



US00D947264S

(12) **United States Design Patent** (10) **Patent No.:** **US D947,264 S**  
**Block et al.** (45) **Date of Patent:** **\*\* Mar. 29, 2022**

(54) **CREASING RULE FOR PAPERBOARD BLANKS**

64/40; B29C 65/18; B29C 69/001; B29C 70/16; B29C 70/28; B29C 70/38; B29C 70/545; B29C 71/02

(71) Applicant: **The C.W. Zumbiel Company**, Hebron, KY (US)

See application file for complete search history.

(72) Inventors: **Steven J. Block**, Amelia, OH (US);  
**Edward A. Zumbiel**, Union, KY (US)

(56) **References Cited**

(73) Assignee: **The C.W. Zumbiel Company**, Hebron, KY (US)

U.S. PATENT DOCUMENTS

(\*\*) Term: **15 Years**

(21) Appl. No.: **29/694,734**

(22) Filed: **Jun. 13, 2019**

1,847,147	A *	3/1932	Thomas, Jr. ....	H02G 3/06 174/68.3
2,250,156	A *	7/1941	Ferguson .....	H01R 4/026 174/84 R
3,224,314	A *	12/1965	Wolnez .....	B26D 7/22 83/522.26
3,653,304	A	4/1972	Lenoir	
D245,831	S	9/1977	West et al.	
4,299,575	A *	11/1981	Carrow .....	B60Q 1/26 362/543
4,334,446	A *	6/1982	Field .....	B23B 29/043 407/40
D276,528	S	11/1984	Shaffer	
D277,864	S	3/1985	Hoffman, Jr. et al.	
4,693,535	A *	9/1987	Frode .....	H01M 2/24 429/160
4,963,126	A	10/1990	Jesch	
D343,398	S	1/1994	Dunn	
6,203,482	B1	3/2001	Sandford	
6,441,338	B1	8/2002	Rabinovich	
D616,317	S	5/2010	Yeh	
D778,353	S *	2/2017	Hamayde .....	D18/34.1
D795,344	S *	8/2017	Cenzano .....	D19/32
D818,787	S *	5/2018	Kitago .....	D8/44
D820,329	S *	6/2018	Kanada .....	D15/139
2005/0209075	A1	9/2005	Kocherga et al.	
2008/0108490	A1	5/2008	Kocherga et al.	
2010/0257987	A1	10/2010	Palm et al.	
2013/0029823	A1	1/2013	Zoeckler	
2014/0352509	A1	12/2014	Schroder	

**Related U.S. Application Data**

(63) Continuation-in-part of application No. 29/576,364, filed on Sep. 2, 2016, now abandoned.

(51) **LOC (13) Cl.** ..... **15-03**

(52) **U.S. Cl.**  
USPC ..... **D15/123**

(58) **Field of Classification Search**

USPC ..... D15/127-129, 122, 138, 139-141;  
D8/44, 51, 68; D19/32, 26-30, 49, 100;  
D18/34.1-34.9, 50, 53, 99

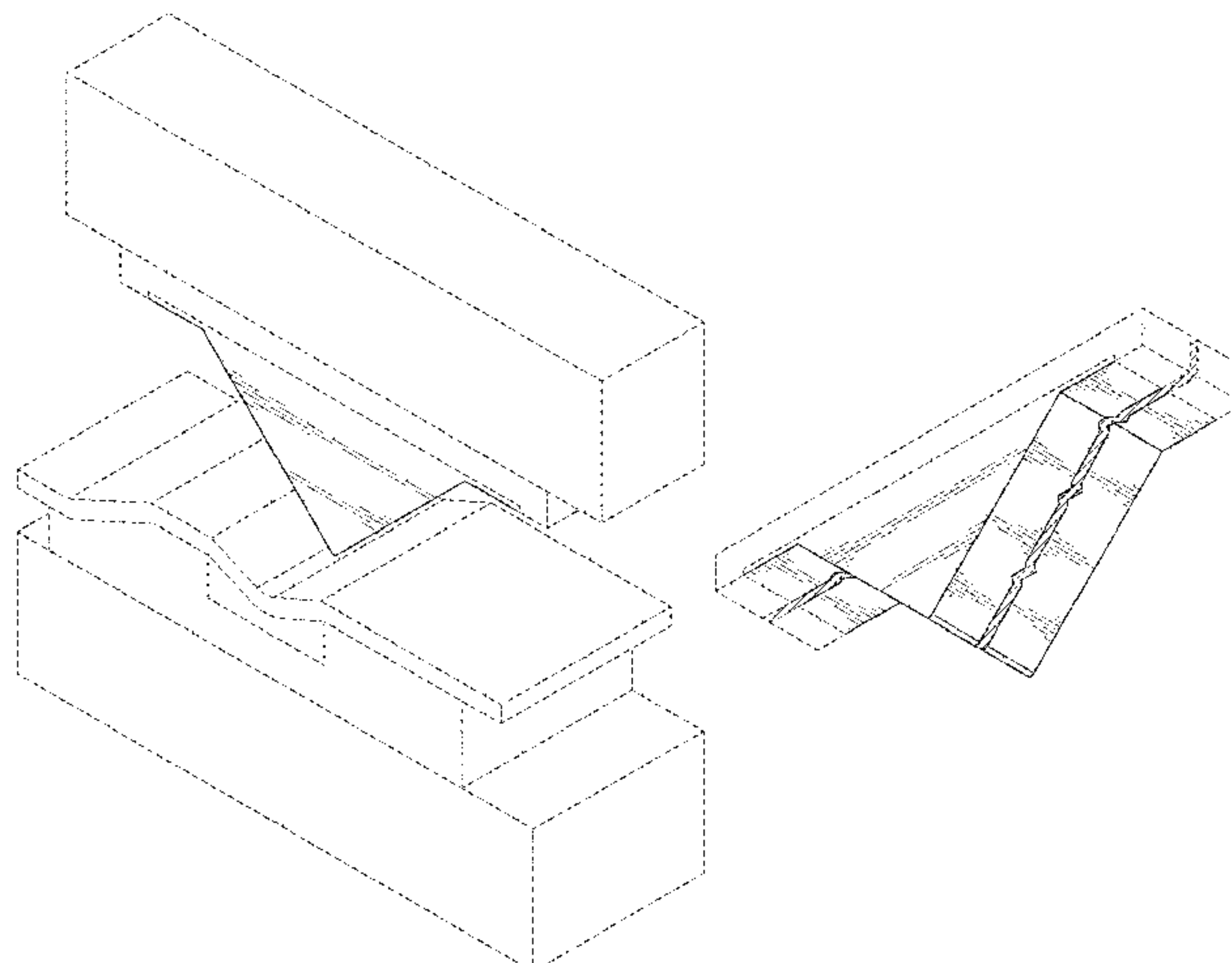
CPC ..... B23P 19/04; B23P 15/28; B23P 15/34;  
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B23Q 11/0057; B23Q 11/1069; B23Q  
17/2409; B23Q 3/1554; B23Q 7/001;  
B24D 18/00; B24D 3/00; B24D 3/06;  
B29C 64/386; B29C 2035/0822; B29C  
2035/0827; B29C 2035/0833; B29C  
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B29C 47/0002; B29C 47/0004; B29C  
47/0009; B29C 47/0057; B29C 47/92;  
B29C 64/00; B29C 64/106; B29C 64/129;  
B29C 64/135; B29C 64/141; B29C  
64/165; B29C 64/20; B29C 64/223; B29C

FOREIGN PATENT DOCUMENTS

GB	2530723	A	4/2016
JP	H09300299	A	11/1997

OTHER PUBLICATIONS

Seaga Group, Creasing Rule, web site print out, 1 pg., Feb. 24, 2017.  
 Advanced Die Supplies, Creasing Rule, web site printout, 3 pgs., Feb. 24, 2017.





HD Stahl-Steel-Acier, HD Creasing Rules, web site printout, 3 pgs., Feb. 24, 2017.  
 Ameri-Ken, Steel Rule—Creasing, web site printout, 3 pgs., Feb. 24, 2017.  
 Cito Group, Hinge Crease, web site printout, 5 pgs., Feb. 24, 2017.  
 Rotalaser; Consumable Materials, web site printout, 3 pgs., Feb. 24, 2017.  
 Up Group, Creasing Rule, web site printout, 1 pg., Feb. 24, 2017.  
 Fag Graphic Systems, Creasing, Scoring, Folding, Embossing, Manual, 53 pgs., Undated.  
 Iggesund Paperboard, Die-cutting and creasing, Manual, 24 pgs., Feb. 24, 2017.  
 International Searching Authority, PCT/US2017/064171; Search Report and Written Opinion, 12 pgs, dated Dec. 1, 2017.

\* cited by examiner

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 (74) *Attorney, Agent, or Firm* — Wood Herron & Evans  
 LLP

(57) **CLAIM**

The ornamental design for a creasing rule for paperboard blanks, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of an embodiment of our invention shown in a creasing assembly for environment;  
 FIG. 2 is a top right perspective view of the embodiment shown in FIG. 1;  
 FIG. 3 is a bottom perspective view thereof;  
 FIG. 4 is front elevational view thereof with the back elevational view being a mirror image;  
 FIG. 5 is a right side elevational view thereof with the left side elevational view being a mirror image;  
 FIG. 6 is a top plan view thereof;  
 FIG. 7 is a bottom plan view thereof;  
 FIG. 8 is a top right perspective view of another embodiment of this invention;  
 FIG. 9 is a top front perspective view thereof;  
 FIG. 10 is bottom perspective view;  
 FIG. 11 is a front elevational view thereof with the back elevational view being a mirror image;  
 FIG. 12 is a right side elevational view thereof with the left side elevational view being a mirror image thereof;  
 FIG. 13 is a top plan view thereof;  
 FIG. 14 is a bottom plan view thereof;  
 FIG. 15 is a top right perspective view of another embodiment of this invention;  
 FIG. 16 is a top front perspective view thereof;  
 FIG. 17 is bottom perspective view;  
 FIG. 18 is a front elevational view thereof with the back elevational view being a mirror image;  
 FIG. 19 is a right side elevational view thereof with the left side elevational view being a mirror image thereof;  
 FIG. 20 is a top plan view thereof;  
 FIG. 21 is a bottom plan view thereof;  
 FIG. 22 is a top right perspective view of another embodiment of this invention;  
 FIG. 23 is a top front perspective view thereof;  
 FIG. 24 is bottom perspective view;  
 FIG. 25 is a front elevational view thereof with the back elevational view being a mirror image;  
 FIG. 26 is a right side elevational view thereof with the left side elevational view being a mirror image thereof;  
 FIG. 27 is a top plan view thereof;

FIG. 28 is a bottom plan view thereof;  
 FIG. 29 is a top right perspective view of another embodiment of this invention;  
 FIG. 30 is a top front perspective view thereof;  
 FIG. 31 is bottom perspective view;  
 FIG. 32 is a front elevational view thereof with the back elevational view being a mirror image;  
 FIG. 33 is a right side elevational view thereof with the left side elevational view being a mirror image thereof;  
 FIG. 34 is a top plan view thereof;  
 FIG. 35 is a bottom plan view thereof;  
 FIG. 36 is a top right perspective view of another embodiment of this invention;  
 FIG. 37 is a top front perspective view thereof;  
 FIG. 38 is bottom perspective view;  
 FIG. 39 is a front elevational view thereof with the back elevational view being a mirror image;  
 FIG. 40 is a right side elevational view thereof with the left side elevational view being a mirror image thereof;  
 FIG. 41 is a top plan view thereof;  
 FIG. 42 is a bottom plan view thereof;  
 FIG. 43 is a top right perspective view of another embodiment of this invention;  
 FIG. 44 is a top front perspective view thereof;  
 FIG. 45 is bottom perspective view;  
 FIG. 46 is a front elevational view thereof with the back elevational view being a mirror image;  
 FIG. 47 is a right side elevational view thereof with the left side elevational view being a mirror image thereof;  
 FIG. 48 is a top plan view thereof;  
 FIG. 49 is a bottom plan view thereof;  
 FIG. 50 is a top right perspective view of another embodiment of this invention;  
 FIG. 51 is a top front perspective view thereof;  
 FIG. 52 is bottom perspective view;  
 FIG. 53 is a front elevational view thereof with the back elevational view being a mirror image;  
 FIG. 54 is a right side elevational view thereof with the left side elevational view being a mirror image thereof;  
 FIG. 55 is a top plan view thereof;  
 FIG. 56 is a bottom plan view thereof;  
 FIG. 57 is a top right perspective view of another embodiment of this invention;  
 FIG. 58 is a top front perspective view thereof;  
 FIG. 59 is bottom perspective view;  
 FIG. 60 is a front elevational view thereof with the back elevational view being a mirror image;  
 FIG. 61 is a right side elevational view thereof with the left side elevational view being a mirror image thereof;  
 FIG. 62 is a top plan view thereof;  
 FIG. 63 is a bottom plan view thereof;  
 FIG. 64 is a top right perspective view of another embodiment of this invention;  
 FIG. 65 is a top front perspective view thereof;  
 FIG. 66 is bottom perspective view;  
 FIG. 67 is a front elevational view thereof with the back elevational view being a mirror image;  
 FIG. 68 is a right side elevational view thereof with the left side elevational view being a mirror image thereof;  
 FIG. 69 is a top plan view thereof;  
 FIG. 70 is a bottom plan view thereof;  
 FIG. 71 is a top right perspective view of another embodiment of this invention;  
 FIG. 72 is a top front perspective view thereof;  
 FIG. 73 is bottom perspective view;

FIG. 74 is a front elevational view thereof with the back elevational view being a mirror image;

FIG. 75 is a right side elevational view thereof with the left side elevational view being a mirror image thereof;

FIG. 76 is a top plan view thereof;

FIG. 77 is a bottom plan view thereof;

FIG. 78 is a top right perspective view of another embodiment of this invention;

FIG. 79 is a top front perspective view thereof;

FIG. 80 is bottom perspective view;

FIG. 81 is a front elevational view thereof with the back elevational view being a mirror image;

FIG. 82 is a right side elevational view thereof with the left side elevational view being a mirror image thereof;

FIG. 83 is a top plan view thereof; and,

FIG. 84 is a bottom plan view thereof.

Elements or portions of the design shown in broken lines show environmental aspects of the claimed invention. Neither the broken lines themselves nor the portions represented by the broken lines form any part of the claimed invention. The creasing rule is shown with a symbolic break in its length. The appearance of any portion of the creasing rule between the break lines forms no part of the claimed design.

