



US00D988481S

(12) **United States Design Patent** (10) **Patent No.:** **US D988,481 S**
Nagashima et al. (45) **Date of Patent:** **** Jun. 6, 2023**

(54) **MECHANICAL JOINT**

OTHER PUBLICATIONS

(71) Applicant: **KUBOTA CORPORATION**, Osaka (JP)
(72) Inventors: **Takeshi Nagashima**, Ichikawa (JP);
Hiroyuki Eguchi, Ichikawa (JP);
Nobuhito Tahara, Ichikawa (JP); **Daiki Kachi**, Ichikawa (JP)

Laqnican Joint Mechanical Joints for Steel Pipe Piles and Steel Pipe Sheet Plies (Kubota corporation) Product Brochure, Published May 2022; Visited Online Feb. 10, 2023; https://www.kubota.com/products/materials/support/pdf/Laqnican_Joint2022-2.pdf (Year: 2022).*

Primary Examiner — Amy C Wierenga

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

(57) **CLAIM**

(21) Appl. No.: **35/514,438**

The ornamental design for a mechanical joint, as shown and described.

(22) Filed: **Dec. 15, 2021**

DESCRIPTION

(80) **Hague Agreement Data**

Int. Filing Date: **Dec. 15, 2021**
Int. Reg. No.: **DM/219806**
Int. Reg. Date: **Dec. 15, 2021**
Int. Reg. Pub. Date: **Jun. 17, 2022**

- 1. Mechanical joint
- 1.1 : Perspective
- 1.2 : Front
- 1.3 : Right
- 1.4 : Top
- 1.5 : Bottom
- 1.6 : Cross sectional
- 1.7 : Cross sectional
- 1.8 : Cross sectional
- 1.9 : Cross sectional
- 1.10 : Cross sectional
- 1.11 : Cross sectional
- 1.12 : Front
- 1.13 : Top
- 1.14 : Cross sectional
- 1.15 : Cross sectional
- 1.16 : Cross sectional
- 1.17 : Cross sectional
- 1.18 : Cross sectional
- 1.19 : Cross sectional
- 1.20 : Cross sectional
- 1.21 : Cross sectional
- 1.22 : Cross sectional
- 1.23 : Cross sectional

(51) **LOC (14) Cl.** **23-01**

(52) **U.S. Cl.**
USPC **D23/266; D23/262**

(58) **Field of Classification Search**
USPC **D23/259, 262, 264–266, 269; D8/331, D8/339, 347, 354, 382–383, 396**
(Continued)

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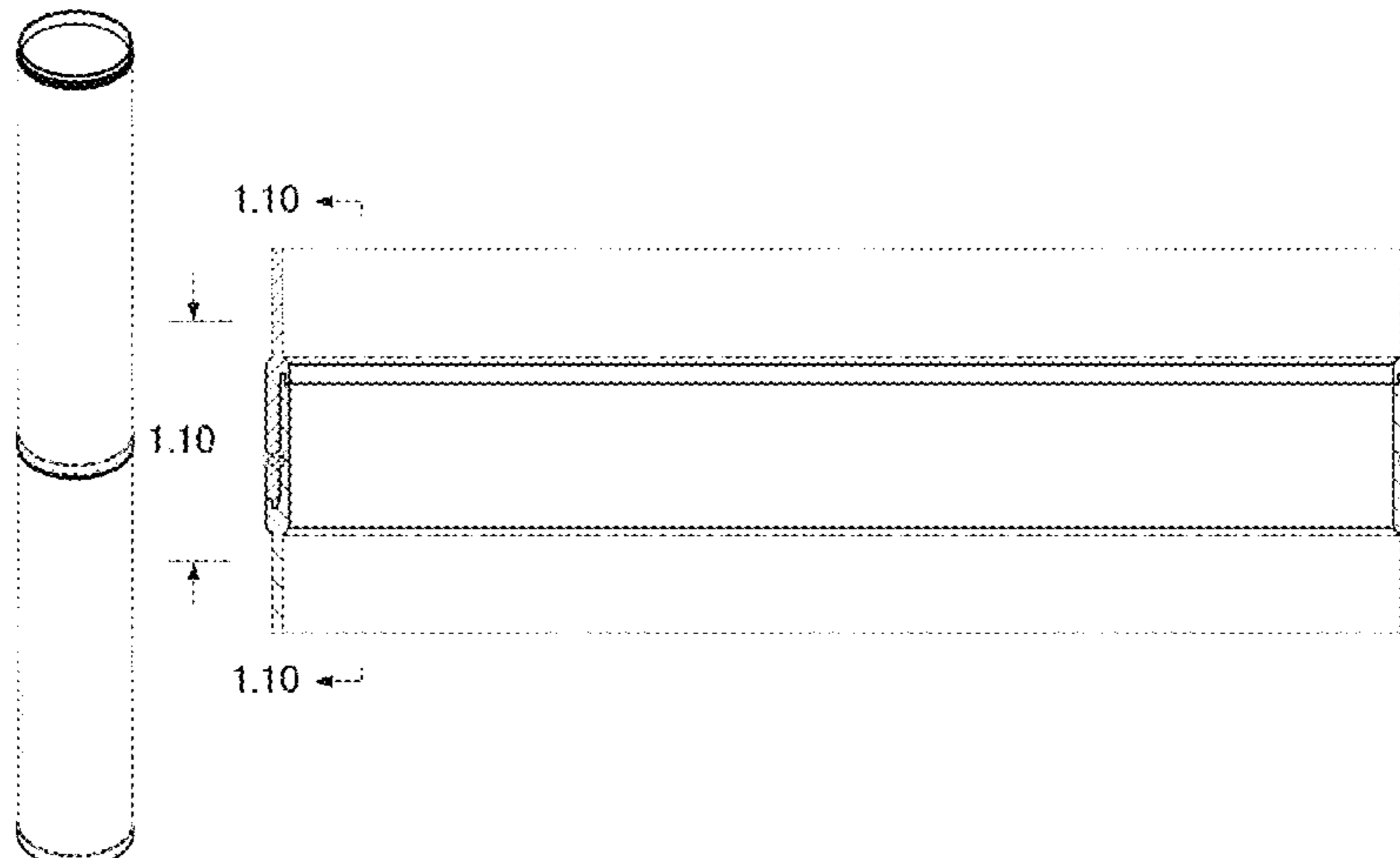
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(Continued)

The evenly spaced broken lines shown in the drawings depict portions of the mechanical joint and form no part of

(Continued)



the claim. The long-dash short-dash broken lines indicates cutoff boundaries for enlarged detail portion views and form no part of the claim.

