



US0D1056368S

(12)

United States Design Patent

Grüter

(10)

Patent No.:

US D1,056,368 S

(45)

Date of Patent:

** Dec. 31, 2024

(54) TEAT CUP LINER HEAD FOR MILKING MACHINES

(71) Applicant: GEA Farm Technologies GmbH,
Bönen (DE)

(72) Inventor: Thomas Grüter, Lippstadt (DE)

(73) Assignee: GEA Farm Technologies GmbH,
Bönen (DE)

(**) Term: 15 Years

(21) Appl. No.: 29/921,106

(22) Filed: Dec. 14, 2023

(56) References Cited

U.S. PATENT DOCUMENTS

D489,866	S *	5/2004	Brown	119/14.47
6,789,501	B2 *	9/2004	Brown	A01J 5/08 119/14.47
7,707,966	B2	5/2010	Torgerson et al.	
D624,715	S	9/2010	Auburger et al.	
8,033,247	B2 *	10/2011	Torgerson	A01J 7/04 119/14.47
8,113,145	B2	2/2012	Sellner	
8,117,989	B2	2/2012	Torgerson et al.	
8,567,346	B1 *	10/2013	Alveby	A01J 5/16 119/14.49
9,408,367	B2 *	8/2016	Alveby	A01J 5/08
(Continued)				

OTHER PUBLICATIONS

Hedlund, Nathan; "Milker Unit Short Milk Tube Milk Claw End Connector," U.S. Appl. No. 29/808,746, filed Sep. 22, 2021.
(Continued)

Primary Examiner — Susan Moon Lee
(74) Attorney, Agent, or Firm — BainwoodHuang

(57) CLAIM

The ornamental design for a teat cup liner head for milking machines, as shown and described.

DESCRIPTION

FIG. 1.1 is a left side perspective view of a teat cup liner head for milking machines in accordance with the present design;
FIG. 1.2 is a right side perspective view thereof;
FIG. 1.3 is an end view thereof.
FIG. 1.4 is a first side elevation thereof.
FIG. 1.5 is a second side elevation view thereof; and,
FIG. 1.6 is a third side elevation view thereof.
The broken lines depict portions of the teat cup liner head for milking machines that form no part of the claimed design.

1 Claim, 6 Drawing Sheets

Related U.S. Application Data

(62) Division of application No. 35/515,865, filed on Sep. 6, 2022 (U.S. filing date under 35 U.S.C. 384), and having an international filing date of Sep. 6, 2022, now Pat. No. Des. 1,024,461.

