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(12) **United States Design Patent**
Stephan et al.

(10) **Patent No.:** **US D687,544 S**

(45) **Date of Patent:** **** Aug. 6, 2013**

(54) **MEDICAL INJECTOR**

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Michael Schabbach, Weinheim (DE)

(73) Assignee: **Sanofi-Aventis Deutschland GmbH**,
Frankfurt (DE)

(**) Term: **14 Years**

(21) Appl. No.: **29/287,565**

(22) Filed: **Aug. 23, 2007**

(30) **Foreign Application Priority Data**

Feb. 23, 2007 (EM) 000683479

(51) **LOC (9) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/114**

(58) **Field of Classification Search**

USPC D19/35, 36, 41, 43, 44, 45, 46, 47,
D19/48, 49, 50, 51, 54, 55, 56, 57; D24/108,
D24/112, 113, 114, 130, 133, 138, 146, 147;
604/187, 188, 189, 197, 198, 207, 208, 227,
604/229, 232, 181, 182, 185; 603/181, 182,
603/185; 401/243, 263, 292

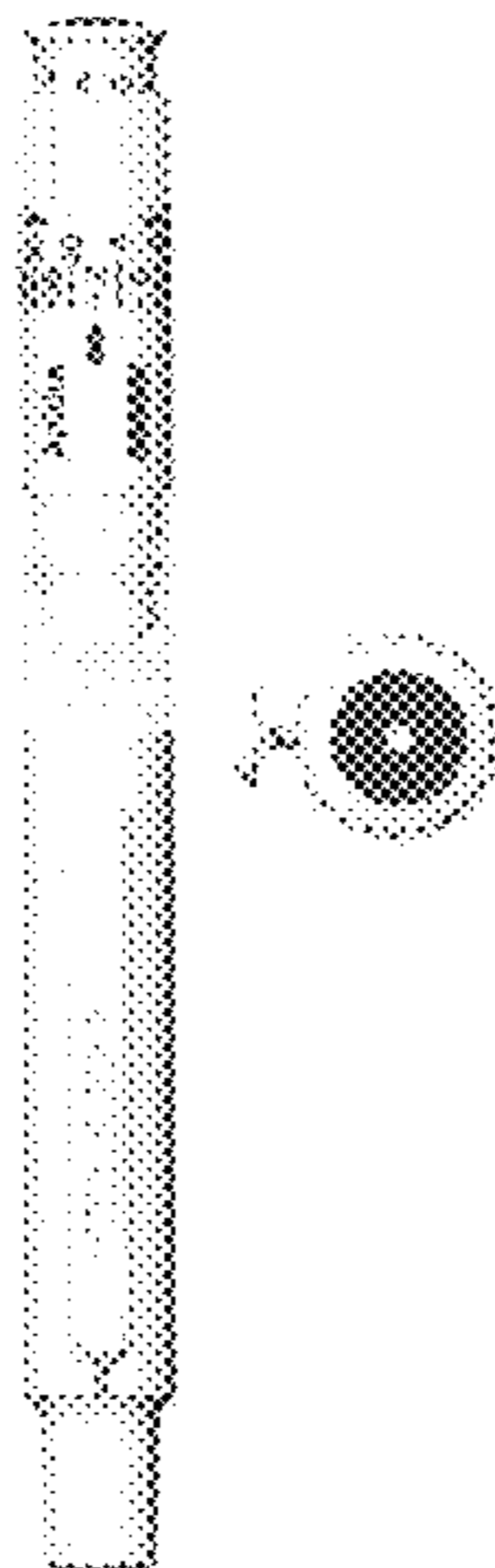
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,205,004 A * 11/1916 Matsui 401/259
D59,035 S * 9/1921 Sheaffer D19/46
1,948,982 A * 2/1934 Cutter 604/222
D143,051 S * 11/1945 Waldinger D19/48
D145,122 S * 7/1946 Crain D19/23
D151,661 S * 11/1948 Sherrer D19/21
3,403,679 A * 10/1968 Watson et al. 604/138
4,008,969 A * 2/1977 Anderson 401/292
4,018,536 A * 4/1977 Brenner 401/292
4,592,745 A * 6/1986 Rex et al. 604/211
D286,791 S * 11/1986 Booker D19/51
4,643,605 A * 2/1987 Iwasaki 401/243
D289,424 S * 4/1987 Huang D19/36
4,936,833 A * 6/1990 Sams 604/232
4,973,318 A * 11/1990 Holm et al. 604/208

5,041,088 A * 8/1991 Ritson et al. 604/88
D321,719 S * 11/1991 Nitta D19/48
D323,030 S * 1/1992 Ahlstrand et al. D24/114
5,104,380 A * 4/1992 Holman et al. 604/117
5,226,895 A * 7/1993 Harris 604/208
D341,623 S * 11/1993 Chuang D19/36
5,279,586 A * 1/1994 Balkwill 604/207
5,295,976 A * 3/1994 Harris 604/211
5,368,016 A * 11/1994 Henry 128/200.23
5,599,314 A * 2/1997 Neill 604/207
5,925,021 A * 7/1999 Castellano et al. 604/207
6,001,082 A * 12/1999 Dair et al. 604/207
6,001,089 A * 12/1999 Burroughs et al. 604/506
D426,573 S * 6/2000 Sekine et al. D19/48
6,086,567 A * 7/2000 Kirchhofer et al. 604/211
6,193,698 B1 * 2/2001 Kirchhofer et al. 604/211
6,210,369 B1 * 4/2001 Wilmot et al. 604/157
6,241,709 B1 * 6/2001 Bechtold et al. 604/207
D451,139 S * 11/2001 Wang D19/36
D452,527 S * 12/2001 Maki et al. D19/43
6,569,126 B1 * 5/2003 Poulsen et al. 604/207
6,613,023 B2 * 9/2003 Kirchhofer et al. 604/208
6,666,849 B1 * 12/2003 Marshall et al. 604/246
6,699,224 B2 * 3/2004 Kirchhofer et al. 604/208
6,827,708 B2 * 12/2004 Kirchhofer 604/187
D506,221 S * 6/2005 Huang D19/43
6,932,794 B2 * 8/2005 Giambattista et al. 604/207
7,018,364 B2 * 3/2006 Giambattista et al. 604/207
7,169,133 B2 * 1/2007 Broennimann et al. 604/208
7,316,670 B2 * 1/2008 Graf et al. 604/207
7,331,936 B2 * 2/2008 Liu 604/110
7,377,913 B2 * 5/2008 Gurtner 604/211
7,396,347 B2 * 7/2008 Hjertman et al. 604/207
7,407,492 B2 * 8/2008 Gurtner 604/181
7,534,222 B2 * 5/2009 Sugita et al. 604/82
D599,009 S * 8/2009 Tyce D24/113
D600,794 S * 9/2009 Tyce D24/113
7,648,299 B2 * 1/2010 Geithner et al. 401/243
D626,216 S * 10/2010 Tyce D24/114
2005/0222540 A1 * 10/2005 Kirchhofer et al. 604/207
2005/0251103 A1 * 11/2005 Steffen et al. 604/500
2007/0106227 A1 * 5/2007 Burren et al. 604/207
2007/0129687 A1 * 6/2007 Marshall et al. 604/207
2007/0167921 A1 * 7/2007 Burren et al. 604/211
2007/0233015 A1 * 10/2007 Saiki 604/207
2007/0233167 A1 * 10/2007 Weiss et al. 606/182
2008/0071226 A1 * 3/2008 Moser et al. 604/207
2008/0269688 A1 * 10/2008 Colucci et al. 604/189
2009/0124981 A1 * 5/2009 Evans 604/197
2009/0311036 A1 * 12/2009 Pires et al. 401/263



FOREIGN PATENT DOCUMENTS

DE 101-06 368 .7 * 2/2001
 WO WO 2005/102421 A1 * 11/2005

OTHER PUBLICATIONS

Optiset injector with packaging, as shown in publication “Offarm,” title of the article, “Actualidad Profesional Mostrador,” shown on p. 52 (of the publication), p. 8 of the reference (upper left-hand corner). Dated Sep. 3, 2004.*

OptiSet information brochure as found on www.diabetesplein.nl (link indicated by arrow on p. 3), untranslated, brochure dated Aug. 24, 2007 (see p. 20).*

Informational brochure on OptiSet injector, dated Oct. 16, 2007 (see p. 9), at the following link: www.insulin.se/insulinse/Insulinpennor/OptiSet/.*

Photograph of Koh-i-Noor Rapidograph pens, as shown on-line. Photograph taken on Feb. 15, 2006. Downloaded from the Internet on Jul. 5, 2012. URL: <http://www.flickr.com/photos/surlygrrrl/100277672/in/faves-porkfriedrice/>. (2 pages).*

Rotring catalog dated 1988, on p. 19. As shown on <http://leadholder.com/cat-rottring-1988-p19.html>. (2 pages).*

Koh-I-Noor Rapidograph Set slim pack 3165 SP-7, product dated 1981 [on-line]. Downloaded from the Internet on Jun. 2, 2012. URL: <http://www.etsy.com/listing/101525849/sale-was-5000-koh-i-noor-rapidograph-set>. (1 page).*

* cited by examiner

Primary Examiner — Karen E Eldridge Powers
 (74) *Attorney, Agent, or Firm* — Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.

(57) **CLAIM**

The ornamental design for the medical injector, as shown and described.

DESCRIPTION

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

FIG. 1 is a front plan view of a first embodiment of a medical injector of our new design, where the colored portions are shown in blue Pantone 072C;

FIG. 2 is a right side view thereof;

FIG. 3 is a rear view thereof;

FIG. 4 is a left side view thereof;

FIG. 5 is a top view thereof;

FIG. 6 is a bottom view thereof;

FIG. 7 is a front plan view of a second embodiment of a medical injector of our new design, where the colored portions are shown in green Pantone 375C;

FIG. 8 is a right side view thereof;

FIG. 9 is a rear view thereof;

FIG. 10 is a left side view thereof;

FIG. 11 is a top view thereof;

FIG. 12 is a bottom view thereof;

FIG. 13 is a front plan view of a third embodiment of a medical injector of our new design, where the colored portions are shown in mustard yellow Pantone 104C;

FIG. 14 is a right side view thereof;

FIG. 15 is a rear view thereof;

FIG. 16 is a left side view thereof;

FIG. 17 is a top view thereof;

FIG. 18 is a bottom view thereof;

FIG. 19 is a front plan view of a fourth embodiment of a medical injector of our new design, where the colored portions are shown in blue Pantone 313C;

FIG. 20 is a right side view thereof;

FIG. 21 is a rear view thereof;

FIG. 22 is a left side view thereof;

FIG. 23 is a top view thereof;

FIG. 24 is a bottom view thereof;

FIG. 25 is a front plan view of a fifth embodiment of a medical injector of our new design, where the indicia “comb 50” and the dark ring shown in FIG. 25 are shown in grey Pantone 445C;

FIG. 26 is a right side view thereof;

FIG. 27 is a rear view thereof;

FIG. 28 is a left side view thereof;

FIG. 29 is a top view thereof;

FIG. 30 is a bottom view thereof;

FIG. 31 is a front plan view of a sixth embodiment of a medical injector of our new design, where the colored portions are shown in lavender Pantone 2645C;

FIG. 32 is a right side view thereof;

FIG. 33 is a rear view thereof;

FIG. 34 is a left side view thereof;

FIG. 35 is a top view thereof;

FIG. 36 is a bottom view thereof;

FIG. 37 is a front plan view of a seventh embodiment of a medical injector of our new design, where the colored portions are shown in yellow Pantone 123C;

FIG. 38 is a right side view thereof;

FIG. 39 is a rear view thereof;

FIG. 40 is a left side view thereof;

FIG. 41 is a top view thereof;

FIG. 42 is a bottom view thereof;

FIG. 43 is a front plan view of an eighth embodiment of a medical injector of our new design, the design of FIGS. 1-6 depicted in black and white;

FIG. 44 is a right side view thereof;

FIG. 45 is a rear view thereof;

FIG. 46 is a left side view thereof;

FIG. 47 is a top view thereof;

FIG. 48 is a bottom view thereof;

FIG. 49 is a front plan view of a ninth embodiment of a medical injector of our new design, the design of FIGS. 7-12 depicted in black and white;

FIG. 50 is a right side view thereof;

FIG. 51 is a rear view thereof;

FIG. 52 is a left side view thereof;

FIG. 53 is a top view thereof;

FIG. 54 is a bottom view thereof;

FIG. 55 is a front plan view of a tenth embodiment of a medical injector of our new design, the design of FIGS. 13-18 depicted in black and white;

FIG. 56 is a right side view thereof;

FIG. 57 is a rear view thereof;

FIG. 58 is a left side view thereof;

FIG. 59 is a top view thereof;

FIG. 60 is a bottom view thereof;

FIG. 61 is a front plan view of an eleventh embodiment of a medical injector of our new design, the design of FIGS. 19-24 depicted in black and white;

FIG. 62 is a right side view thereof;

FIG. 63 is a rear view thereof;

FIG. 64 is a left side view thereof;

FIG. 65 is a top view thereof;

FIG. 66 is a bottom view thereof;

FIG. 67 is a front plan view of a twelfth embodiment of a medical injector of our new design, the design of FIGS. 25-30 depicted in black and white;

FIG. 68 is a right side view thereof;

FIG. 69 is a rear view thereof;

FIG. 70 is a left side view thereof;

FIG. 71 is a top view thereof;

FIG. 72 is a bottom view thereof;

FIG. 73 is a front plan view of a thirteenth embodiment of a medical injector of our new design, the design of FIGS. 31-36 depicted in black and white;

FIG. 74 is a right side view thereof;

FIG. 75 is a rear view thereof;

FIG. 76 is a left side view thereof;

FIG. 77 is a top view thereof;

FIG. 78 is a bottom view thereof;

FIG. 79 is a front plan view of a fourteenth embodiment of a medical injector of our new design, the design of FIGS. 37-42 depicted in black and white;

FIG. 80 is a right side view thereof;

FIG. 81 is a rear view thereof;

FIG. 82 is a left side view thereof;

FIG. 83 is a top view thereof;

FIG. 84 is a bottom view thereof;

FIG. 85 is a front plan view of a fifteenth embodiment of a medical injector of our new design, the letters x rendered in broken lines, and shown in some of the figures, illustrate the presence of indicia and the grey bar the presence of a contrasting color;

FIG. 86 is a right side view thereof, the grey bar indicating the presence of a contrasting color;

FIG. 87 is a rear view thereof;

FIG. 88 is a left side view thereof, the letters x indicating the presence of indicia;

FIG. 89 is a top view thereof;

FIG. 90 is a bottom view thereof;

FIG. 91 is a front plan view of a sixteenth embodiment of a medical injector of our new design, the letters x rendered in broken lines, and shown in some of the figures, illustrate the presence of indicia and the grey bar the presence of a contrasting color;

FIG. 92 is a right side view thereof, the grey bar indicating the presence of a contrasting color;

FIG. 93 is a rear view thereof;

FIG. 94 is a left side view thereof, the letters x indicating the presence of indicia;

FIG. 95 is a top view thereof;

FIG. 96 is a bottom view thereof;

FIG. 97 is a front plan view of a seventeenth embodiment of a medical injector of our new design, the letters x rendered in broken lines, and shown in some of the figures, illustrate the presence of indicia and the grey bar the presence of a contrasting color;

FIG. 98 is a right side view thereof, the grey bar indicating the presence of a contrasting color;

FIG. 99 is a rear view thereof;

FIG. 100 is a left side view thereof, the letters x indicating the presence of indicia;

FIG. 101 is a top view thereof;

FIG. 102 is a bottom view thereof;

FIG. 103 is a front plan view of an eighteenth embodiment of a medical injector of our new design, the letters x rendered in broken lines, and shown in some of the figures, illustrate the presence of indicia and the grey bar the presence of a contrasting color;

FIG. 104 is a right side view thereof, the letters x indicating the presence of indicia and the grey bar the presence of a contrasting color;

FIG. 105 is a rear view thereof;

FIG. 106 is a left side view thereof; the letters x indicating the presence of indicia;

FIG. 107 is a top view thereof;

FIG. 108 is a bottom view thereof;

FIG. 109 is a front plan view of a nineteenth embodiment of a medical injector of our new design, the letters x rendered in broken lines, and shown in some of the figures, illustrate the presence of indicia and the grey bar the presence of a contrasting color;

FIG. 110 is a right side view thereof, the letters x indicating the presence of indicia and the grey bar the presence of a contrasting color;

FIG. 111 is a rear view thereof;

FIG. 112 is a left side view thereof, the letters x indicating the presence of indicia;

FIG. 113 is a top view thereof;

FIG. 114 is a bottom view thereof;

FIG. 115 is a front plan view of a twentieth embodiment of a medical injector of our new design, the letters x rendered in broken lines, and shown in some of the figures, illustrate the presence of indicia and the grey bar the presence of a contrasting color;

FIG. 116 is a right side view thereof, the letters x indicating the presence of indicia and the grey bar the presence of a contrasting color;

FIG. 117 is a rear view thereof;

FIG. 118 is a left side view thereof, the letters x indicating the presence of indicia;

FIG. 119 is a top view thereof;

FIG. 120 is a bottom view thereof;

FIG. 121 is a front plan view of a twenty-first embodiment of a medical injector of our new design, the letters x rendered in broken lines, and shown in some of the figures, illustrate the presence of indicia;

FIG. 122 is a right side view thereof, the letters x indicating the presence of indicia;

FIG. 123 is a rear view thereof;

FIG. 124 is a left side view thereof, the letters x indicating the presence of indicia;

FIG. 125 is a top view thereof;

FIG. 126 is a bottom view thereof;

FIG. 127 is a front plan view of a twenty-second embodiment of a medical injector of our new design, the letters x rendered in broken lines, and shown in some of the figures, illustrate the presence of indicia;

FIG. 128 is a right side view thereof, the letters x indicating the presence of indicia;

FIG. 129 is a rear view thereof;

FIG. 130 is a left side view thereof, the letters x indicating the presence of indicia;

FIG. 131 is a top view thereof;

FIG. 132 is a bottom view thereof;

FIG. 133 is a front plan view of a twenty-third embodiment of a medical injector of our new design, the letters x rendered in broken lines, and shown in some of the figures, illustrate the presence of indicia;

FIG. 134 is a right side view thereof, the letters x indicating the presence of indicia;

FIG. 135 is a rear view thereof;

FIG. 136 is a left side view thereof, the letters x indicating the presence of indicia;

FIG. 137 is a top view thereof;
FIG. 138 is a bottom view thereof;
FIG. 139 is a front plan view of a twenty-fourth embodiment of a medical injector of our new design;
FIG. 140 is a right side view thereof;
FIG. 141 is a rear view thereof;
FIG. 142 is a left side view thereof;
FIG. 143 is a top view thereof;
FIG. 144 is a bottom view thereof;

FIG. 145 is a front plan view of a twenty-fifth embodiment of a medical injector of our new design;
FIG. 146 is a right side view thereof;
FIG. 147 is a rear view thereof;
FIG. 148 is a left side view thereof;
FIG. 149 is a top view thereof; and,
FIG. 150 is a bottom view thereof.

**1 Claim, 50 Drawing Sheets
(50 of 50 Drawing Sheet(s) Filed in Color)**

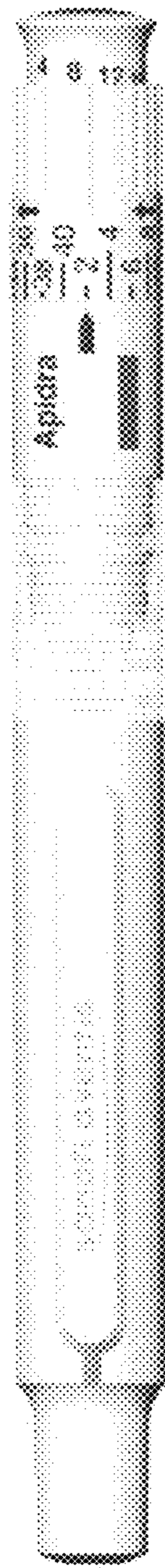


FIG. 1

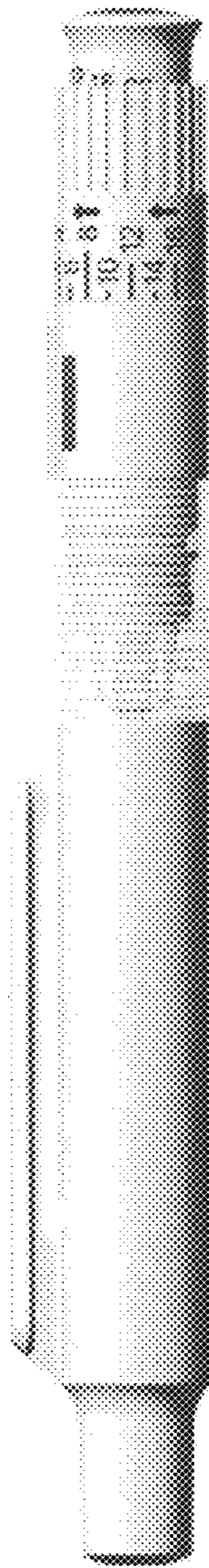


FIG. 2

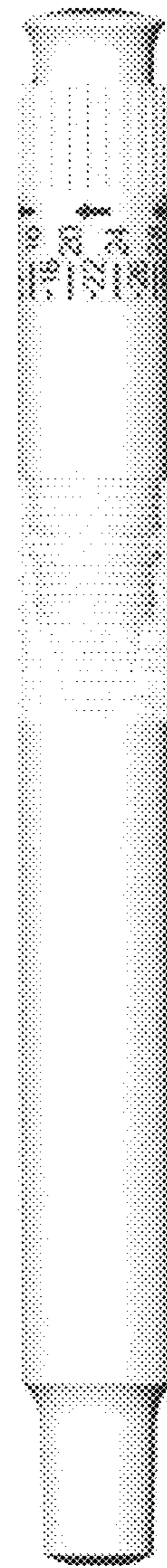


FIG. 3

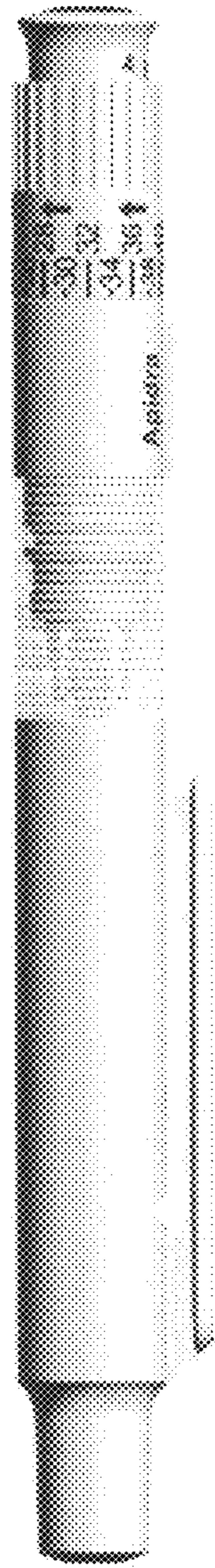


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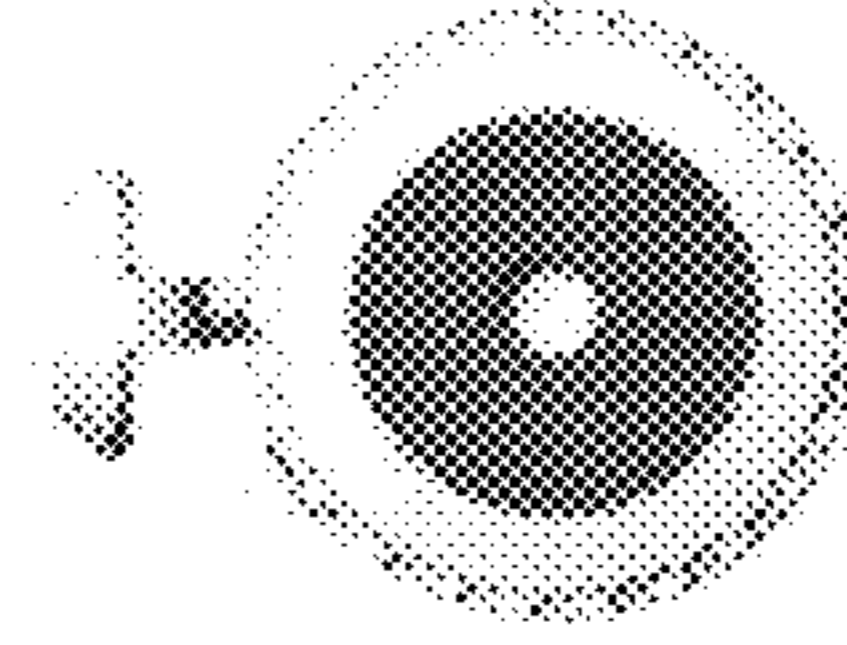


