

US00D762182S

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

(10) **Patent No.:** **US D762,182 S**

(45) **Date of Patent:** **\*\* Jul. 26, 2016**

(54) **LIGHT-EMITTING DIODE**

(71) Applicants: **CITIZEN ELECTRONICS CO., LTD.**,  
Yamanashi-ken (JP); **CITIZEN**  
**HOLDINGS CO., LTD.**, Tokyo (JP)

(72) Inventors: **Takashi Akiyama**, Saitama-ken (JP);  
**Shigehisa Watanabe**, Yamanashi-ken  
(JP); **Yuki Ochiai**, Yamanashi-ken (JP);  
**Satoshi Goto**, Yamanashi-ken (JP);  
**Tatsuro Yamada**, Yamanashi-ken (JP);  
**Yuki Nishikawa**, Shiga-ken (JP)

(73) Assignees: **CITIZEN ELECTRONICS CO., LTD.**,  
Yamanashi-Ken (JP); **CITIZEN**  
**HOLDINGS CO., LTD.**, Tokyo (JP)

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

(21) Appl. No.: **29/504,427**

(22) Filed: **Oct. 6, 2014**

(51) **LOC (10) Cl.** ..... **13-03**

(52) **U.S. Cl.**  
USPC ..... **D13/180**

(58) **Field of Classification Search**  
USPC ..... D13/180; D26/1  
CPC ... H01L 25/167; H01L 25/0753; H01L 27/15;  
H01L 27/156; H01L 31/02; H01L 33/00;  
H01L 33/04; H01L 33/08; H01L 33/10;  
H01L 33/20; H01L 33/38; H01L 33/42;  
H01L 33/4862; H01L 33/483; H01L 33/486  
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D618,635 S \* 6/2010 Imai ..... D13/180  
D658,603 S \* 5/2012 Egawa ..... D13/180

(Continued)

*Primary Examiner* — Selina Sikder

(74) *Attorney, Agent, or Firm* — Wenderoth, Lind & Ponack,  
L.L.P.

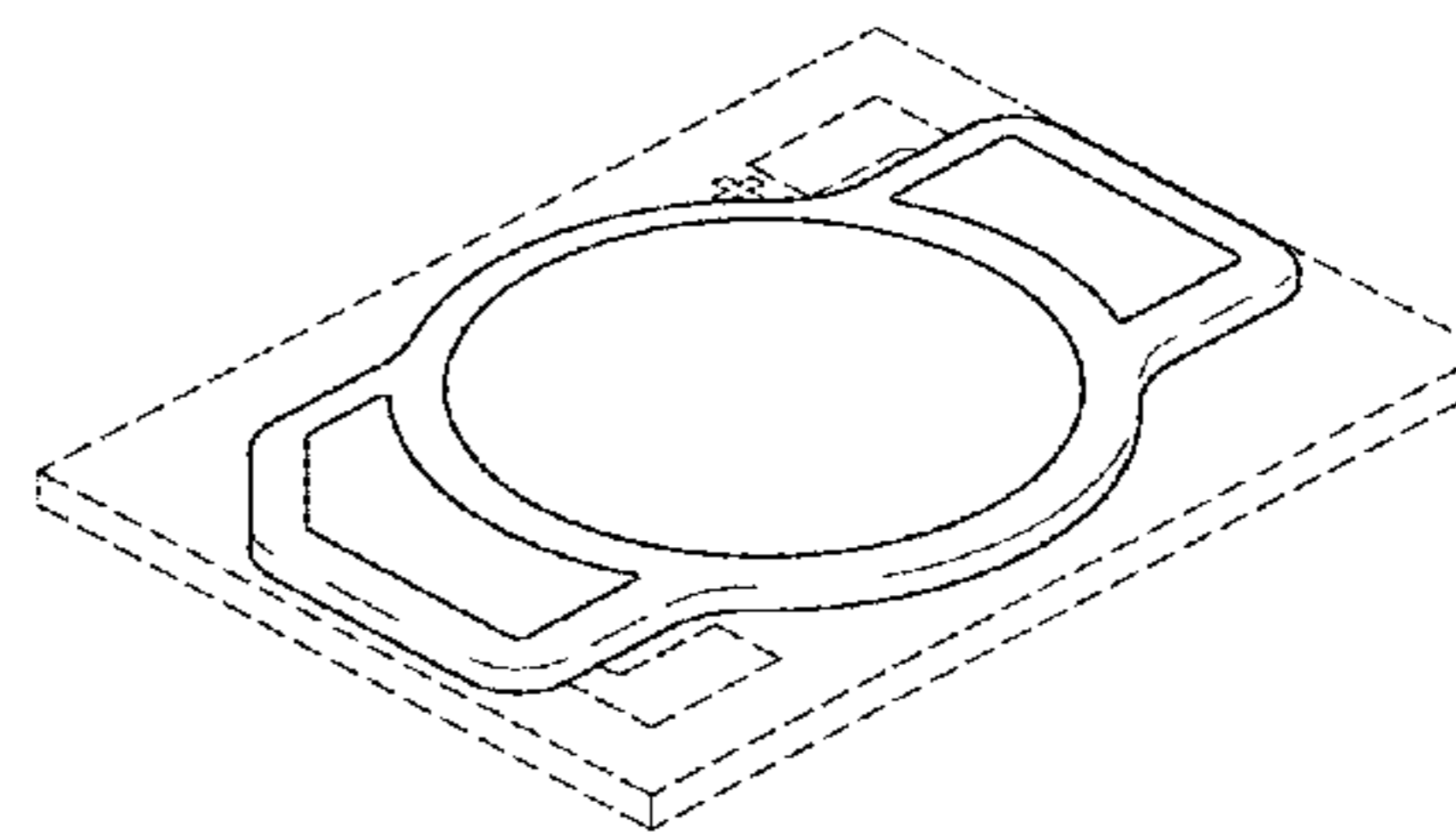
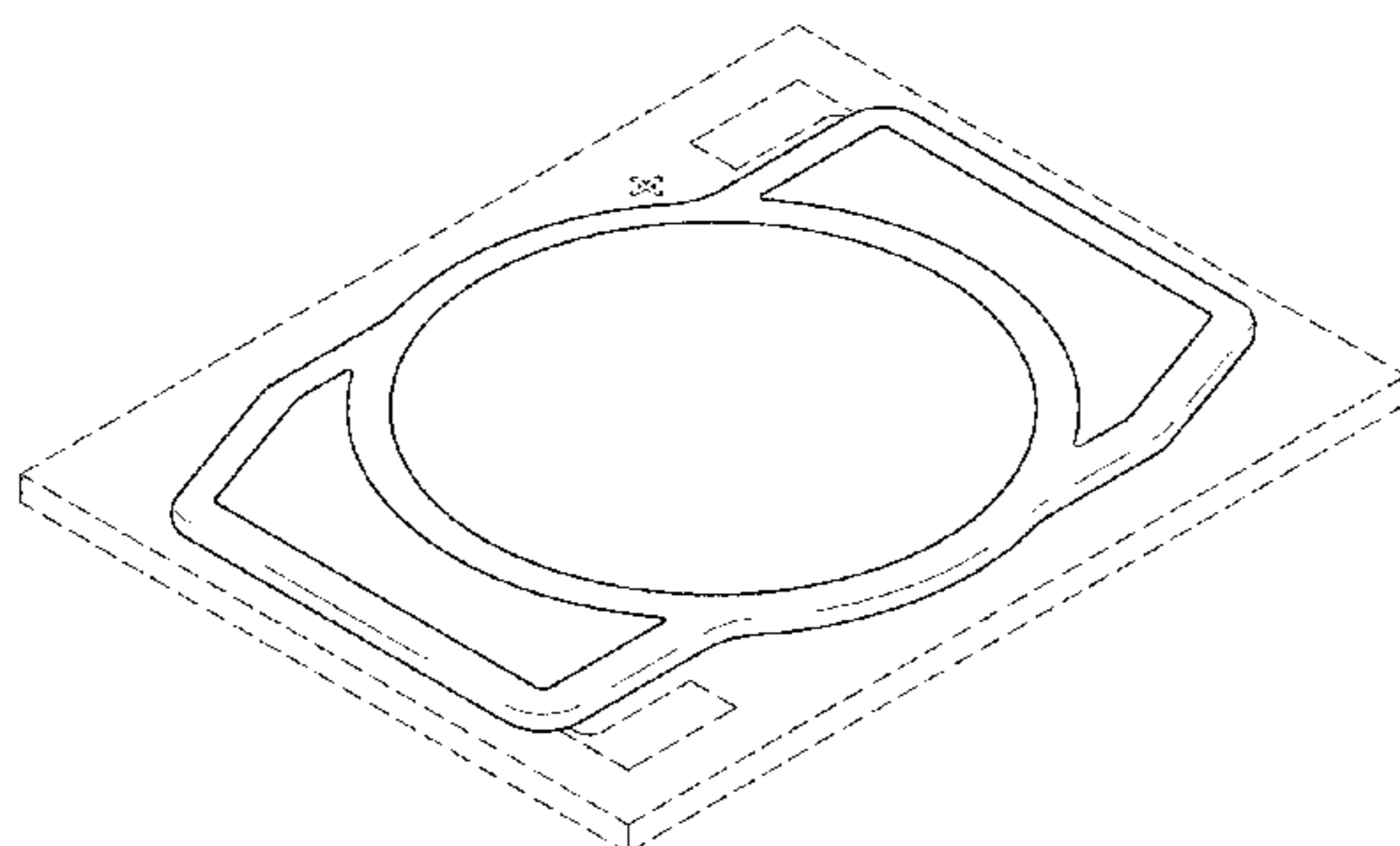
(57) **CLAIM**

The ornamental design for a light-emitting diode, as shown  
and described.

