US00D874082S

(12) **United States Design Patent**
Spronken

(10) **Patent No.: US D874,082 S**
(45) **Date of Patent: ** Jan. 28, 2020**

(54) **CRANE TIE-ARM**

(71) Applicant: **John Rene Spronken**, Calgary (CA)

(72) Inventor: **John Rene Spronken**, Calgary (CA)

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

(21) Appl. No.: **29/576,211**

(22) Filed: **Sep. 1, 2016**

(30) **Foreign Application Priority Data**

Aug. 29, 2016 (CA) 170237

(51) **LOC (12) Cl.** **12-05**

(52) **U.S. Cl.**
USPC **D34/33**; D34/35

(58) **Field of Classification Search**
USPC D34/33, 28, 35; 606/57; 396/428, 419; 248/187.1; D16/242

(Continued)

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File: De Bange 90 mm field cannon and breech system before 1923.jpg, source: Encyclopedie Larousee Illustree. Originally uploaded to EN Wikipedia as en: File: De Bange 90 mm field cannon and breech system before 1923.jpg by User: PHG Dec. 2, 2008, author: unknown.

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(57) **CLAIM**

The ornamental design for a crane tie-arm, as shown and described.

DESCRIPTION

FIG. **1** is a perspective view of a first variant of the design;
FIG. **2** is an end view thereof;
FIG. **3** is the other end view thereof;
FIG. **4** is one side view thereof;
FIG. **5** is the other side view thereof;
FIG. **6** is a top plan view thereof;
FIG. **7** is a bottom plan view thereof;
FIG. **8** is an exploded perspective view of the first variant of the design;
FIG. **9** is an end view thereof;
FIG. **10** is the other end view thereof;
FIG. **11** is one side view thereof;
FIG. **12** is the other side view thereof;
FIG. **13** is a top plan view thereof;
FIG. **14** is a bottom plan view thereof;
FIG. **15** is a perspective view of a second variant of the design;
FIG. **16** is an end view thereof;
FIG. **17** is the other end view thereof;
FIG. **18** is one side view thereof;
FIG. **19** is the other side view thereof;
FIG. **20** is a top plan view thereof;
FIG. **21** is a bottom plan view thereof;
FIG. **22** is an exploded perspective view of the second variant of the design;
FIG. **23** is an end view thereof;
FIG. **24** is the other end view thereof;
FIG. **25** is one side view thereof;
FIG. **26** is the other side view thereof;
FIG. **27** is a top plan view thereof; and,
FIG. **28** is a bottom plan view thereof.

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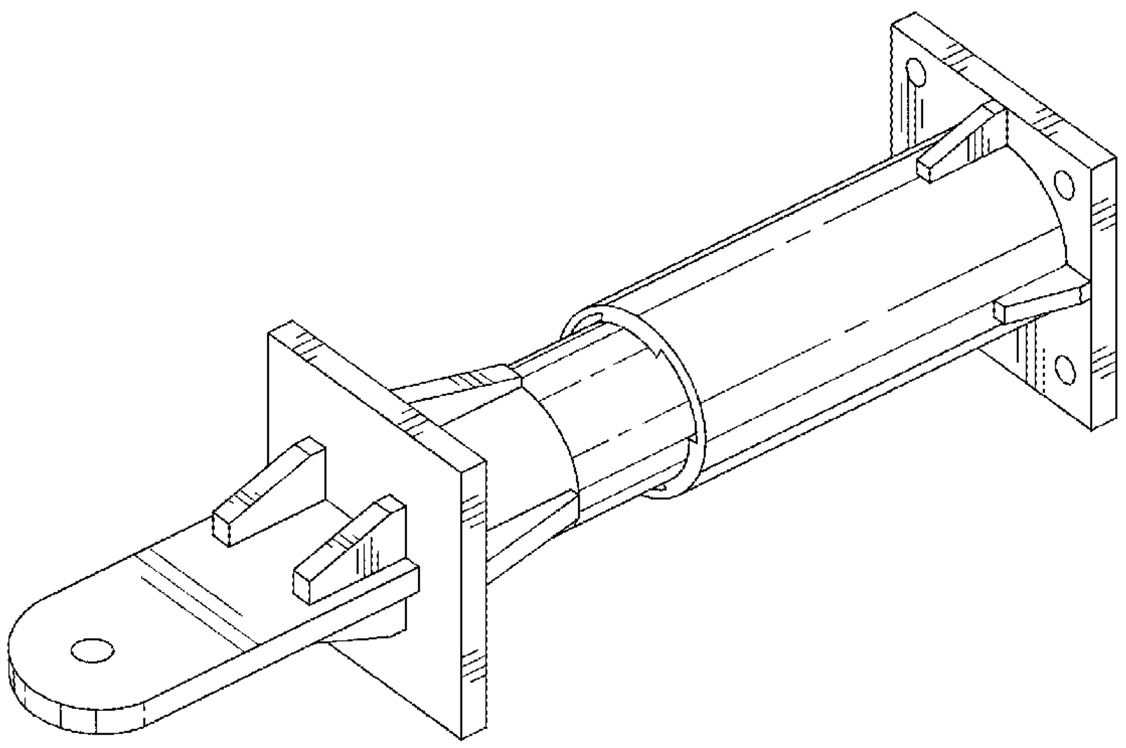

The broken lines shown in the figures are included for the purpose of illustrating portions of the crane tie arm and form no part of the claimed design.

1 Claim, 10 Drawing Sheets

(58) **Field of Classification Search**
CPC B66C 23/701; B66C 23/54; B66C 13/12; B66C 13/46; B66C 23/706; B66C 23/04; B66C 23/342; B66C 23/28; B66C 23/62; B66F 9/0655; B66F 11/046; B66F 11/048; B65F 3/041
See application file for complete search history.

