



US00D857070S

(12) **United States Design Patent** (10) **Patent No.:** **US D857,070 S**  
**Maeno et al.** (45) **Date of Patent:** **\*\* Aug. 20, 2019**

(54) **CUTTING TOOL**

(74) *Attorney, Agent, or Firm* — Baker Botts L.L.P.;  
Michael A. Sartori

(71) Applicant: **SUMITOMO ELECTRIC  
HARDMETAL CORP.**, Itami-shi (JP)

(57) **CLAIM**

(72) Inventors: **Hideo Maeno**, Itami (JP); **Yosuke  
Shimamoto**, Itami (JP); **Naoki  
Matsuda**, Itami (JP)

The ornamental design for a cutting tool, as shown and  
described.

(73) Assignee: **SUMITOMO ELECTRIC  
HARDMETAL CORP.**, Hyogo (JP)

**DESCRIPTION**

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

(21) Appl. No.: **29/670,678**

(22) Filed: **Nov. 19, 2018**

FIG. 1 is a front view of a cutting tool in accordance with  
Embodiment 1 of the present design;  
FIG. 2 is a rear view thereof;  
FIG. 3 is a top view thereof;  
FIG. 4 is a bottom view thereof;  
FIG. 5 is a right side view thereof;  
FIG. 6 is a left side view thereof;  
FIG. 7 is a perspective view thereof;  
FIG. 8 is an enlarged view of 8-8 portion of FIG. 3;  
FIG. 9 is an enlarged perspective view of 8-8 portion of FIG.  
3;  
FIG. 10 is an enlarged front view of 8-8 portion of FIG. 3;  
FIG. 11 is an enlarged rear view of 8-8 portion of FIG. 3;  
FIG. 12 is an enlarged left side view of 8-8 portion of FIG.  
3;  
FIG. 13 is a cross sectional view taken along line 13-13 of  
FIG. 3;  
FIG. 14 is a cross sectional view taken along line 14-14 of  
FIG. 3;  
FIG. 15 is a cross sectional view taken along line 15-15 of  
FIG. 8;  
FIG. 16 is a cross sectional view taken along line 16-16 of  
FIG. 8;  
FIG. 17 is a cross sectional view taken along line 17-17 of  
FIG. 8;  
FIG. 18 is a cross sectional view taken along line 18-18 of  
FIG. 8;  
FIG. 19 is a cross sectional view taken along line 19-19 of  
FIG. 8;  
FIG. 20 is a referential enlarged perspective view of 8-8  
portion of FIG. 3;  
FIG. 21 is a front view of a cutting tool in accordance with  
Embodiment 2 of the present design;  
FIG. 22 is a rear view thereof;

**Related U.S. Application Data**

(62) Division of application No. 29/592,600, filed on Jan.  
31, 2017.

(30) **Foreign Application Priority Data**

Jun. 17, 2016 (JP) ..... 2016-013008  
Jun. 17, 2016 (JP) ..... 2016-013009

(Continued)

(51) **LOC (12) Cl.** ..... **15-03**

(52) **U.S. Cl.**  
USPC ..... **D15/139**

(58) **Field of Classification Search**  
USPC ..... D15/131, 138, 139, 140; D8/70

(Continued)

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D503,181 S \* 3/2005 Kasperik ..... D15/139  
D522,025 S \* 5/2006 Niebauer ..... D15/139

(Continued)

*Primary Examiner* — Khawaja Anwar

(Continued)



FIG. 23 is a top view thereof;  
 FIG. 24 is a bottom view thereof;  
 FIG. 25 is a right side view thereof;  
 FIG. 26 is a left side view thereof;  
 FIG. 27 is a perspective view thereof;  
 FIG. 28 is an enlarged view of 28-28 portion of FIG. 23;  
 FIG. 29 is an enlarged perspective view of 28-28 portion of FIG. 23;  
 FIG. 30 is an enlarged front view of 28-28 portion of FIG. 23;  
 FIG. 31 is an enlarged rear view of 28-28 portion of FIG. 23;  
 FIG. 32 is an enlarged left side view of 28-28 portion of FIG. 23;  
 FIG. 33 is a cross sectional view taken along line 33-33 of FIG. 23;  
 FIG. 34 is a cross sectional view taken along line 34-34 of FIG. 23;  
 FIG. 35 is a cross sectional view taken along line 35-35 of FIG. 28;  
 FIG. 36 is a cross sectional view taken along line 36-36 of FIG. 28;  
 FIG. 37 is a cross sectional view taken along line 37-37 of FIG. 28;  
 FIG. 38 is a cross sectional view taken along line 38-38 of FIG. 28;  
 FIG. 39 is a cross sectional view taken along line 39-39 of FIG. 28; and,  
 FIG. 40 is a referential enlarged perspective view of 28-28 portion of FIG. 23.

**1 Claim, 34 Drawing Sheets**

(30) **Foreign Application Priority Data**

Jun. 17, 2016 (JP) ..... 2016-013010  
 Jun. 17, 2016 (JP) ..... 2016-013011  
 Jun. 17, 2016 (JP) ..... 2016-013012

(58) **Field of Classification Search**

CPC ..... B23C 5/207; B23C 5/06; B23C 2200/125;  
 B23C 5/202; B23C 2200/203; B23C  
 2200/208; B23C 2210/168; B23C 5/109;  
 B23C 2200/128; B23C 2200/205; B23C  
 2200/367; B23C 5/20; B23C 5/2221;  
 B23C 2200/286; B23C 2200/0461; B23C  
 2200/0494; B23C 2200/085; B23C  
 2200/165; B23C 2200/201; B23C  
 2210/045; B23C 5/10; B23C 2200/0411;

B23C 2200/0416; B23C 2200/0455;  
 B23C 2200/123; B23C 2210/0457; B23C  
 5/006; B23C 5/2247; B23C 5/28; B23C  
 2200/0422; B23C 2200/0433; B23C  
 2200/0444; B23C 2200/045; B23C  
 2200/0477; B23C 2200/0483; B23C  
 2200/08; B23C 2200/086; B23C  
 2200/126; B23C 2200/164; B23C  
 2200/168; B23C 2200/28; B23C  
 2200/366; B23C 2210/16; B23C  
 2210/161; B23C 2220/16; B23C 2228/10;  
 B23C 2250/12; B23C 5/08; B23C 5/16;  
 B23C 5/205; B23C 5/2213; B23C 5/2273;  
 B23C 2200/0466; B23C 2200/12; B23C  
 2200/16; B23C 2200/161; B23C  
 2200/167; B23C 2200/206; B23C  
 2200/243; B23C 2200/246; B23C  
 2200/283; B23C 2200/326; B23C  
 2200/361; B23C 2200/368; B23C  
 2210/02; B23C 2210/03; B23C  
 2210/0414; B23C 2210/0428; B23C  
 2210/163; B23C 2210/202; B23C  
 2210/244; B23C 2210/28; B23C 2210/66;  
 B23C 2220/44; B23C 2220/56; B23C  
 2220/60; B23C 2222/28; B23C 2222/32;  
 B23C 2224/04; B23C 2224/28; B23C  
 2224/36; B23C 2226/125; B23C 2226/18;  
 B23C 2228/04; B23C 2240/24; B23C  
 2240/245; B23C 2240/32; B23C 2250/04;  
 B23C 2260/28; B23C 2265/08; B23C  
 3/12; B23C 5/003; B23C 5/1027; B23C  
 5/1045; B23C 5/18; B23C 5/22; B23C  
 5/2204; B23C 5/2208; B23C 5/2239;  
 B23C 5/2269; B23C 5/2406; B23C 5/241;  
 B23C 5/242; B23C 5/2462; B23C 5/2472

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D523,040 S \* 6/2006 Niebauer ..... D15/139  
 D632,320 S \* 2/2011 Chen ..... D15/139  
 D718,357 S \* 11/2014 Park ..... D15/139  
 D794,103 S \* 8/2017 Jeong ..... D15/139  
 D806,150 S \* 12/2017 Komiyama ..... D15/139  
 D816,744 S \* 5/2018 Lee ..... D15/139  
 D822,080 S \* 7/2018 Oh ..... D15/139  
 D822,731 S \* 7/2018 Yoshida ..... D15/139  
 D829,785 S \* 10/2018 Sakai ..... D15/139

