



US00D959514S

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

(10) **Patent No.:** **US D959,514 S**

(45) **Date of Patent:** **\*\* Aug. 2, 2022**

(54) **STATIC MIXER**

(71) Applicant: **Commonwealth Scientific and Industrial Research Organisation, Acton (AU)**

(72) Inventors: **Yutong Zhu, Acton (AU); Dayalan Gunasegaram, Acton (AU); Saber Mostafavian, Acton (AU)**

(73) Assignee: **Commonwealth Scientific and Industrial Research Organisation, Australian Capital Territory (AU)**

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

(21) Appl. No.: **29/766,260**

(22) Filed: **Jan. 14, 2021**

(30) **Foreign Application Priority Data**

Jul. 17, 2020 (AU) ..... 202013911

(51) **LOC (13) Cl.** ..... **15-09**

(52) **U.S. Cl.**  
USPC ..... **D15/135; D15/138**

(58) **Field of Classification Search**  
USPC ..... D8/70, 71; D15/122, 135, 136, 138;  
D23/207, 259, 261, 267, 268  
CPC ..... B01F 25/4314; B01F 25/43231; B01F  
35/10; B29B 7/88; B29B 7/325; B29C  
45/30; B29C 45/581; B29K 2067/00;  
F15D 1/02  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,027,857 A \* 6/1977 Cunningham .... B01F 25/43231  
366/340  
4,093,188 A \* 6/1978 Horner ..... B01F 25/43161  
366/337  
5,053,202 A \* 10/1991 Dwyer ..... B01F 25/4312  
422/135

D466,595 S \* 12/2002 Glanville ..... D23/259  
D485,886 S \* 1/2004 Glanville ..... D23/207  
D607,476 S \* 1/2010 Saul ..... D15/138  
D638,920 S \* 5/2011 Ealer, Sr. .... D23/267  
D831,170 S \* 10/2018 Schluter ..... D23/261  
D904,562 S \* 12/2020 Stewart ..... D23/213  
D939,660 S \* 12/2021 Zhu ..... D23/209  
2002/0063344 A1 \* 5/2002 Pagade ..... B01F 25/4323  
261/DIG. 72

(Continued)

**FOREIGN PATENT DOCUMENTS**

WO WO-9913972 A1 \* 3/1999 ..... B01F 3/04021  
WO WO-2004052519 A1 \* 6/2004 ..... B01F 5/0617

(Continued)

**OTHER PUBLICATIONS**

<http://samhwamix.com/wp/high-shear-mixershsm/> (Year: 2019).\*

*Primary Examiner* — Patricia A Palasik

(74) *Attorney, Agent, or Firm* — Merchant & Gould P.C.

