



US00D788271S

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

(10) **Patent No.:** **US D788,271 S**
(45) **Date of Patent:** **** May 30, 2017**

(54) **SHAFT COUPLING HUB**

(71) Applicant: **Miki Pulley Co., Ltd.**, Kanagawa (JP)

(72) Inventors: **Katsuhiko Sato**, Sagamihara (JP); **Toru Shibuya**, Sagamihara (JP)

(73) Assignee: **Miki Pulley Co., Ltd.**, Kawasaki-shi, Kanagawa (JP)

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

(21) Appl. No.: **29/525,055**

(22) Filed: **Apr. 27, 2015**

(30) **Foreign Application Priority Data**

Oct. 28, 2014 (JP) 2014-024064

(51) **LOC (10) Cl.** **23-01**

(52) **U.S. Cl.**
USPC **D23/262; D8/382**

(58) **Field of Classification Search**

USPC D8/354, 382, 349, 356, 360, 396,
D8/358-359; D23/233-237, 259, 262,
D23/264-266; D15/148; D34/29
CPC F16L 17/025; F16L 17/035; F16L 17/04;
F16L 27/06; F16L 55/172; F16L 41/021;
F16L 19/086; F16L 23/18; F16L 15/02;
F16L 15/04; F16L 23/00; F16L 23/12;
F16L 23/036; F16L 33/02; F16L 33/04;
F16L 33/08; F16J 15/3404; F16J 15/187;
F16J 15/36; F16H 55/52; F16C 9/04;
F16C 33/12; F16D 1/0864; A63B 21/00

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D263,415 S * 3/1982 Roche D23/265
D292,308 S * 10/1987 Beltran D23/269

D309,094 S * 7/1990 Donis D23/265
5,312,137 A * 5/1994 Nee F16L 23/167
285/14
5,480,193 A * 1/1996 Echols F16L 33/04
285/318

(Continued)

OTHER PUBLICATIONS

Miki Pulley Co. Website. <http://www.mikipulley.co.jp/EN/Products/FlexibleCouplings/PARAFLEX/index.html> Found Aug. 1, 2016.*

(Continued)

