



US00D961364S

(12) **United States Design Patent** (10) **Patent No.:** **US D961,364 S**  
**Porter** (45) **Date of Patent:** **\*\* Aug. 23, 2022**

(54) **THERMOPLASTIC PILE EXTRUSION**

FOREIGN PATENT DOCUMENTS

(71) Applicant: **Mark A. Porter**, Jacksonville, FL (US)

CN 203783246 8/2014  
CN 209082485 7/2019

(72) Inventor: **Mark A. Porter**, Jacksonville, FL (US)

(Continued)

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

OTHER PUBLICATIONS

(21) Appl. No.: **29/790,349**

E-Glass Chopped Strand Fibers, Lauscha Fiber International, Jun. 2014, <https://www.unifrax.com/wp-content/uploads/2018/08/U-807-EN.pdf> (Year: 2014).

(22) Filed: **Nov. 22, 2021**

**Related U.S. Application Data**

(63) Continuation-in-part of application No. 16/722,892, filed on Dec. 20, 2019, now Pat. No. 11,186,961.

(51) **LOC (13) Cl.** ..... **08-05**

(52) **U.S. Cl.**  
USPC ..... **D8/354**

(58) **Field of Classification Search**  
USPC ..... D8/14, 45, 354; D25/119, 122, 124  
CPC ..... E02D 27/525; E02D 2250/0015; E02D 2300/0053

See application file for complete search history.

*Primary Examiner* — Keli L Hill

*Assistant Examiner* — Harold E Blackwell, II

(74) *Attorney, Agent, or Firm* — Mark Young, PA

(57) **CLAIM**

The ornamental design for a thermoplastic pile extrusion, as shown and described.

**DESCRIPTION**

FIG. 1 is a top plan view of a thermoplastic pile extrusion. FIG. 2 is a side view of a thermoplastic pile extrusion shown in FIG. 1.

FIG. 3 is a first top perspective view of a thermoplastic pile extrusion shown in FIG. 1.

FIG. 4 is a second top perspective view of a thermoplastic pile extrusion shown in FIG. 1.

FIG. 5 is a third top perspective view of a thermoplastic pile extrusion shown in FIG. 1; and,

FIG. 6 is a fourth top perspective view of a thermoplastic pile extrusion shown in FIG. 1.

The thermoplastic pile extrusion is shown with a symbolic break in its length. The appearance of any portion of the thermoplastic pile extrusion between the jagged break lines forms no part of the claimed design. The broken lines in the drawings illustrate portions of a pile which form no part of the claimed design.