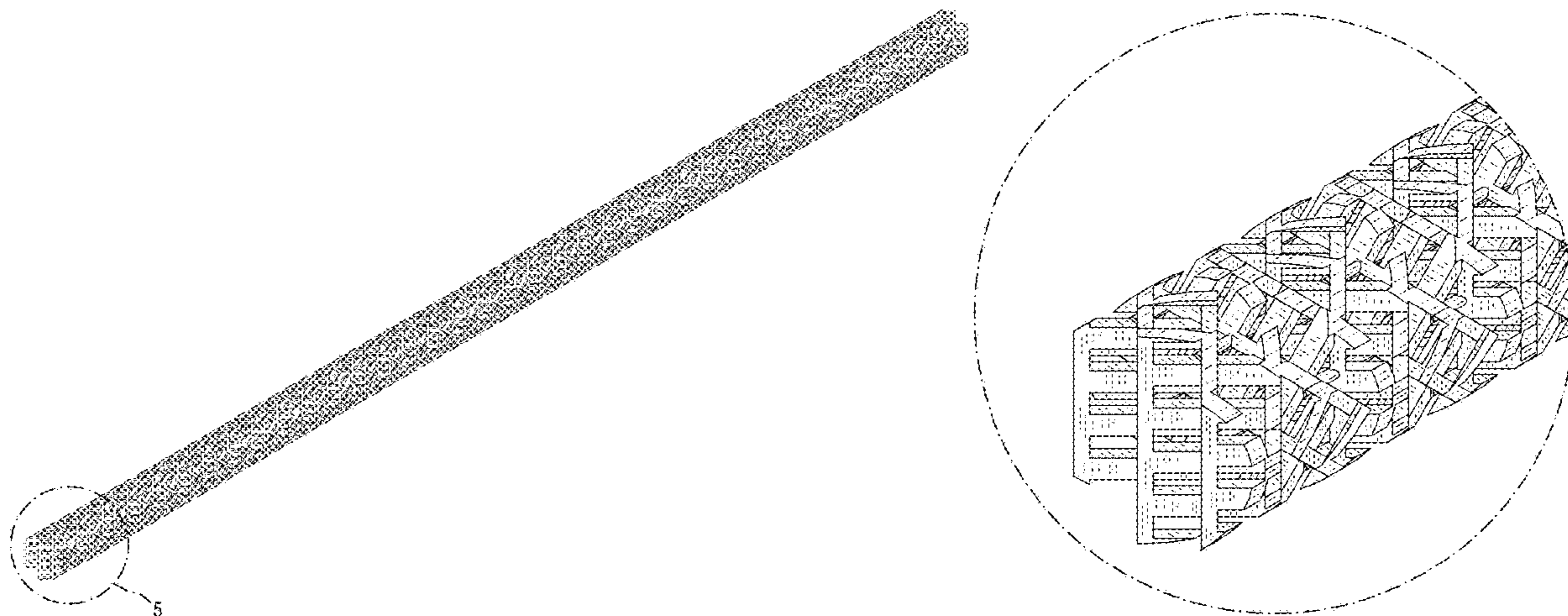
(57) **CLAIM**

The ornamental design for a static mixer, as shown and described.

**DESCRIPTION**

FIG. 1 is a first perspective view of the static mixer;  
FIG. 2 is a second perspective view of the static mixer of FIG. 1;  
FIG. 3 is a side view of the static mixer of FIG. 1;  
FIG. 4 is an end view of the static mixer of FIG. 1;  
FIG. 5 is a first enlarged partial perspective view of encircled area 5 of the of the static mixer of FIG. 1;  
FIG. 6 is a second enlarged partial perspective view of encircled area 6 of the static mixer of FIG. 2; and,  
FIG. 7 is an enlarged partial side view of encircled area 7 of the static mixer of FIG. 3.

**1 Claim, 7 Drawing Sheets**



(56)

**References Cited**

U.S. PATENT DOCUMENTS

2004/0218469 A1\* 11/2004 Unterlander ..... B29B 7/325  
366/336  
2022/0062835 A1\* 3/2022 Zenke ..... B01F 25/43161

FOREIGN PATENT DOCUMENTS

WO WO-2009049790 A1\* 4/2009 ..... B01D 53/9431  
WO WO-2010060225 A1\* 6/2010 ..... B01F 13/002  
WO WO-2010066457 A1\* 6/2010 ..... B01F 3/0861  
WO WO-2019245538 A1\* 12/2019 ..... B01D 17/047  
WO WO-2020021444 A1\* 1/2020 ..... B01F 3/04049  
WO WO-2021081122 A1\* 4/2021