Primary Examiner — Eric Goodman
Assistant Examiner — Amy Wierenga

(74) *Attorney, Agent, or Firm* — Marshall & Melhorn, LLC

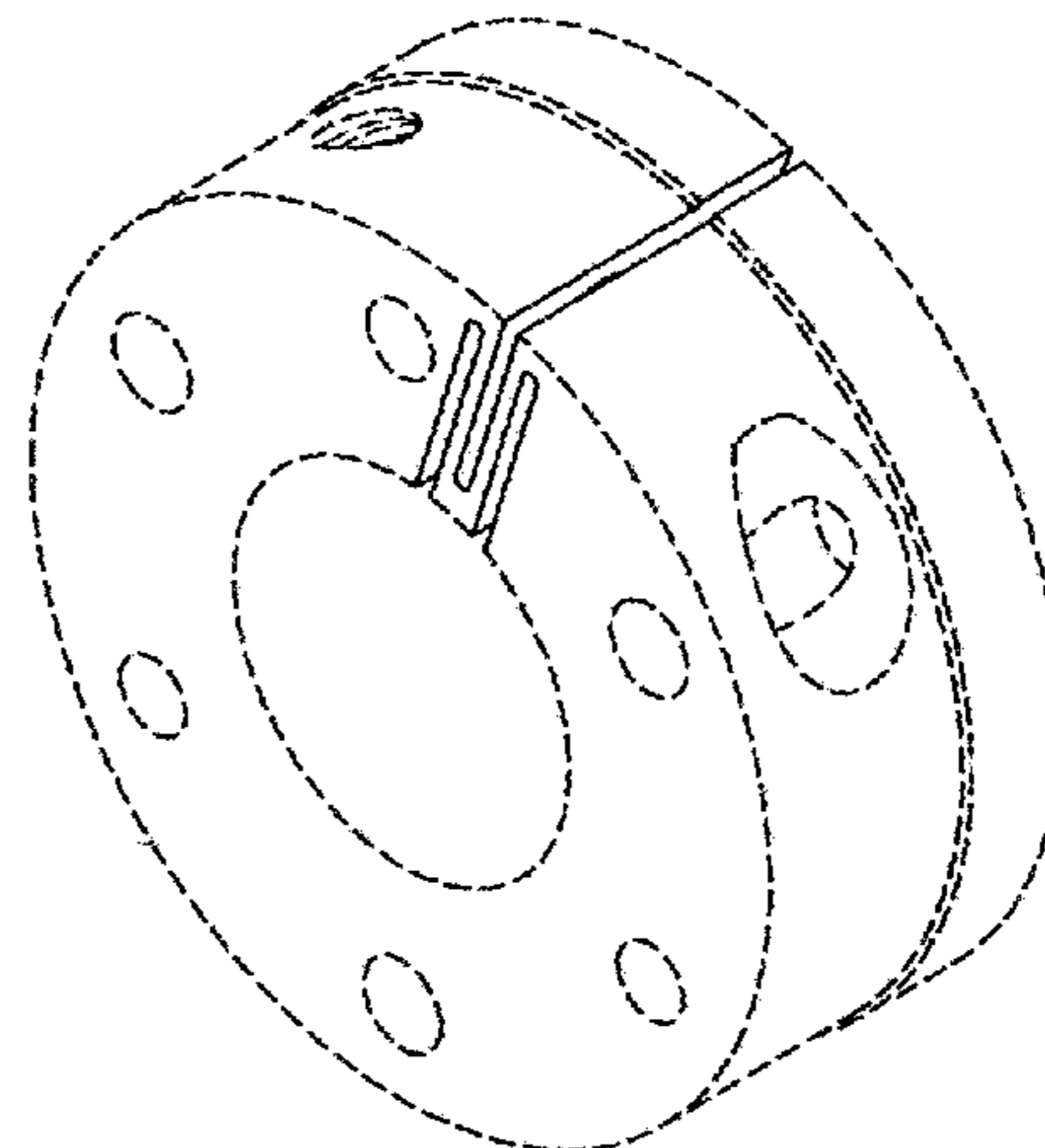
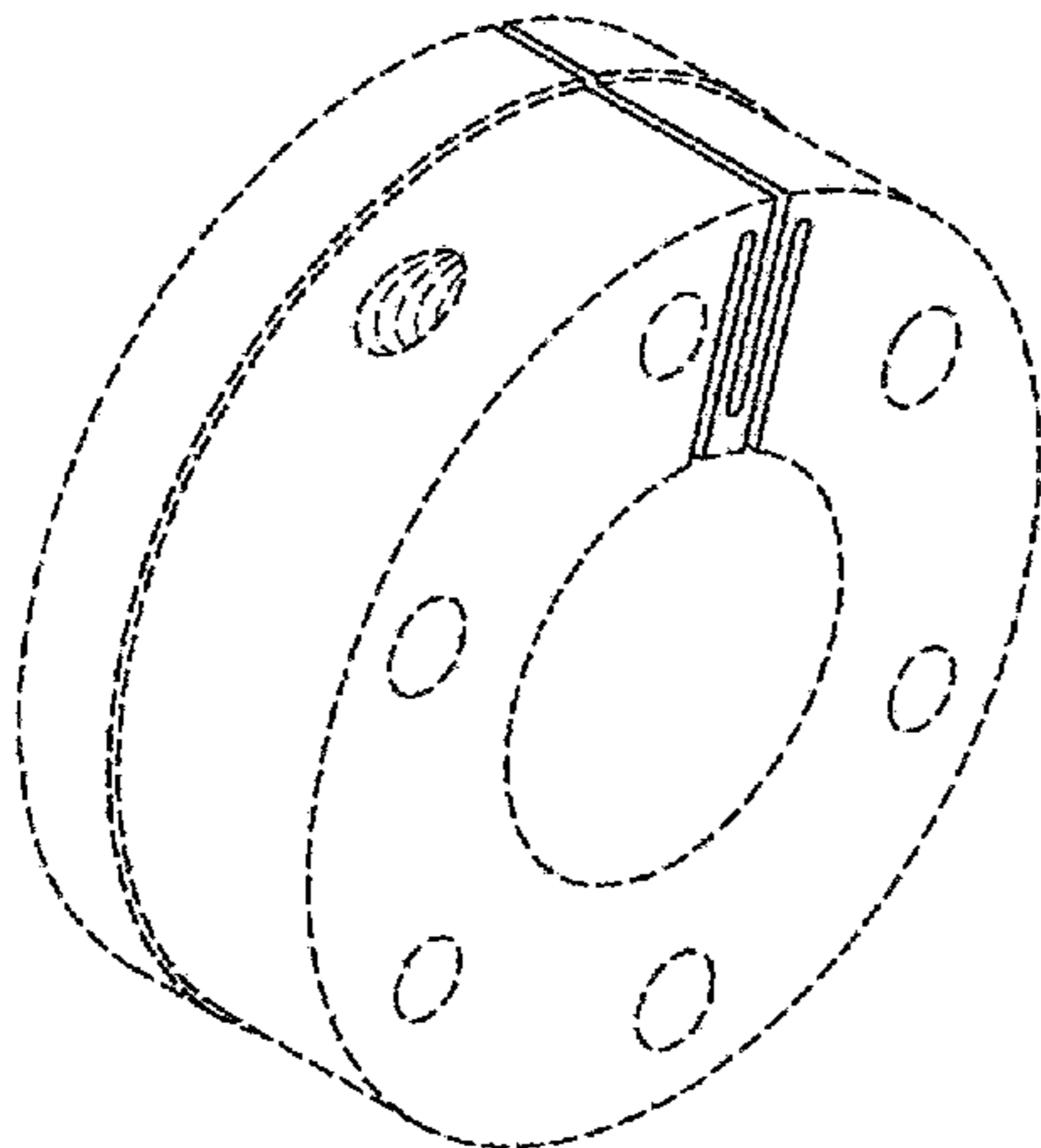
(57) **CLAIM**

The ornamental design for a shaft coupling hub, as shown and described.