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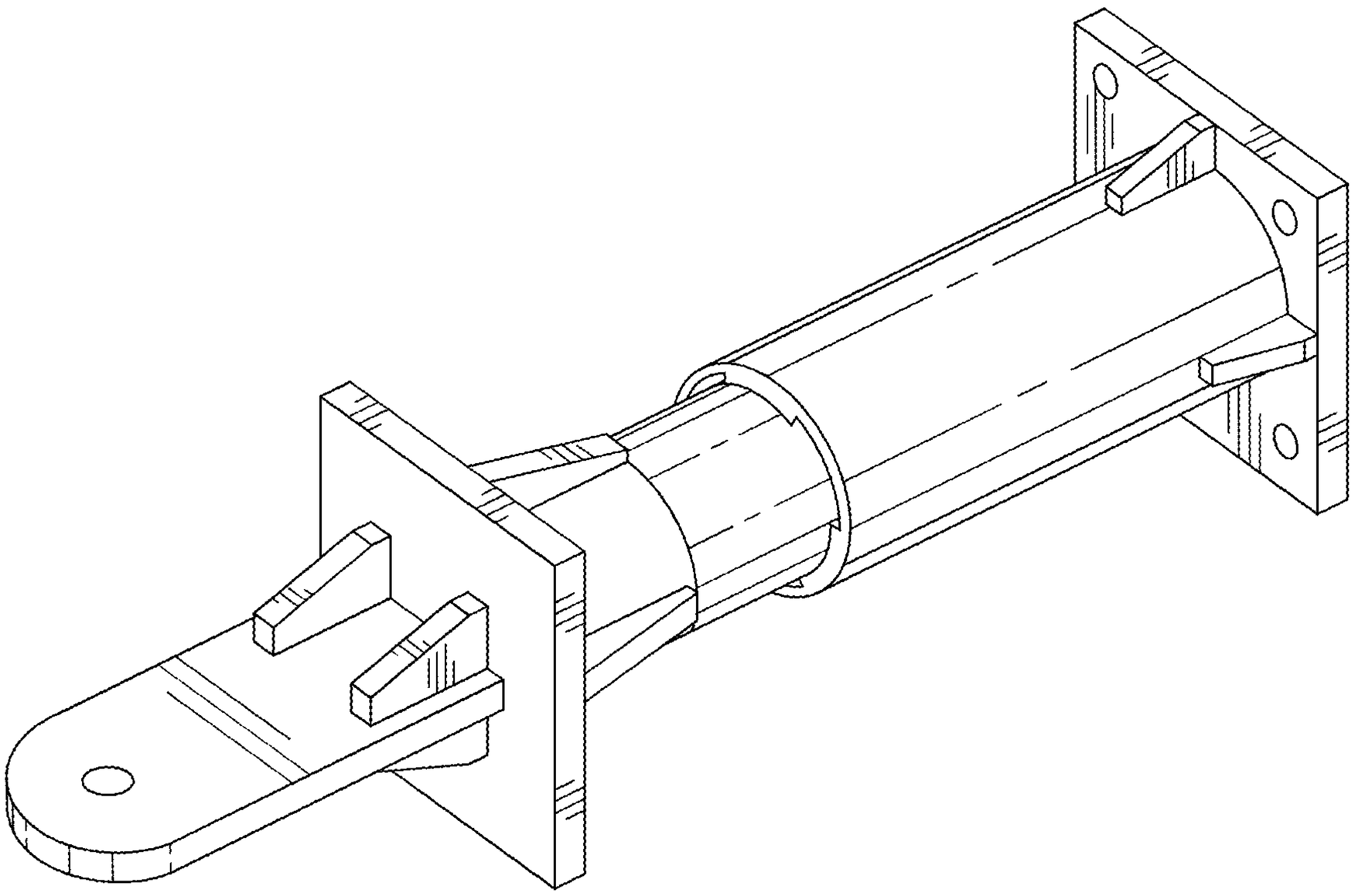


FIG. 1

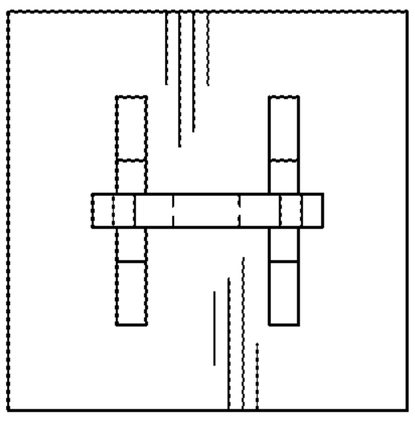


FIG. 2

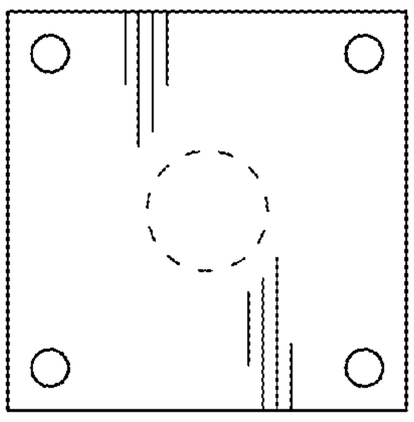
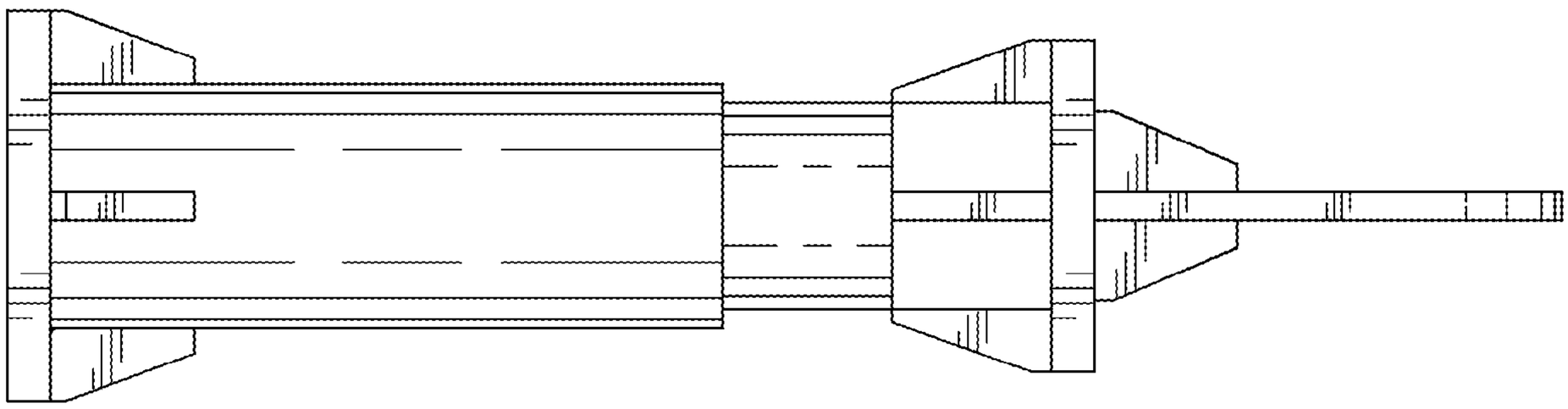


FIG. 3



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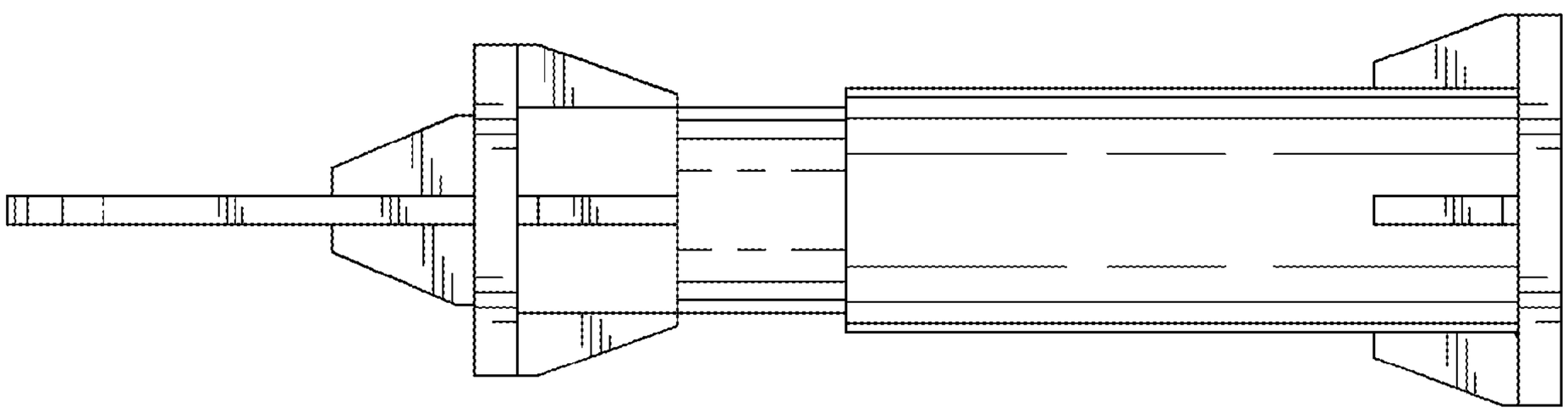

