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

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(54) **BEARING FOR A WHEEL, A PART OF A BEARING FOR A WHEEL, AND A HUB WHEEL OF A BEARING FOR A WHEEL**

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

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Related U.S. Application Data

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Dec. 4, 2012 (JP) 2012-029688

(51) **LOC (10) Cl.** **12-16**
(52) **U.S. Cl.**
USPC **D12/160**
(58) **Field of Classification Search**
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F16C 19/34; F16C 19/361; F16C 19/54;
F16C 2326/02
See application file for complete search history.

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(57) **CLAIM**
The ornamental design for a bearing for a wheel, a part of a bearing for a wheel, and a hub wheel of a bearing for a wheel, as shown and described.

DESCRIPTION

FIG. 1 illustrates a front view of a part of a bearing for a wheel according to the embodiment;

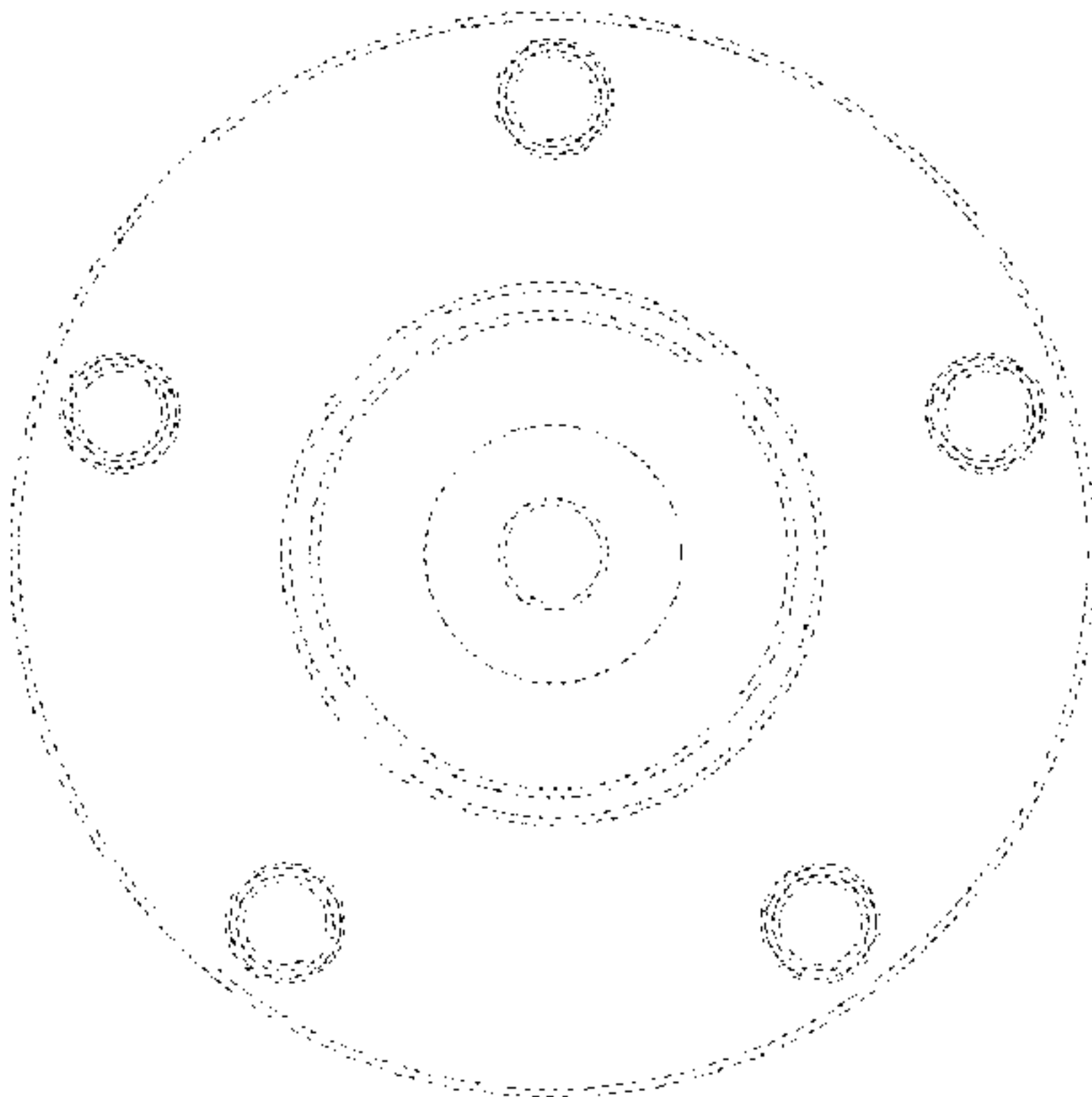


FIG. 2 illustrates a rear view of the part of the bearing for the wheel according to the embodiment;

FIG. 3 illustrates a top view of the part of the bearing for the wheel according to the embodiment;

FIG. 4 illustrates a bottom view of the part of the bearing for the wheel according to the embodiment;

FIG. 5 illustrates a right side view of the part of the bearing for the wheel according to the embodiment;

FIG. 6 illustrates a reference front view of the part of the bearing for the wheel according to the embodiment;

FIG. 7 illustrates a combined sectional view taken along line A-B-C in FIG. 6 of the part of the bearing for the wheel according to the embodiment;

FIG. 8 illustrates an enlarged view of portions D, E in FIG. 7 of the part of the bearing for the wheel according to the embodiment;

FIG. 9 illustrates a sectional view taken along line F-G in FIG. 8 of the part of the bearing for the wheel according to the embodiment;

FIG. 10 illustrates a sectional view taken along line H-I in FIG. 8 of the part of the bearing for the wheel according to the embodiment;

FIG. 11 illustrates a prospective view of the part of the bearing for the wheel according to the embodiment;

FIG. 12 illustrates a reference sectional view showing an assembled state in an automobile of the part of the bearing for the wheel according to the embodiment; and,

FIG. 13 illustrates a reference enlarged perspective view of the female teeth portion of the part of the bearing for the wheel according to the embodiment.

a) In the drawings, the portions indicated by solid lines are the portions for which a patent as a partial design is sought. The portions of the drawings illustrated with broken lines are not part of the claimed design.

b) In the drawings, the left side view is omitted because it is symmetrically shown in the right side view.

A bearing for a wheel supports a wheel of an automobile in a rotatable manner, and transmits a driving force of an engine or a motor to the wheel. A shaft portion of an outer joint member that configures a constant velocity universal joint is press-fitted into an inner circumference of a hub wheel. The inner circumference of the hub wheel has a female spline-shaped female teeth portion formed thereon, and after press-fitting the shaft portion of the outer joint member, a torque transmission between the shaft portion and the hub wheel is performed by a male spline-shaped male teeth portion formed on an outer circumferential surface of the shaft portion meshing with the female teeth portion. The female teeth portion of the hub wheel is composed of a fitting portion on an axially front side and a guide portion on an axially back side. Recess portions of the female teeth portion that extend in an axial direction have greater width and depth at the guide portion than at the fitting portion. A module M , defined by $M = \text{PCD} [\text{mm}] / Z$, of the female teeth portion is set to be smaller than 1.0. In the formula, “Z” represents number of teeth.

