



US00D687544S

(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**

(75) Inventors: **Caroline Stephan**, Offenbach (DE);
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

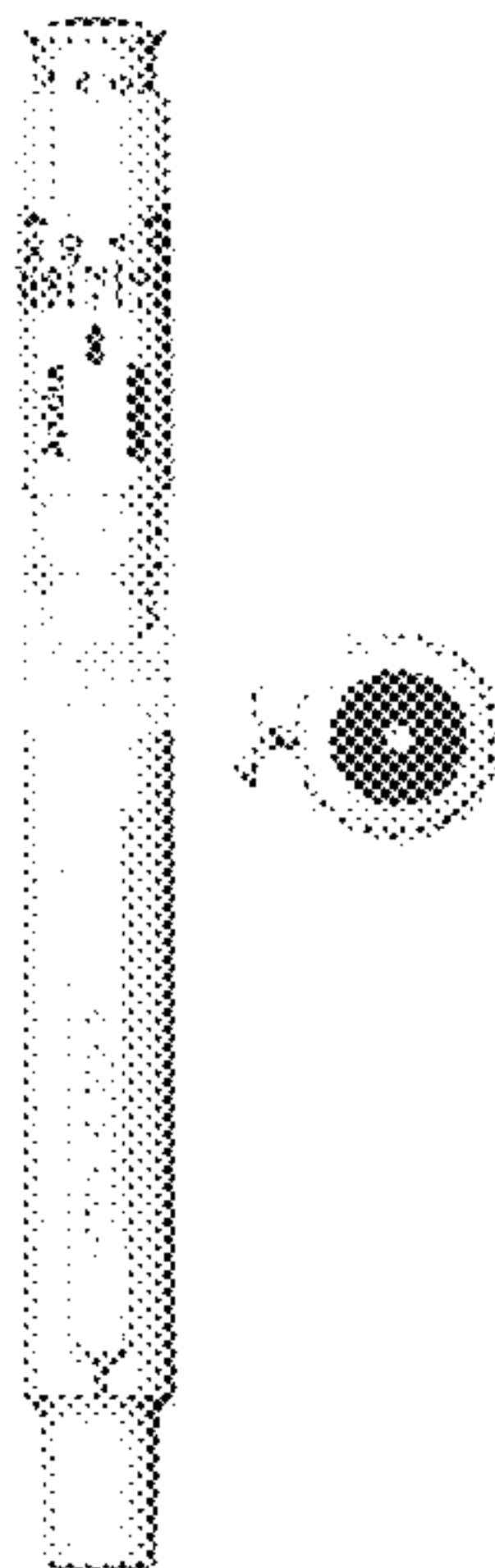
See application file for complete search history.