\* cited by examiner

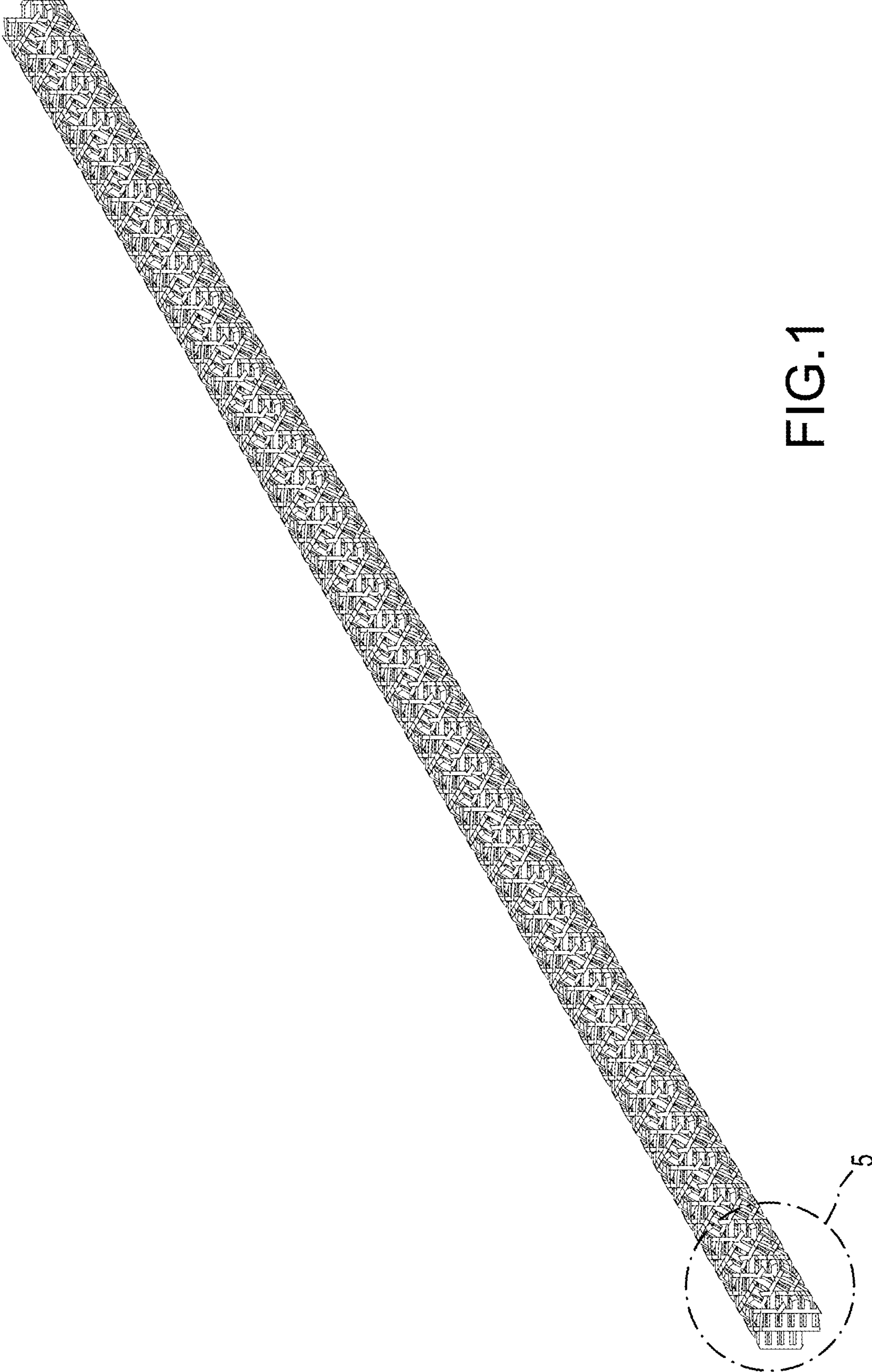


