



US00D864351S

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

(10) **Patent No.:** **US D864,351 S**

(45) **Date of Patent:** **** Oct. 22, 2019**

(54) **AIR PUMP**

(71) Applicant: **Jiao Hsiung Industry Corp.**, New Taipei (TW)

(72) Inventor: **Yung-Hao Yang**, New Taipei (TW)

(73) Assignee: **Jiao Hsiung Industry Corp.**, New Taipei (TW)

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

(21) Appl. No.: **29/650,755**

(22) Filed: **Jun. 8, 2018**

(30) **Foreign Application Priority Data**

Jun. 6, 2018 (TW) 107303209

(51) **LOC (12) Cl.** **15-02**

(52) **U.S. Cl.**
USPC **D23/231; D15/7**

(58) **Field of Classification Search**

USPC D15/7-9; D5/53, 58; D23/231, 232, 225
CPC F04B 53/14; F04B 53/92; F04B 33/00;
F04B 33/005; F04B 1/005; F04D 13/06;
F04D 29/22; F04D 29/046; F04D
29/2266; F02M 37/04; F02M 37/14

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

785,154 A * 3/1905 Cordeau F15B 15/261
92/15
1,511,649 A * 10/1924 Wentzell F04B 33/005
417/554
1,751,780 A * 3/1930 Weiger B60L 5/06
420/430
1,776,147 A * 9/1930 Clagett F04B 33/005
92/169.1
1,916,342 A * 7/1933 Sullivan F04B 33/005
92/161

D140,232 S * 2/1945 Russell D23/231
D150,097 S * 6/1948 Russell D23/231
2,831,948 A * 4/1958 Fraser H02B 1/048
200/295
3,786,730 A * 1/1974 Linderholm B21D 39/00
92/169.1

(Continued)

OTHER PUBLICATIONS

<https://theconstructor.org/building/swirl-finish-concrete/29717/>; Jul. 18, 2019.*

(Continued)

Primary Examiner — Mitchell I. Siegel

(74) *Attorney, Agent, or Firm* — C. G. Mersereau; DeWitt LLP

(57) **CLAIM**

The ornamental design for an air pump, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of an air pump showing my new design;

FIG. 2 is a front view thereof;

FIG. 3 is a rear view thereof;

FIG. 4 is a left side view thereof;

FIG. 5 is a right side view thereof;

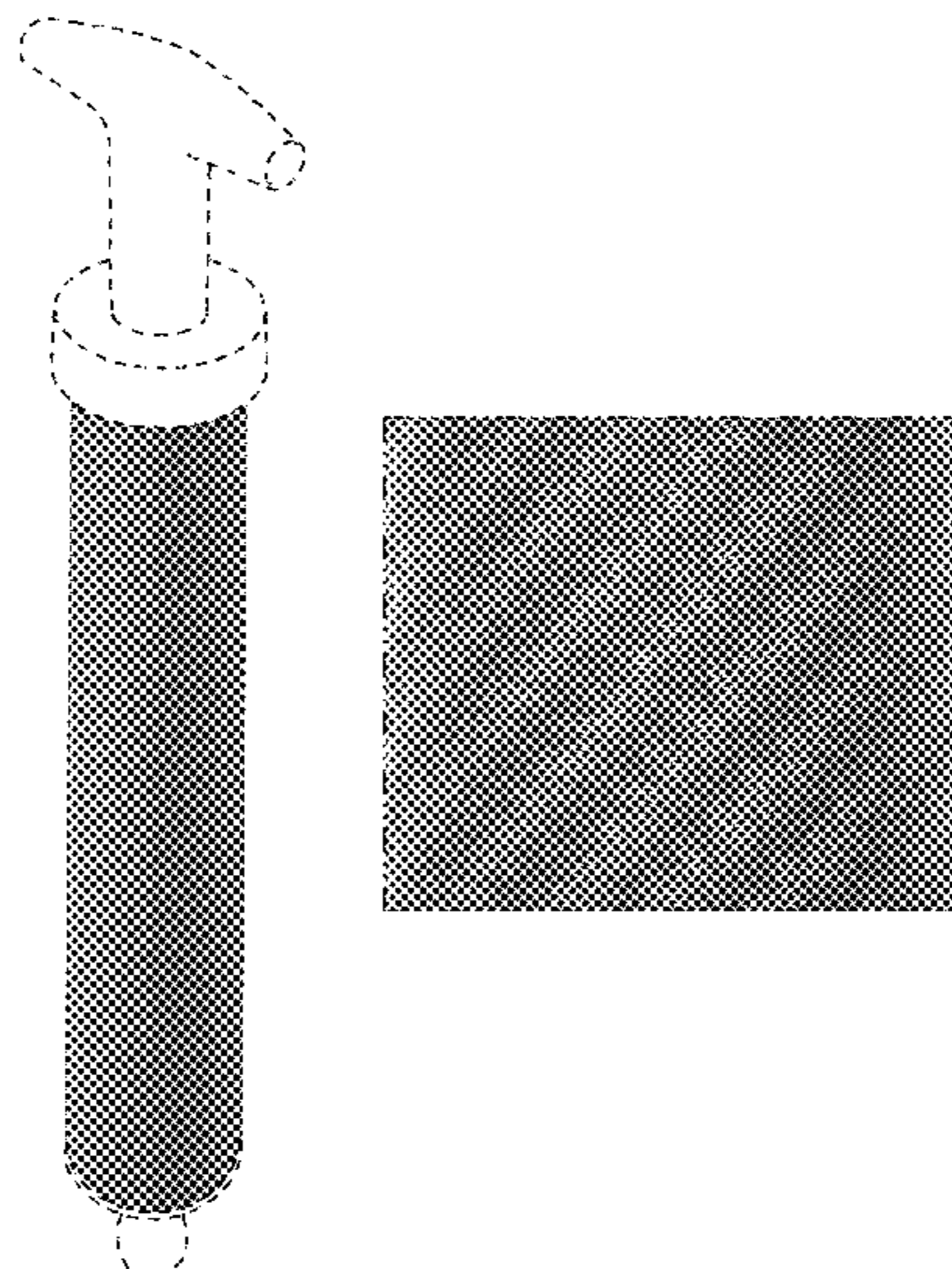
FIG. 6 is a top view thereof;