**1 Claim, 36 Drawing Sheets**

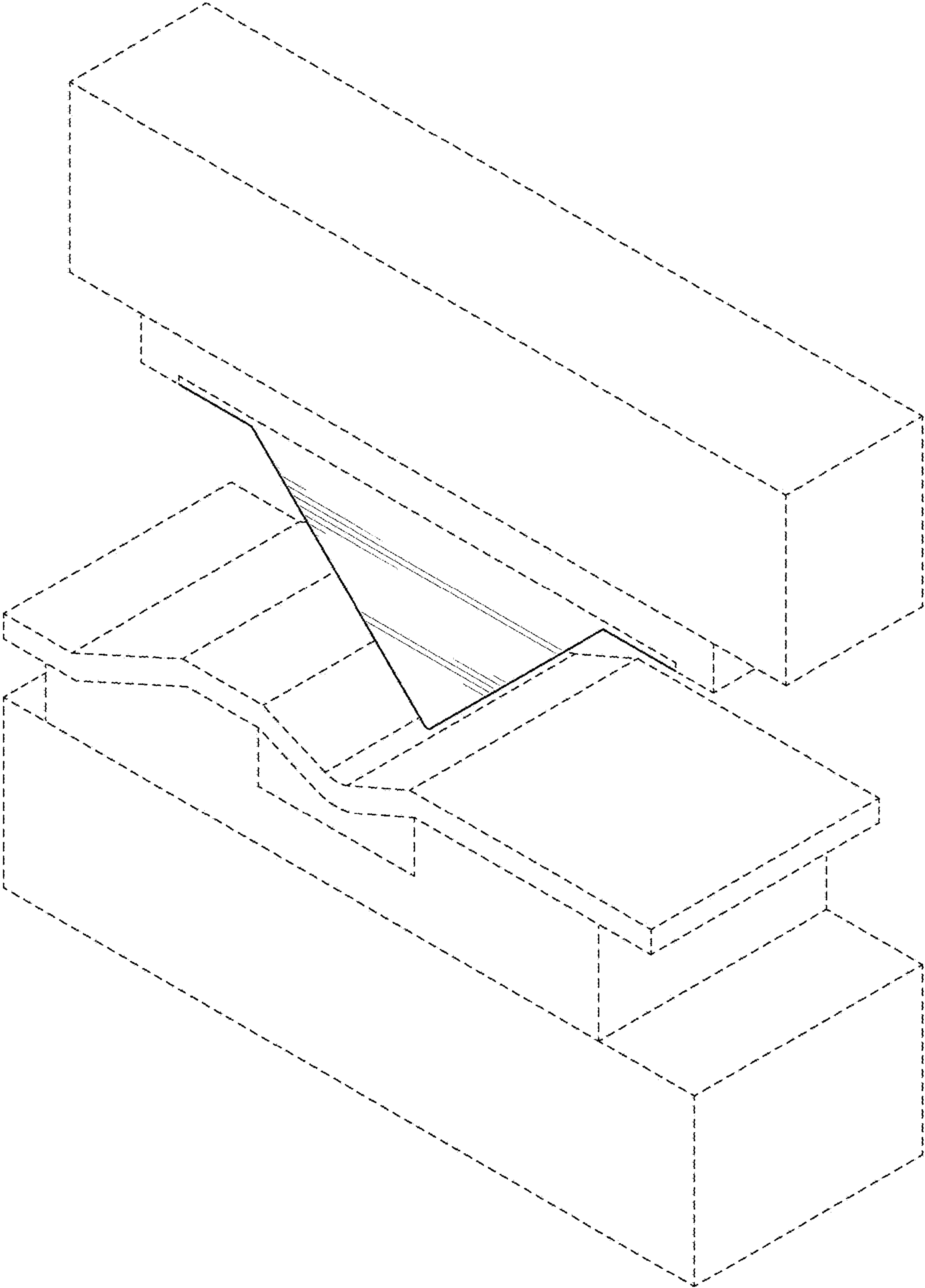


FIG. 1



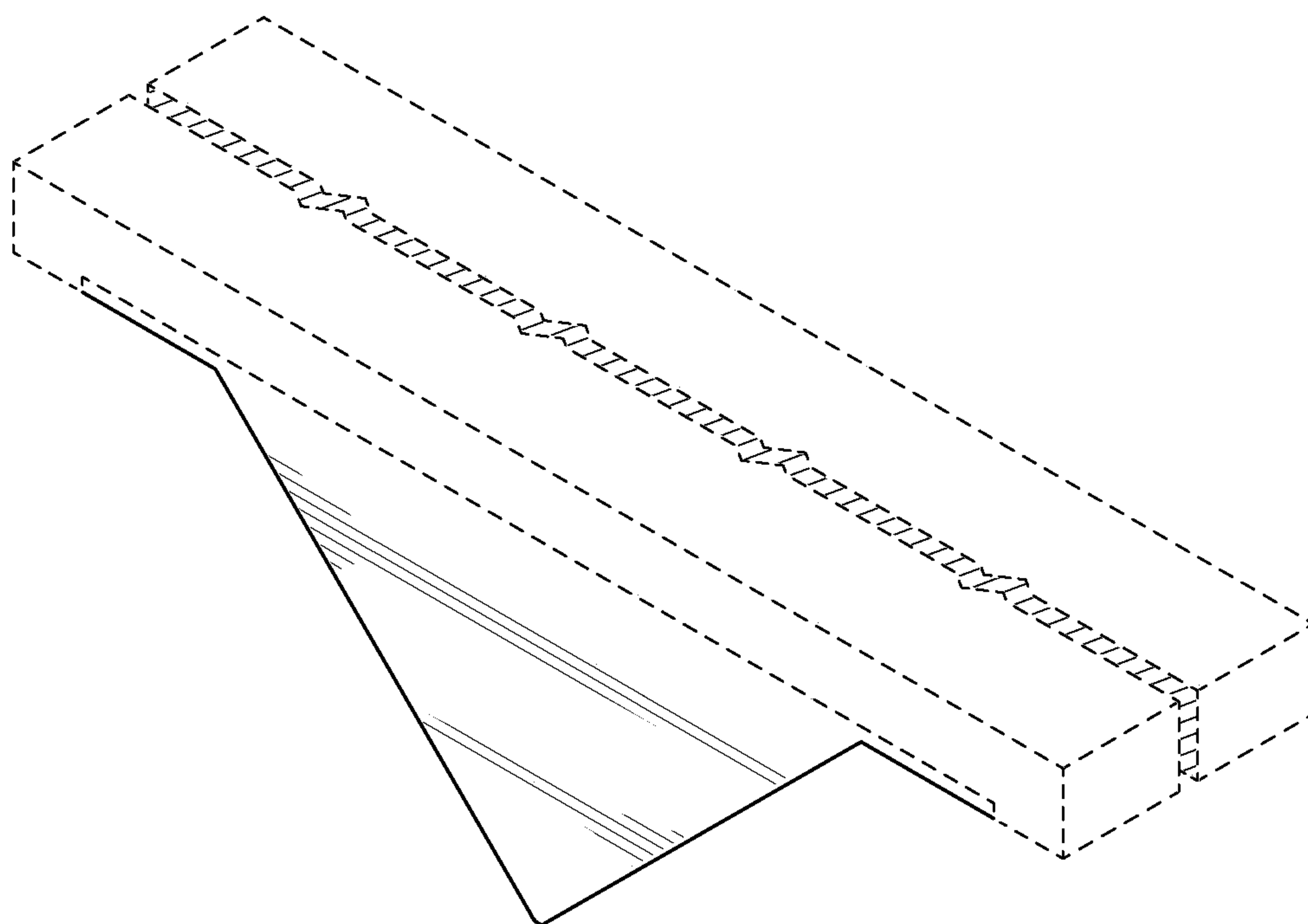


FIG. 2

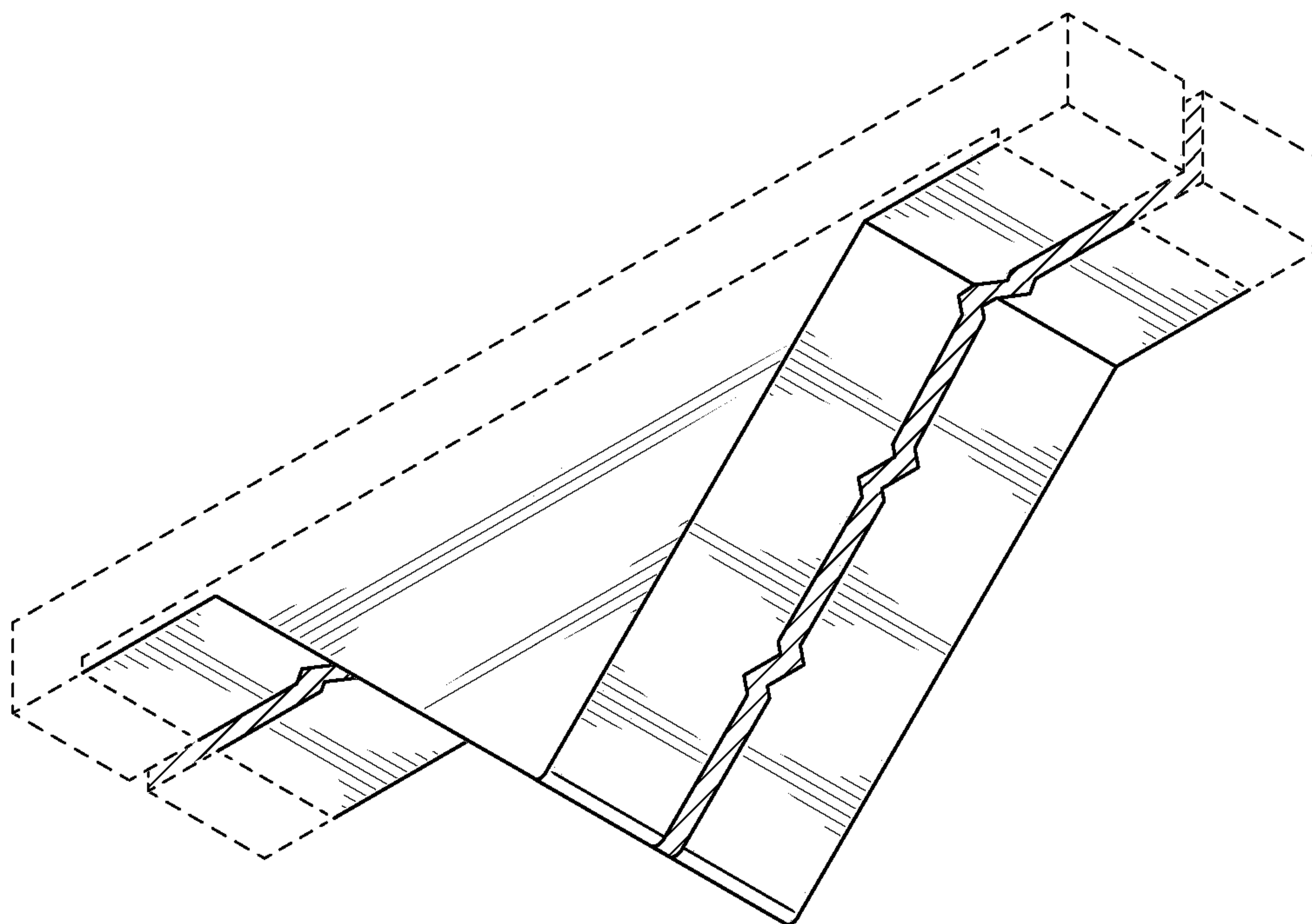


FIG. 3

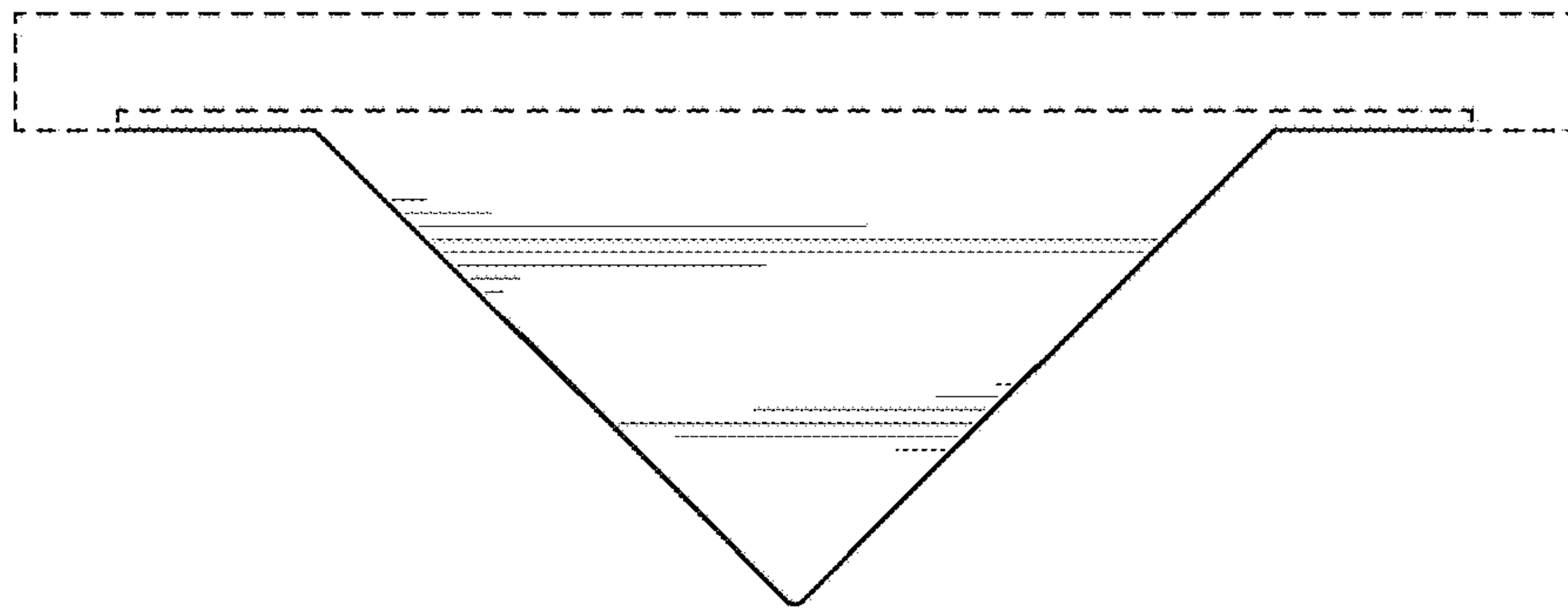


FIG. 4

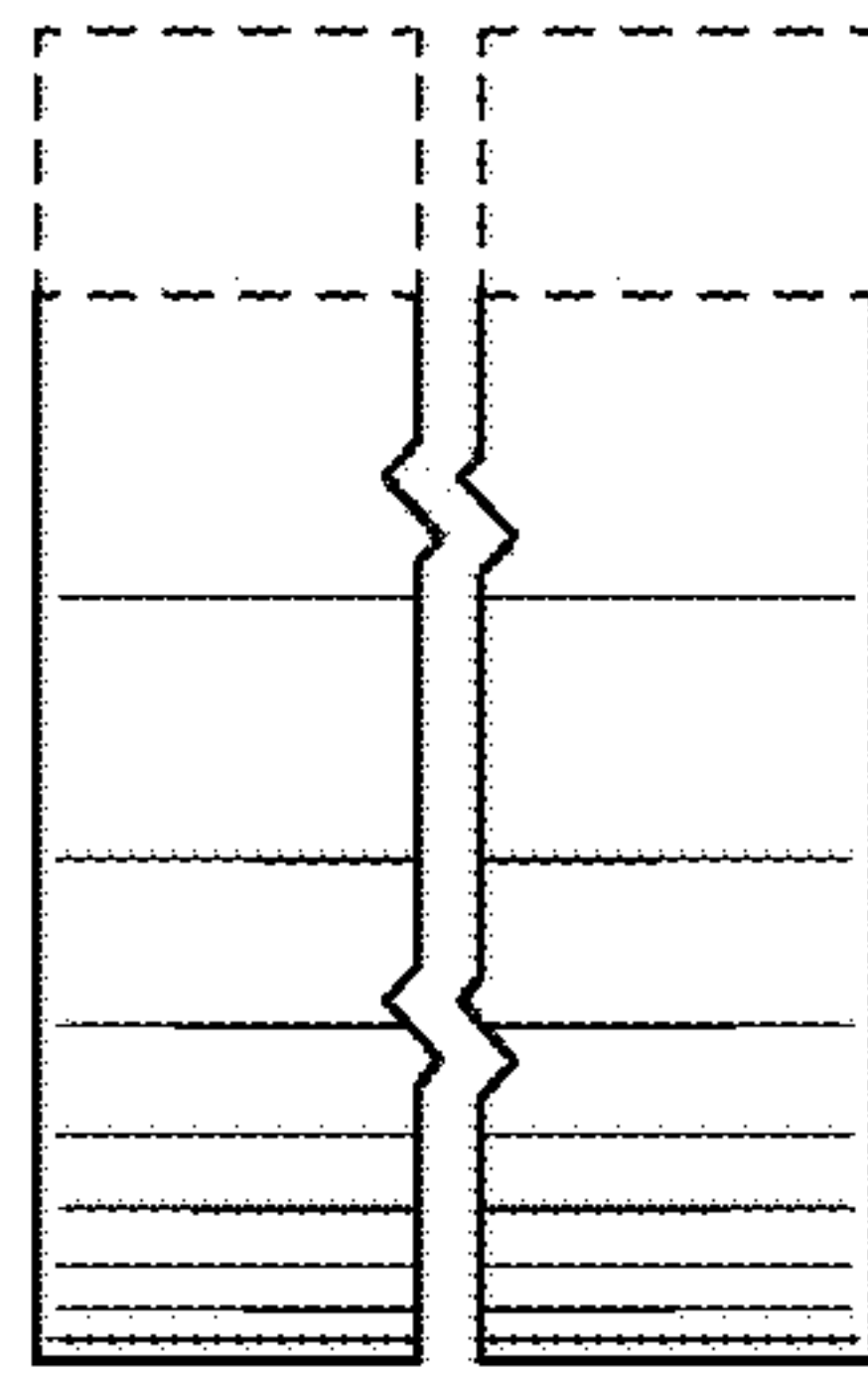


FIG. 5

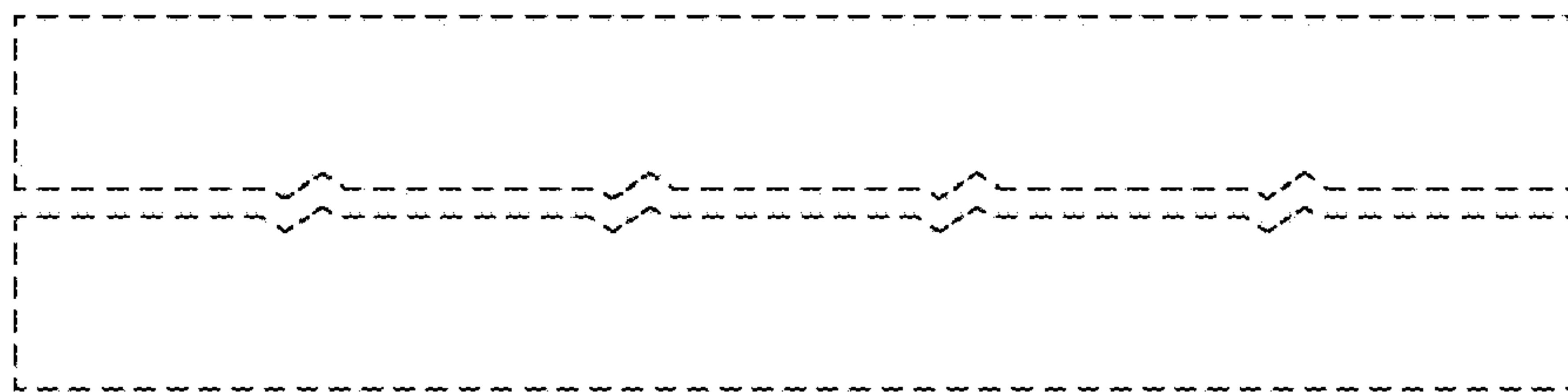


FIG. 6

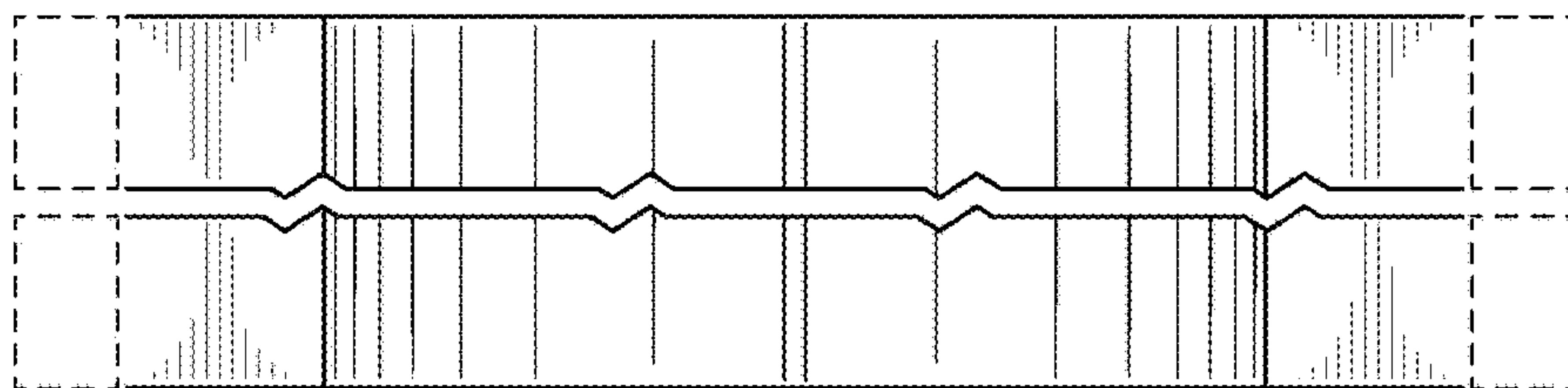


FIG. 7

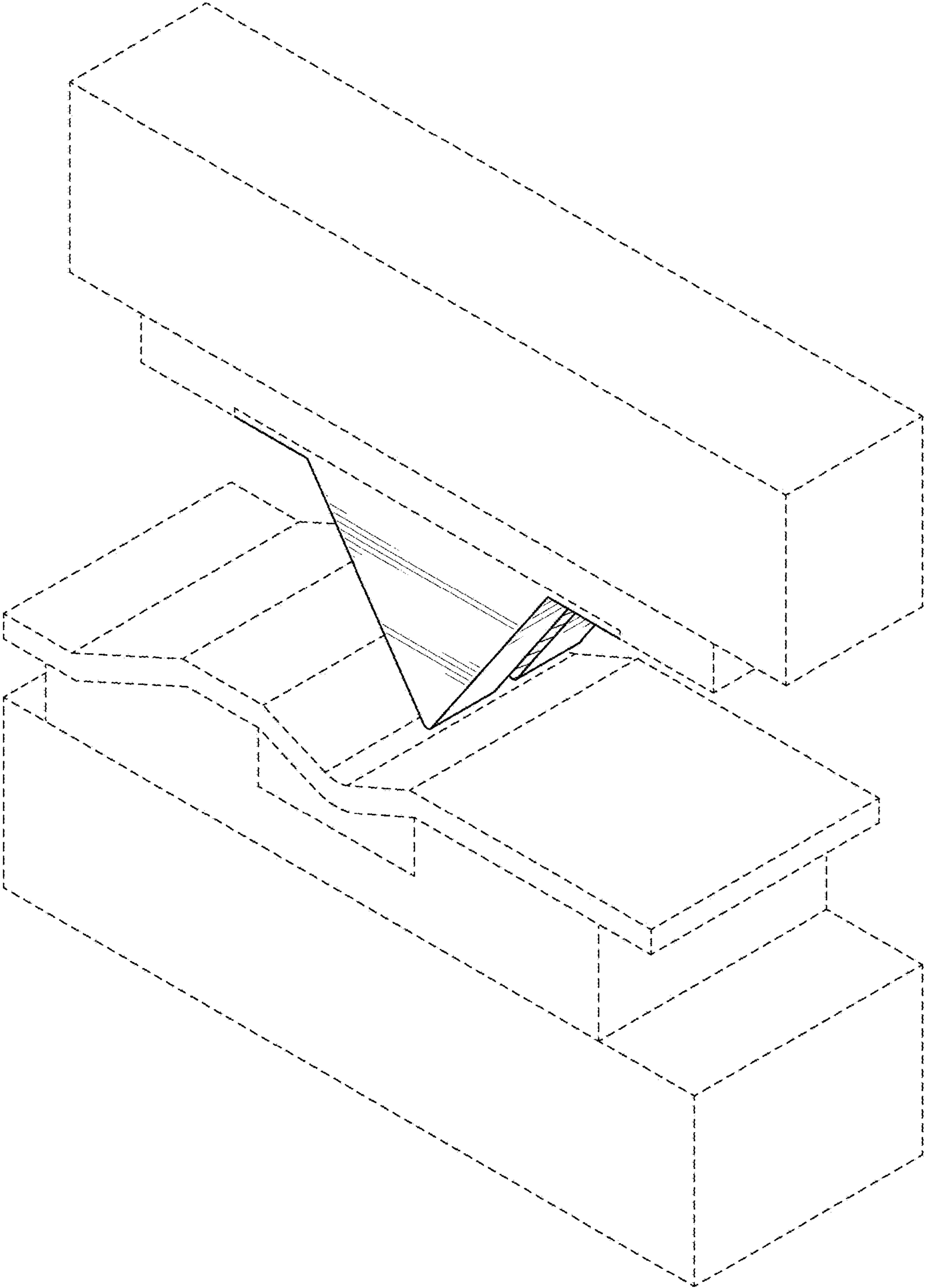


FIG. 8

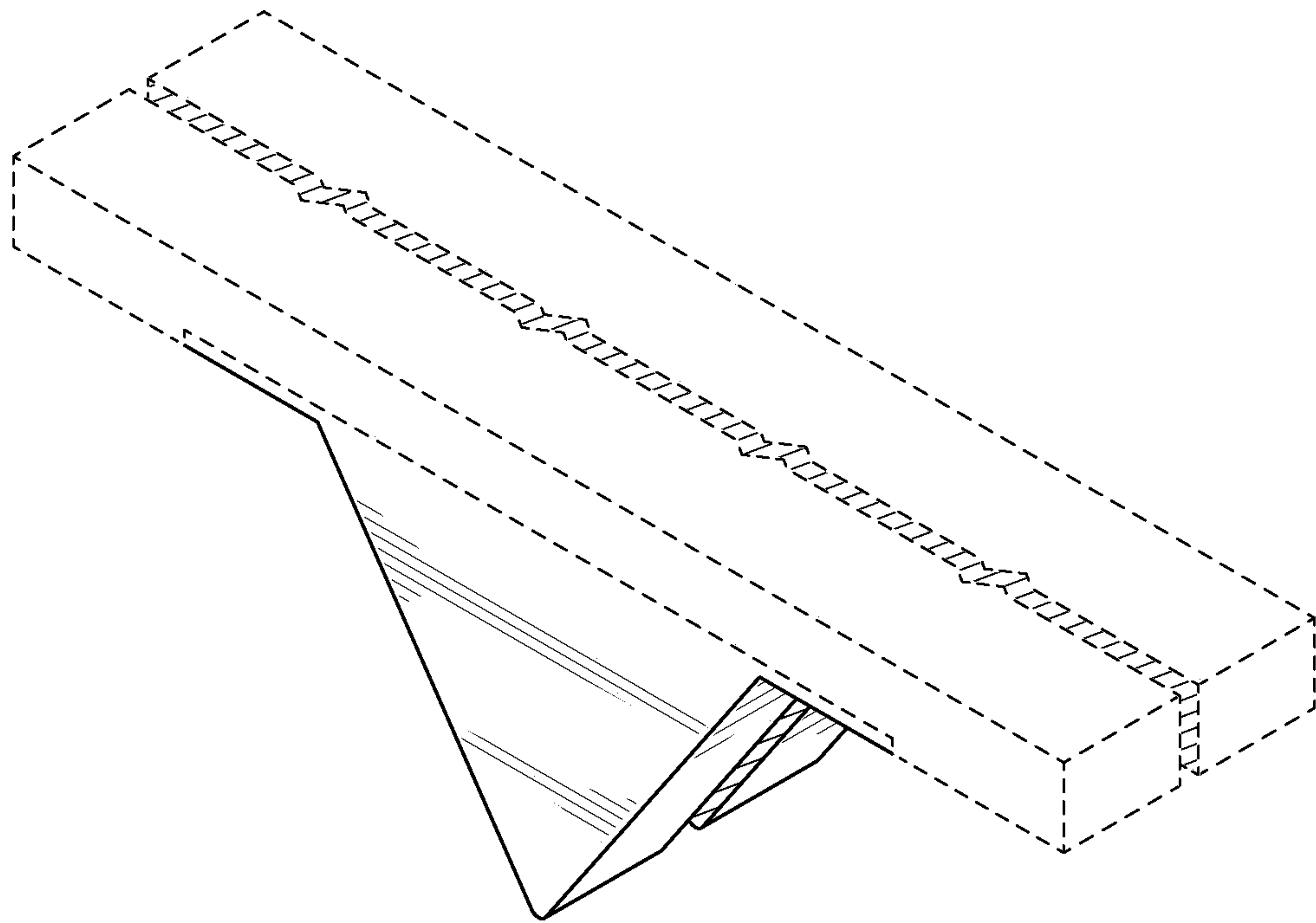


FIG. 9

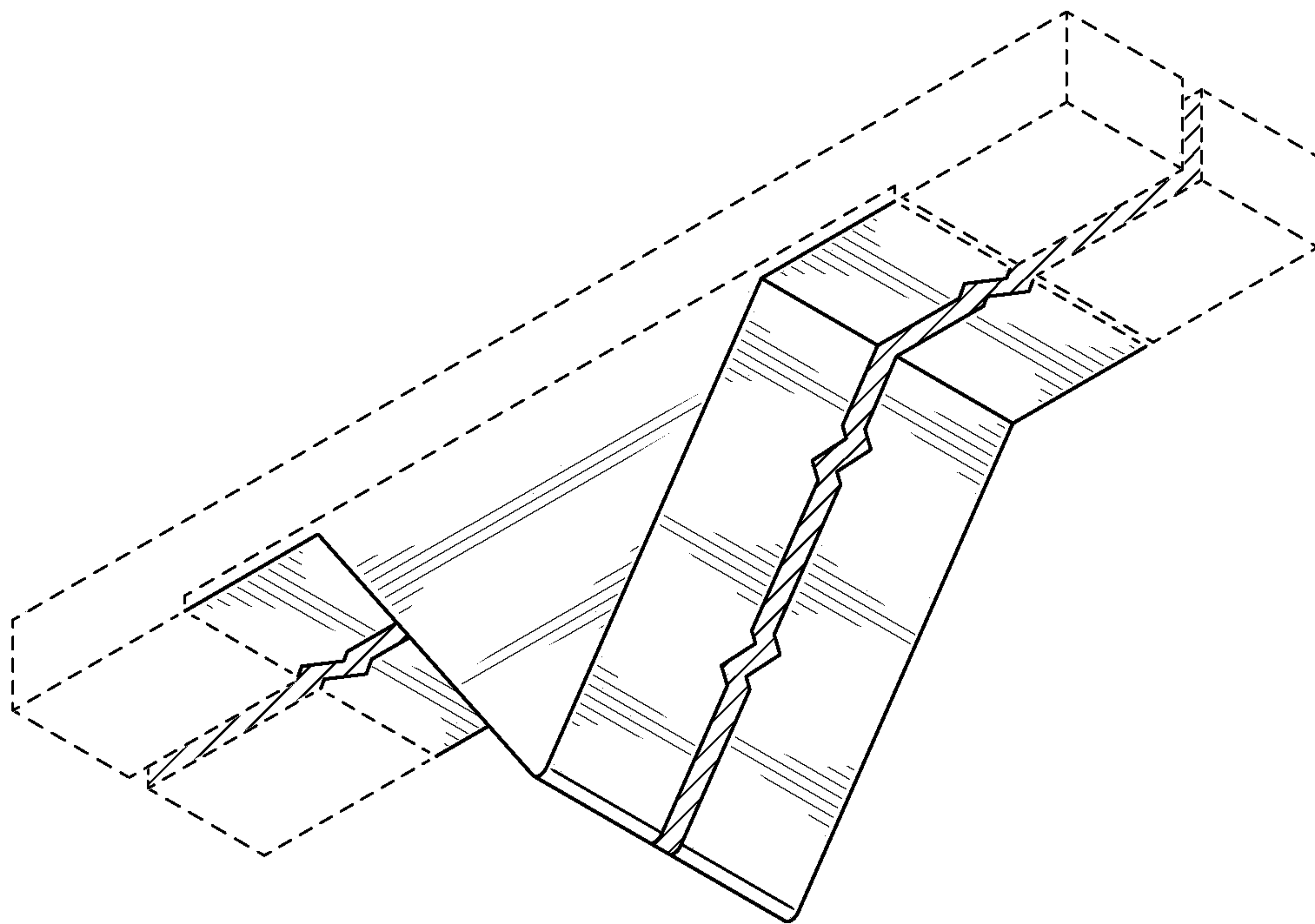


FIG. 10



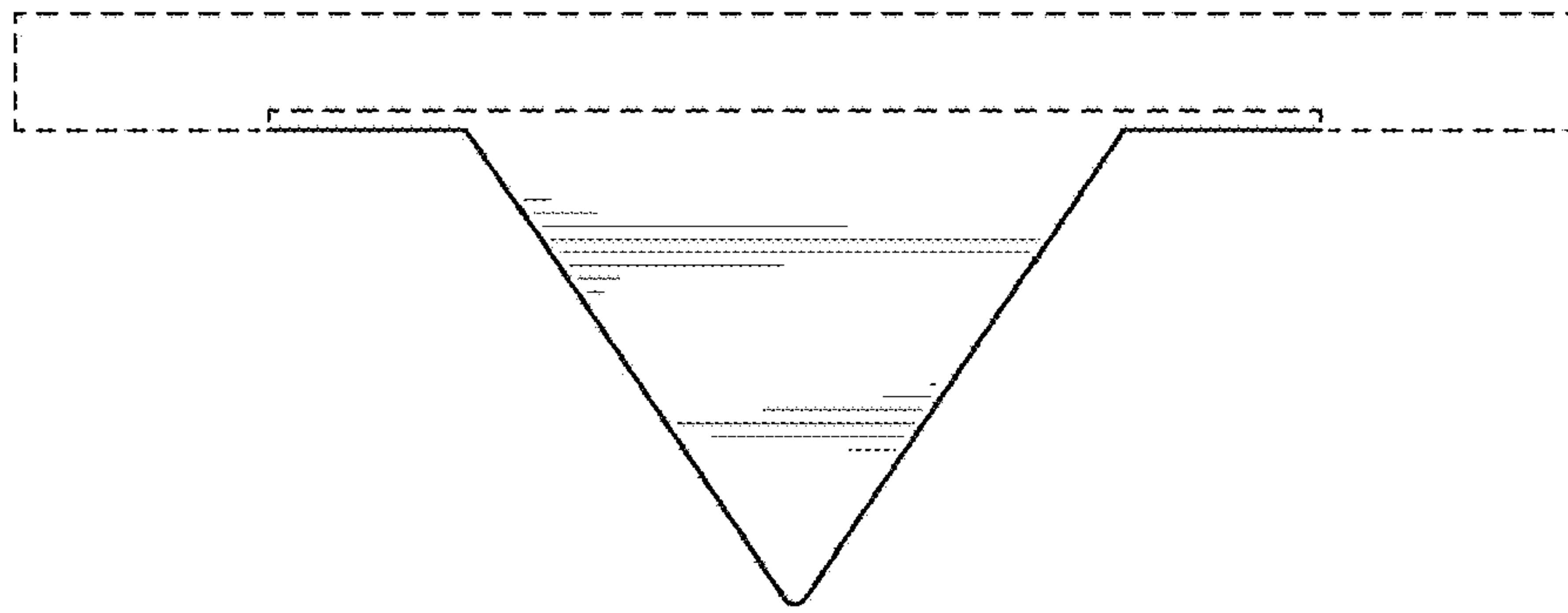


FIG. 11

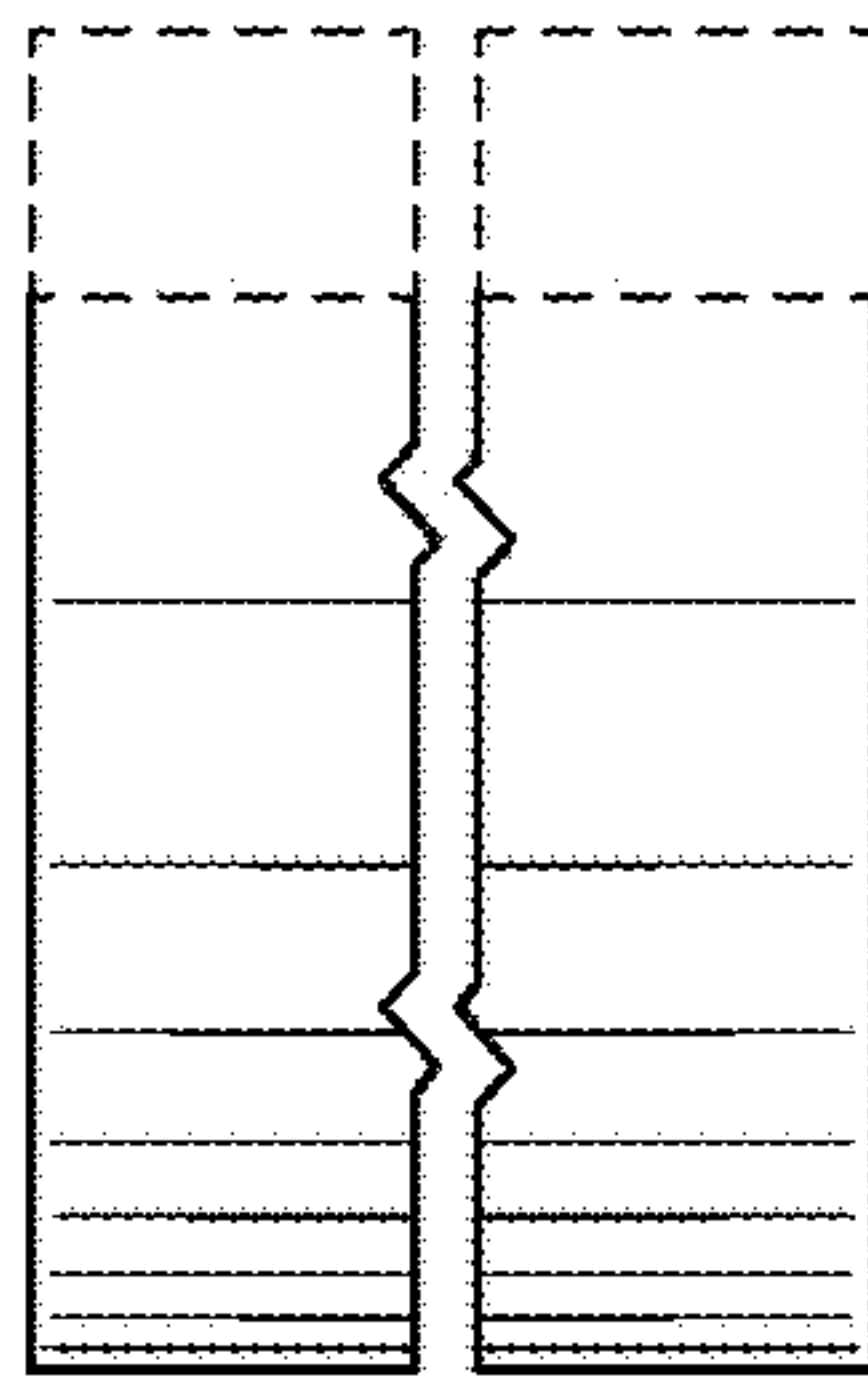