FIG. 5

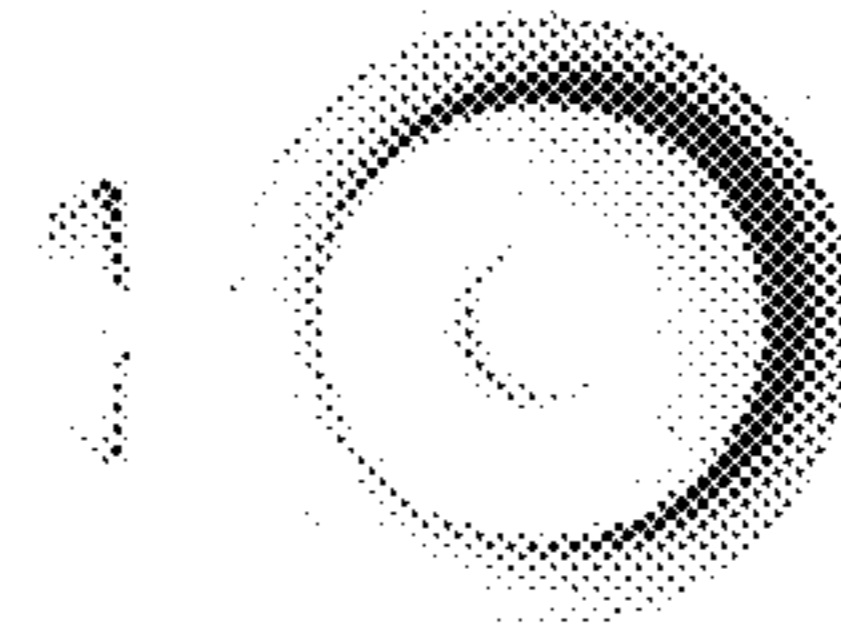


FIG. 6

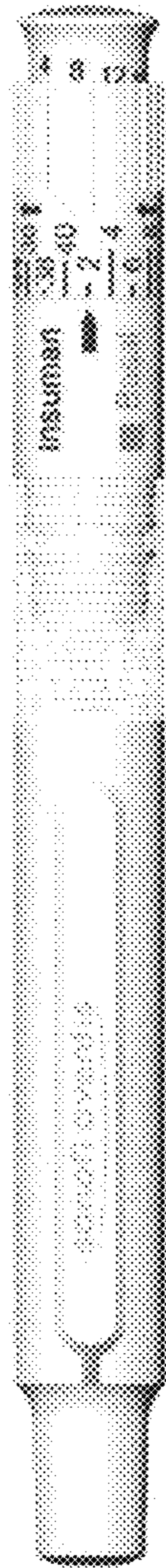


FIG. 7

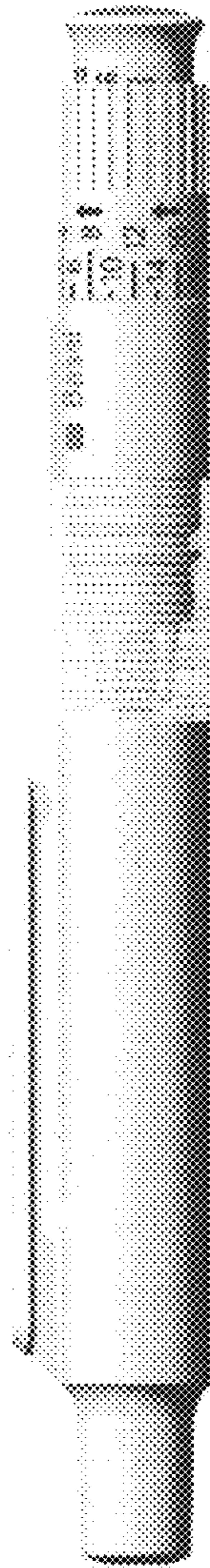


FIG. 8

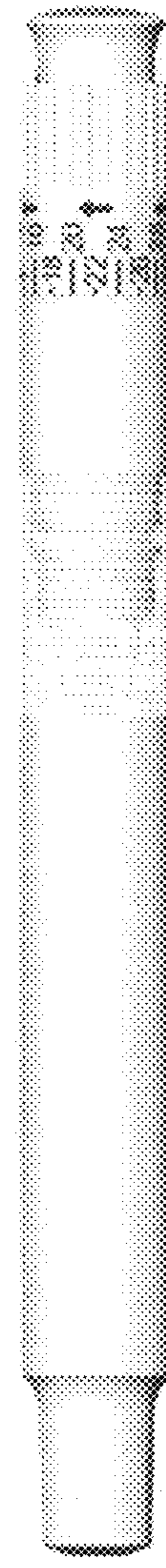


FIG. 9

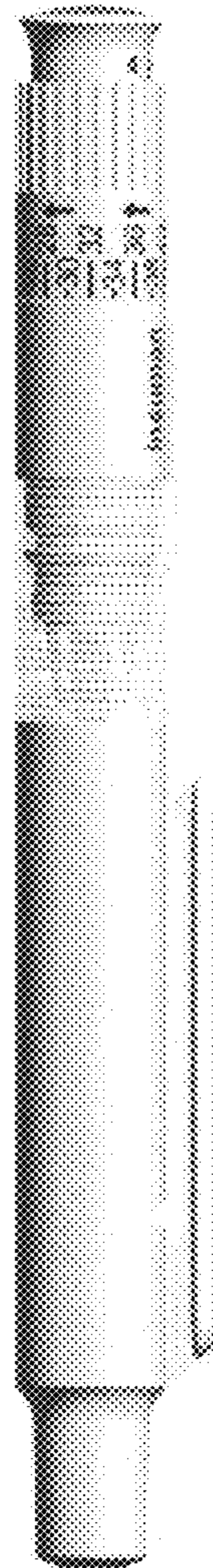


FIG. 10

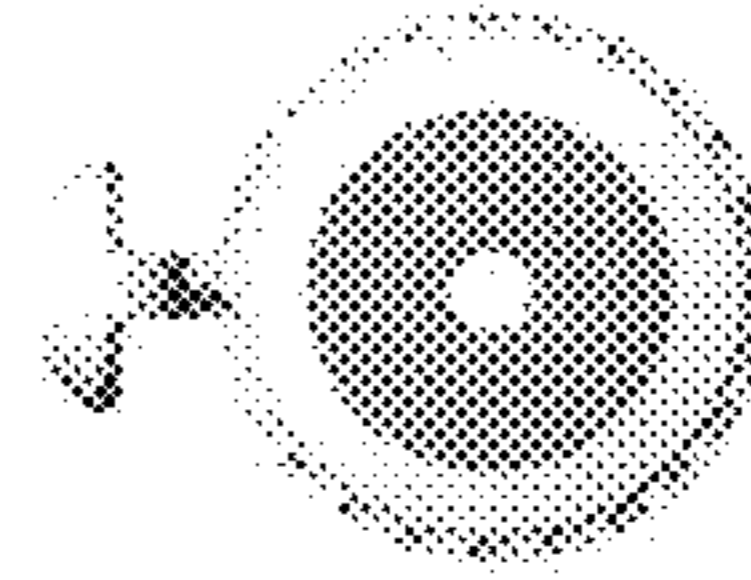


FIG. 11



FIG. 12

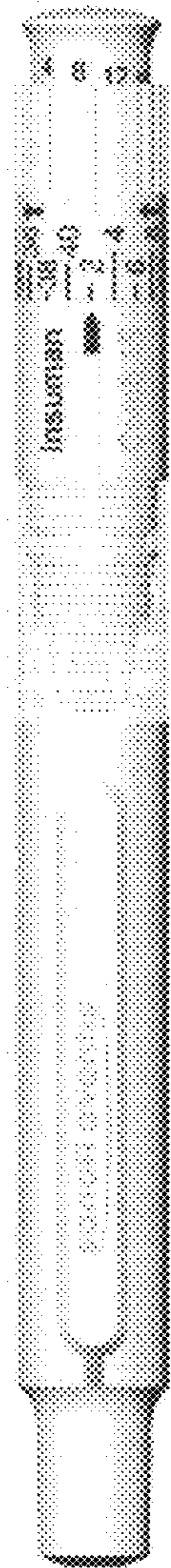


FIG. 13

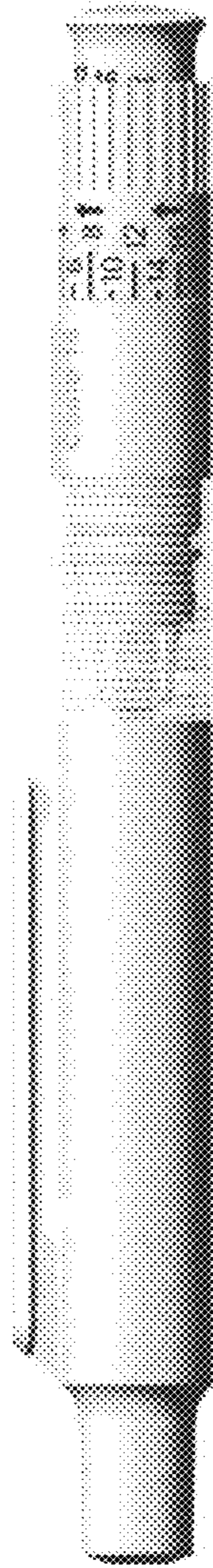


FIG. 14

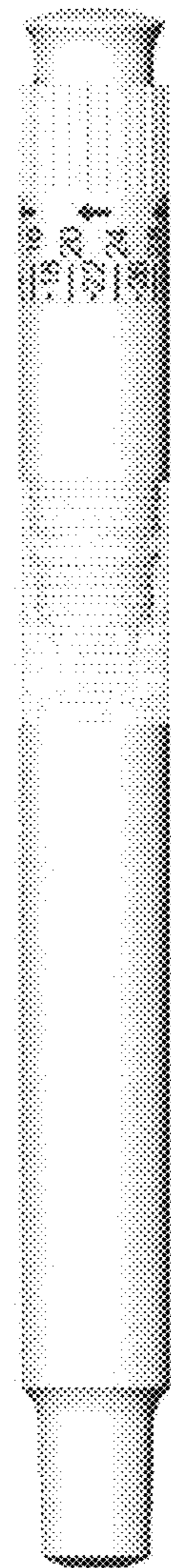


FIG. 15

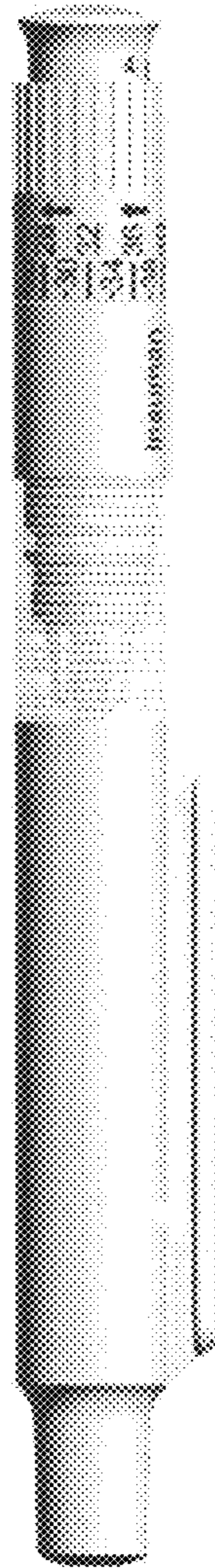


FIG. 16

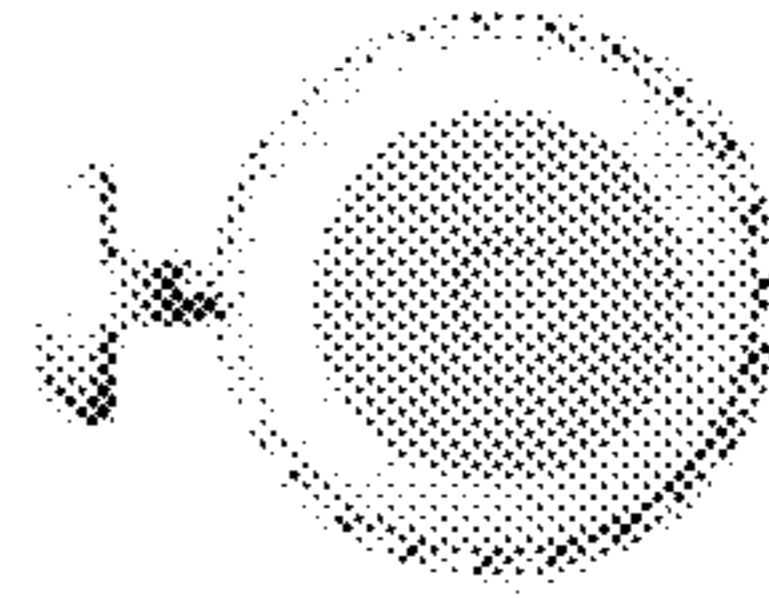


FIG. 17

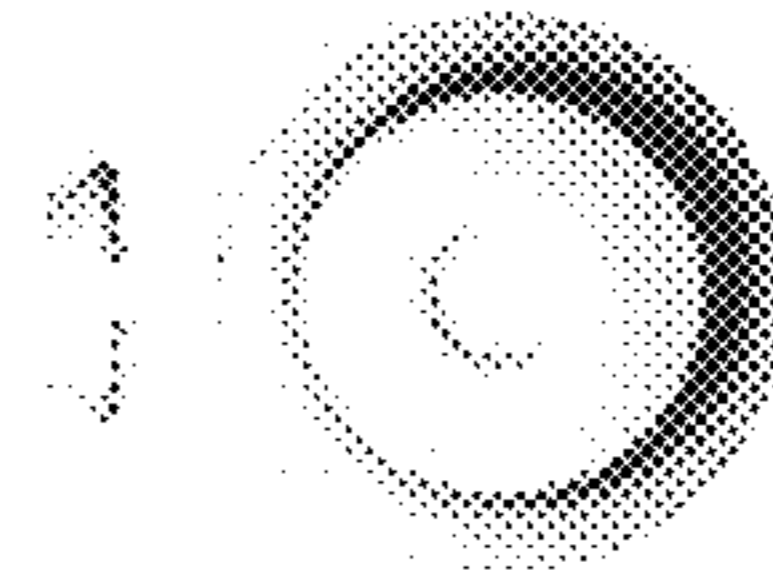


FIG. 18

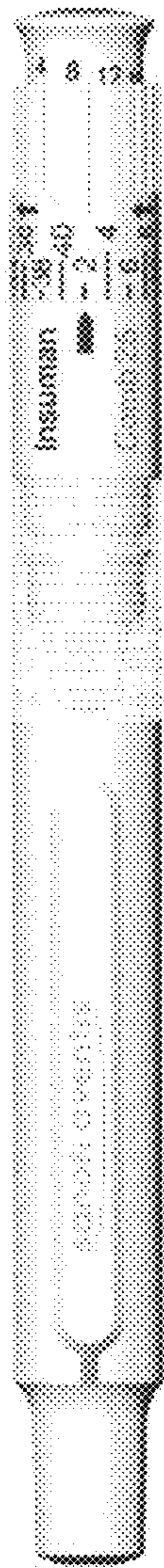


FIG. 19

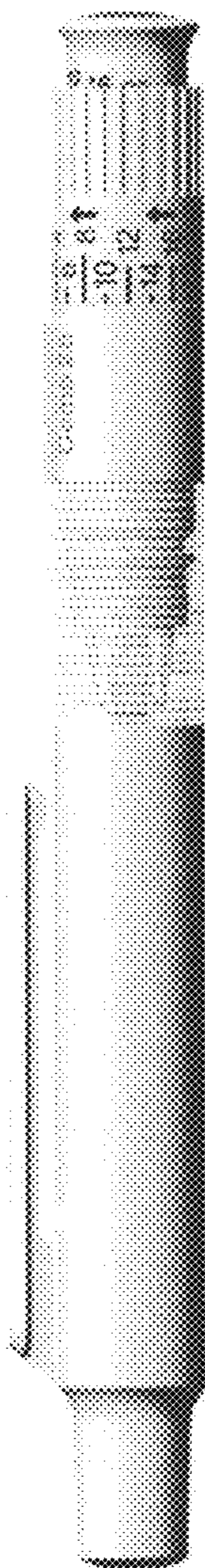


FIG. 20

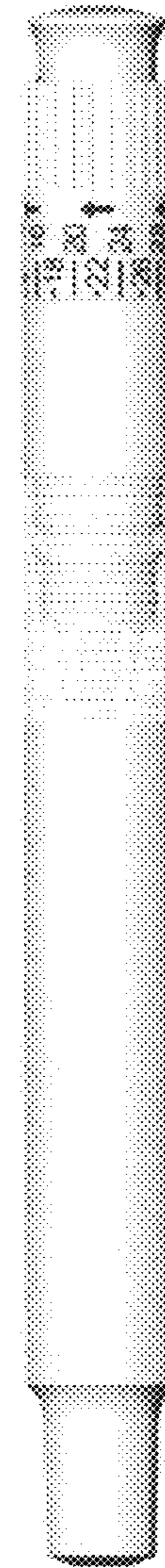


FIG. 21

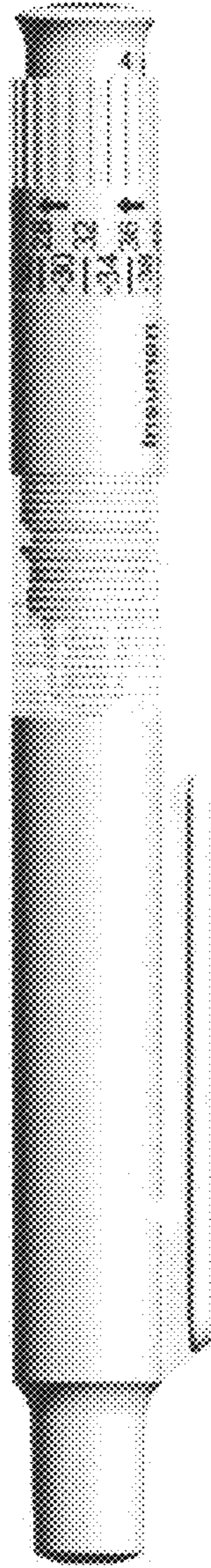


FIG. 22

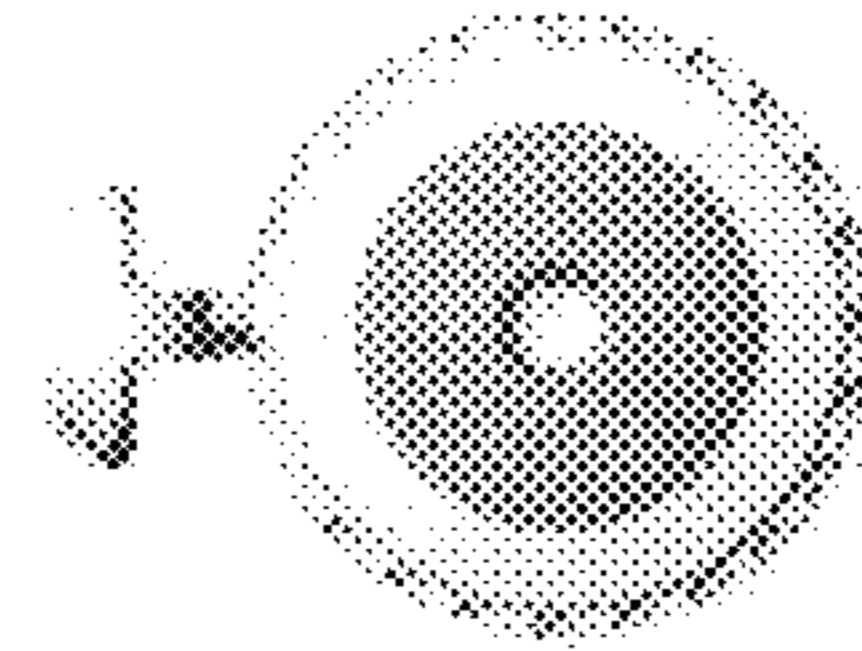


FIG. 23

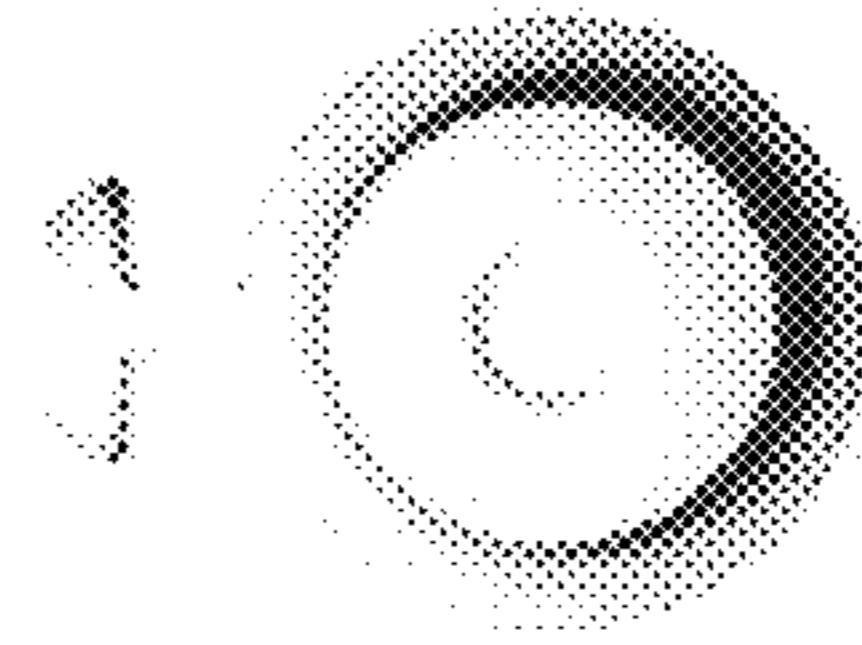


FIG. 24

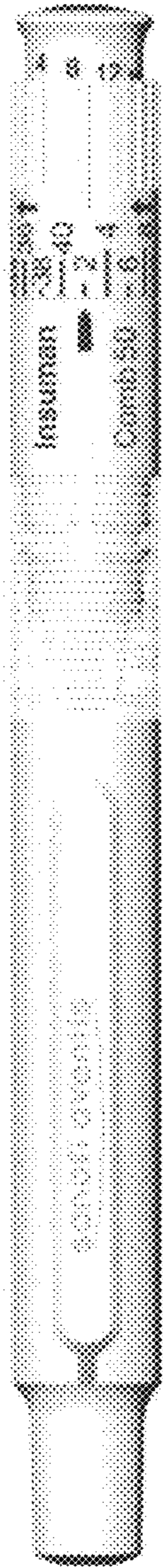


