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(12) **United States Design Patent**
Iwasaki

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- (54) **BALL SCREW**
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Kawasaki-shi, Kanagawa (JP)
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- (52) **U.S. Cl.**
USPC **D8/387**
- (58) **Field of Classification Search**
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CPC F16H 25/2285; F16H 25/2223; F16H
25/2214; F16H 25/2247; F16H 2025/2271;
Y10T 74/19772; Y10T 74/19744; Y10T
74/19749; Y10T 74/19753; Y10T 74/19758;
Y10T 74/19763
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 5,373,755 A * 12/1994 Rohlinger F16H 25/2214
74/424.86
- 5,791,192 A * 8/1998 Lee F16H 25/2219
74/424.87
- 6,561,053 B2 * 5/2003 Greubel F16H 25/2219
74/424.82
- 7,350,434 B2 * 4/2008 Nishimura F16C 33/3706
74/424.82
- 7,487,692 B2 * 2/2009 Lin F16H 25/2223
74/424.81
- 7,523,682 B2 * 4/2009 Liao F16H 25/2214
74/424.83
- 8,336,415 B2 * 12/2012 Miyahara F16H 25/2247
384/45
- D726,000 S * 4/2015 Iwasaki D8/387
- 9,062,748 B1 * 6/2015 Guglietti F16H 25/2214

- 2007/0295132 A1 * 12/2007 Lin F16H 25/2223
74/424.86
- 2008/0115609 A1 * 5/2008 Tsou F16H 25/2219
74/424.87
- 2008/0134822 A1 * 6/2008 Pan F16H 25/2214
74/424.87
- 2009/0107273 A1 * 4/2009 Chen F16H 25/2214
74/424.86
- 2010/0107794 A1 * 5/2010 Lin F16H 25/2214
74/424.83
- 2010/0170360 A1 * 7/2010 Chen F16H 25/2214
74/424.84
- 2011/0314941 A1 * 12/2011 Pan F16H 25/2219
74/424.86
- 2013/0283953 A1 * 10/2013 Iwasaki F16H 25/2219
74/424.87
- 2014/0033847 A1 * 2/2014 Chiu F16H 57/0497
74/424.86
- 2015/0314498 A1 * 11/2015 Iwasaki F16B 37/00
411/427

FOREIGN PATENT DOCUMENTS

- EP 1574752 A2 * 9/2005 F16H 25/2204
- GB 2253675 A * 9/1992 F16H 25/2209
- WO WO 2012022502 A1 * 2/2012 F16H 25/2223

* cited by examiner

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(57) **CLAIM**

The ornamental design for a ball screw, as shown and described.

DESCRIPTION

FIG. 1 is a front and right side perspective view of a ball screw;
 FIG. 2 is a front view thereof;
 FIG. 3 is a back 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 an enlarged view taken along line 8-8 in FIG. 2; and,
 FIG. 9 is an enlarged schematic cross-sectional view thereof taken along line 9-9 of FIG. 2.

The broken lines in the drawing represent the environment of the claimed design and form no part thereof.