1 Claim, 13 Drawing Sheets

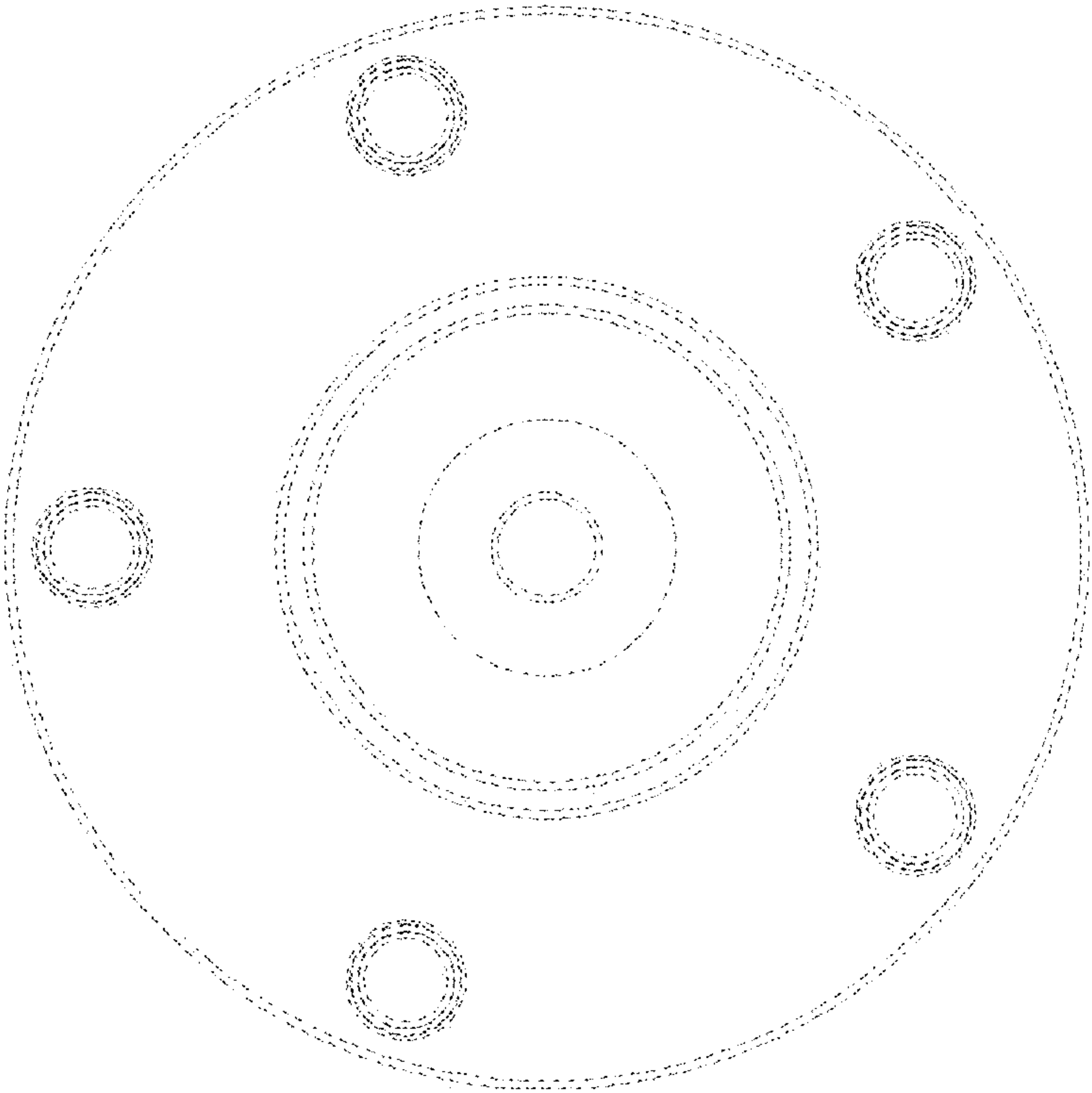


FIG. 1

