



US00D900310S

(12) **United States Design Patent** (10) **Patent No.:** **US D900,310 S**
Carper et al. (45) **Date of Patent:** **** Oct. 27, 2020**

(54) **SYRINGE PLUNGER SEAL AND BARREL**

(74) *Attorney, Agent, or Firm* — Goodhue, Coleman & Owens, P.C.

(71) Applicant: **Treble Innovations, LLC**, Spanish Fork, UT (US)

(57) **CLAIM**

The ornamental design for syringe plunger seal and barrel, as shown and described.

(72) Inventors: **Scott Carper**, Freeburg, PA (US);
Brian Dean Owens, Plano, TX (US);
Roland Clifford Park, Springville, UT (US)

DESCRIPTION

(73) Assignee: **TREBLE INNOVATIONS, LLC**, Spanish Fork, UT (US)

The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.

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

FIG. 1 is a perspective view of a plunger seal and barrel showing a new design;

(21) Appl. No.: **29/712,743**

FIG. 2 is a front view thereof;

(22) Filed: **Nov. 11, 2019**

FIG. 3 is a back view thereof;

Related U.S. Application Data

(62) Division of application No. 29/634,995, filed on Jan. 26, 2018.

FIG. 4 is a left side view thereof;

(51) **LOC (12) Cl.** **24-02**

FIG. 5 is a right side view thereof;

(52) **U.S. Cl.**
USPC **D24/112**

FIG. 6 is a perspective view of a plunger seal and barrel showing another new design;

(58) **Field of Classification Search**
USPC D24/112–114, 108, 133, 130, 127, 186;
606/181, 185; 604/264, 272, 187, 181,
604/184, 227

FIG. 7 is a front view thereof;

(Continued)

FIG. 8 is a back view thereof;

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(Continued)

FIG. 9 is a left side view thereof;

FIG. 10 is a right side view thereof;

FIG. 11 is a perspective view of a plunger seal and barrel showing another new design;

FIG. 12 is a front view thereof;

FIG. 13 is a back view thereof;

FIG. 14 is a left side view thereof;

FIG. 15 is a right side view thereof;

FIG. 16 is a perspective view of a plunger seal and barrel showing another new design;

FIG. 17 is a front view thereof;

FIG. 18 is a back view thereof;

FIG. 19 is a left side view thereof;

FIG. 20 is a right side view thereof;

FIG. 21 is a perspective view of a plunger seal and barrel showing another new design;

FIG. 22 is a front view thereof;

FIG. 23 is a back view thereof;

FIG. 24 is a left side view thereof;

FIG. 25 is a right side view thereof;

(Continued)

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WO 2007014428 A1 2/2007

Primary Examiner — David G Muller

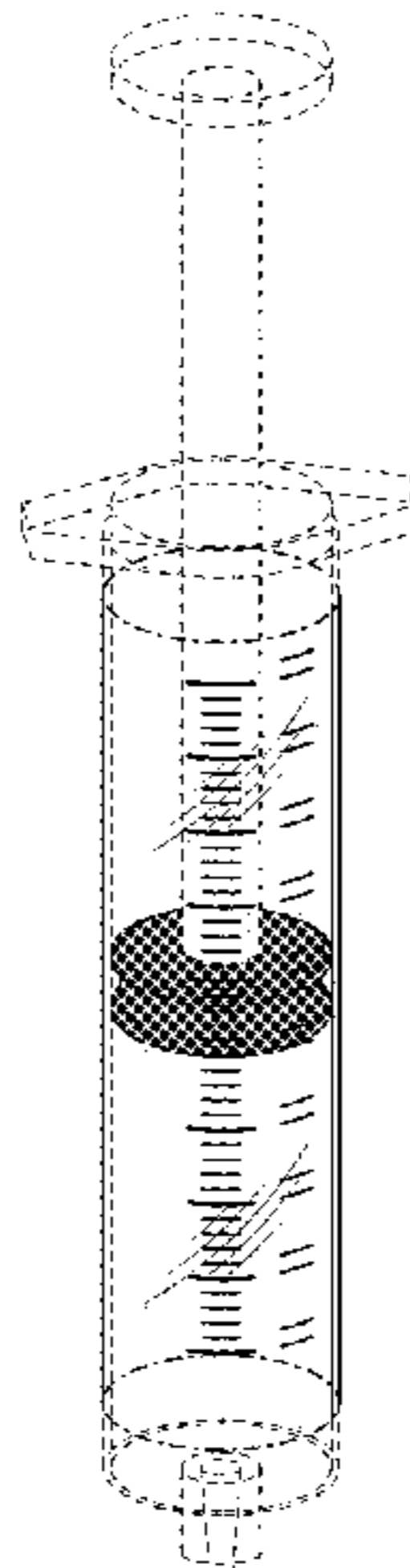


FIG. 26 is a perspective view of a plunger seal and barrel showing another new design;
 FIG. 27 is a front view thereof;
 FIG. 28 is a back view thereof;
 FIG. 29 is a left side view thereof;
 FIG. 30 is a right side view thereof;
 FIG. 31 is a perspective view of a plunger seal and barrel showing another new design;
 FIG. 32 is a front view thereof;
 FIG. 33 is a back view thereof;
 FIG. 34 is a left side view thereof;
 FIG. 35 is a right side view thereof;
 FIG. 36 is a perspective view of a plunger seal and barrel showing another new design;
 FIG. 37 is a front view thereof;
 FIG. 38 is a back view thereof;
 FIG. 39 is a left side view thereof;
 FIG. 40 is a right side view thereof;
 FIG. 41 is a perspective view of a plunger seal and barrel showing another new design;
 FIG. 42 is a front view thereof;
 FIG. 43 is a back view thereof;
 FIG. 44 is a left side view thereof;
 FIG. 45 is a right side view thereof;
 FIG. 46 is a perspective view of a plunger seal and barrel showing another new design;
 FIG. 47 is a front view thereof;
 FIG. 48 is a back view thereof;
 FIG. 49 is a left side view thereof;
 FIG. 50 is a right side view thereof;
 FIG. 51 is a perspective view of a plunger seal and barrel showing another new design;
 FIG. 52 is a front view thereof;
 FIG. 53 is a back view thereof;
 FIG. 54 is a left side view thereof;
 FIG. 55 is a right side view thereof;
 FIG. 56 is a perspective view of a plunger seal and barrel showing another new design;
 FIG. 57 is a front view thereof;
 FIG. 58 is a back view thereof;
 FIG. 59 is a left side view thereof;
 FIG. 60 is a right side view thereof;

FIG. 61 is a perspective view of a plunger seal and barrel showing another new design;
 FIG. 62 is a front view thereof;
 FIG. 63 is a back view thereof;
 FIG. 64 is a left side view thereof;
 FIG. 65 is a right side view thereof;
 FIG. 66 is a perspective view of a plunger seal and barrel showing another new design;
 FIG. 67 is a front view thereof;
 FIG. 68 is a back view thereof;
 FIG. 69 is a left side view thereof; and,
 FIG. 70 is a right side view thereof.

The broken lines in the Figures show portions of the syringe plunger seal and barrel and environment which form no part of the claimed design.

**1 Claim, 14 Drawing Sheets
 (14 of 14 Drawing Sheet(s) Filed in Color)**

(58) **Field of Classification Search**

CPC A61M 5/178; A61M 3/00; A61M 5/20;
 A61M 5/31; A61M 5/3146; A61M
 5/3129; A61M 5/3148; A61M 5/315
 See application file for complete search history.

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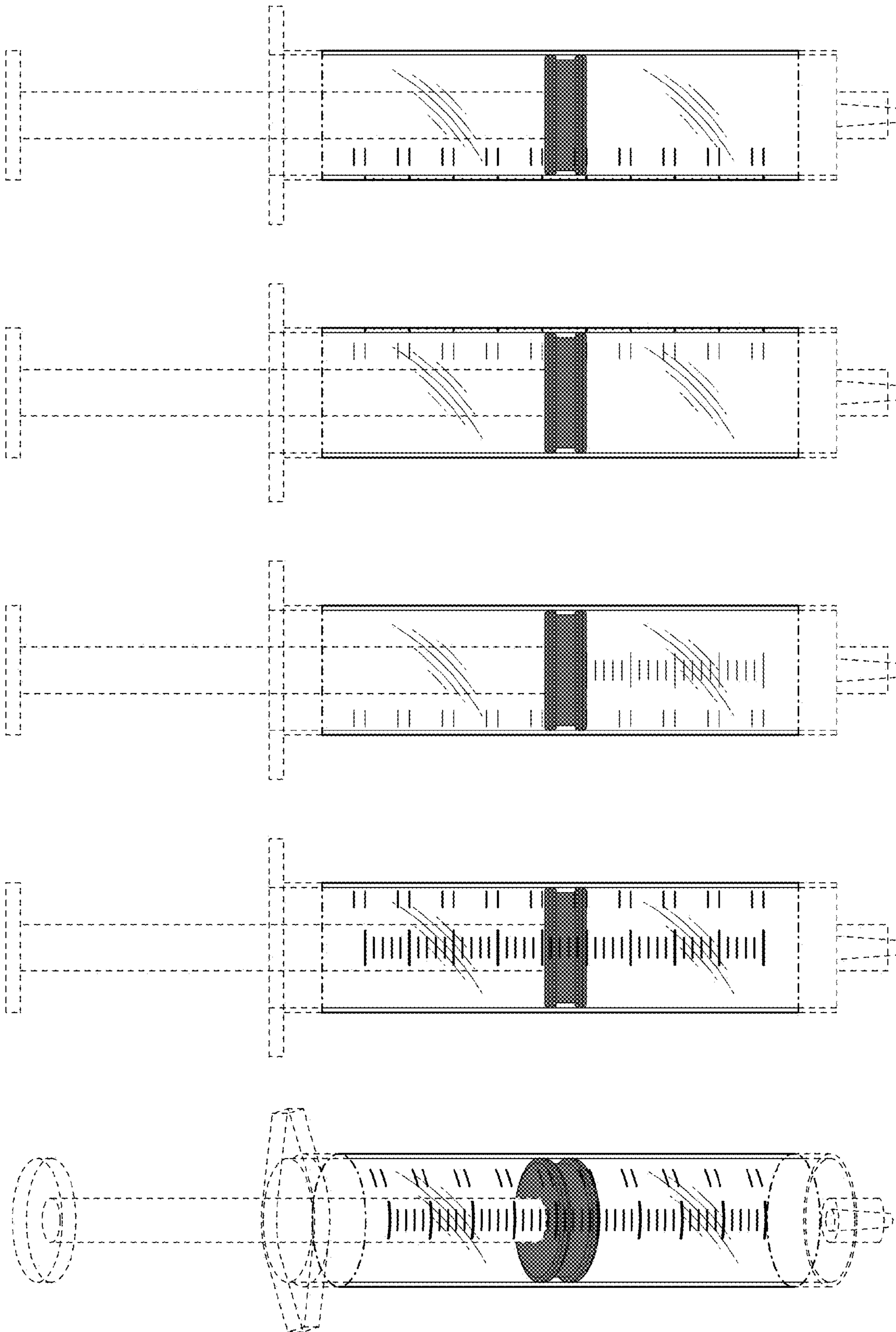