The back view is omitted because it is a mirror image of the front view; the left side view is omitted because it is identical to the right side view; reproduction 1.12 is the front view showing a constituent member of the mechanical joint; reproduction 1.13 is the top view showing a constituent member of the mechanical joint; reproduction 1.6 is a cross-sectional view taken along line 1.6-1.6 of reproduction 1.4; reproduction 1.7 is a cross-sectional view taken along line 1.7-1.7 of reproduction 1.4; reproduction 1.8 is a partially enlarged cross-sectional view of 1.8-1.8 region in reproduction 1.6 ; reproduction 1.9 is a partially enlarged cross-sectional view of 1.9-1.9 region in reproduction 1.7; reproduction 1.10 is a partially enlarged cross-sectional view of 1.10-1.10 region in reproduction 1.8; reproduction 1.11 is a partially enlarged cross-sectional view of 1.11-1.11 region in reproduction 1.9; reproduction 1.14 is a cross-sectional view taken along line 1.14-1.14 of reproduction 1.13; reproduction 1.15 is a cross-sectional view taken along line 1.15-1.15 of reproduction 1.13; reproduction 1.16 is a partially enlarged cross-sectional view of 1.16-1.16 region in reproduction 1.14.; Reproduction 1.17 is a partially enlarged cross-sectional view of 1.17-1.17 region in reproduction 1.14; reproduction 1.18 is a partially enlarged cross-sectional view of 1.18-1.18 region in reproduction 1.15; reproduction 1.19 is a partially enlarged cross-sectional view of 1.19-1.19 region in reproduction 1.15; reproduction 1.20 is a partially enlarged cross-sectional view of 1.20-1.20 region in reproduction 1.16; reproduction 1.21 is a partially enlarged cross-sectional view of 1.21-1.21 region in reproduction 1.17; reproduction 1.22 is a partially enlarged cross-

sectional view of 1.22-1.22 region in reproduction 1.18; reproduction 1.23 is a partially enlarged cross-sectional view of 1.23-1.23 region in reproduction 1.19.

1 Claim, 23 Drawing Sheets

(58) **Field of Classification Search**

CPC F16L 21/002; F16L 19/041; E03C 1/02
See application file for complete search history.

