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

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(54) **PROPELLER FAN**
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7,727,299 B2 * 6/2010 Knowles B01D 46/0005
55/497
D725,257 S * 3/2015 Huang D23/370
D736,368 S * 8/2015 Xu D23/370
D759,227 S * 6/2016 Lofy D23/370
D777,901 S * 1/2017 Whittemore D23/370

* cited by examiner

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(**) Term: **15 Years**
(21) Appl. No.: **29/543,908**

(57) **CLAIM**
The ornamental design for a propeller fan, as shown and described.

(22) Filed: **Oct. 29, 2015**

DESCRIPTION

(30) **Foreign Application Priority Data**

May 14, 2015 (JP) 2015-010484

(51) **LOC (11) Cl.** **23-04**

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

(58) **Field of Classification Search**
USPC D23/382, 370, 378; D12/214
CPC F04D 25/105; F24F 1/025
See application file for complete search history.

FIG. 1 is a front, bottom and right side perspective view of a propeller fan, showing our new 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 enlarged sectional view taken along line A-A of FIG. 3;
FIG. 9 is enlarged sectional view taken along line B-B of FIG. 3; and,
FIG. 10 is a rear, bottom, and left side perspective view thereof.
The broken lines of FIGS. 1-10 illustrate portions of the propeller fan that form no part of the claimed design.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,527,838 B2 * 3/2003 Volo B01D 46/0005
55/471
D586,455 S * 2/2009 Guthrie D23/412