1 Claim, 9 Drawing Sheets

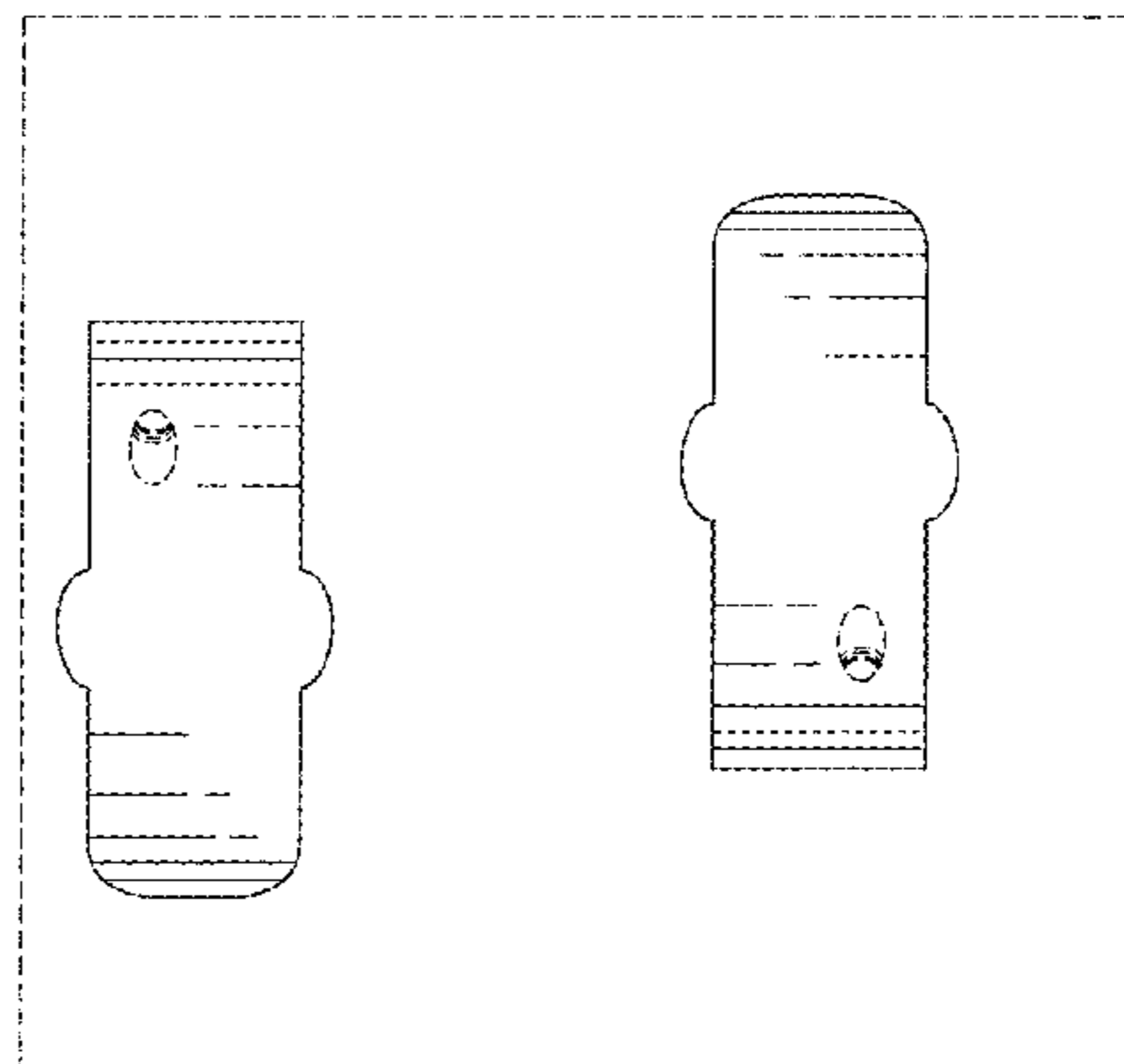
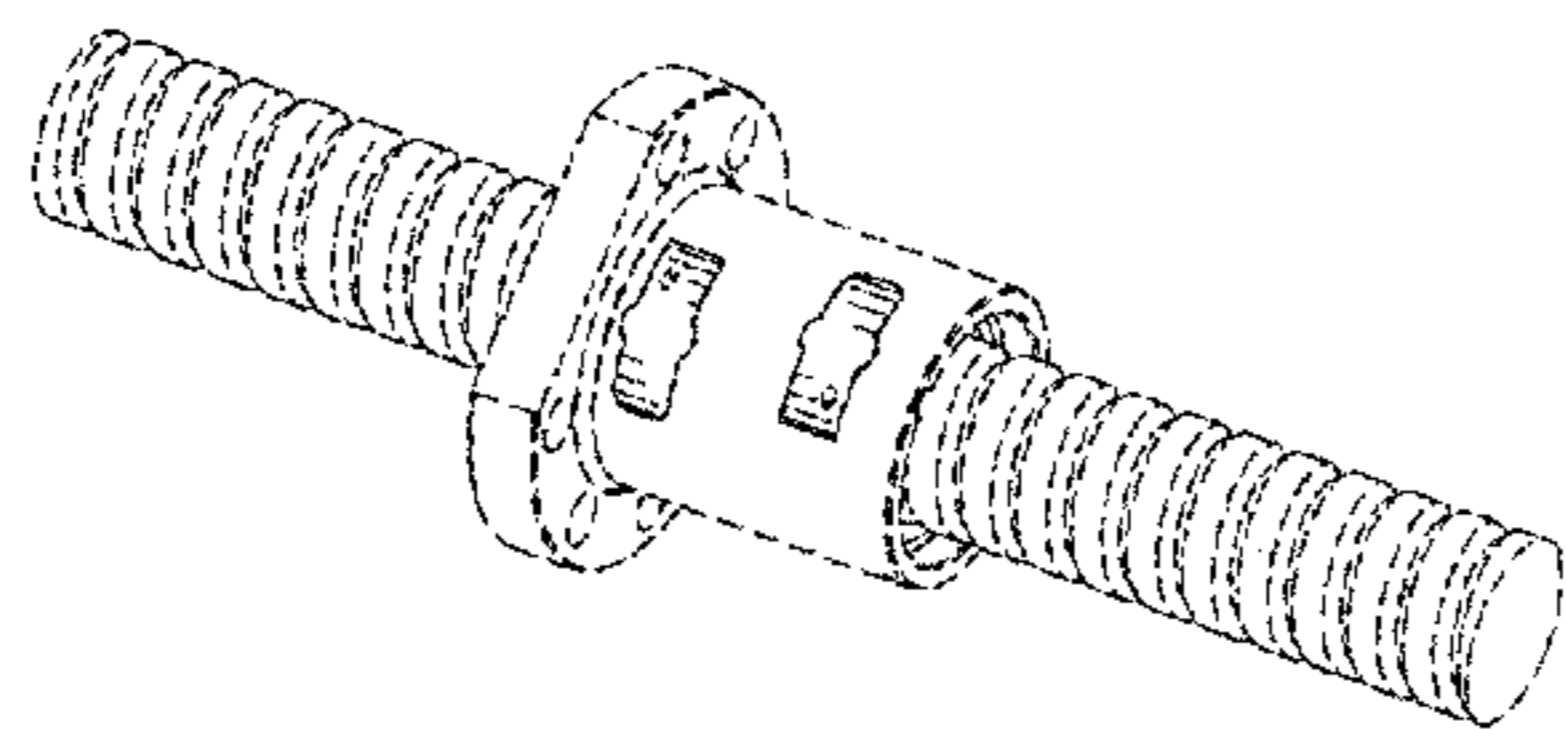