(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)**

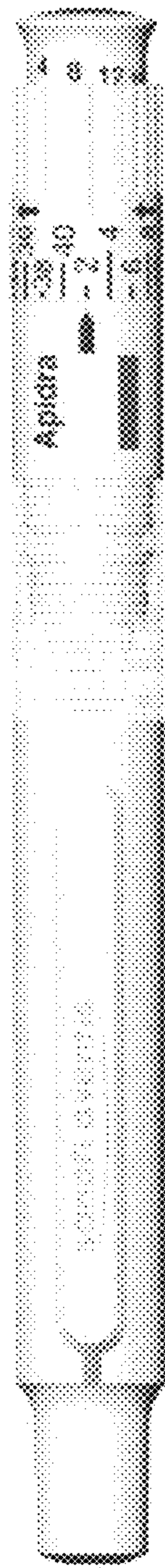


FIG. 1

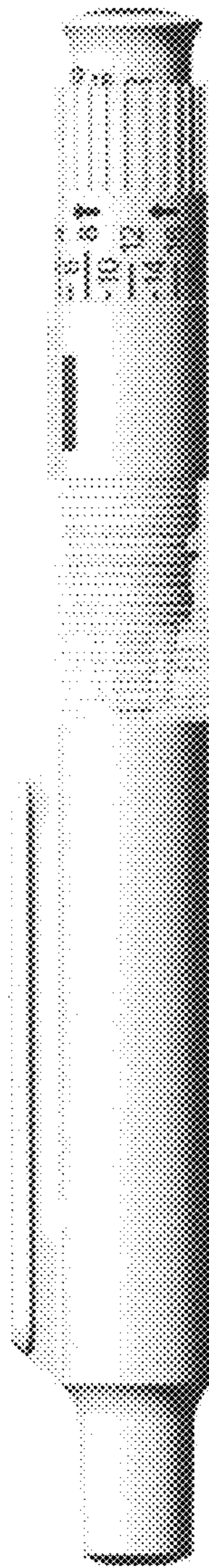


FIG. 2

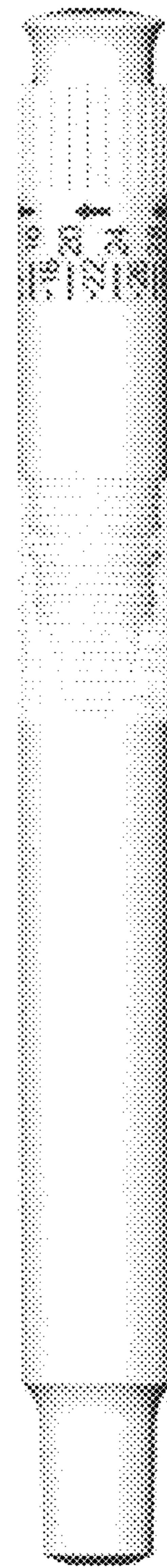


FIG. 3

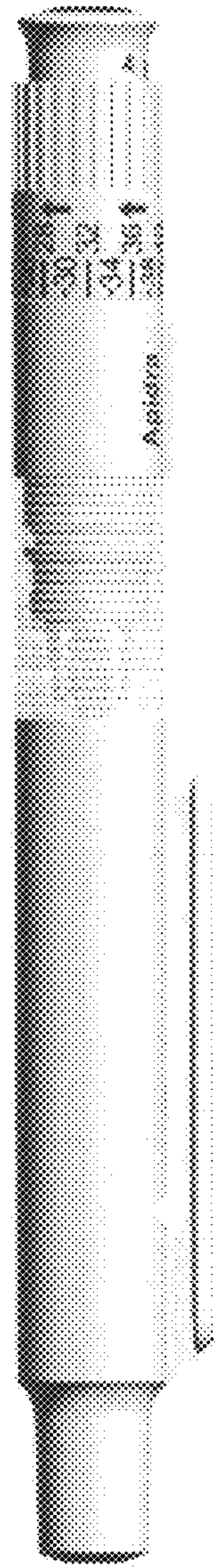


FIG. 4

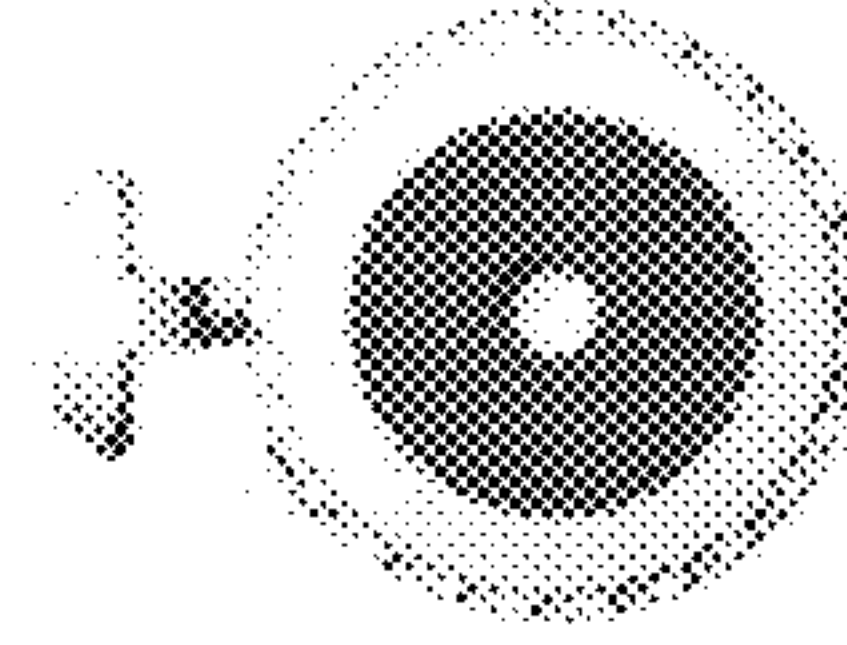


FIG. 5



FIG. 6

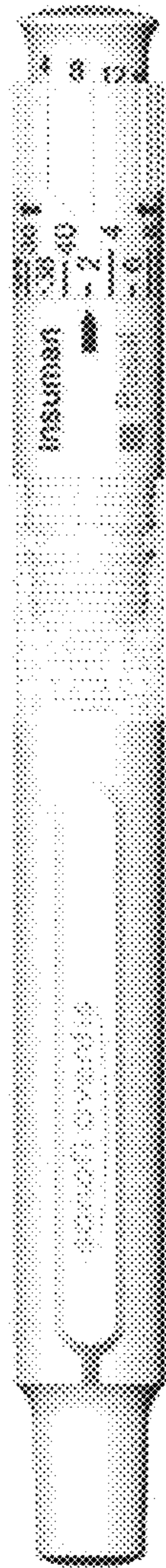


FIG. 7

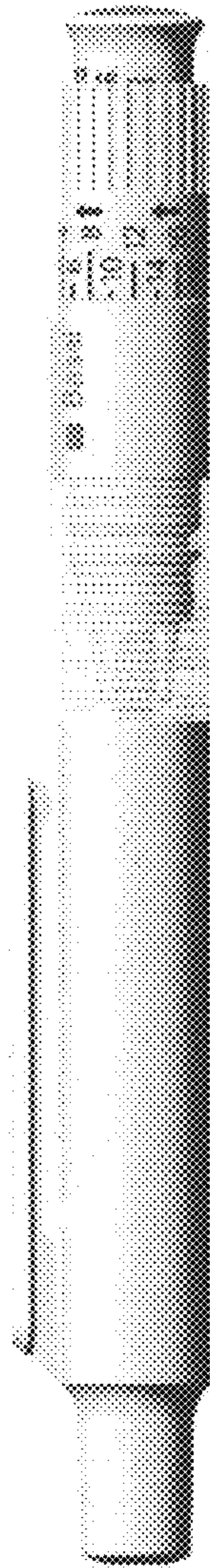


FIG. 8

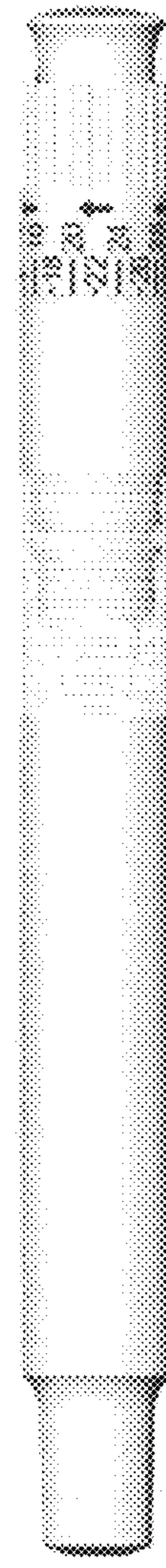


FIG. 9

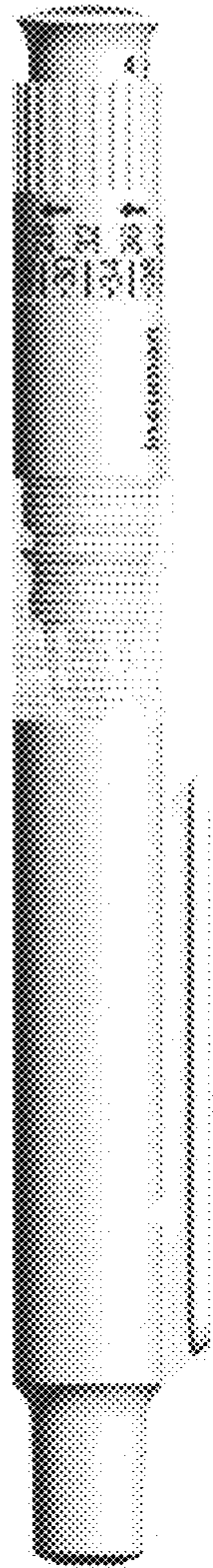


FIG. 10

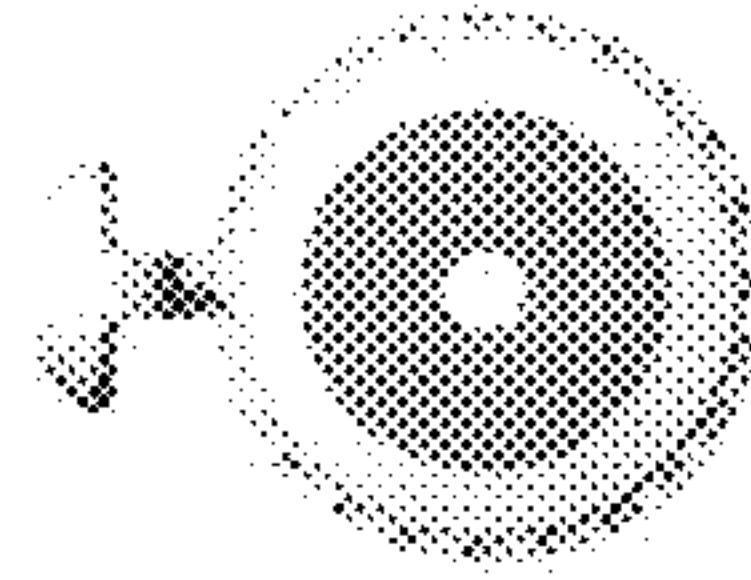


FIG. 11



FIG. 12

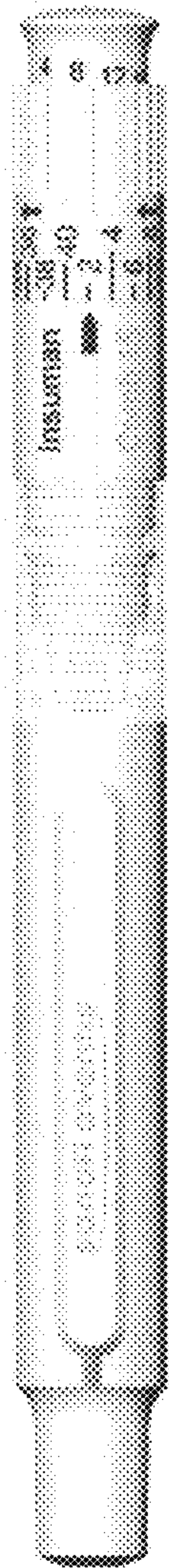


FIG. 13

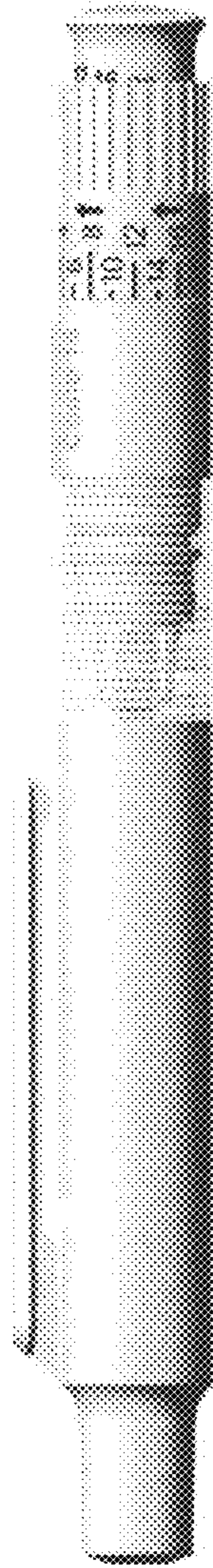


FIG. 14

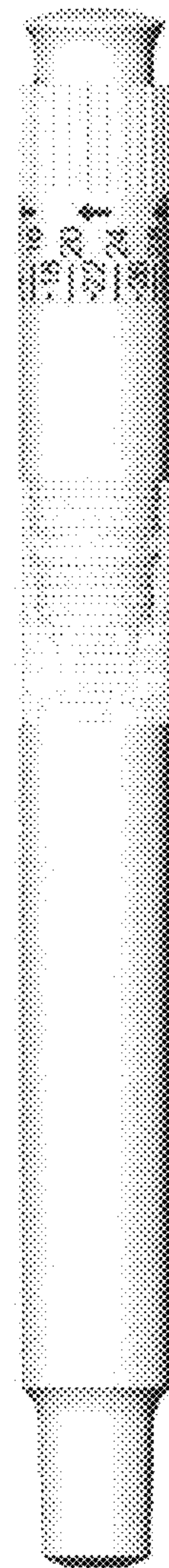


FIG. 15

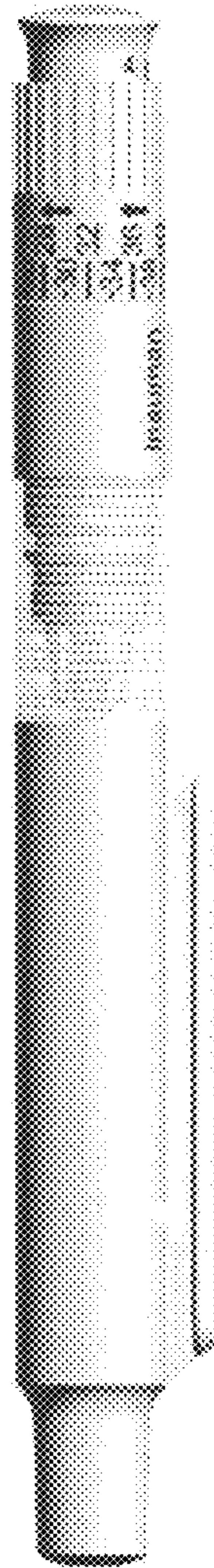


FIG. 16



FIG. 17

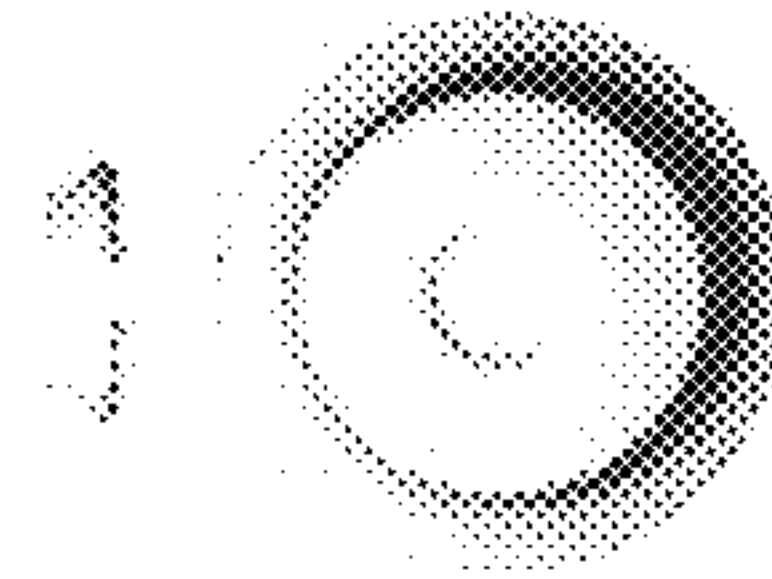


FIG. 18

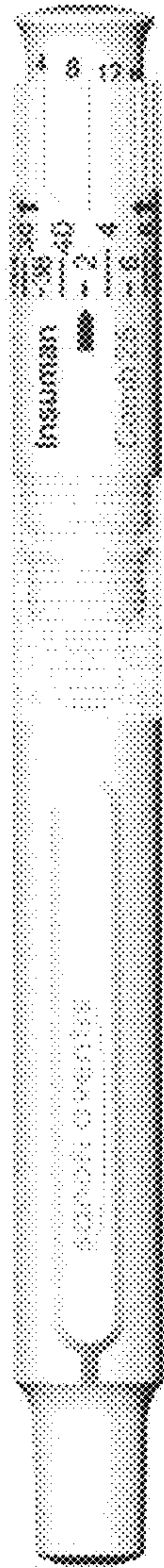


FIG. 19

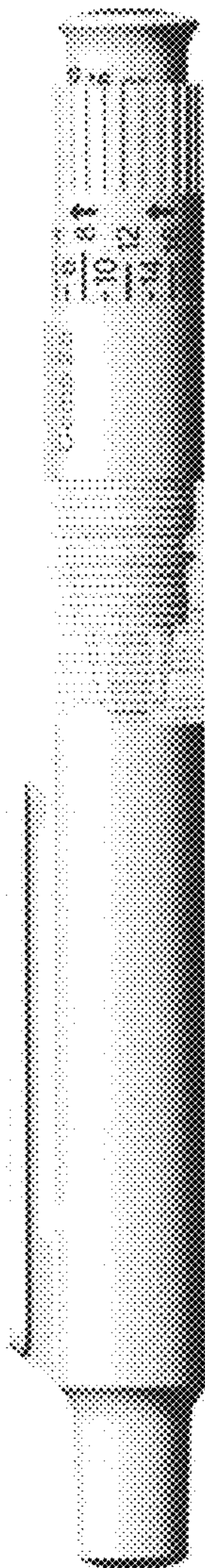


FIG. 20

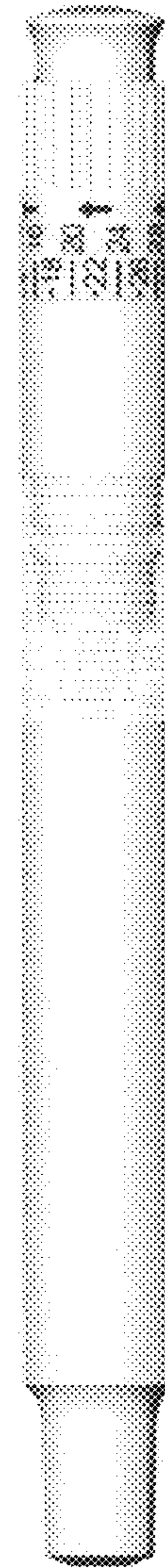


FIG. 21

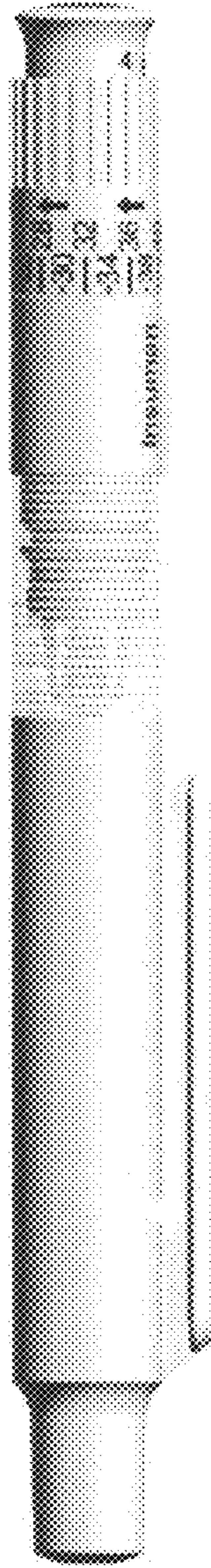