1 Claim, 10 Drawing Sheets

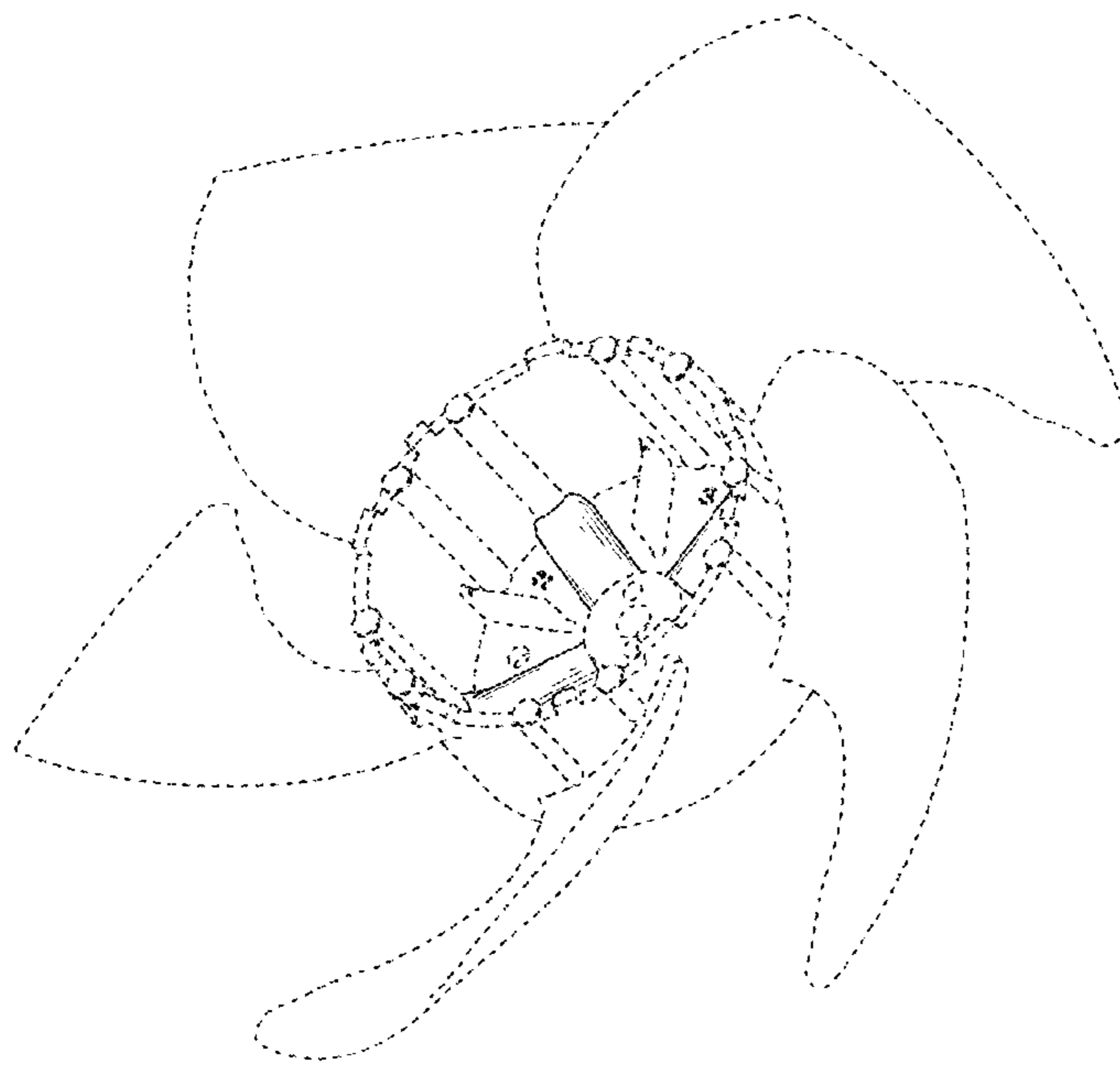


Fig.1