\* cited by examiner

FIG.1

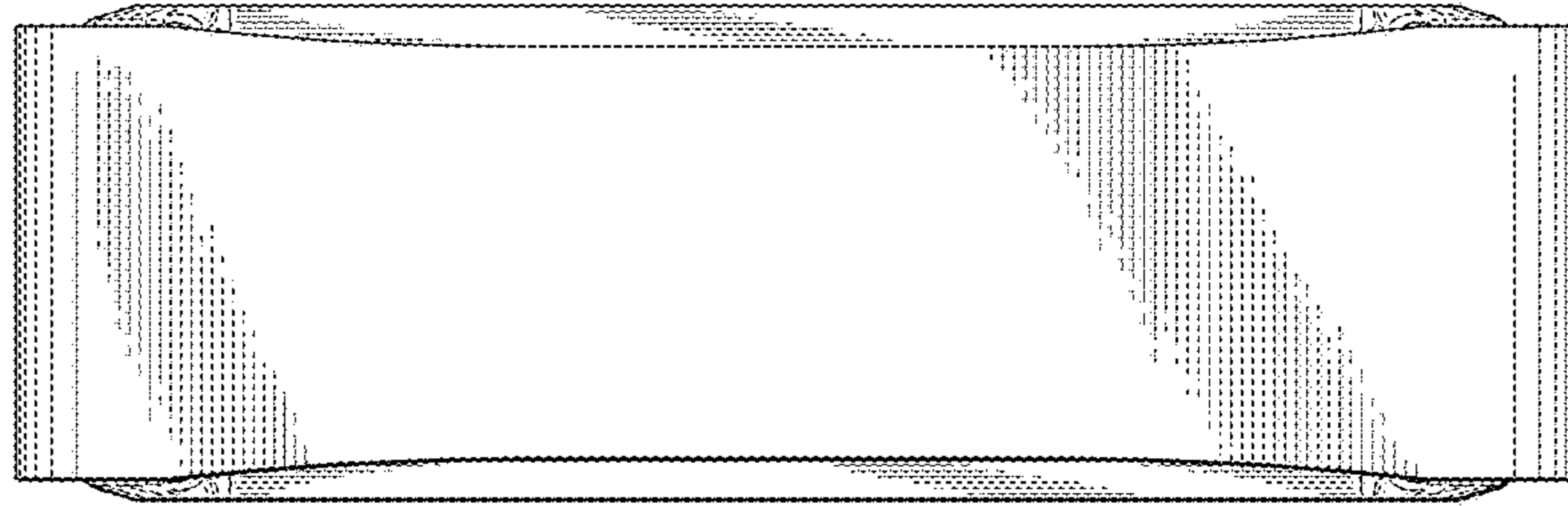


FIG.2

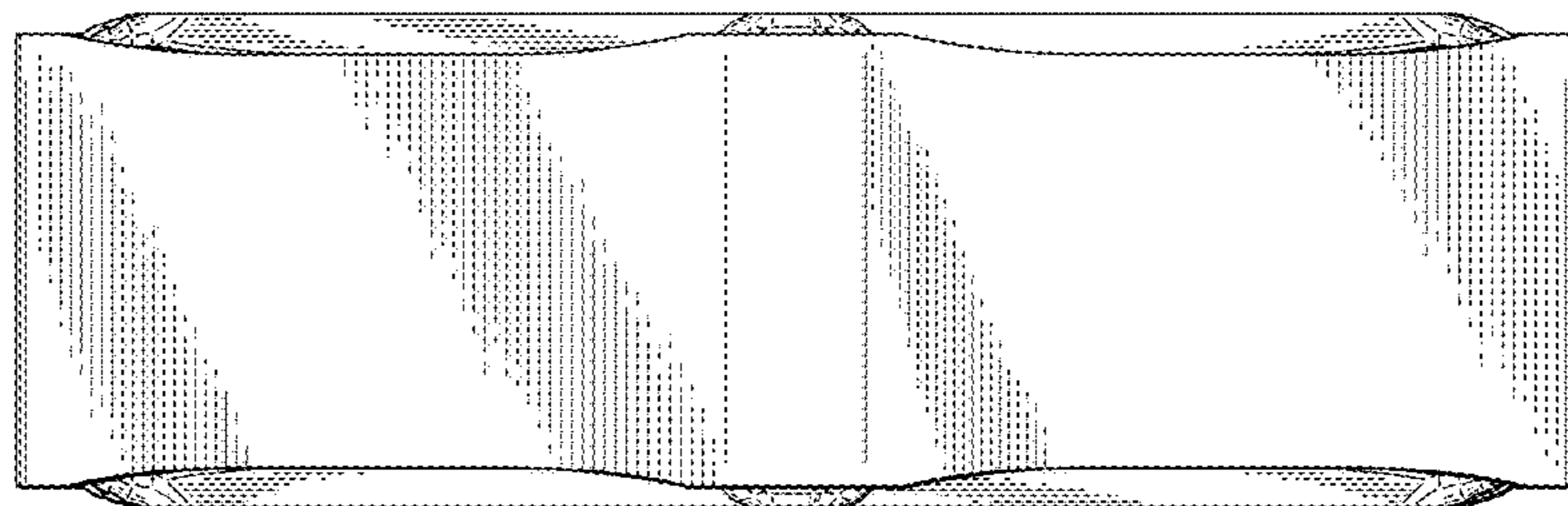


FIG.3

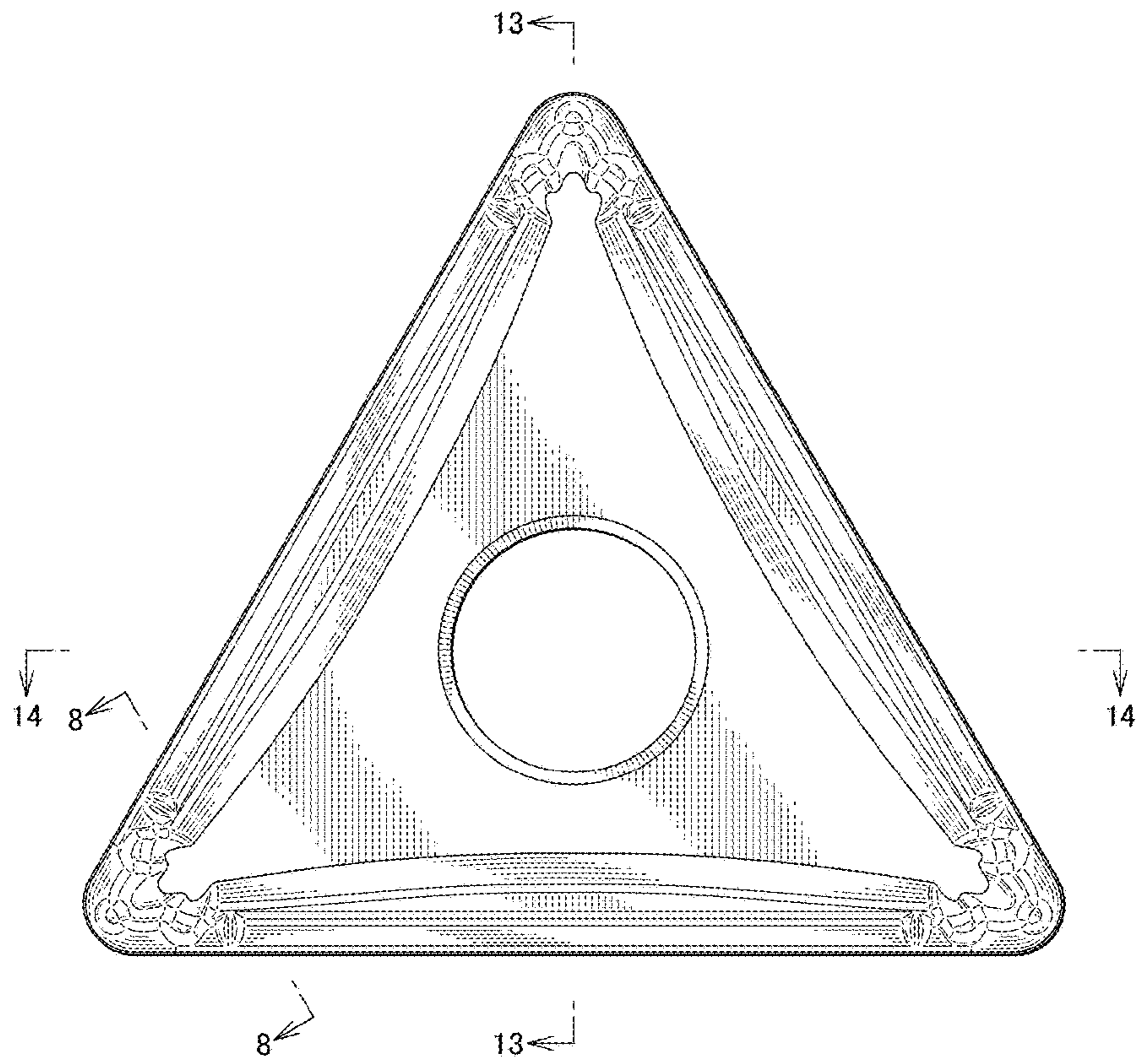


FIG.4

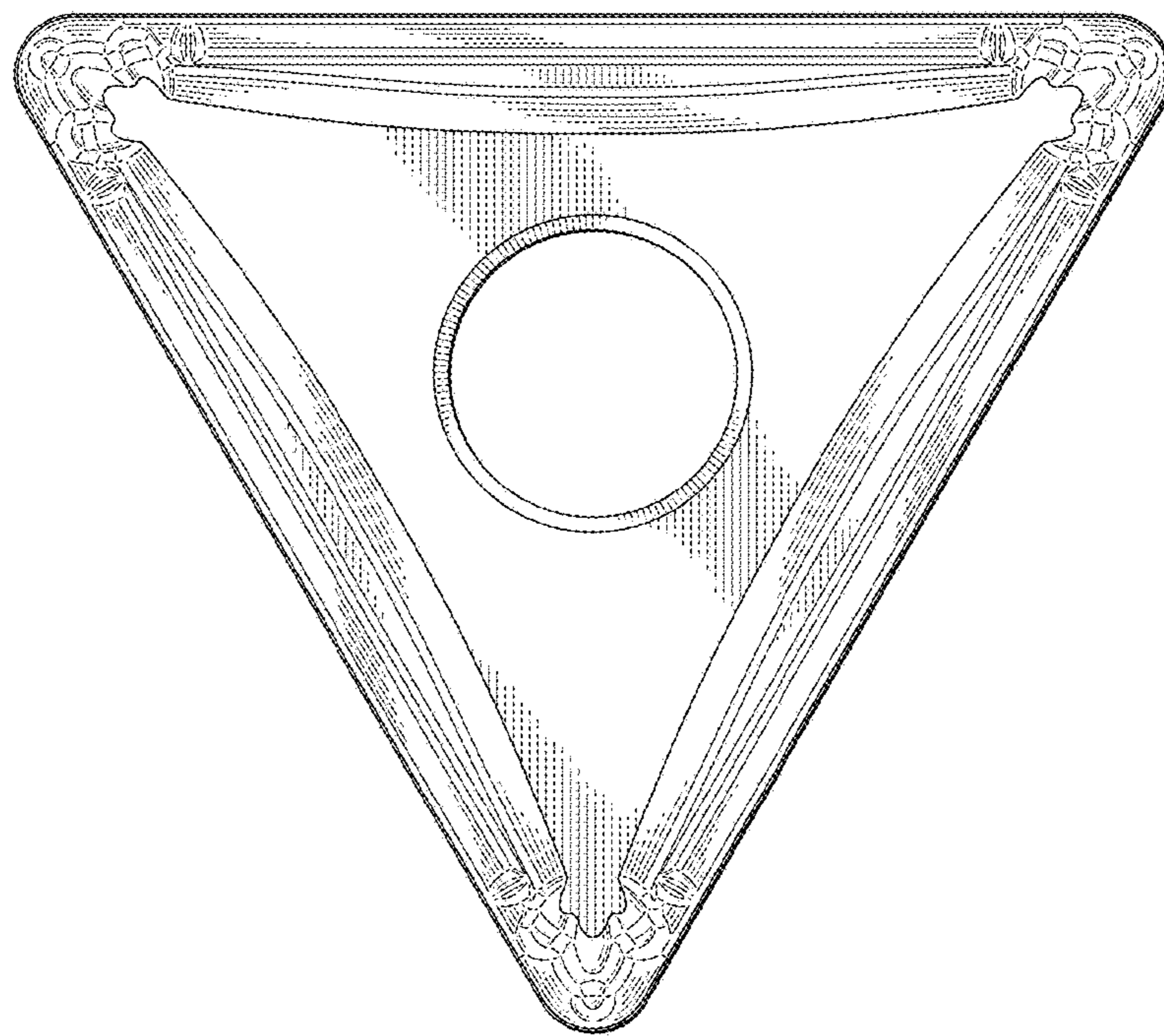


FIG.5

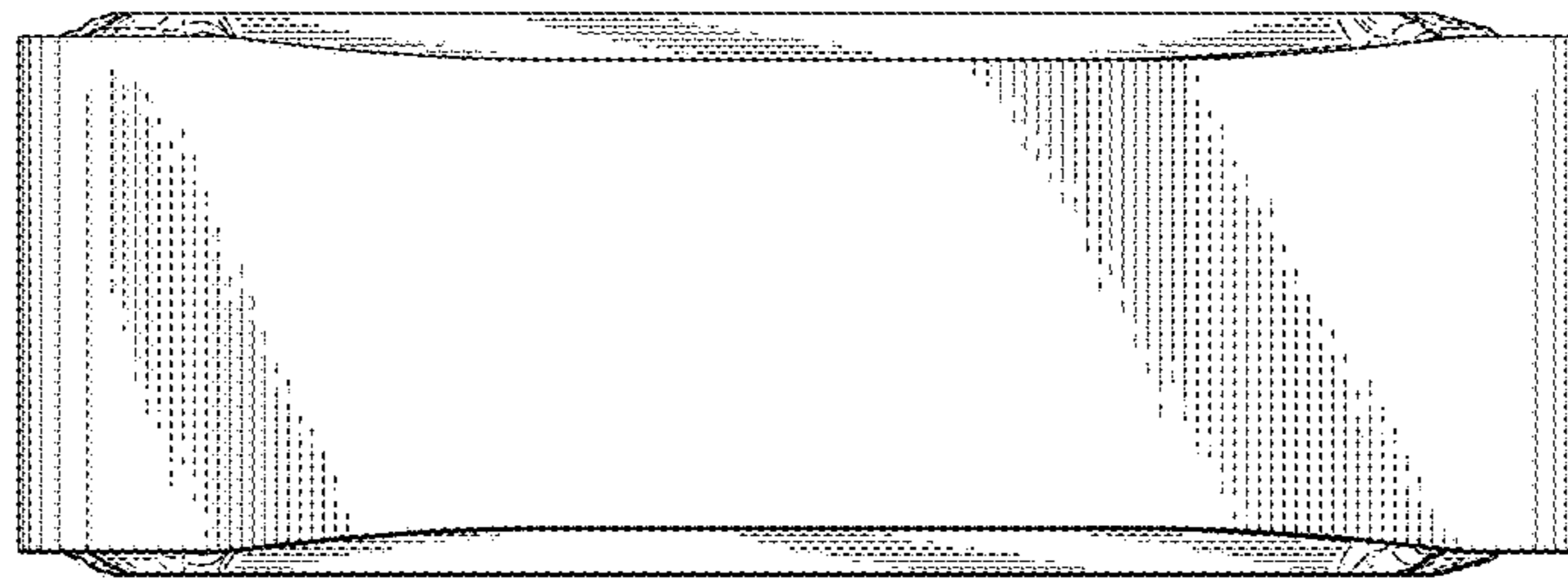


FIG.6