FIG. 25

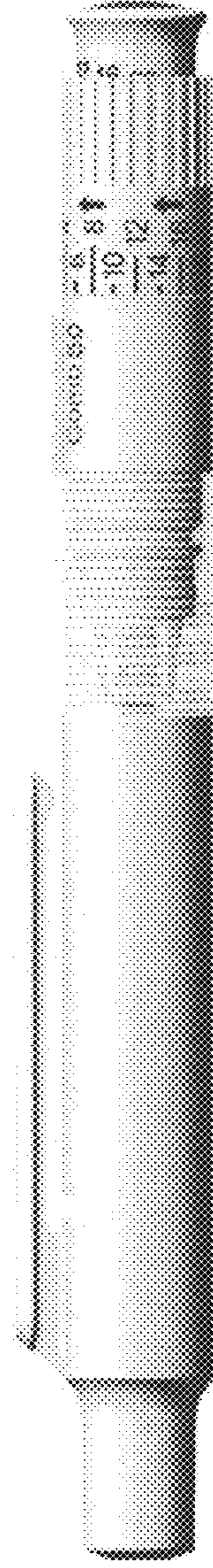


FIG. 26

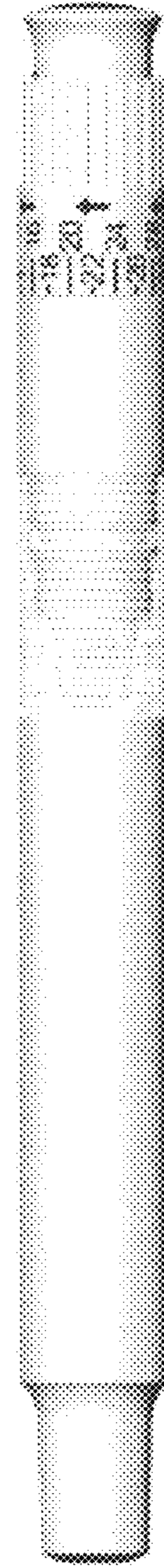


FIG. 27

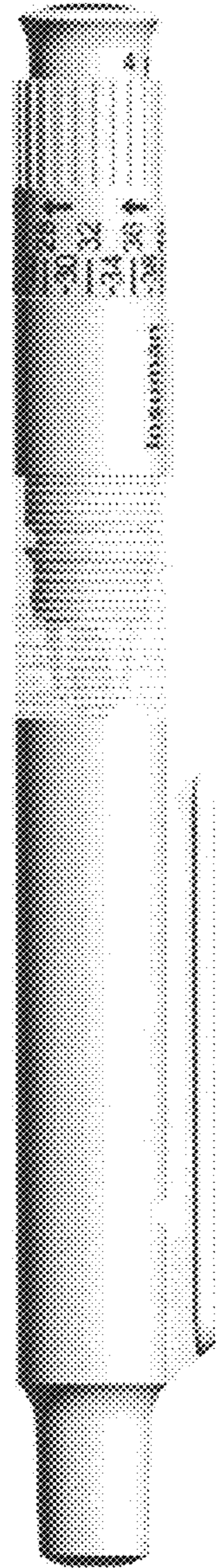


FIG. 28

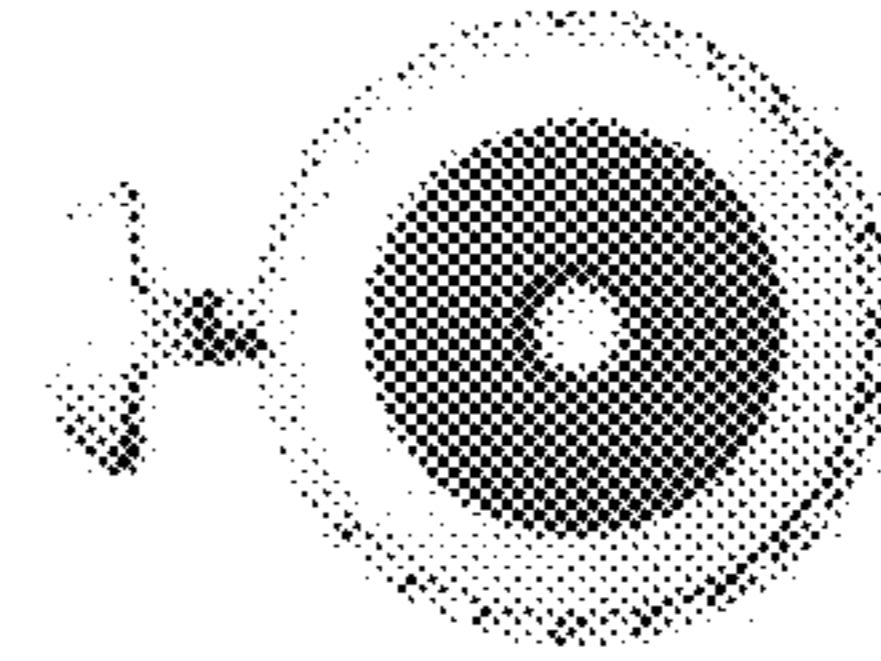


FIG. 29

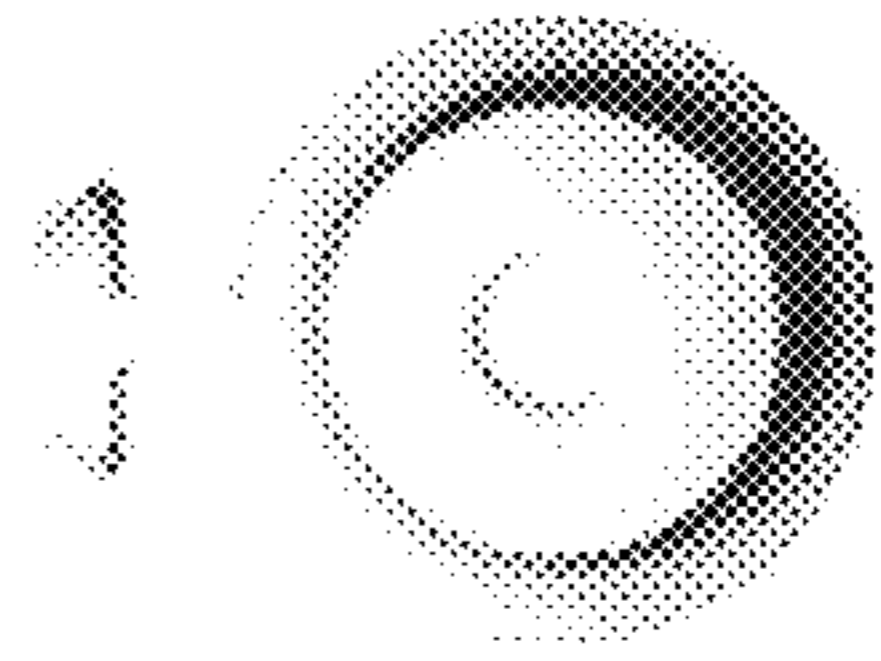


FIG. 30

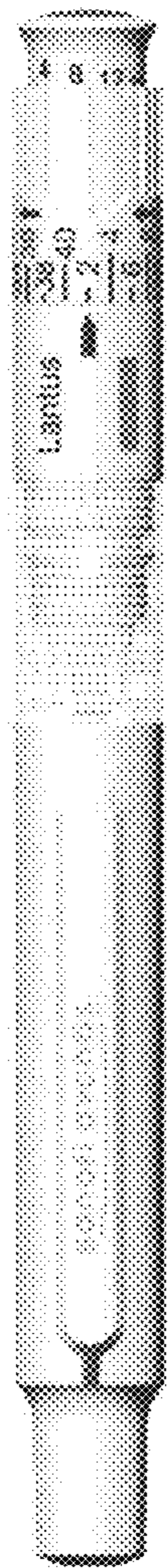


FIG. 31

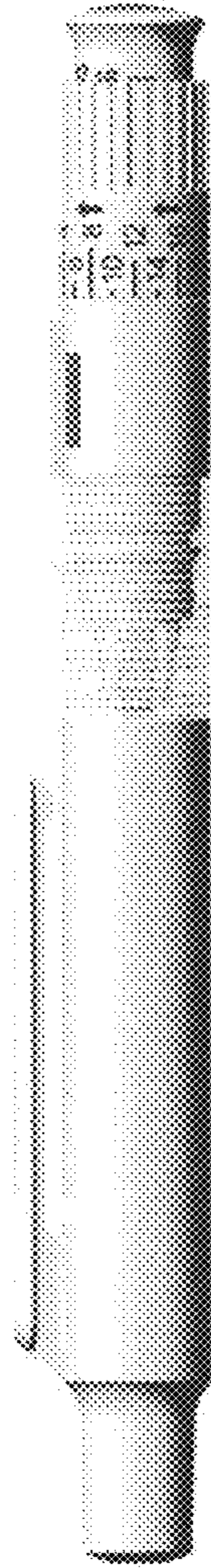


FIG. 32

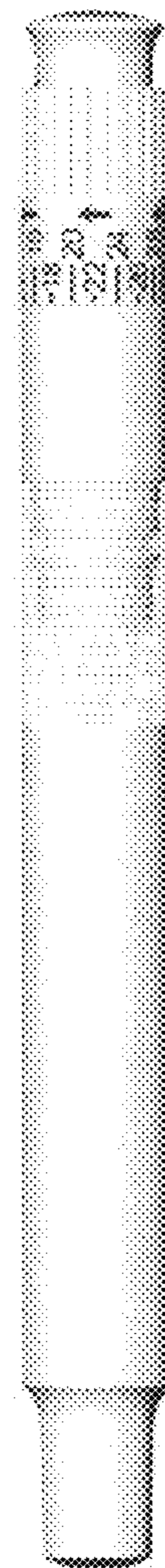


FIG. 33

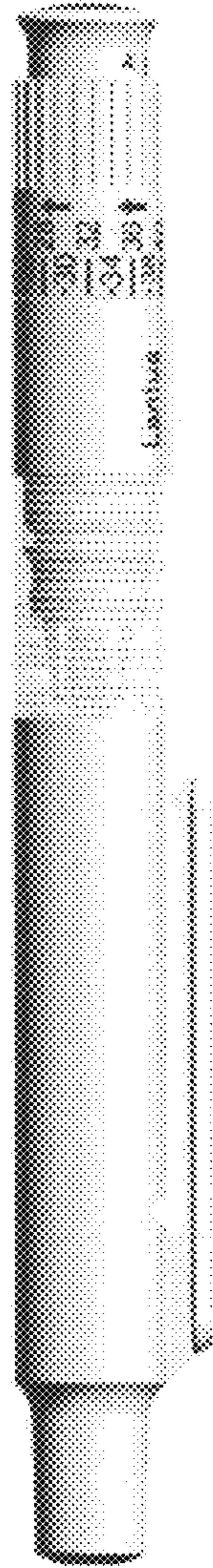


FIG. 34

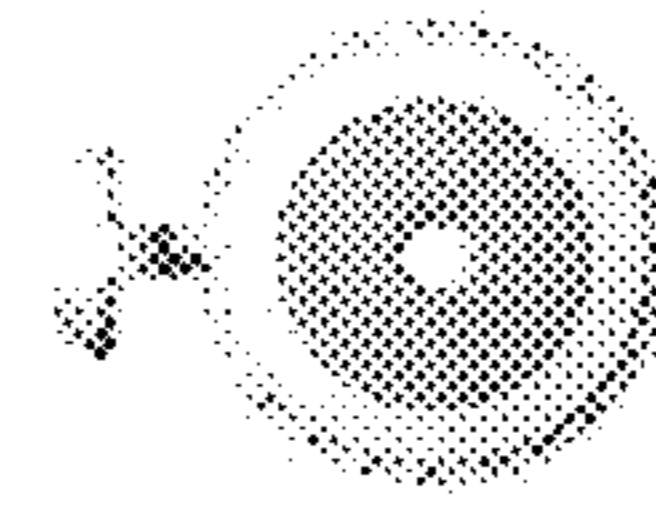


FIG. 35



FIG. 36

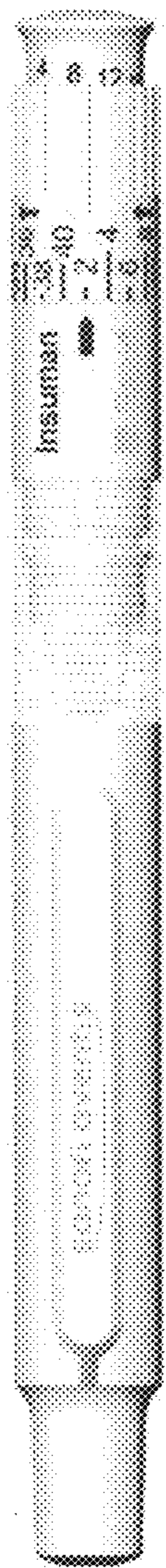


FIG. 37

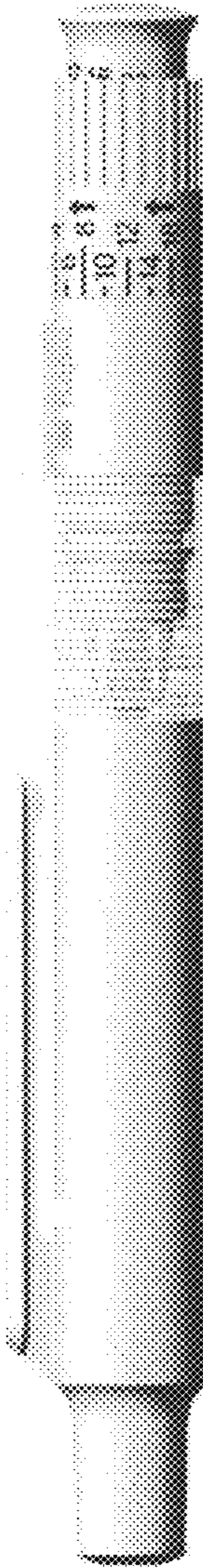


FIG. 38

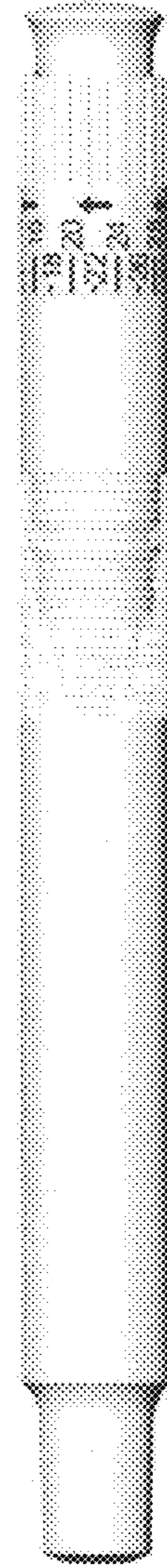


FIG. 39

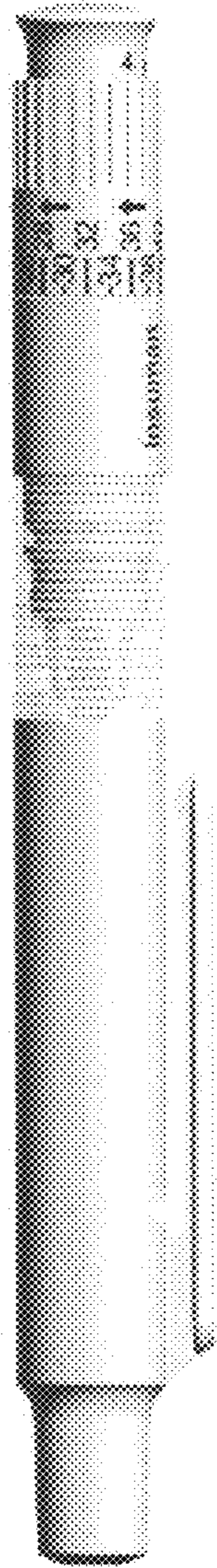


FIG. 40

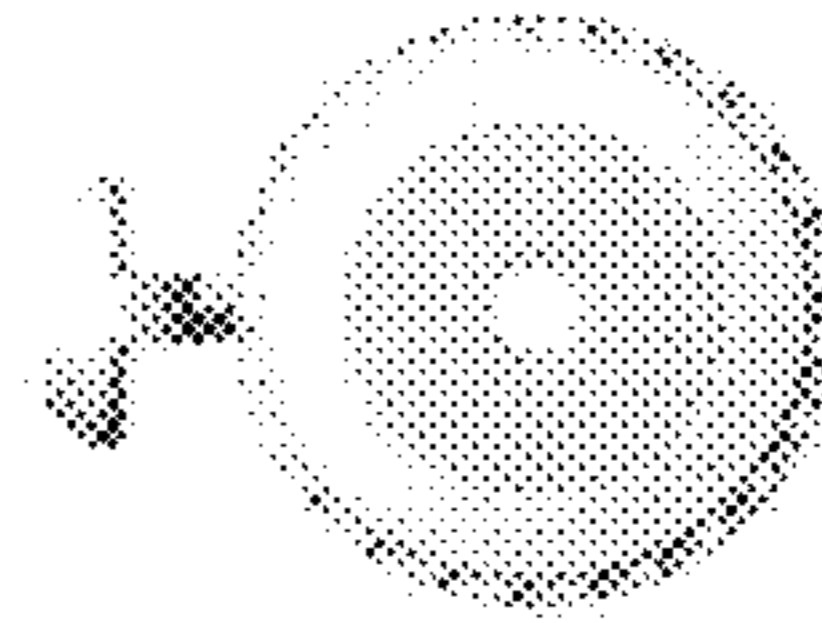


FIG. 41

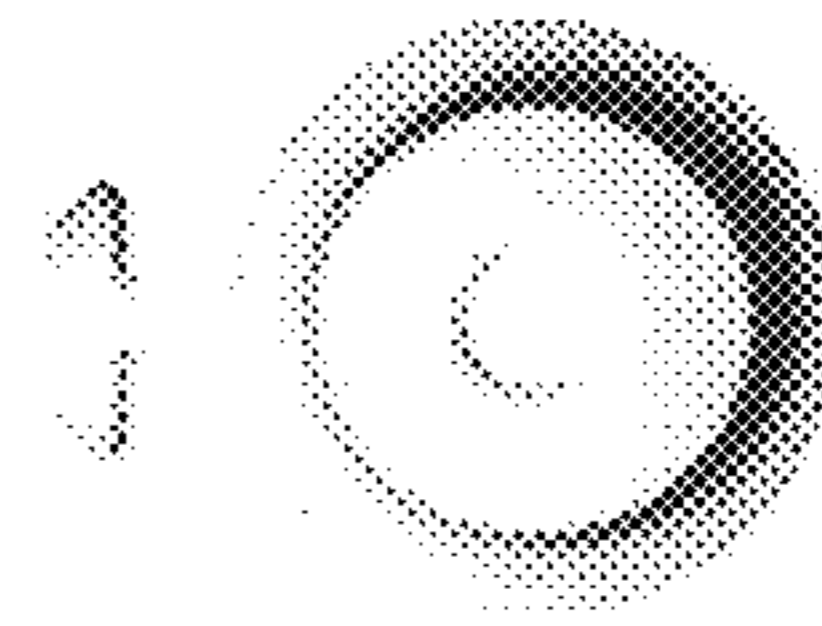


FIG. 42

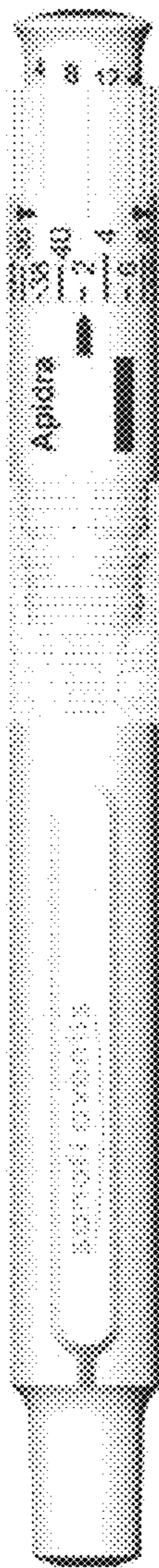


FIG. 43

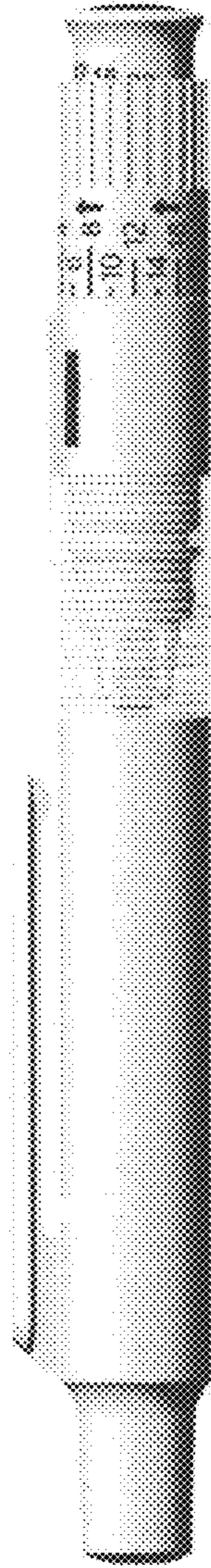


FIG. 44

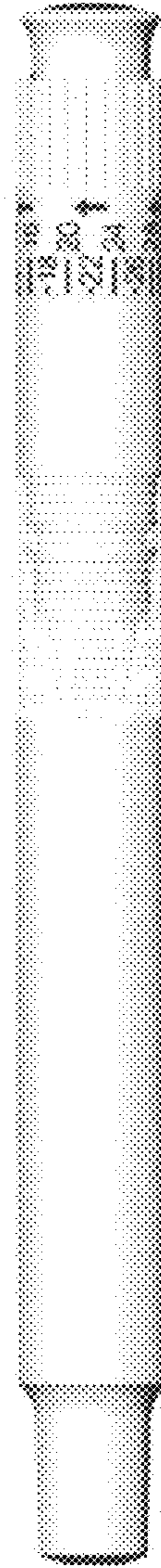