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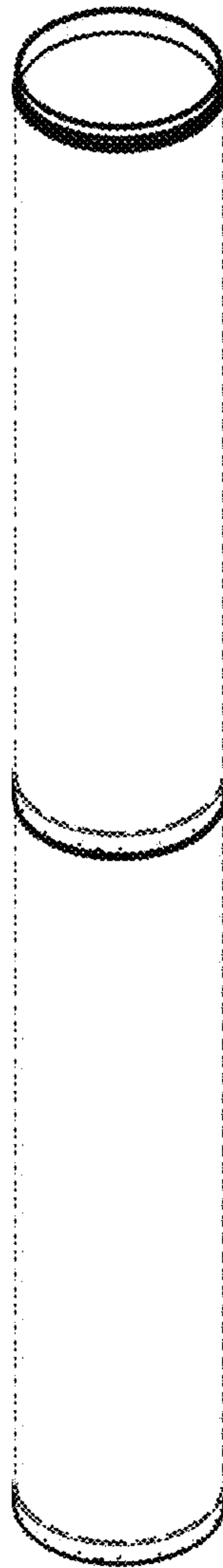
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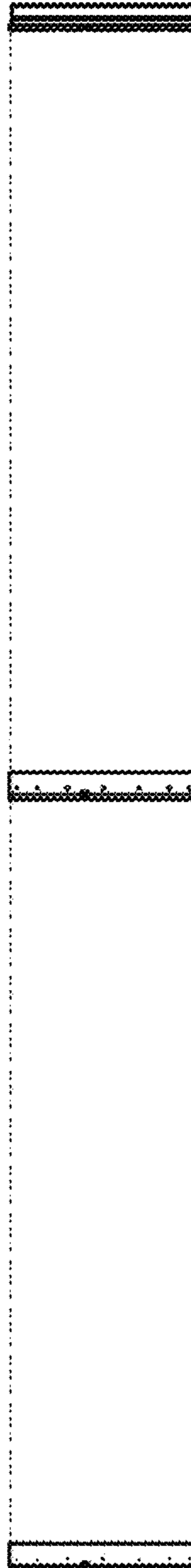
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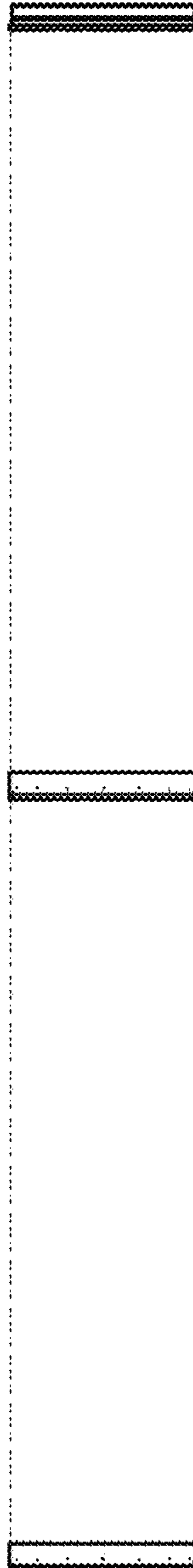
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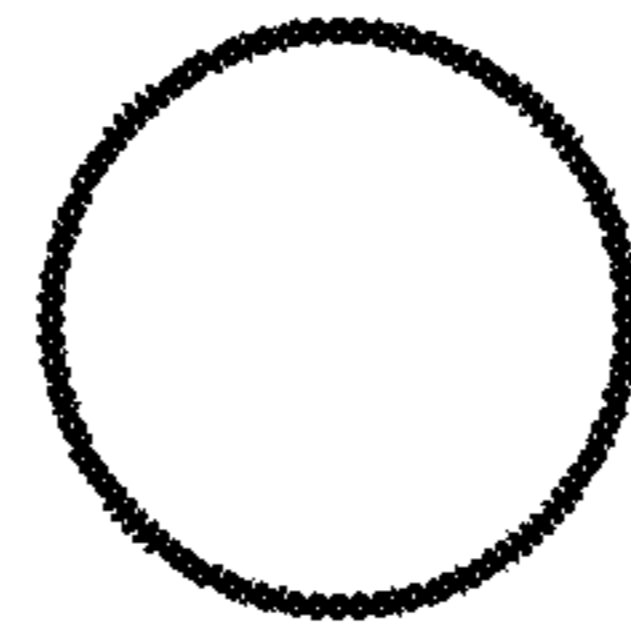
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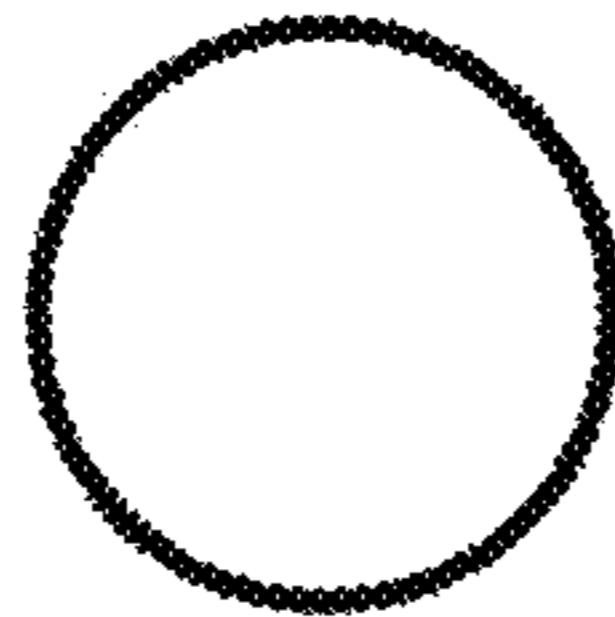
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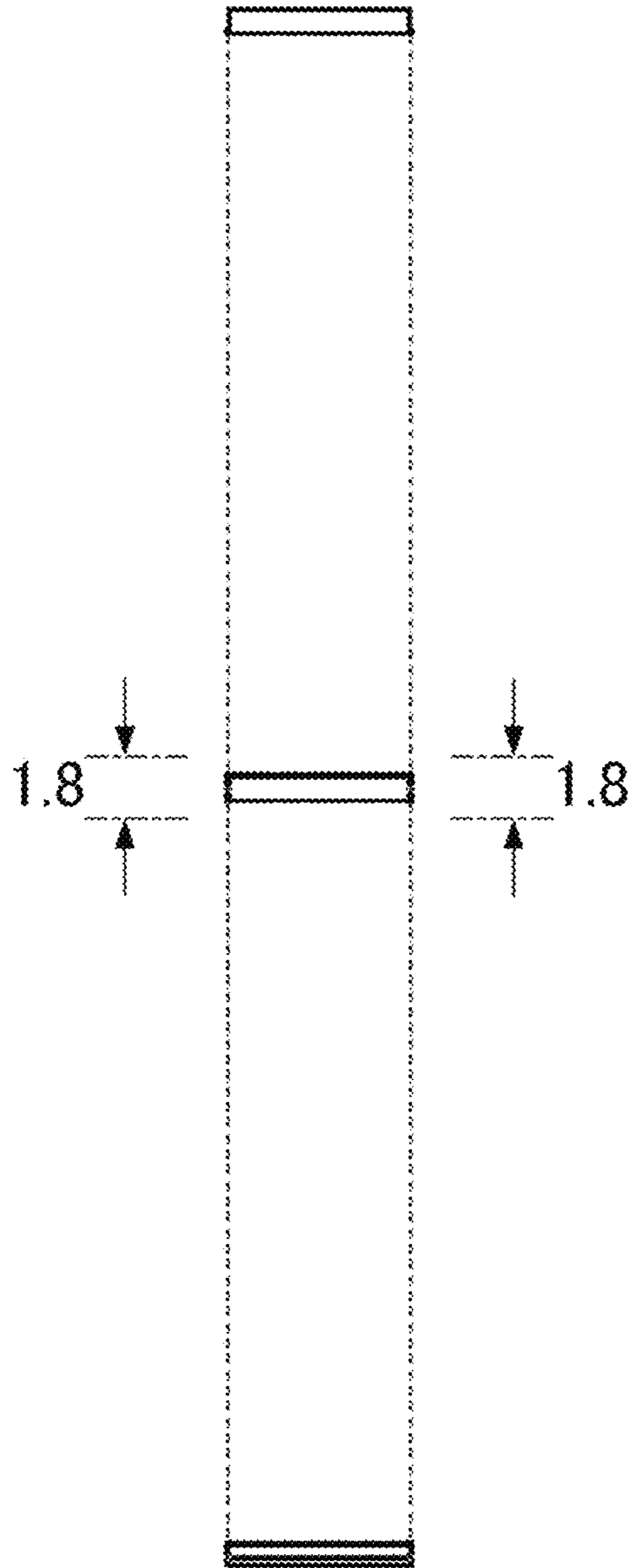
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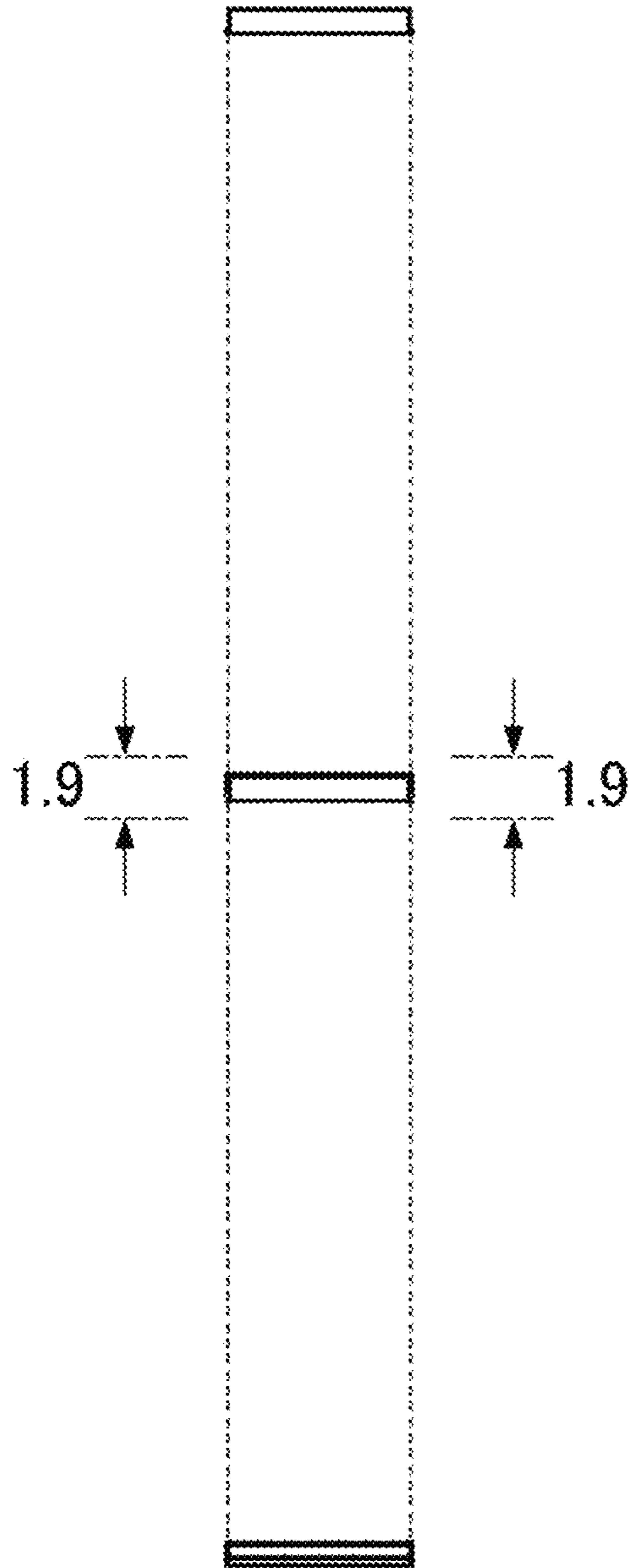
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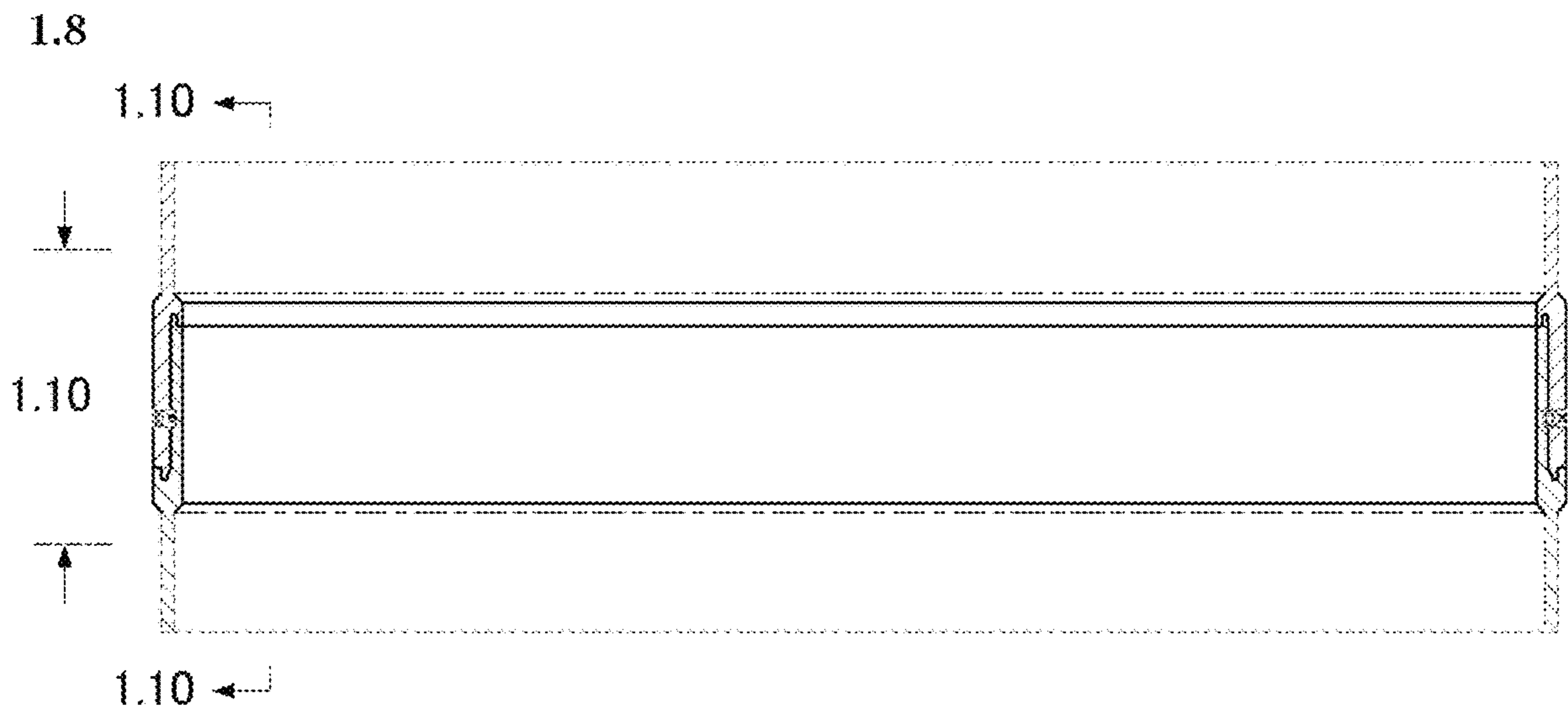