FIG. 1

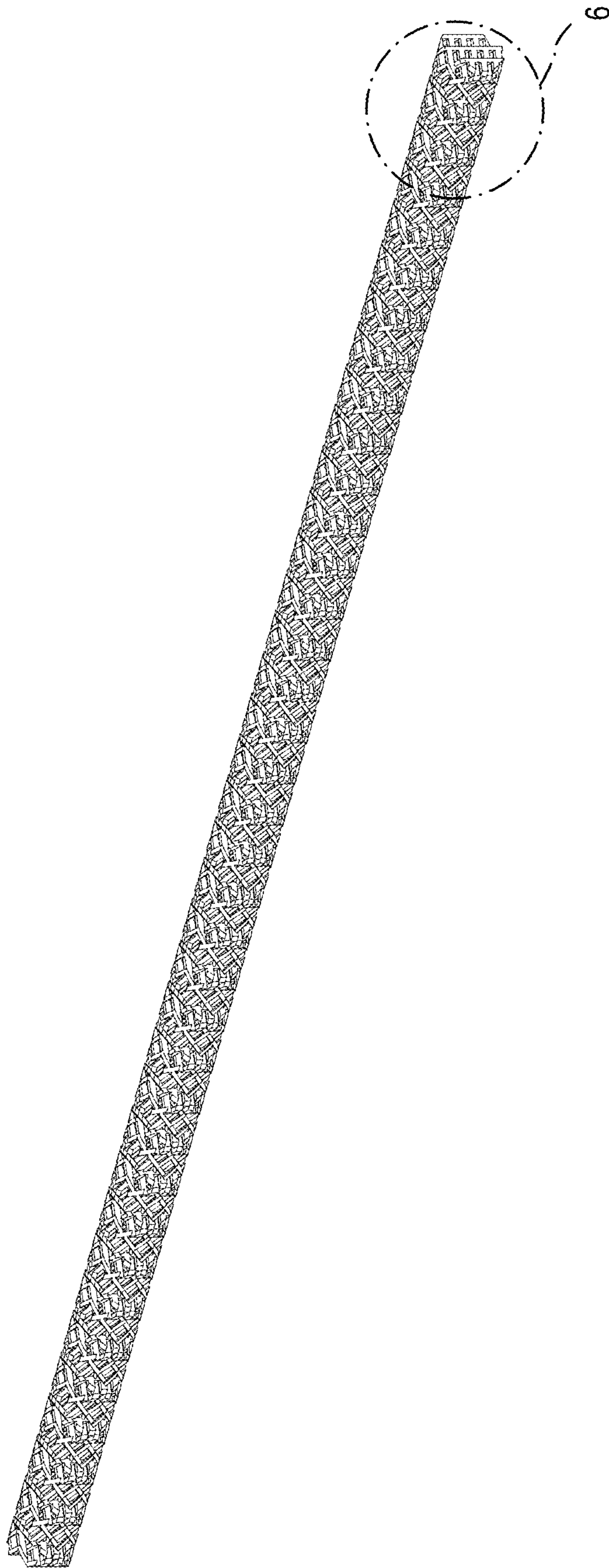


FIG.2