FIG. 22

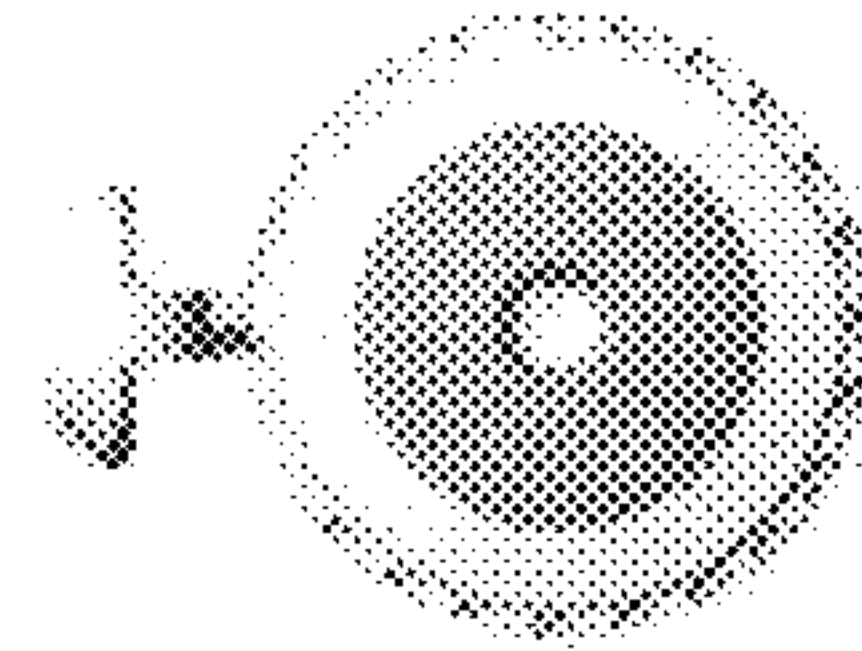


FIG. 23

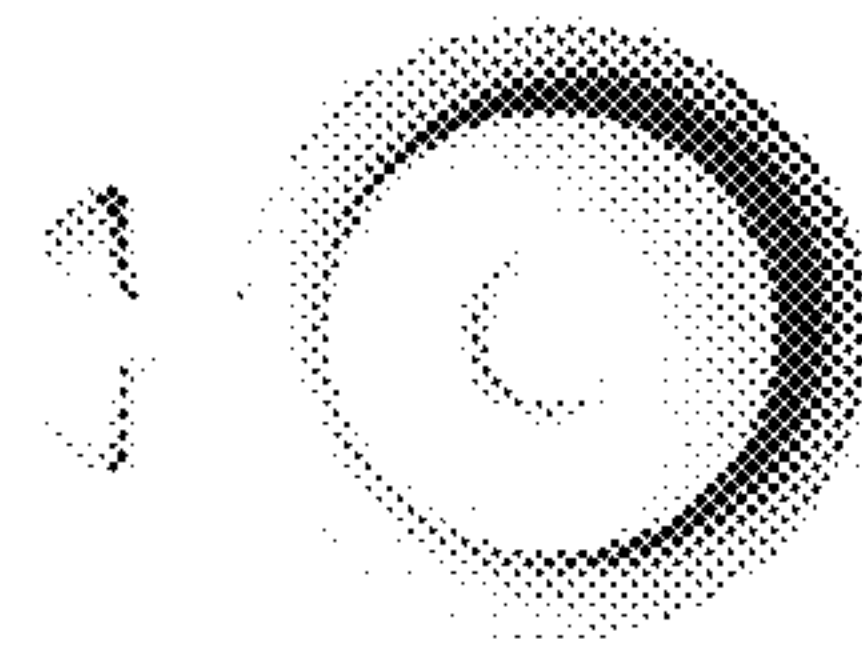


FIG. 24

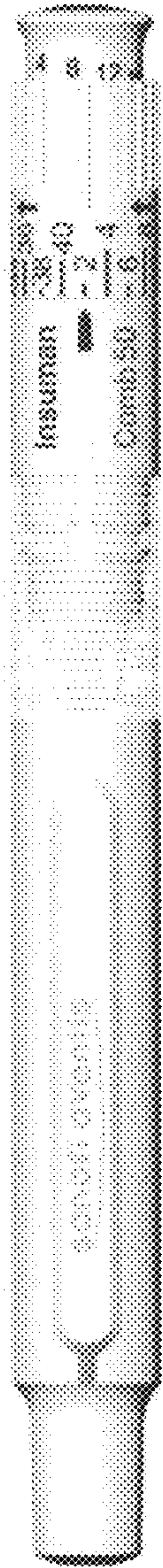


FIG. 25

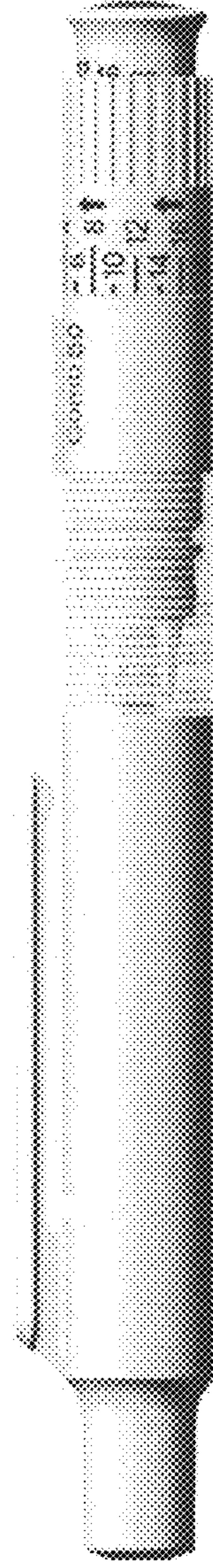


FIG. 26

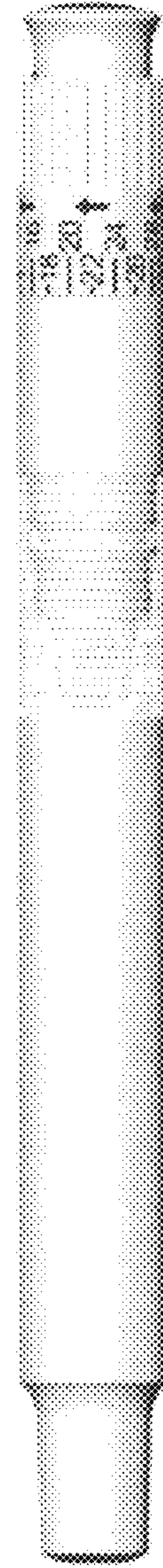


FIG. 27

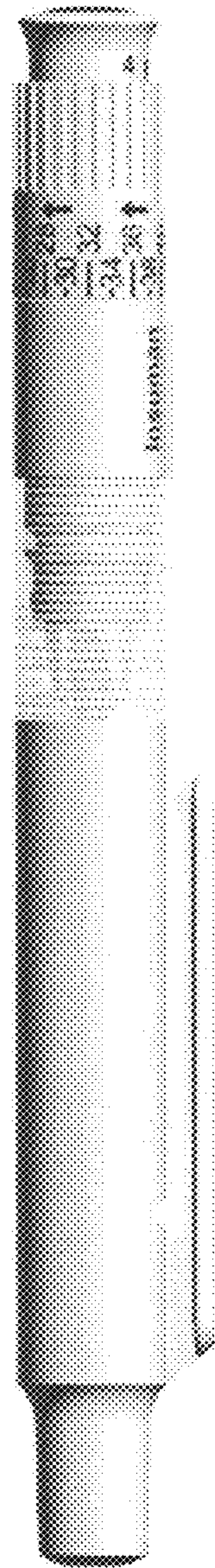


FIG. 28

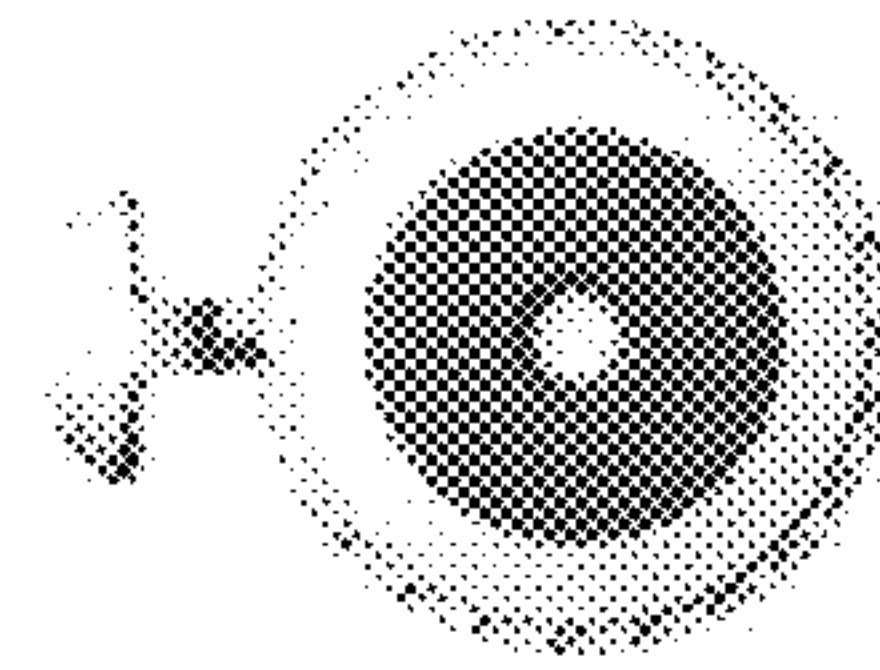


FIG. 29

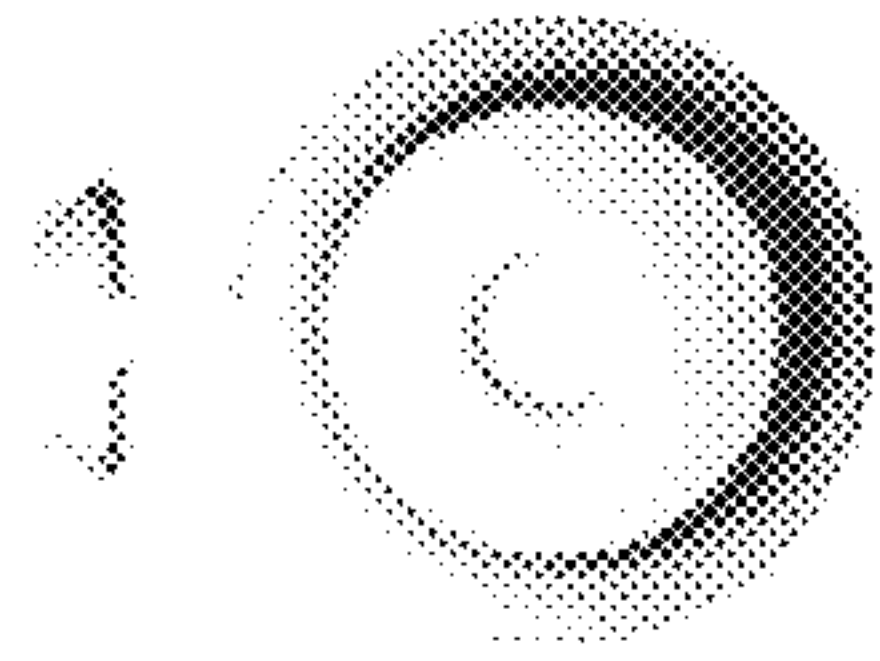


FIG. 30

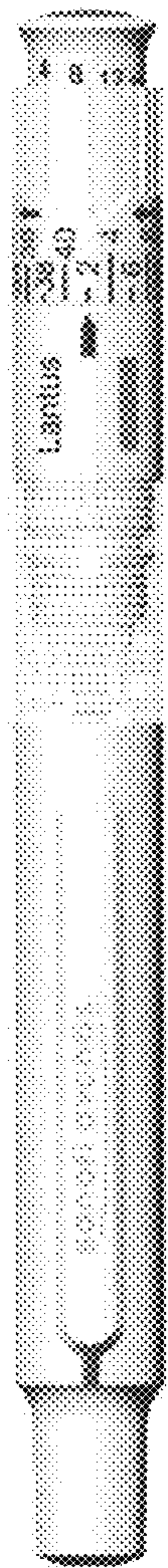


FIG. 31

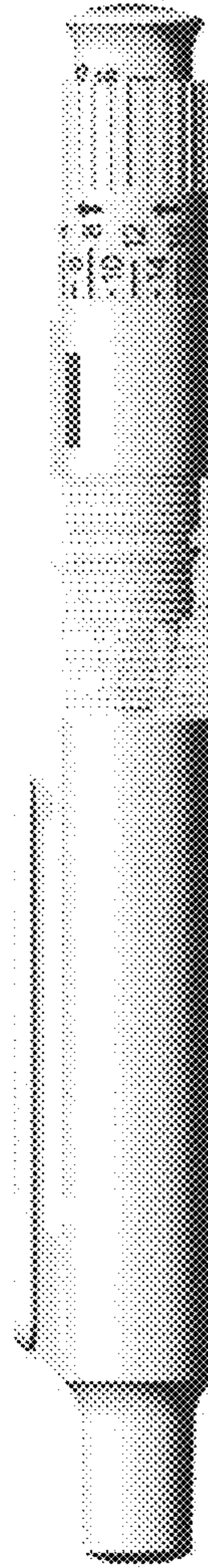


FIG. 32

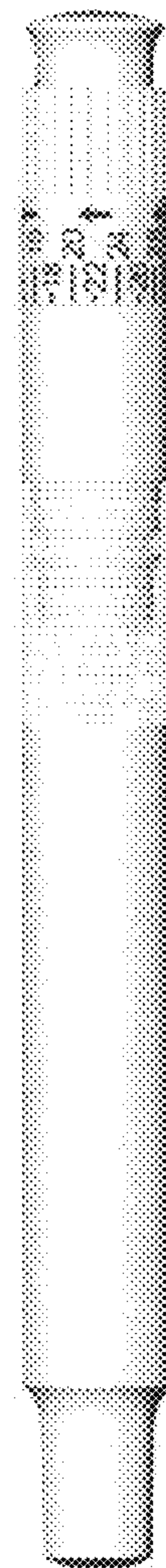


FIG. 33

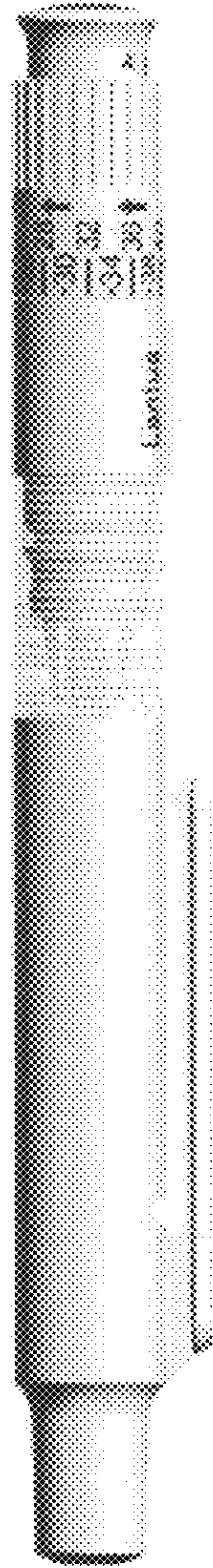


FIG. 34

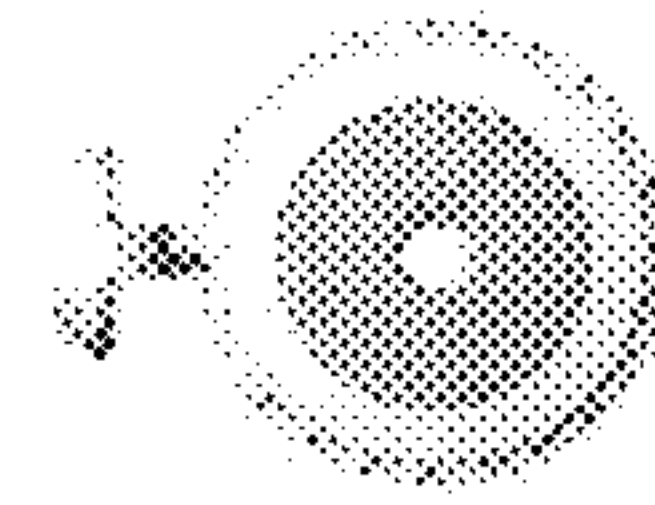


FIG. 35



FIG. 36

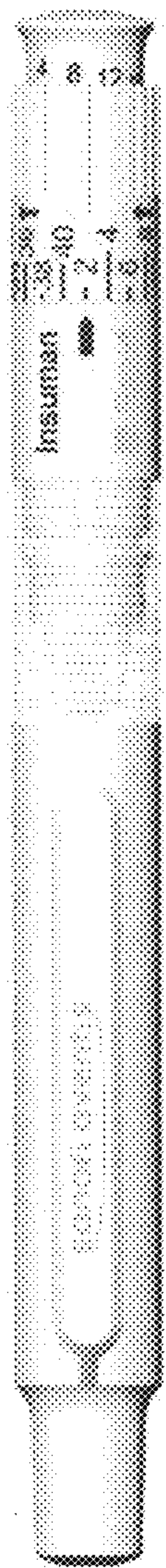


FIG. 37

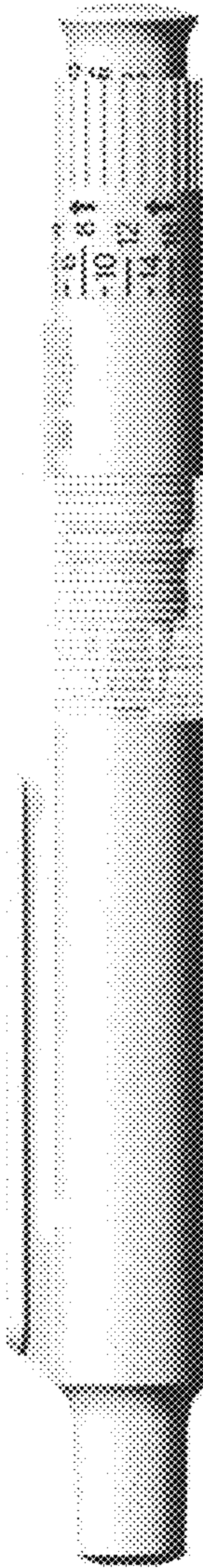


FIG. 38

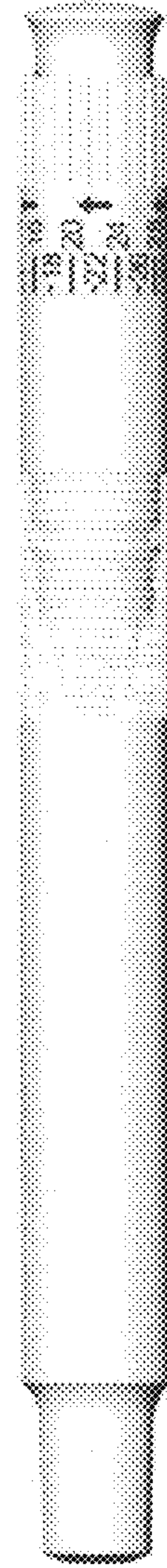


FIG. 39

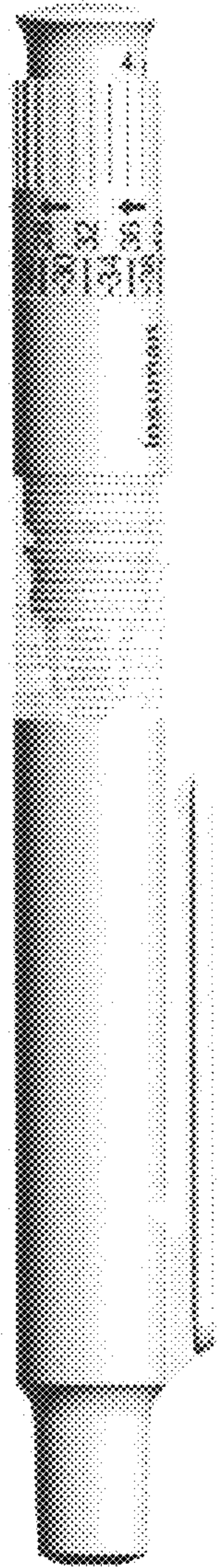


FIG. 40

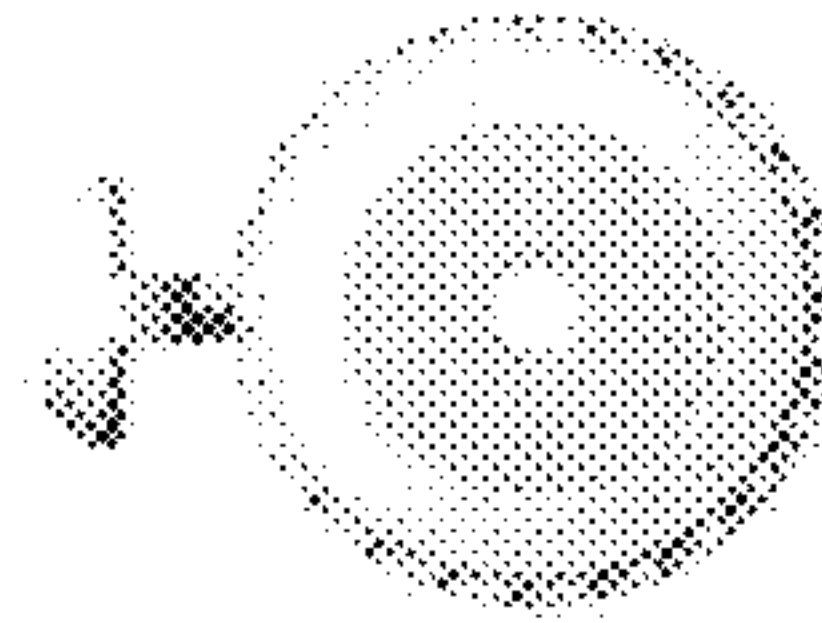


FIG. 41

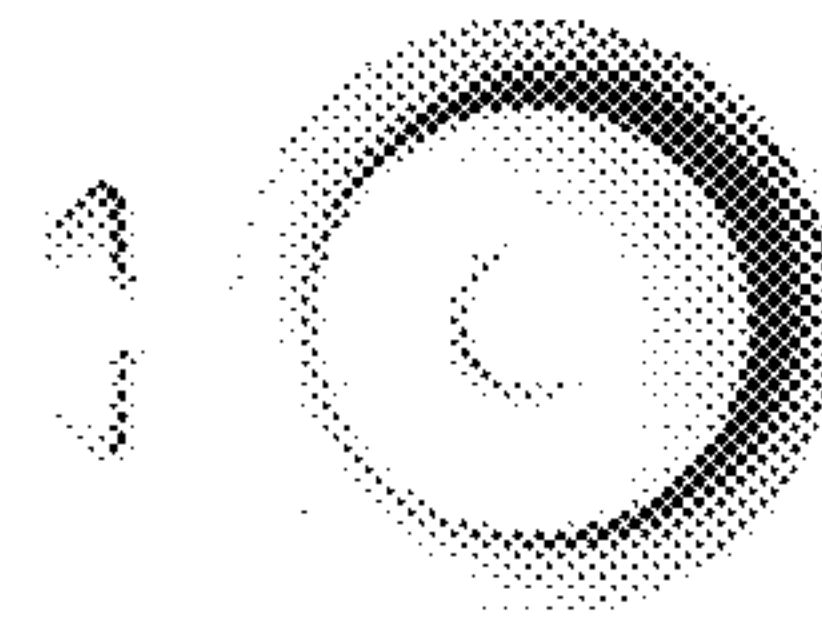


FIG. 42

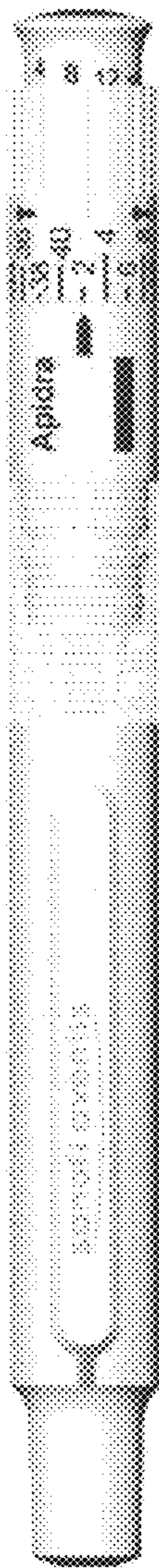


FIG. 43

