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

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(45) **Date of Patent:** **\*\* Jul. 24, 2018**

(54) **TOOL FOR FIXING A TENSION MEMBER OF COMPOSITE STRAND FOR PRESTRESSED CONCRETE REINFORCEMENT AND POST TENSIONING CONCRETE STRUCTURE**

(71) Applicant: **TOKYO ROPE MFG. CO., LTD.**,  
Chuo-ku, Tokyo (JP)

(72) Inventors: **Daisuke Manabe**, Kasumigaura (JP);  
**Shunji Hachisuka**, Kasumigaura (JP);  
**Hiroshi Kimura**, Noda (JP); **Yoshihiro Tamura**, Kashiwa (JP)

(73) Assignee: **TOKYO ROPE MFG. CO., LTD.**,  
Tokyo (JP)

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

(21) Appl. No.: **29/610,086**

(22) Filed: **Jul. 10, 2017**

**Related U.S. Application Data**

(62) Division of application No. 29/517,806, filed on Feb. 17, 2015, now Pat. No. Des. 809,907.

(51) **LOC (11) Cl.** ..... **08-08**

(52) **U.S. Cl.**  
USPC ..... **D8/383**; D8/382

(58) **Field of Classification Search**  
USPC ..... D8/383, 382, 385, 393, 394, 396, 499,  
D8/354, 355, 14, 44, 47, 71, 72  
(Continued)

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Related U.S. Appl. No. 29/610,082; First Named Inventor: Daisuke Manabe; Title: "Tool for Fixing Tension Member of Composite Strand for Prestressed Concrete Reinforcement and Post Tensioning for Concrete Structure"; filed Jul. 10, 2017.

*Primary Examiner* — Sandra S Snapp

*Assistant Examiner* — Ieisha N Price

(74) *Attorney, Agent, or Firm* — Holtz, Holtz & Volek PC

(57) **CLAIM**

The ornamental design for a tool for fixing a tension member of composite strand for prestressed concrete reinforcement and post tensioning for concrete structure, as shown and described.

**DESCRIPTION**

FIG. 1 is a front, top and left side perspective view of a first embodiment of a tool for fixing a tension member of composite strand for prestressed concrete reinforcement and post tensioning concrete structure, showing our new design; FIG. 2 is a front view thereof, the rear being identical; FIG. 3 is a left side view thereof; FIG. 4 is a right side view thereof; FIG. 5 is a top plan view thereof, the bottom plan being identical; FIG. 6 is a front view thereof, wherein three-fourths of the article has been removed for ease of illustration; FIG. 7 is a rear view of FIG. 6; FIG. 8 is a left side view of FIG. 6; FIG. 9 is a right side view of FIG. 6; FIG. 10 is a top plan view of FIG. 6; FIG. 11 is a bottom plan view of FIG. 6; FIG. 12 is a perspective view showing the environmental use thereof; and FIG. 13 is an exploded perspective view showing the environmental use thereof.  
FIG. 14 is a front, top and left side perspective view of a second embodiment of a tool for fixing a tension member of composite strand for prestressed concrete reinforcement and post tensioning concrete structure, showing our new design;

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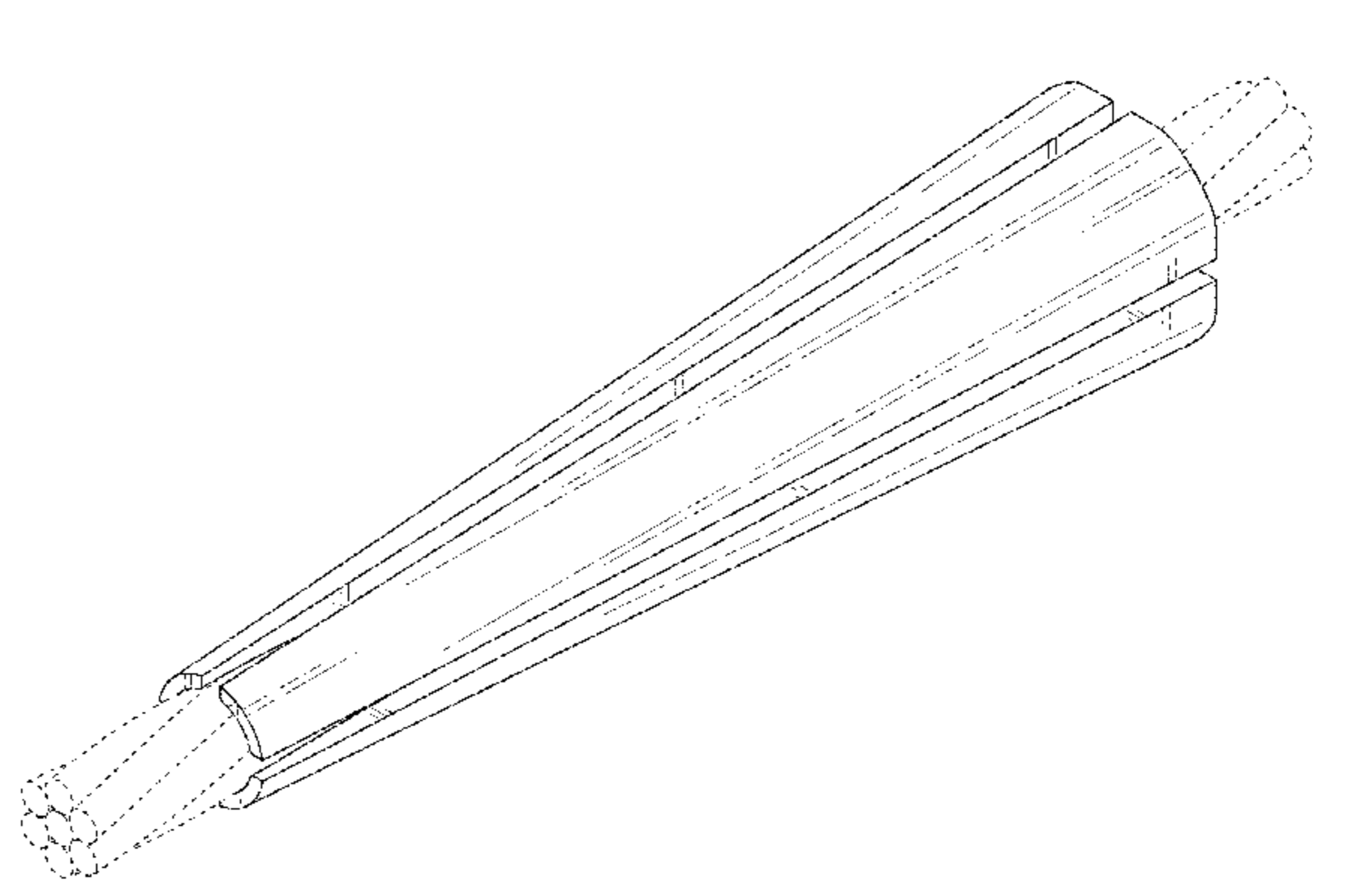
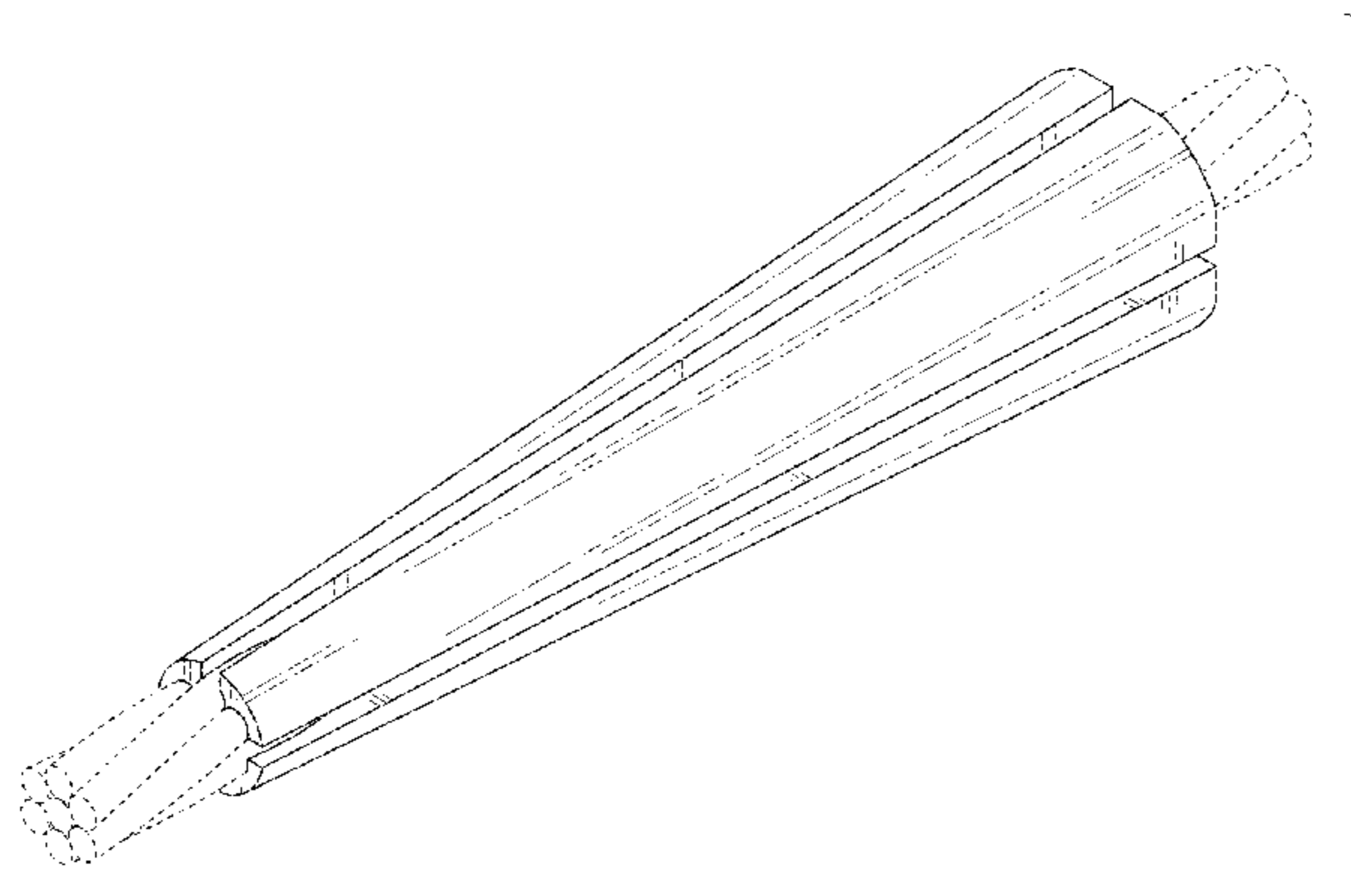


