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

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(54) **FILTER CARTRIDGE**

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

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(51) **LOC (9) Cl.** **23-01**

(52) **U.S. Cl.** **D23/209**

(58) **Field of Classification Search** D23/207,
D23/209; 210/232, 238, 249, 282, 321.88,
210/340, 341, 443, 457, 470, 493.1, 493.2,
210/493.4, 496, 497.01, 497.3, 489, 499

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

330,101 A * 11/1885 Murphy, Jr. 105/263
(Continued)

OTHER PUBLICATIONS

U.S. Appl. No. 12/857,395, Buzanowski.

(Continued)

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(57) **CLAIM**

The ornamental design for a filter cartridge, as shown and described.

DESCRIPTION

This application is related to copending U.S. application Ser. No. 29/361,828 filed concurrently herewith and entitled "Filter Cartridge Assembly," U.S. application Ser. No. 29/361,

825 filed concurrently herewith and entitled "Filter Cartridge," and U.S. application Ser. No. 29/361,824 filed concurrently herewith and entitled "Filter Cartridge," the disclosures of which are incorporated herein by reference.

FIG. 1 depicts a top plan view of a filter cartridge having the claimed ornamental design;

FIG. 2 depicts a bottom plan view of the filter cartridge of FIG. 1, showing the bottom side of a filter cartridge having my design;

FIG. 3 is an elevation view from the left or right side of the filter cartridge of FIG. 1, showing the left or right side of a filter cartridge having my design;

FIG. 4 is an elevation view from the front or back side of the filter cartridge of FIG. 1, showing the front or back side of a filter cartridge having my design;

FIG. 5 is a perspective view of the filter cartridge of FIG. 1, showing the top and sides of a filter cartridge having my design;

FIG. 6 is a perspective view of the filter cartridge of FIG. 1, showing the bottom and sides of a filter cartridge having my design; and,

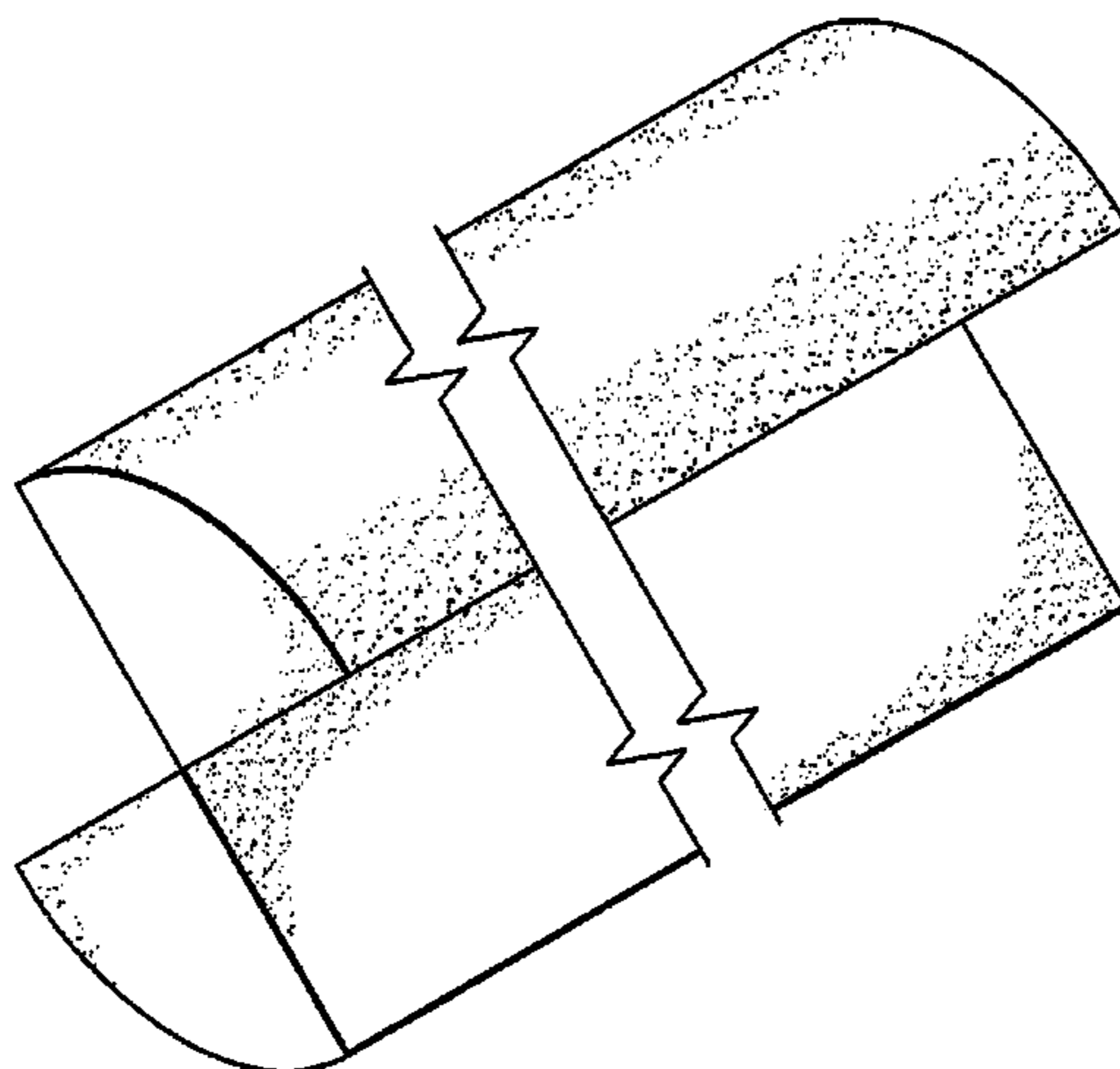
FIG. 7 is a perspective view of a filter housing having several filter cartridges of FIG. 1 installed therein. The housing is shown in phantom for environmental purposes only and forms no part of the claimed embodiment. The filter cartridges are shown in phantom except one because the filter cartridges' appearance within the filter housing are not a part of the claimed ornamental design of this application.

