



US00D724039S

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

(10) **Patent No.:** **US D724,039 S**  
(45) **Date of Patent:** **\*\* Mar. 10, 2015**

(54) **LIGHT-EMITTING DIODE**

(71) Applicants: **Citizen Electronics Co., Ltd.**,  
Yamanashi-ken (JP); **Citizen Holdings**  
**Co., Ltd.**, Tokyo (JP)

(72) Inventors: **Takashi Iino**, Yamanashi-ken (JP);  
**Nodoka Oyamada**, Yamanashi-ken (JP)

(73) Assignees: **Citizen Electronics Co., Ltd.**,  
Yamanashi-ken (JP); **Citizen Holdings**  
**Co., Ltd.**, Tokyo (JP)

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

(21) Appl. No.: **29/484,696**

(22) Filed: **Mar. 12, 2014**

(30) **Foreign Application Priority Data**

Sep. 13, 2013 (JP) ..... 2013-021213  
Sep. 13, 2013 (JP) ..... 2013-021214  
Sep. 13, 2013 (JP) ..... 2013-021215

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

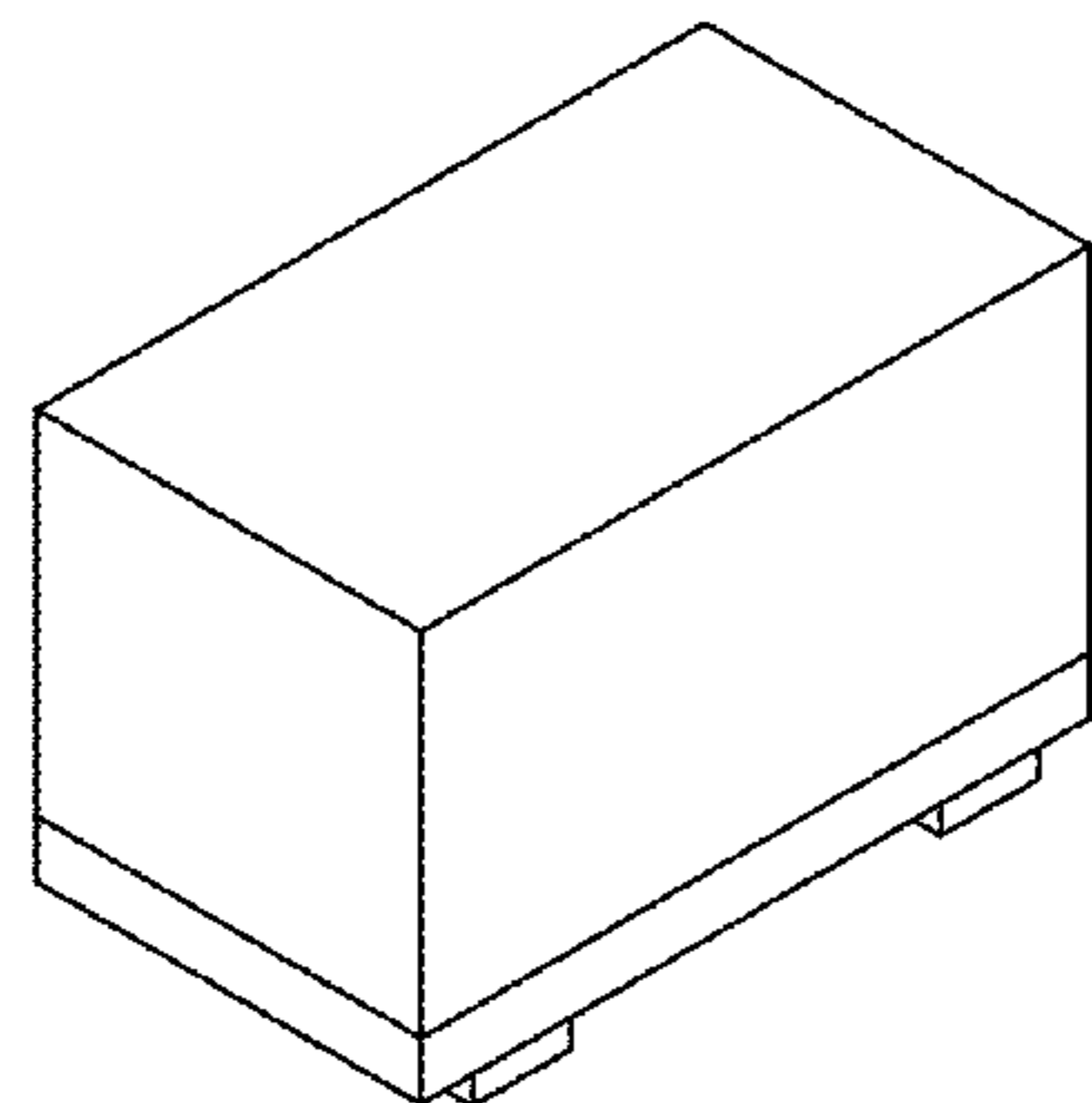
(52) **U.S. Cl.**  
USPC ..... **D13/180**

(58) **Field of Classification Search**  
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 33/48; H01L 33/483; H01L 33/486  
USPC ..... D13/180; D26/1; 257/79, 80, 81, 88,  
257/89, 95, 98, 99, 100, E33.058; 313/483,  
313/498, 500; 362/555, 800  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

6,657,238 B2 \* 12/2003 Ueda ..... 257/99  
D601,977 S \* 10/2009 Tsuchiya ..... D13/180



*Primary Examiner* — Selina Sikder

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

(57) **CLAIM**

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

**DESCRIPTION**

FIG. 1 is a top perspective view of a first embodiment of a light-emitting diode showing an upper surface with front and left side surfaces;

FIG. 2 is a bottom perspective view thereof showing a bottom surface with rear and right side surfaces;

FIG. 3 is a front view thereof, a rear view opposite the front view being a mirror image of 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 opposite the left side view being identical to FIG. 6;

FIG. 7 is a top perspective view of a second embodiment of a light-emitting diode showing an upper surface with front and left side surfaces;

FIG. 8 is a bottom perspective view thereof showing a bottom surface with rear and right side surfaces;

FIG. 9 is a front view thereof, a rear view opposite the front view being a mirror image of 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 opposite the left side view being identical to FIG. 12;

FIG. 13 is a top perspective view of a third embodiment of a light-emitting diode showing an upper surface with front and left side surfaces;

FIG. 14 is a bottom perspective view thereof showing a bottom surface with rear and right side surfaces;

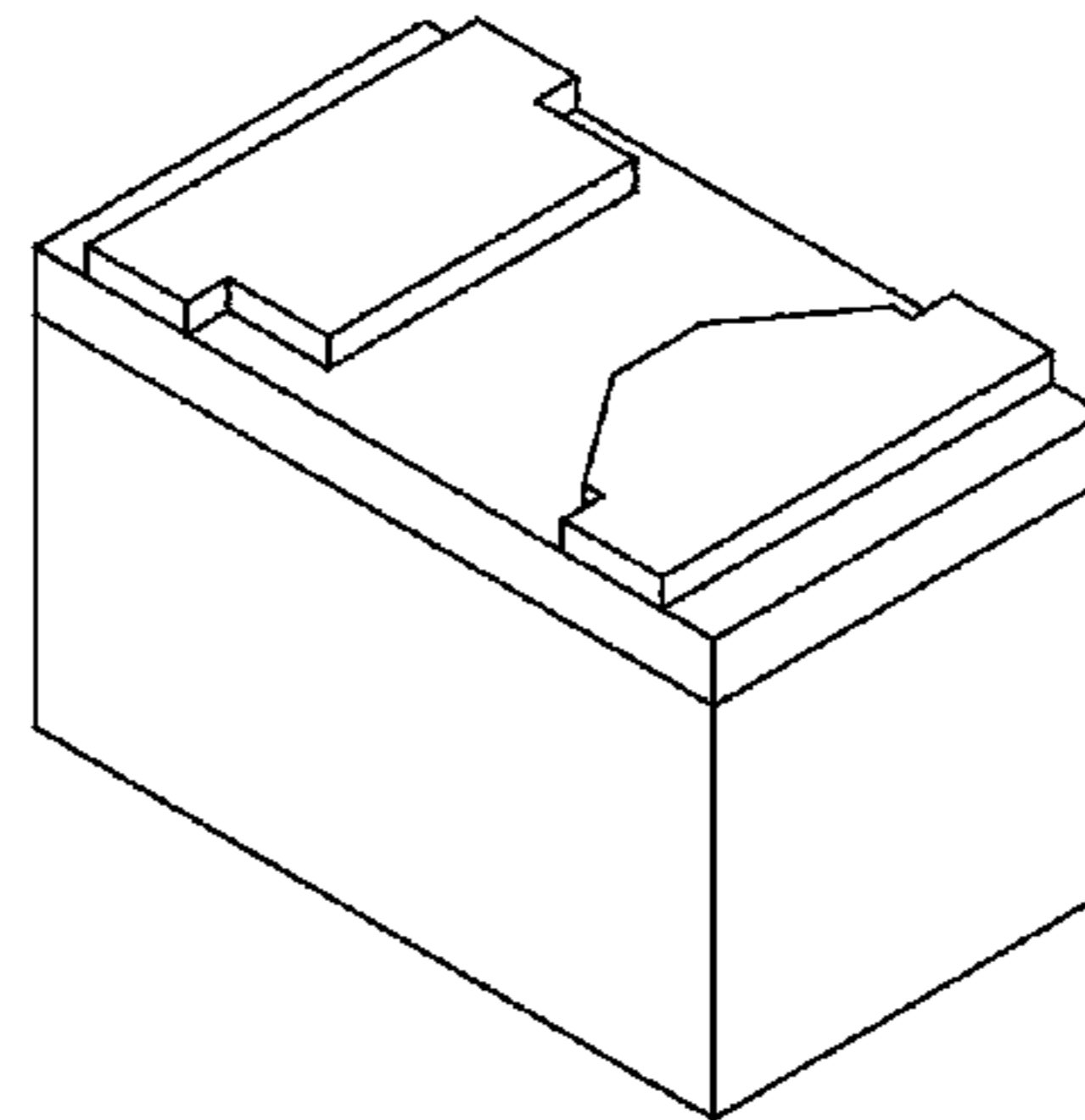
FIG. 15 is a front view thereof, a rear view opposite the front view being a mirror image of FIG. 15; and,

FIG. 16 is a top plan view thereof;

FIG. 17 is a bottom plan view thereof; and,

FIG. 18 is a left side view thereof, a right side view opposite the left side view being identical to FIG. 18.