Fig. 1

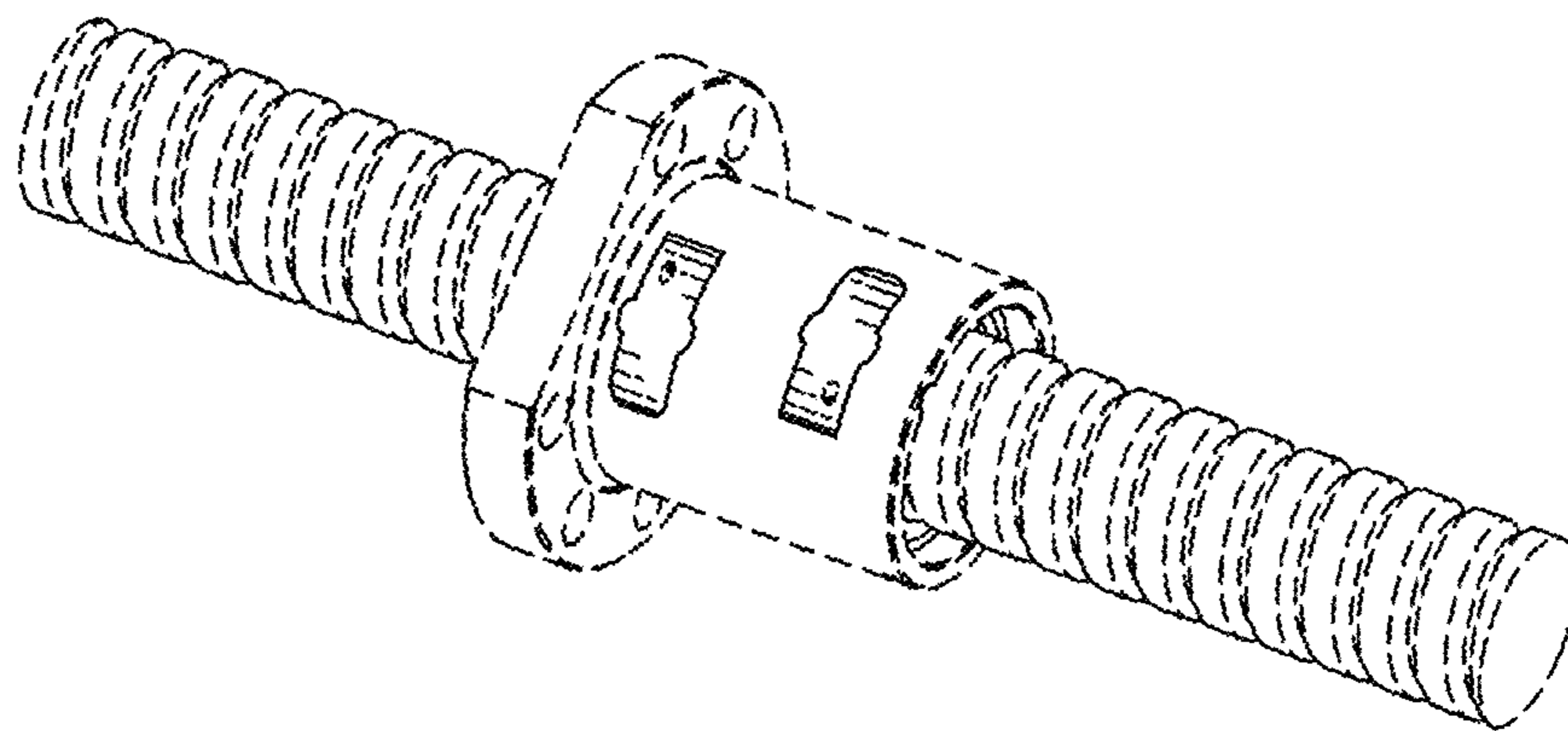


Fig.2