DESCRIPTION

FIG. 1 is a left front perspective view of a shaft coupling hub;
FIG. 2 is a right front perspective view thereof;
FIG. 3 is a front view thereof;
FIG. 4 is a back view thereof;
FIG. 5 is a left side view thereof;
FIG. 6 is a right side view thereof;
FIG. 7 is a top view thereof;
FIG. 8 is a bottom view thereof; and,
FIG. 9 is a perspective view of the shaft coupling hub in a state of use in which the shaft coupling hub is connected to another shaft coupling hub such that two shafts are connected to each other by the shaft coupling hubs.
The broken lines shown in the drawing are for the purpose of depicting portions of the article that form no part of the claim. The broken lines shown in FIG. 9 are for the purpose of illustrating environment that forms no part of the claim.

1 Claim, 9 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

5,851,084 A * 12/1998 Nishikawa F16D 1/0864
 403/290
 D462,256 S * 9/2002 Jaynes D12/160
 D516,417 S * 3/2006 Gimpel D8/396
 D529,527 S * 10/2006 Kinoshita D15/148
 D533,204 S * 12/2006 Kinoshita D15/149
 D615,164 S * 5/2010 Zeyfang D23/260
 D619,152 S * 7/2010 Evatt D15/138
 D621,862 S * 8/2010 Kaneda D15/149
 D636,790 S * 4/2011 Brooks D15/5
 D652,705 S * 1/2012 Stava D8/300
 D687,701 S * 8/2013 Rast D8/382
 D691,877 S * 10/2013 Ganski D8/356
 D693,389 S * 11/2013 Koehler D15/138
 D696,388 S * 12/2013 Letnik D23/259
 D723,670 S * 3/2015 Lorraine D23/266
 D732,148 S * 6/2015 Evans D23/269
 9,052,017 B2 * 6/2015 Evans F16J 15/18
 D741,700 S * 10/2015 Mock D8/396
 D743,007 S * 11/2015 Kimura D23/266
 D745,815 S * 12/2015 Ohno D8/51

D746,116 S * 12/2015 Ohno D8/51
 D758,177 S * 6/2016 Riccione D8/396
 2005/0215328 A1 * 9/2005 Endou F16D 3/72
 464/78
 2006/0276247 A1 * 12/2006 Martinez F16D 3/72
 464/78
 2014/0116608 A1 * 5/2014 Sato F16D 3/68
 156/245
 2015/0014940 A1 * 1/2015 Hoehle F16J 15/441
 277/412
 2015/0240856 A1 * 8/2015 Watanabe F16B 31/00
 411/1
 2015/0345643 A1 * 12/2015 Hoehle F16J 15/187
 277/410

OTHER PUBLICATIONS

VMA Miki Pulley Group Website. <http://www.vma-antriebstechnik.de/produkte/wellenkupplungen/ausgleichskupplungen/highlights.html> Copyright 2016, Found Aug. 1, 2016.*
 Design U.S. Appl. No. 29/525,052, filed Apr. 27, 2015.
 Design U.S. Appl. No. 29/525,078, filed Apr. 27, 2015.