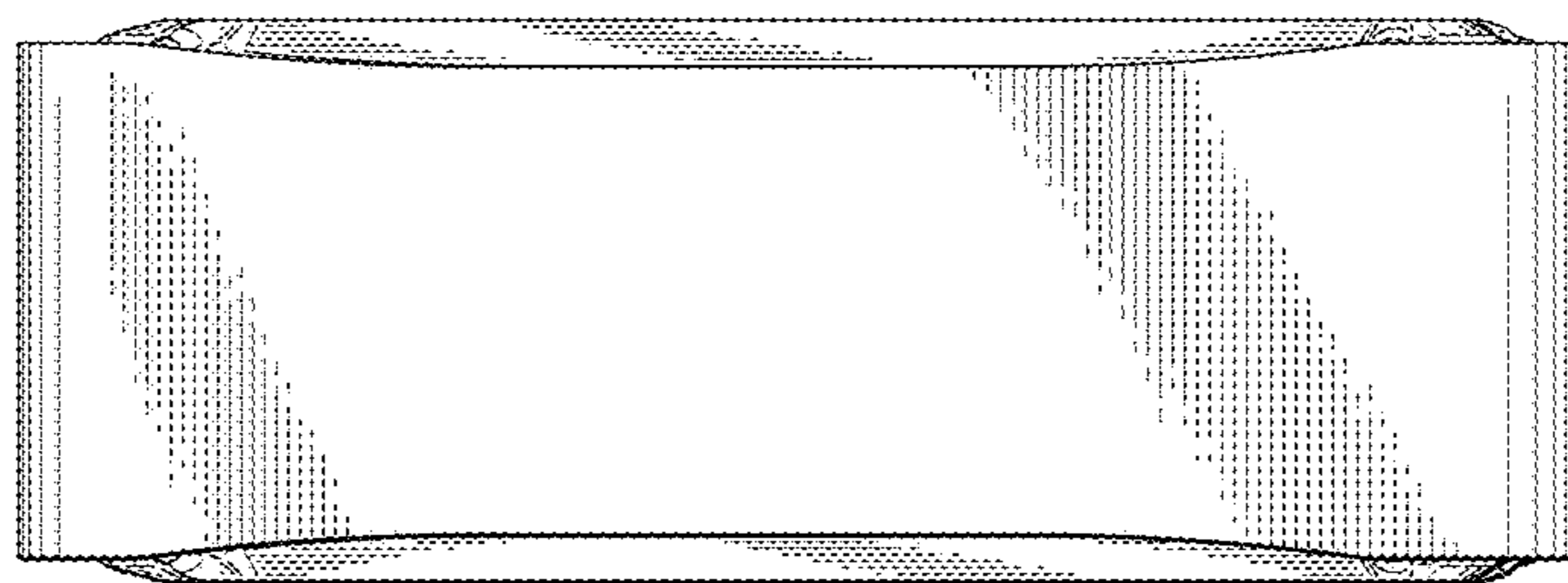


FIG. 7

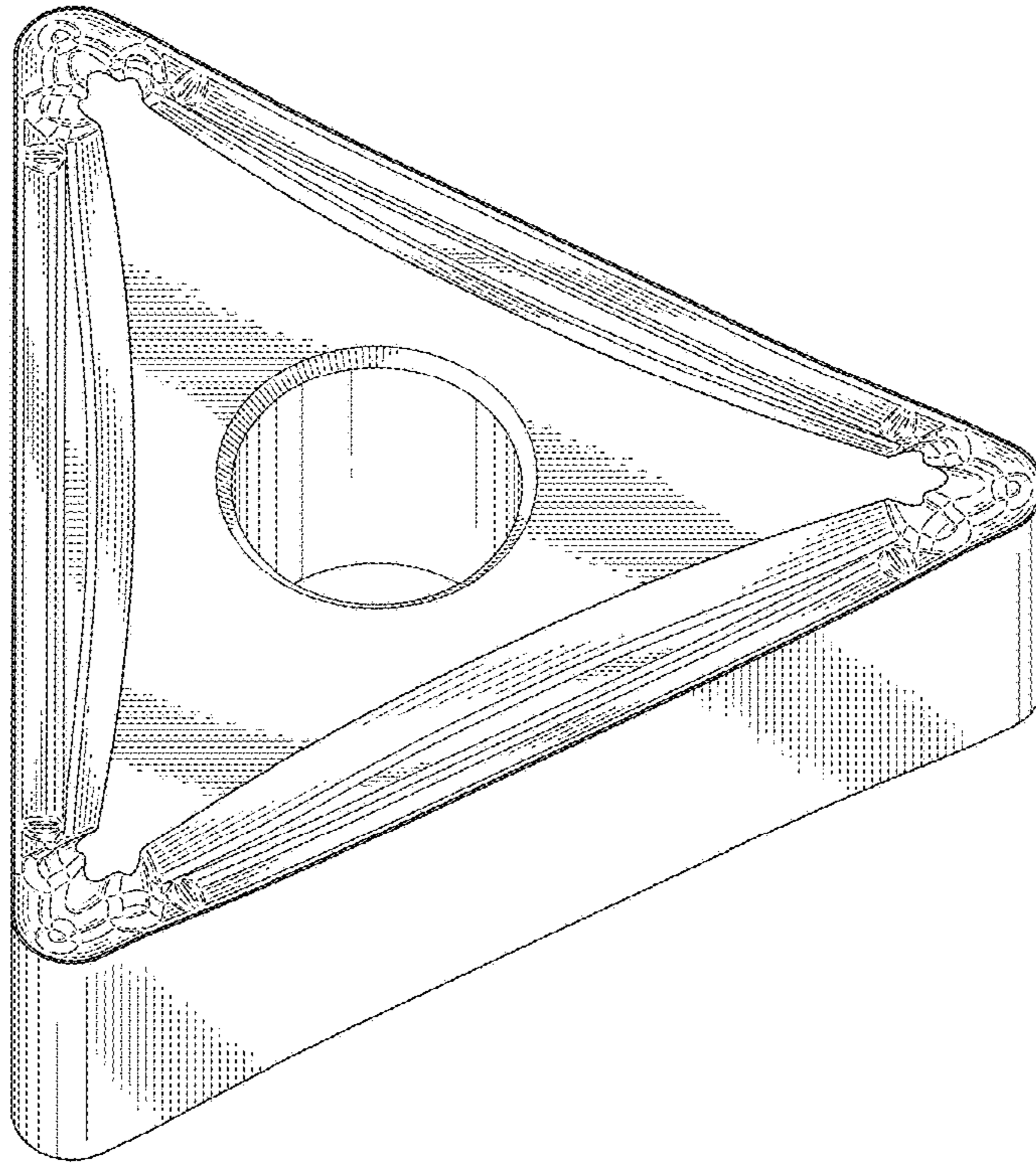


FIG.8

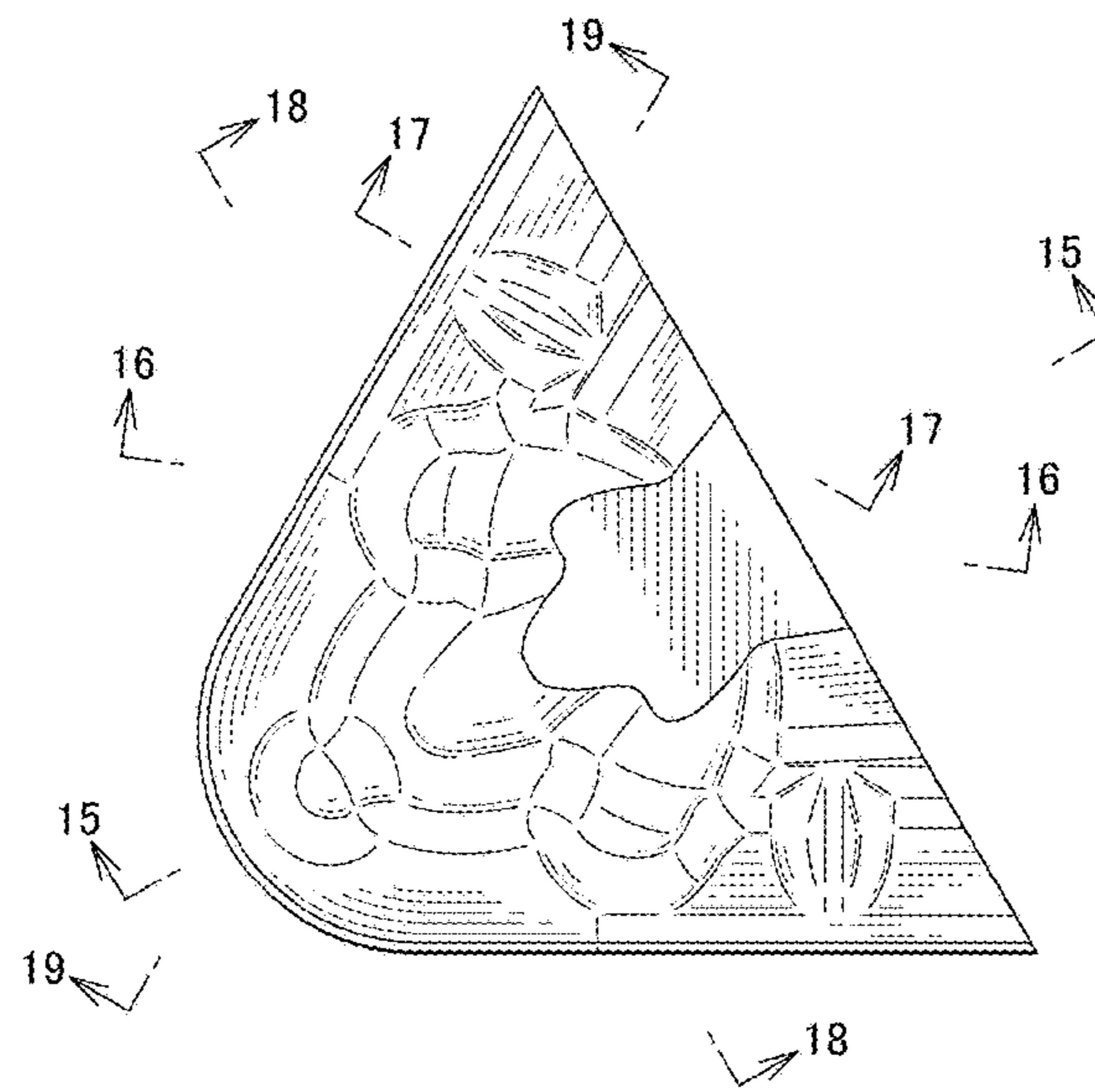




FIG.9

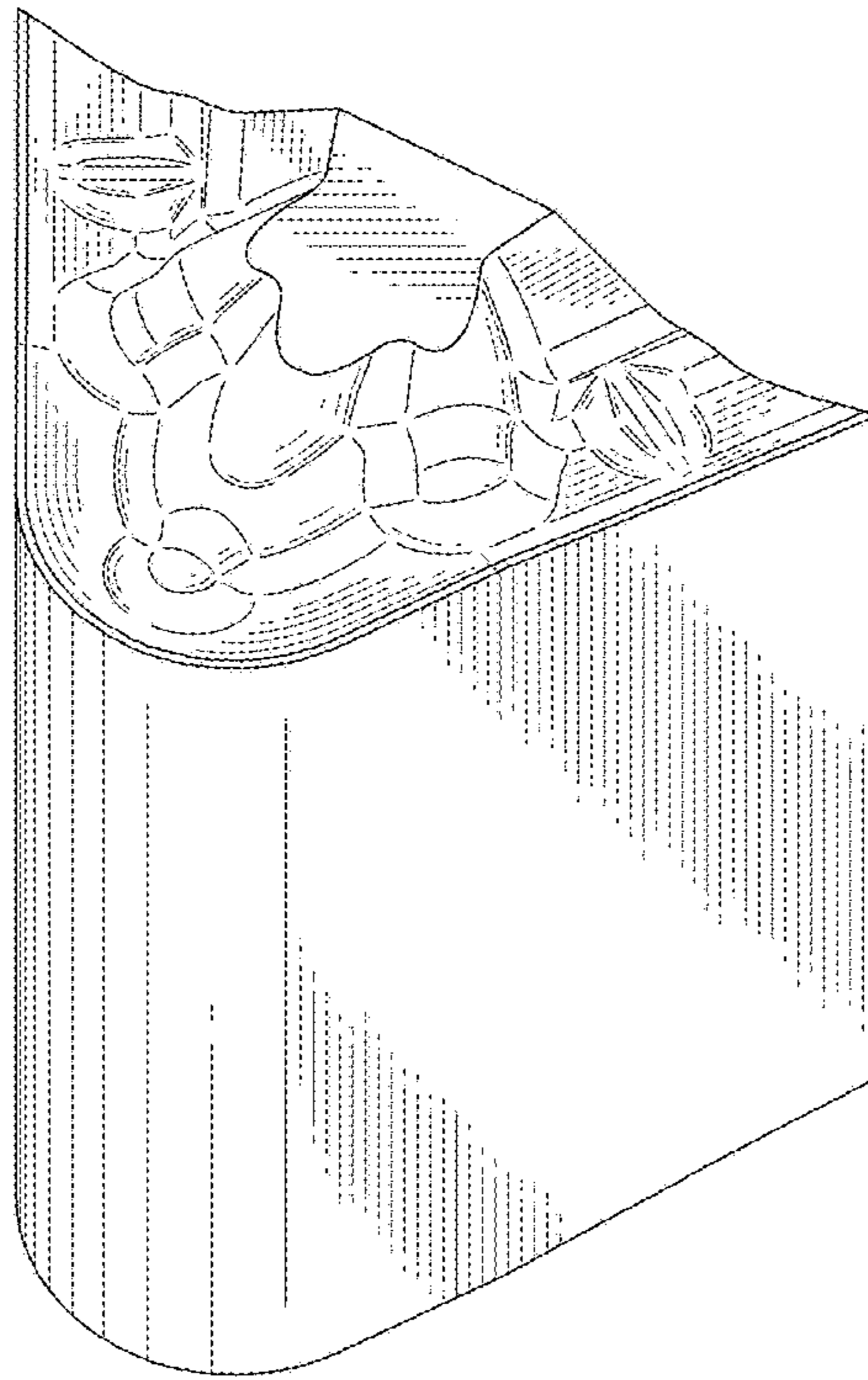


FIG.10

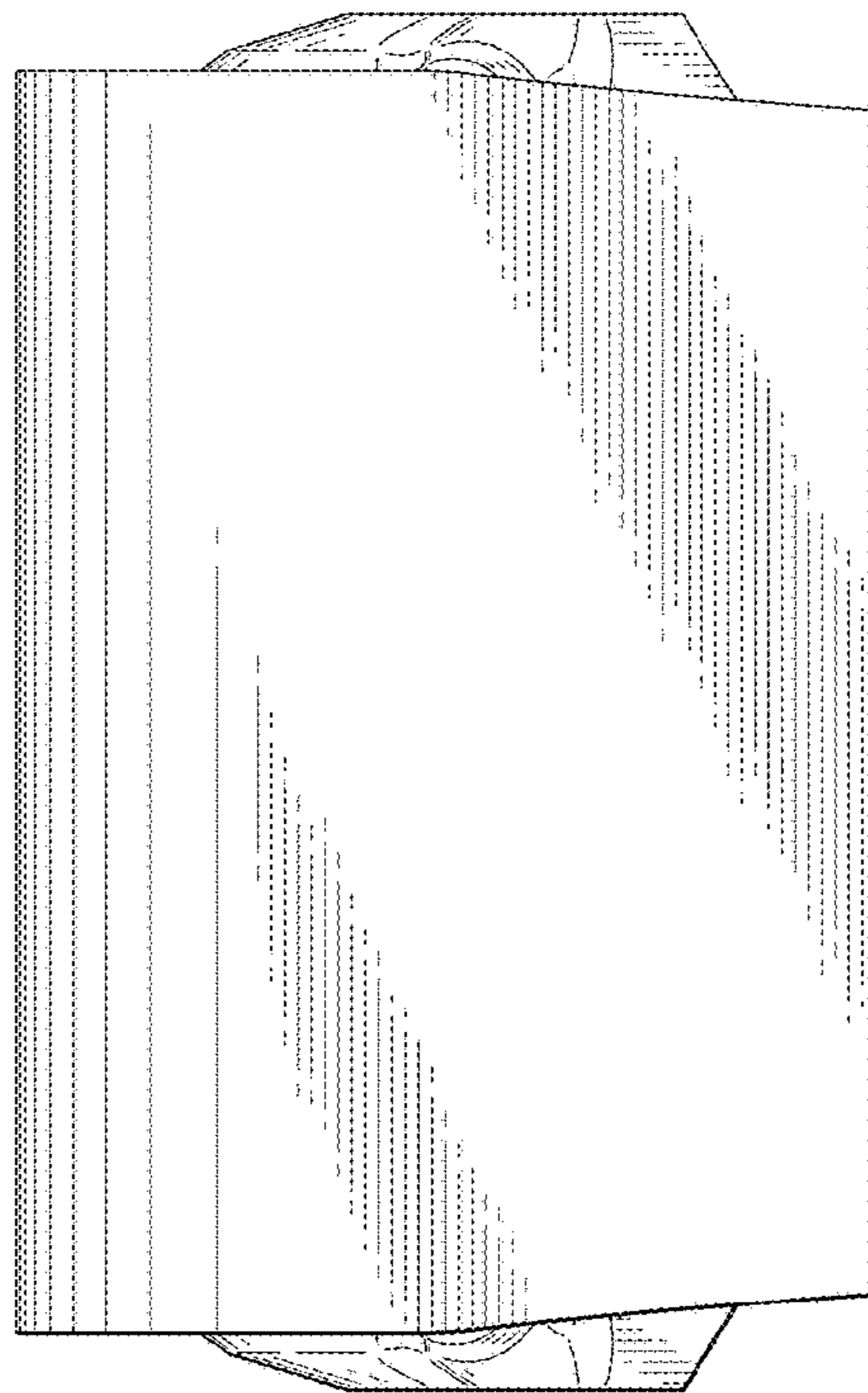


FIG.11

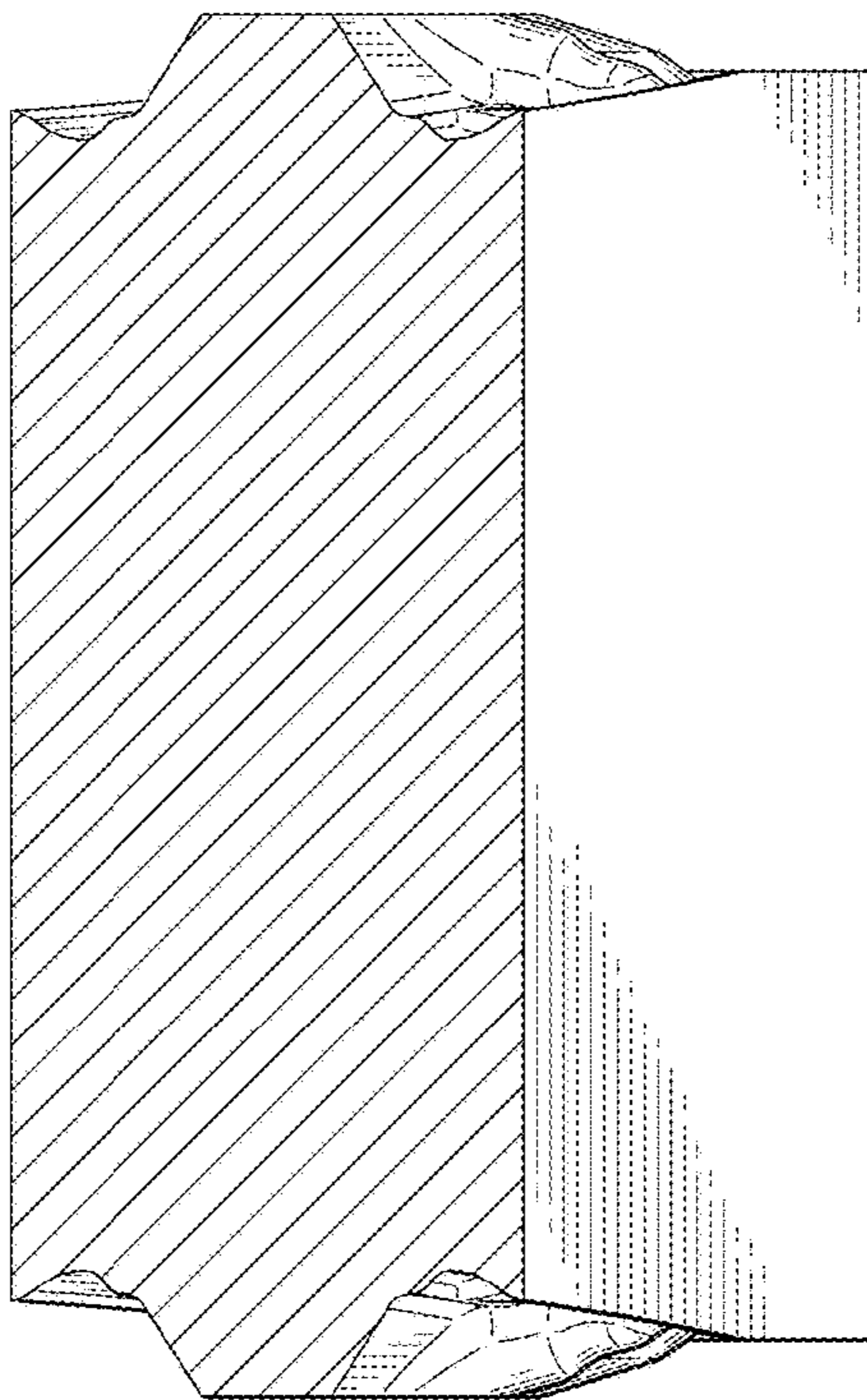