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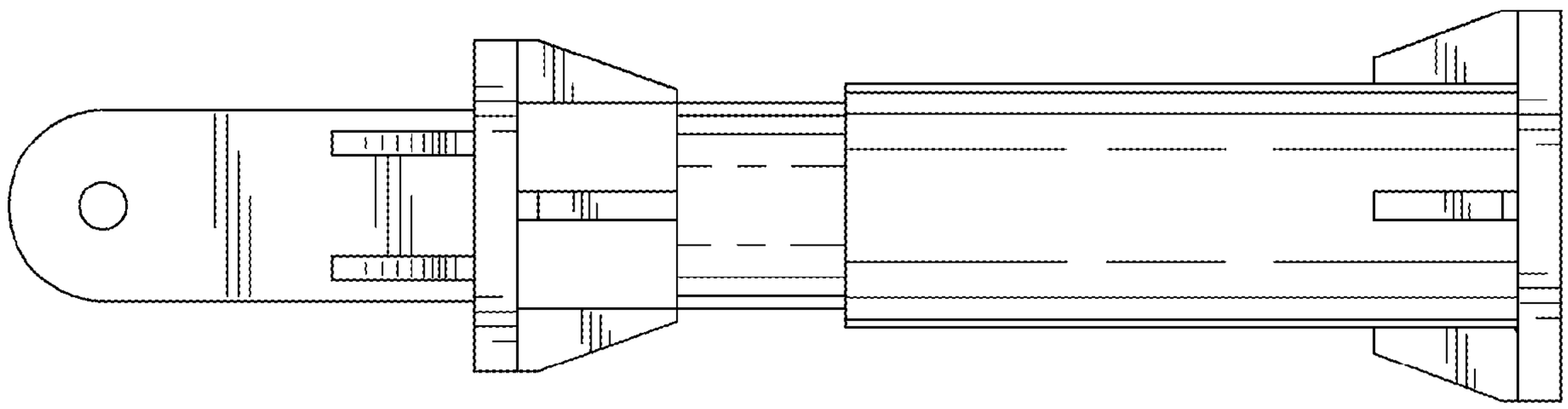

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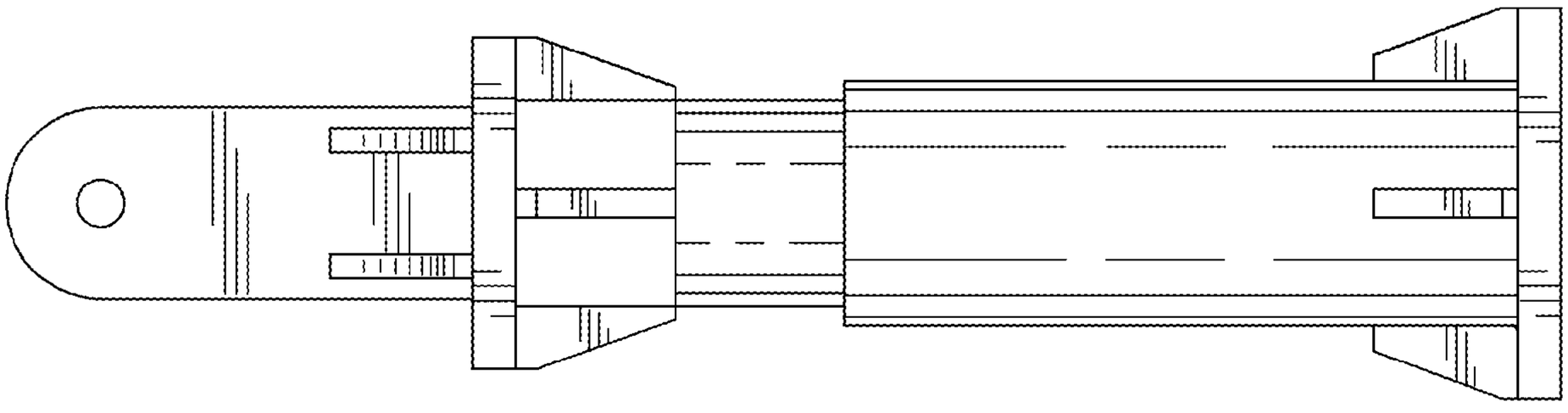

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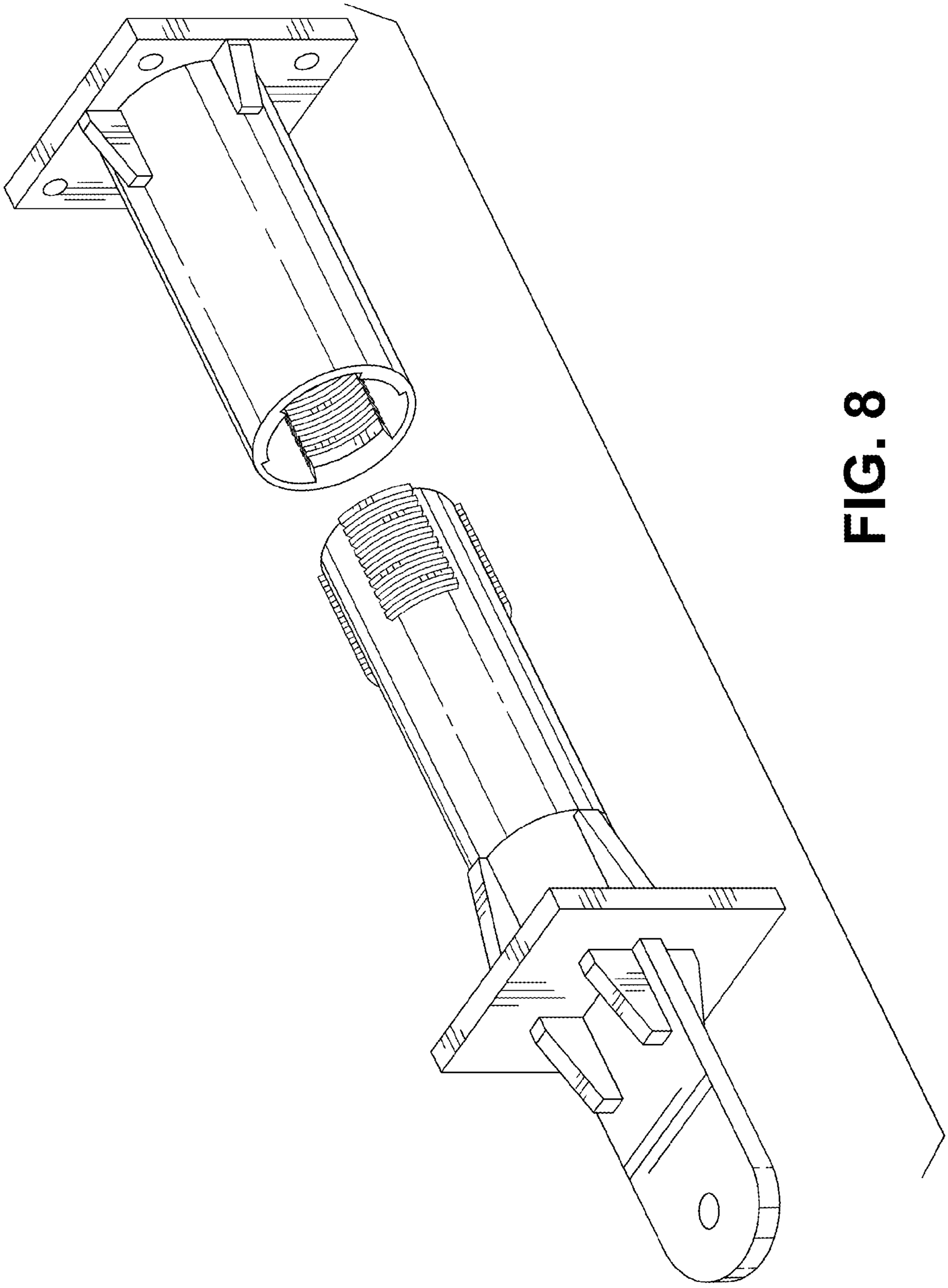