FIG. 45

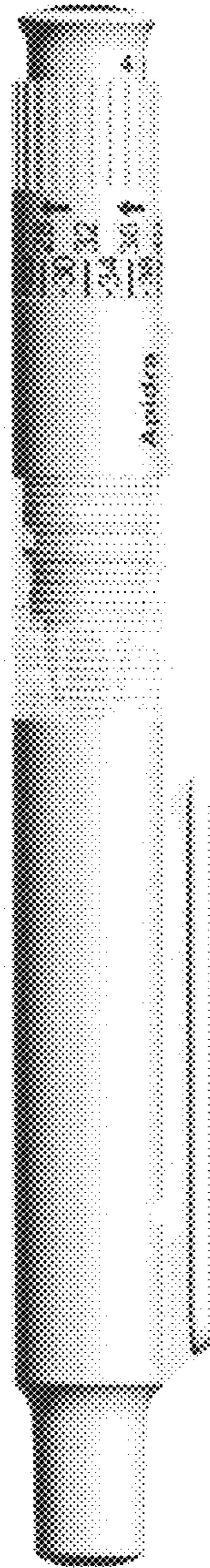


FIG. 46

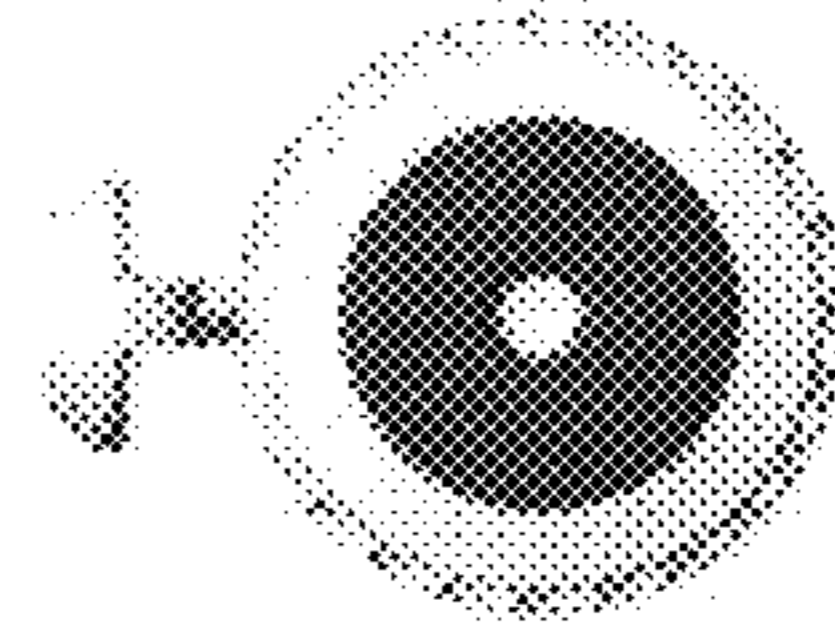


FIG. 47

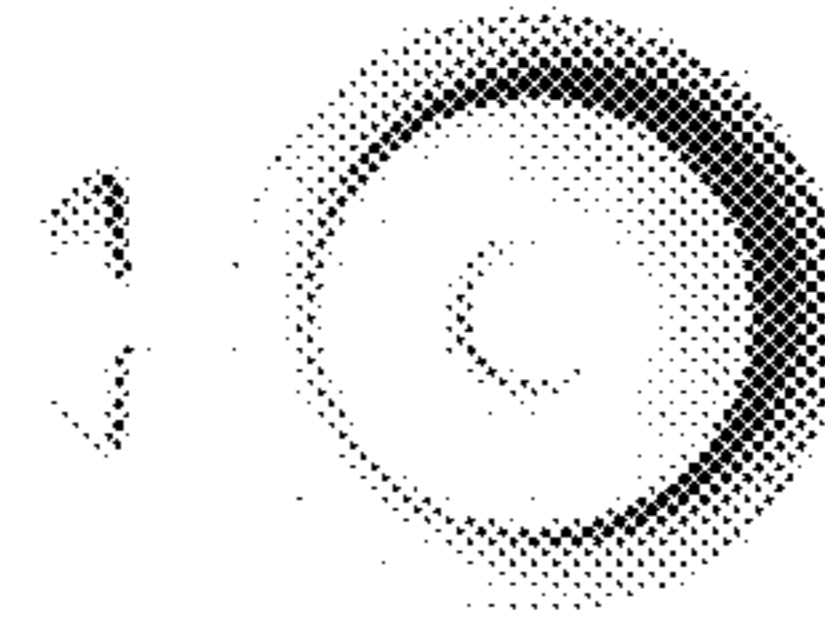


FIG. 48

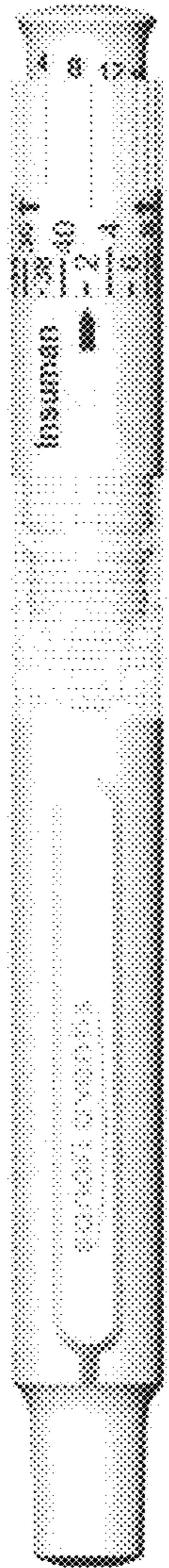


FIG. 49

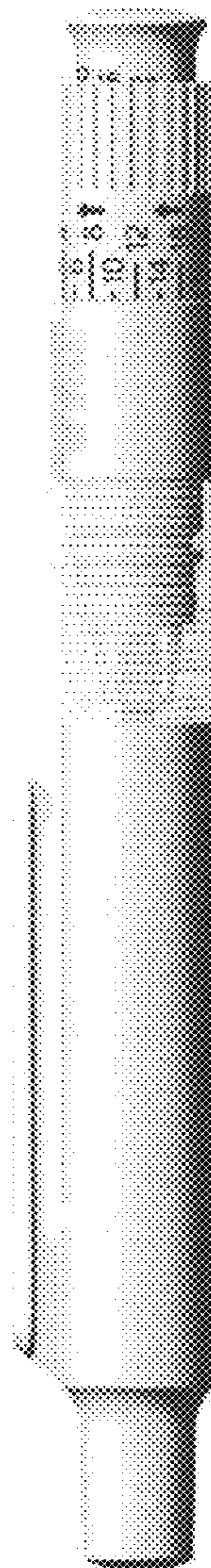


FIG. 50

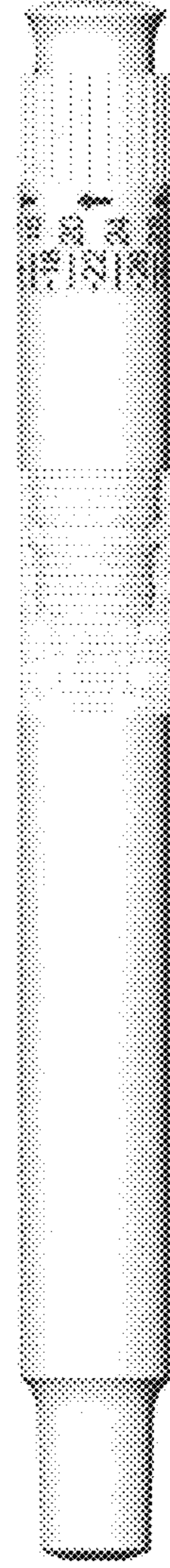


FIG. 51

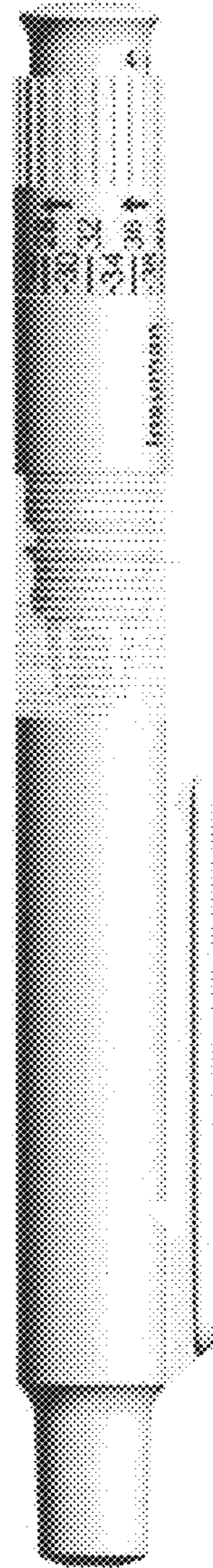


FIG. 52

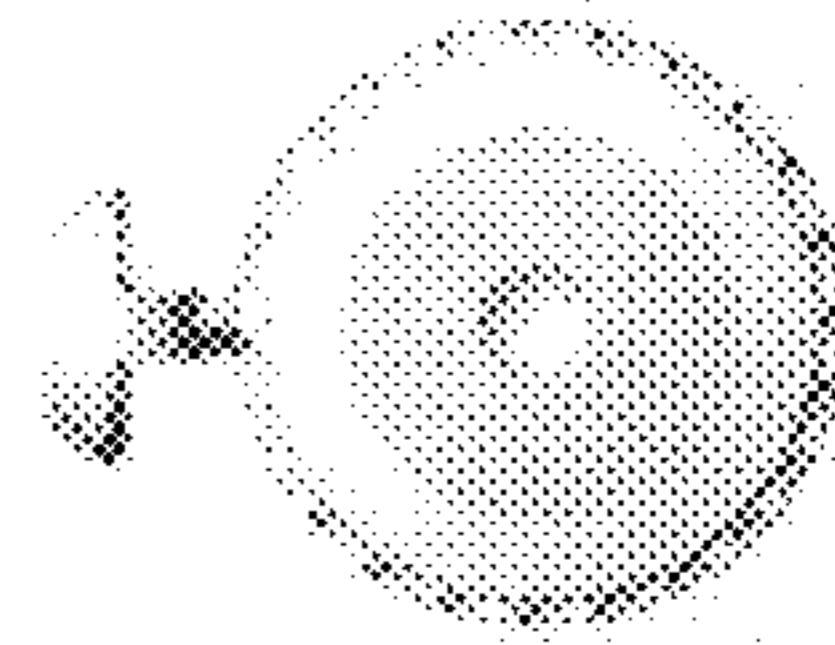


FIG. 53



FIG. 54

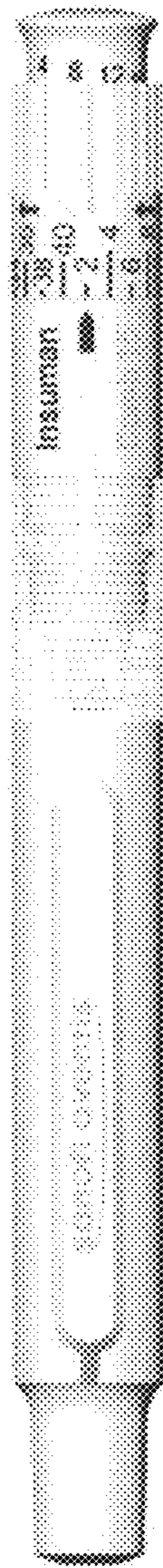


FIG. 55

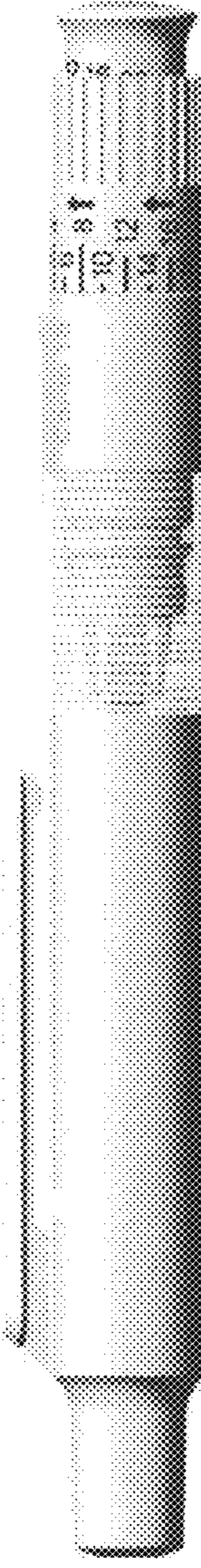


FIG. 56

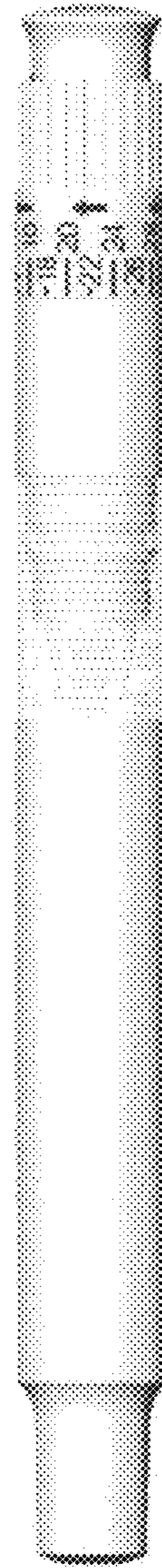


FIG. 57

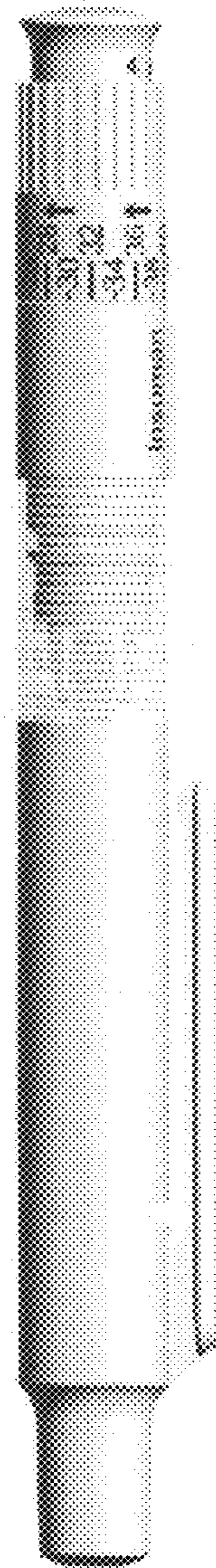


FIG. 58

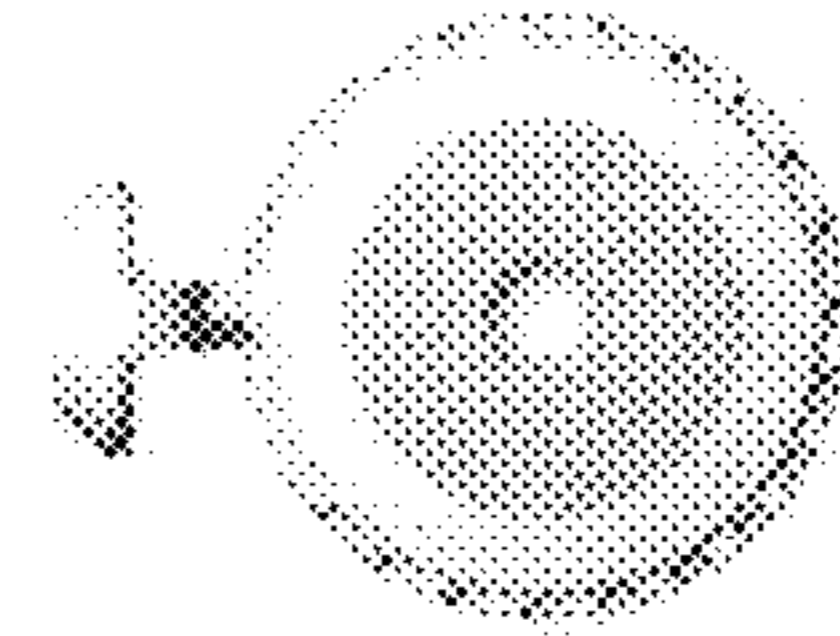


FIG. 59

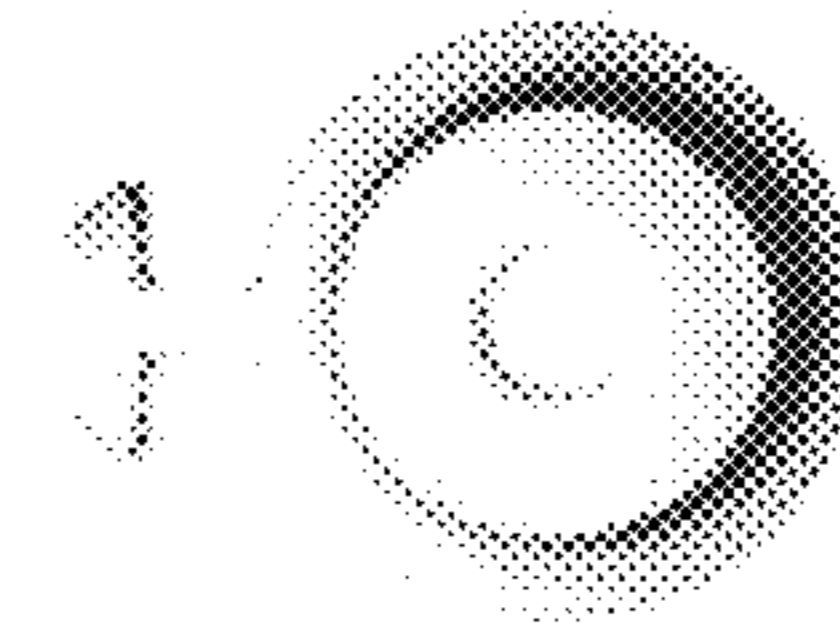


FIG. 60

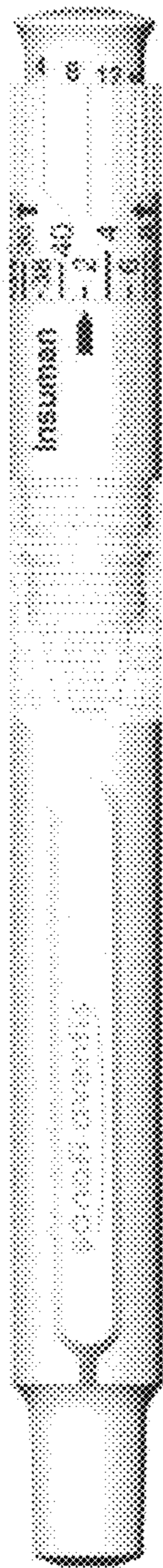


FIG. 61

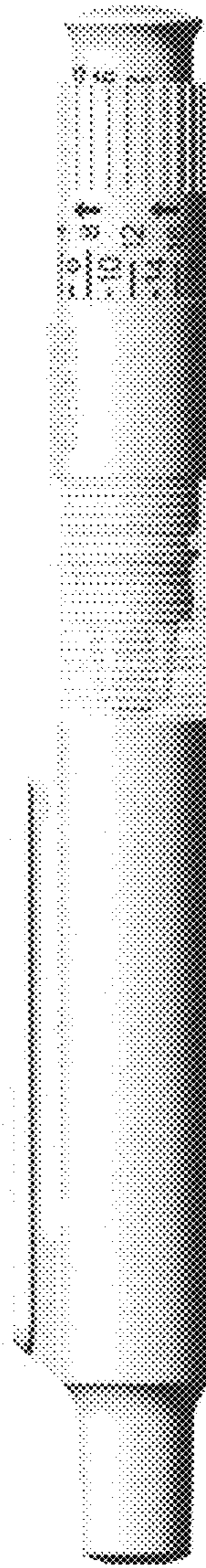


FIG. 62

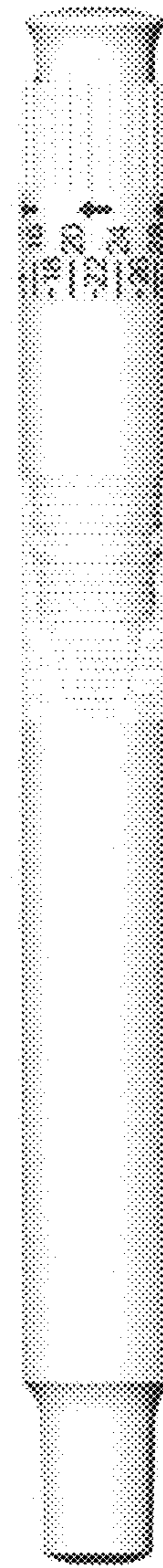


FIG. 63

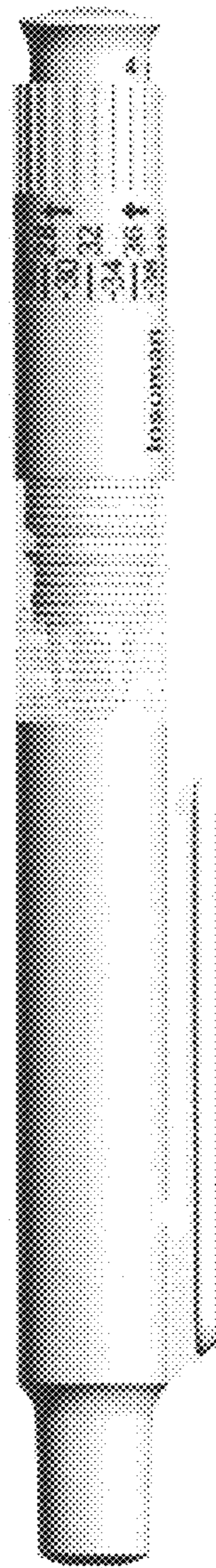


FIG. 64

