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Lim et al.

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(54) **RADIO FREQUENCY IDENTIFICATION (RFID) READER**

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

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(52) **U.S. Cl.**
USPC **D14/428**

(58) **Field of Classification Search**

USPC D14/420, 426-430, 453, 346, 341, 347, D14/412, 138, 230, 385; D13/107, 184; 358/473; 235/462.43, 462.45, 462.47, 235/462.48, 462.44, 462.46, 487, 472.01, 235/472.02, 145 A, 145 R, 385, 440, 383, 235/454, 462.01, 435; D10/78; 324/426; D3/273; 710/73; D18/7; 361/679, 728, 361/679.56, 679.55, 679.59; 382/313, 382/321; 455/575.1, 561, 572, 557, 349, 455/556.1, 556.2, 90.3; 345/156, 168, 345/169, 172, 173, 87; 705/17, 18, 705/22-25

CPC G06F 1/626; G06F 1/1626; G06F 1/1656; G06F 1/1632; G06F 1/1684; G06F 1/1635; G06F 8/63; G06F 17/30091; G06F 9/4401; G06K 7/10881; G06K 7/1098; G06K 7/10722; G06K 7/1404; G06K 7/0004; G06K 7/10633; G06K 7/10851; G06K 7/1091; G06K 7/1092;

G06K 7/1093; G06K 7/10; G06K 7/109; G06K 7/1417; G06K 9/228; G06K 17/0022; G06K 17/00; G06K 2207/1011; G06K 2207/1013; G06K 2207/1016; G06K 2207/1018; G06K 2017/0051; G06K 2017/0067; G06K 2007/10524; G06K 19/0722; G06K 19/07758; G06K 19/0723; G06K 7/1095; G06K 7/089; G06K 7/10821; G06K 7/10386; G06K 7/10356; G06K 7/10316; G06K 7/10346; G06K 7/10366; G06K 7/10237; G07G 1/0081; G07G 1/009; G06Q
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,210,802 A * 7/1980 Sakai G06K 7/10881
235/462.16
5,200,599 A * 4/1993 Krichever G06K 7/10643
235/462.38

(Continued)

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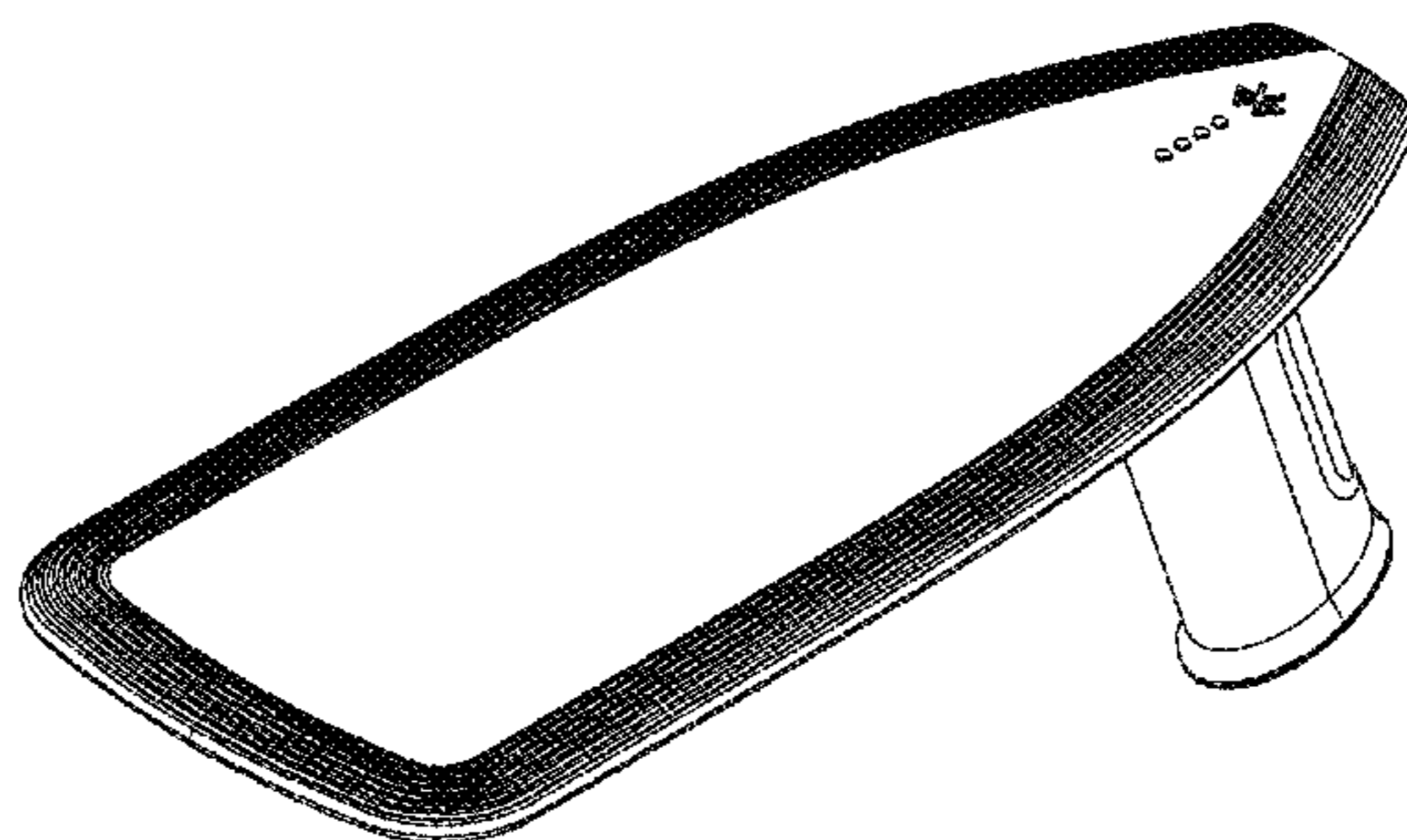
(57) **CLAIM**