* cited by examiner

Fig.1

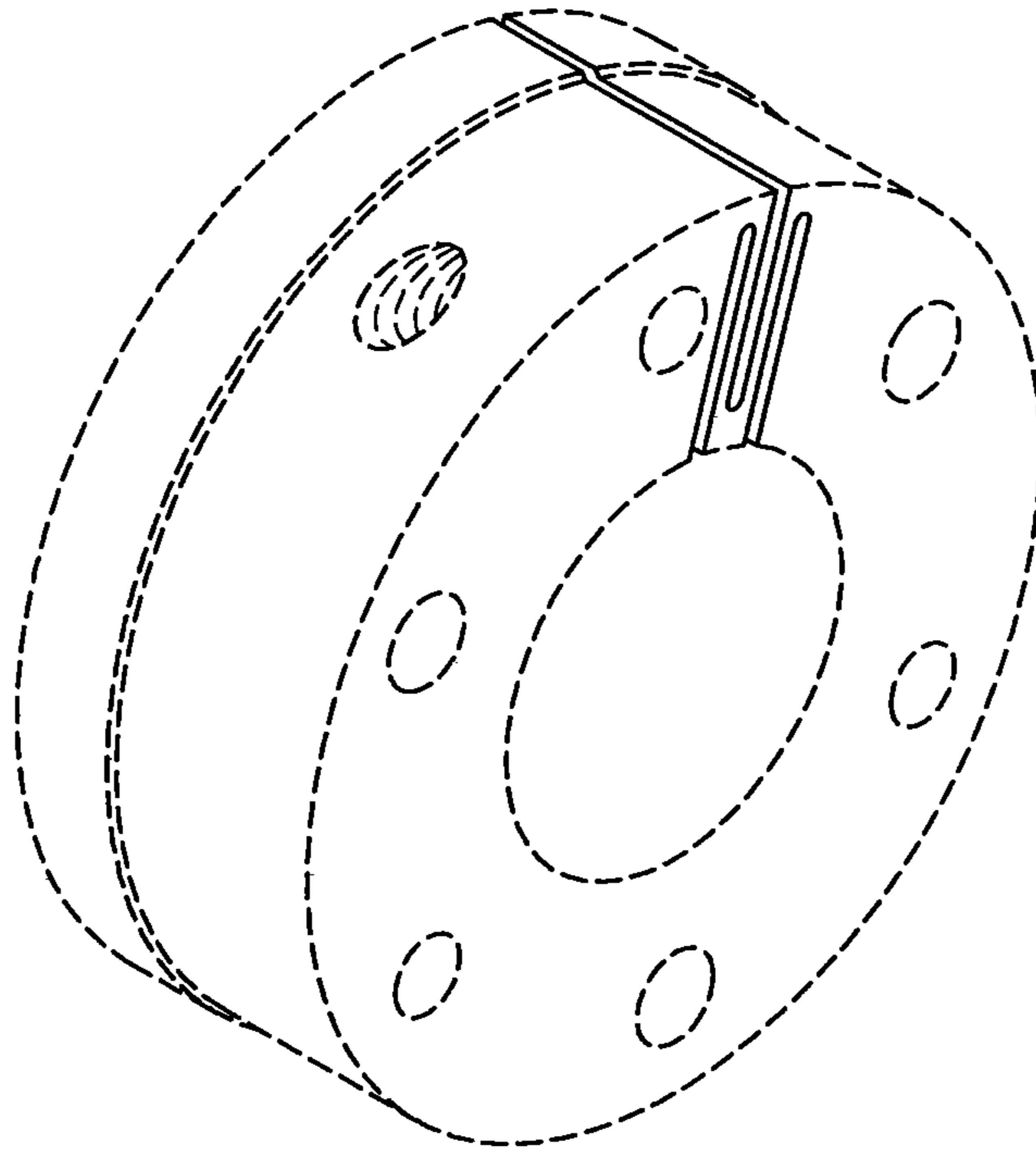


Fig.2

