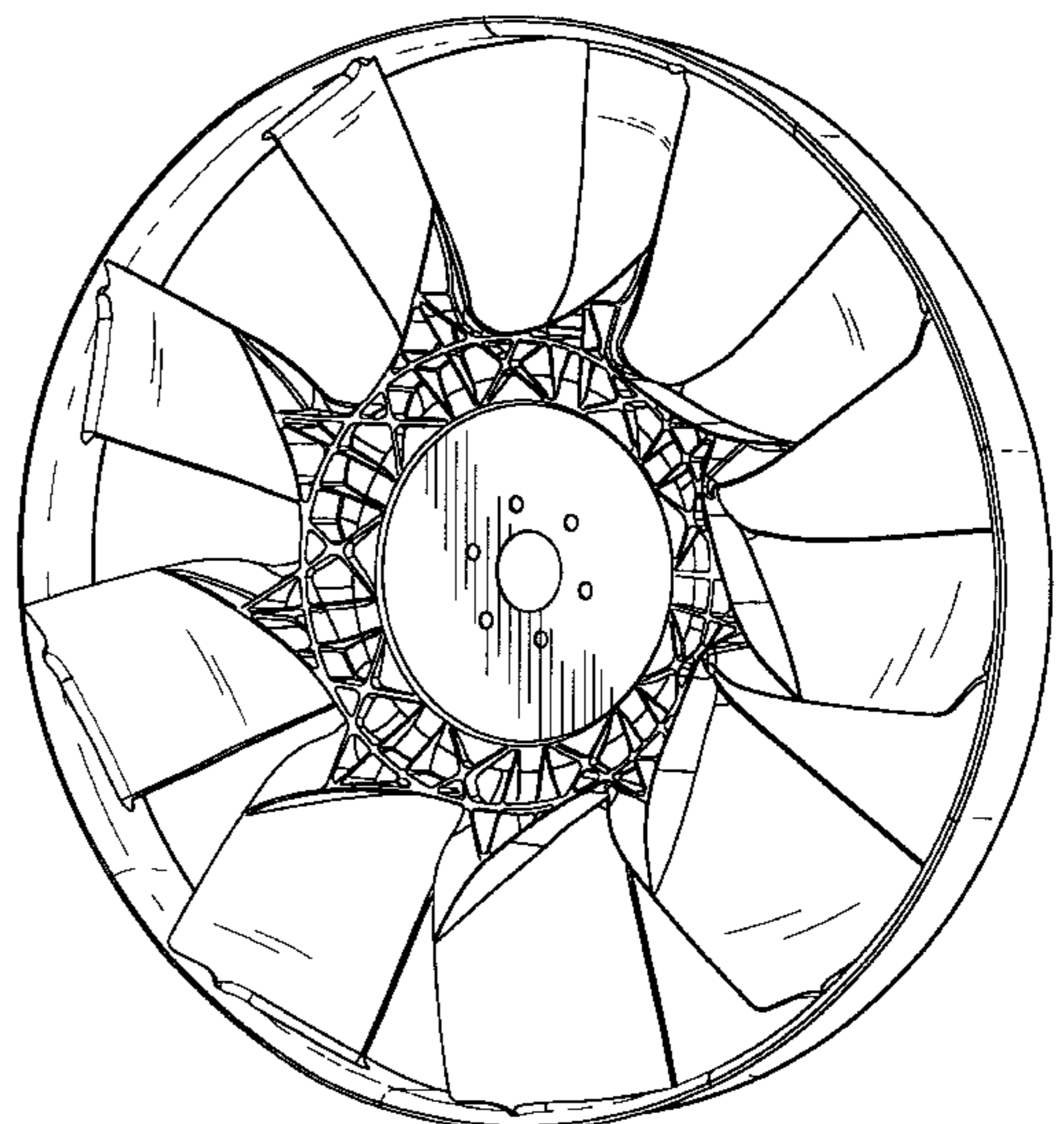
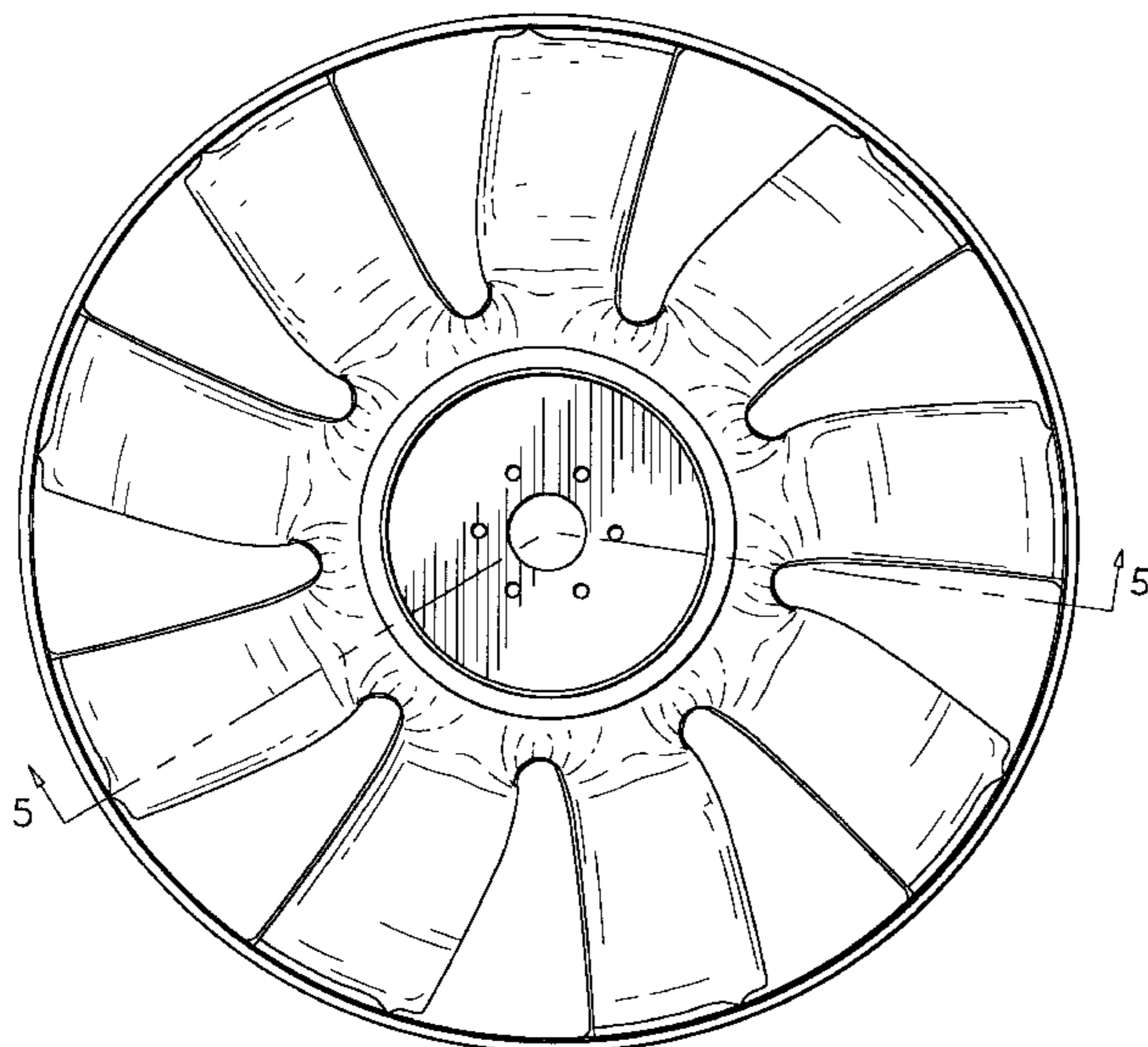
FIG. 8 is a bottom plan view of FIG. 6.