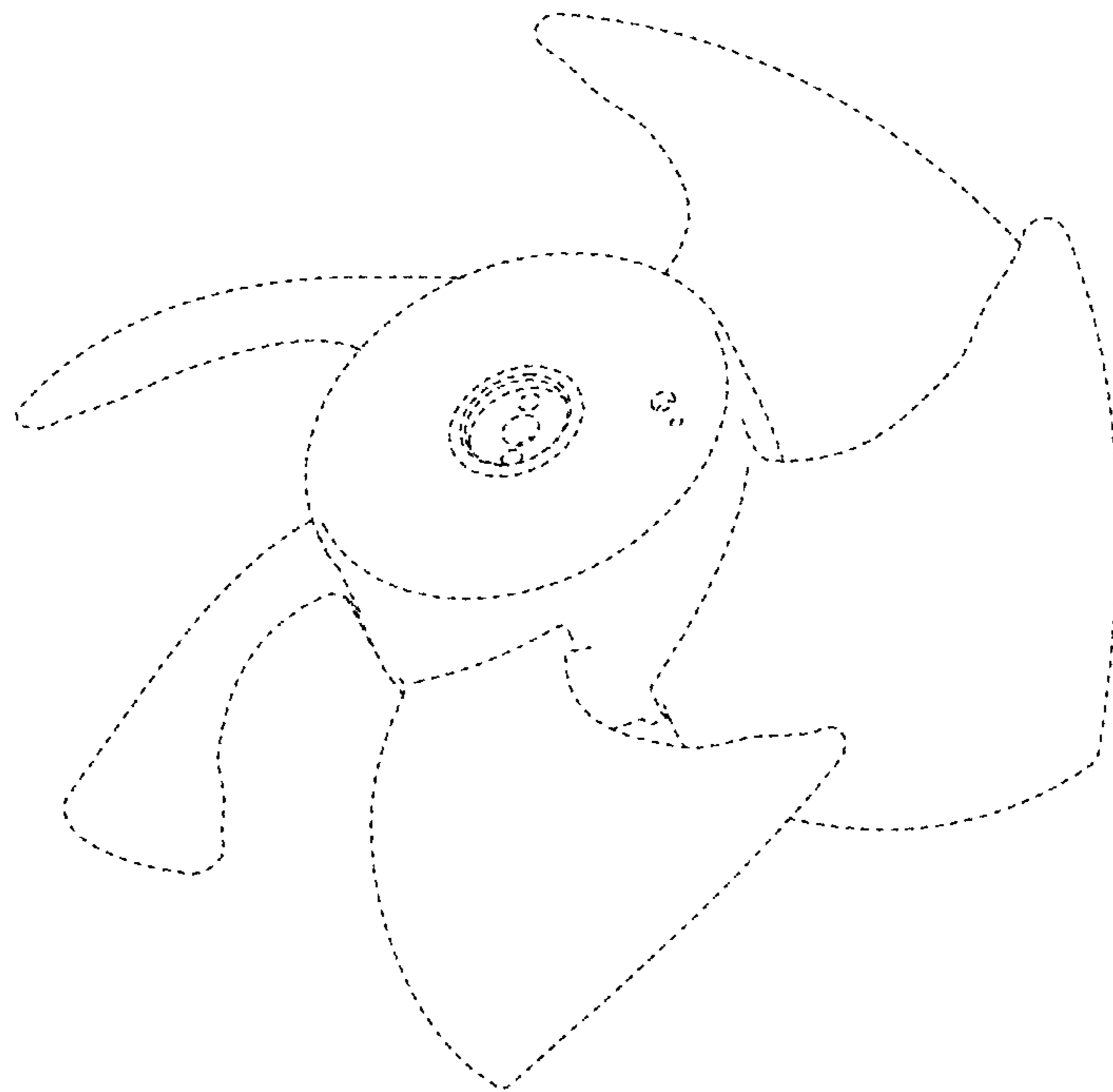


Fig.2

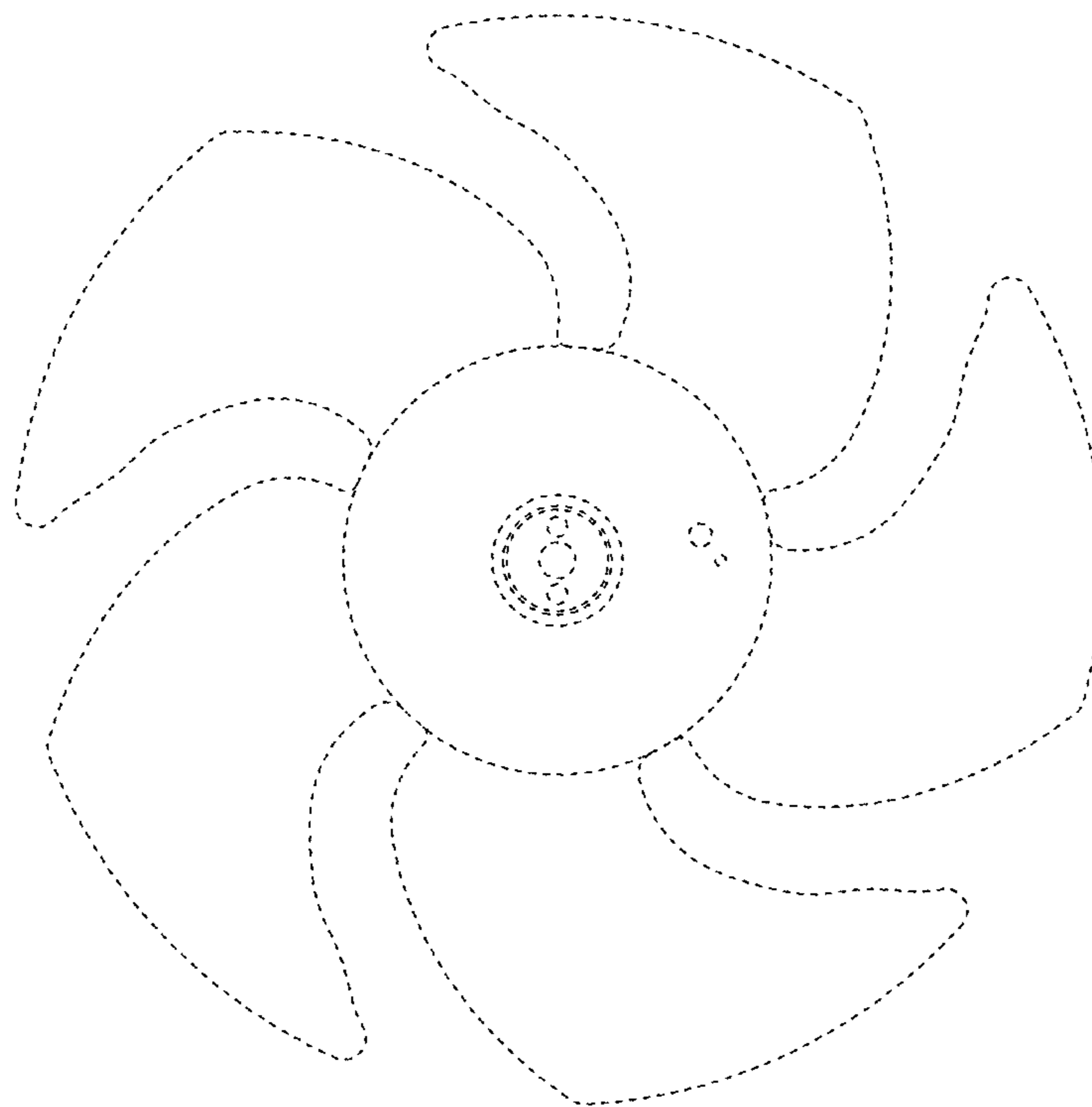