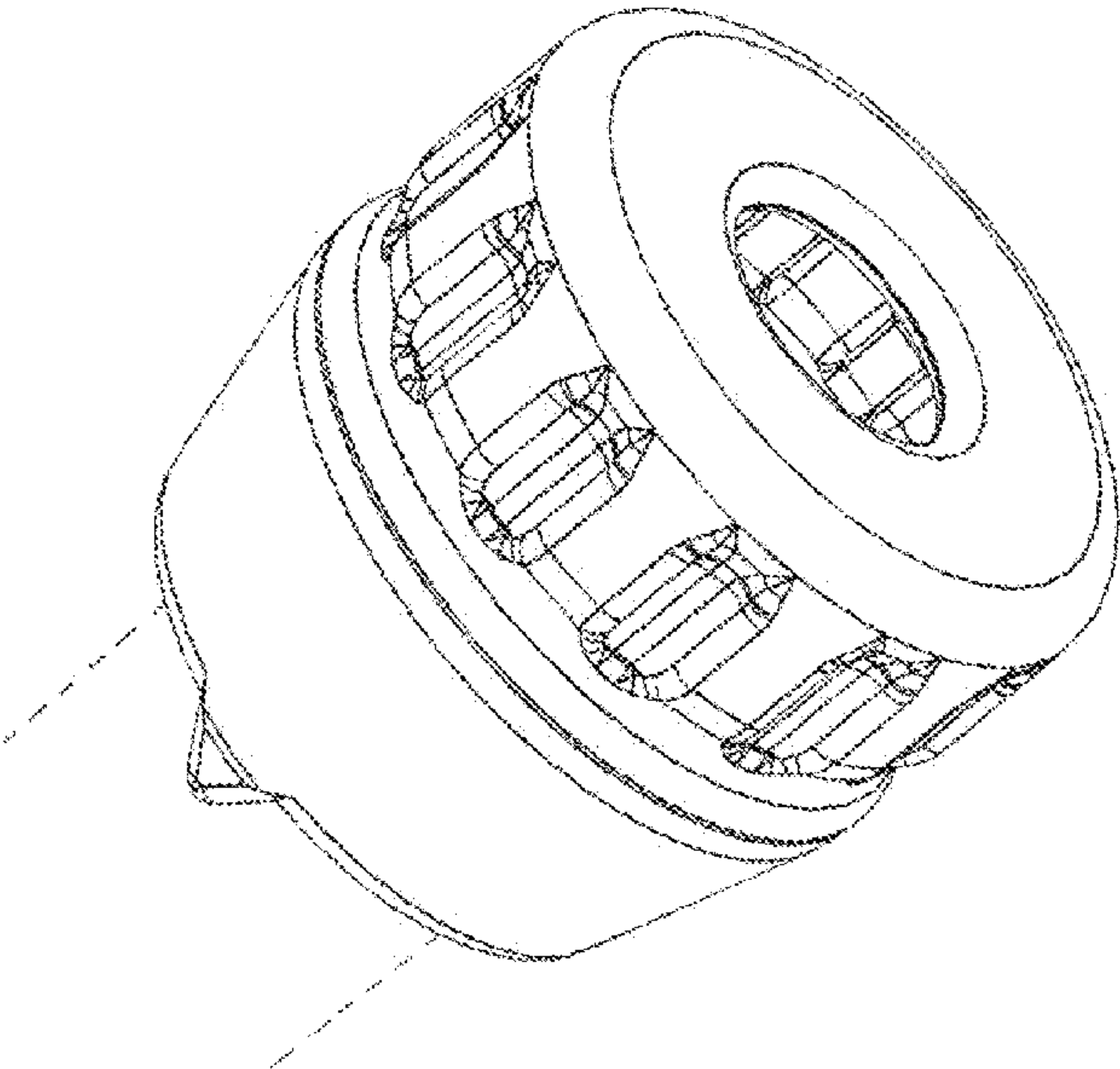
(30) Foreign Application Priority Data

Mar. 15, 2022 (EM) 008886121-0001
Mar. 15, 2022 (EM) 008886121-0002

(51) LOC (14) Cl. 30-99

(52) U.S. Cl.
USPC D30/199

(58) Field of Classification Search
USPC D30/199, 121; 119/14.54, 14.55, 14.36, 119/14.39, 14.37
CPC A01J 5/041; A01J 5/00; A01J 5/003; A01J 5/0075; A01J 5/01; A01J 5/017-048; A01J 5/06-16; A01J 3/00; A01J 7/00; A01J 7/005; A01K 1/12; A01K 1/123; A01K 1/126
See application file for complete search history.



(56)

References Cited

U.S. PATENT DOCUMENTS

9,526,225 B2 *

12/2016

Kochman

.....

A01J 5/041

D830,372 S

10/2018

Gratzki

.....

D830,649 S

10/2018

Hedlund

.....

10,785,952 B2

9/2020

Hedlund

.....

10,874,084 B2

12/2020

Torgerson et al.

.....

D910,249 S

2/2021

Hedlund

.....

11,510,389 B2

11/2022

Hedlund et al.

.....

11,516,990 B2

12/2022

Hedlund

.....

11,540,484 B2

1/2023

Torgerson et al.

.....

D1,024,461 S *

4/2024

Grüter

.....

D30/199

2007/0137582 A1 *

6/2007

Boast

.....

A01J 5/044

.....

119/14.54

2009/0084319 A1 *

4/2009

Sellner

.....

A01J 5/08

.....

119/14.47

2010/0275849 A1

11/2010

Wulle et al.

.....

2014/0041591 A1

2/2014

Krone

.....

2014/0137803 A1

5/2014

Auburger et al.

.....

2015/0090183 A1

4/2015

Hedlund et al.

.....