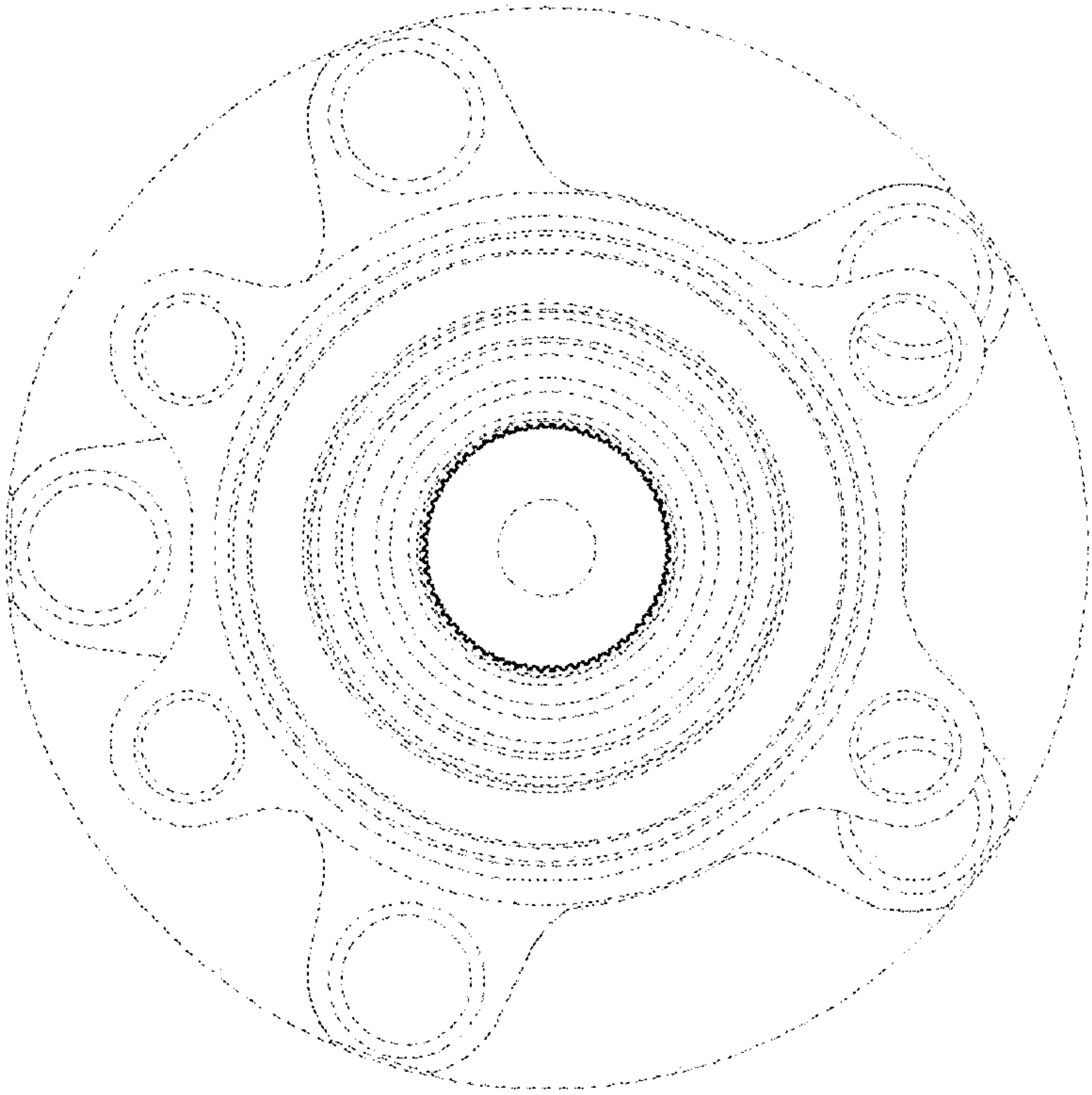
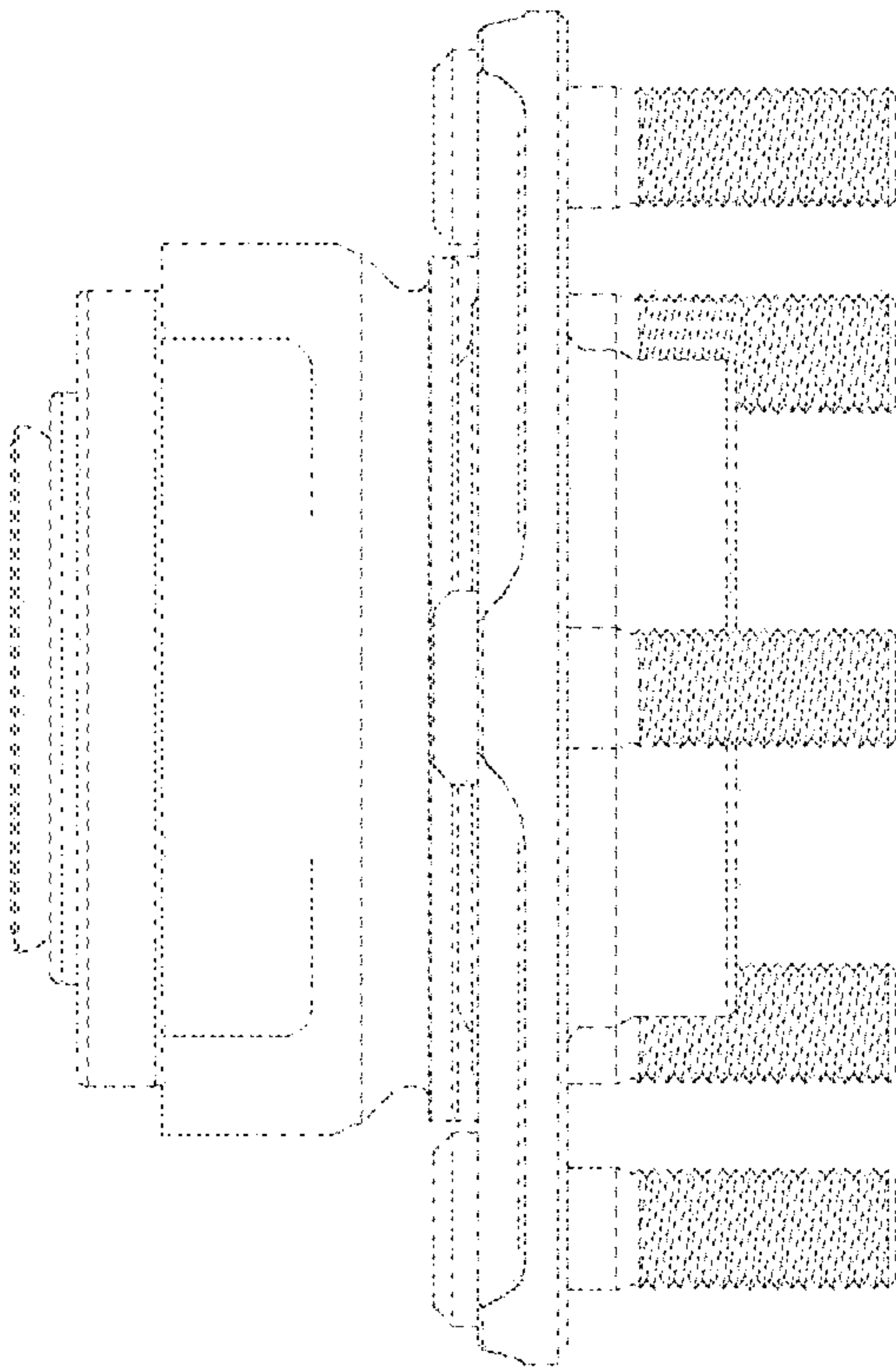