Fig.3

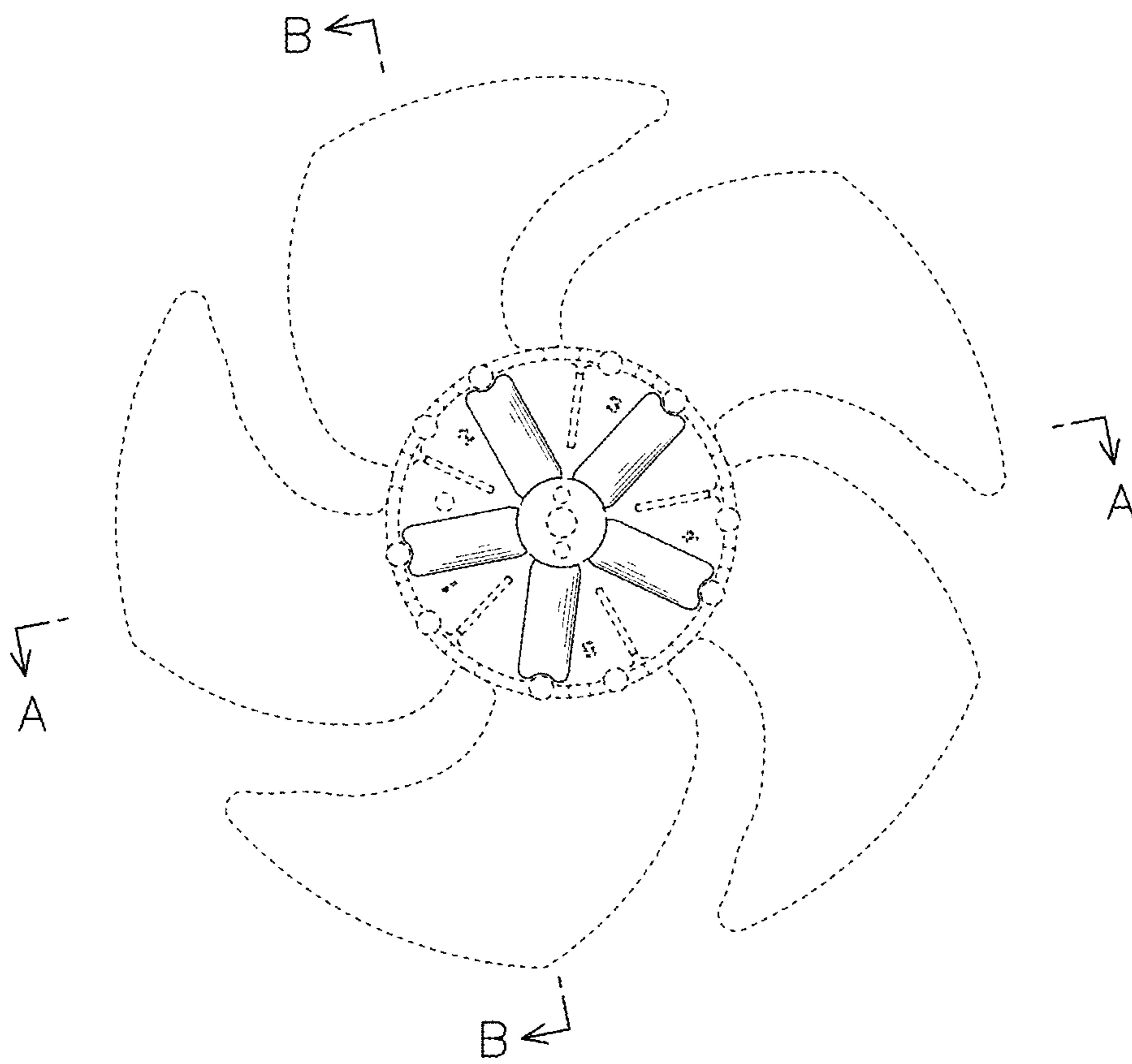


Fig.4