2015/0114298 A1 *

4/2015

Alveby

.....

A01J 5/08

.....

119/14.47

2016/0128299 A1 *

5/2016

Hedlund

.....

A01J 5/16

.....

119/14.47

2018/0098519 A1 *

4/2018

Rousseau

.....

A01J 5/08

2018/0228117 A1 *

8/2018

Grüter et al.

.....

A01J 5/06

2020/0396954 A1 *

12/2020

Hedlund

.....

A01J 5/06

2022/0079107 A1 *

3/2022

Grüter

.....

A01J 5/06

2022/0312718 A1 *

10/2022

Silvianu

.....

A01J 5/044

2023/0225282 A1 *

7/2023

Hedlund

.....

F16L 55/105

.....

119/14.01

2024/0077163 A1 *

3/2024

Desmarteau

.....

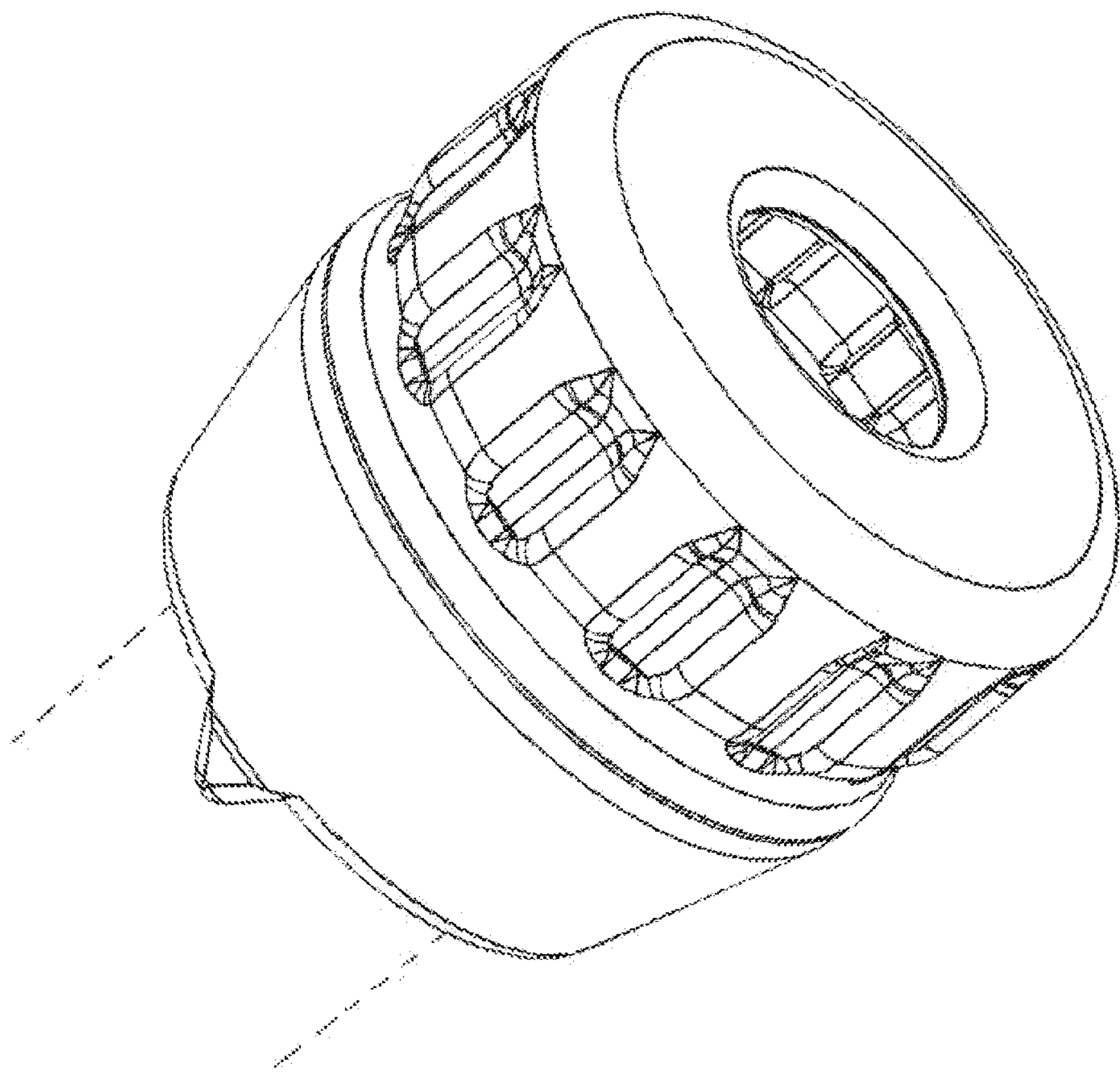
F16L 55/1141

OTHER PUBLICATIONS

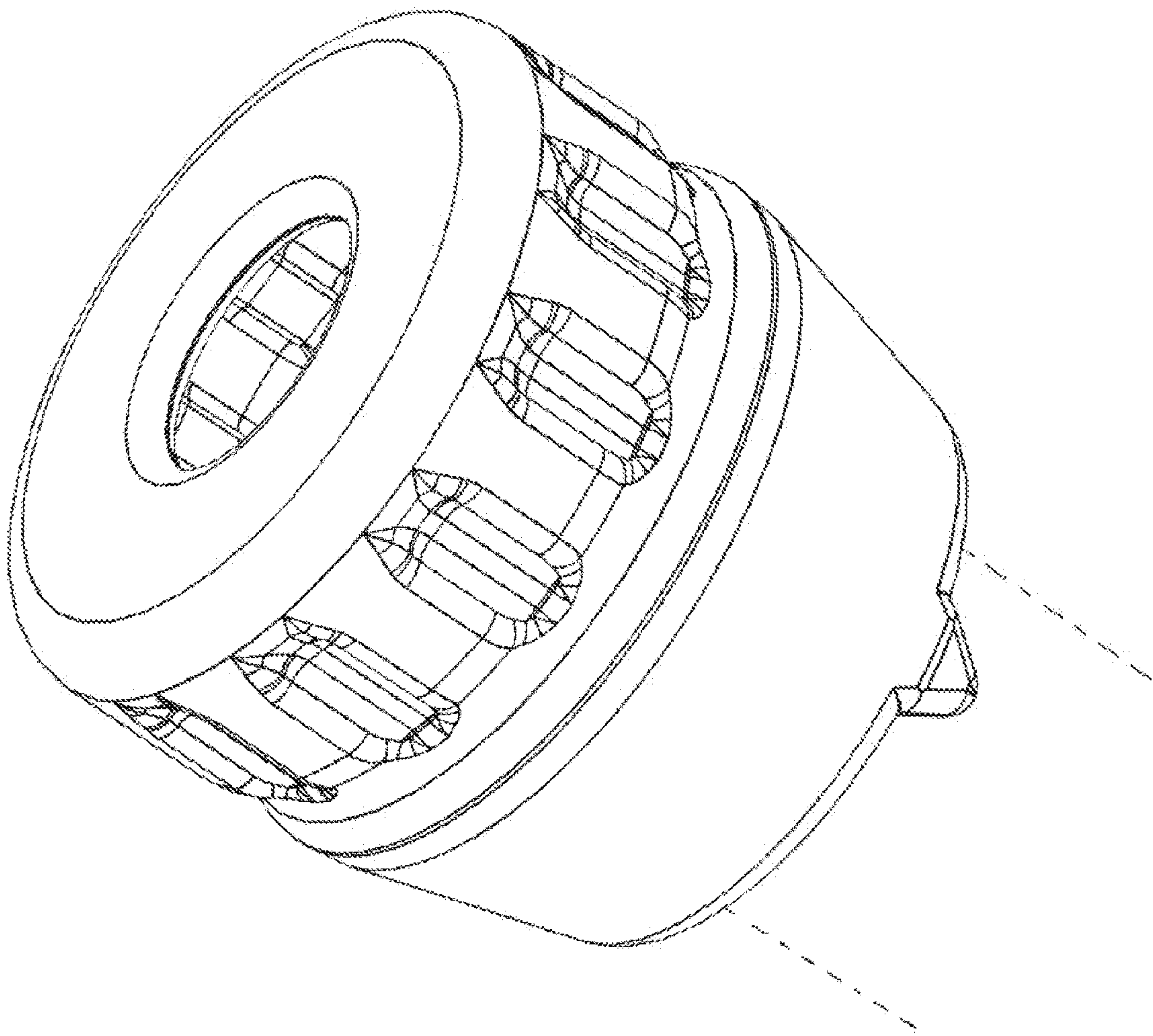
Hedlund, Nathan; “Liner Vent With Improved Flow Characteristics,” U.S. Appl. No. 29/823,122, filed Jan. 14, 2022.