FIG. 2

FIG. 3



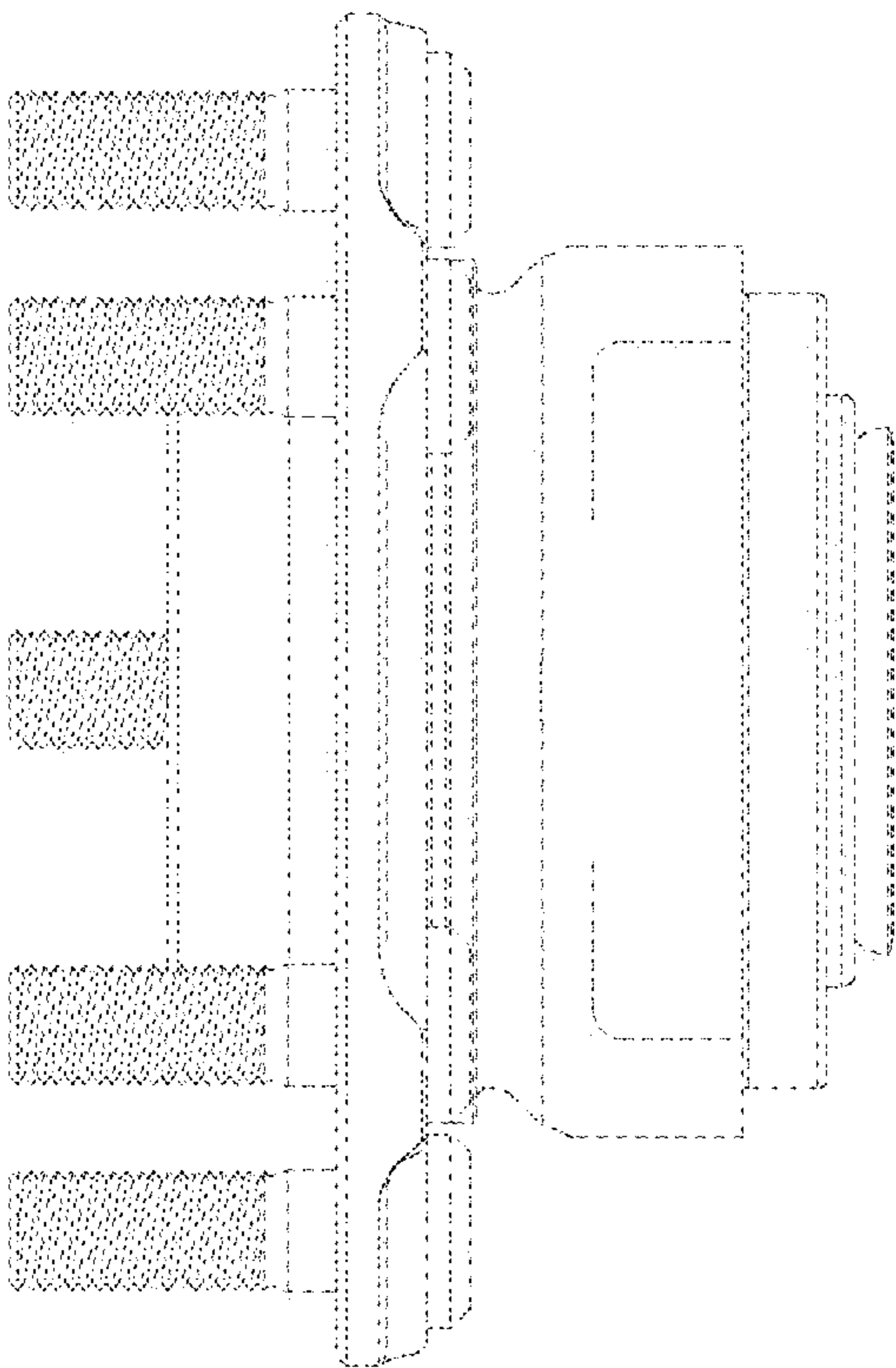
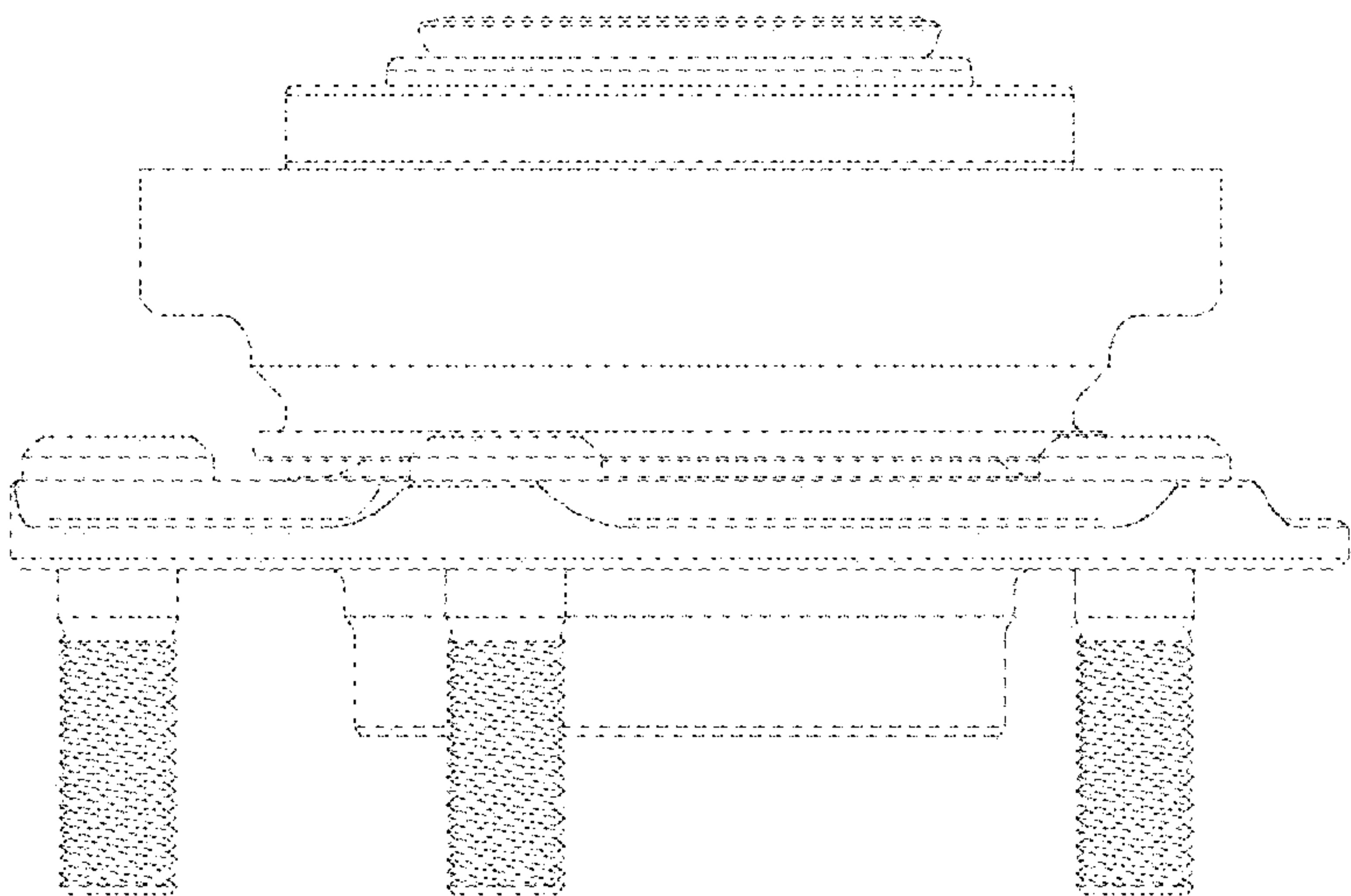