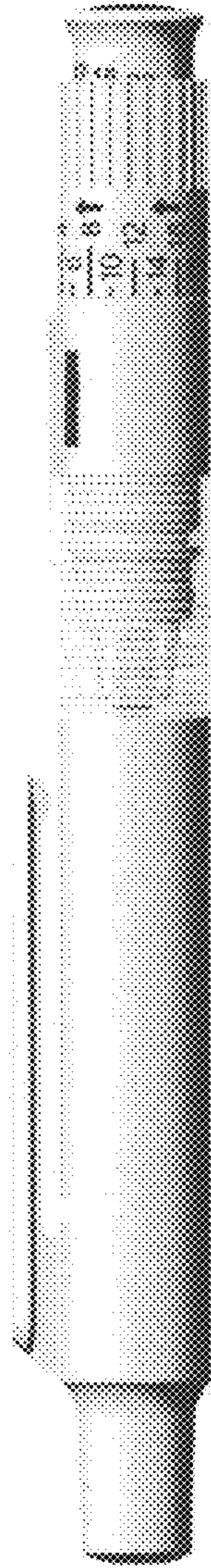


FIG. 44

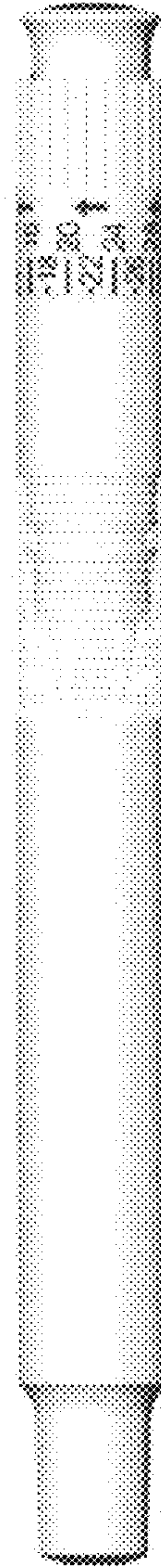


FIG. 45

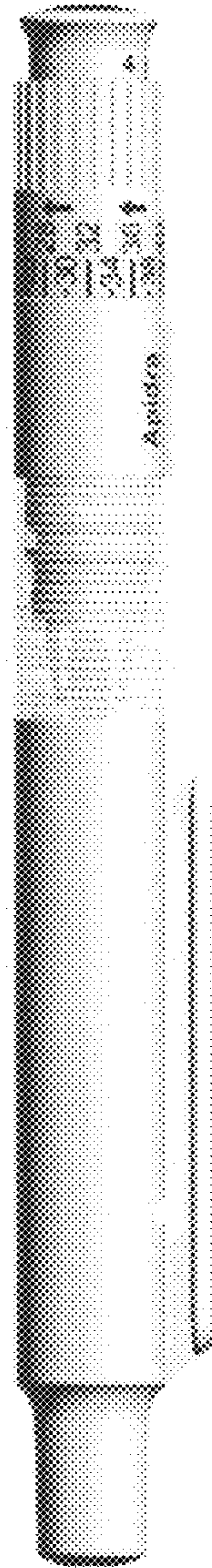


FIG. 46

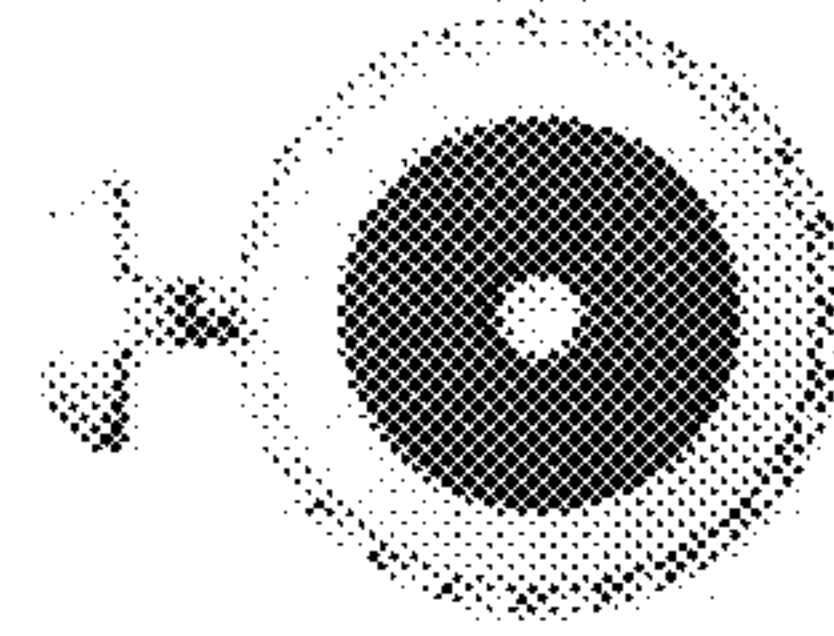


FIG. 47

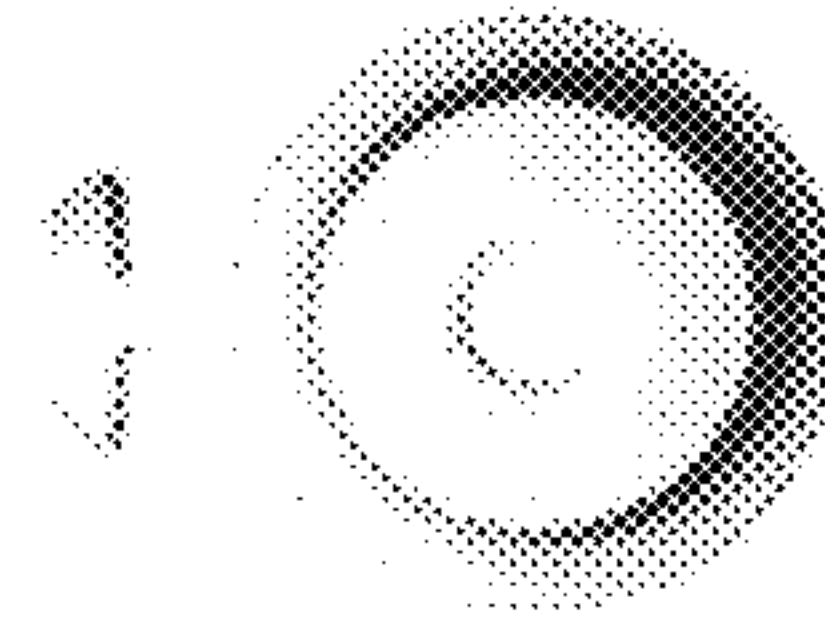


FIG. 48

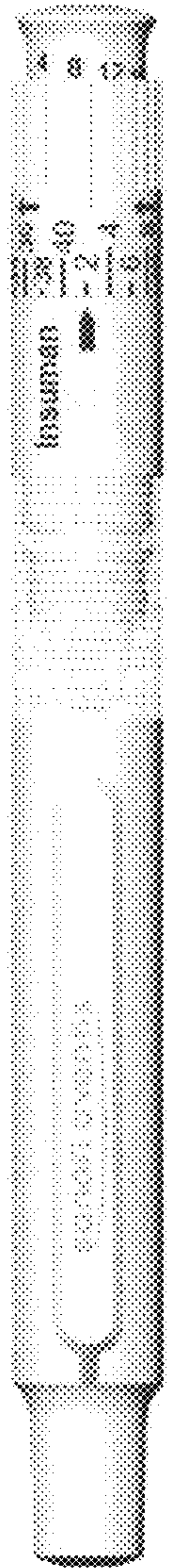


FIG. 49

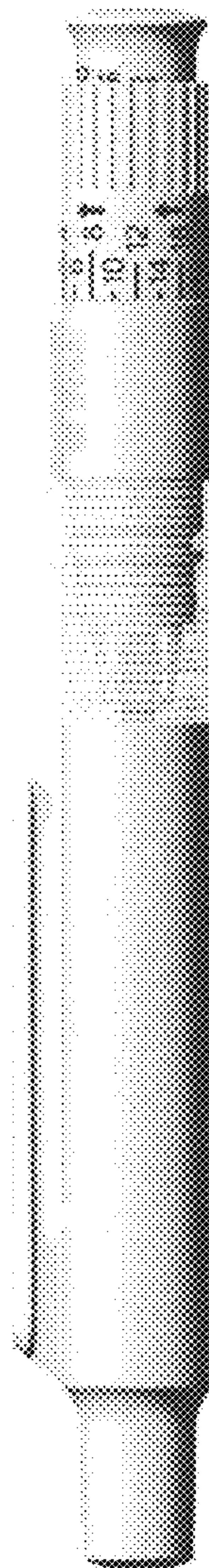


FIG. 50

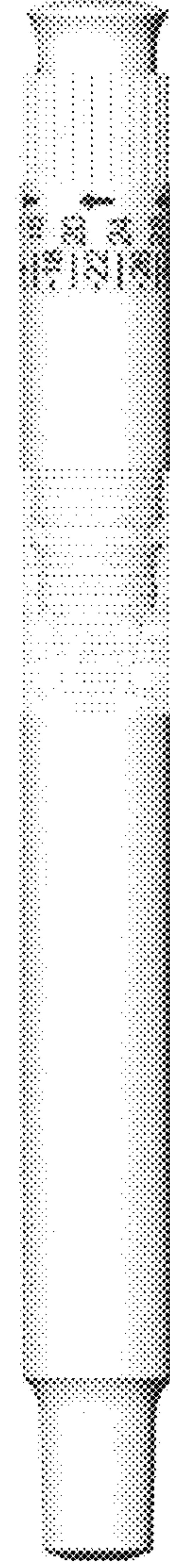


FIG. 51

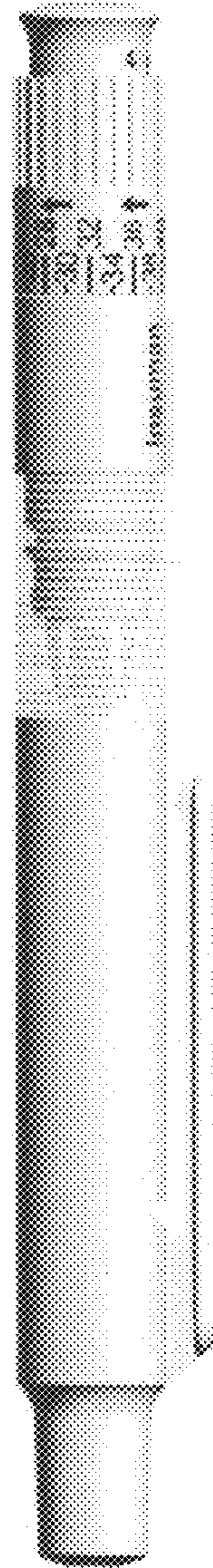


FIG. 52

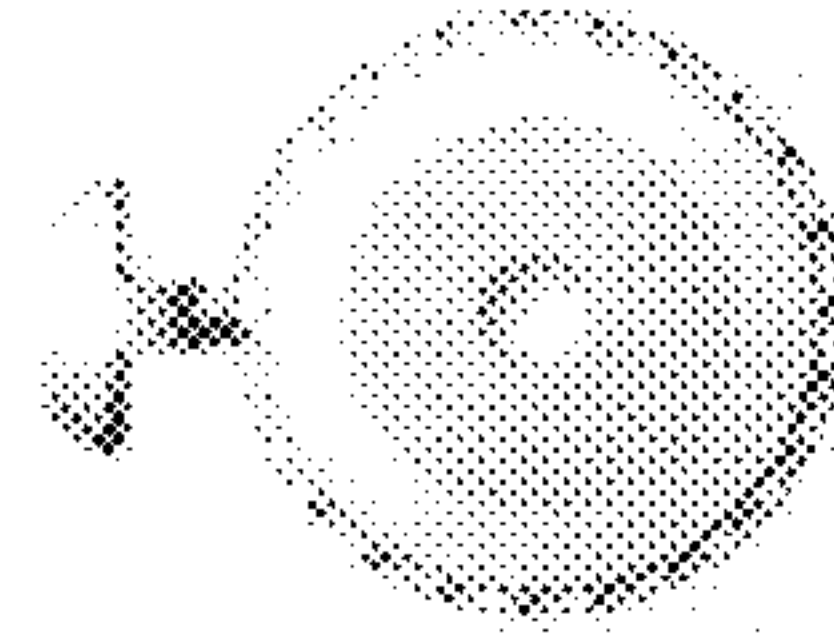


FIG. 53

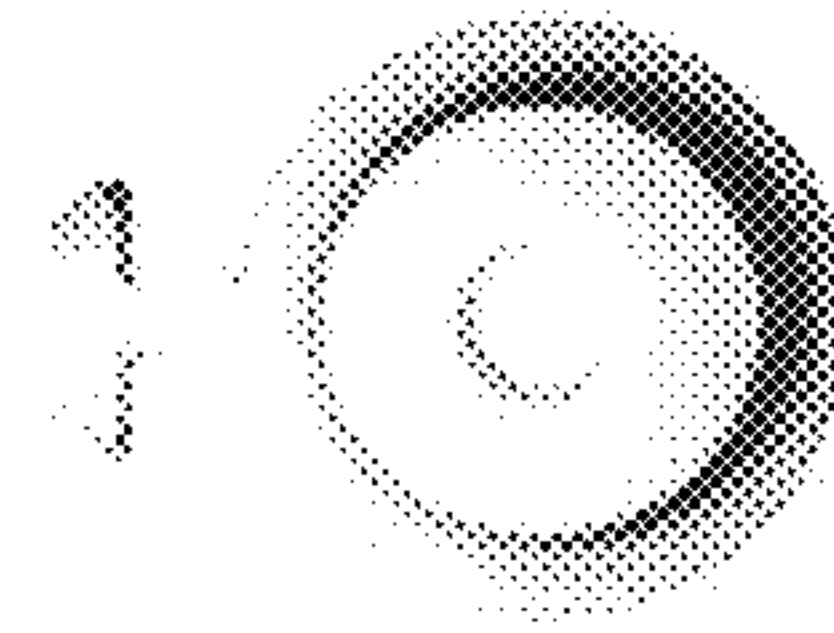


FIG. 54

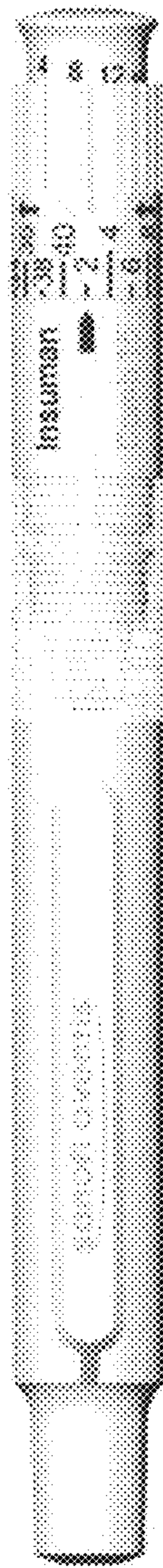


FIG. 55

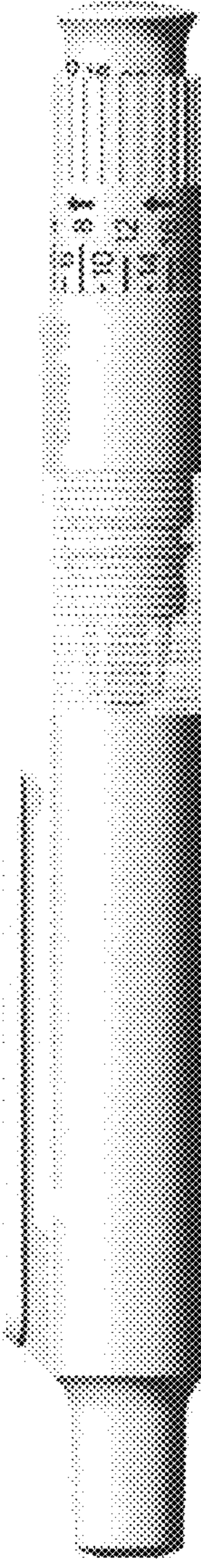


FIG. 56

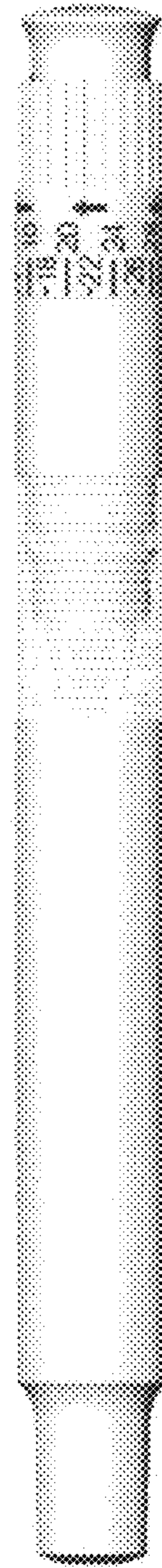


FIG. 57

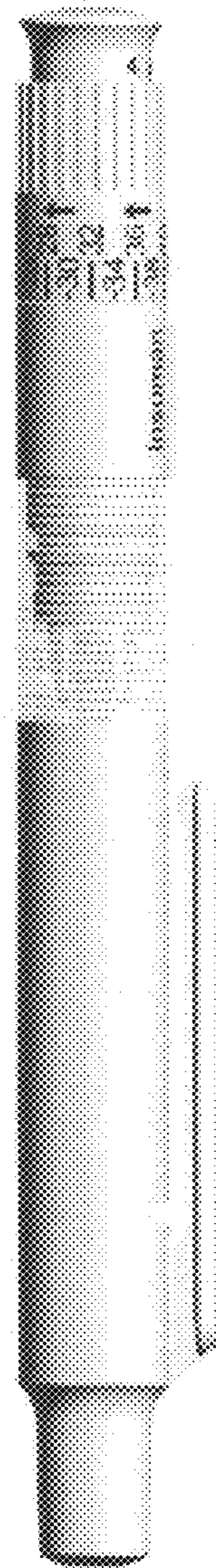


FIG. 58

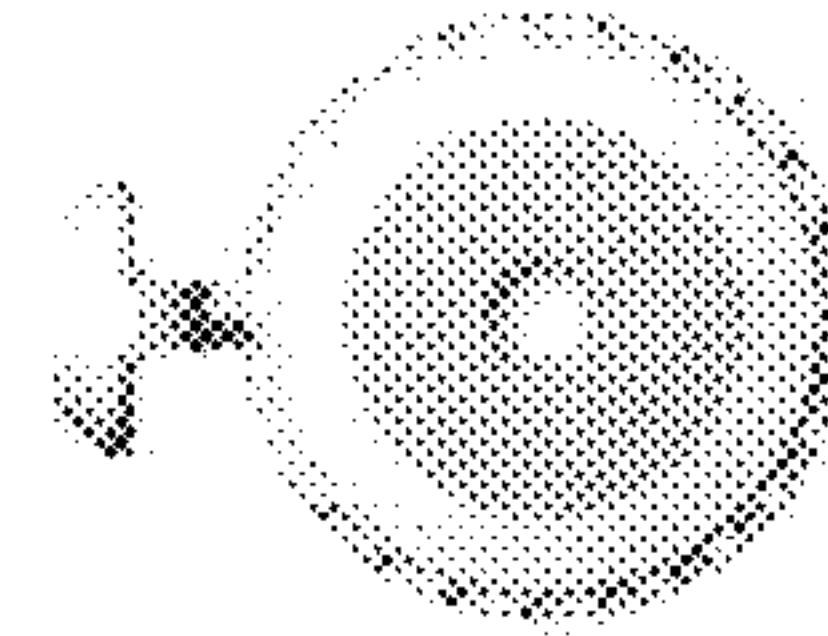


FIG. 59

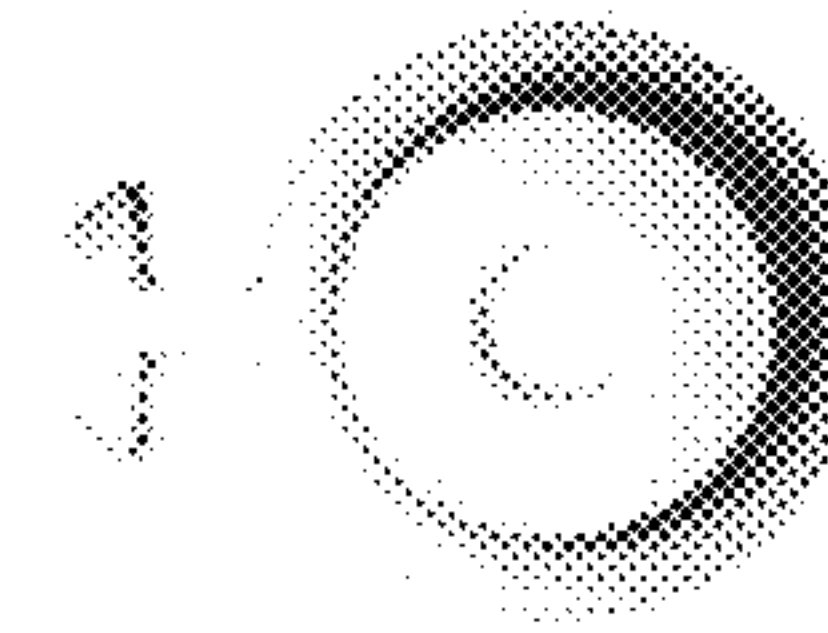


FIG. 60

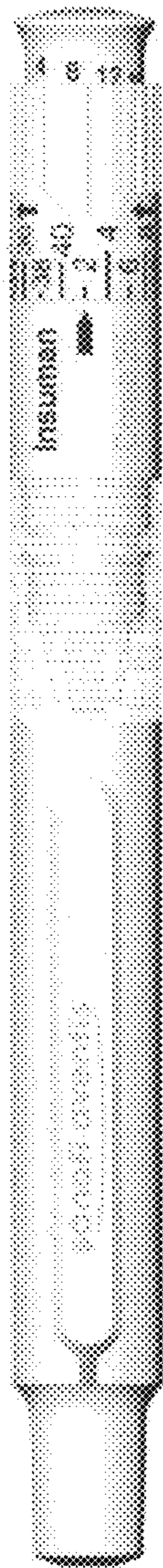


FIG. 61

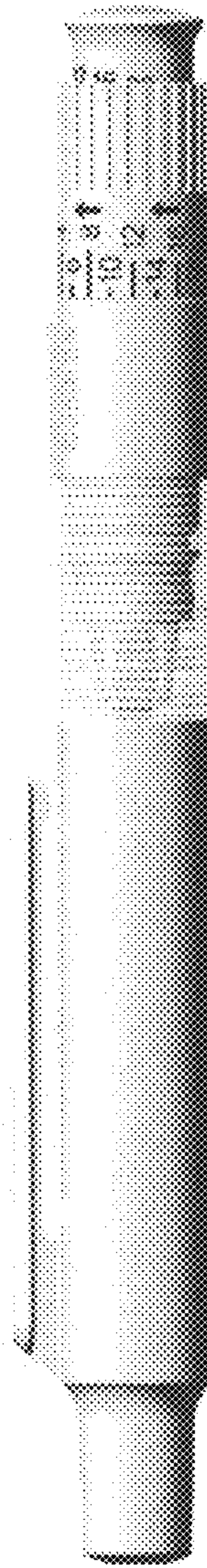


FIG. 62

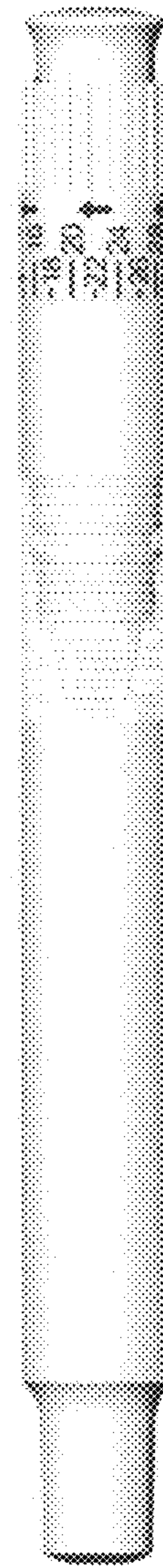


FIG. 63

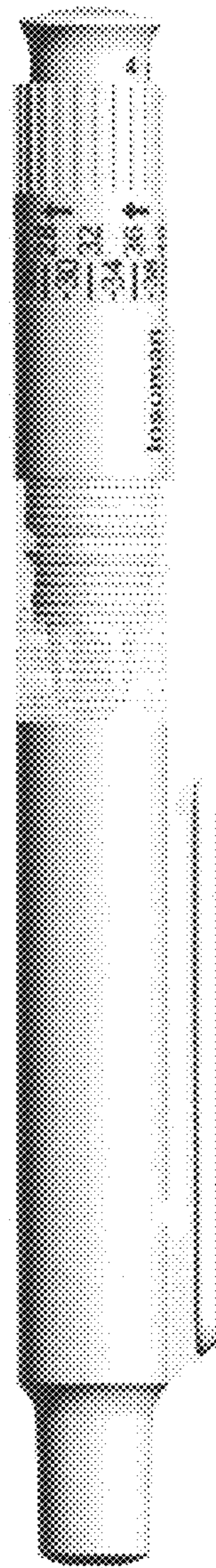