FIG. 5

FIG. 4

FIG. 3

FIG. 2

FIG. 1

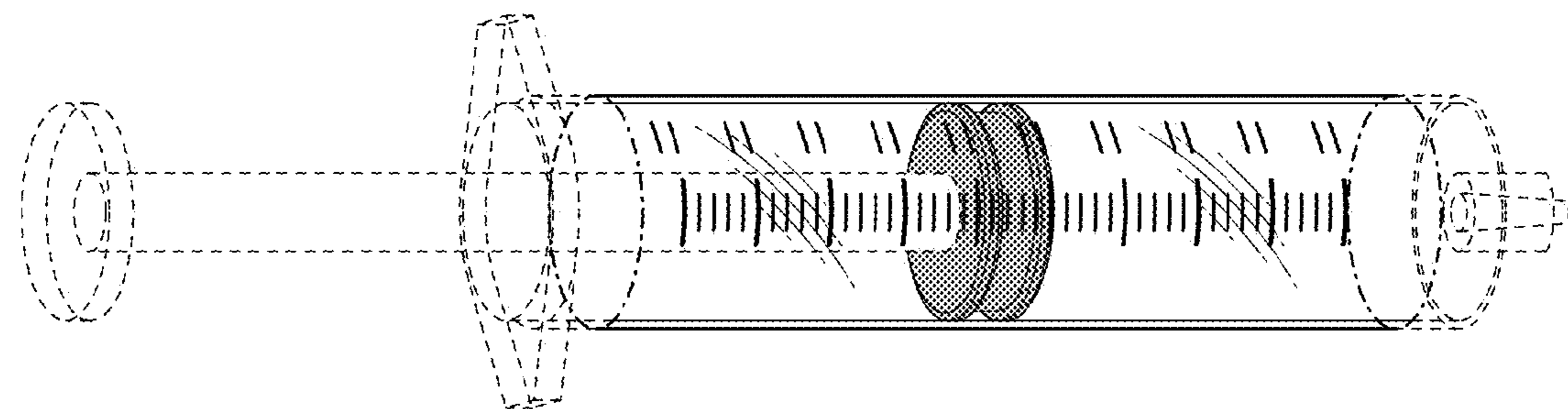


FIG. 6

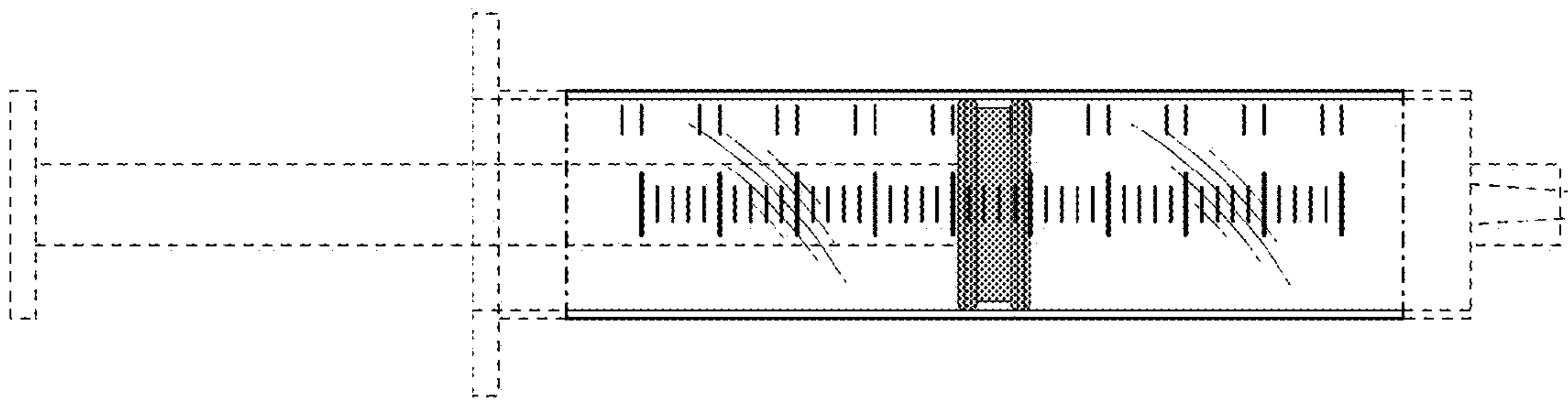


FIG. 7

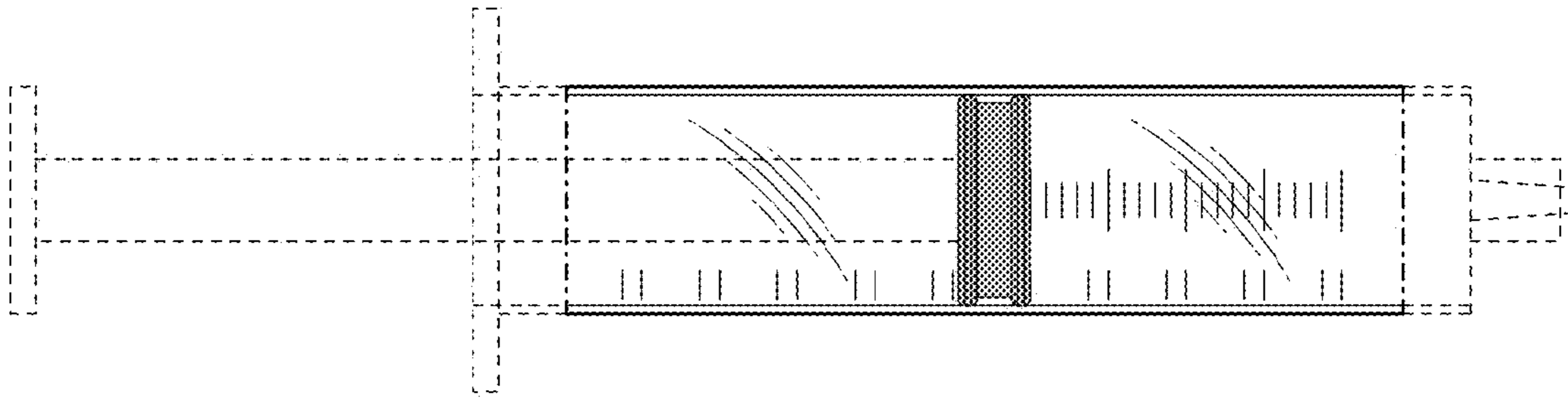


FIG. 8

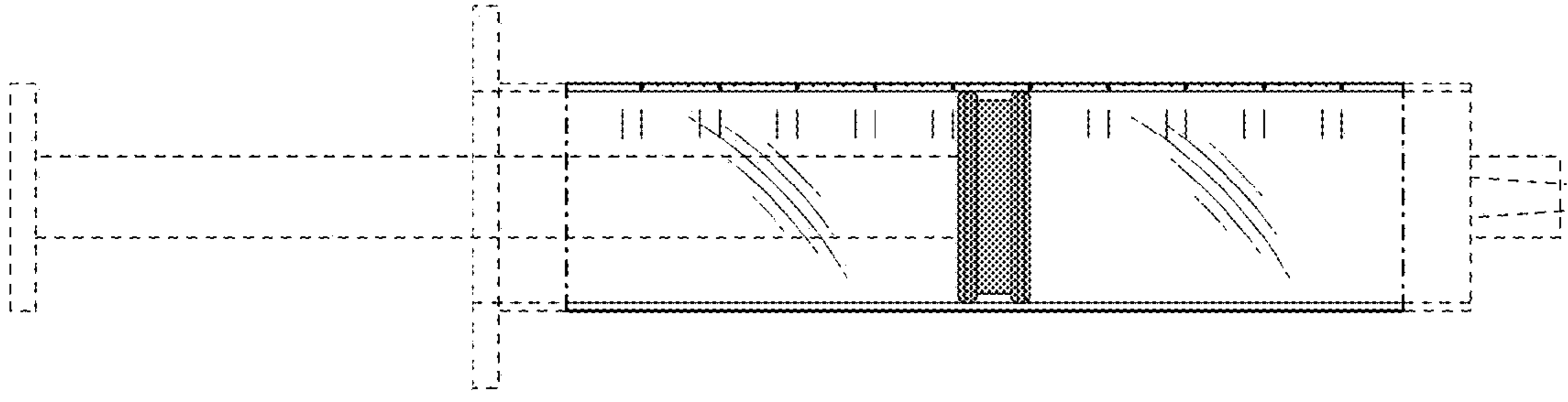


FIG. 9

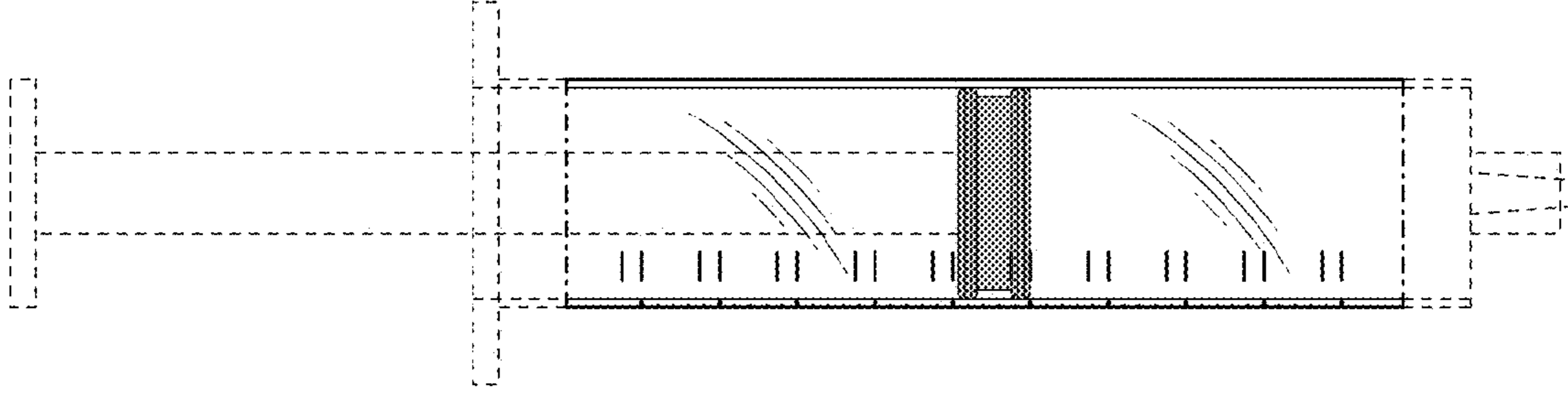


FIG. 10

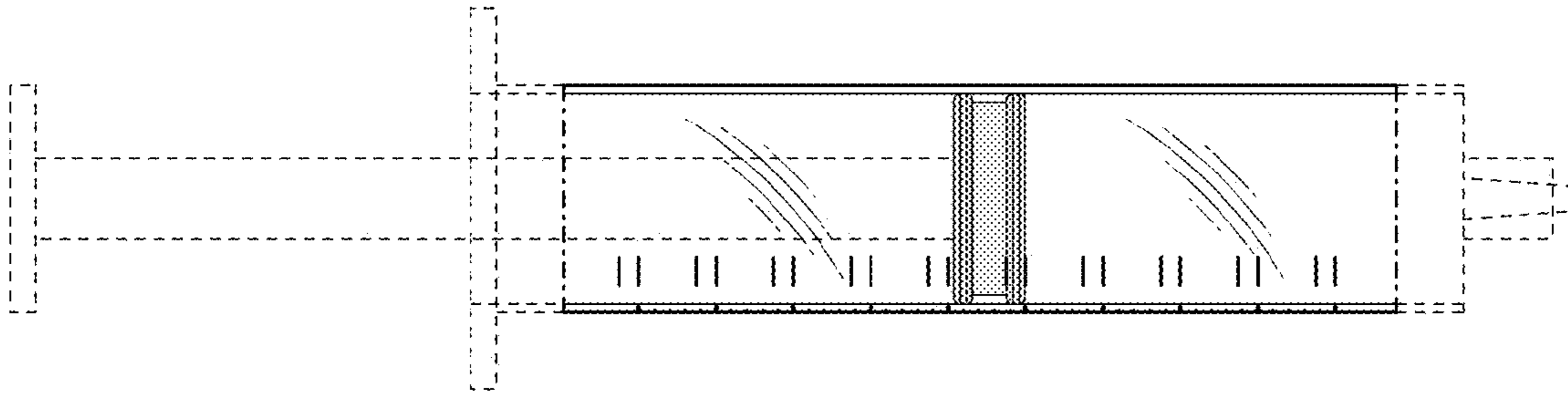


FIG. 15

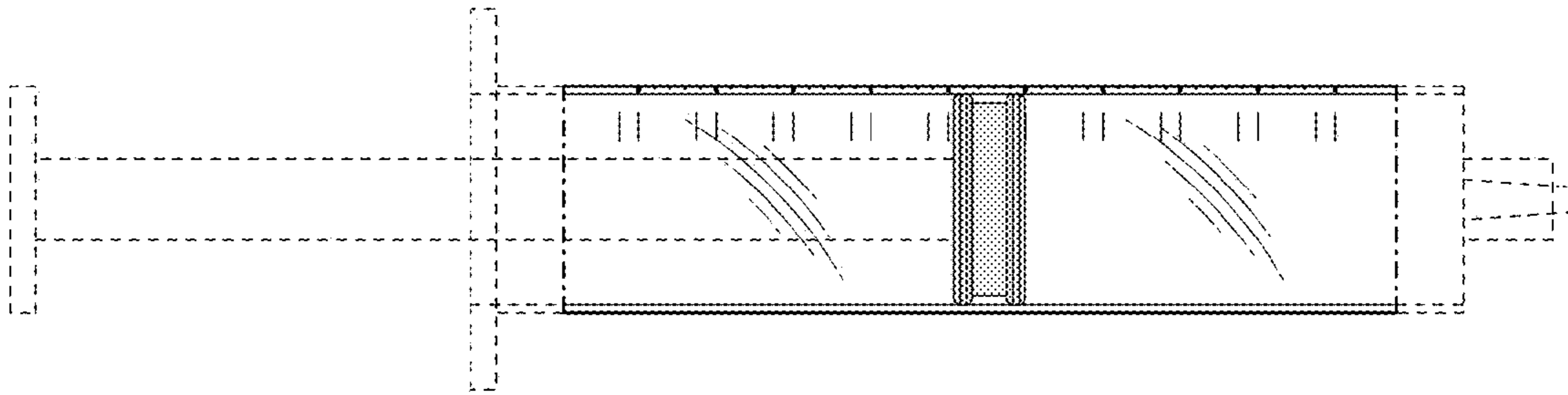


FIG. 14

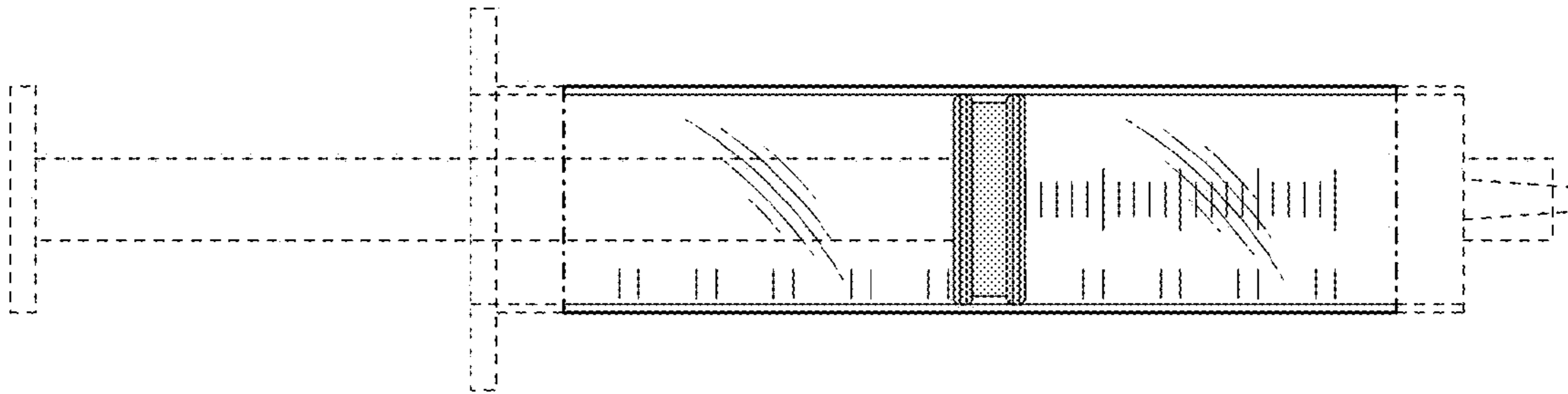


FIG. 13

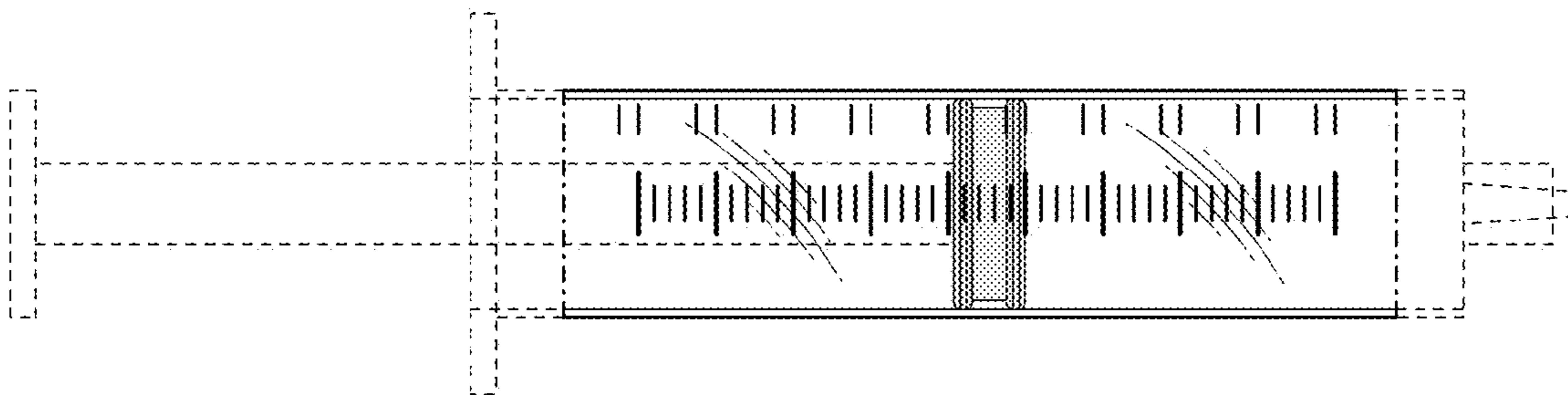


FIG. 12

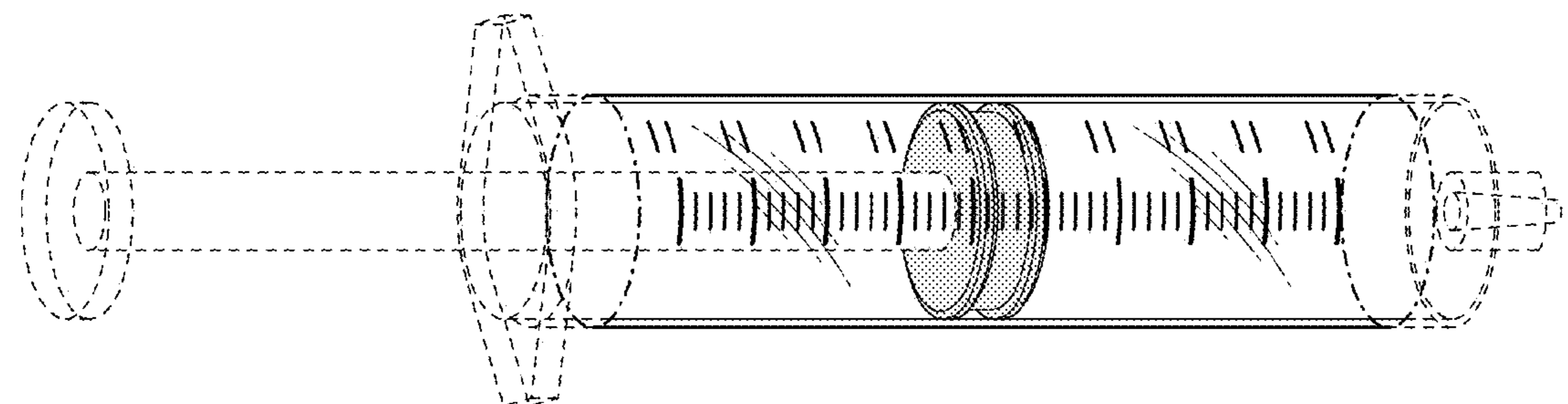


FIG. 11

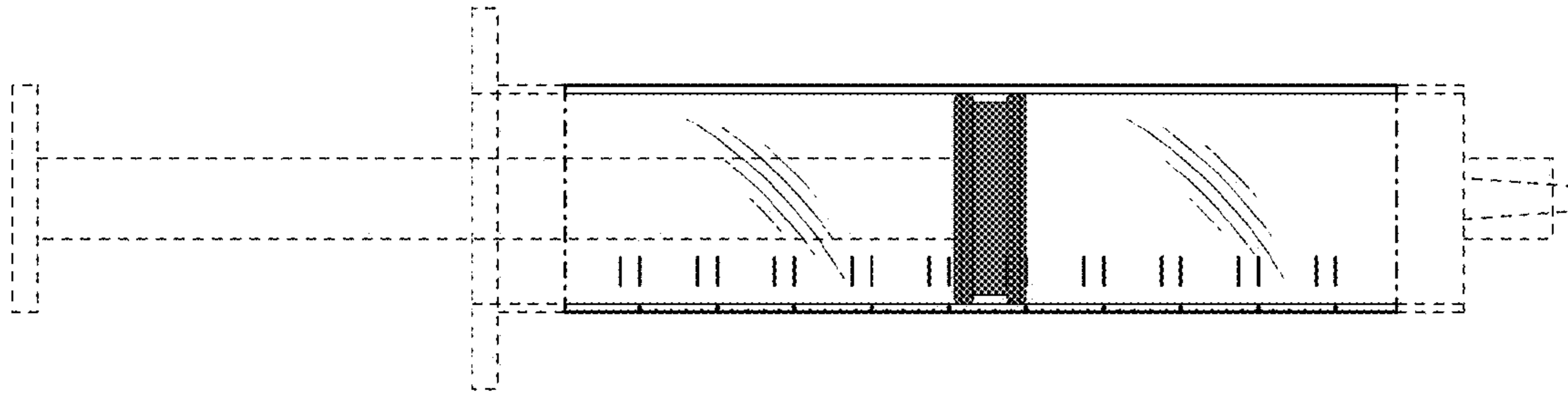


FIG. 20