FIG. 4

FIG. 5



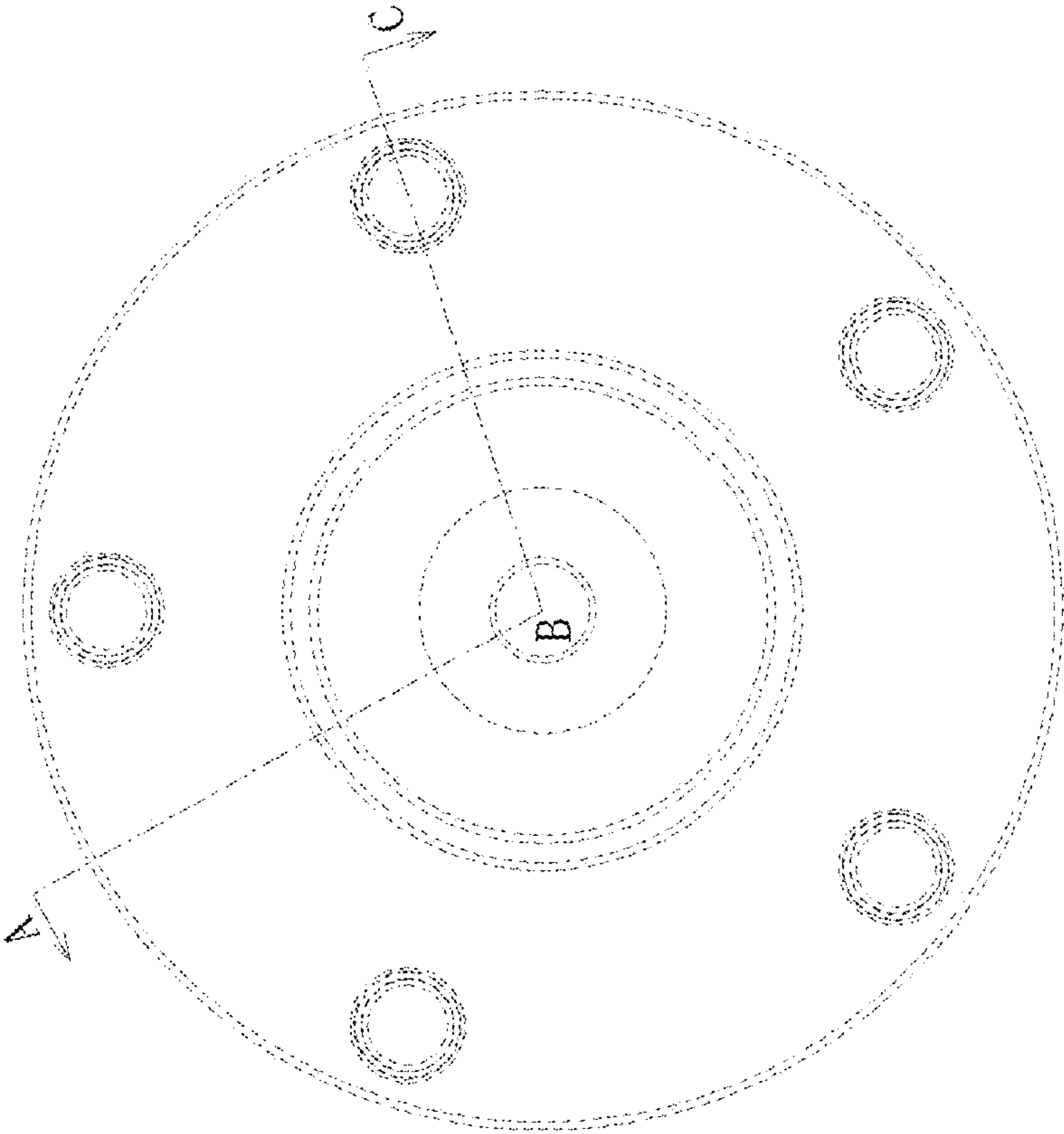


FIG. 6