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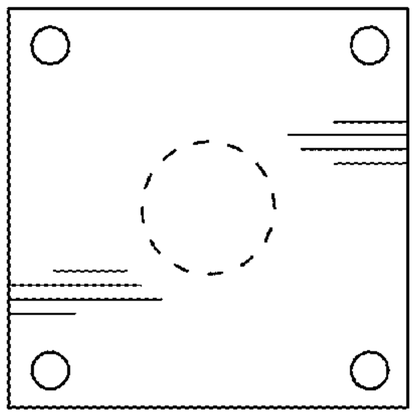

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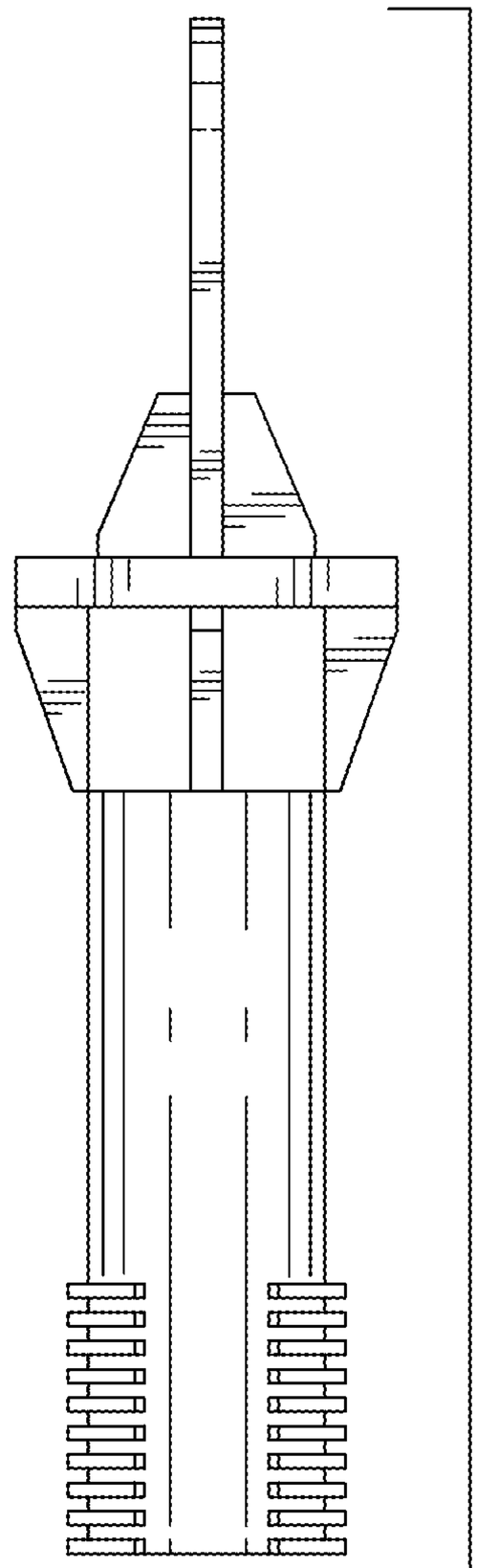

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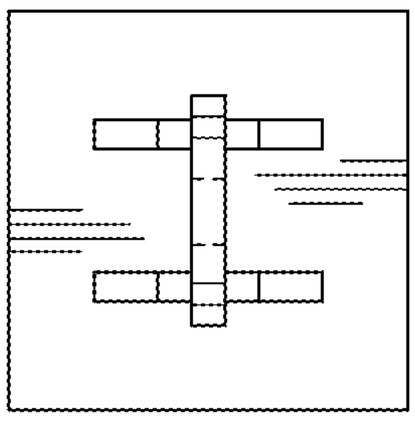

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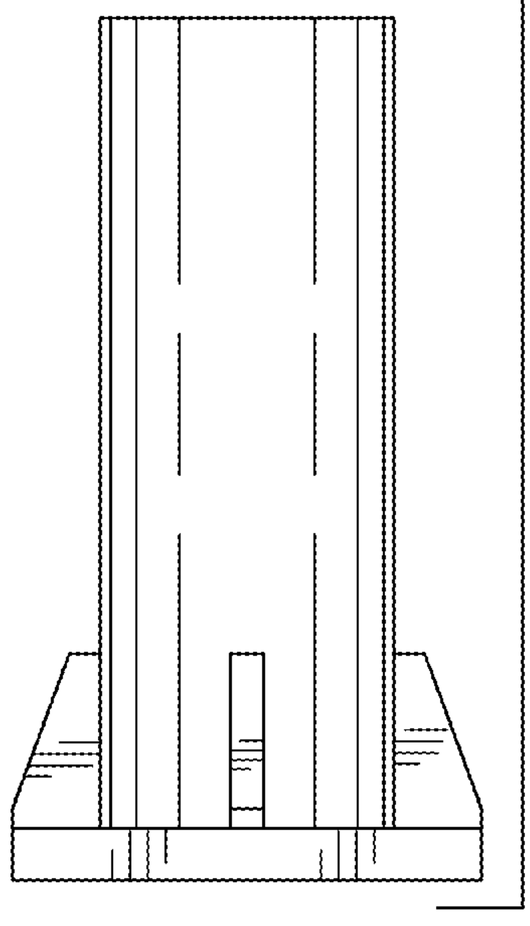