FIG. 15 is a front view thereof, the rear being identical;  
 FIG. 16 is a left side view thereof;  
 FIG. 17 is a right side view thereof;  
 FIG. 18 is a top plan view thereof, the bottom plan being identical;  
 FIG. 19 is a front view thereof, wherein three-fourths of the article has been removed for ease of illustration;  
 FIG. 20 is a rear view of FIG. 19;  
 FIG. 21 is a left side view of FIG. 19;  
 FIG. 22 is a right side view of FIG. 19;  
 FIG. 23 is a top plan view of FIG. 19;  
 FIG. 24 is a bottom plan view of FIG. 19;  
 FIG. 25 is an enlarged cross sectional view taken along line 25-25 in FIG. 15  
 FIG. 26 is a perspective view showing the environmental use thereof; and,  
 FIG. 27 is an exploded perspective view showing the environmental use thereof.  
 The broken line showing of tension members shown in FIGS. 12, 13, 26 and 27 illustrates the environment of the claimed design and forms no part thereof. The broken lines shown in FIG. 25 illustrate portions of the tool for fixing a tension member of composite strand for prestressed concrete reinforcement and post tensioning concrete structure and form no part of the claimed design.

**1 Claim, 13 Drawing Sheets**

(58) **Field of Classification Search**

CPC . D07B 1/18; D07B 1/005; D07B 9/00; D07B 2201/2083; D07B 2201/2084; D07B 2201/2085; D07B 2201/2089; F16G 11/00; F16G 11/03; F16G 11/04; F16G 11/048; F16G 11/08; F16G 11/10; F16G 11/105; F16G 11/108

See application file for complete search history.

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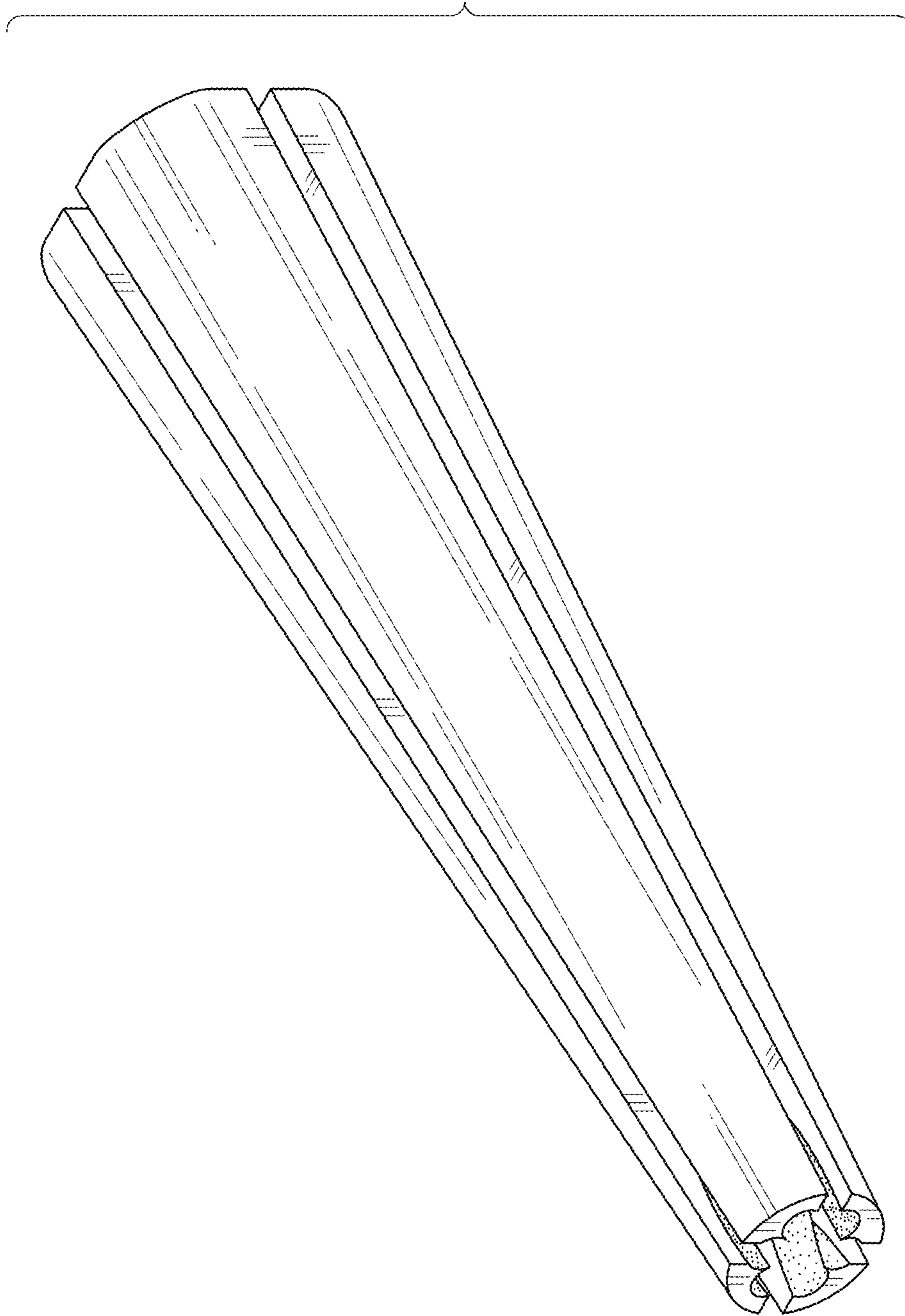