FIG. 12

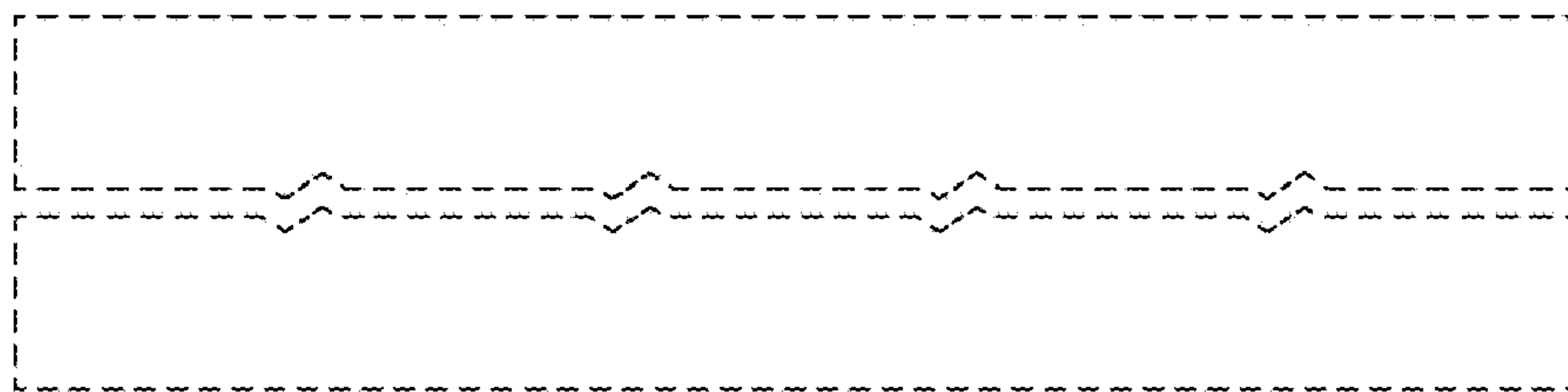


FIG. 13

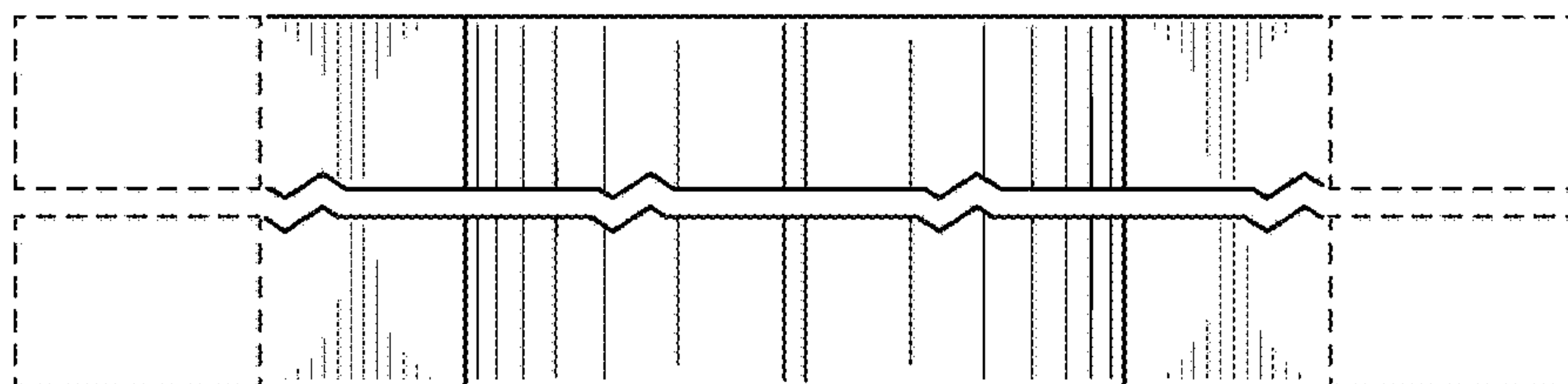


FIG. 14

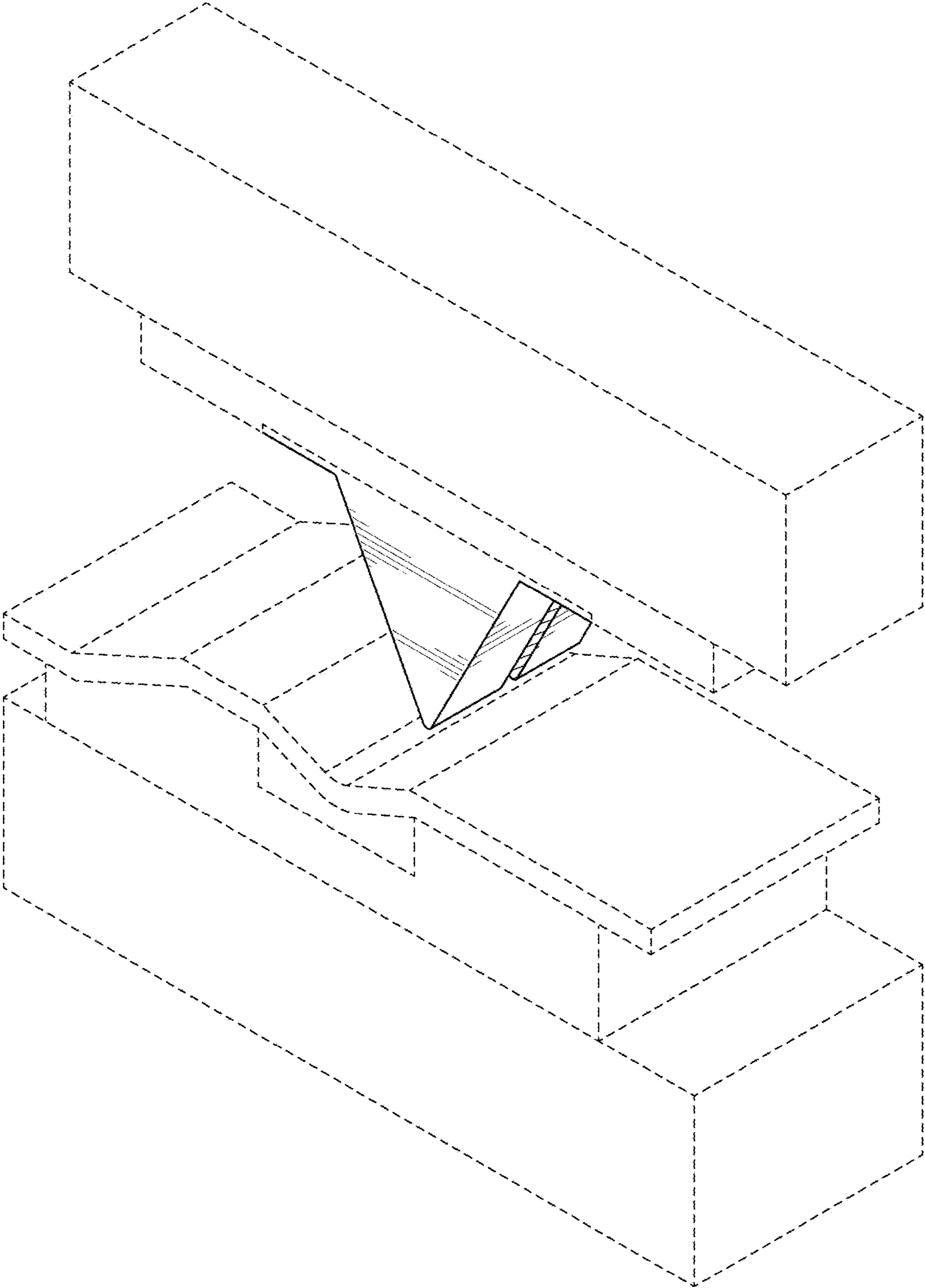


FIG. 15

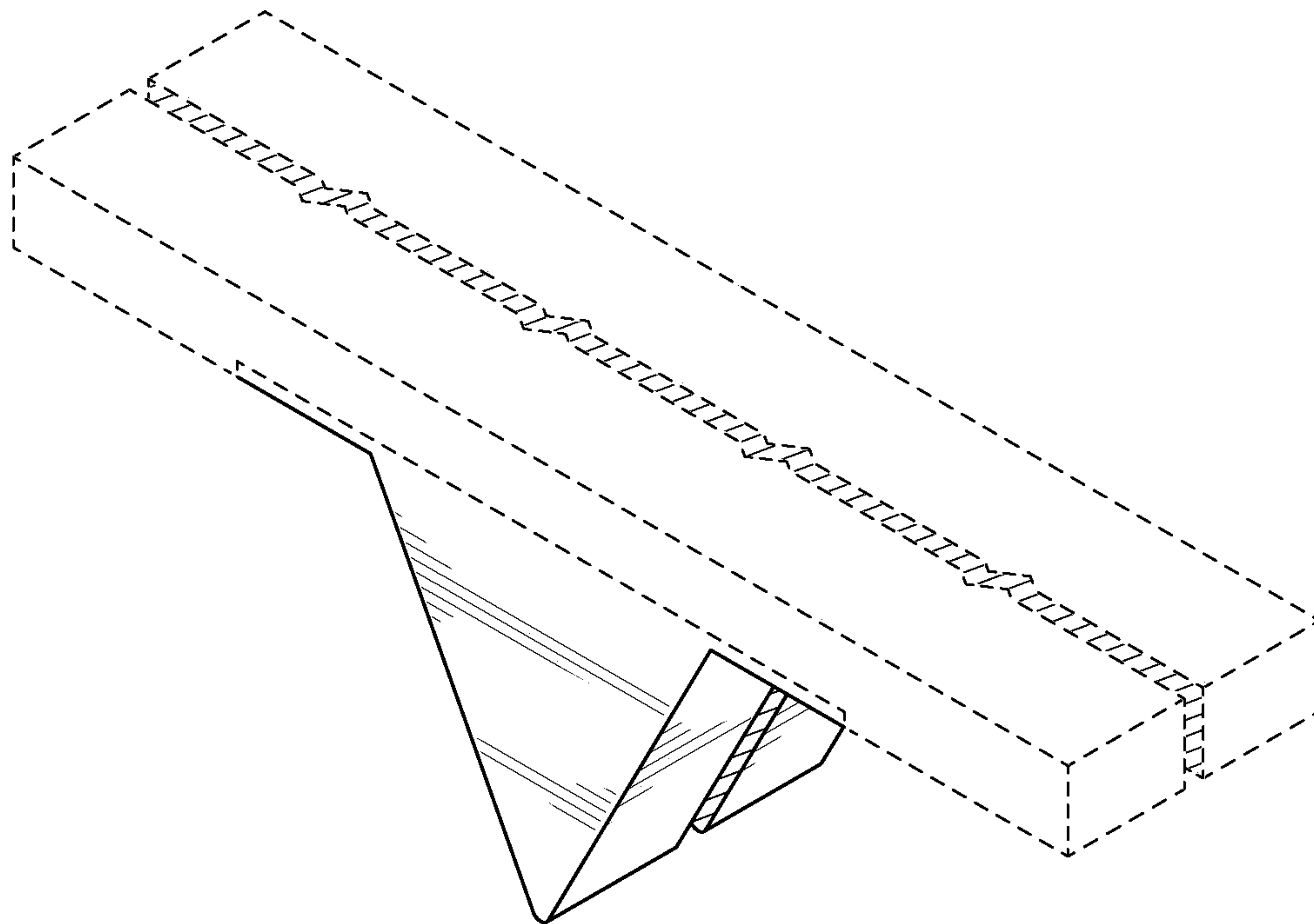


FIG. 16

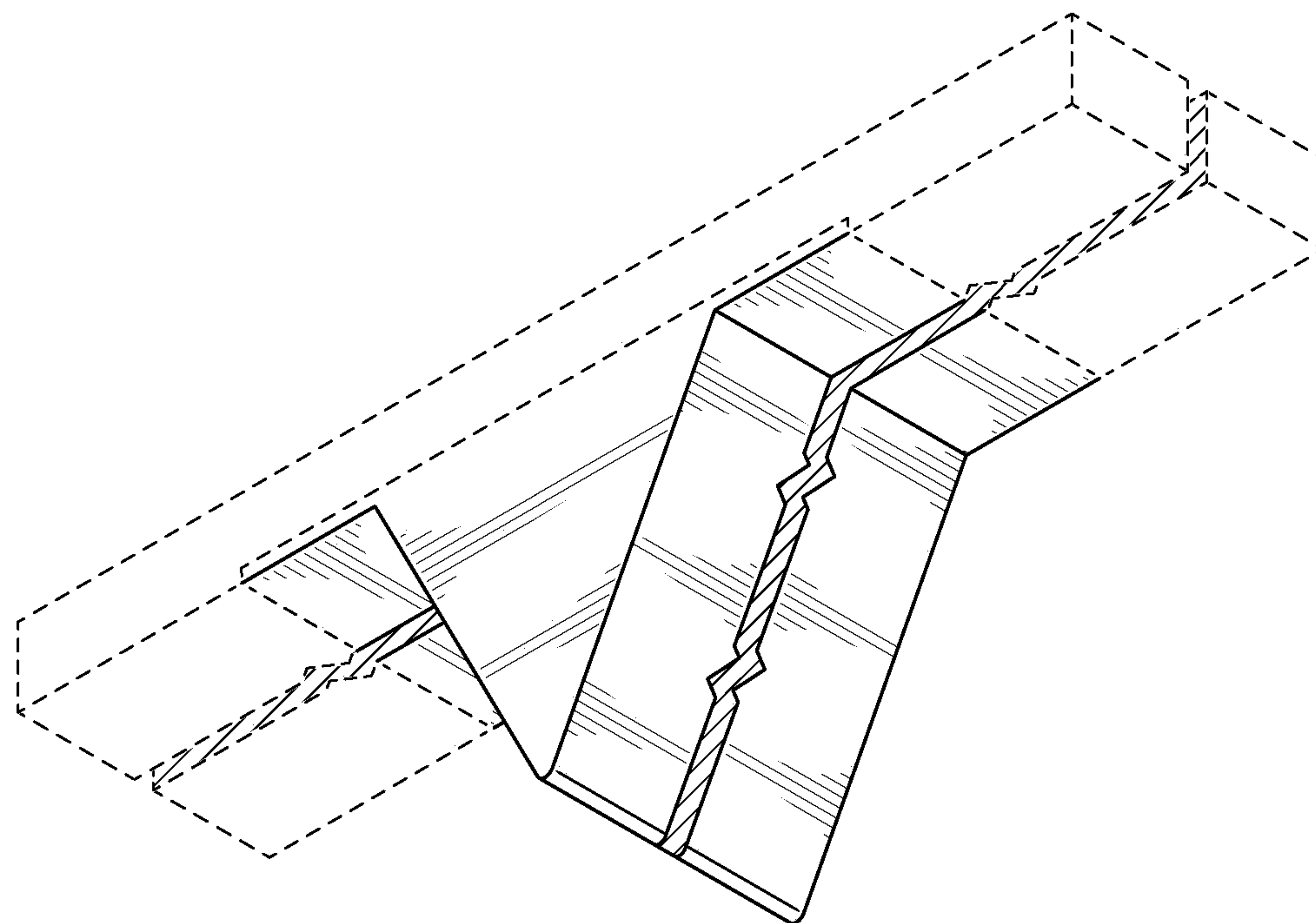


FIG. 17



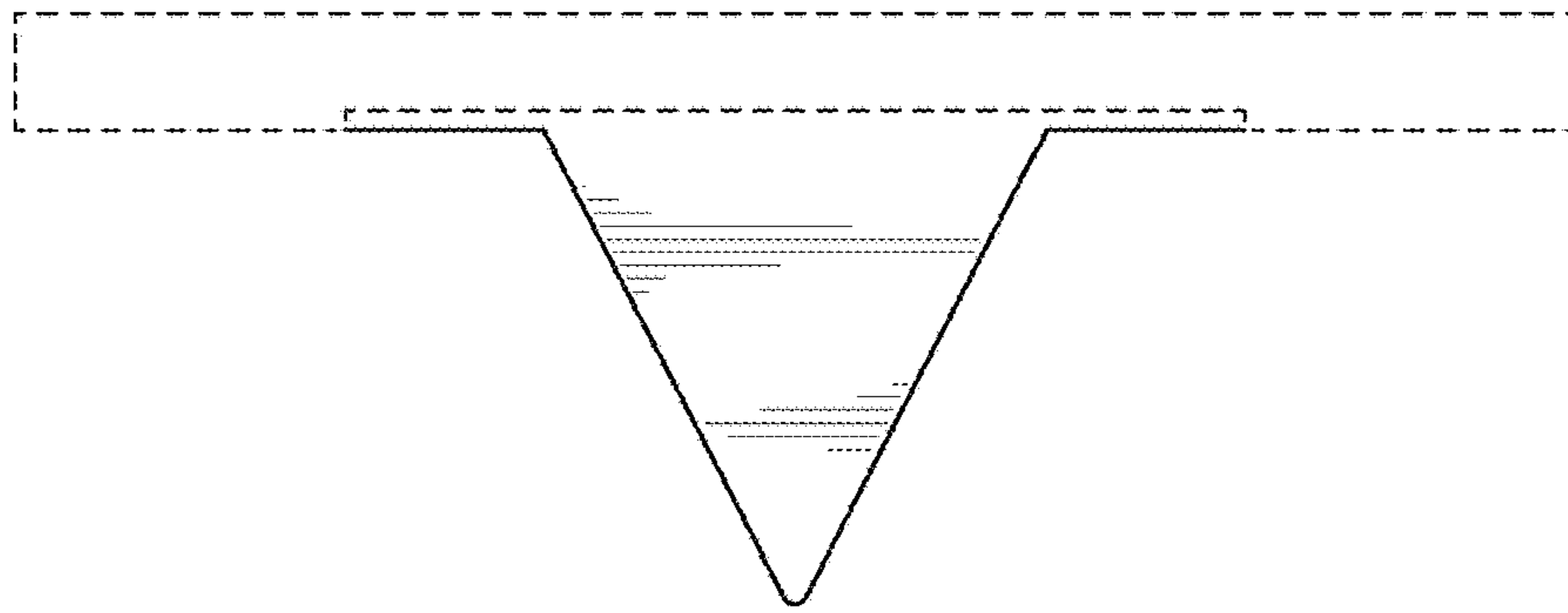


FIG. 18

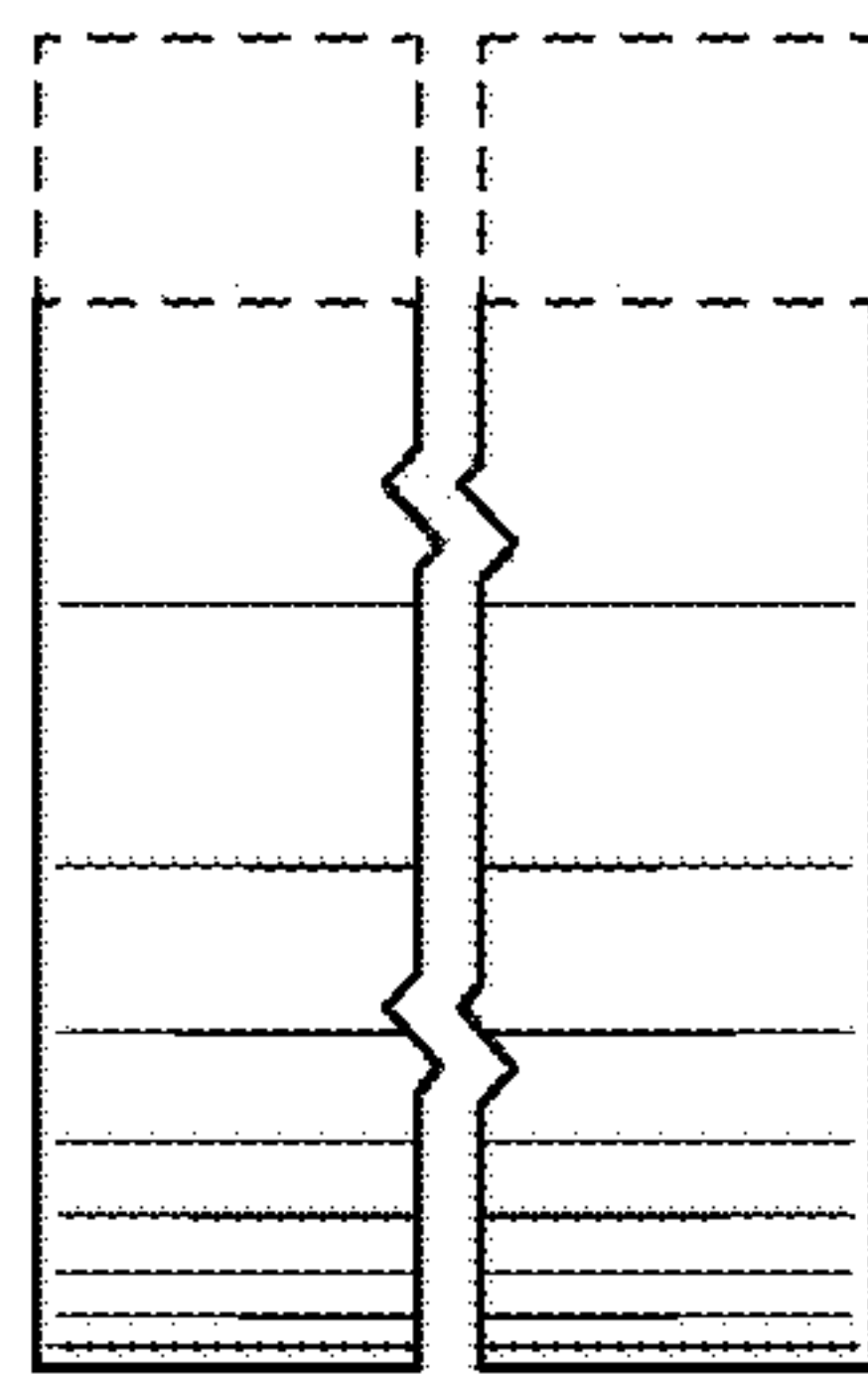


FIG. 19

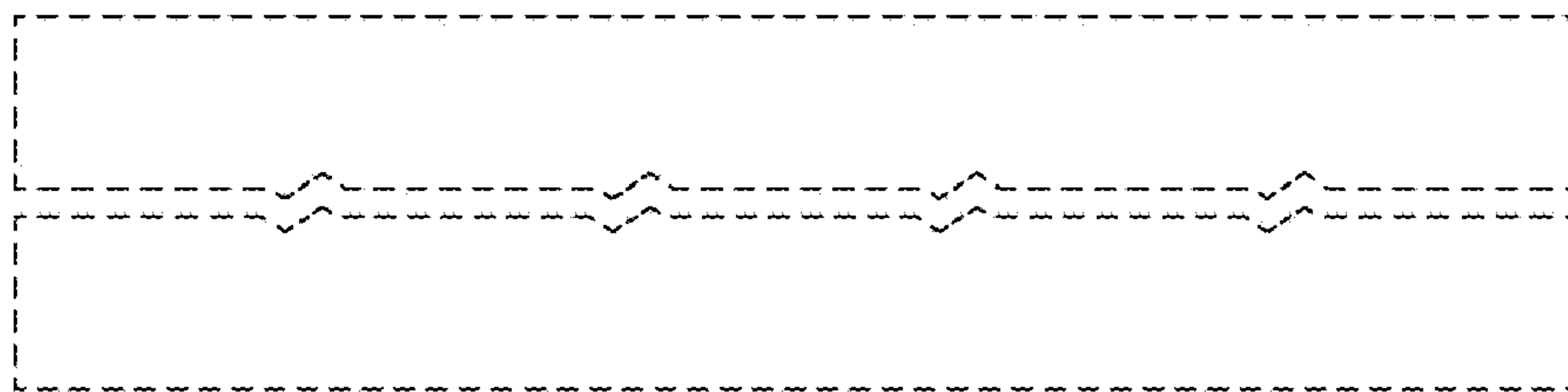


FIG. 20

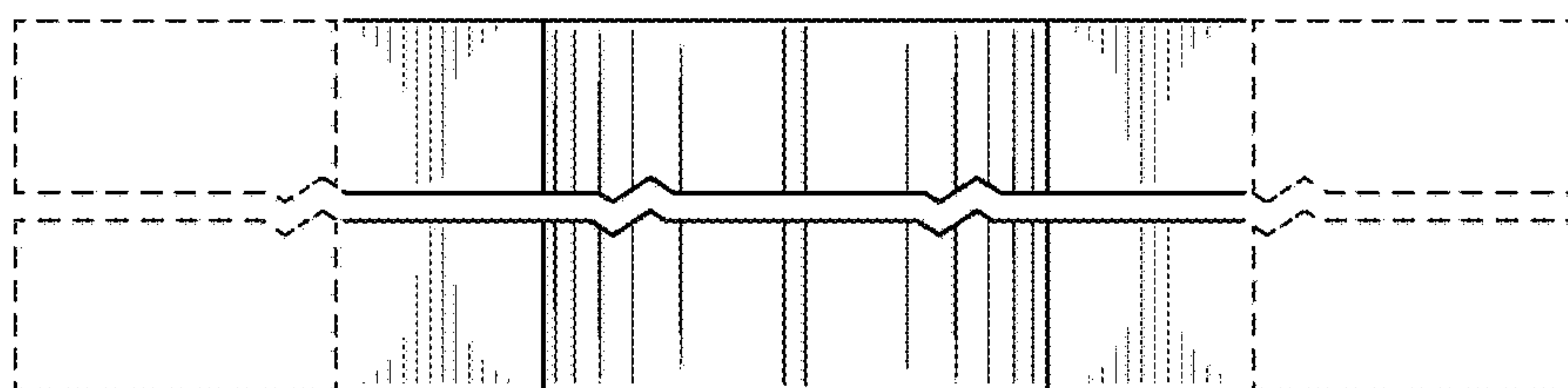


FIG. 21

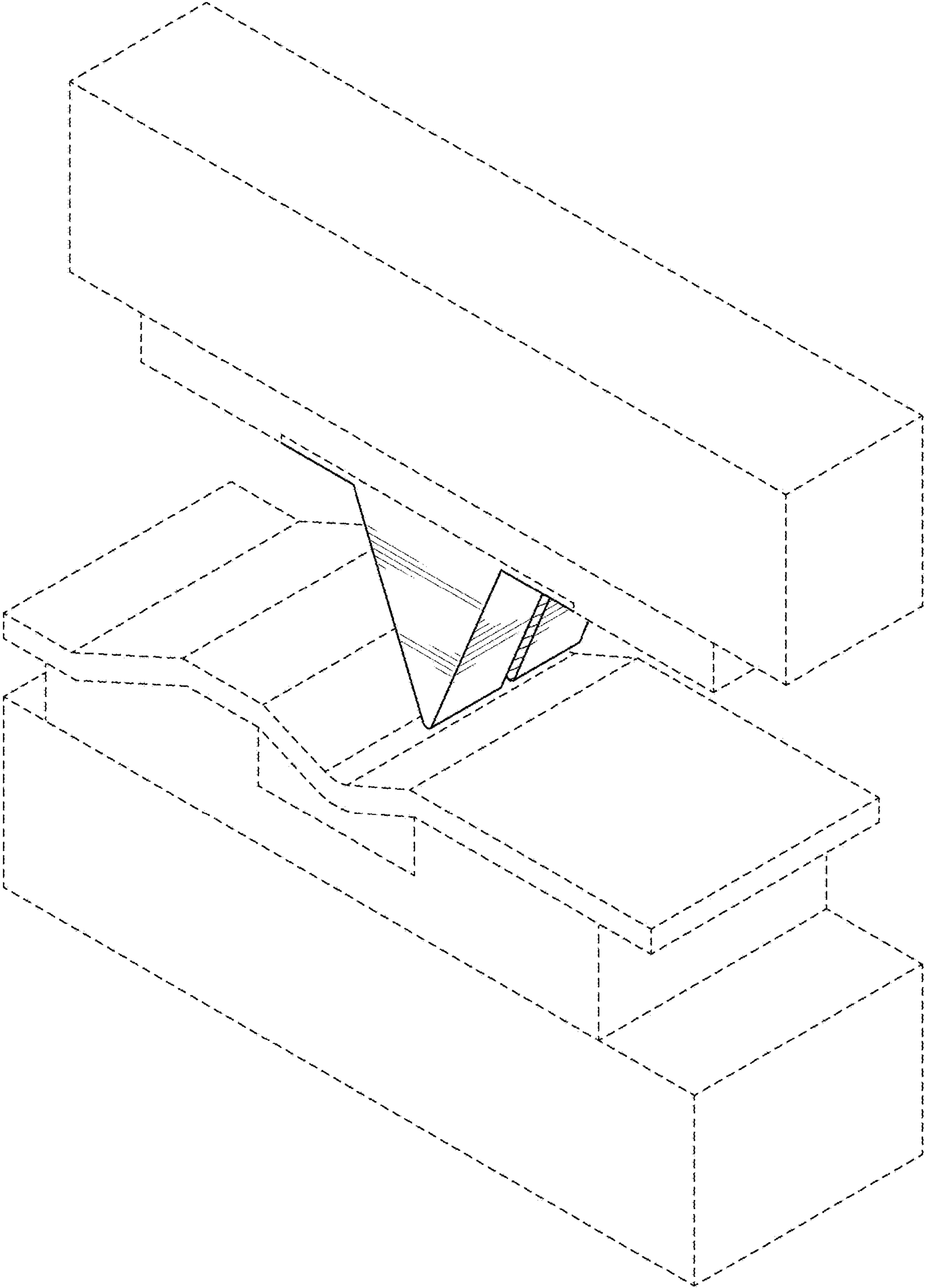
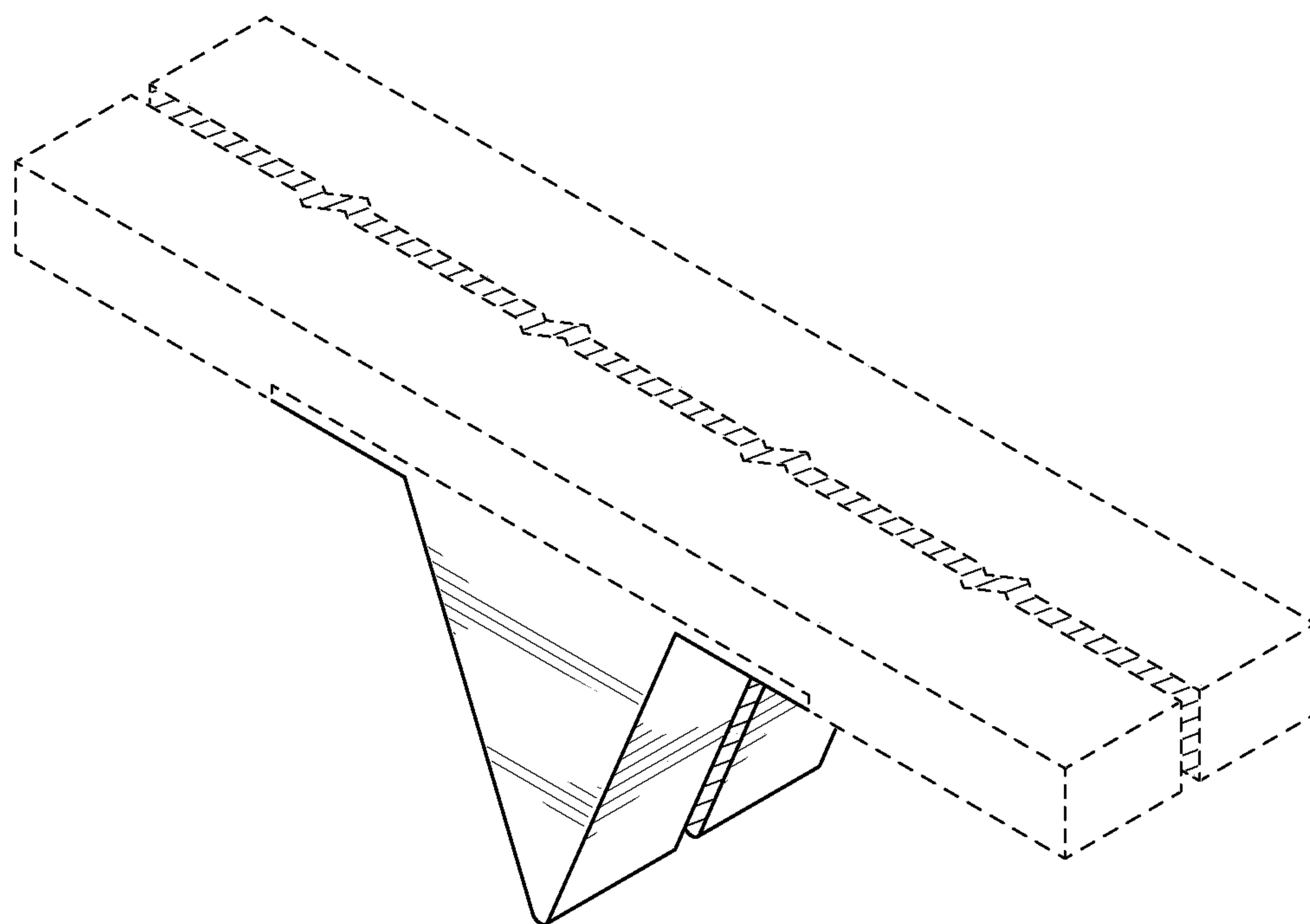
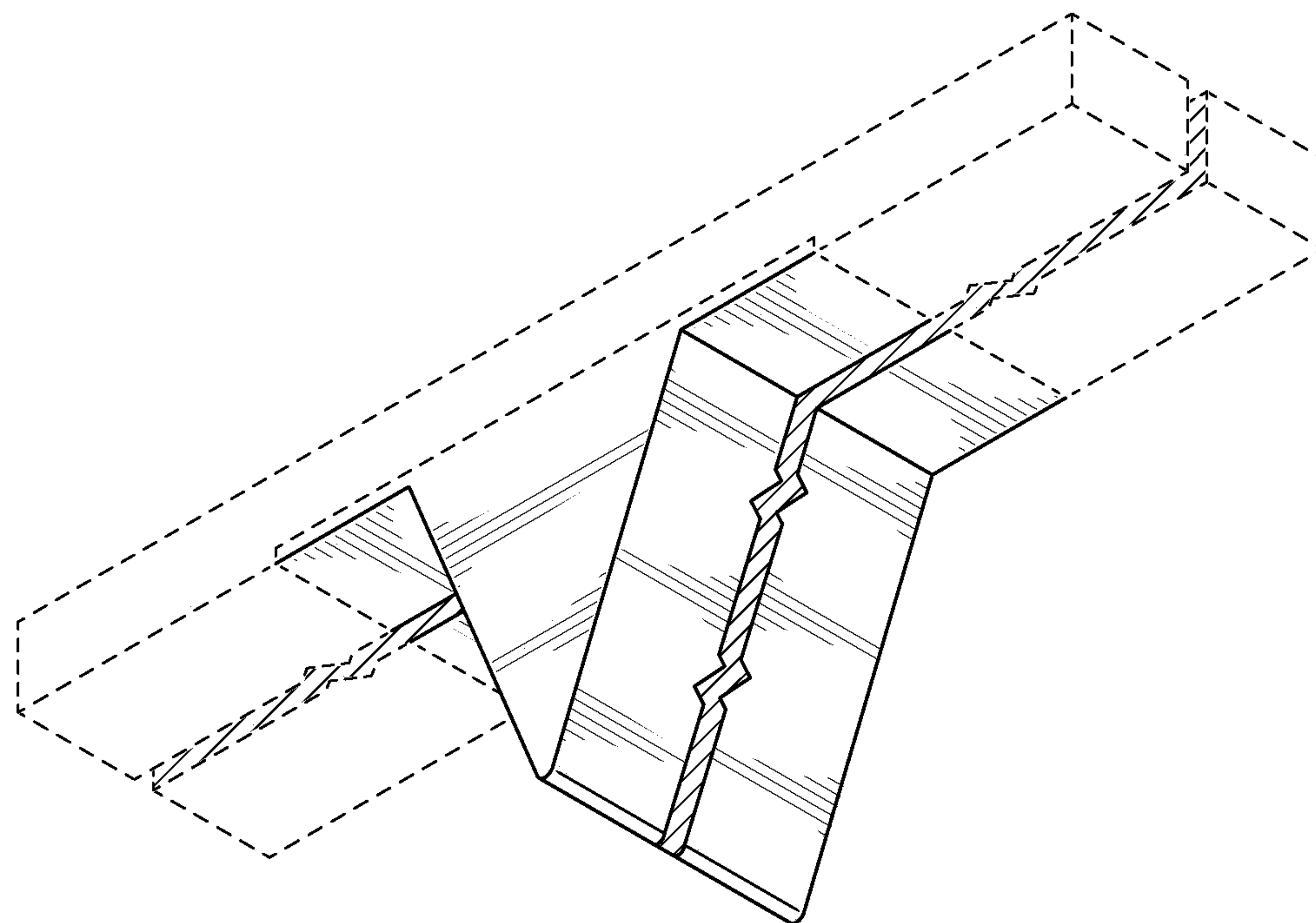