The design is shown broken away along its length to indicate unspecified length.

It should be understood that the labels used herein for describing orientation (e.g., front, rear, top, bottom, left, and right) are merely for reference, and the design may be disposed in any manner and still be within the scope of the present invention.

The broken line showing of unclaimed portions of the filter cartridge forms no part of the claimed design.

1 Claim, 3 Drawing Sheets



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U.S. PATENT DOCUMENTS

4,058,463 A * 11/1977 Bartik 210/317
4,613,438 A 9/1986 DeGraffenreid
4,715,954 A 12/1987 DeGraffenreid
4,749,485 A 6/1988 DeGraffenreid
D519,186 S * 4/2006 Oranski et al. D23/209
D547,825 S * 7/2007 Kennedy et al. D23/209
D548,306 S * 8/2007 Kennedy et al. D23/209
D571,433 S * 6/2008 Koteskey D23/209
7,473,360 B2 * 1/2009 Hoffman et al. 210/236
D599,880 S * 9/2009 Rampen et al. D23/209
7,611,764 B2 11/2009 Komori et al.
D614,259 S * 4/2010 Reid et al. D23/209
2002/0178921 A1 12/2002 Kosmider et al.

2003/0183568 A1 * 10/2003 Hoffman et al. 210/232
2006/0174598 A1 * 8/2006 Mills et al. 55/499
2010/0146917 A1 * 6/2010 Coulonvaux et al. 55/344

OTHER PUBLICATIONS

Buzanowski, Mac et al., "Minimizing the Pressure Drop Across Filters with Multi Cylindrical Filter Tubes," American Filtration and Separation Society Annual Conference, Filter Modeling Session, Mar. 26-29, 2007, Orlando, FL. 5 pages, AFS.
Buzanowski, Mac et al., "Optimization of Multi Cylindrical Filters for Industrial Gas Processing Plants," Proceedings of the 5th Joint ASME/JSME Fluids Engineering Conference, Jul. 30-Aug. 2, 2007, San Diego, CA, 3 pages, ASME.