**DESCRIPTION**

FIG. 1 is a top perspective view of a first embodiment of a  
light-emitting diode;  
FIG. 2 is a bottom perspective view thereof;  
FIG. 3 is a front view thereof, a rear view being identical to  
FIG. 3;  
FIG. 4 is a top plan view thereof;  
FIG. 5 is a bottom plan view thereof;  
FIG. 6 is a left side view thereof, a right side view being  
identical to FIG. 6;  
FIG. 7 is a top perspective view of a second embodiment of a  
light-emitting diode;  
FIG. 8 is a bottom perspective view thereof;  
FIG. 9 is a front view thereof, a rear view being identical to  
FIG. 9;  
FIG. 10 is a top plan view thereof;  
FIG. 11 is a bottom plan view thereof;  
FIG. 12 is a left side view thereof, a right side view being  
identical to FIG. 12;  
FIG. 13 is a top perspective view of a third embodiment of a  
light-emitting diode;  
FIG. 14 is a bottom perspective view thereof;  
FIG. 15 is a front view thereof, a rear view being identical to  
FIG. 15;  
FIG. 16 is a top plan view thereof;  
FIG. 17 is a bottom plan view thereof;  
FIG. 18 is a left side view thereof, a right side view being  
identical to FIG. 18;  
FIG. 19 is a top perspective view of a fourth embodiment of a  
light-emitting diode;  
FIG. 20 is a front view thereof;  
FIG. 21 is a rear view thereof;  
FIG. 22 is a top plan view thereof;  
FIG. 23 is a bottom plan view thereof;  
FIG. 24 is a left side view thereof;  
FIG. 25 is a right side view thereof;  
FIG. 26 is a top perspective view of a fifth embodiment of a  
light-emitting diode;  
FIG. 27 is a front view thereof;  
FIG. 28 is a rear view thereof;  
FIG. 29 is a top plan view thereof;  
FIG. 30 is a bottom plan view thereof;  
FIG. 31 is a left side view thereof; and,  
FIG. 32 is a right side view thereof.  
The broken lines shown herein are for illustrative purpose  
only and form no part of the claimed design.

**1 Claim, 15 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

D660,812 S \* 5/2012 Sasano ..... D13/180  
D669,041 S \* 10/2012 Imai ..... D13/180  
D683,708 S \* 6/2013 Sasano ..... D13/180  
D714,236 S \* 9/2014 Watanabe ..... D13/180

D727,860 S \* 4/2015 Watanabe ..... D13/180  
9,046,226 B2 \* 6/2015 Shimozawa ..... F21K 9/56  
9,130,140 B2 \* 9/2015 Tsuchiya ..... H01L 33/641  
9,231,023 B2 \* 1/2016 Agatani ..... F21K 9/00  
2013/0193462 A1 \* 8/2013 Ishizaki ..... F21K 9/135  
257/88