FIG. 64

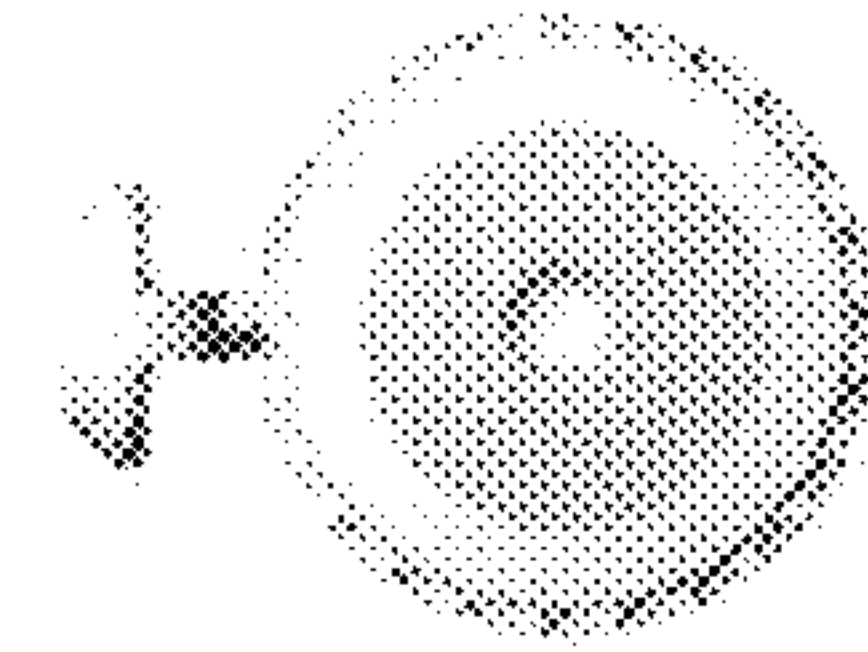


FIG. 65



FIG. 66

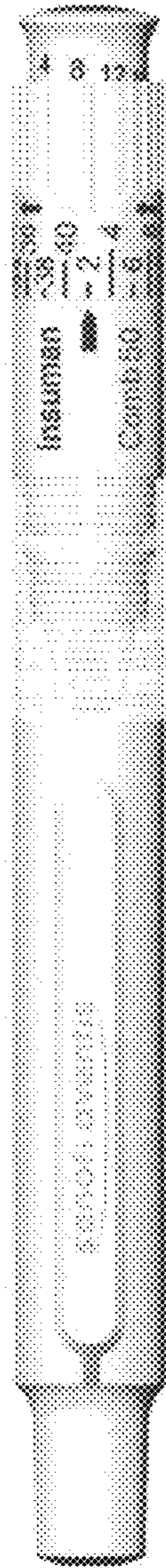


FIG. 67

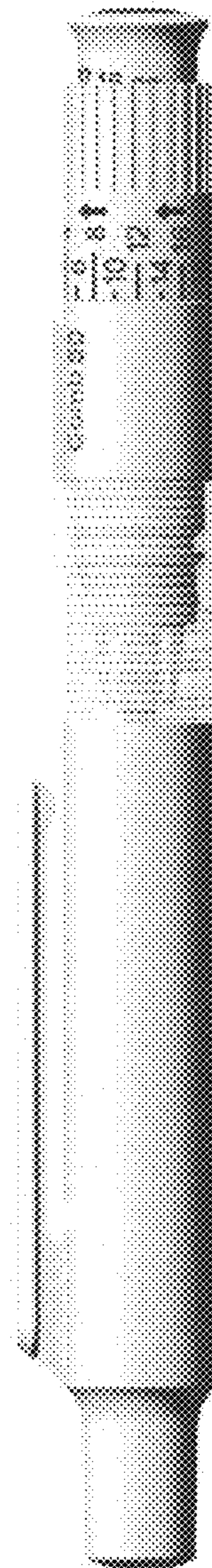


FIG. 68

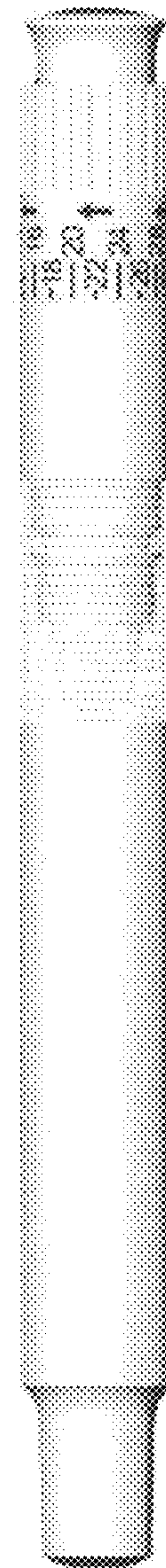


FIG. 69

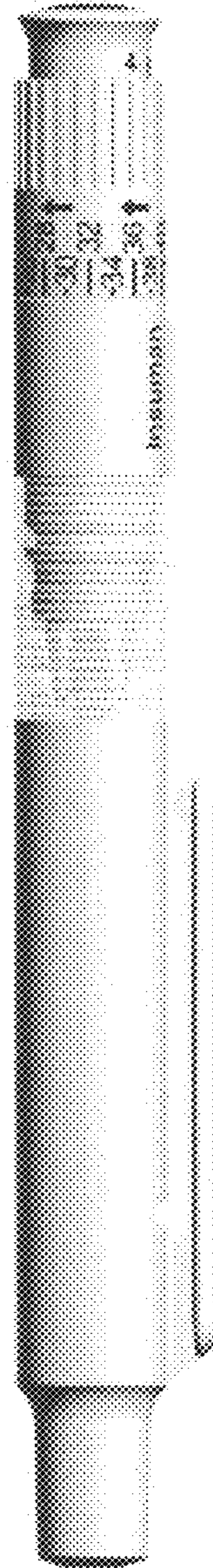


FIG. 70

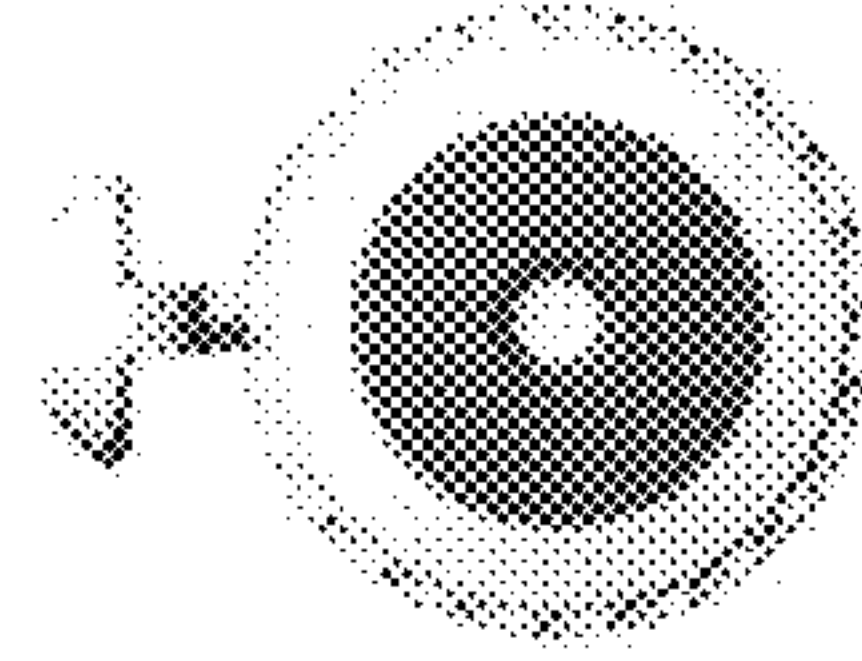


FIG. 71

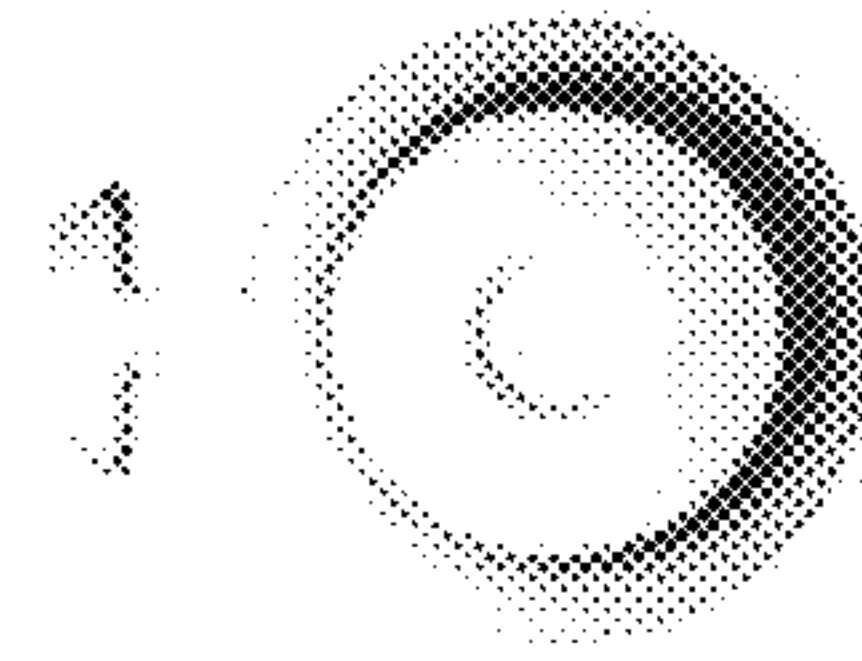


FIG. 72

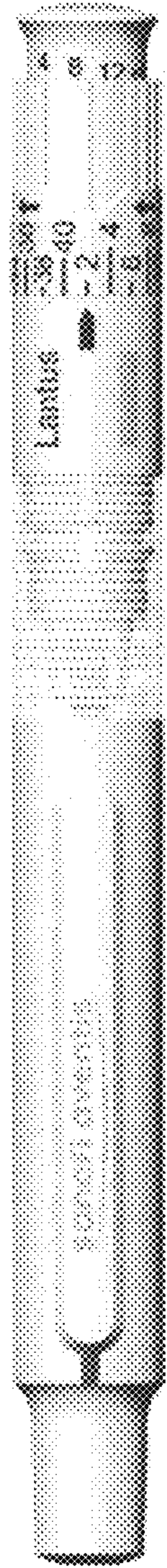


FIG. 73

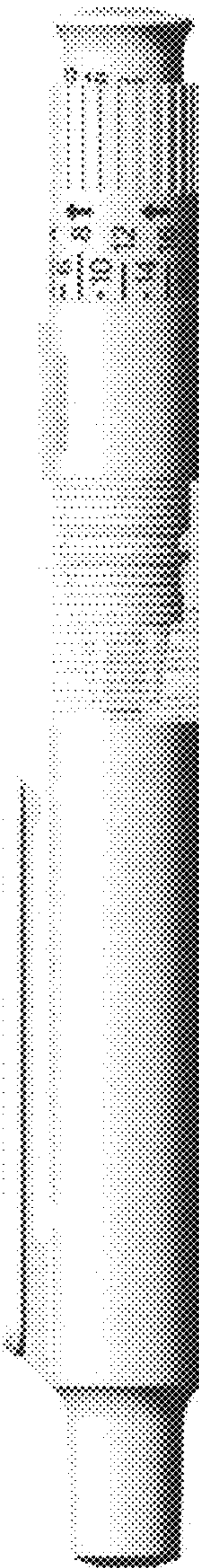


FIG. 74

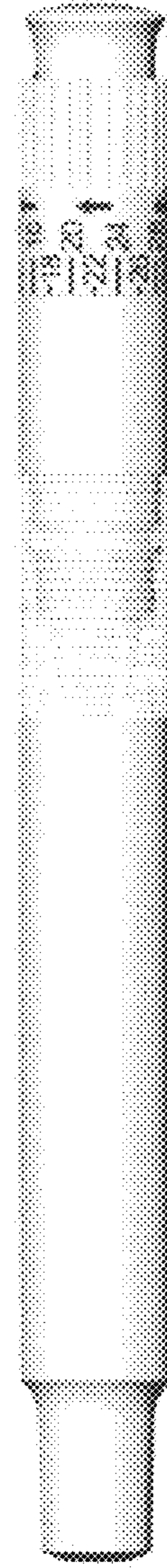


FIG. 75

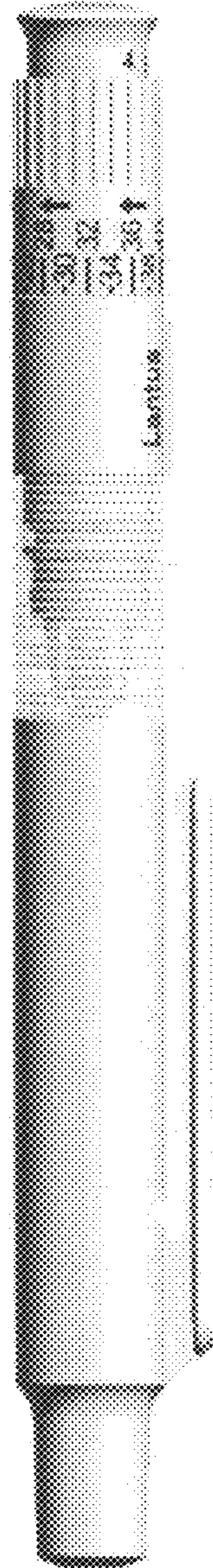


FIG. 76

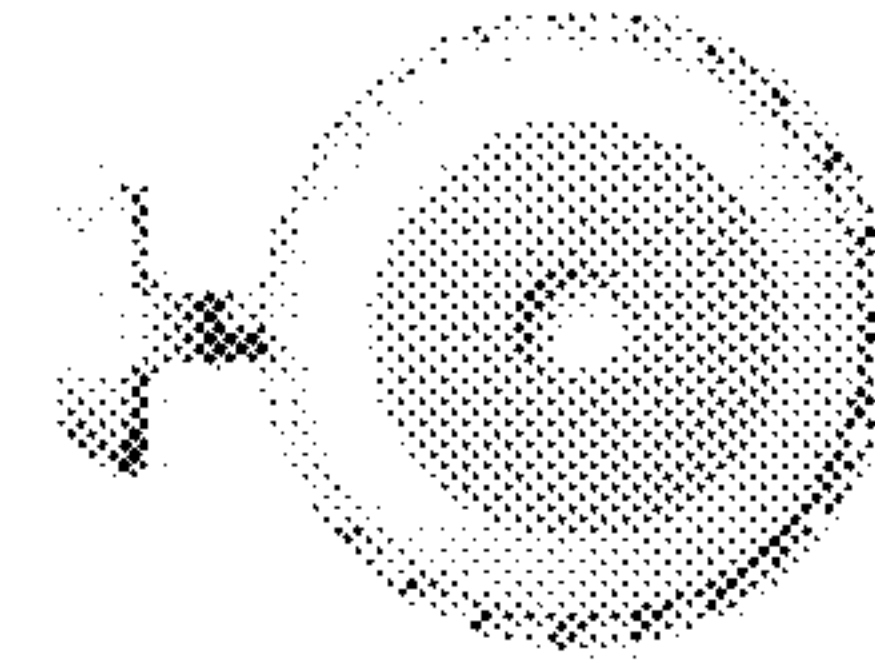


FIG. 77

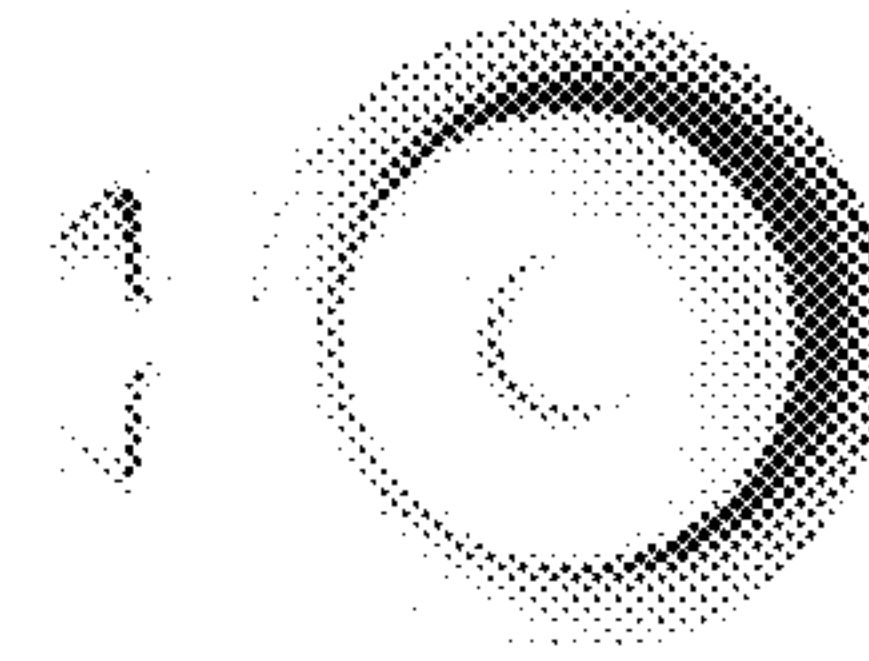


FIG. 78

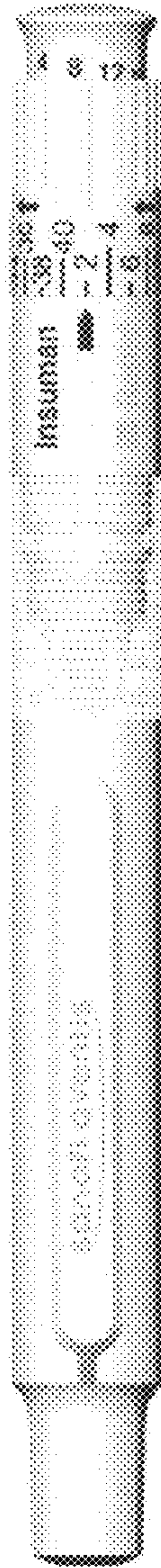


FIG. 79

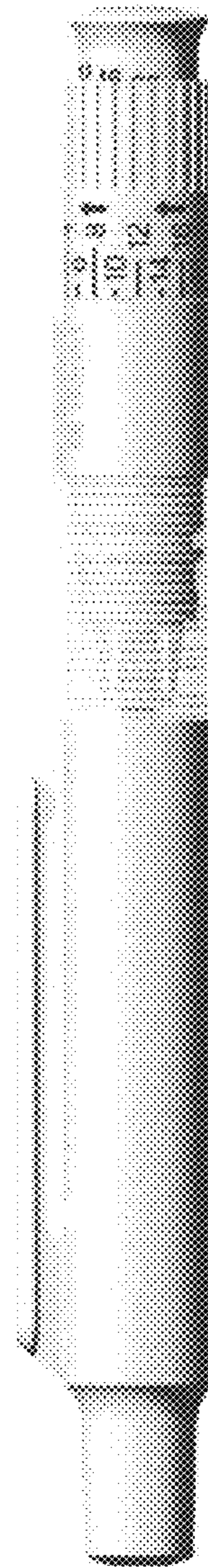


FIG. 80

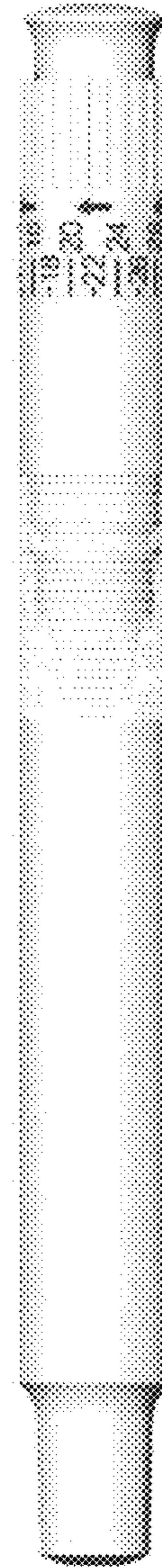


FIG. 81

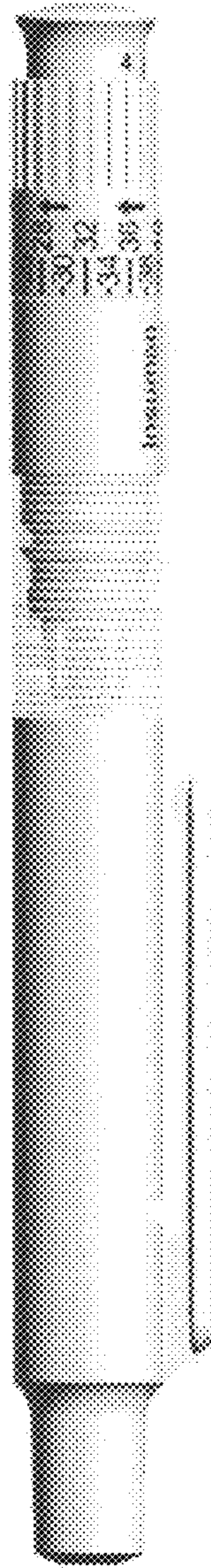


FIG. 82

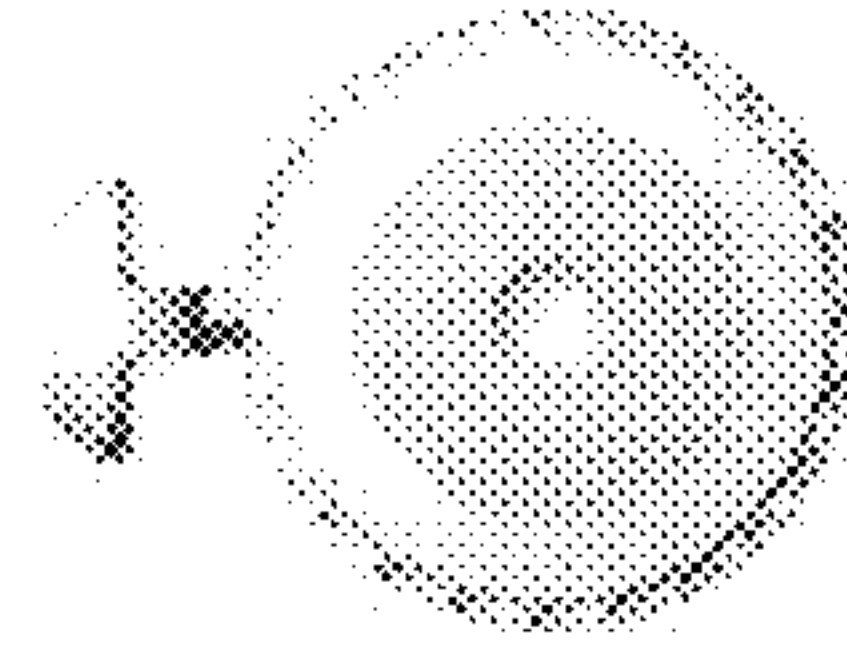


FIG. 83



FIG. 84

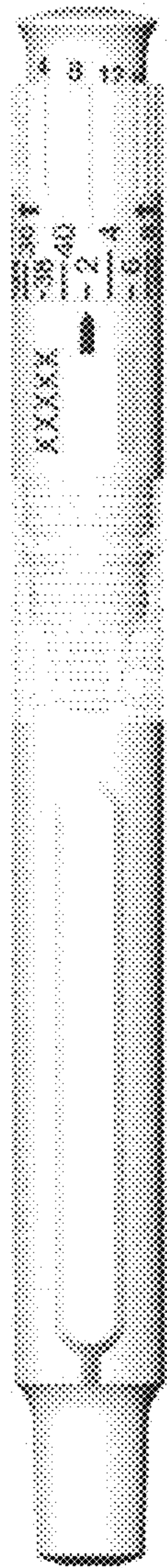


FIG. 85

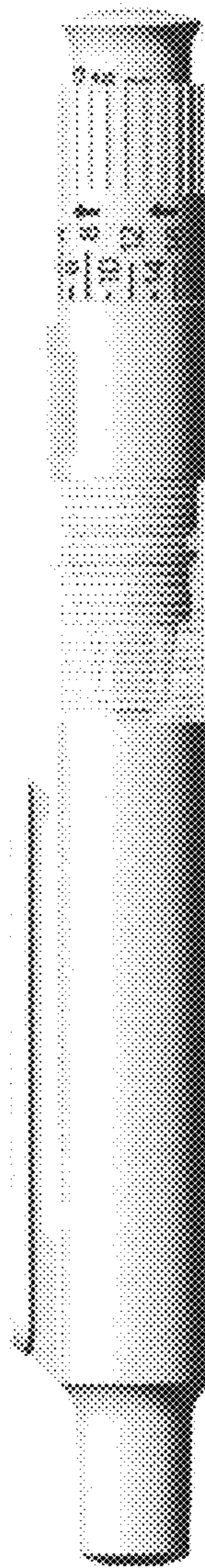