The ornamental design for a radio frequency identification (RFID) reader, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a radio frequency identification (RFID) reader showing our new design; FIG. 2 is a front elevation view thereof; FIG. 3 is a rear elevation view thereof; FIG. 4 is a left side view thereof; FIG. 5 is a right side view thereof; FIG. 6 is a top plan view thereof; and, FIG. 7 is a bottom plan view thereof.

1 Claim, 5 Drawing Sheets



(58) **Field of Classification Search**

CPC 20/20; G06Q 20/201; G06Q 20/202; G06Q
 20/203; G06Q 20/30; G06Q 20/32; G06Q
 20/322; G06Q 20/4014; G06Q 10/087;
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 H04N 2101/00; H04M 1/0249; H04M
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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,361,061 A * 11/1994 Mays G06F 15/0225
 340/7.54
 5,841,121 A * 11/1998 Koenck G06K 7/10574
 235/472.01
 D442,597 S * 5/2001 Meyers D14/428
 D449,995 S * 11/2001 Christianson D10/18
 6,366,261 B1 * 4/2002 Stout H01Q 1/084
 343/702
 6,394,355 B1 * 5/2002 Schlieffers G06K 7/10881
 235/462.45
 D467,150 S * 12/2002 Frederick D8/68
 D470,847 S * 2/2003 Carlson D14/428
 6,820,812 B2 * 11/2004 Bhatia G06K 7/10881
 235/472.01
 D531,632 S * 11/2006 Brandon D14/426
 7,357,326 B2 * 4/2008 Hattersley G06K 7/10
 235/462.45

D569,378 S * 5/2008 Wanamaker D14/426
 D600,349 S * 9/2009 Bell D24/169
 D634,435 S * 3/2011 Chua D24/186
 D659,032 S * 5/2012 Atwell D10/63
 D659,033 S * 5/2012 Bailey D10/63
 D671,121 S * 11/2012 Schickling D14/426
 D679,710 S * 4/2013 Hansen D14/426
 D729,247 S * 5/2015 Hackett D14/426
 9,239,590 B2 * 1/2016 Vargas G06F 1/1632
 9,436,226 B2 * 9/2016 Chen G06F 1/1654
 9,679,180 B2 * 6/2017 Lim G06K 7/10544
 9,727,840 B2 * 8/2017 Bernhardt G06Q 10/087
 D799,454 S * 10/2017 Lin D14/230
 D802,568 S * 11/2017 Manivannan D14/230
 D814,447 S * 4/2018 Forster D14/230
 D819,608 S * 6/2018 Manivannan D14/230
 D820,263 S * 6/2018 Rebello D14/426
 D822,663 S * 7/2018 Paolizzi D14/428
 10,019,613 B1 * 7/2018 DeBates G06K 7/10356
 D826,219 S * 8/2018 Kobayashi D14/230
 10,055,618 B1 * 8/2018 Dagleish G06K 7/10316
 2001/0008390 A1 * 7/2001 Berquist G06K 7/10079
 340/10.31
 2004/0179254 A1 * 9/2004 Lewis G02B 26/085
 359/204.1
 2009/0160638 A1 * 6/2009 Jesme G01S 13/825
 340/539.11
 2013/0311314 A1 * 11/2013 Fernando G06K 7/01
 705/17
 2014/0249942 A1 * 9/2014 Hicks G07G 1/0081
 705/17
 2014/0368317 A1 * 12/2014 Man G06K 7/10198
 340/10.1
 2015/0255873 A1 * 9/2015 Chan H01Q 9/285
 343/806
 2016/0078257 A1 * 3/2016 Liou G06K 7/10792
 340/10.3
 2016/0359223 A1 * 12/2016 Zhao H01Q 1/42
 2017/0124361 A1 * 5/2017 Wilfred G06K 7/10198
 2018/0260592 A1 * 9/2018 Trishaun G06K 7/10386