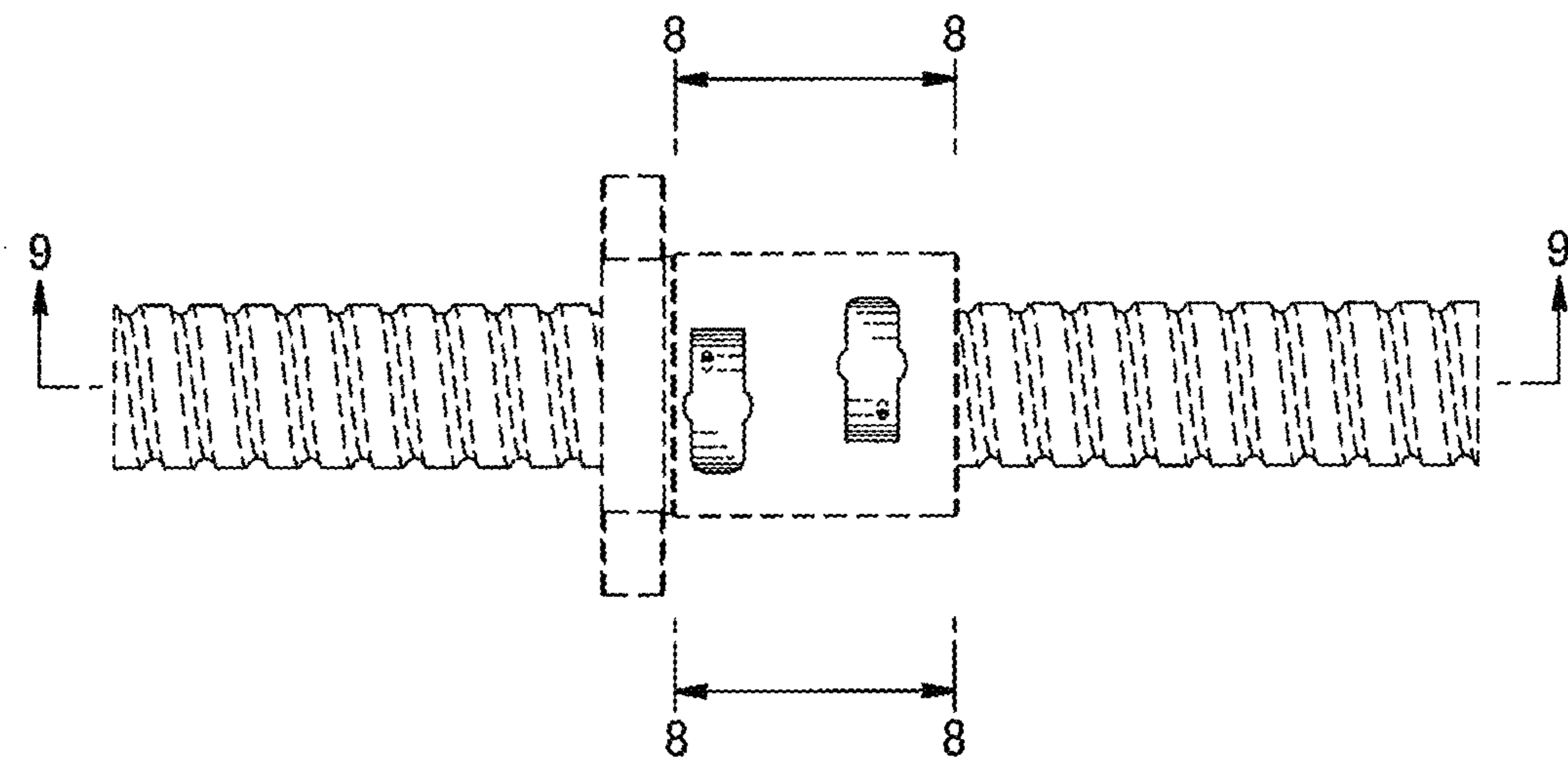


Fig.3

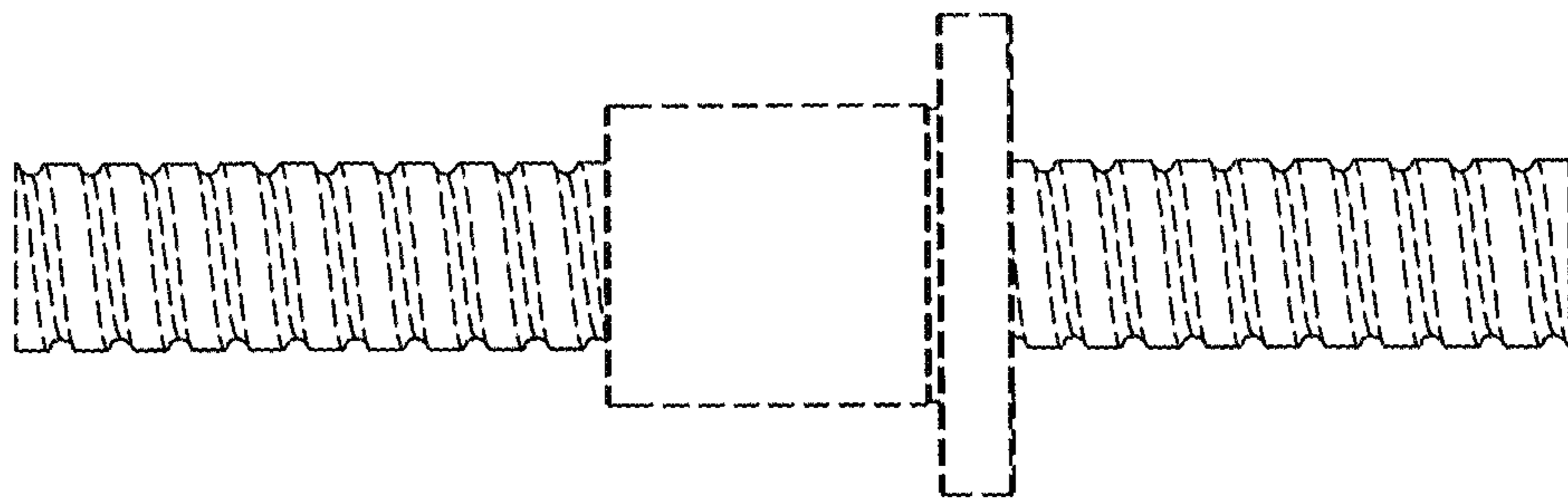