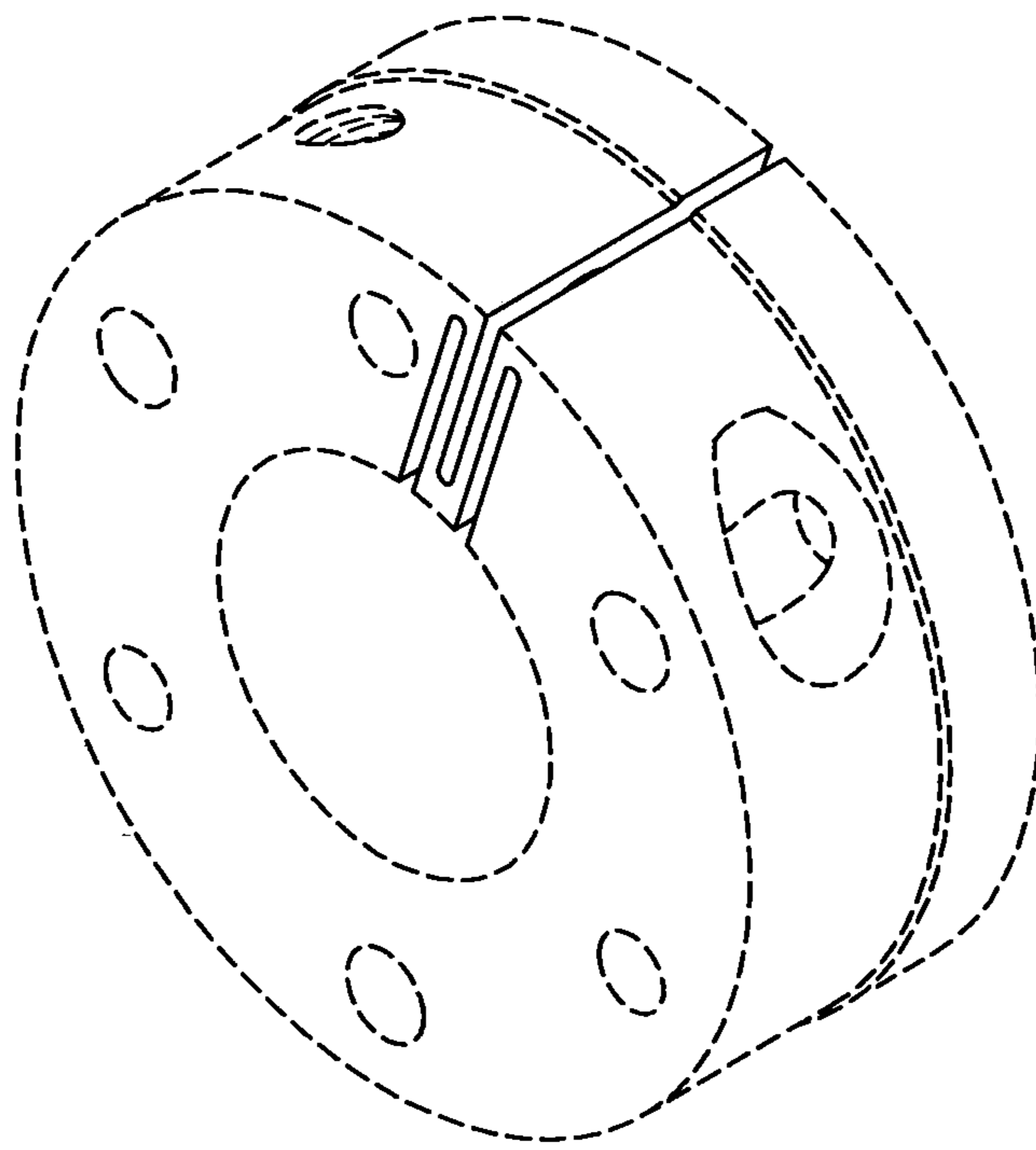


Fig.3

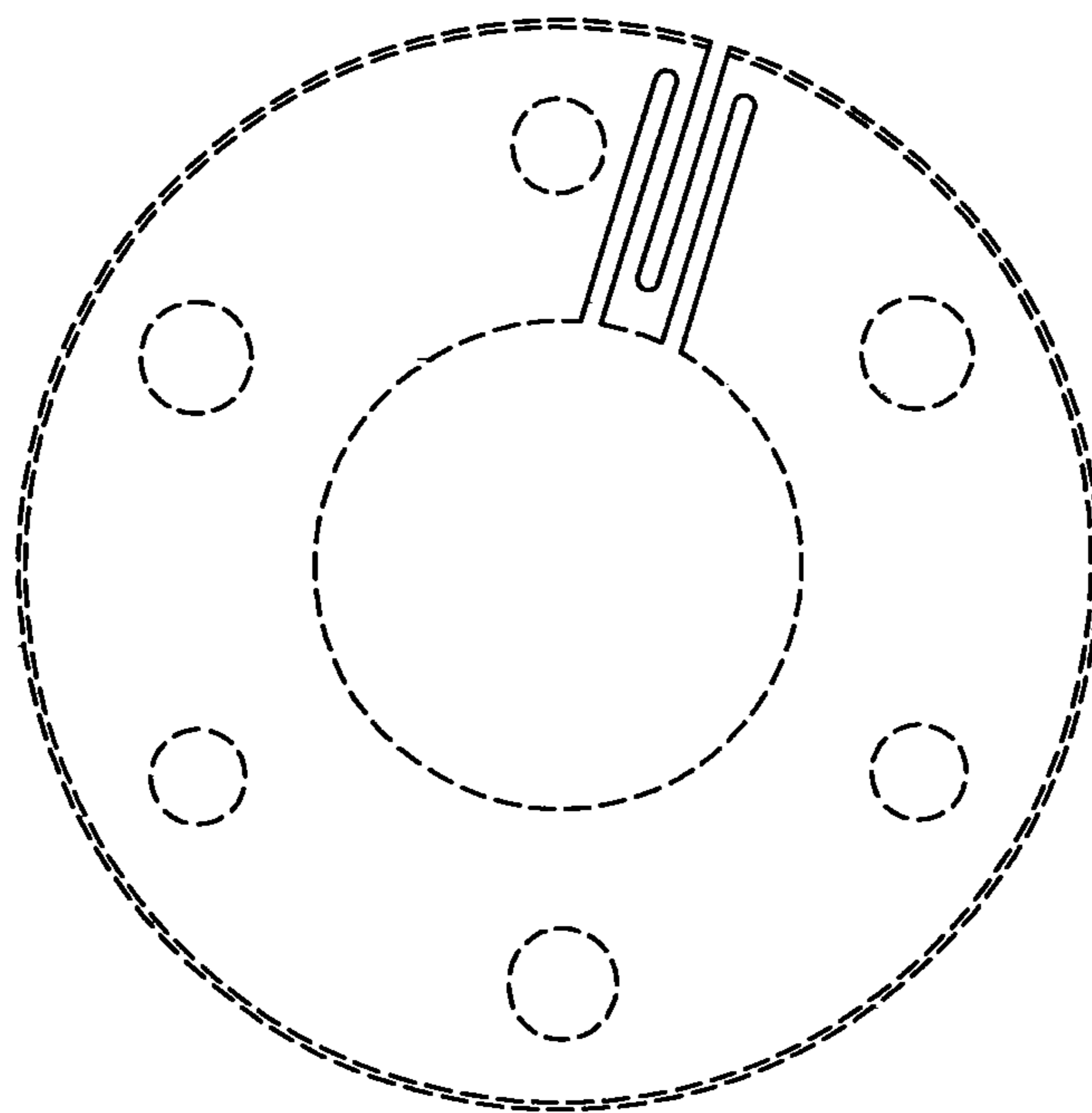