FIG.12

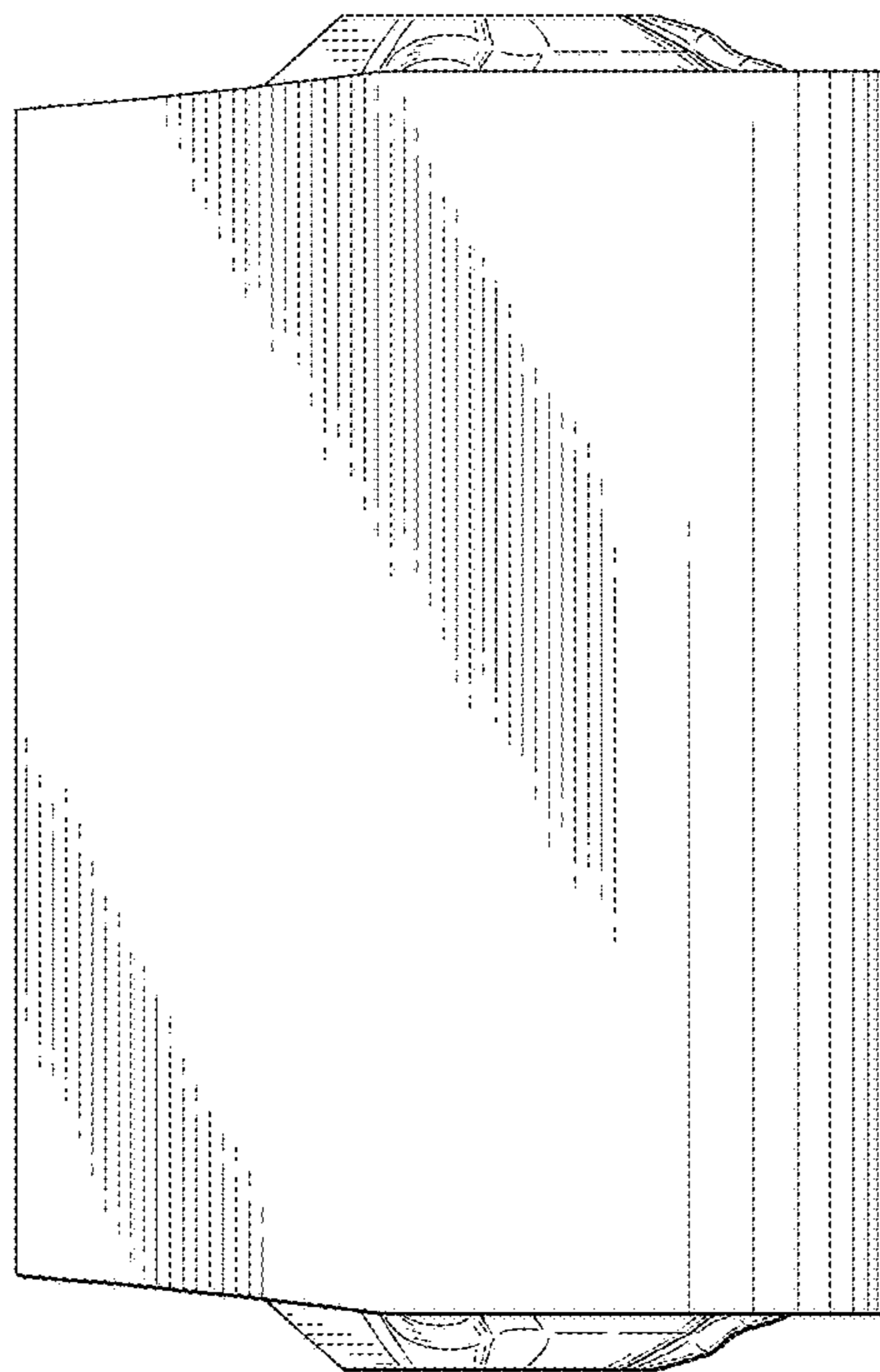


FIG.13

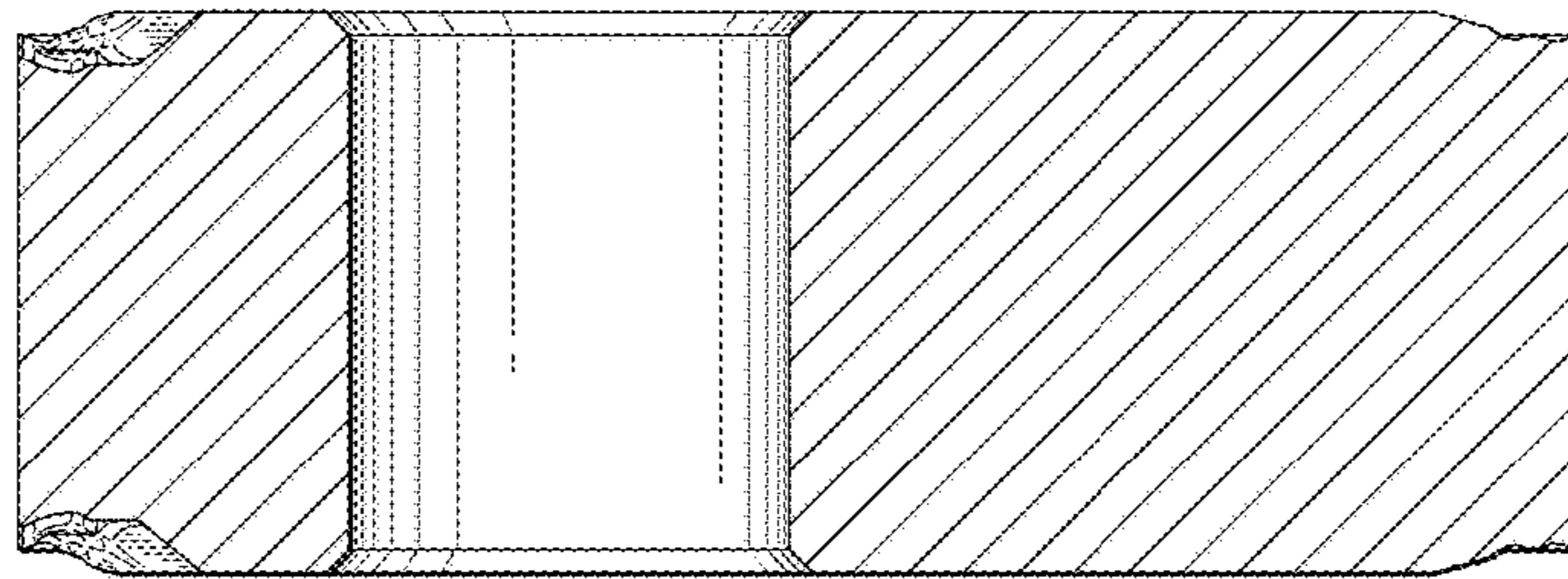


FIG.14

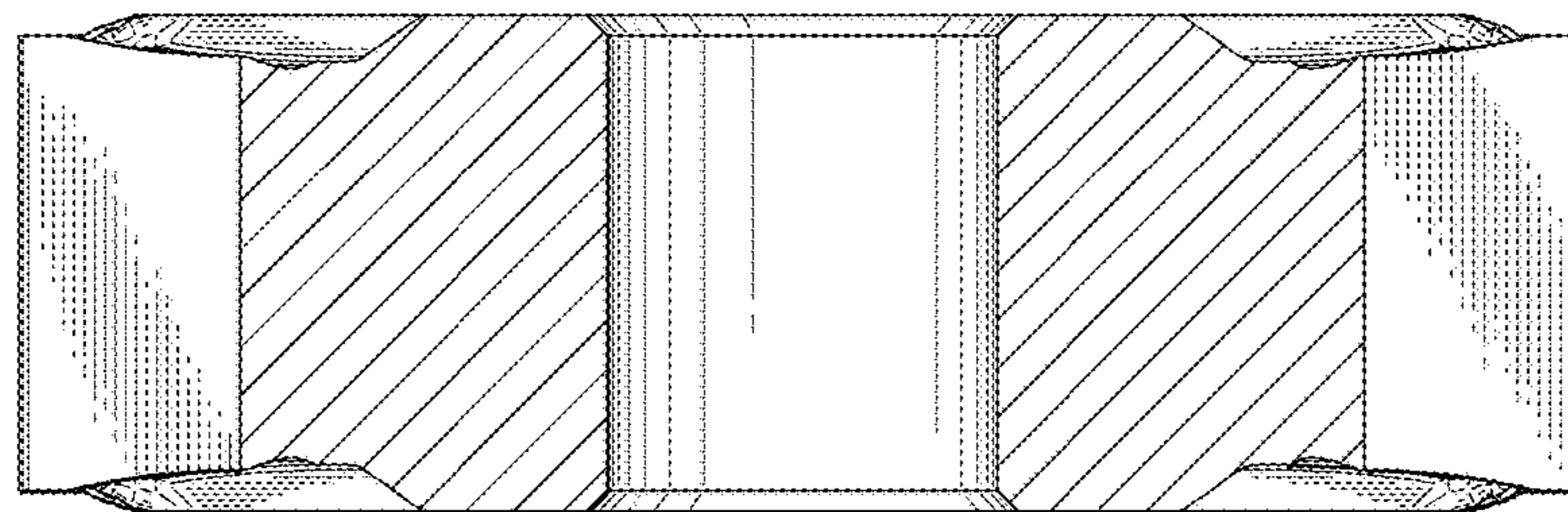


FIG.15

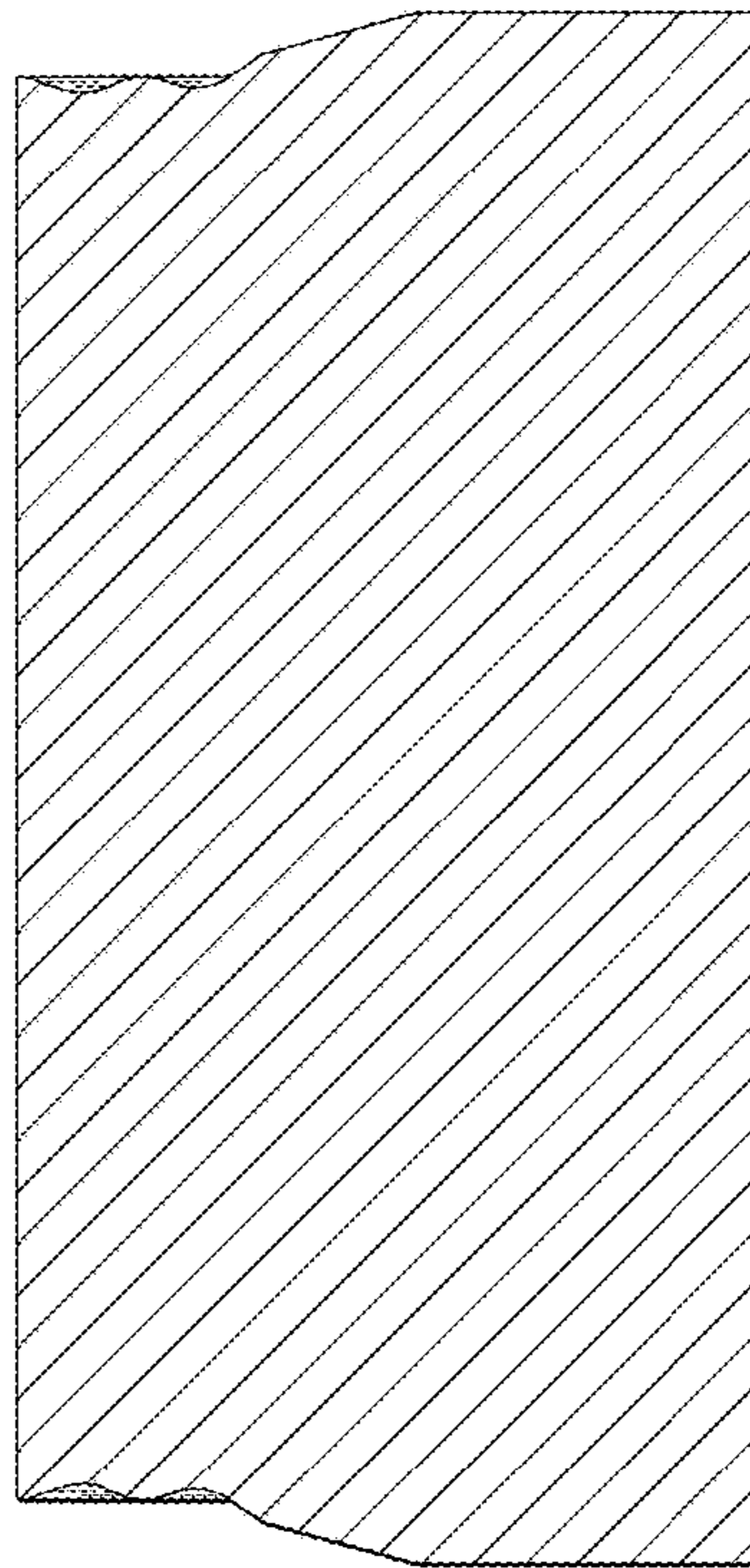


FIG.16

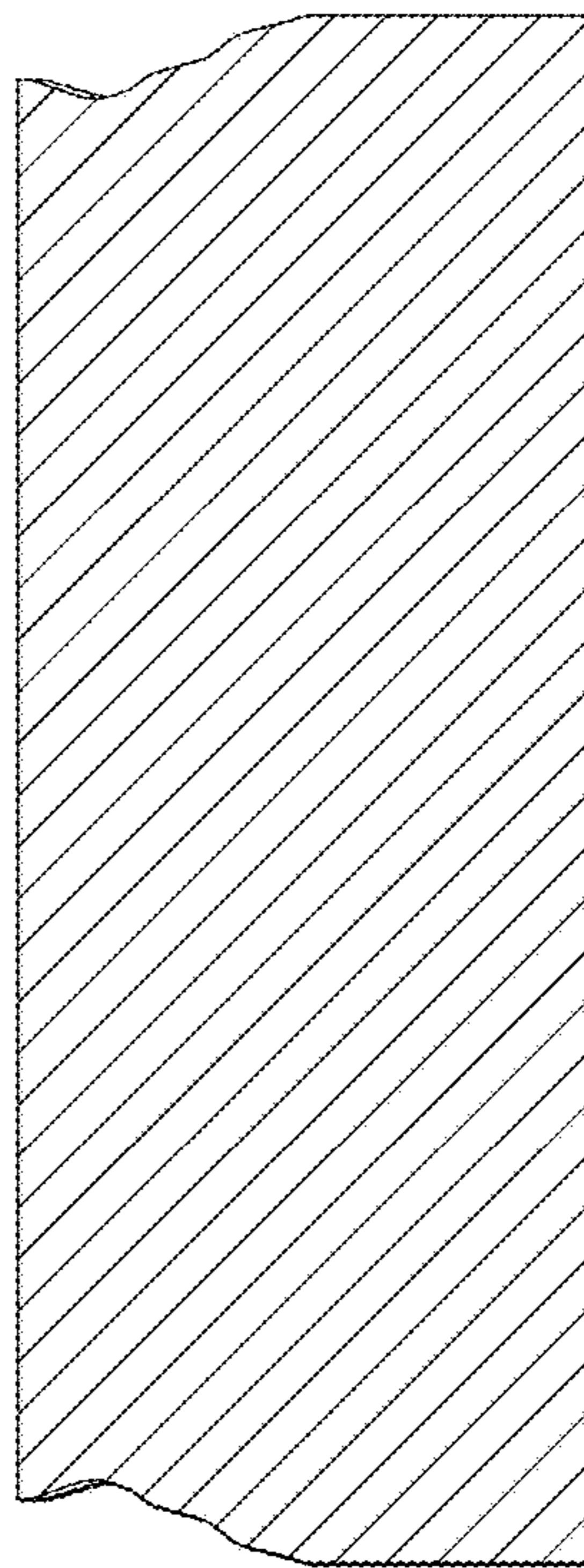


FIG.17

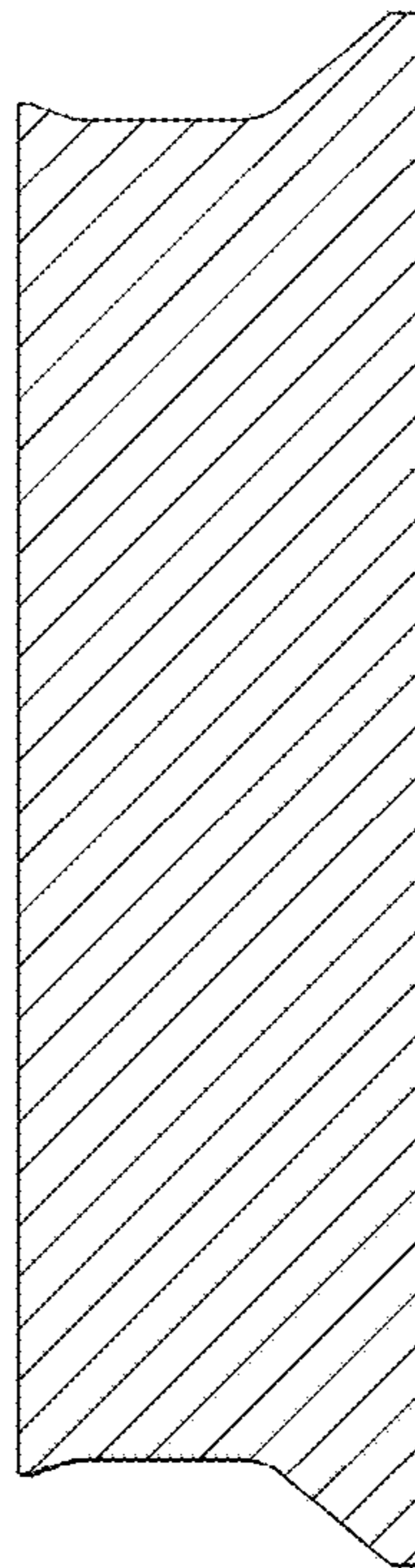