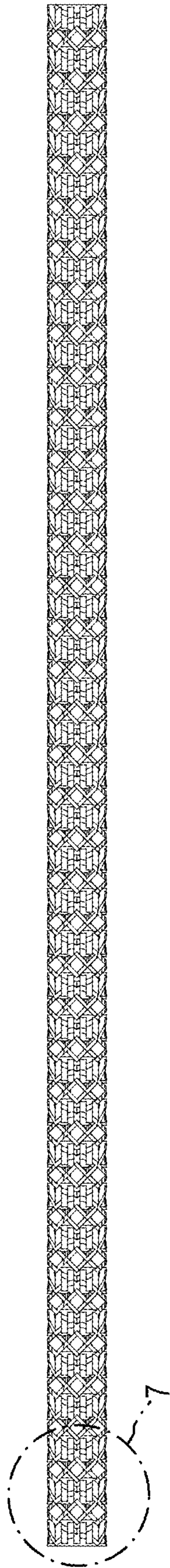


FIG.3

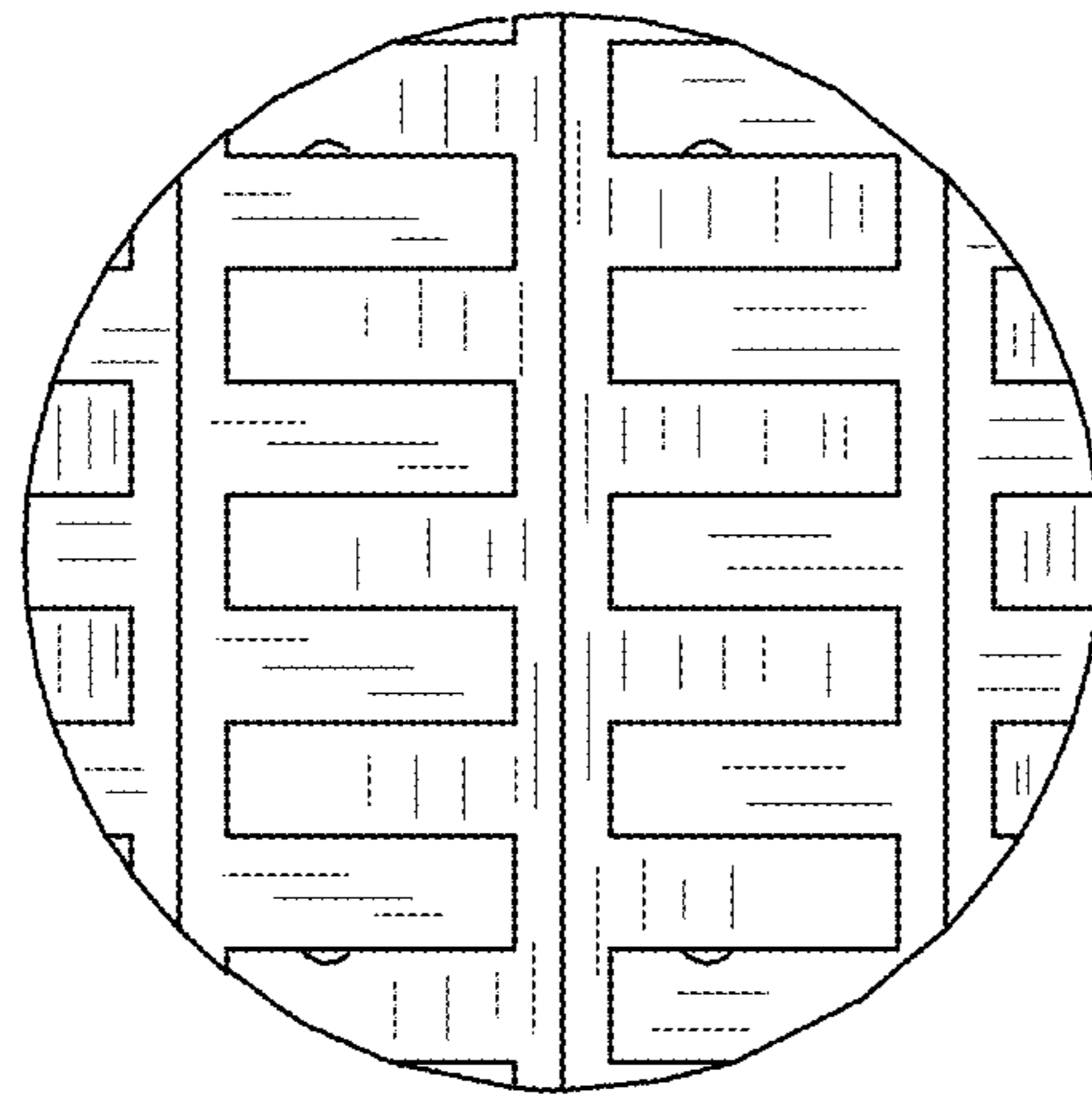


FIG.4

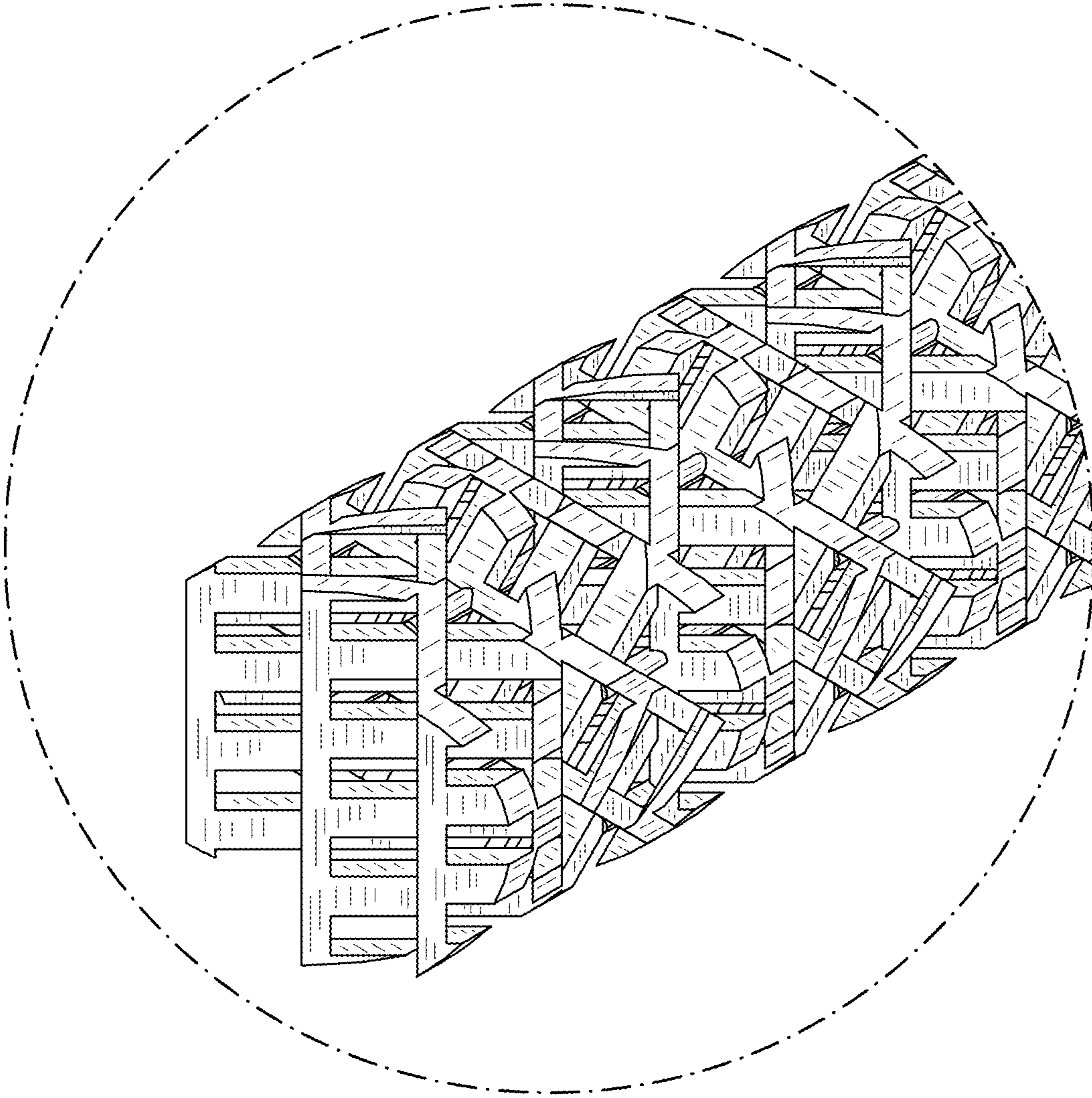