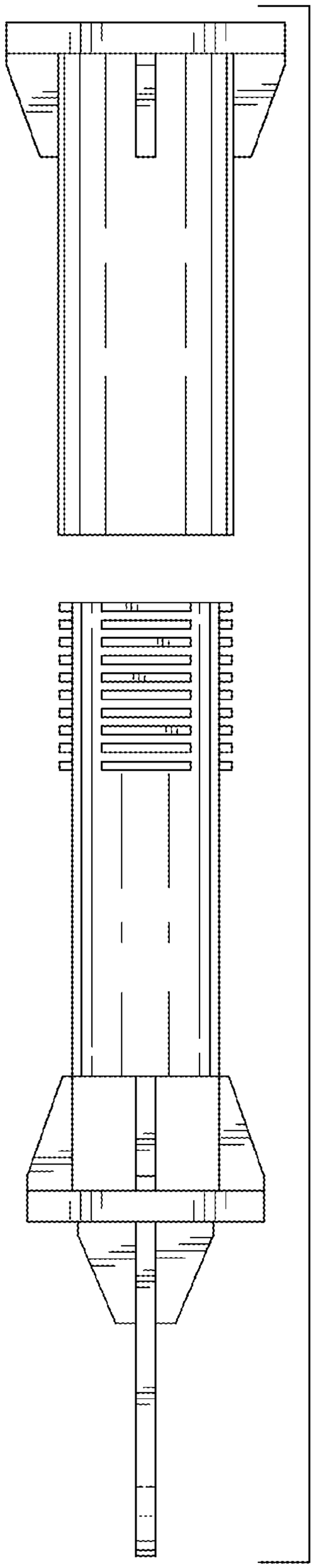

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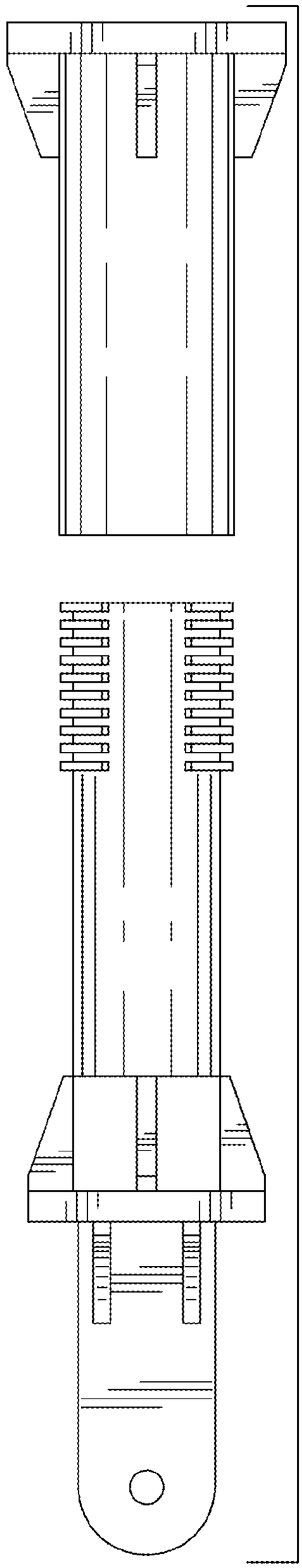
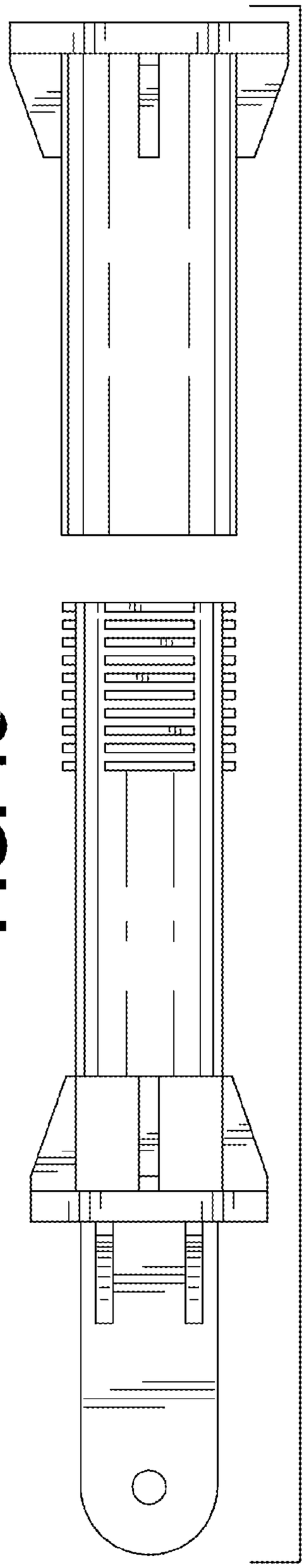


FIG. 13



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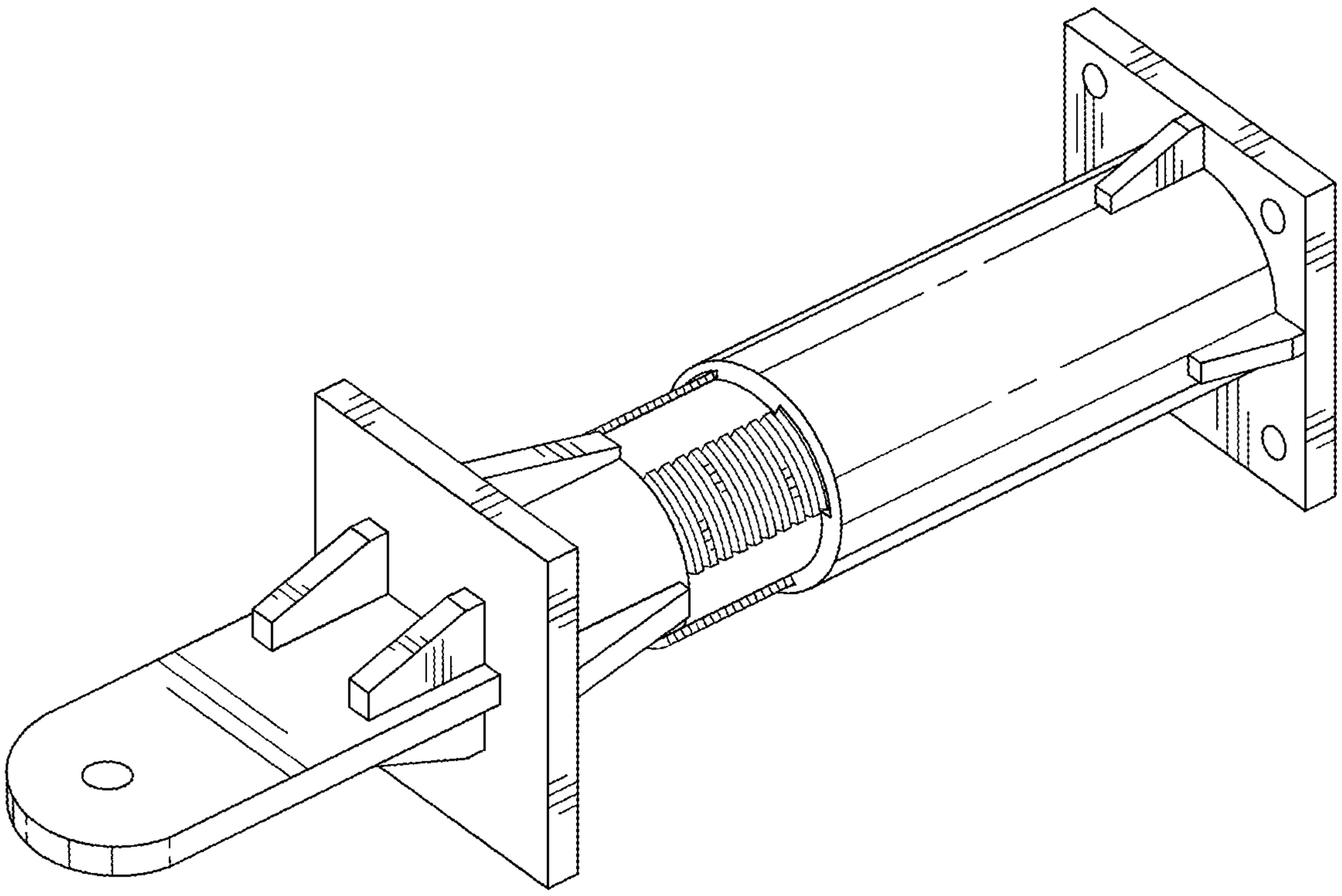

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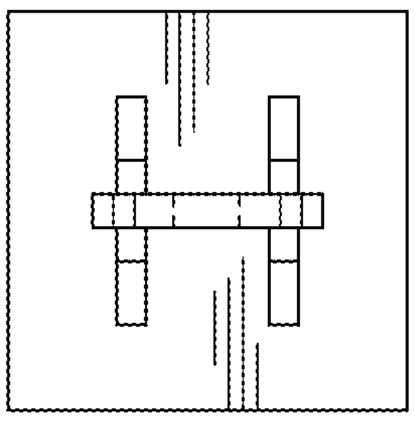
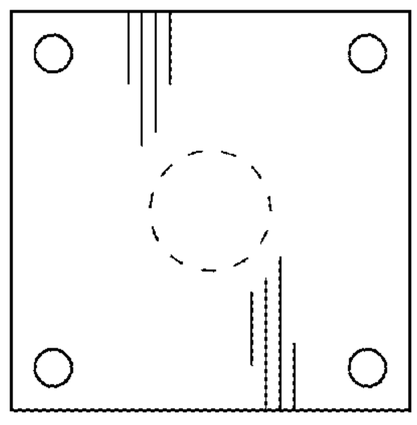