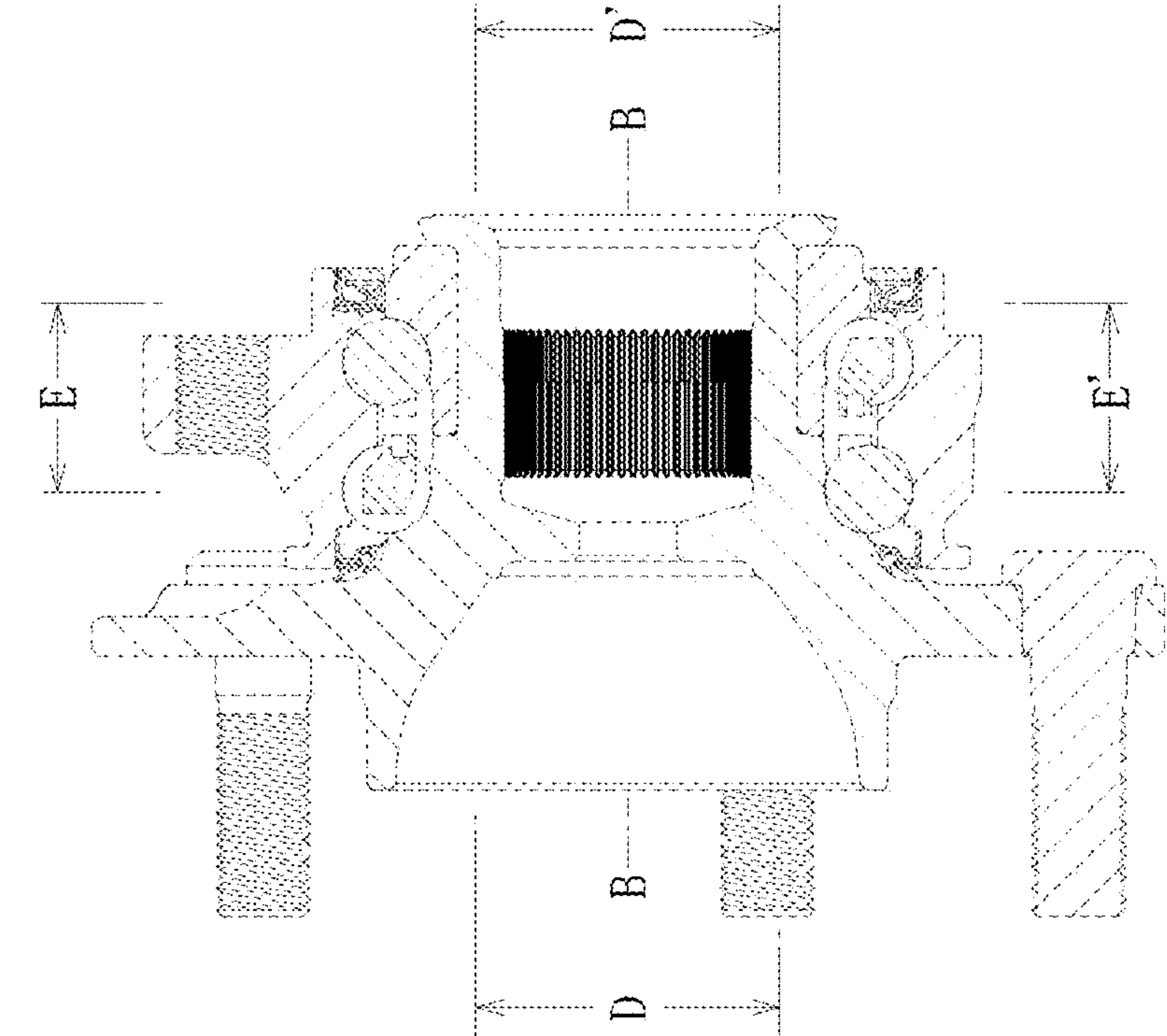
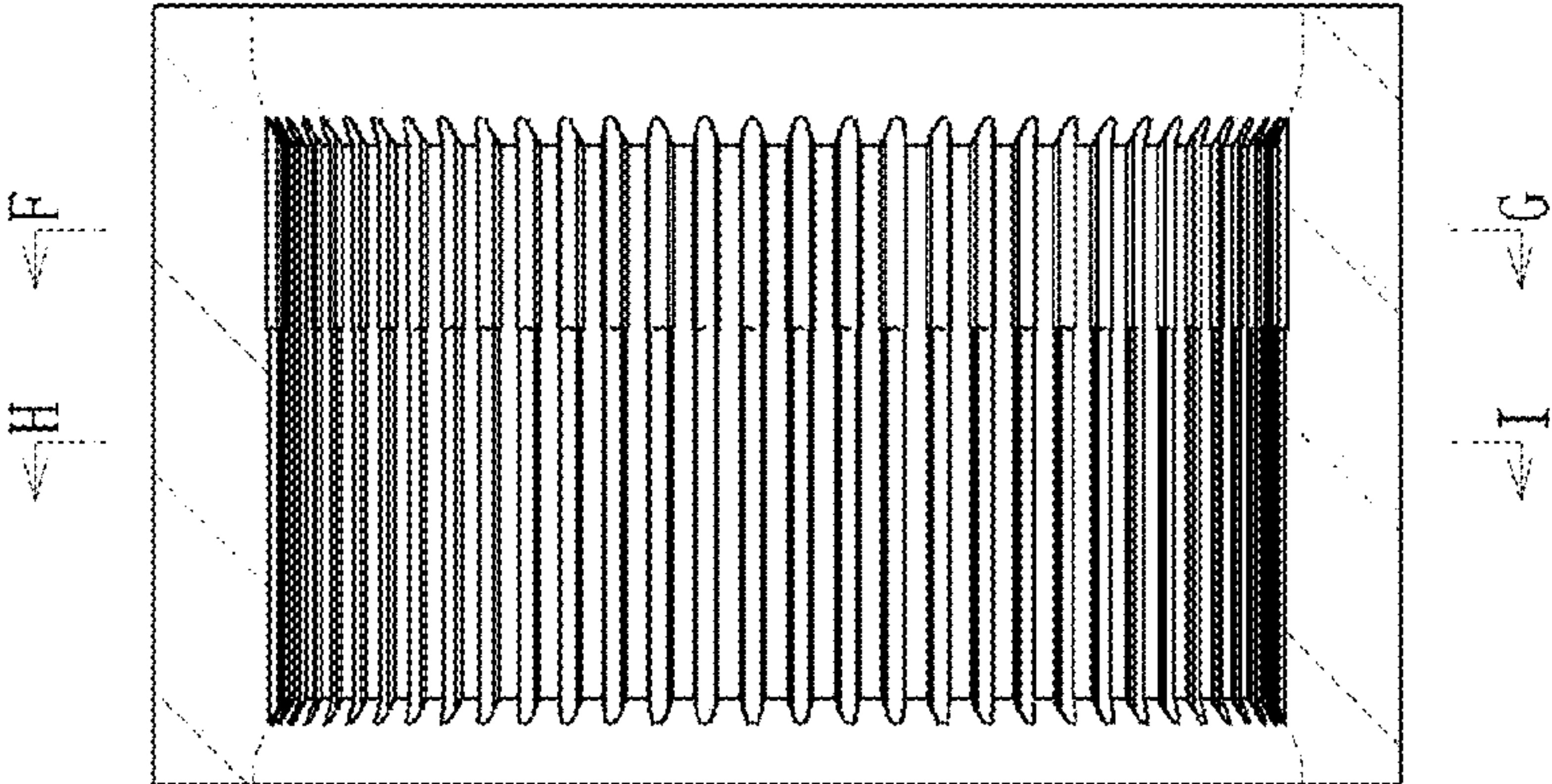


