



US0D1073069S

(12) **United States Design Patent** (10) **Patent No.:** **US D1,073,069 S**  
**Gorfinkel et al.** (45) **Date of Patent:** **\*\* Apr. 29, 2025**

(54) **PROTECTIVE SLEEVE FOR AN INTRAORAL SCANNER**

(71) Applicant: **Align Technology, Inc.**, San Jose, CA (US)

(72) Inventors: **Roe Gorfinkel**, Yavne (IL); **Eran Ishay**, Tel Aviv (IL); **Benny Gordon**, Hod HaSharon (IL); **Avi Kopelman**, Palo Alto, CA (US); **Nir Makmel**, Tel Aviv (IL)

(73) Assignee: **Align Technology, Inc.**, San Jose, CA (US)

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

(21) Appl. No.: **29/784,195**

(22) Filed: **May 18, 2021**

(51) **LOC (15) Cl.** ..... **24-02**

(52) **U.S. Cl.**  
USPC ..... **D24/152**

(58) **Field of Classification Search**  
USPC ..... D24/152, 133, 138, 158, 137, 176, 127; D4/101; D14/426, 453; D7/691  
CPC ..... A61C 9/0053; A61C 19/04; A61C 19/004; A61C 7/002; A61C 1/088; A61B 5/0088; A61B 1/24; A61B 1/00194; A61B 5/4547;

(Continued)

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

3,769,980 A 11/1973 Karman  
4,279,247 A 7/1981 Kinoshita

(Continued)

**FOREIGN PATENT DOCUMENTS**

GB 8090454000-1000 \* 2/2016  
JP 1577736 S 5/2017

(Continued)

**OTHER PUBLICATIONS**

ITero Element Plus, retrieved from youtube.com, posting date Mar. 3, 2021, online, retrieved Jul. 12, 2024, URL: https://www.youtube.com/watch?v=VSQMPgW1vSs(Year: 2021).\*

(Continued)

*Primary Examiner* — Jennifer L Rempfer  
*Assistant Examiner* — Michelle Marquart Christeon  
(74) *Attorney, Agent, or Firm* — Shay Glenn LLP

(57) **CLAIM**

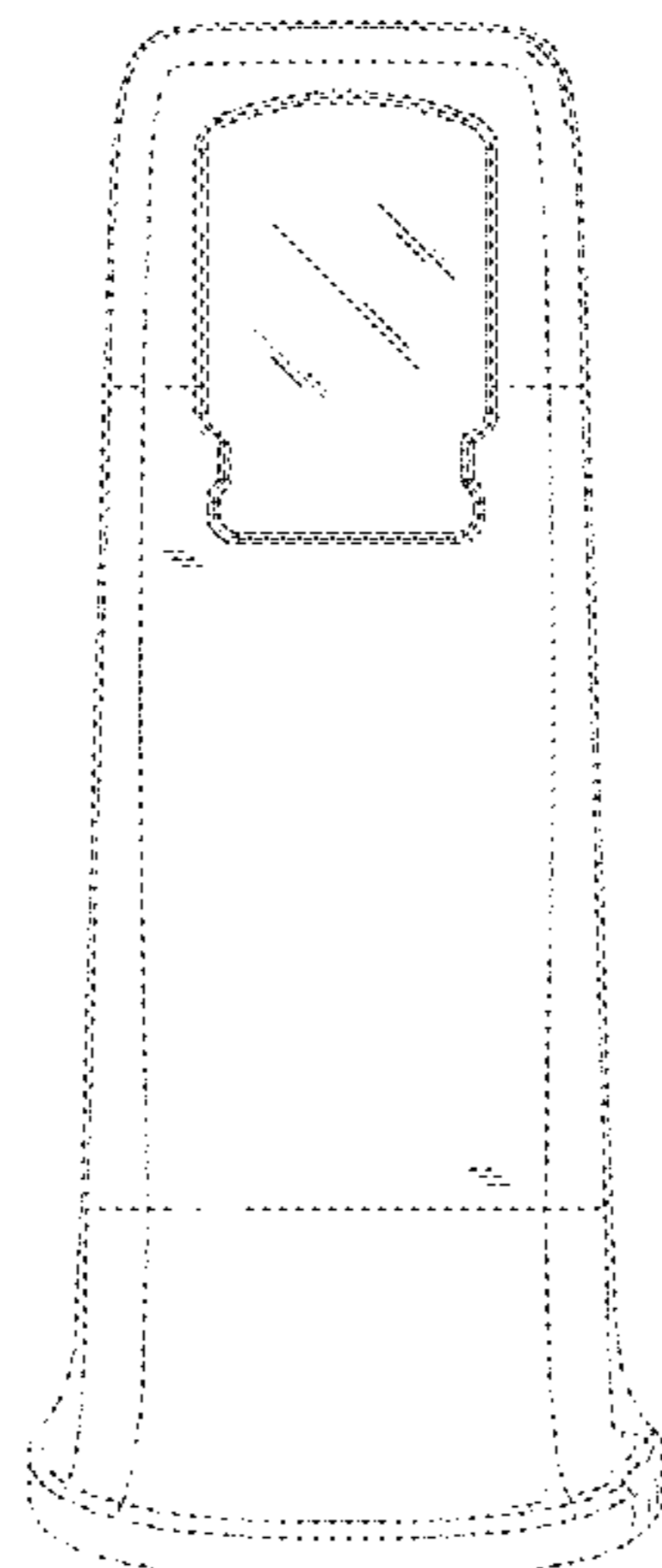
The ornamental design for a protective sleeve for an intraoral scanner, as shown and described.