Fig.4

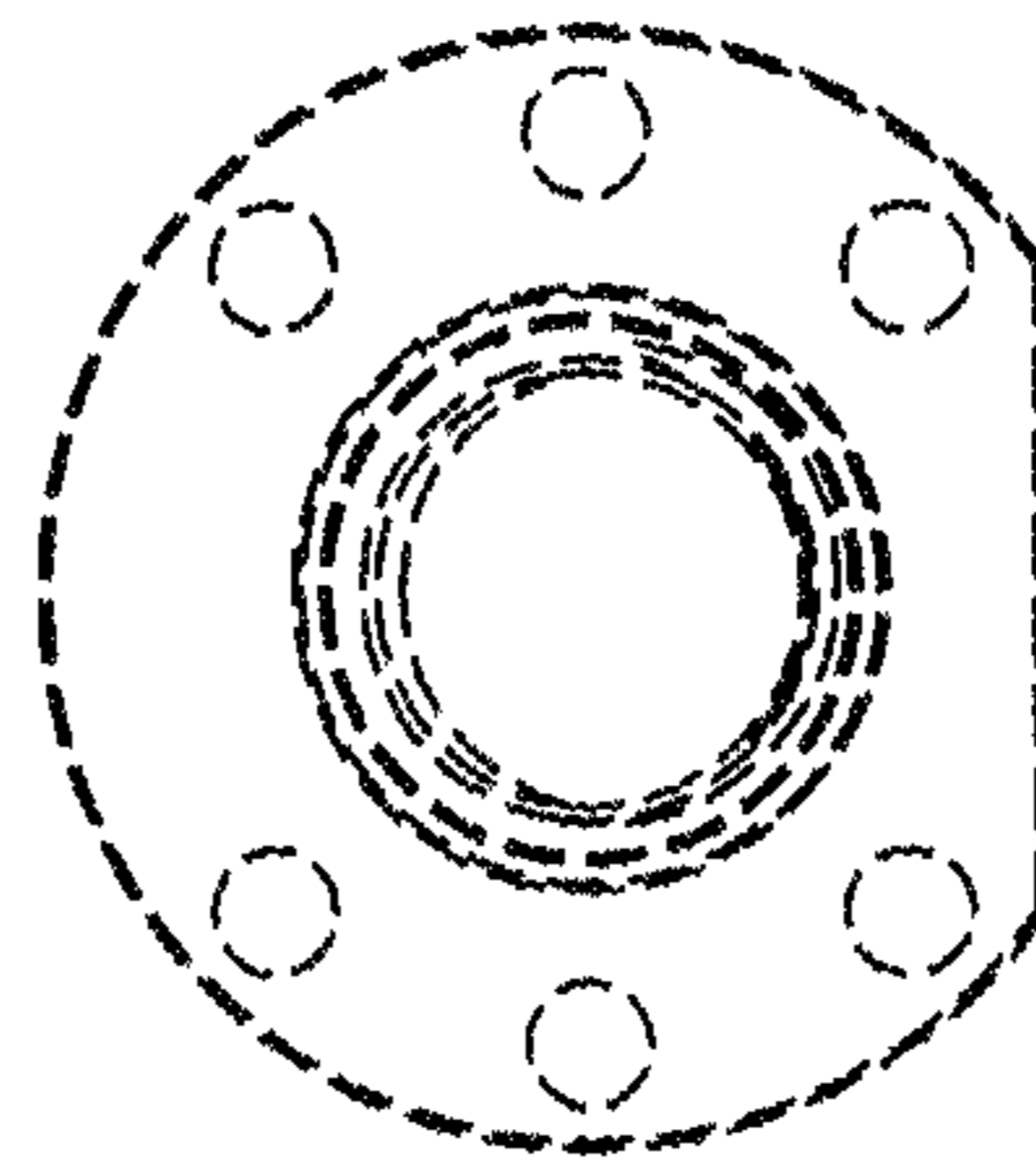