Fig. 1

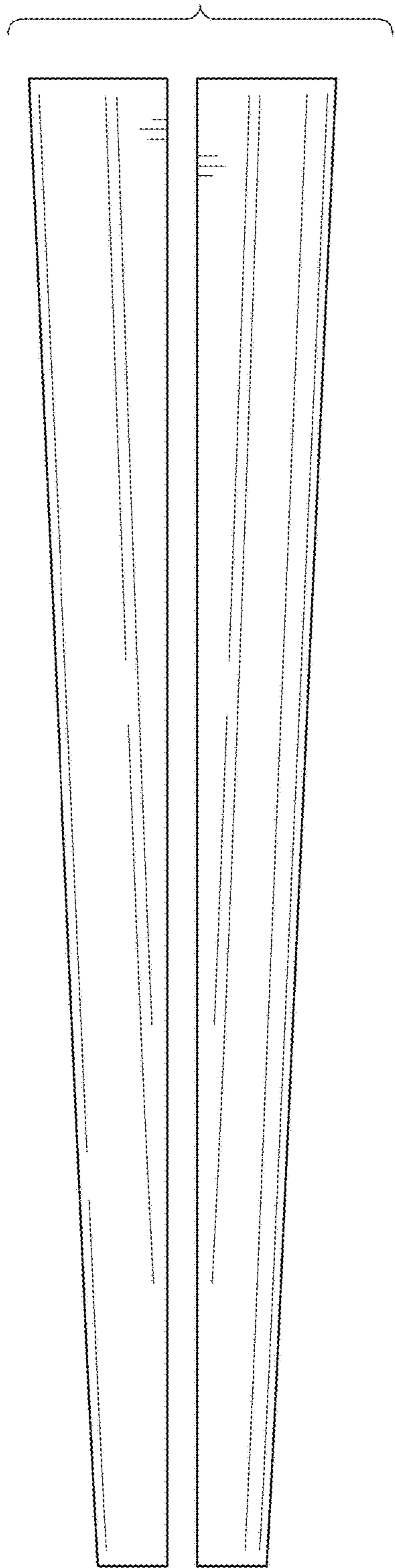


Fig. 2

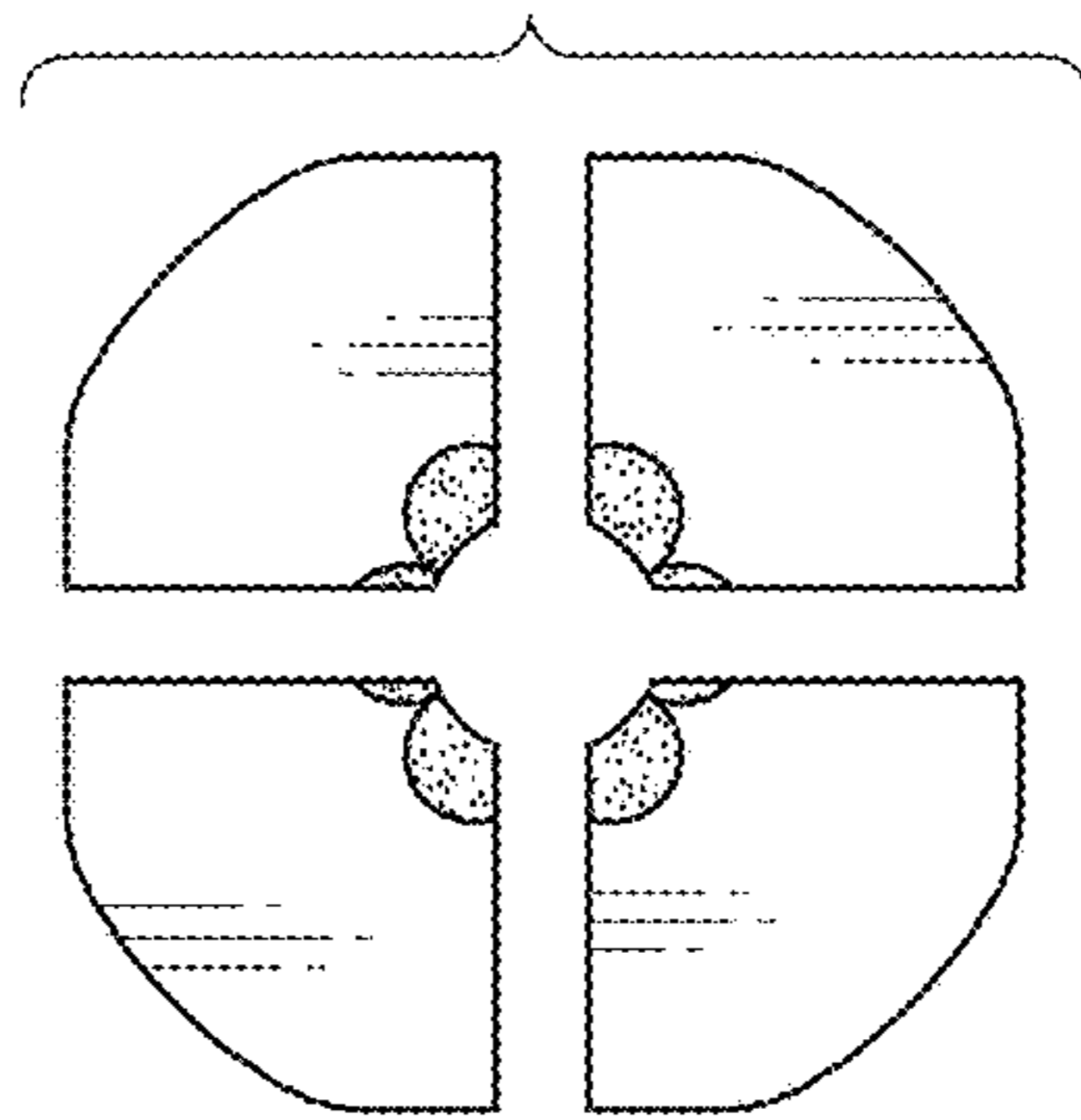


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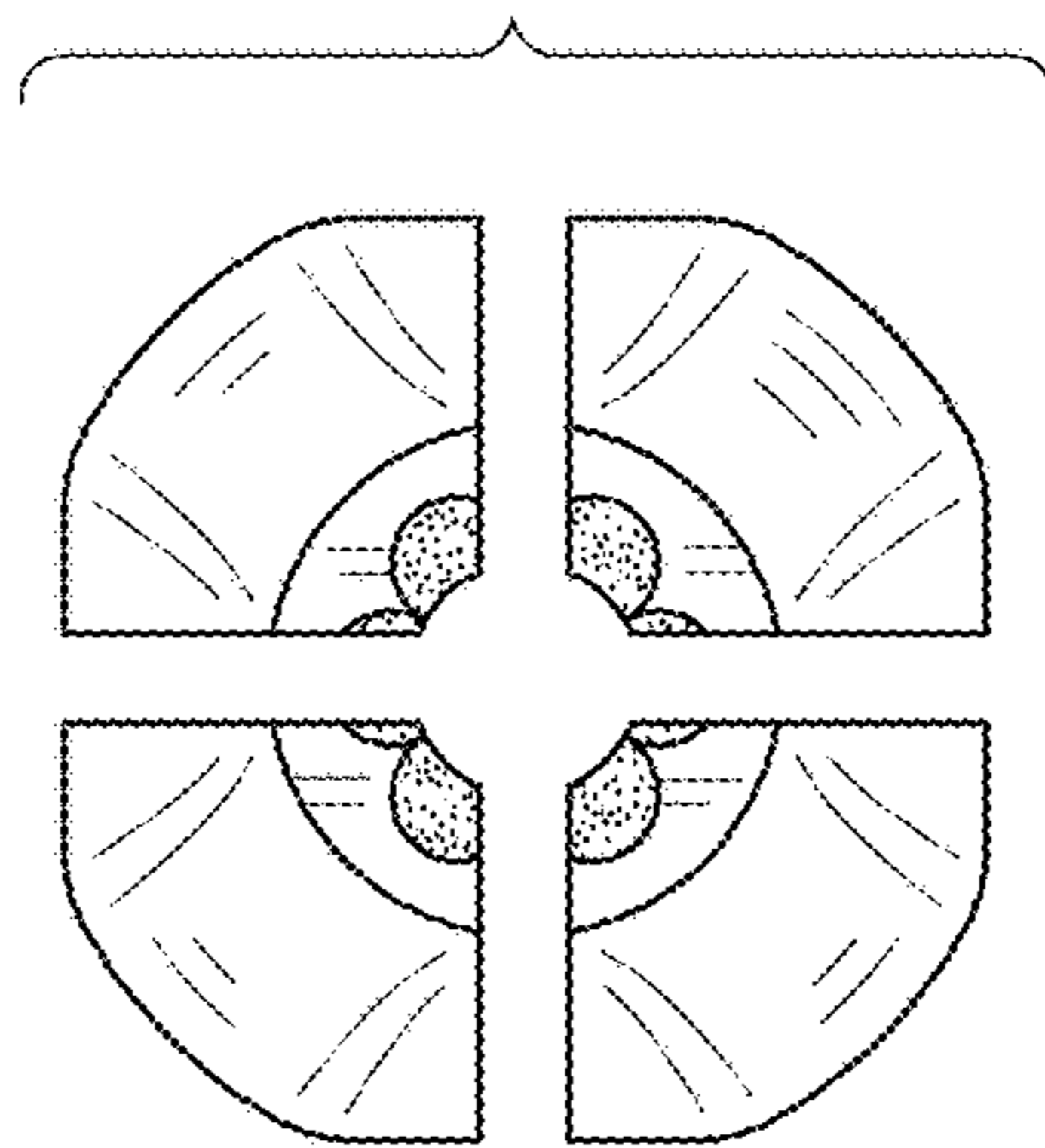


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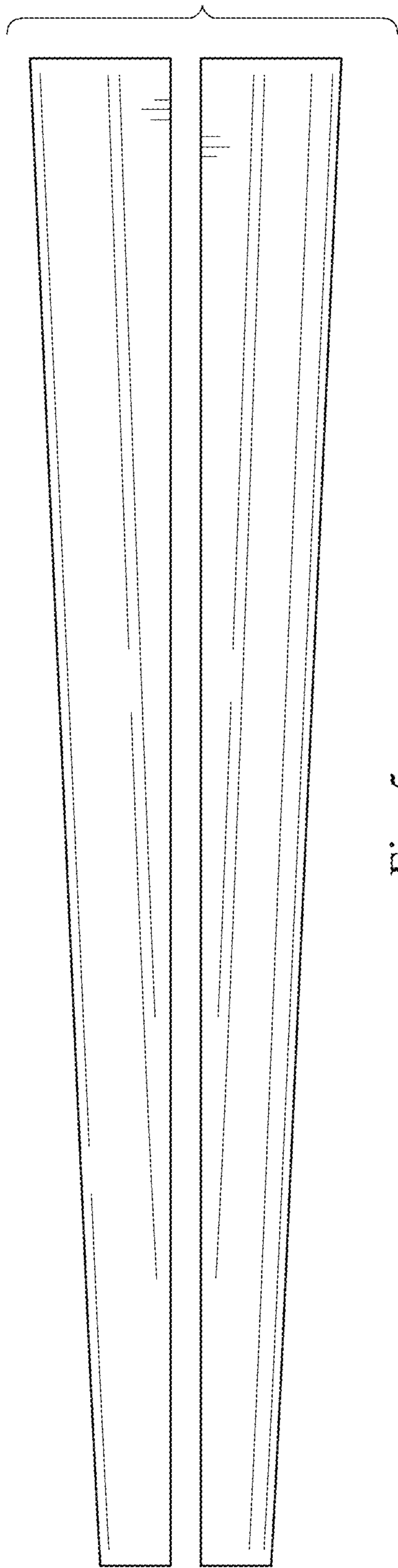