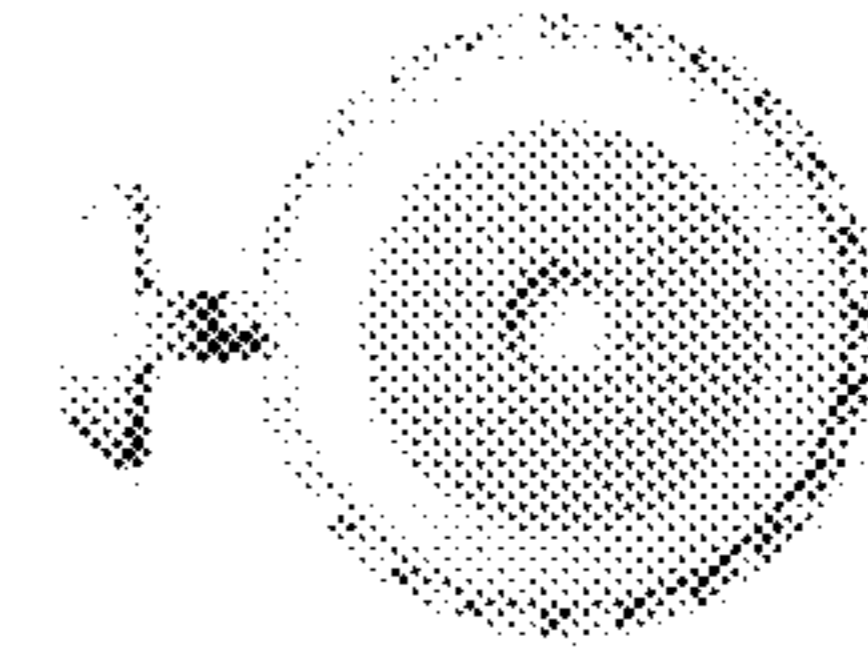


FIG. 65



FIG. 66

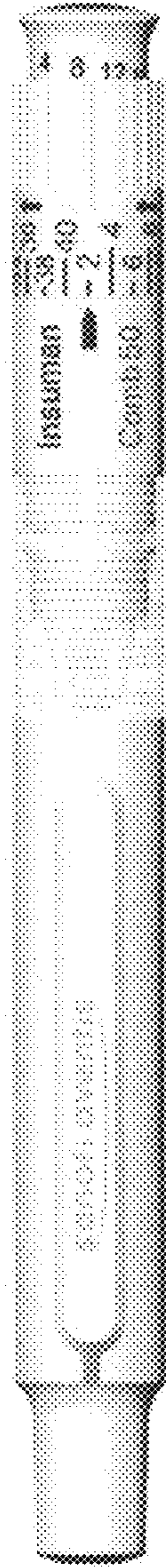


FIG. 67

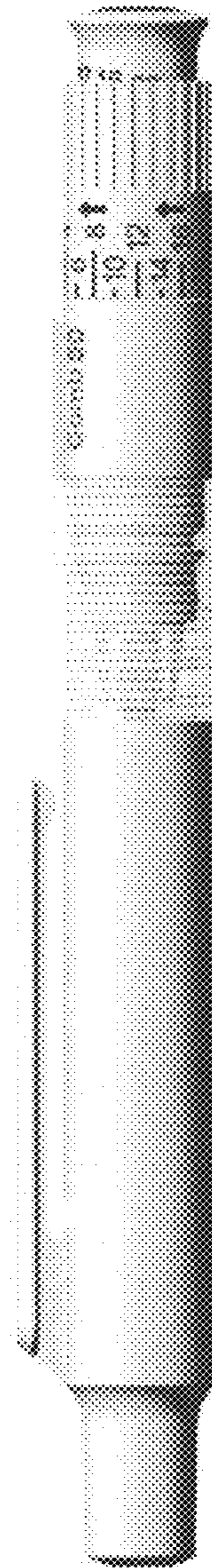


FIG. 68

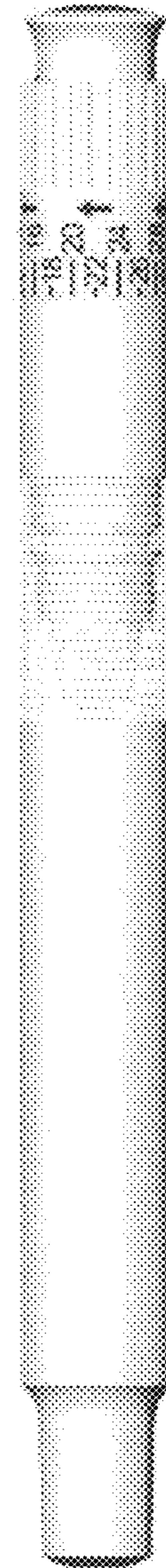


FIG. 69

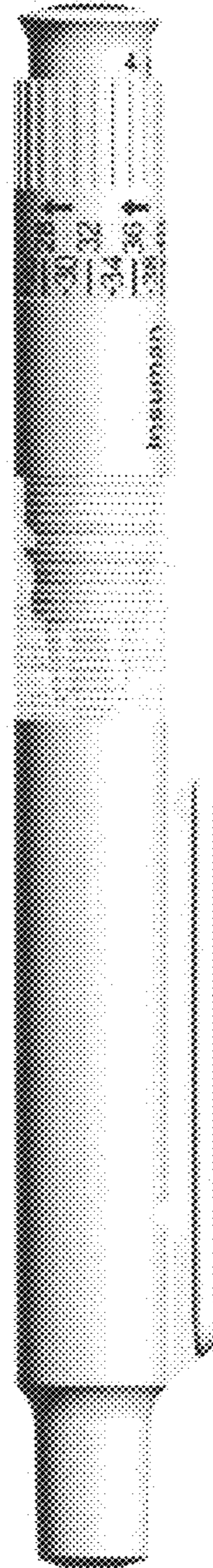


FIG. 70

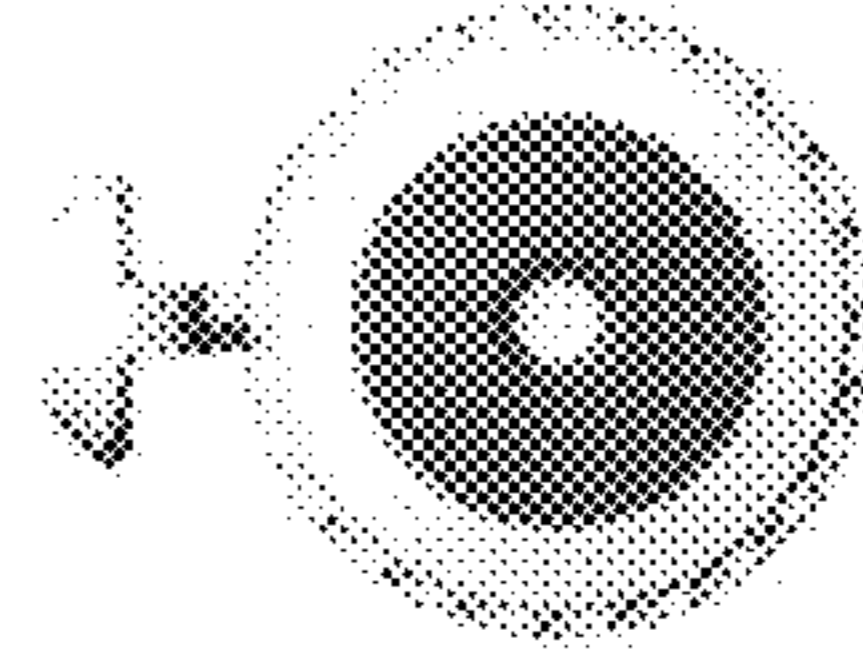


FIG. 71

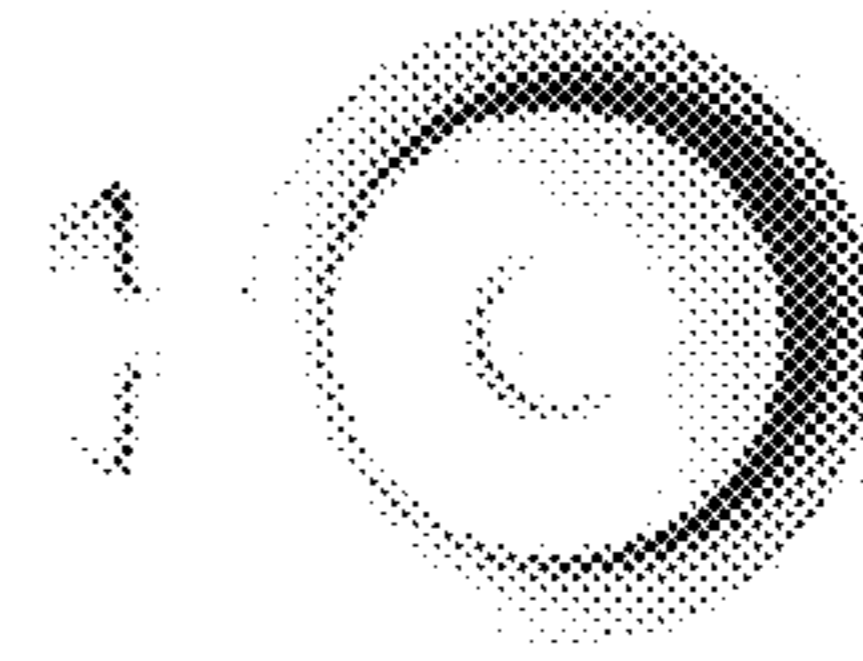


FIG. 72

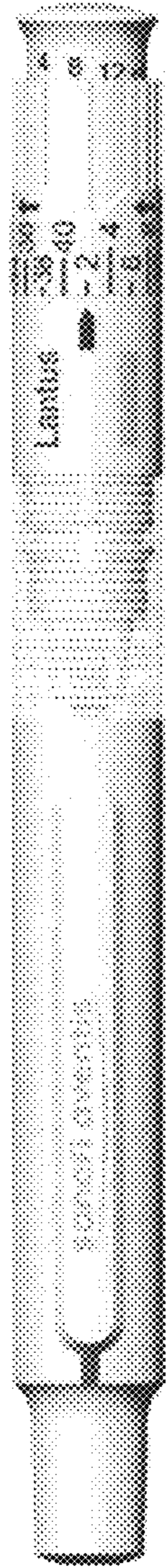


FIG. 73

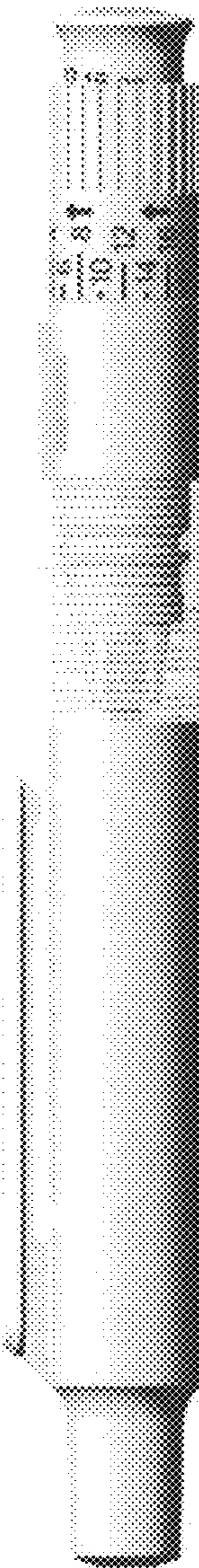


FIG. 74

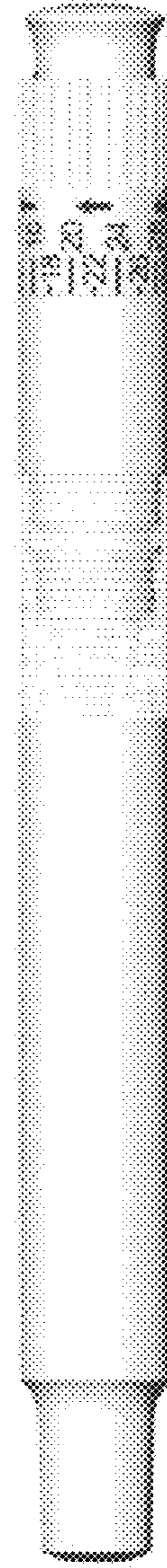


FIG. 75

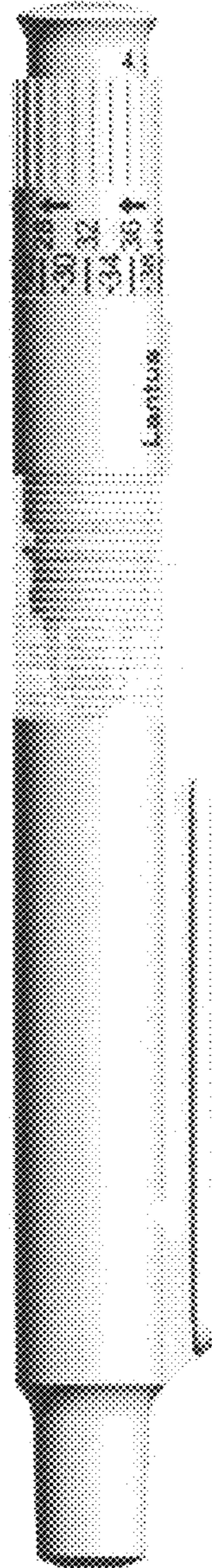


FIG. 76

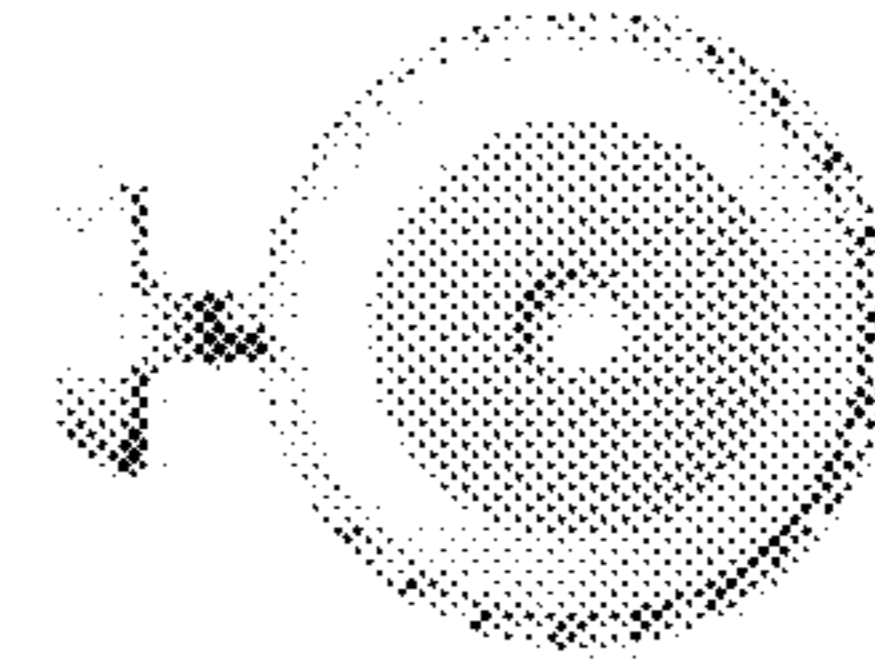


FIG. 77

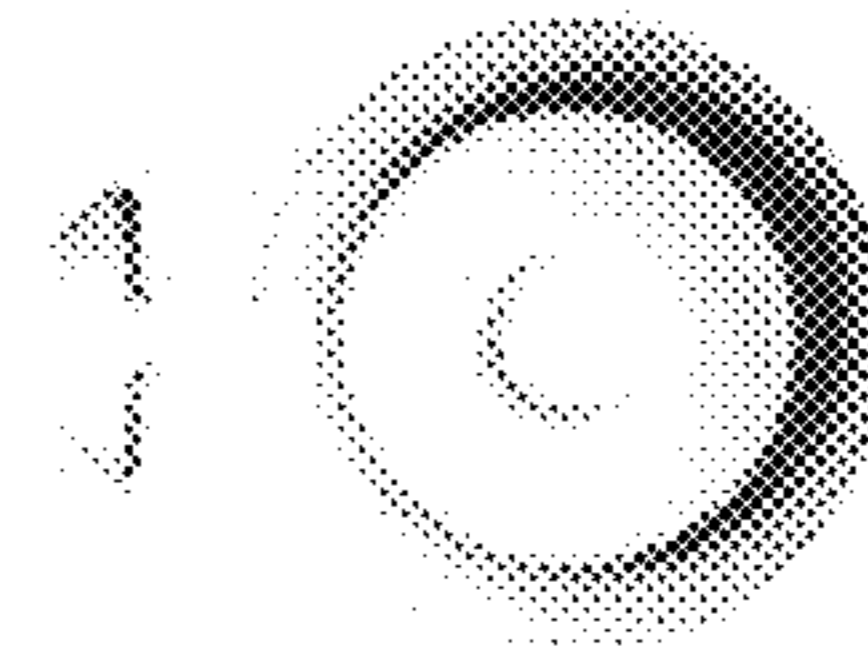


FIG. 78

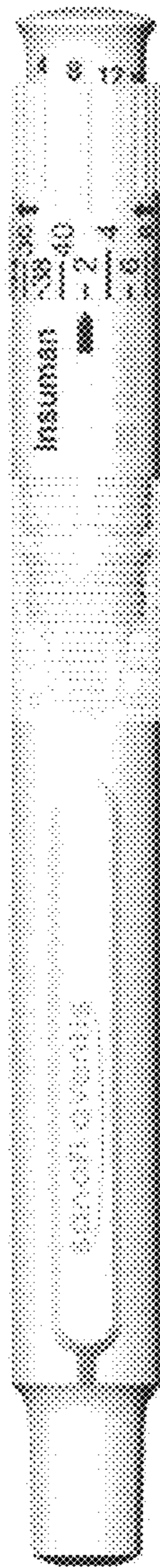


FIG. 79

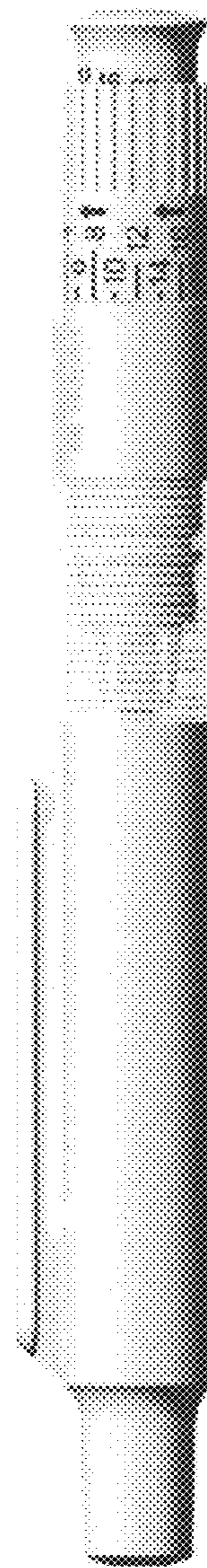


FIG. 80

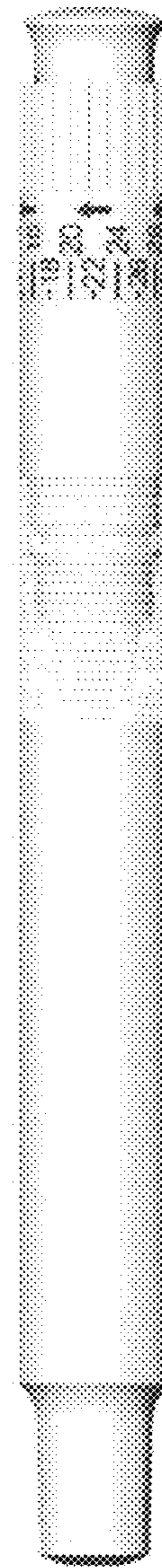


FIG. 81

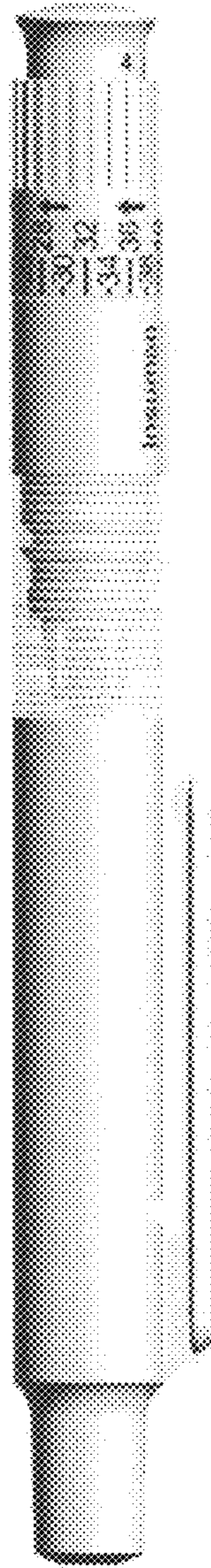


FIG. 82

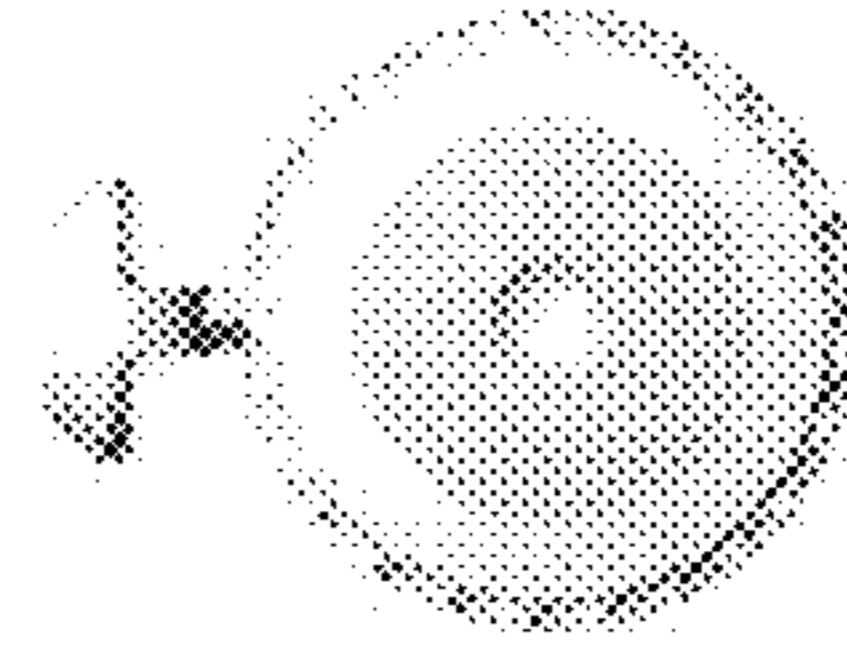


FIG. 83



FIG. 84

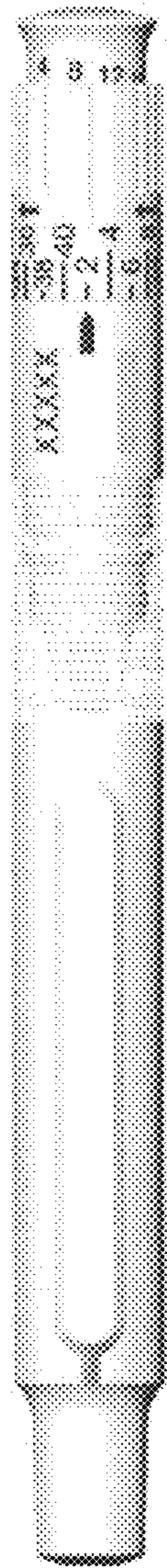