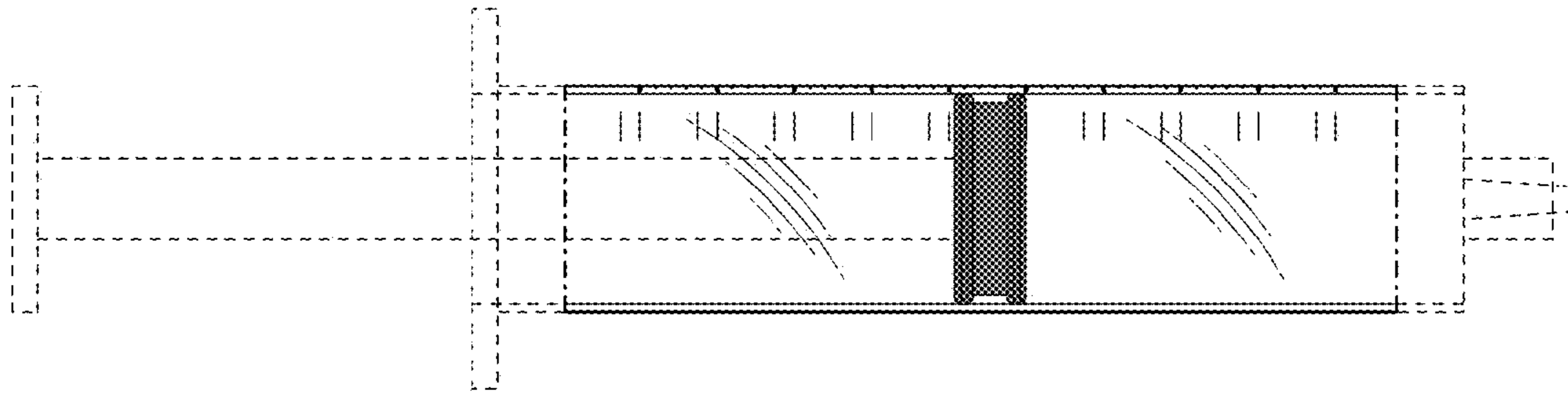


FIG. 19

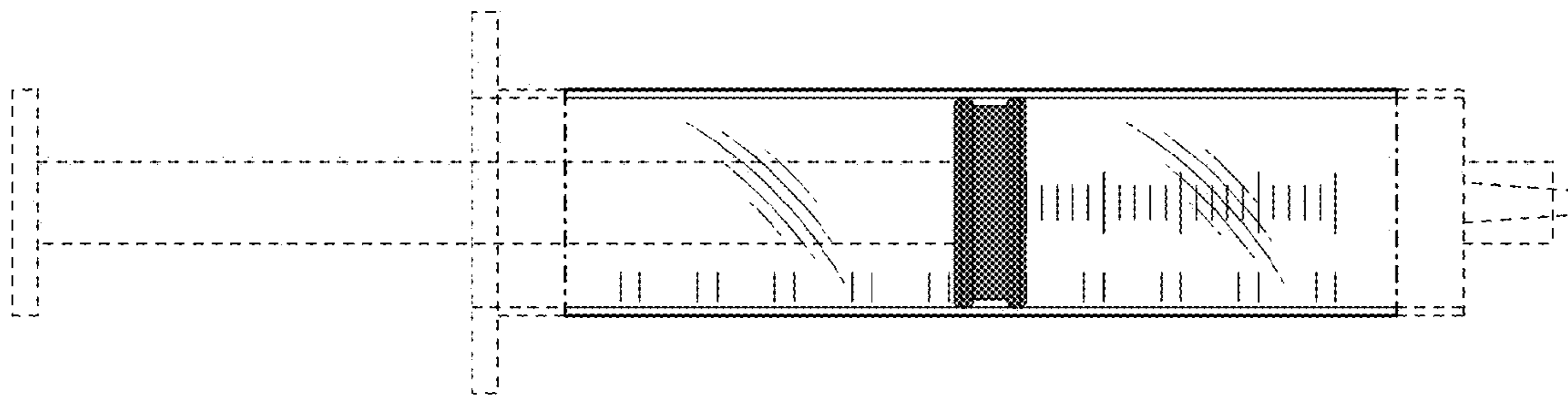


FIG. 18

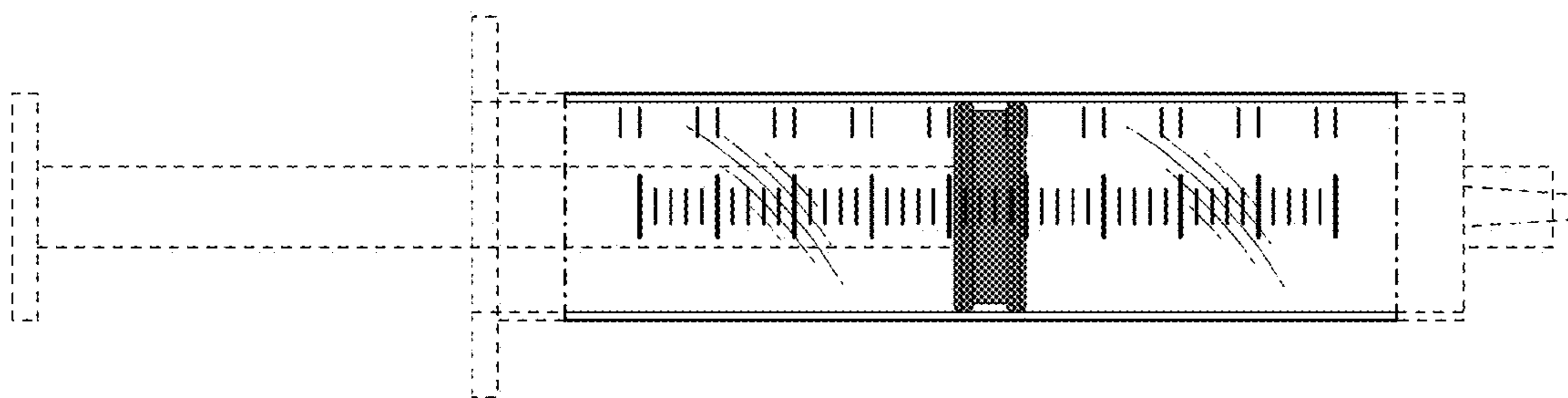


FIG. 17

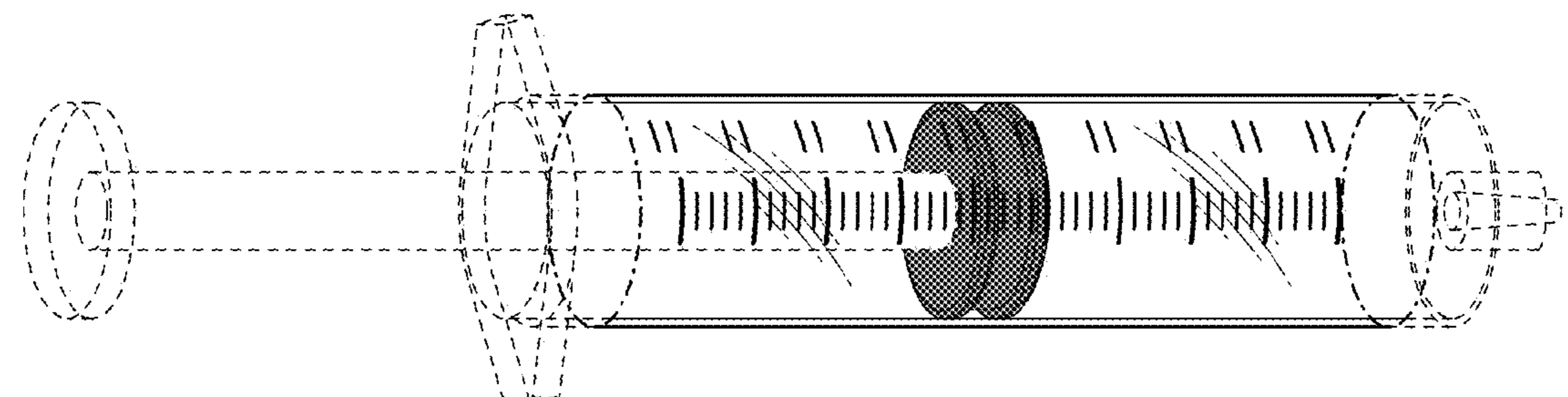


FIG. 16

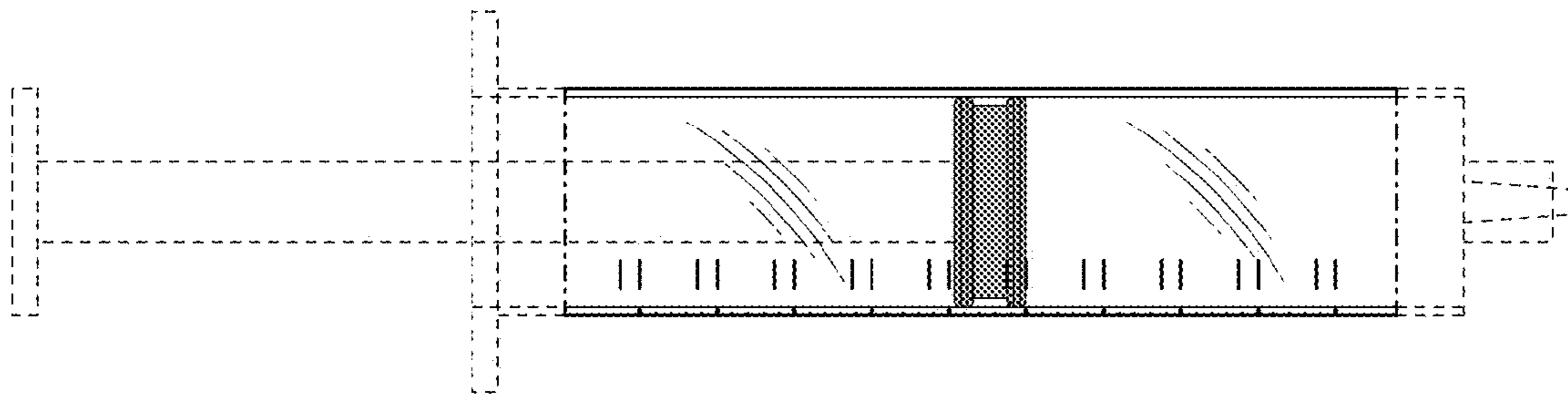


FIG. 25

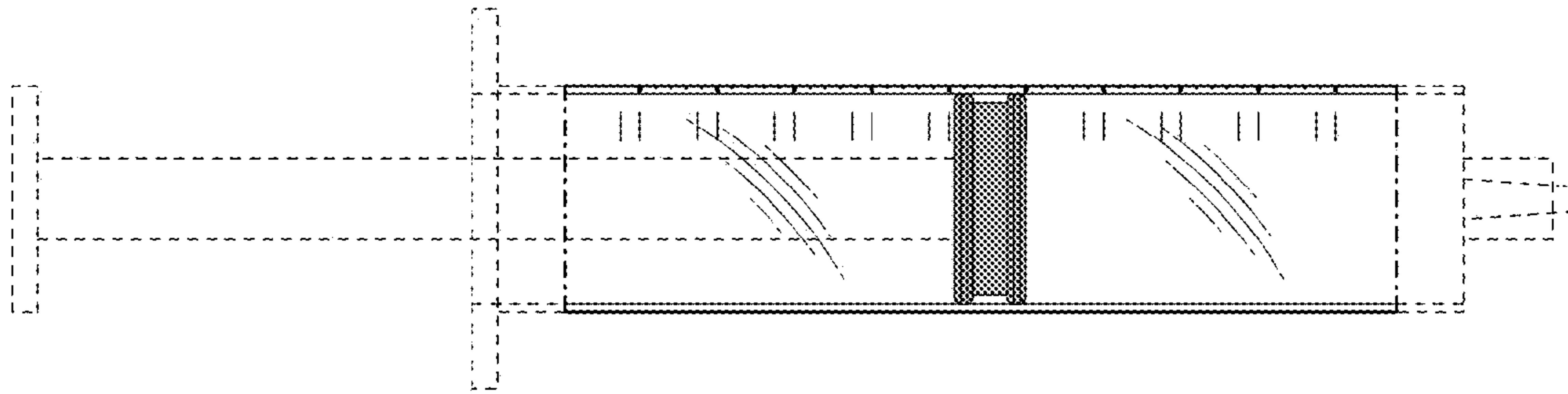


FIG. 24

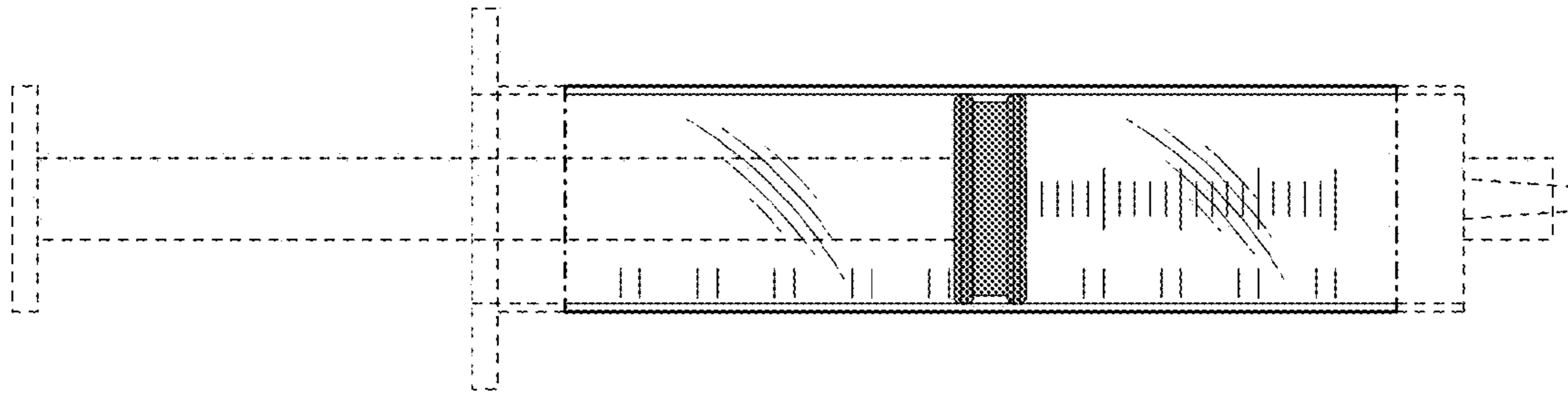


FIG. 23

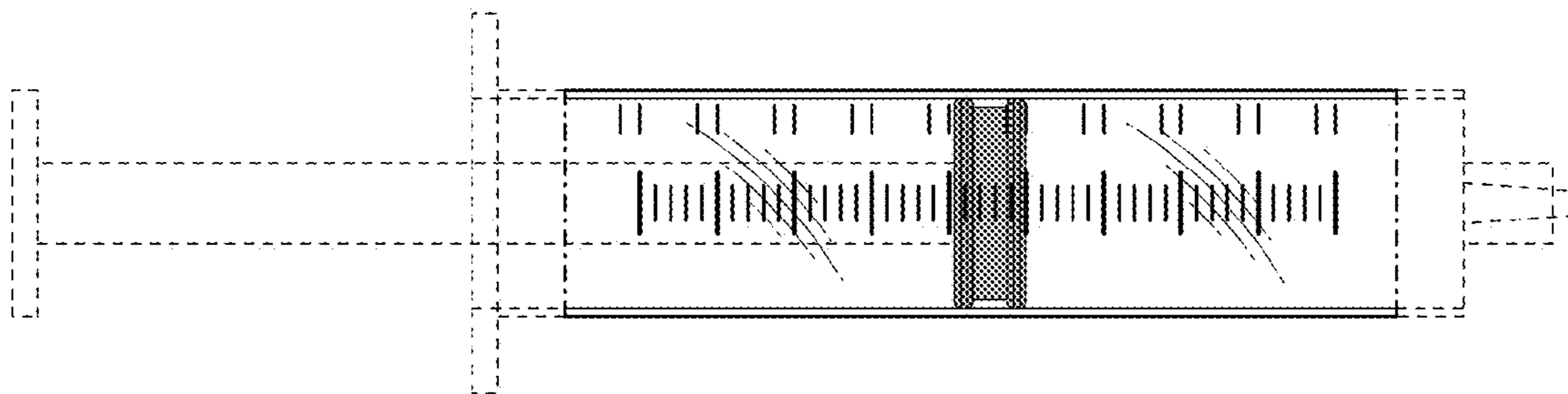


FIG. 22

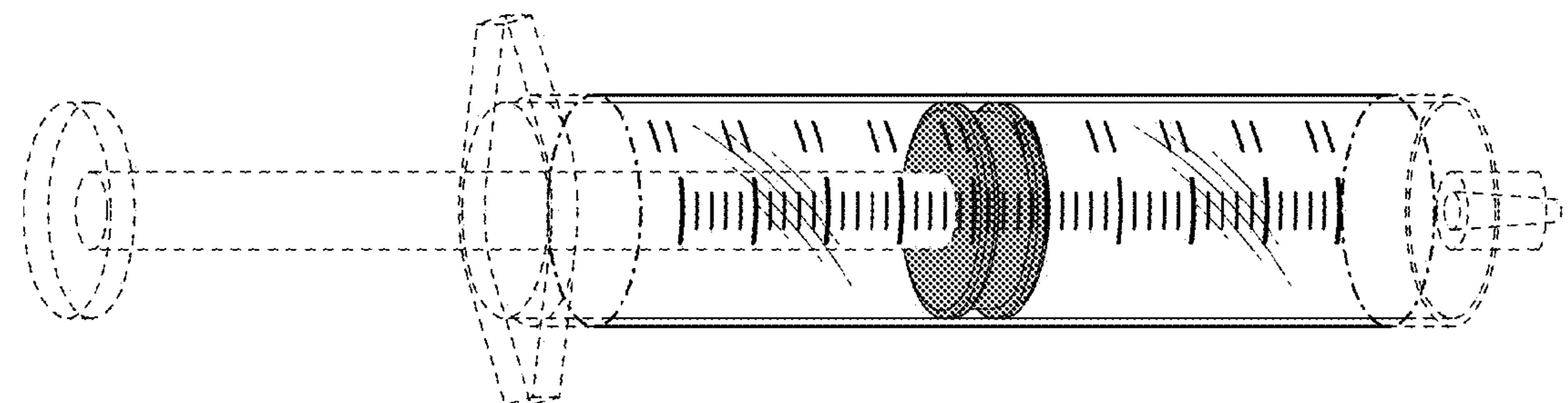


FIG. 21

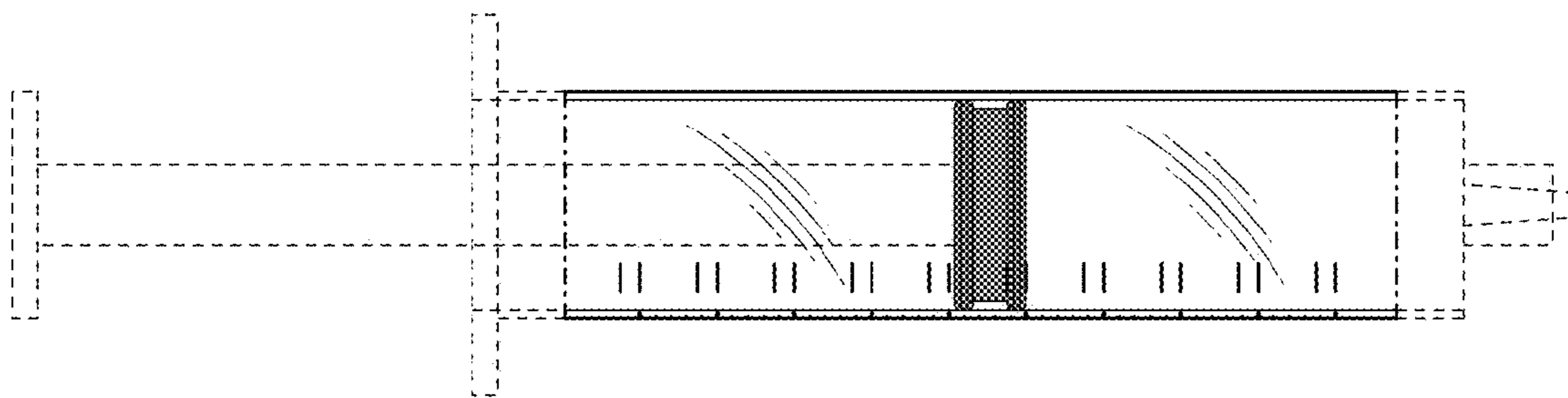


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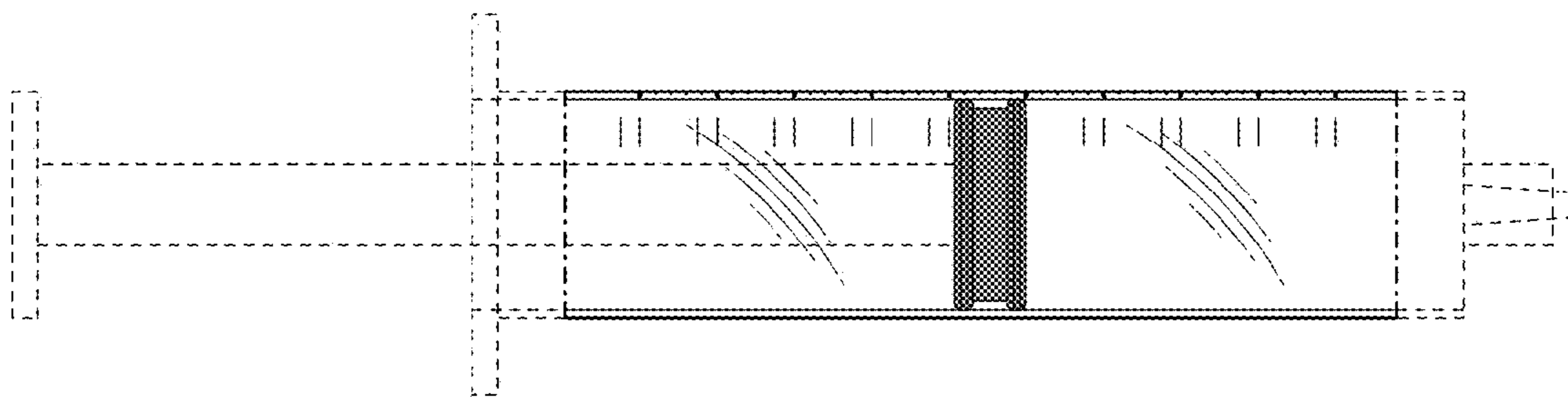