FIG. 7 is a bottom view thereof; and,

FIG. 8 is an enlarged detailed view according to Area 8 circumscribed within FIG. 2.

The evenly-spaced broken lines shown are included for the purpose of illustrating unclaimed subject matter and forms no part of the claimed design. The dash-dot-dot-dash broken lines on FIGS. 2 and 8 represent the unclaimed boundary and forms no part of the claimed design.

1 Claim, 8 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

4,023,835 A * 5/1977 Ewing E03F 3/04
285/235
4,135,015 A * 1/1979 Boyden, Jr. A61F 5/04
428/373
4,373,556 A * 2/1983 Bergh B29C 70/08
138/140
4,586,610 A * 5/1986 Gandolfo G09F 3/0295
206/345
D287,531 S * 12/1986 Evans D23/231
4,691,986 A * 9/1987 Aberson, Jr. G02B 6/382
385/64
D295,660 S * 5/1988 Chiarella D23/231
4,890,203 A * 12/1989 Watson F21L 2/00
362/102
D309,174 S * 7/1990 Furusawa D23/231
D321,037 S * 10/1991 Furusawa D23/231
5,067,912 A * 11/1991 Bickford H01R 24/40
29/842
D323,876 S * 2/1992 Furusawa D23/231
D343,397 S * 1/1994 Wang D15/7
5,306,176 A * 4/1994 Coffey H01R 13/6392
439/367
5,347,913 A * 9/1994 Stepner B62J 11/02
280/288.4
D351,896 S * 10/1994 Sundheim D15/7
5,433,136 A * 7/1995 Lung-Po F04B 33/005
417/234
D375,315 S * 11/1996 Paul-Johansson D15/7
5,715,554 A * 2/1998 Downs B25F 1/00
152/415
D419,781 S * 2/2000 Pratt D5/53
D426,959 S * 6/2000 Jahner D5/53
D436,740 S * 1/2001 Jahner D5/53
D452,726 S * 1/2002 Tsai D23/231
D454,358 S * 3/2002 Davis D15/7
6,474,858 B1 * 11/2002 Liao F21S 10/002
362/551
6,739,842 B2 * 5/2004 Wu F04B 33/005
417/553
6,814,552 B2 * 11/2004 Wu F04B 33/005
137/228
D520,521 S * 5/2006 Angeletta D15/7
D550,717 S * 9/2007 Saunders D15/7
D556,215 S * 11/2007 Saunders D15/7
D556,216 S * 11/2007 Saunders D15/7
D556,217 S * 11/2007 Saunders D15/7