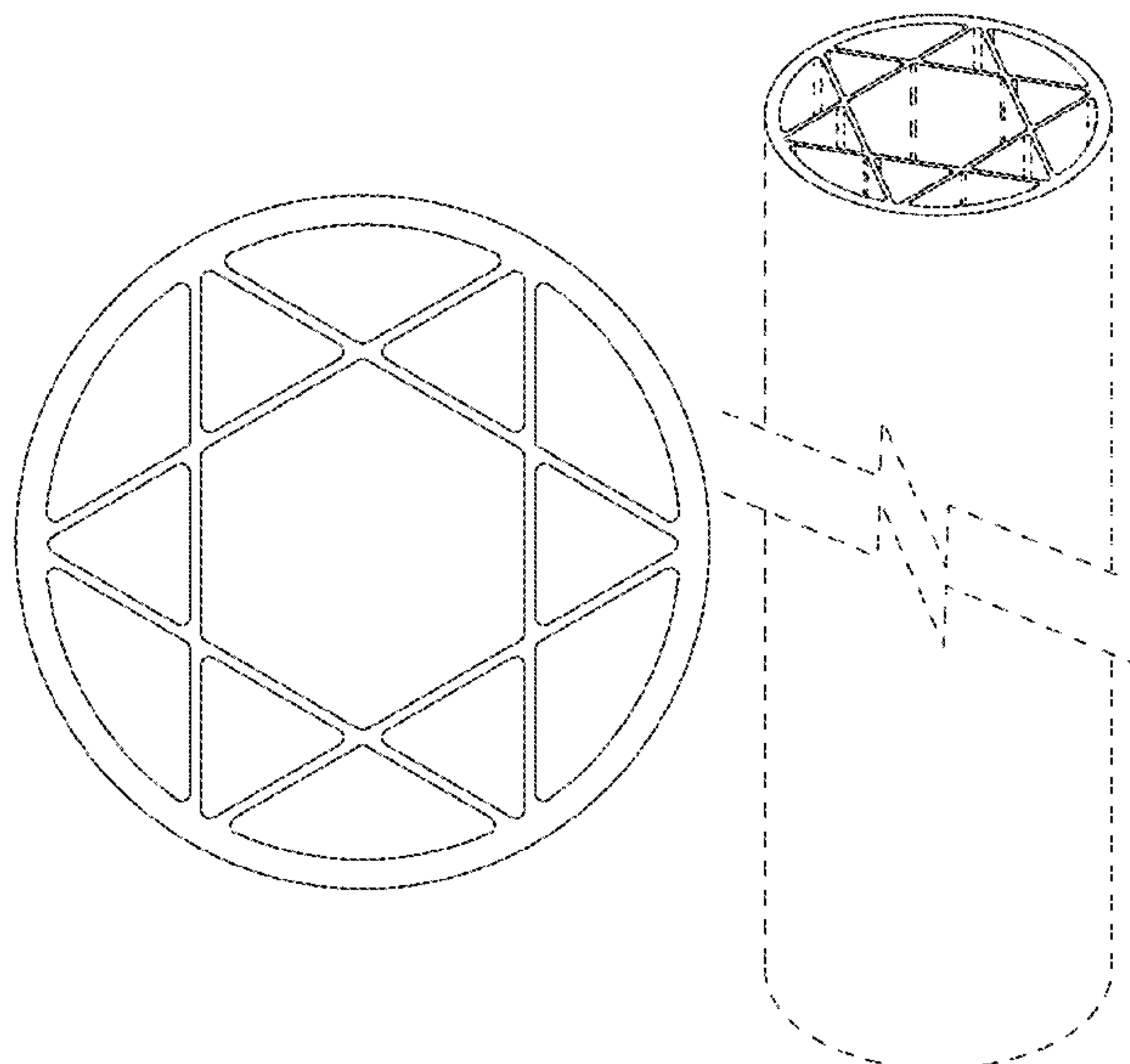
(56) **References Cited**

**U.S. PATENT DOCUMENTS**

341,831 A \* 5/1886 Burns ..... E06B 3/205  
273/317  
3,941,157 A 3/1976 Barnett  
3,957,250 A 5/1976 Murphy  
4,110,989 A 9/1978 Selkirk  
D250,518 S \* 12/1978 Friedman ..... D99/25  
4,183,777 A 1/1980 Summers et al.  
4,697,649 A 10/1987 Kinnan  
D299,579 S \* 1/1989 Jones ..... D99/27  
5,051,285 A 9/1991 Borzakian  
5,593,251 A \* 1/1997 Gillen ..... E02D 5/48  
405/250  
5,706,620 A 1/1998 De Zen  
6,123,485 A 9/2000 Mirmiran et al.  
6,405,974 B1 6/2002 Herrington

(Continued)

**1 Claim, 6 Drawing Sheets**





(56)

References Cited

U.S. PATENT DOCUMENTS

D460,375 S \* 7/2002 Ambar ..... D11/7  
6,675,919 B2 1/2004 Mosing et al.  
6,955,780 B2 10/2005 Herrington  
D515,222 S \* 2/2006 Kieffer ..... D25/122  
D519,053 S \* 4/2006 Meyer ..... D11/41  
D536,381 S \* 2/2007 Cho ..... D20/23  
D572,166 S \* 7/2008 Freer-Heeter ..... D11/108  
D603,241 S \* 11/2009 Pearce ..... D8/107  
D645,160 S \* 9/2011 Loken ..... D23/209  
D645,161 S \* 9/2011 Loken ..... D23/209  
D659,195 S \* 5/2012 Boltz ..... D20/43  
8,266,856 B2 9/2012 Carlson et al.  
D670,550 S \* 11/2012 Jungklaus ..... D8/107  
D691,216 S \* 10/2013 Drori ..... D21/444  
D718,653 S \* 12/2014 Attia ..... D11/81  
D788,124 S \* 5/2017 Katopis ..... D14/492  
9,643,311 B1 \* 5/2017 Cowie ..... B25G 1/04