FIG. 29

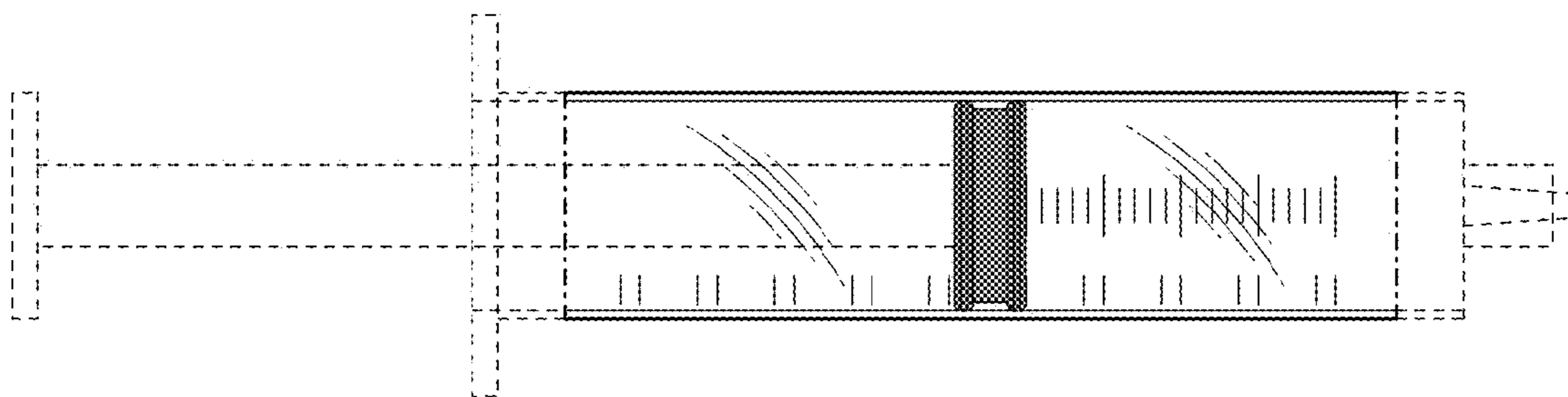


FIG. 28

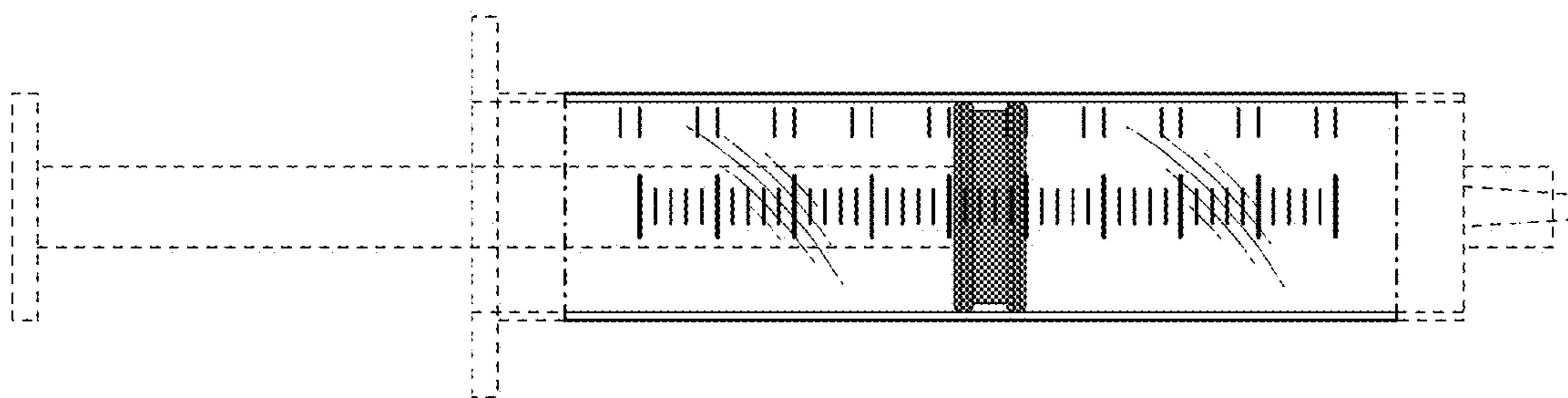


FIG. 27

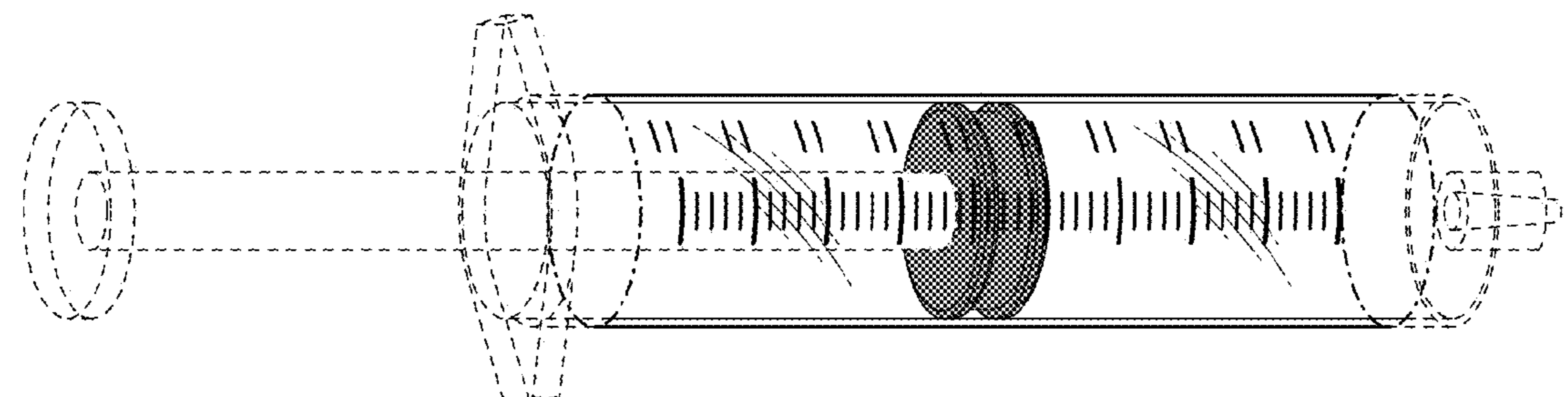


FIG. 26

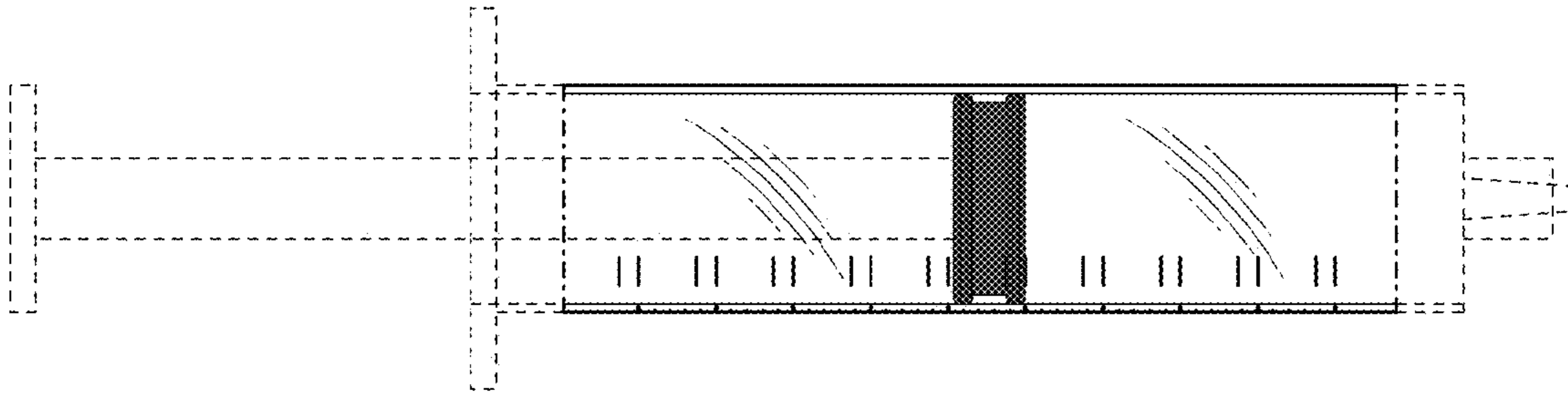


FIG. 35

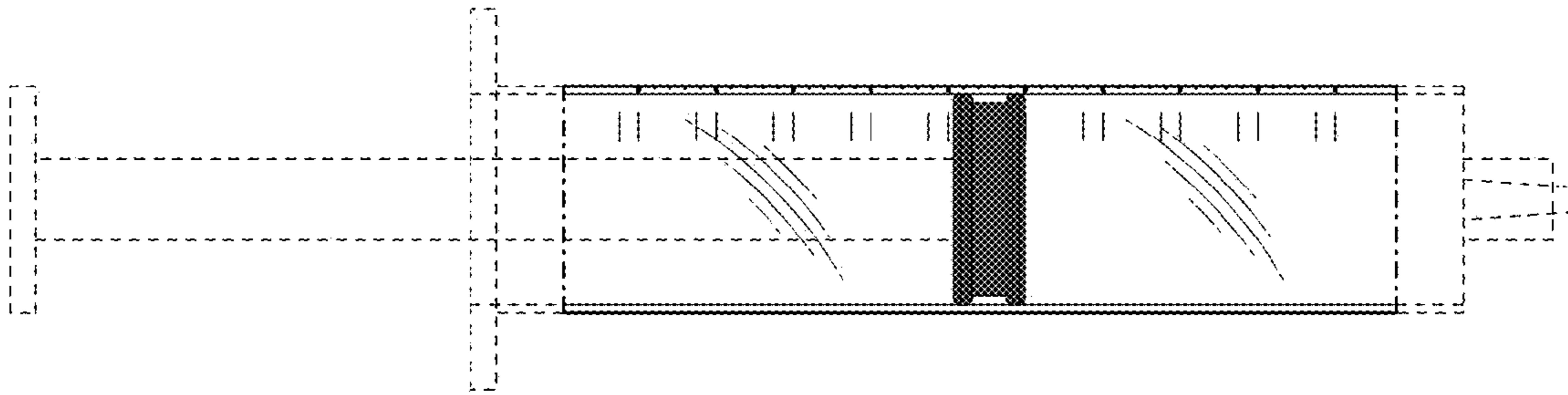


FIG. 34

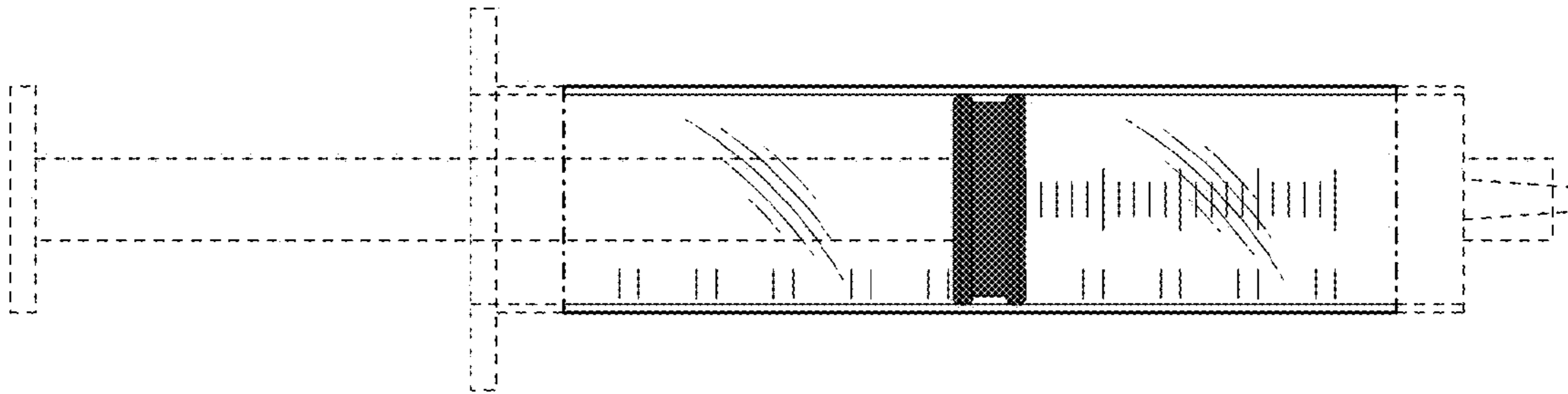


FIG. 33

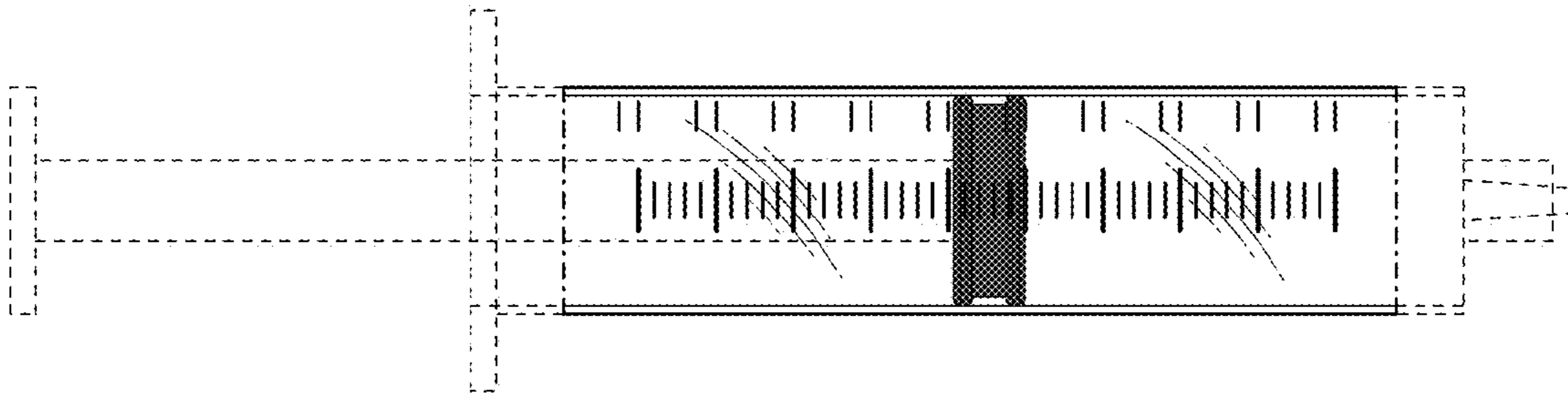


FIG. 32

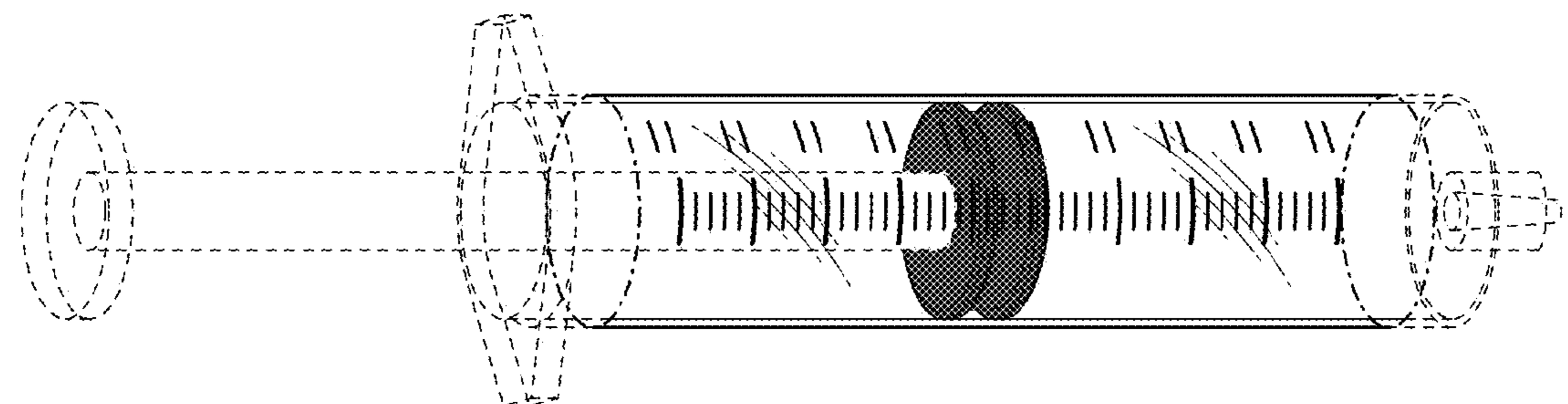