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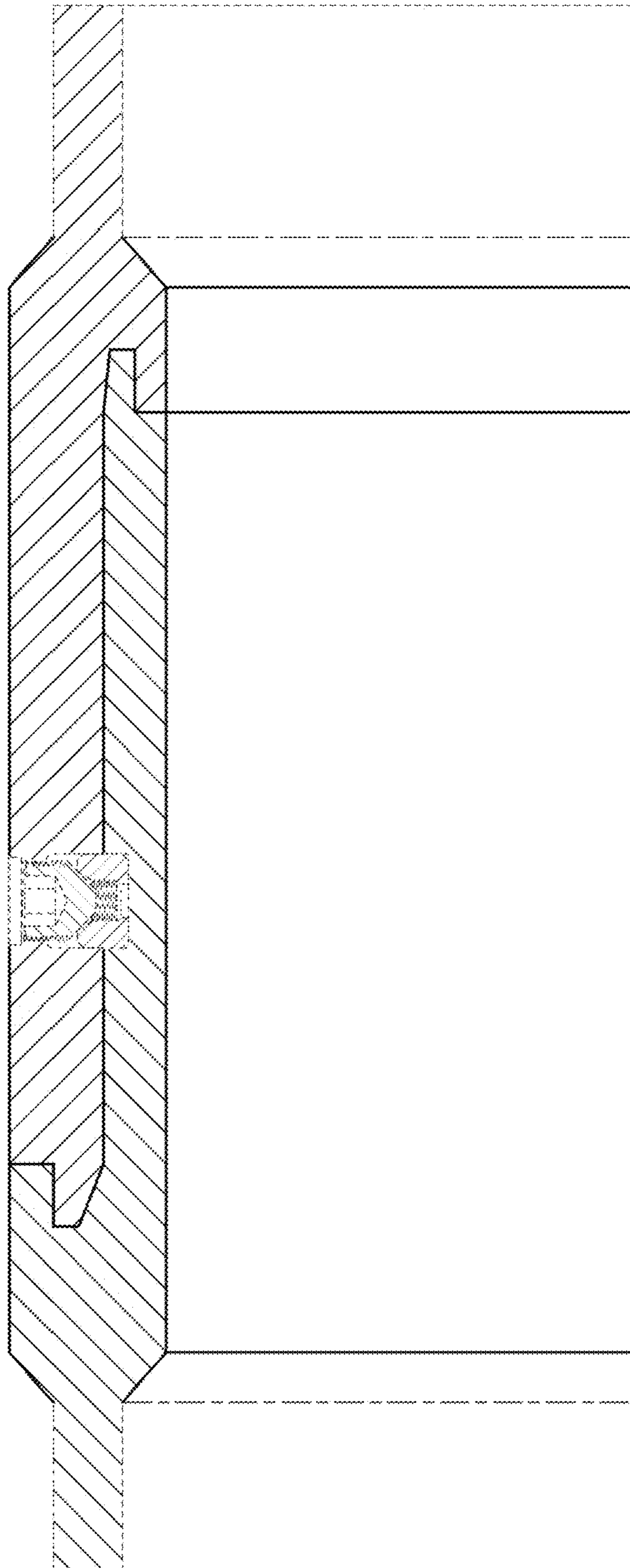
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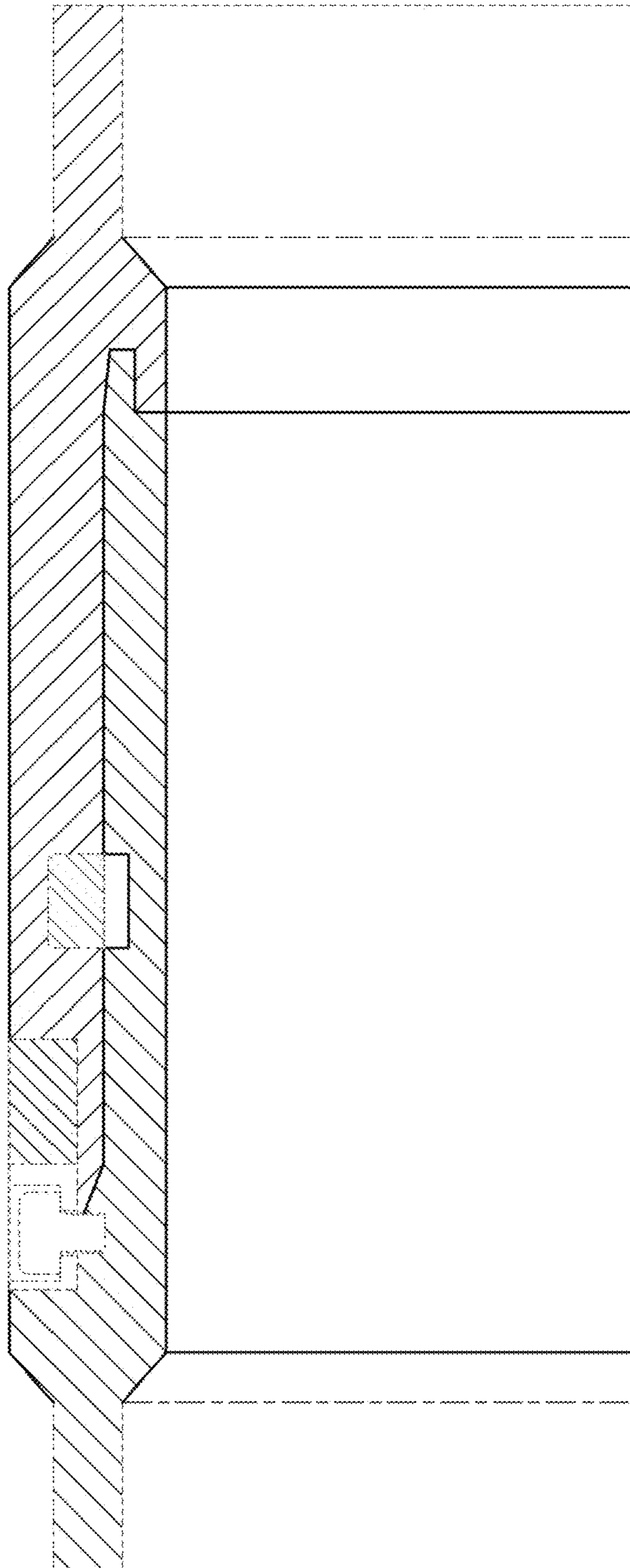




