



US00D886654S

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

(10) **Patent No.:** **US D886,654 S**
(45) **Date of Patent:** **** Jun. 9, 2020**

(54) **FLOW DETECTOR**

(71) Applicant: **LUBE CORPORATION**, Tokyo (JP)

(72) Inventor: **Koichi Wada**, Tokyo (JP)

(73) Assignee: **LUBE CORPORATION**, Tokyo (JP)

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

(21) Appl. No.: **35/506,494**

(22) Filed: **Sep. 27, 2018**

(80) **Hague Agreement Data**

Int. Filing Date: **Sep. 27, 2018**

Int. Reg. No.: **DM/103571**

Int. Reg. Date: **Sep. 27, 2018**

Int. Reg. Pub. Date: **Mar. 29, 2019**

(30) **Foreign Application Priority Data**

Mar. 29, 2018 (JP) 2018-006869

Mar. 29, 2018 (JP) 2018-006870

(51) **LOC (12) Cl.** **10-04**

(52) **U.S. Cl.**
USPC **D10/96**

(58) **Field of Classification Search**
USPC D10/96
CPC B01D 29/603
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D344,465 S * 2/1994 Brew D10/96
D447,072 S * 8/2001 Asai D10/96

D562,169 S * 2/2008 Oshima D10/96
D668,570 S * 10/2012 Rainer D10/96
10,473,494 B2 * 11/2019 Allen B01D 29/603

* cited by examiner

Primary Examiner — George D. Kirschbaum

(74) *Attorney, Agent, or Firm* — Manabu Kanesaka

(57) **CLAIM**

The ornamental design for flow detector, as shown and described.