FIG. 31

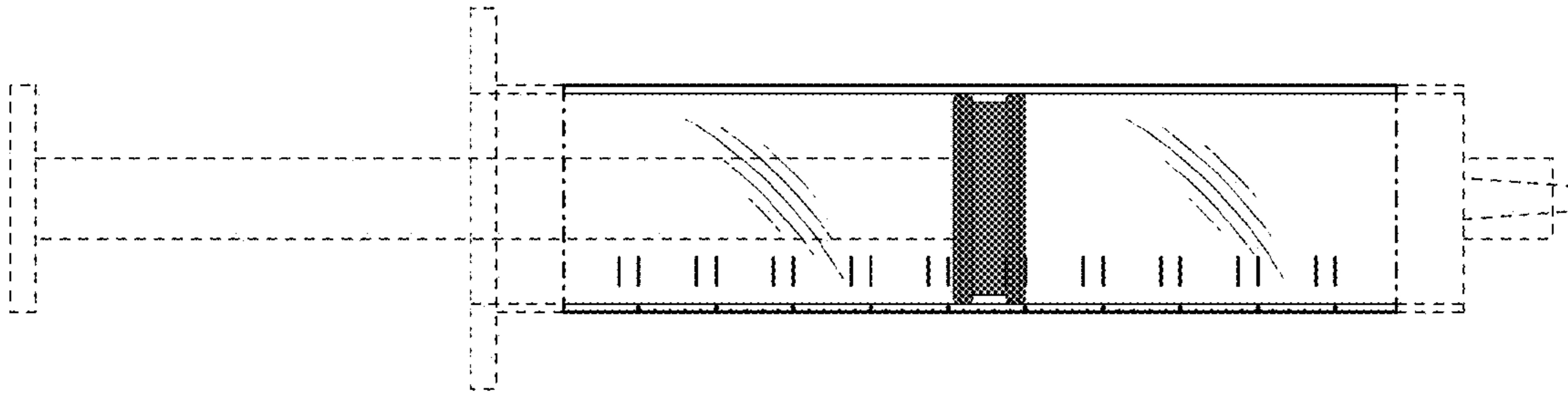


FIG. 36

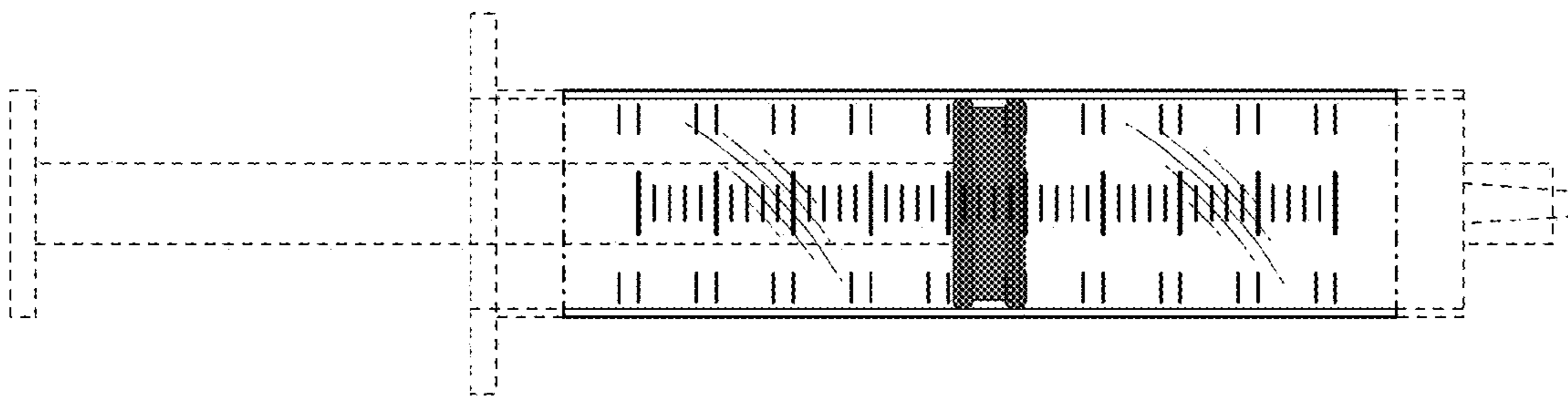


FIG. 37

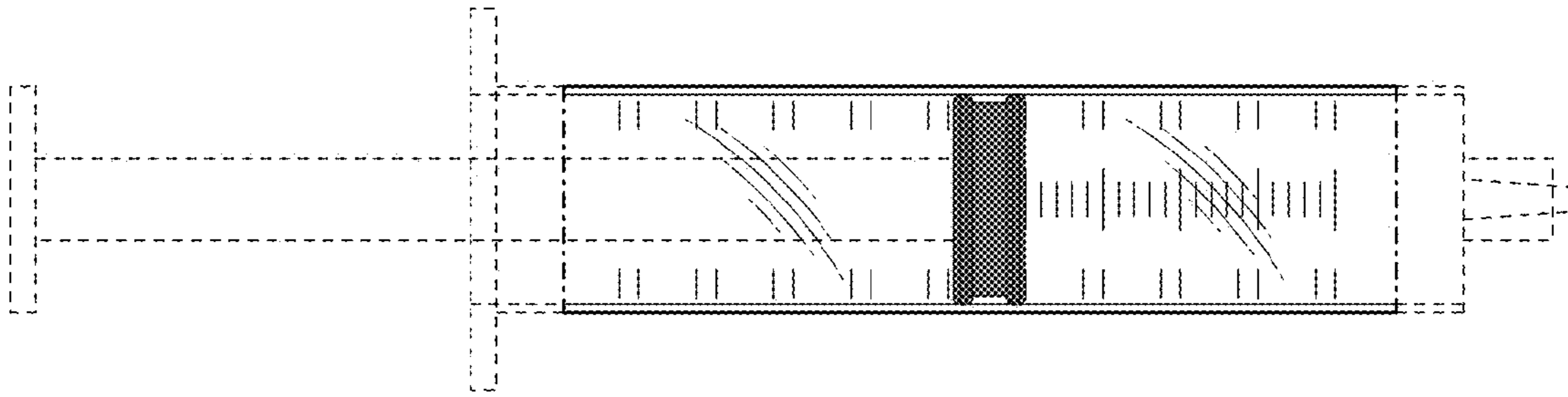


FIG. 38

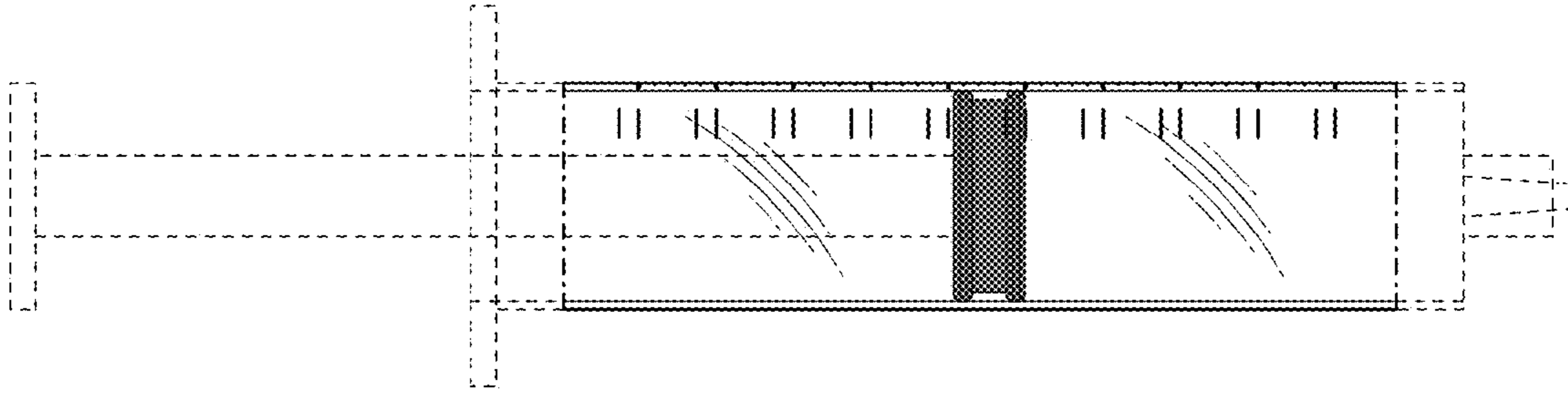


FIG. 39

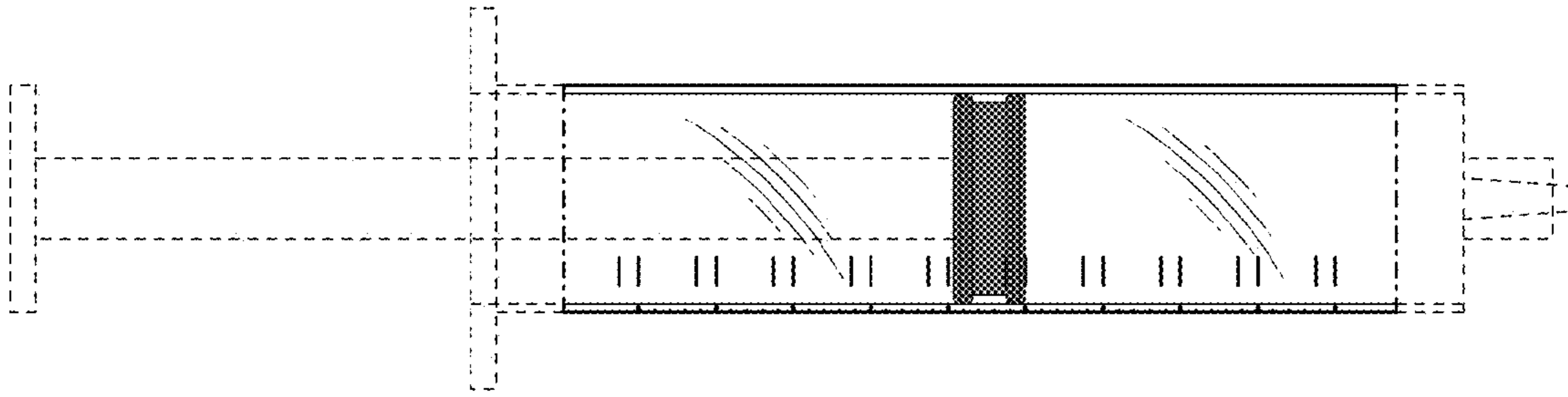


FIG. 40

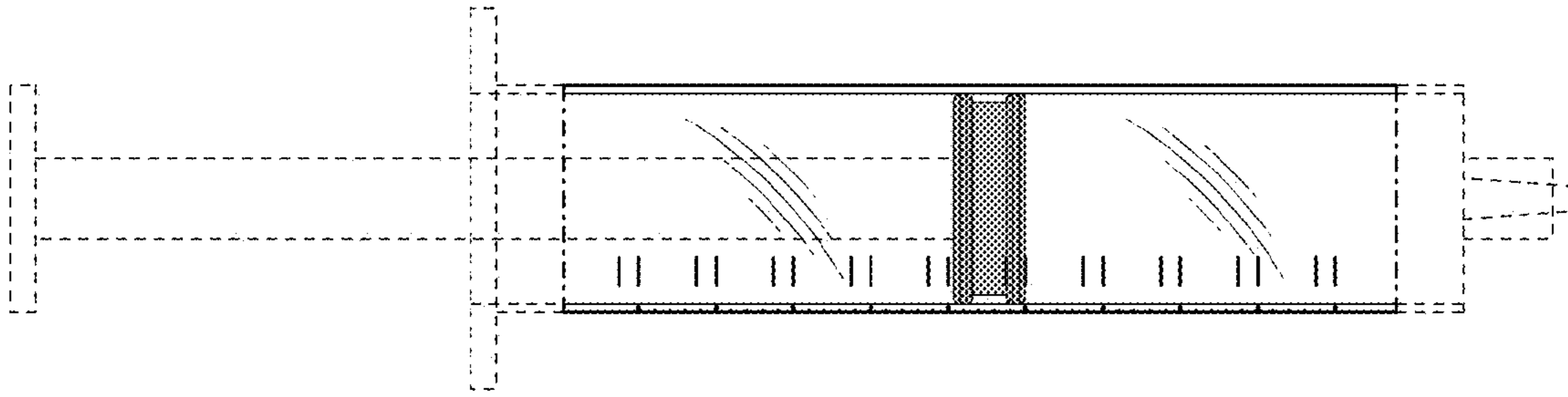


FIG. 45

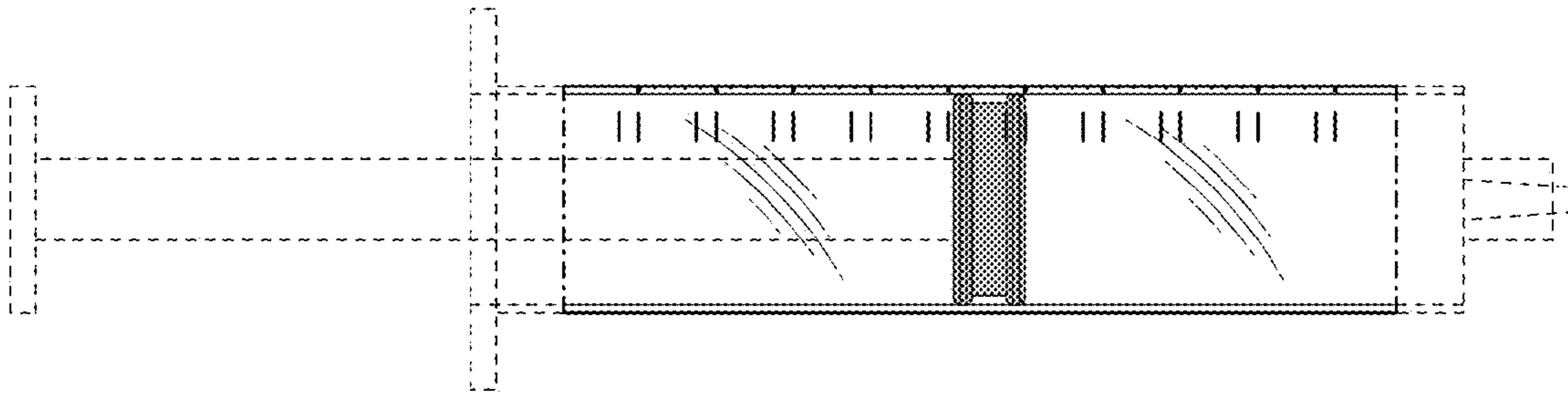


FIG. 44

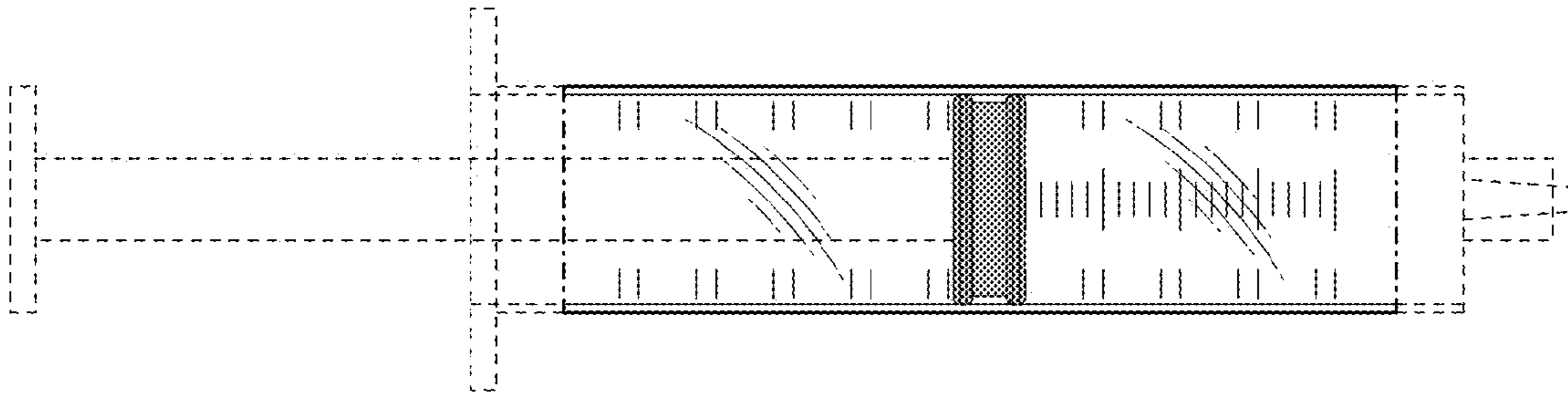