* cited by examiner

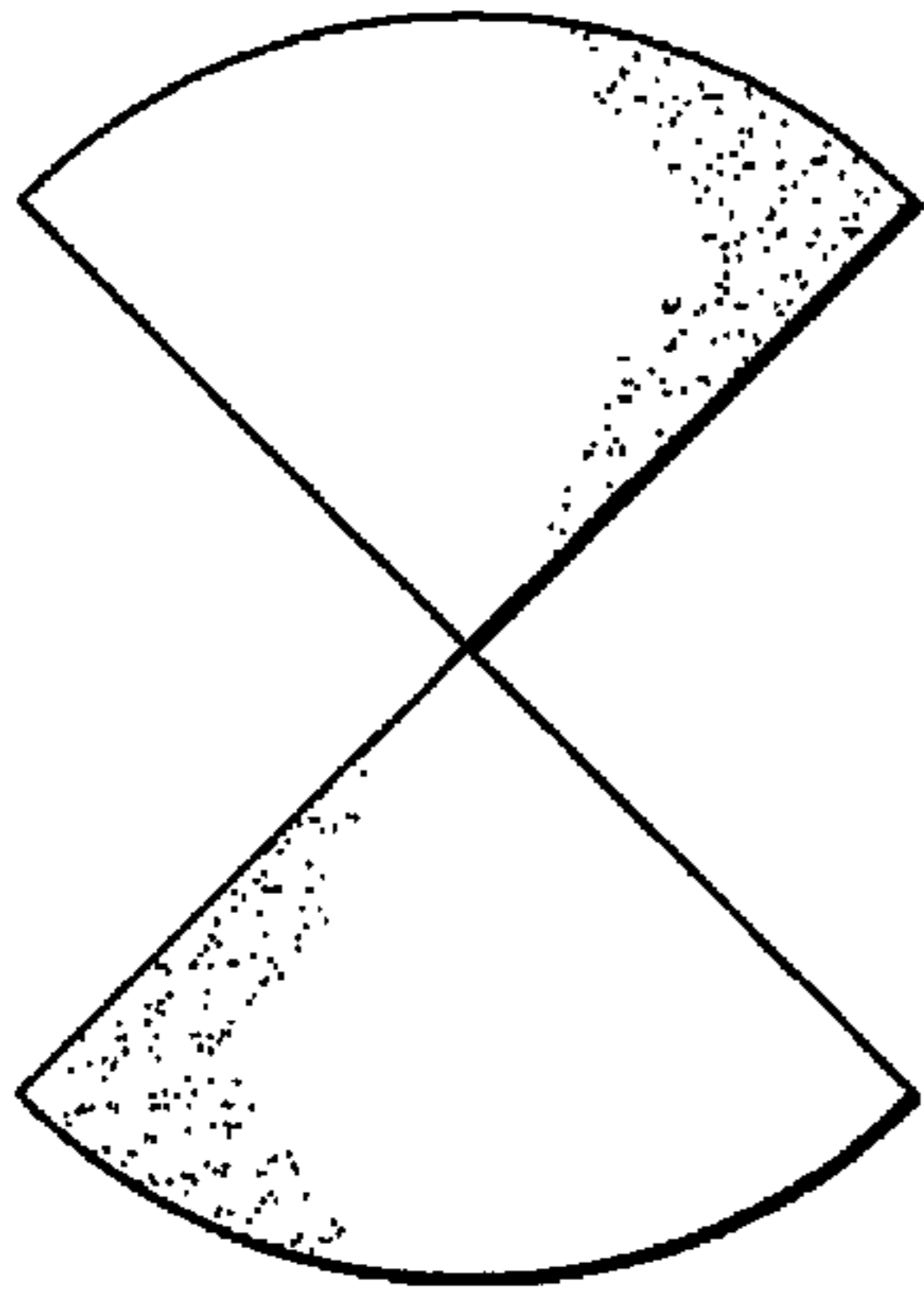