FIG.18

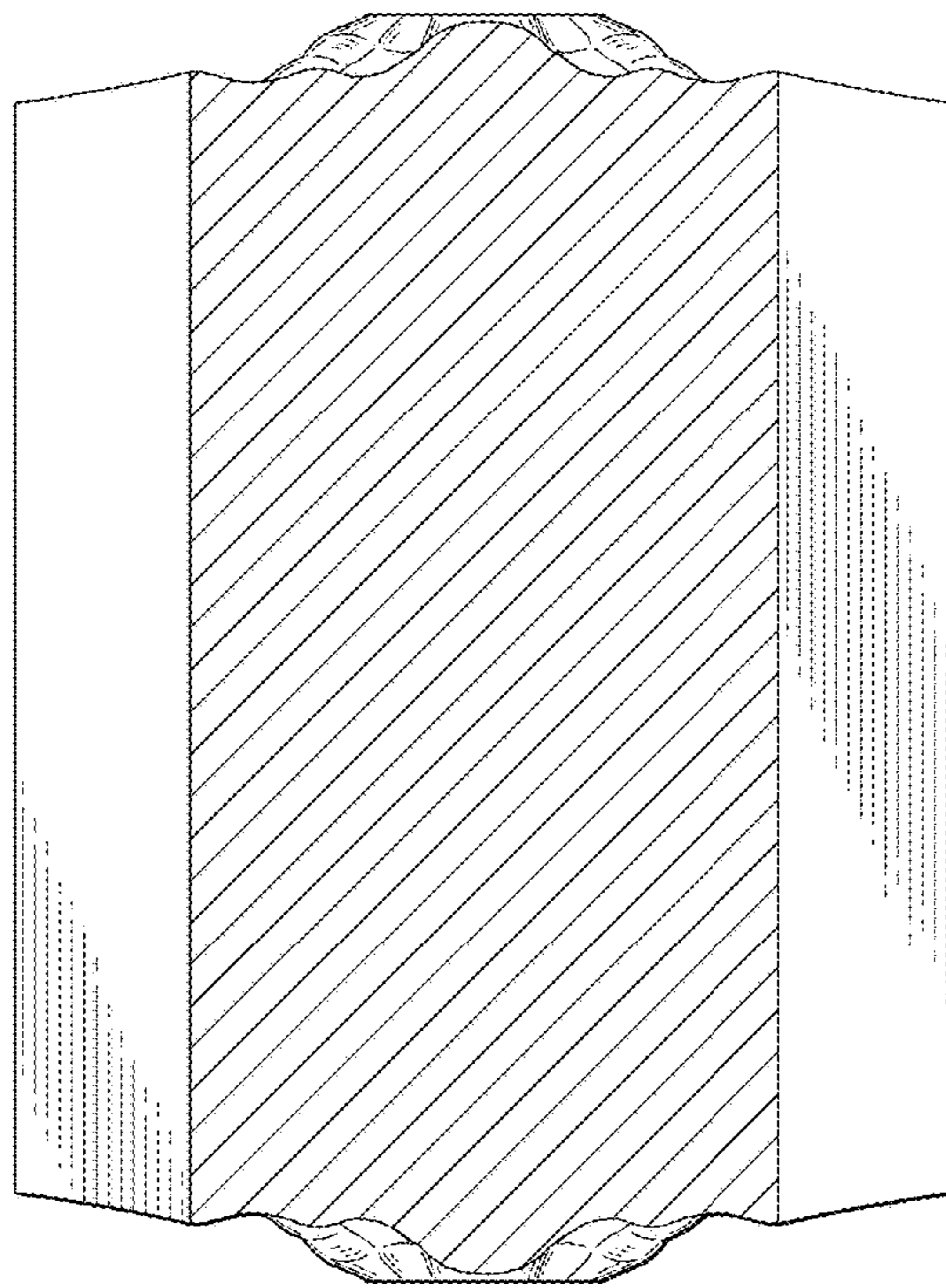


FIG.19

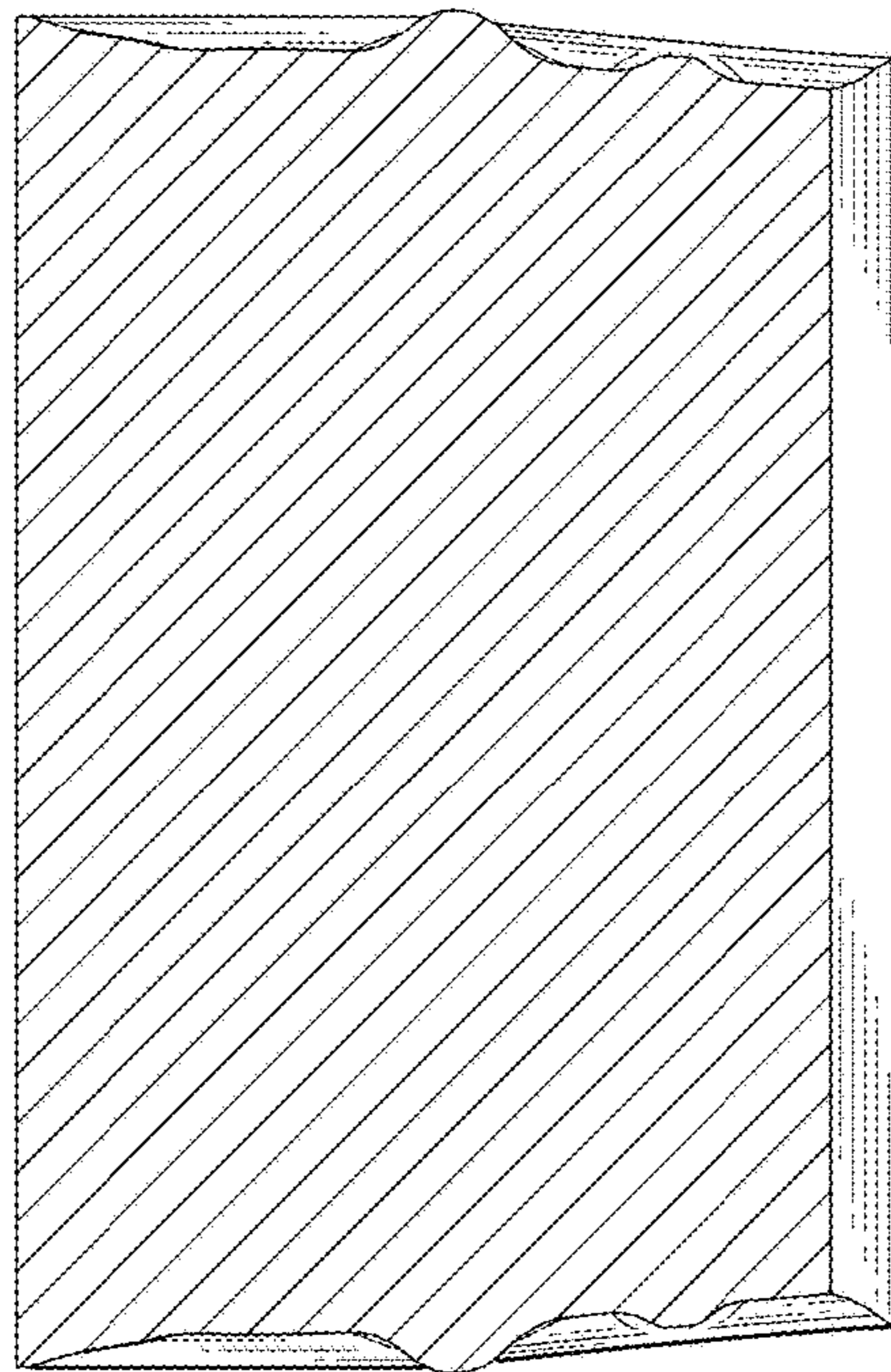


FIG.20

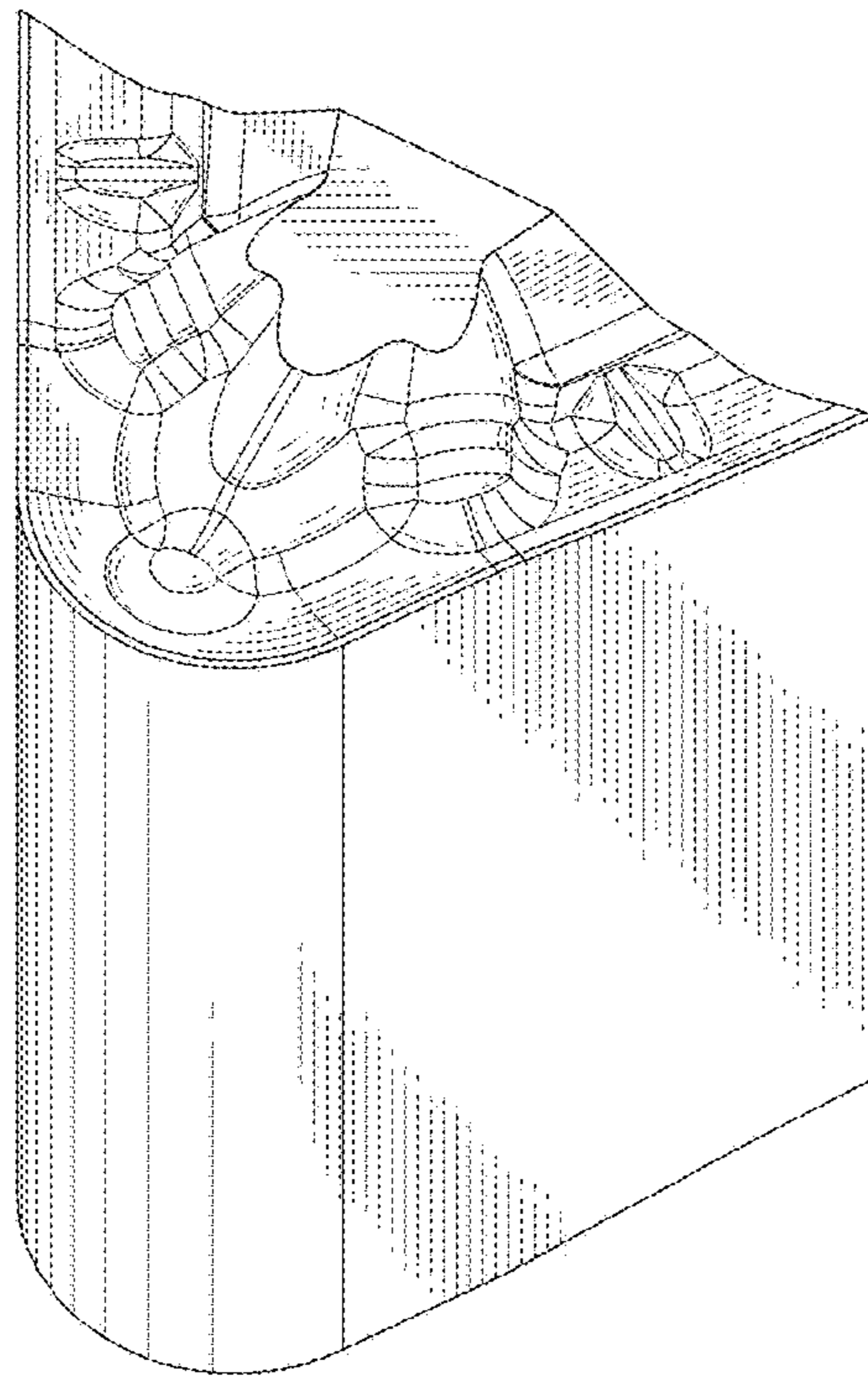


FIG.21

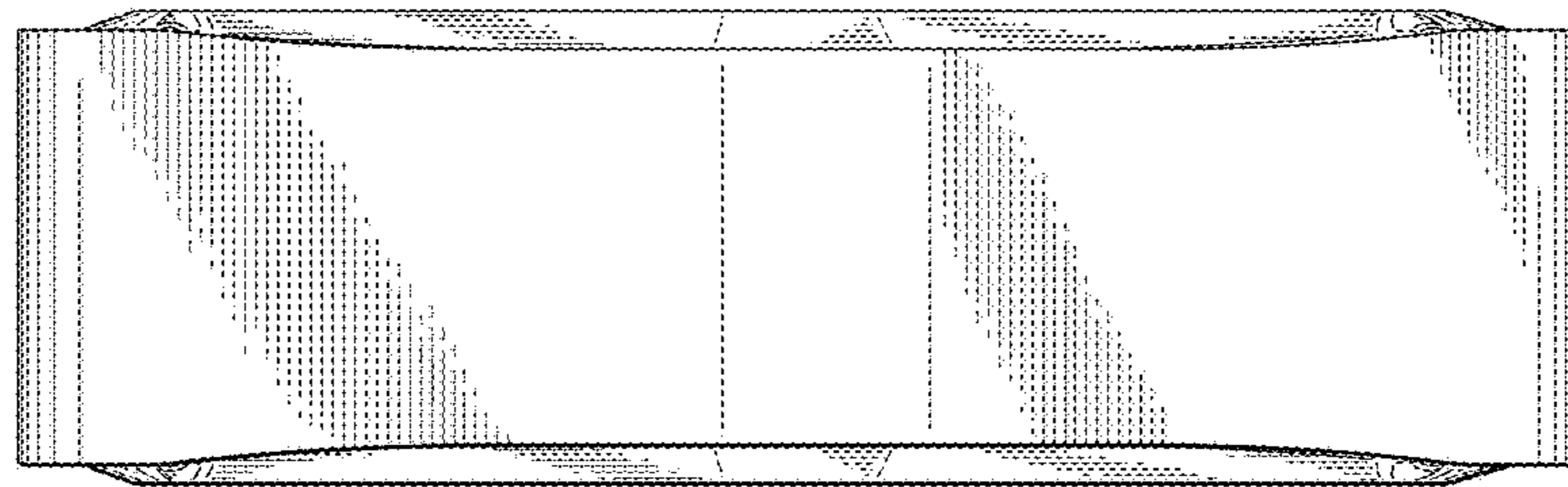


FIG.22

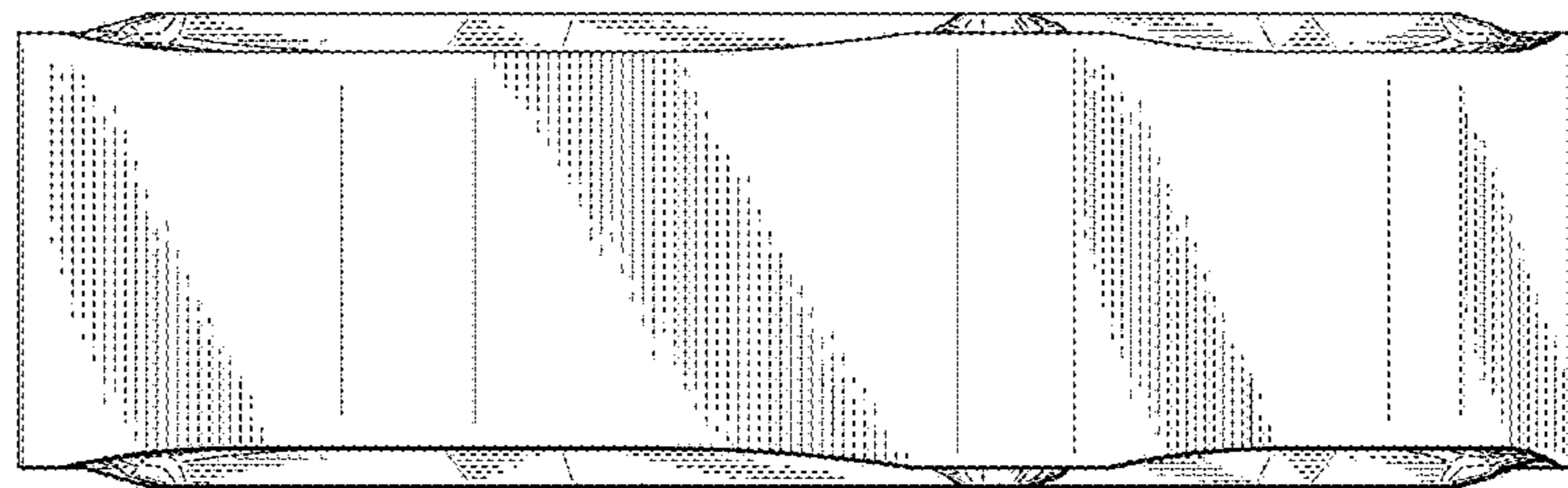


FIG.23