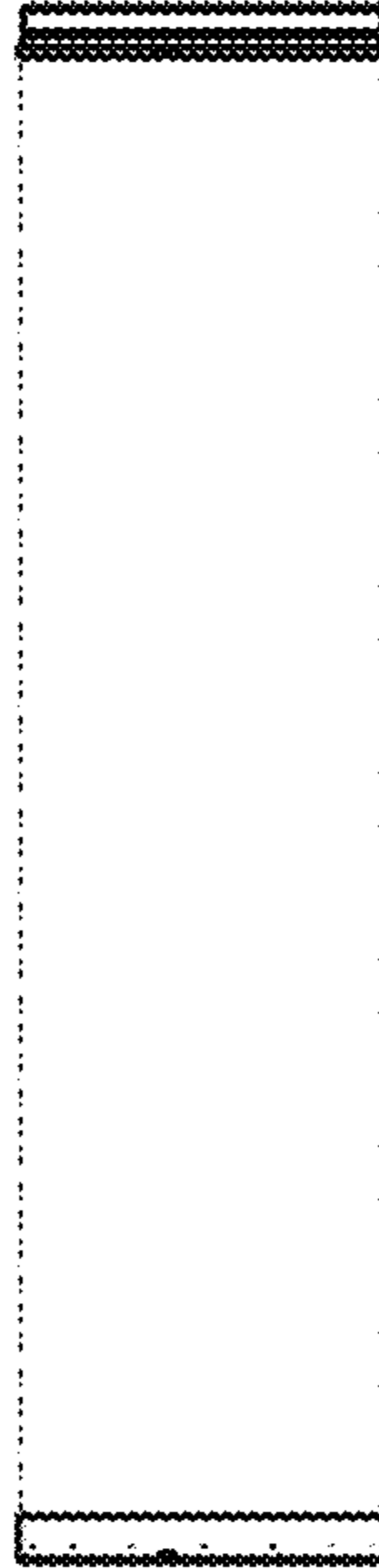
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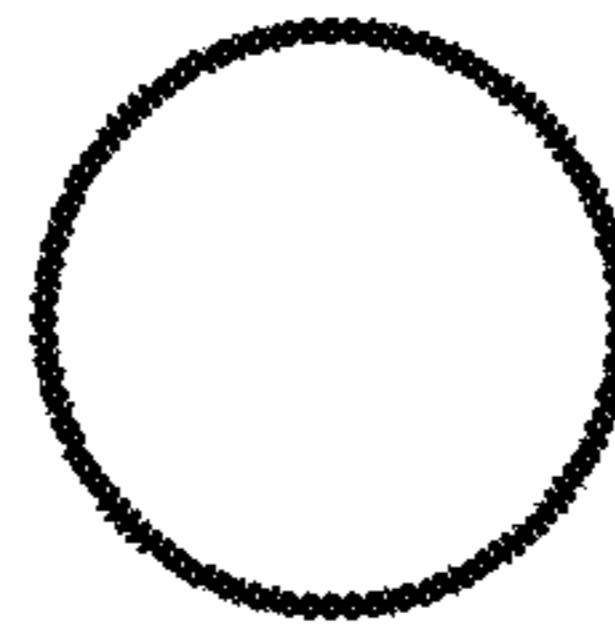
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1.13