FIG. 1

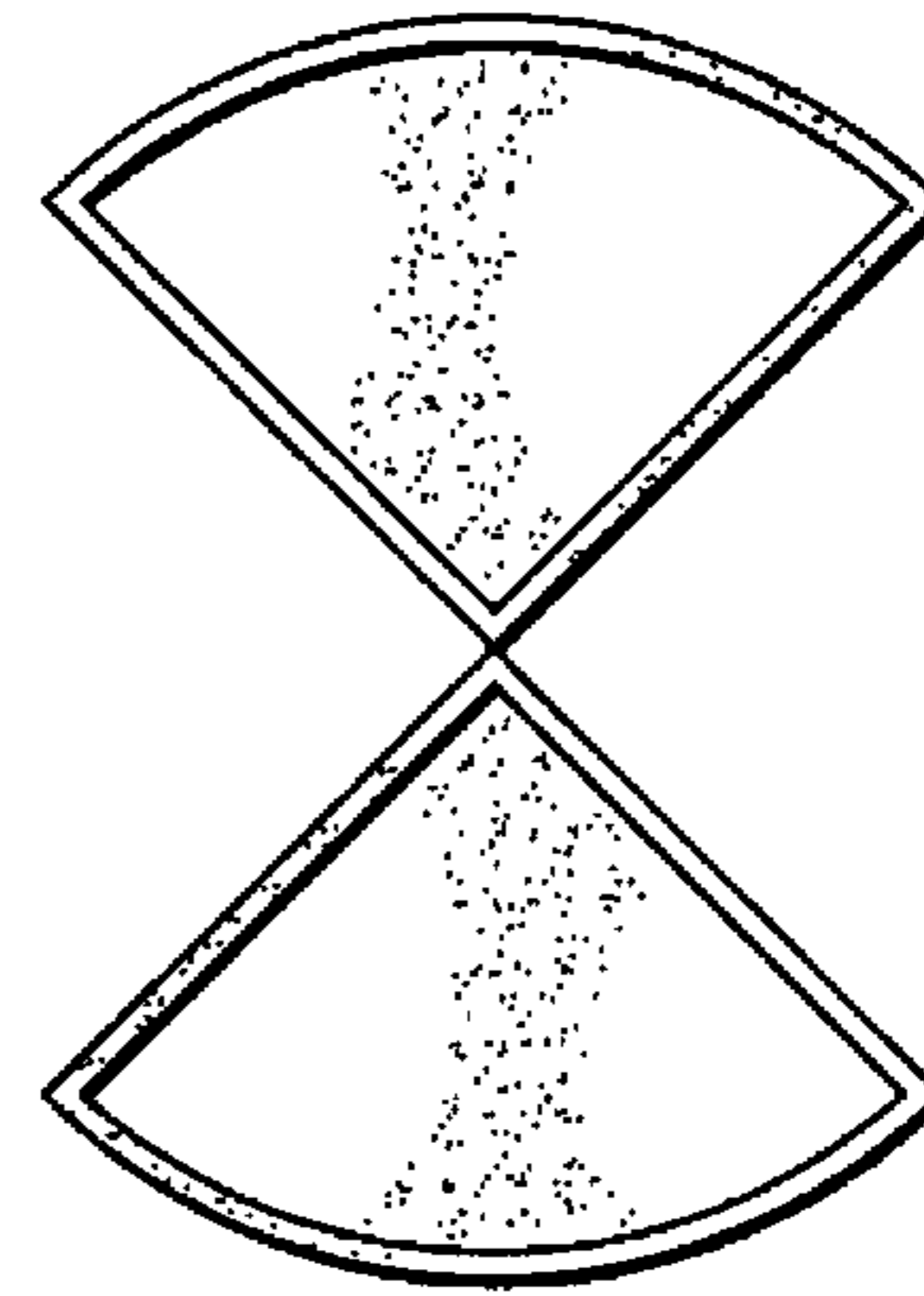


FIG. 2