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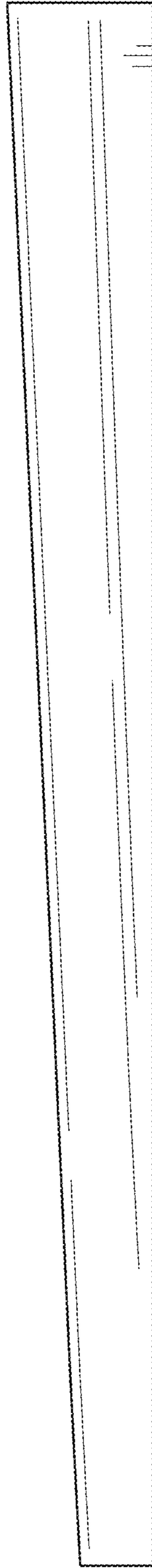


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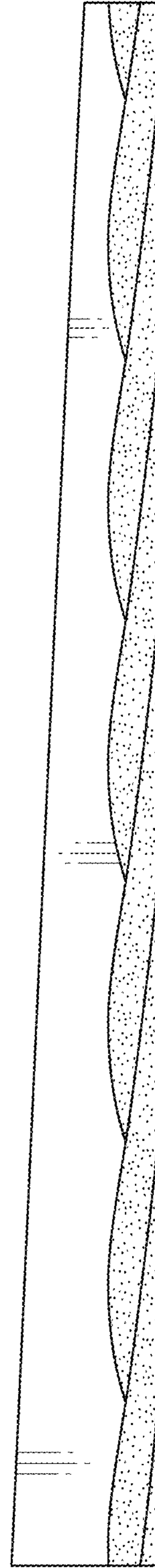


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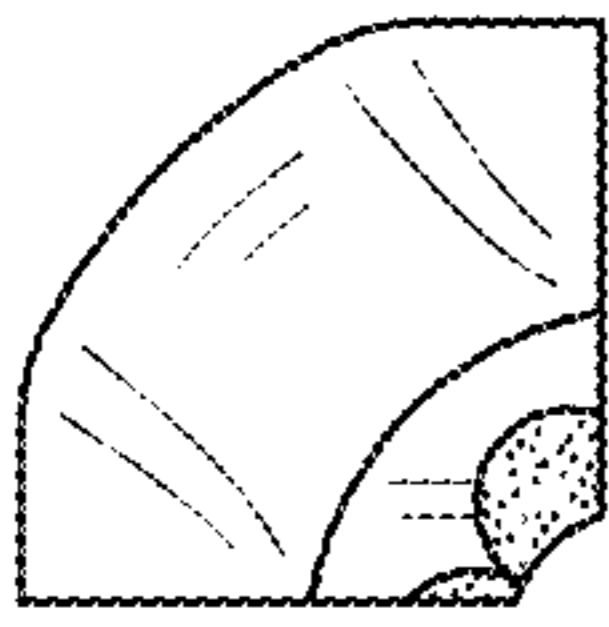


Fig. 8

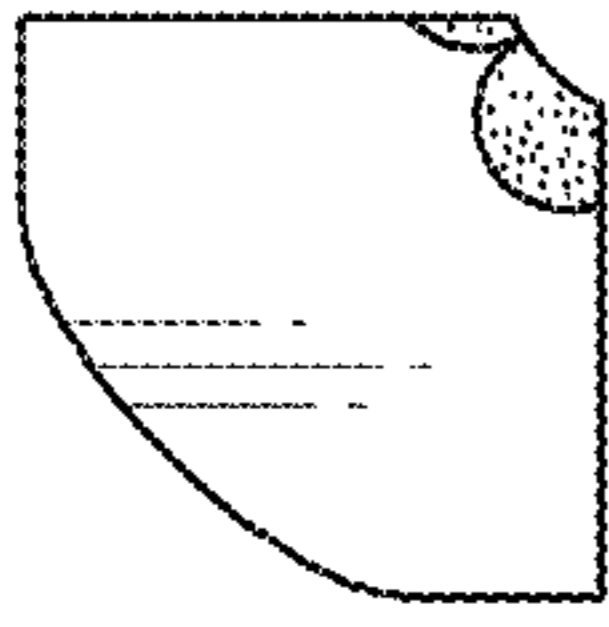


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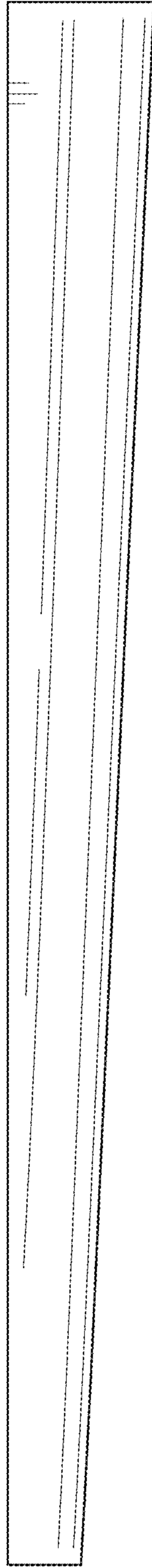


Fig. 10

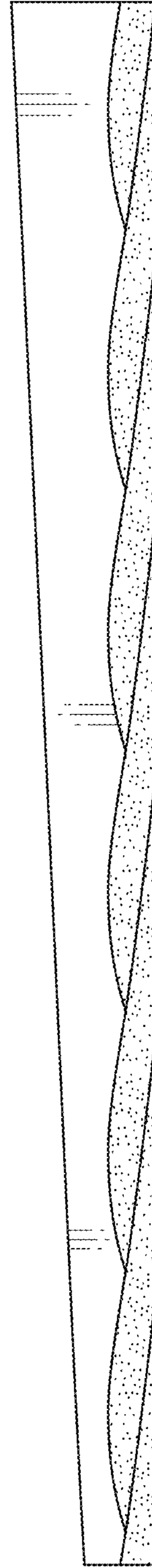


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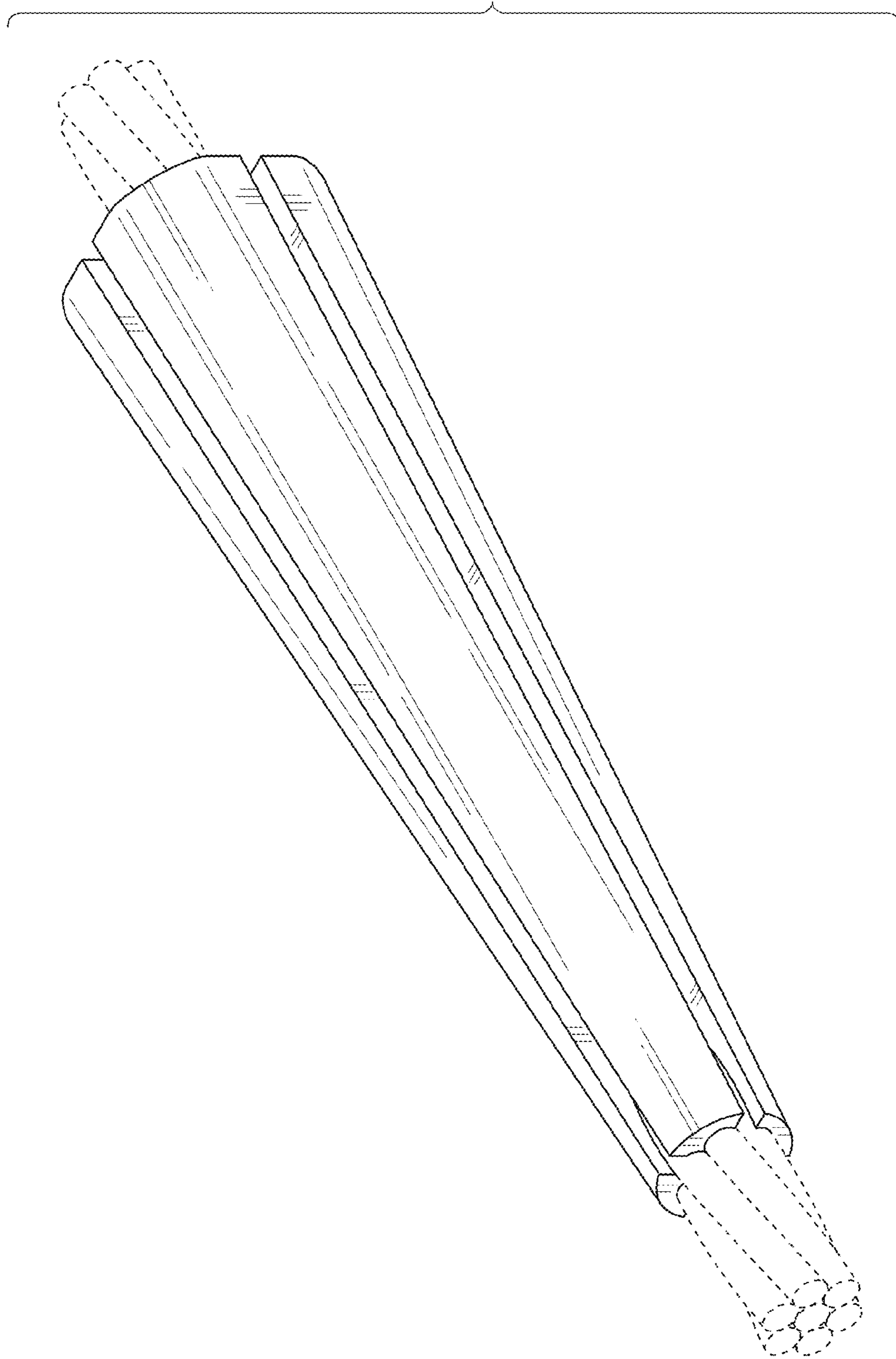