\* cited by examiner

Fig. 1

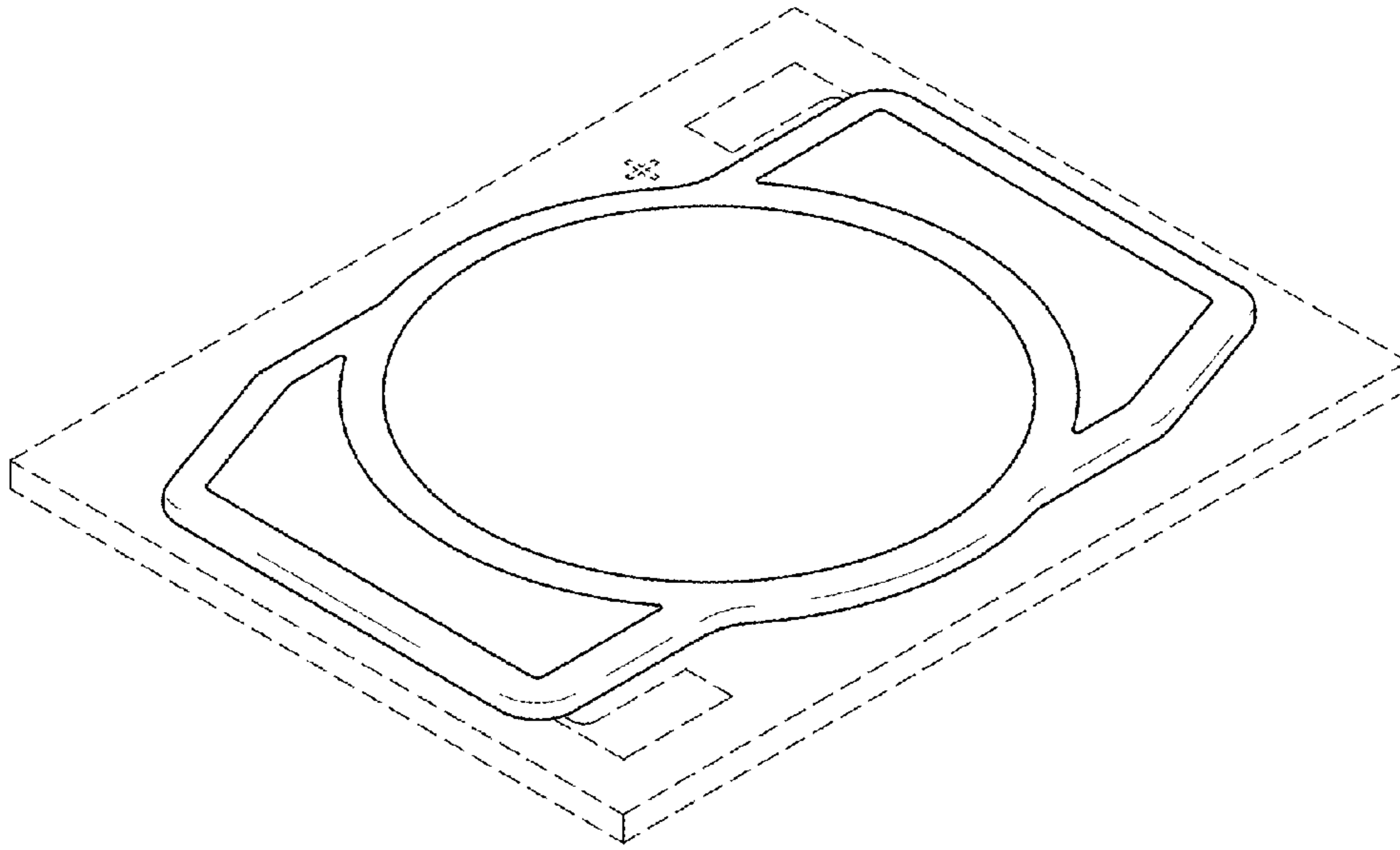


Fig. 2

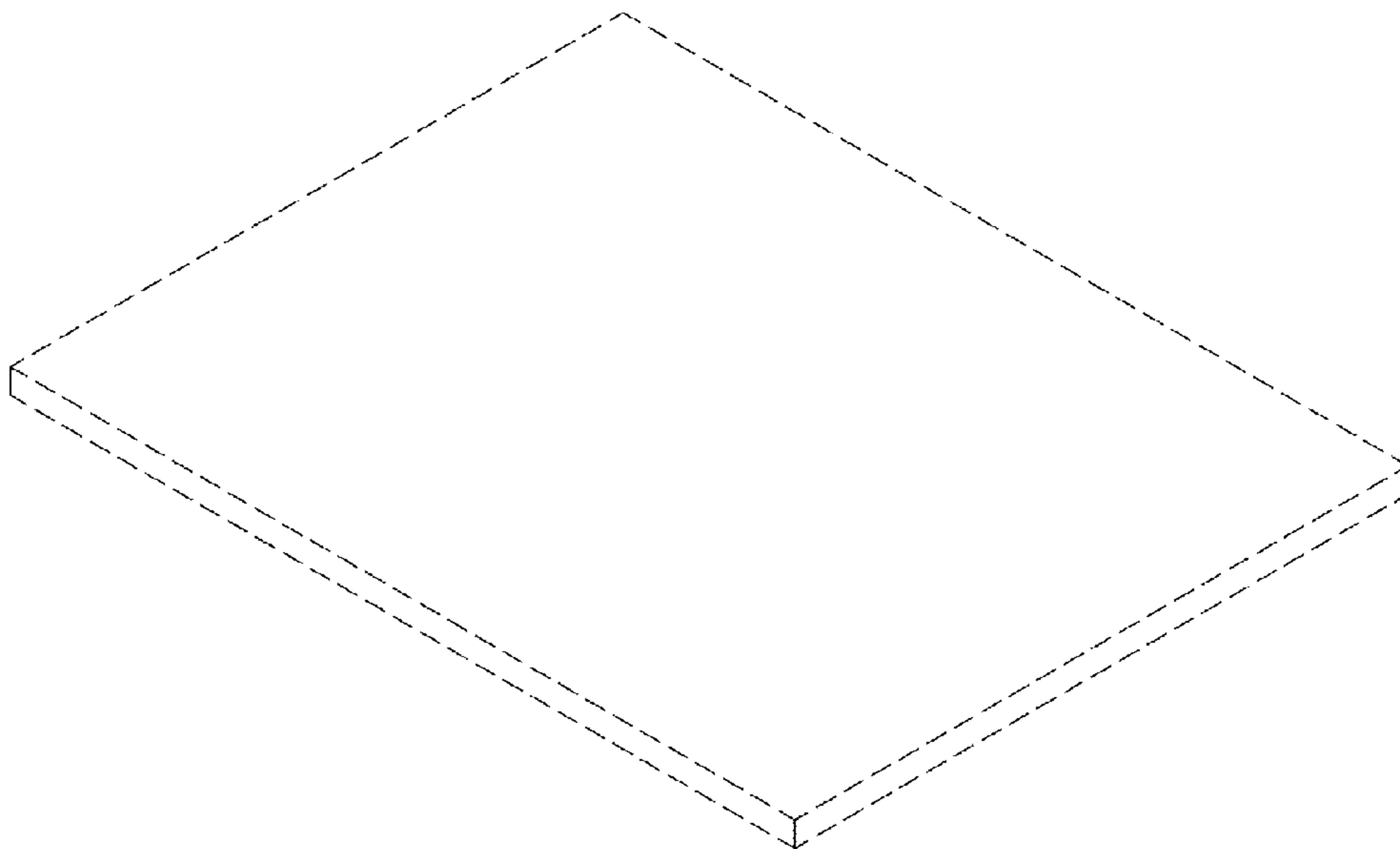


Fig. 3

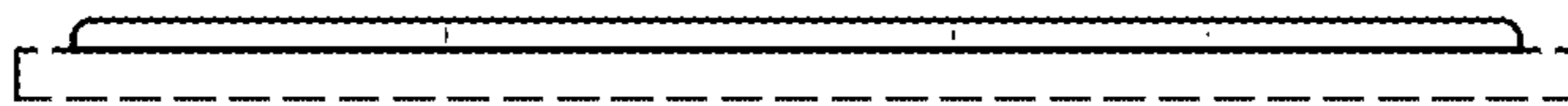


Fig. 4

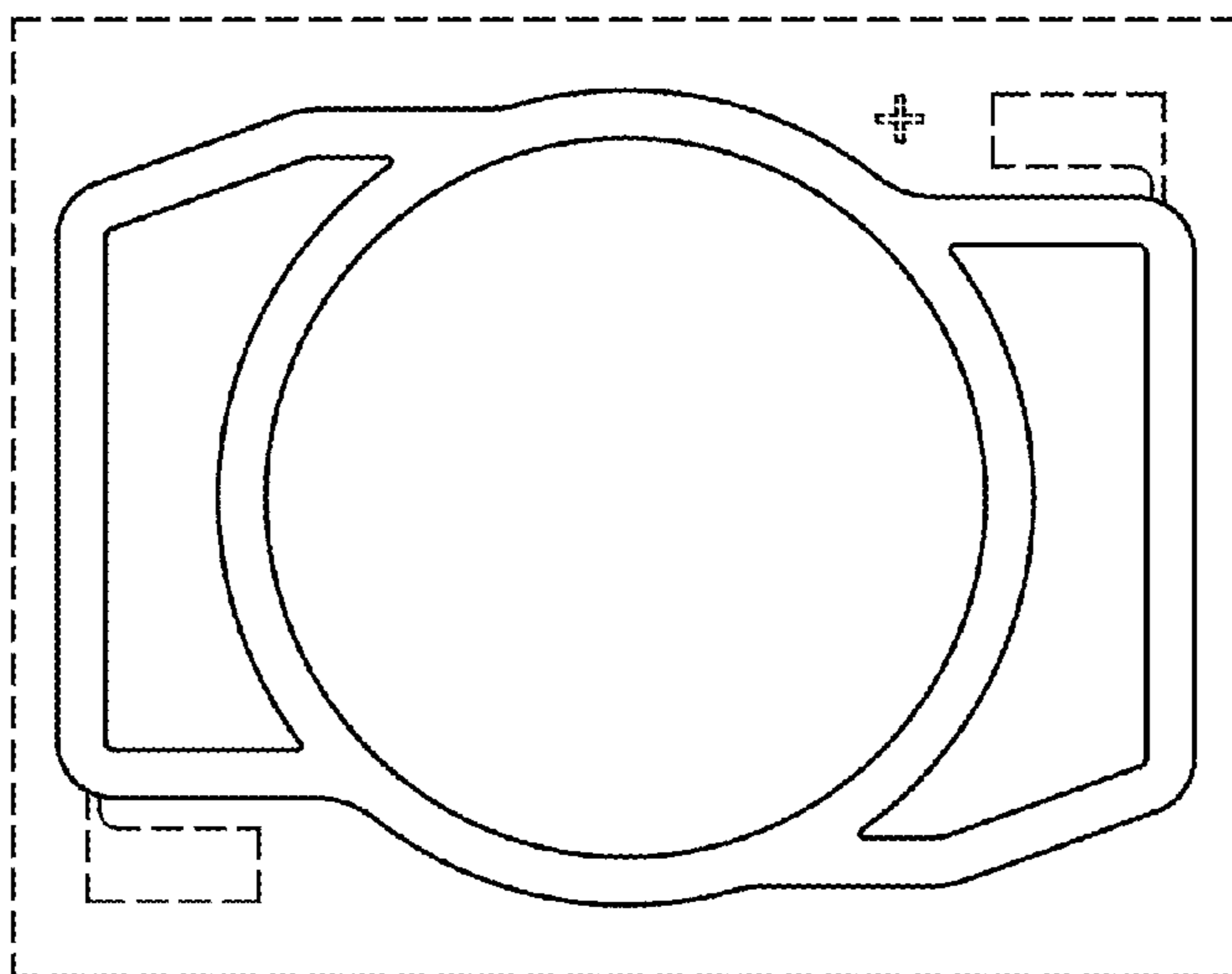