* cited by examiner

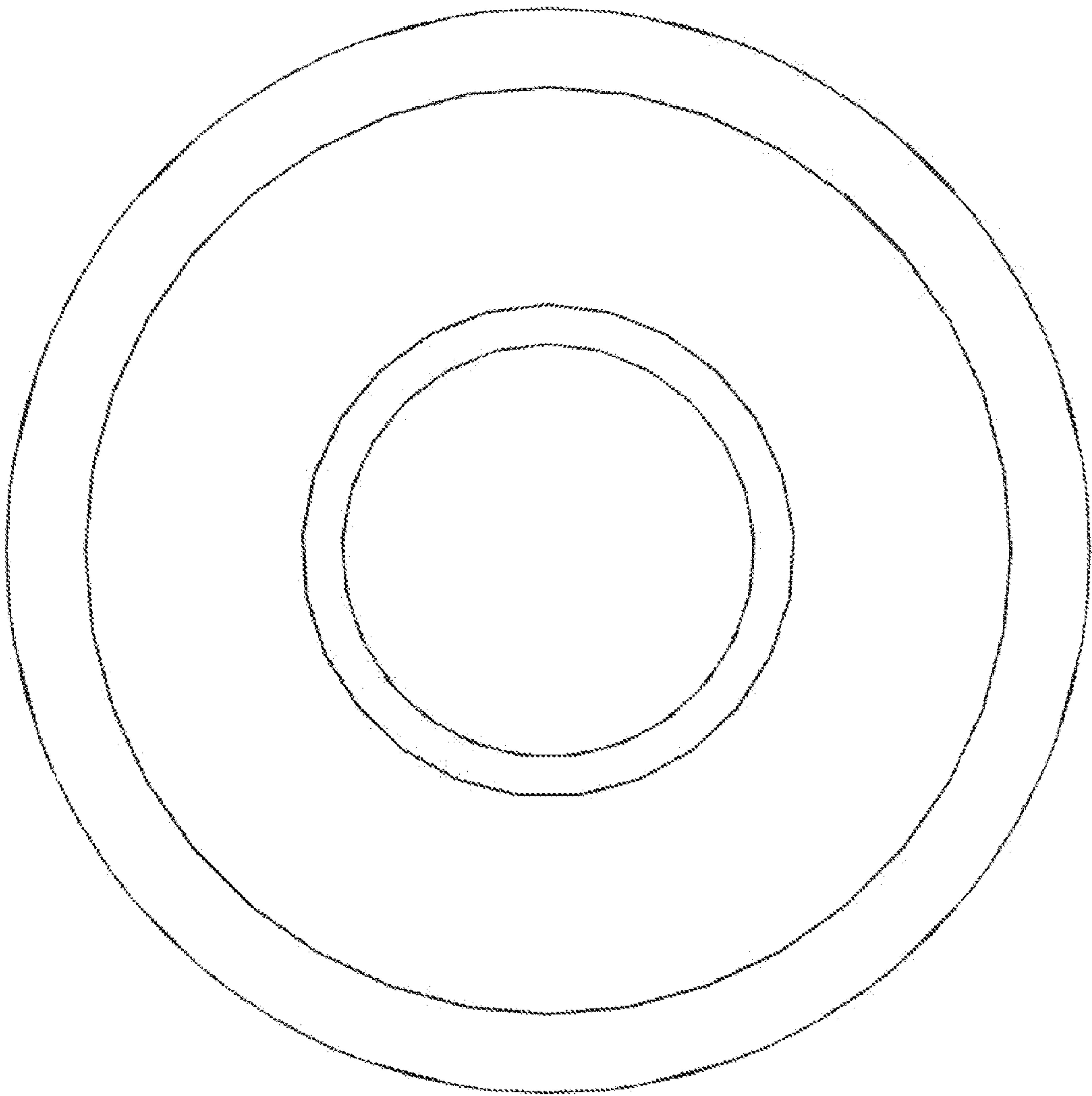