D556,781 S * 12/2007 Saunders D15/7
D559,866 S * 1/2008 Saunders D15/7
7,331,768 B2 * 2/2008 Wu F04B 33/005
417/468
D588,161 S * 3/2009 Daniel D15/7
D596,202 S * 7/2009 van der Blom D10/86
D632,306 S * 2/2011 Wang D15/7
D632,307 S * 2/2011 Wang D15/7
D634,755 S * 3/2011 Sanders D15/7
8,147,224 B2 * 4/2012 Tsai F04B 53/126
417/455
D663,746 S * 7/2012 Kwon D15/7
D669,095 S * 10/2012 Chang D15/7
D686,639 S * 7/2013 Dooley D15/7
8,689,676 B2 * 4/2014 Van der Blom F04B 33/005
92/169.1
D724,864 S * 3/2015 Harmening D5/56
D745,570 S * 12/2015 Scott D15/7
D746,082 S * 12/2015 Harmening D6/605
D800,787 S * 10/2017 Lahav D15/7
D801,928 S * 11/2017 Yoshida D13/122
9,885,354 B2 * 2/2018 Yang F04B 53/14
D813,276 S * 3/2018 Yuan D15/7
D818,004 S * 5/2018 Lee D15/7
D834,620 S * 11/2018 Neir B60C 29/068
D15/7
D834,682 S * 11/2018 Liao D23/231
D852,168 S * 6/2019 Zhou D14/205
D853,733 S * 7/2019 Mazumder D5/56
2005/0087559 A1 * 4/2005 Smith B60P 7/065
222/251

OTHER PUBLICATIONS

<https://pngtree.com/freepng/classical-blue-moire-circular-patte>; Jul. 18, 2019.*
https://www.yelp.com/biz_photos/hoffman-concrete-saint-louis?se; Jul. 18, 2019.*
<https://www.concretedecor.net/decorativeconcretearticles/vol-3->; Jul. 18, 2019.*
https://industrytoday.co.uk/built_environment/decorative-circul; Jul. 18, 2019.*
<http://stl-concrete.com/photo-gallery/traditional-concrete/>; Jul. 18, 2019.*
<http://coloredstainlesssteel.sell.everychina.com/p-94579613/sho>; Jul. 18, 2019.*
<https://www.traffloor.com/floors/abstract-loops-flooring/>; Jul. 18, 2019.*