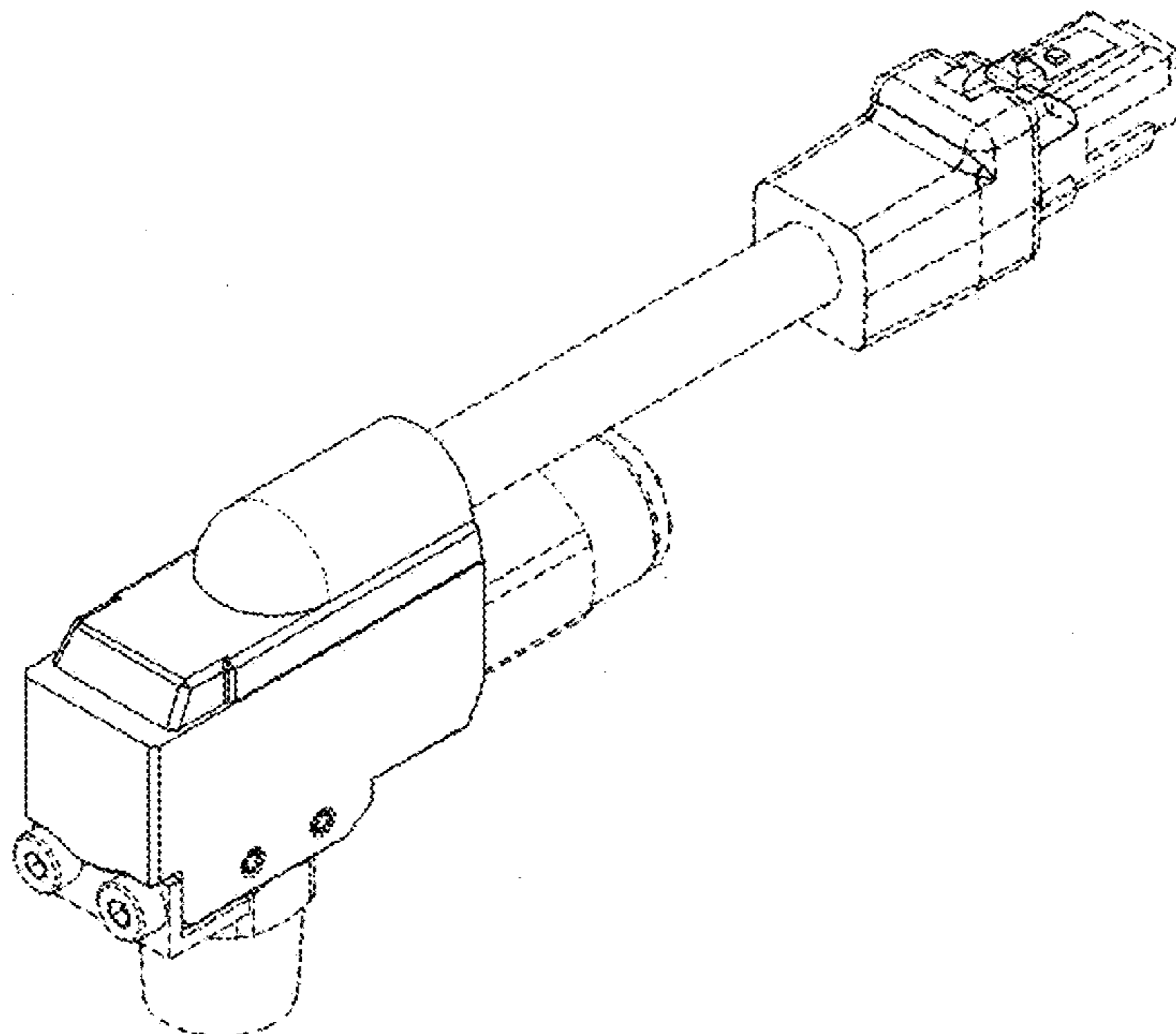
DESCRIPTION

- 1. Flow detector
- 1.1: Front
- 1.2: Back
- 1.3: Left
- 1.4: Right
- 1.5: Top
- 1.6: Bottom
- 1.7: Perspective
- 1.8: Perspective
- 1.9: Perspective
- 1.10 Referential cross-sectional view

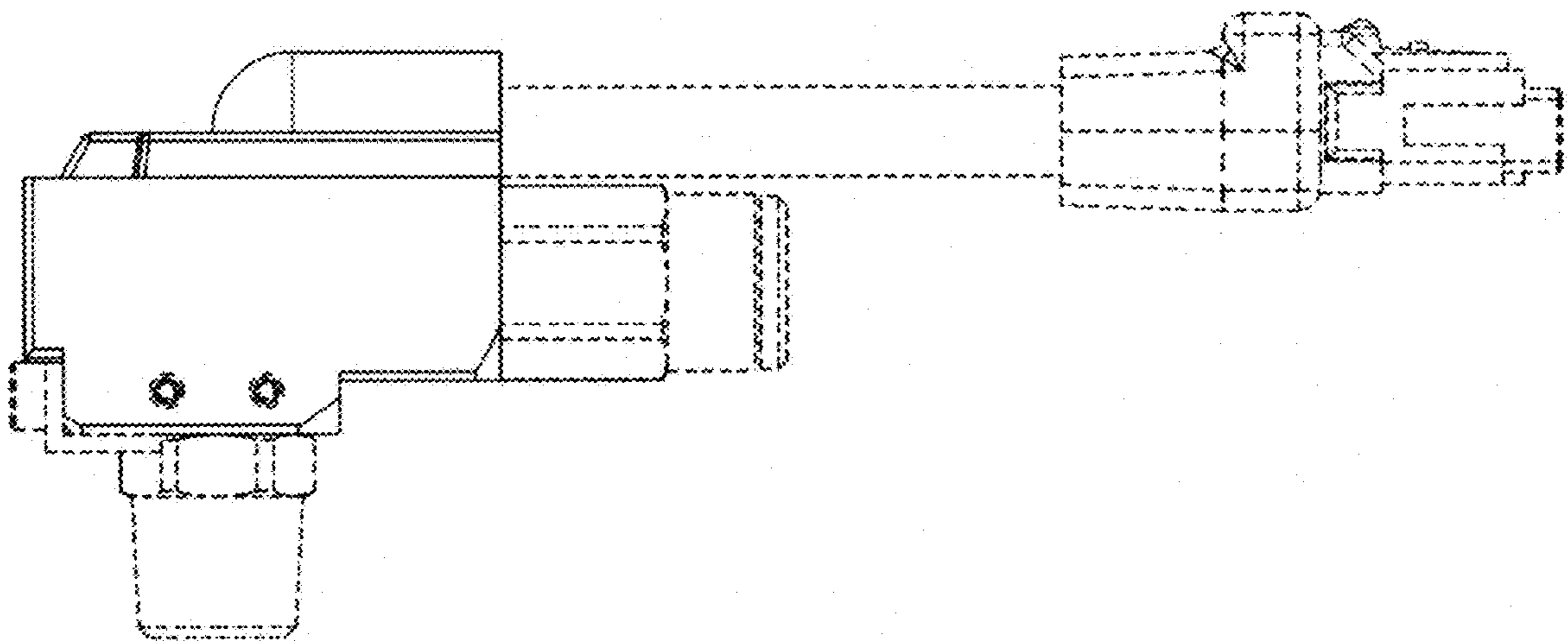
The parts shown by means of broken lines in the reproduction are not part of the claimed design; the article of the design is a flow detector which detects flow of lubricant such as grease or oil in a lubrication system installed in industrial machines such as injection molding machines or working machines; a lubricant flow channel is formed in the article, and it detects lubricant flow by electrically detecting a movement of a valve provided in the channel; 1.10 shows a referential cross-sectional view sectioned vertically at the center of the front view 1.1.