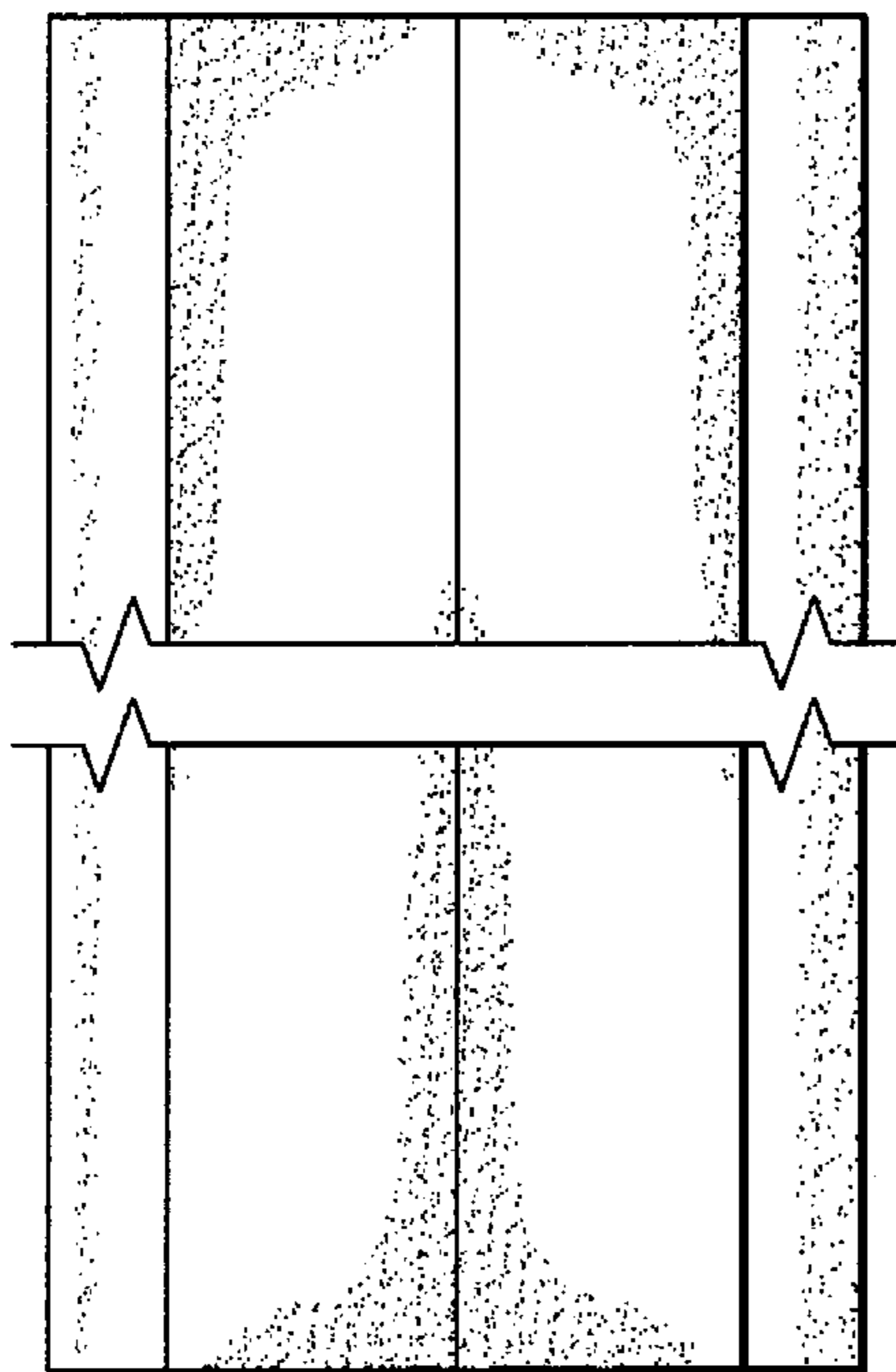


FIG. 3