FIG. 9 is a front elevational view of FIG. 6; and,

FIG. 10 is a rear elevational view of FIG. 6.

The broken line showing of environmental structure in FIGS. 6–10 is for illustrative purposes only and forms no part of the claimed design.

1 Claim, 8 Drawing Sheets



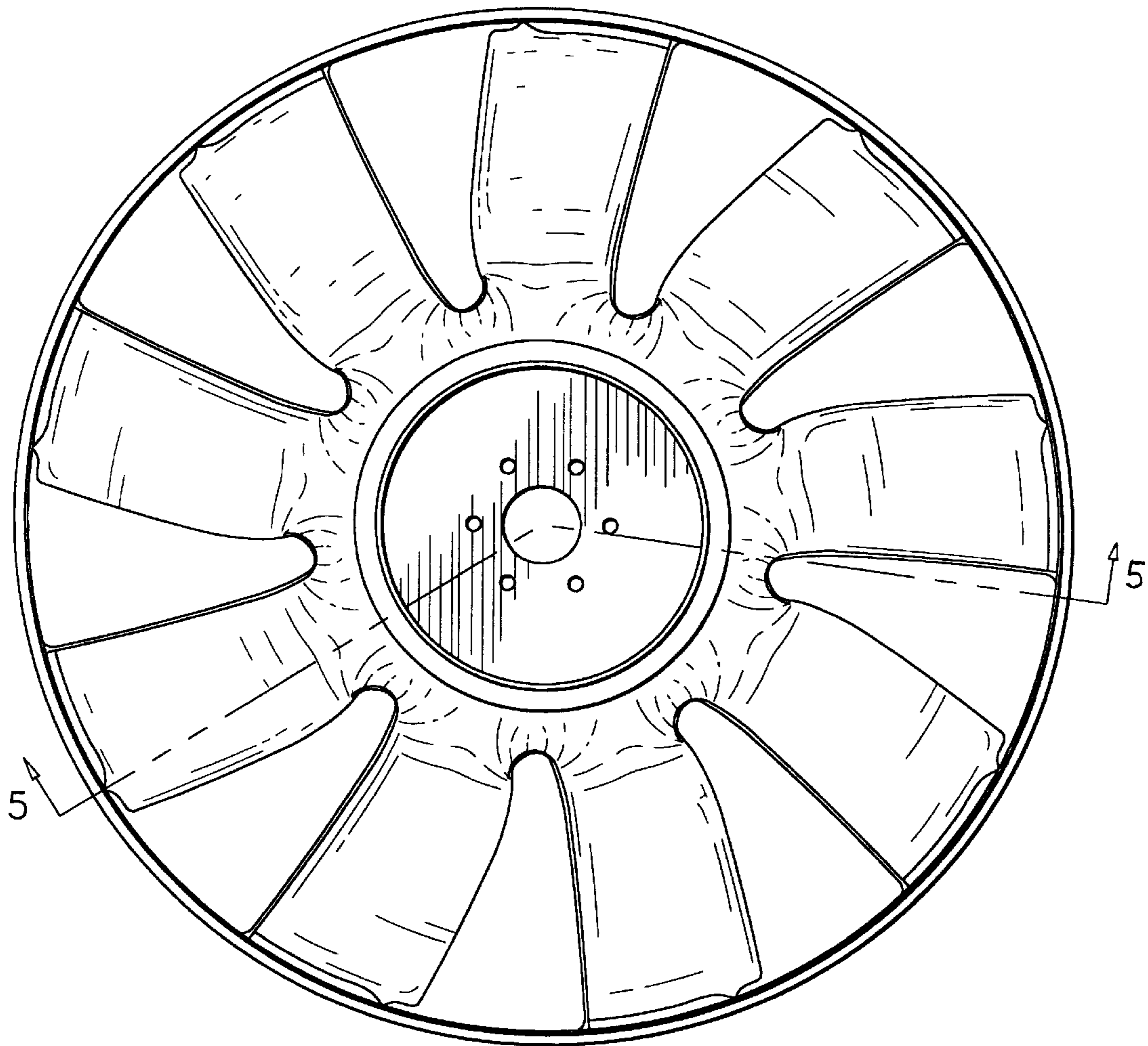


Fig. 1

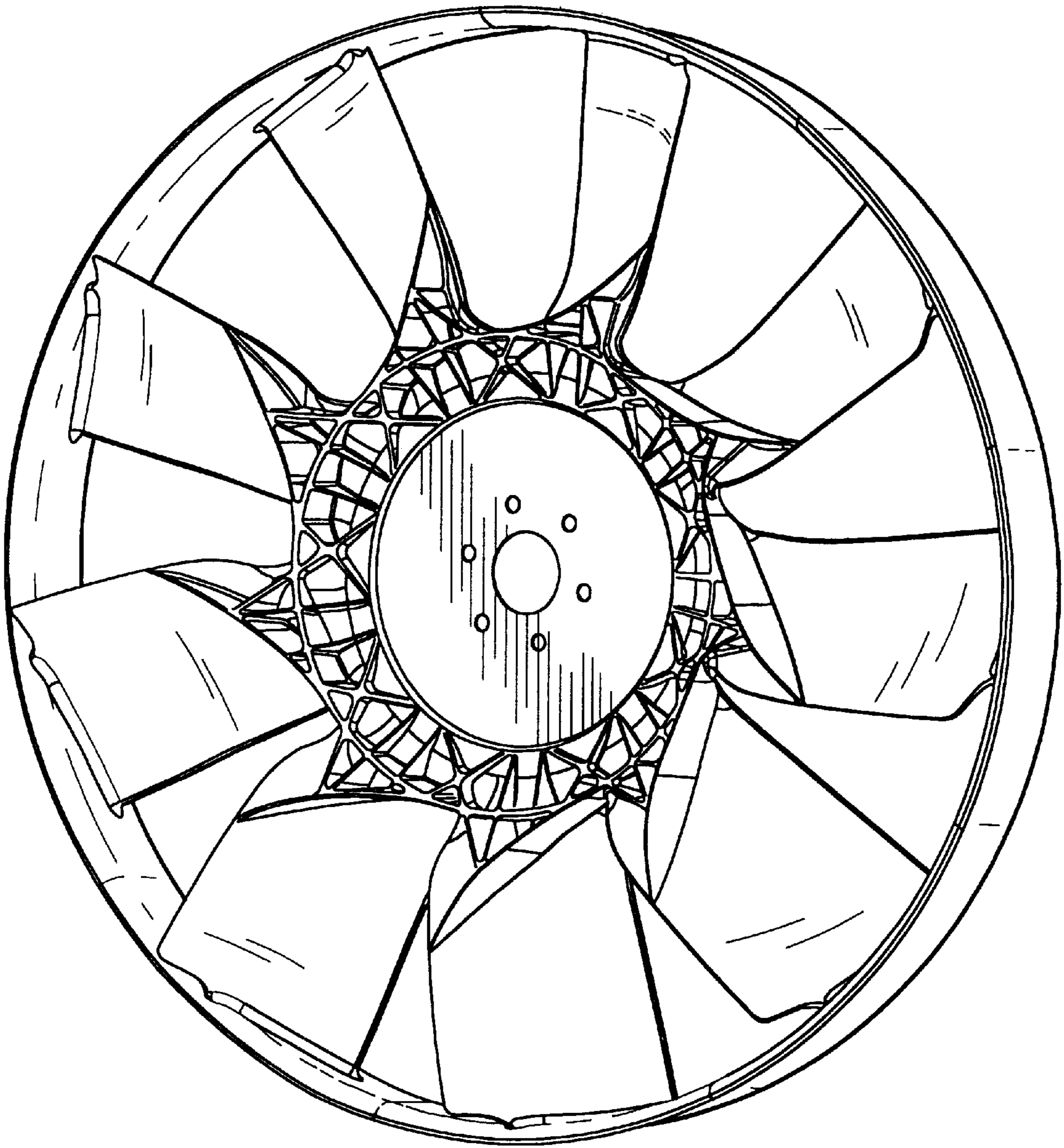


Fig. 2