FIG. 43

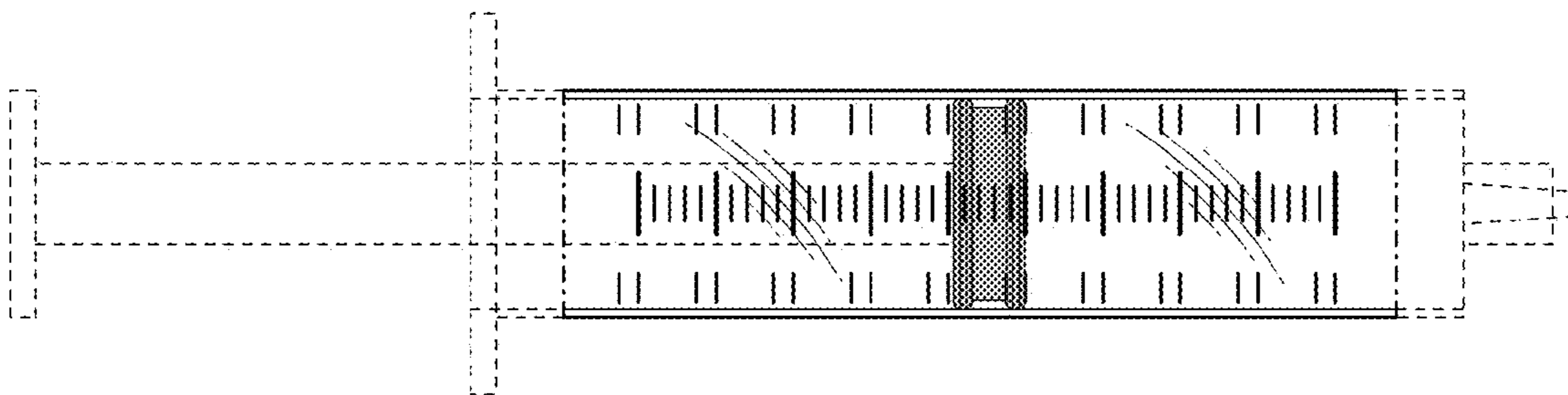


FIG. 42

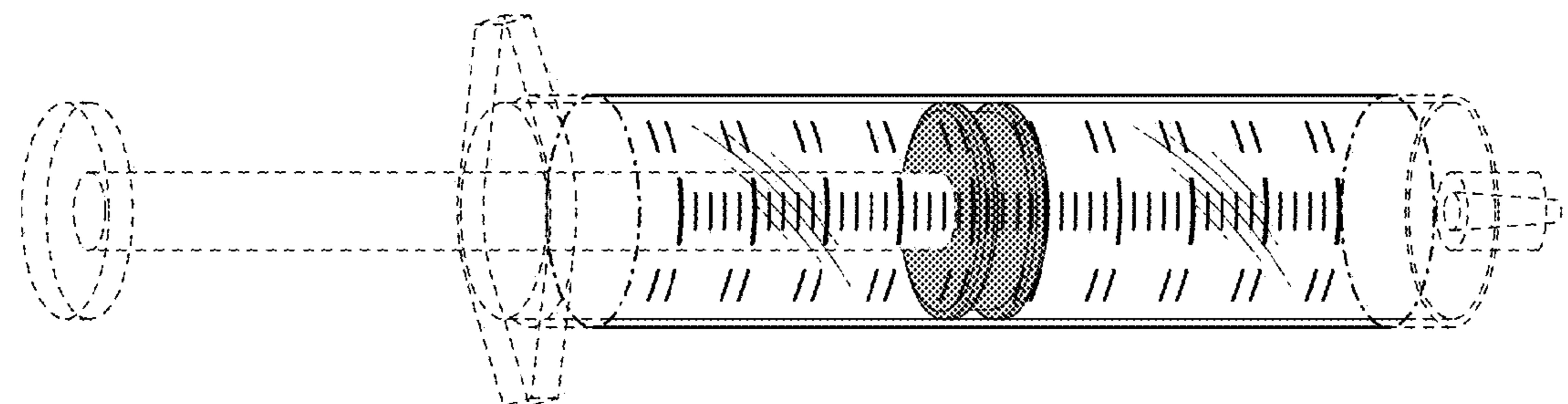


FIG. 41

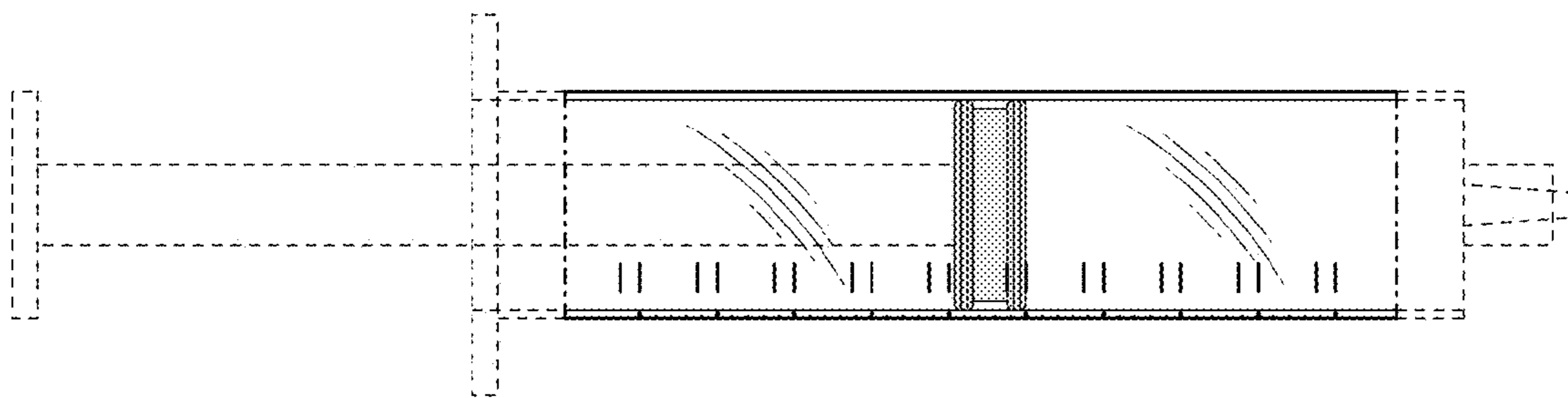


FIG. 50

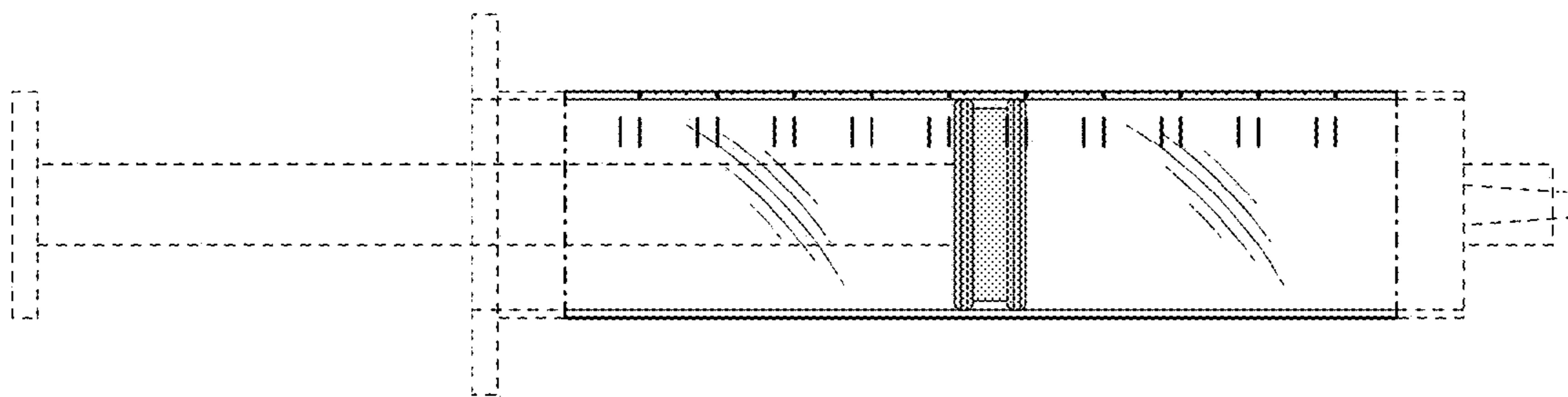


FIG. 49

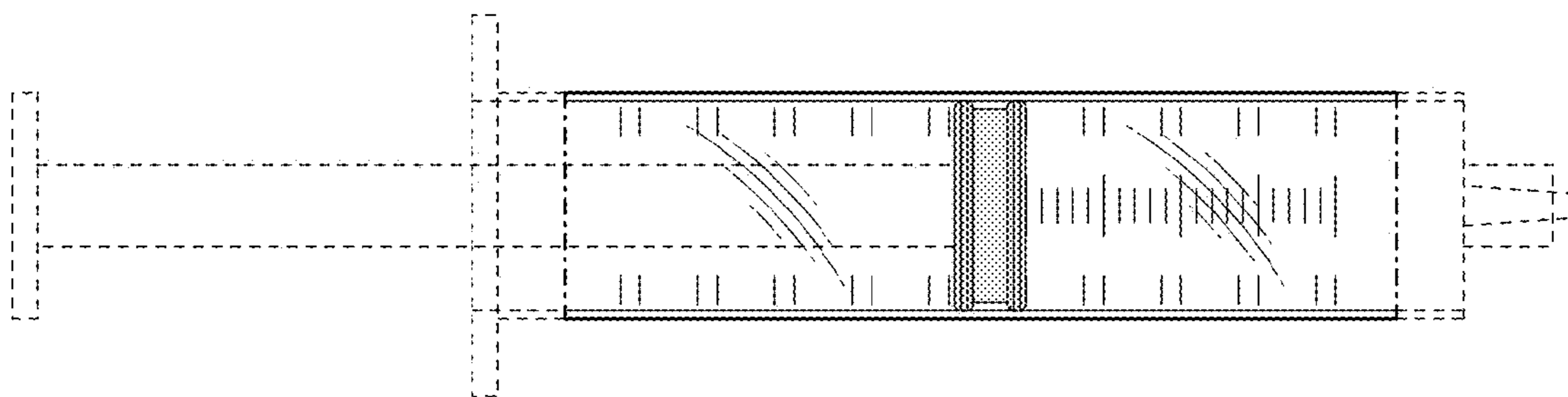


FIG. 48

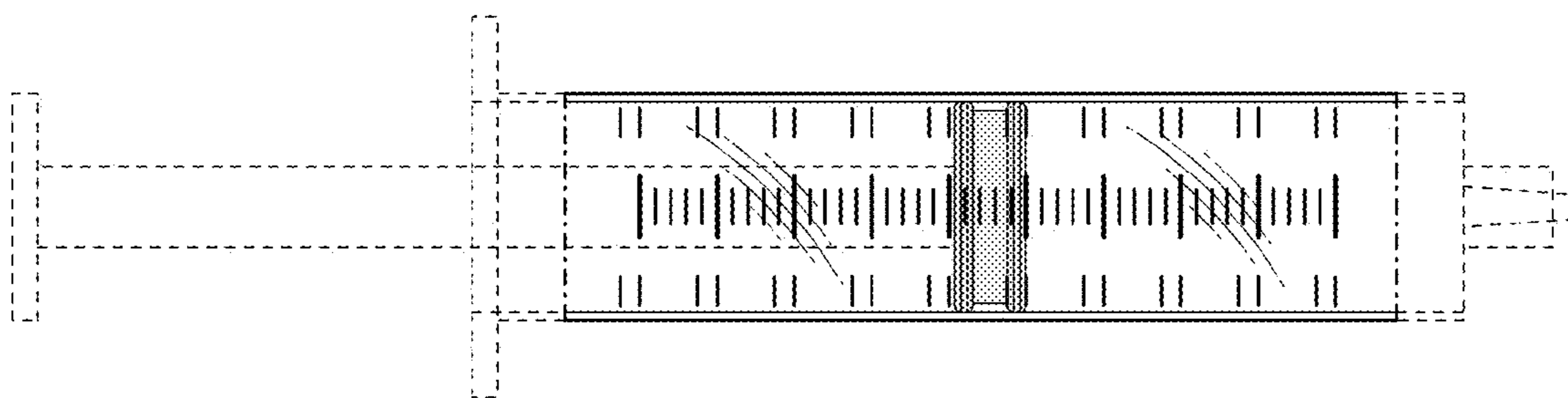


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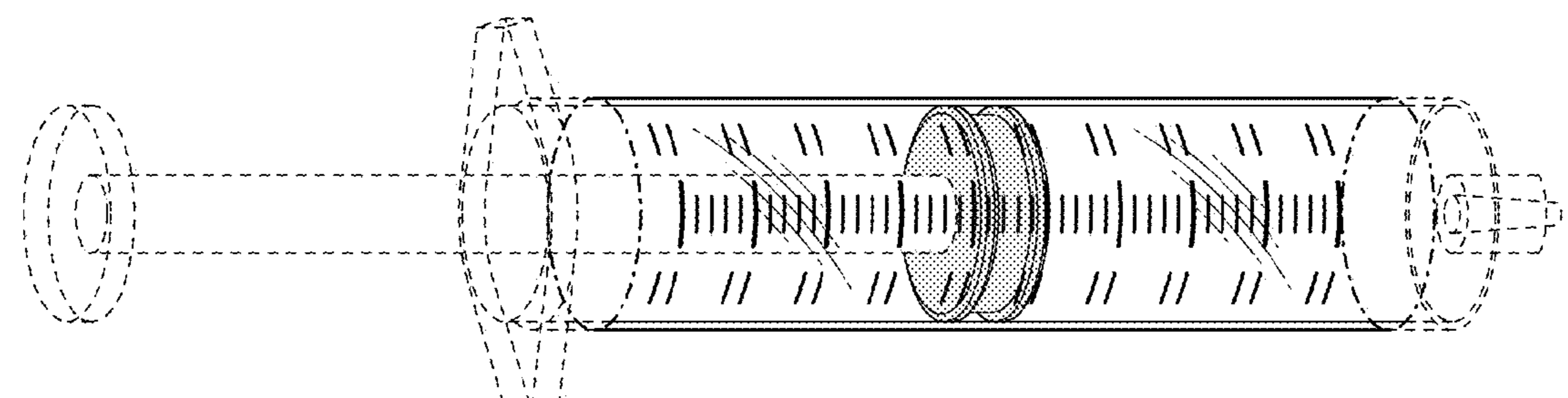