* cited by examiner

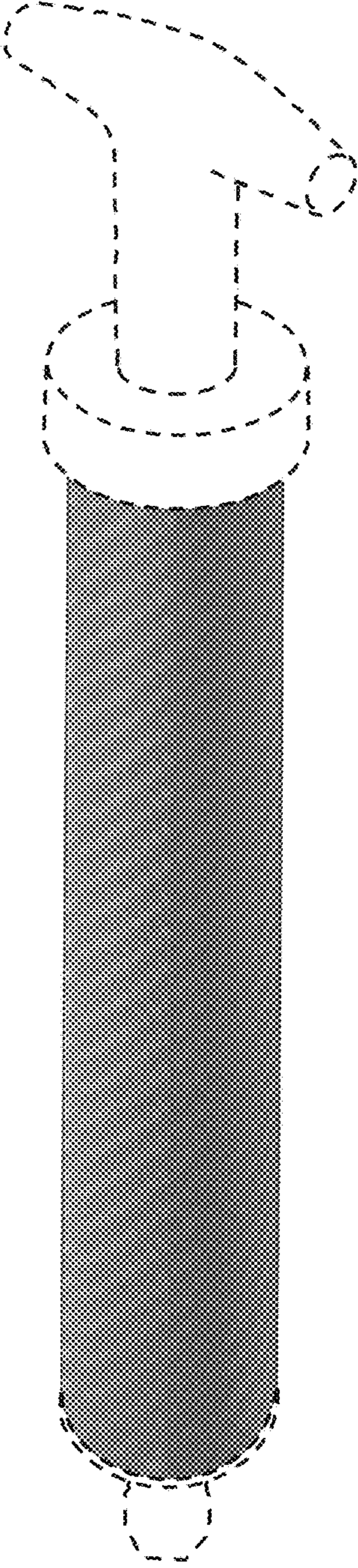


FIG. 1

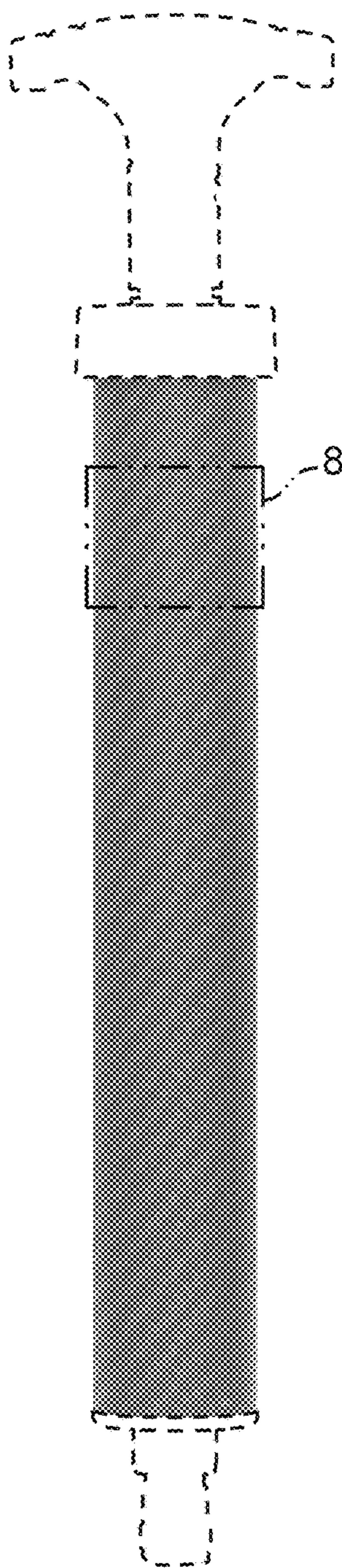