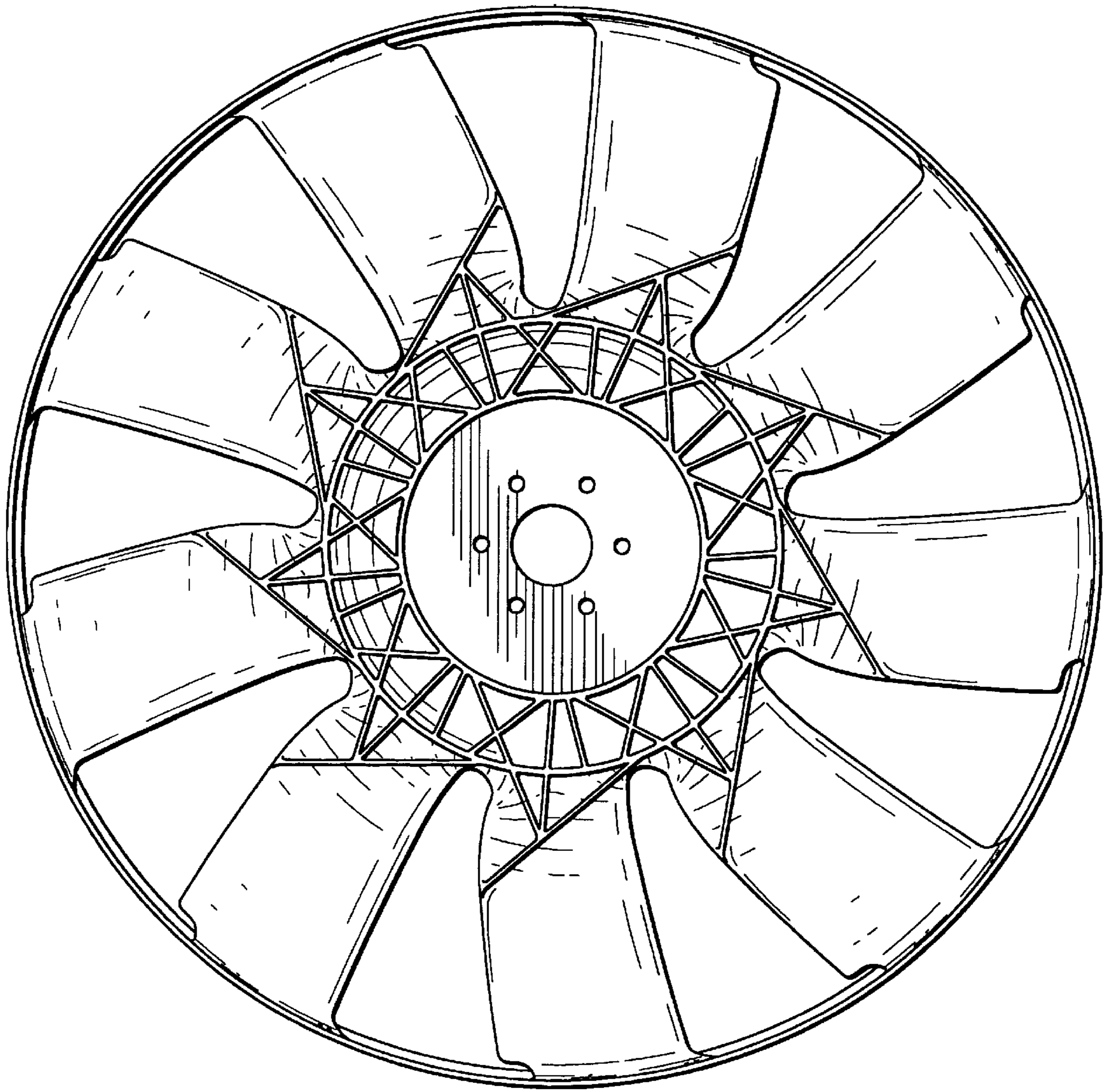


Fig. 3

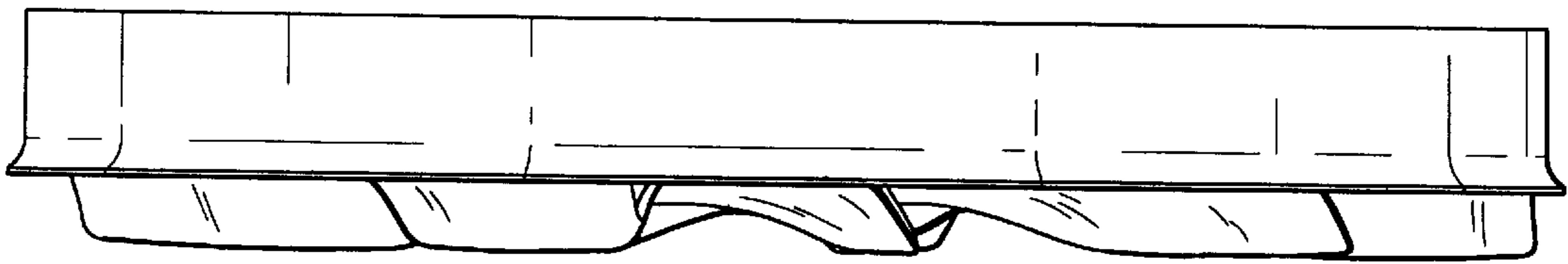


Fig. 4

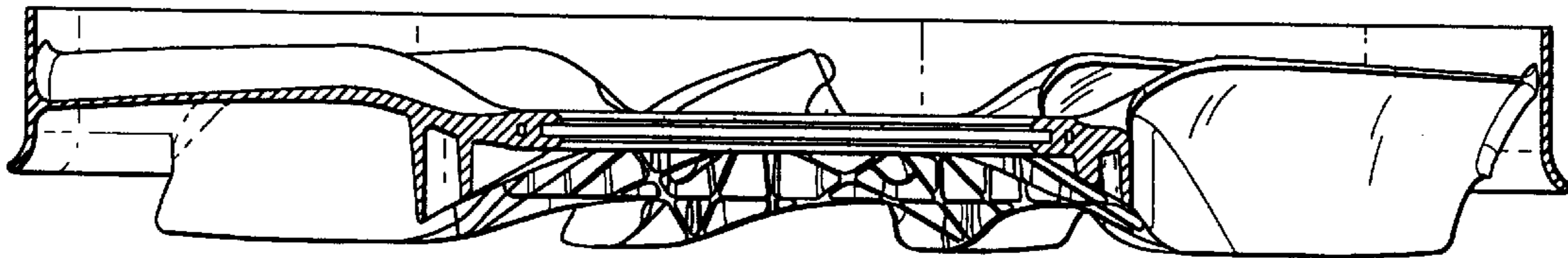