FIG.5

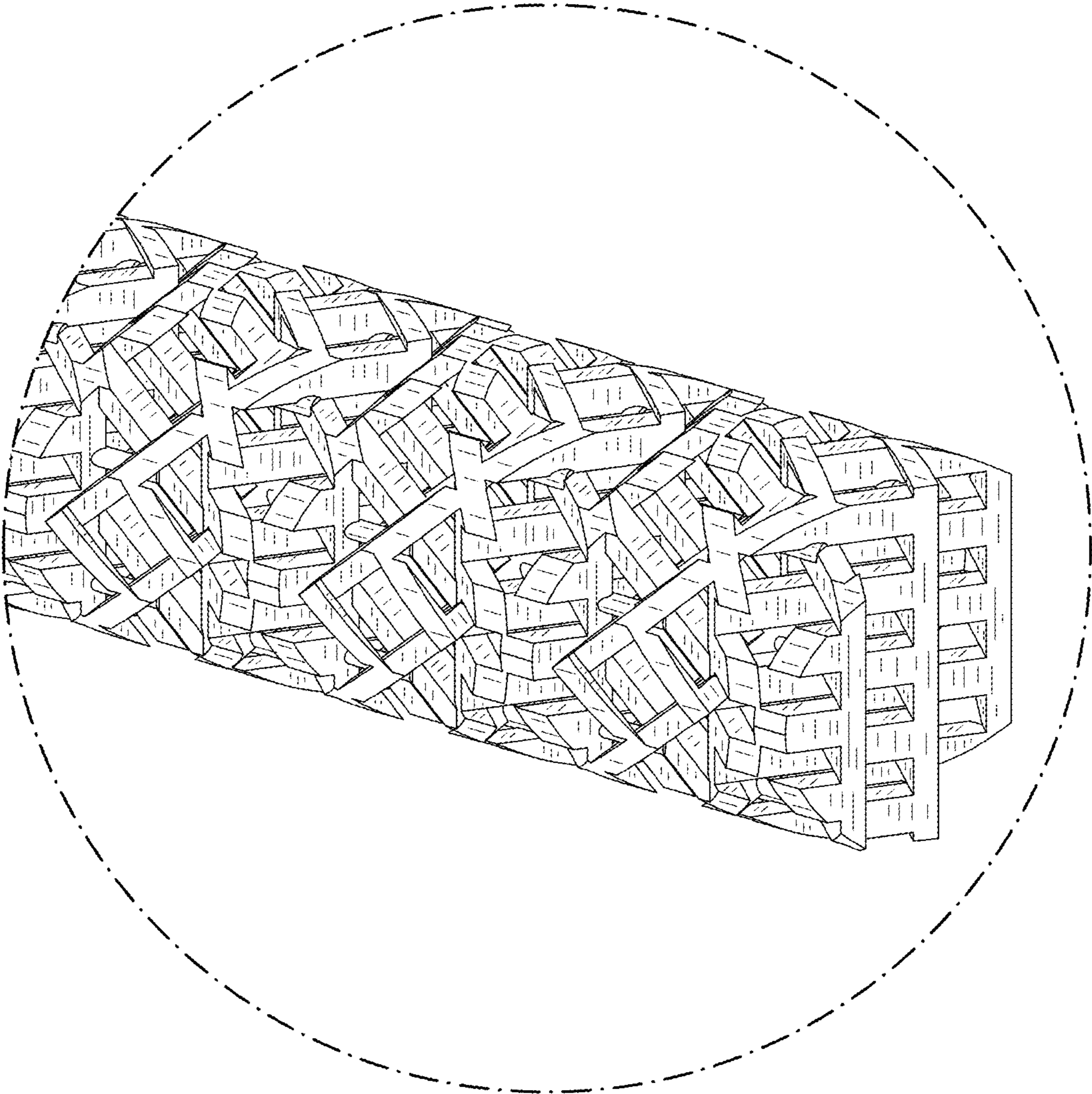