FIG. 22



**FIG. 23**



**FIG. 24**



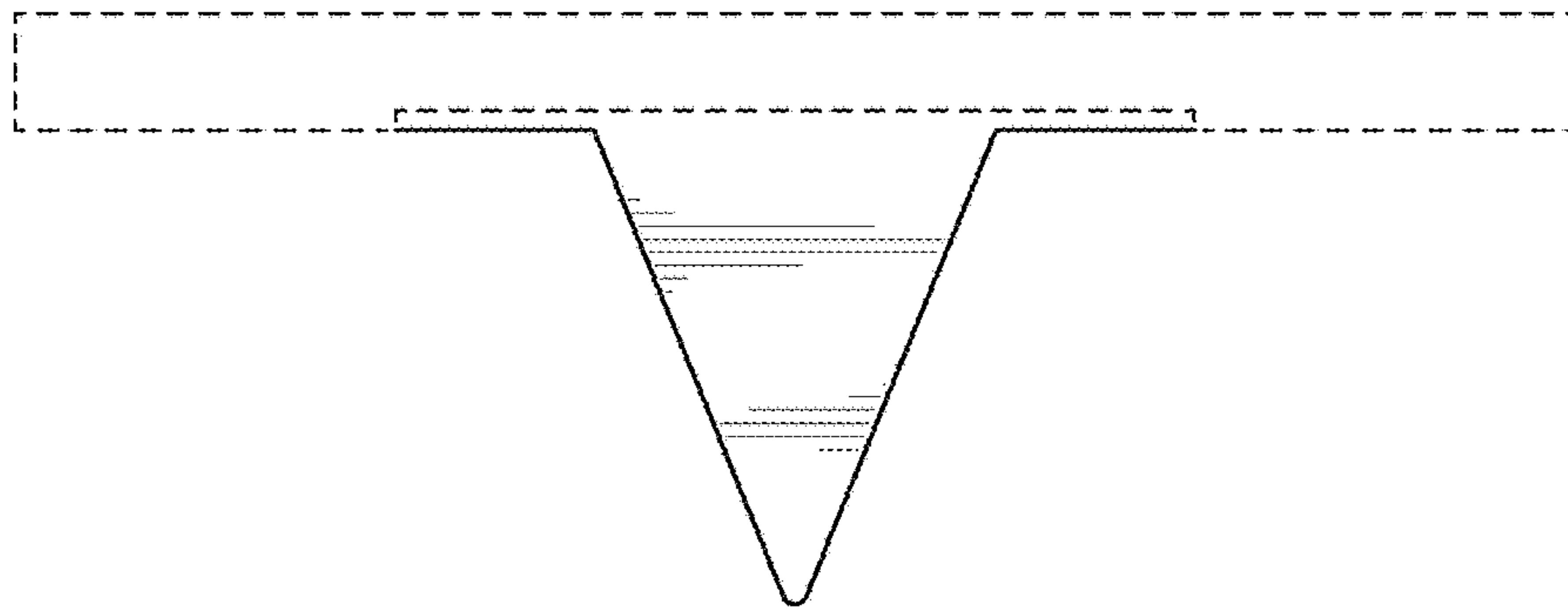


FIG. 25

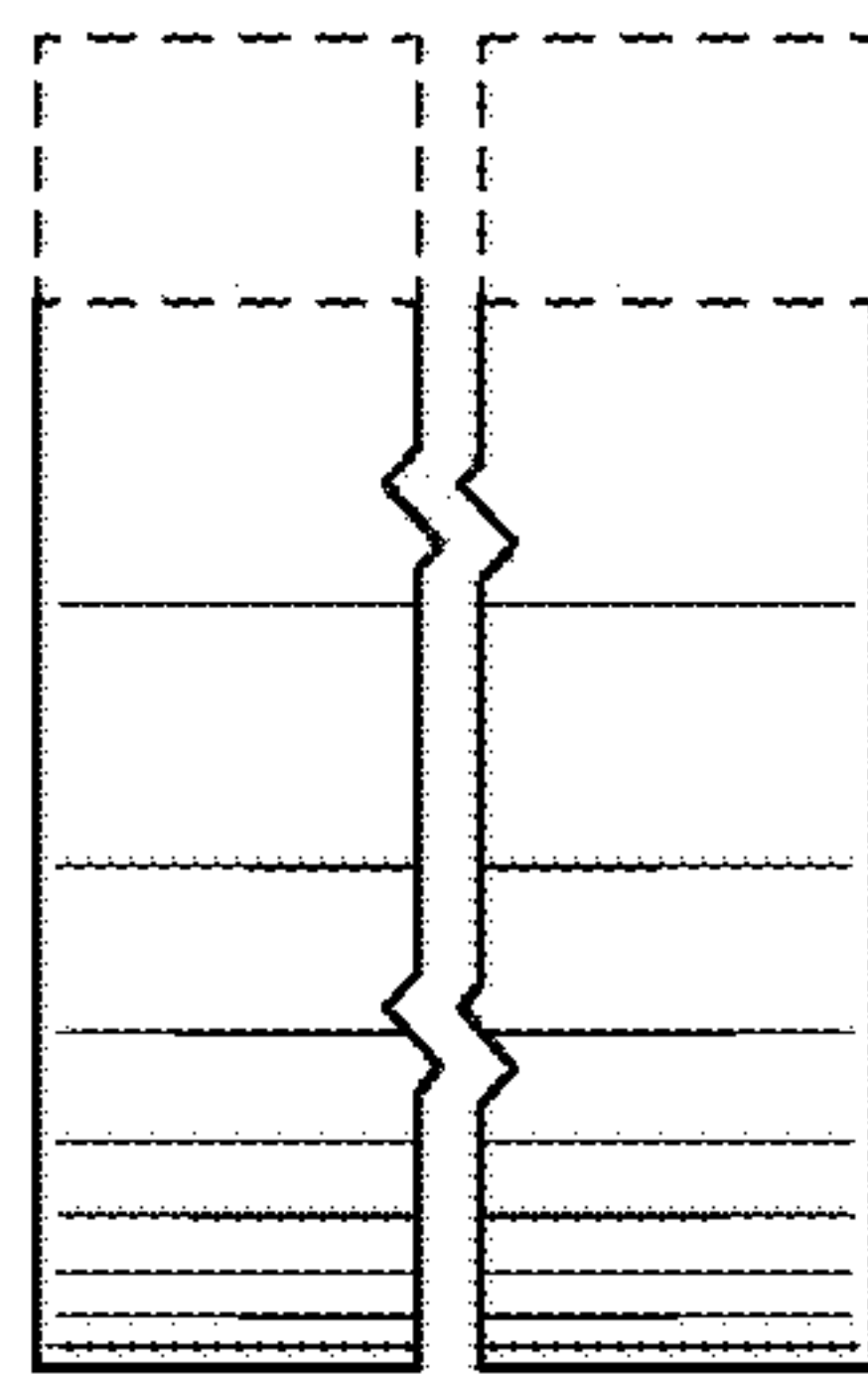


FIG. 26

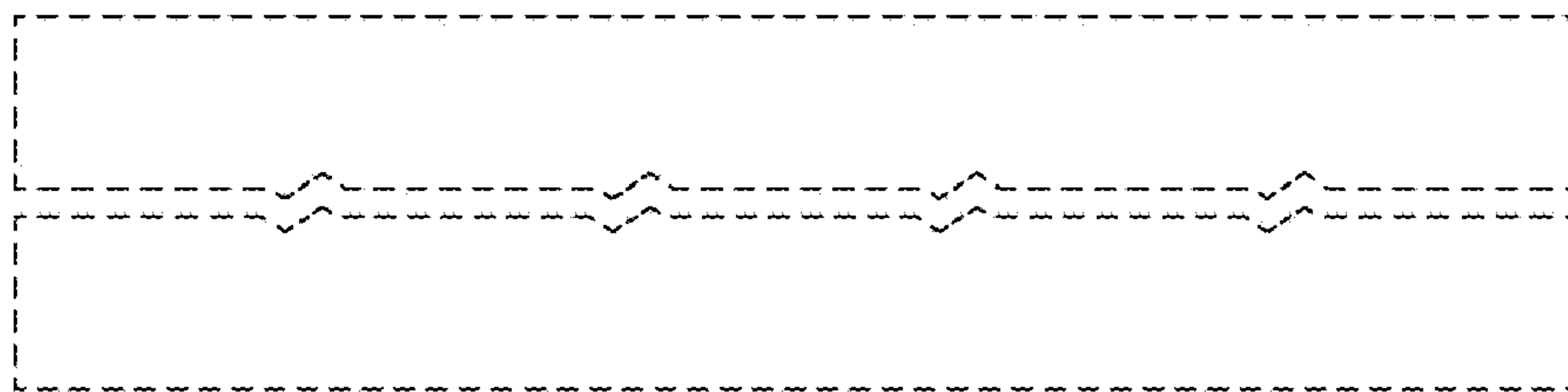


FIG. 27

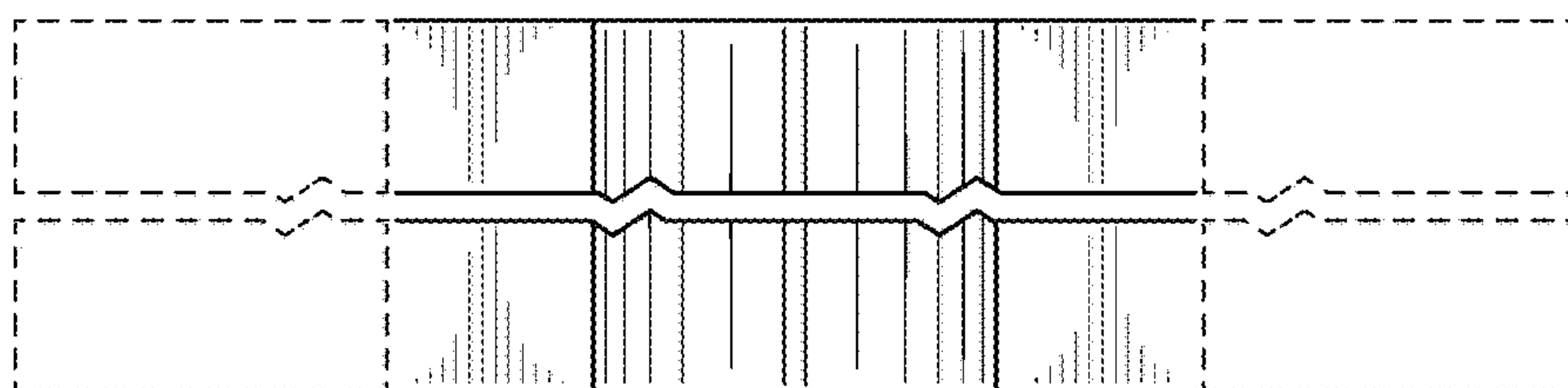


FIG. 28

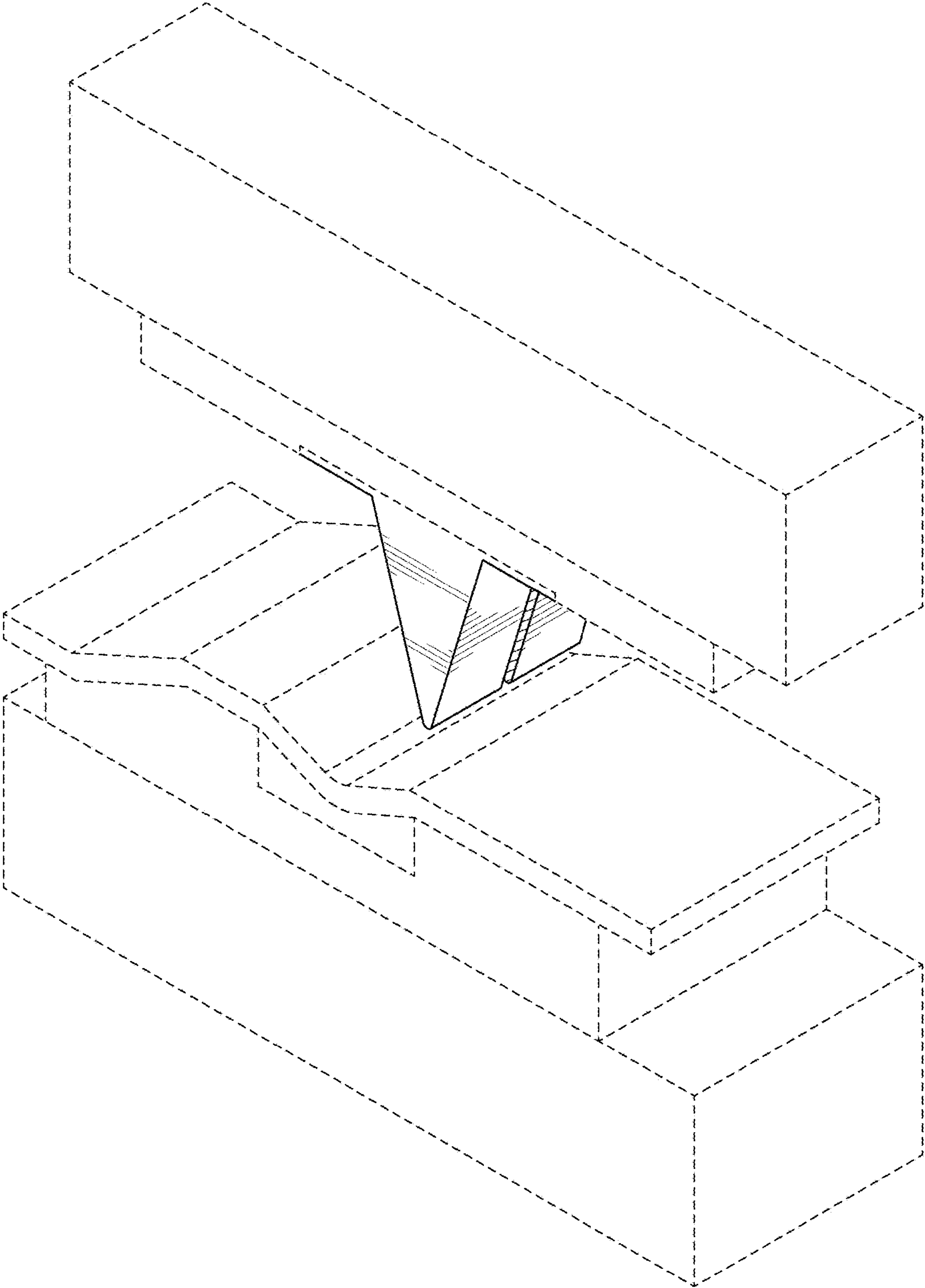


FIG. 29

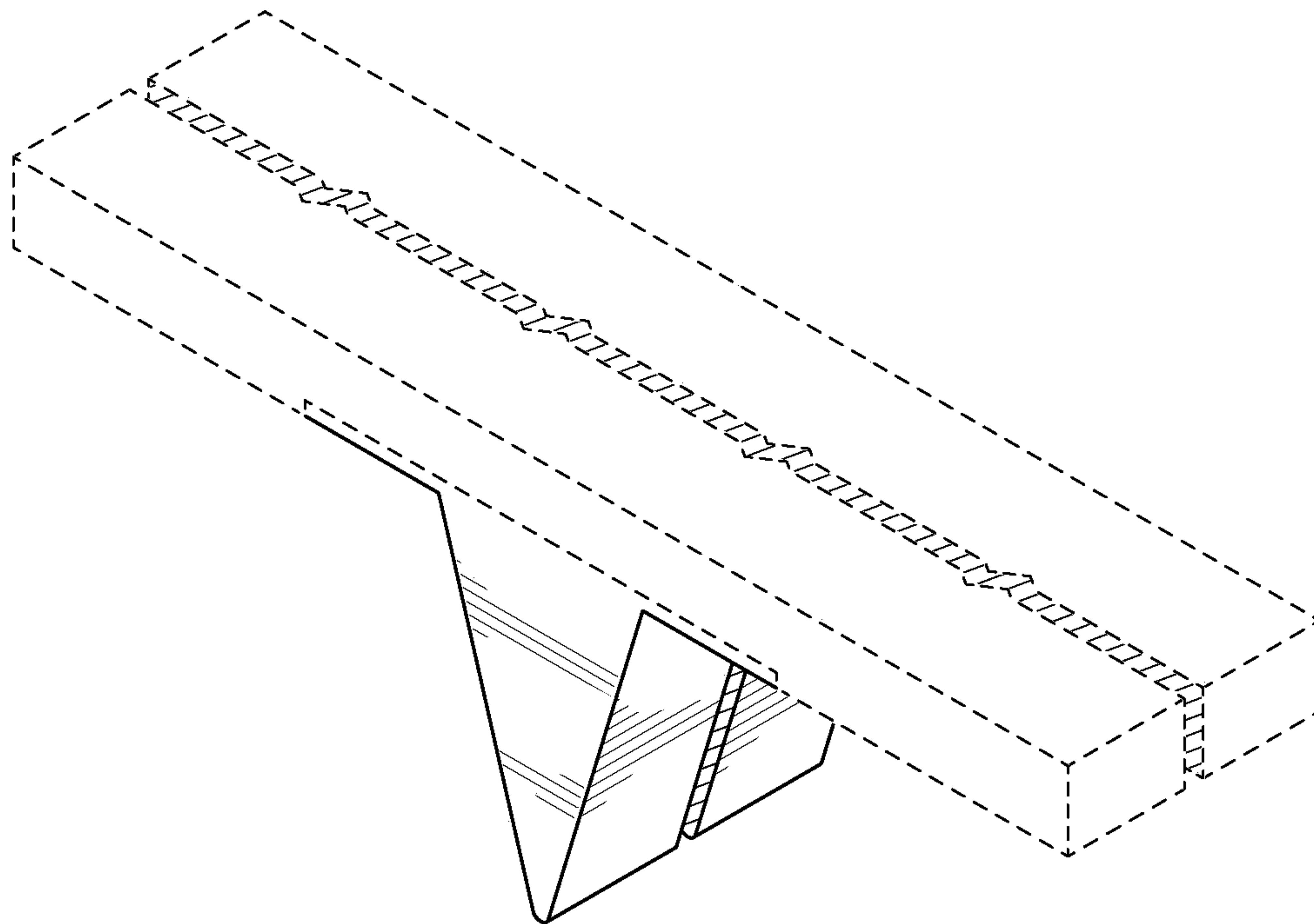


FIG. 30

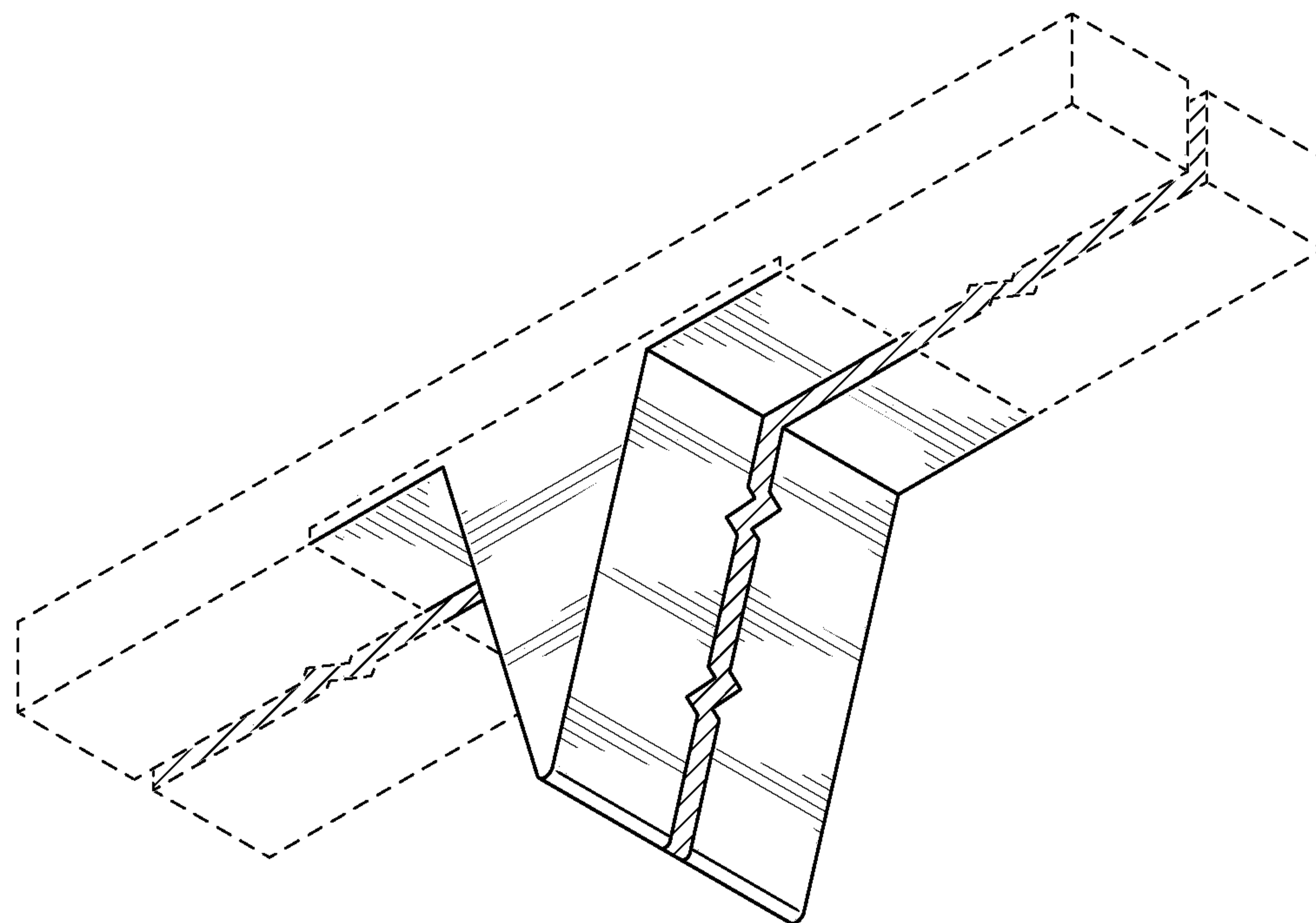


FIG. 31



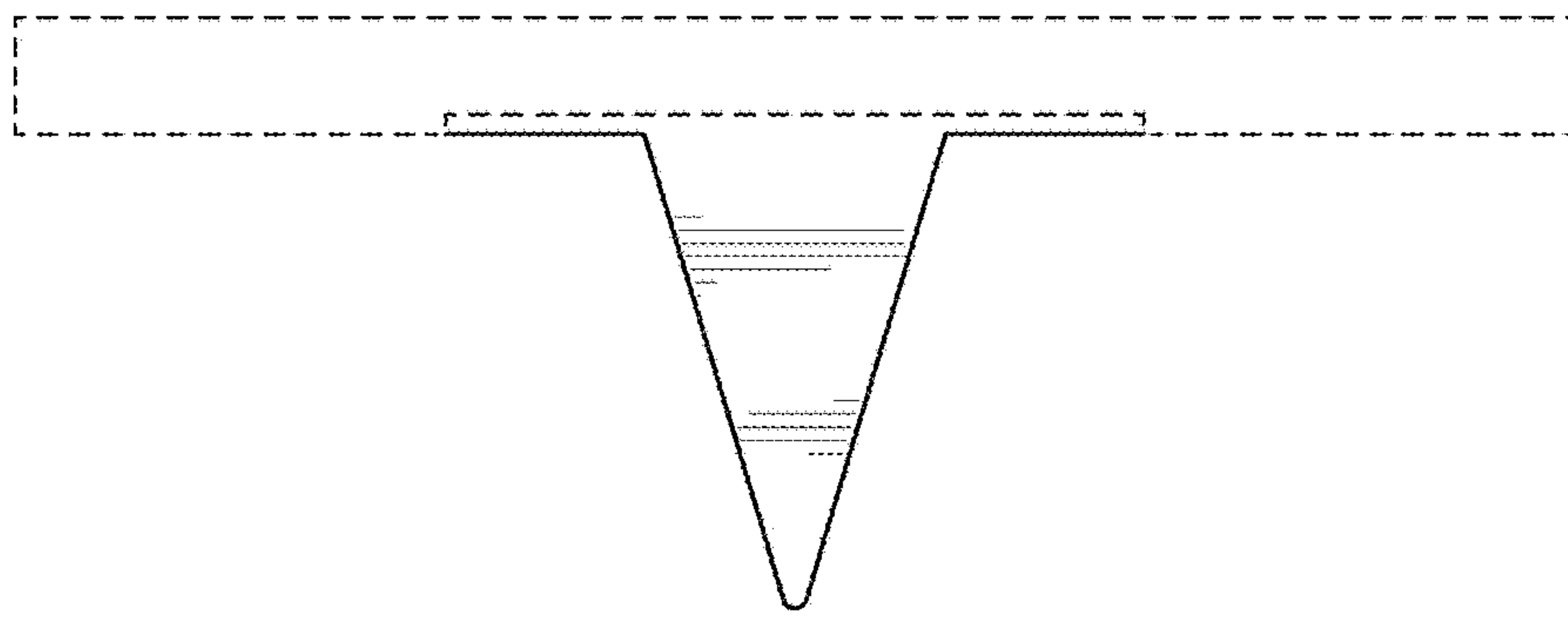


FIG. 32

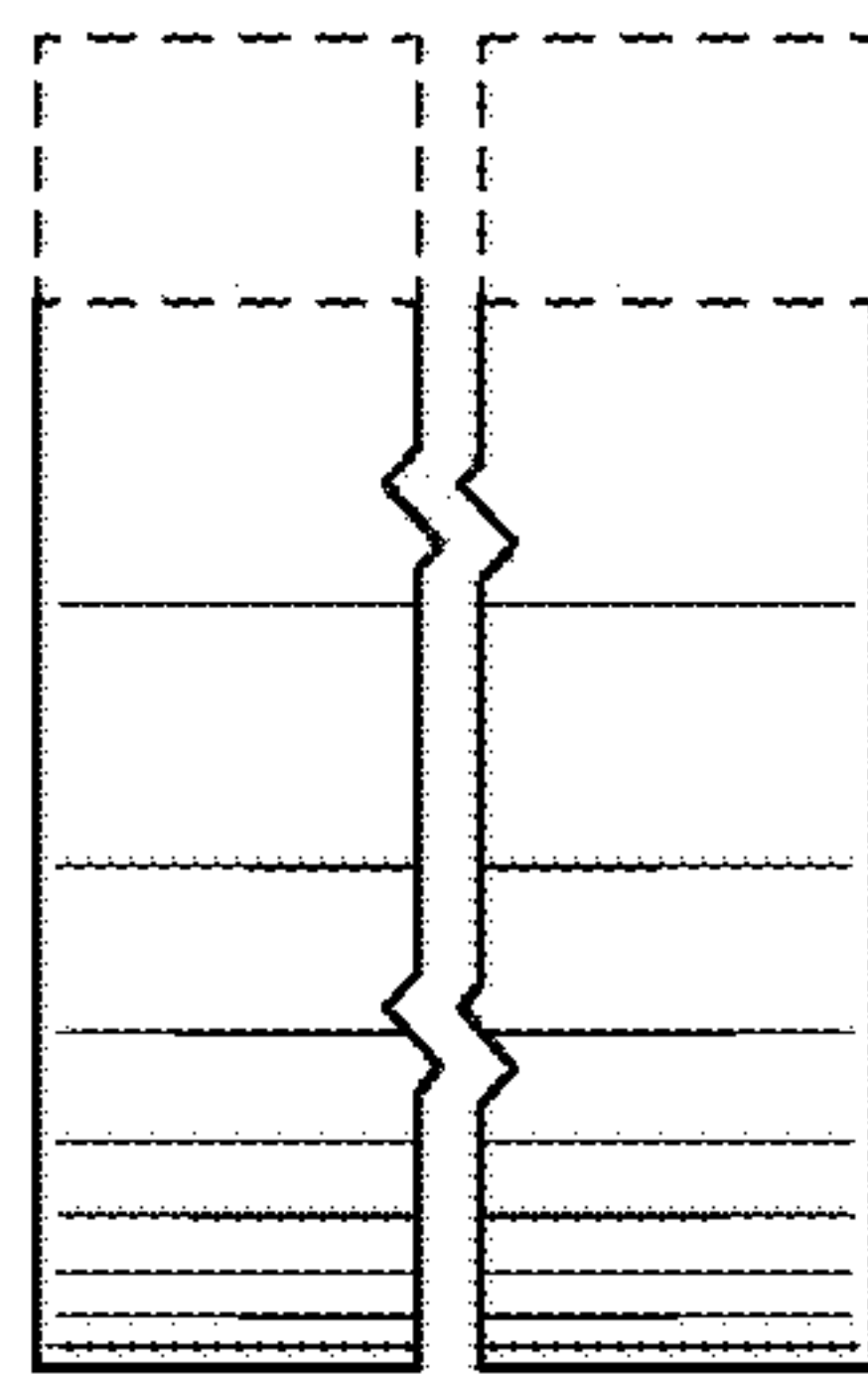


FIG. 33

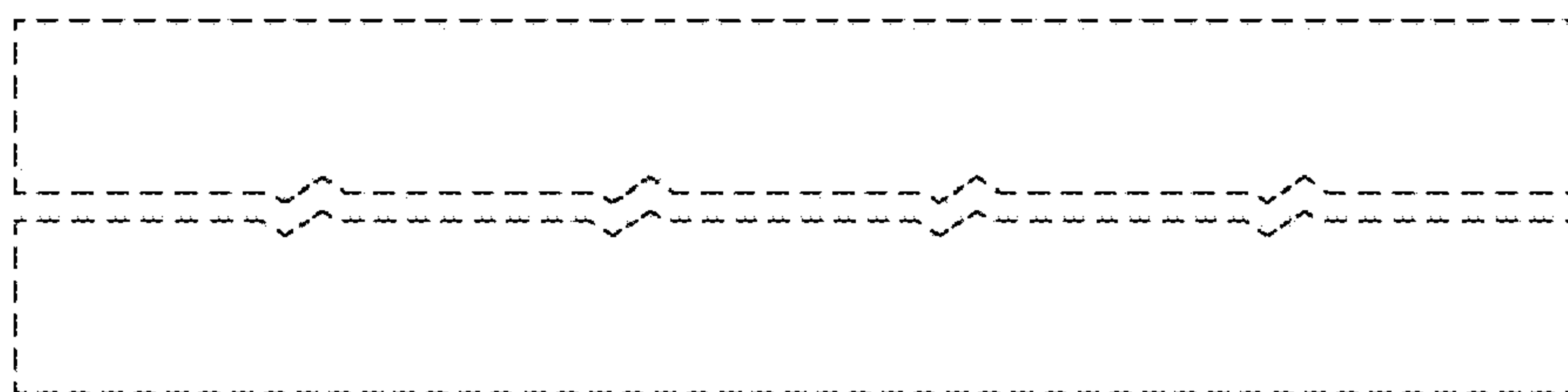


FIG. 34

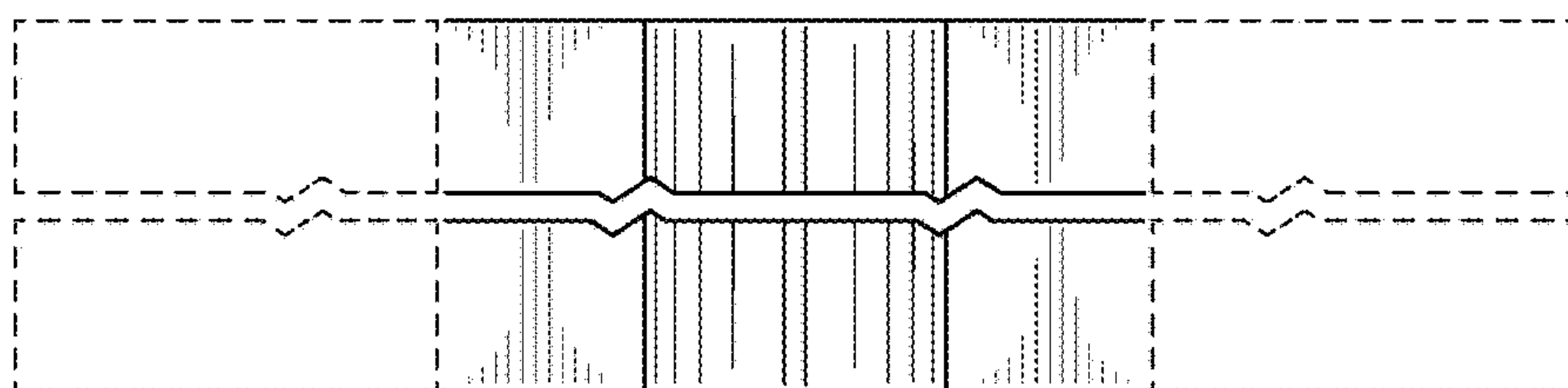


FIG. 35

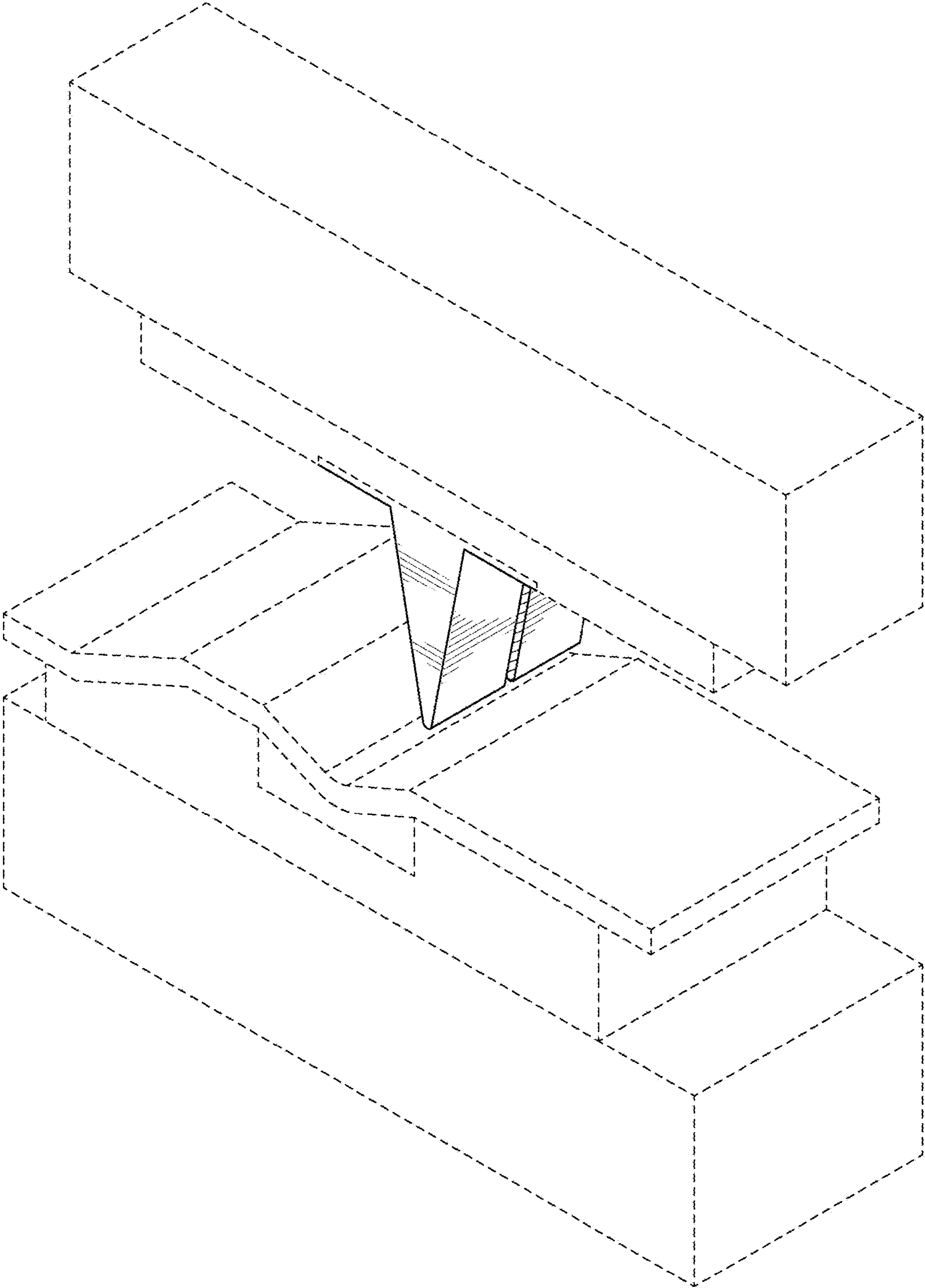
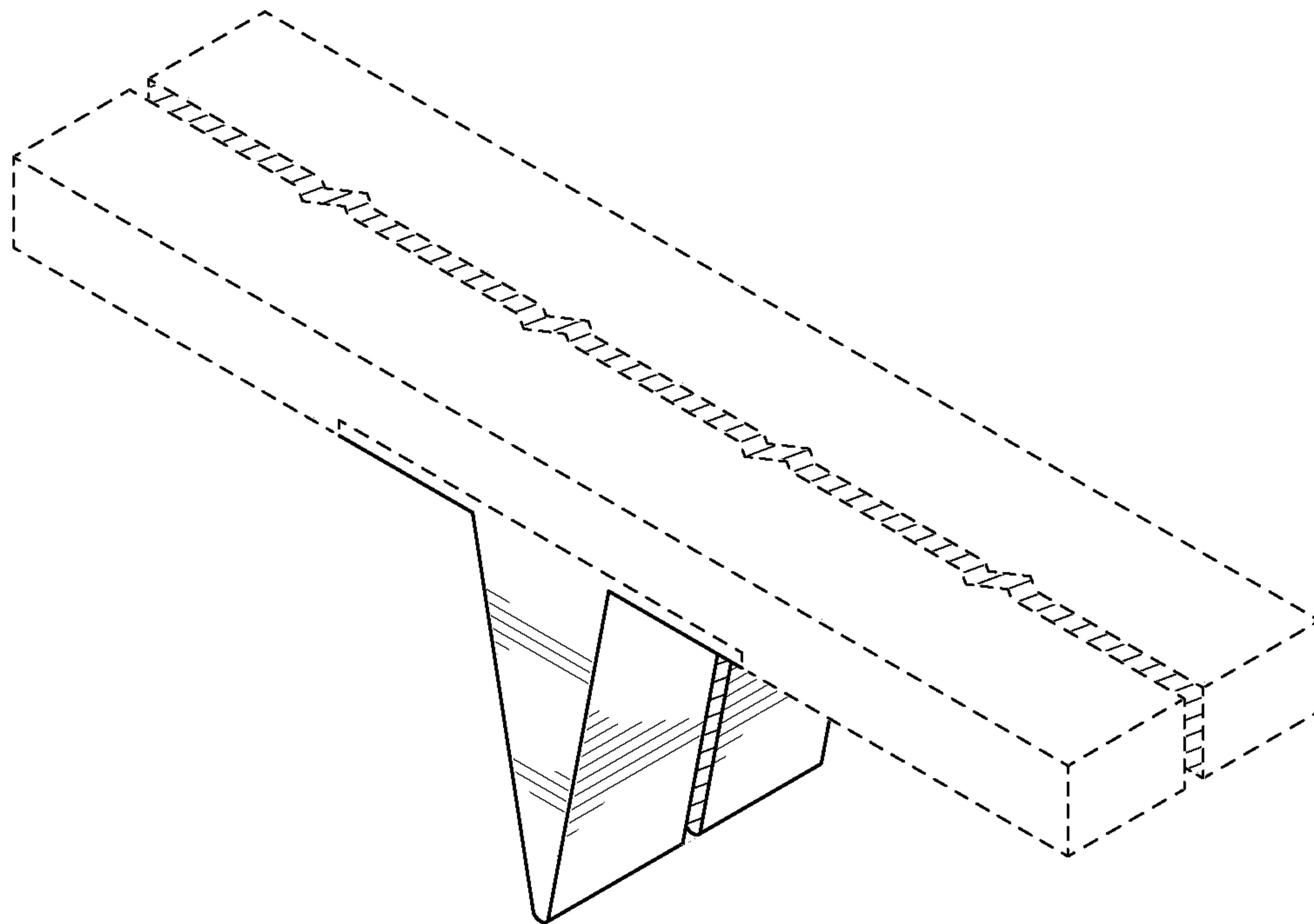
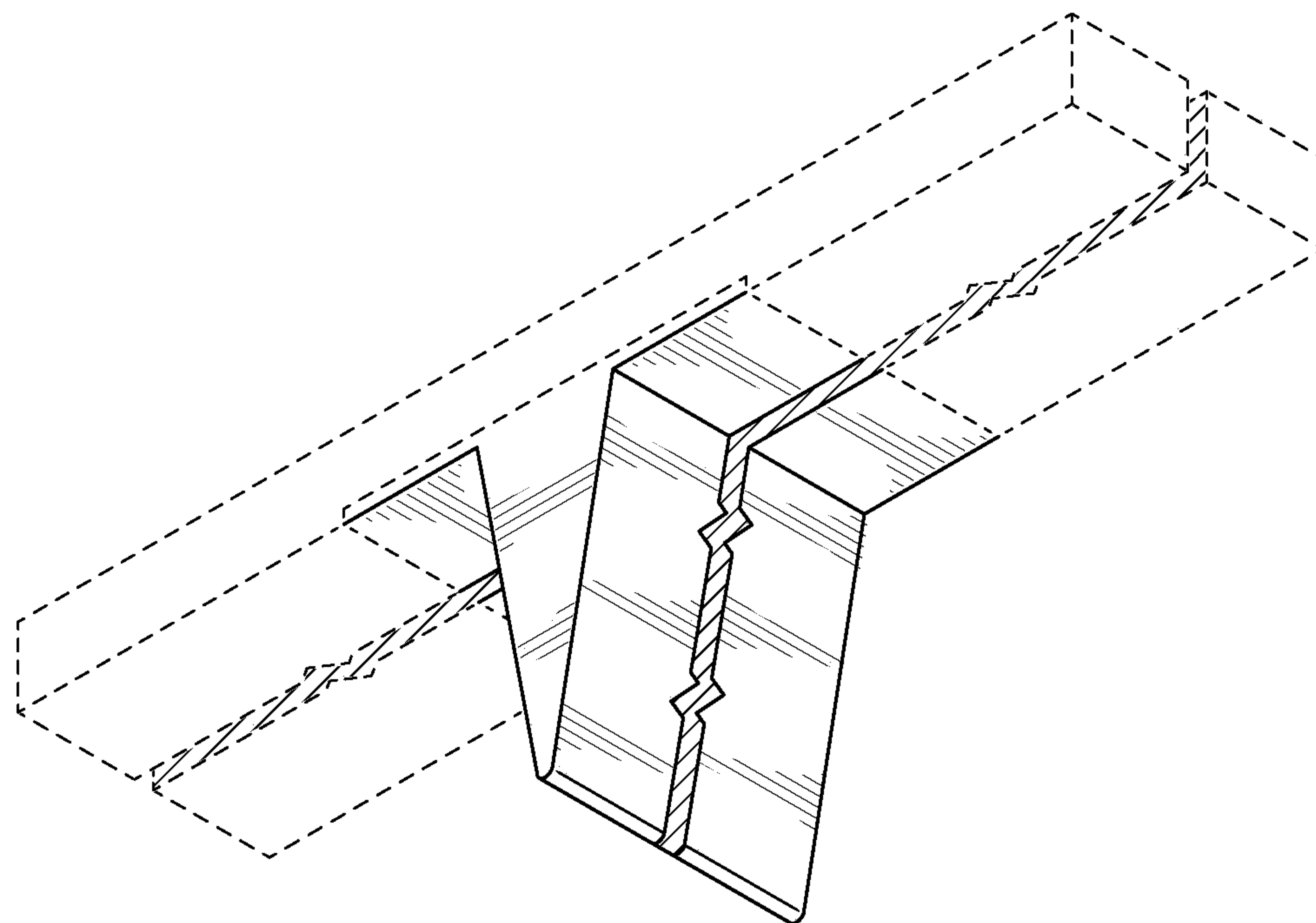