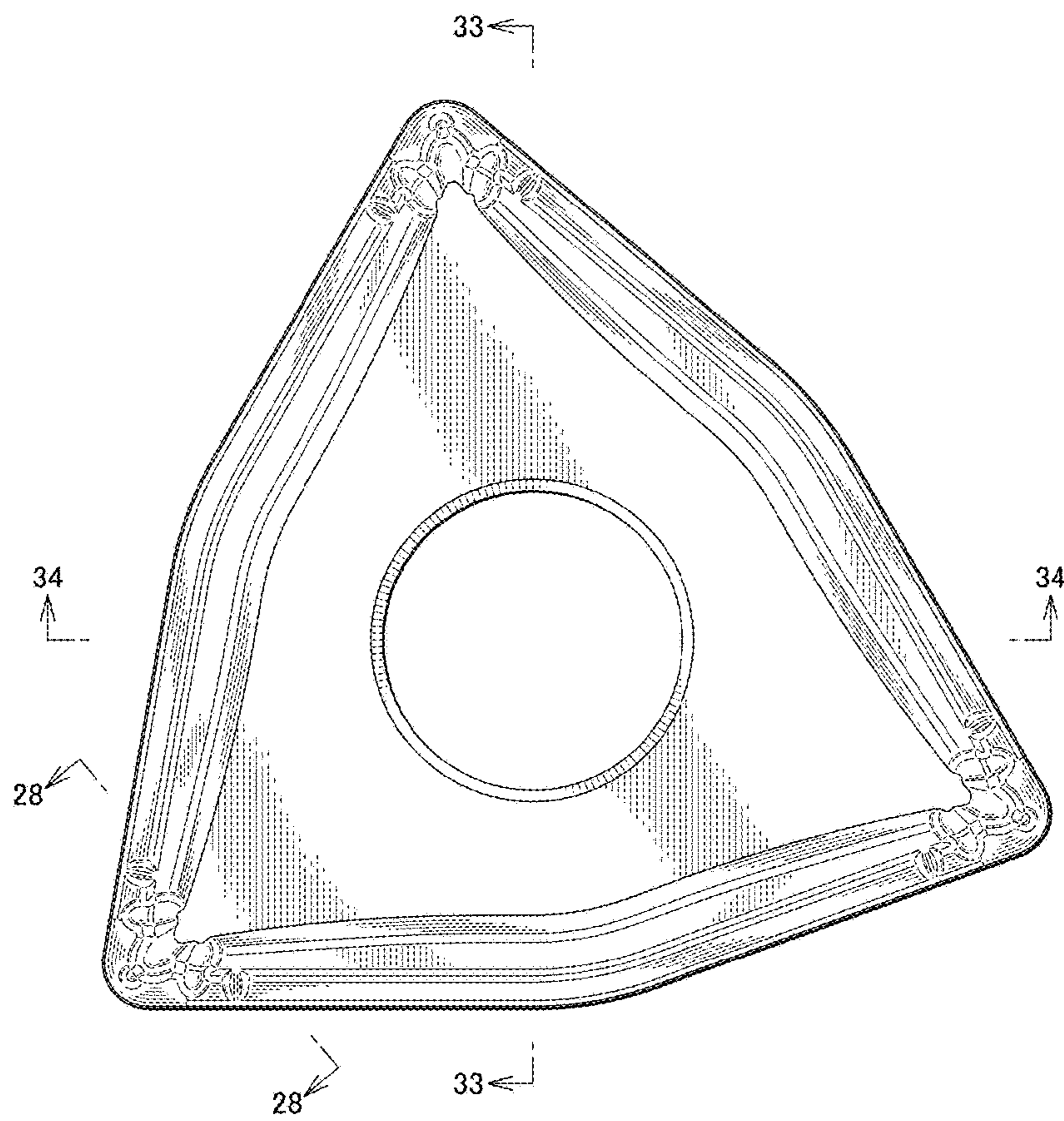


FIG.24

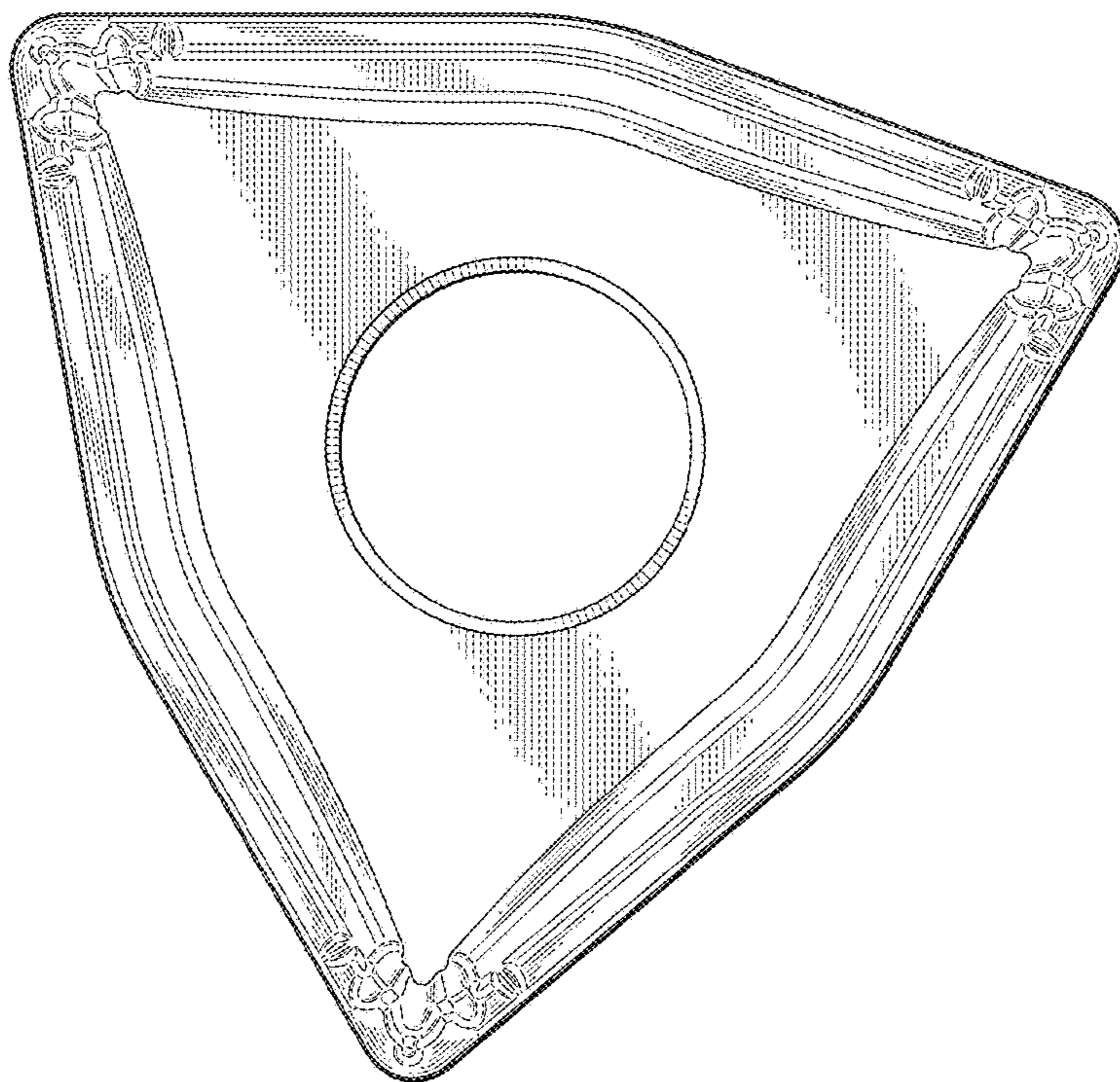


FIG.25

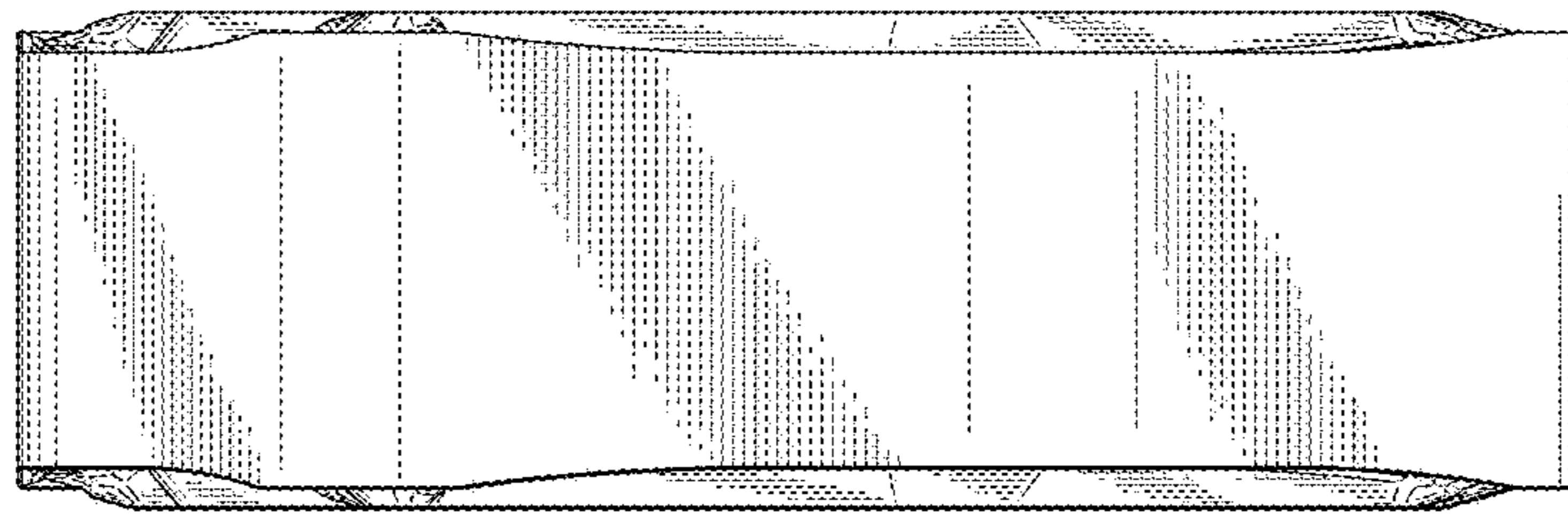


FIG.26

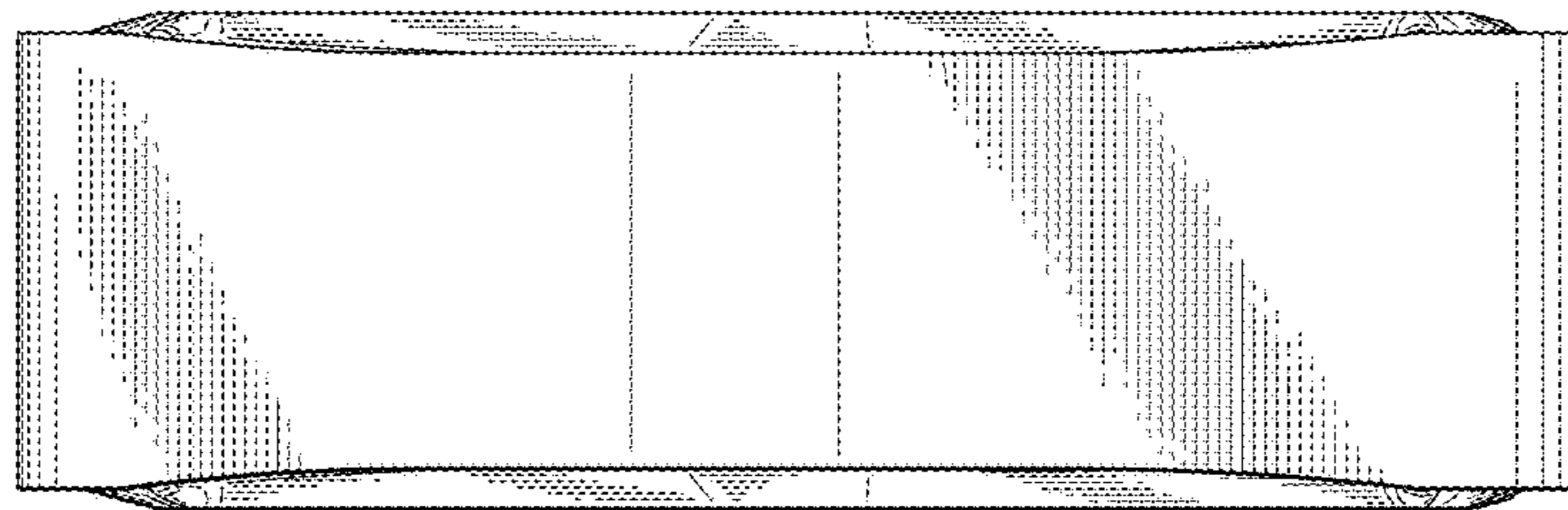


FIG.27

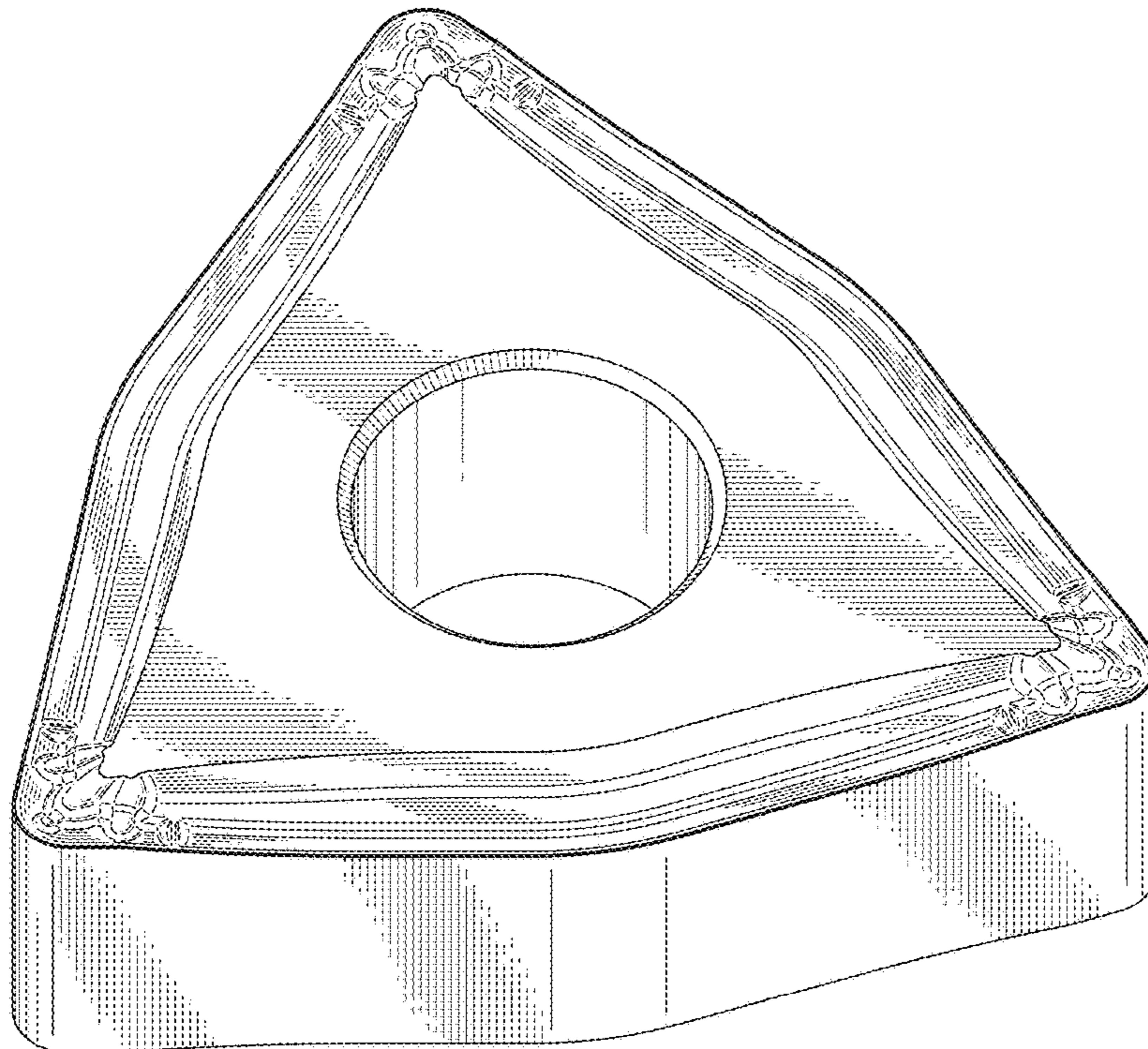




FIG.28

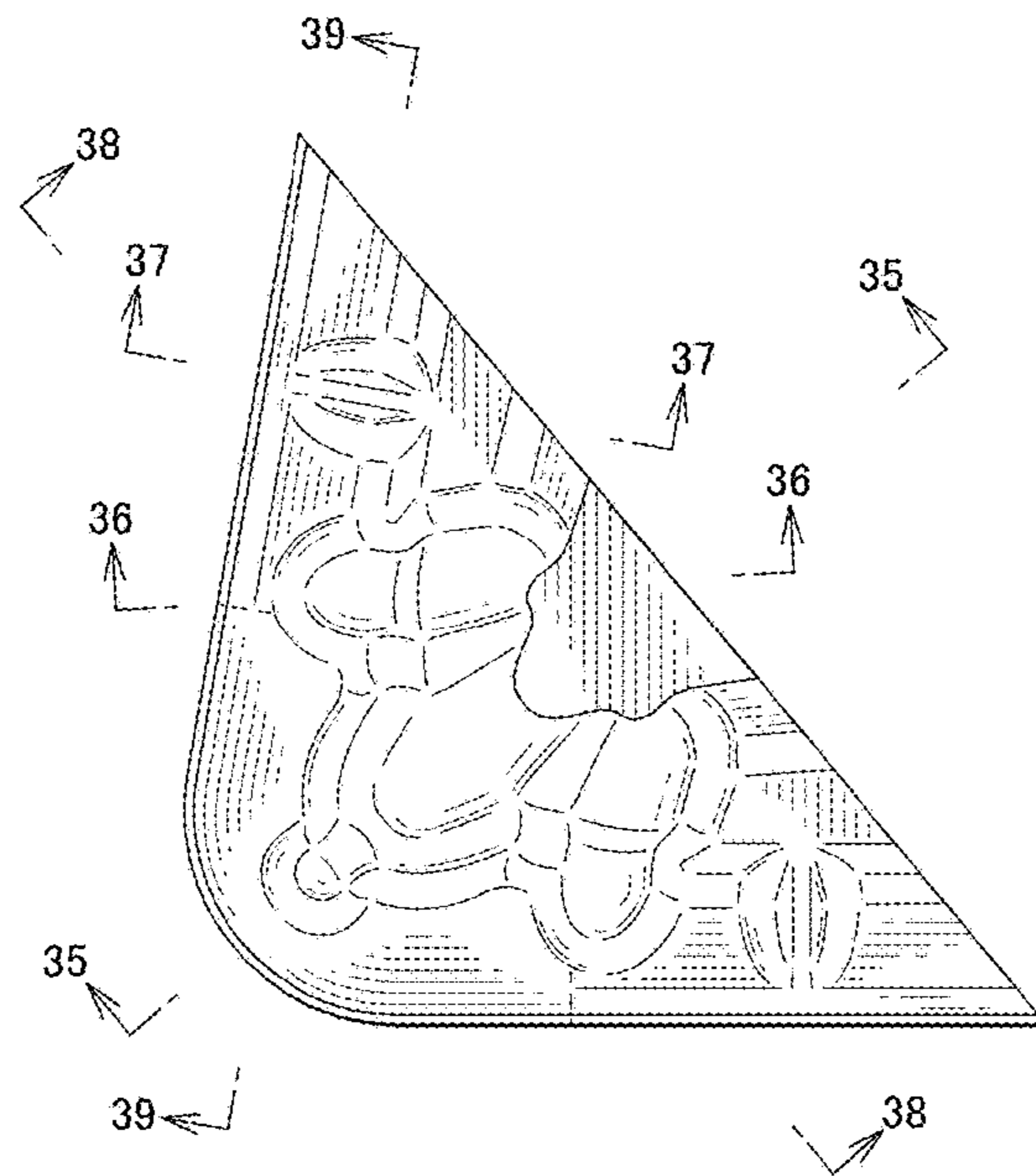


