



US00D808390S

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

(10) **Patent No.:** **US D808,390 S**
(45) **Date of Patent:** **** Jan. 23, 2018**

(54) **TACTILE INTERFACE**

(74) *Attorney, Agent, or Firm* — Boyle Fredrickson, S.C.

(71) Applicant: **Wisconsin Alumni Research Foundation**, Madison, WI (US)

(57) **CLAIM**

The ornamental design for a tactile interface, as shown and described.

(72) Inventors: **J. Bern Jordan**, Madison, WI (US);
David P. Kelso, Madison, WI (US);
Gregg C. Vanderheiden, Madison, WI (US)

DESCRIPTION

(73) Assignee: **Wisconsin Alumni Research Foundation**, Madison, WI (US)

FIG. 1 is an isometric view of a tactile interface in accordance with the present invention shown in a state of use within a kiosk;

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

FIG. 2 is an isometric view, from above, of the tactile interface of FIG. 1;

(21) Appl. No.: **29/544,058**

FIG. 3 is an isometric view, from below, of the tactile interface of FIG. 1;

(22) Filed: **Oct. 30, 2015**

FIG. 4 is a front elevational view of the tactile interface of FIG. 1;

Related U.S. Application Data

FIG. 5 is a cross-sectional view of a first side of the tactile interface of the present invention taken along line 5-5 of FIG. 4;

(63) Continuation of application No. 13/589,628, filed on Aug. 20, 2012.

FIG. 6 is a cross-sectional view a second side of the tactile interface of the present invention taken along line 6-6 of FIG. 4;

(51) **LOC (11) Cl.** **14-02**

(52) **U.S. Cl.**
USPC **D14/388**; D14/455

FIG. 7 is a front plan view thereof, shown tilted forward 30° for clarity;

(58) **Field of Classification Search**
USPC D14/388–390, 399, 320, 331, 333, 338,
D14/346, 356, 358, 387, 454, 455, 456,

(Continued)

FIG. 8 is an isometric view, from above, of a second embodiment of the tactile interface of the present invention;

(56) **References Cited**

U.S. PATENT DOCUMENTS

D287,598 S * 1/1987 Moggridge D14/456
D310,820 S 9/1990 Watson et al.

(Continued)

FIG. 9 is an isometric view, from below, of the tactile interface of FIG. 8;

FIG. 10 is a front elevational view of the tactile interface of FIG. 8;

FIG. 11 is a cross-sectional view of a first side of the second embodiment of the tactile interface of the present invention taken along line 11-11 of FIG. 10;

FIG. 12 is a cross-sectional view a second side of the second embodiment of the tactile interface of the present invention taken along line 12-12 of FIG. 10; and,

FIG. 13 is a front plan view thereof, shown tilted forward 30° for clarity.

The broken lines consisting of unevenly sized dashes define the boundary of the claim, which extends to the boundary but does not include the boundary, while the remaining