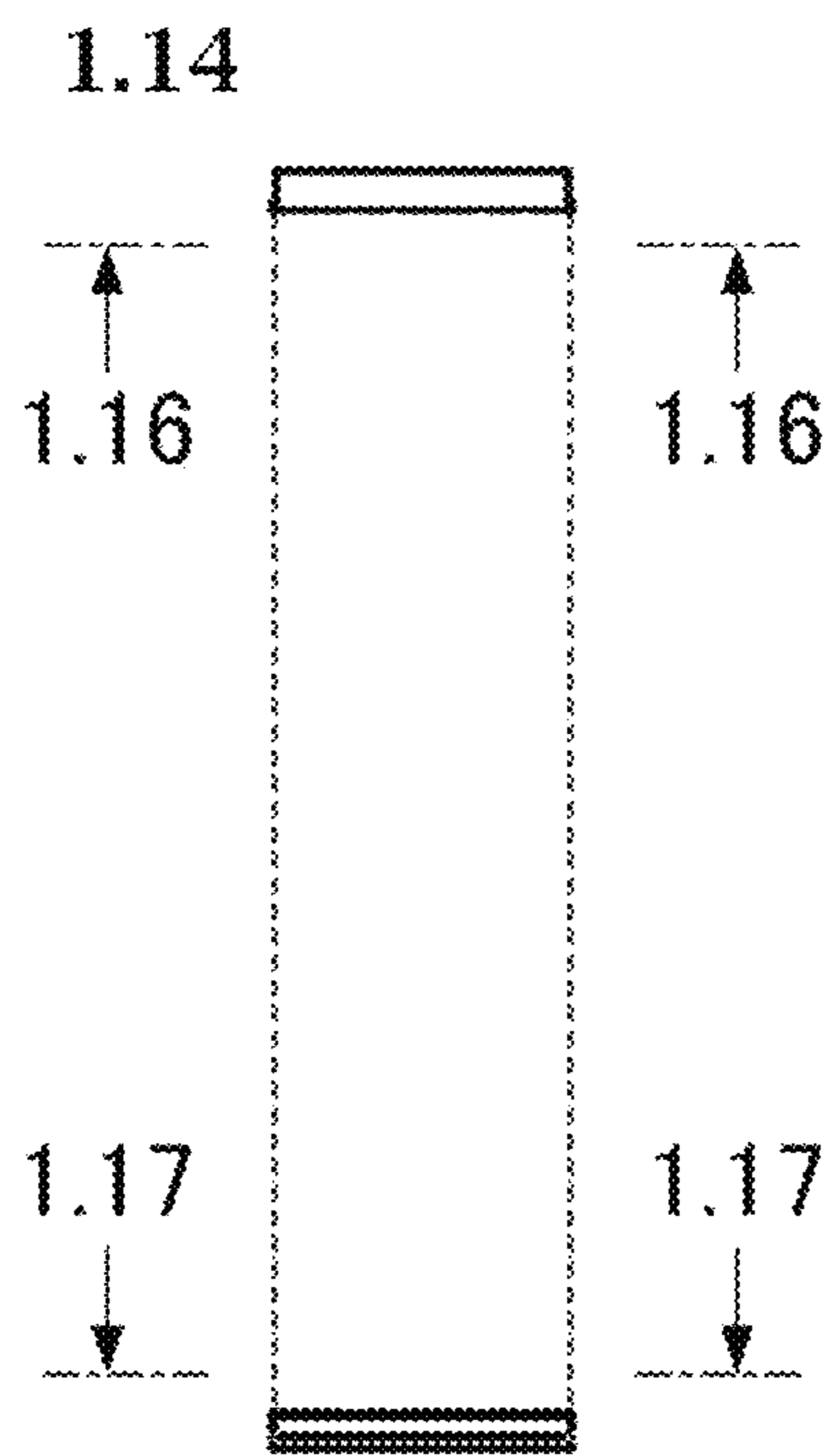
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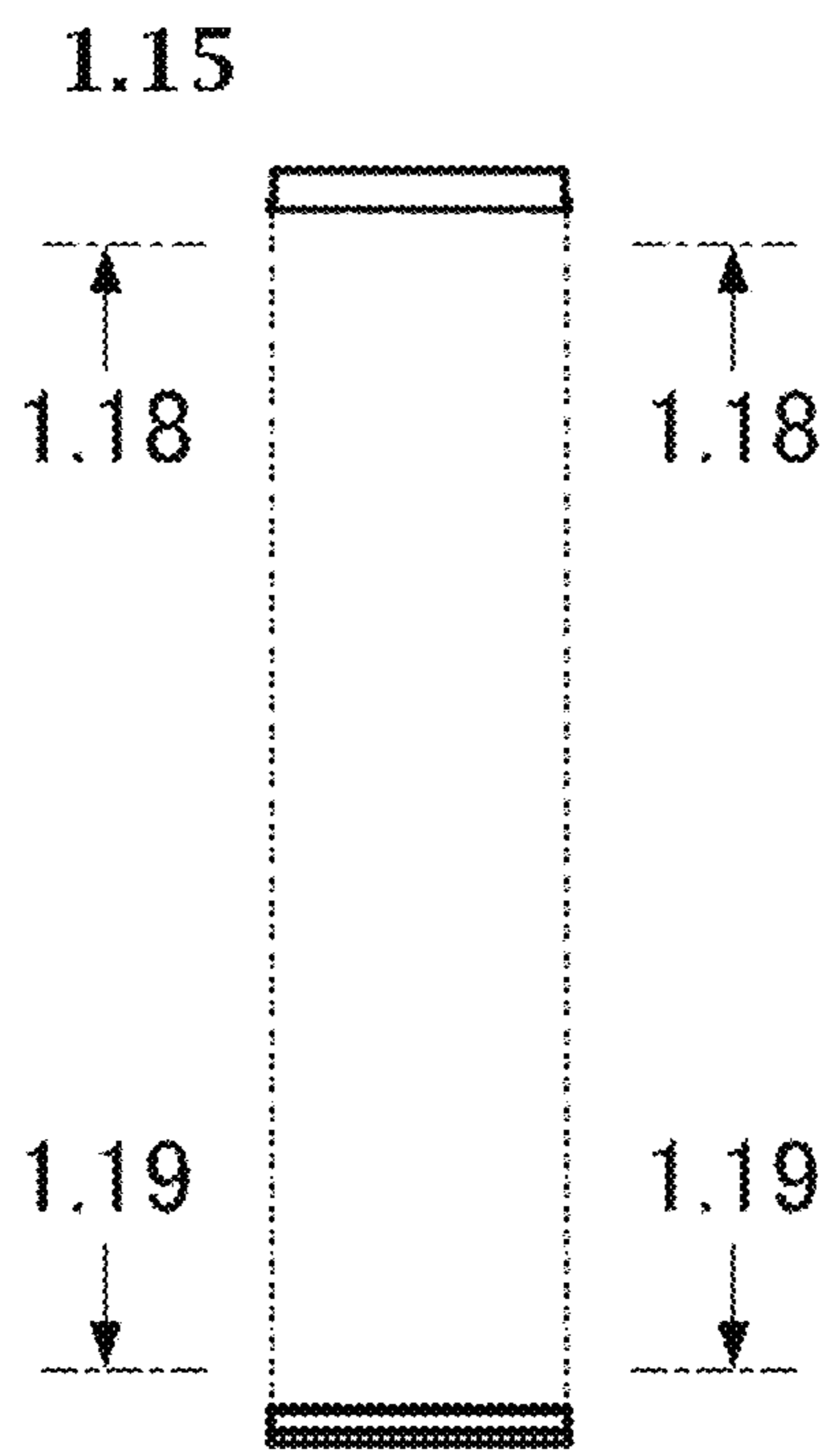
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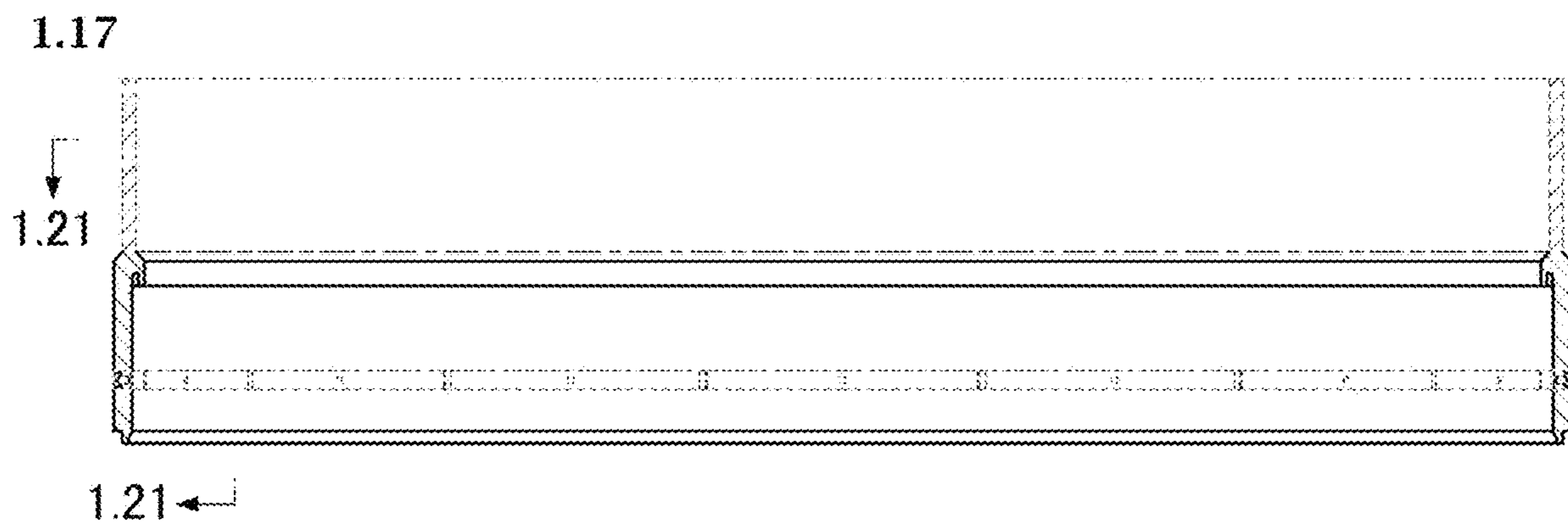