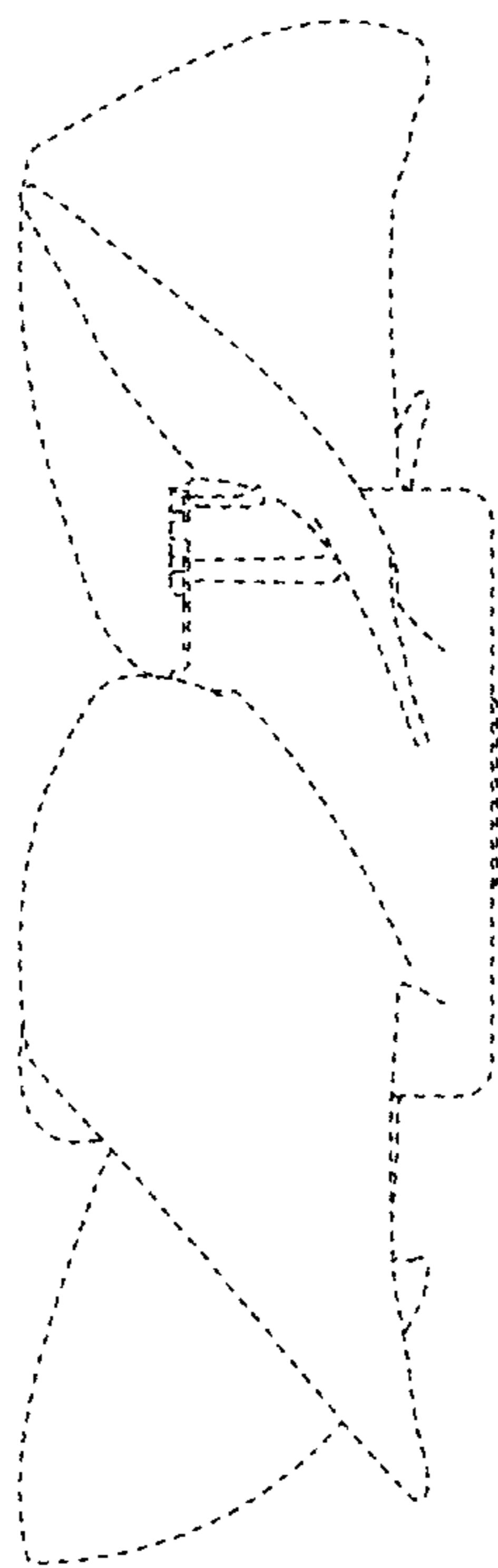


Fig.5

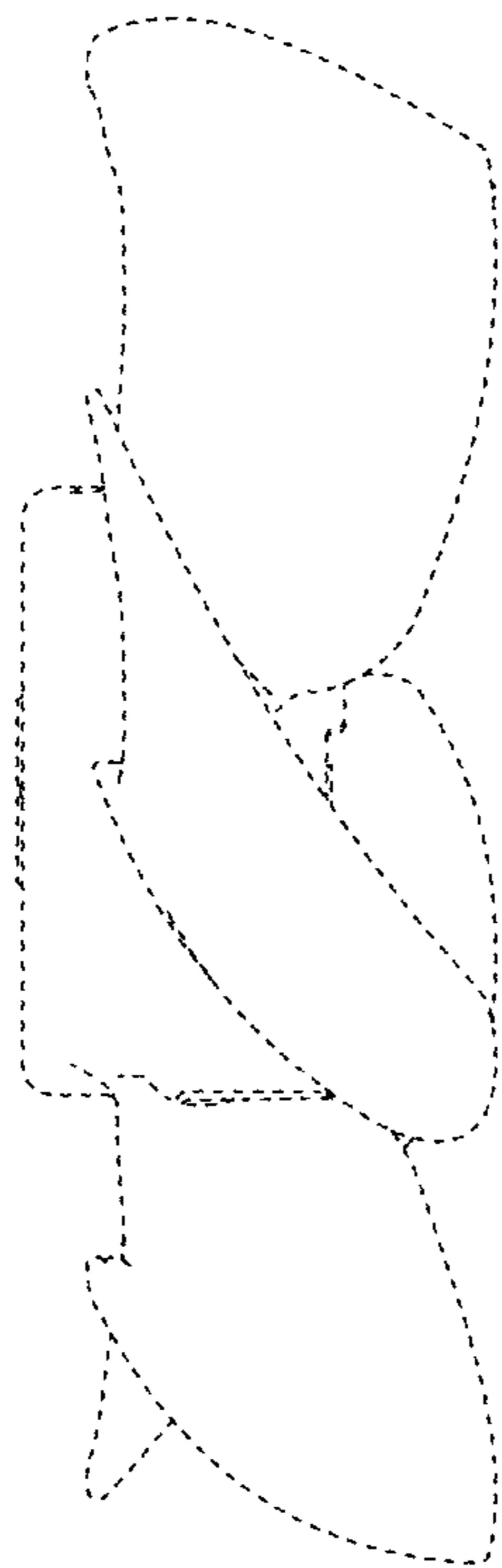