FIG.29

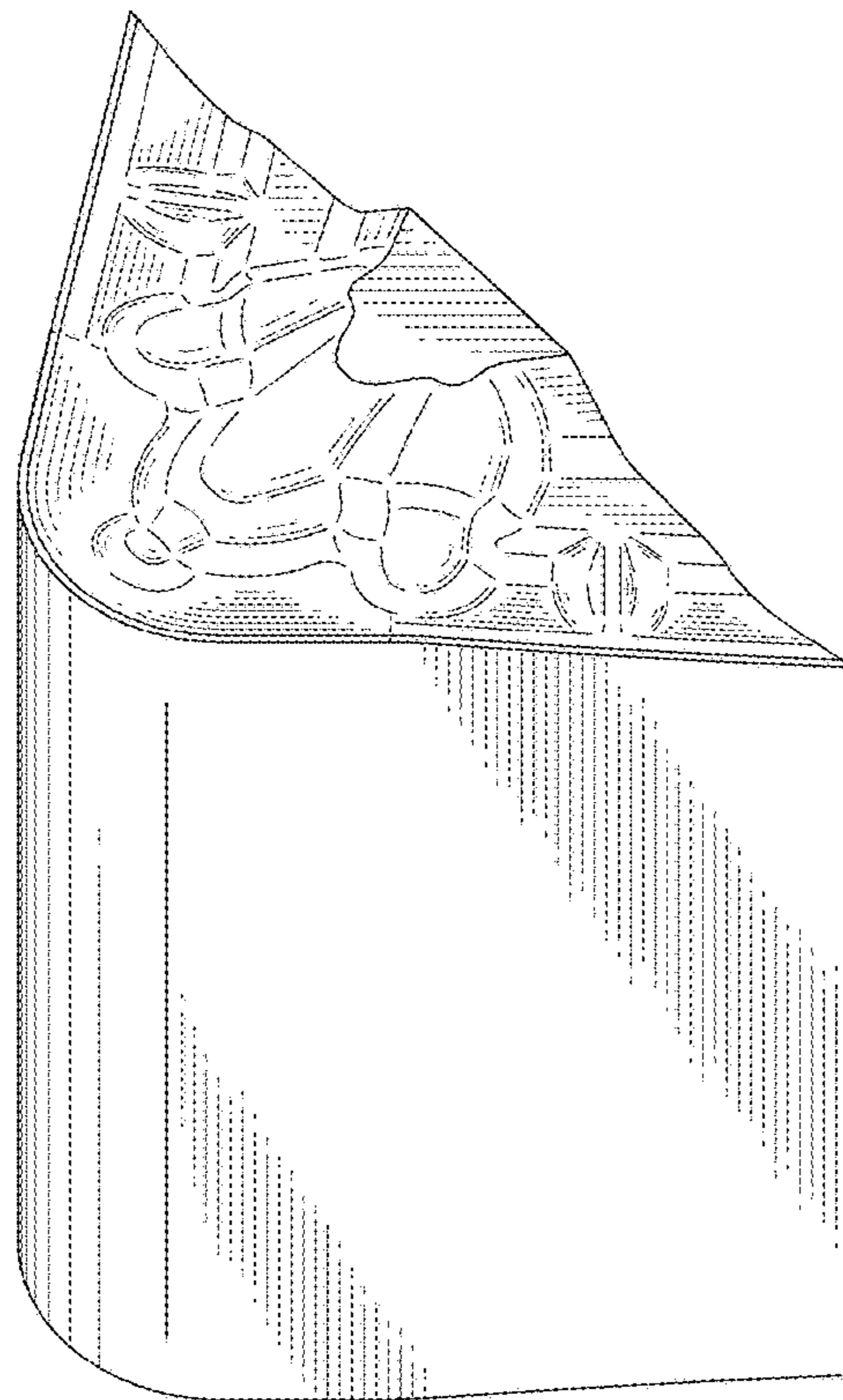


FIG.30

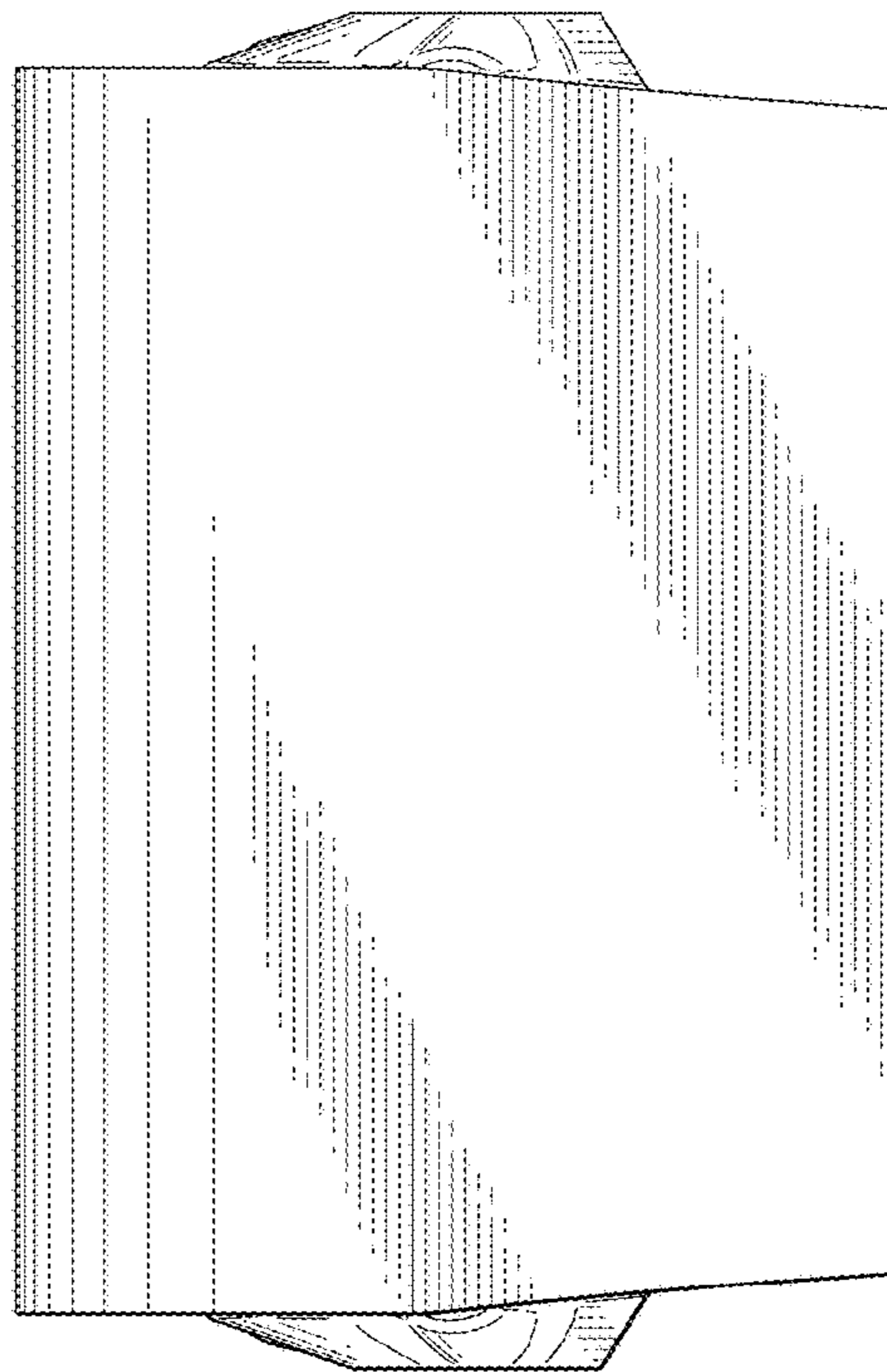


FIG.31

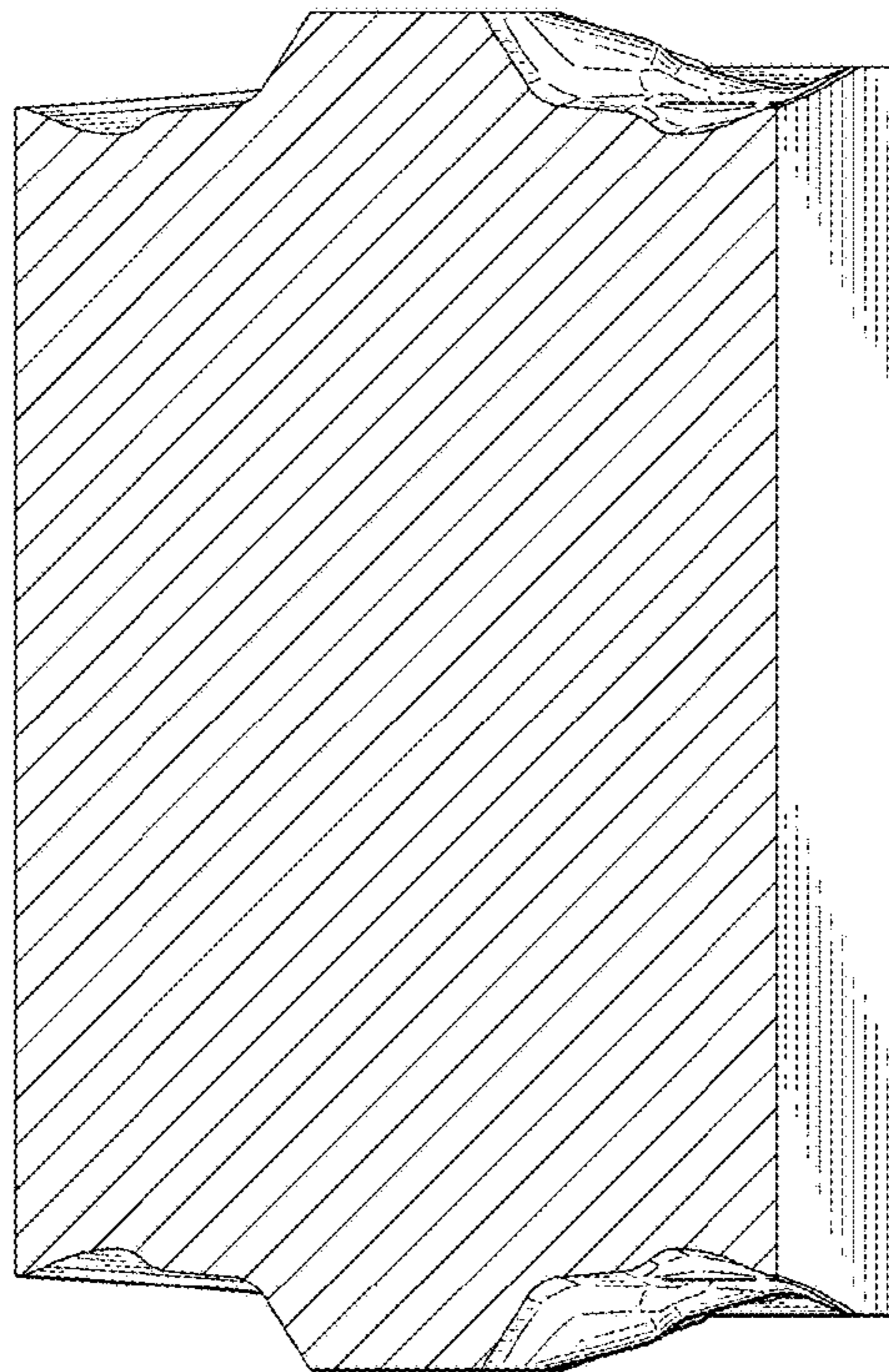


FIG.32

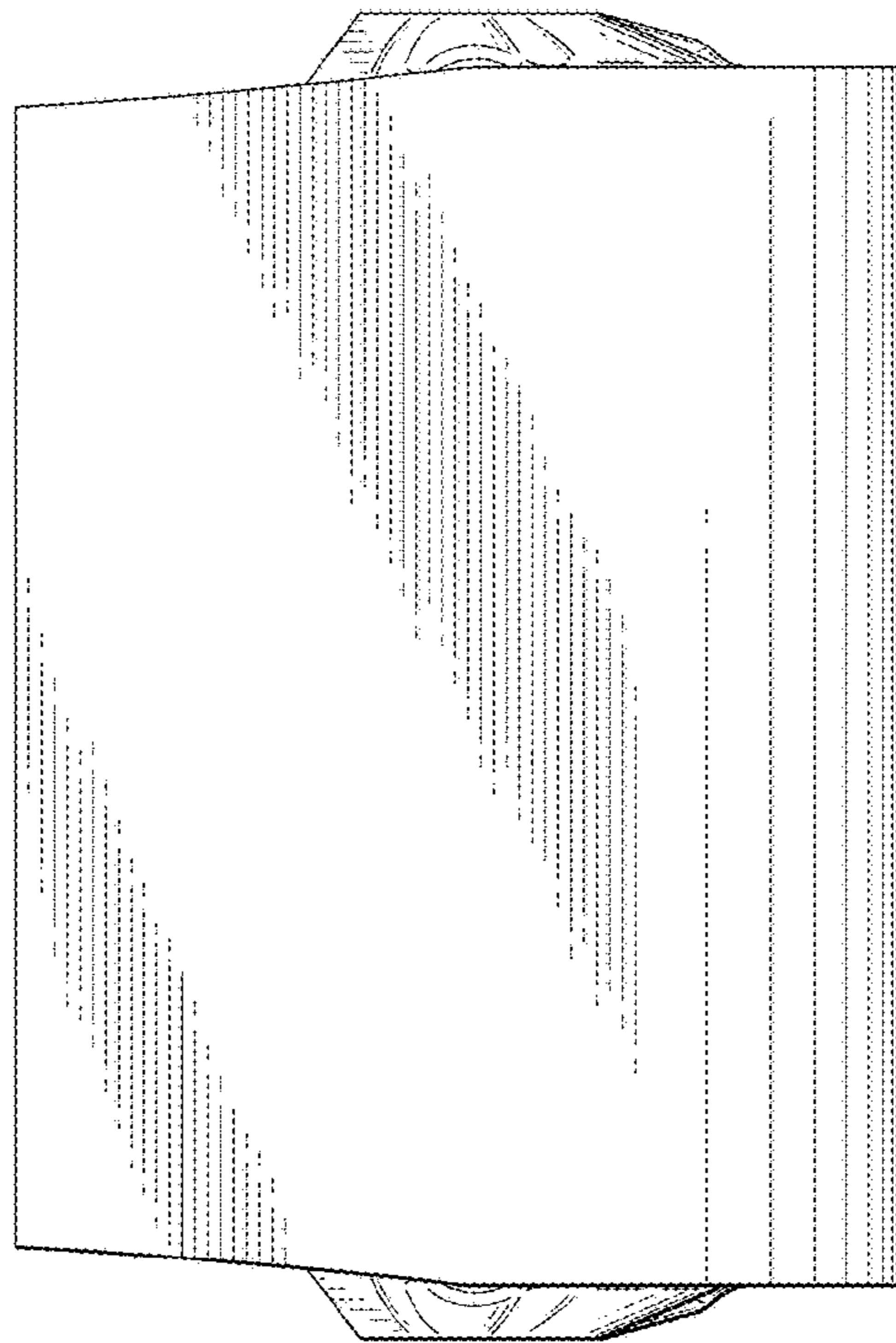


FIG.33

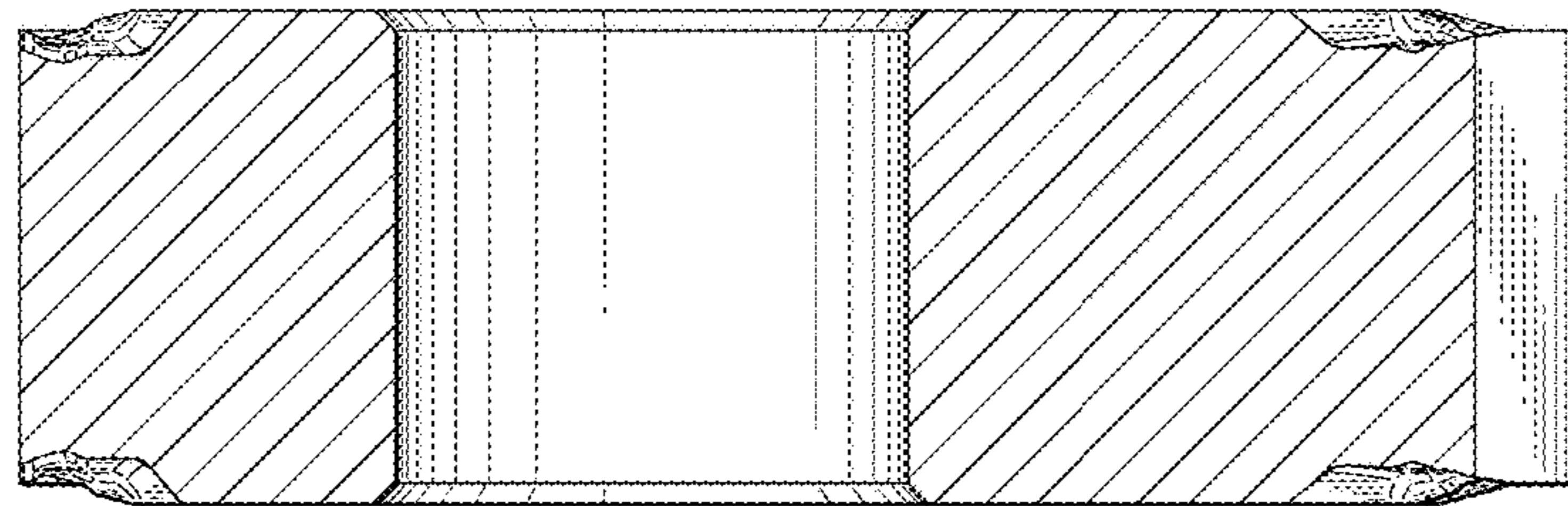


FIG.34