FIG. 46

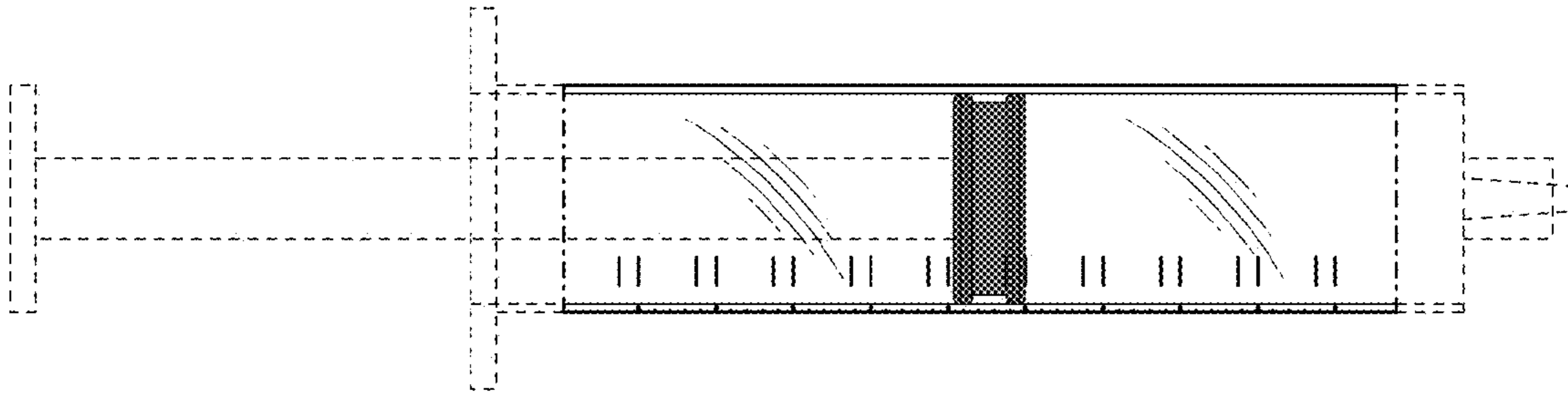


FIG. 55

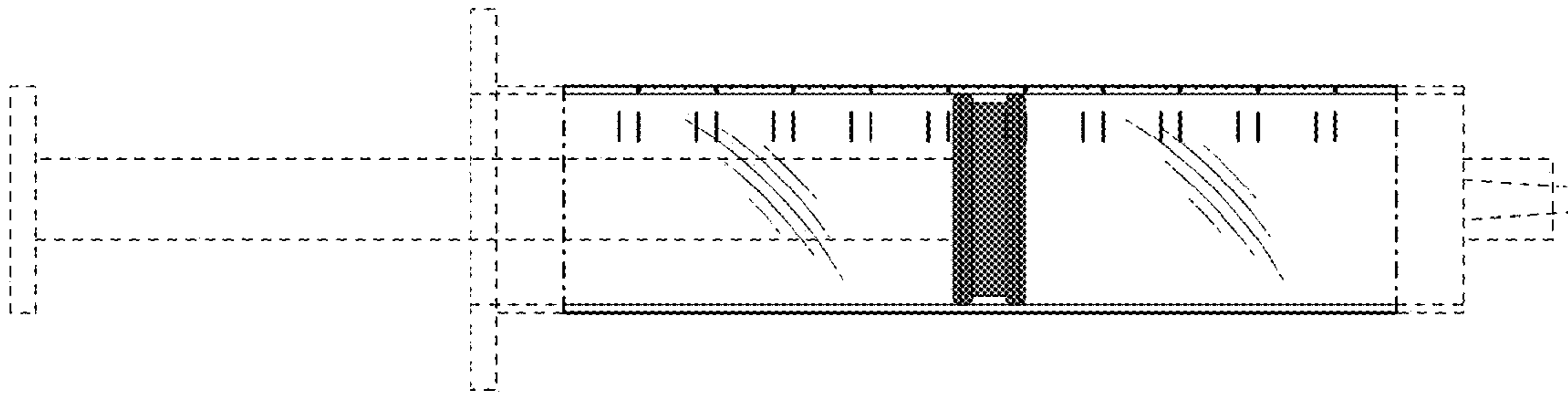


FIG. 54

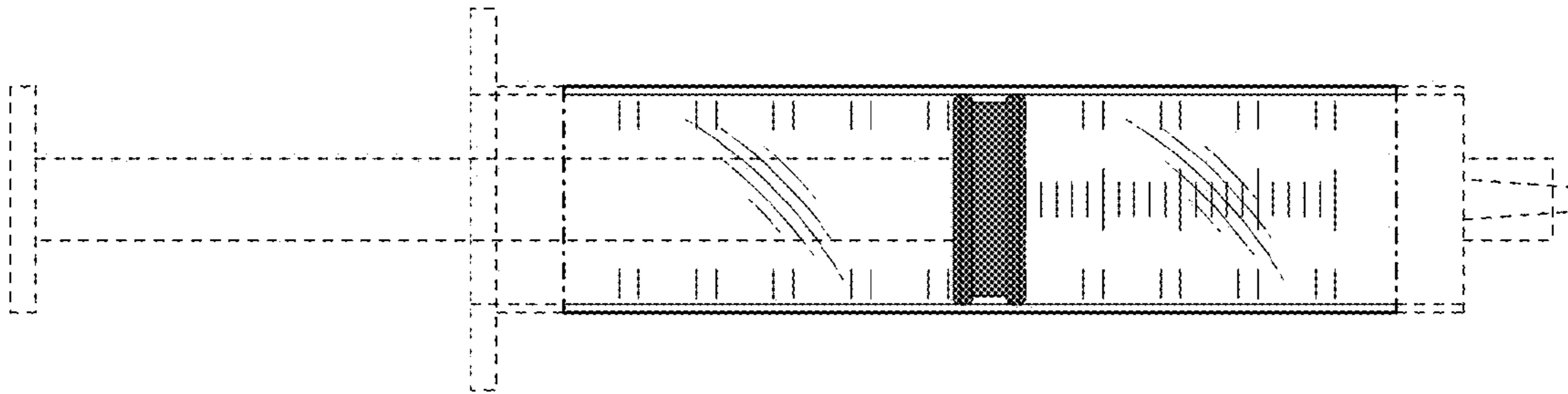


FIG. 53

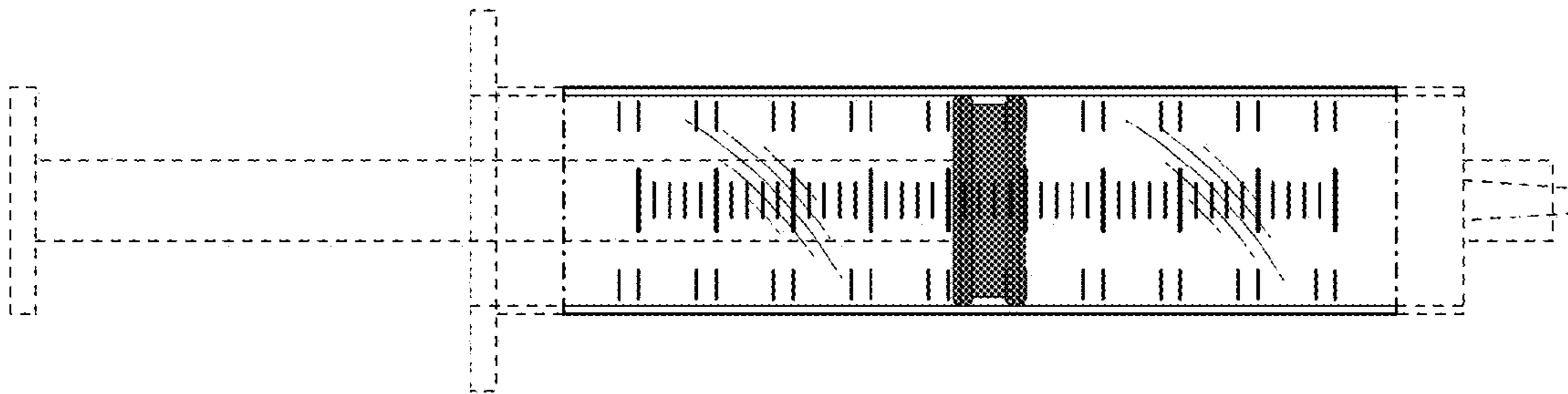


FIG. 52

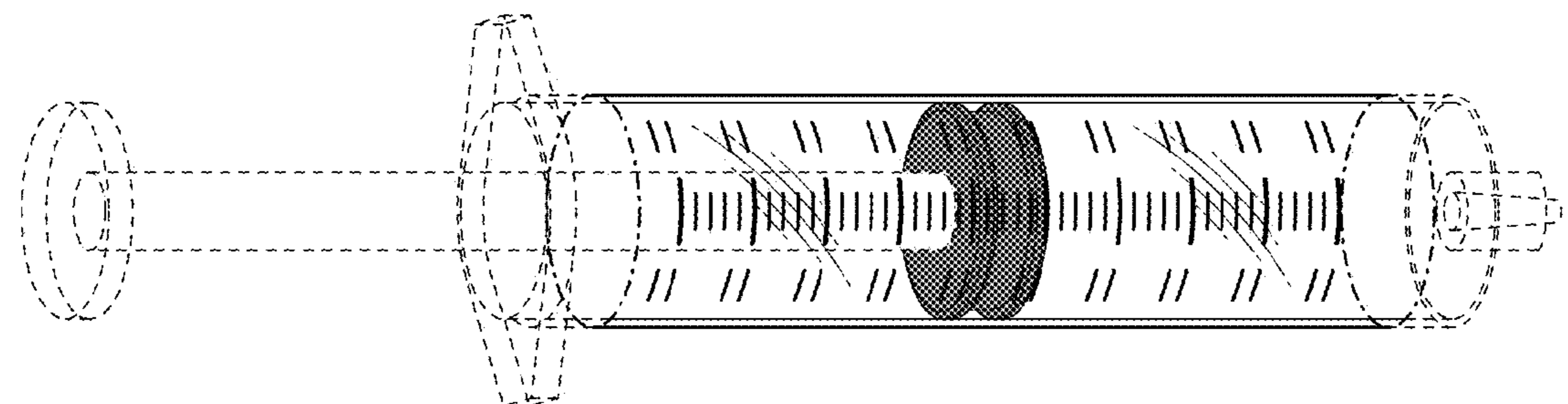


FIG. 51

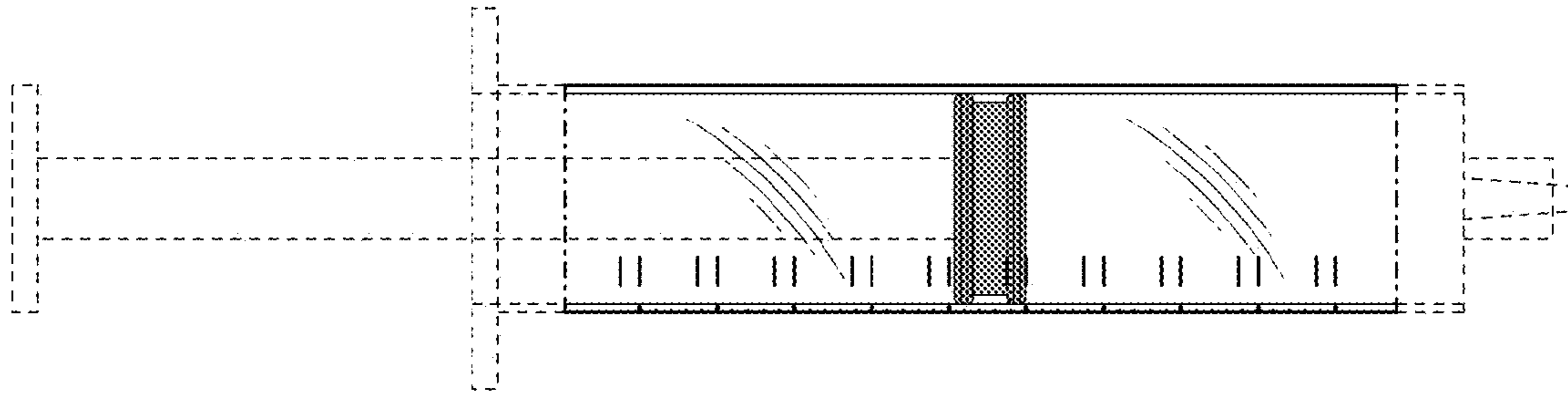


FIG. 56

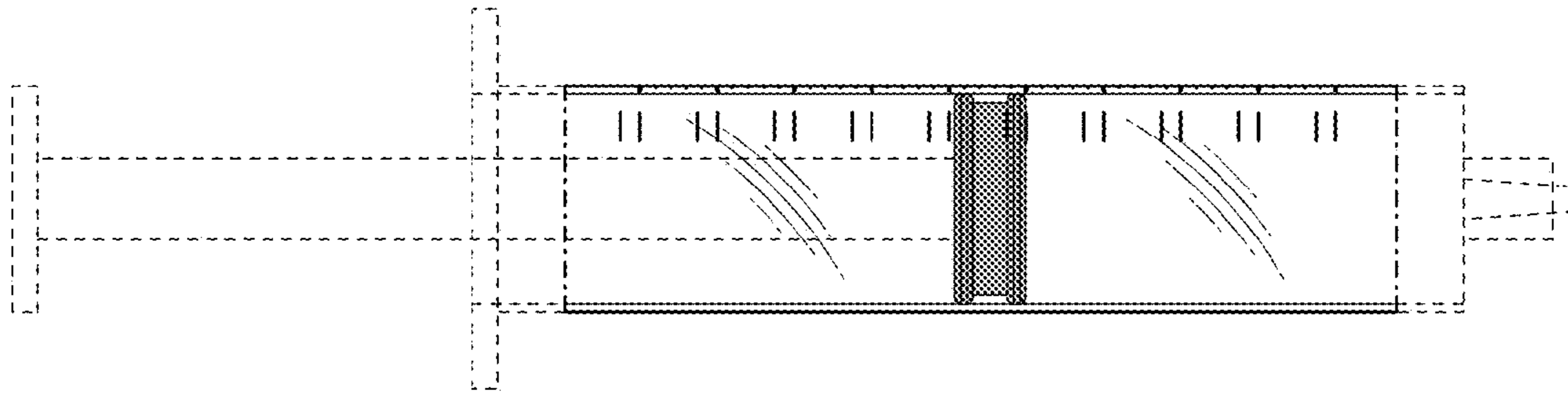


FIG. 57

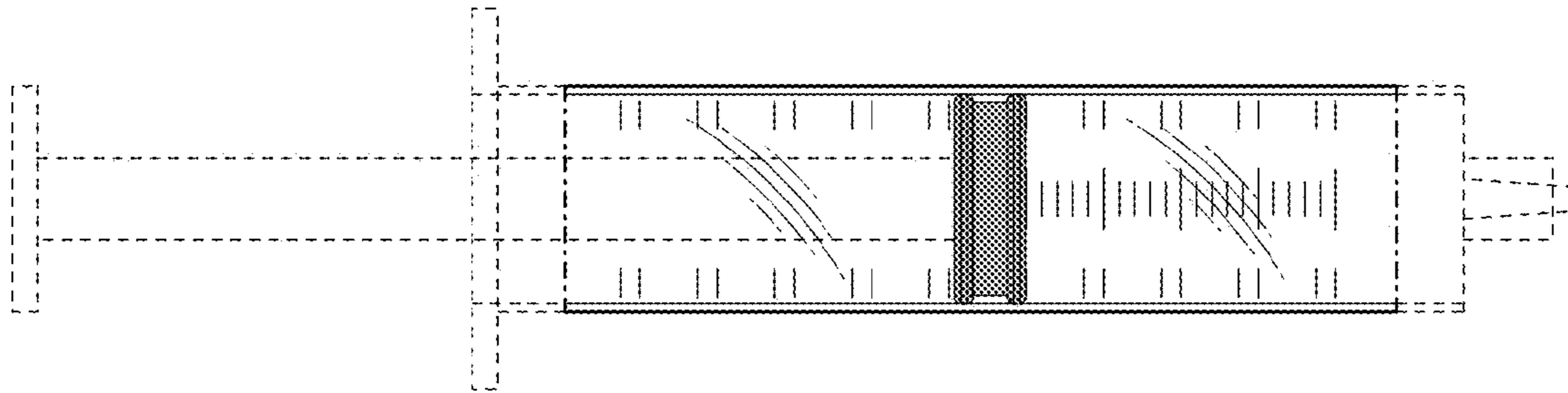


FIG. 58

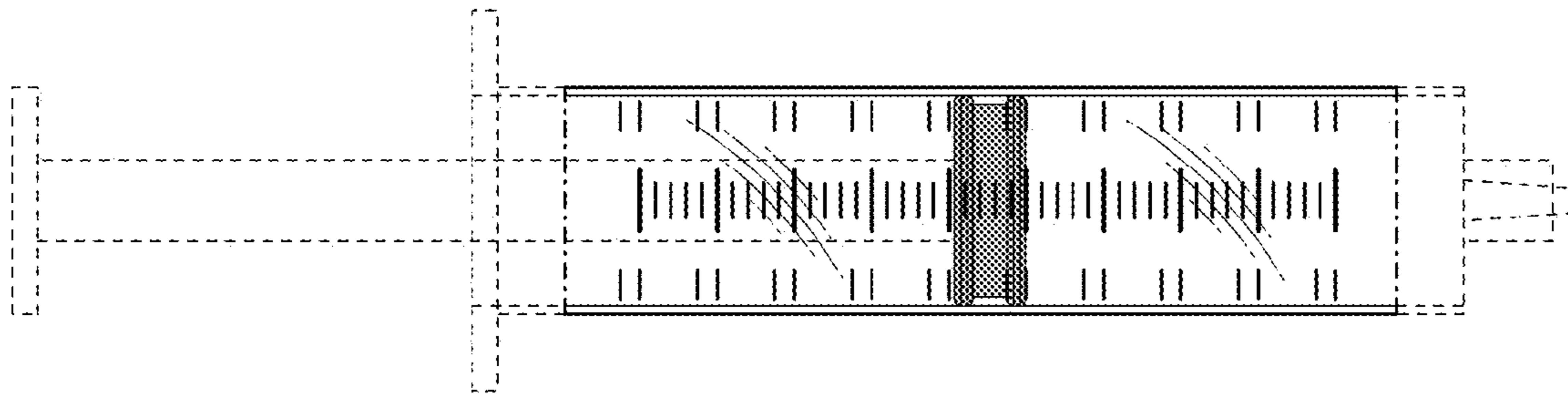


FIG. 59

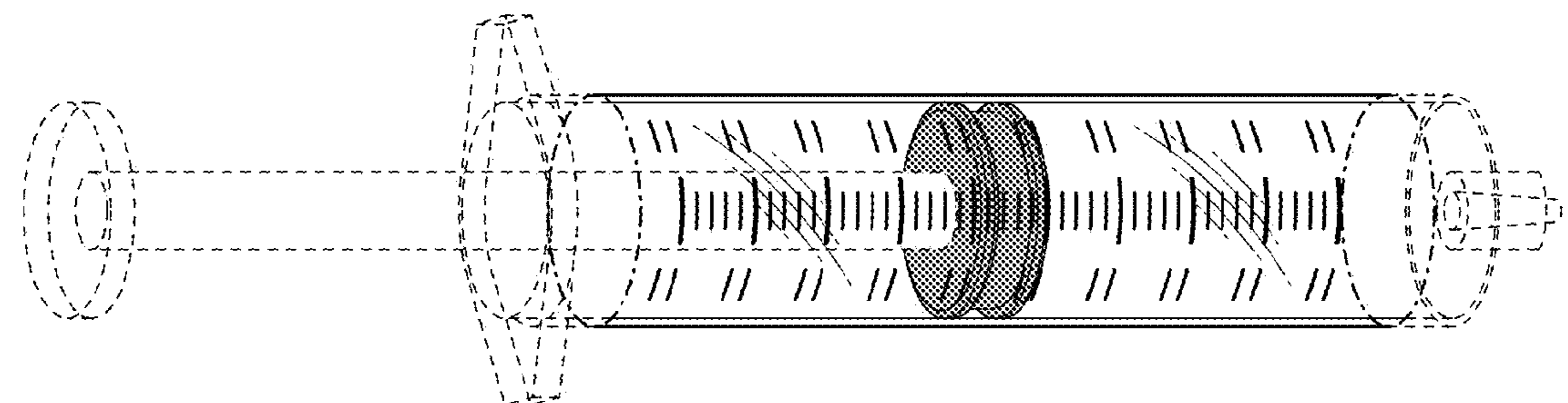