* cited by examiner

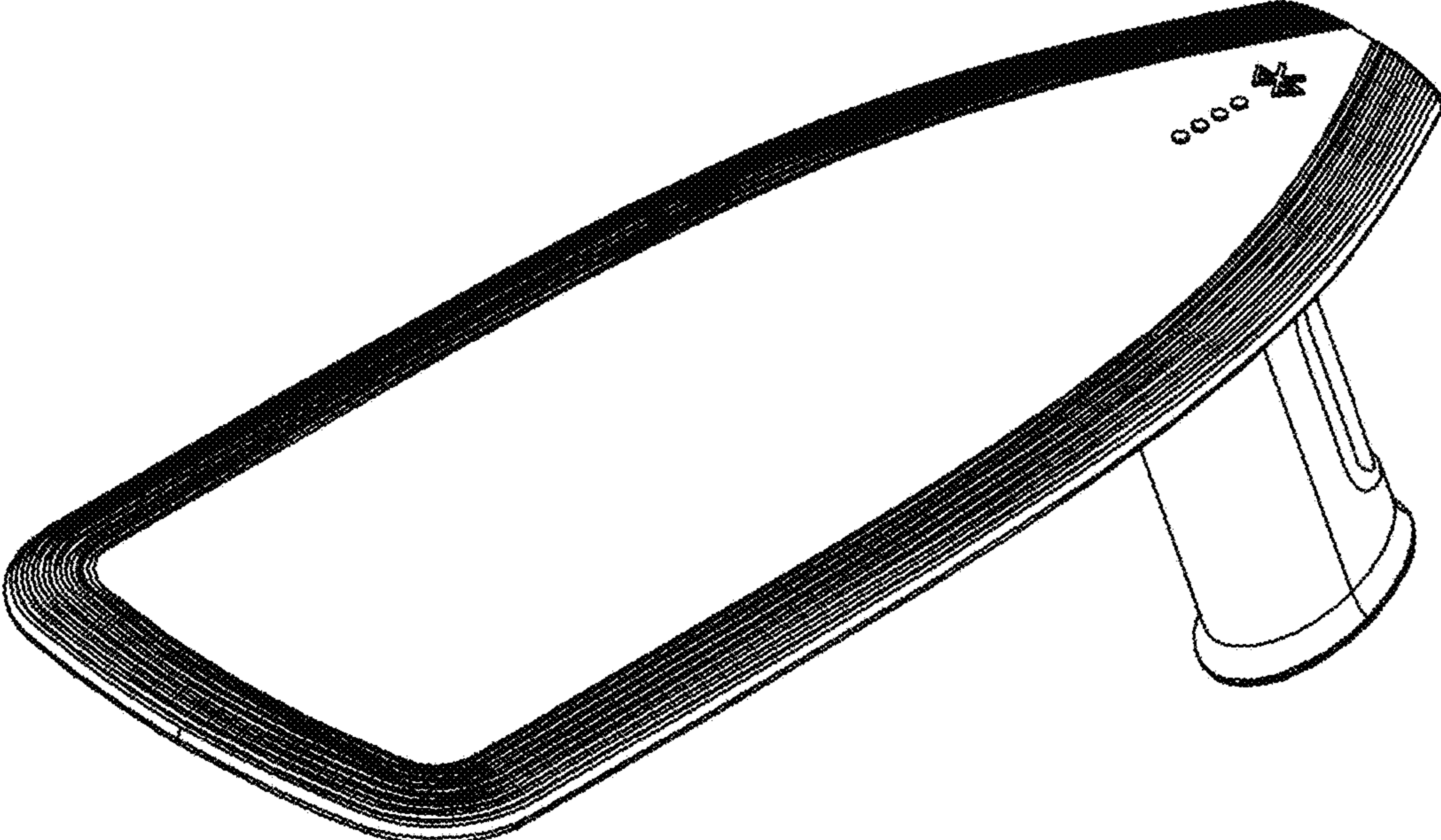