FIG. 2

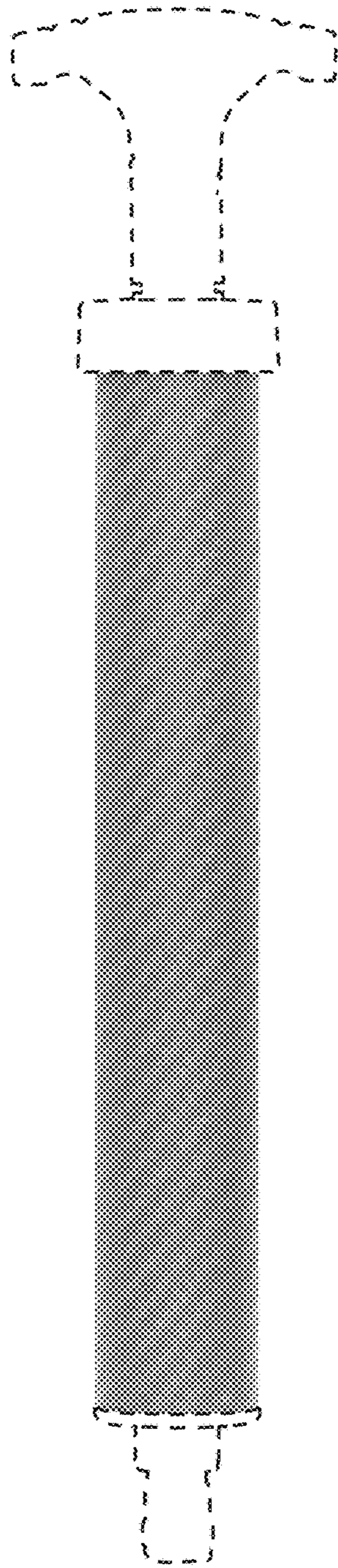


FIG. 3

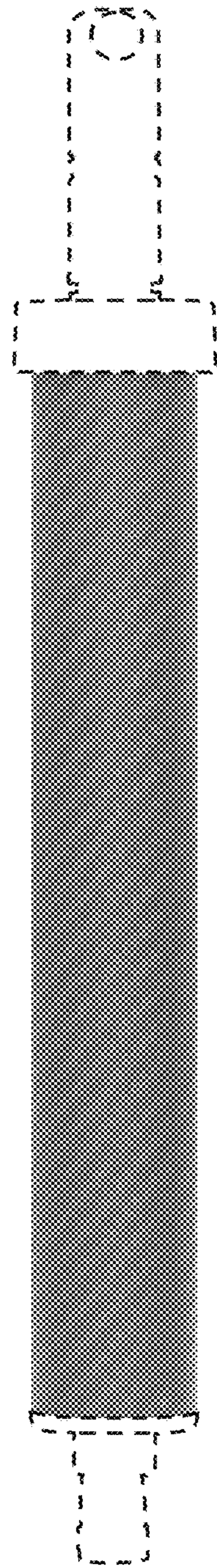