Fig.6

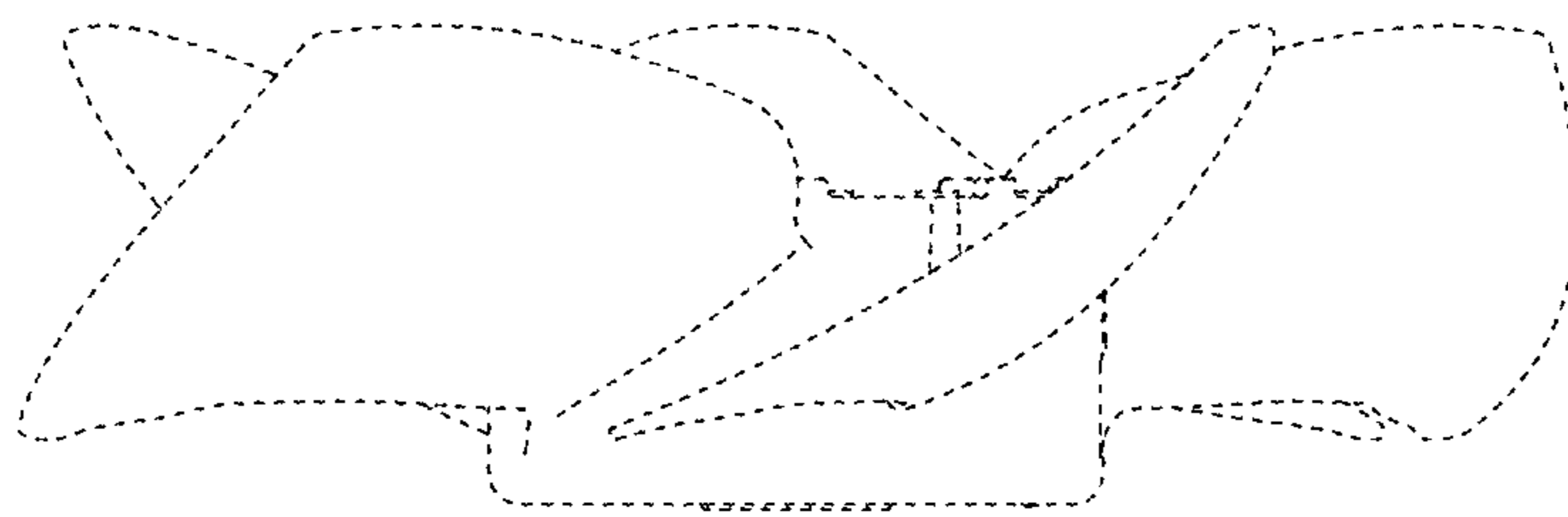


Fig.7