FIG. 36



**FIG. 37**



**FIG. 38**



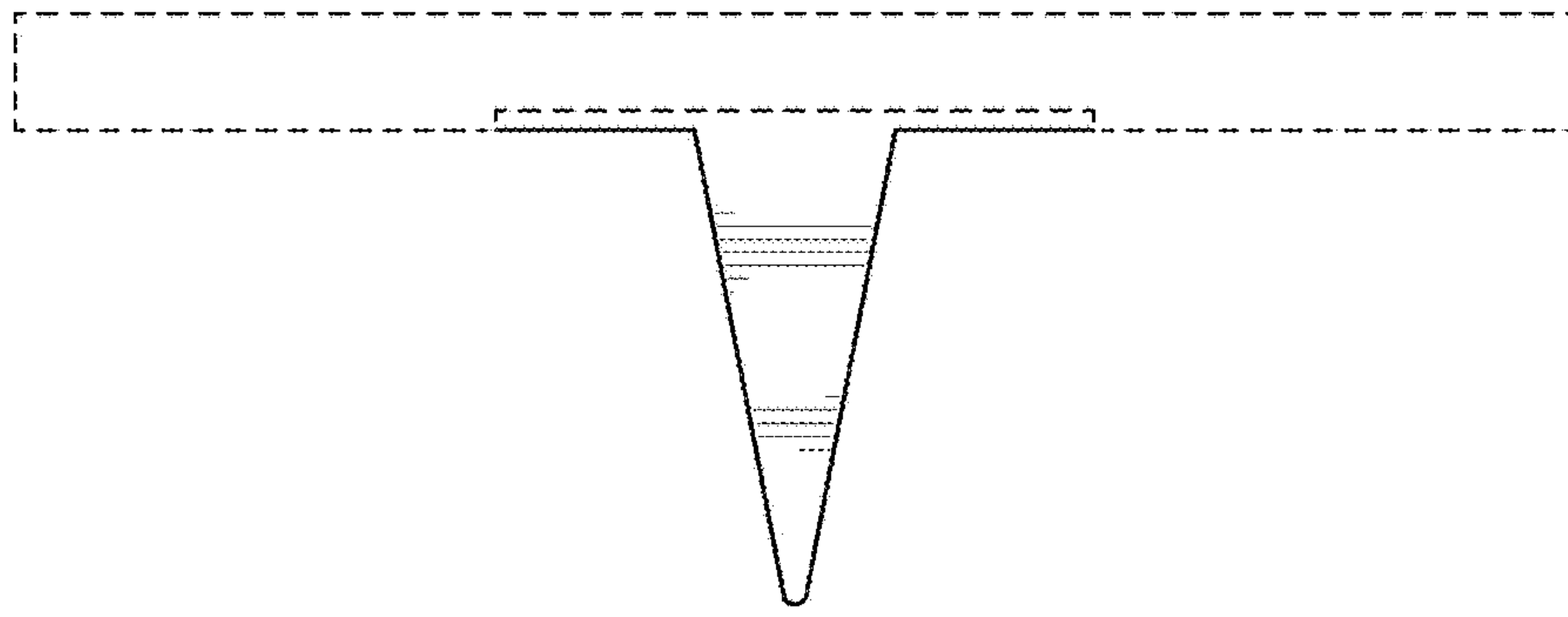


FIG. 39

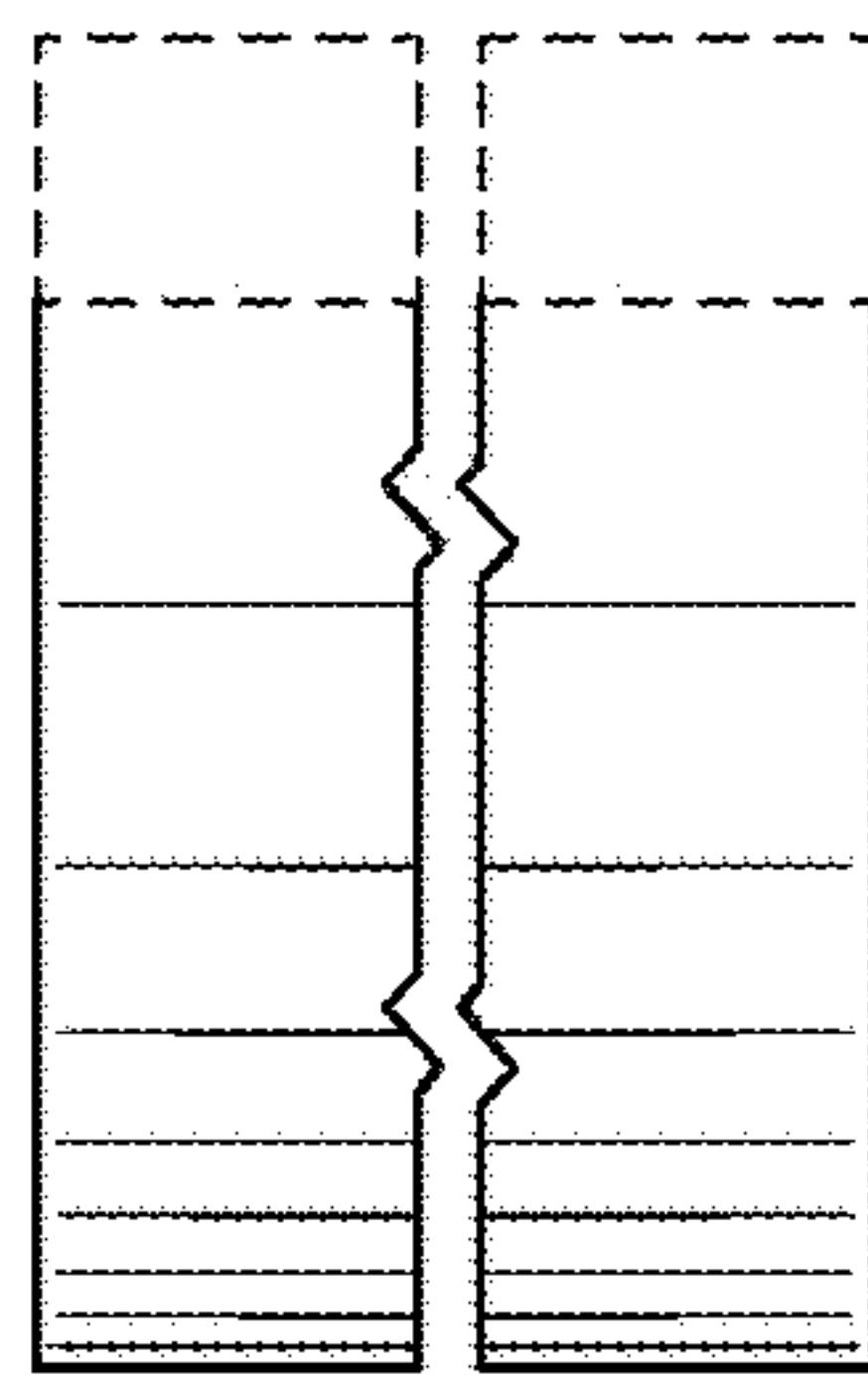


FIG. 40

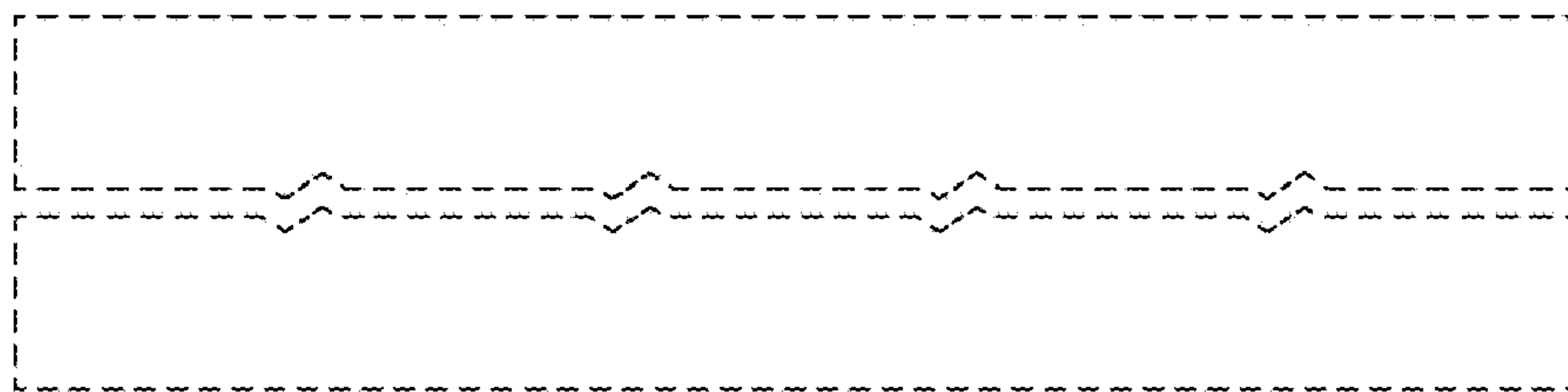


FIG. 41

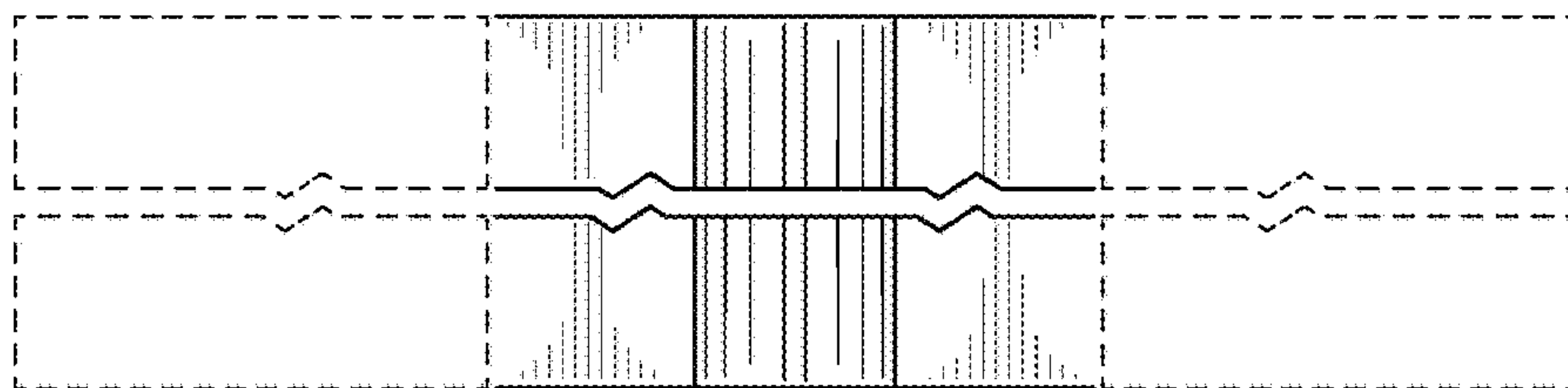


FIG. 42

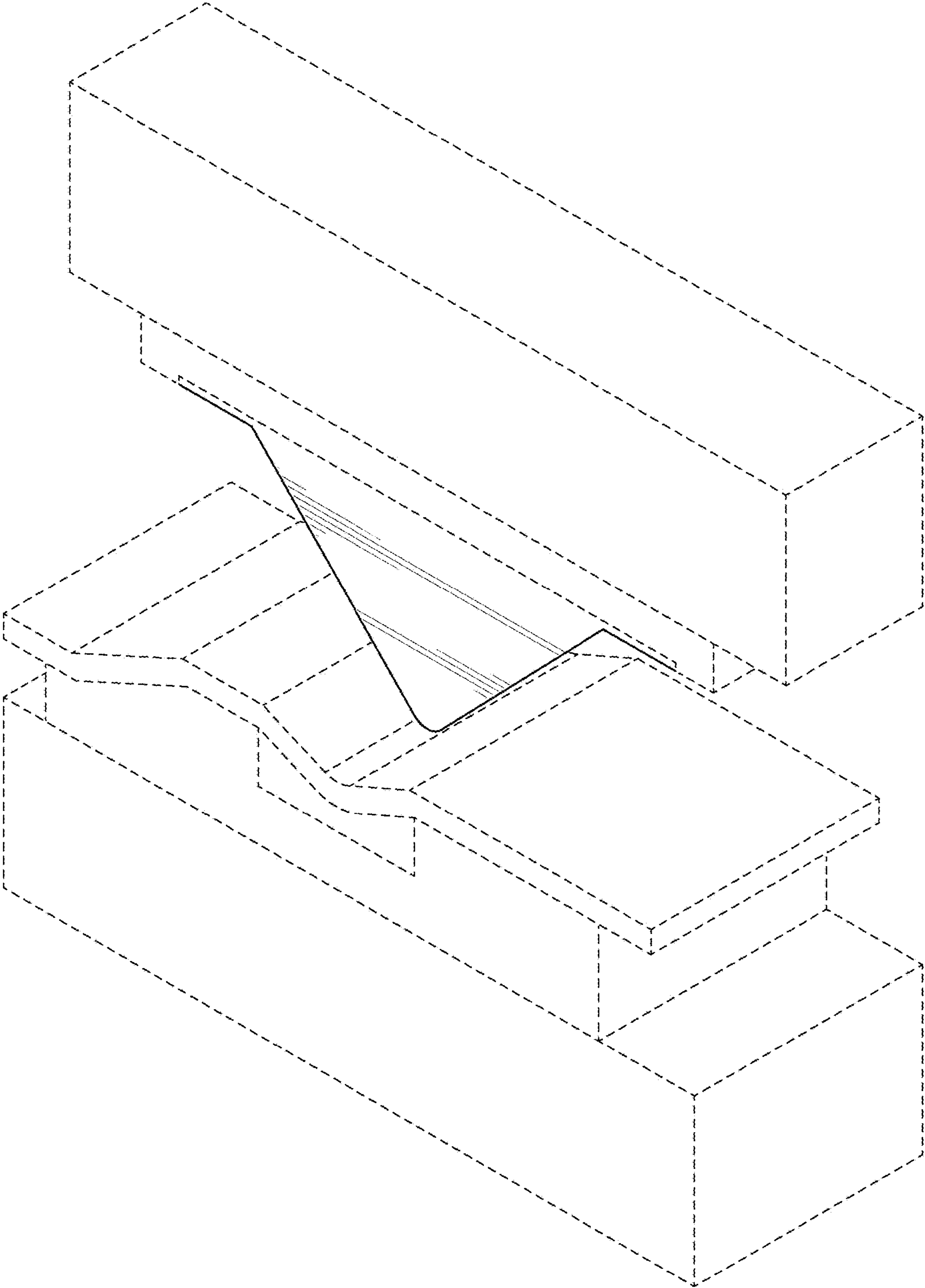


FIG. 43

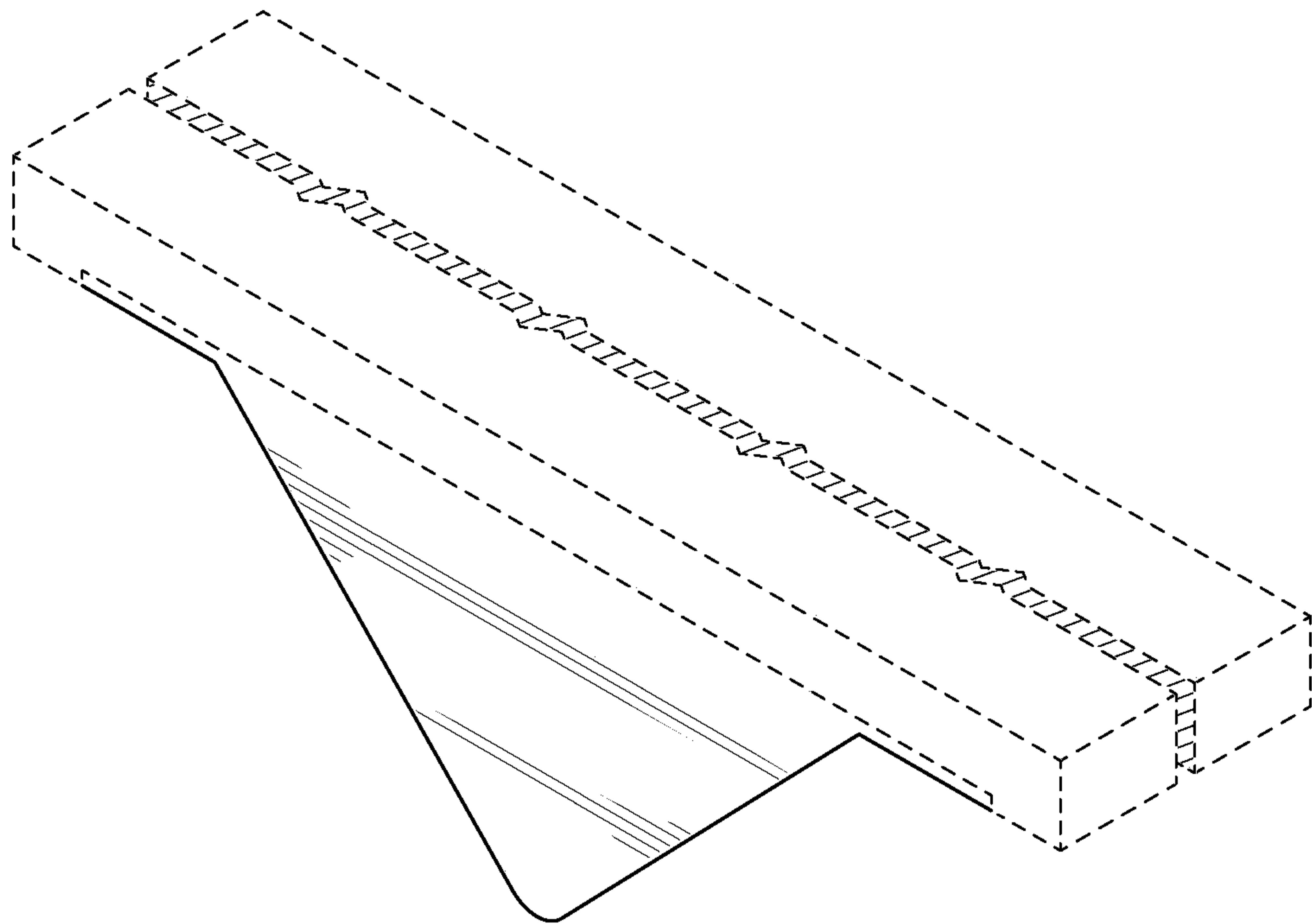


FIG. 44

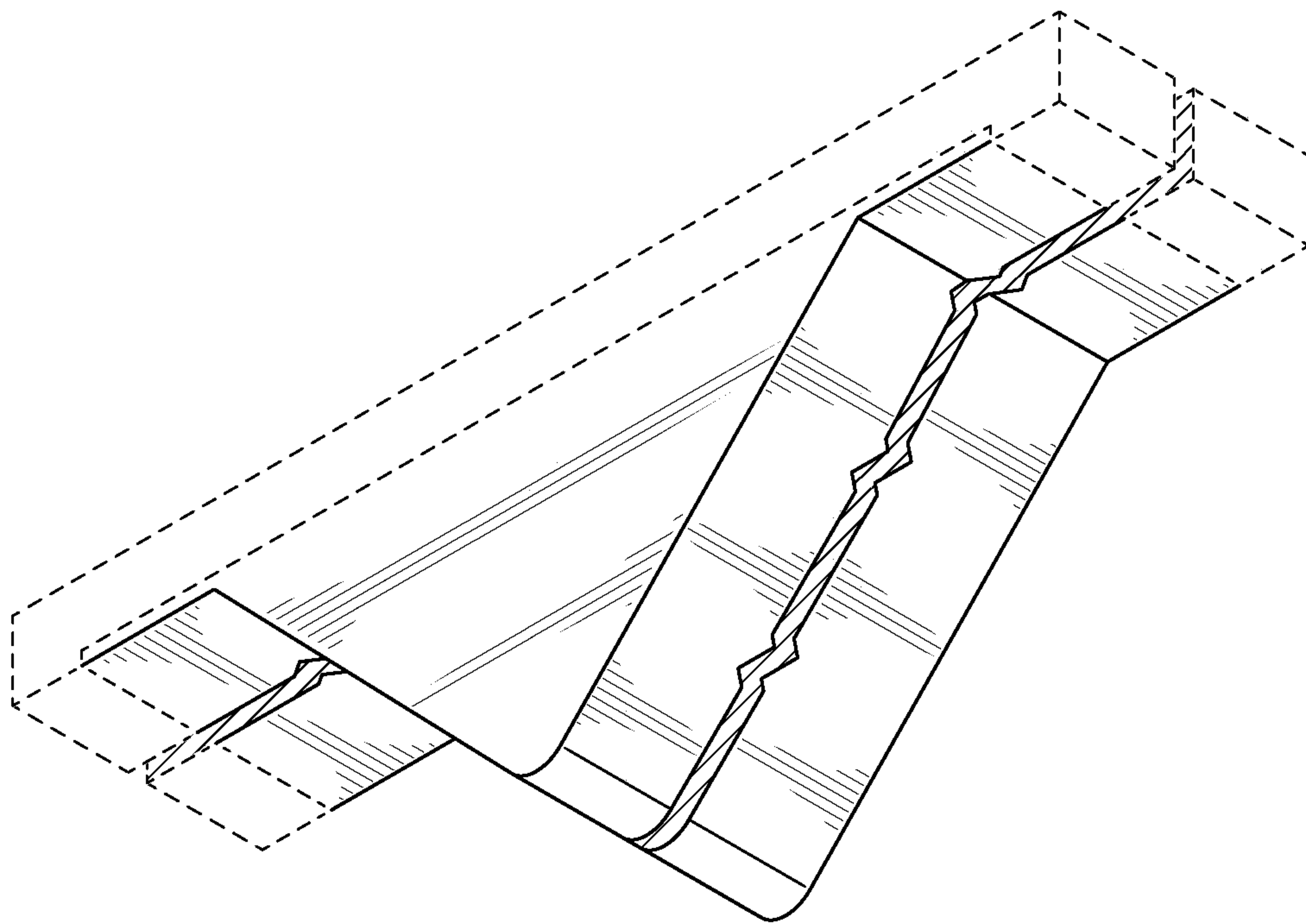


FIG. 45

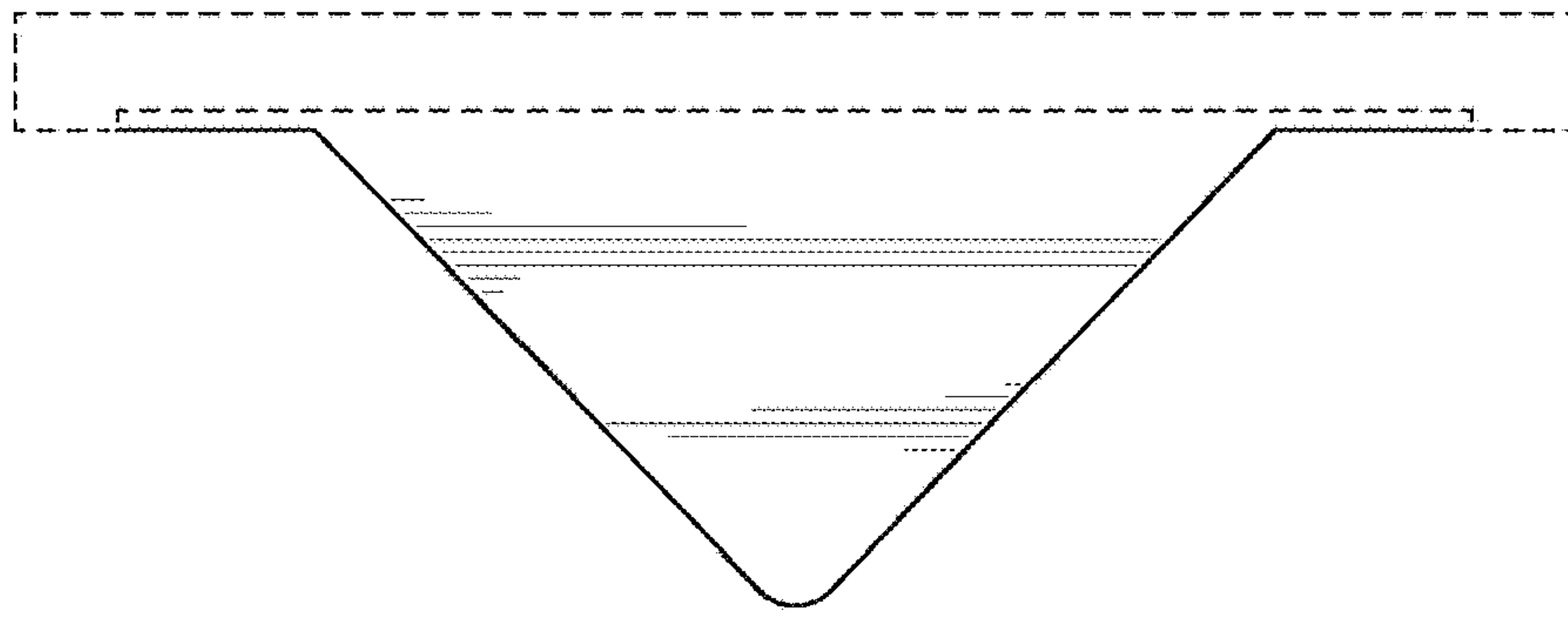


FIG. 46

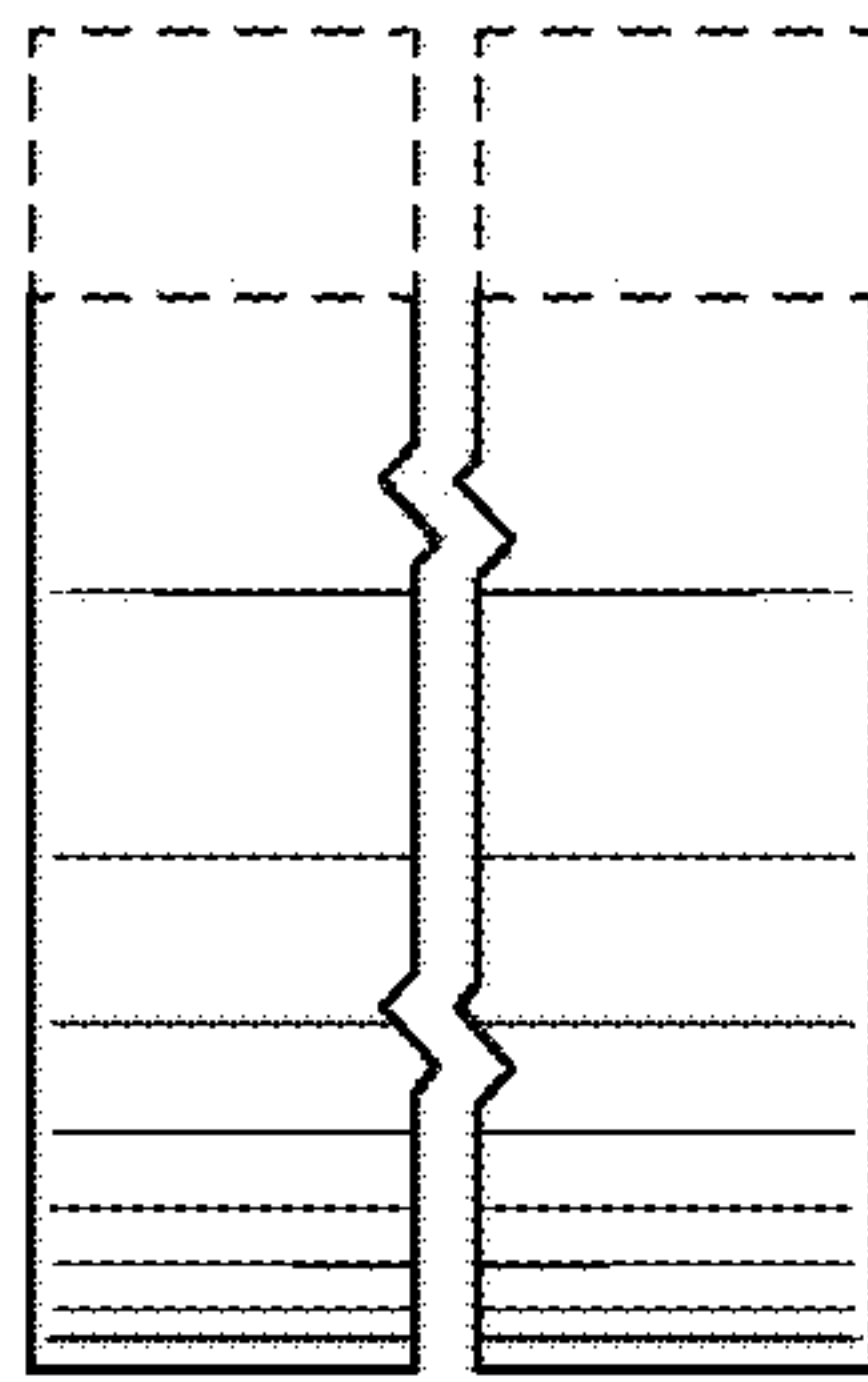


FIG. 47

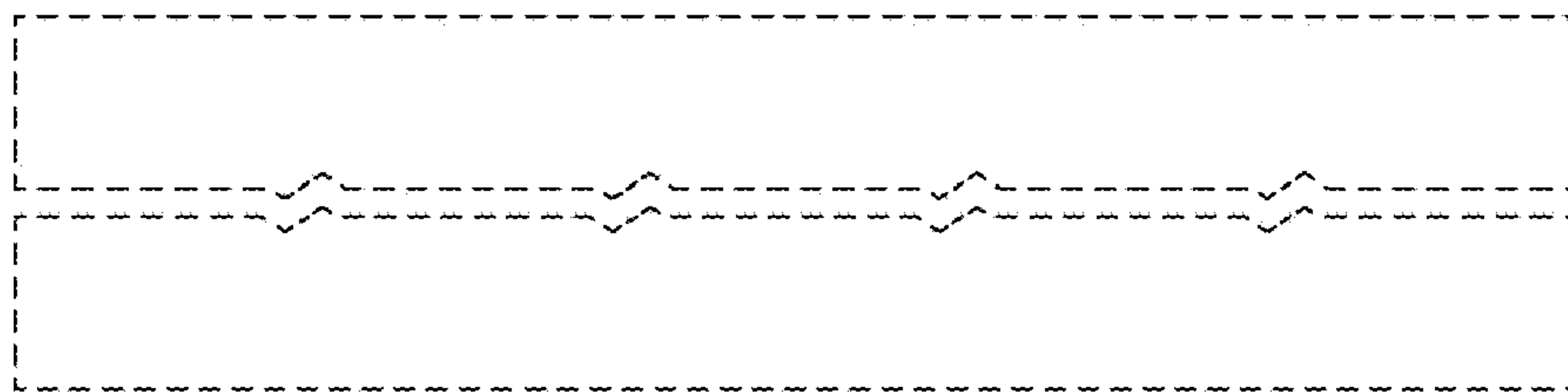


FIG. 48

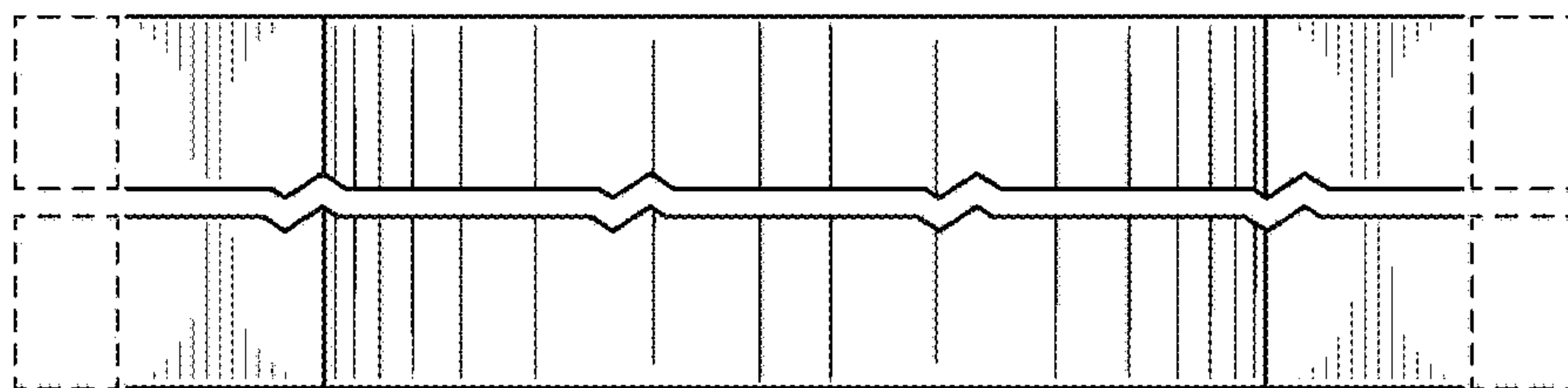


FIG. 49



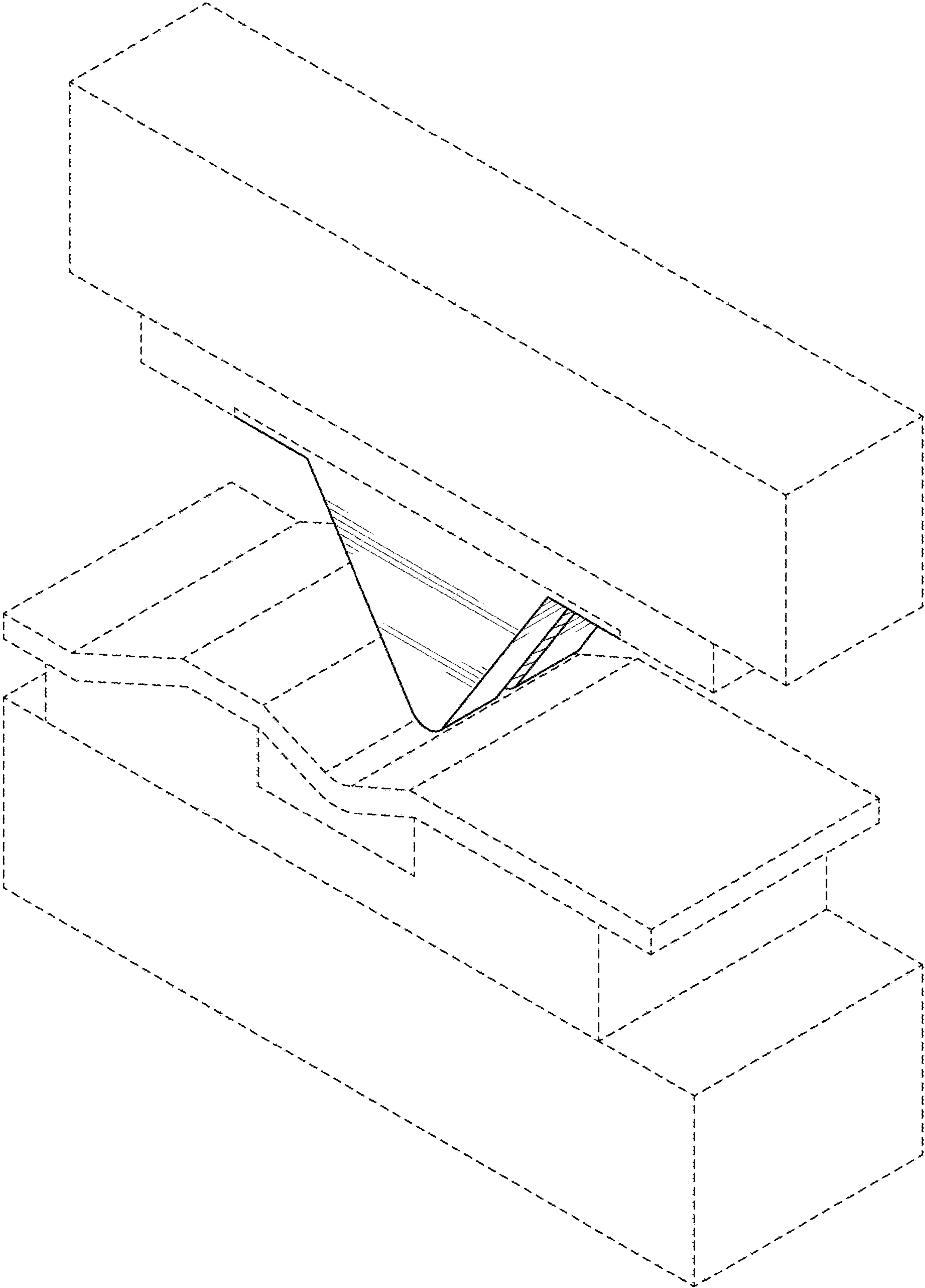
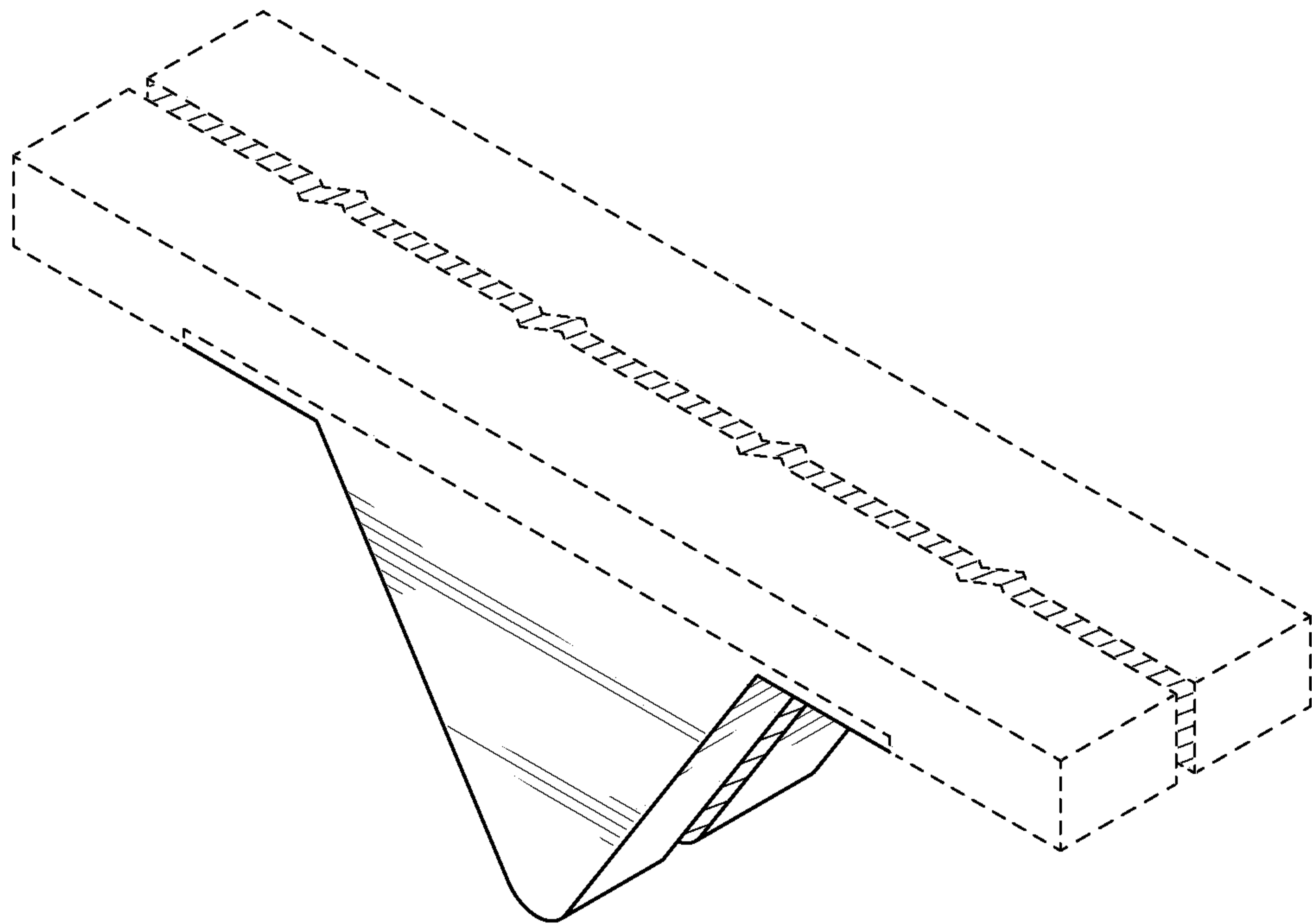
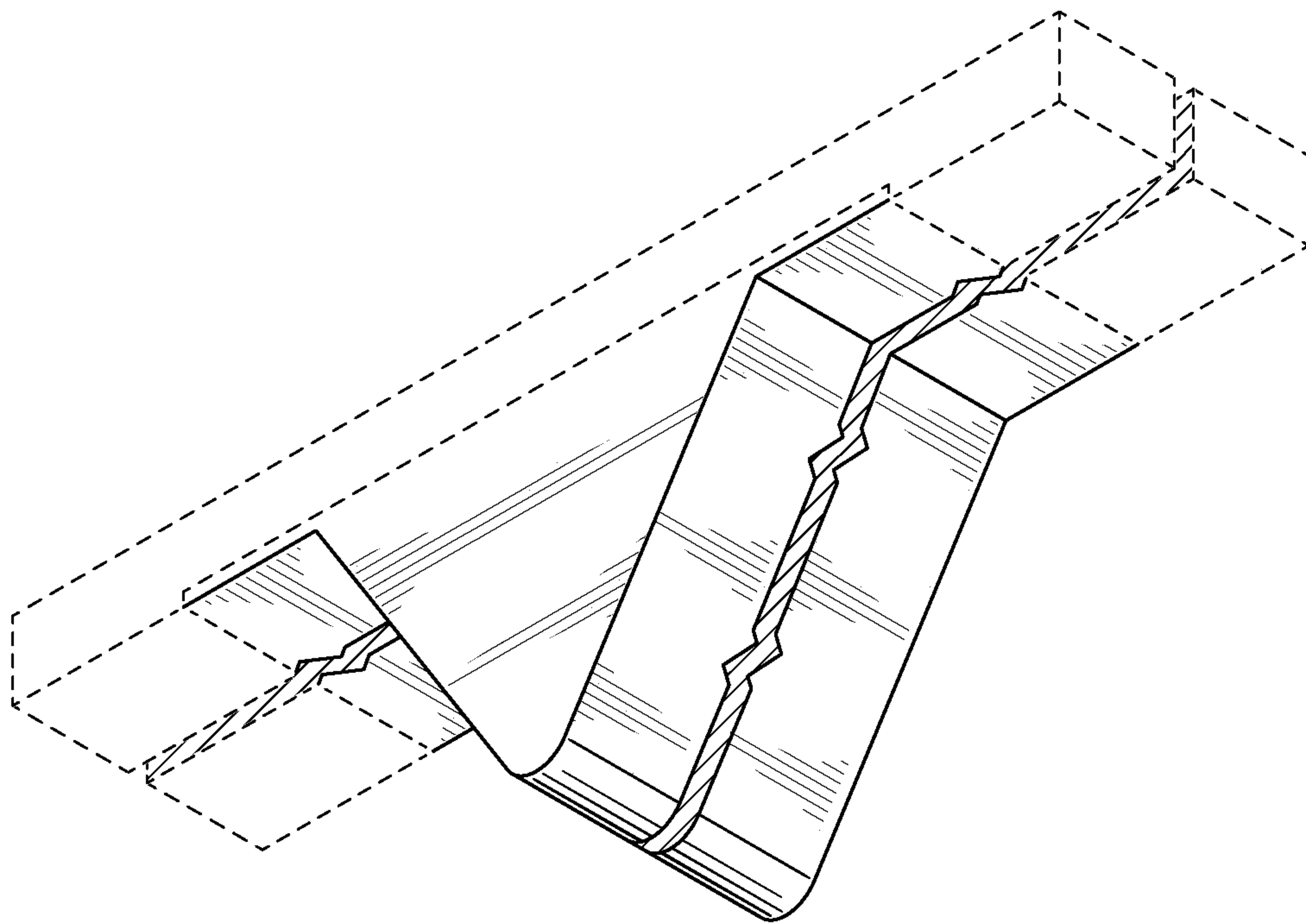