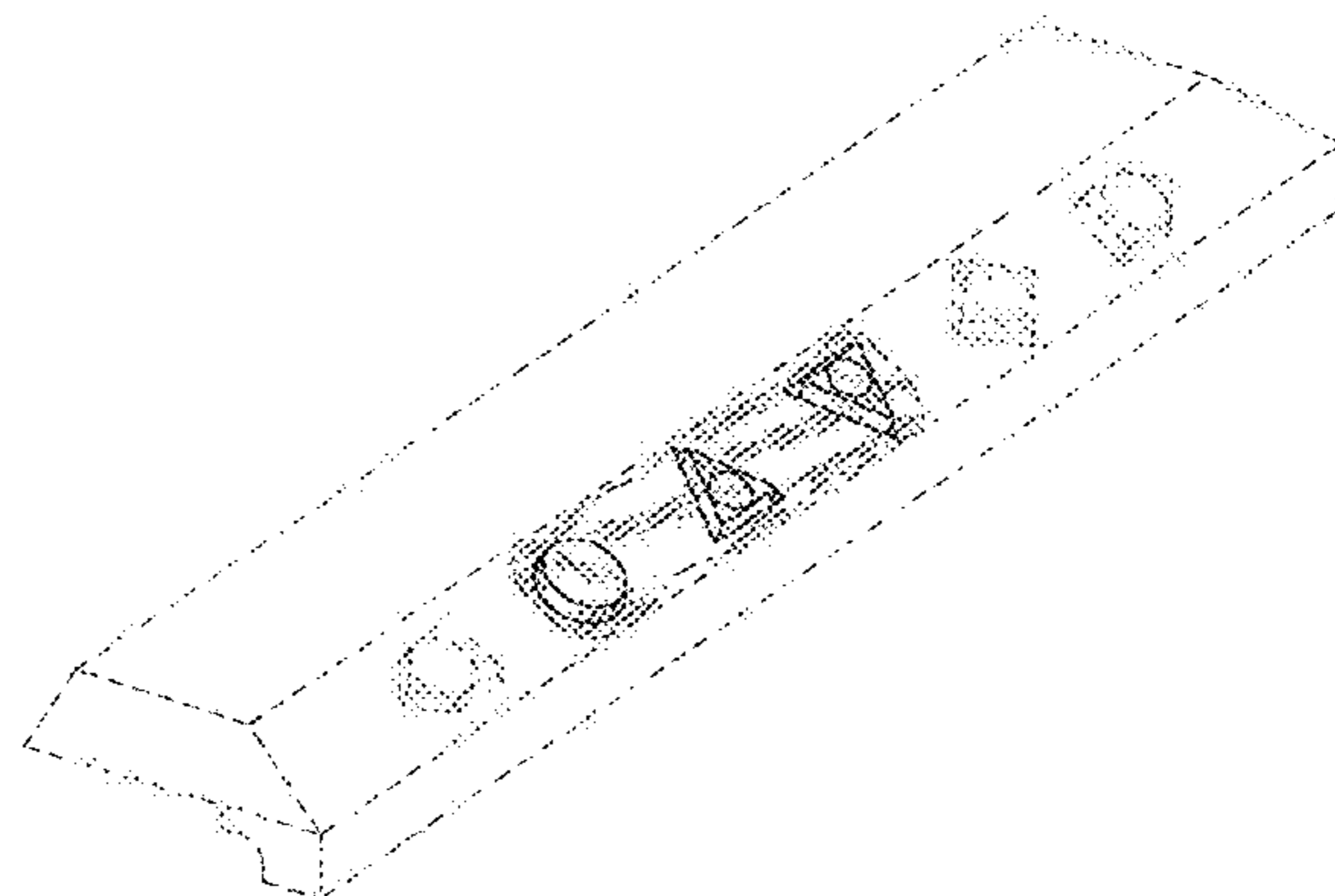
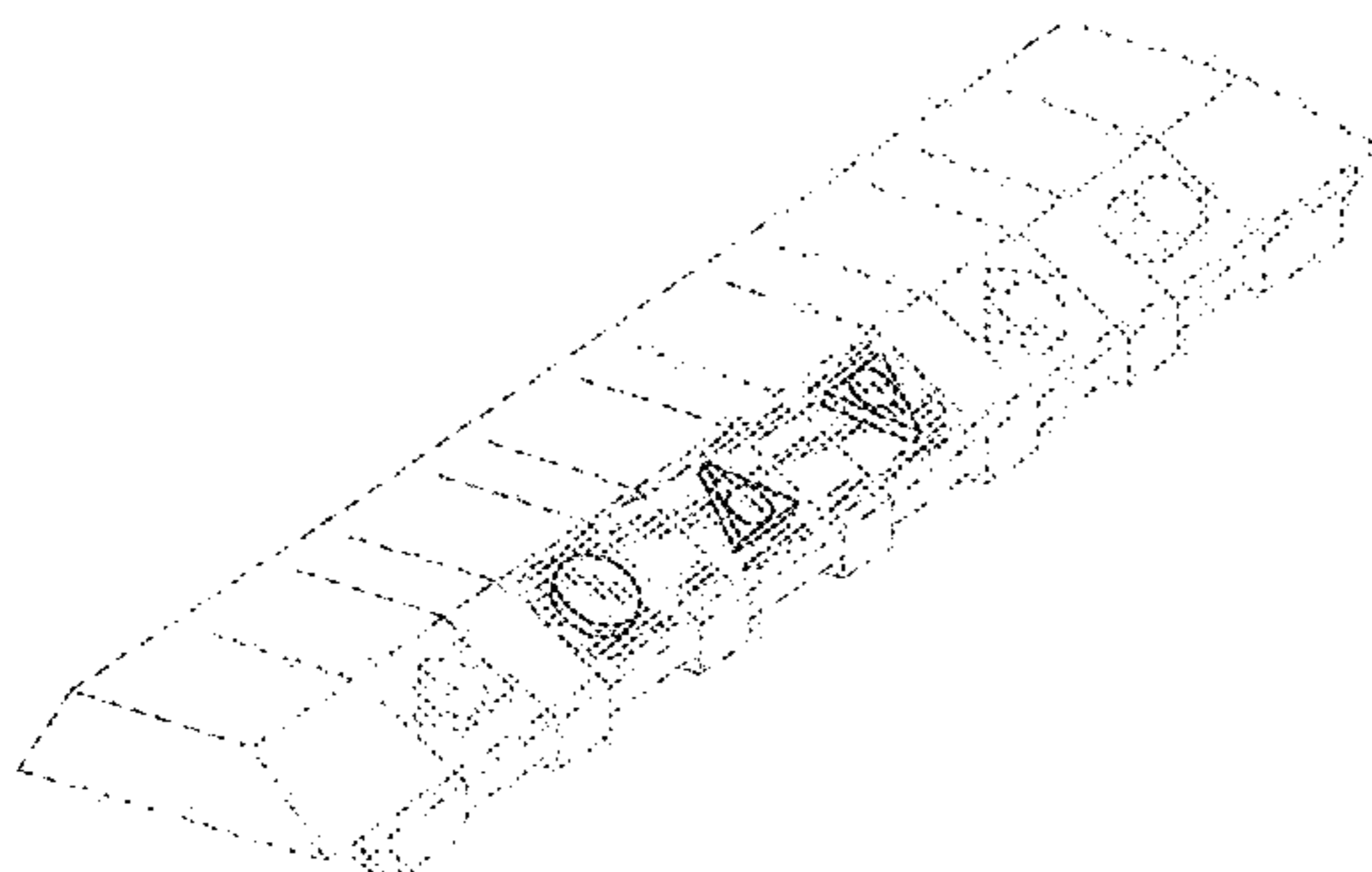
(Continued)

FOREIGN PATENT DOCUMENTS

EM 000154042-0001 3/2004

Primary Examiner — Susan Bennett Hattan

Assistant Examiner — Marie D. Fast Horse



broken lines depict environmental structure and form no part of the claim. All broken lines in the drawings form no part of the claim.

1 Claim, 5 Drawing Sheets

(58) Field of Classification Search

USPC D14/150, 218, 247, 257; D18/6, 7, 8, 12, D18/12.1, 12.2, 24, 29, 40, 50, 56; D20/11; D21/324-333, 368-370, 517, D21/512; D99/43, 99; D13/123, 162, D13/162.1, 168, 171-174; D10/106.1; D24/184-186
 CPC G06F 3/00; G06F 3/002; G06F 3/0338; G06F 3/038; G06F 3/039; G06F 3/041; G06F 3/0414; G06F 3/044; G06F 1/1684; G06F 1/02; G06F 7/544; G06F 7/60; G06F 15/02; G06F 15/0216; G06F 15/025; G06F 15/0225; G06F 15/0258; G09B 19/025

