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

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(54) **FILTER CARTRIDGE**

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

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(51) **LOC (12) Cl.** ..... **23-04**

(52) **U.S. Cl.**  
USPC ..... **D23/365**

(58) **Field of Classification Search**  
USPC ..... D23/209, 235, 341, 358, 363-365;  
D15/5; D32/21-25, 31, 32

(Continued)

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

5,487,767 A 1/1996 Brown  
D437,402 S \* 2/2001 Gieseke ..... D23/365  
(Continued)

**FOREIGN PATENT DOCUMENTS**

DE 199 35 297 2/2001  
JP 2004/136203 5/2004  
(Continued)

**OTHER PUBLICATIONS**

U.S. Appl. No. 15/539,600, filed Jun. 23, 2017.  
(Continued)

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(57) **CLAIM**

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

**DESCRIPTION**

FIG. 1 is a perspective view of a filter cartridge according to the present design; in FIG. 1 the perspective view being shown generally toward an end, opposite a seal end, and toward a media pack side.

FIG. 2 is a perspective view of the filter cartridge of FIG. 1 taken toward an opposite end to FIG. 1.

FIG. 3 is a first side elevational view of the filter cartridge of FIG. 1 the view of FIG. 3 generally being toward the side viewable in FIG. 1.

FIG. 4 is second side elevational view of the filter cartridge of FIG. 1; the view of FIG. 4 being taken generally toward an opposite side to that viewable in FIG. 3.

FIG. 5 is a first end elevational view of the filter cartridge of FIG. 1.

FIG. 6 is a second end elevational view of the filter cartridge of FIG. 1; the view of FIG. 6 being taken generally opposite the view of FIG. 5.

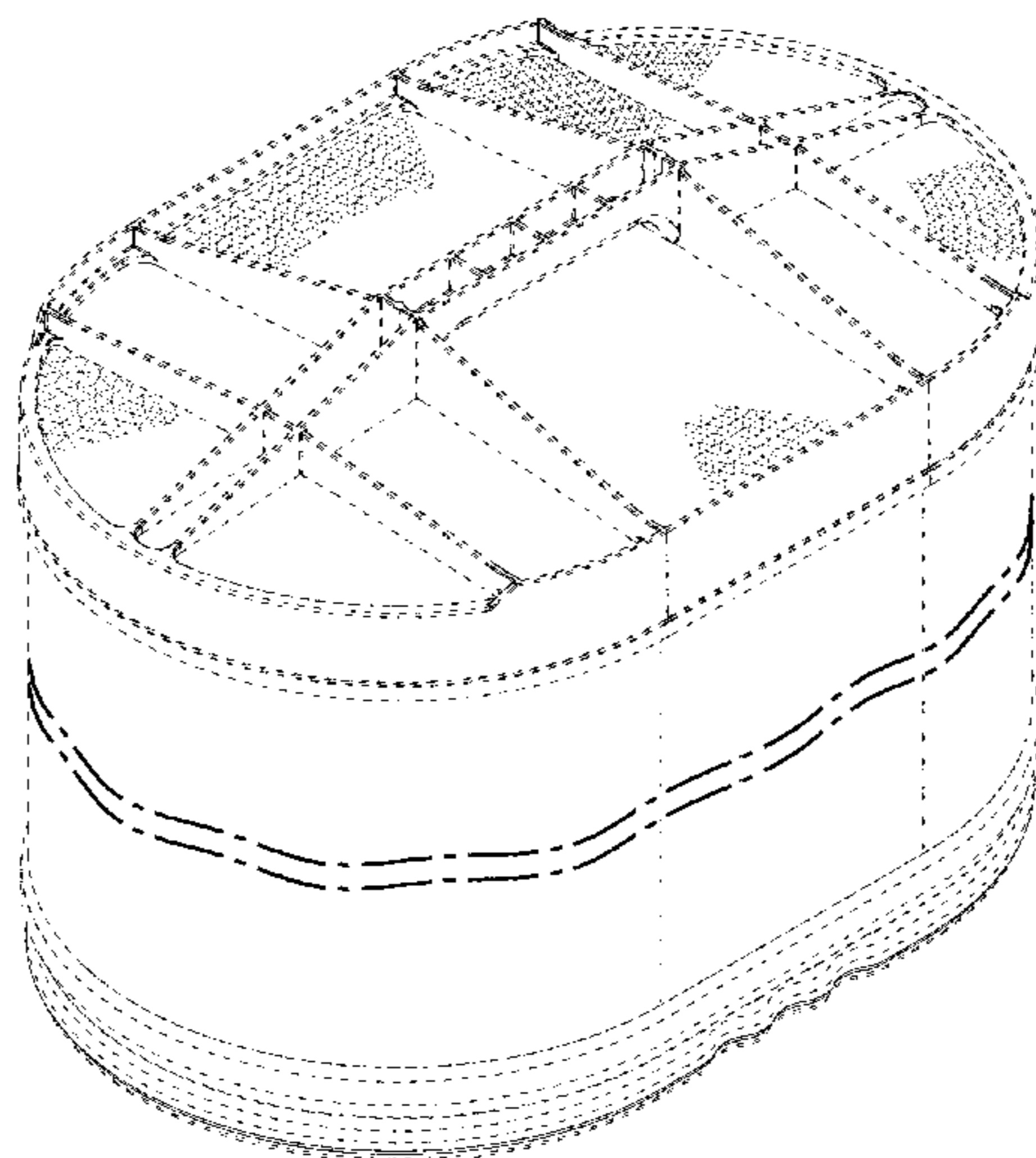
FIG. 7 is a flow end plan view of the filter cartridge of FIG. 1; the end viewable being viewable in FIG. 1; and,