FIG. 85

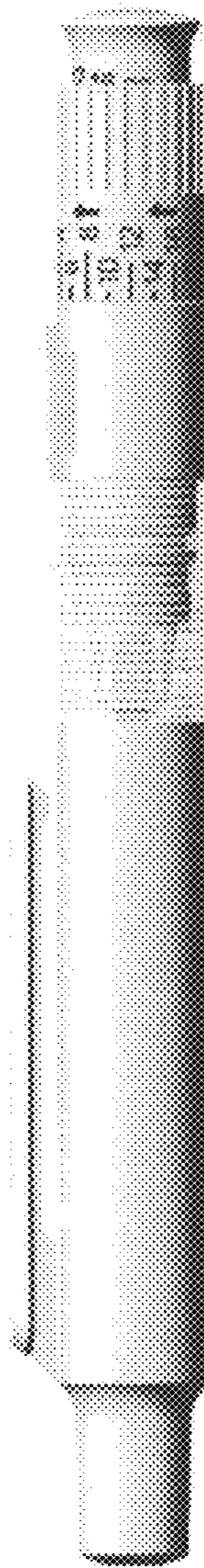


FIG. 86

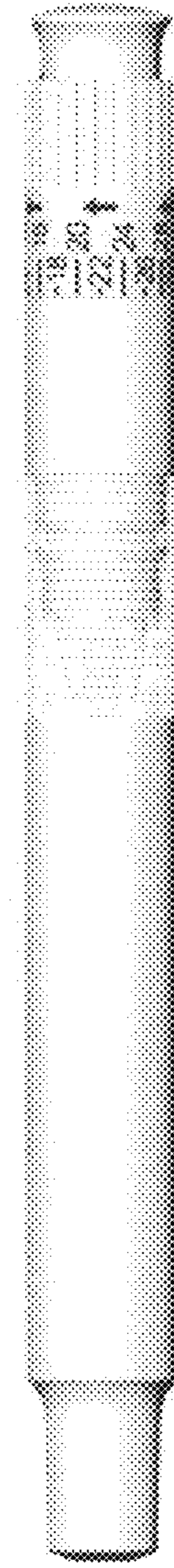


FIG. 87

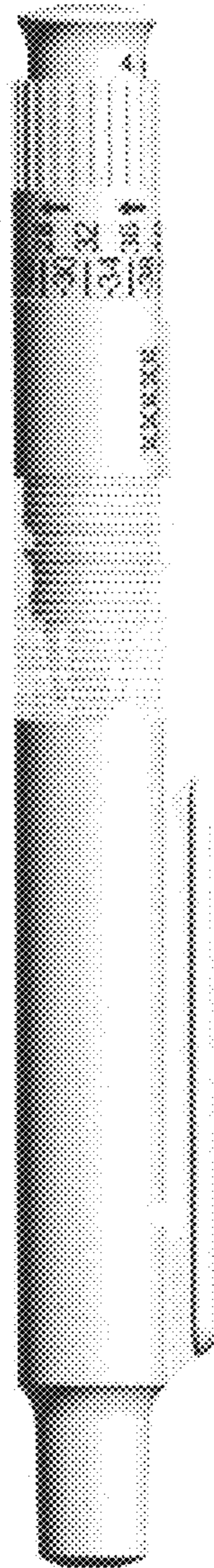


FIG. 88

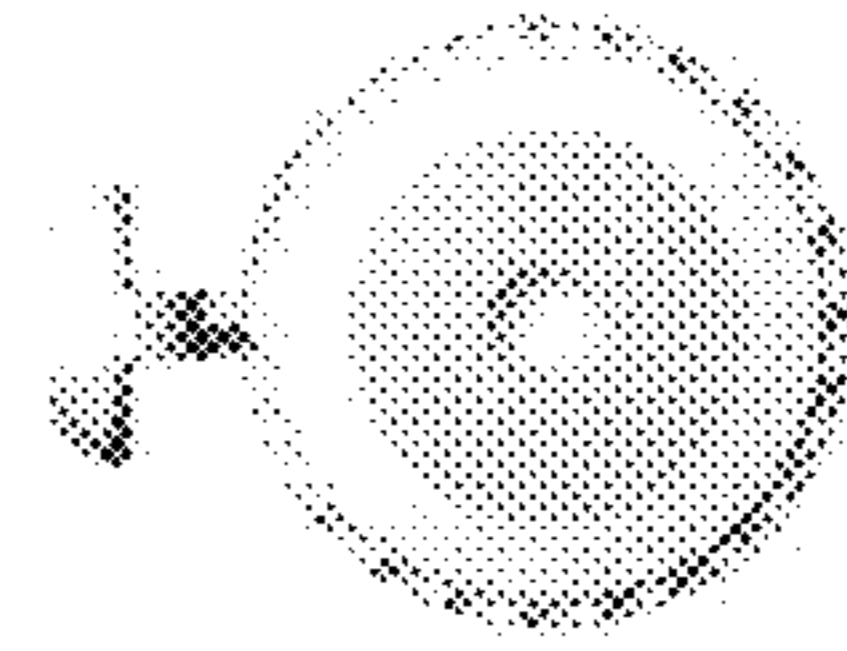


FIG. 89

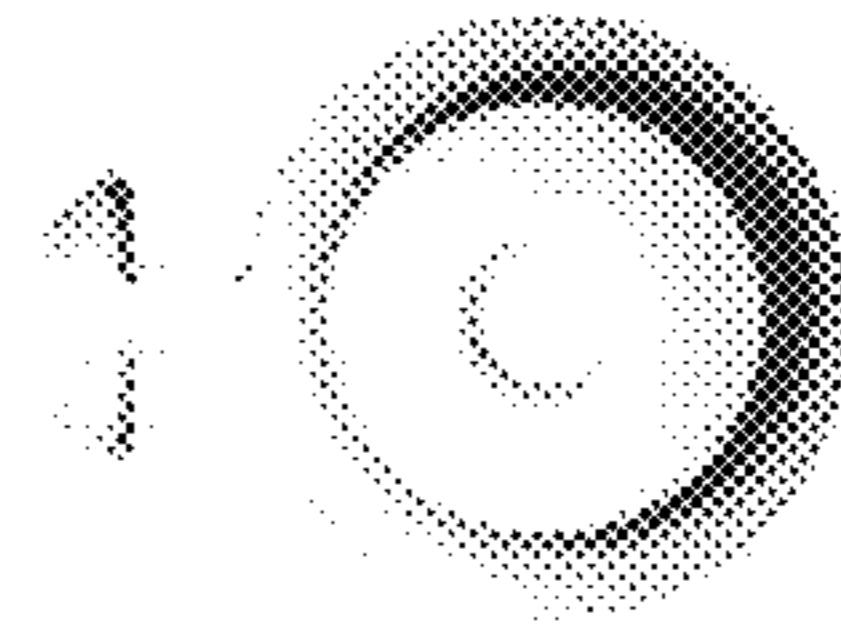


FIG. 90

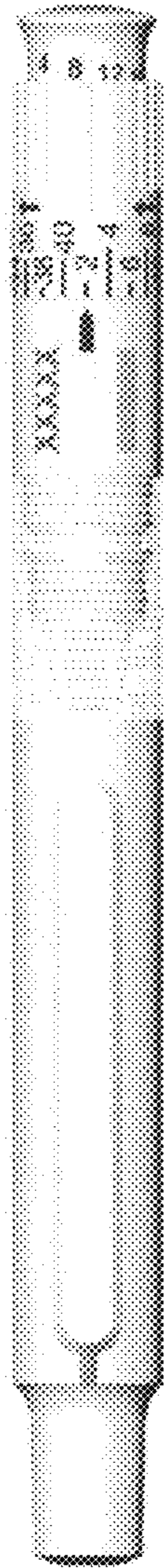


FIG. 91

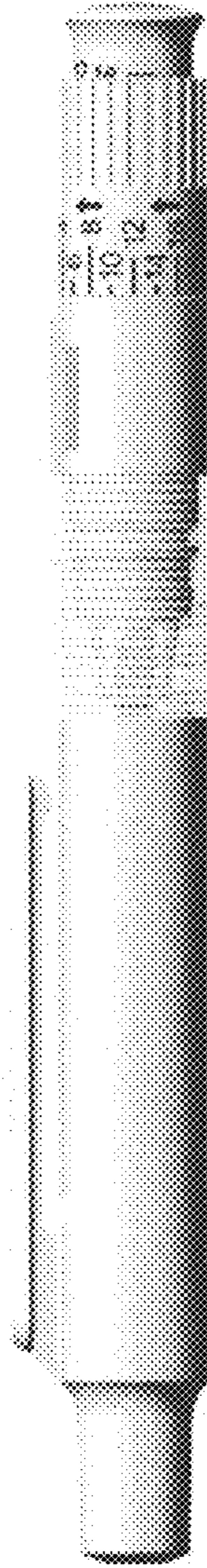


FIG. 92

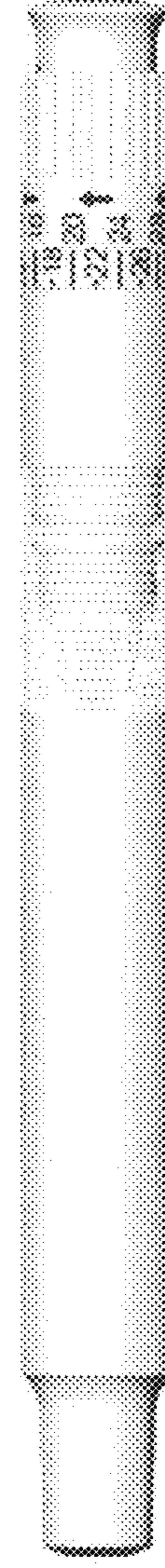


FIG. 93

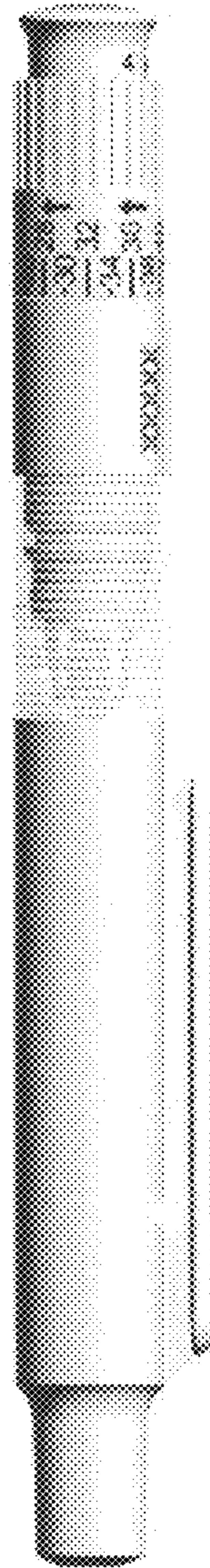


FIG. 94

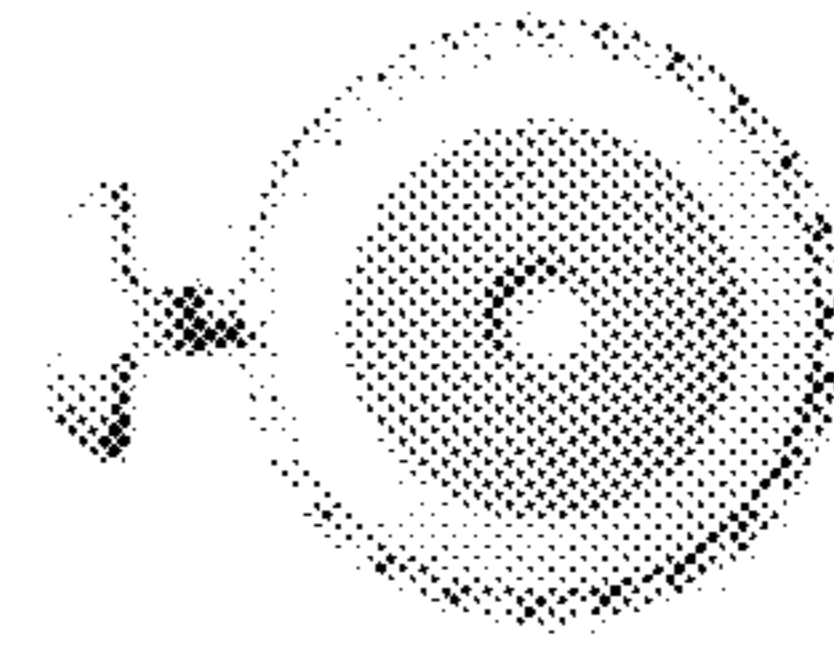


FIG. 95



FIG. 96

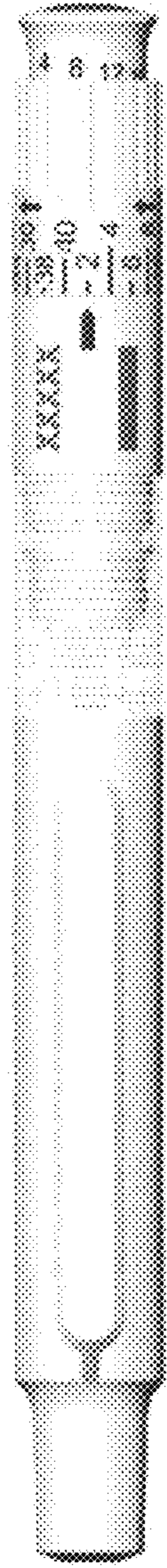


FIG. 97

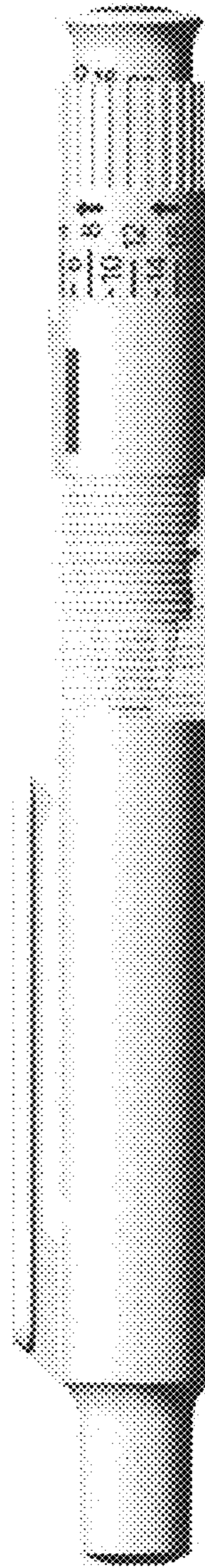


FIG. 98

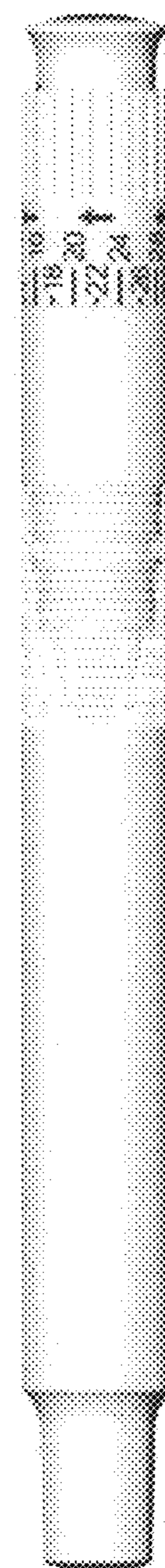


FIG. 99

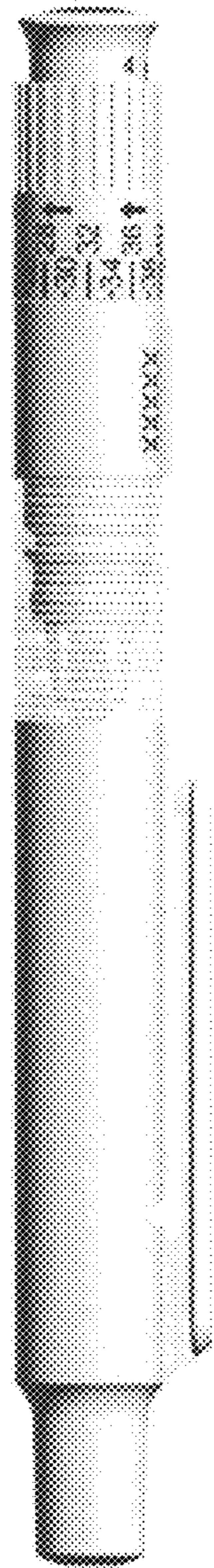


FIG. 100

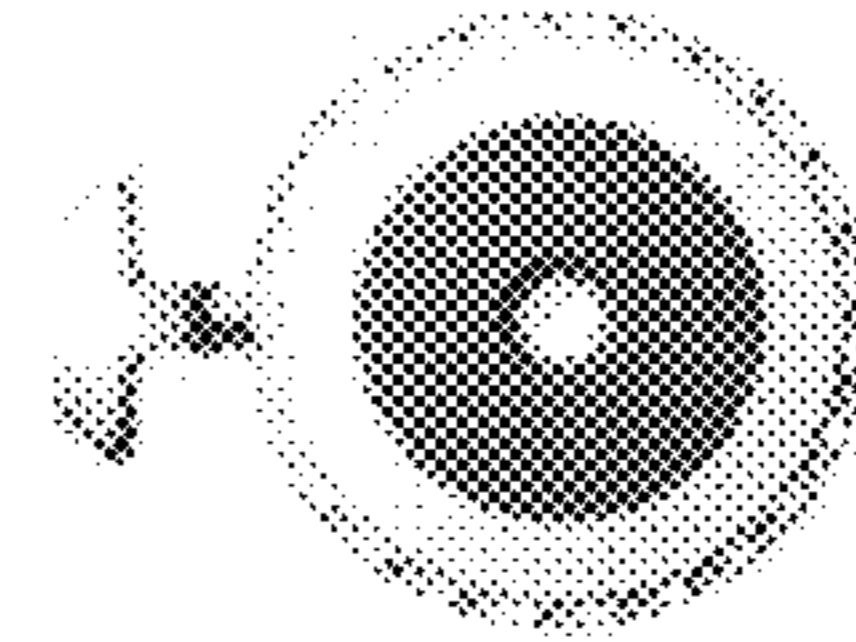


FIG. 101

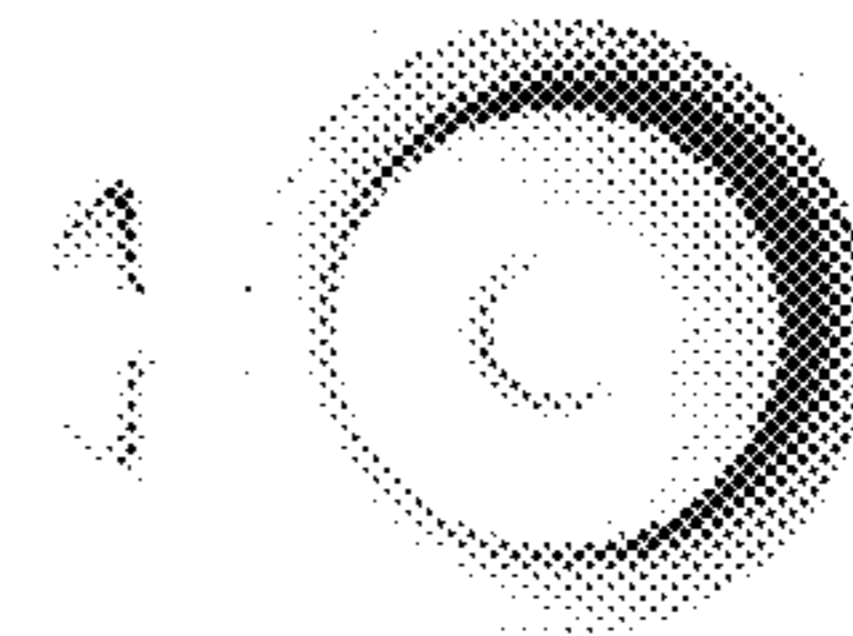


FIG. 102

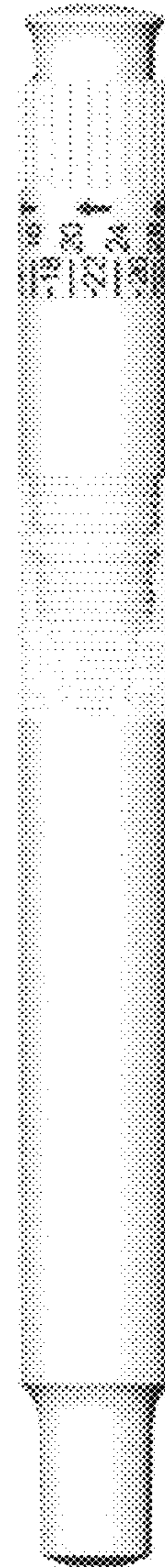
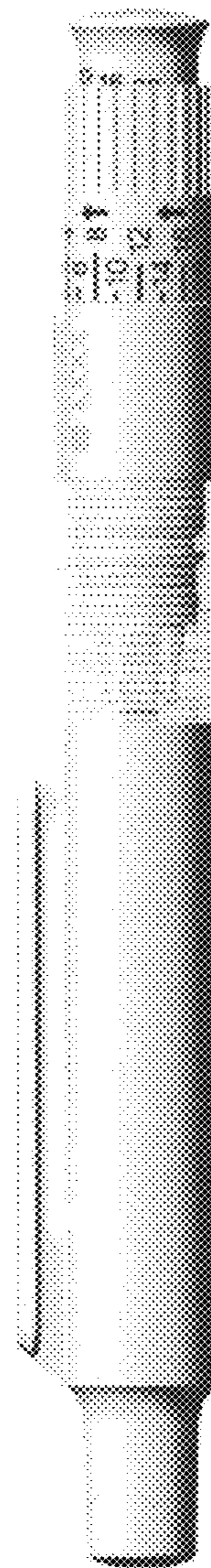
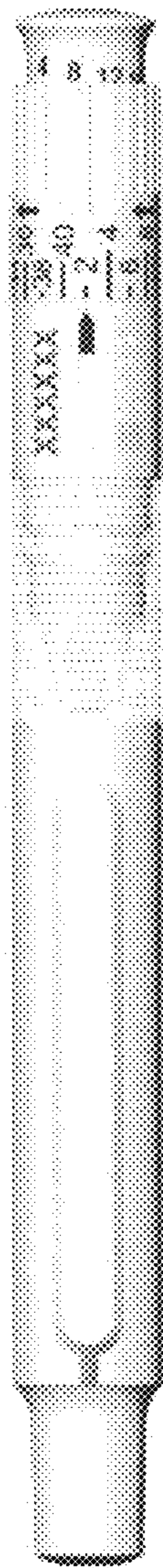