Fig. 5



Fig. 6

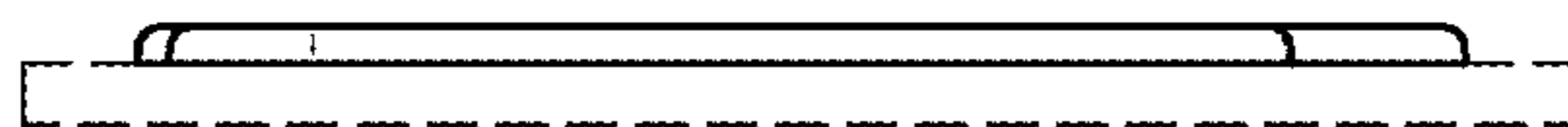


Fig. 7

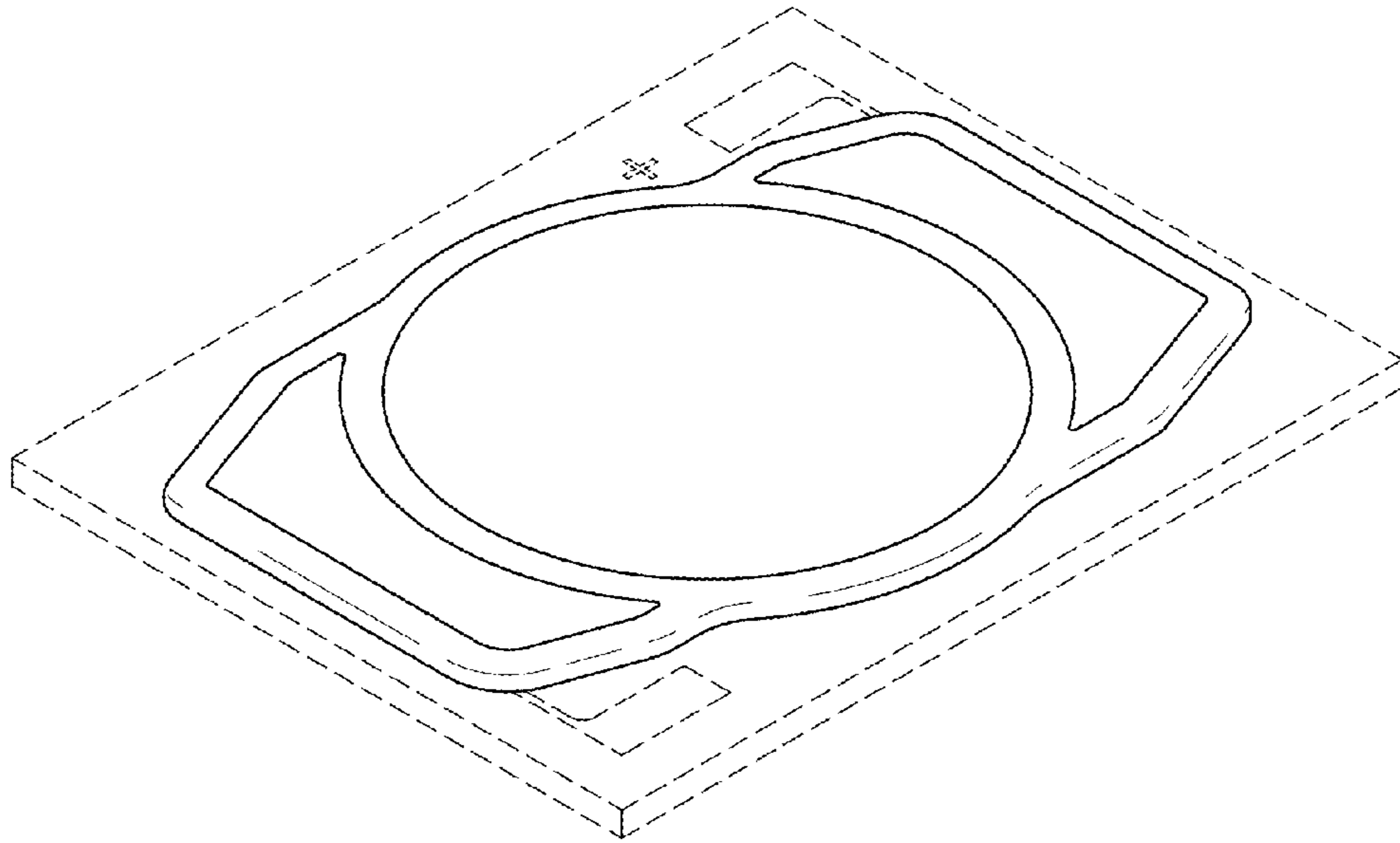


Fig. 8

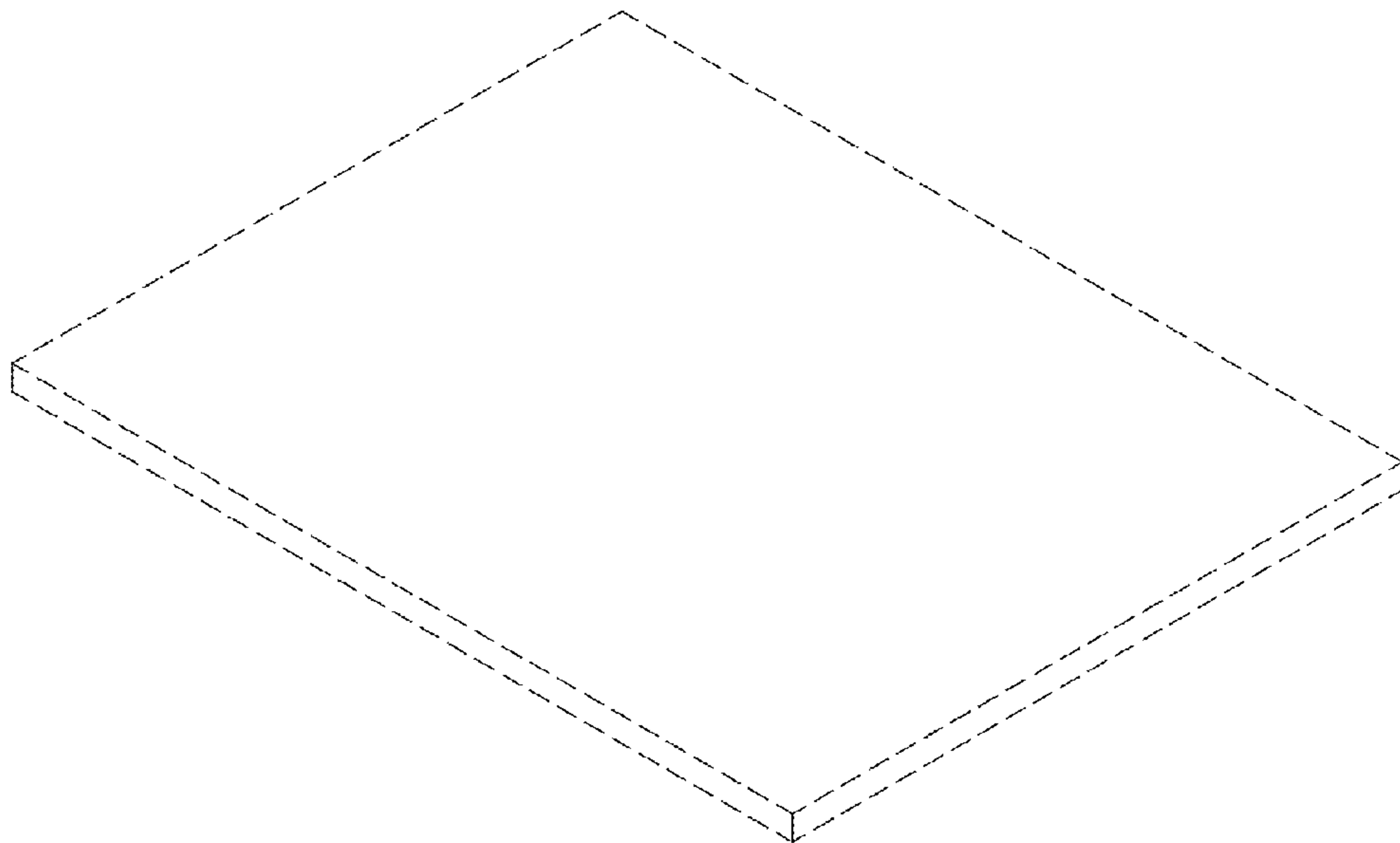


Fig. 9

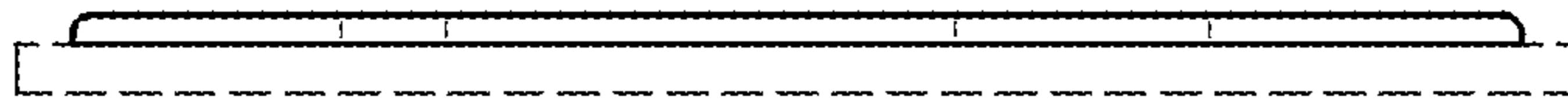


Fig. 10