FIG. 8 is opposite flow end plan view of the filter cartridge of FIG. 1; the view of FIG. 8 being taken generally opposite the view of FIG. 7.

The broken-lines in the drawings show portions of the filter cartridge that form no part of the claim.

The filter cartridge is shown with a symbolic break in its length. The appearance of any portion of the article between the dash-dot-dash break lines forms no part of the claimed design.

**1 Claim, 5 Drawing Sheets**



(58) **Field of Classification Search**  
 CPC ..... F02M 35/04; F02M 35/10; F02M 35/024;  
 B01D 46/0002; B01D 46/10  
 See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,190,432 B1 2/2001 Gieseke et al.  
 6,235,195 B1 5/2001 Tokar  
 D450,828 S 11/2001 Tokar  
 6,348,084 B1 2/2002 Gieseke et al.  
 6,350,291 B1 2/2002 Gieseke et al.  
 D455,483 S \* 4/2002 Gieseke ..... D23/365  
 D461,003 S 7/2002 Gieseke et al.  
 D483,459 S 12/2003 DeWit  
 D484,584 S \* 12/2003 Anderson ..... D23/365  
 D497,202 S \* 10/2004 Carter ..... D15/5  
 D506,539 S \* 6/2005 Bishop ..... D23/365  
 6,966,940 B2 11/2005 Krisko et al.  
 7,247,183 B2 7/2007 Connor et al.  
 7,282,077 B2 \* 10/2007 Honisch ..... F02M 35/024  
 123/198 E  
 7,396,375 B2 7/2008 Nepsund et al.  
 7,396,376 B2 7/2008 Schrage et al.  
 7,481,863 B2 \* 1/2009 Oelpke ..... B01D 46/0098  
 55/521  
 7,520,913 B2 4/2009 Mills et al.  
 7,625,419 B2 12/2009 Nelson et al.  
 7,674,308 B2 3/2010 Krisko et al.  
 7,713,321 B2 5/2010 Kuempel et al.  
 7,736,410 B2 6/2010 Kuempel et al.  
 7,905,936 B2 \* 3/2011 Coulonvaux ..... B01D 46/0023  
 D46/23  
 7,967,886 B2 \* 6/2011 Schrage ..... B01D 25/001  
 55/498  
 7,972,404 B2 7/2011 Kuempel et al.  
 8,016,903 B2 9/2011 Nelson et al.  
 8,066,791 B2 11/2011 Baseotto et al.  
 8,128,724 B2 3/2012 Mills et al.  
 8,409,316 B2 4/2013 Nelson et al.  
 D690,407 S \* 9/2013 Williams ..... D23/365  
 8,728,193 B2 5/2014 Flagstad et al.  
 8,741,017 B2 6/2014 Nelson  
 8,747,512 B2 6/2014 Mills et al.  
 D709,919 S \* 7/2014 Fairchild ..... D15/5  
 8,864,866 B2 10/2014 Osendorf et al.  
 8,920,528 B2 12/2014 Dewit et al.  
 D736,263 S \* 8/2015 Schultz ..... D15/5  
 9,242,199 B2 1/2016 Nelson et al.

9,320,997 B2 4/2016 Campbell et al.  
 9,387,425 B2 7/2016 Osendorf et al.  
 9,463,404 B2 10/2016 Rieger et al.  
 9,610,529 B2 4/2017 Mills  
 9,636,615 B2 5/2017 Osendorf et al.  
 D793,453 S \* 8/2017 Krull ..... D15/5  
 D794,082 S \* 8/2017 Krull ..... D15/5  
 D819,698 S 6/2018 Krull  
 D819,699 S 6/2018 Krull  
 10,046,260 B2 8/2018 Campbell et al.  
 10,118,120 B2 11/2018 Movia et al.  
 D875,630 S \* 2/2020 Kana ..... D12/194  
 2005/0166561 A1 8/2005 Schrage  
 2005/0193695 A1 9/2005 Holmes et al.  
 2006/0174598 A1 8/2006 Mills et al.  
 2007/0193236 A1 \* 8/2007 Merritt ..... B01D 46/0004  
 55/498  
 2008/0016832 A1 \* 1/2008 Krisko ..... B01D 45/16  
 55/342  
 2008/0110142 A1 5/2008 Nelson  
 2010/0064646 A1 3/2010 Smith et al.  
 2010/0242425 A1 \* 9/2010 Swanson ..... B01D 46/2411  
 55/498  
 2010/0252495 A1 \* 10/2010 Reid ..... B01D 29/012  
 210/339  
 2010/0258493 A1 10/2010 Kindkeppel et al.  
 2016/0045848 A1 \* 2/2016 Campbell ..... B01D 46/525  
 55/357