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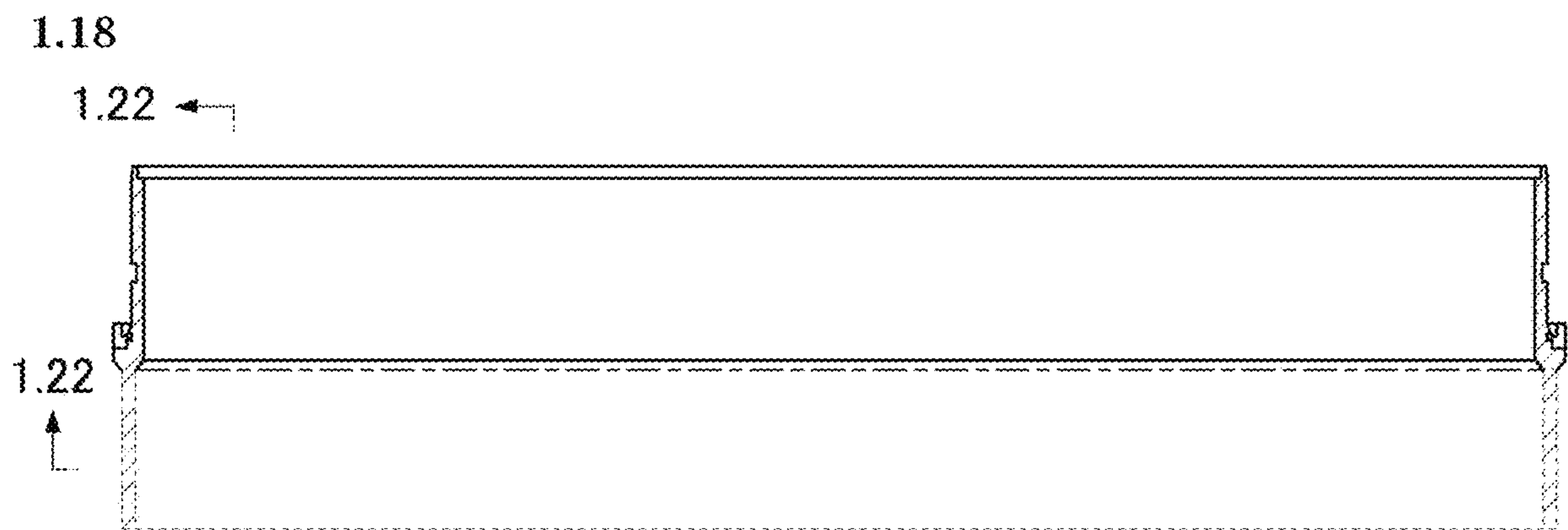
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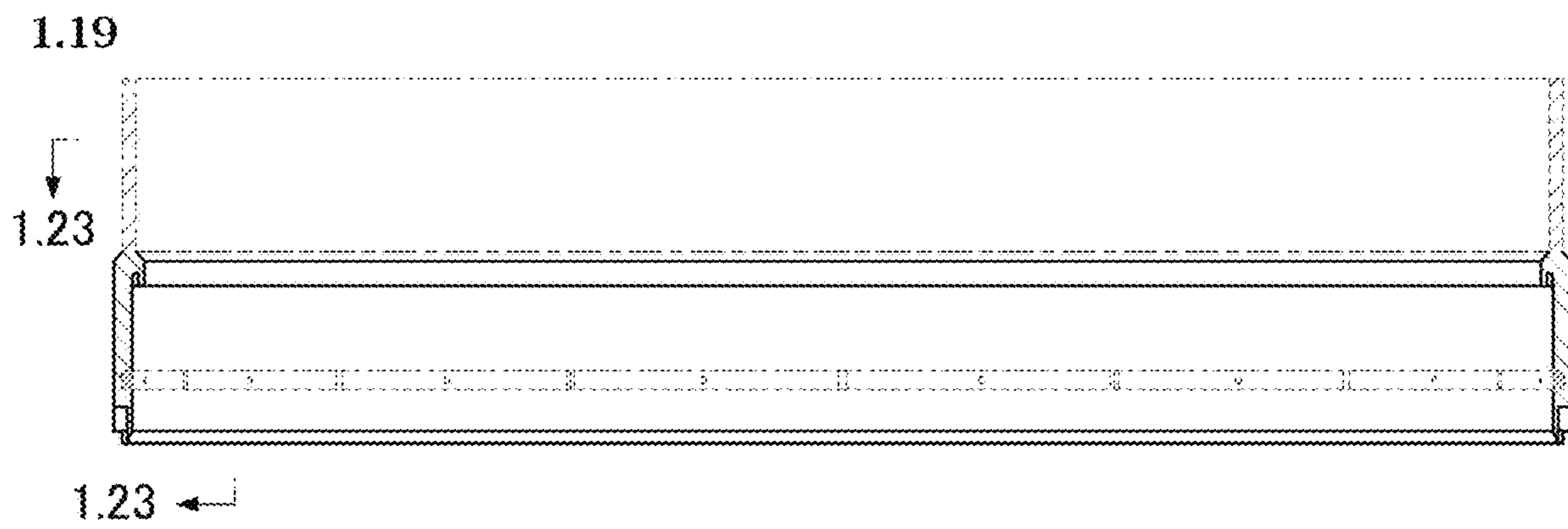