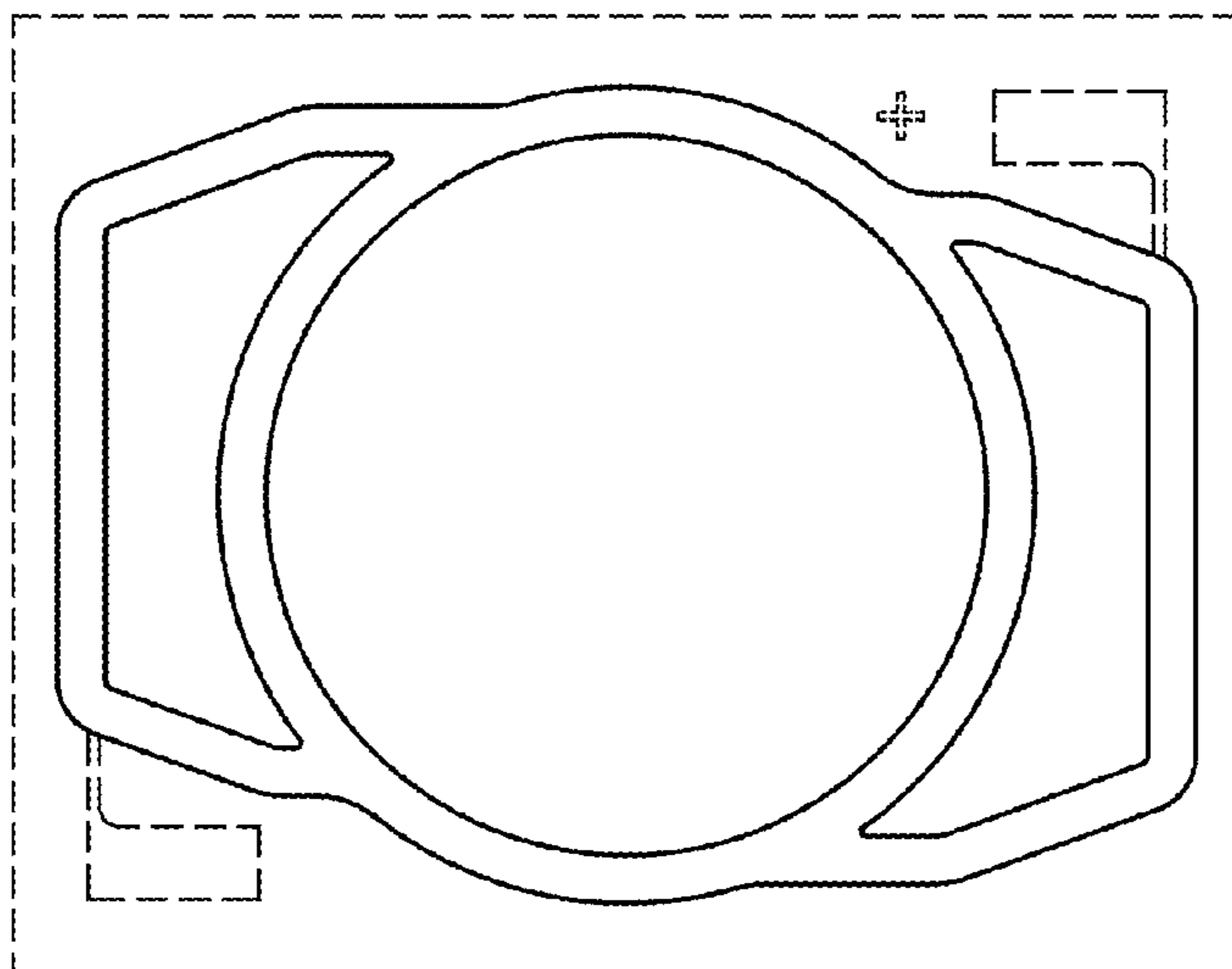


Fig. 11

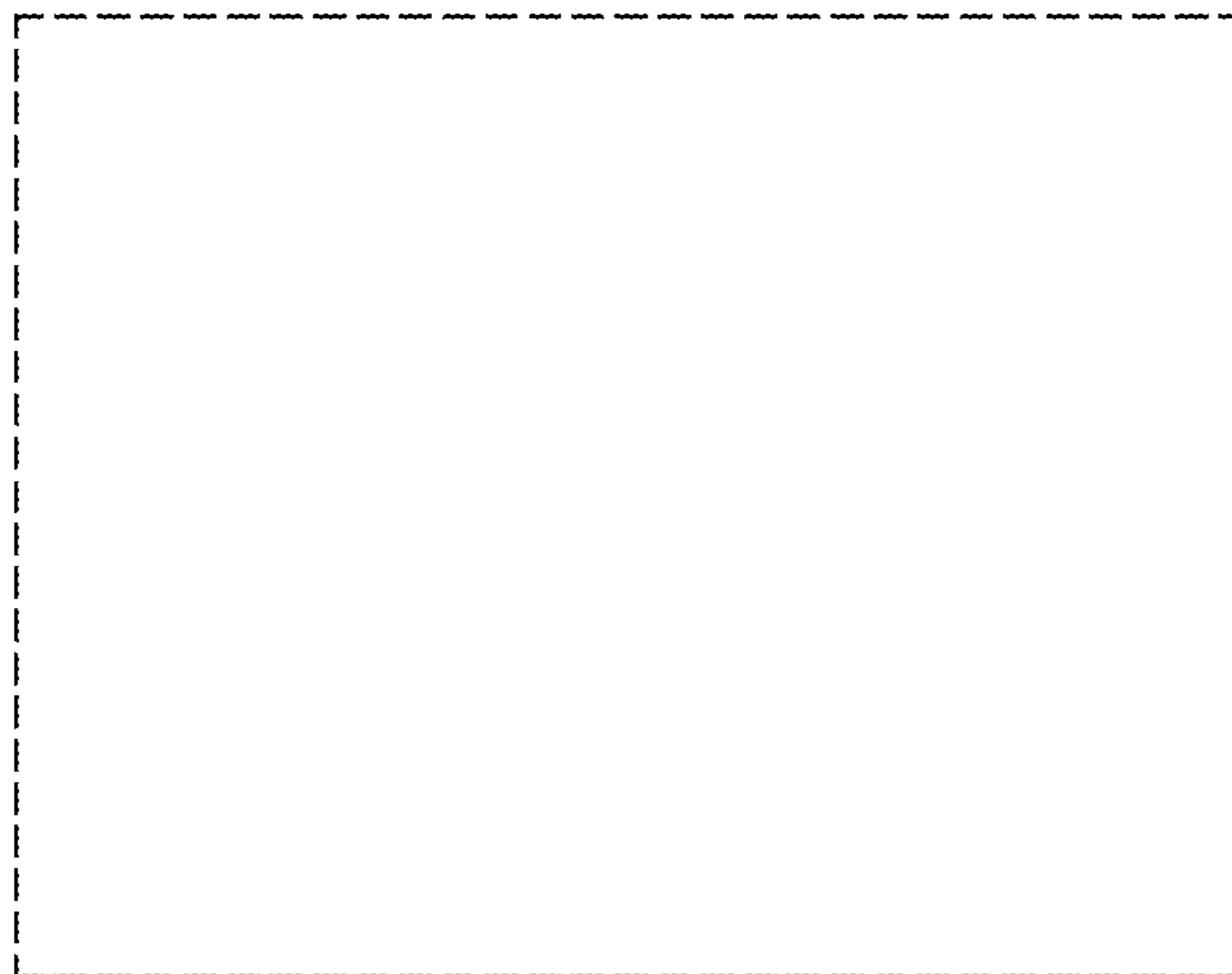


Fig. 12

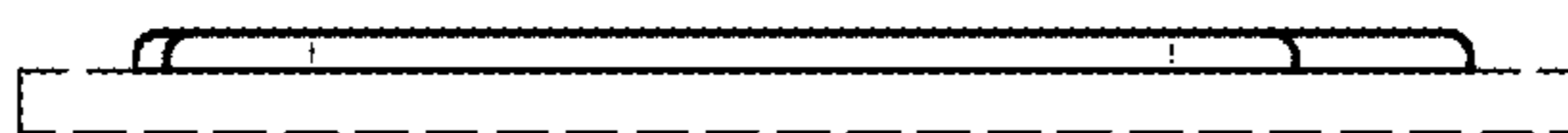




Fig. 13

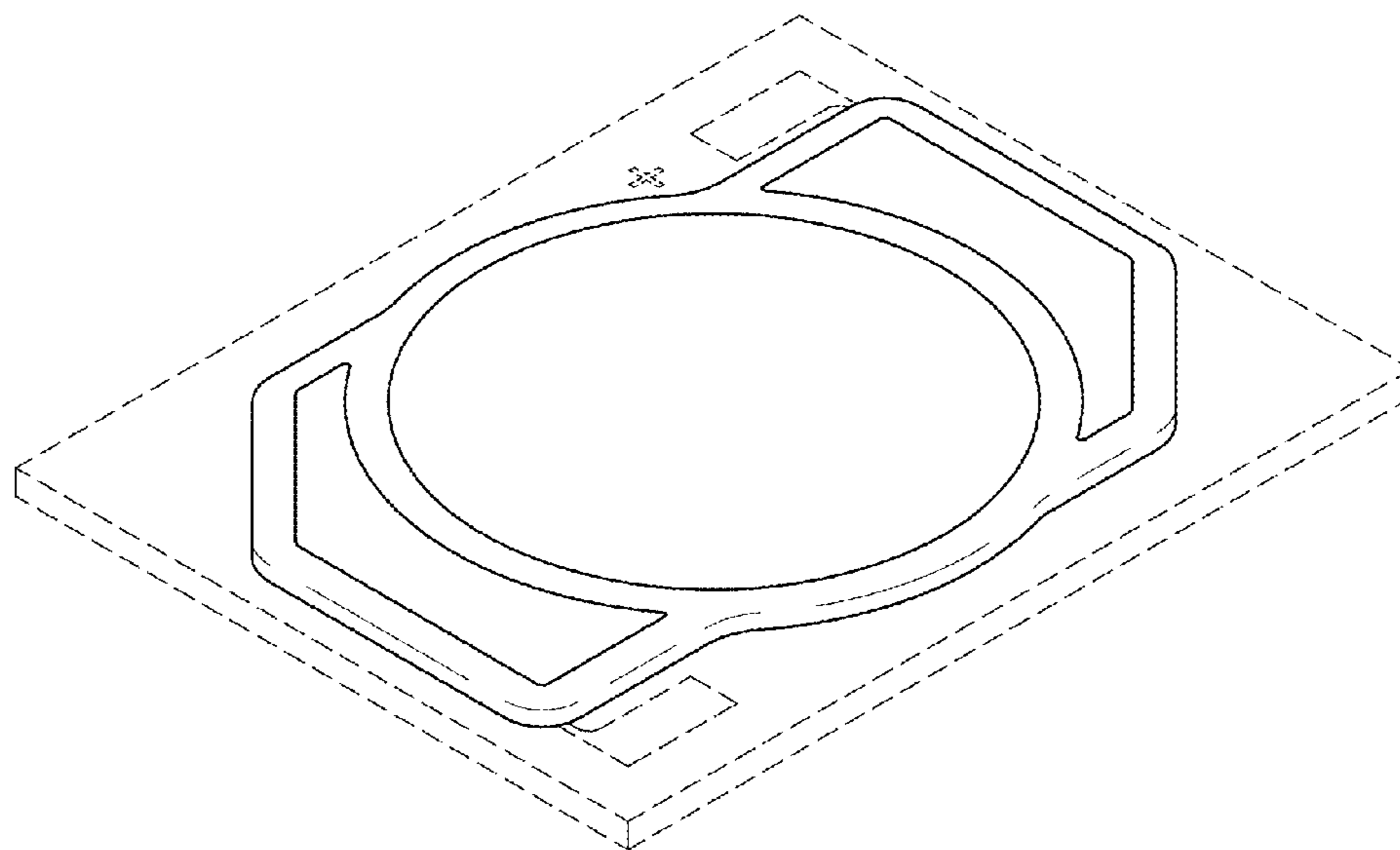


Fig. 14