**1 Claim, 12 Drawing Sheets**



(Continued)

(56)

**References Cited**

U.S. PATENT DOCUMENTS

D602,884 S *	10/2009	Wada et al. ....	D13/180	D676,002 S *	2/2013	Watanabe .....	D13/180
D634,282 S *	3/2011	Wilson .....	D13/180	D694,201 S *	11/2013	Iino .....	D13/180
D647,865 S *	11/2011	Miyashita .....	D13/180	D710,811 S *	8/2014	Chen et al. ....	D13/180
D653,629 S *	2/2012	Miyashita .....	D13/180	2007/0223170 A1 *	9/2007	Sato et al. ....	361/118
D669,042 S *	10/2012	Kanemaru et al. ....	D13/180	2008/0238604 A1 *	10/2008	Sato et al. ....	338/21
D669,043 S *	10/2012	Kamijo .....	D13/180	2009/0202251 A1 *	8/2009	Shibayama .....	398/138
				2013/0240922 A1 *	9/2013	Yamamoto .....	257/89
				2013/0307014 A1 *	11/2013	Yamamoto et al. ....	257/99
				2014/0070249 A1 *	3/2014	Yoon et al. ....	257/98

\* cited by examiner

Fig. 1

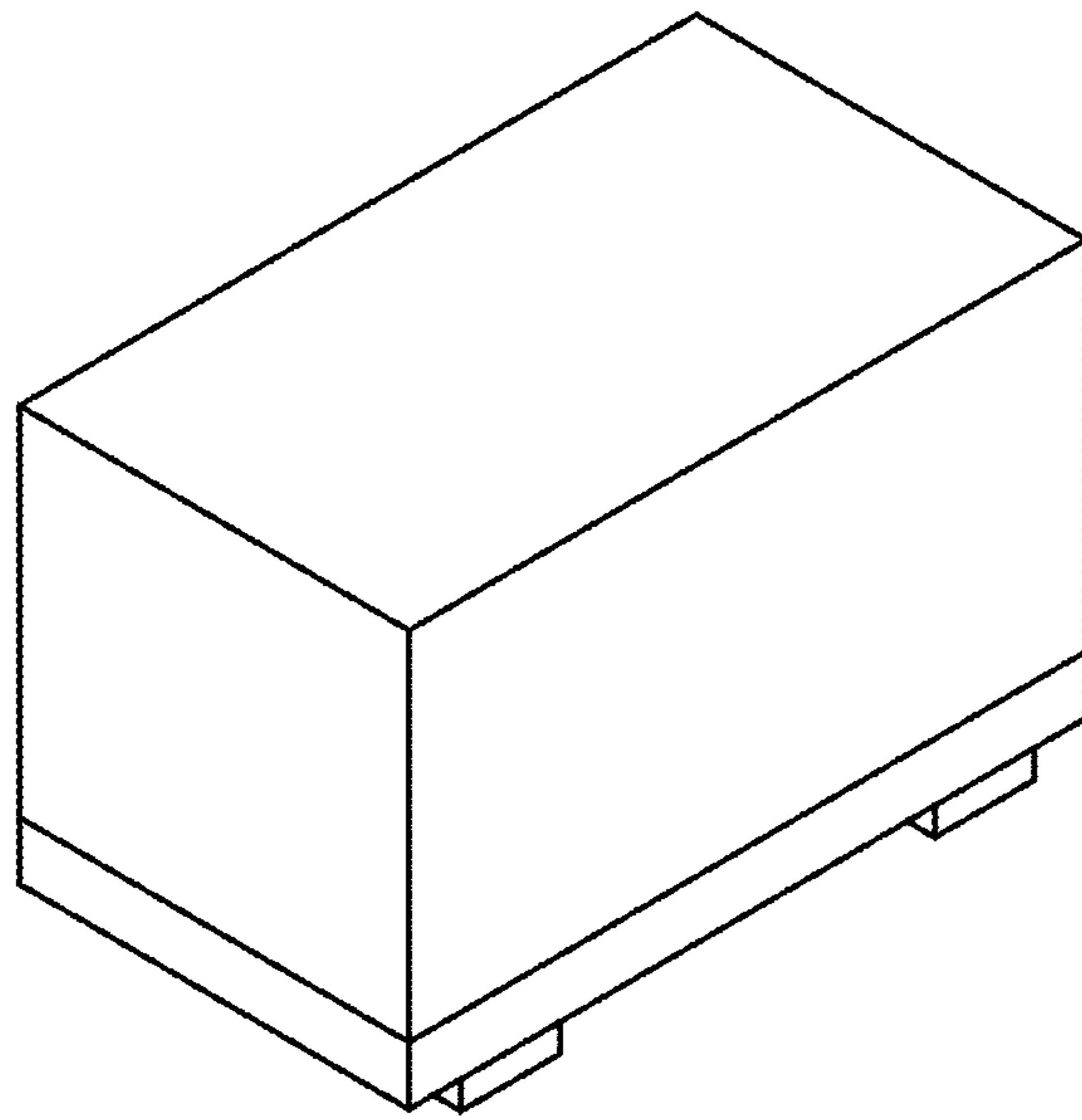


Fig. 2

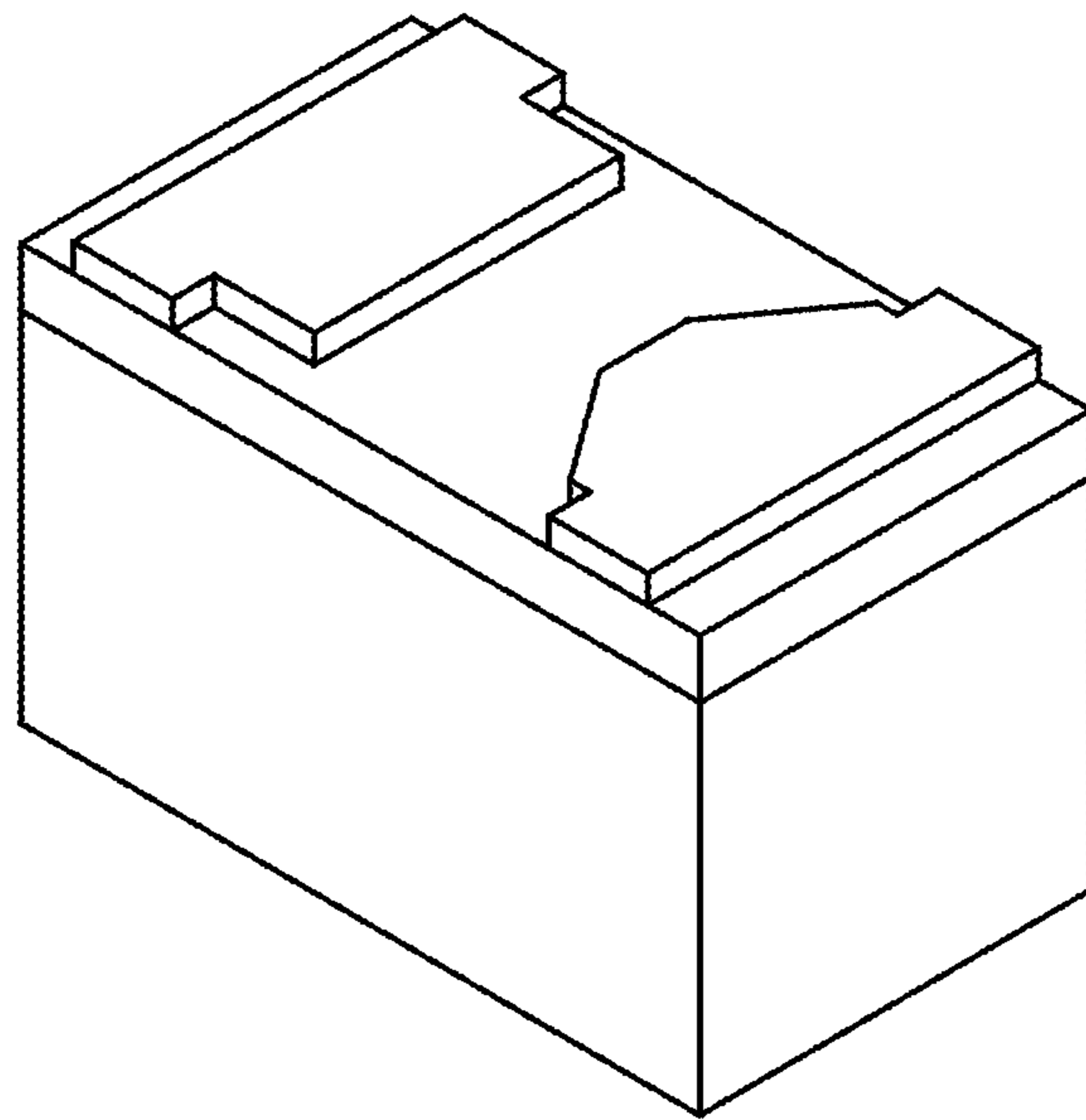


Fig. 3

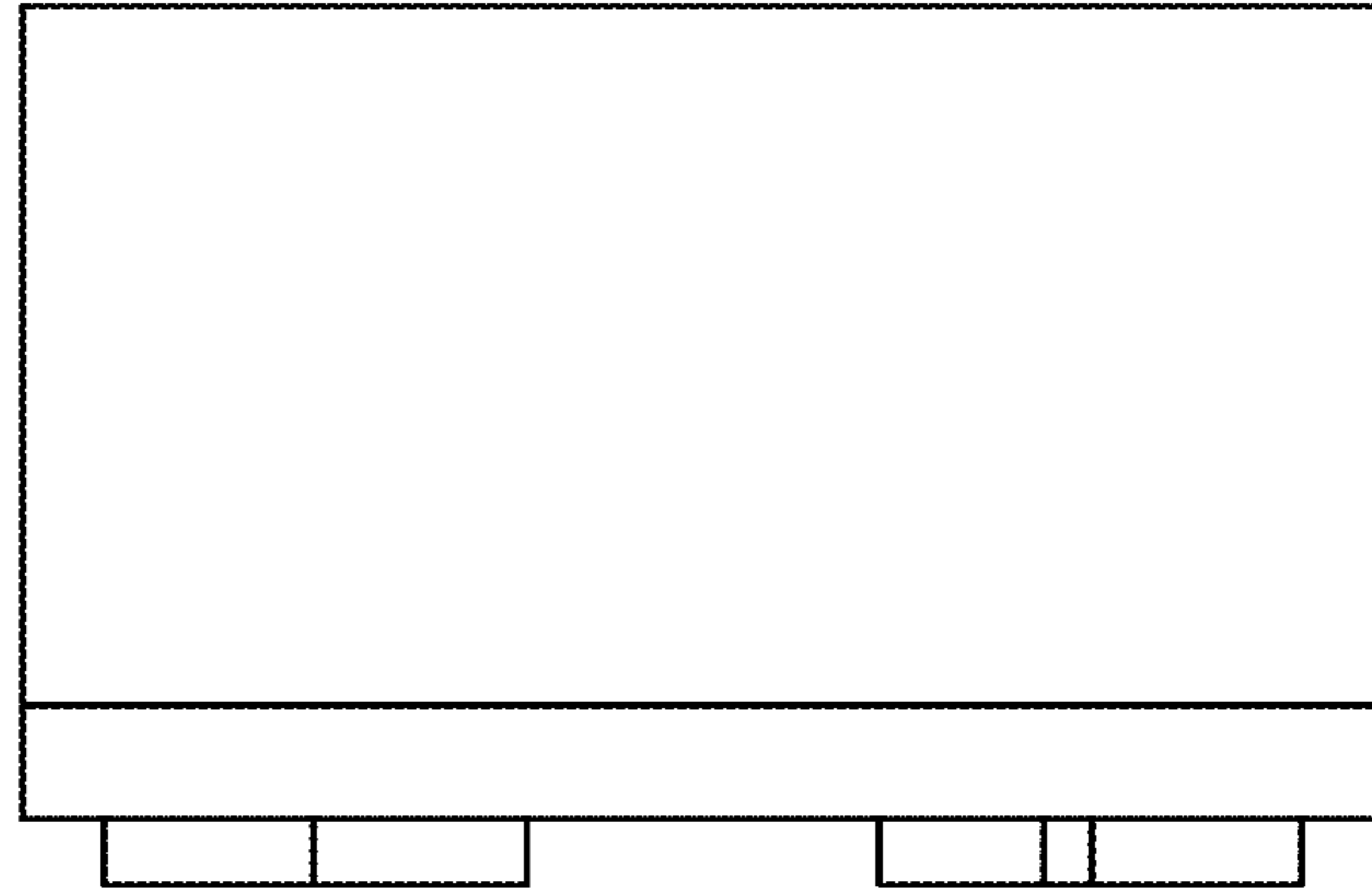