Fig. 5

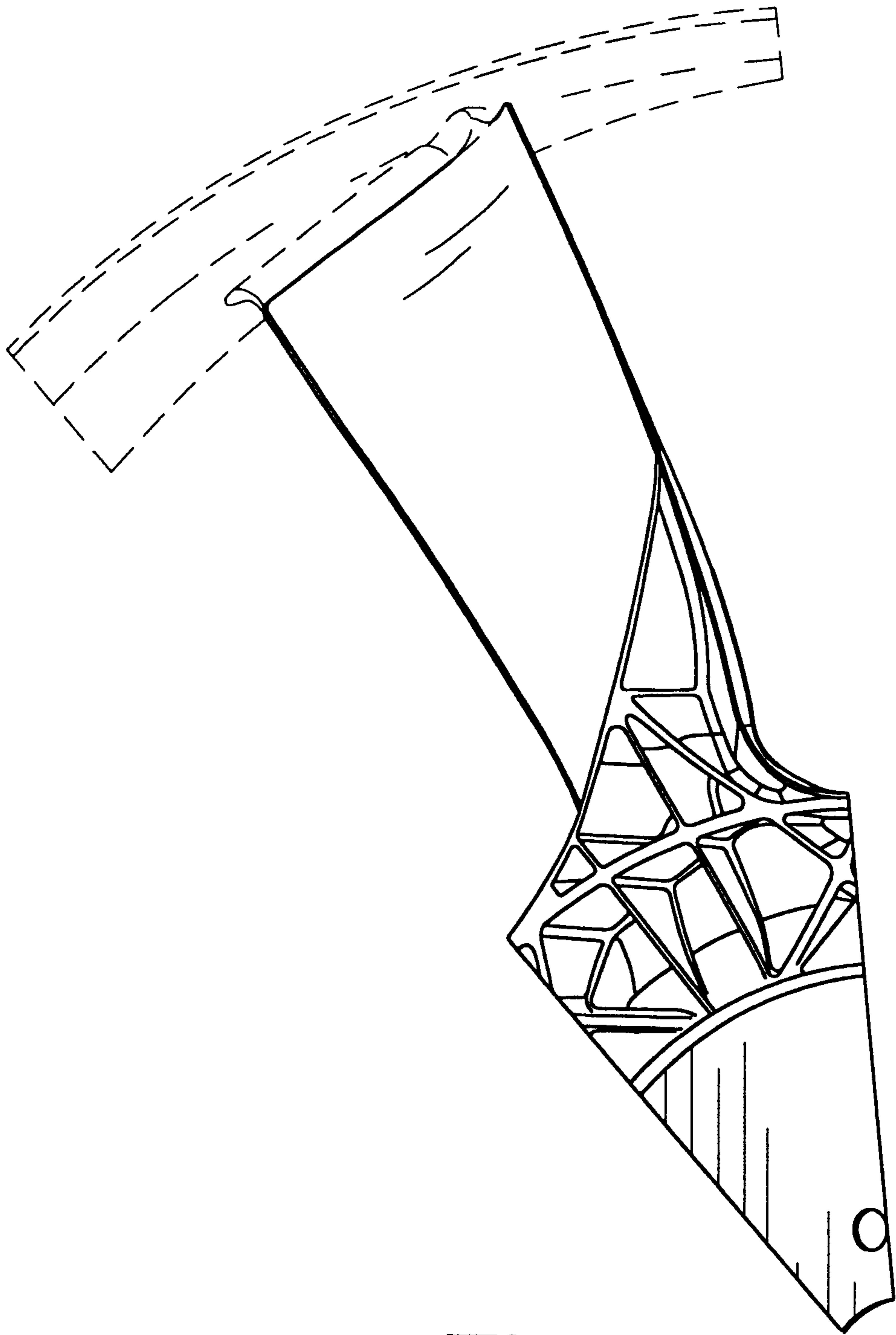


Fig. 6

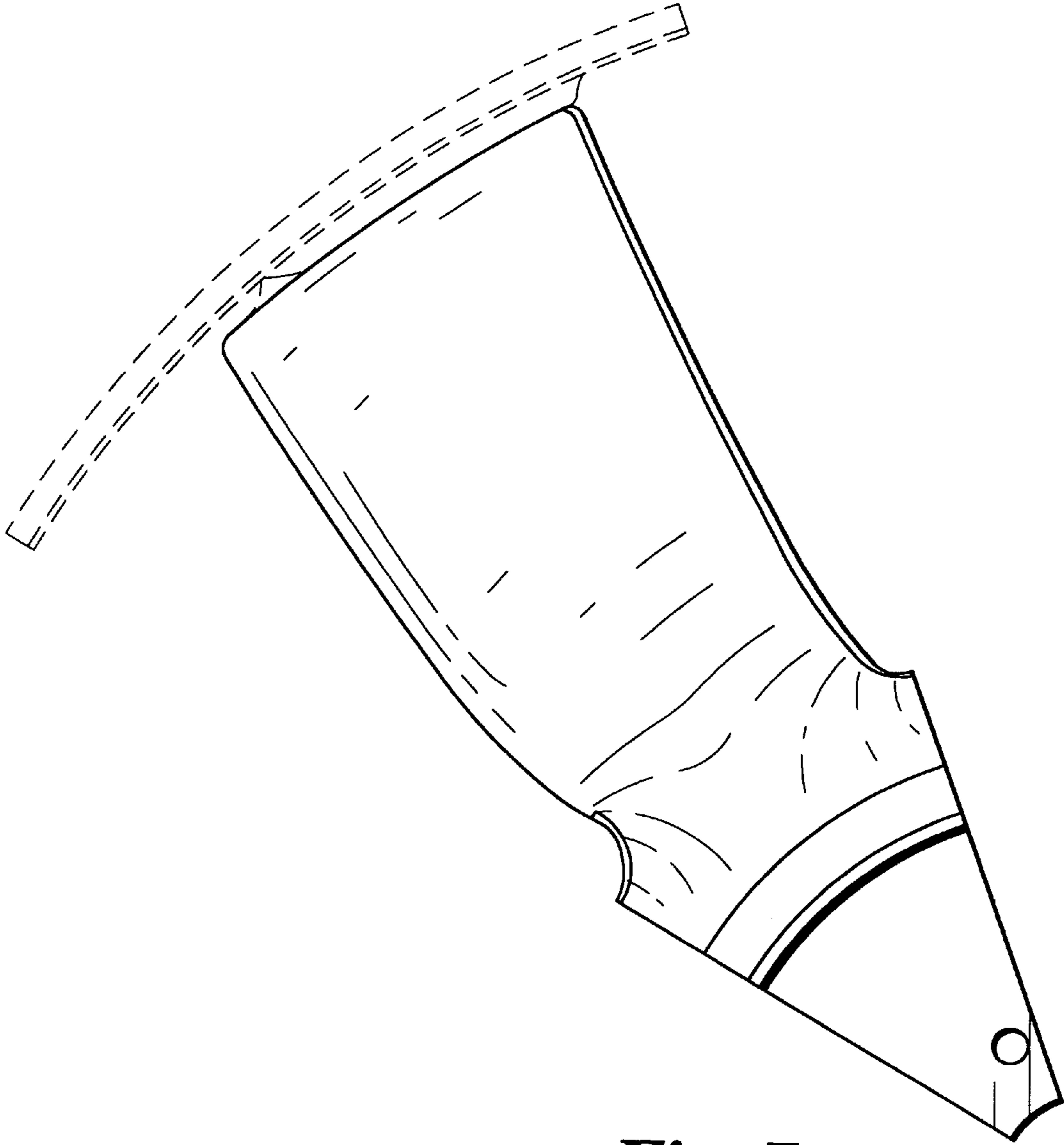


Fig. 7

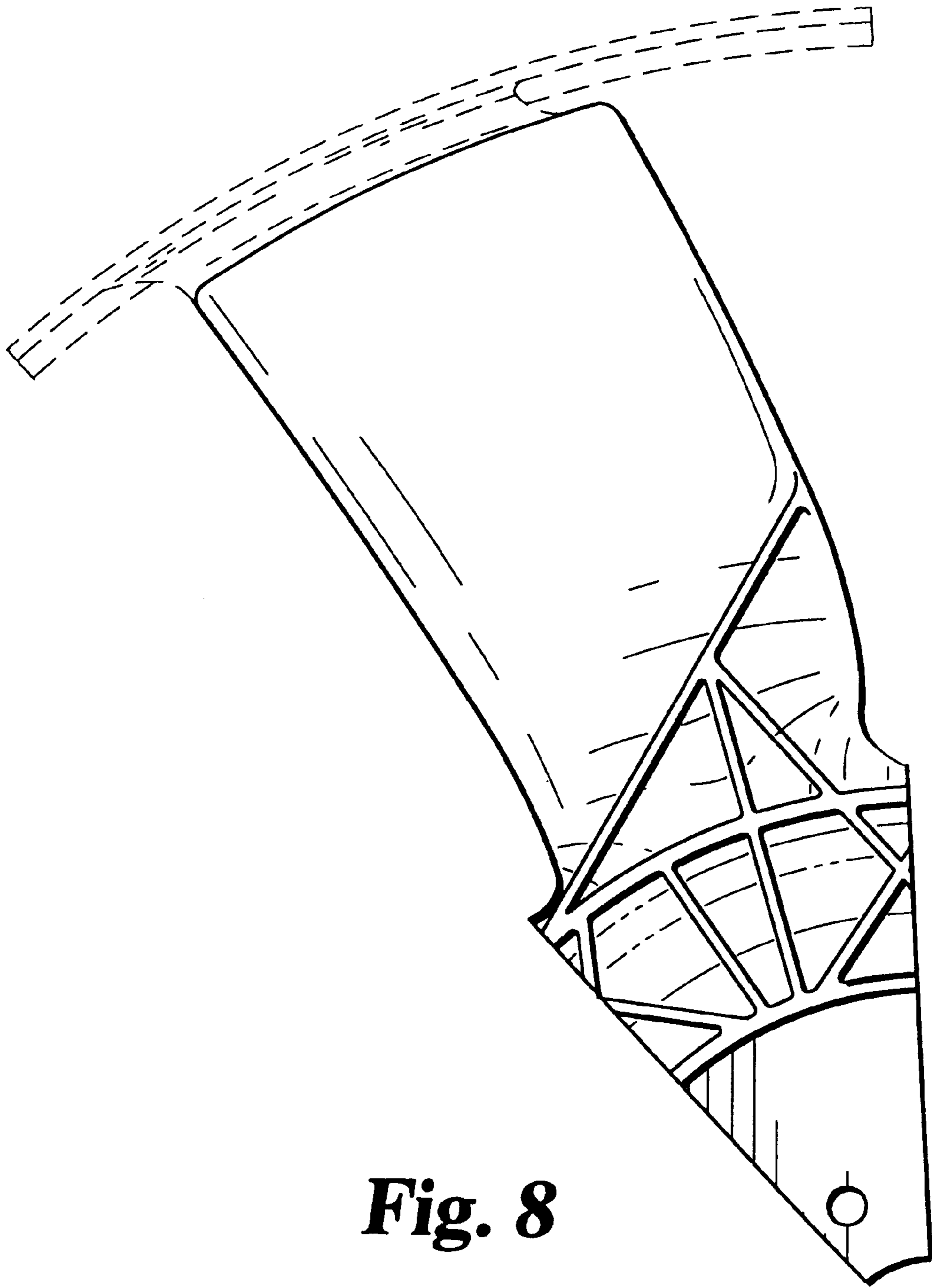