FIG. 1

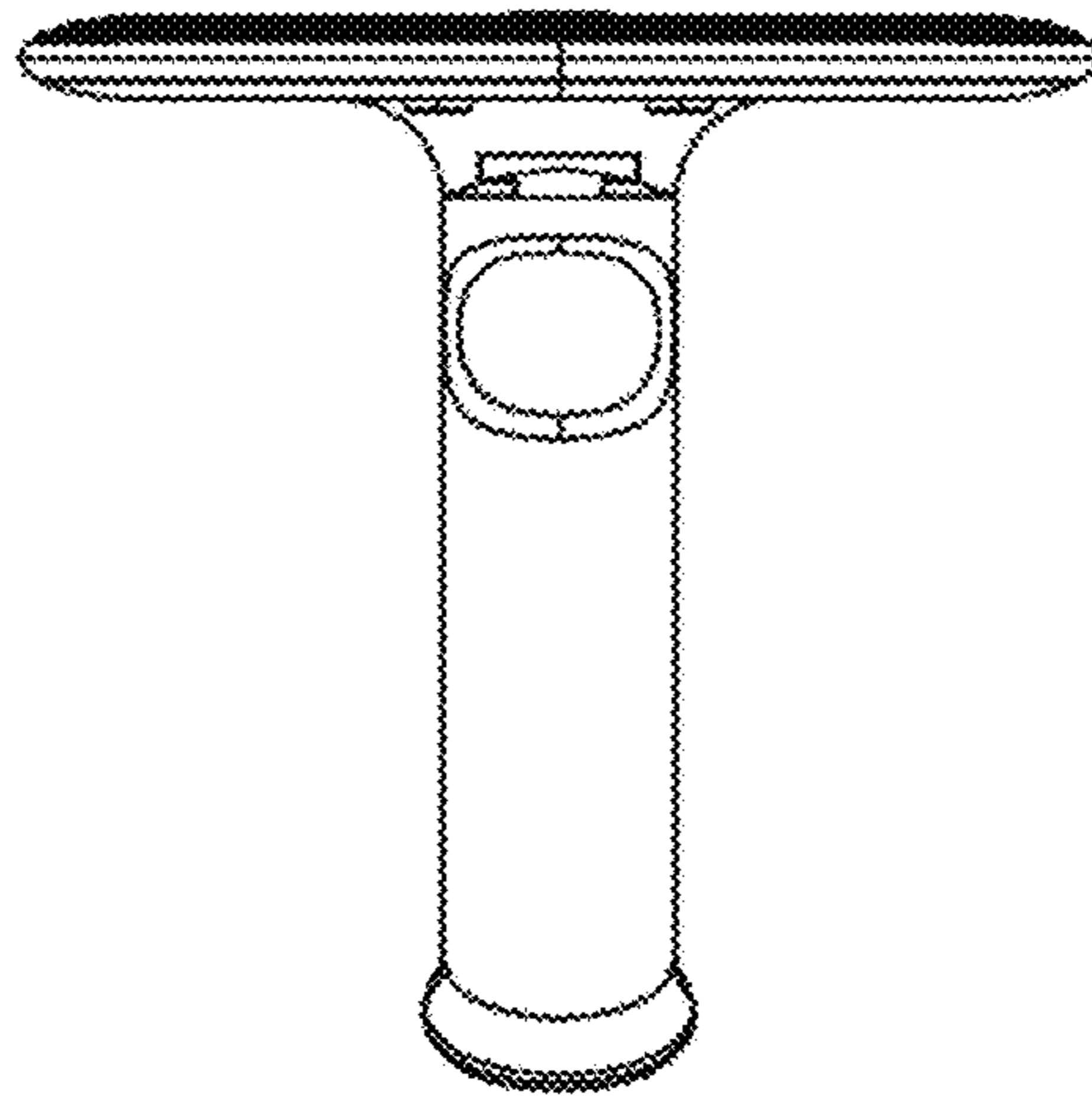


FIG. 2