See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

4,989,610 A 2/1991 Patton et al.
 D321,215 S 10/1991 Shamis
 5,155,806 A 10/1992 Hoeber et al.
 D331,760 S * 12/1992 Renk, Jr. D14/218
 D348,065 S 6/1994 Madill et al.
 D348,435 S 7/1994 Fairnelli et al.
 D354,747 S * 1/1995 Herbstritt D14/443
 D354,761 S 1/1995 Hutcheson
 D355,417 S * 2/1995 Buchholz D10/108
 D357,920 S * 5/1995 Davis D14/218
 D359,737 S 6/1995 Madill et al.
 D362,660 S * 9/1995 Fromson D13/168
 D364,860 S 12/1995 Giebler et al.
 D370,663 S 6/1996 Swain et al.
 D371,550 S 7/1996 Tomkowicz
 D372,704 S 8/1996 Nelson
 5,584,054 A 12/1996 Tyneski et al.
 D380,207 S * 6/1997 Wang D14/218
 D380,737 S 7/1997 Weir et al.
 D382,272 S * 8/1997 Shiono D14/218
 D388,769 S 1/1998 Pritchard et al.
 5,760,824 A 6/1998 Hicks, III
 D398,310 S * 9/1998 Barhold D14/218
 D422,971 S 4/2000 Leib
 D423,509 S * 4/2000 Park D14/218
 6,067,081 A 5/2000 Hahlganss et al.
 6,073,033 A 6/2000 Campo
 D433,675 S * 11/2000 Carranco D14/218
 6,162,059 A 12/2000 Murphy et al.
 D436,579 S 1/2001 Mayo et al.
 D444,774 S * 7/2001 Ciornei D13/164
 D445,406 S * 7/2001 Ciornei D13/164
 D451,482 S 12/2001 Vanderheiden et al.
 D455,776 S 4/2002 Gardner
 6,384,743 B1 5/2002 Vanderheiden et al.
 D459,359 S * 6/2002 Mikan D14/406
 D460,079 S * 7/2002 Brunner D14/455
 6,415,164 B1 7/2002 Blanchard et al.
 D461,782 S * 8/2002 Butler D13/171
 6,492,978 B1 12/2002 Selig et al.
 D469,108 S 1/2003 Lorenzo
 D475,026 S * 5/2003 Buczek D13/168
 D476,975 S * 7/2003 Rodriguez, Sr. D14/218
 D478,570 S * 8/2003 Goto D14/218

D478,898 S * 8/2003 Goto D14/218
 D480,056 S * 9/2003 Arcieri D13/168
 6,624,803 B1 9/2003 Vanderheiden et al.
 D485,827 S * 1/2004 Olson D14/218
 D490,780 S 6/2004 Mayo et al.
 D491,922 S * 6/2004 Poulet D14/218
 D496,645 S 9/2004 Yoo et al.
 D507,244 S 7/2005 Mayo et al.
 D510,074 S 9/2005 Larson et al.
 6,999,066 B2 2/2006 Litwiller
 D517,999 S 3/2006 Merritt et al.
 D524,297 S * 7/2006 Lee D14/218
 D526,623 S * 8/2006 Yin D13/168
 D535,627 S 1/2007 Merritt et al.
 D538,756 S 3/2007 Mayo et al.
 D541,290 S * 4/2007 Swanson D14/455
 D542,226 S 5/2007 Spira
 D543,159 S 5/2007 Merritt et al.
 D547,743 S 7/2007 Kim et al.
 D549,183 S 8/2007 Hewson et al.
 D554,073 S 10/2007 Mayo et al.
 7,277,081 B2 10/2007 Ukita et al.
 D558,277 S 12/2007 Luciano, Jr. et al.
 D561,156 S 2/2008 Jung et al.
 D568,299 S * 5/2008 Tuli D14/218
 D576,566 S 9/2008 Wu et al.
 D583,778 S * 12/2008 Ohlert D13/171
 7,489,303 B1 2/2009 Pryor
 D595,667 S * 7/2009 Lasky D13/168
 D602,458 S 10/2009 Fasching
 D603,865 S 11/2009 Jordan et al.
 D613,746 S 4/2010 Jordan et al.
 D617,777 S * 6/2010 Chizinsky D14/218
 D627,763 S * 11/2010 Carsey D14/218
 D633,506 S 3/2011 Jordan et al.
 D633,910 S * 3/2011 Cacioppo D14/388
 7,978,181 B2 7/2011 Westerman
 8,115,741 B2 2/2012 Jordan et al.
 D672,727 S * 12/2012 McCullar D13/168
 D680,972 S * 4/2013 Hunter D13/168
 8,411,037 B2 4/2013 Larsen et al.
 8,462,133 B2 6/2013 Lynch et al.
 D693,778 S * 11/2013 Sakai D13/168
 D699,224 S * 2/2014 Diamond D14/218
 D714,741 S * 10/2014 O'Donnell D13/174
 D719,935 S * 12/2014 Diamond D14/218
 D729,210 S * 5/2015 Behar D14/218
 D737,250 S * 8/2015 Ingham D14/218
 D760,668 S * 7/2016 Mishan D13/168
 D772,201 S * 11/2016 Lepchenske D14/218
 D777,728 S * 1/2017 Garcia D14/399
 2003/0040340 A1 2/2003 Smethers
 2003/0046451 A1 3/2003 Prabhakarn
 2003/0058139 A1 3/2003 Sakurai
 2004/0026136 A1 * 2/2004 Hill G06F 1/1615
 178/18.01
 2004/0030412 A1 * 2/2004 Huang G06F 1/1616
 700/1
 2004/0119685 A1 6/2004 Harries et al.
 2006/0022955 A1 2/2006 Kennedy
 2006/0026536 A1 2/2006 Hotelling et al.
 2006/0172266 A1 8/2006 Rogers et al.
 2007/0212668 A1 9/2007 Takami et al.
 2008/0204426 A1 8/2008 Hotelling et al.
 2008/0211783 A1 9/2008 Hotelling et al.
 2008/0211784 A1 9/2008 Hotelling et al.
 2008/0211785 A1 9/2008 Hotelling et al.
 2008/0231610 A1 9/2008 Hotelling et al.
 2009/0284477 A1 * 11/2009 Jordan G06F 3/041
 345/173
 2014/0049481 A1 * 2/2014 Jordan G06F 3/039
 345/173
 2015/0261297 A1 * 9/2015 Quek G06F 3/044
 345/174