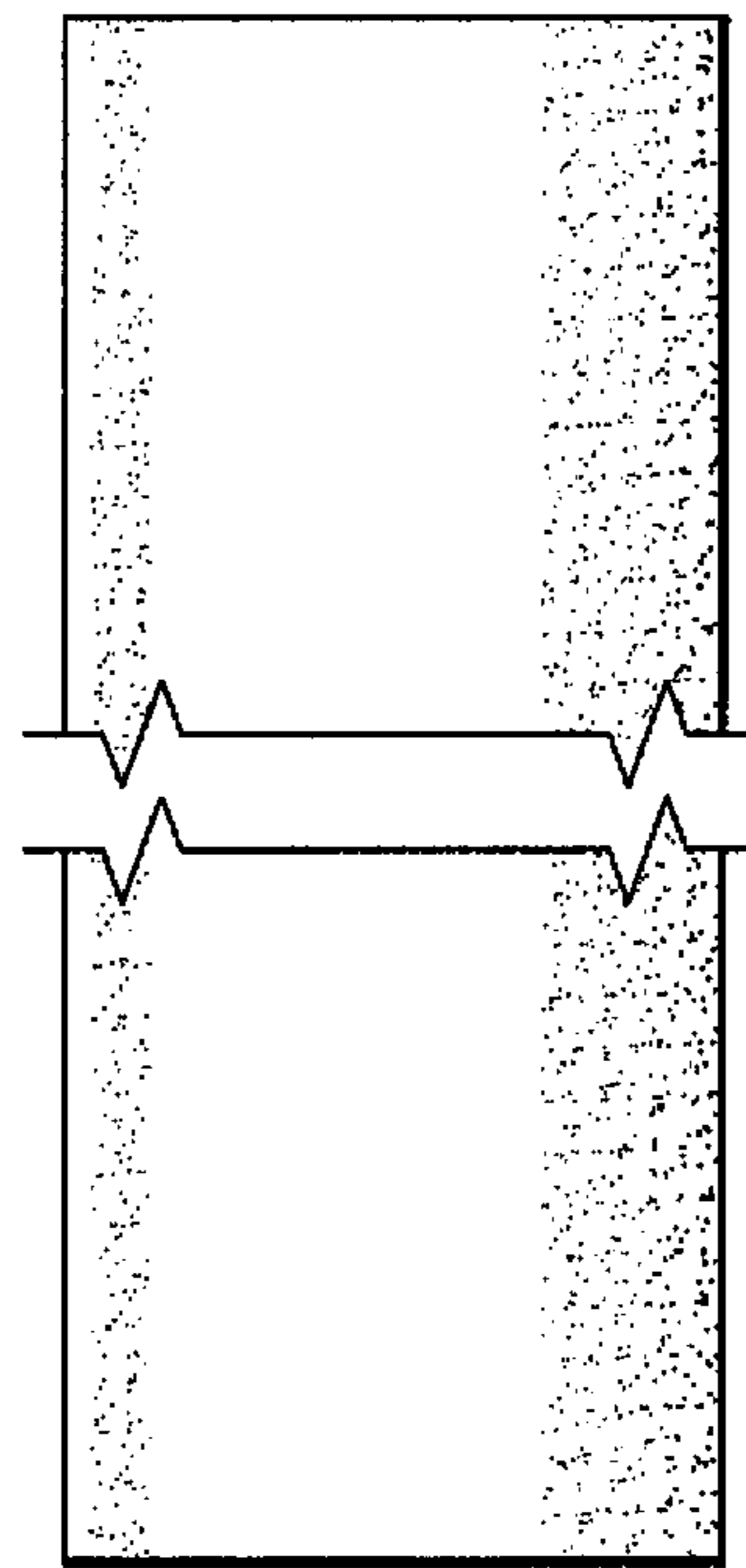


FIG. 4

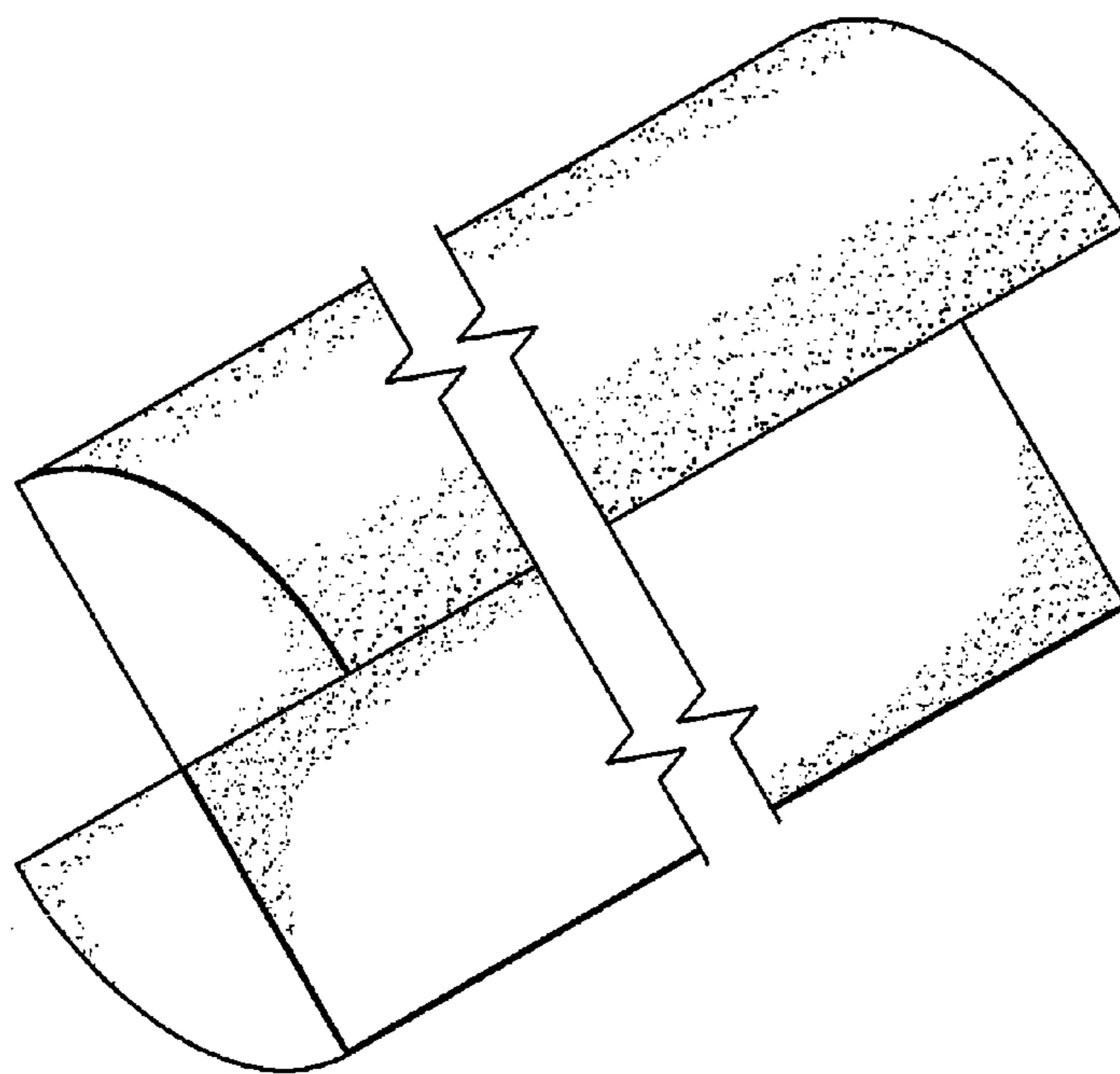