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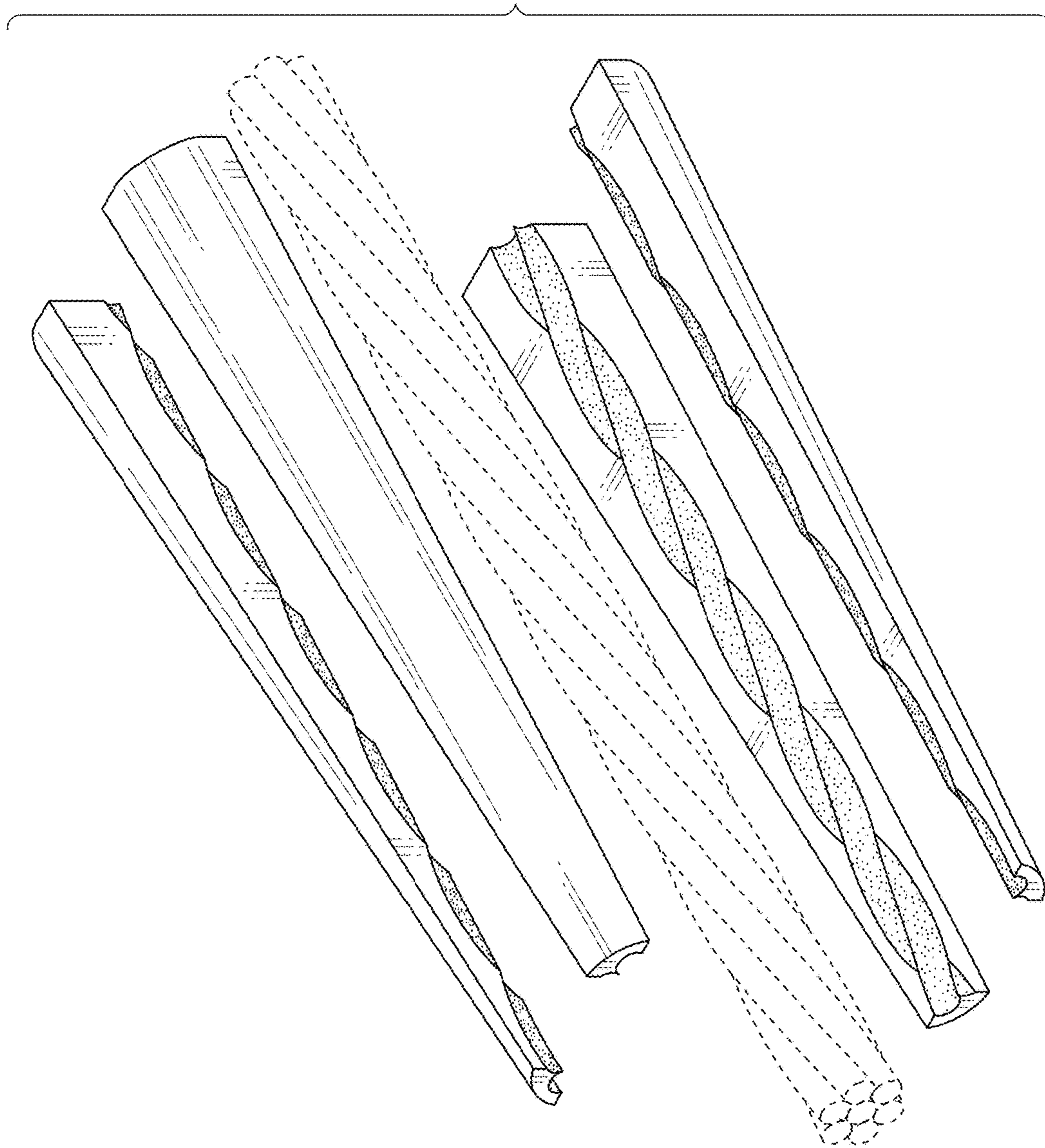