1.1



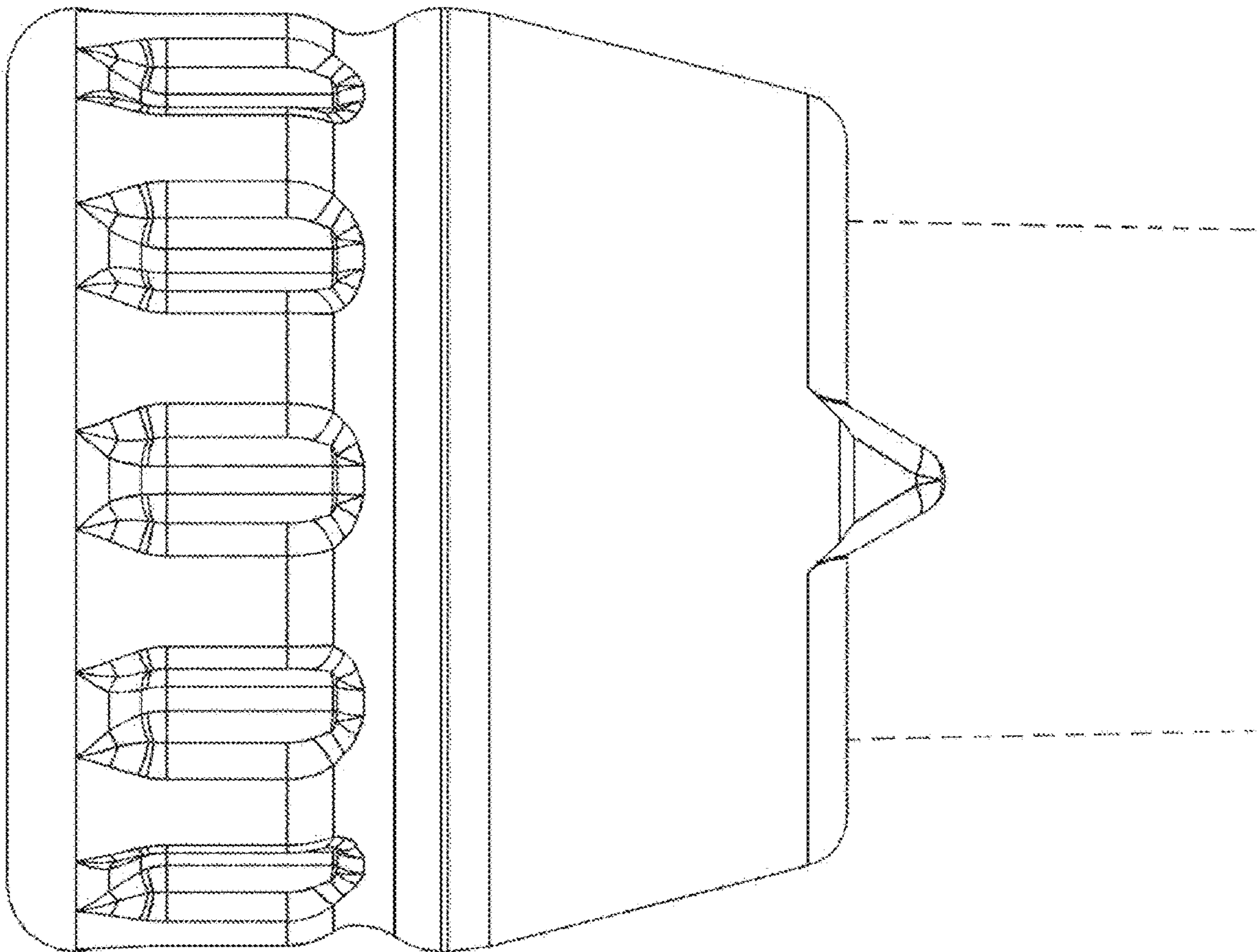
1.2