The broken line showing is included for the purpose of illustrating portions of the “article” and forms no part of the claimed design.

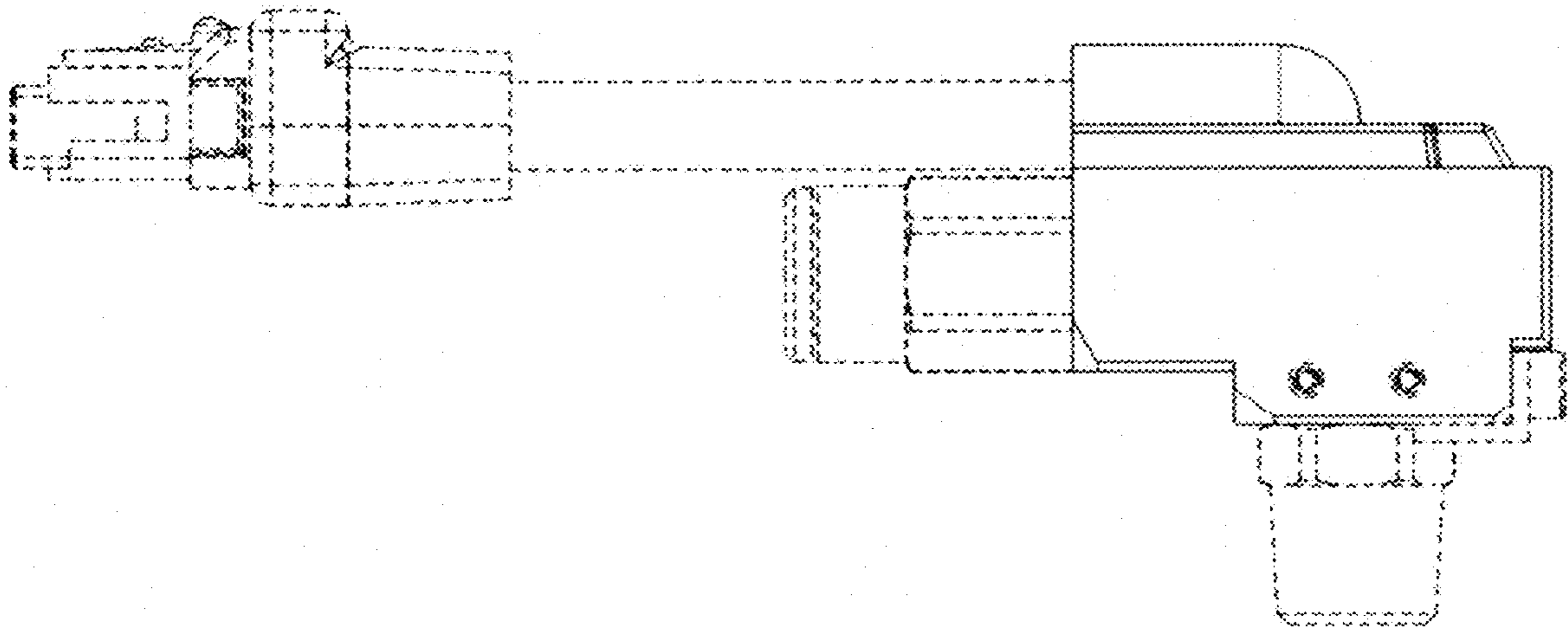
1 Claim, 10 Drawing Sheets