Fig. 13



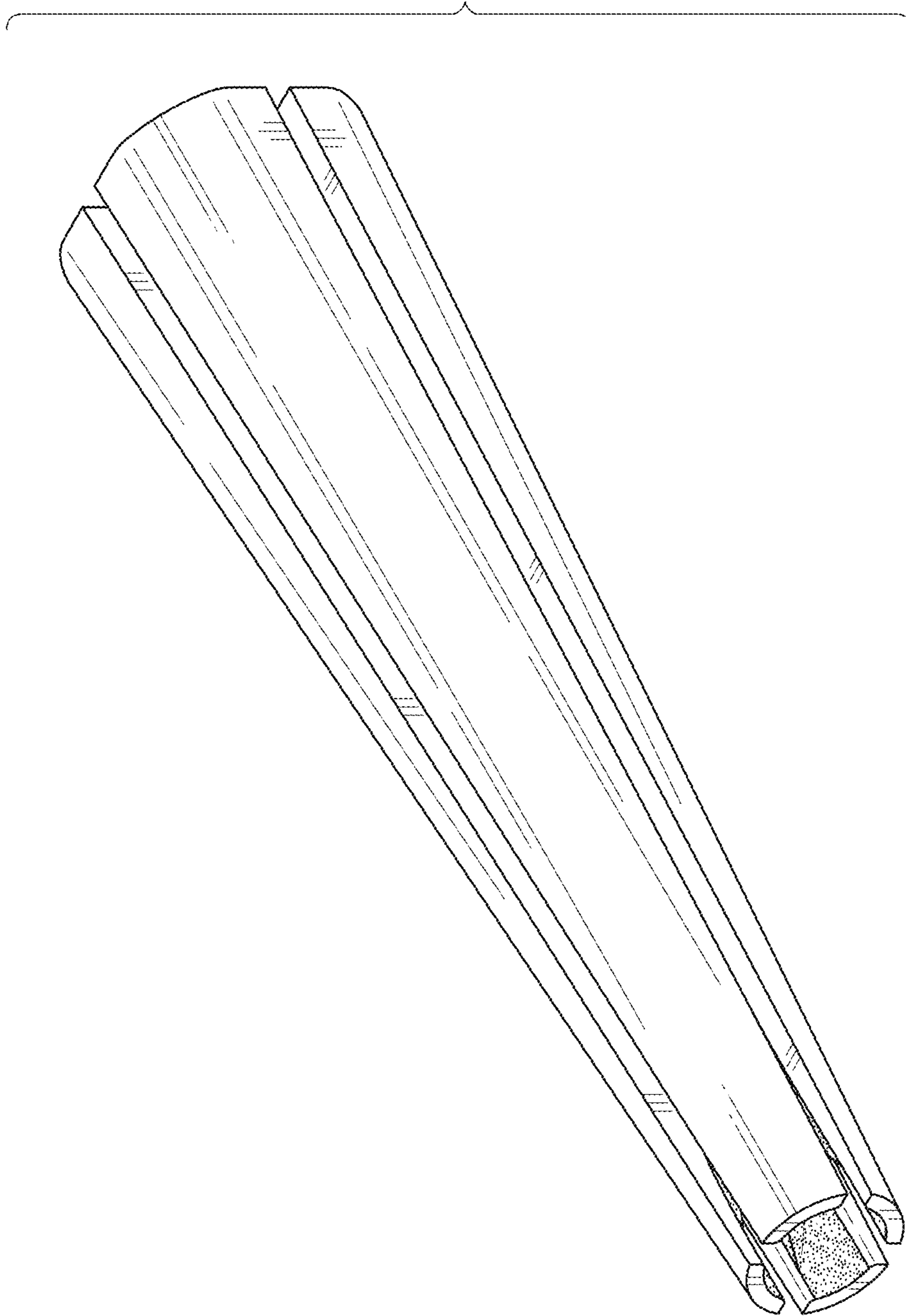


Fig. 14

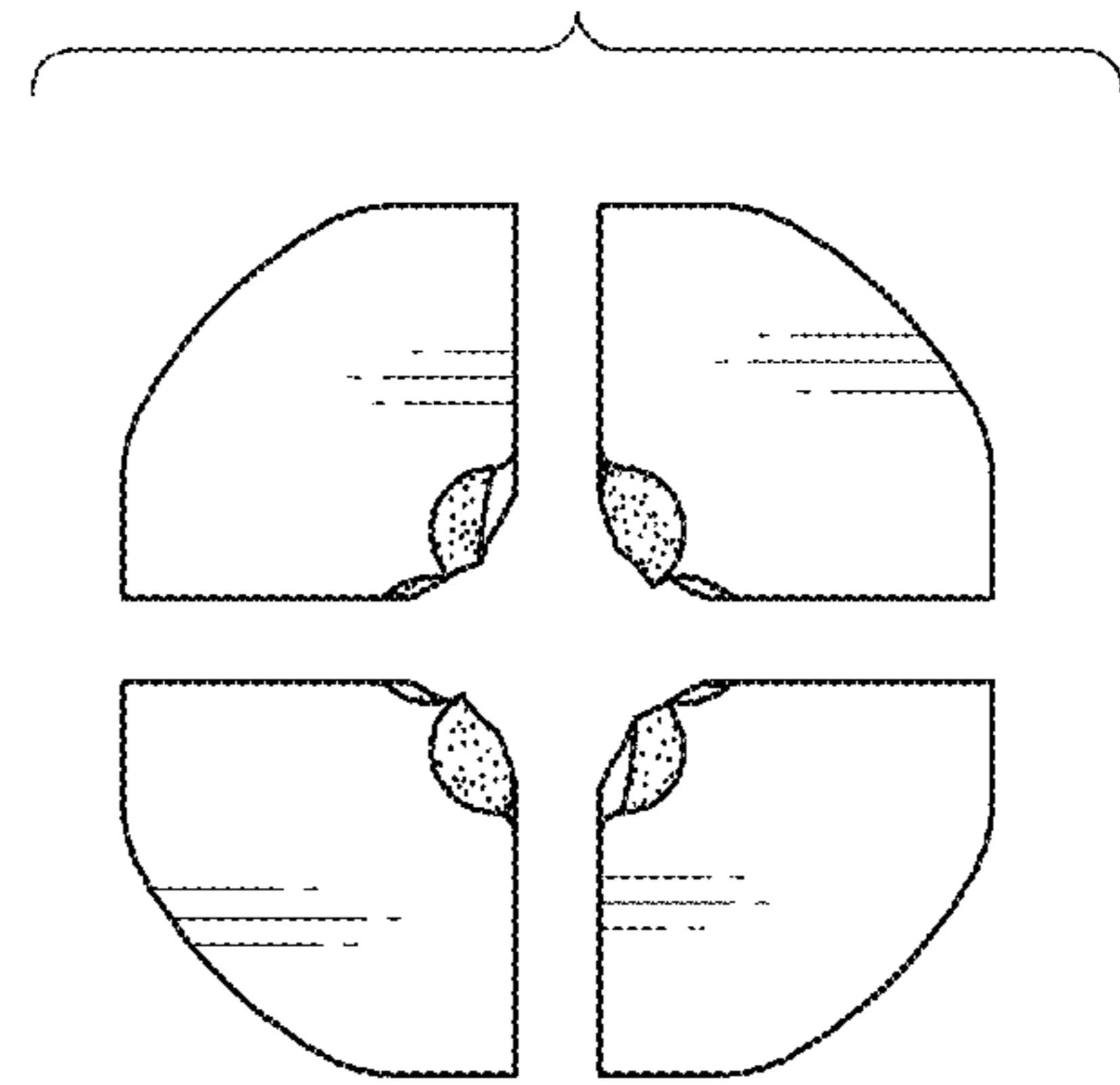
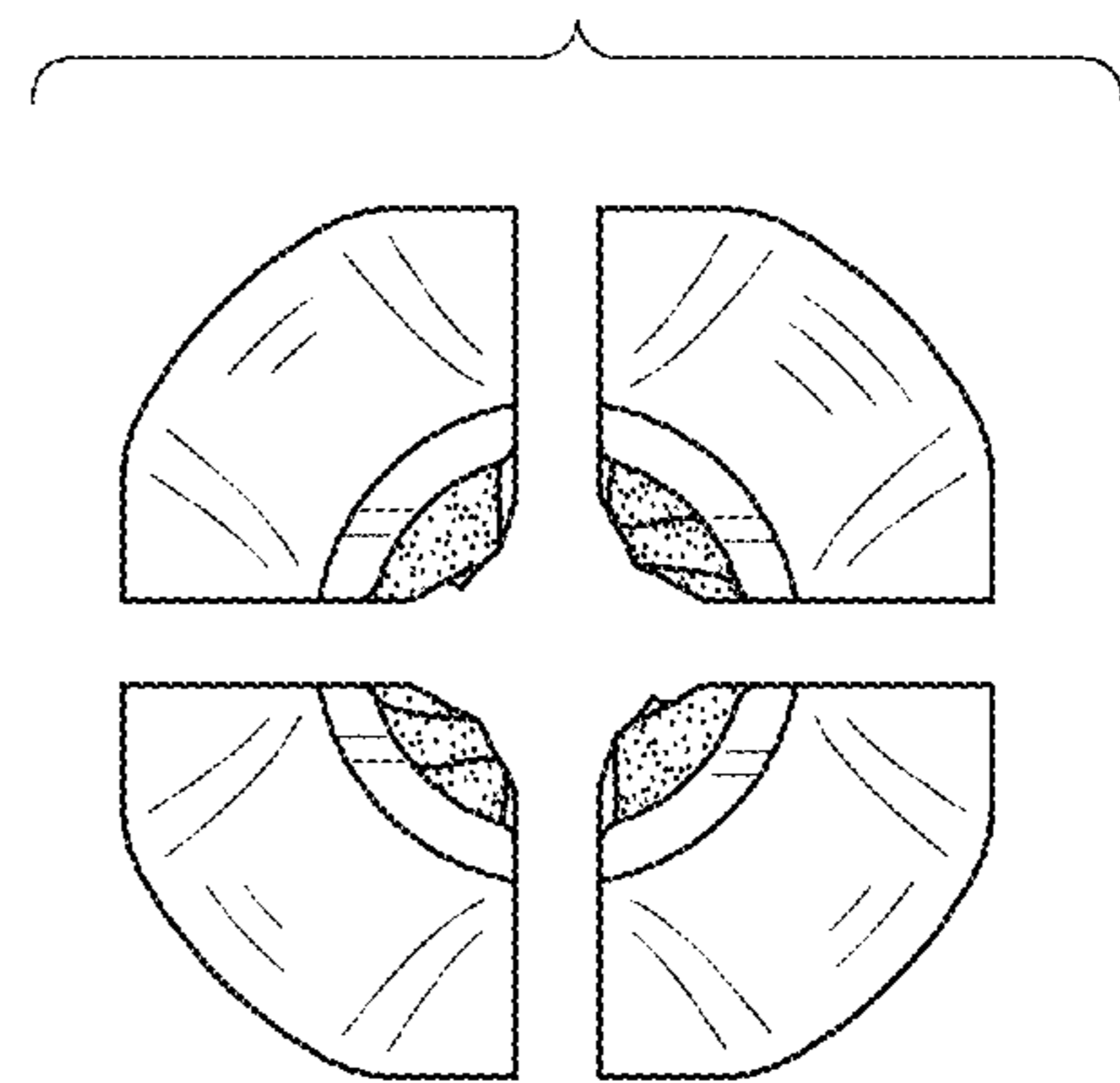
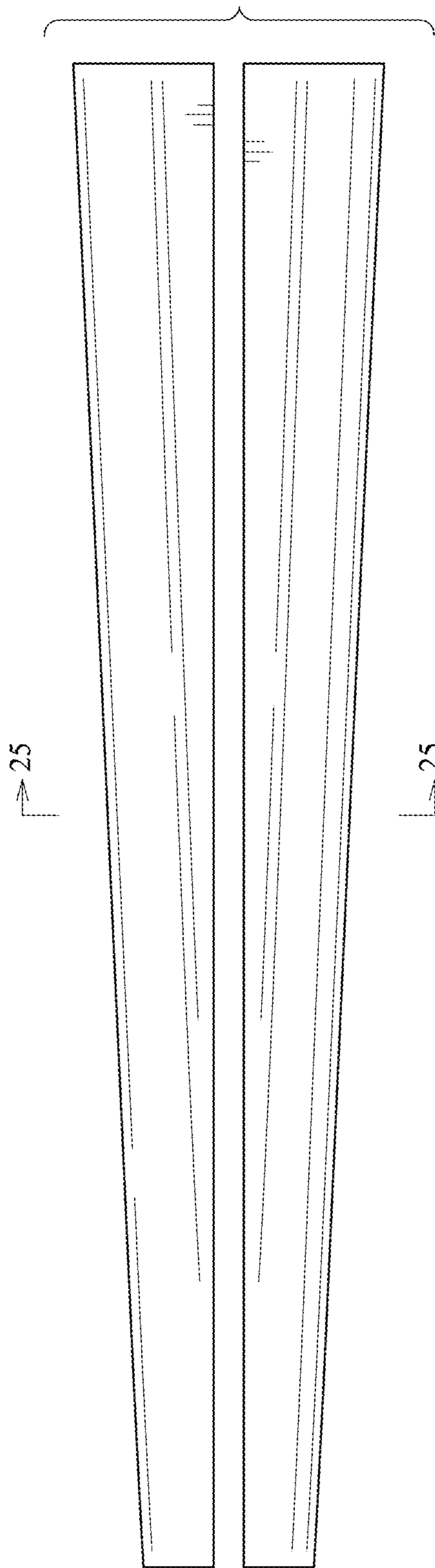