FIG. 50



**FIG. 51**



**FIG. 52**

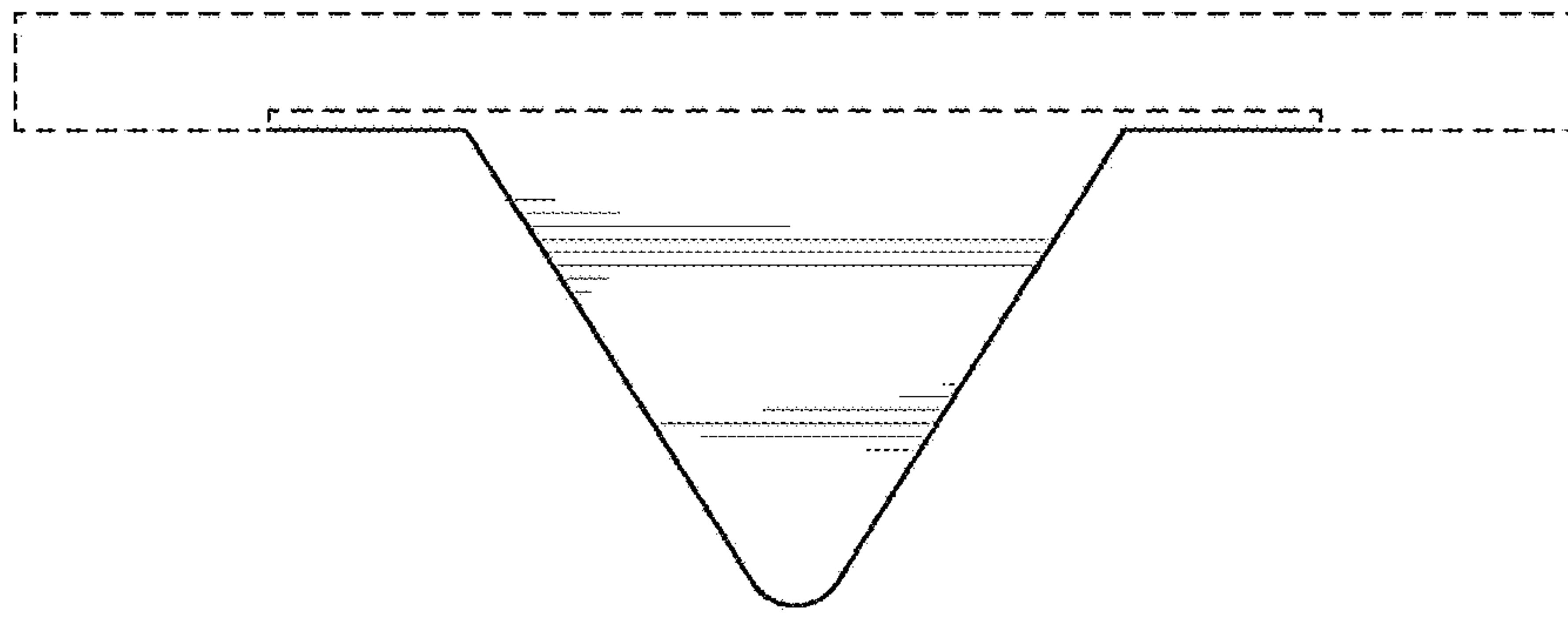


FIG. 53

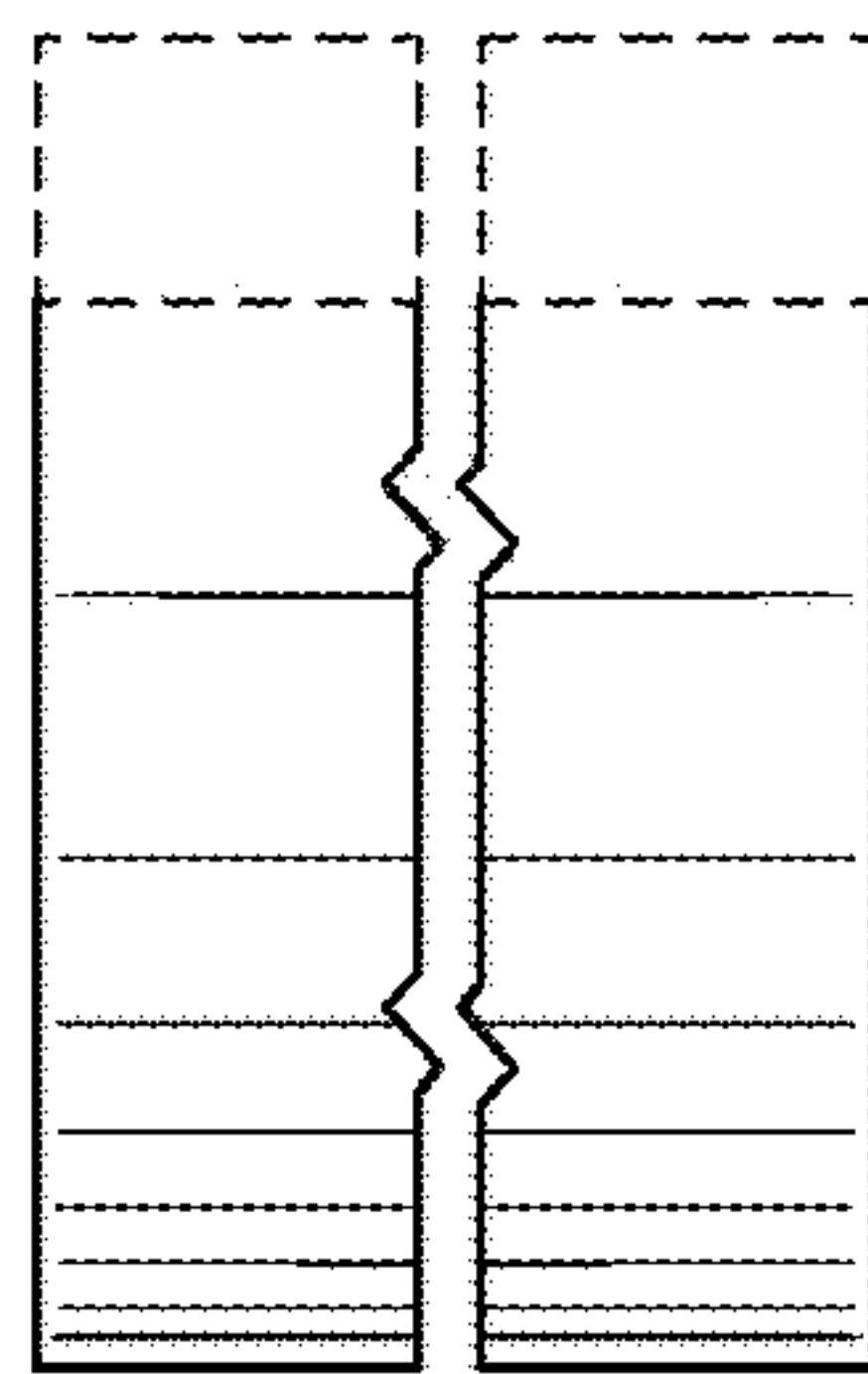


FIG. 54

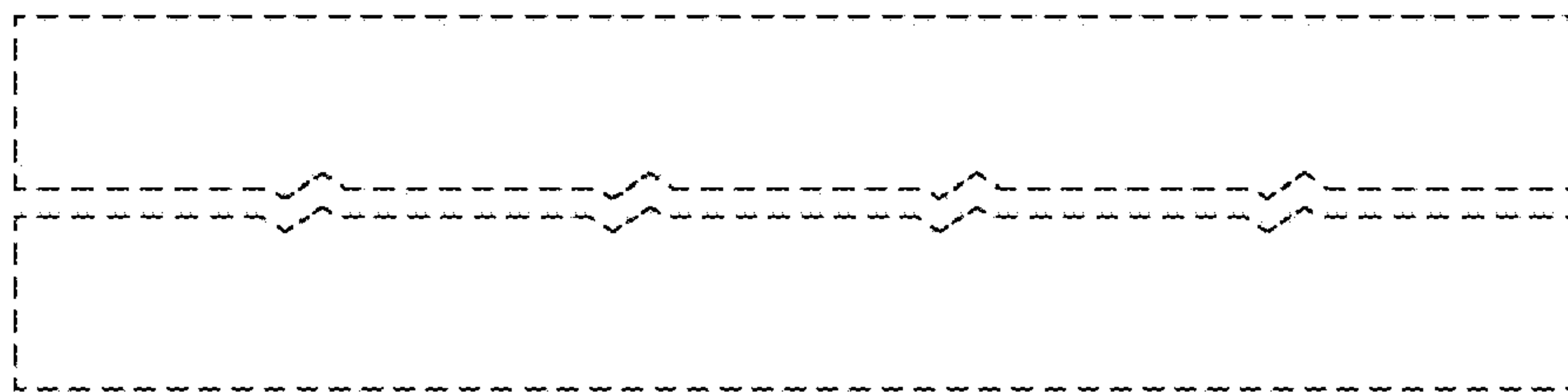


FIG. 55

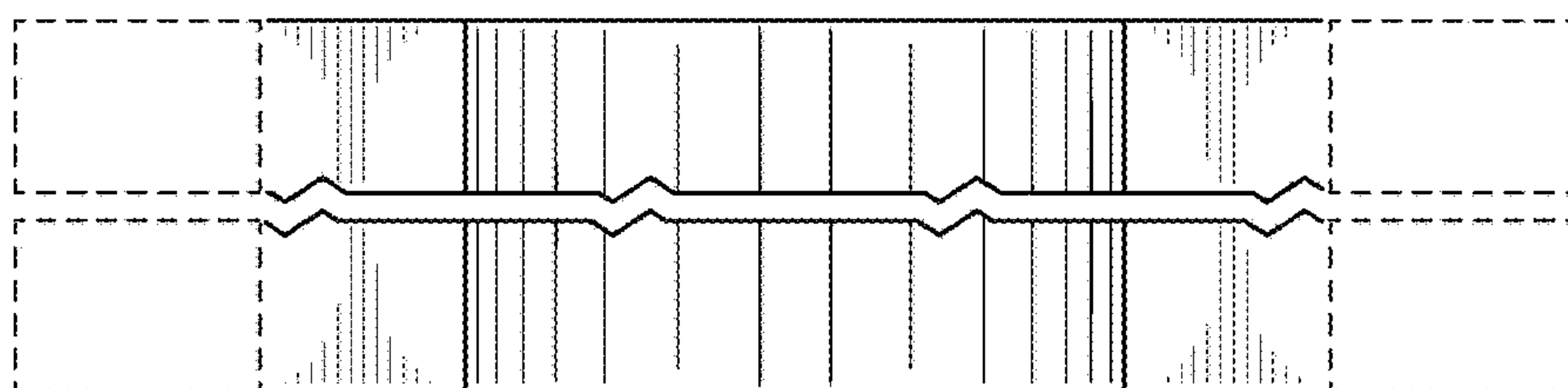


FIG. 56

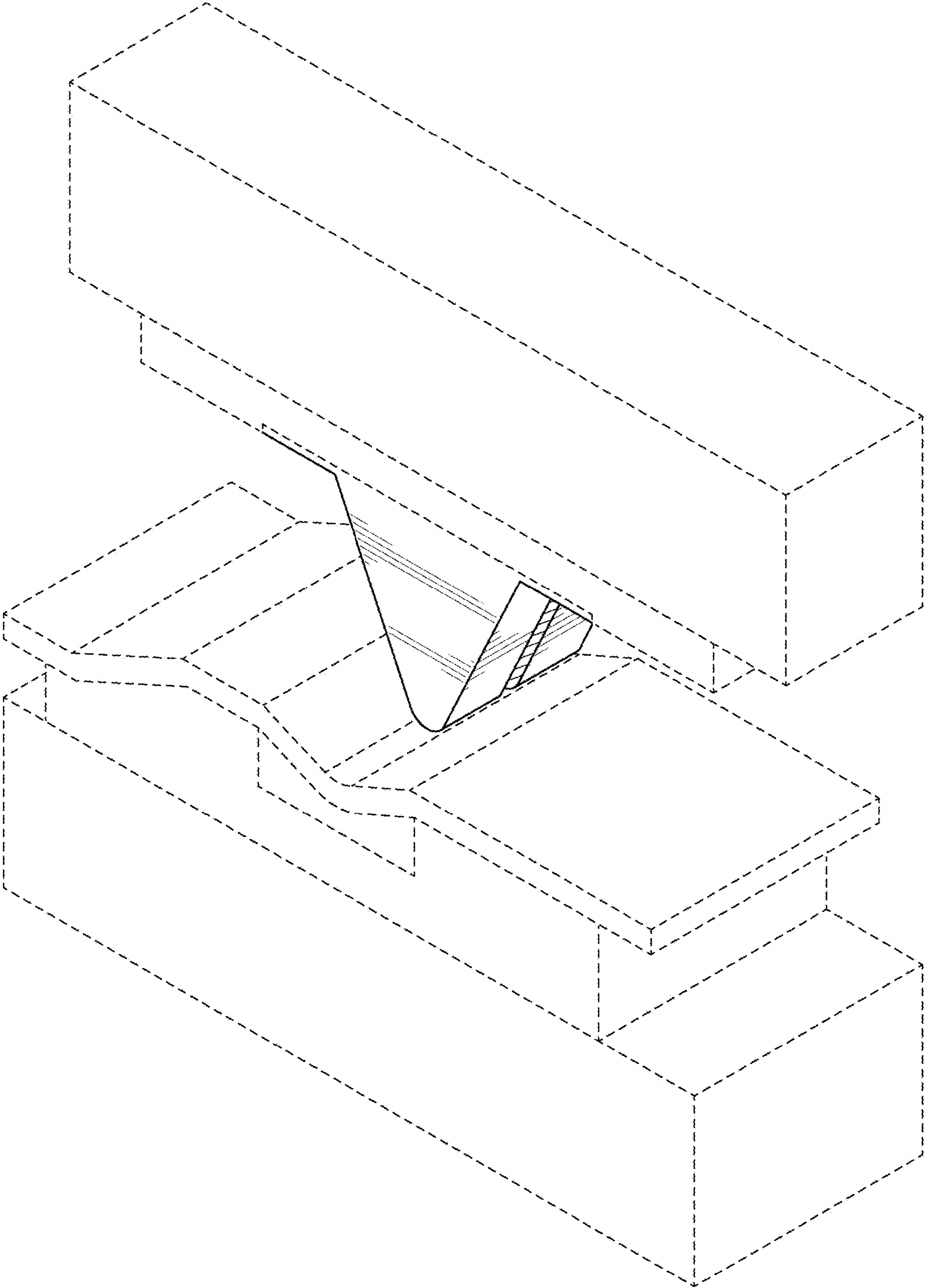
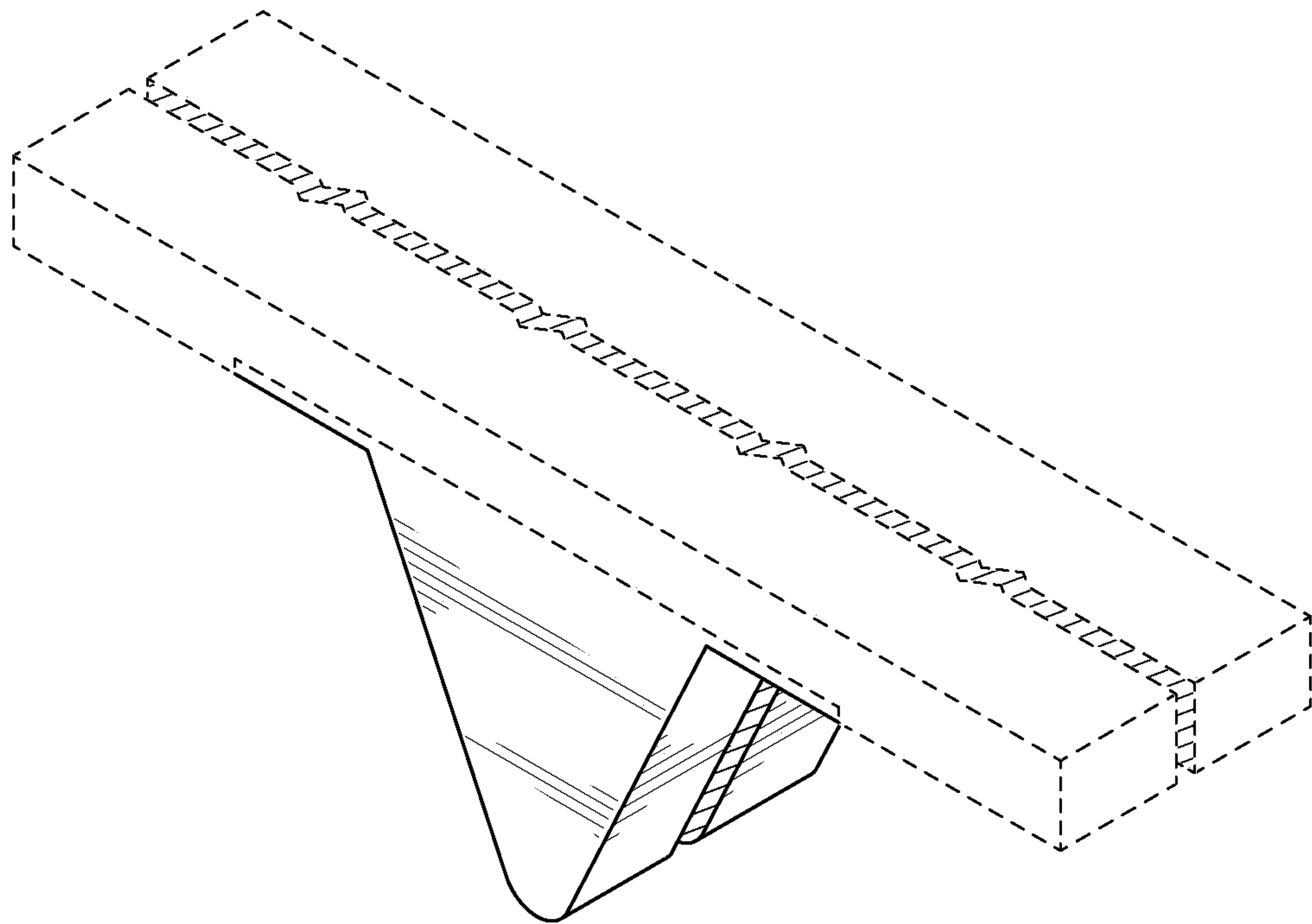
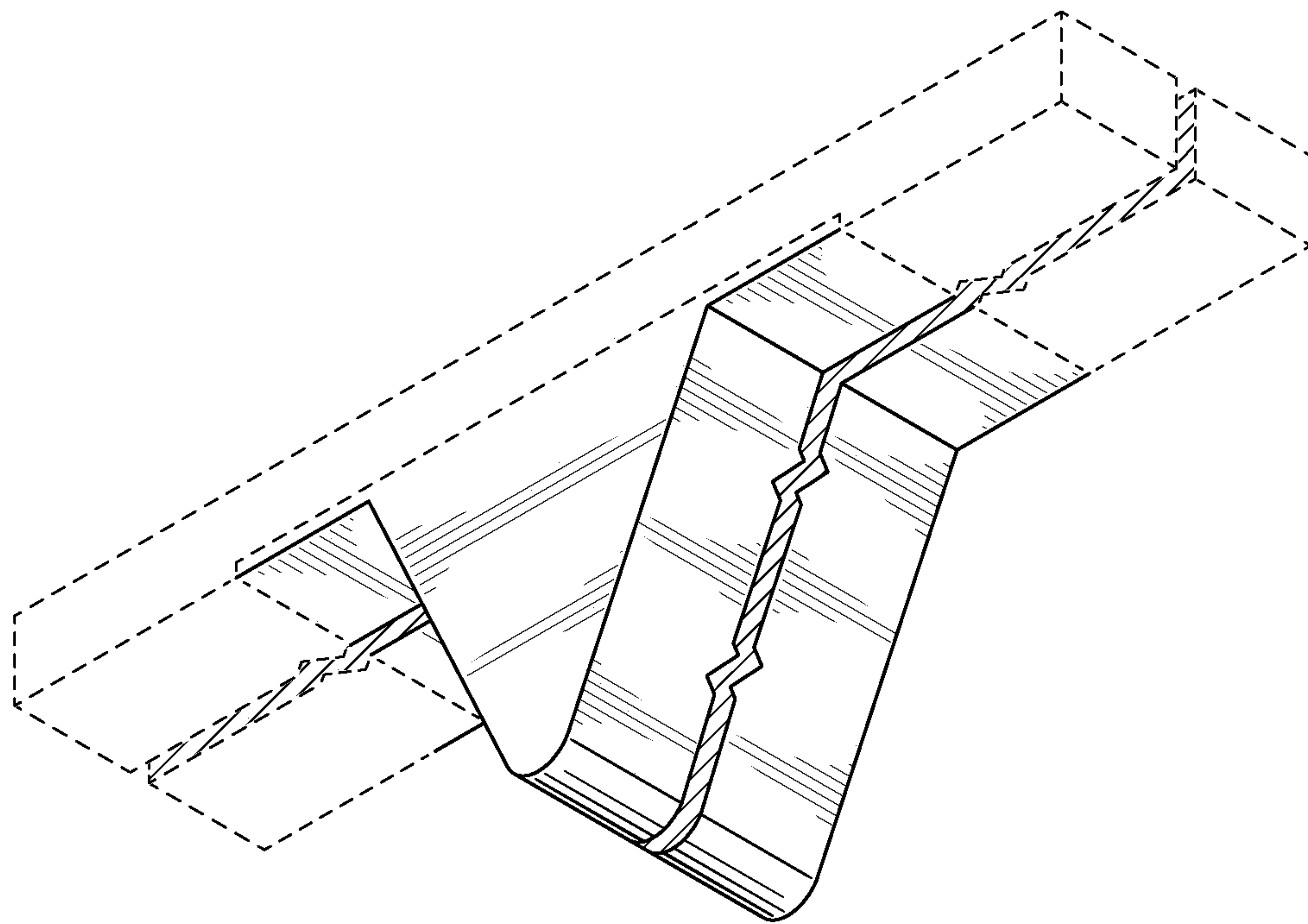