FIG. 5

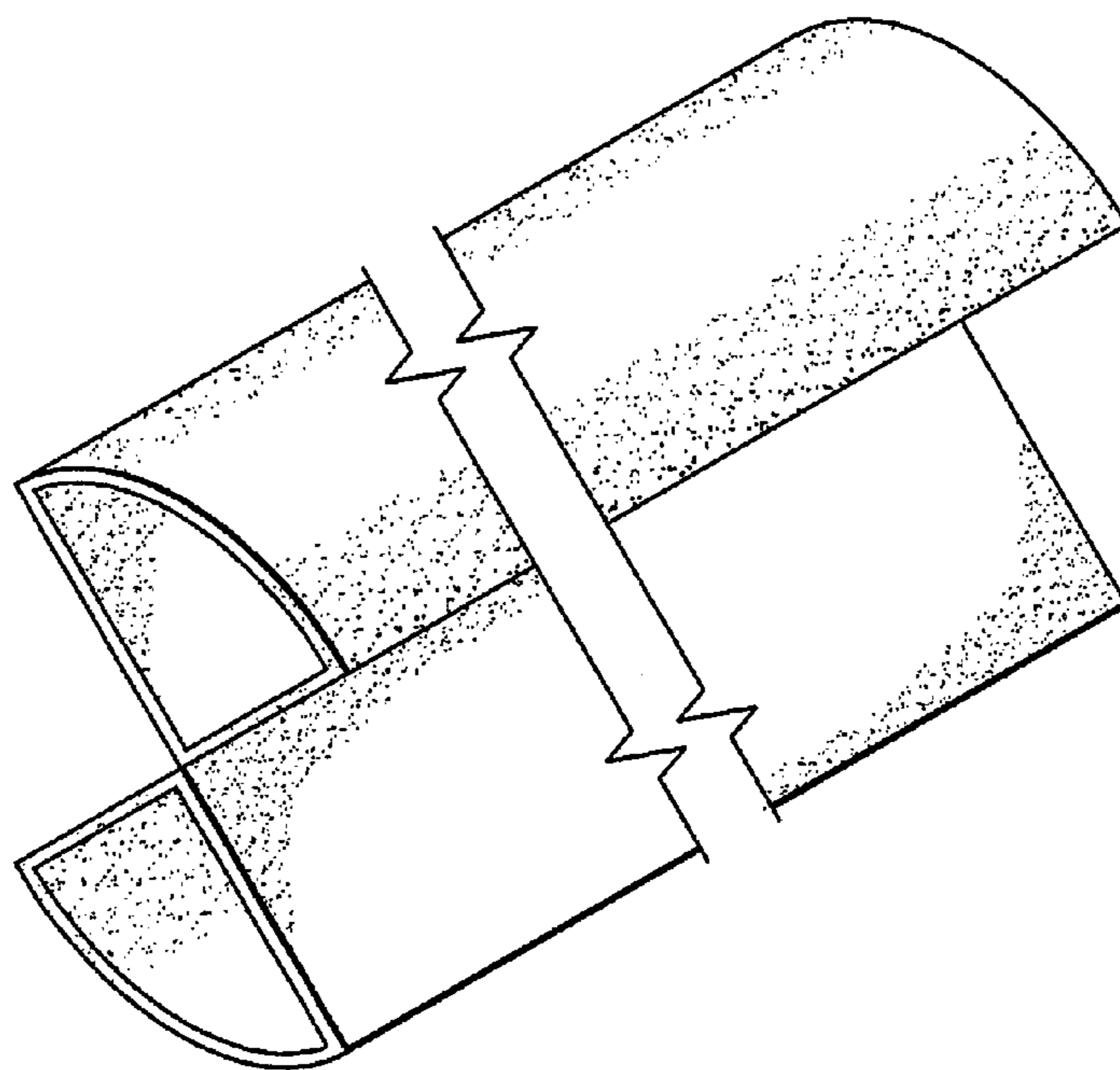