FIG. 4

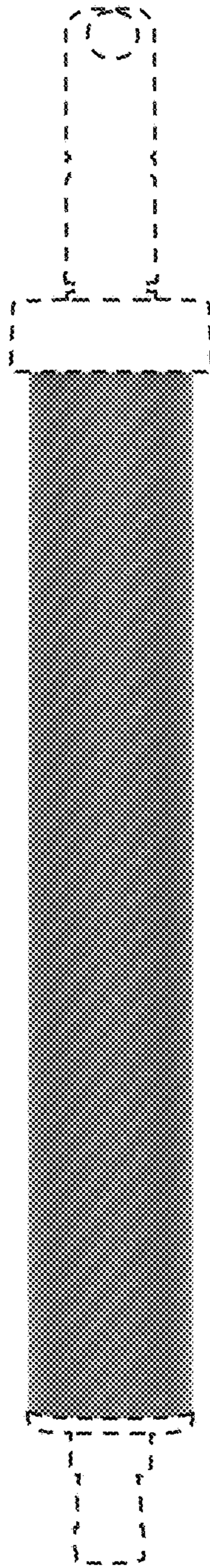


FIG. 5

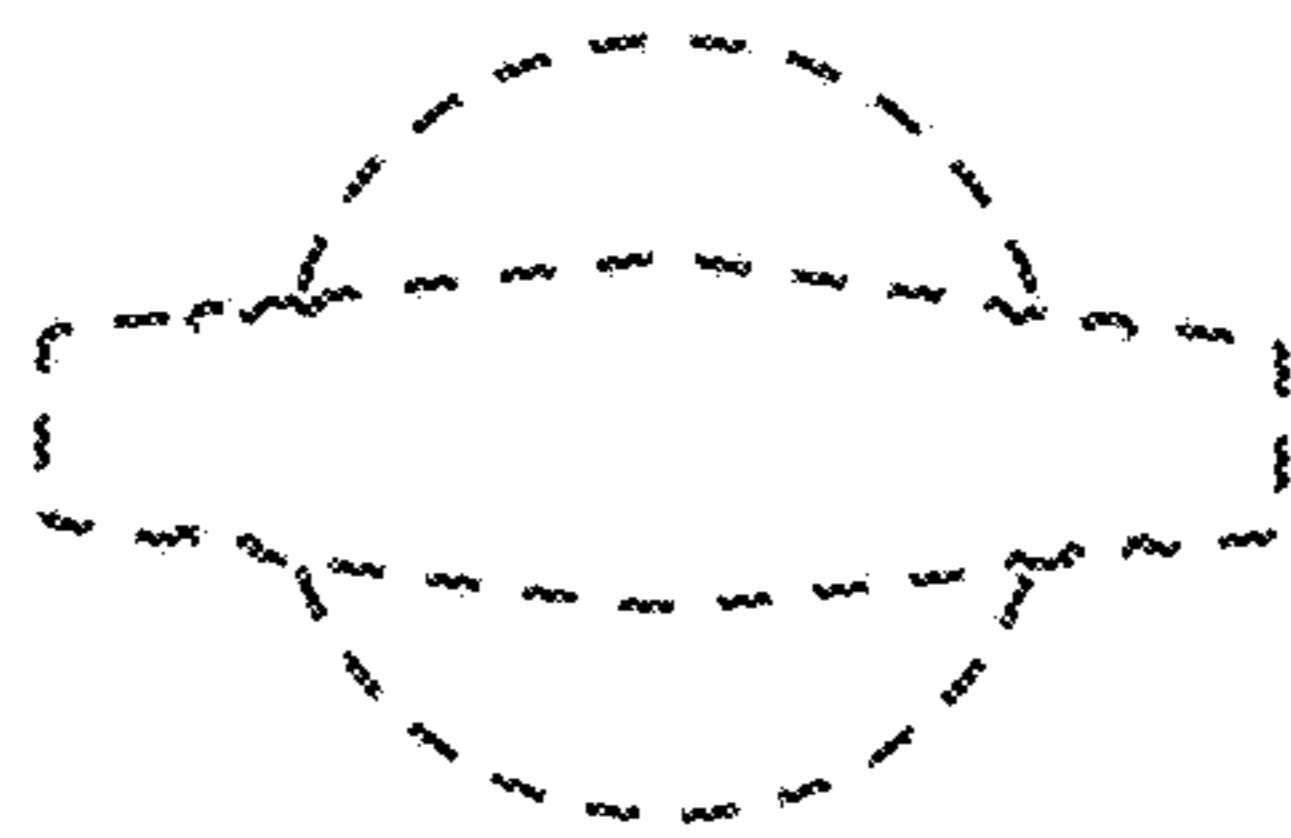