FIG. 86

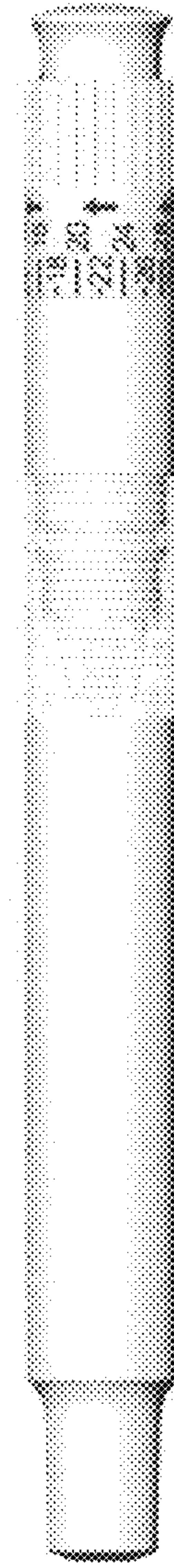


FIG. 87

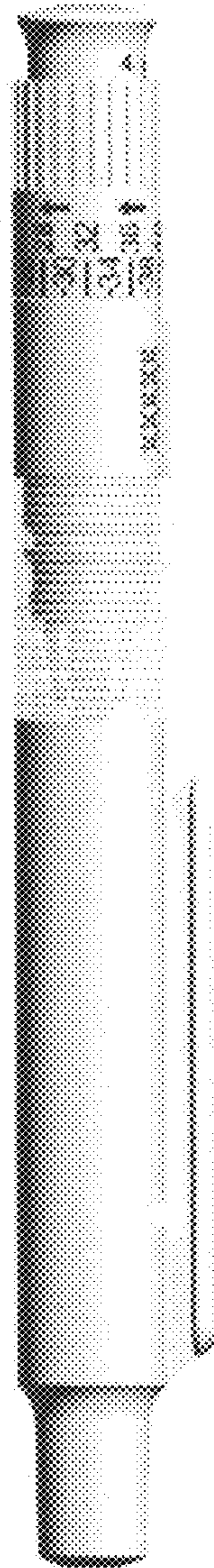


FIG. 88

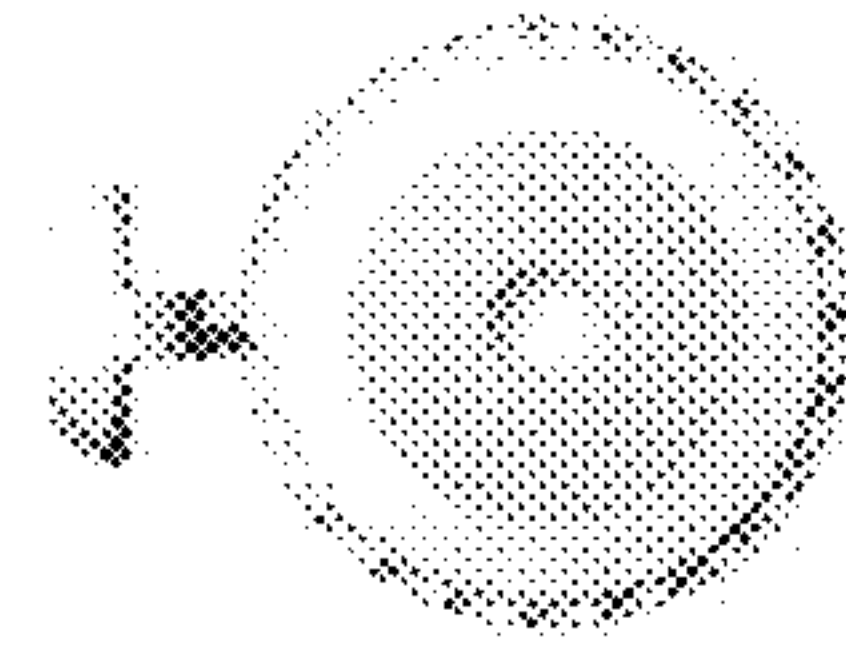


FIG. 89

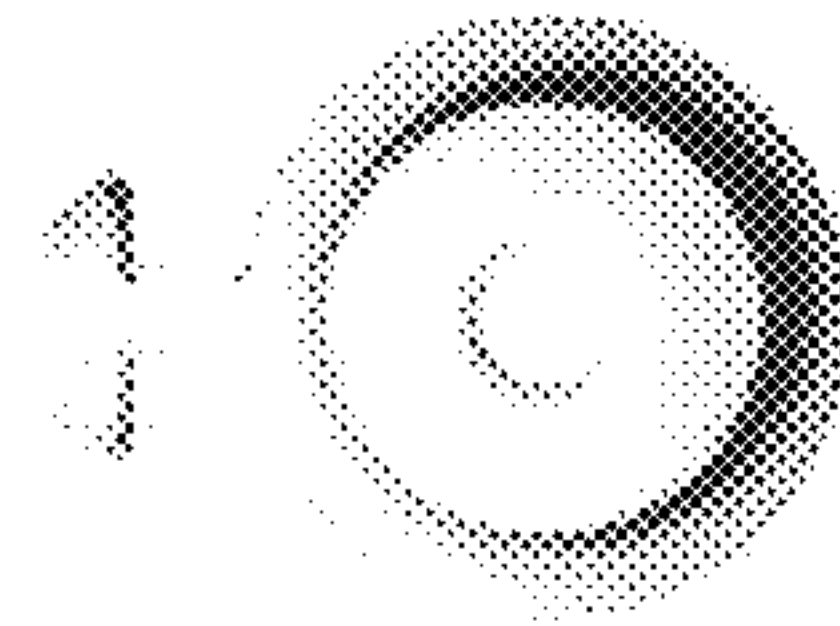


FIG. 90

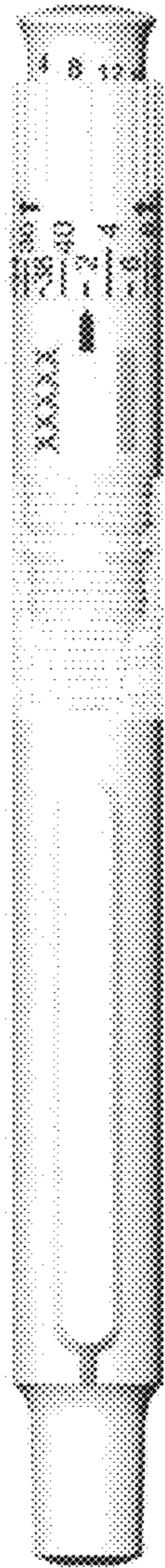


FIG. 91

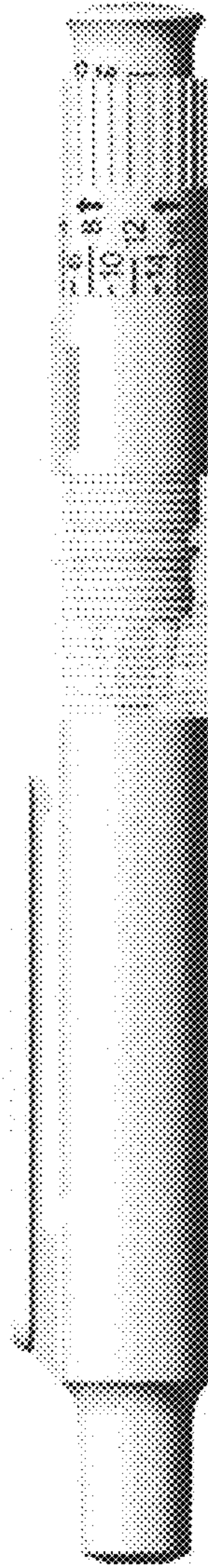


FIG. 92

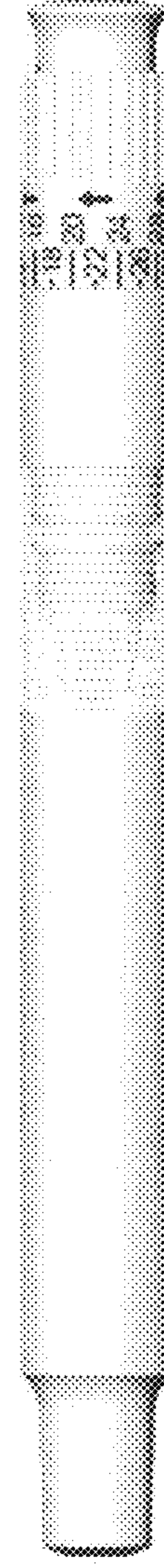


FIG. 93

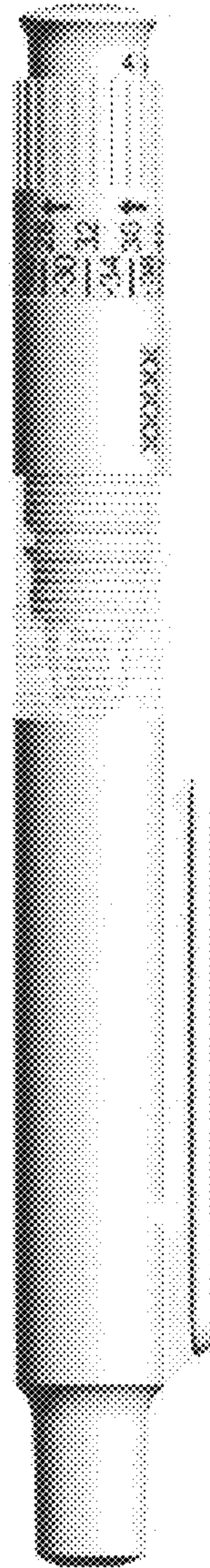


FIG. 94

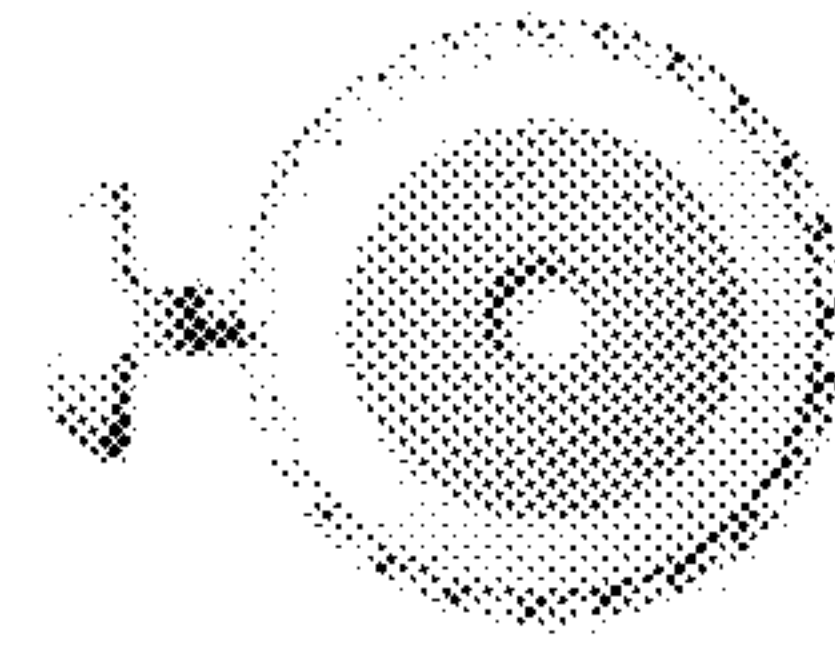


FIG. 95



FIG. 96

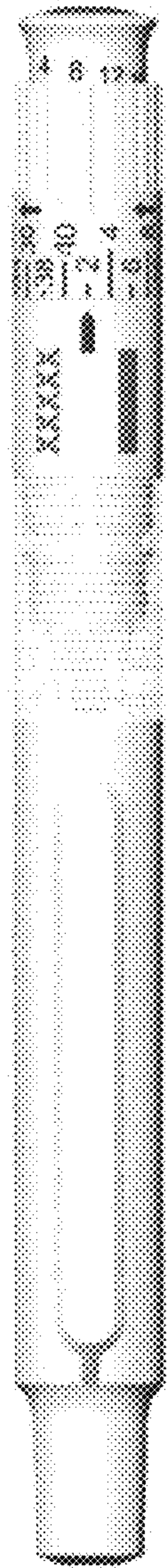


FIG. 97

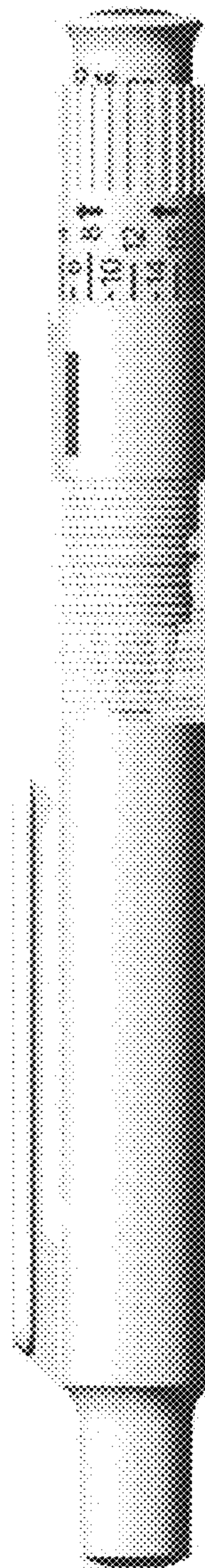


FIG. 98

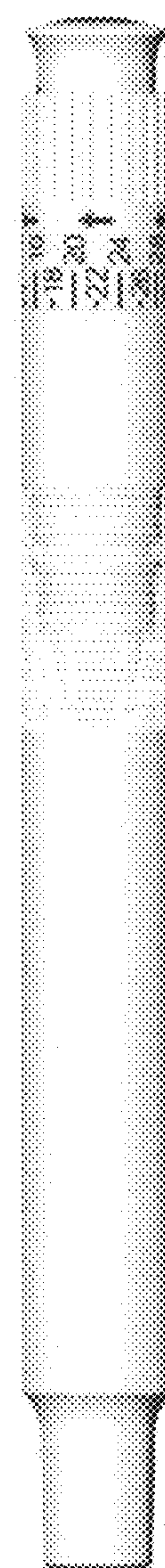


FIG. 99

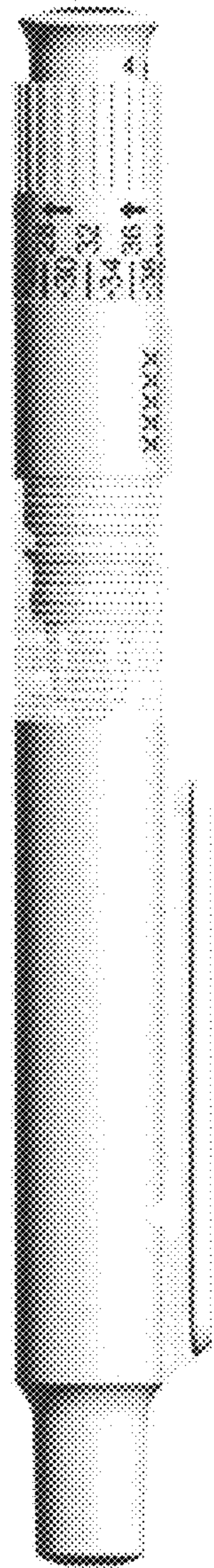


FIG. 100

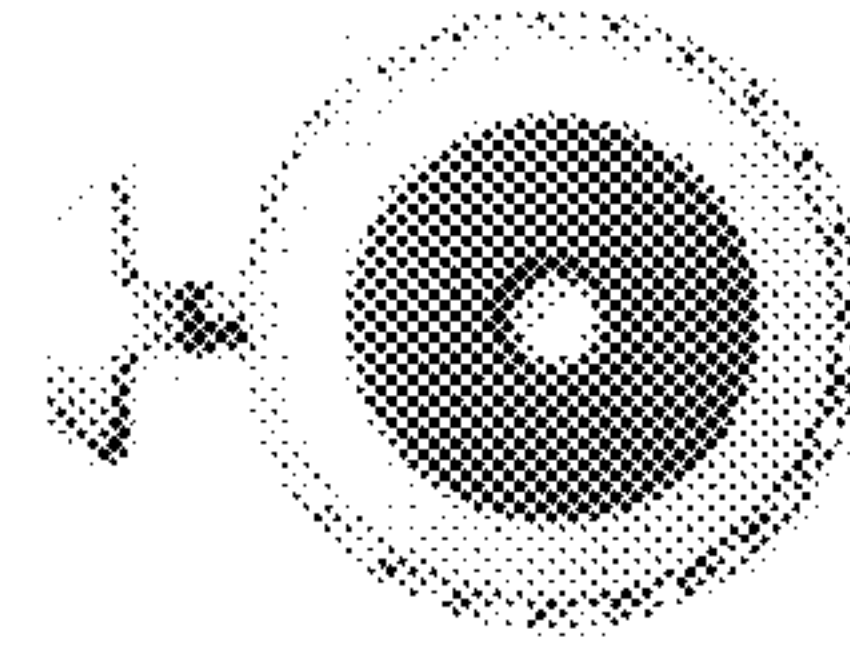


FIG. 101

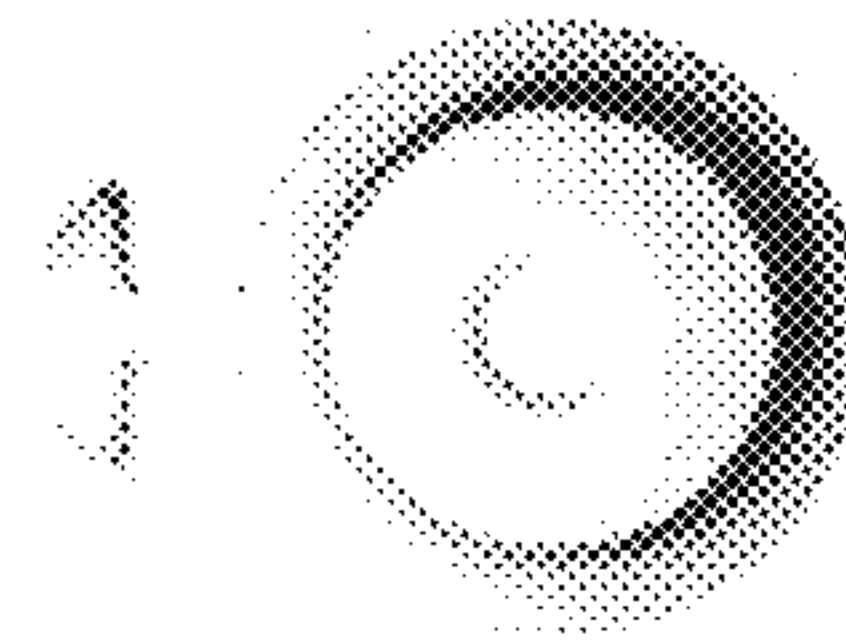


FIG. 102

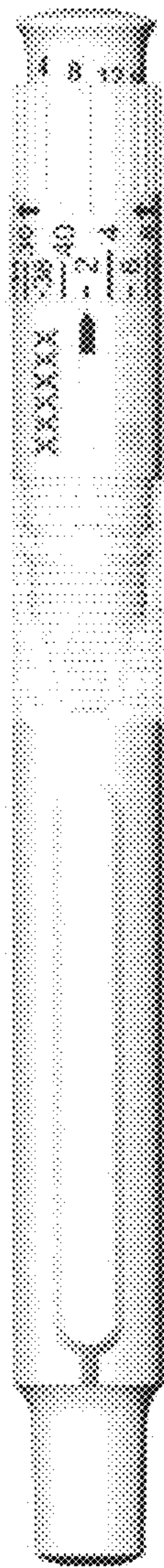


FIG. 103

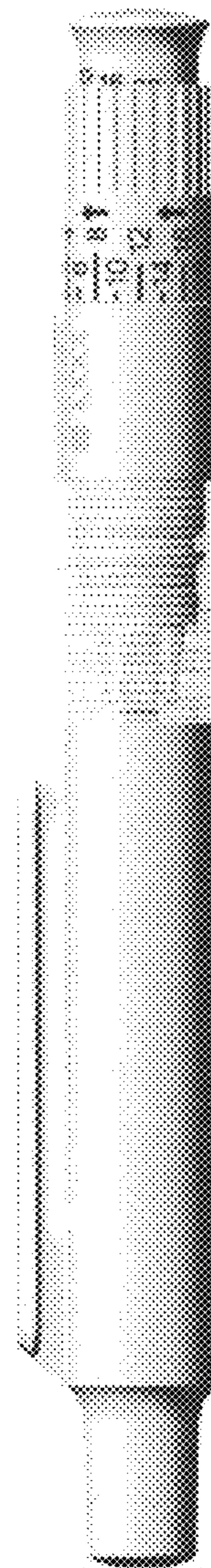


FIG. 104

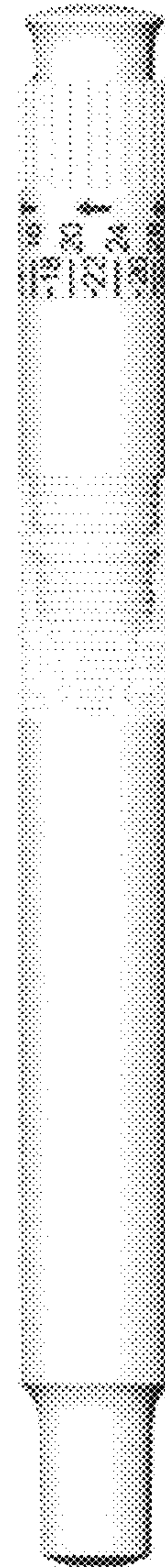


FIG. 105

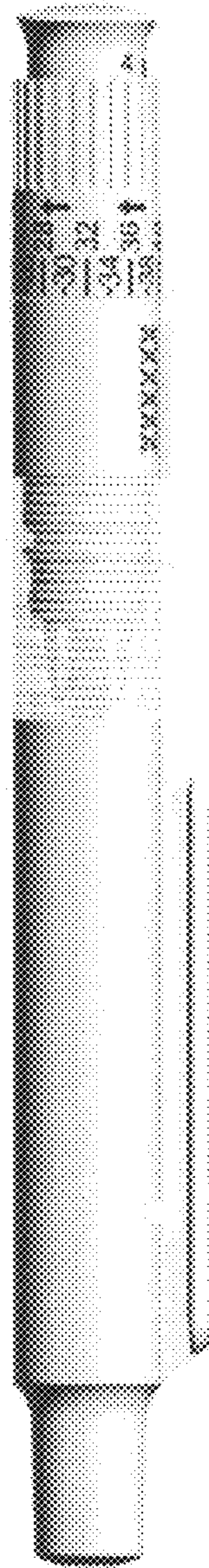


FIG. 106

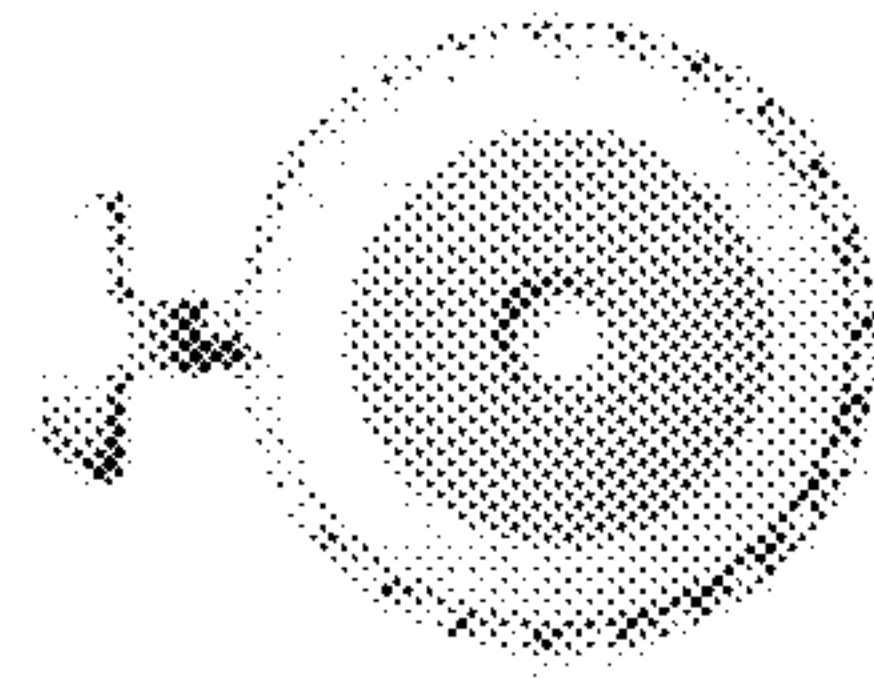