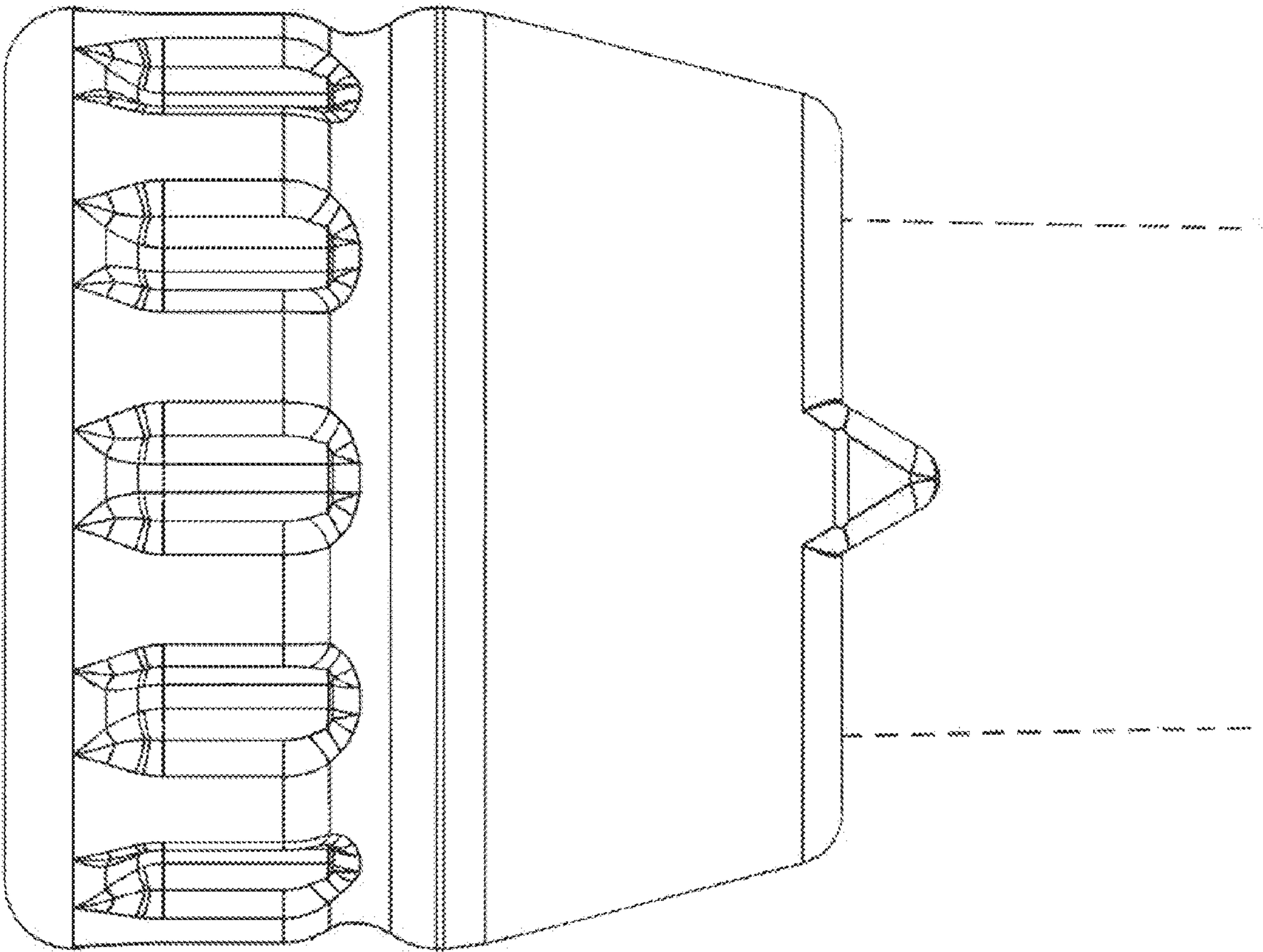
1.3



1.4



1.5



1.6