FIG. 6

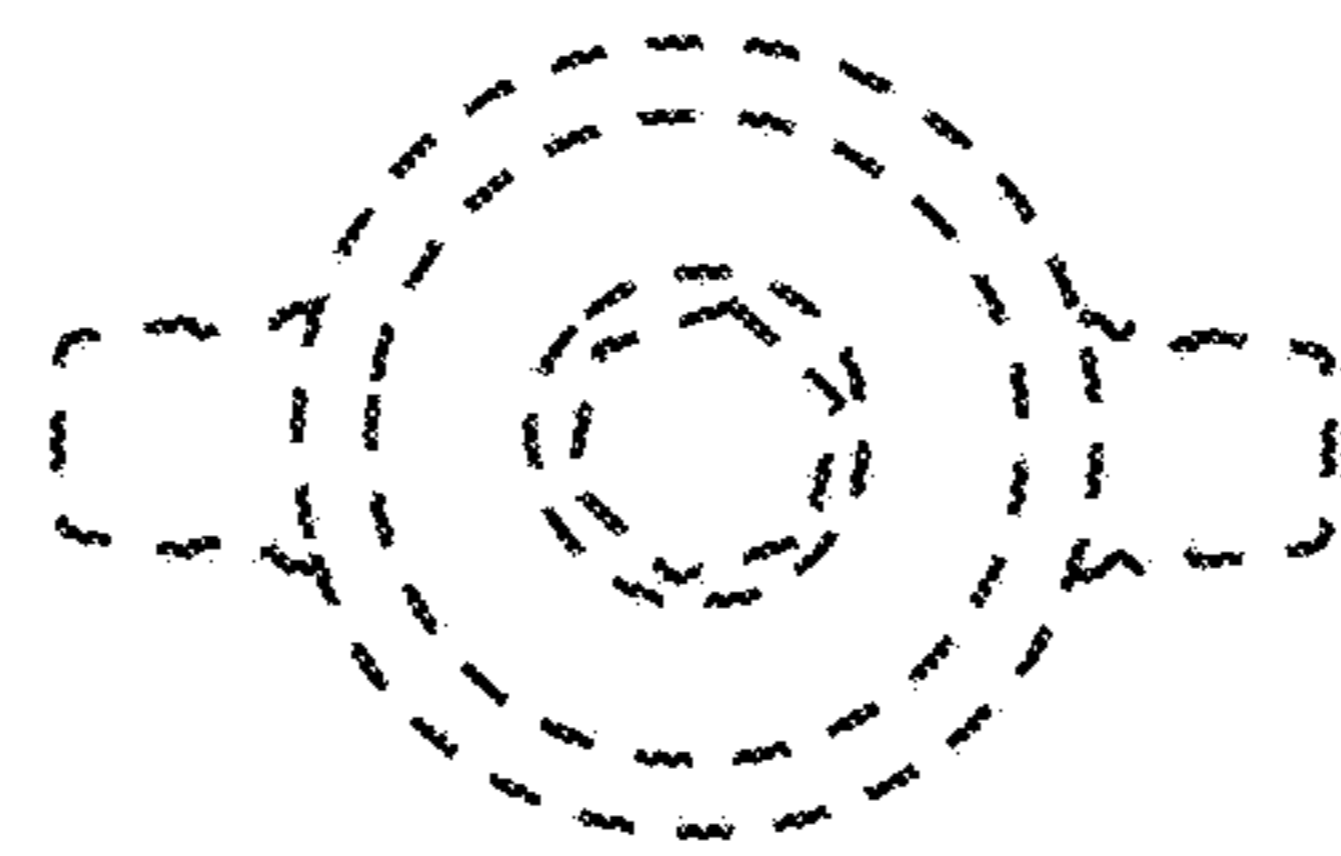


FIG. 7

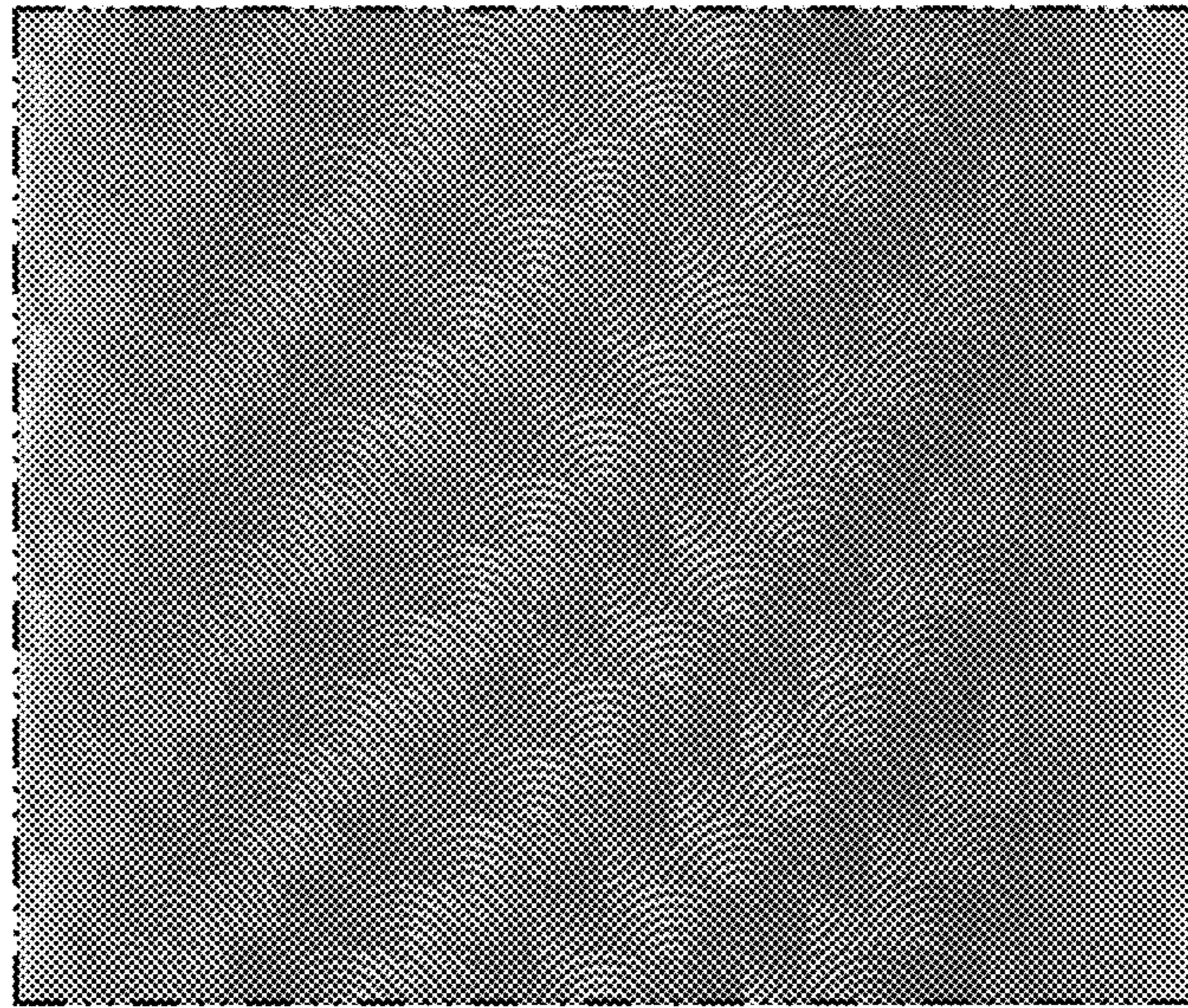


FIG. 8