Fig. 4

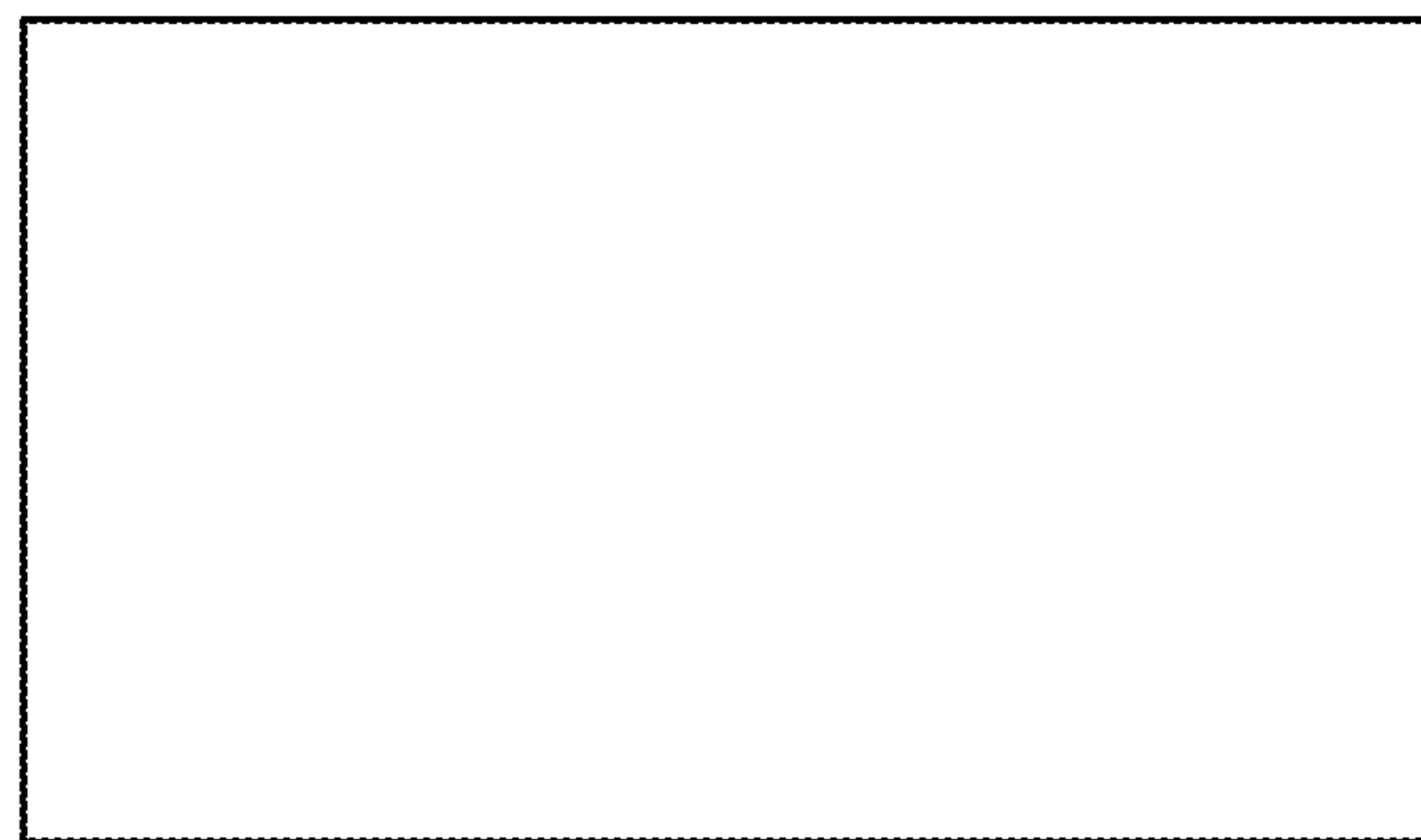


Fig. 5

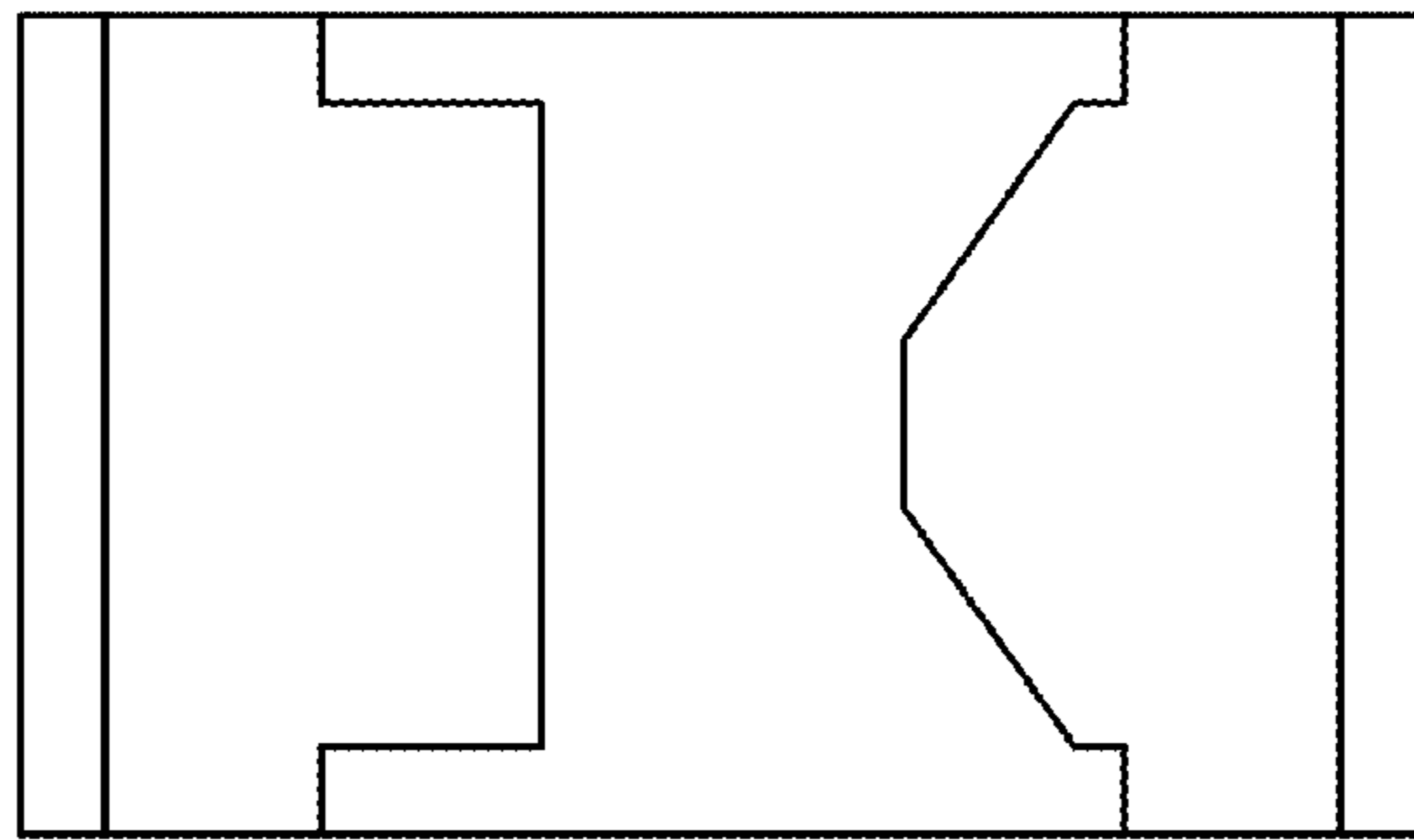


Fig. 6

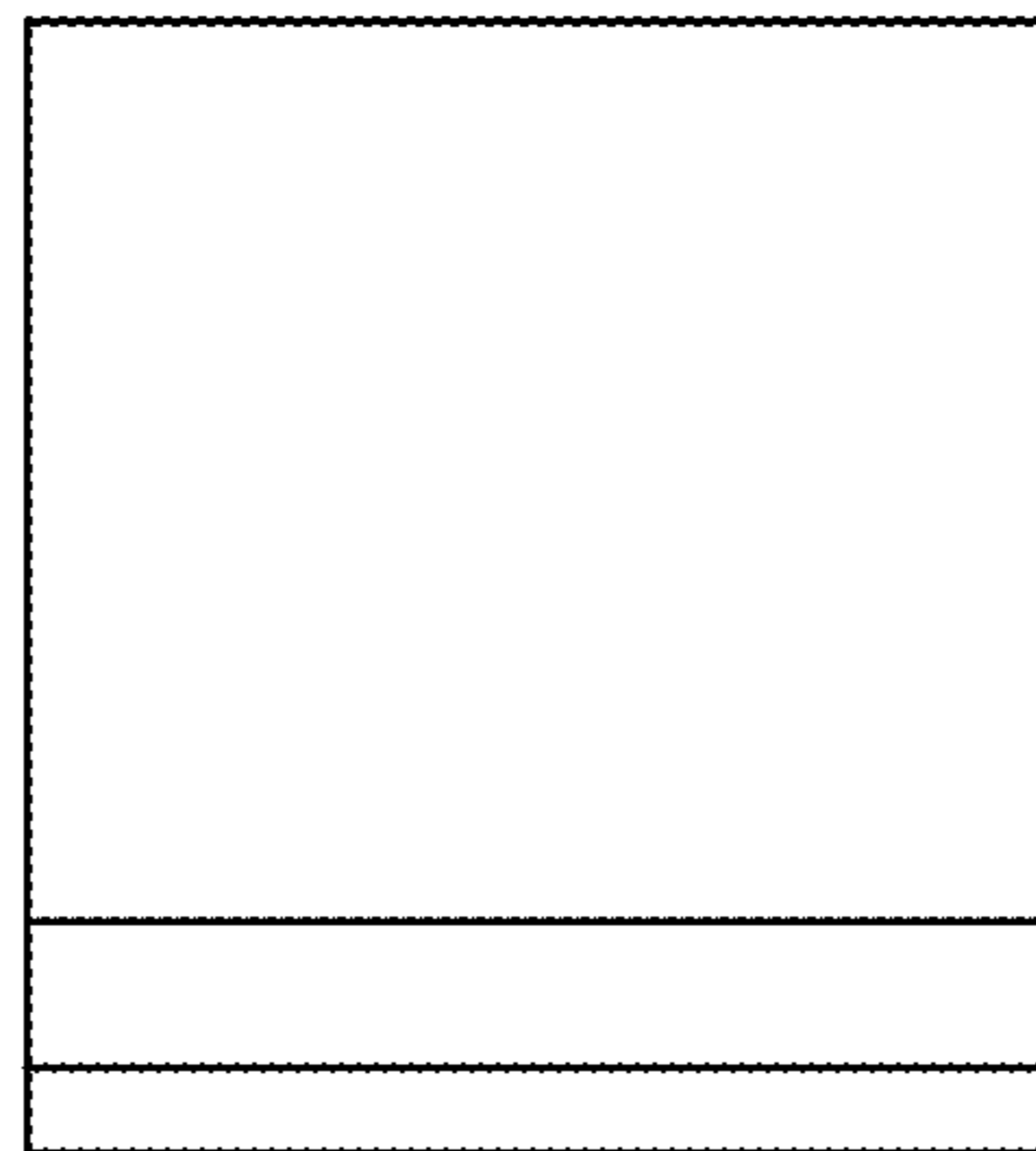


Fig. 7

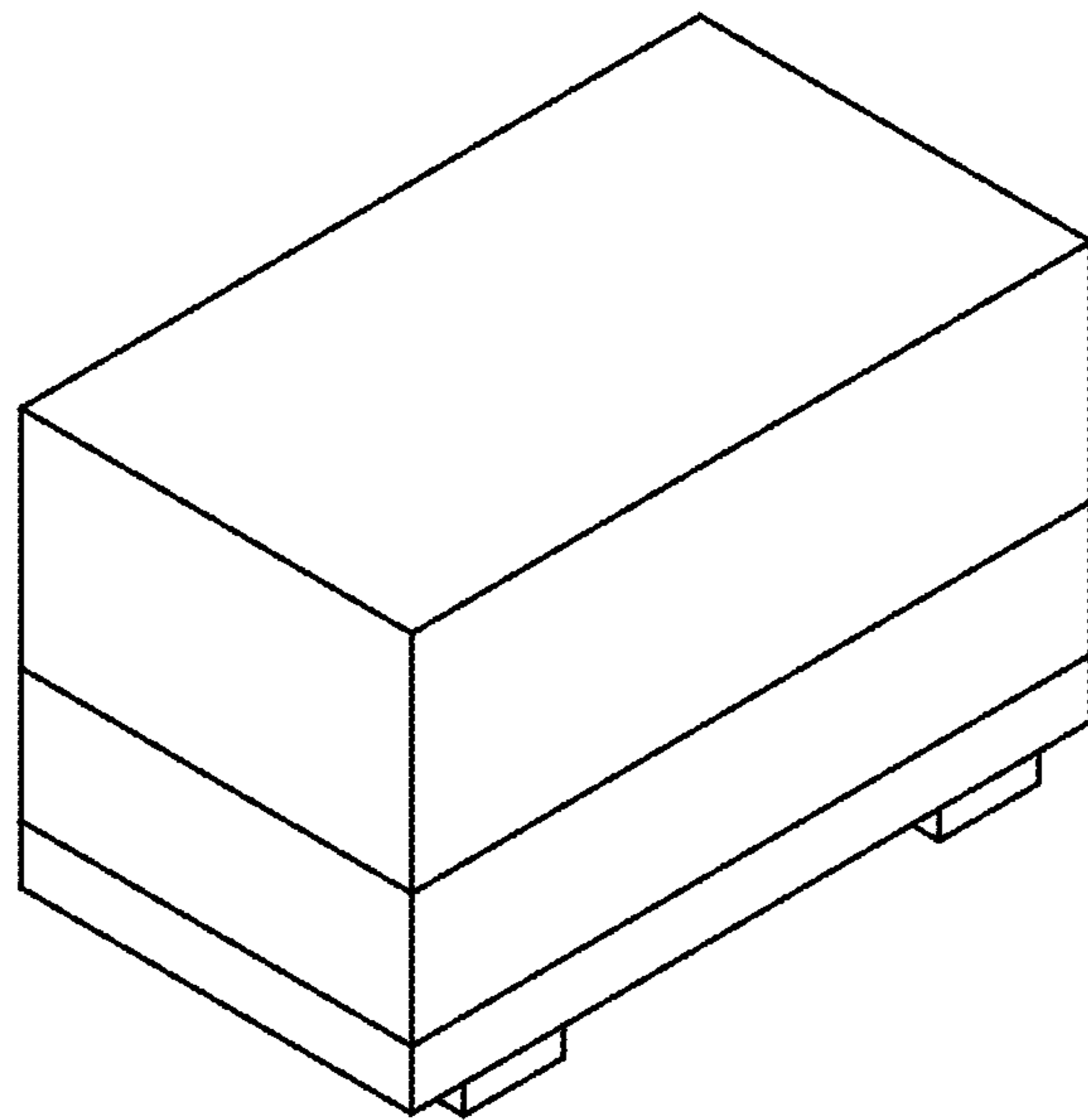


Fig. 8

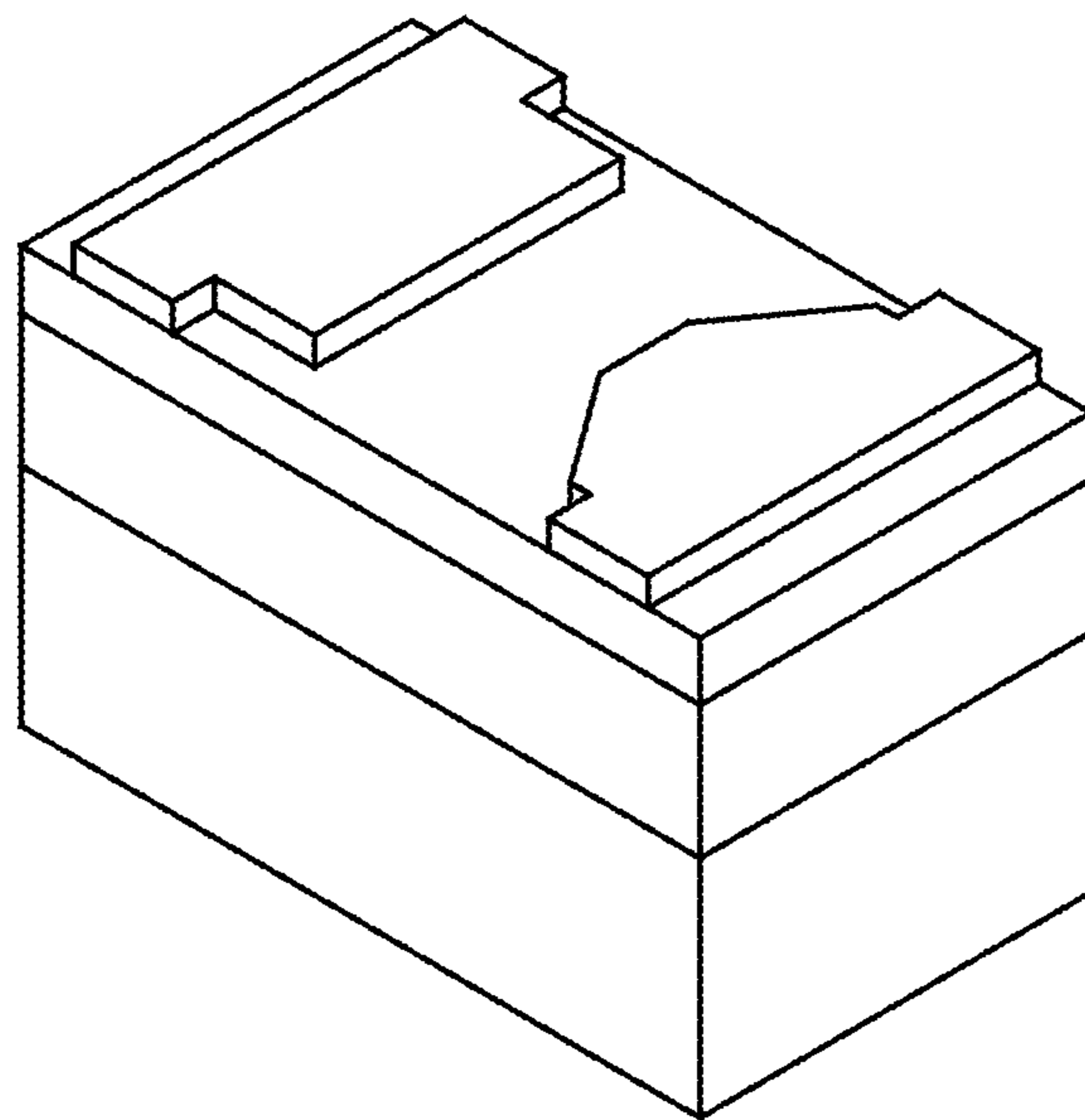