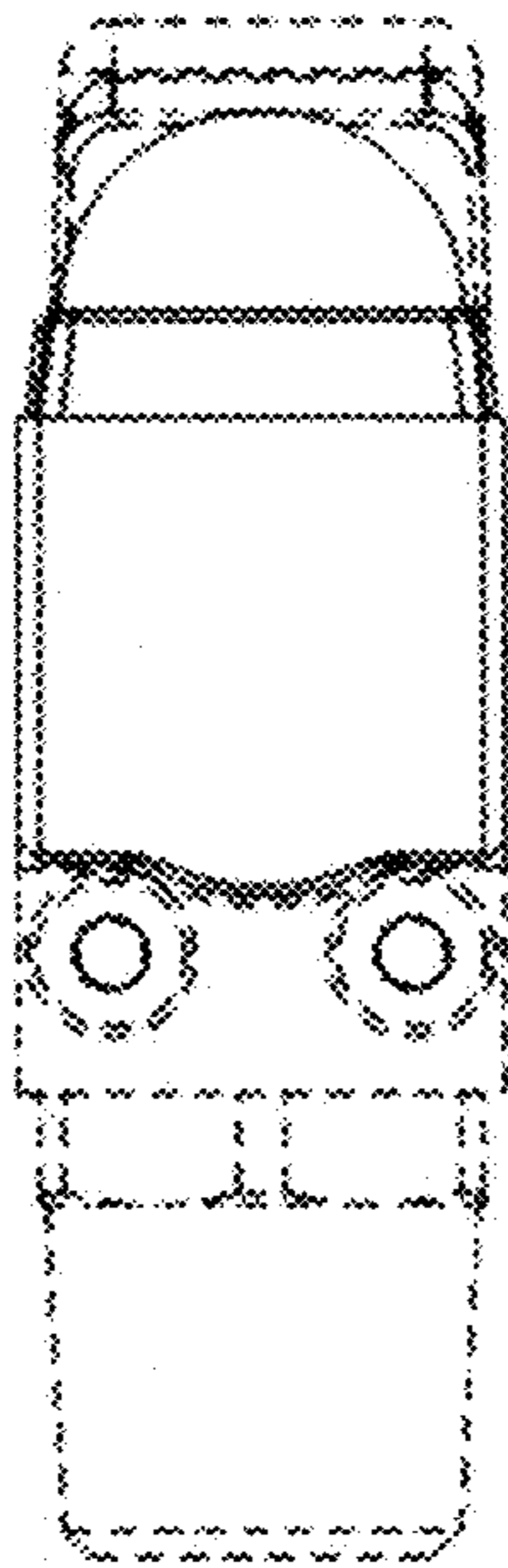
1.1



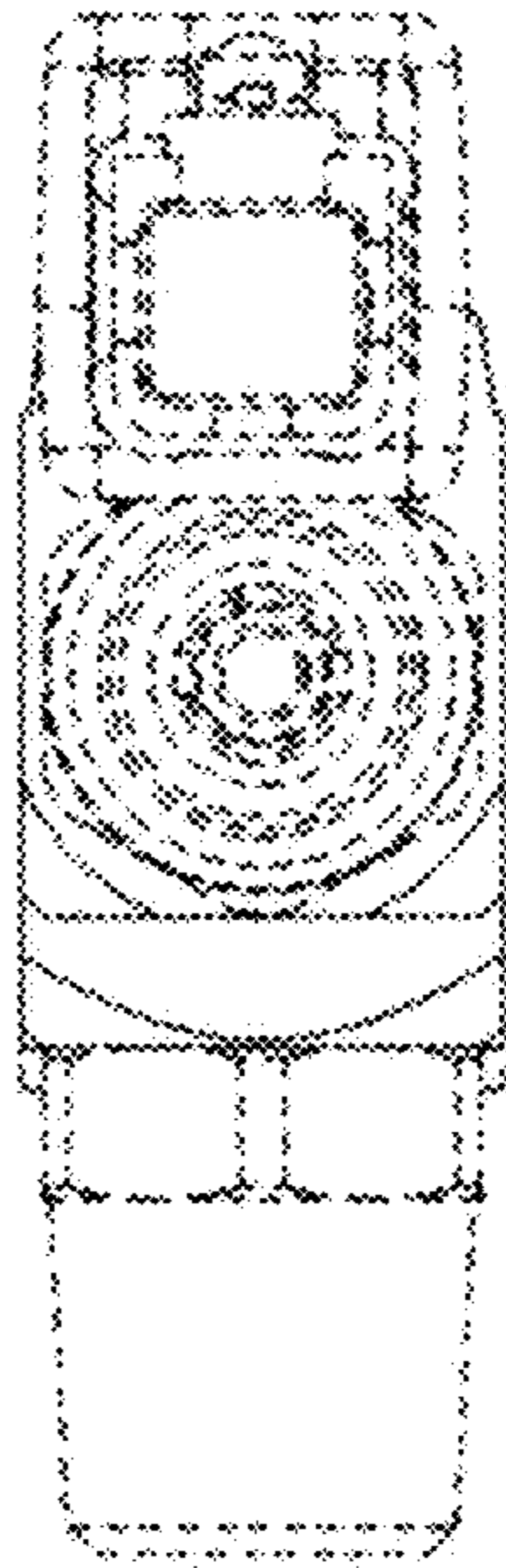
1.2



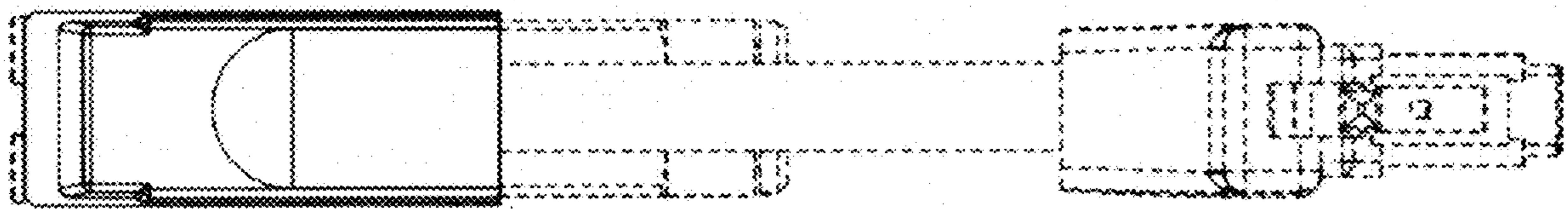