FIG. 107

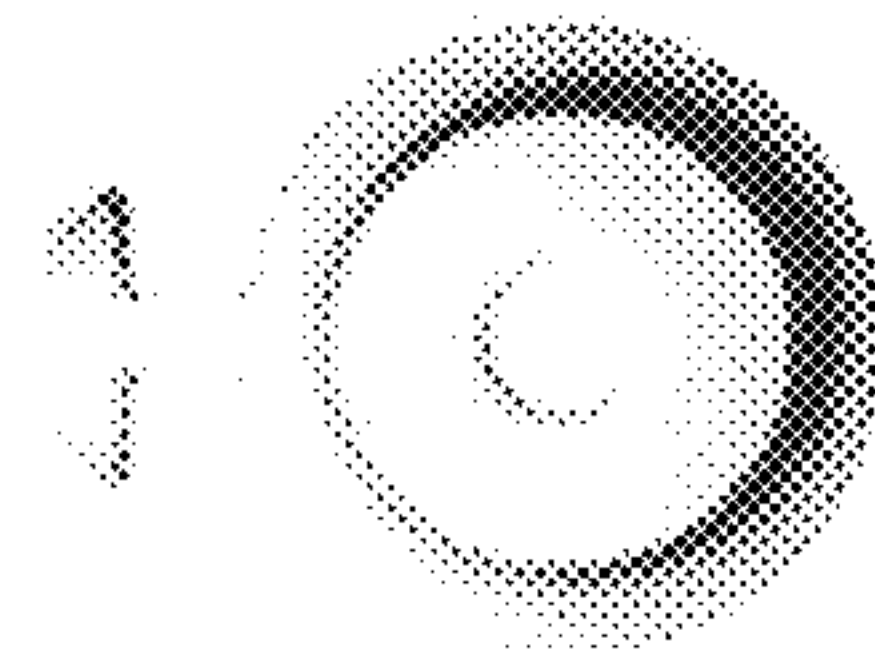


FIG. 108

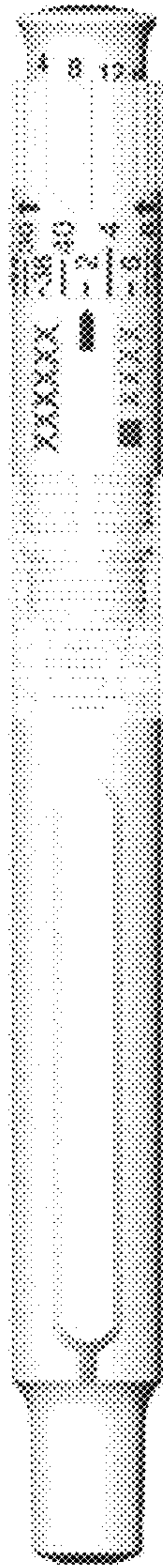


FIG. 109

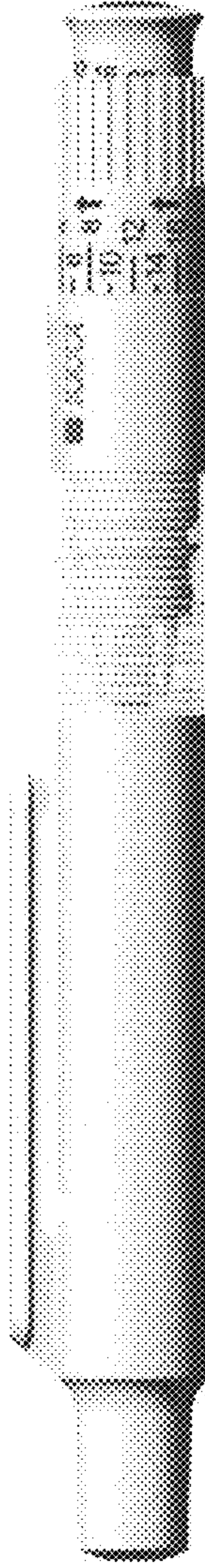


FIG. 110

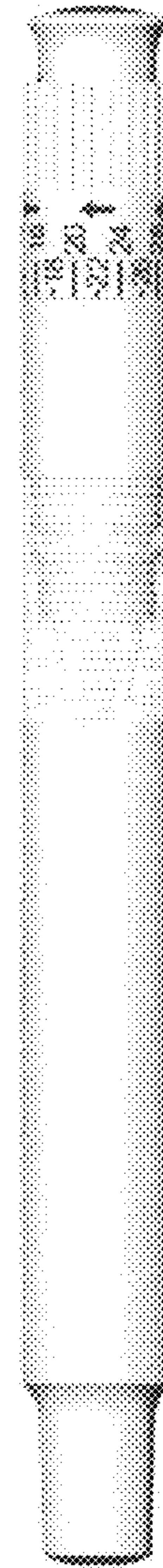


FIG. 111

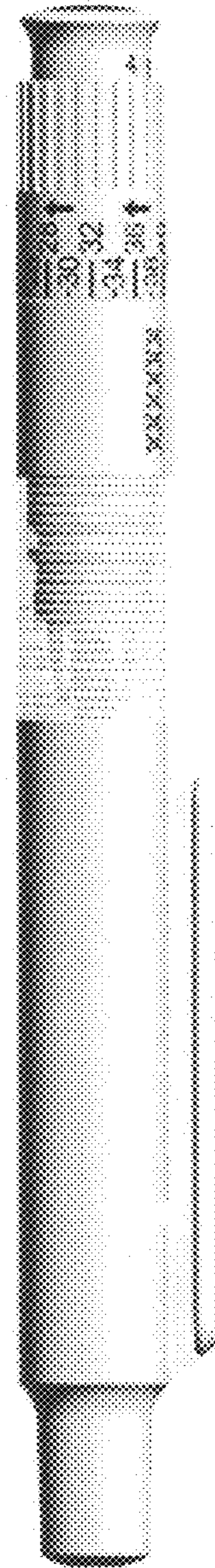


FIG. 112

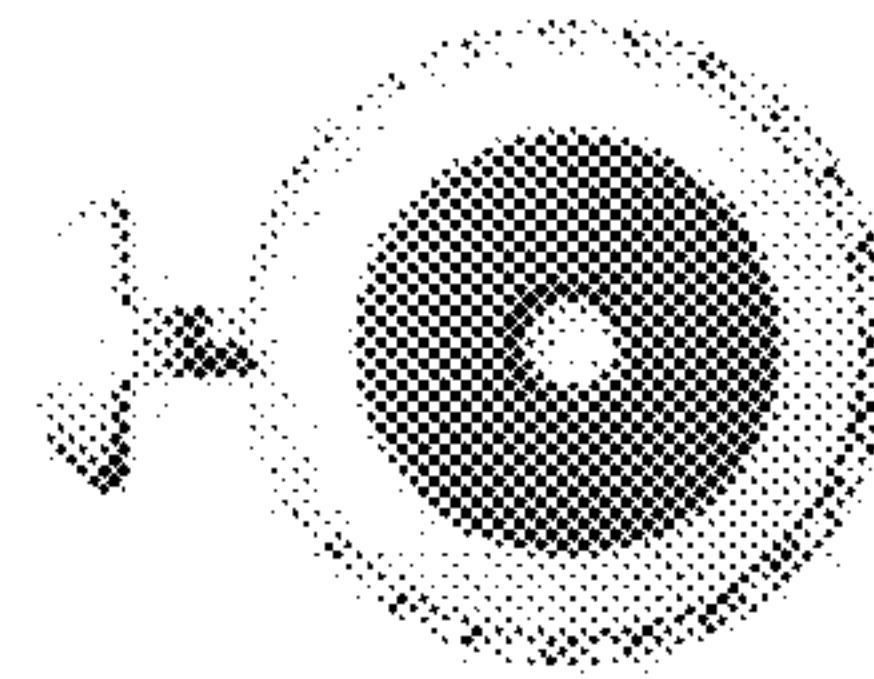


FIG. 113



FIG. 114

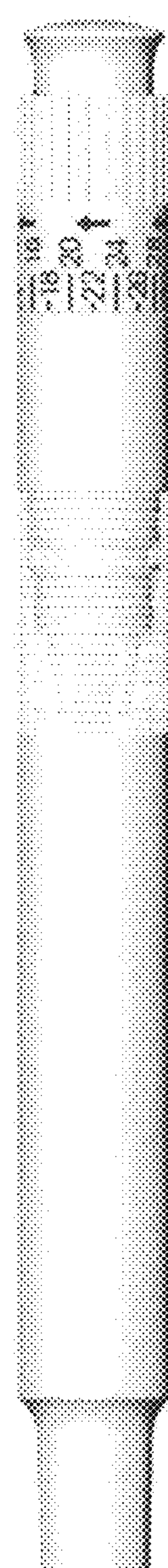
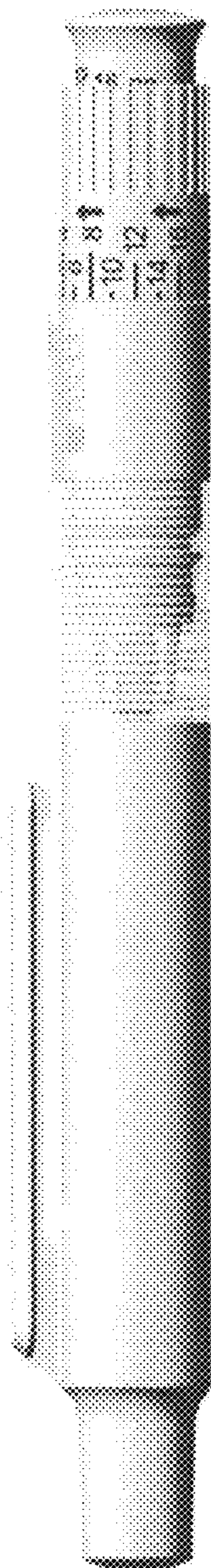
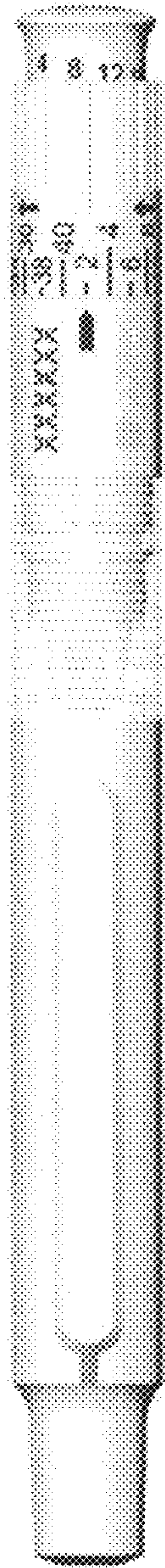


FIG. 115

FIG. 116

FIG. 117

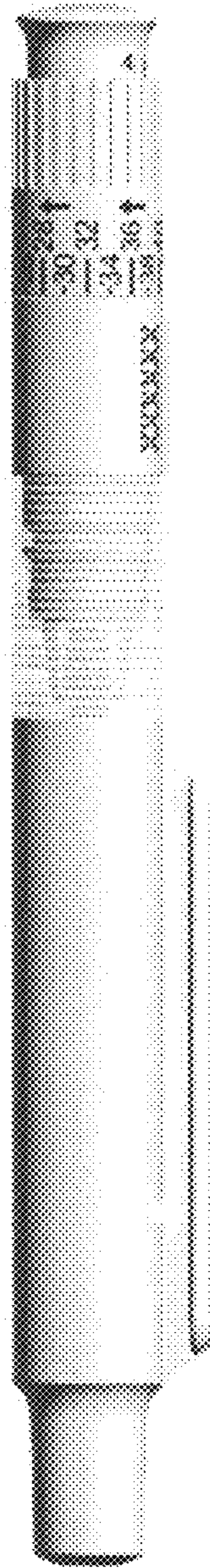


FIG. 118

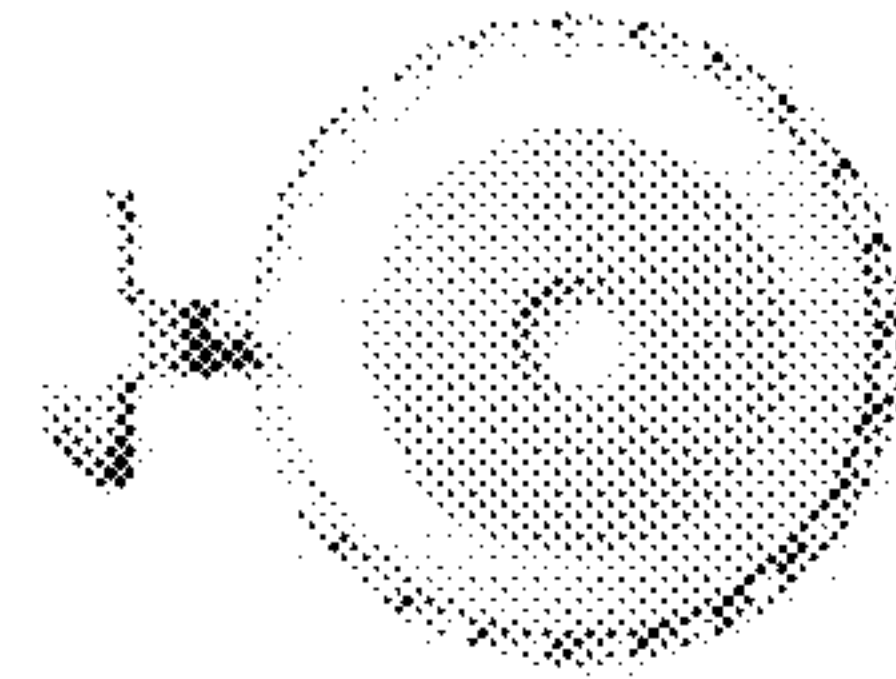


FIG. 119



FIG. 120

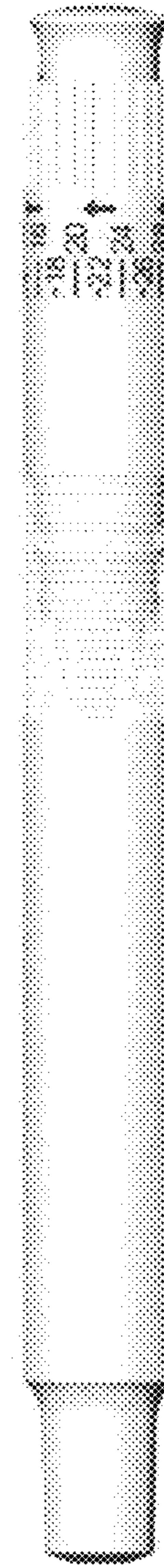
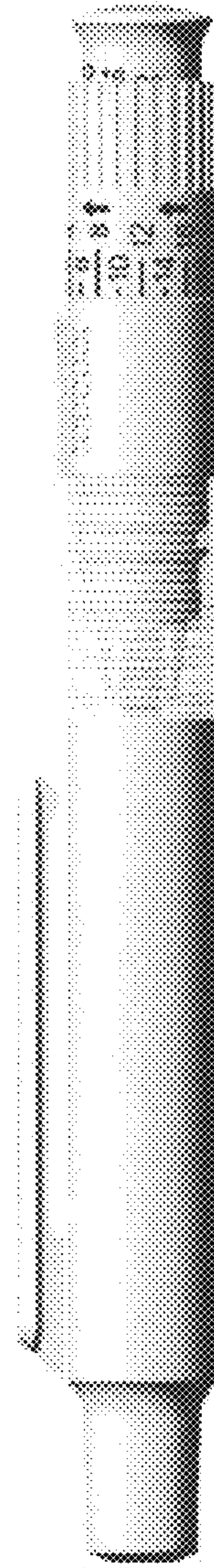
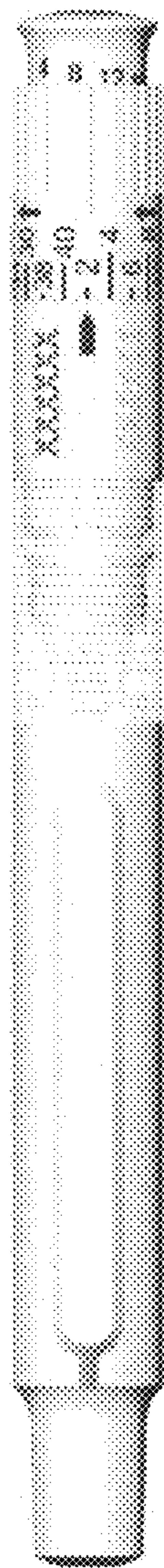


FIG. 121

FIG. 122

FIG. 123

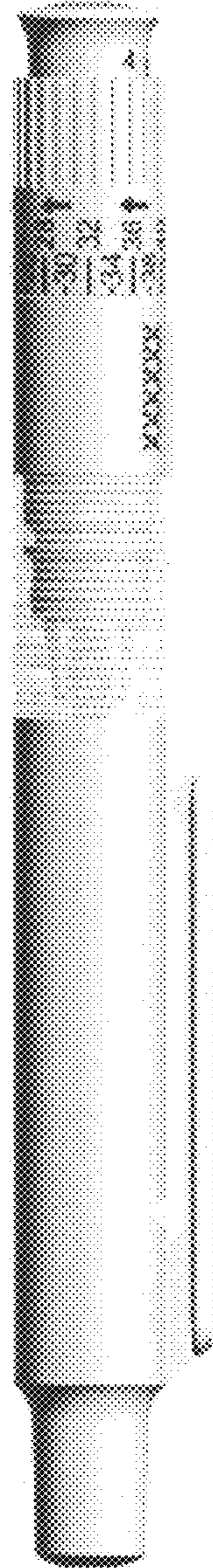


FIG. 124

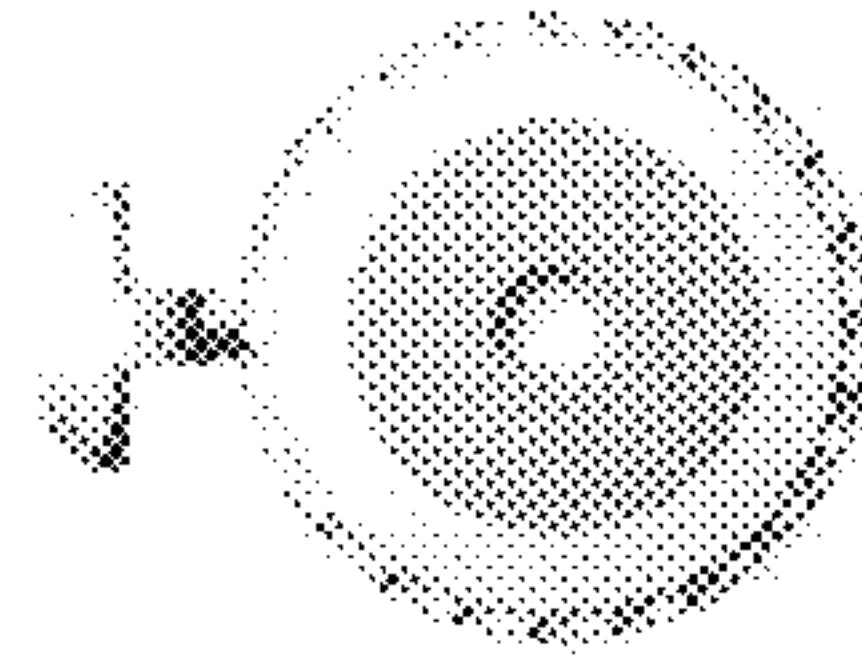


FIG. 125

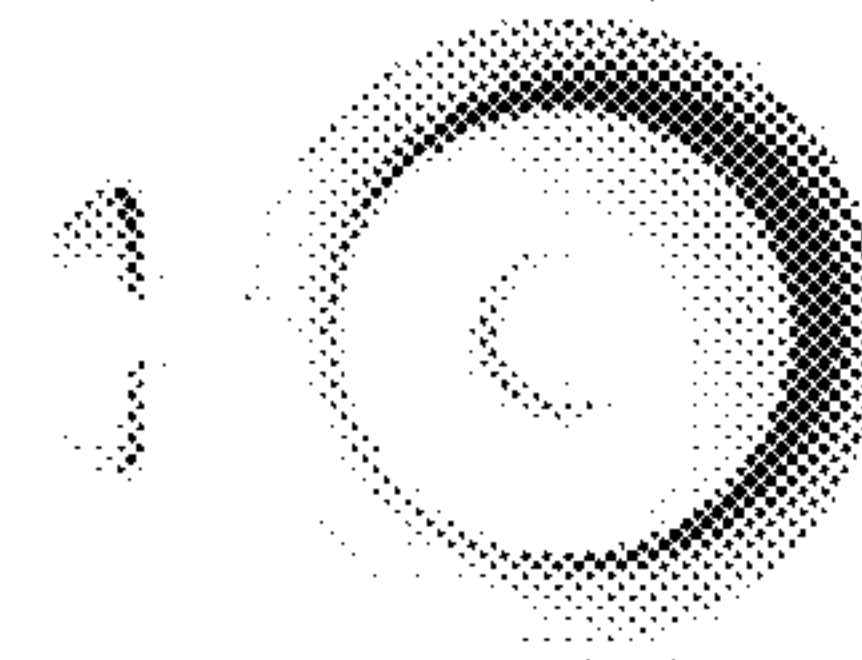


FIG. 126

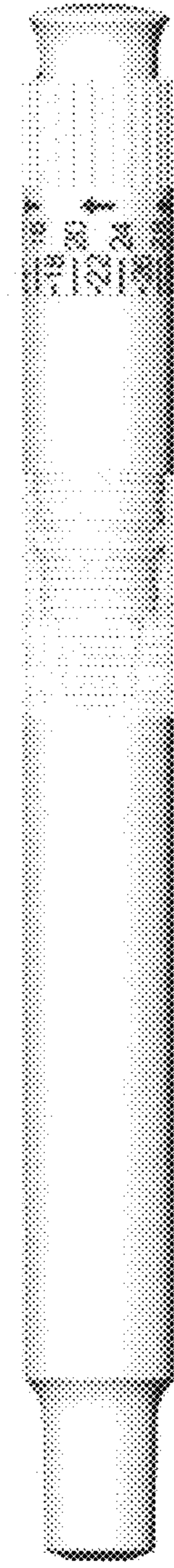
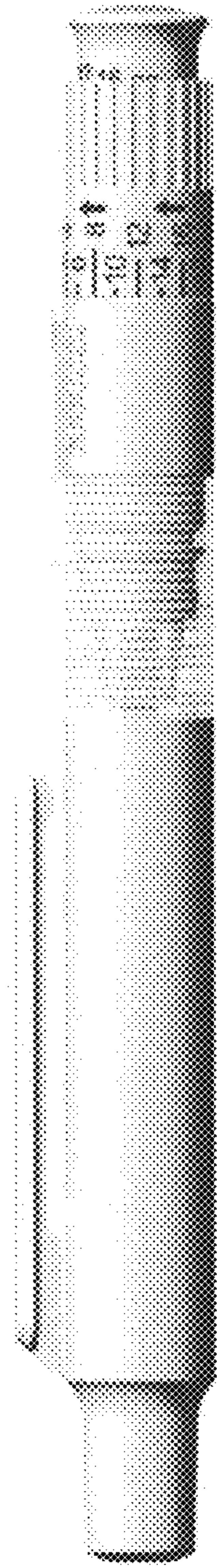
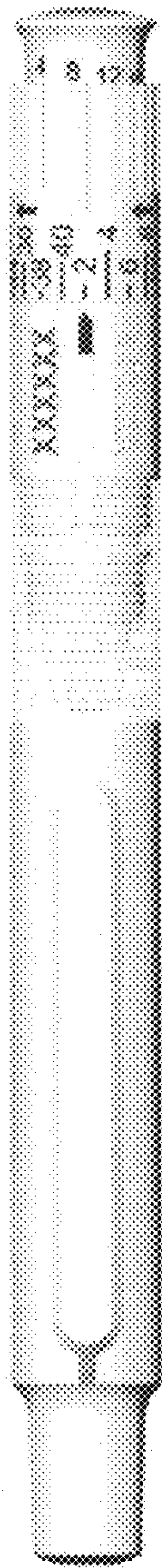