Fig. 8

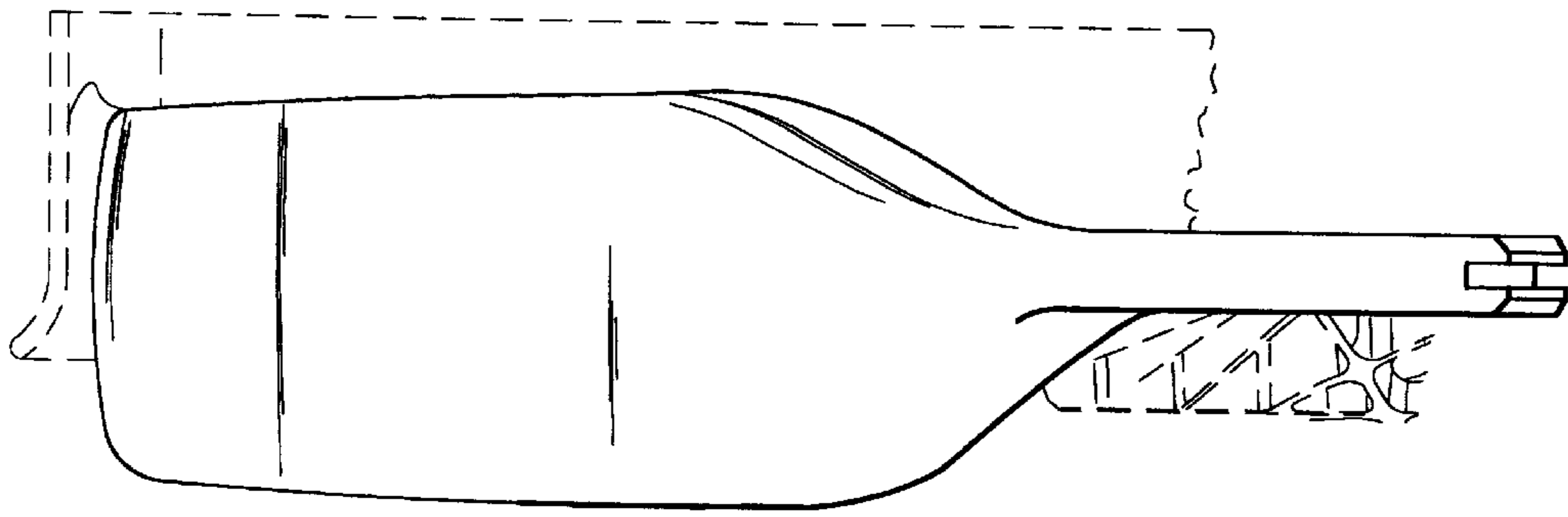


Fig. 9

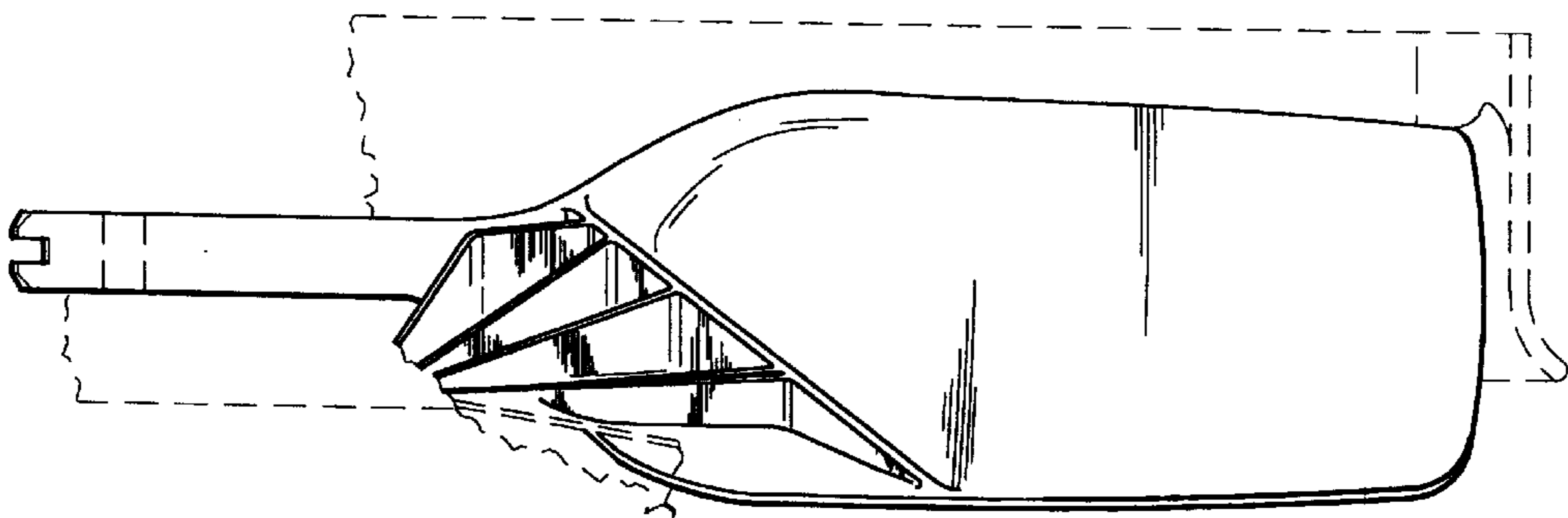


Fig. 10