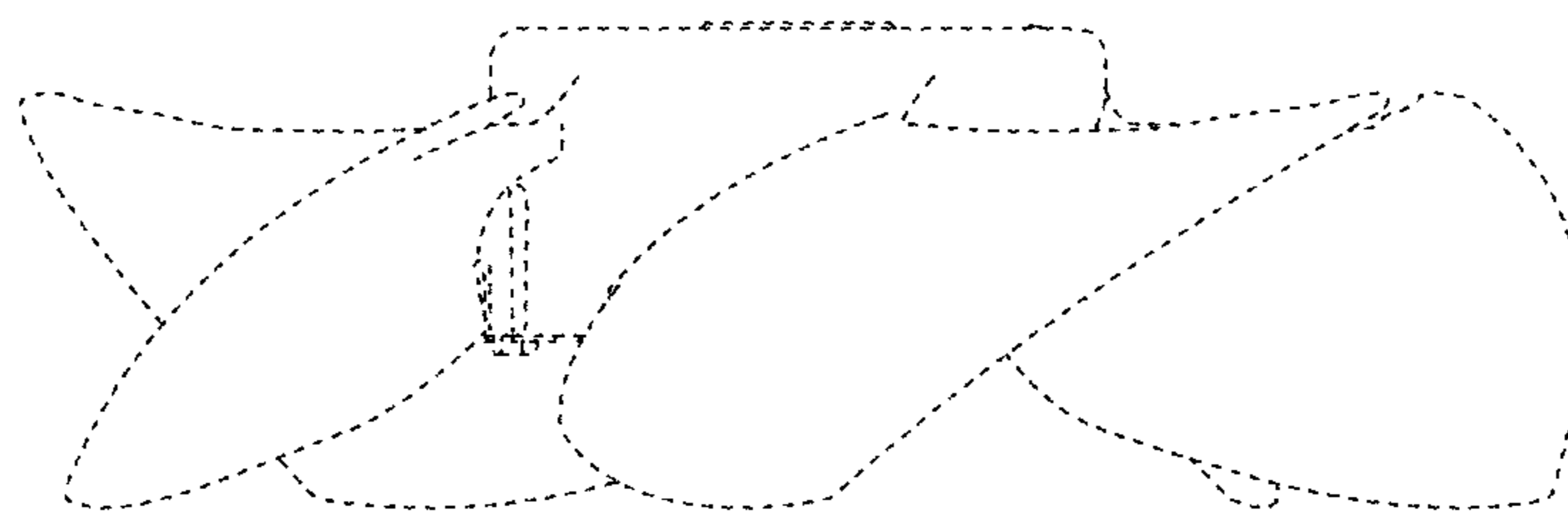


Fig.8

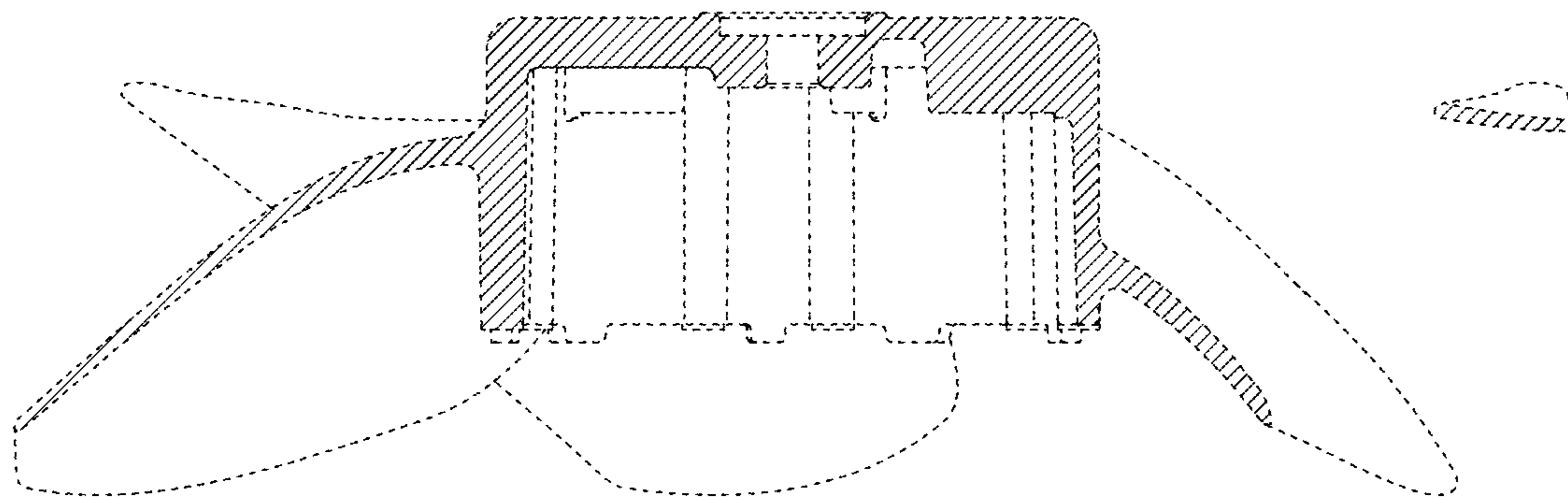