* cited by examiner

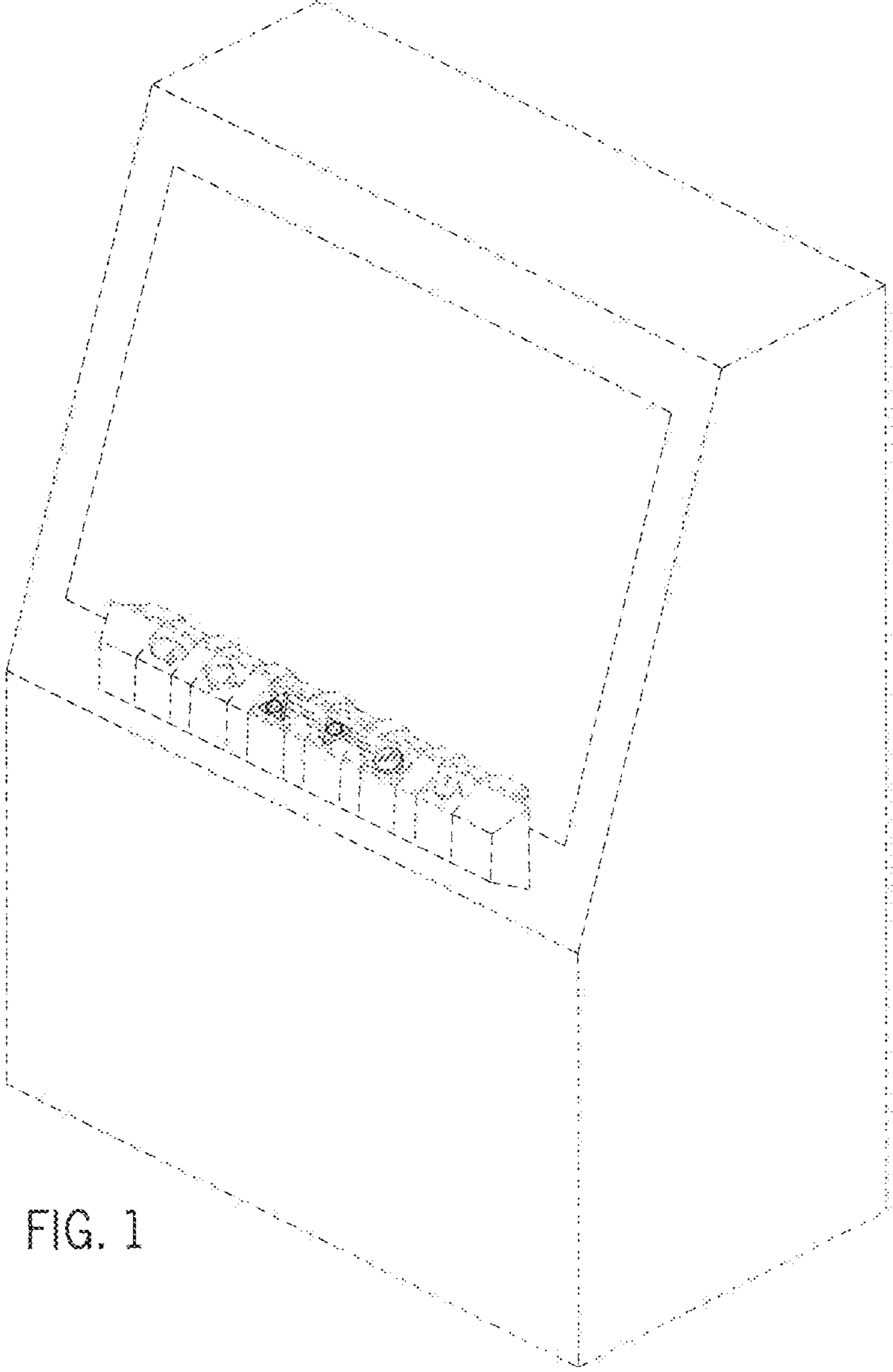


FIG. 1

FIG. 2