1.3



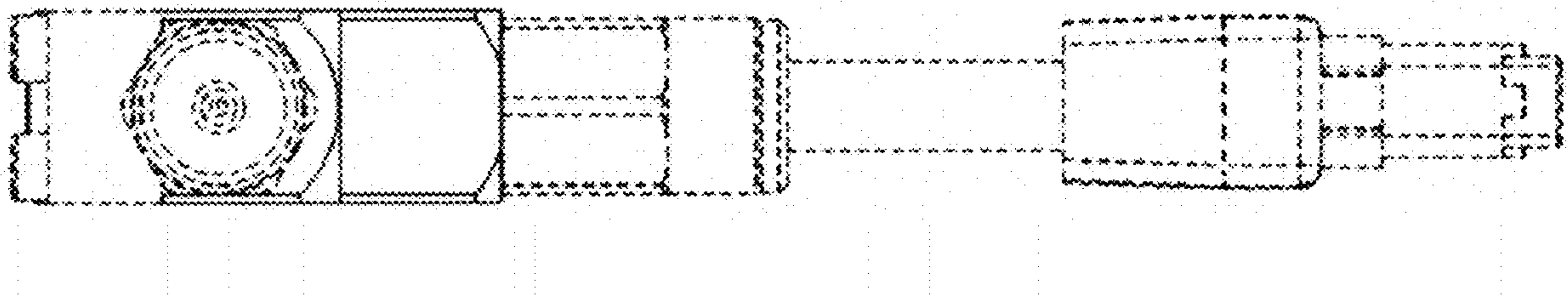
1.4



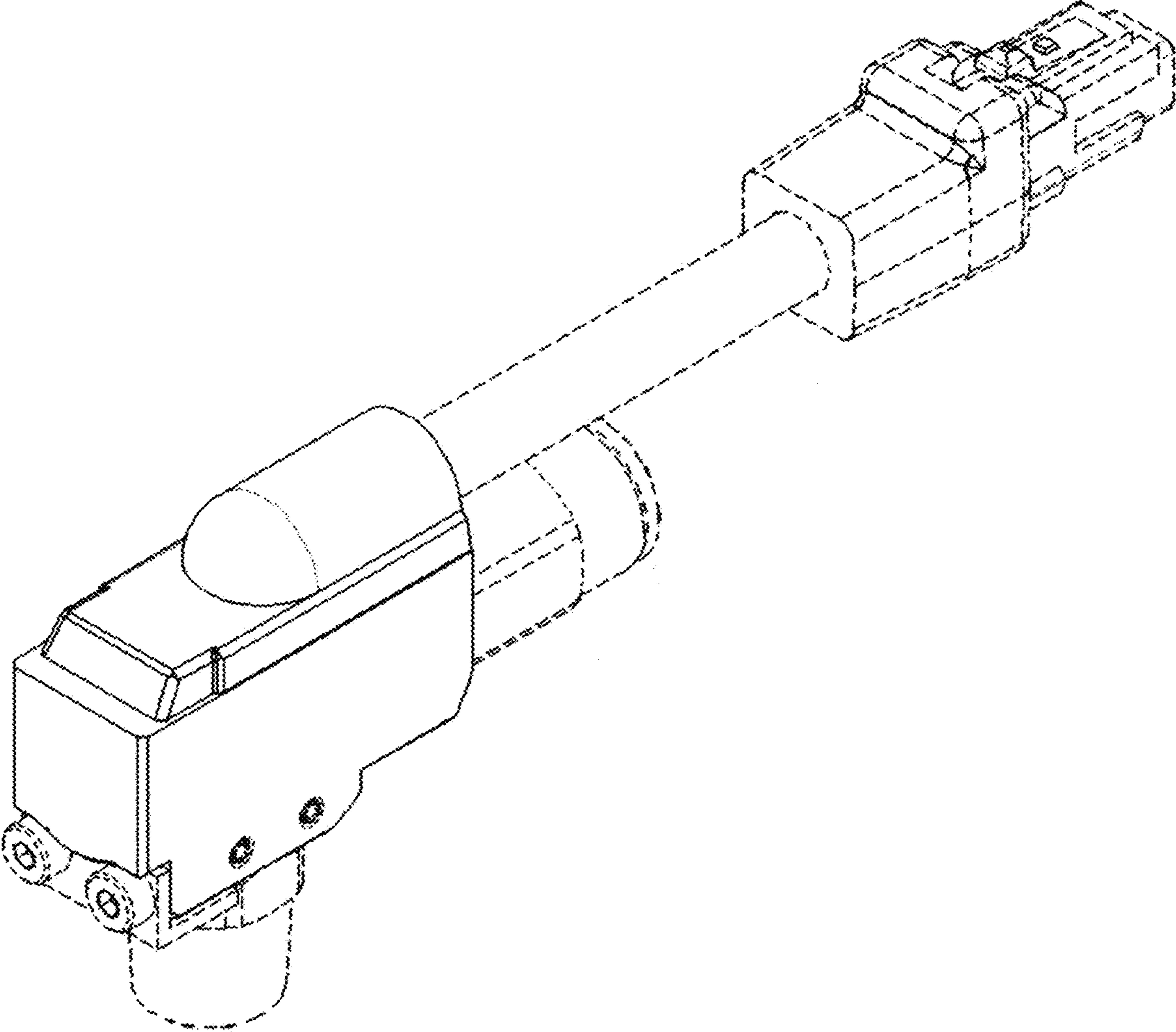
1.5