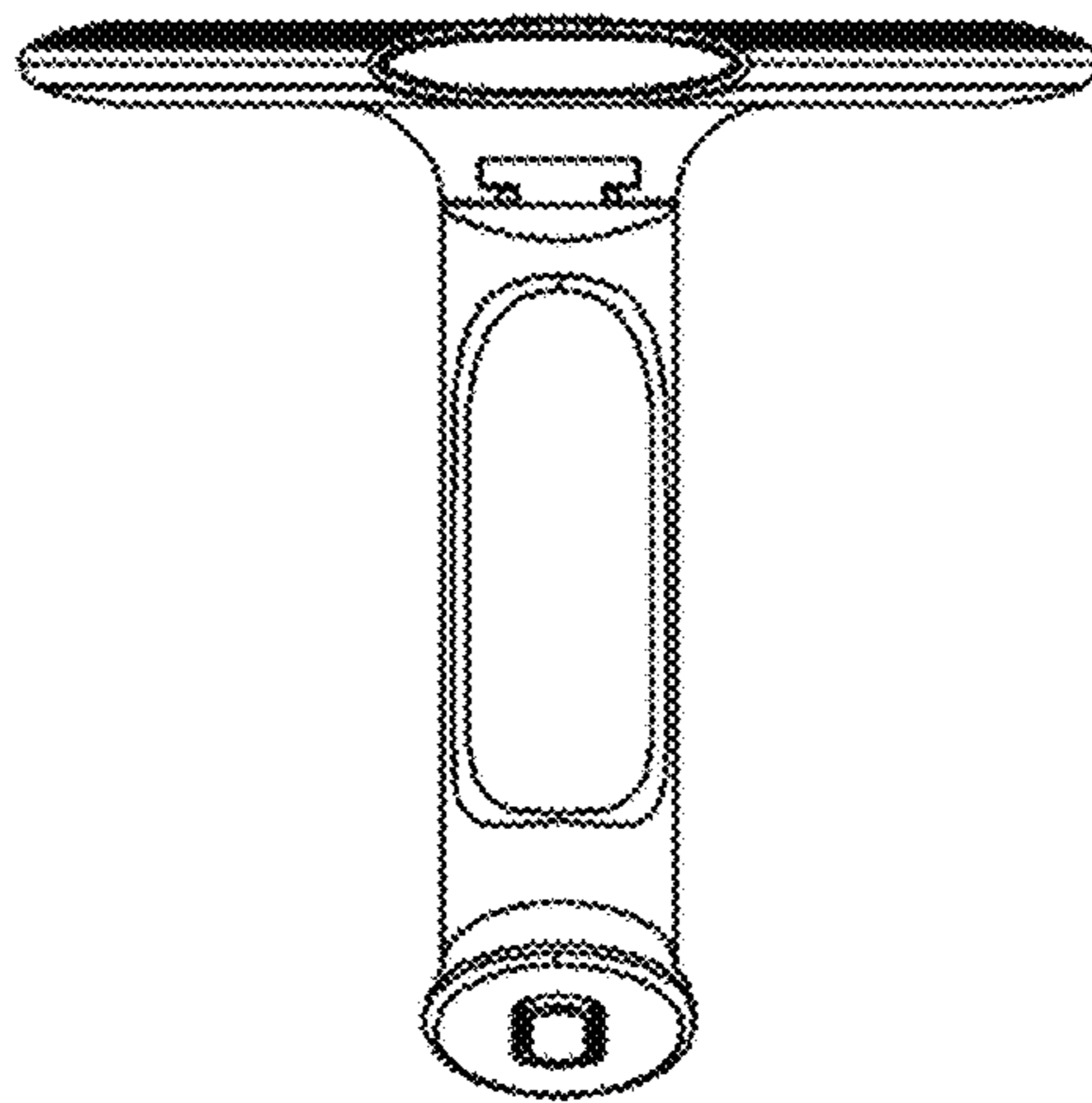


FIG. 3