FIG. 60

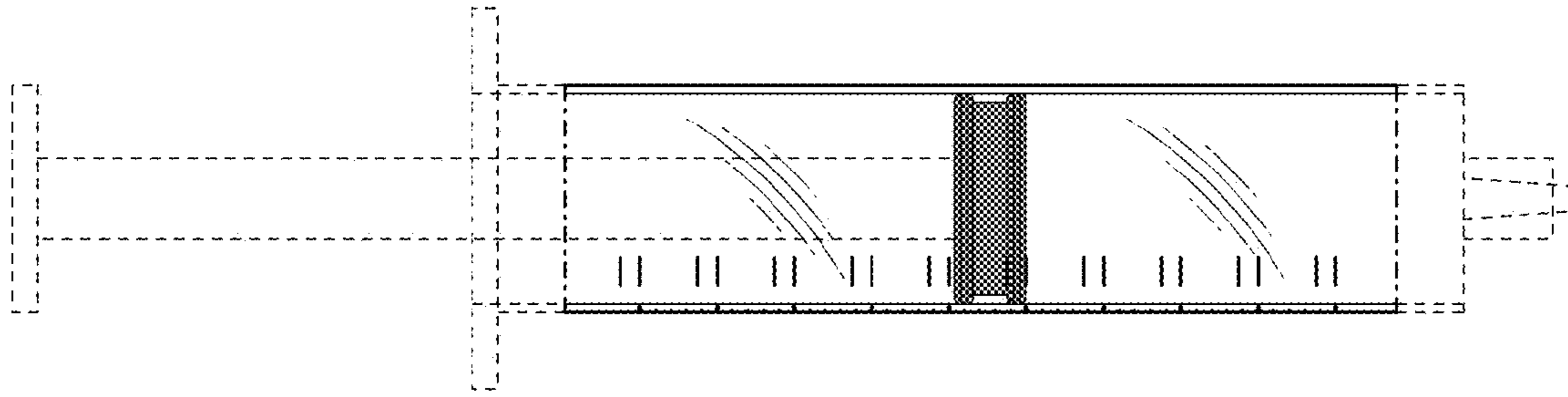


FIG. 65

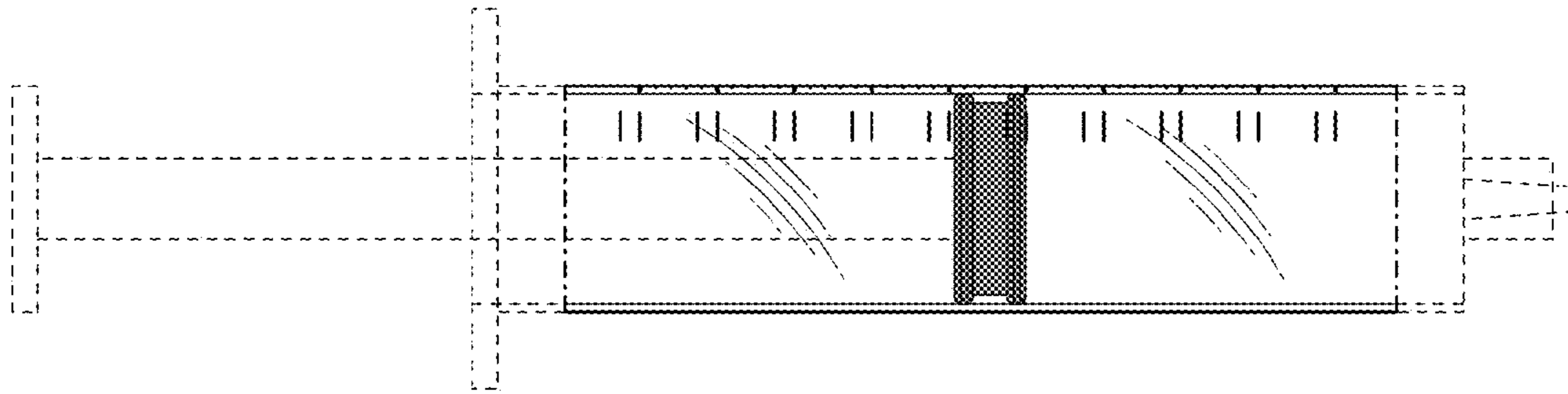


FIG. 64

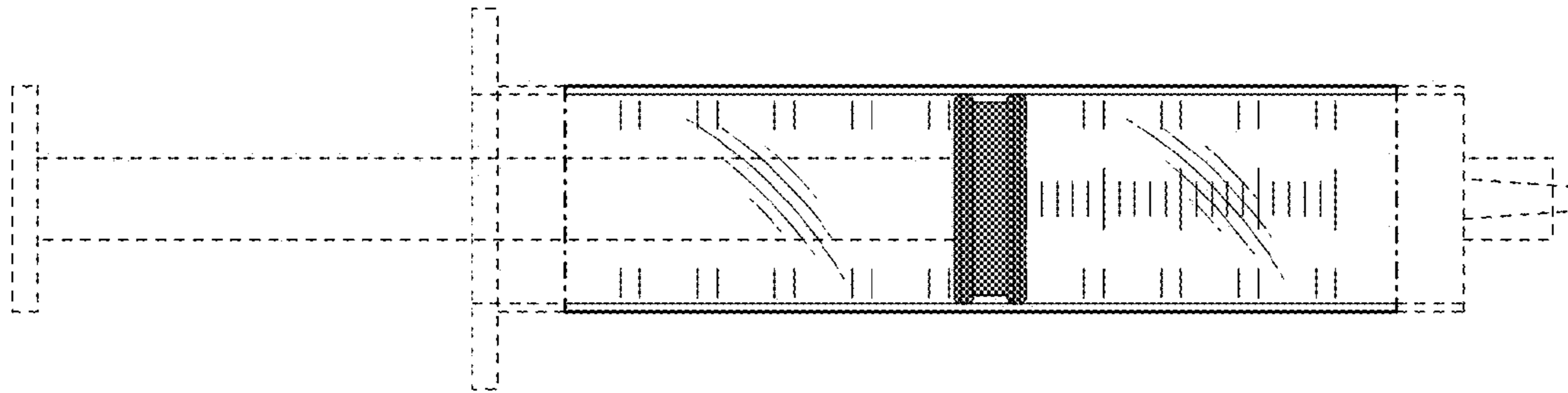


FIG. 63

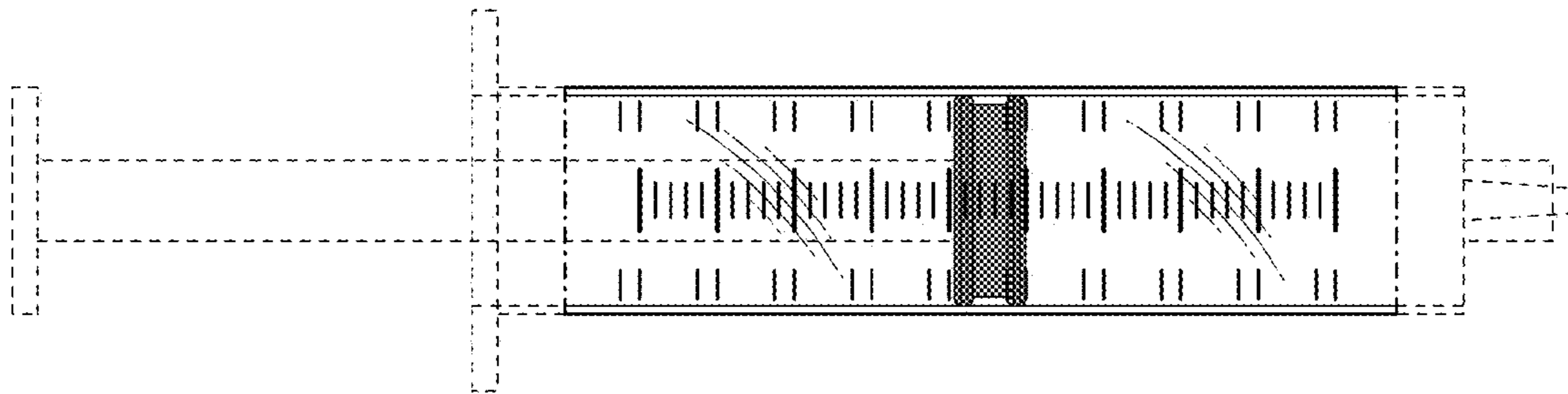


FIG. 62

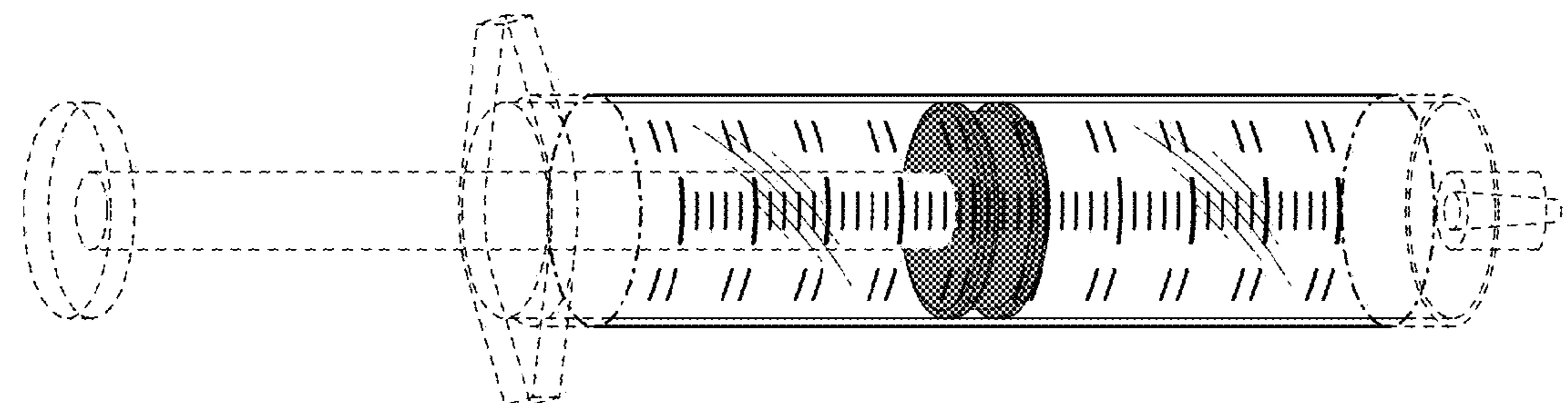


FIG. 61

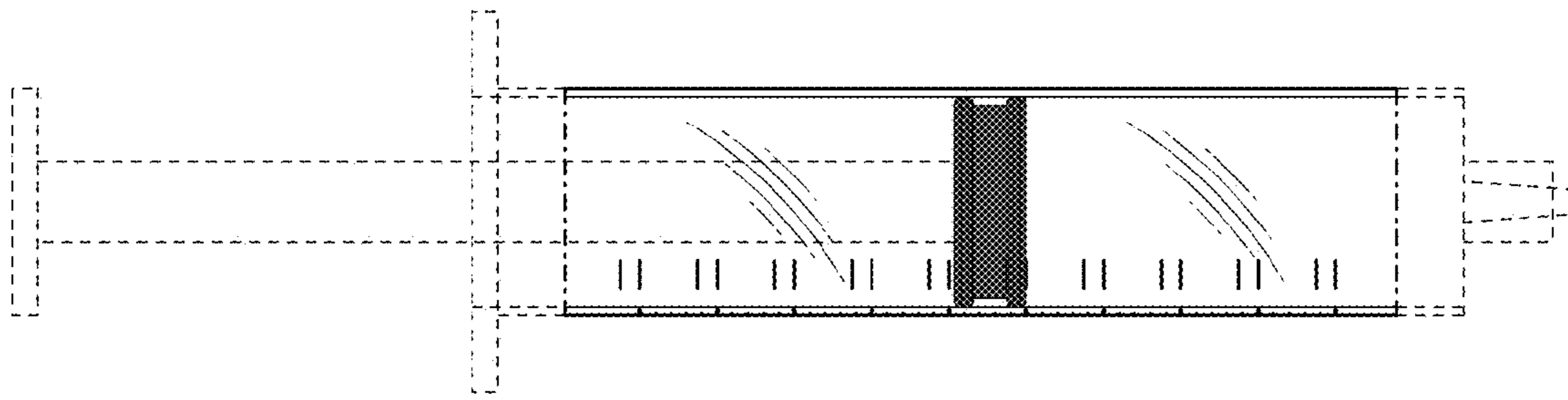


FIG. 70

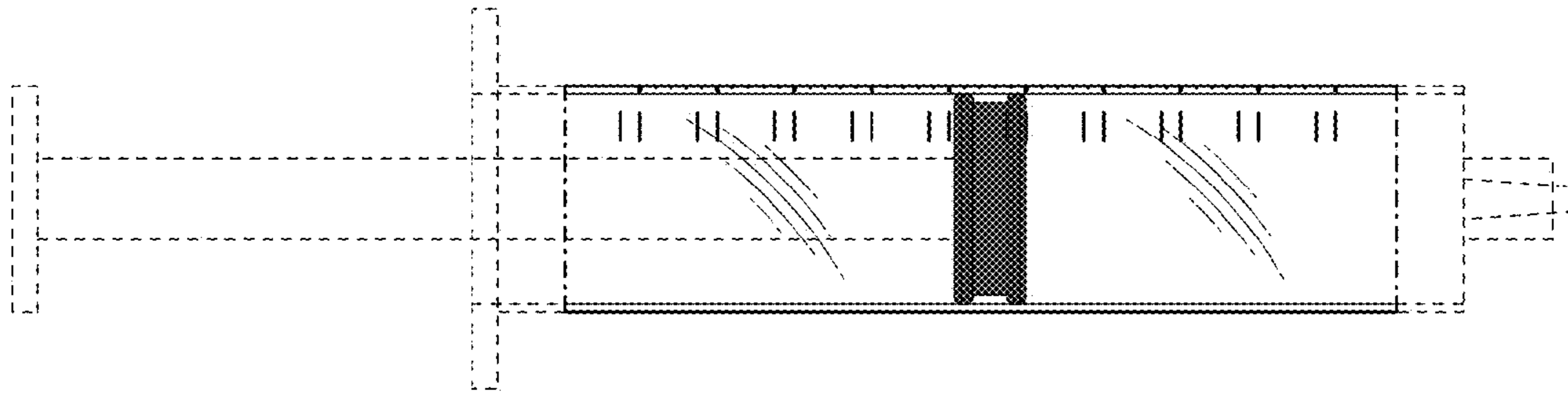


FIG. 69

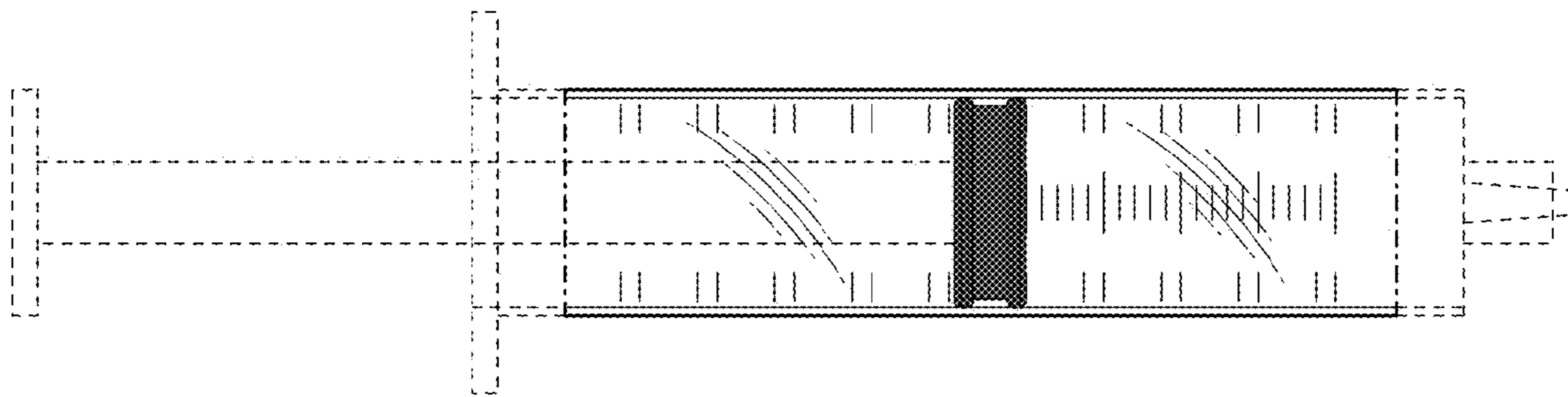


FIG. 68

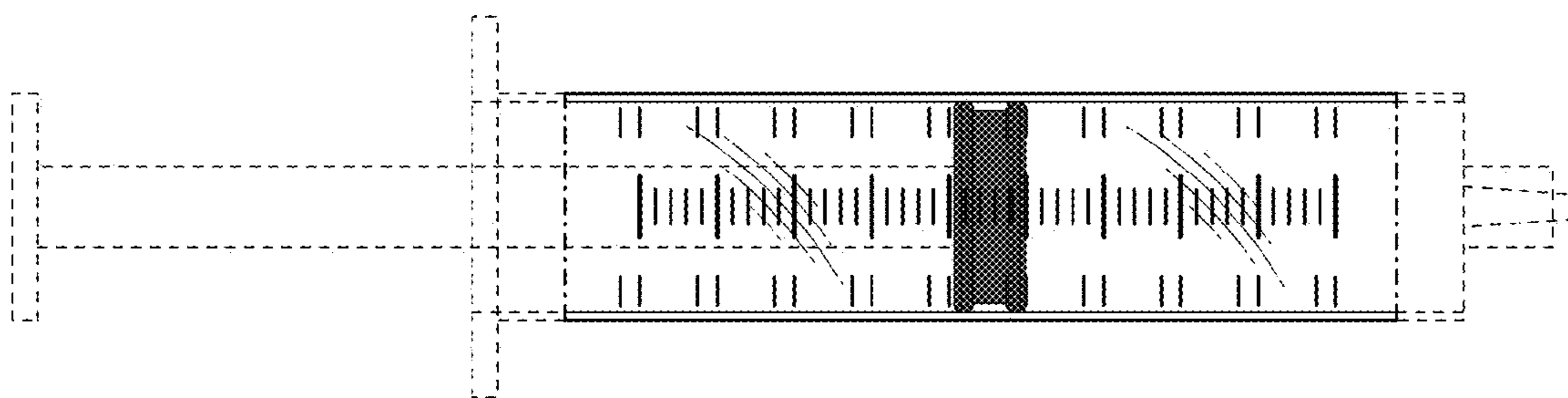


FIG. 67

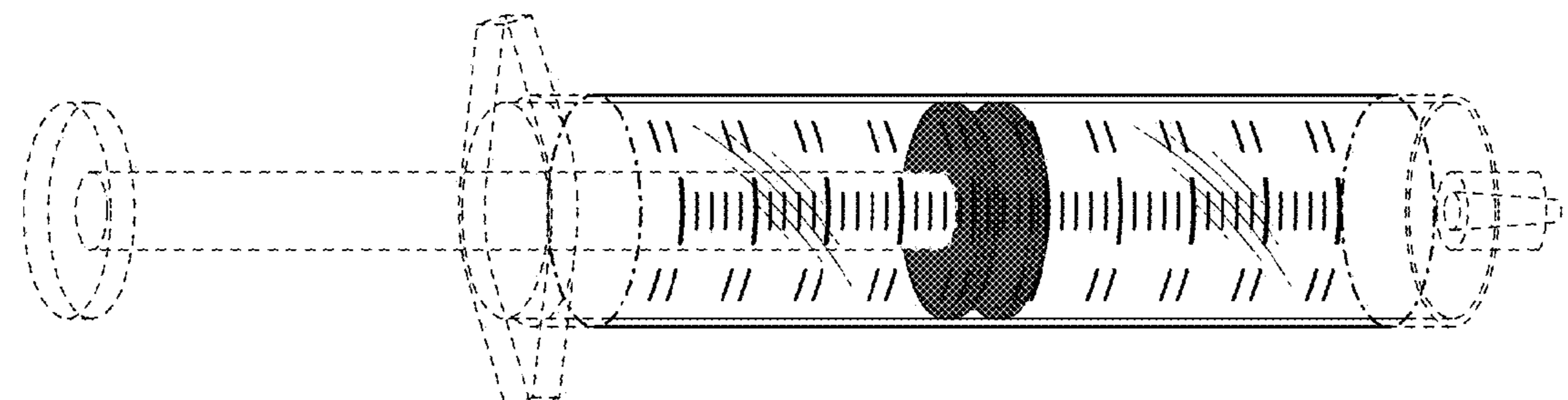


FIG. 66