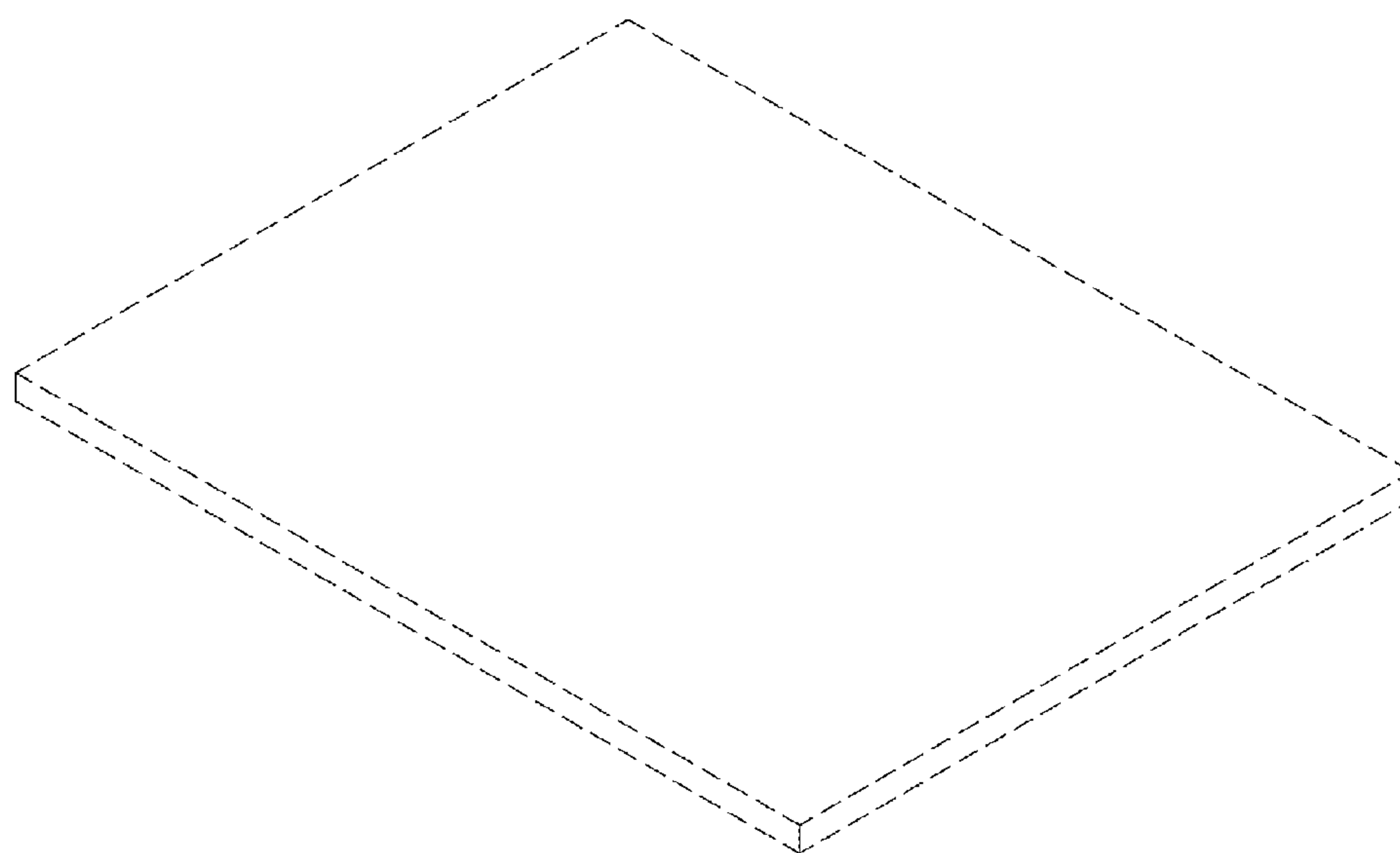


Fig. 15

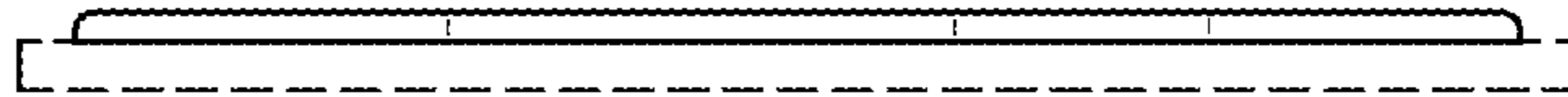


Fig. 16

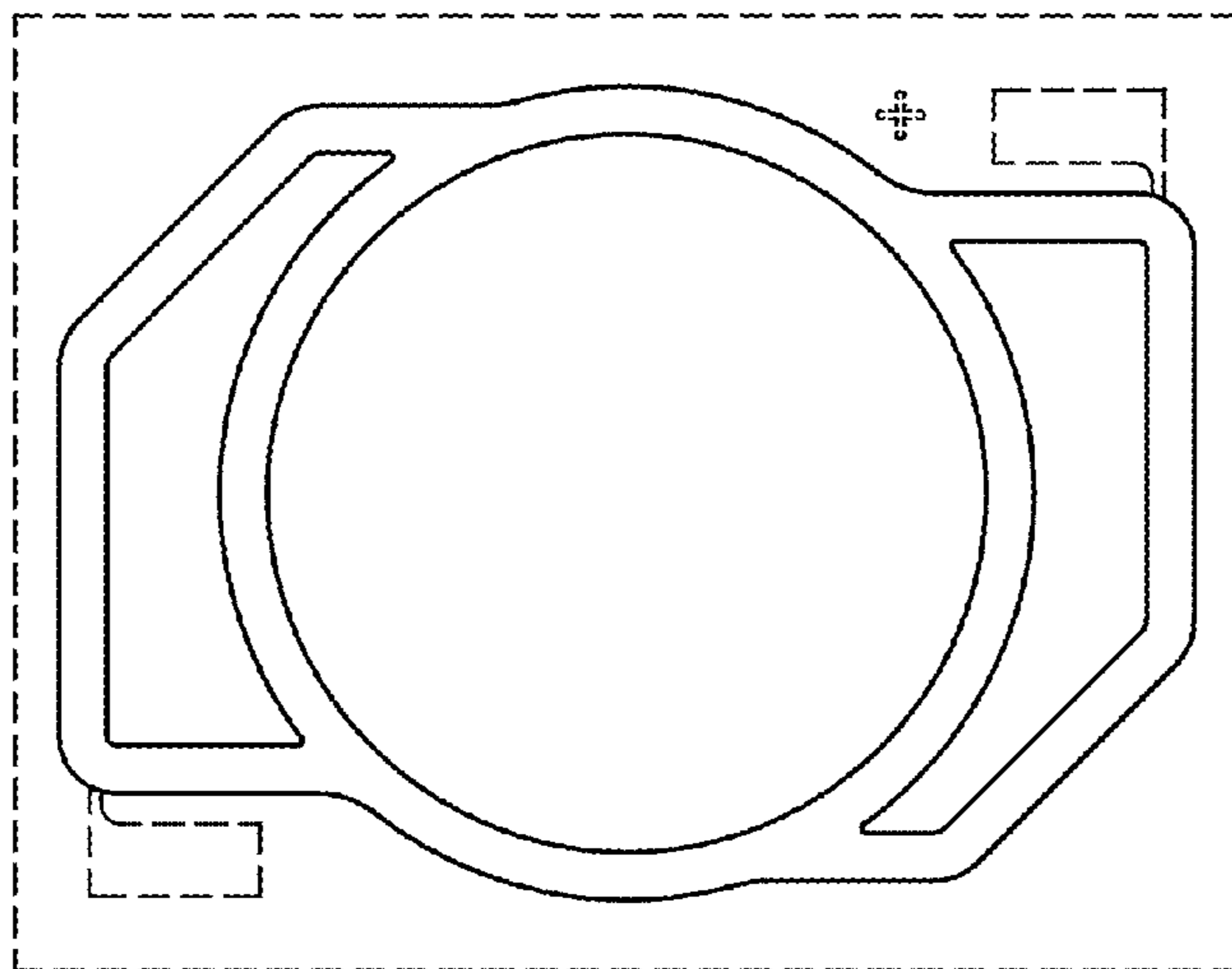


Fig. 17



Fig. 18



Fig. 19

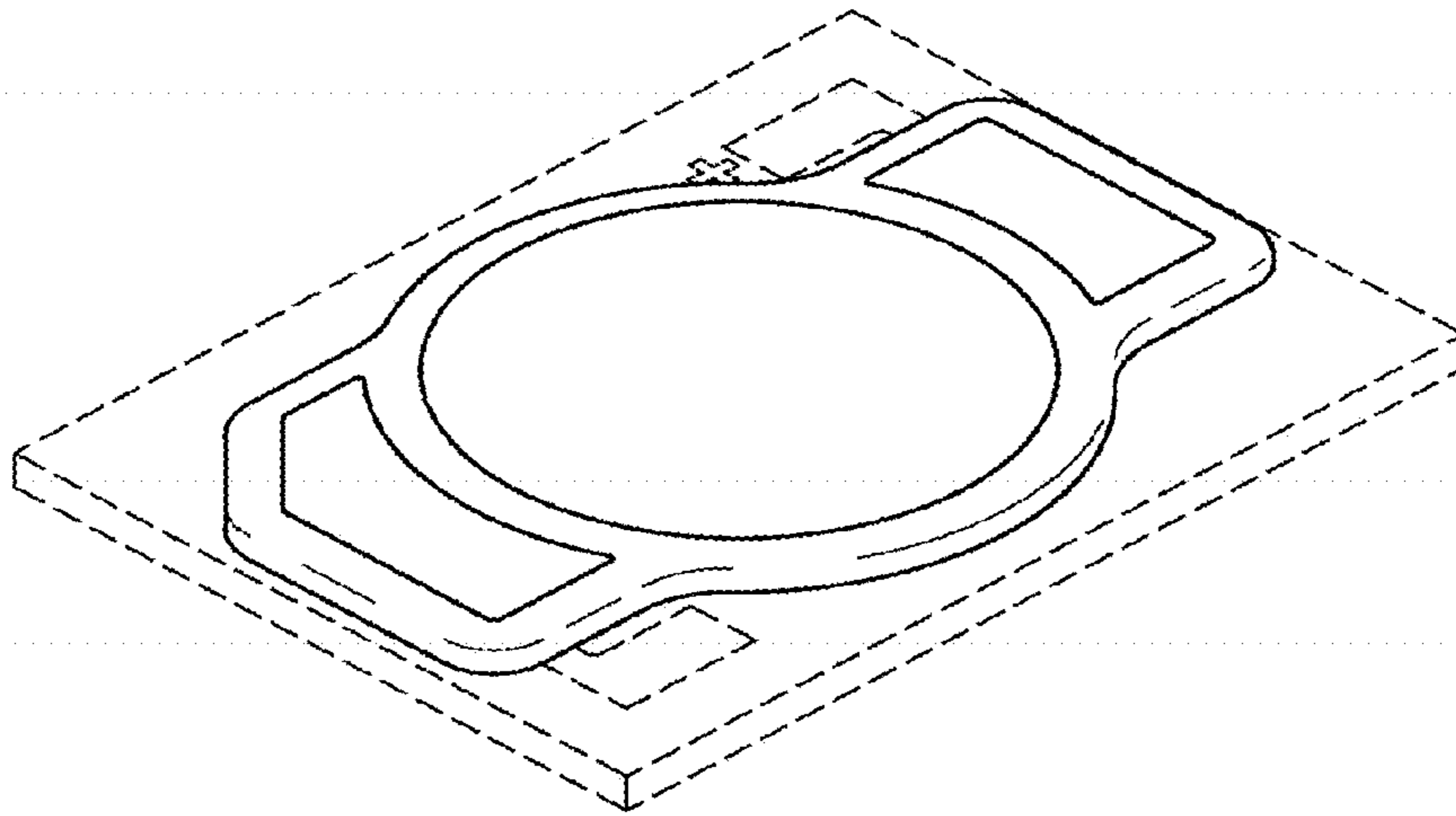


Fig. 20