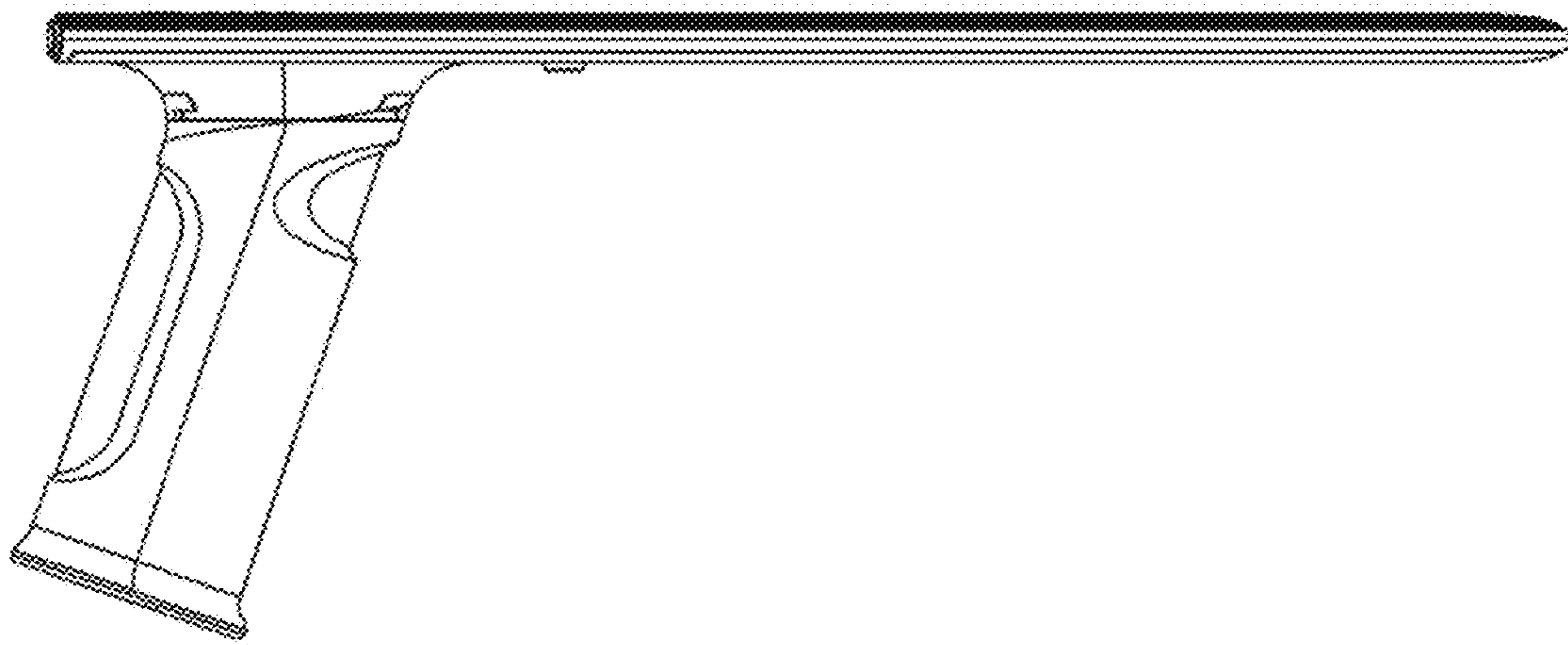


FIG. 4

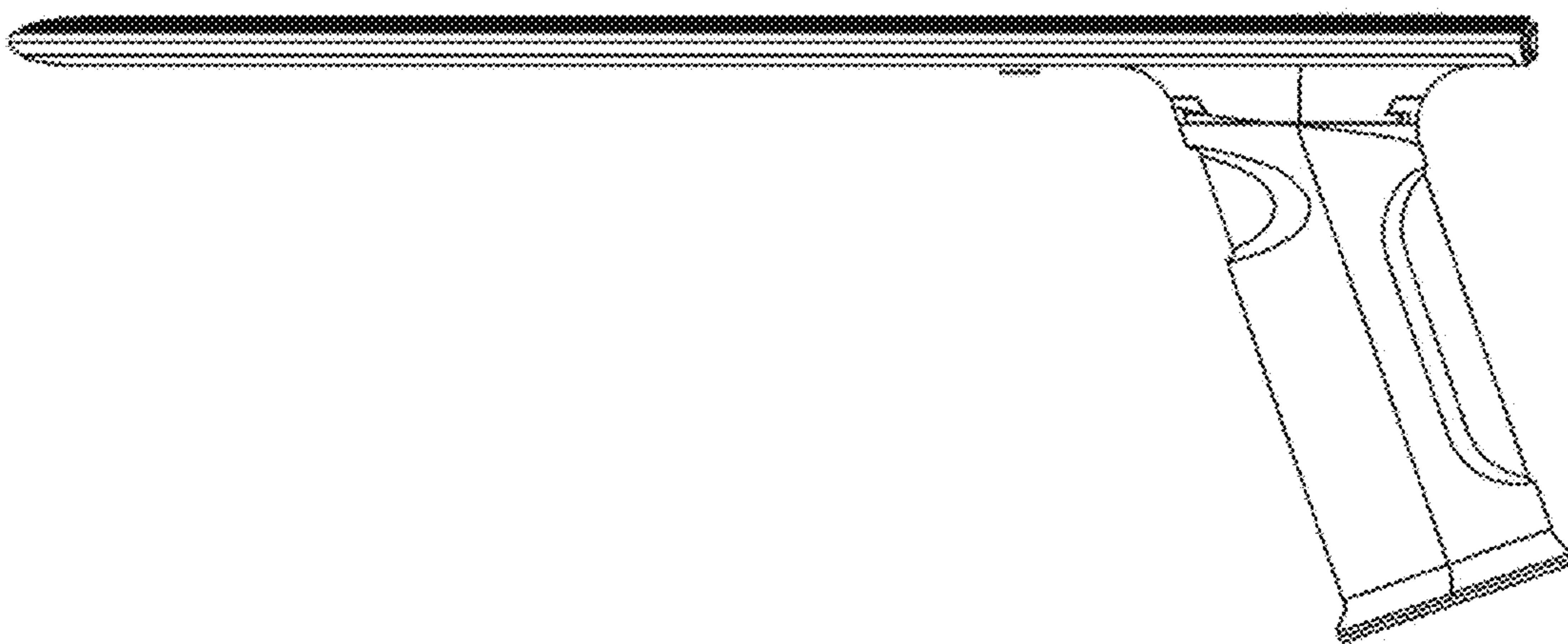