Fig.9

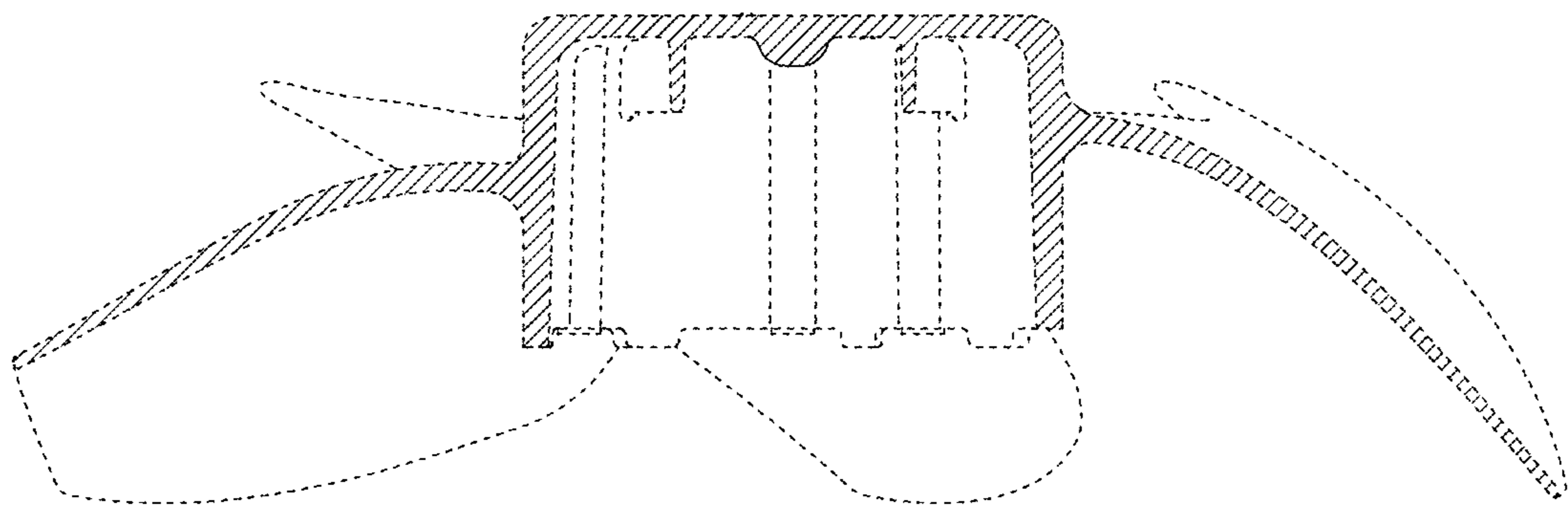


Fig. 10