Fig.5

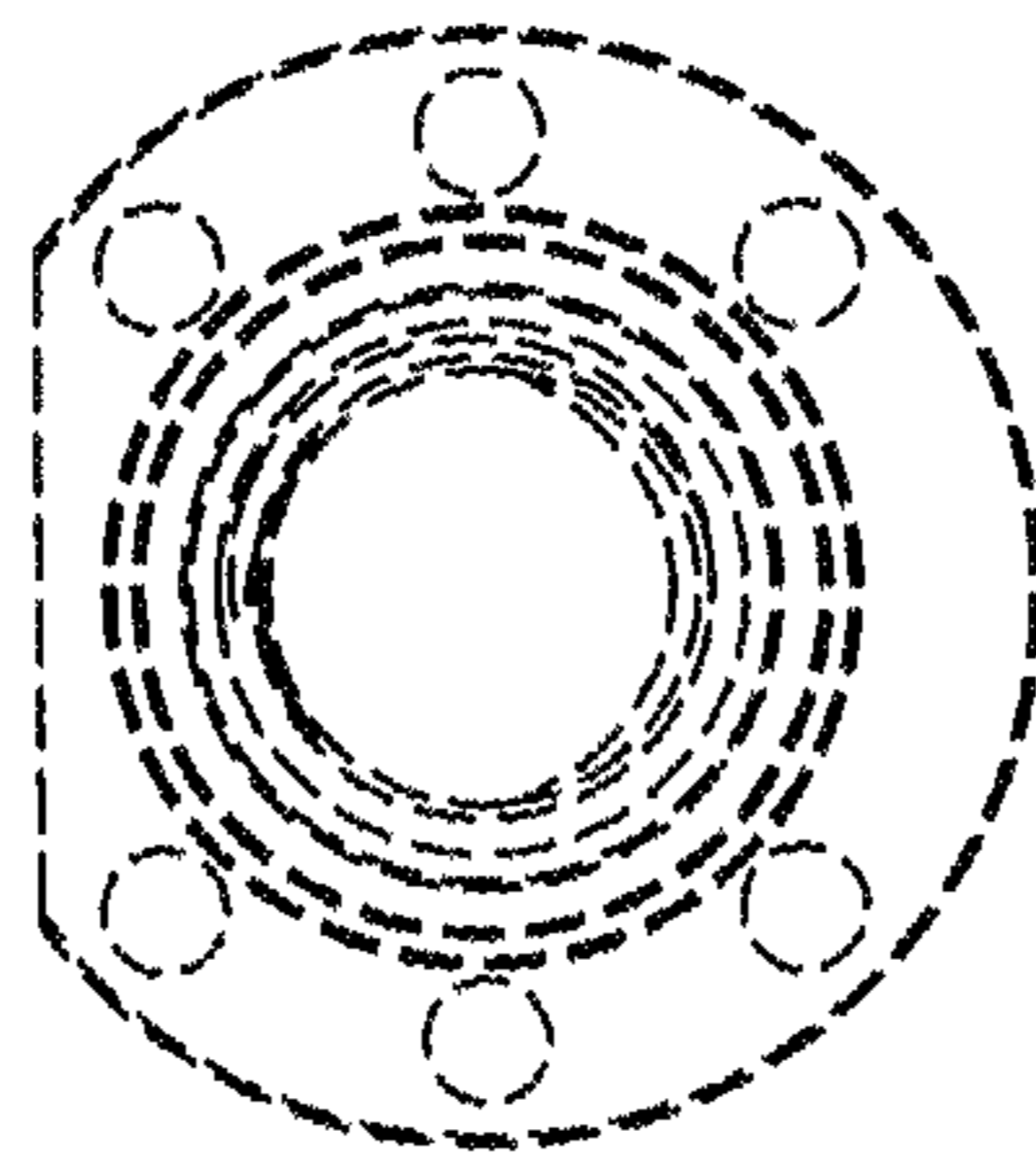


Fig.6