FIG. 127

FIG. 128

FIG. 129

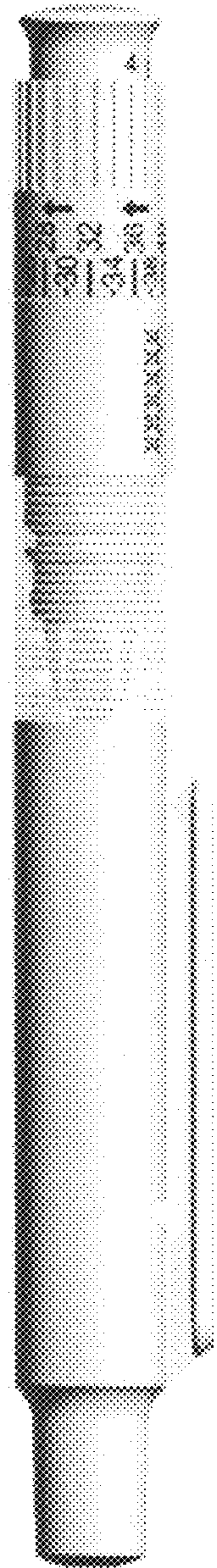


FIG. 130

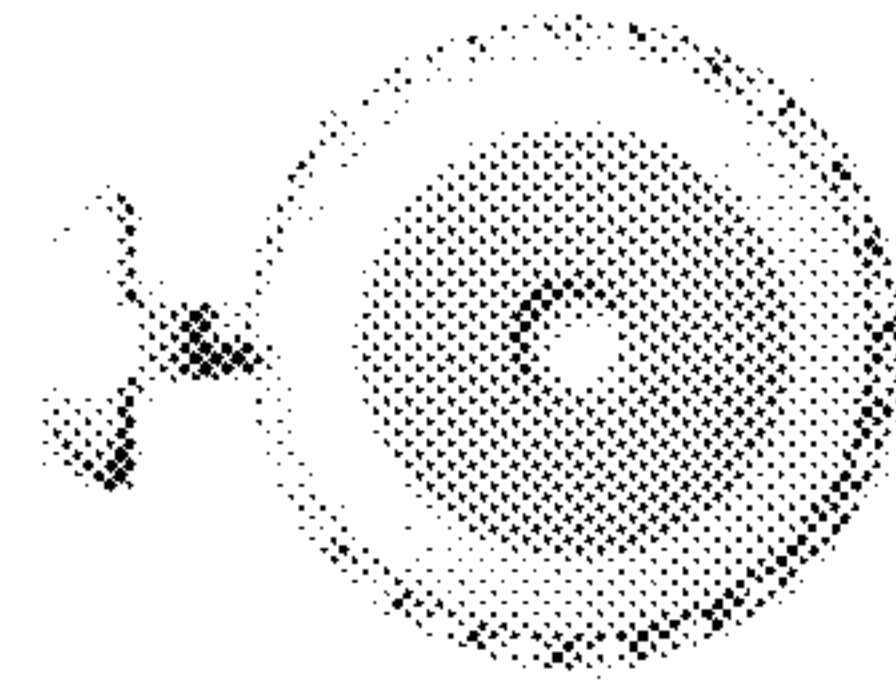


FIG. 131

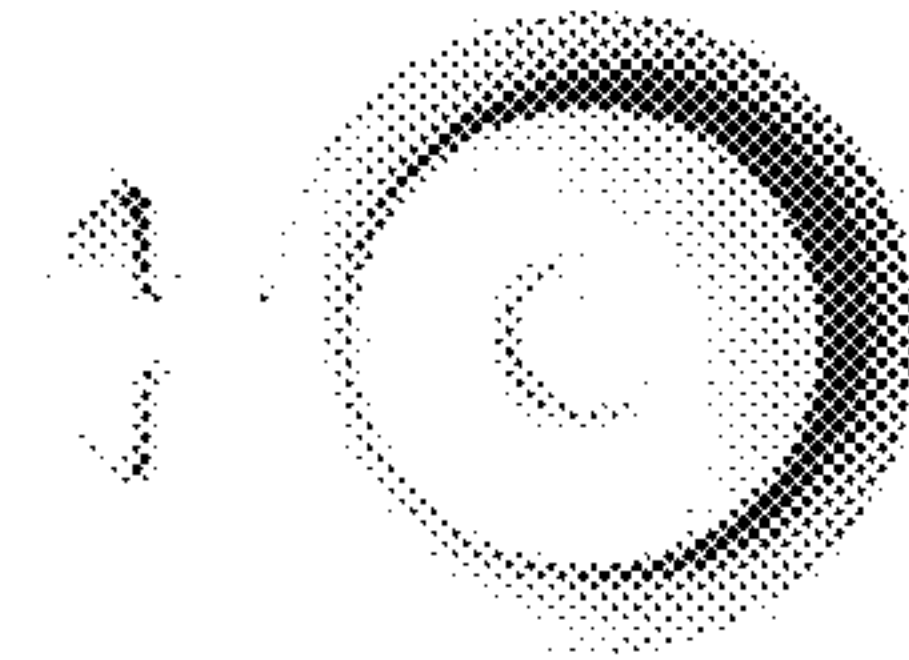


FIG. 132

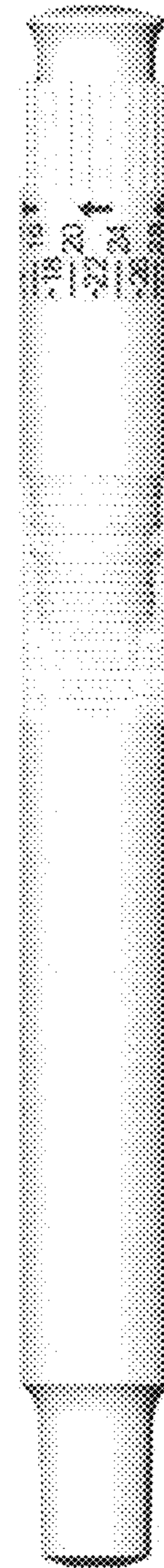
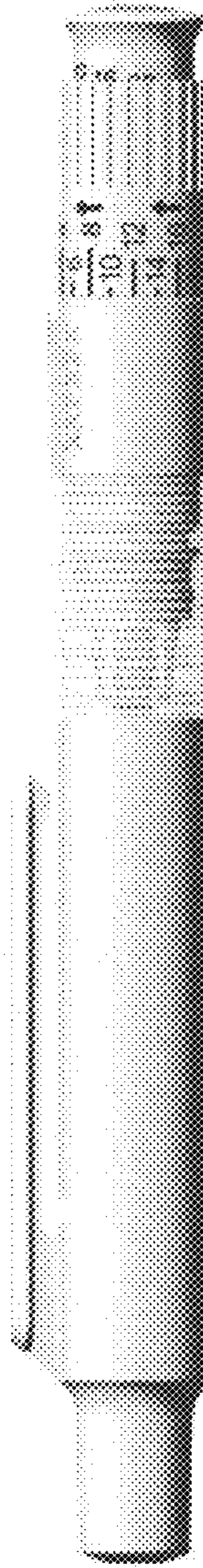
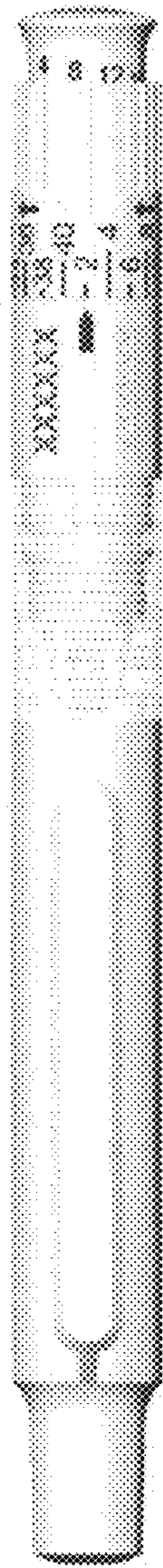


FIG. 133

FIG. 134

FIG. 135

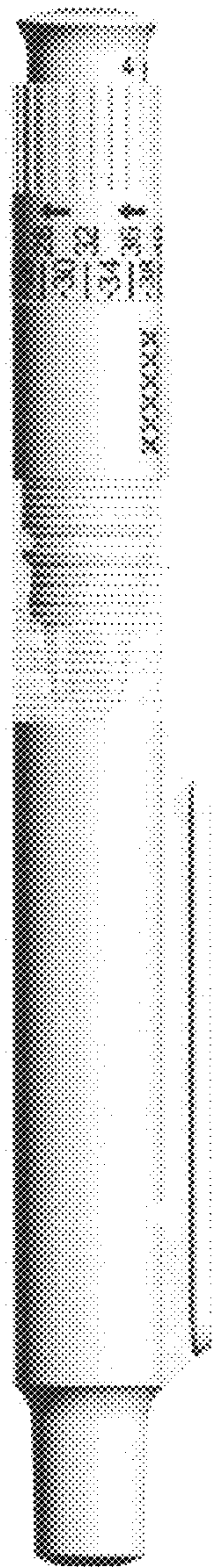


FIG. 136

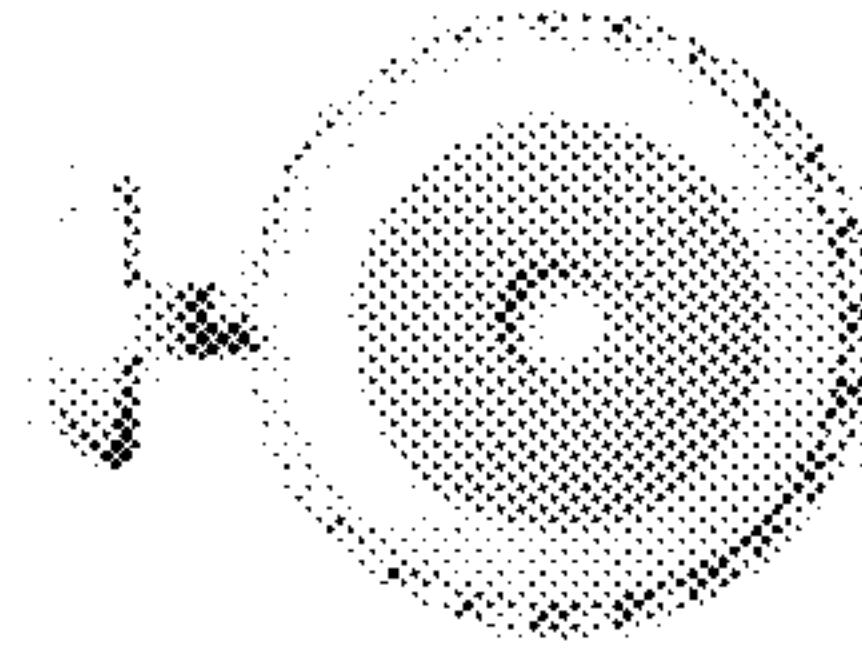


FIG. 137



FIG. 138

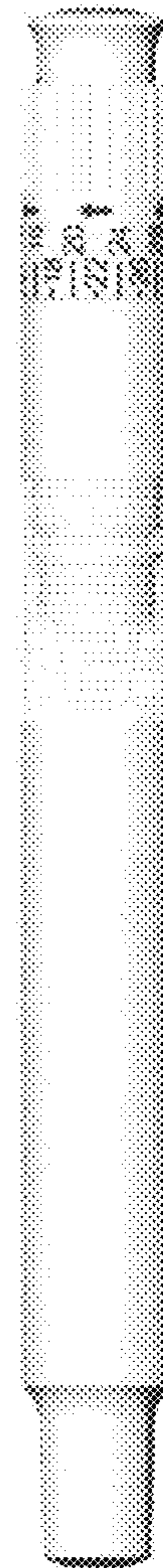
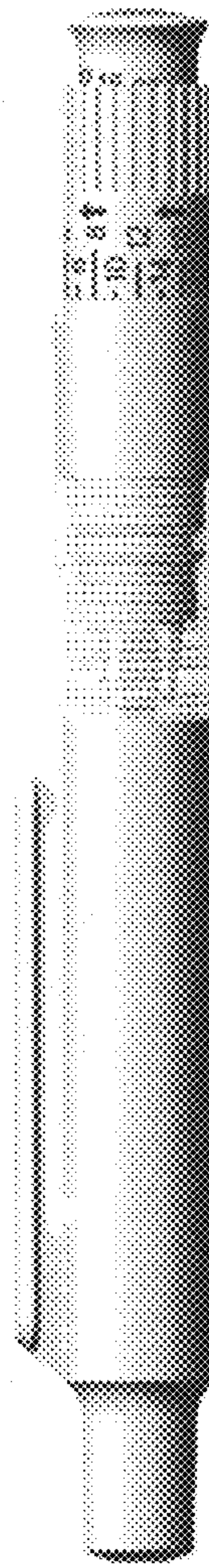
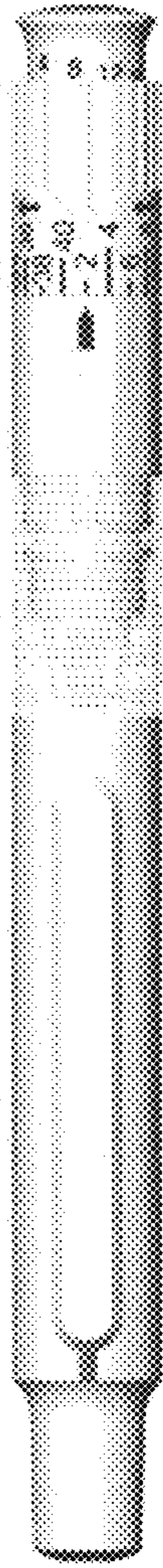


FIG. 139

FIG. 140

FIG. 141

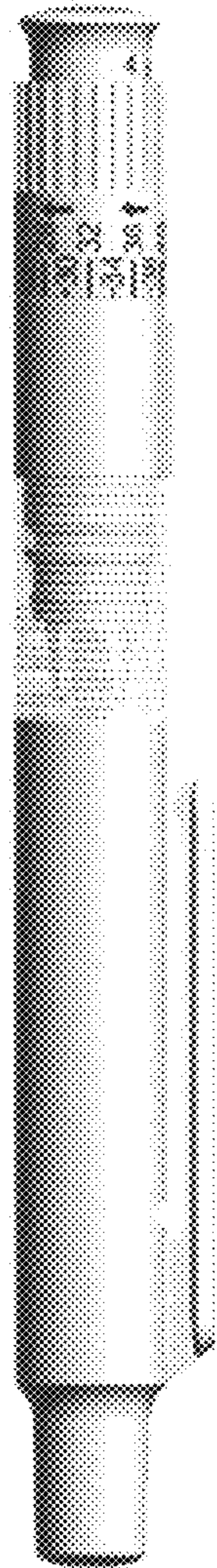


FIG. 142

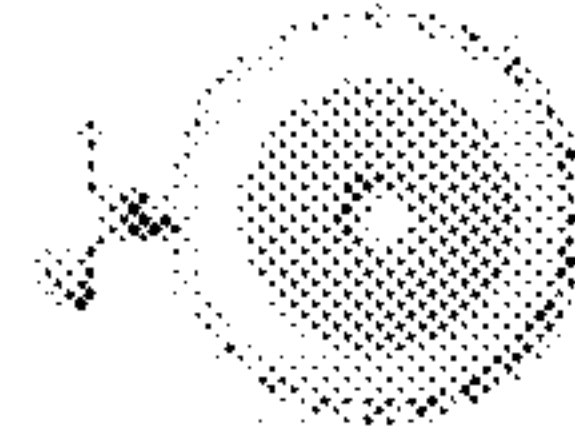


FIG. 143



FIG. 144

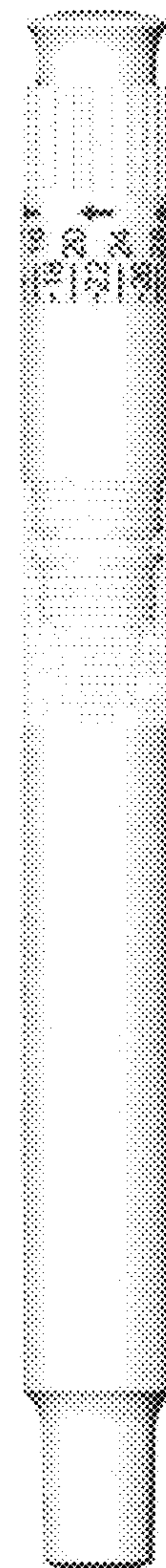
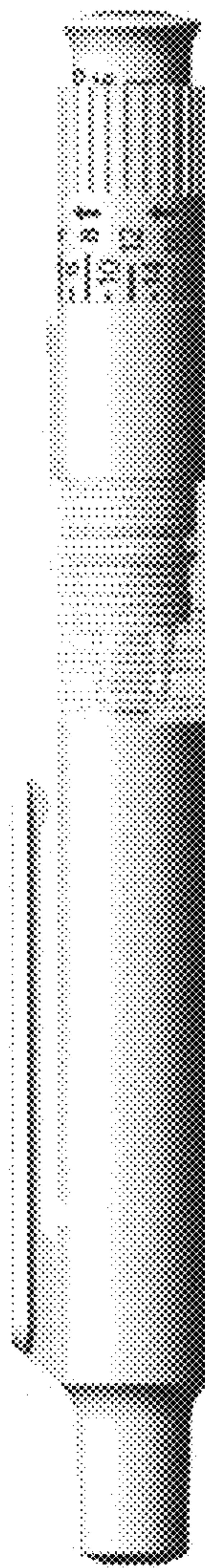
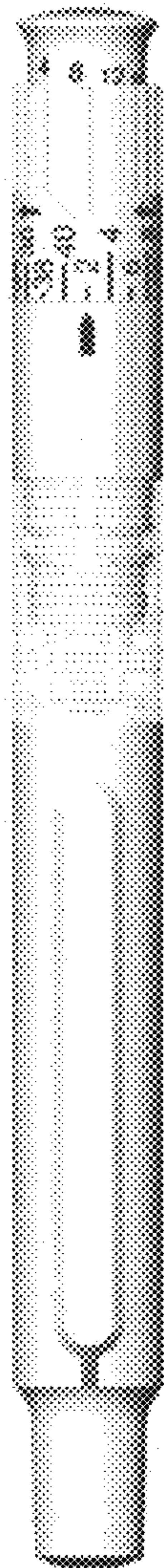


FIG. 145

FIG. 146

FIG. 147

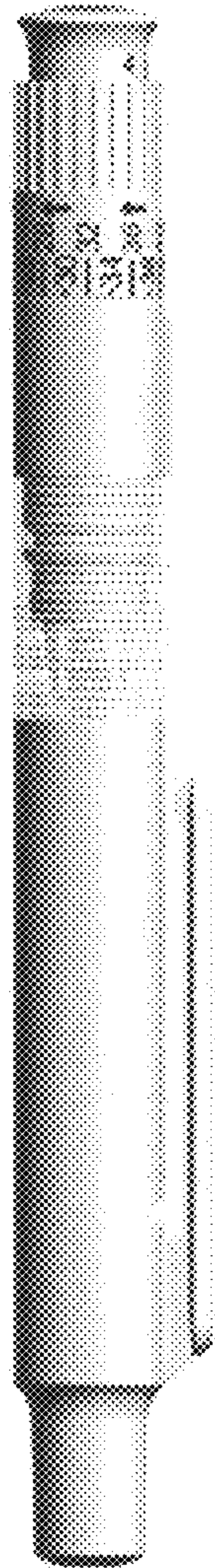


FIG. 148



FIG. 149



FIG. 150