FIG. 5

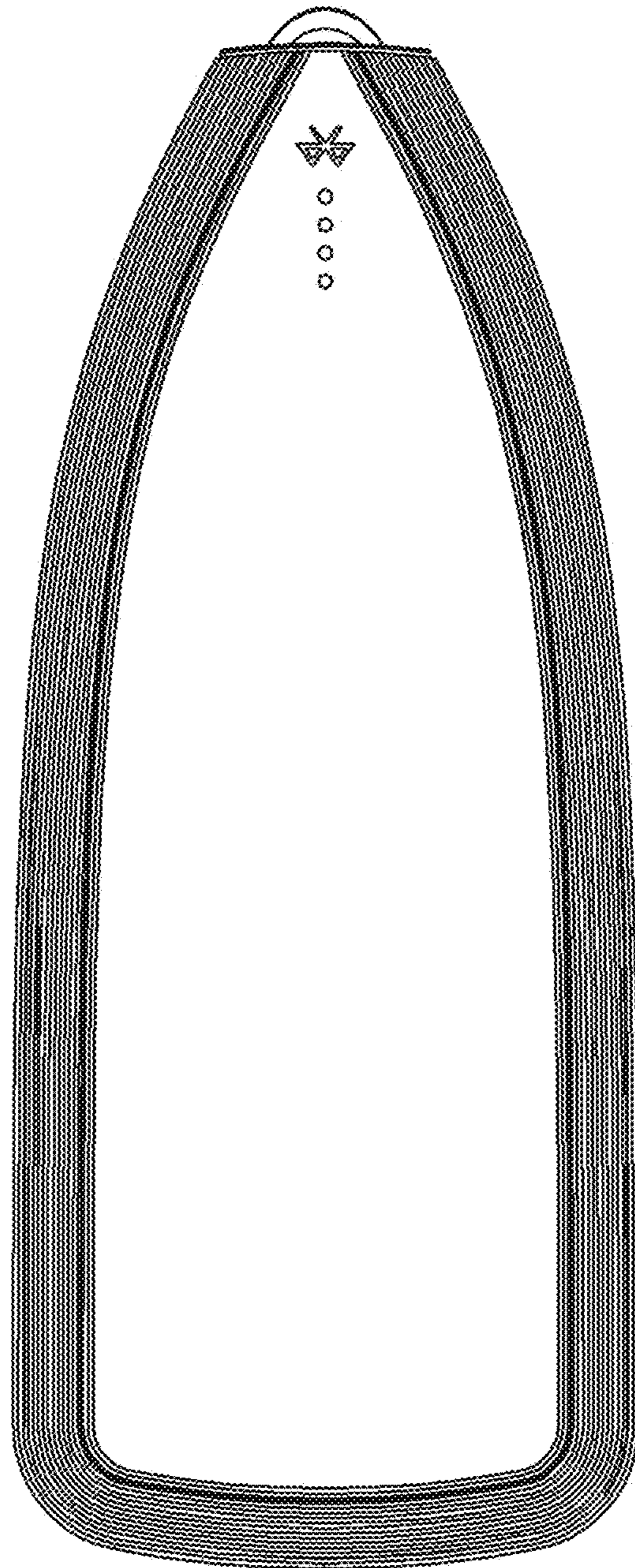