FIG. 6

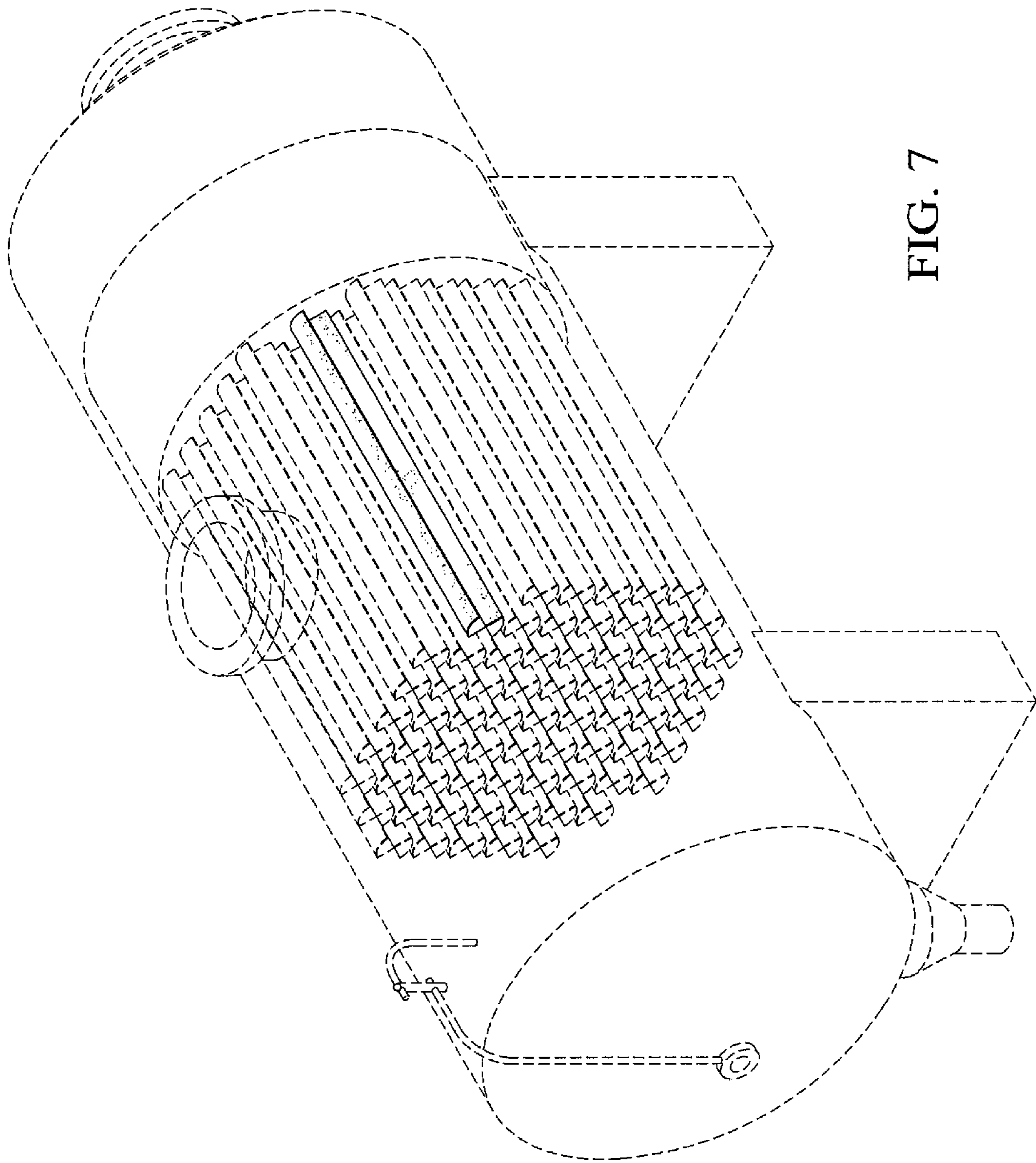


FIG. 7