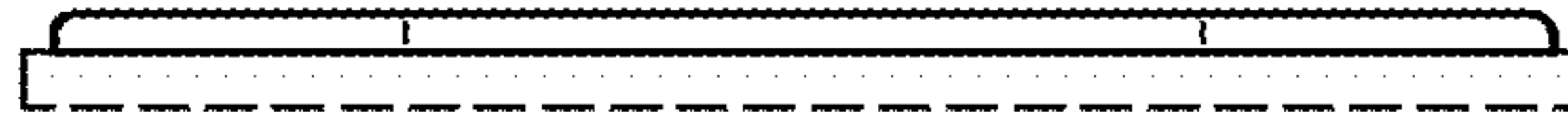


Fig. 21

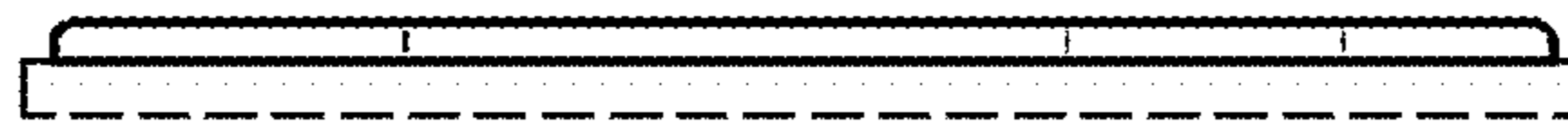


Fig. 22

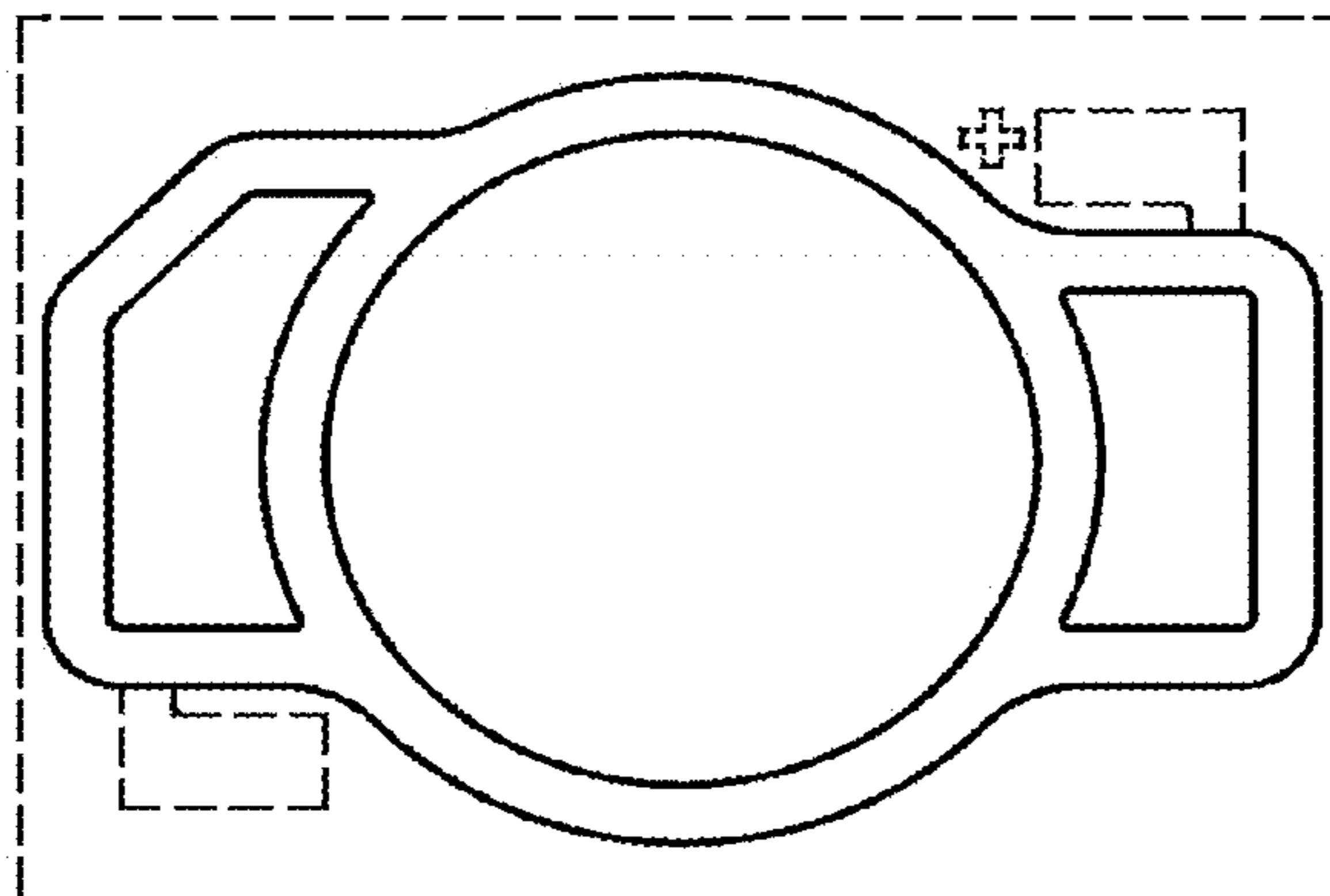


Fig. 23



Fig. 24

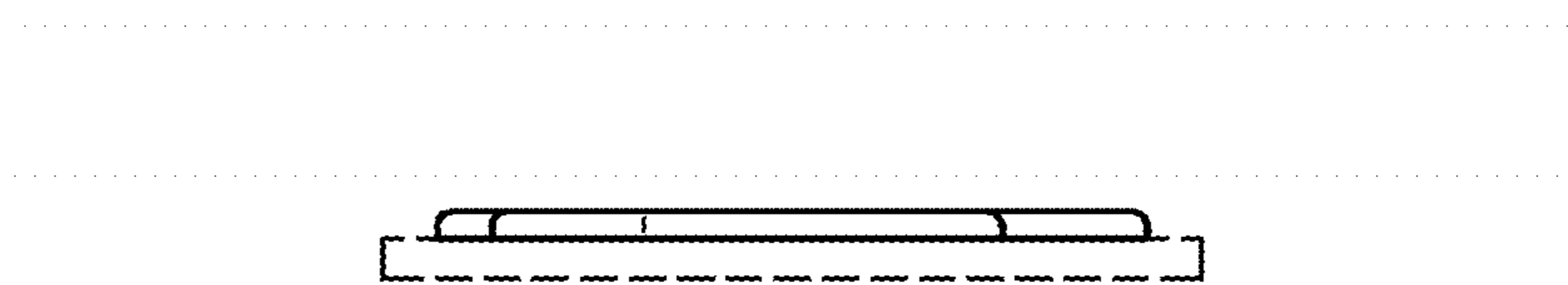


Fig. 25