D801,851 S \* 11/2017 Maufas ..... D11/99  
D811,922 S \* 3/2018 Lefave ..... D11/79  
D918,821 S \* 5/2021 Yamamoto ..... D12/400  
D918,822 S \* 5/2021 Yamamoto ..... D12/400  
11,186,961 B2 \* 11/2021 Porter ..... E02D 5/24  
2002/0194795 A1 12/2002 Spite  
2004/0224141 A1 11/2004 Seiling  
2005/0242456 A1 11/2005 Seilin et al.  
2007/0172315 A1 7/2007 Barrett et al.  
2009/0241447 A1 10/2009 Vollan  
2013/0014453 A1 1/2013 Hargrave et al.  
2015/0040509 A1 2/2015 Peltola et al.  
2016/0040384 A1 2/2016 Wagner  
2020/0208369 A1 \* 7/2020 Porter ..... E02D 5/24

FOREIGN PATENT DOCUMENTS

JP S58173219 10/1983  
KR 20080039020 5/2008

\* cited by examiner



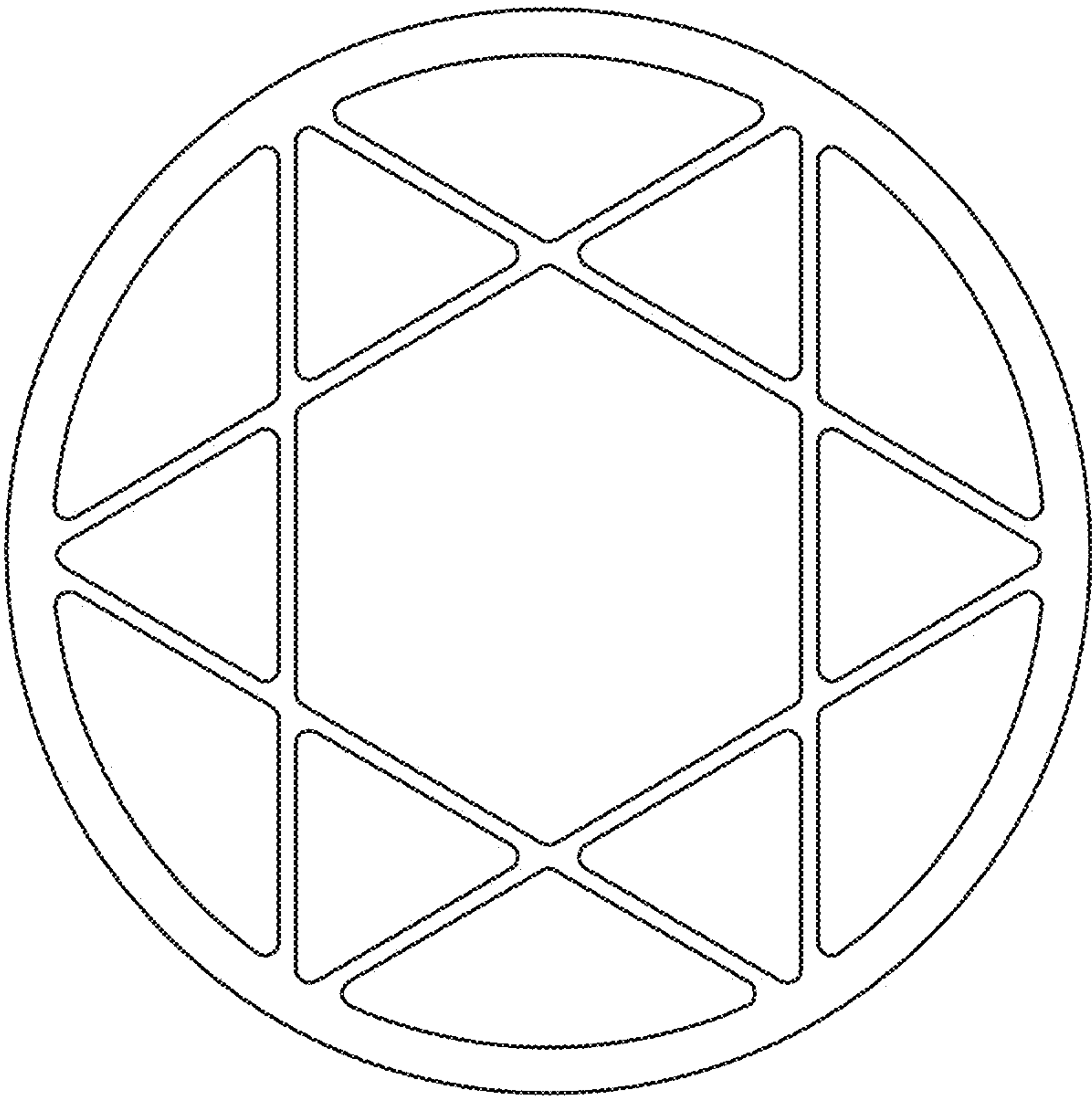


FIG. 1



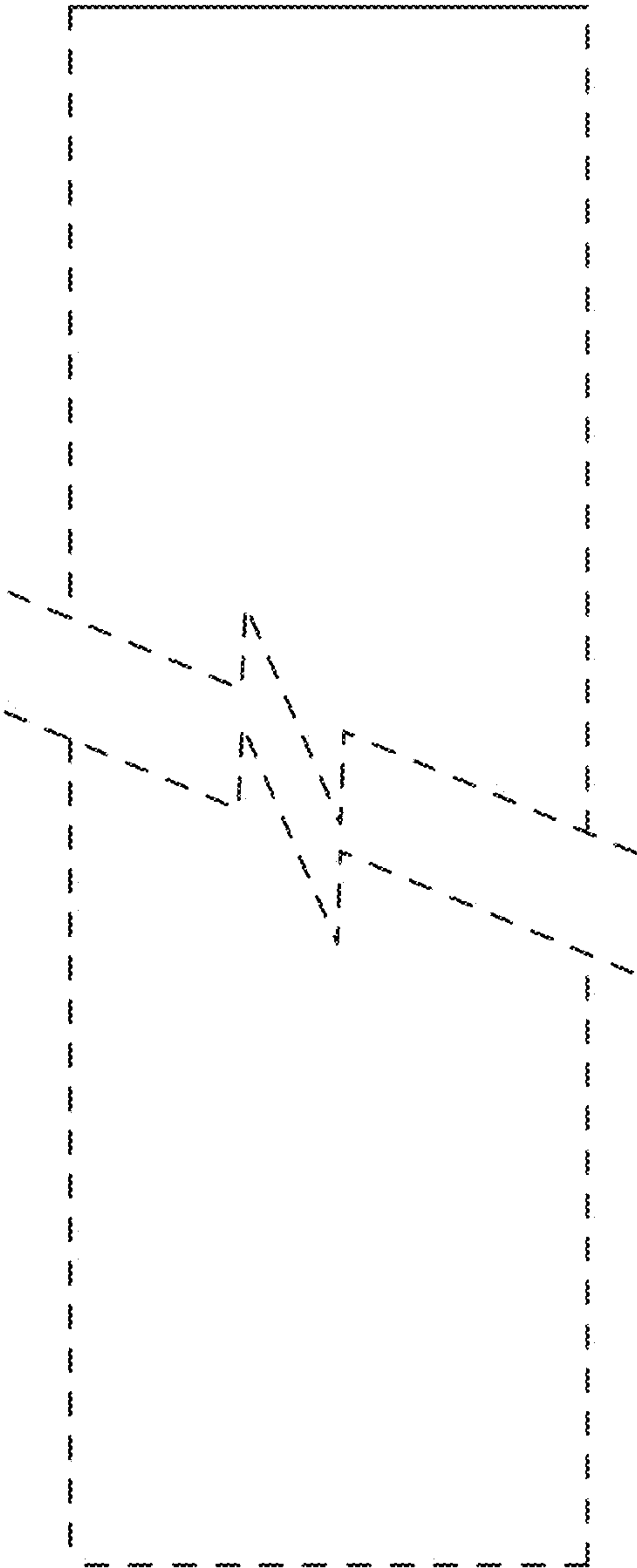


FIG. 2