FIG. 57





**FIG. 58**



**FIG. 59**

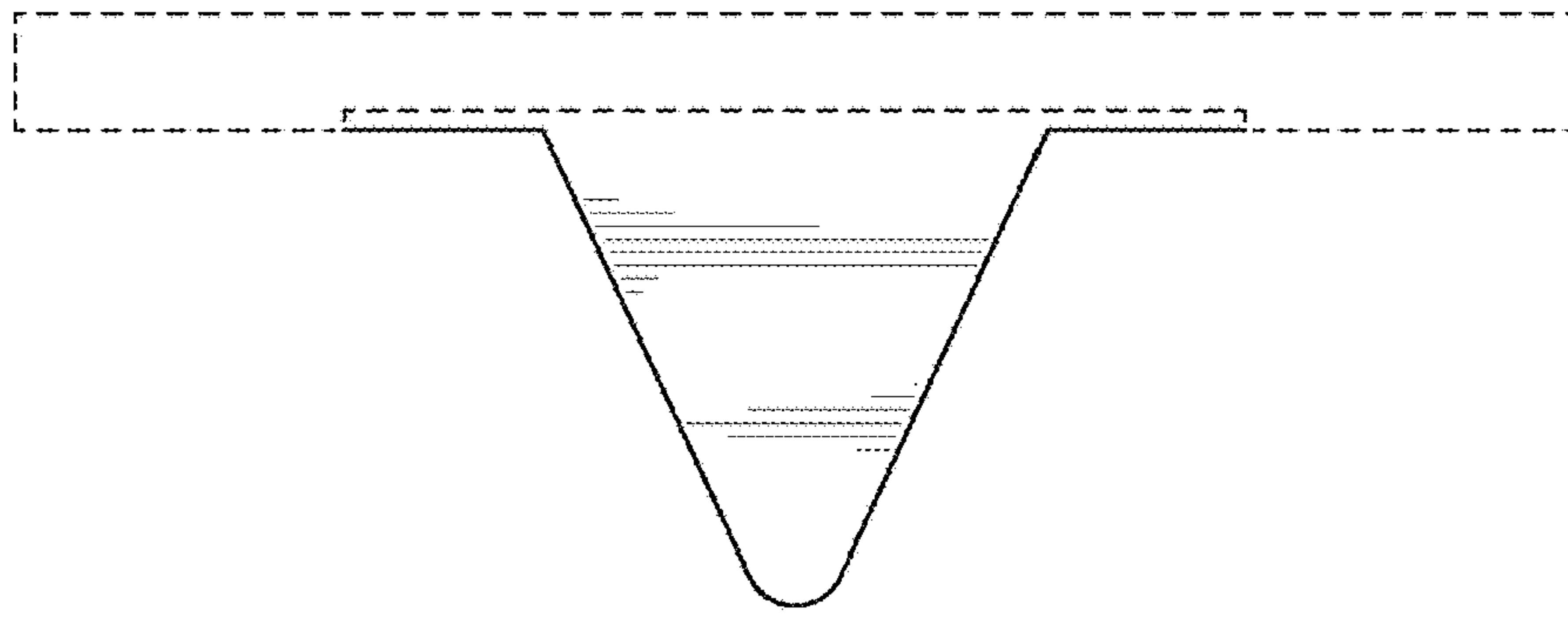


FIG. 60

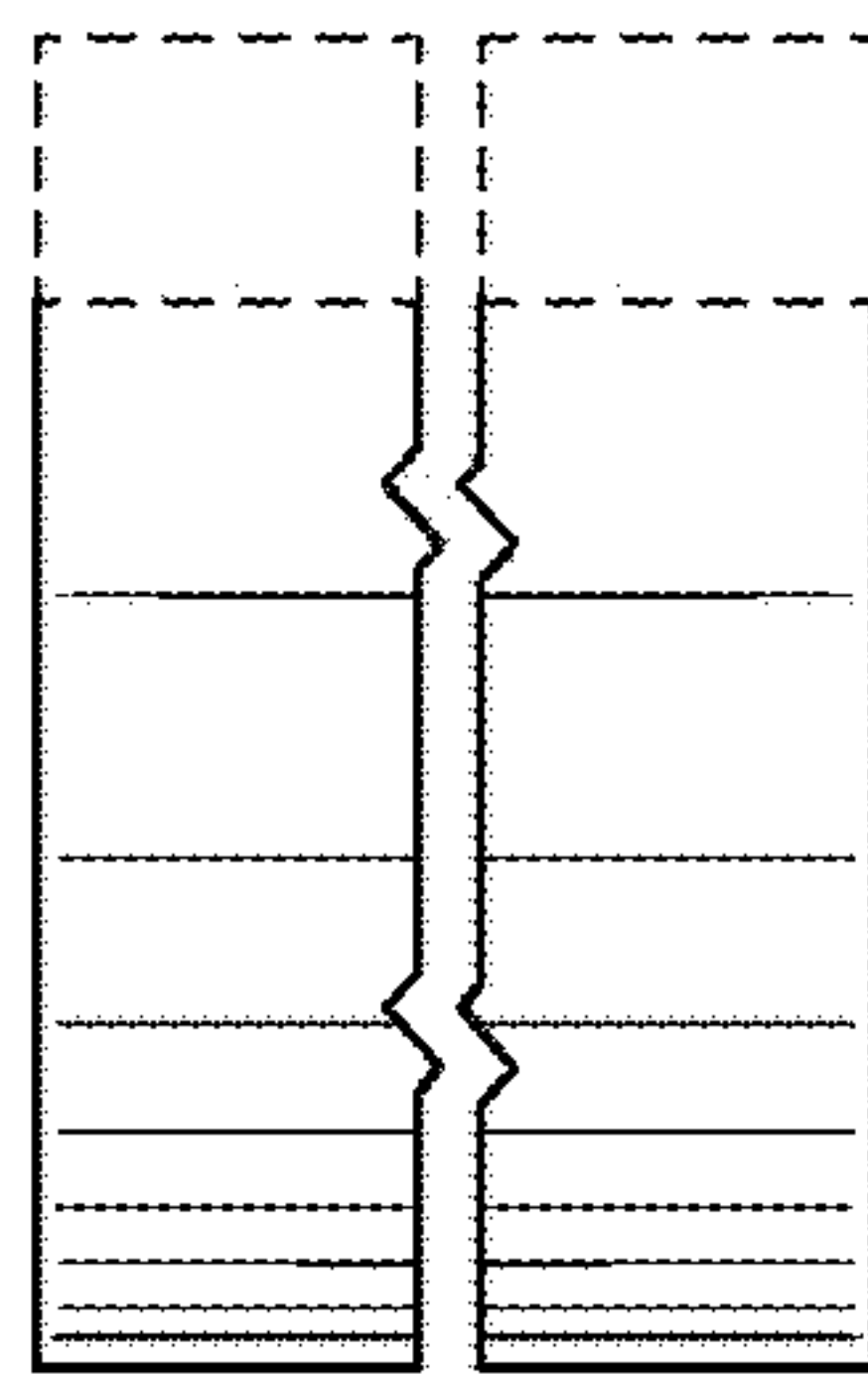


FIG. 61

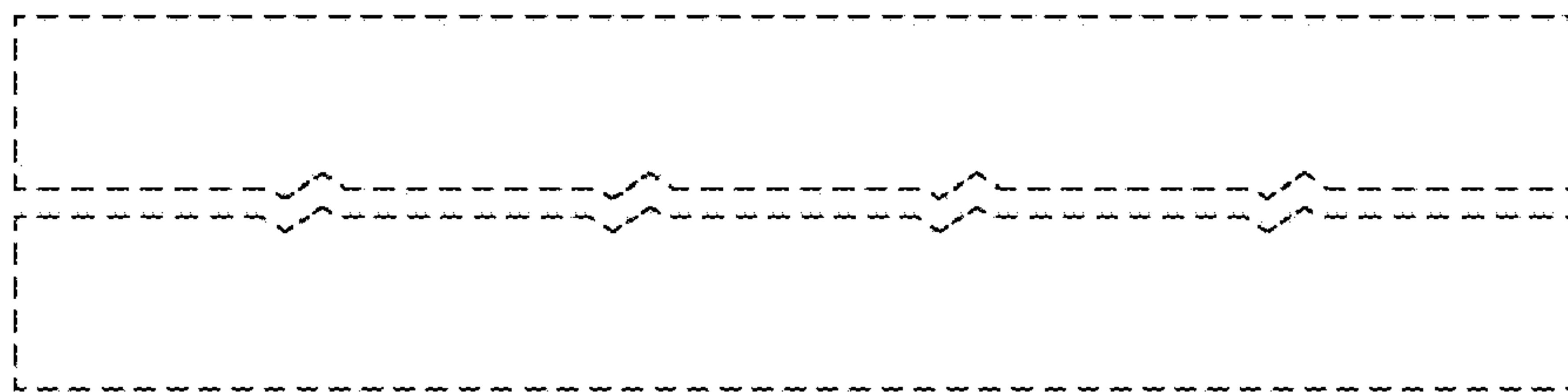


FIG. 62

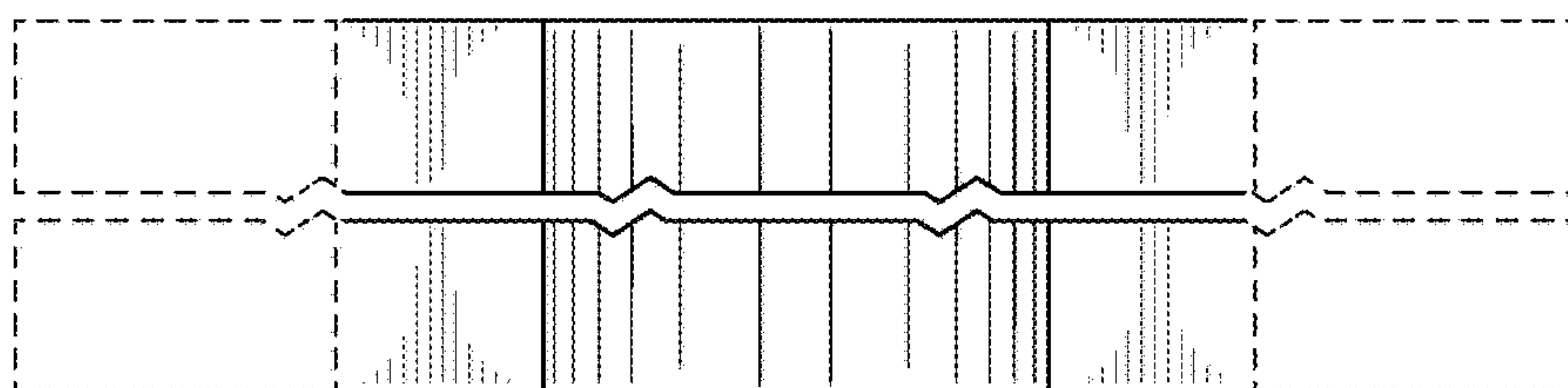


FIG. 63

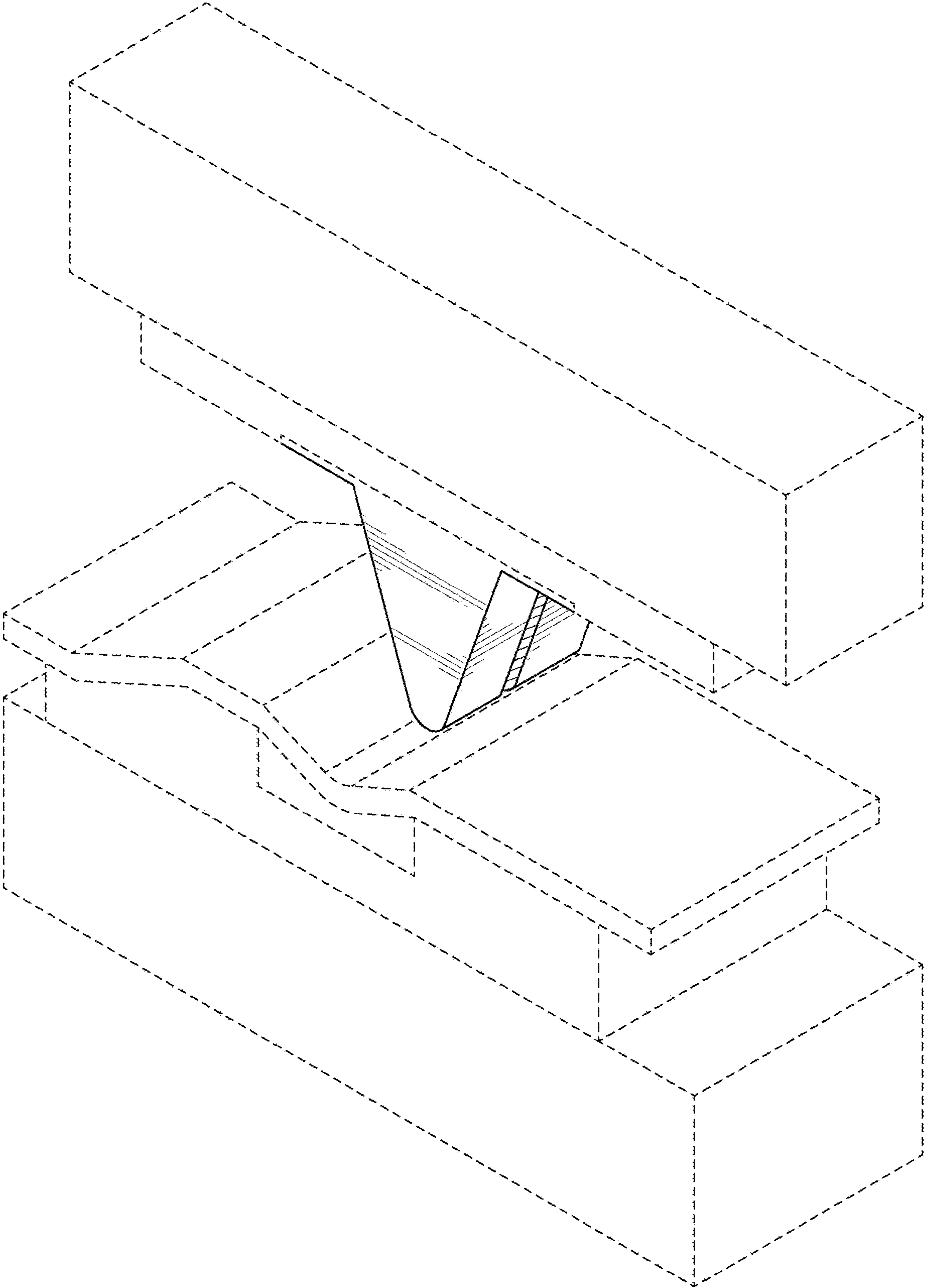
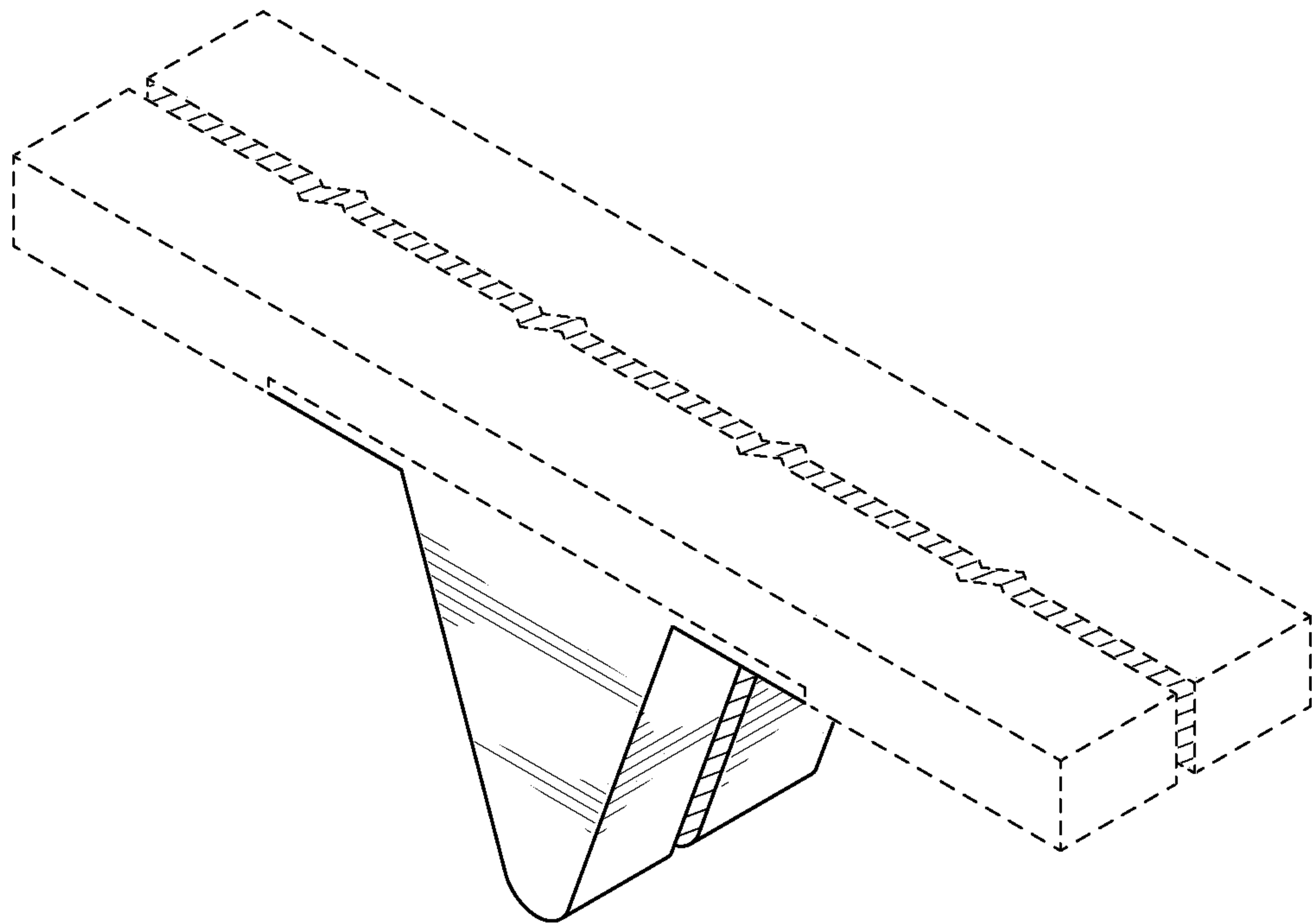
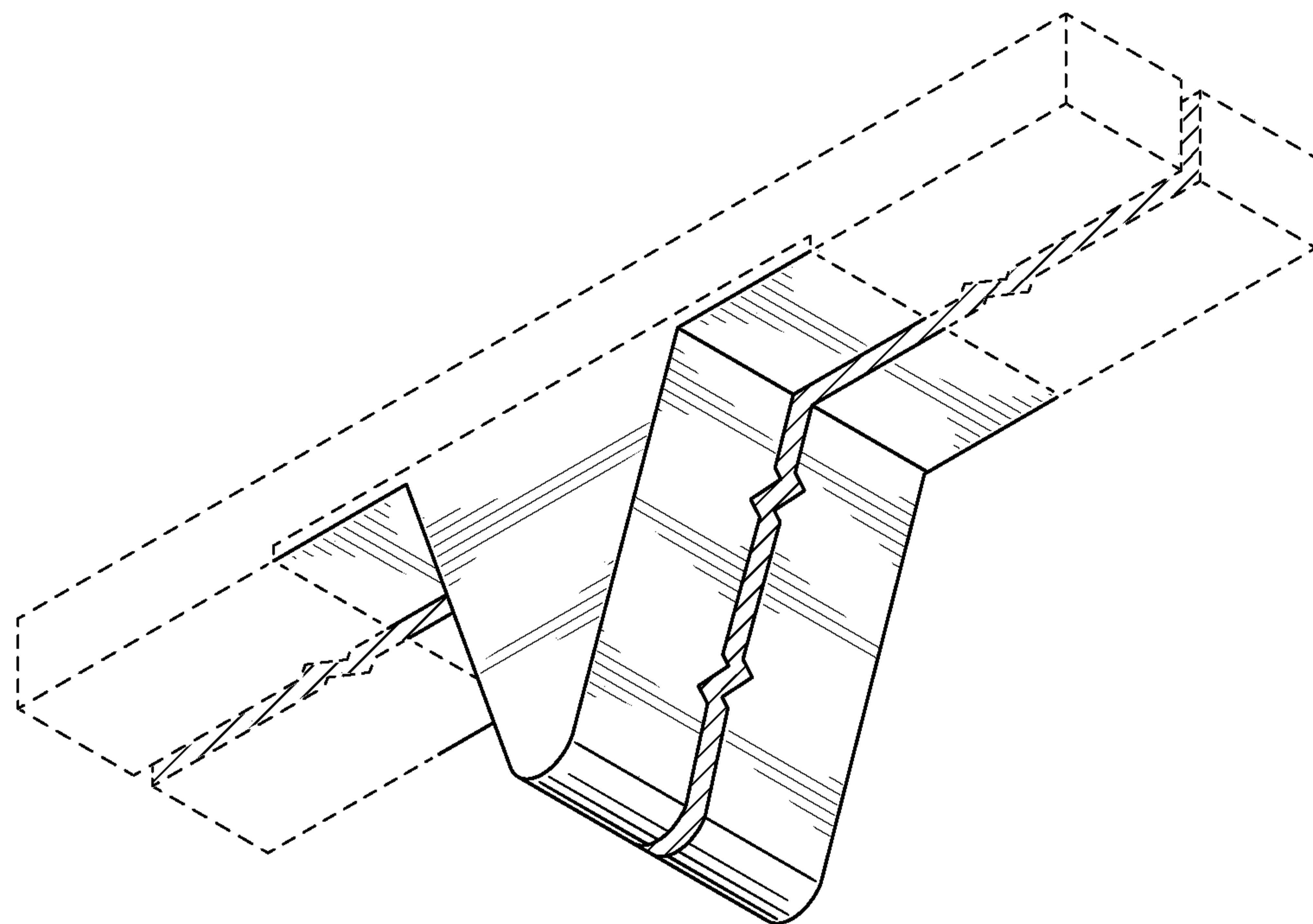