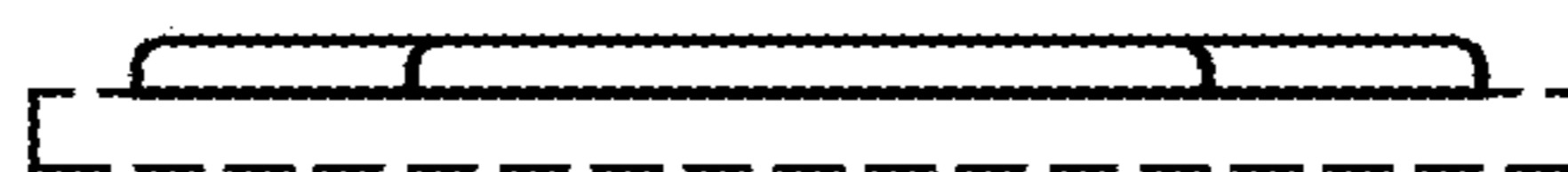


Fig. 26

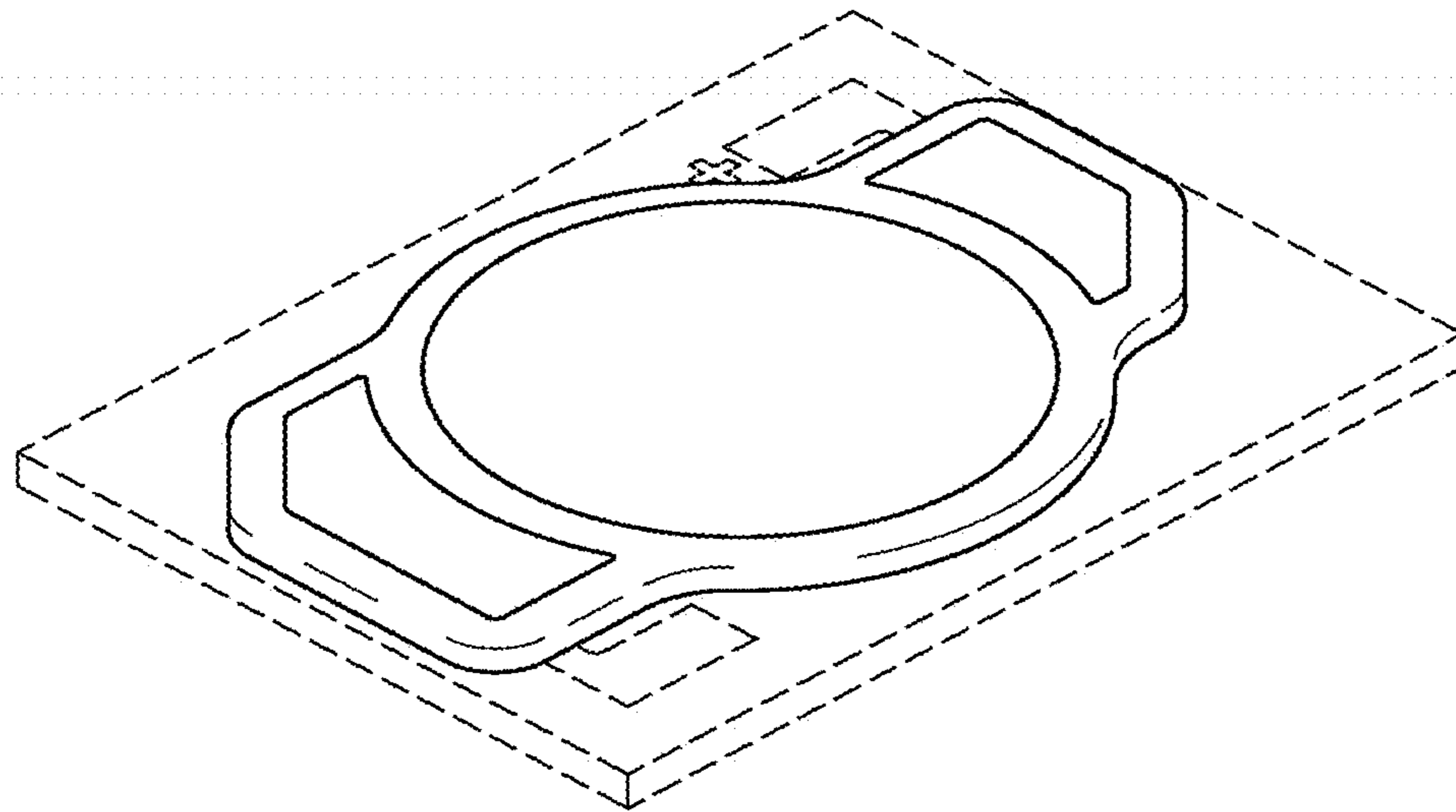


Fig. 27



Fig. 28

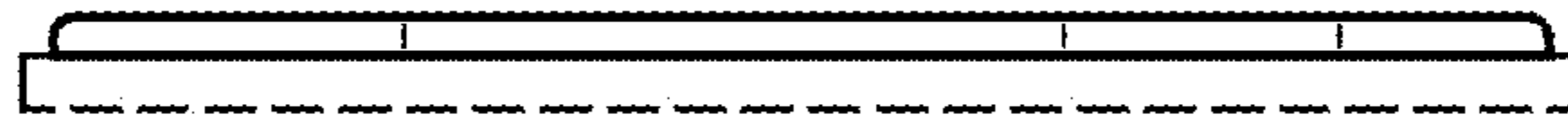


Fig. 29

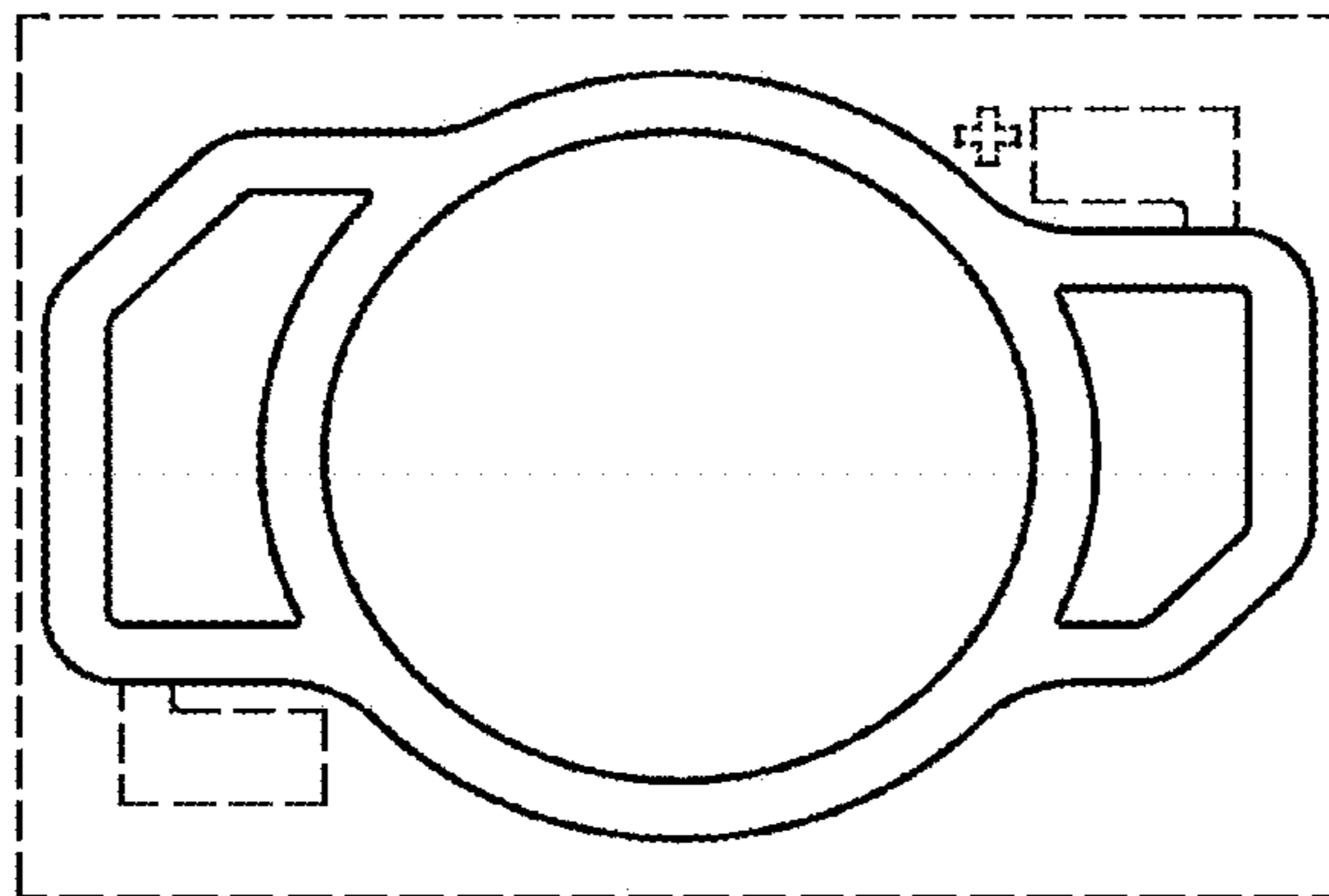




Fig. 30



Fig. 31



Fig. 32