Fig.4

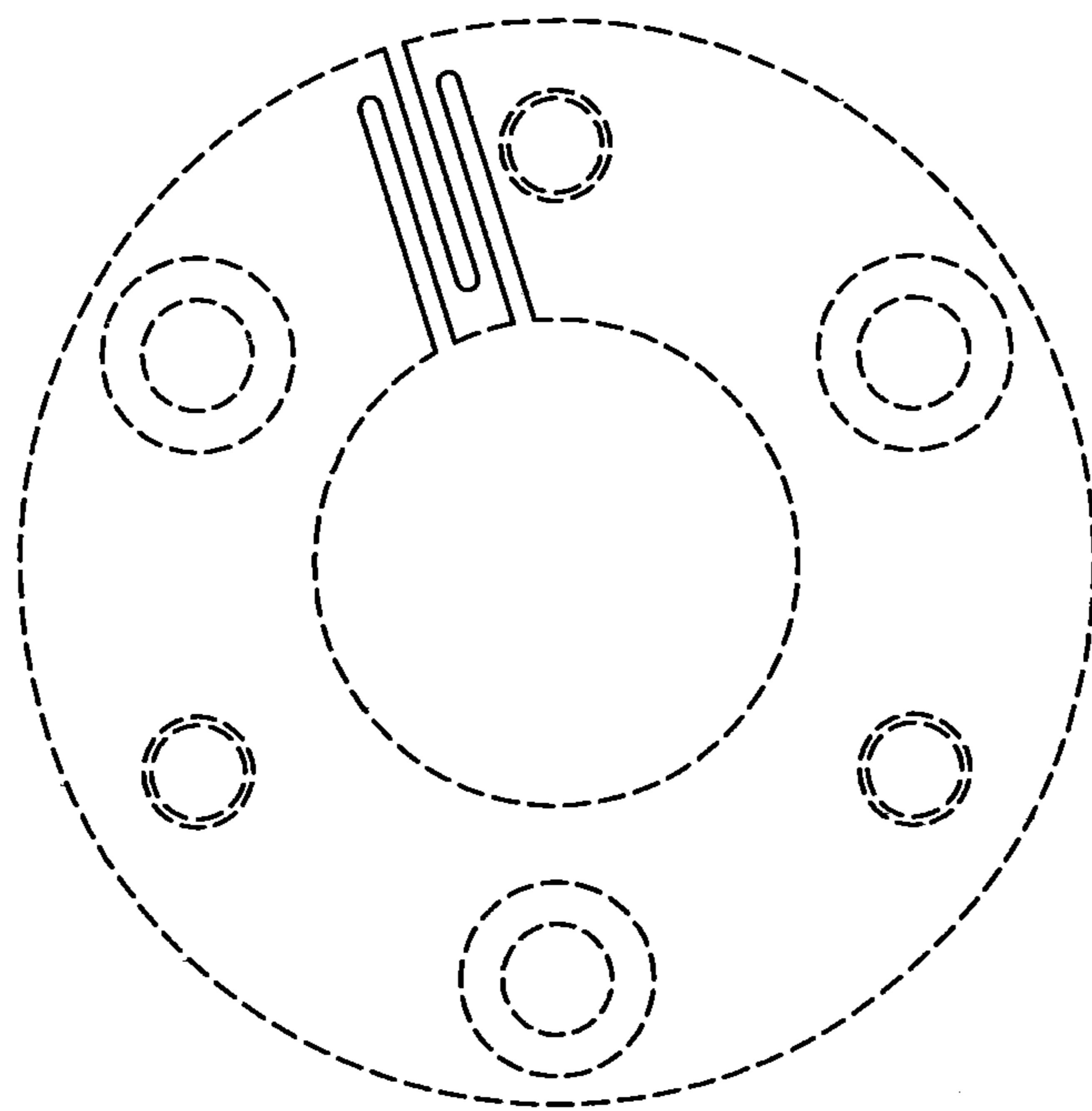


Fig.5

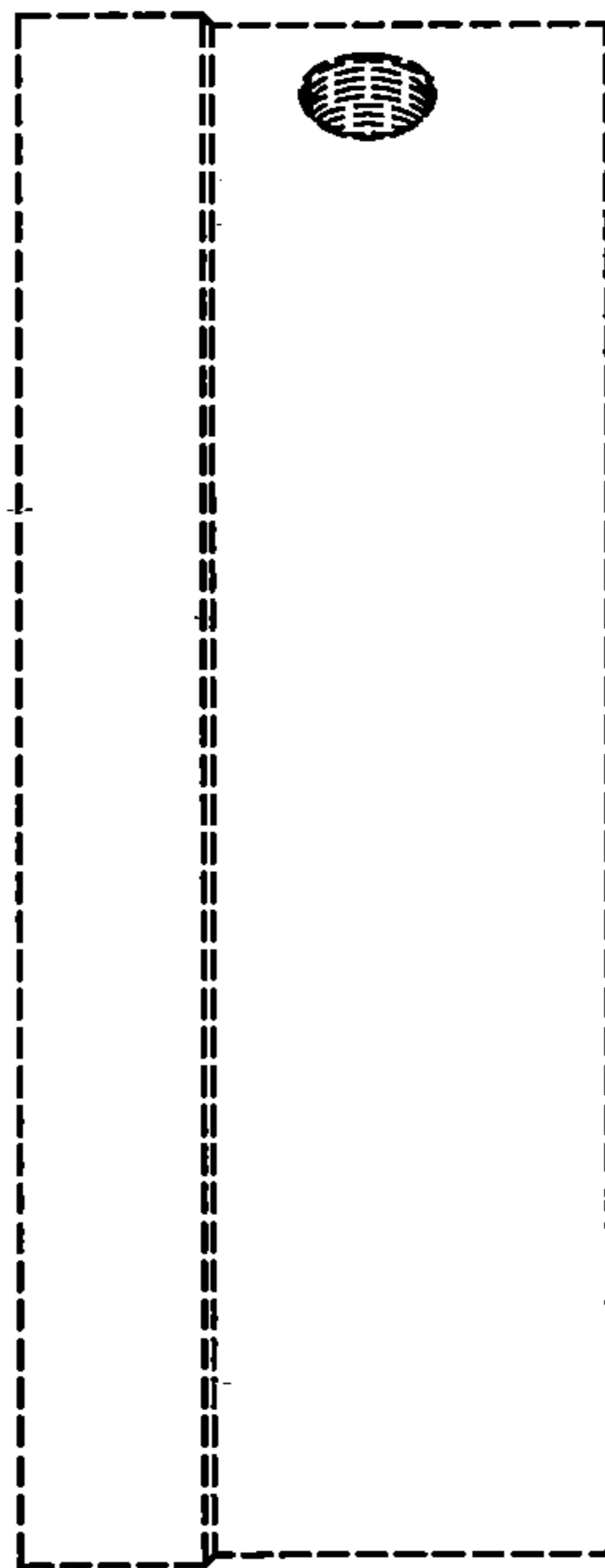