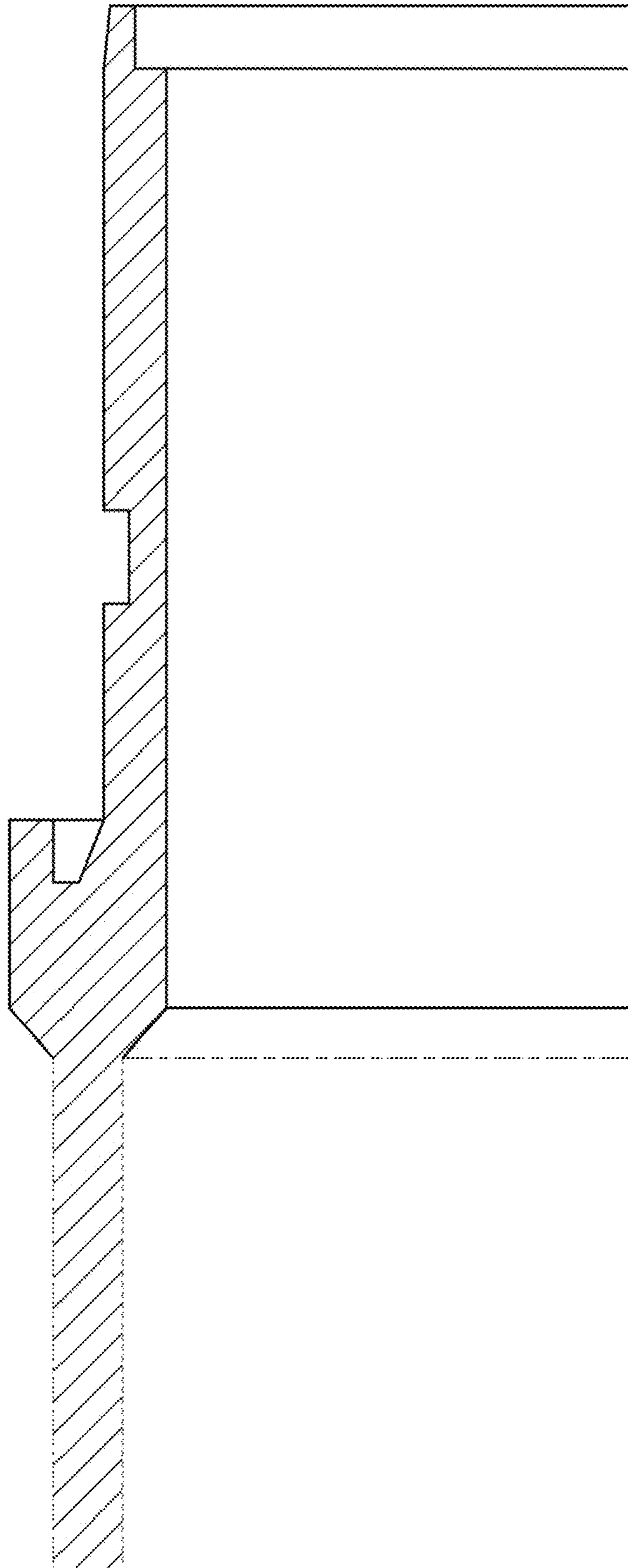




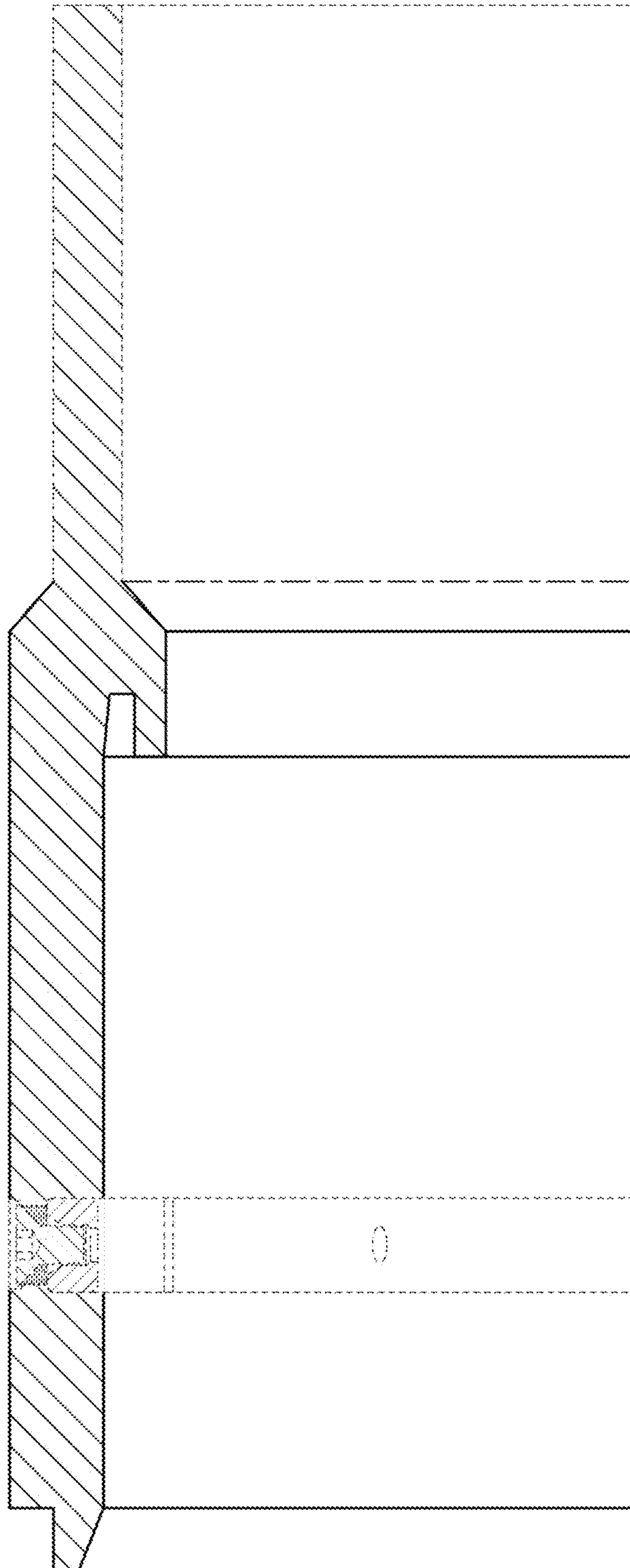




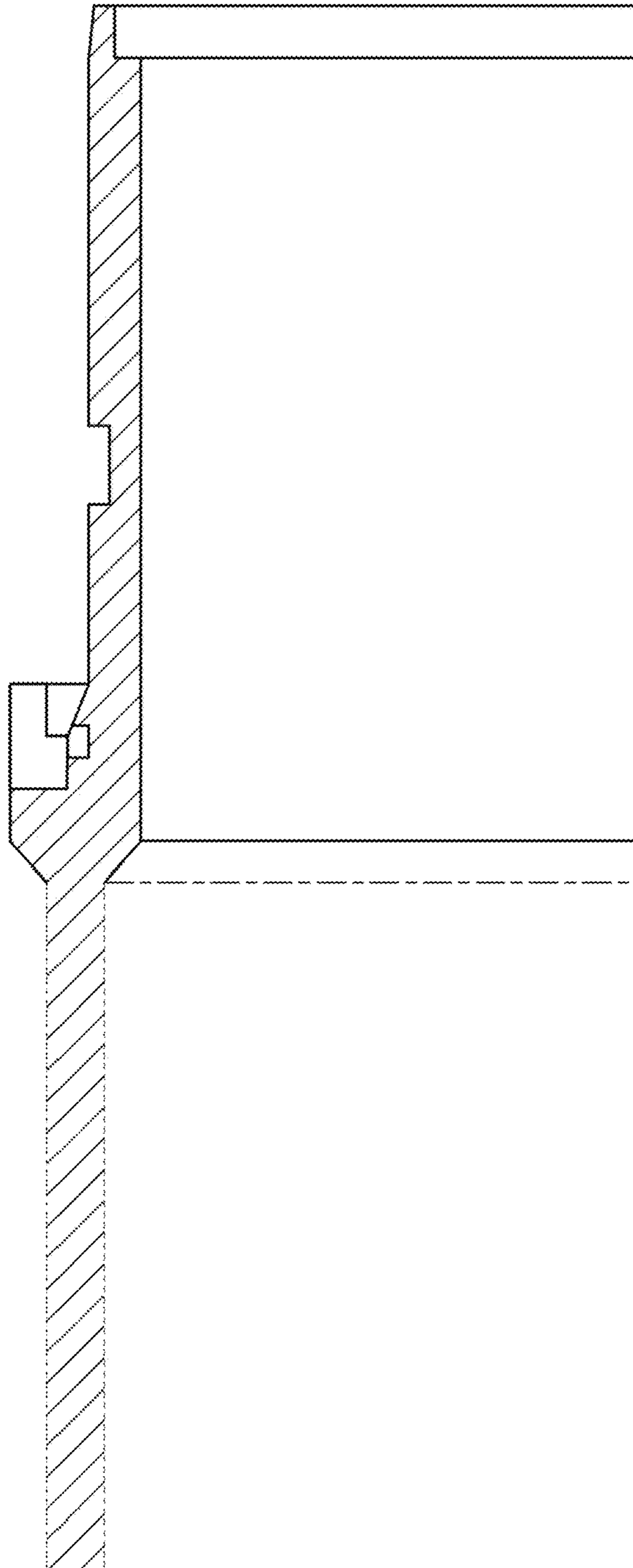
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1.21



1.22



1.23