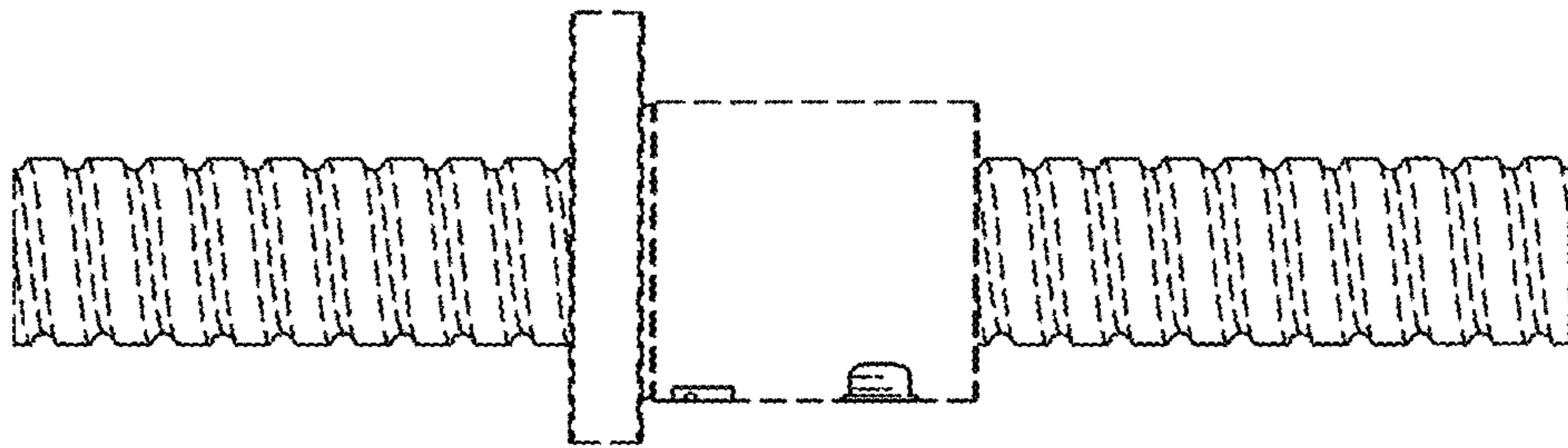


Fig.7

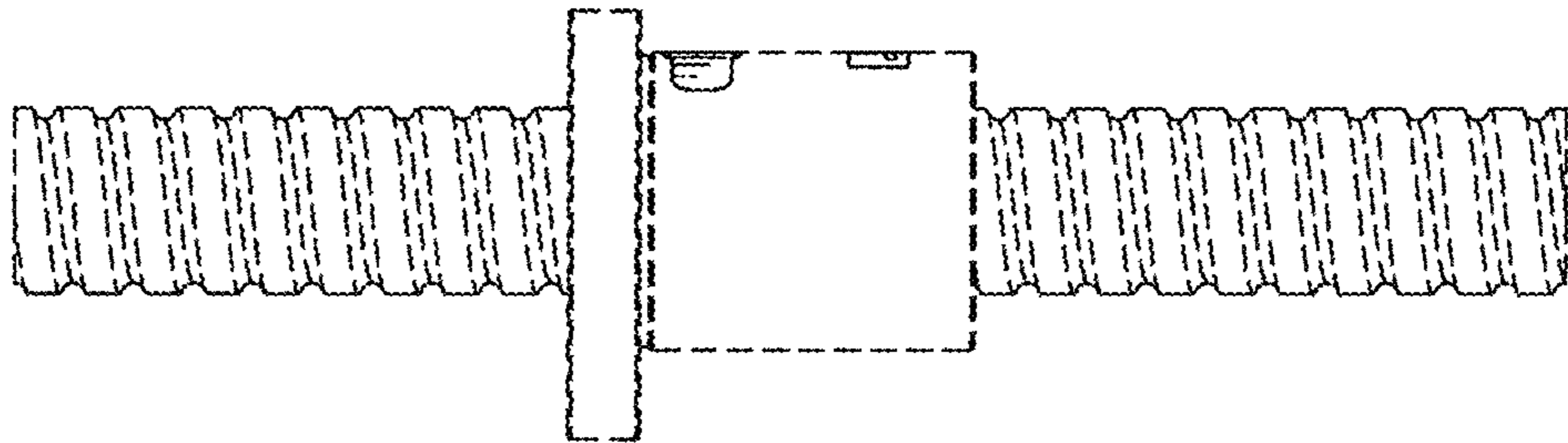