Fig.6

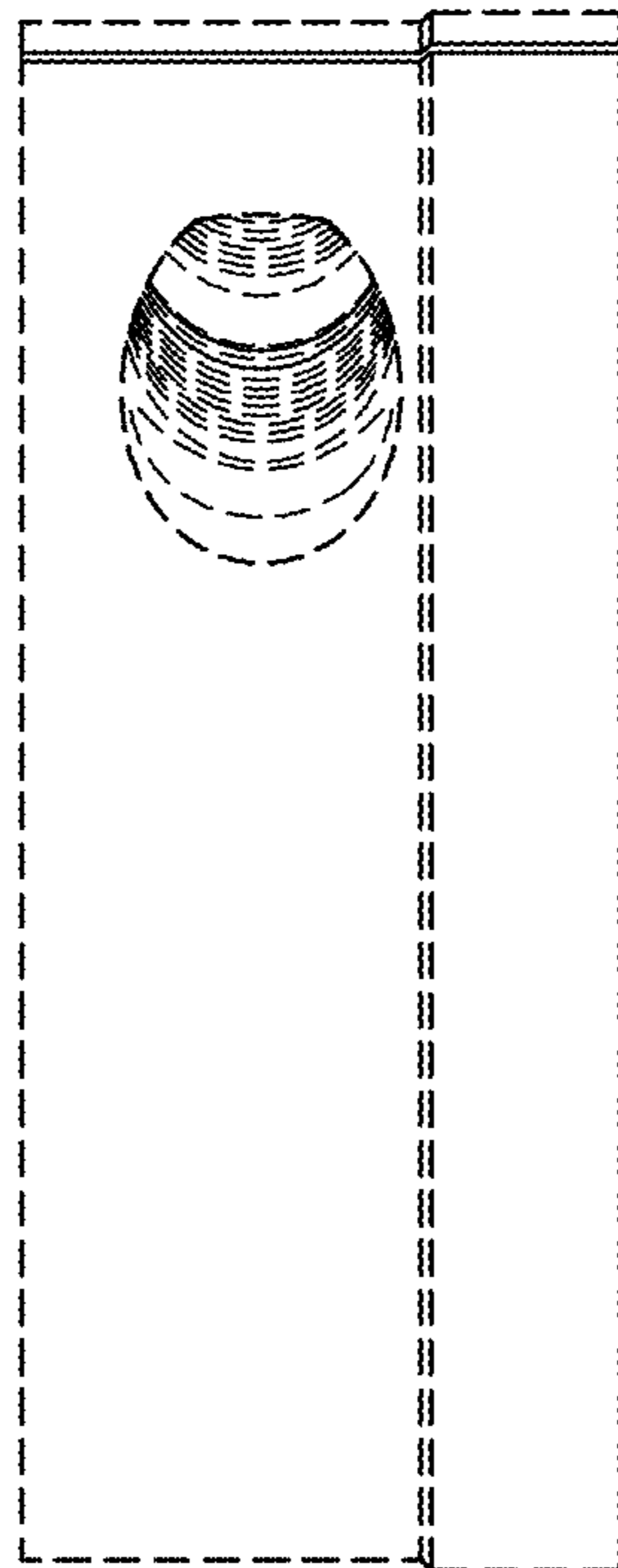


Fig.7