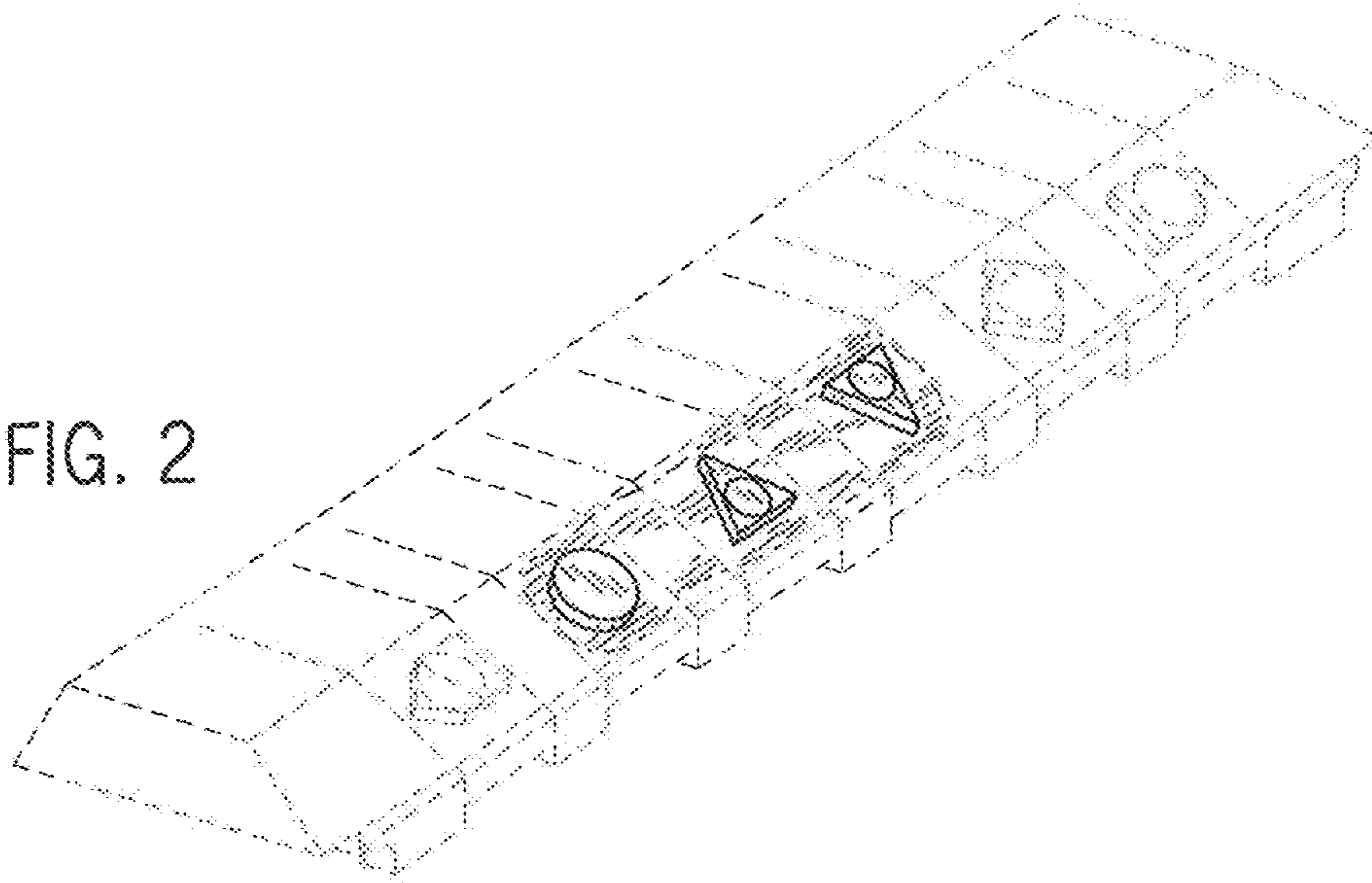
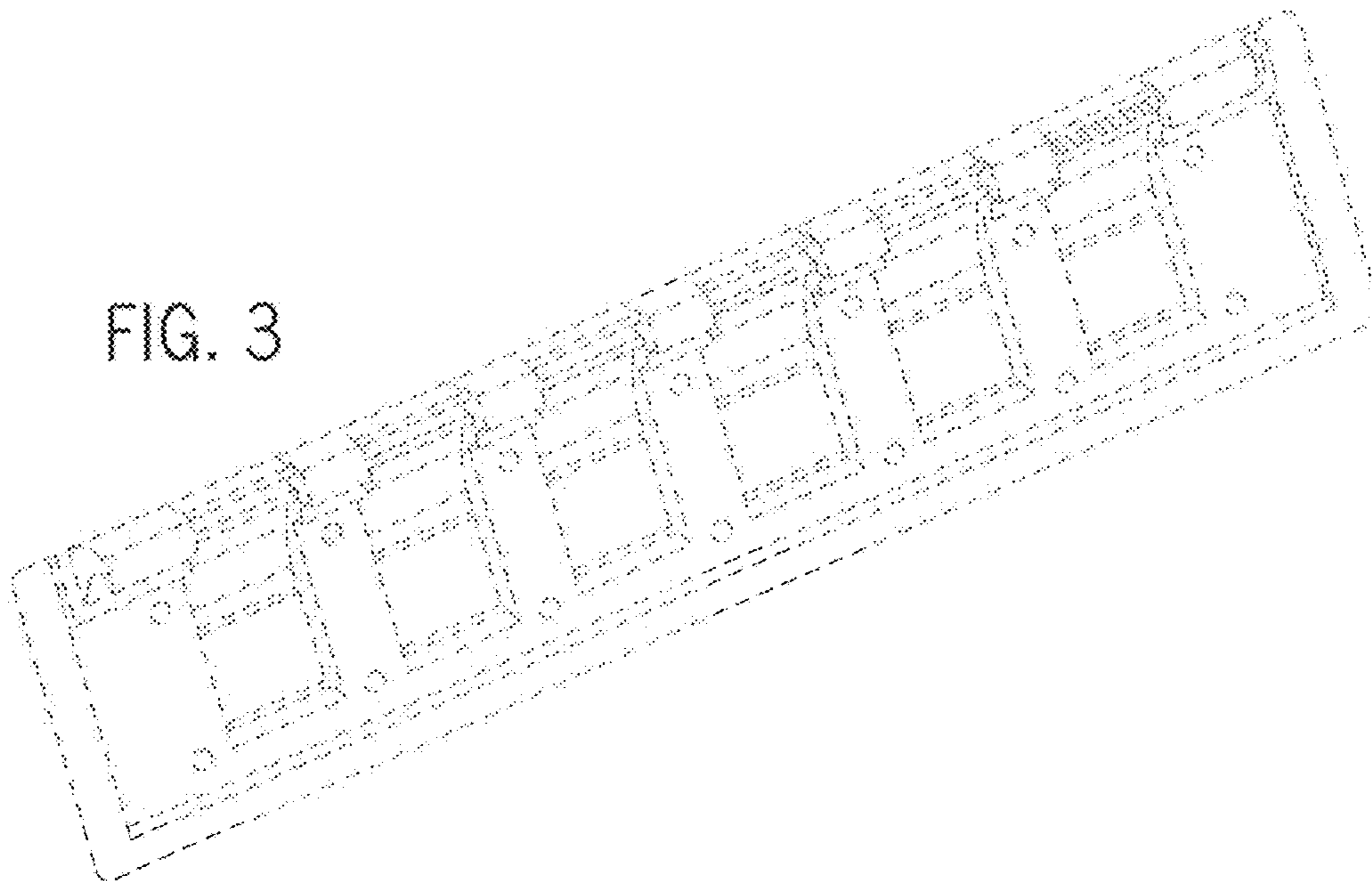