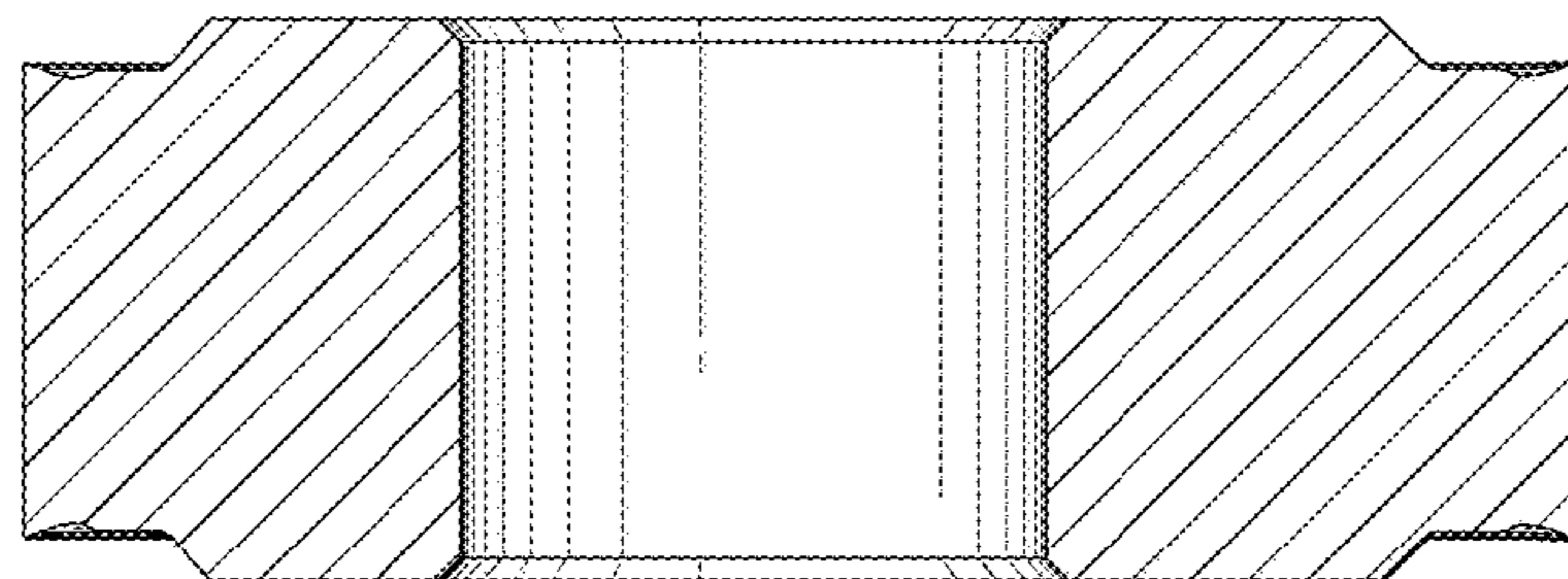


FIG.35

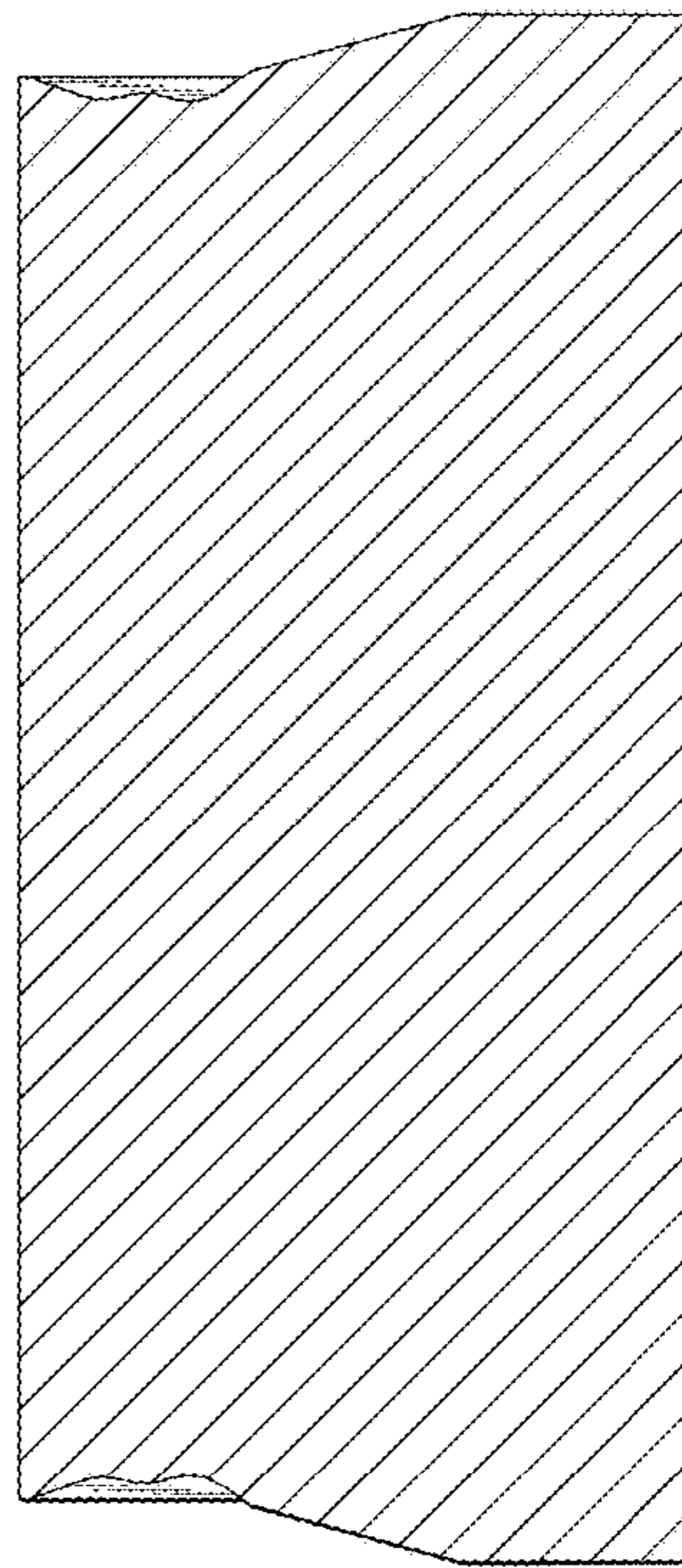


FIG.36

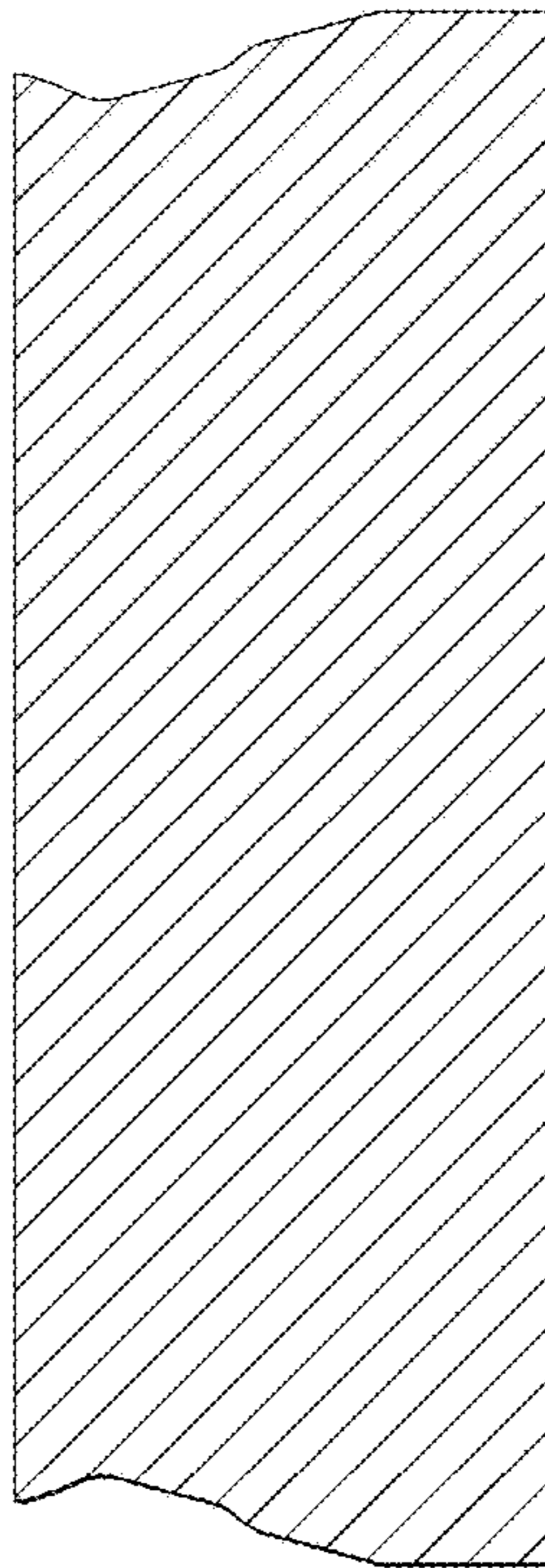




FIG.37

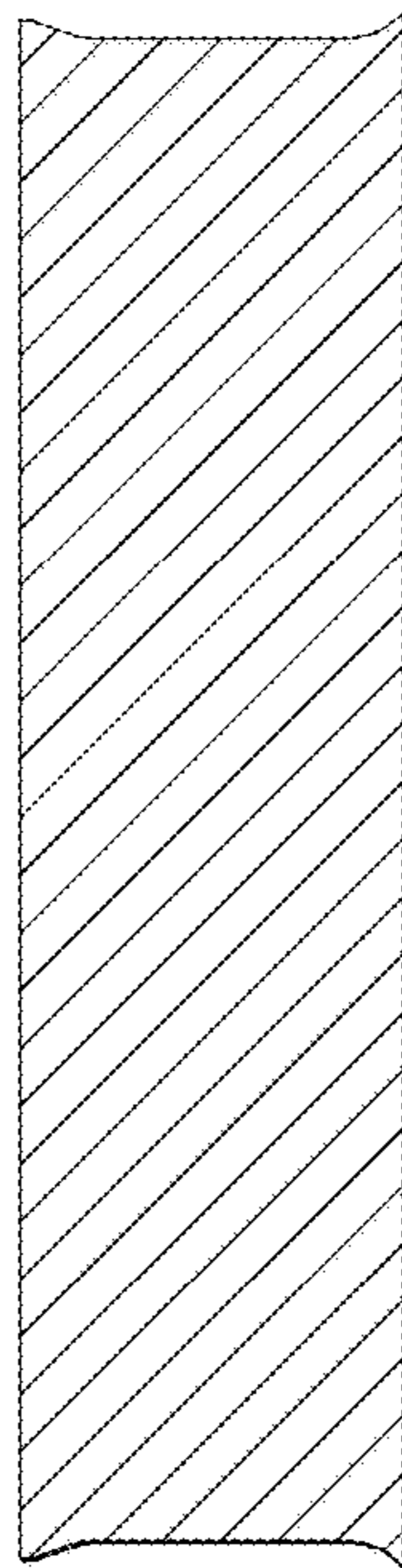


FIG.38

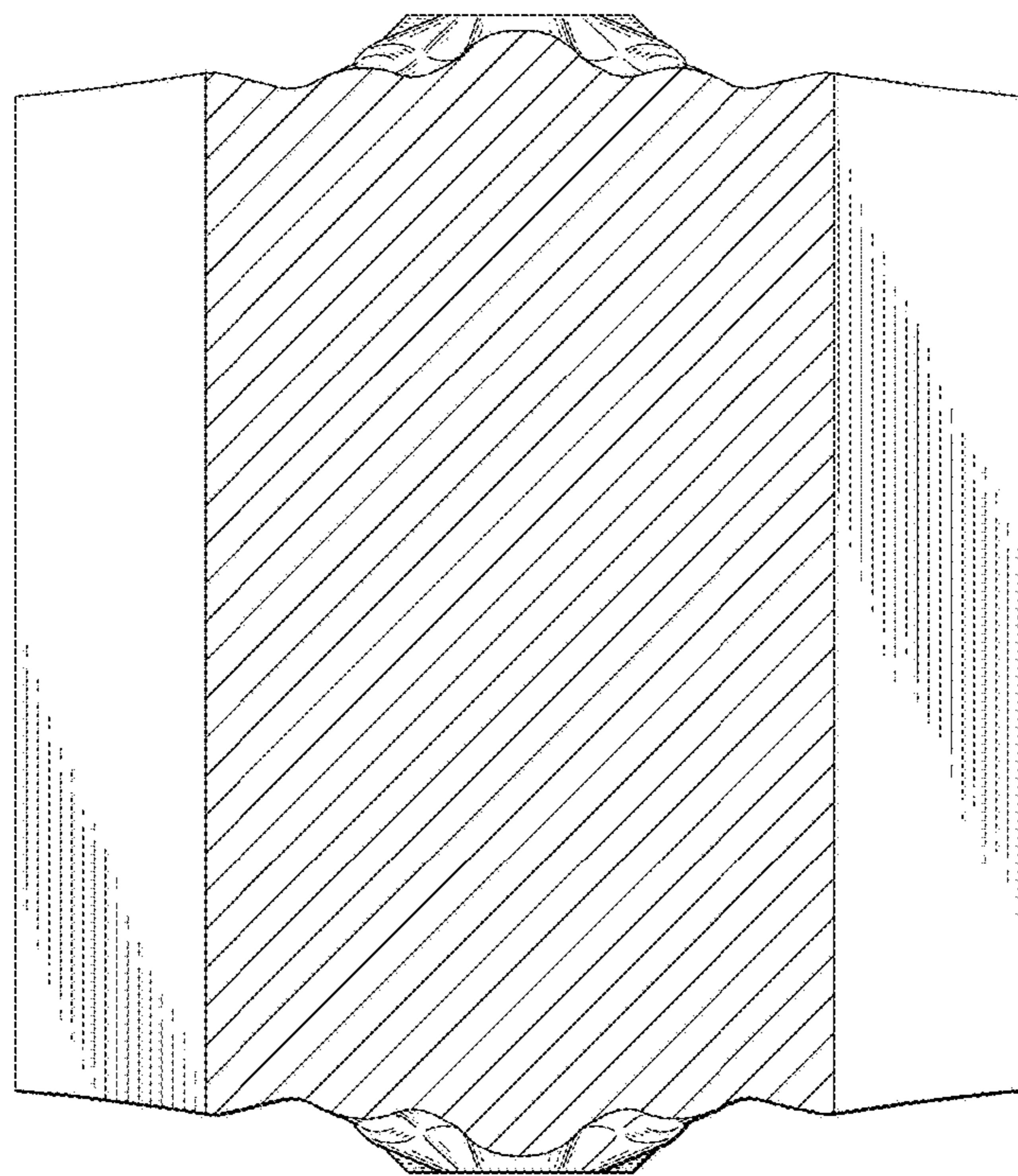


FIG.39

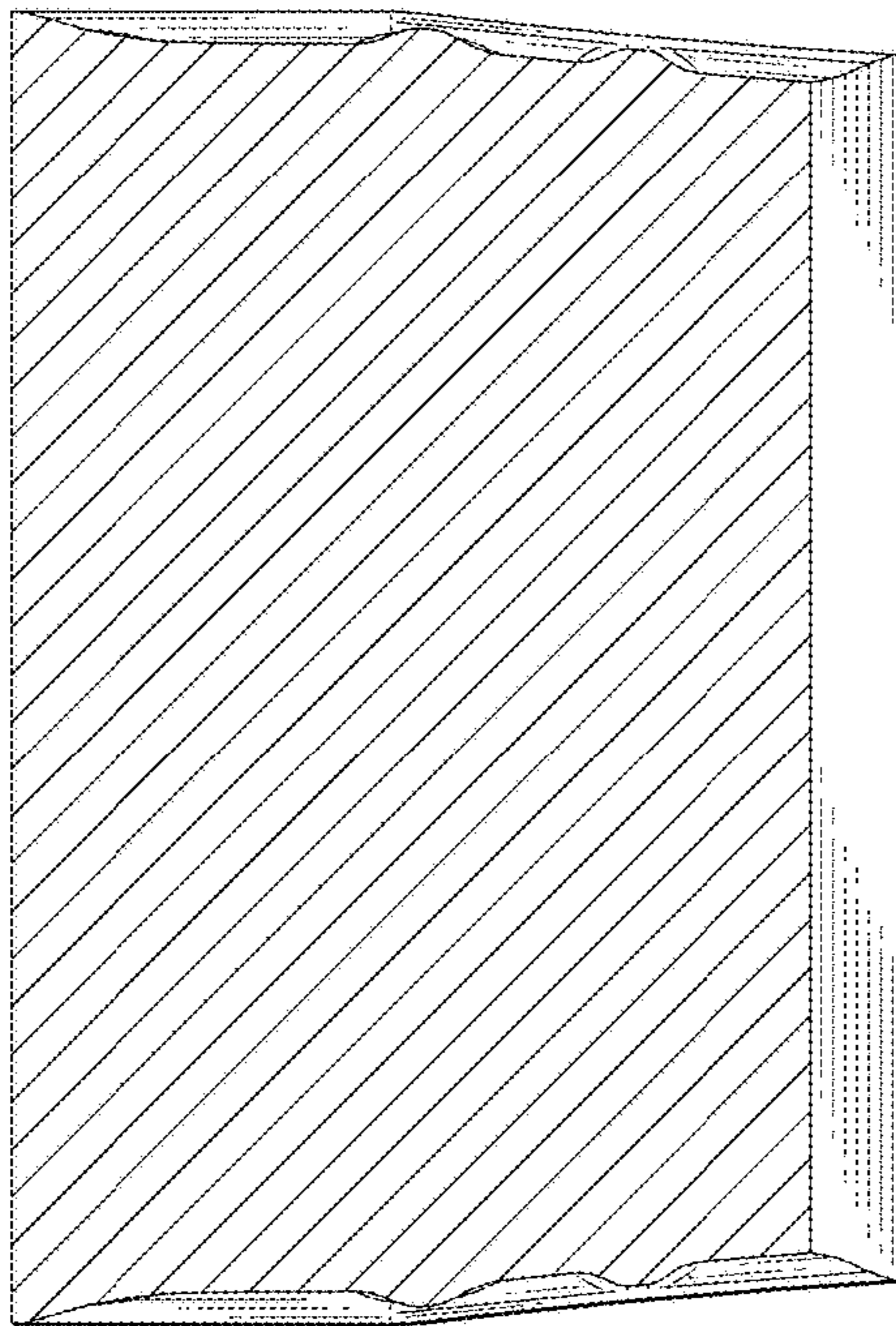


FIG.40