FIG. 16



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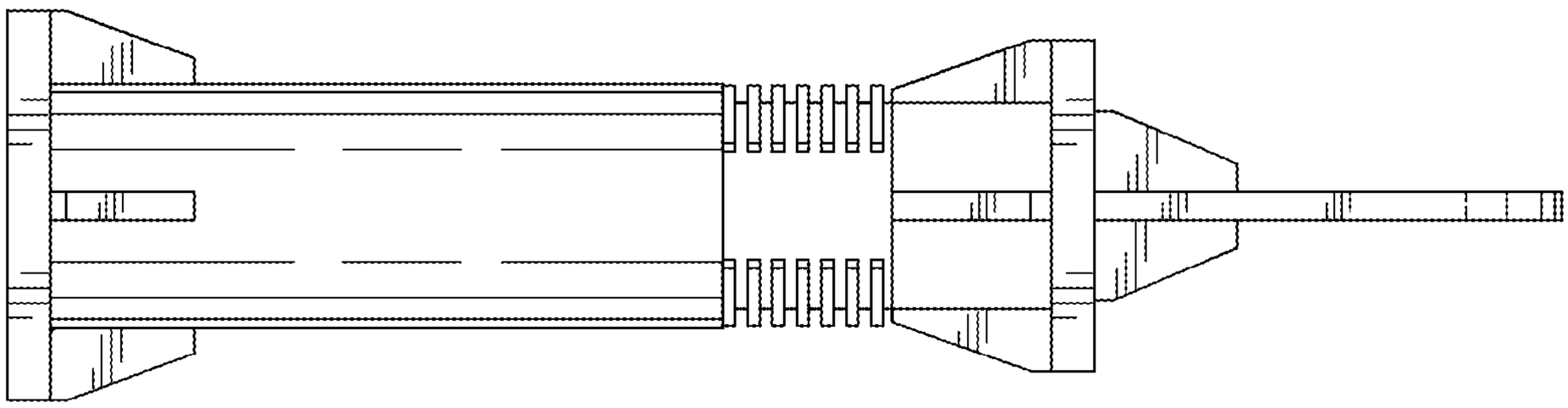

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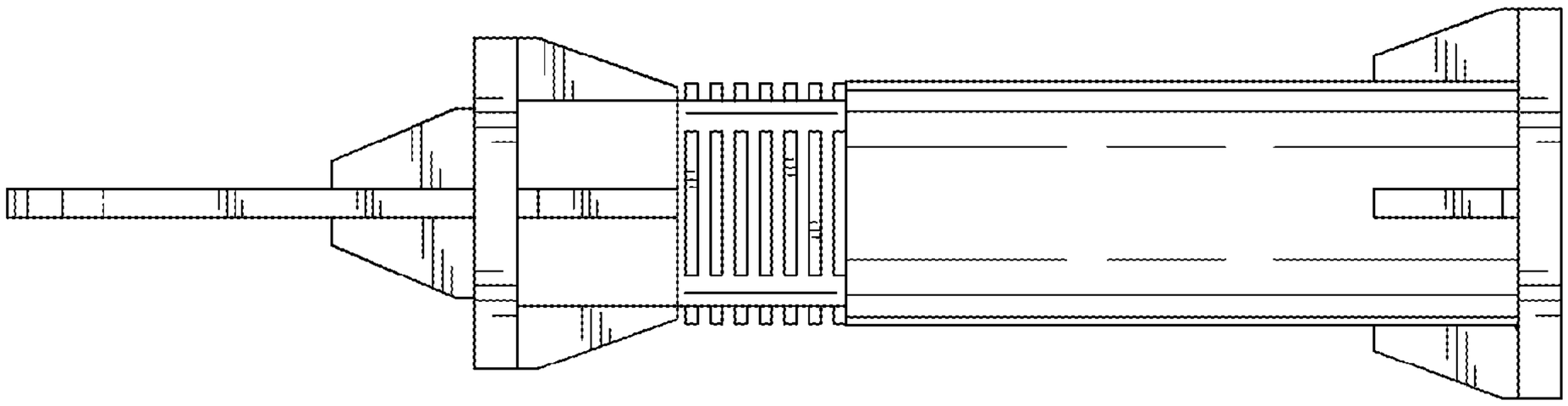
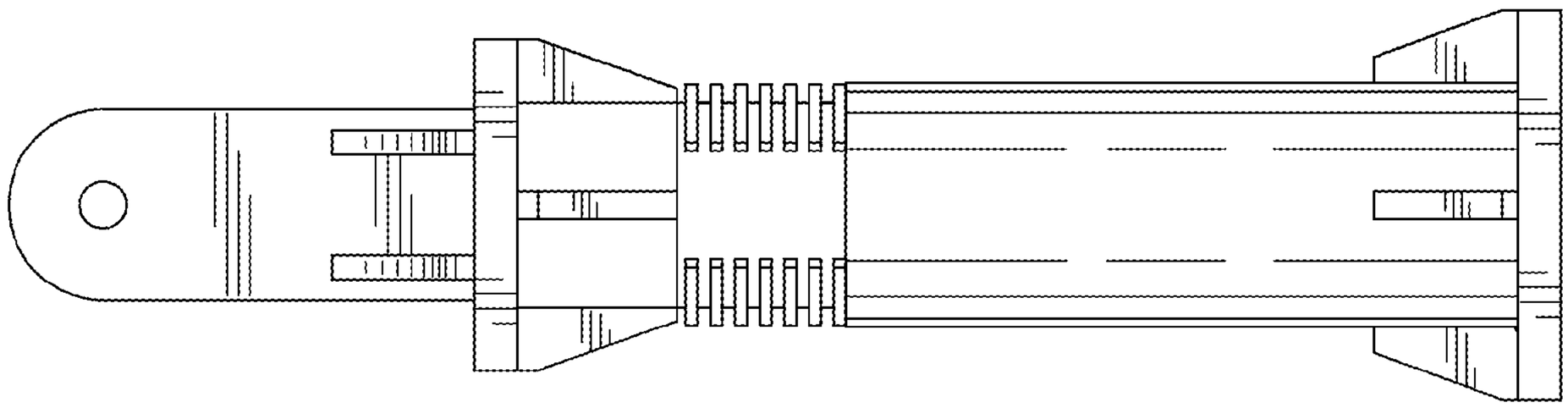