FIG. 103

FIG. 104

FIG. 105

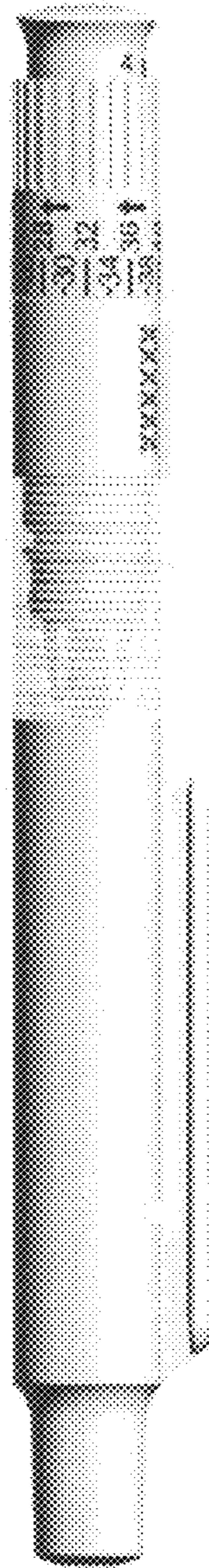


FIG. 106

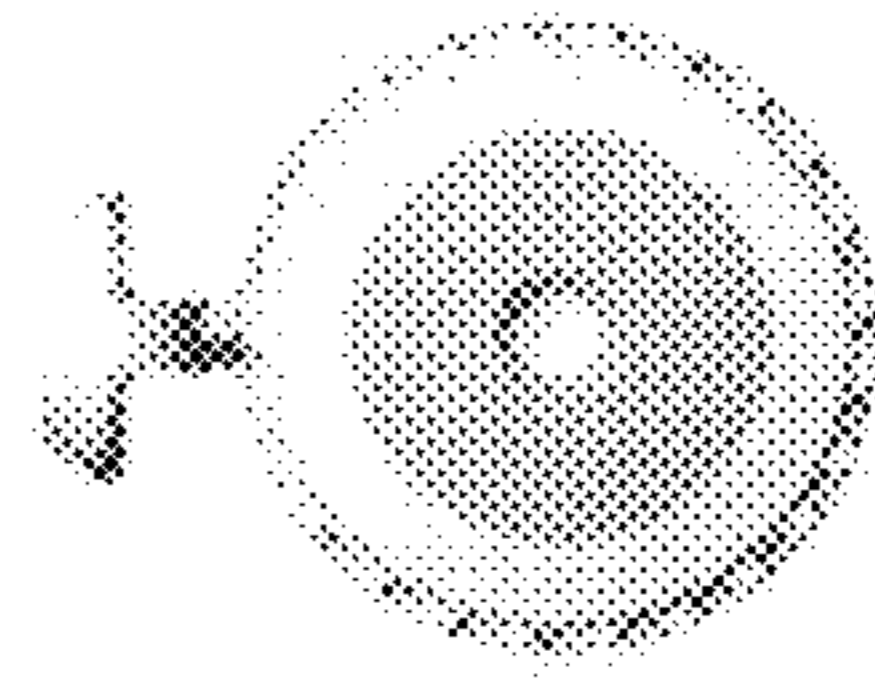


FIG. 107



FIG. 108

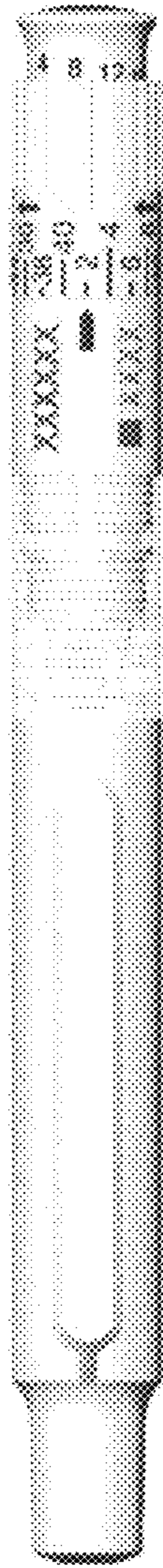


FIG. 109

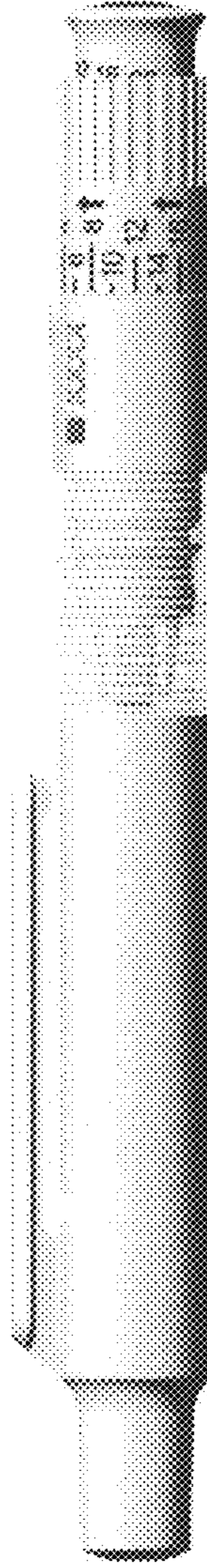


FIG. 110

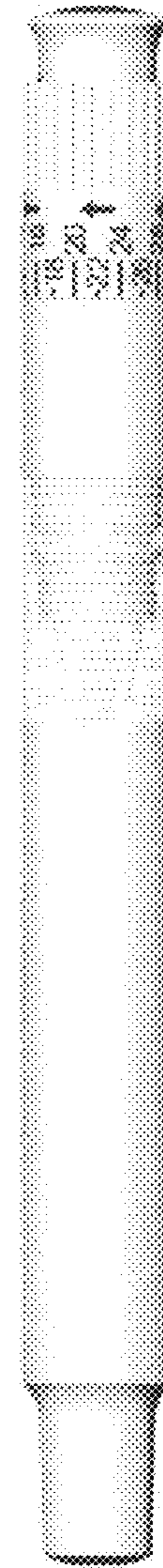


FIG. 111

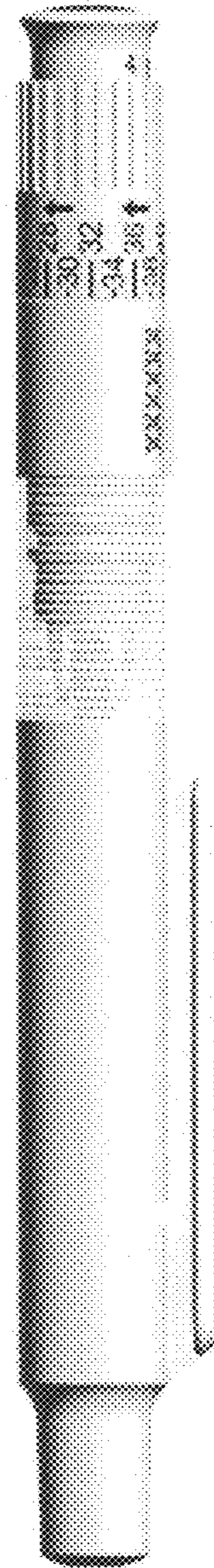


FIG. 112

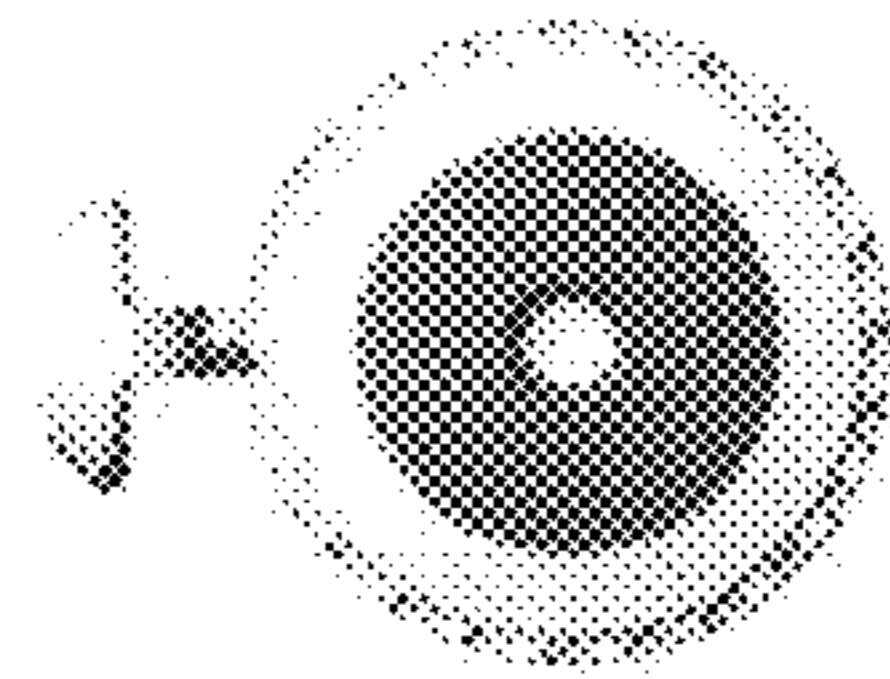


FIG. 113

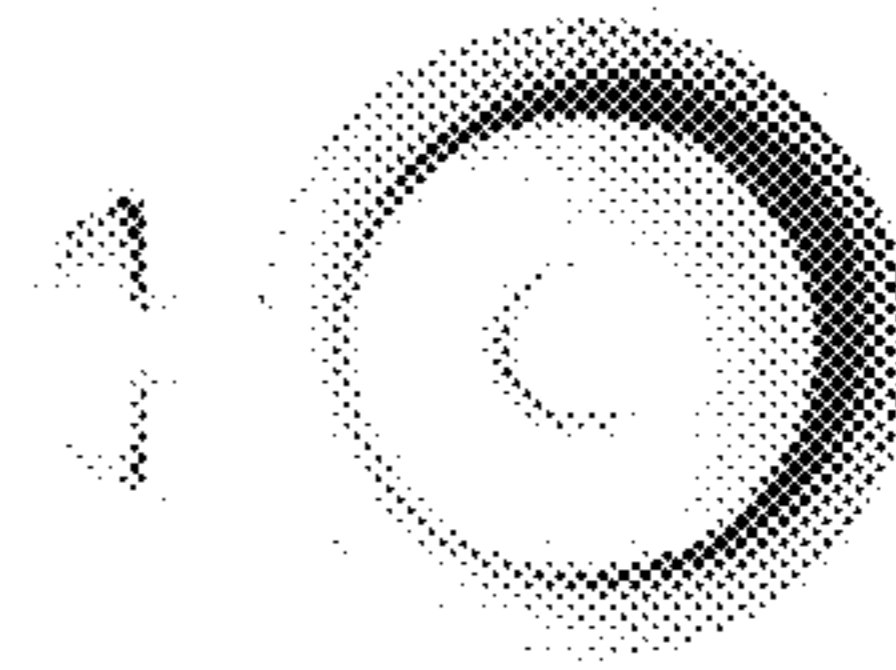


FIG. 114

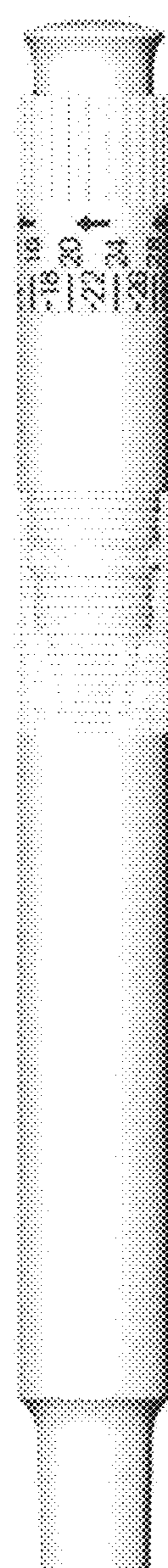
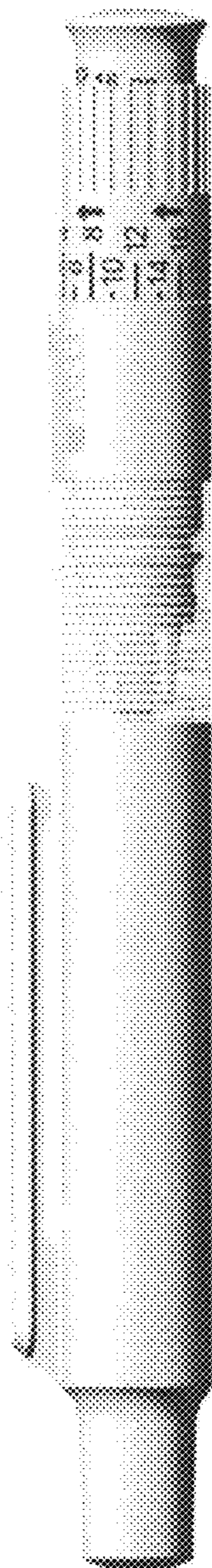
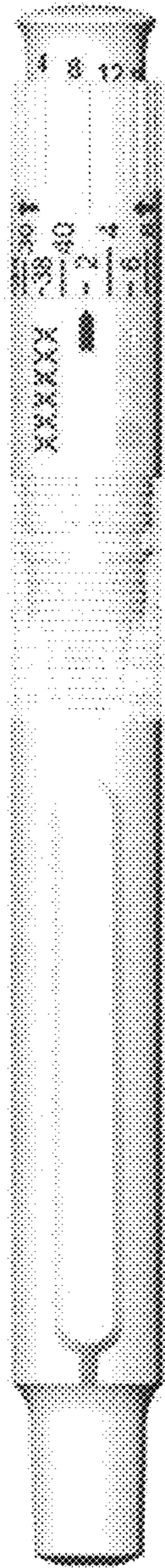


FIG. 115

FIG. 116

FIG. 117

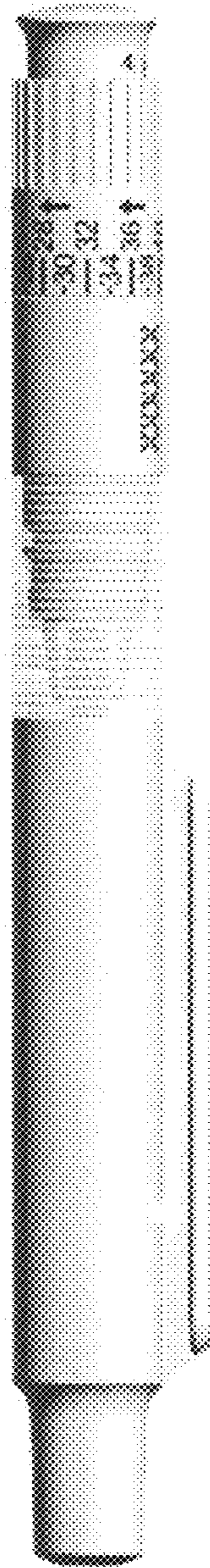


FIG. 118

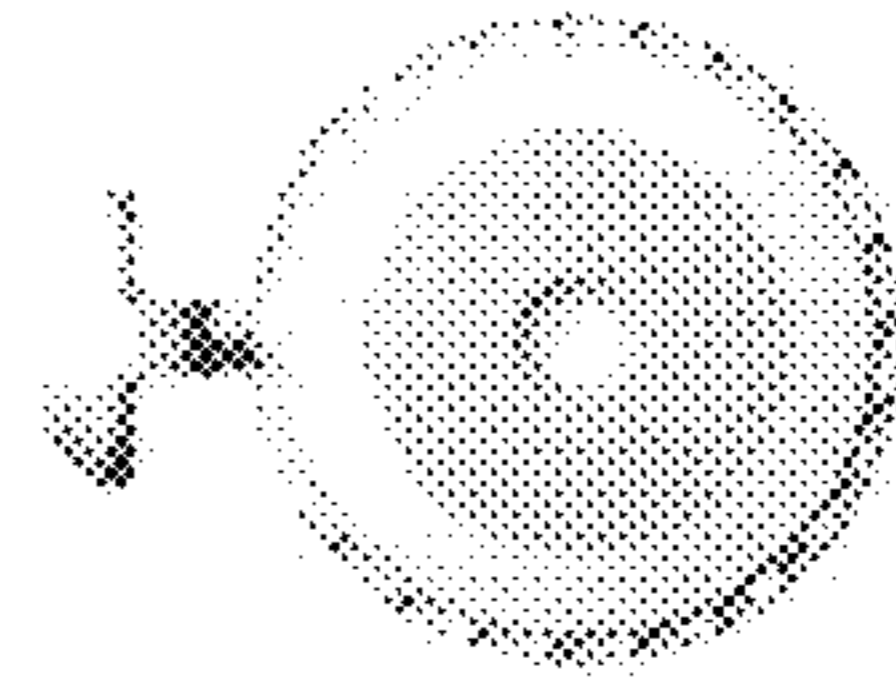


FIG. 119



FIG. 120

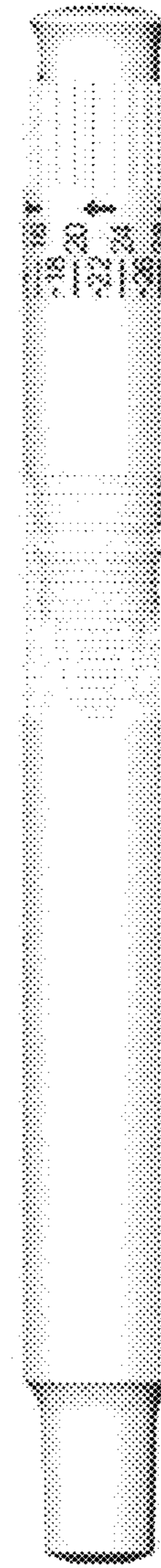
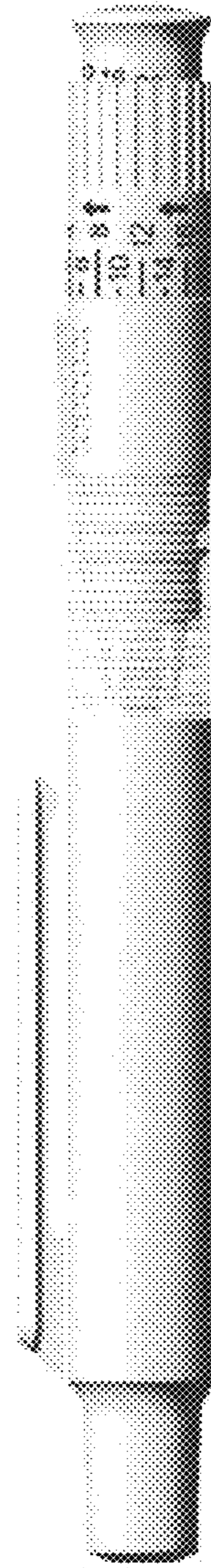
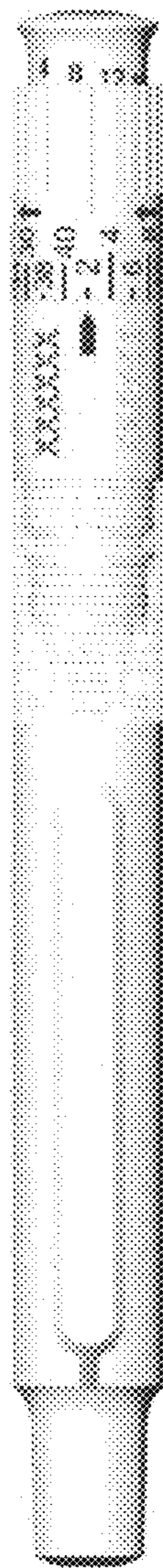