FIG. 7

FIG. 8



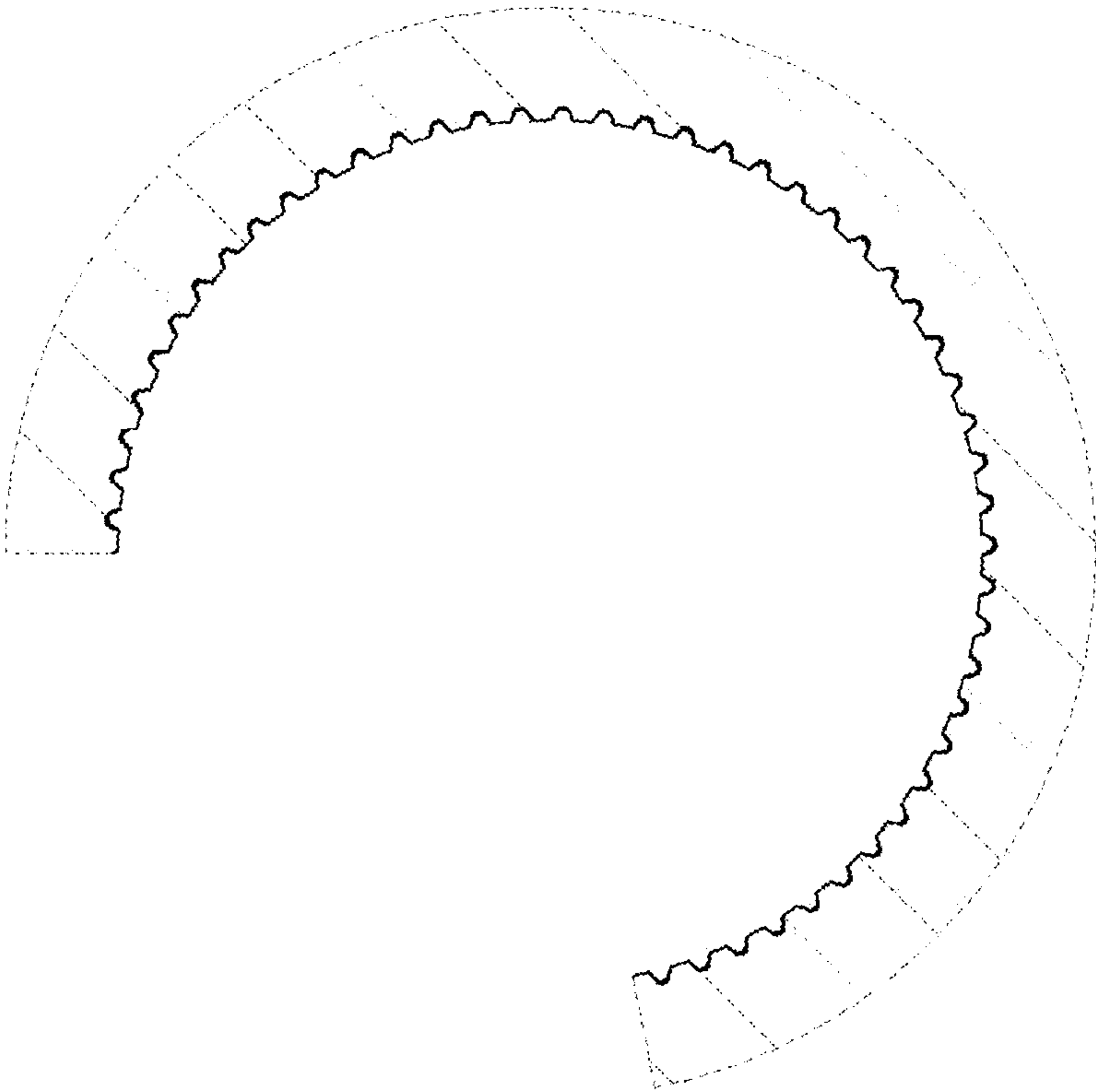


FIG. 9

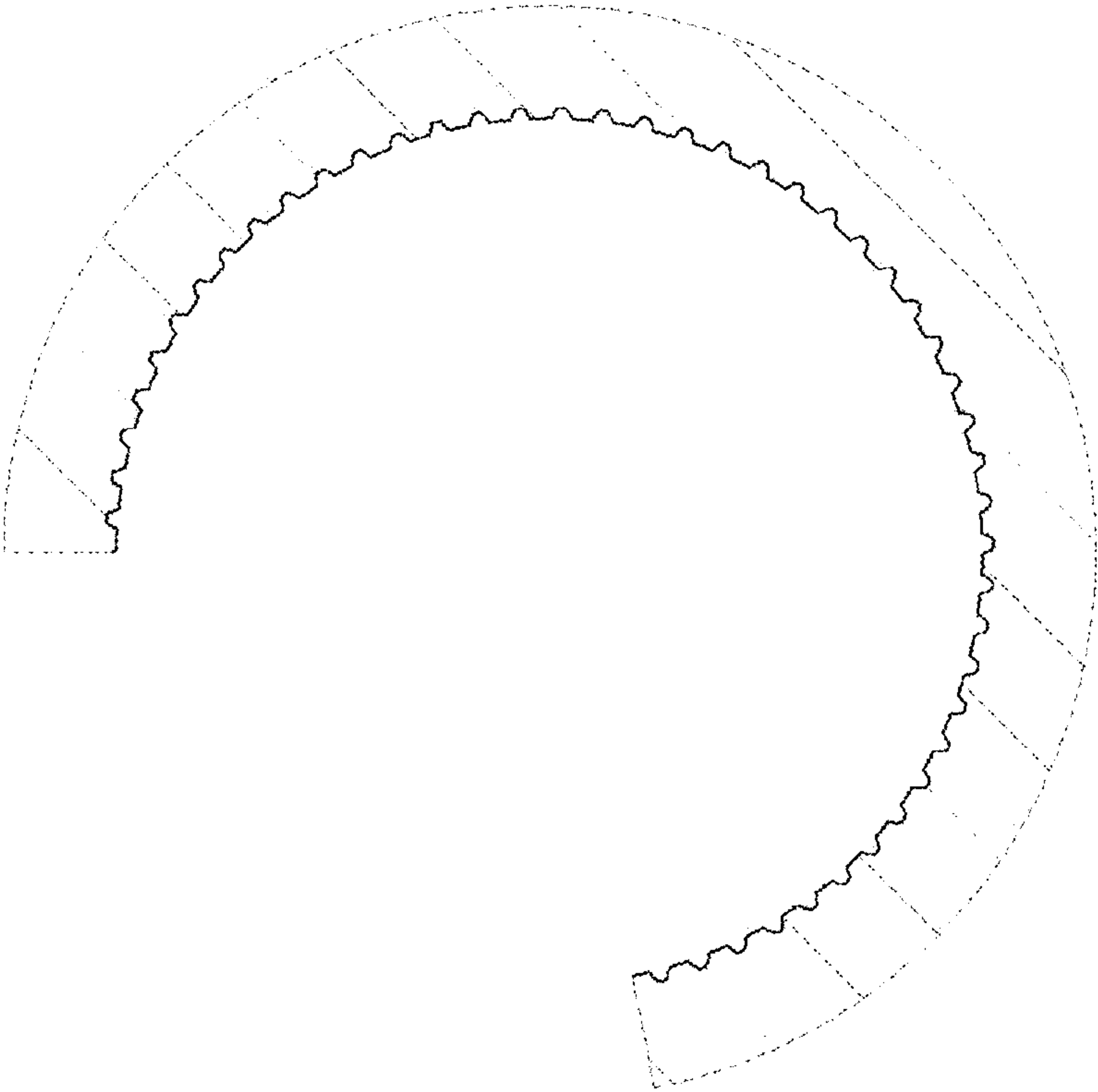


FIG. 10