FIG. 3



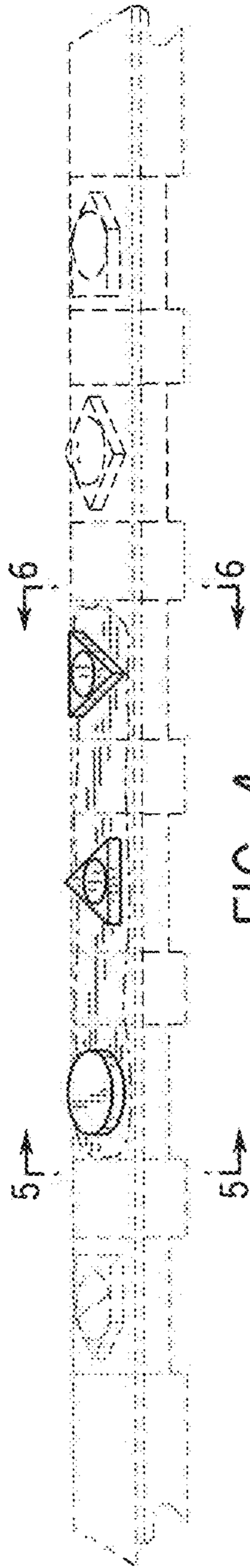


FIG. 4

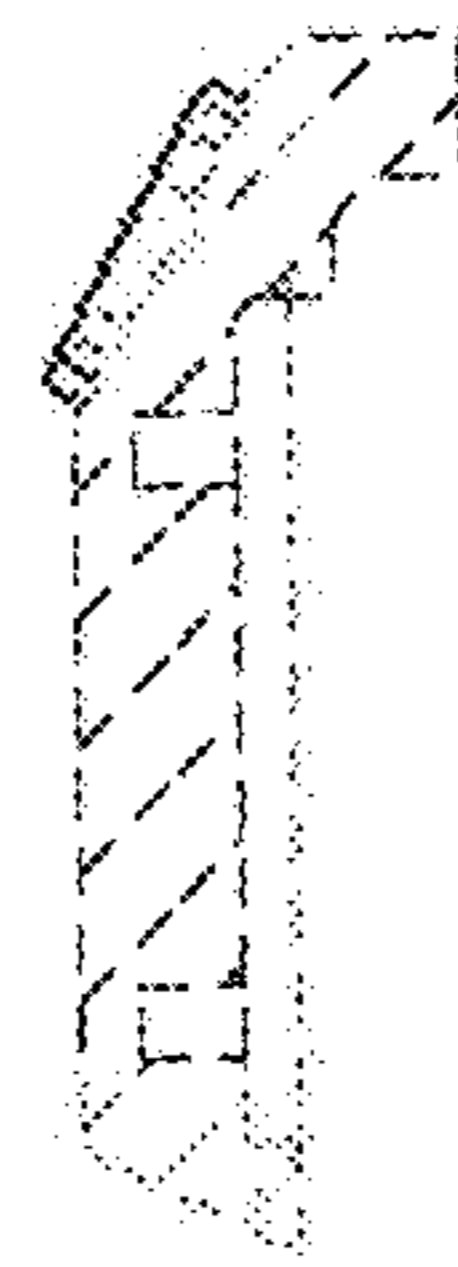


FIG. 5

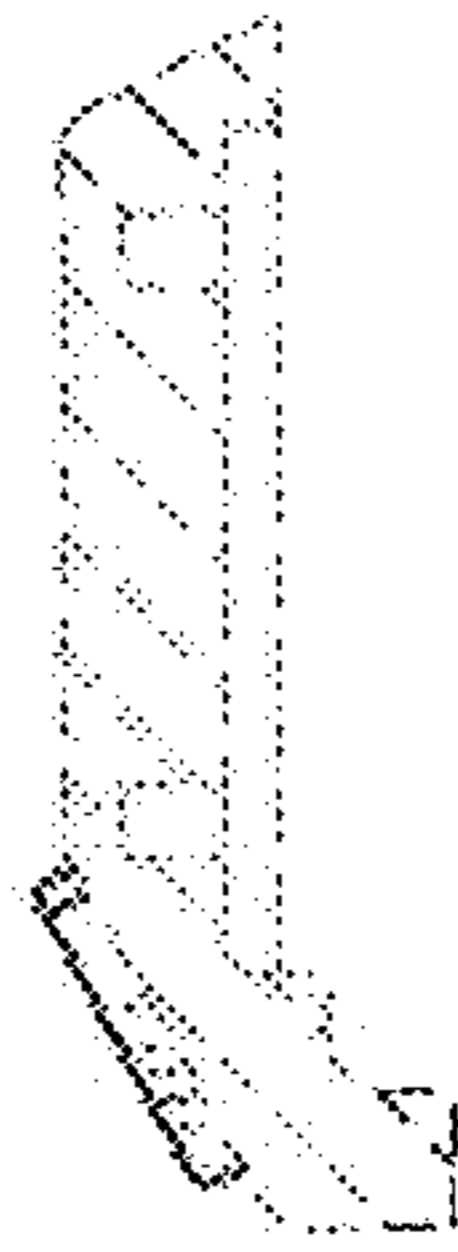