FIG. 121

FIG. 122

FIG. 123

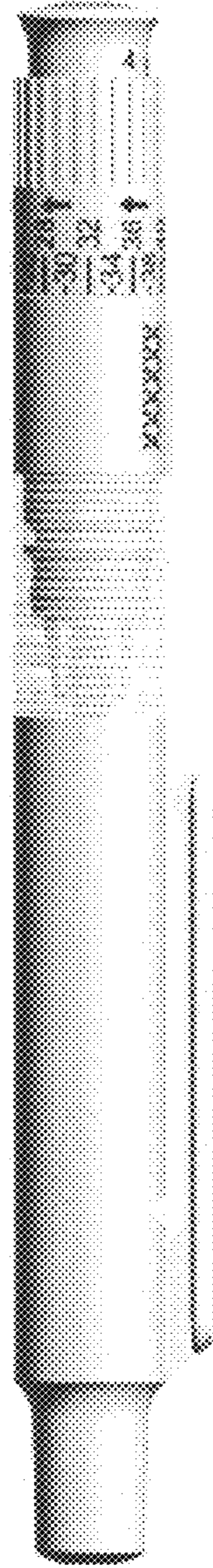


FIG. 124

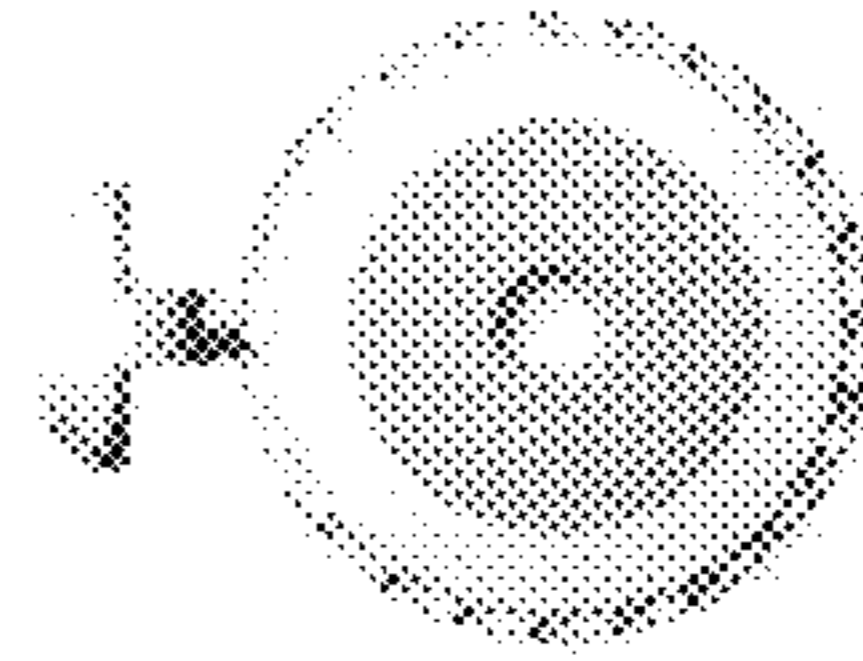


FIG. 125



FIG. 126

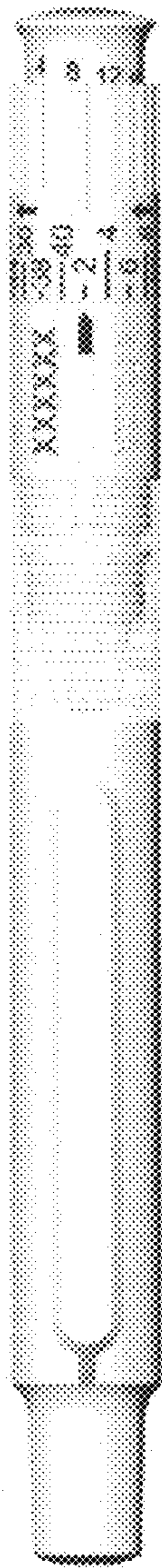


FIG. 127

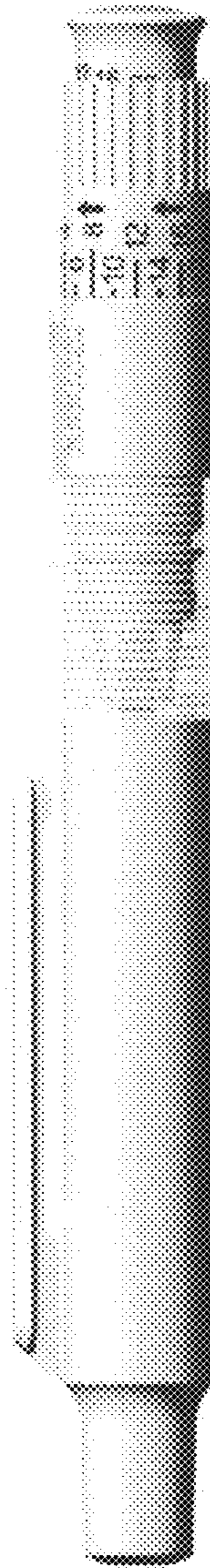


FIG. 128

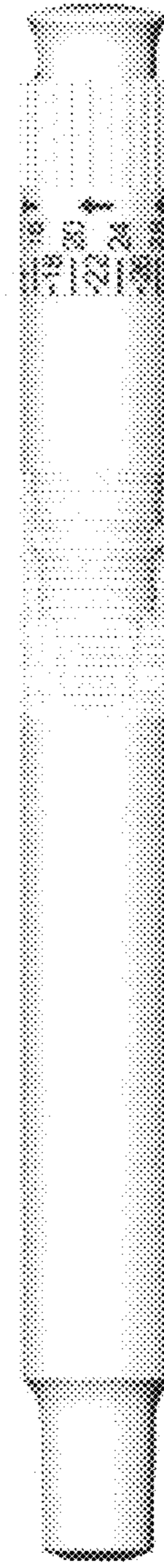


FIG. 129

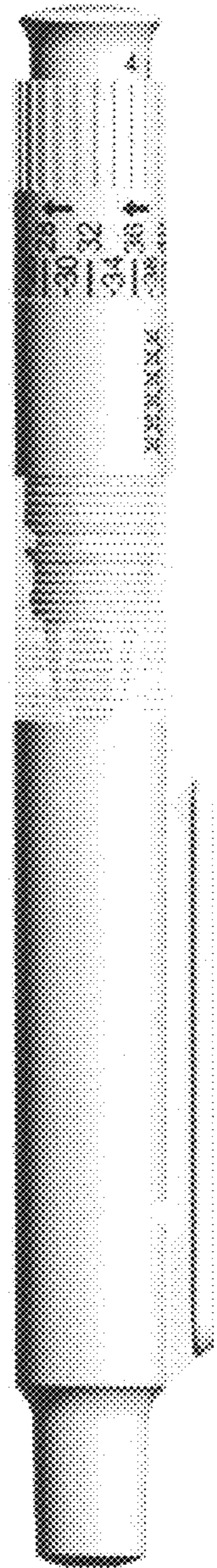


FIG. 130

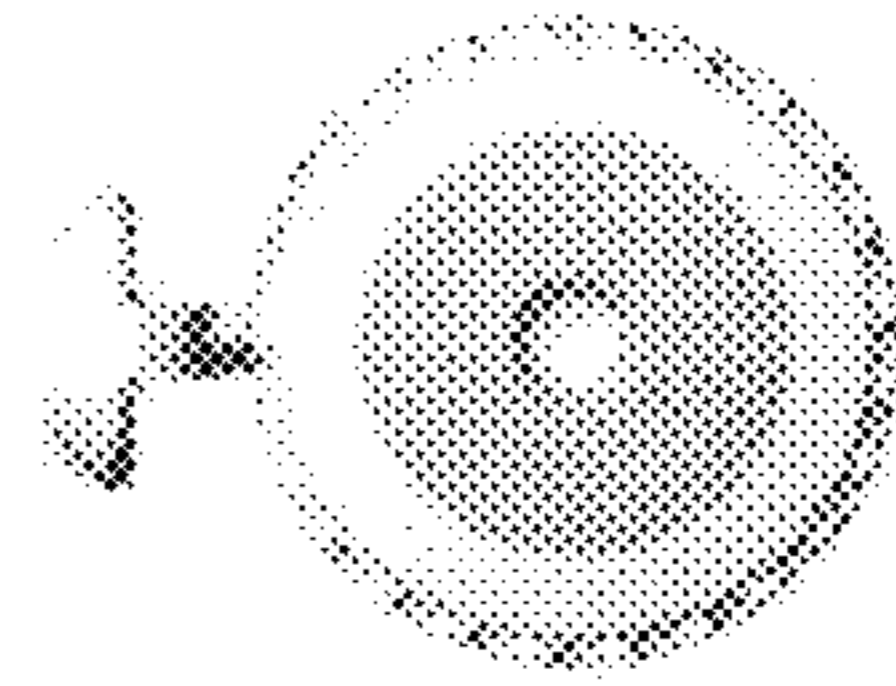


FIG. 131

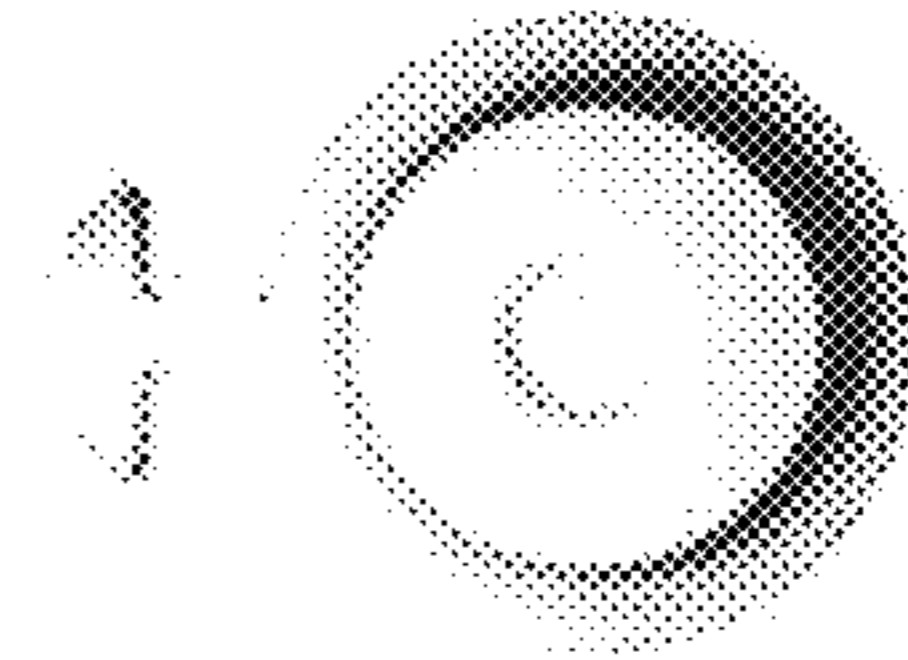


FIG. 132

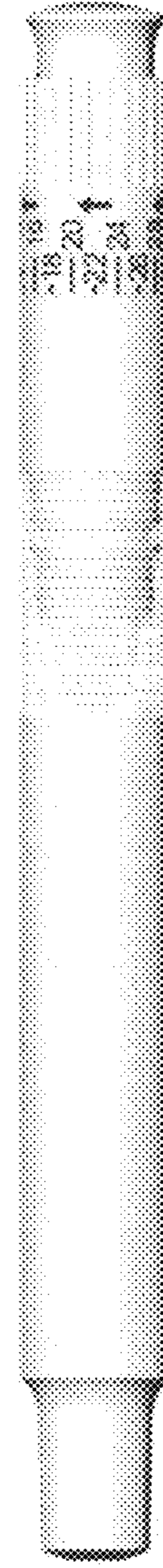
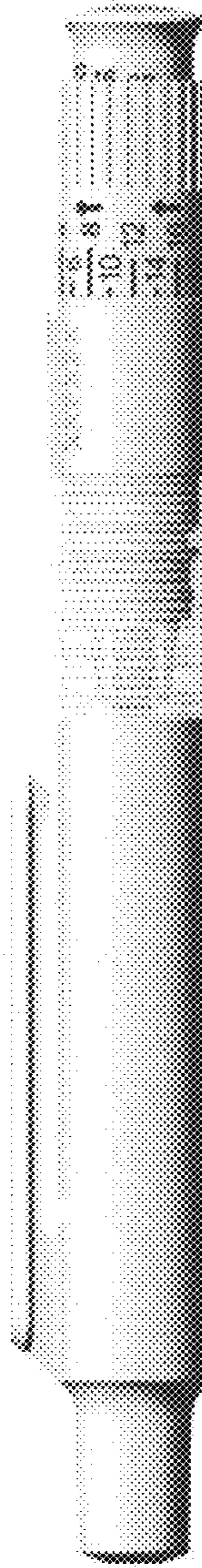
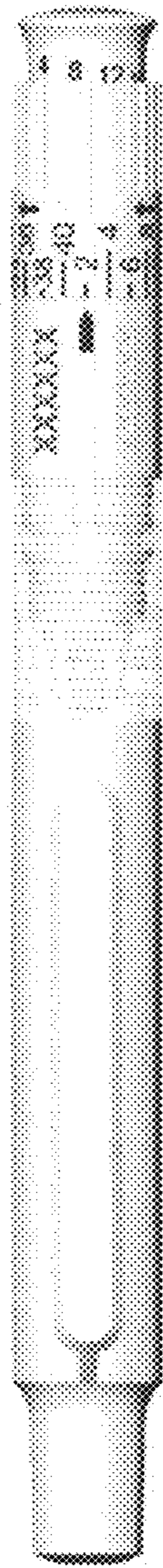


FIG. 133

FIG. 134

FIG. 135

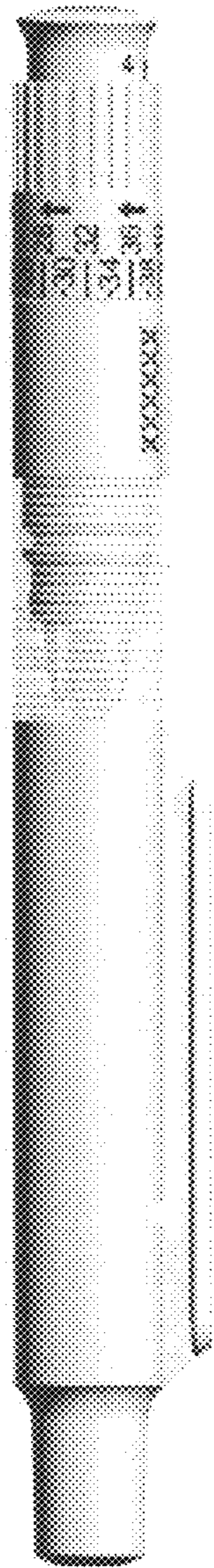


FIG. 136

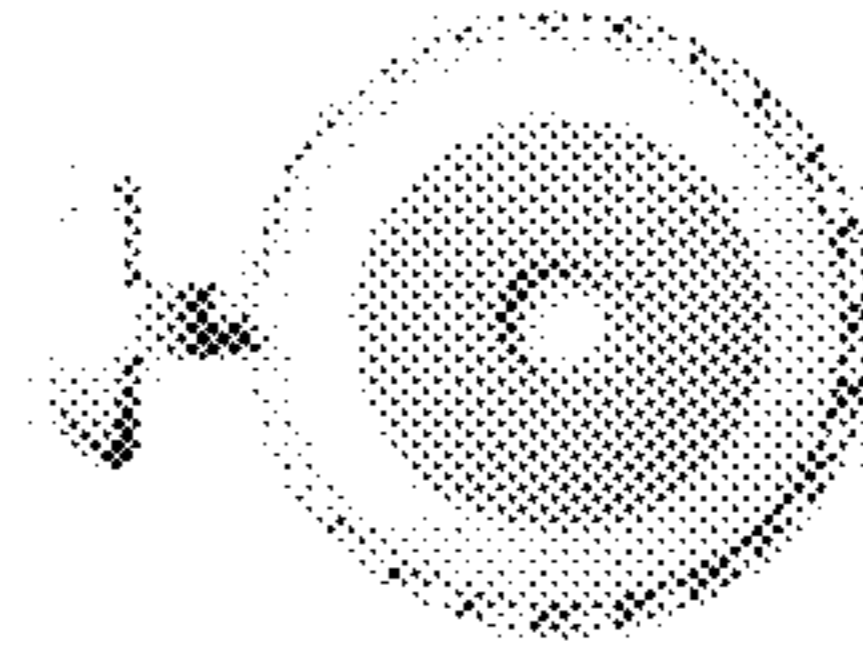


FIG. 137



FIG. 138

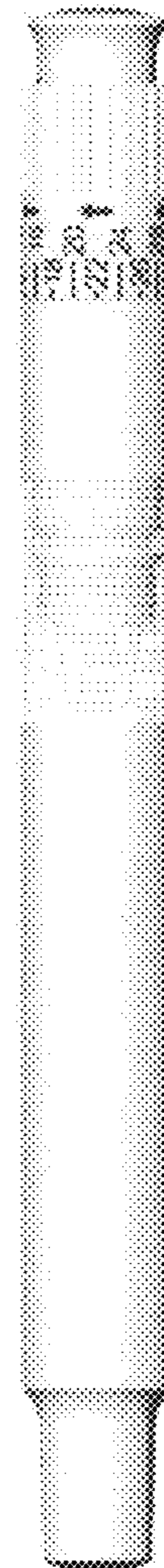
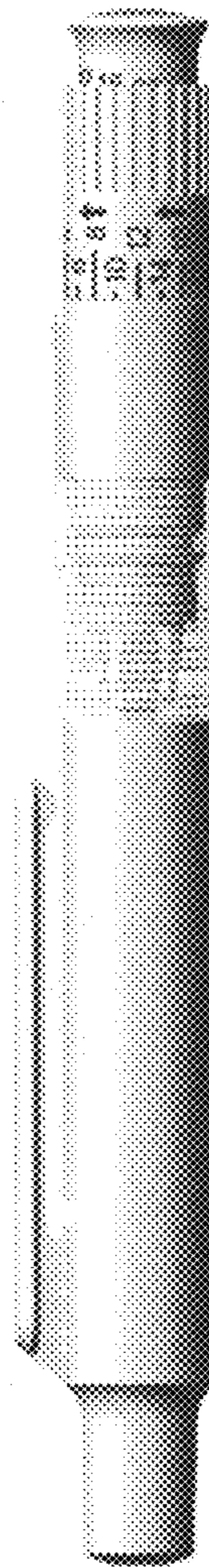
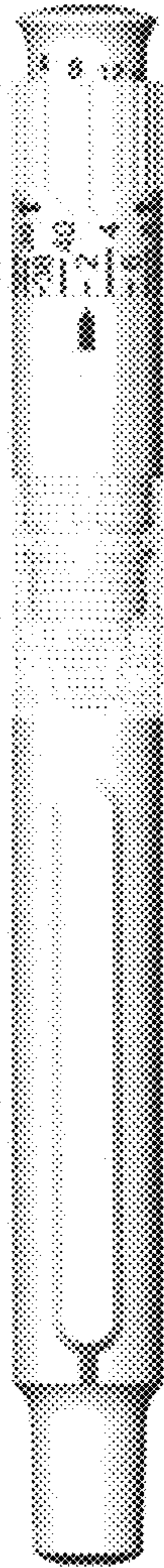


FIG. 139

FIG. 140

FIG. 141

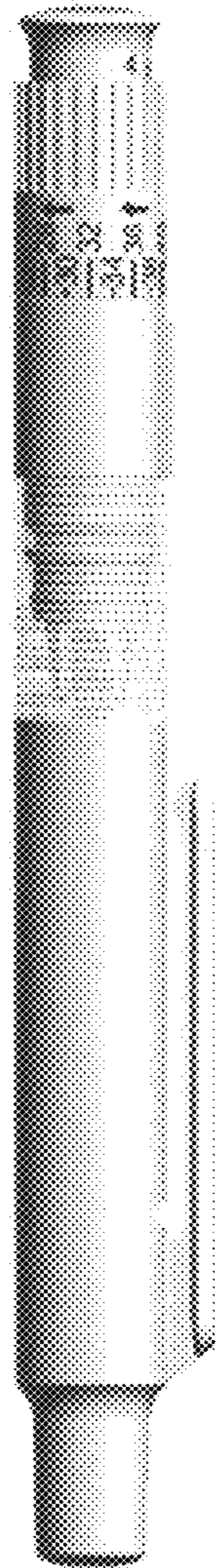


FIG. 142

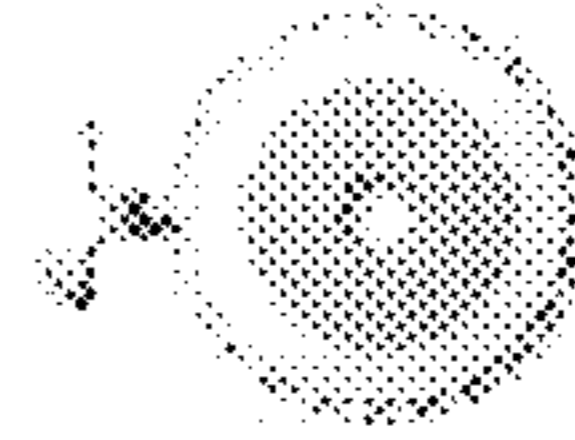


FIG. 143



FIG. 144

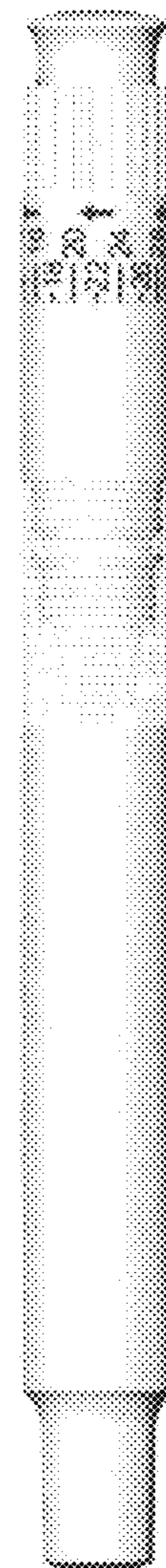
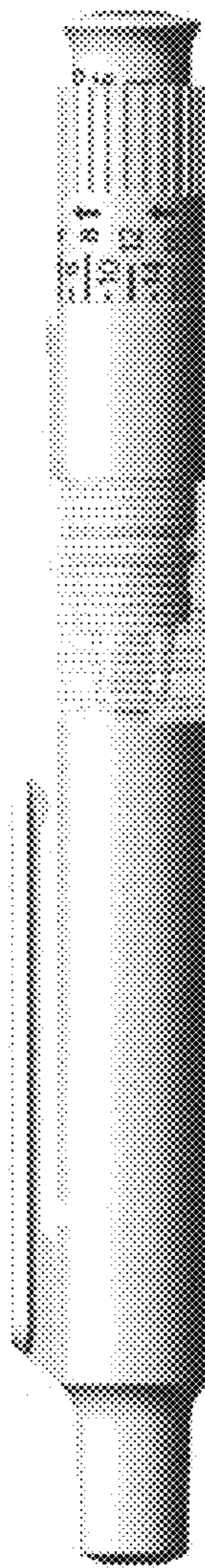
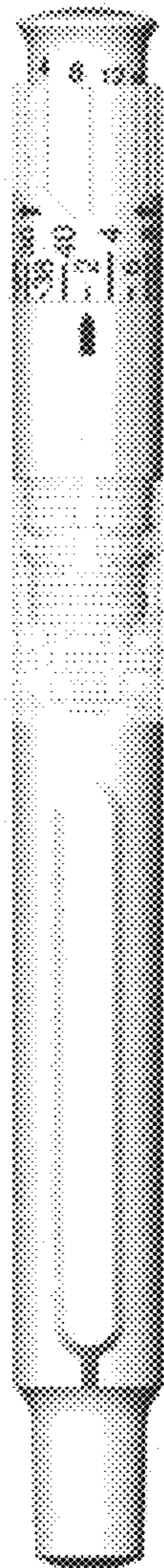


FIG. 145

FIG. 146

FIG. 147

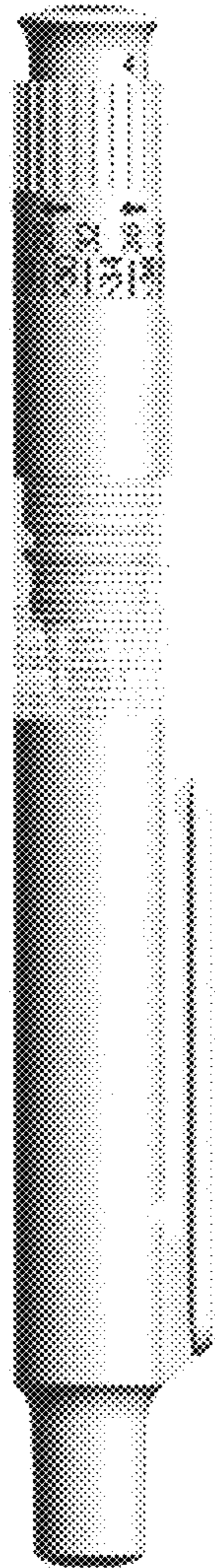


FIG. 148



FIG. 149



FIG. 150