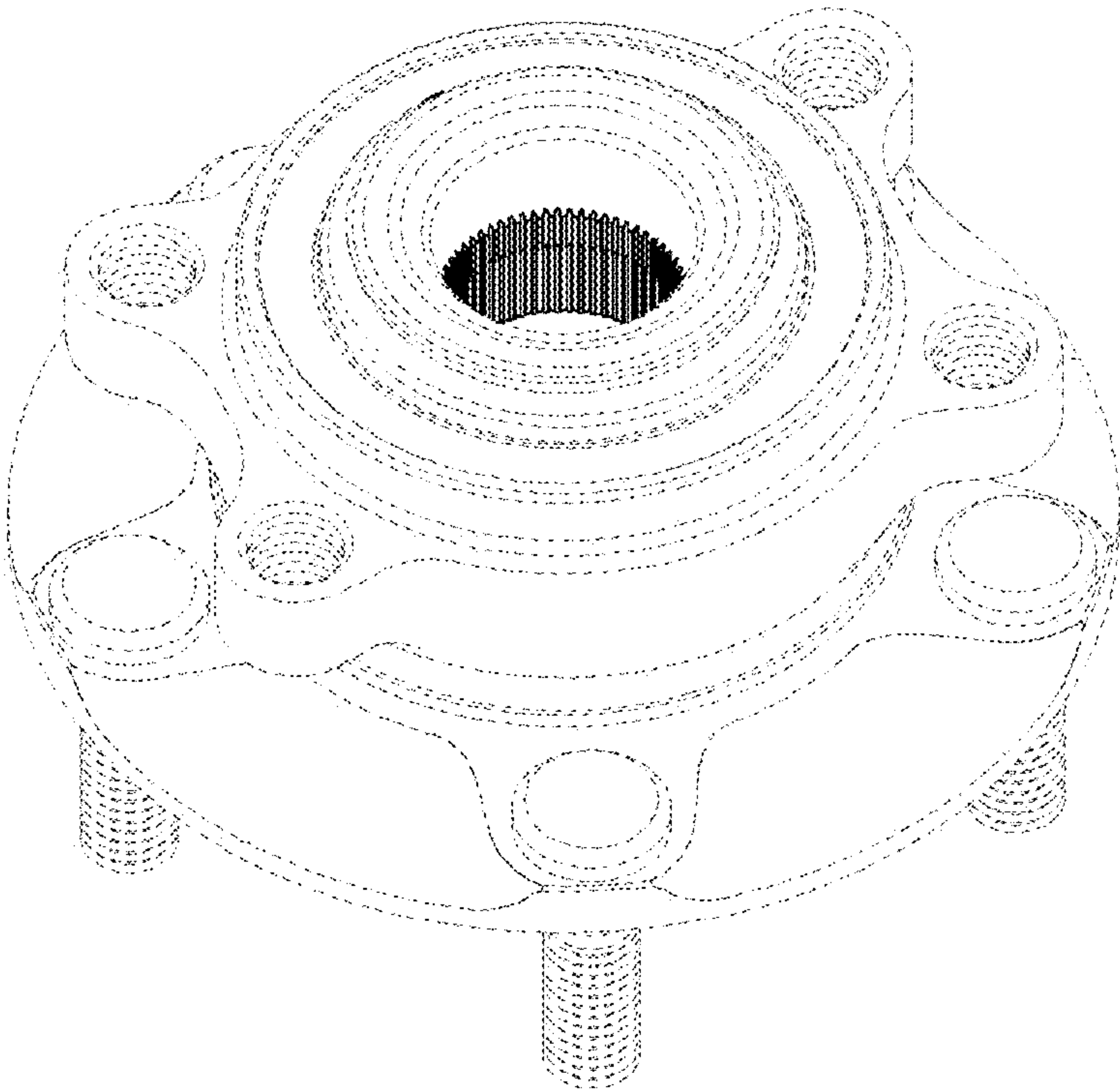


FIG. 11

FIG. 12

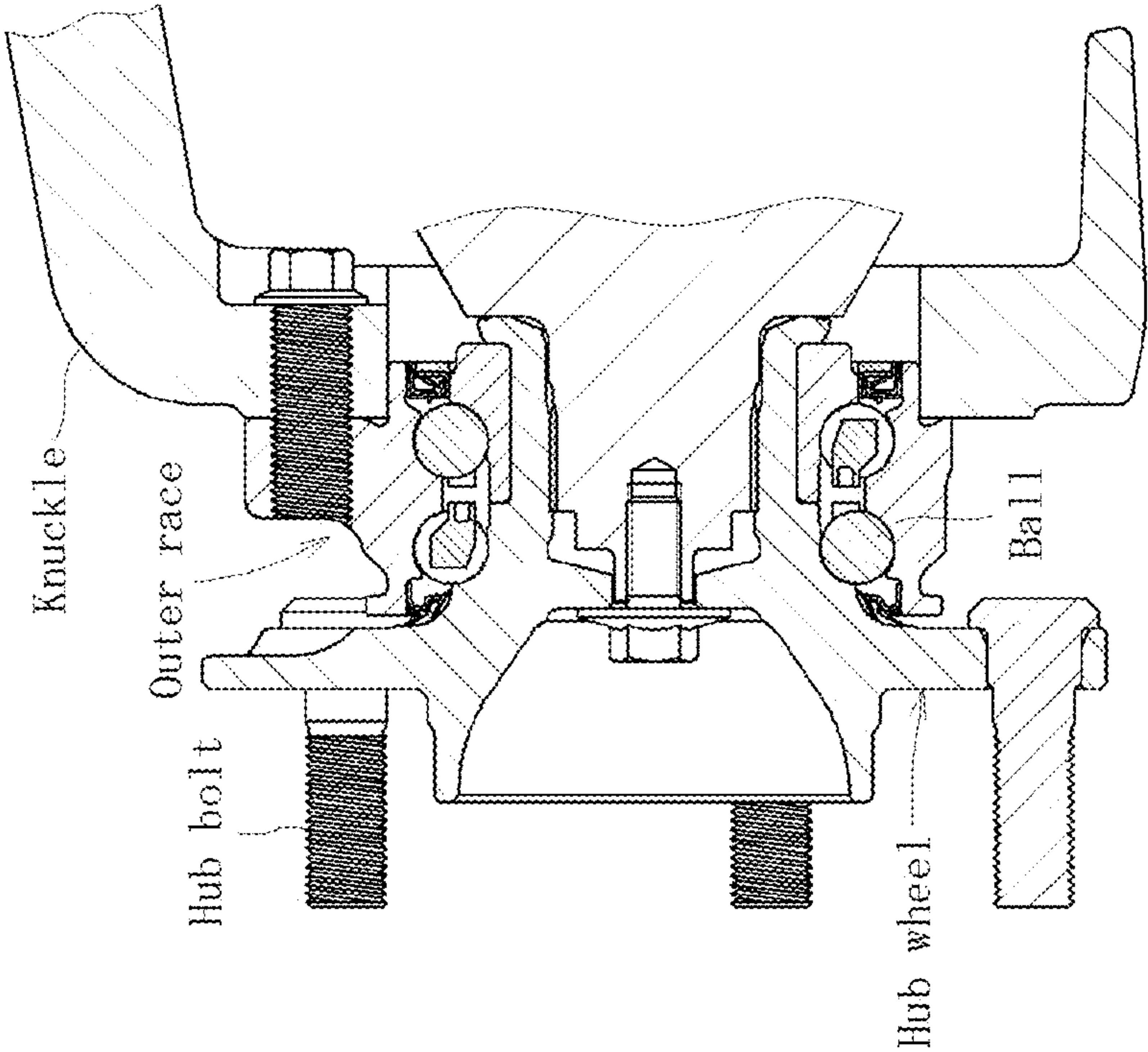


FIG. 13