Fig.8

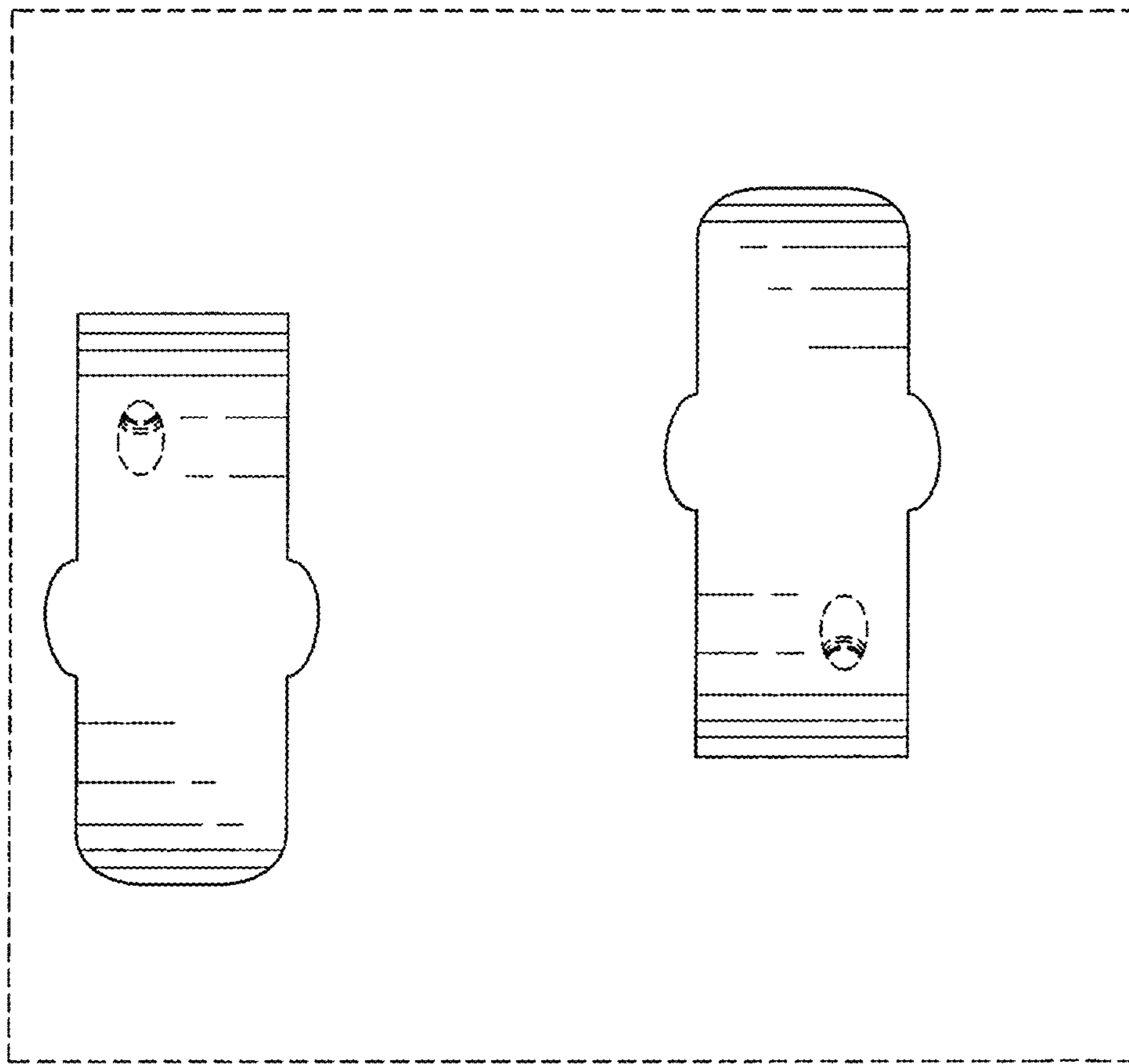


Fig.9