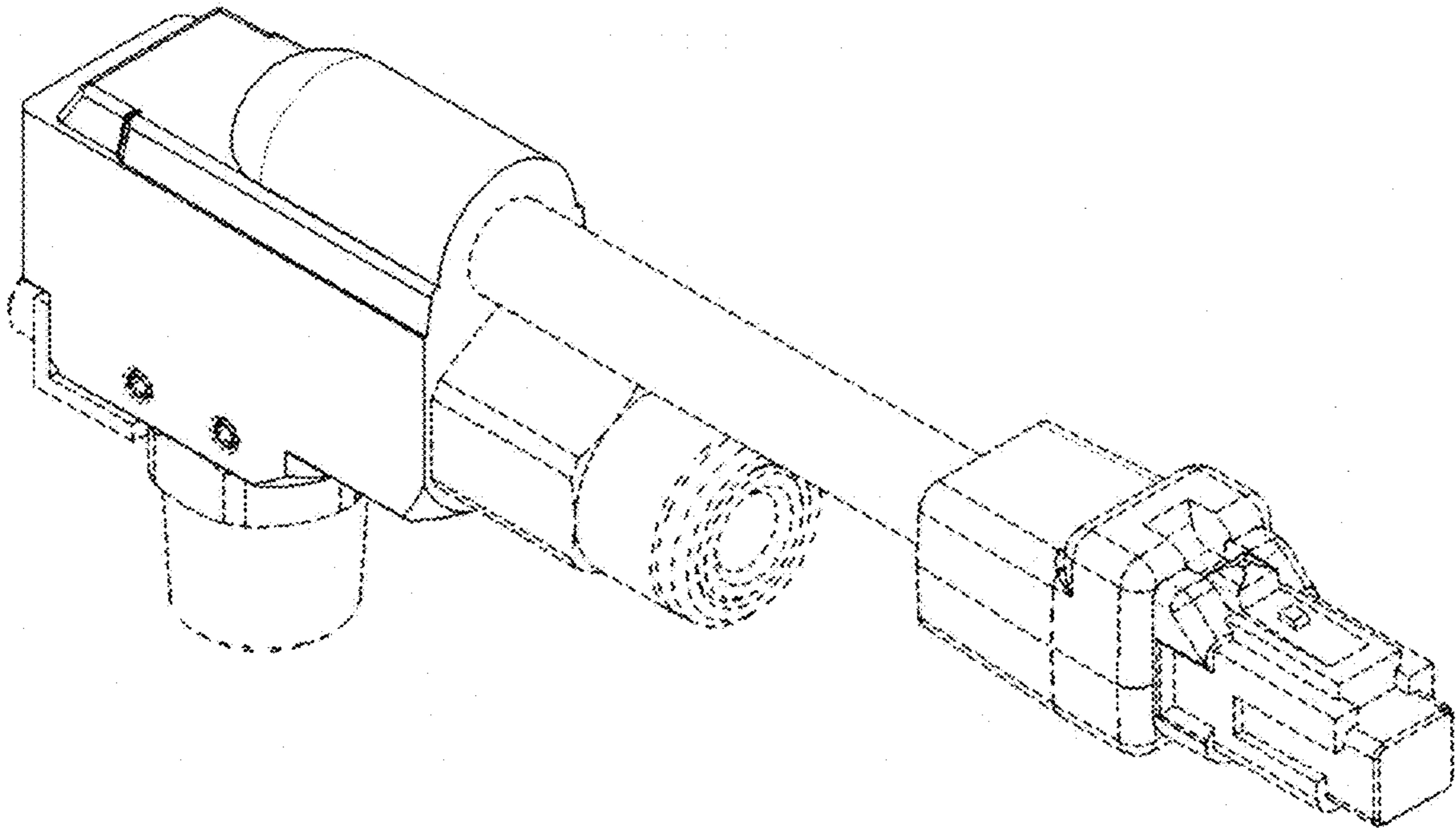
1.6



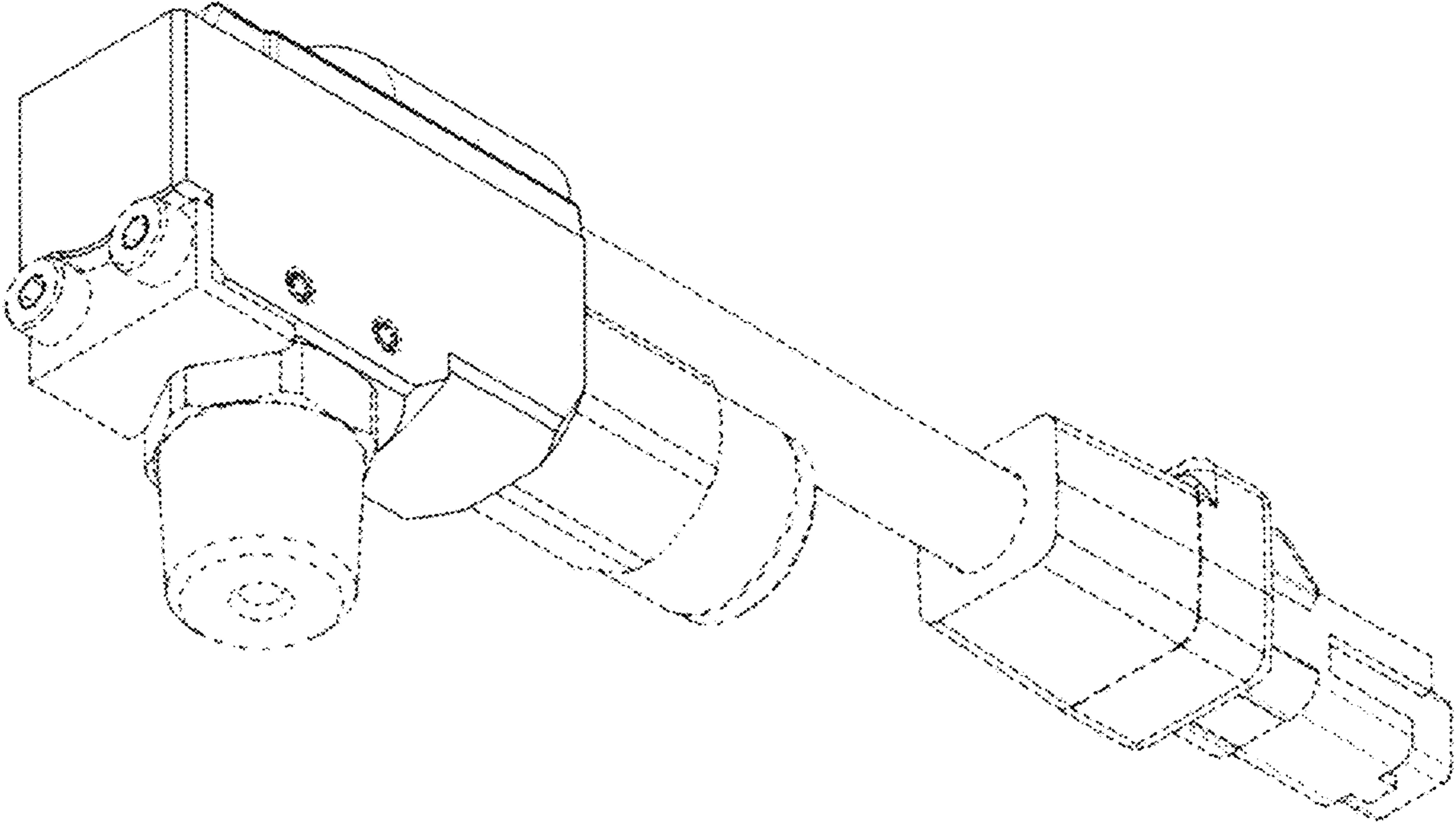
1.7



1.8



1.9



1.10