FOREIGN PATENT DOCUMENTS

RU 2417819 8/2005  
 WO 2006/084094 8/2006  
 WO 2007/009039 1/2007  
 WO 2007/009040 1/2007  
 WO 2009/047196 4/2009  
 WO PCT/US2018/048907 8/2018

OTHER PUBLICATIONS

U.S. Appl. No. 29/613,360, filed Aug. 2017, Gossez et al.  
 U.S. Appl. No. 16/058,472, filed Aug. 2018, Gieseke et al.  
 Pending Claims of U.S. Appl. No. 15/582,995 dated Dec. 10, 2018.  
 Allowed Claims of U.S. Appl. No. 15/204,104 dated Dec. 10, 2018.  
 Pending Claims of U.S. Appl. No. 16/176,134 dated Dec. 10, 2018.  
 Pending claims of U.S. Appl. No. 15/477,235 dated Dec. 10, 2018.  
 Pending drawings of U.S. Appl. No. 29/613,360 dated Dec. 10, 2018.

\* cited by examiner

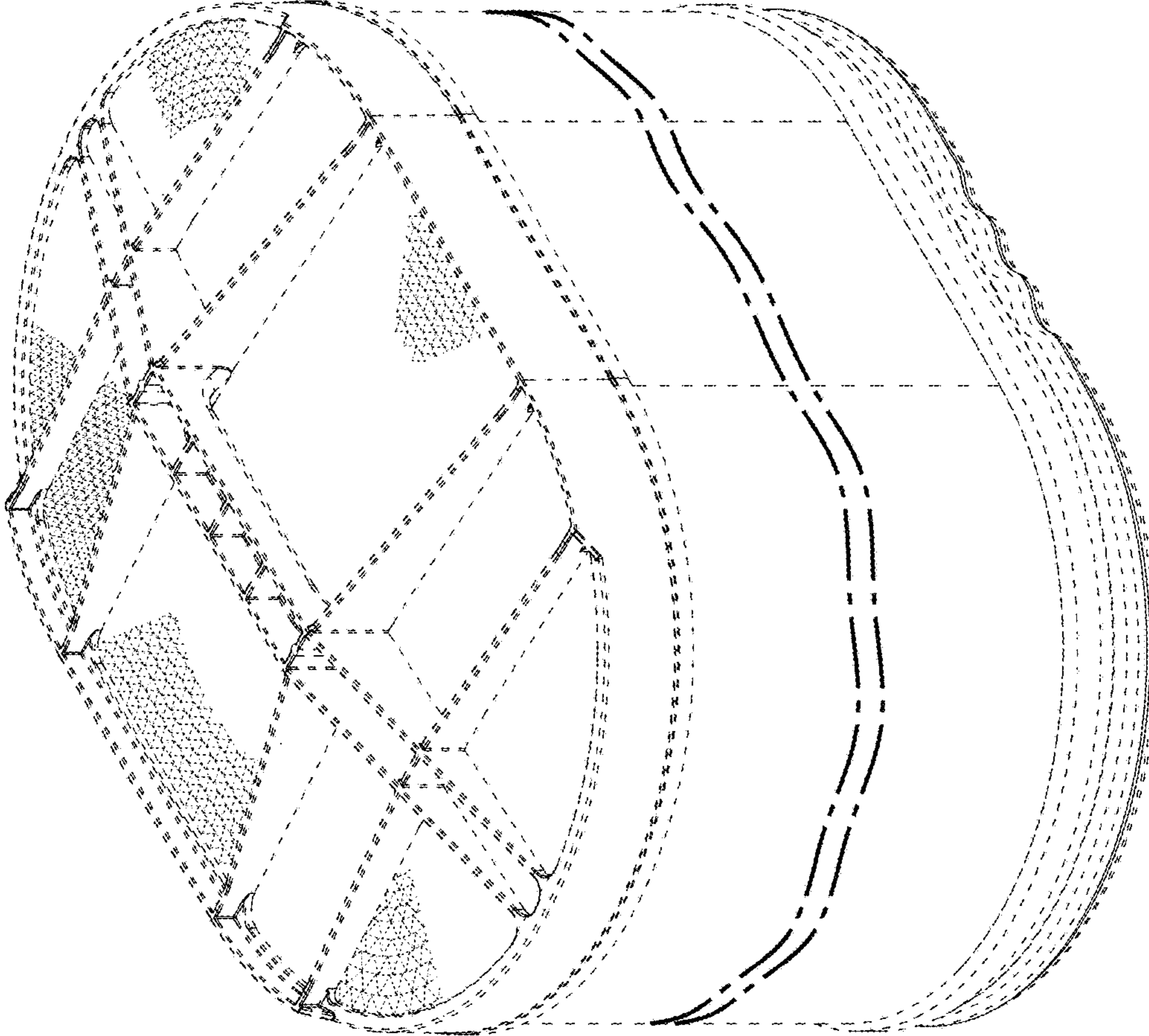


FIG. 1

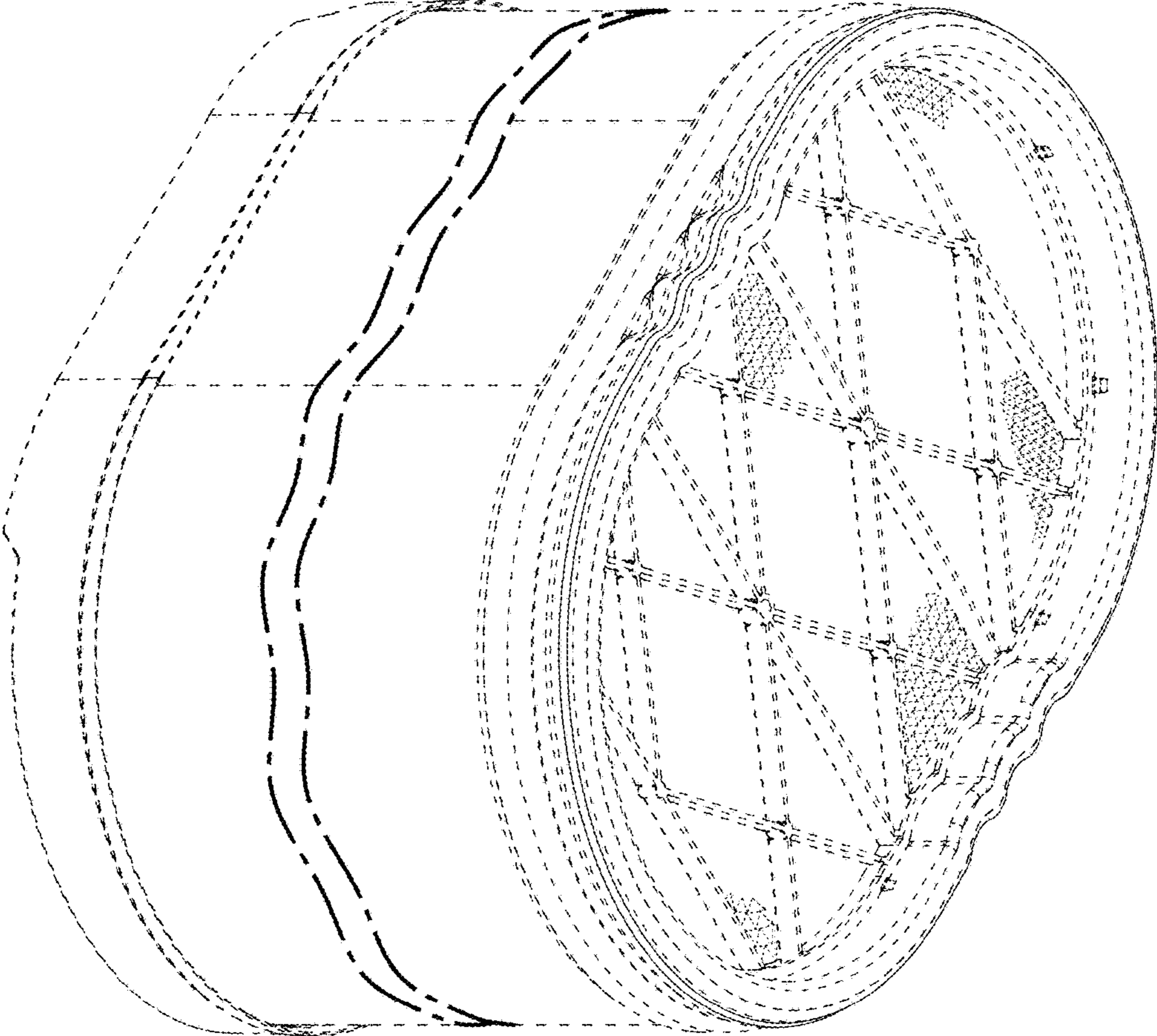


FIG. 2

FIG. 3

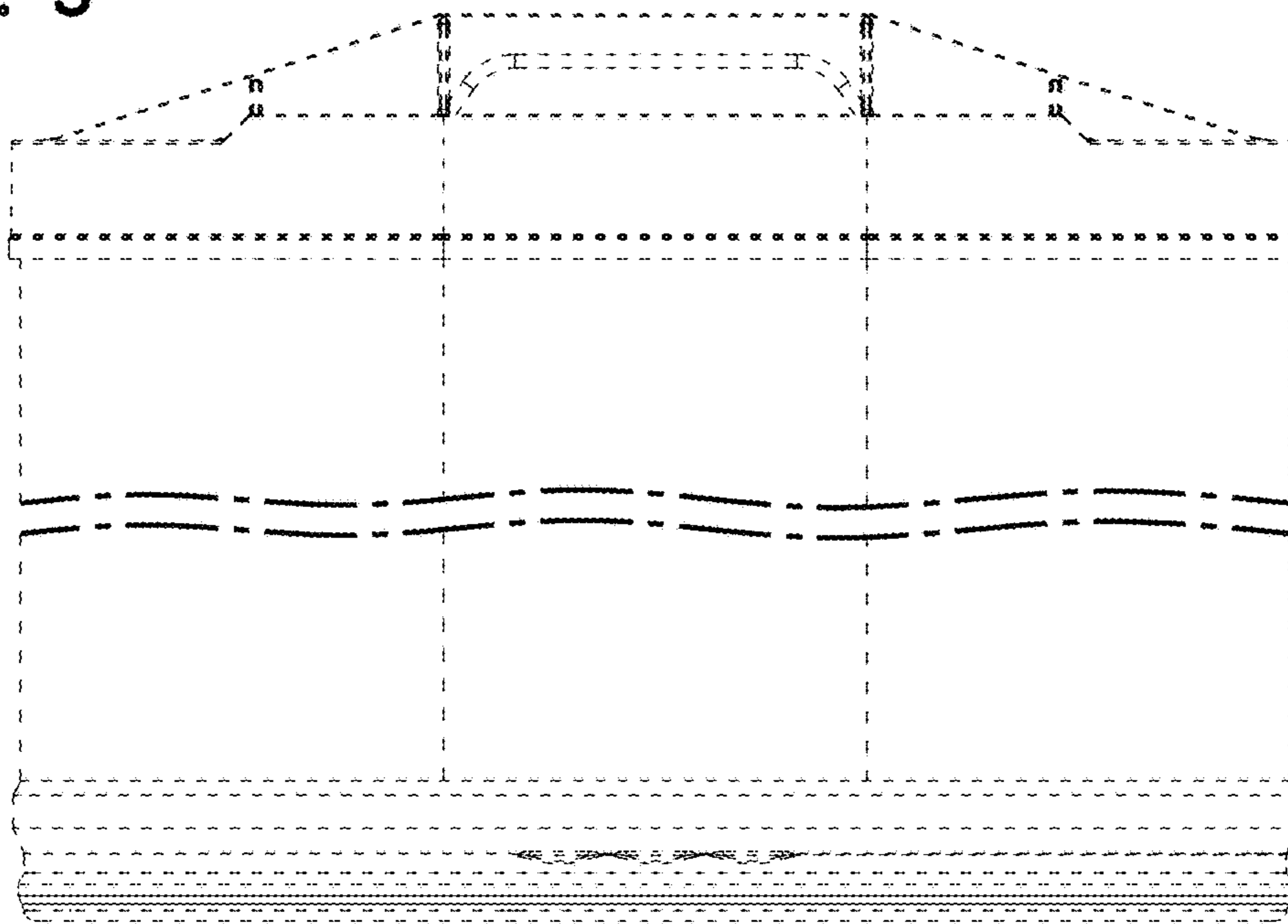


FIG. 4

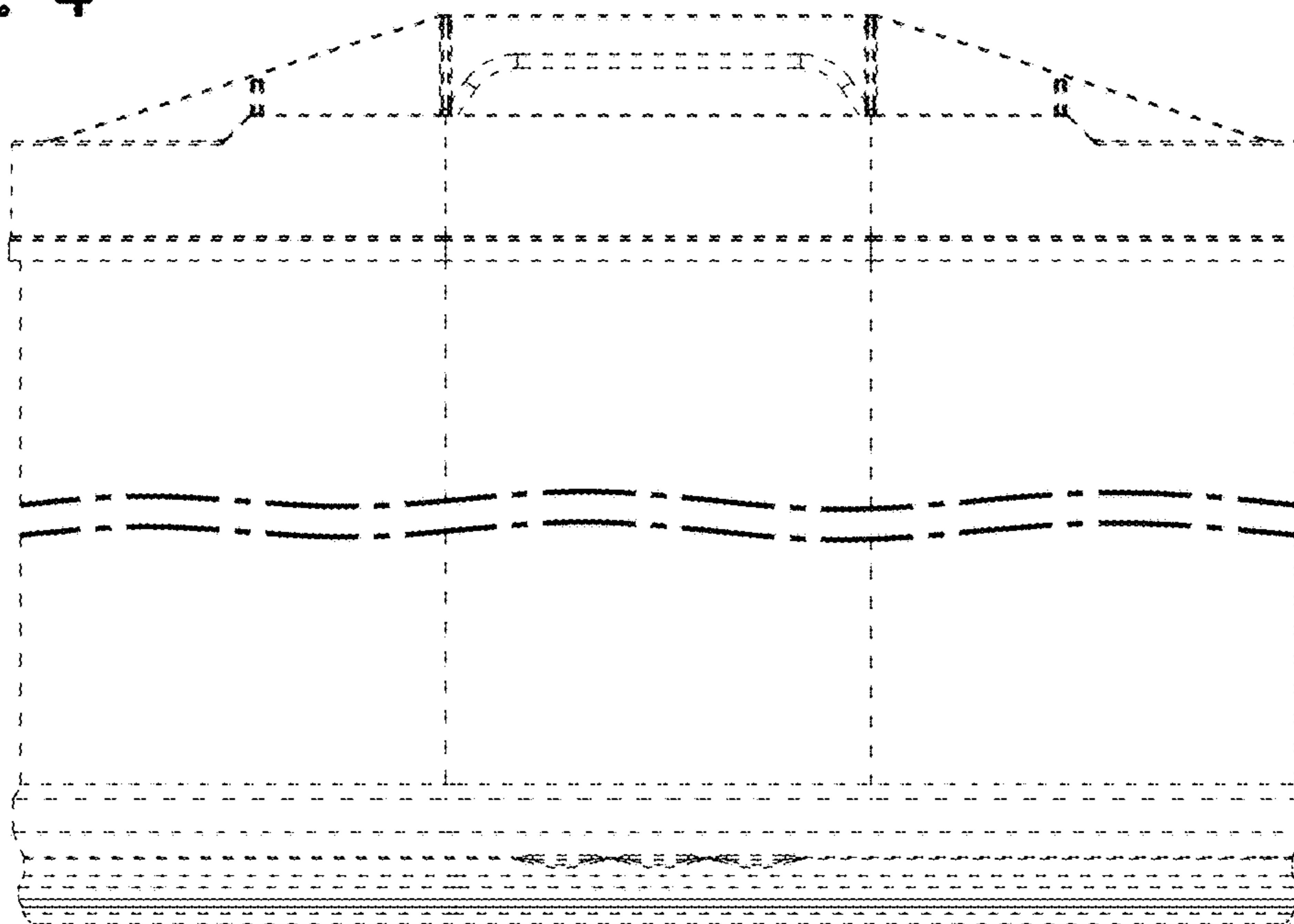