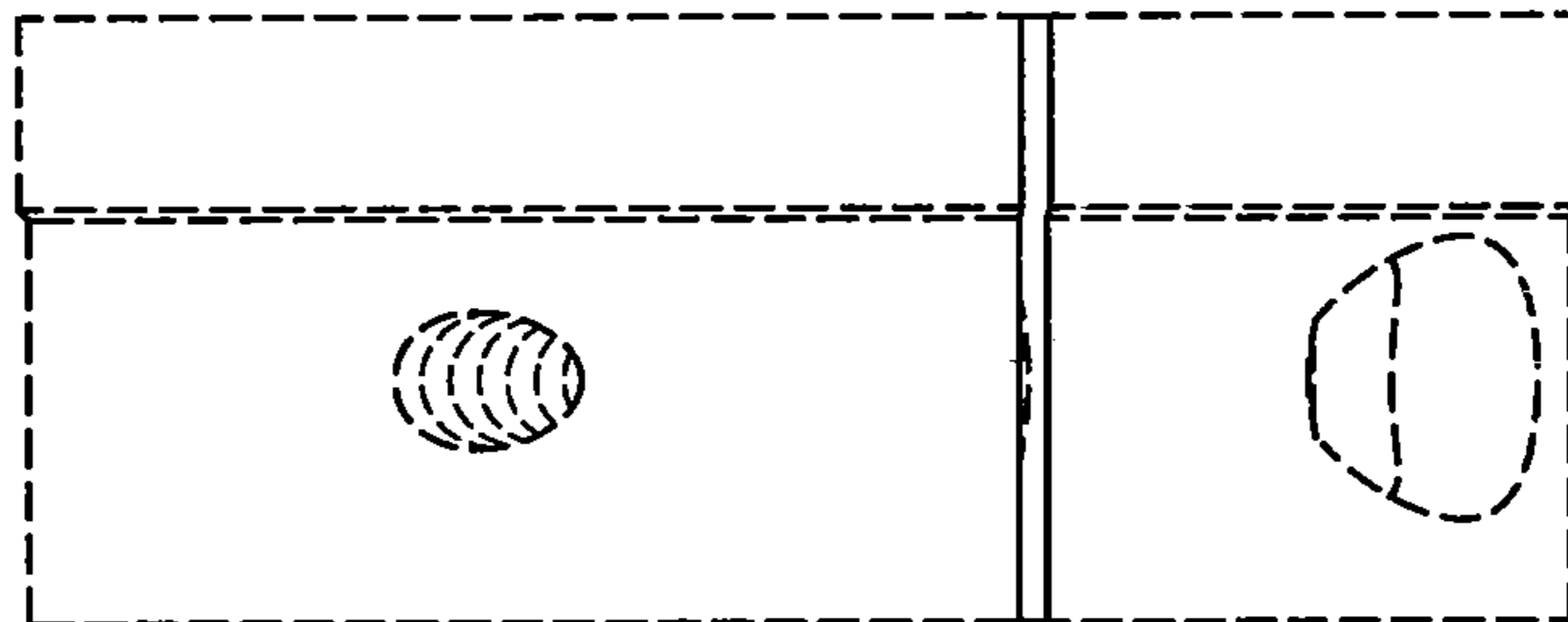


Fig.8

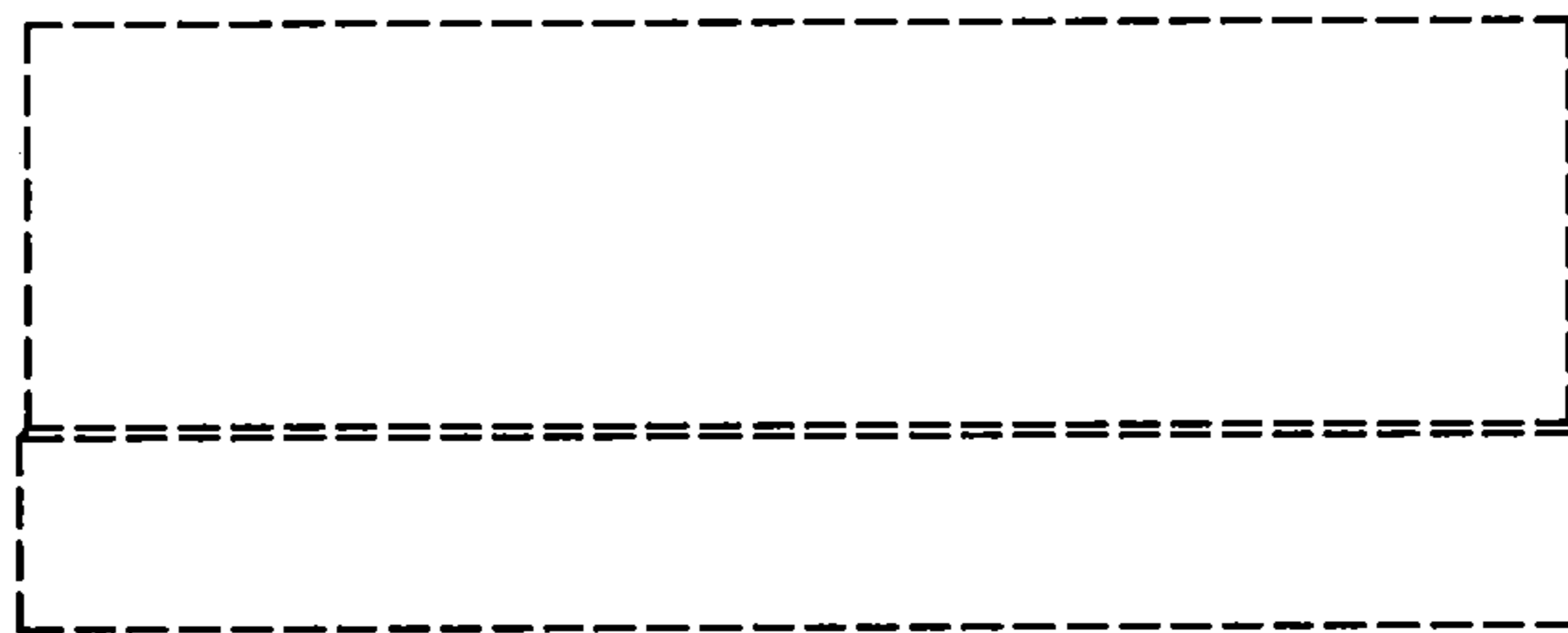


Fig.9