FIG. 6

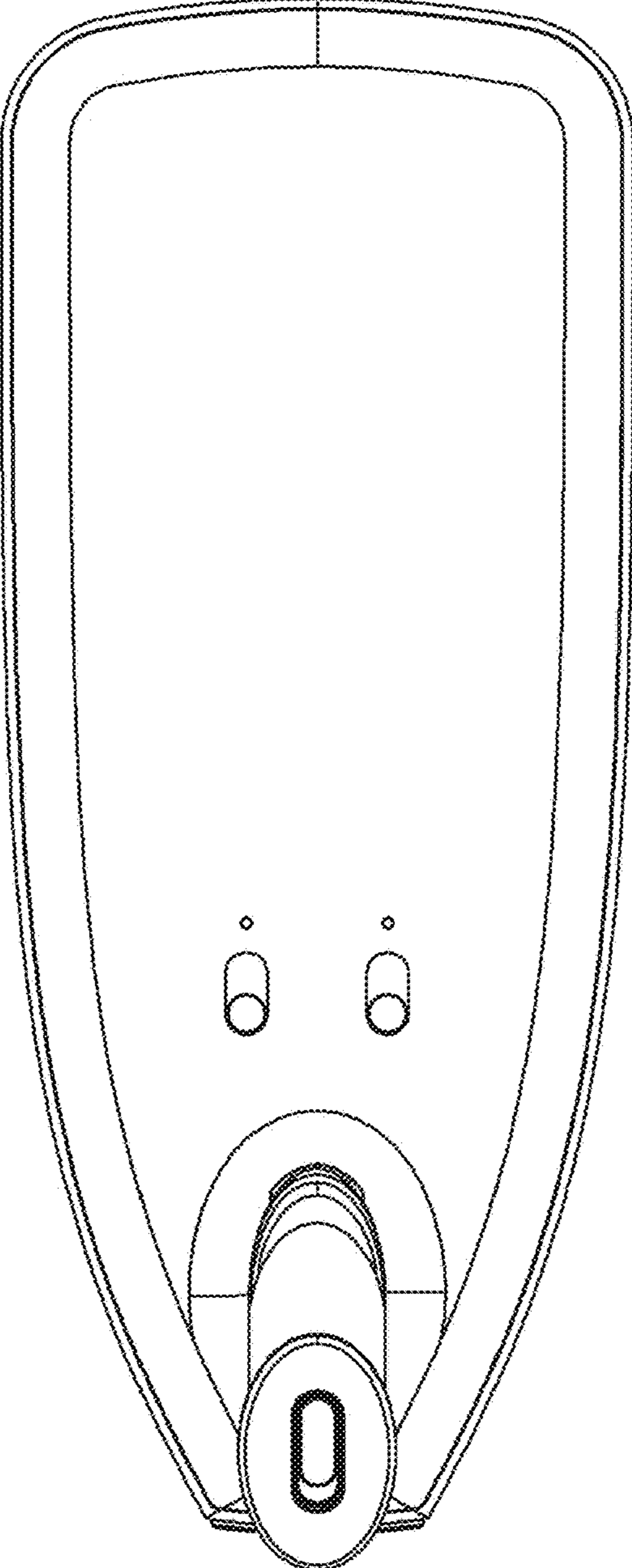


FIG. 7