Fig. 15

Fig. 16

Fig. 17

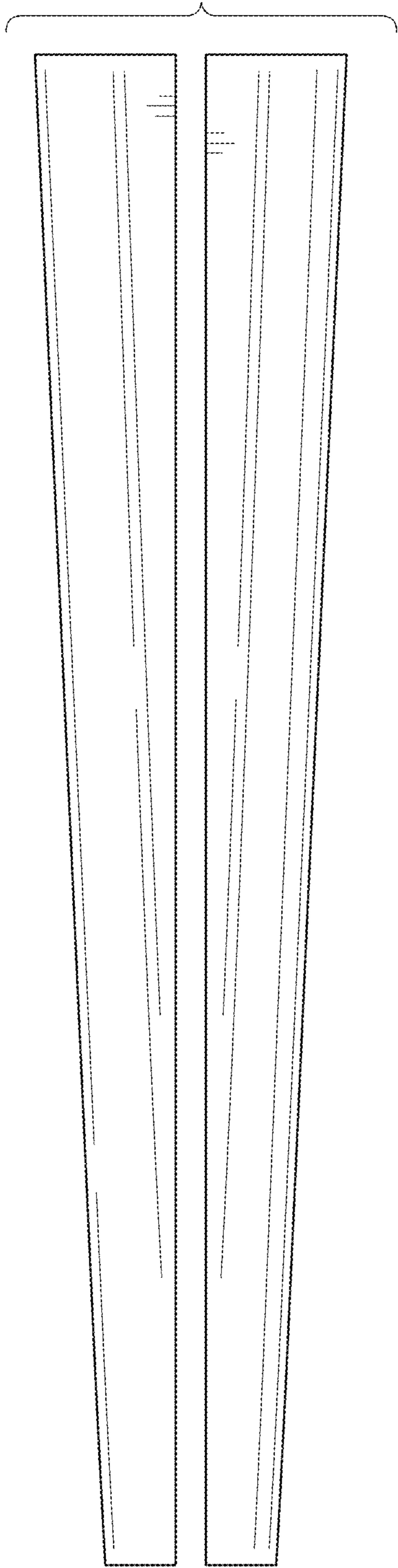


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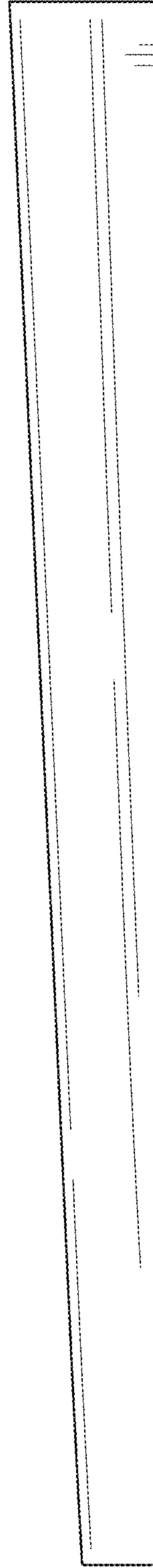


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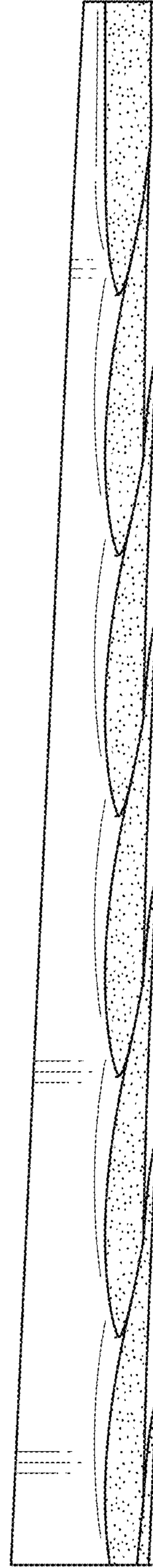


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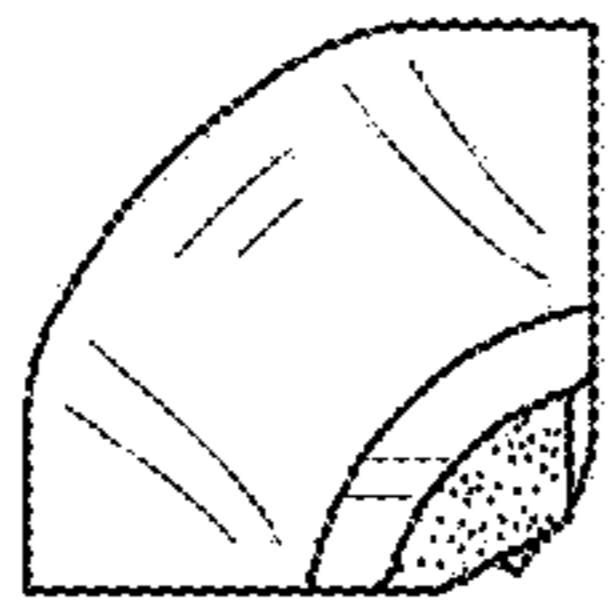


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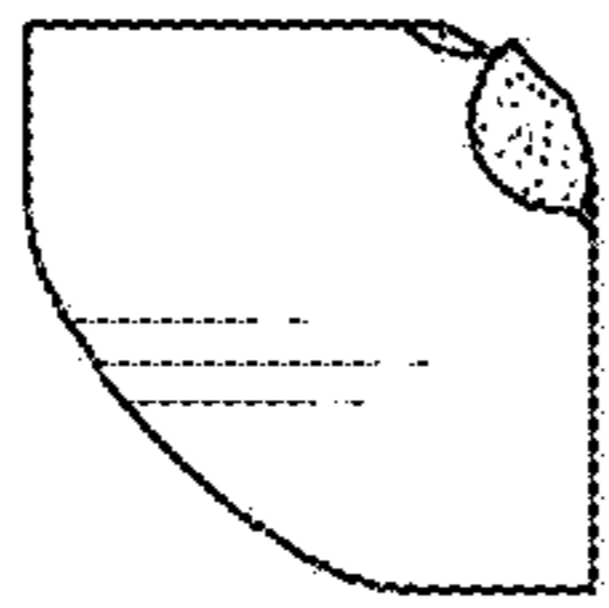