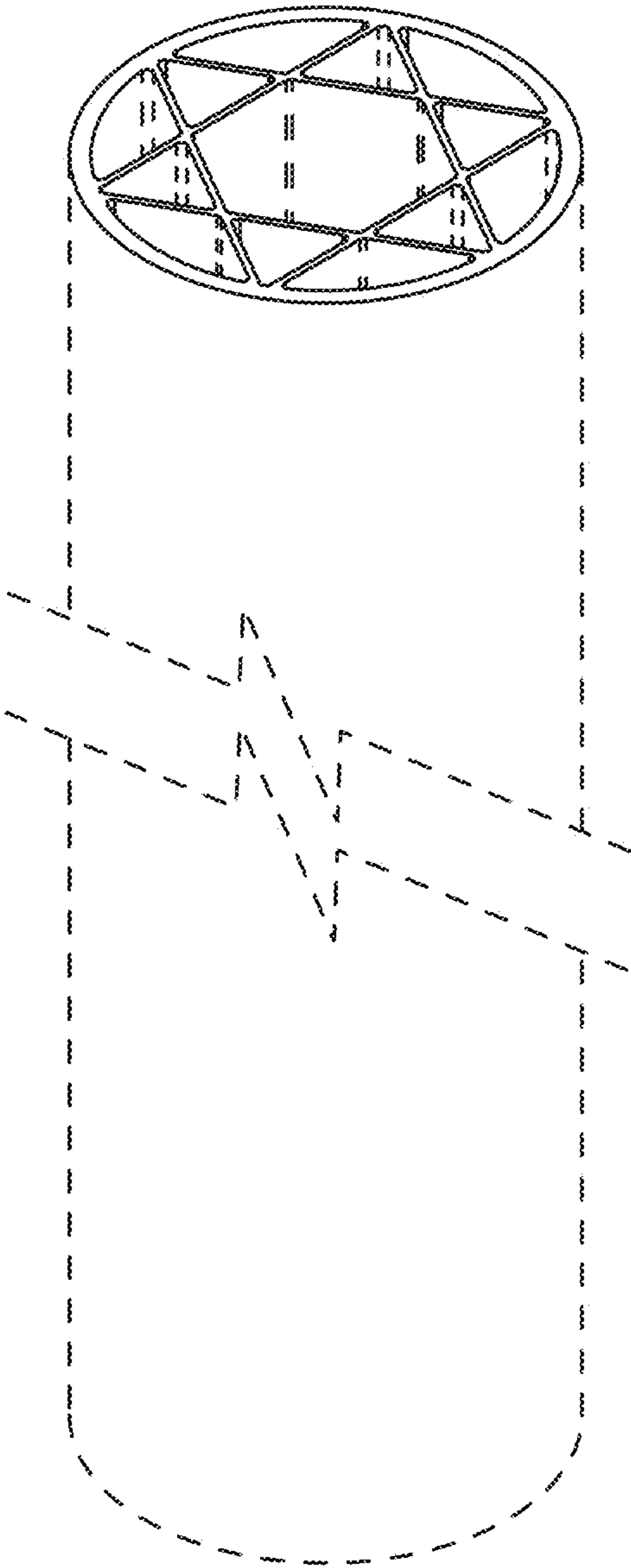


FIG. 3



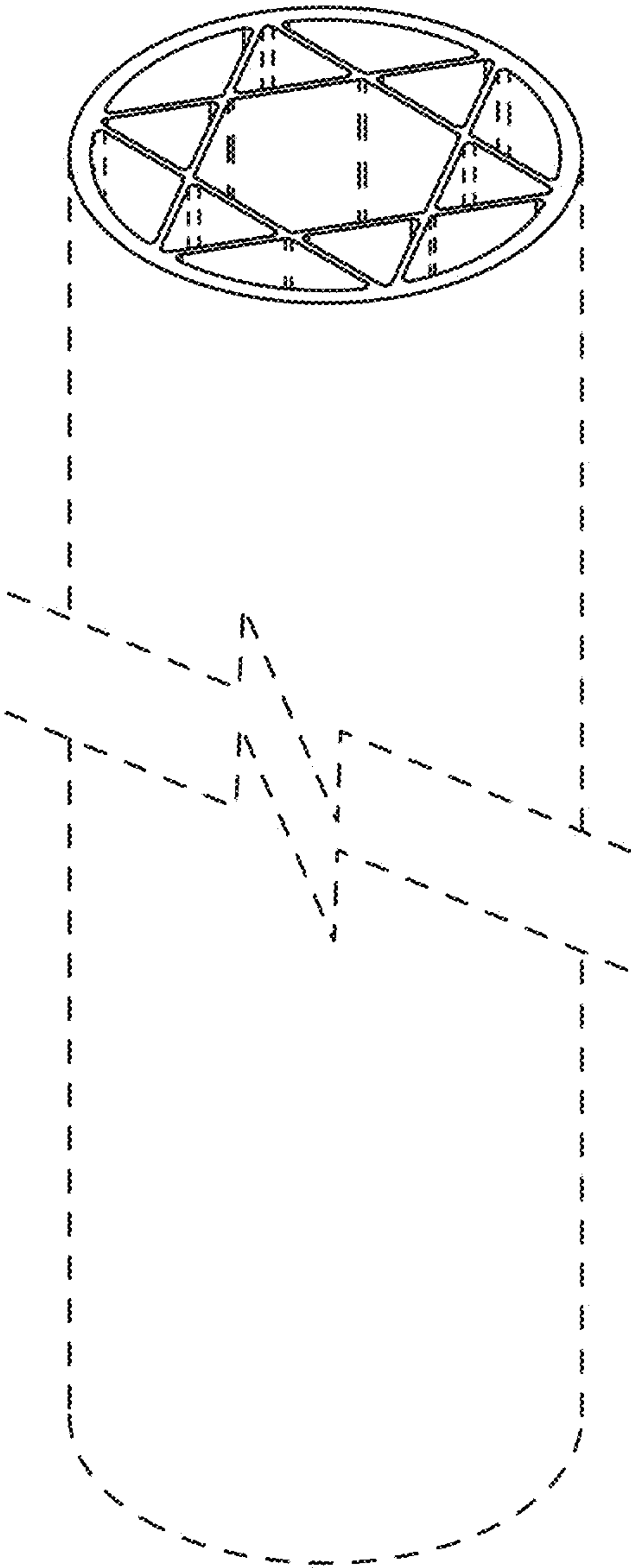


FIG. 4



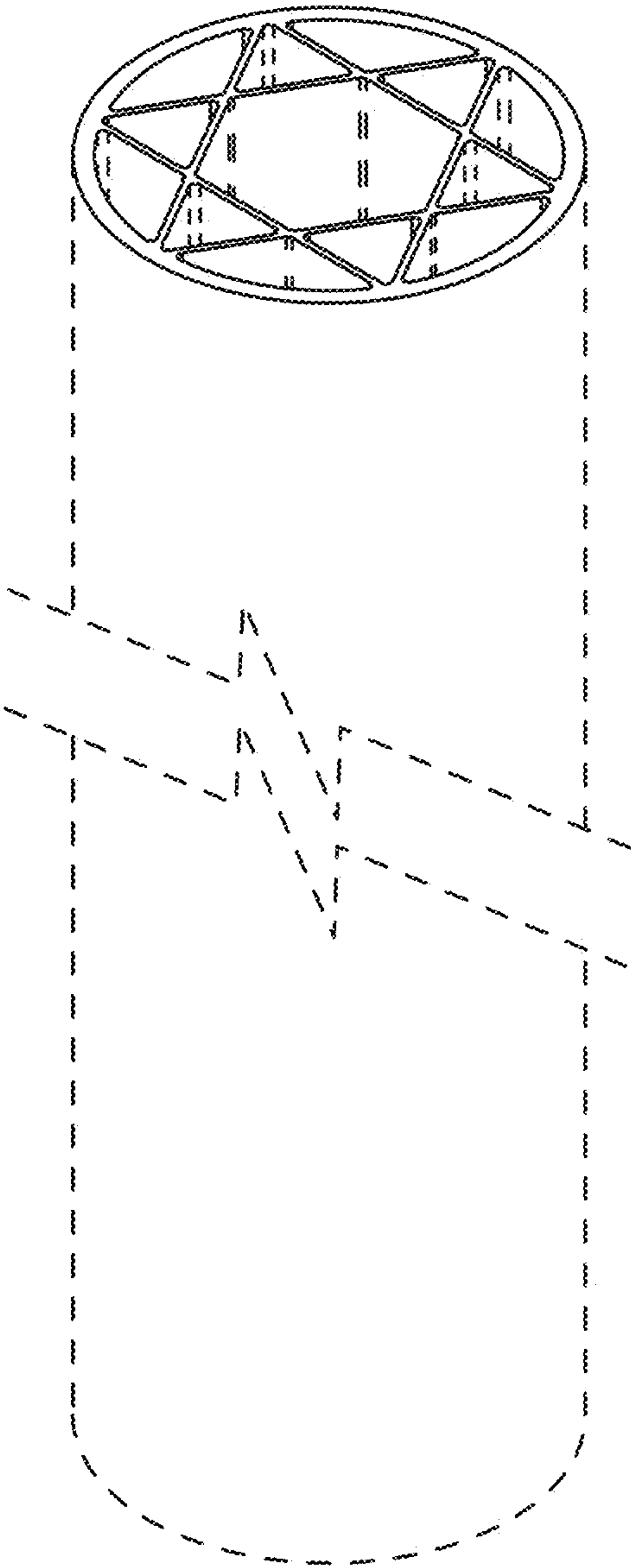


FIG. 5



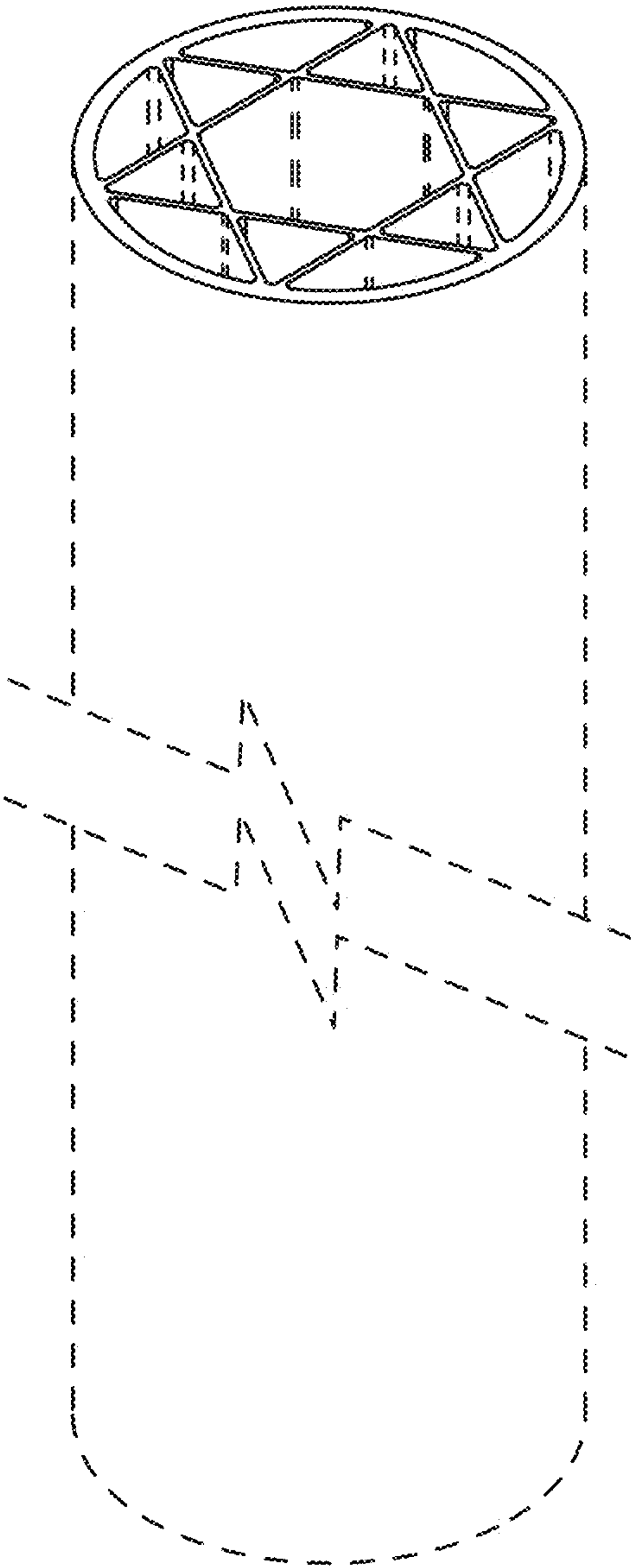


FIG. 6