FIG. 5

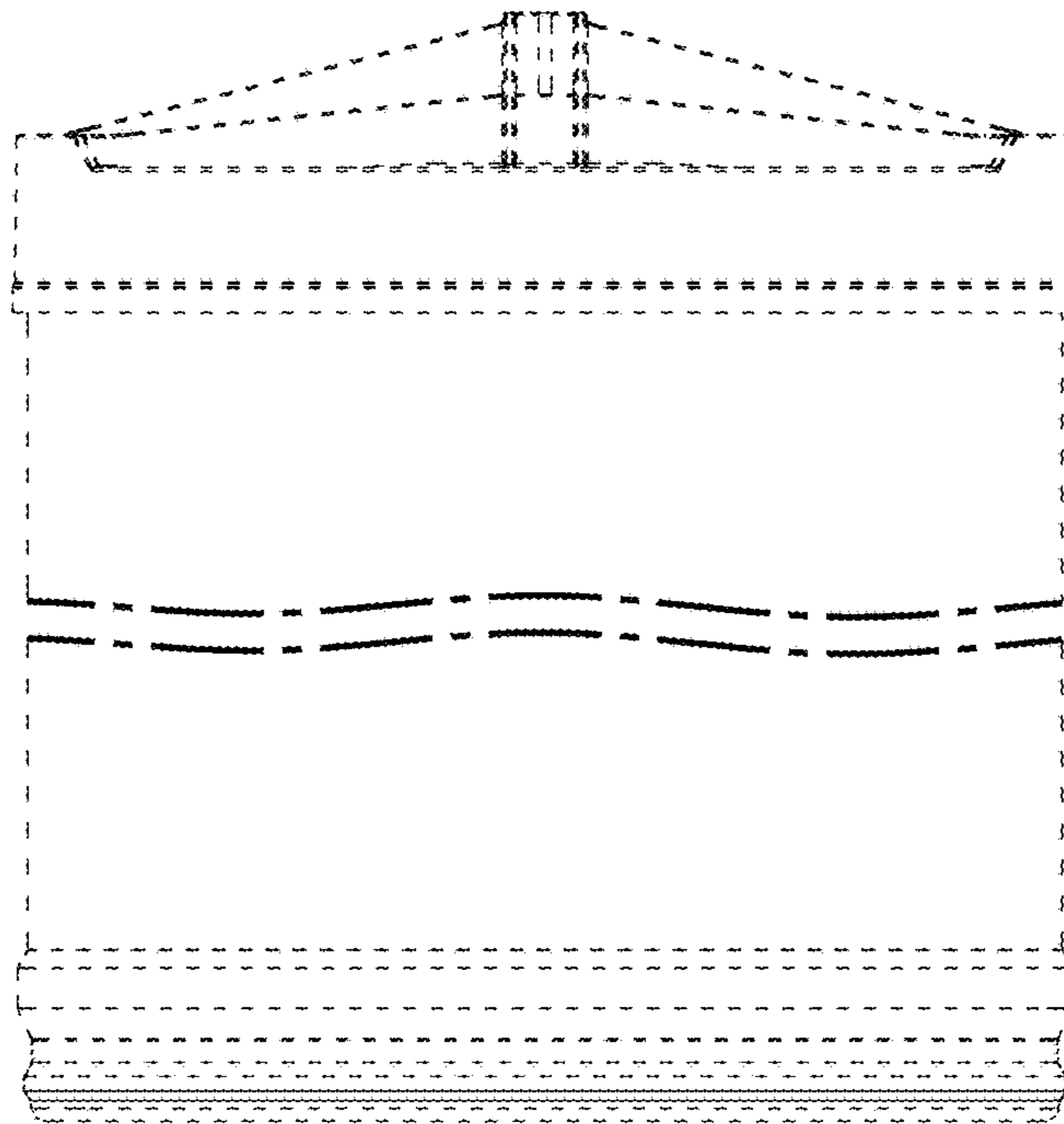


FIG. 6

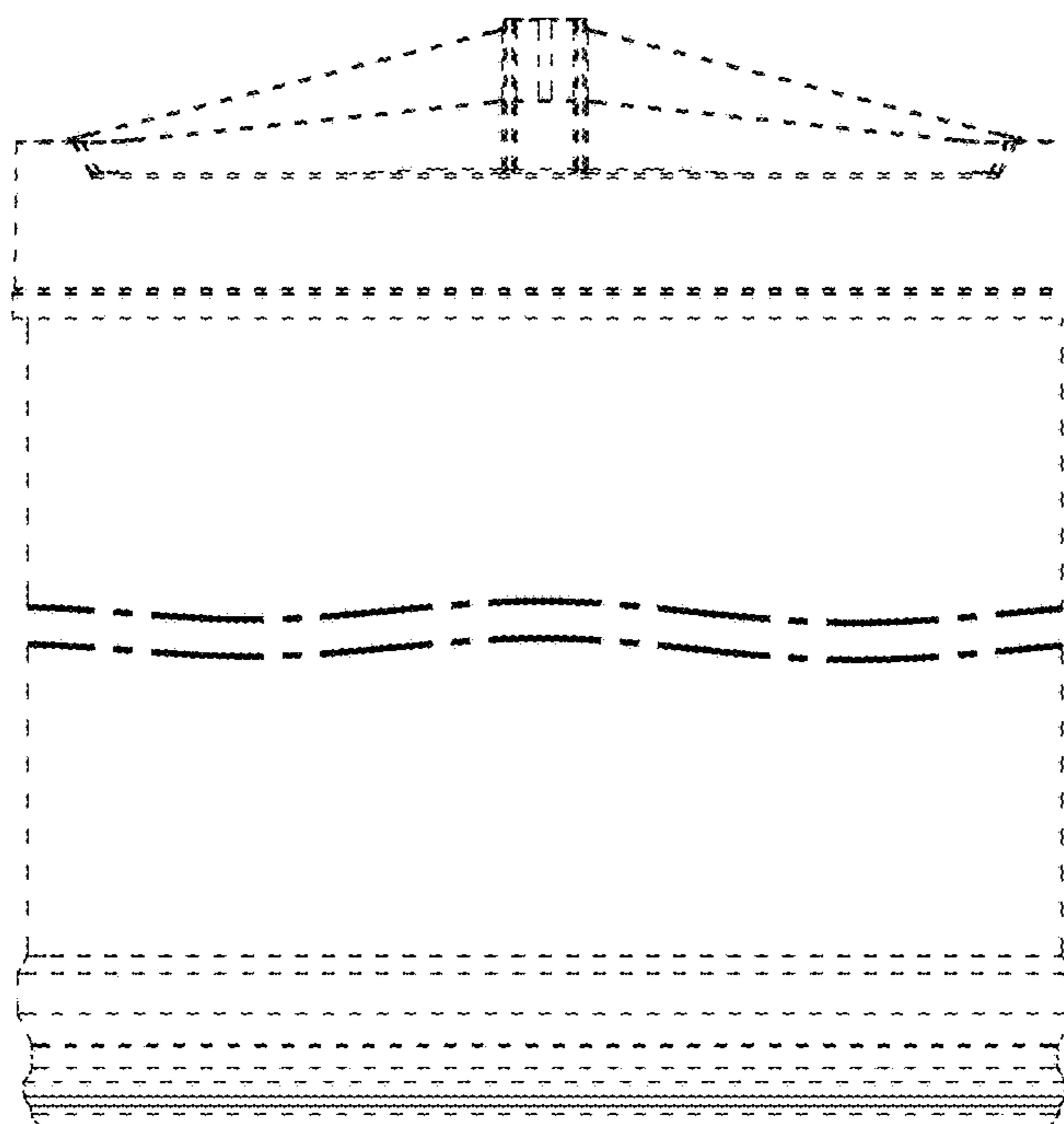


FIG. 7

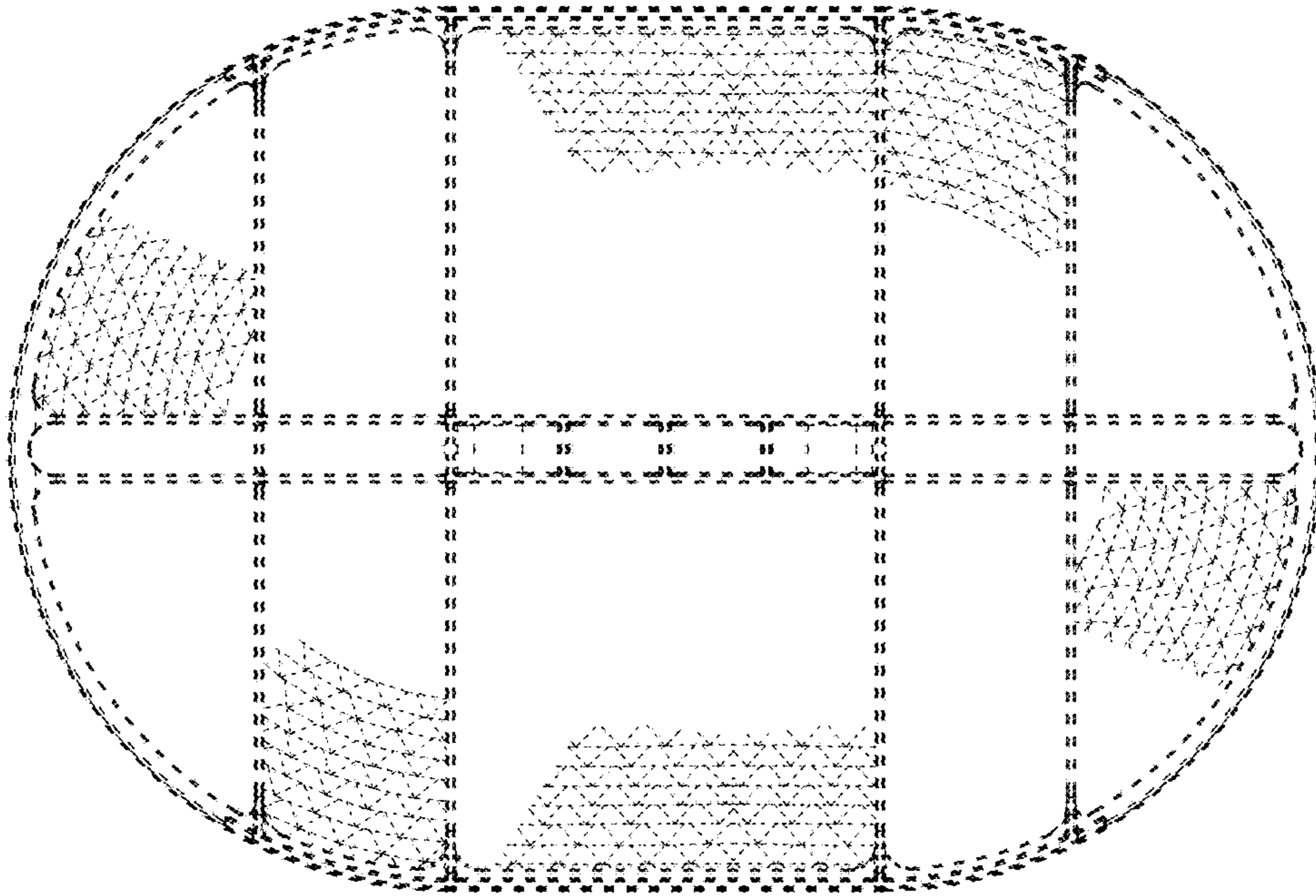


FIG. 8