FIG. 6

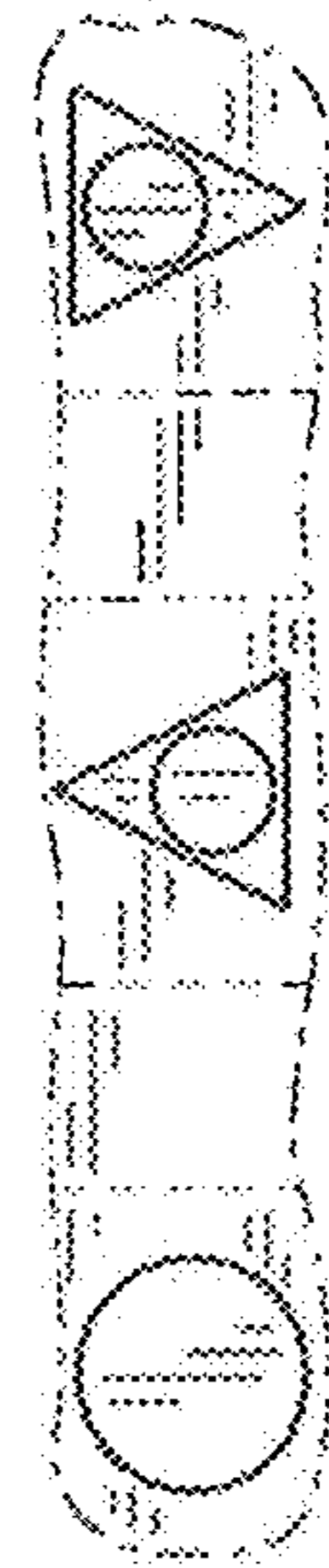


FIG. 7

FIG. 8

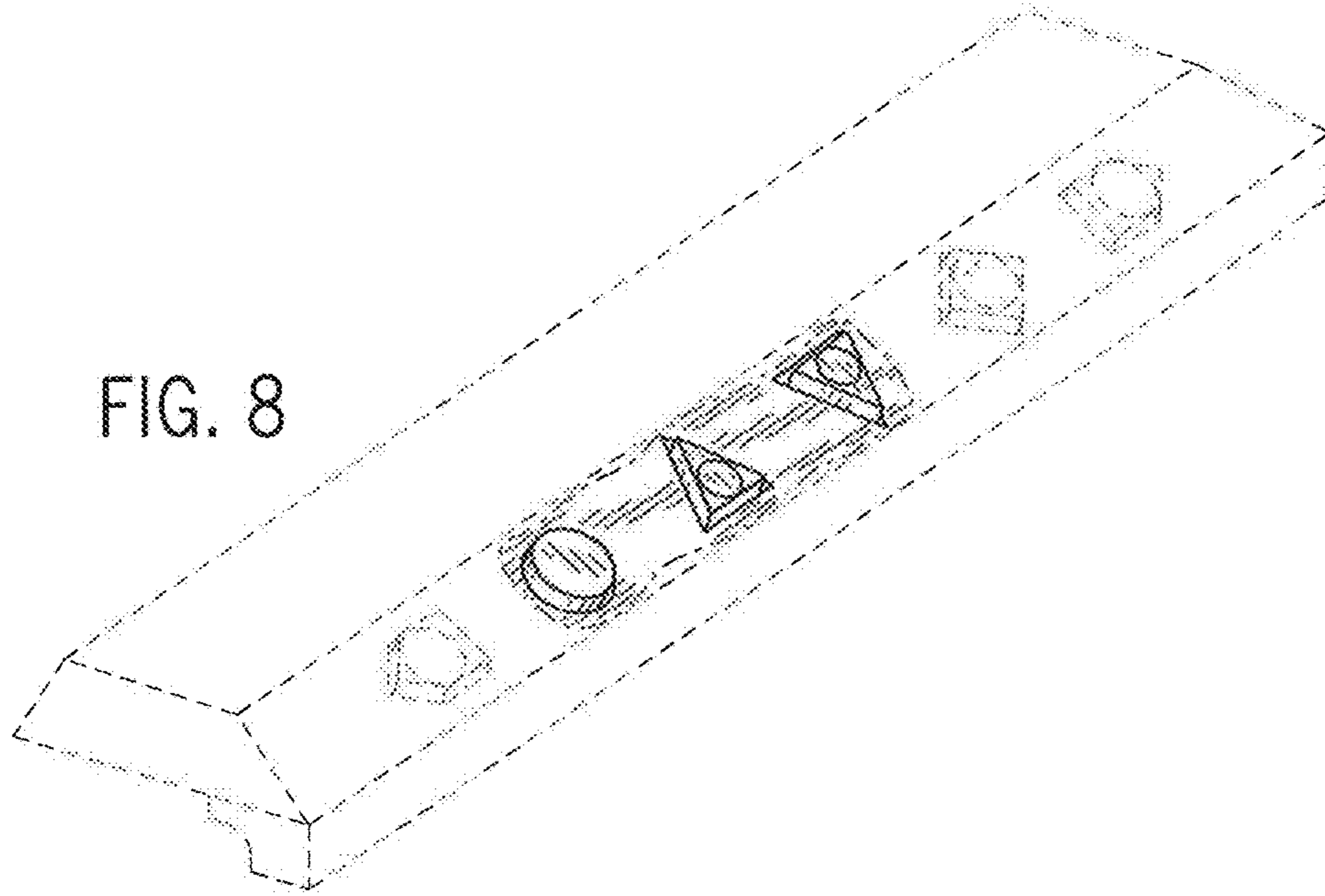
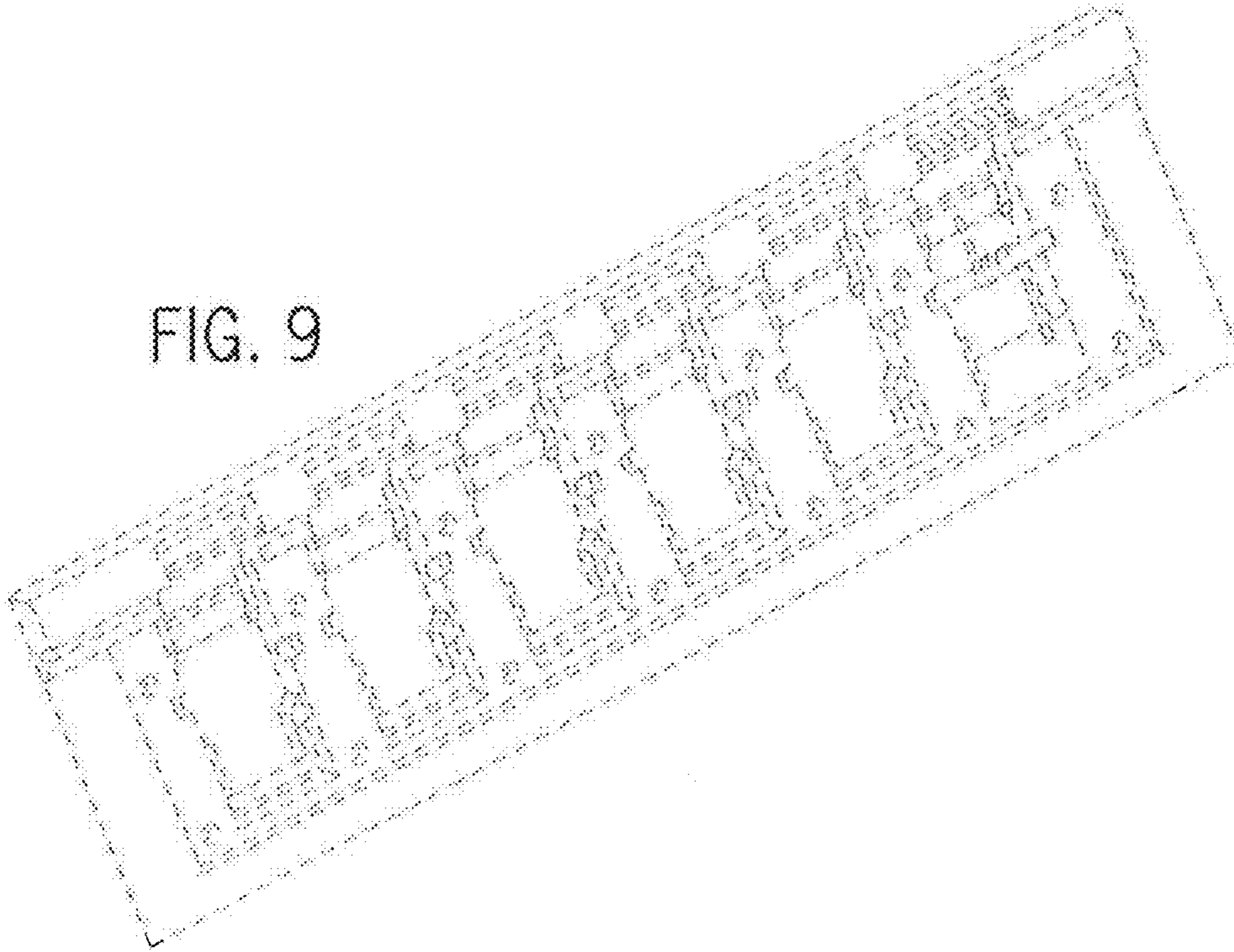