FIG. 19



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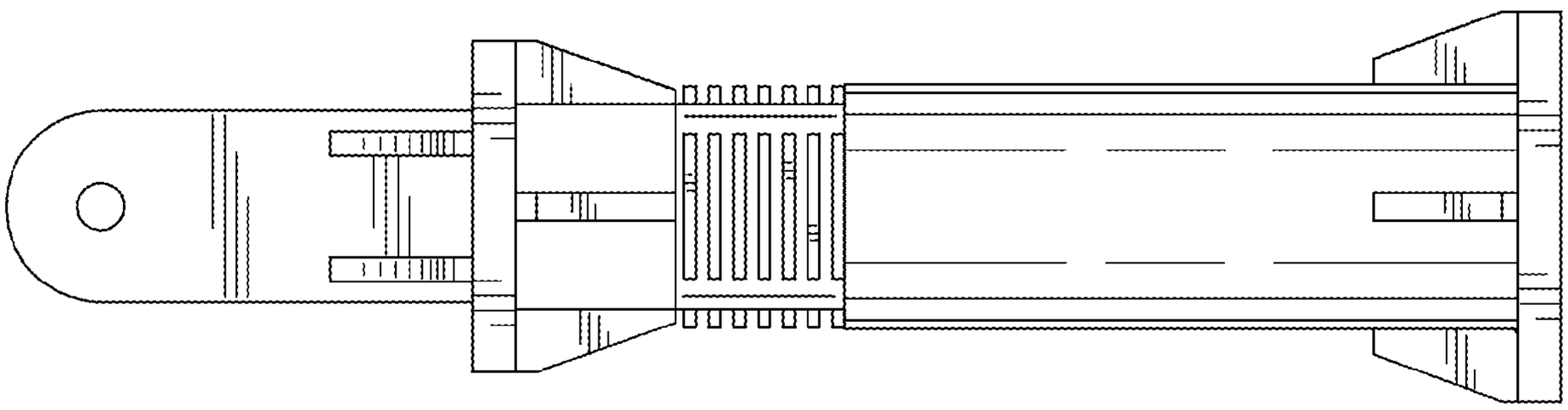

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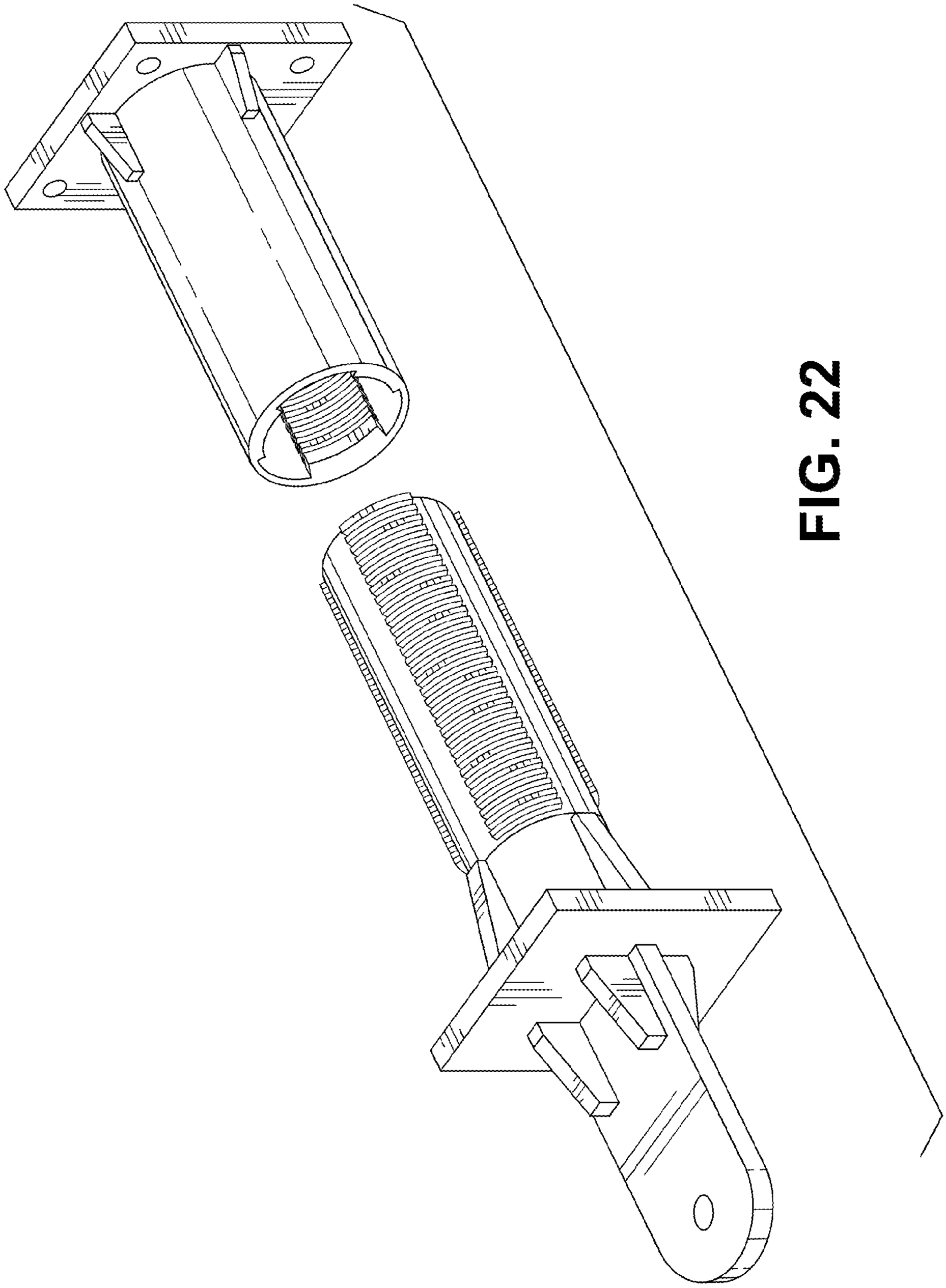

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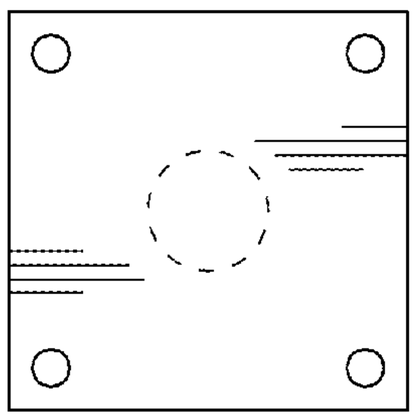

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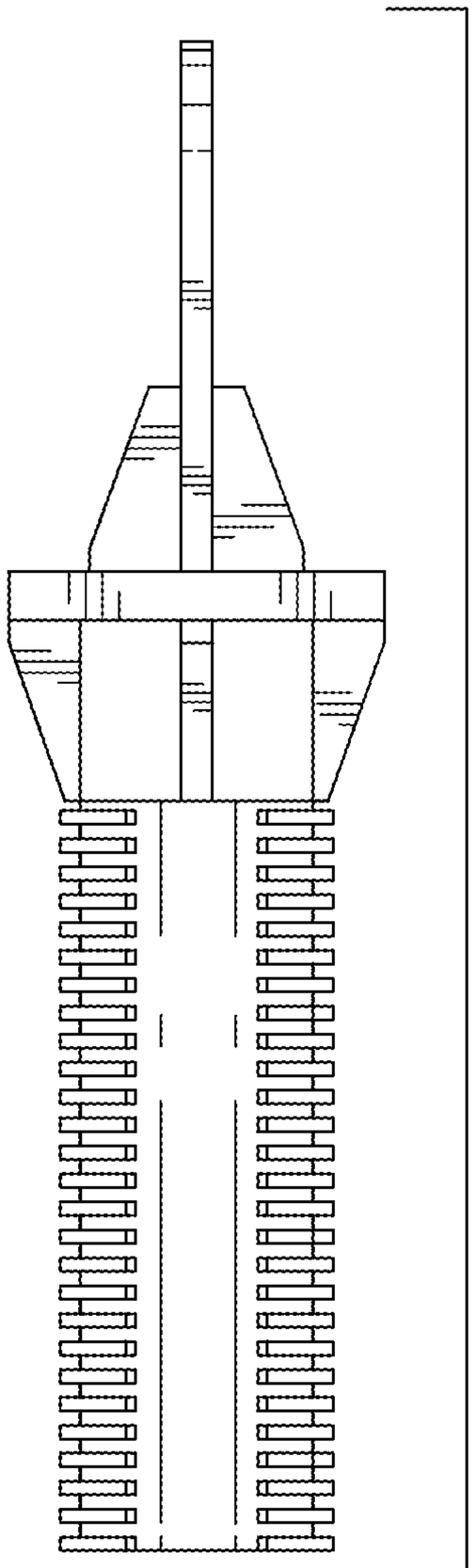