Fig. 22

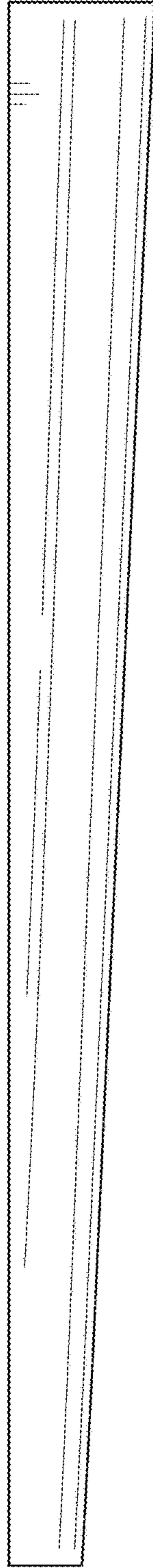


Fig. 23

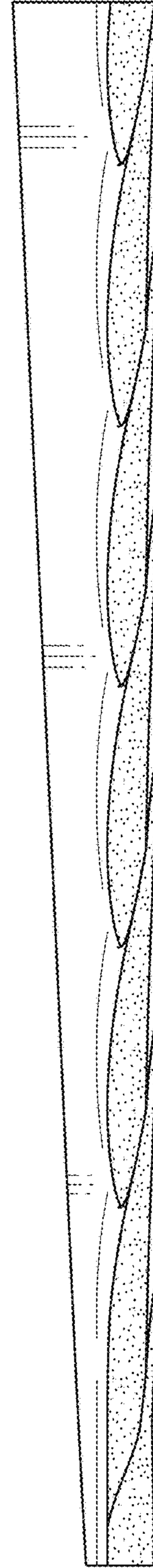


Fig. 24

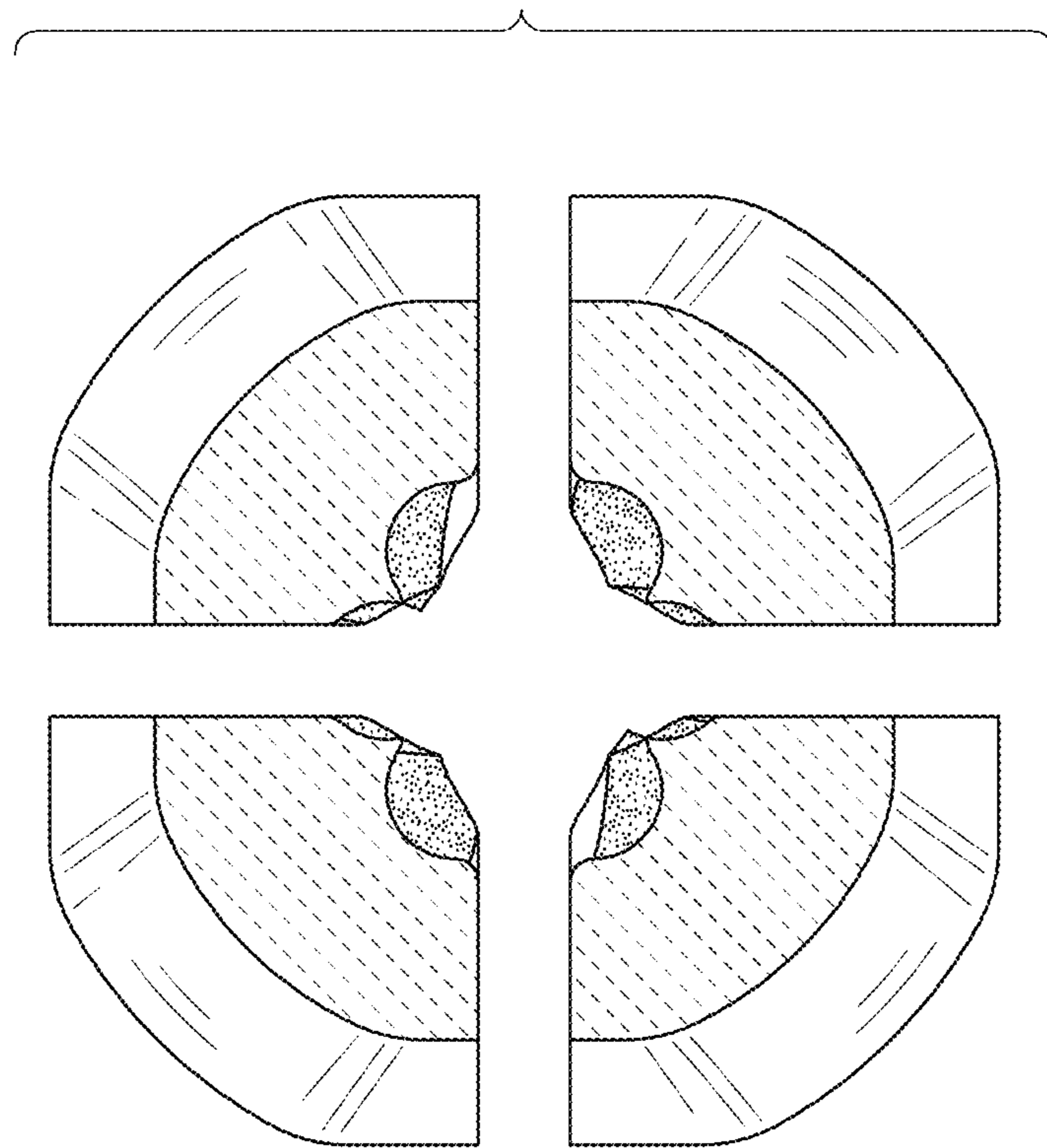


Fig. 25

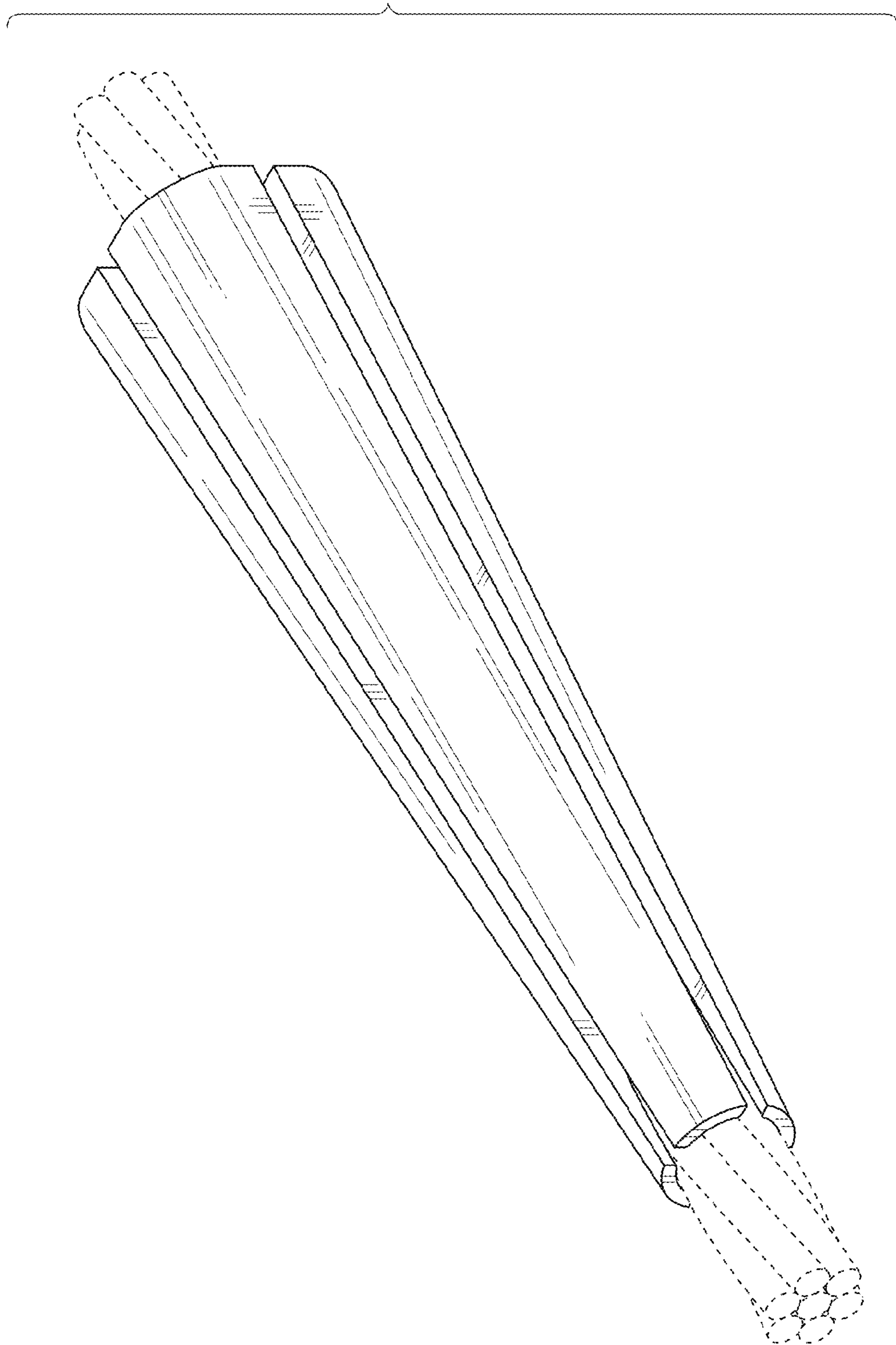


Fig. 26

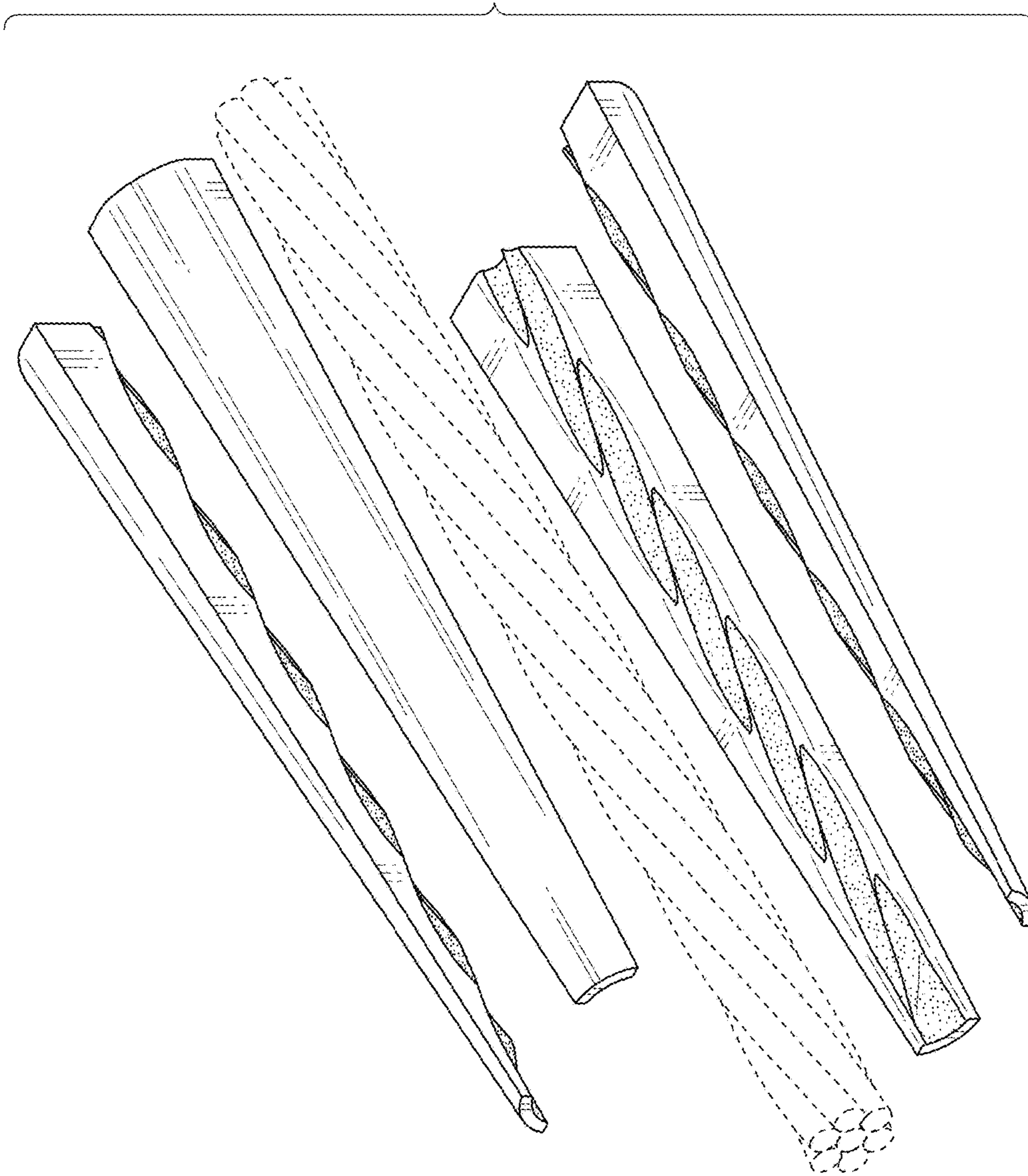


Fig. 27