FIG. 9



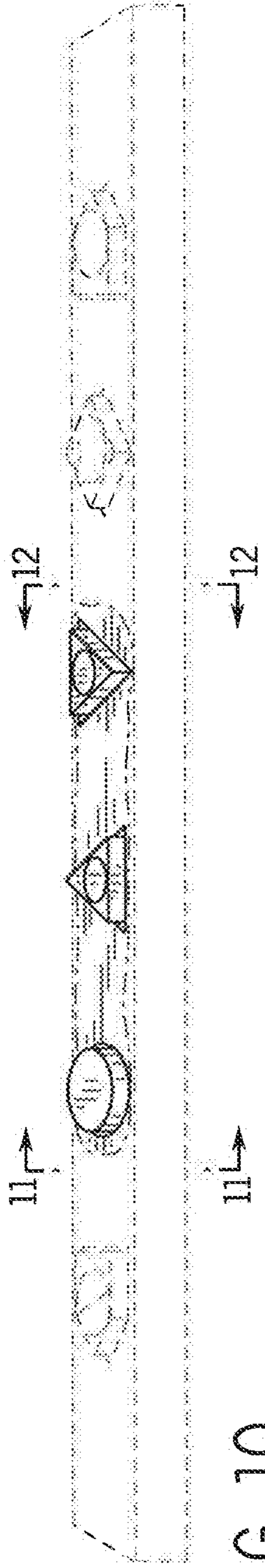


FIG. 10



FIG. 11

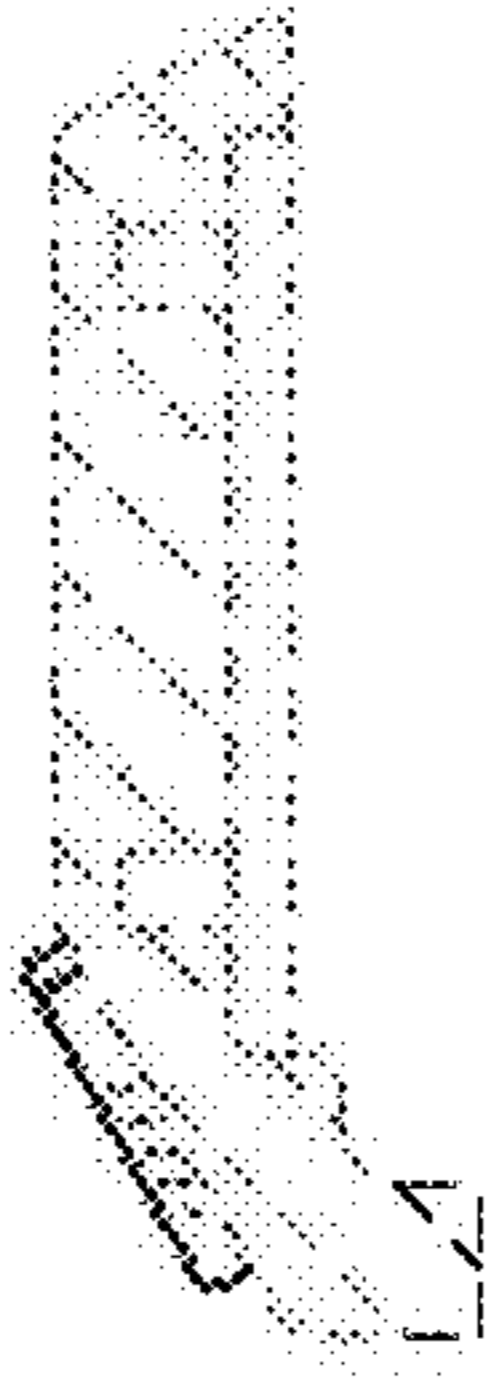


FIG. 12

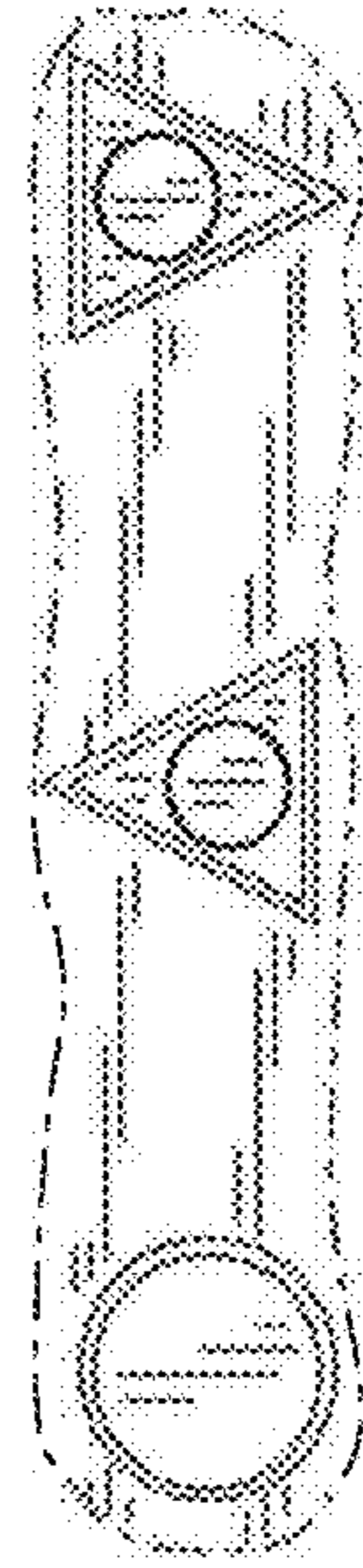


FIG. 13