FIG. 64



**FIG. 65**



**FIG. 66**



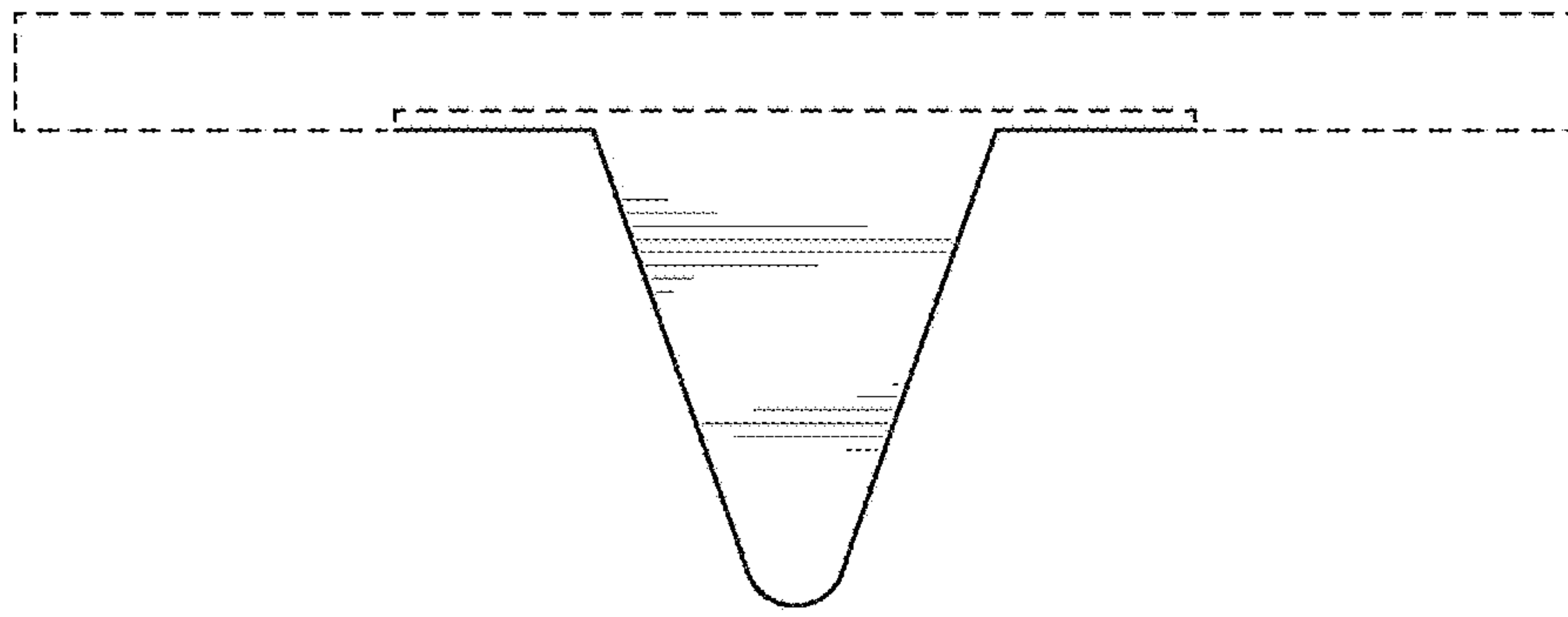


FIG. 67

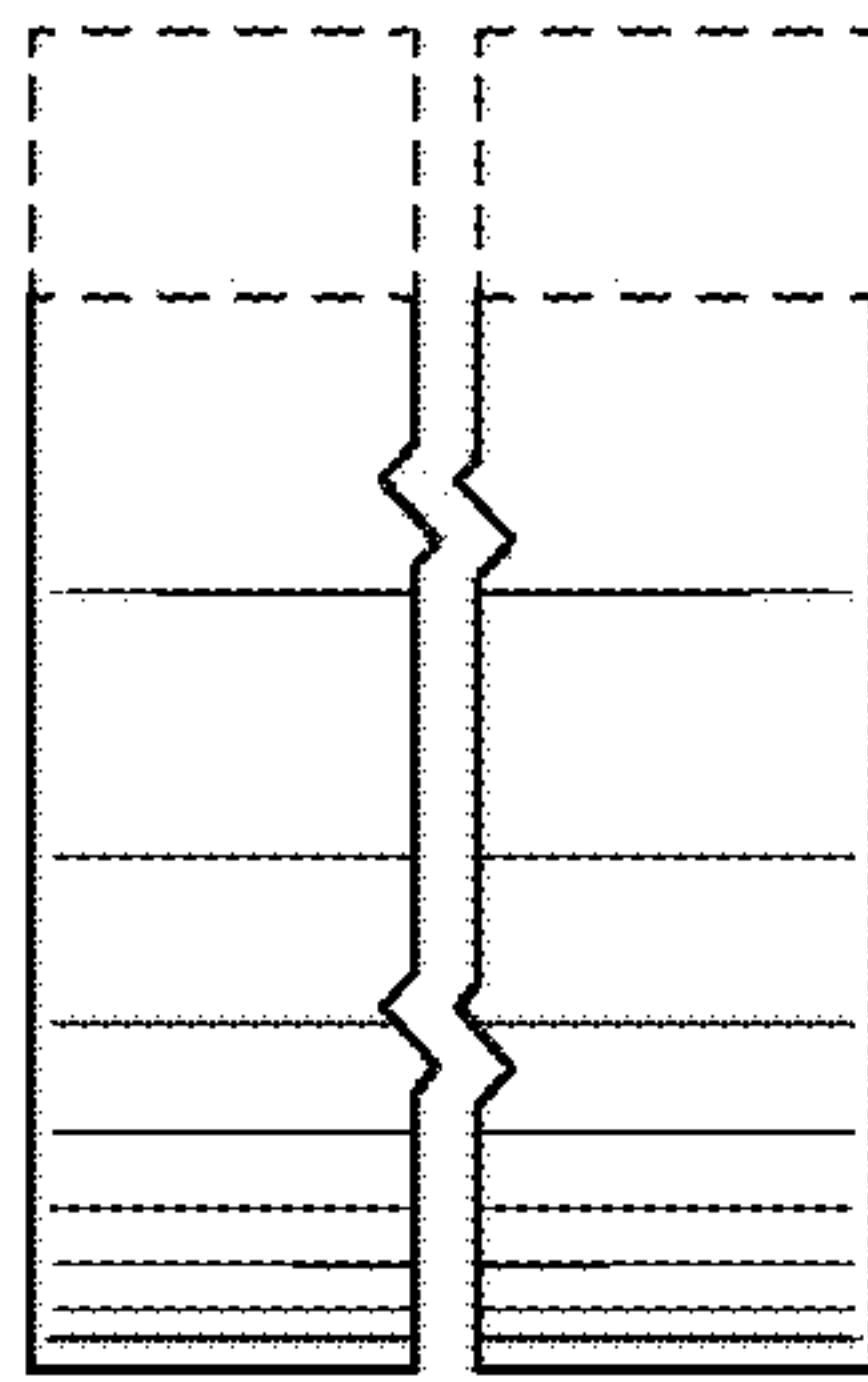


FIG. 68

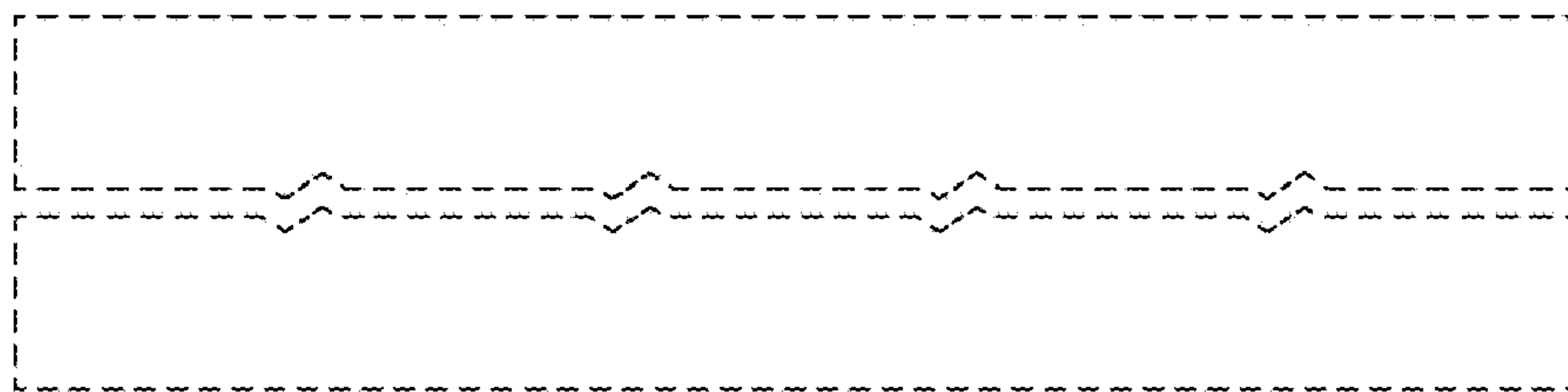


FIG. 69

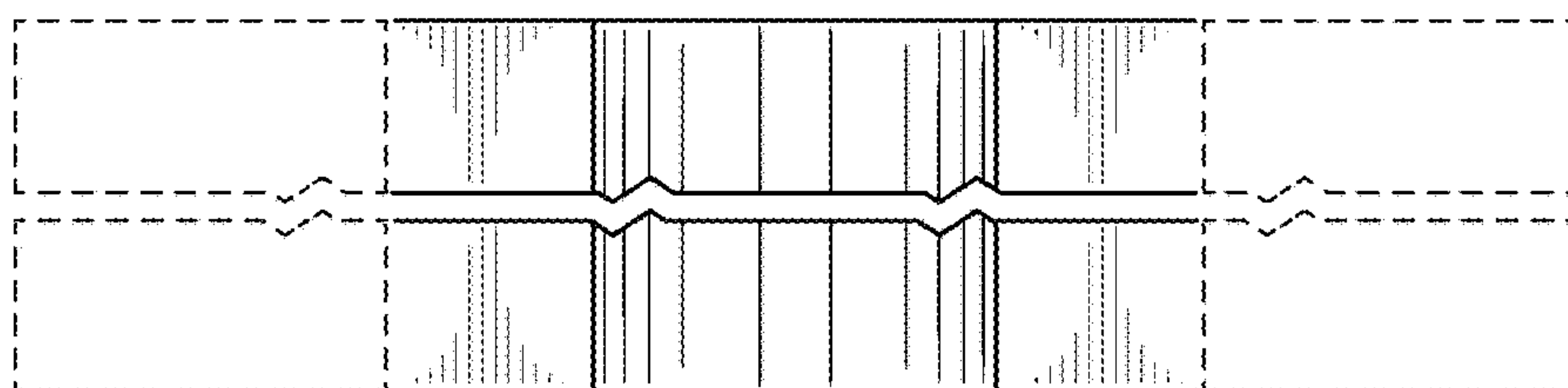


FIG. 70

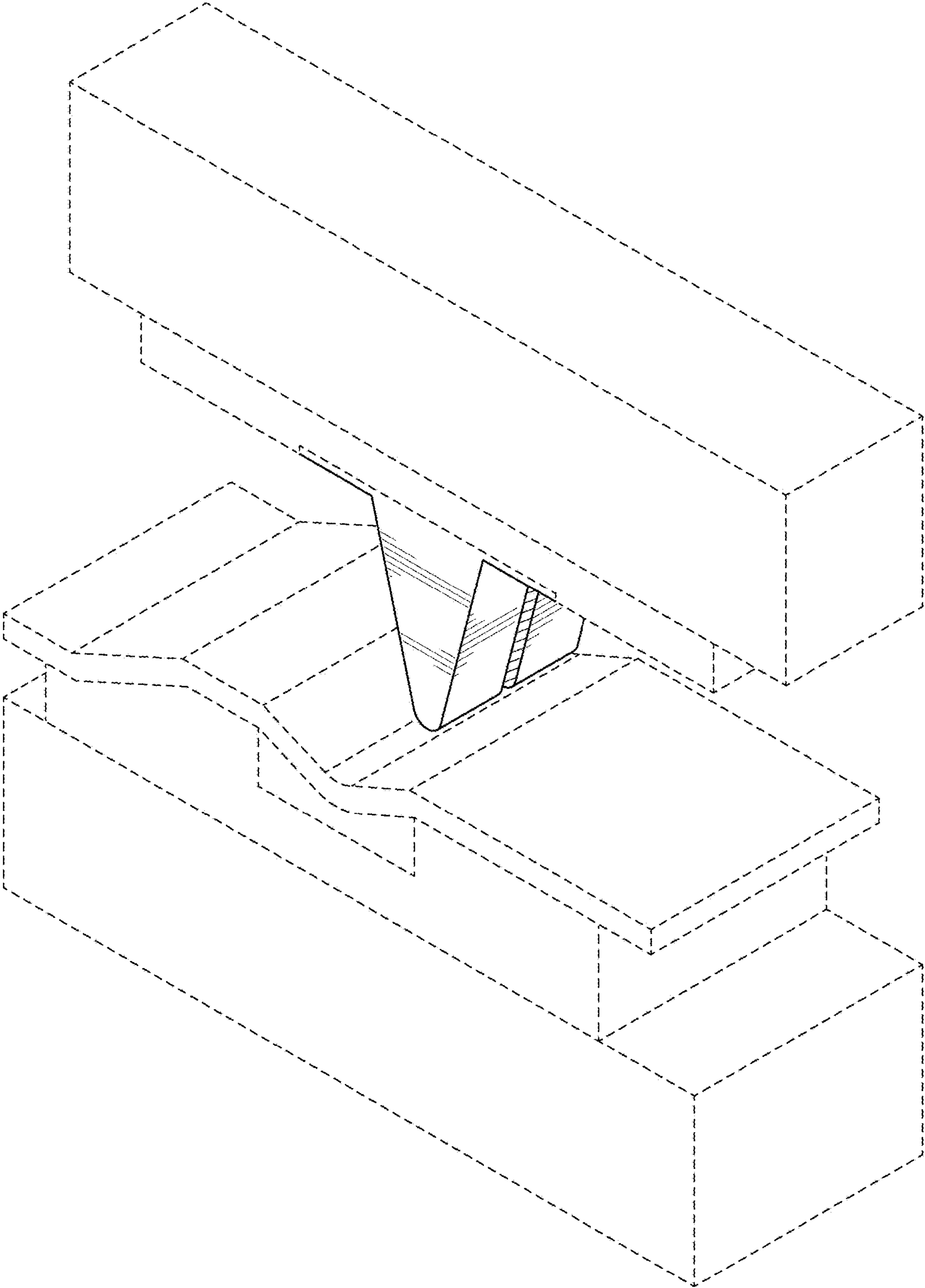


FIG. 71

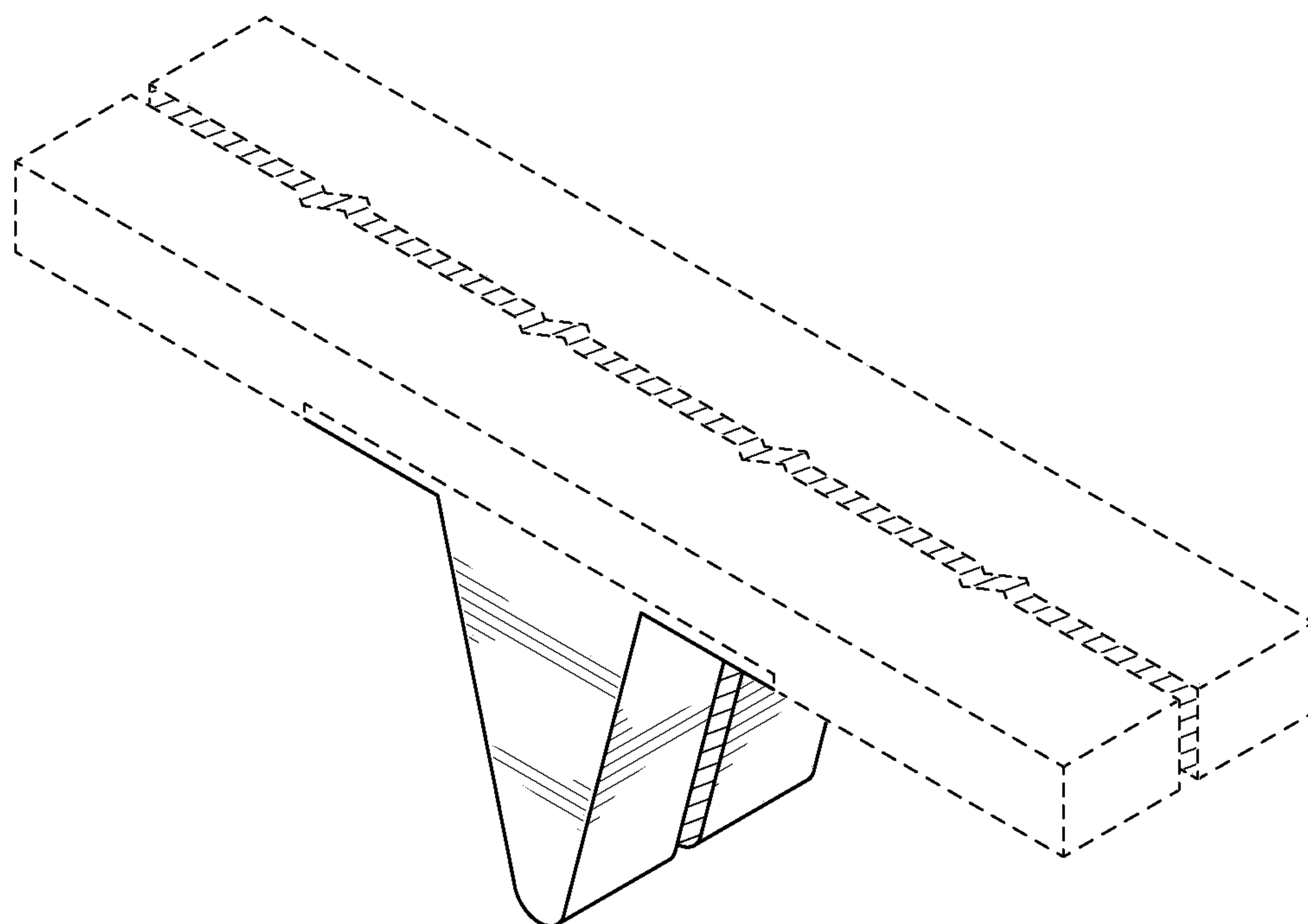


FIG. 72

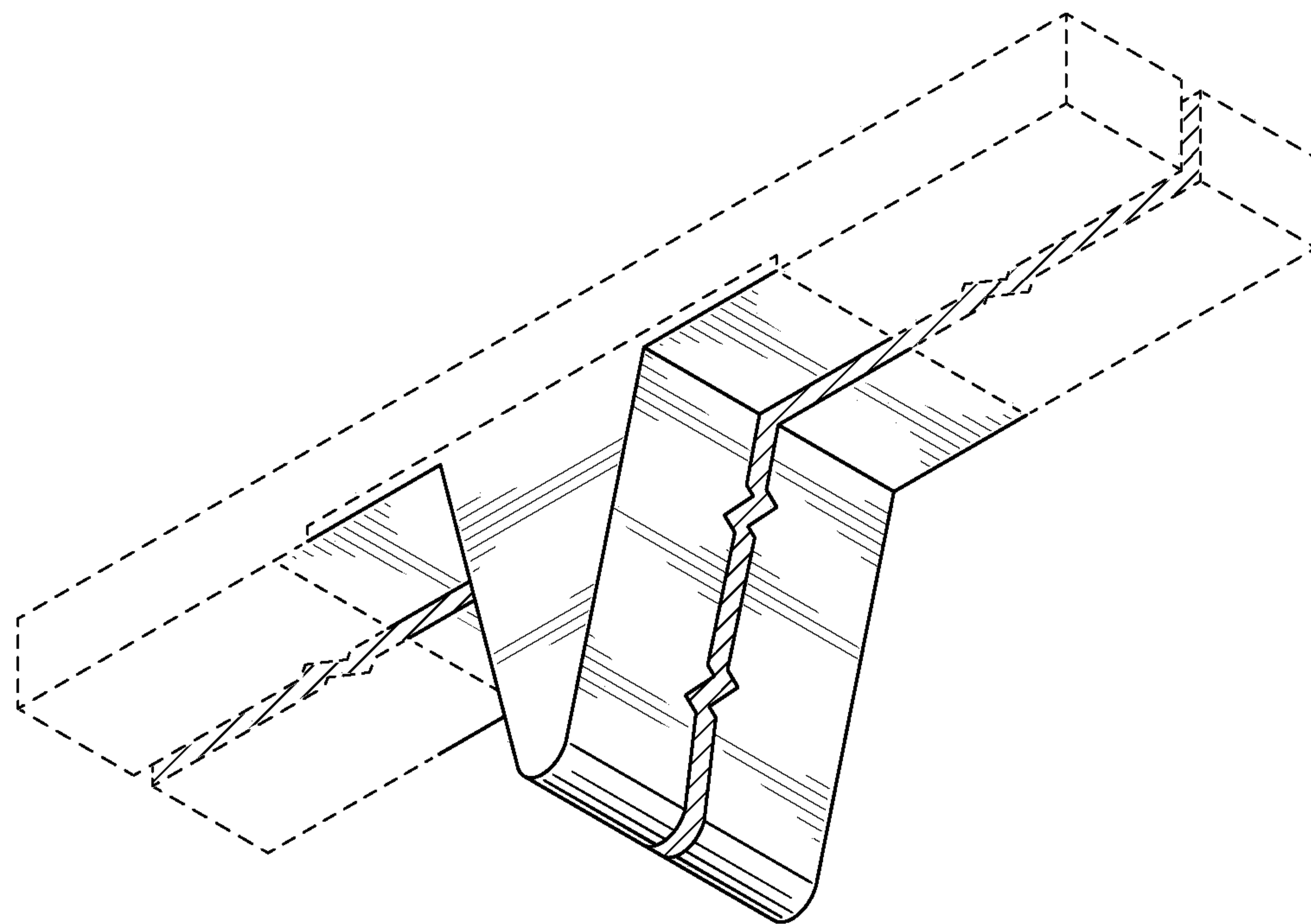


FIG. 73

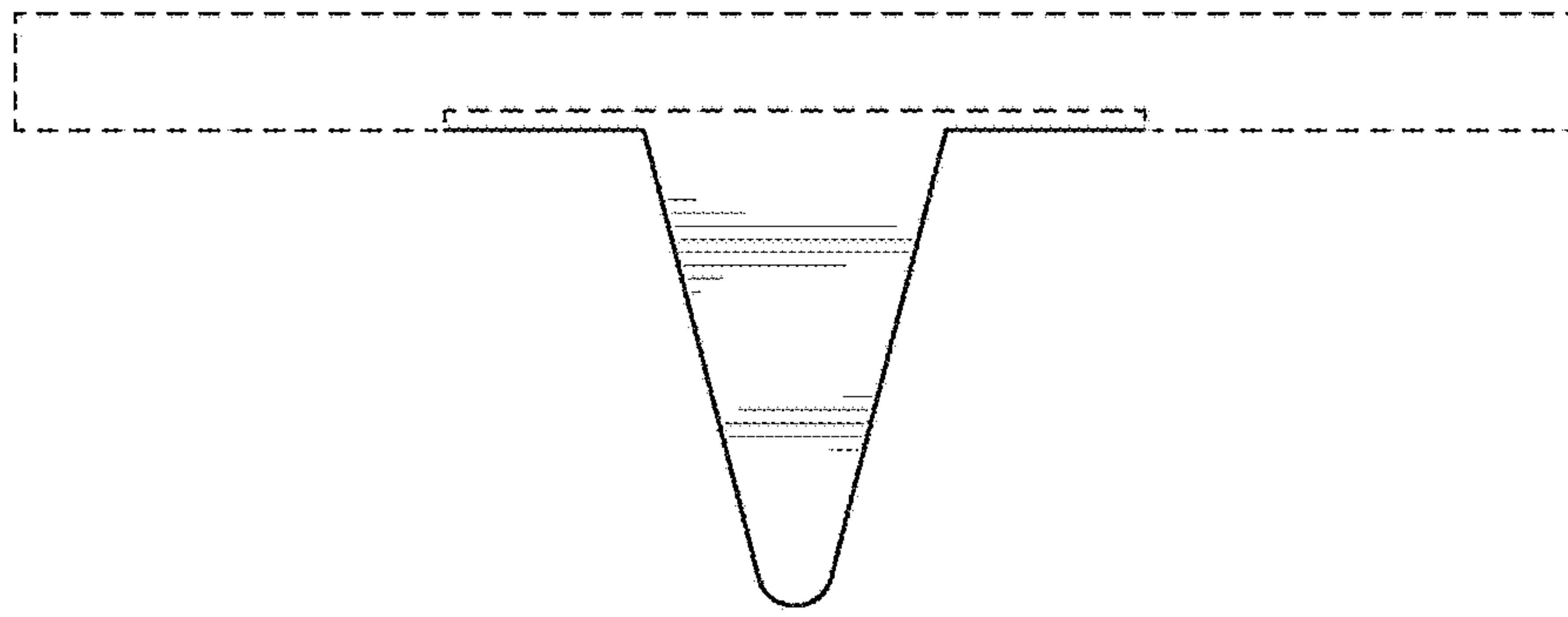


FIG. 74

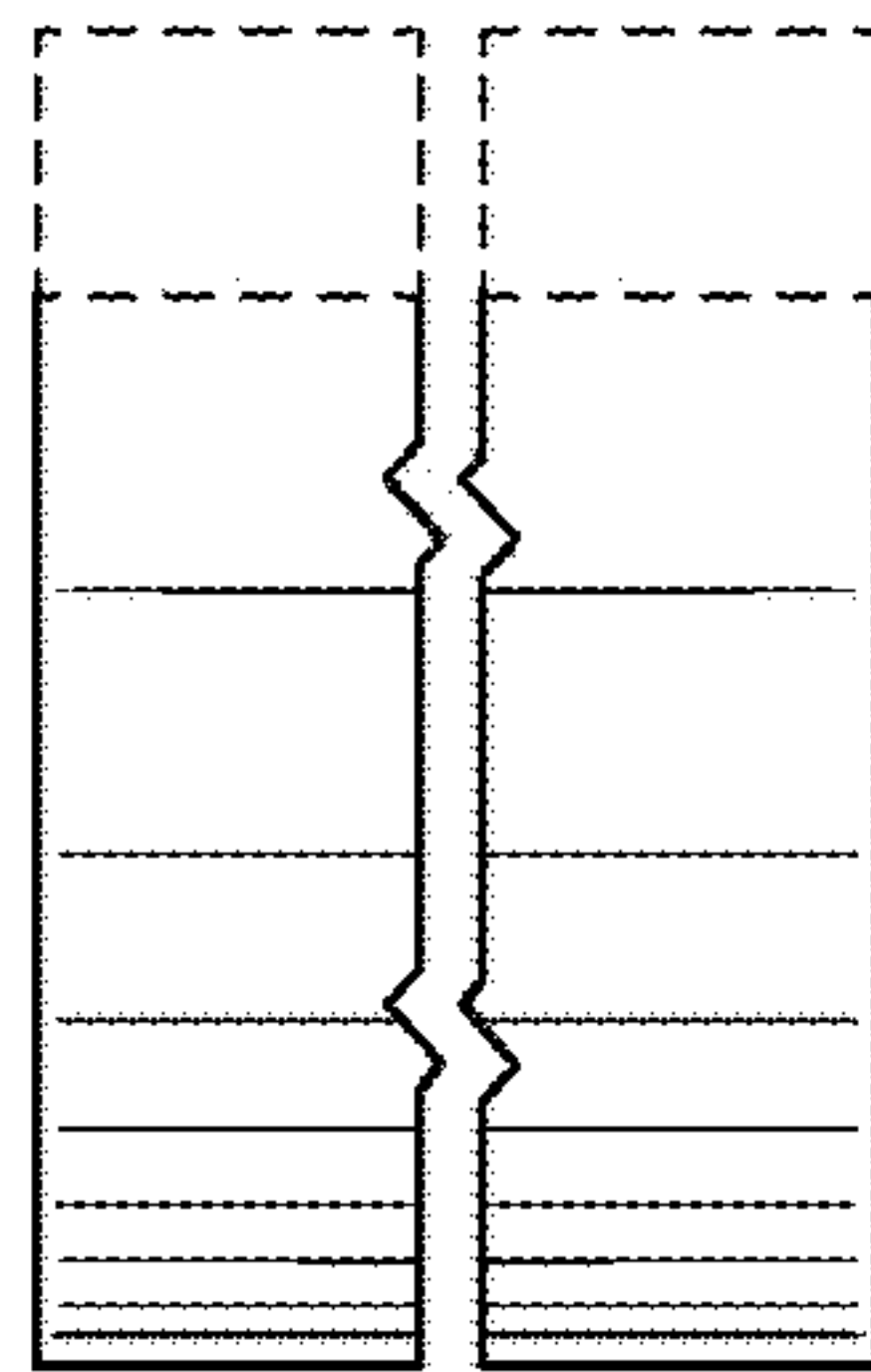


FIG. 75

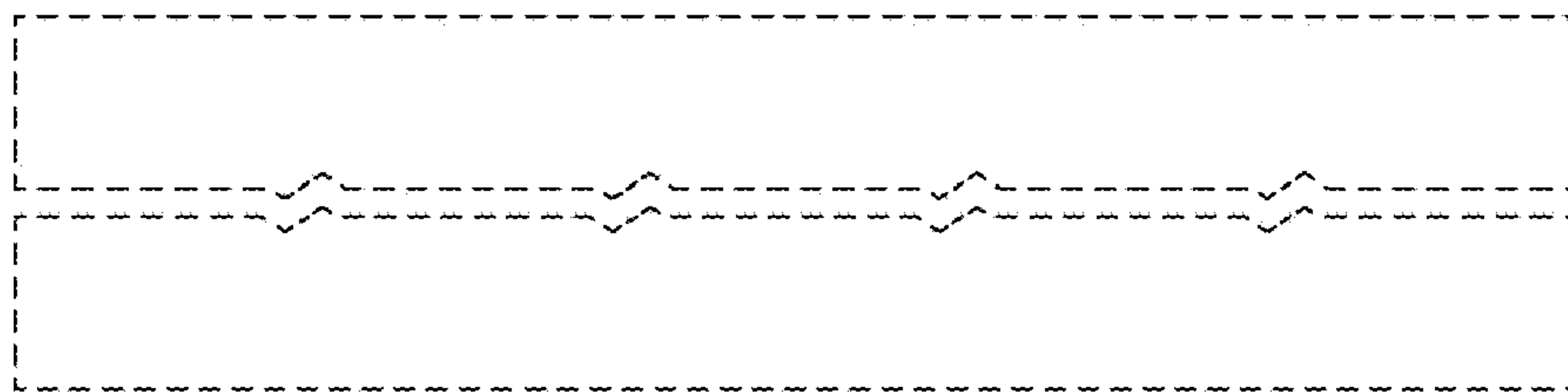


FIG. 76

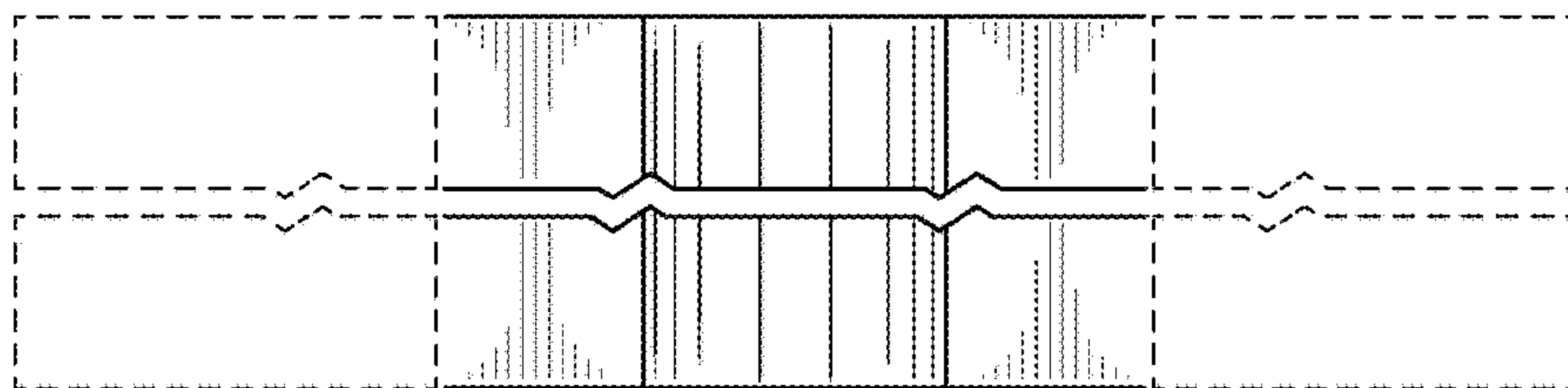


FIG. 77

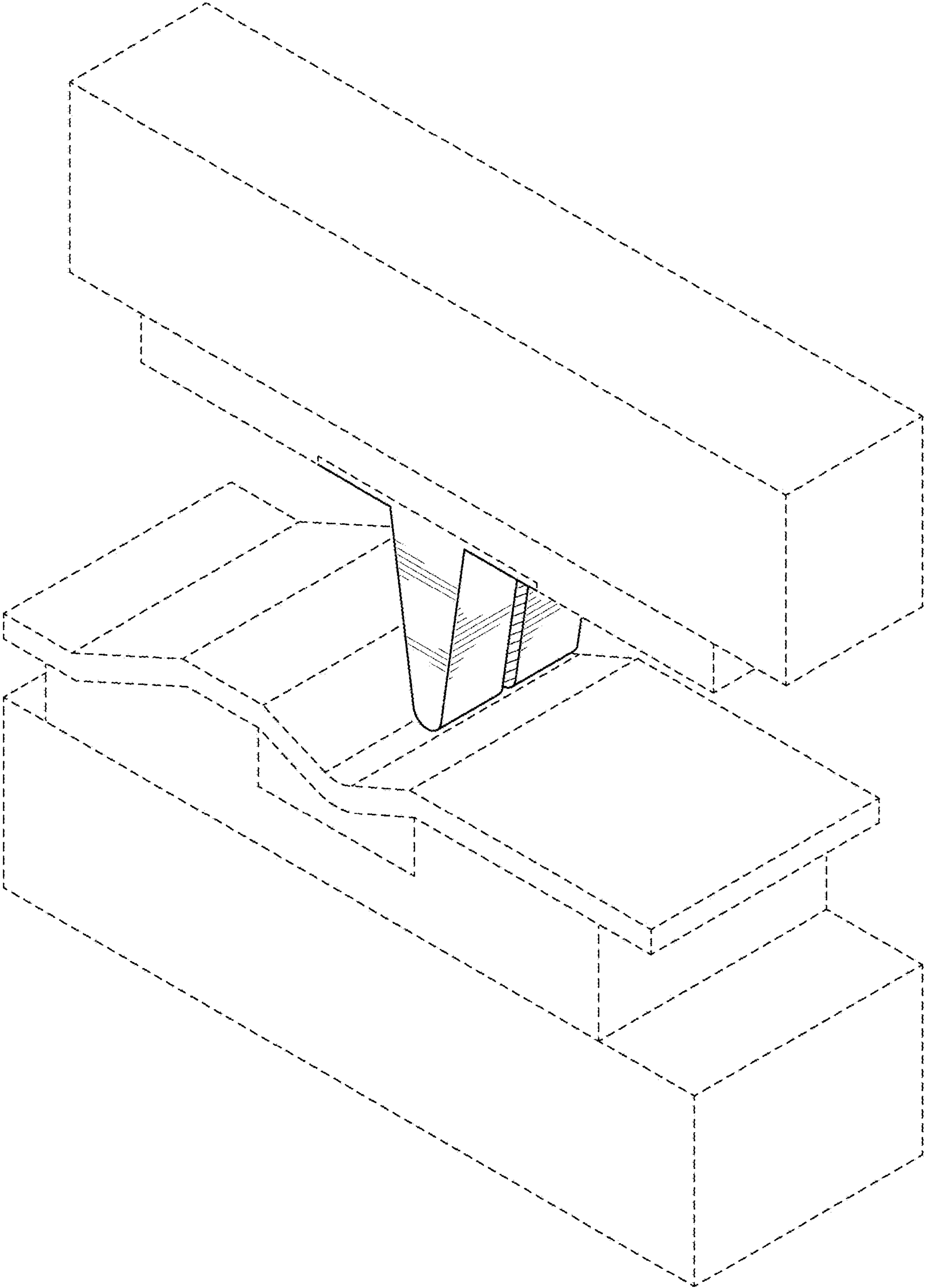
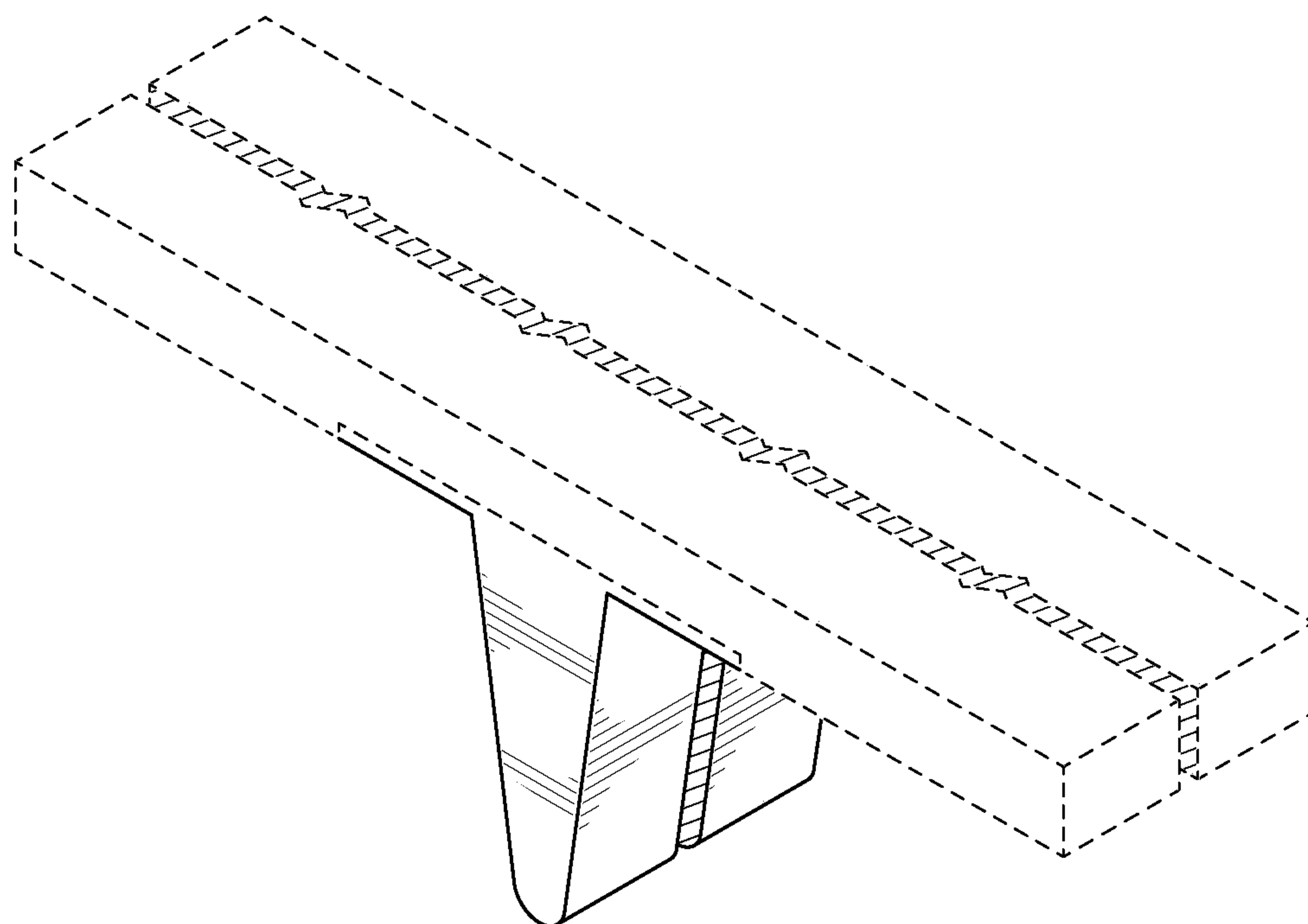
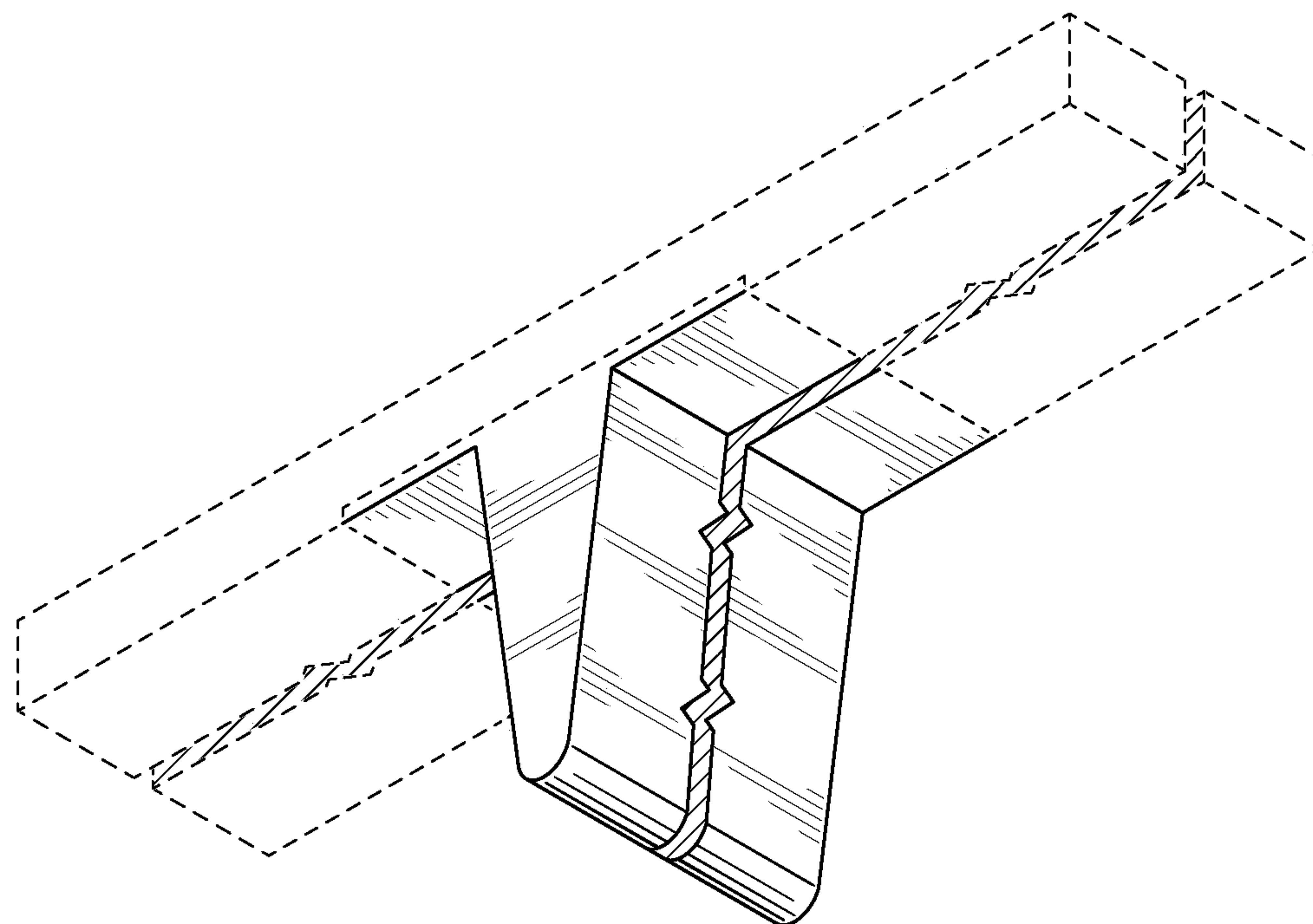


FIG. 78





**FIG. 79**



**FIG. 80**

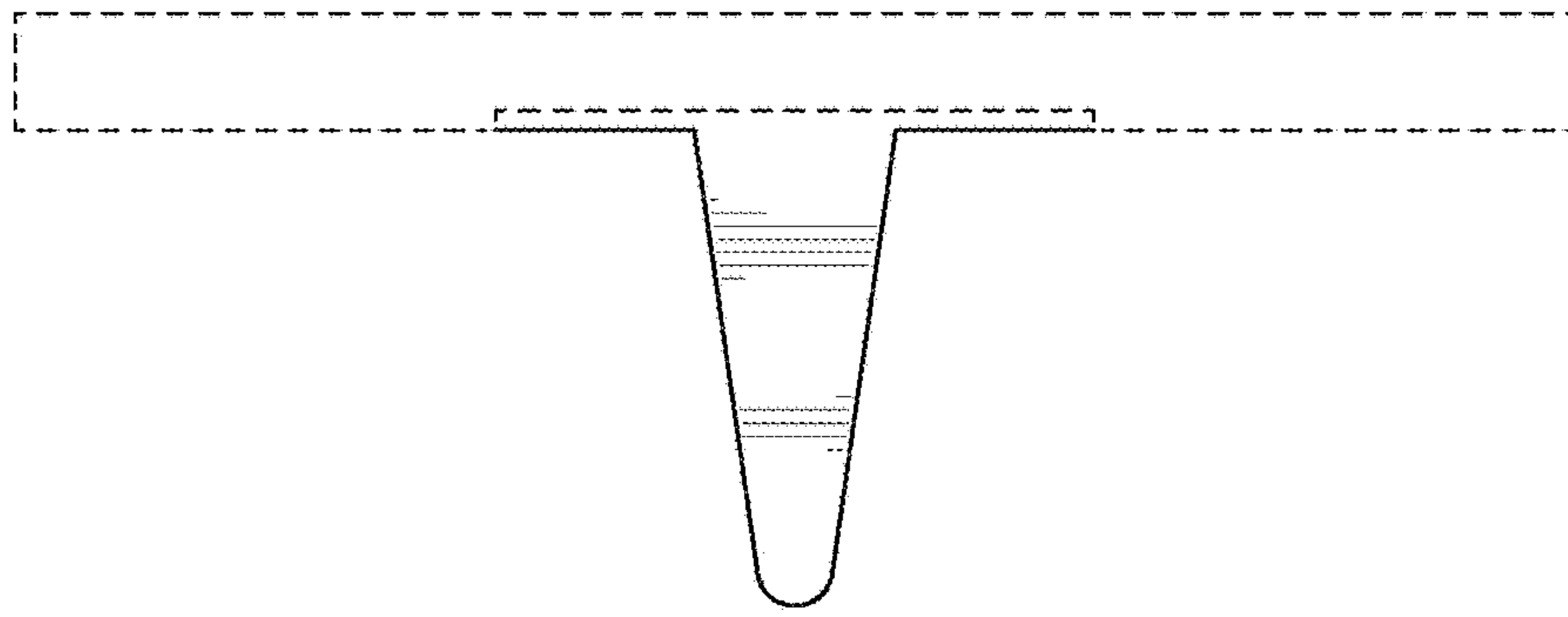


FIG. 81

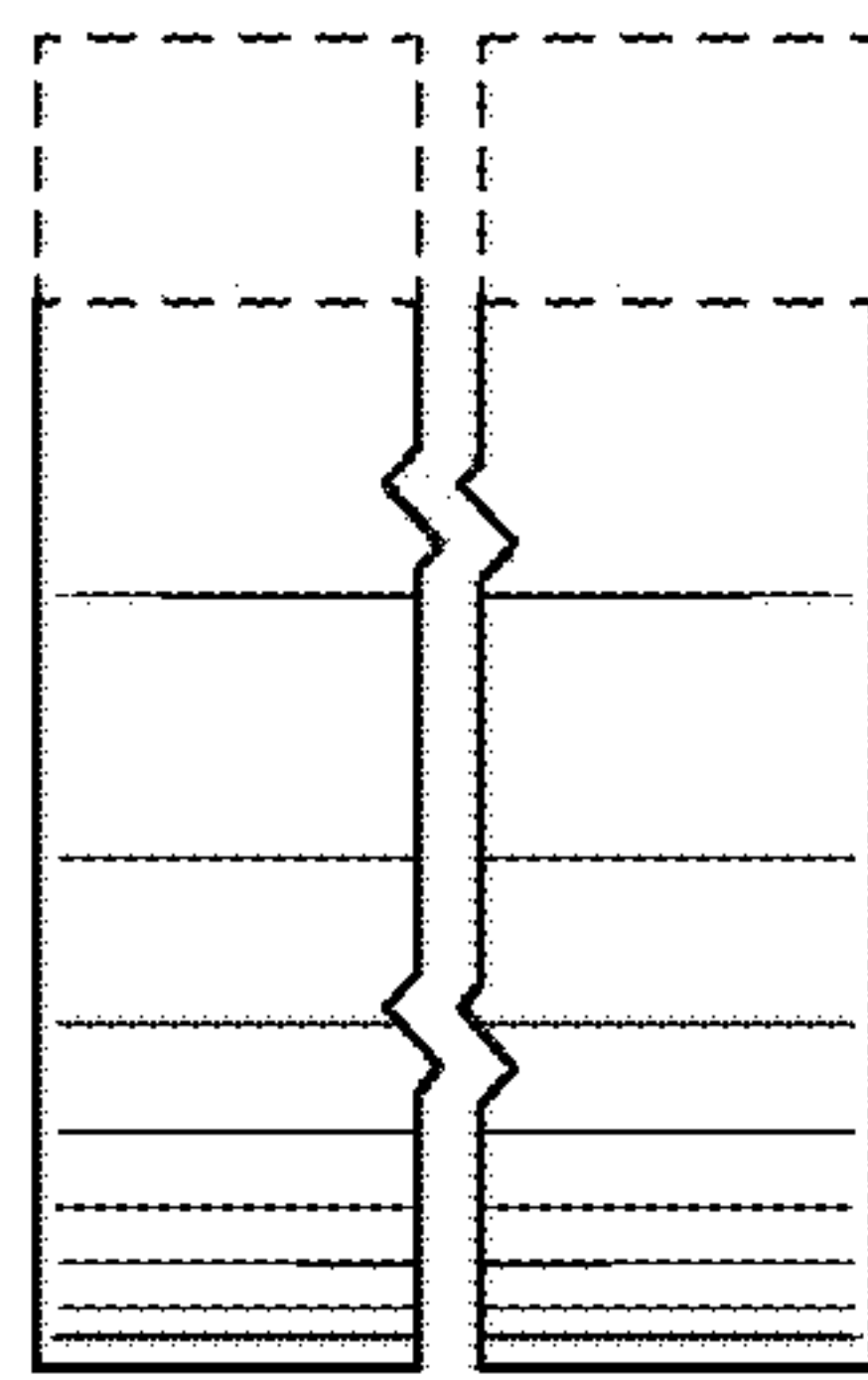


FIG. 82

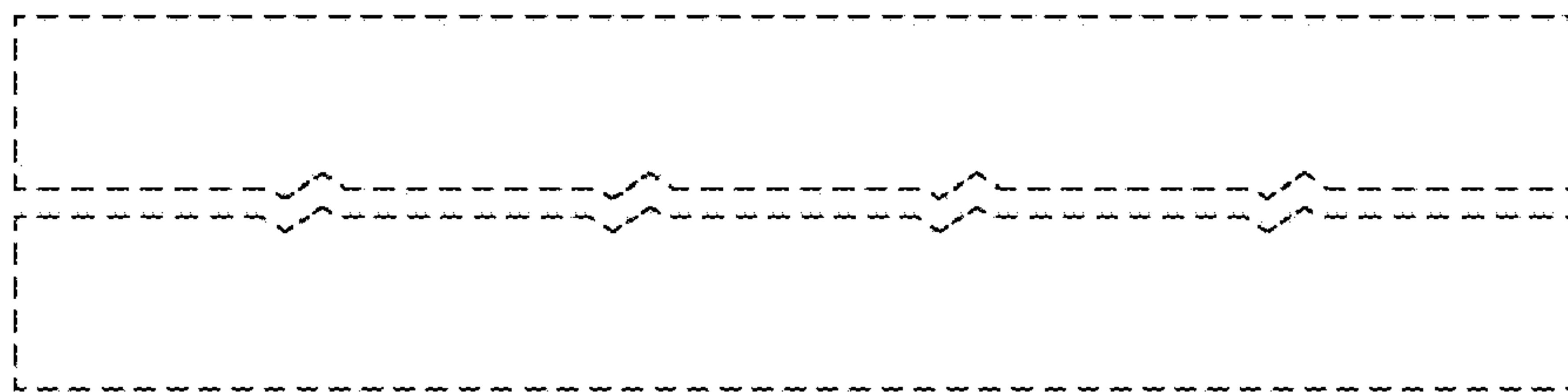


FIG. 83

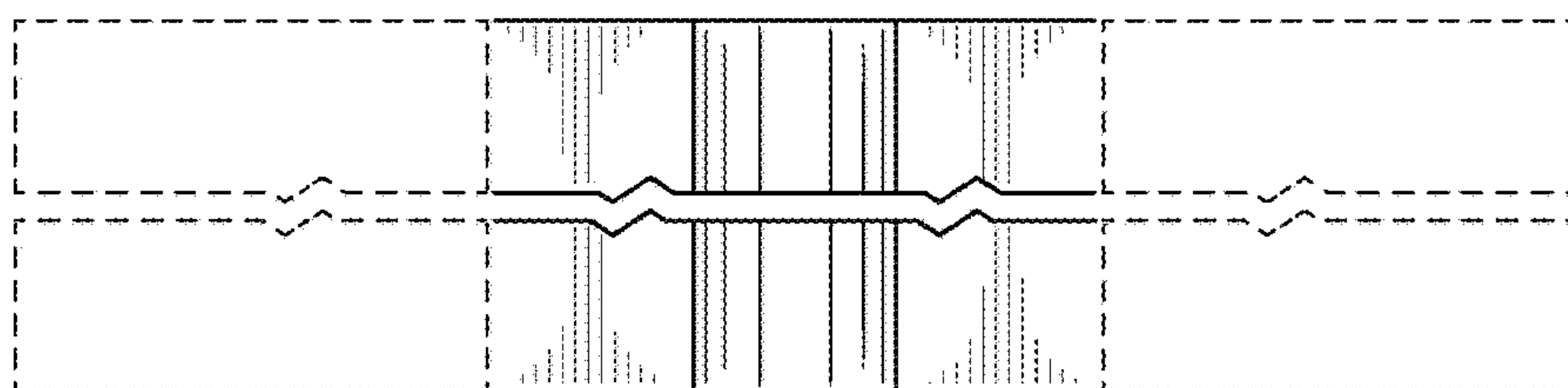


FIG. 84