FIG.6



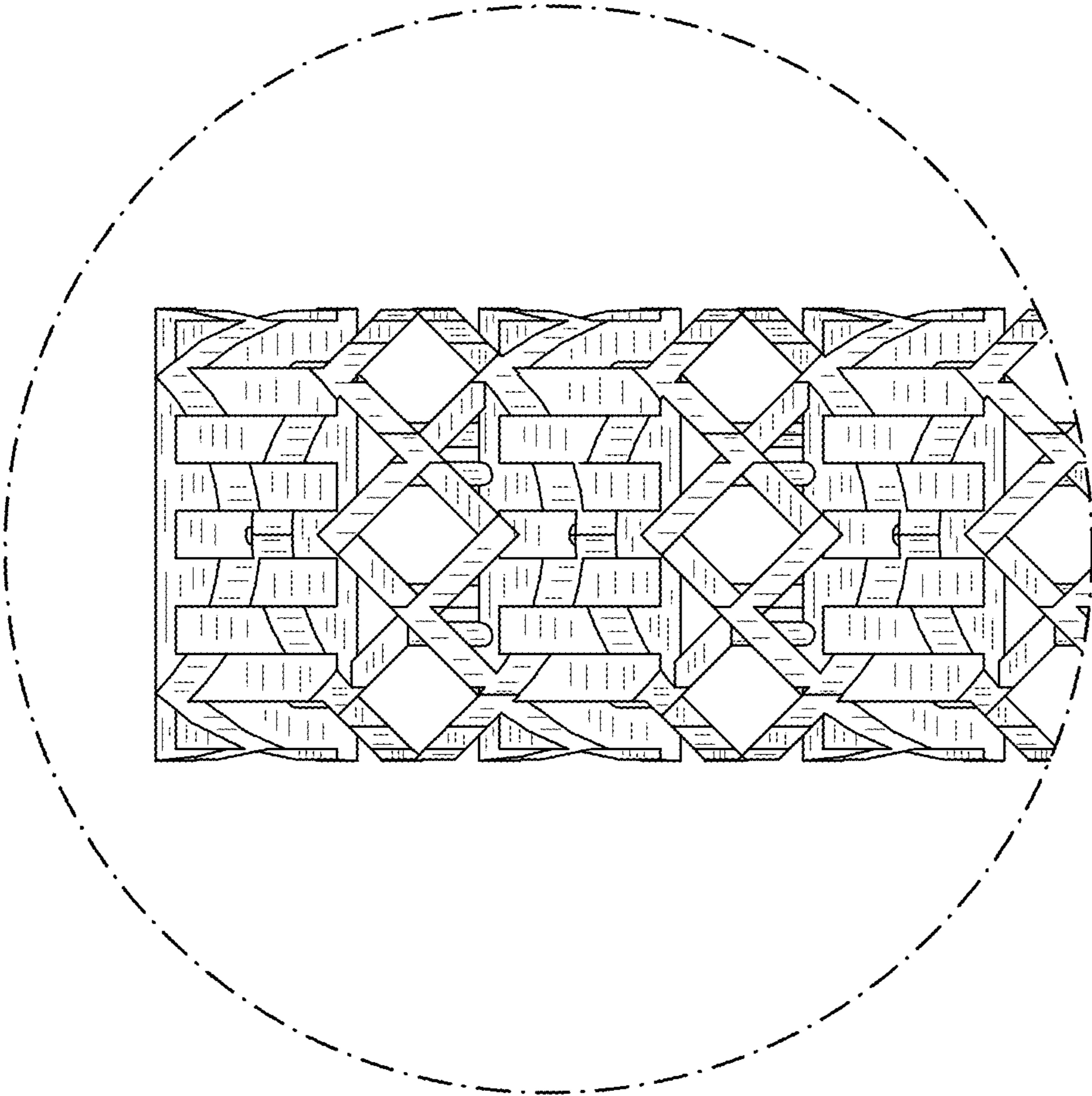


FIG.7