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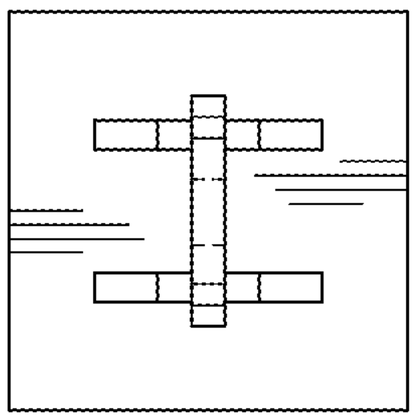

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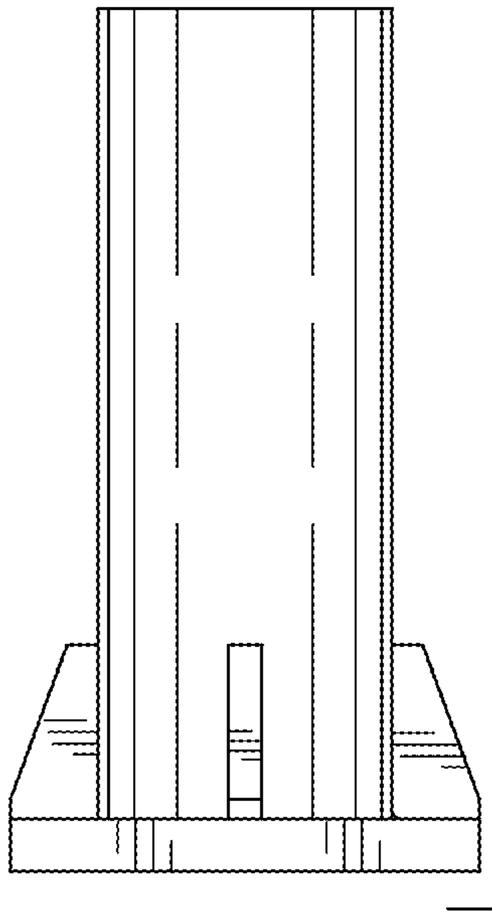

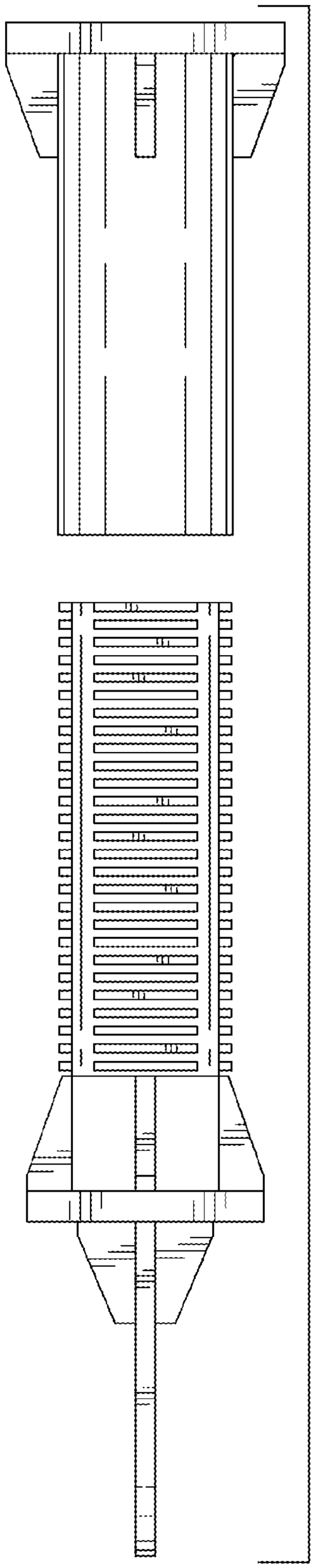

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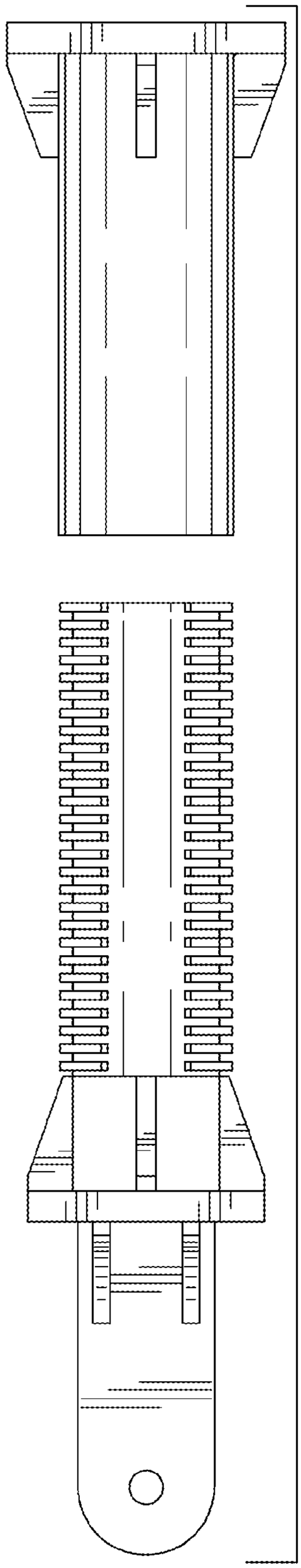

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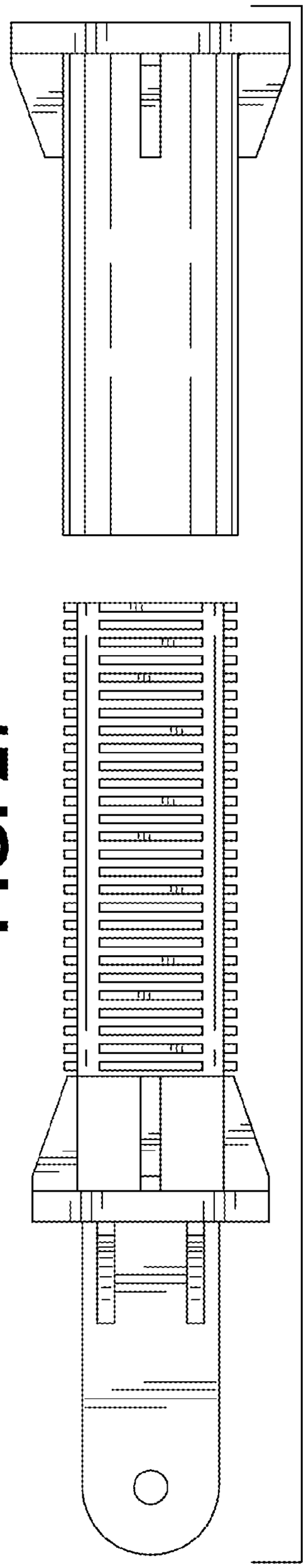

FIG. 28