Fig. 9

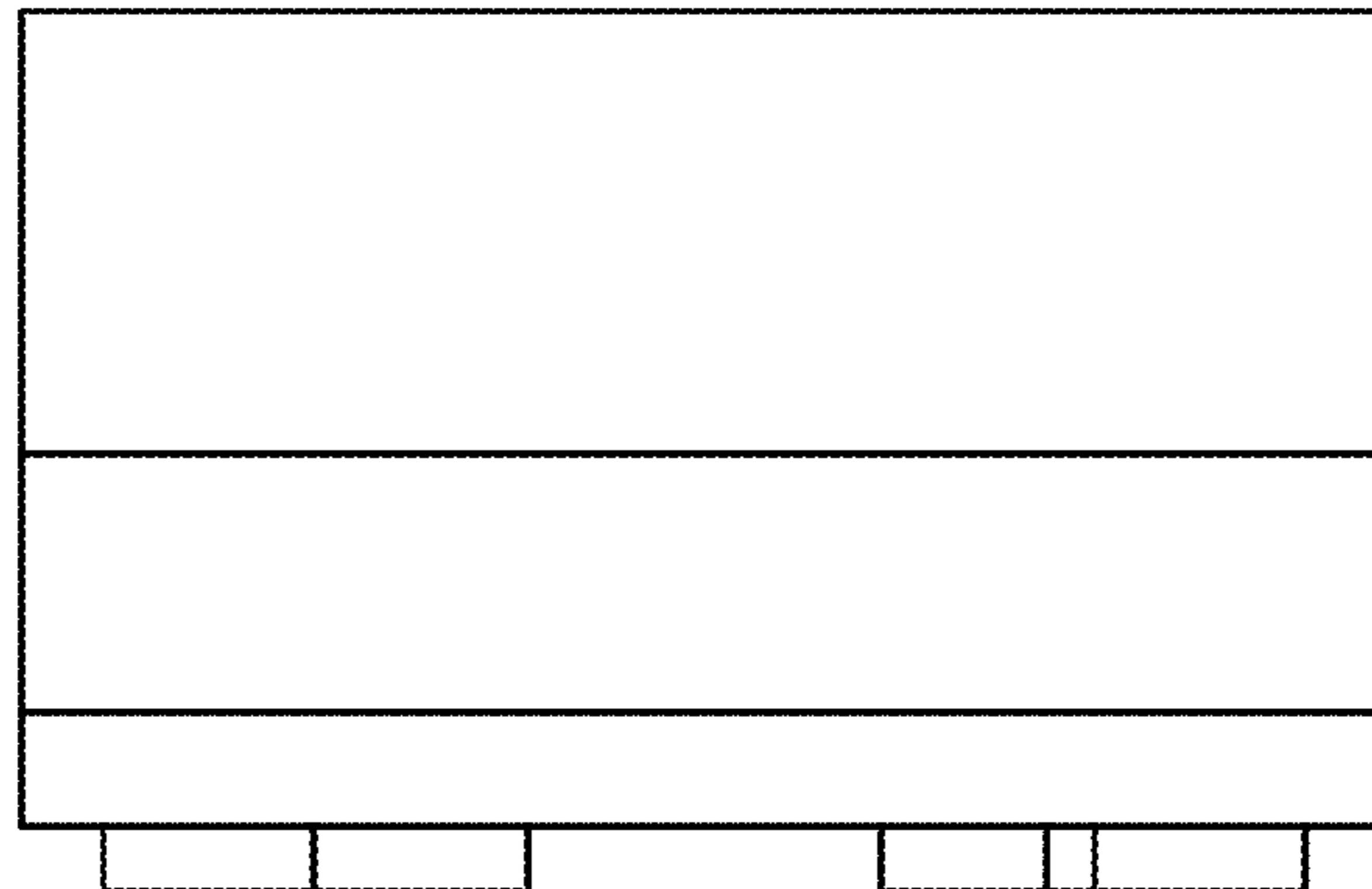


Fig. 10

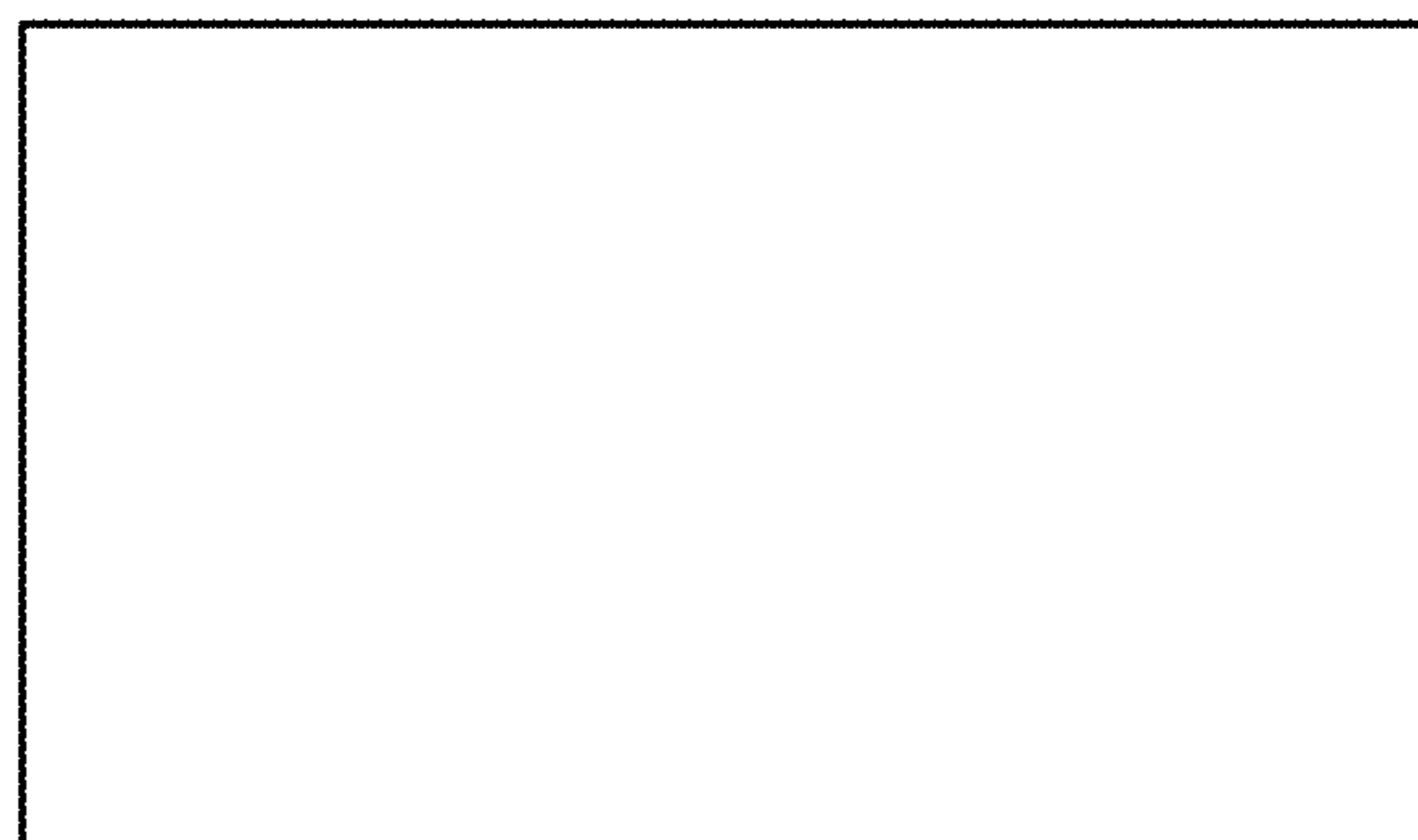


Fig. 11

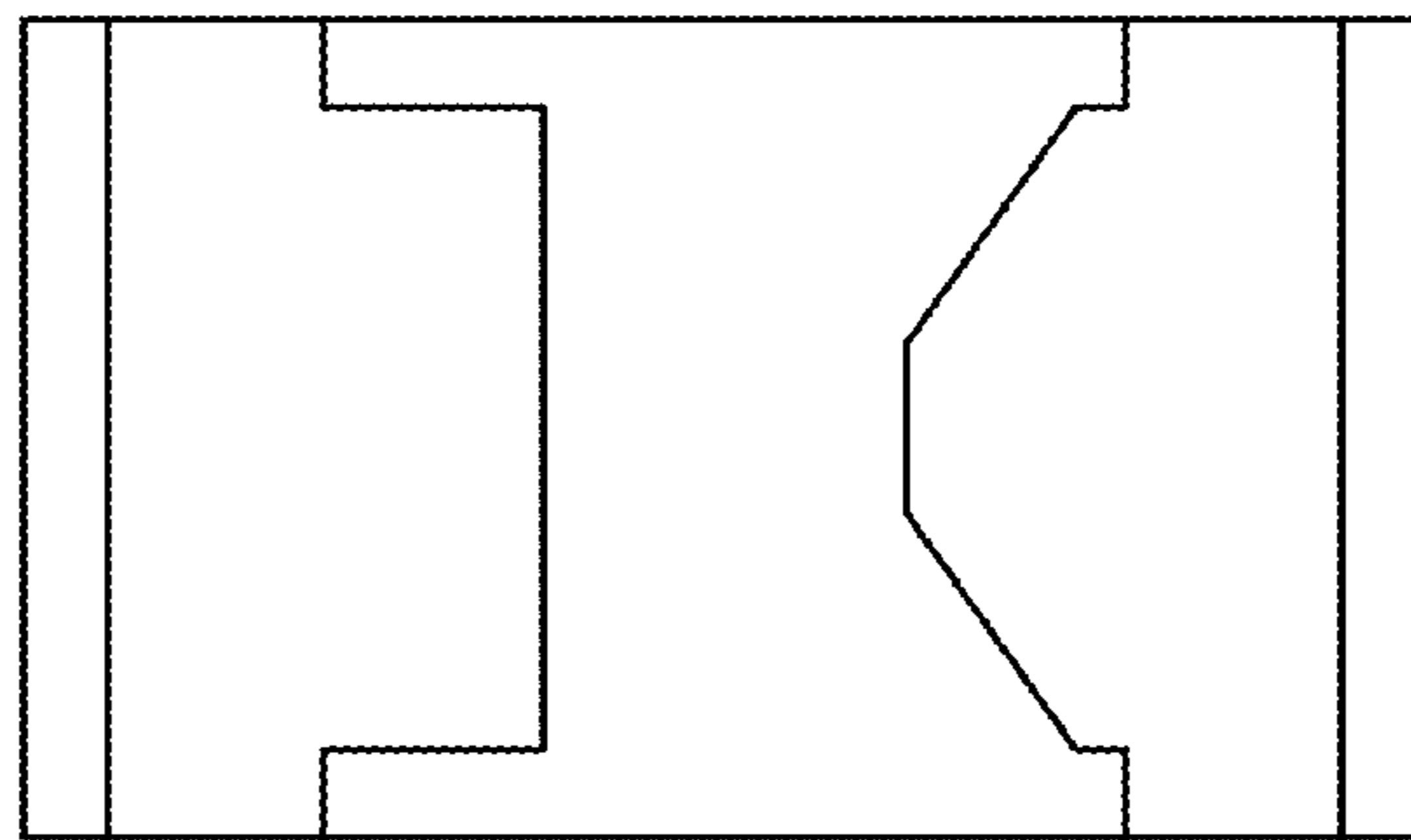


Fig. 12

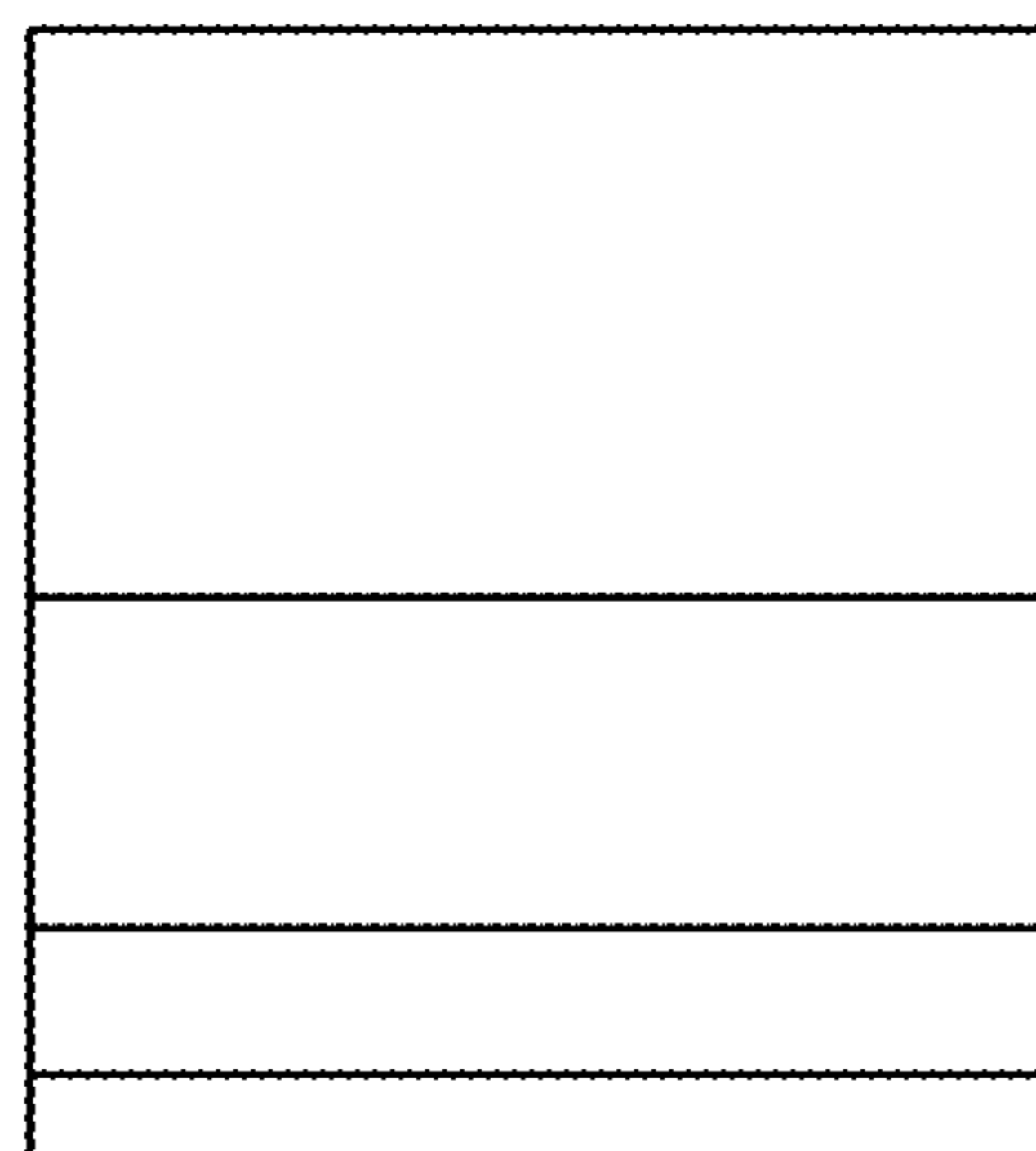


Fig. 13

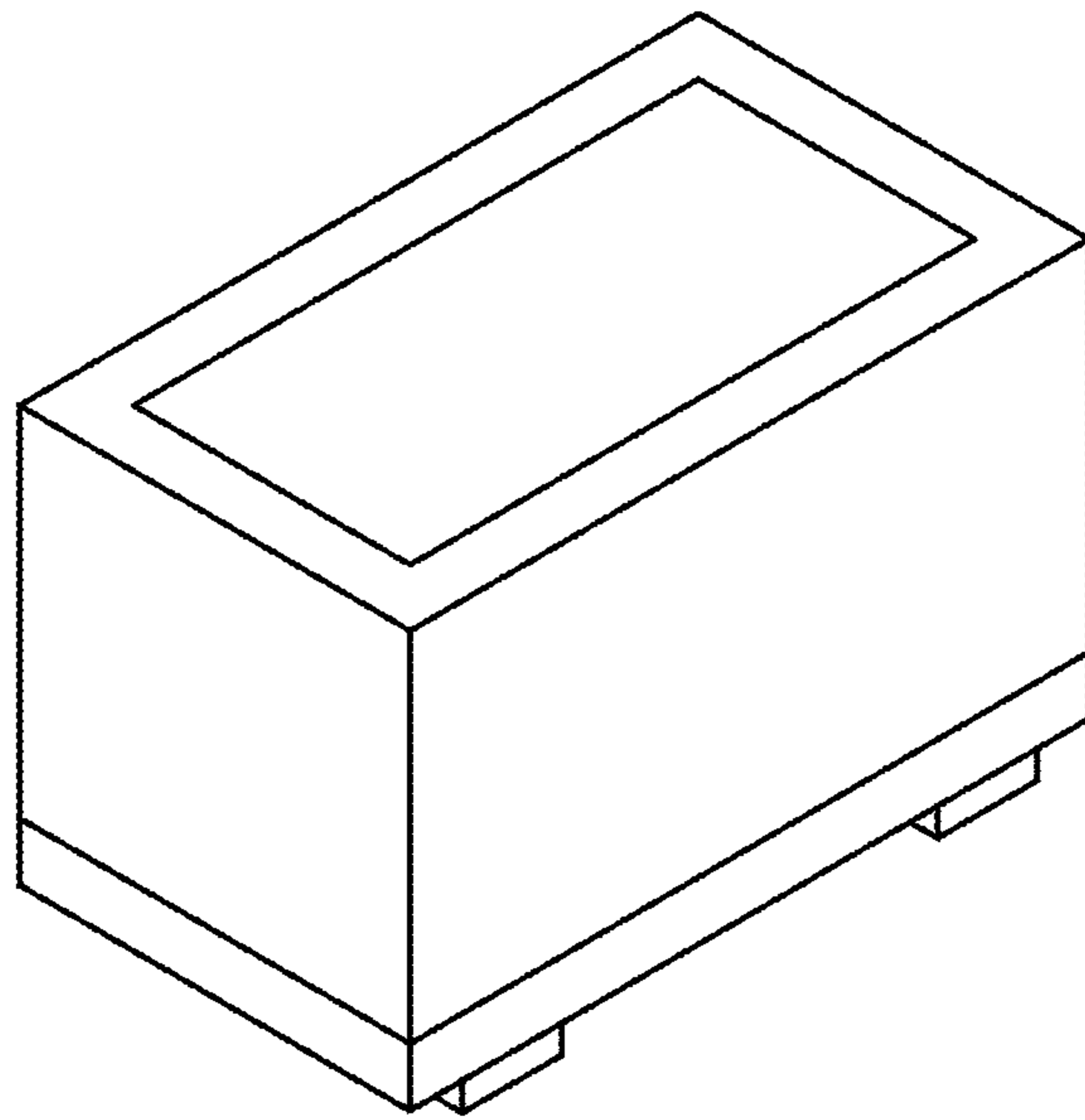


Fig. 14

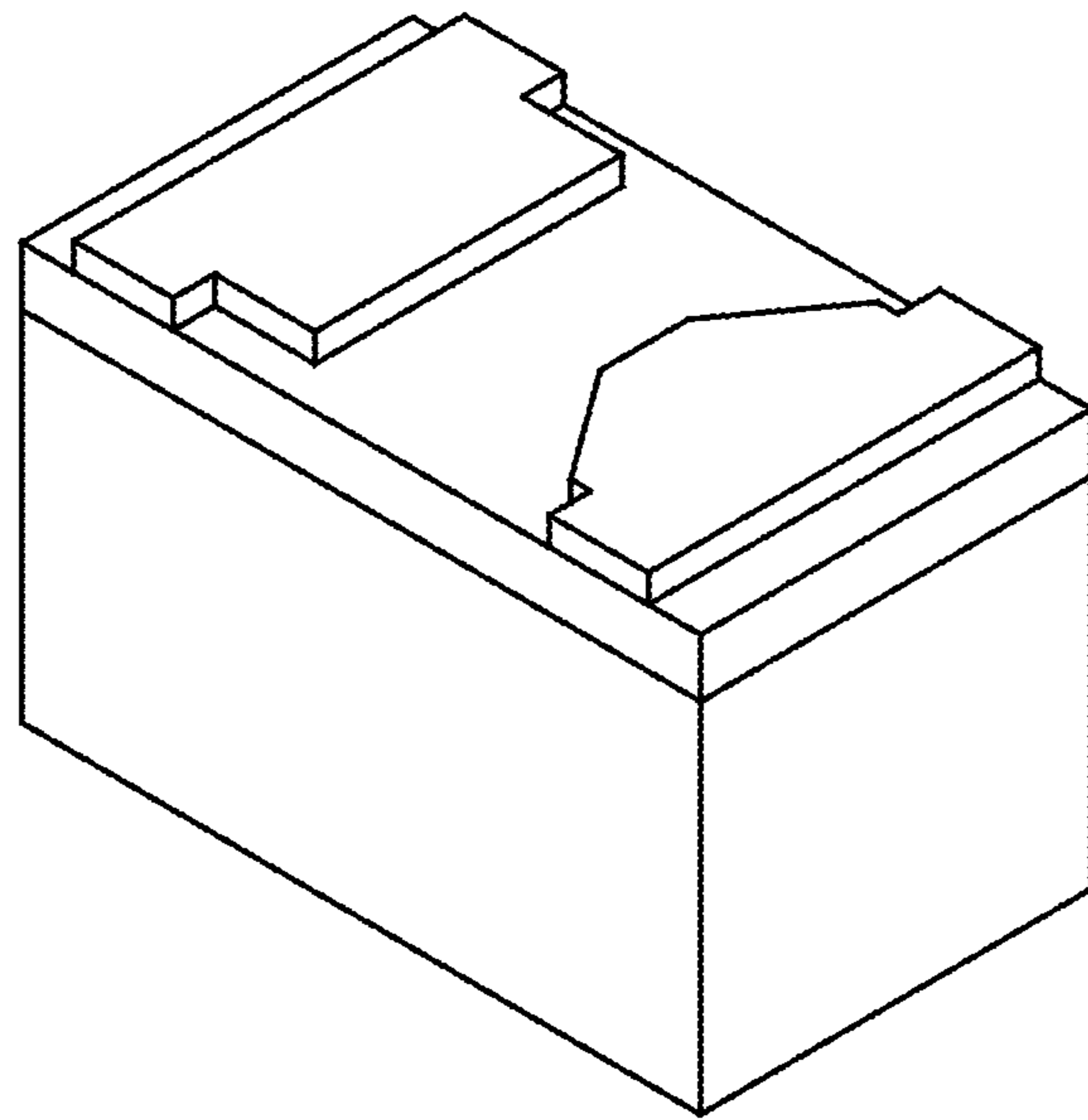


Fig. 15

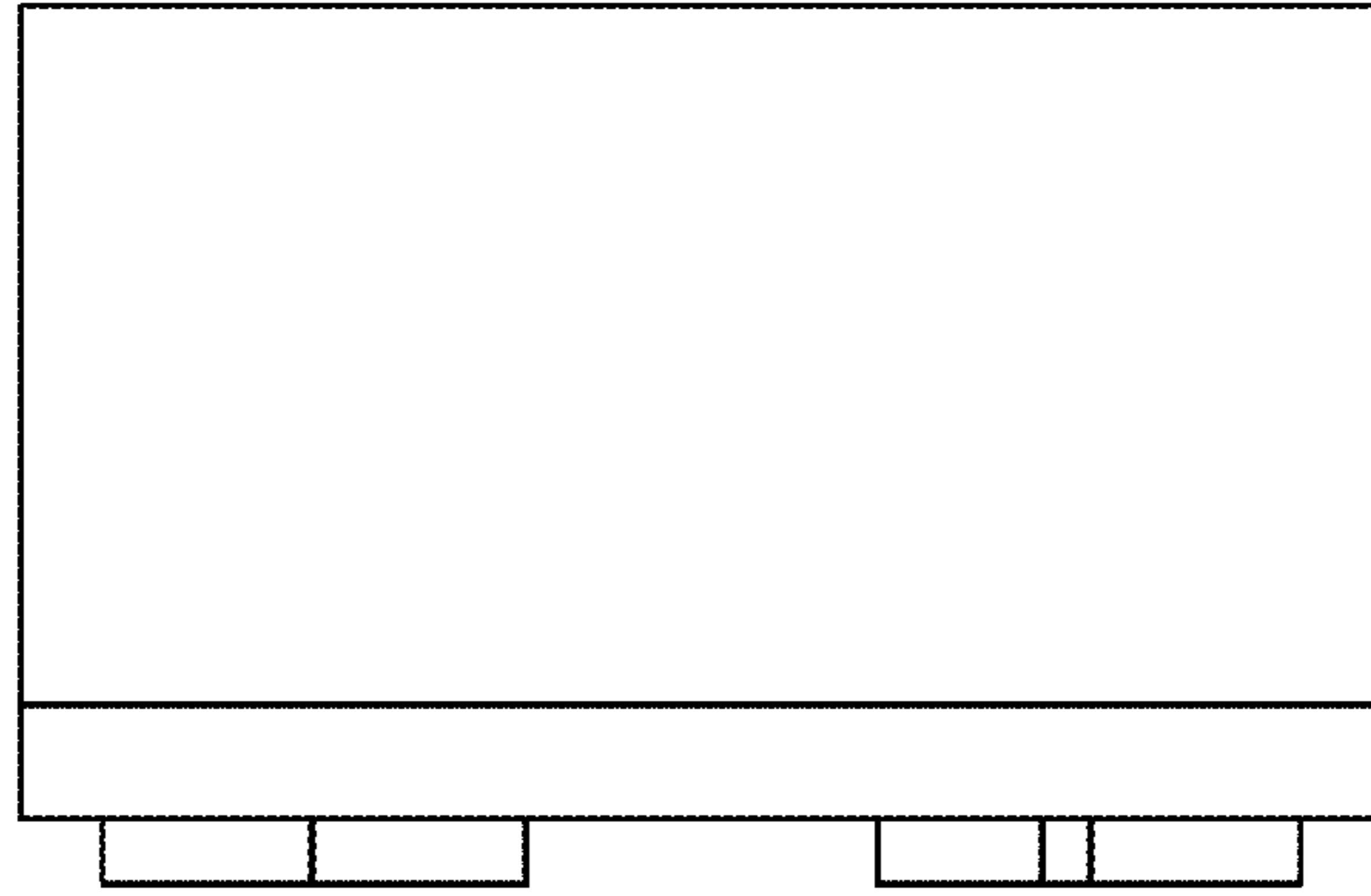


Fig. 16

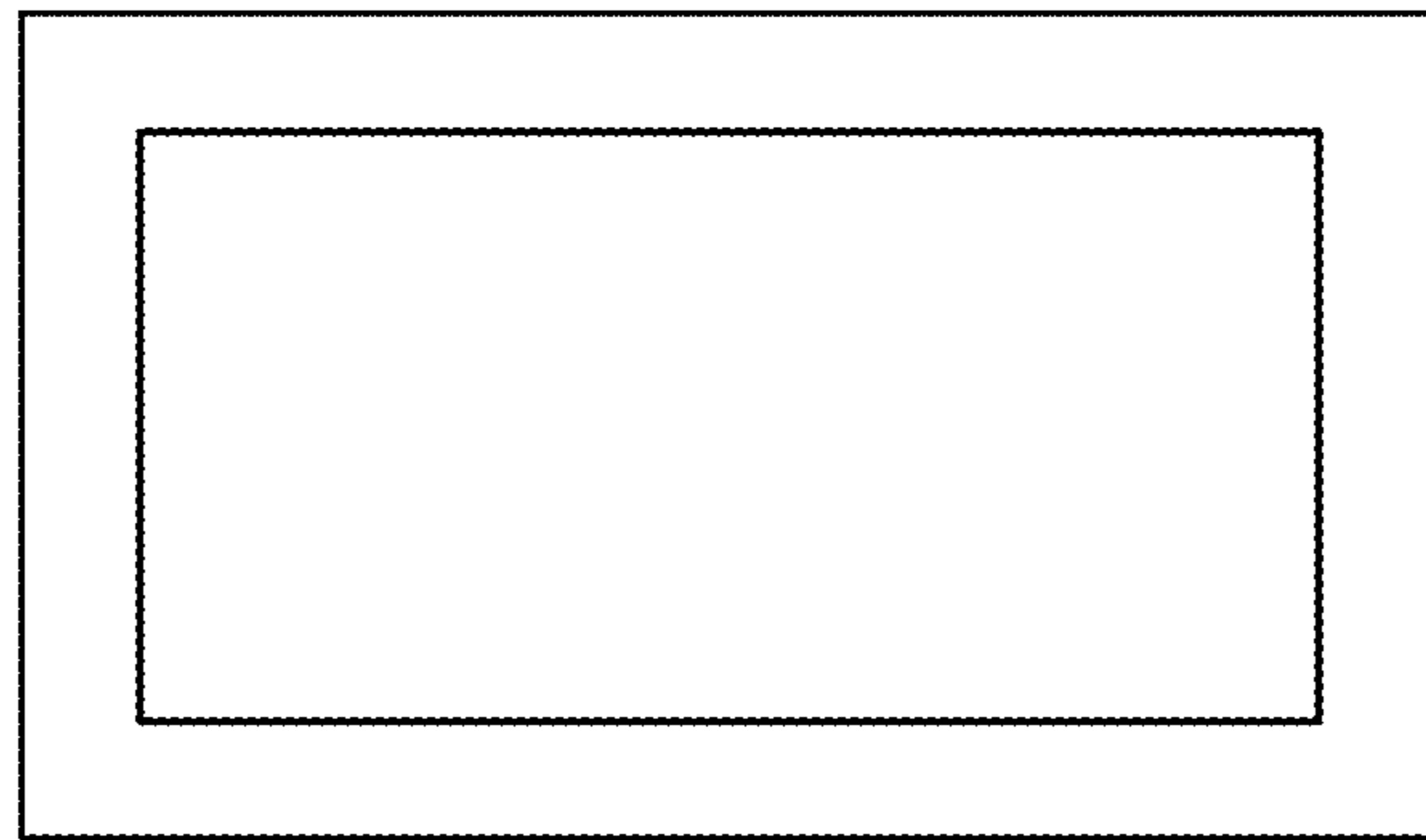


Fig. 17

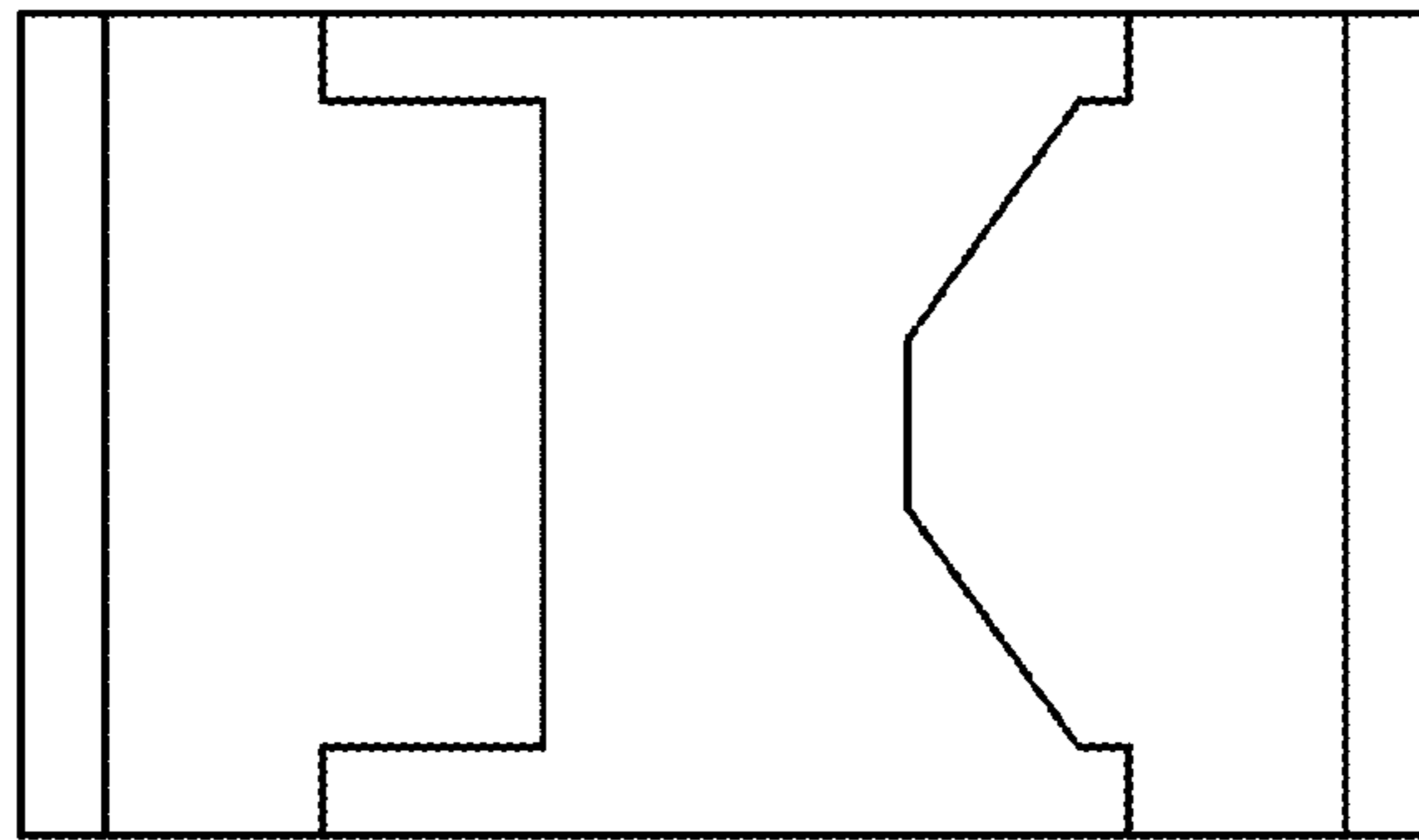


Fig. 18