**DESCRIPTION**

FIG. 1 is a front elevation view of a protective sleeve for an intraoral scanner in accordance with the present invention; FIG. 2 is a back elevation view thereof; FIG. 3 is a bottom plan view thereof; FIG. 4 is a top plan view thereof; FIG. 5 is a right side elevation view thereof; FIG. 6 is a left side elevation view thereof; FIG. 7 is a front perspective view thereof; FIG. 8 is a back perspective view thereof; FIG. 9 is a front elevation view of a second embodiment of a protective sleeve for an intraoral scanner; FIG. 10 is a back elevation view thereof; FIG. 11 is a bottom plan view thereof; FIG. 12 is a top plan view thereof; FIG. 13 is a right side elevation view thereof; FIG. 14 is a left side elevation view thereof; FIG. 15 is a front perspective view thereof; and, FIG. 16 is a back perspective view thereof.

The broken lines in the drawings depict portions of the protective sleeve for an intraoral scanner that forms no part of the claimed design.

**1 Claim, 16 Drawing Sheets**



(58) **Field of Classification Search**  
 CPC ... A61B 1/00009; A61B 5/0062; A61B 5/682;  
 A61B 1/00101; A61B 1/00045; A61B  
 1/247; A61B 5/4542; A61B 6/512; A61B  
 1/053; A61B 1/00135; G06T 2207/30036  
 See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,408,992 A 4/1995 Hamlin et al.  
 5,484,283 A 1/1996 Franetzki  
 5,695,448 A 12/1997 Kimura et al.  
 6,099,314 A 8/2000 Kopelman et al.  
 6,334,772 B1 1/2002 Taub et al.  
 6,334,853 B1 1/2002 Kopelman et al.  
 6,379,296 B1 4/2002 Baggett  
 6,463,344 B1 10/2002 Pavlovskaja et al.  
 6,542,249 B1 4/2003 Kofman et al.  
 6,633,789 B1 10/2003 Nikolskiy et al.  
 6,664,986 B1 12/2003 Kopelman et al.  
 6,697,164 B1 2/2004 Babayoff et al.  
 6,845,175 B2 1/2005 Kopelman et al.  
 6,867,864 B2 3/2005 Overbeck et al.  
 6,979,196 B2 12/2005 Nikolskiy et al.  
 7,030,383 B2 4/2006 Babayoff et al.  
 7,202,466 B2 4/2007 Babayoff et al.  
 7,255,558 B2 8/2007 Babayoff et al.  
 7,286,954 B2 10/2007 Kopelman et al.  
 7,319,529 B2 1/2008 Babayoff  
 7,373,286 B2 5/2008 Nikolskiy et al.  
 7,507,088 B2 3/2009 Taub et al.  
 7,545,372 B2 6/2009 Kopelman et al.  
 7,698,068 B2 4/2010 Babayoff  
 7,914,442 B1 3/2011 Gazdzinski  
 7,916,911 B2 3/2011 Kaza et al.  
 8,108,189 B2 1/2012 Chelnokov et al.  
 8,244,028 B2 8/2012 Kuo et al.  
 8,587,582 B2 11/2013 Matov et al.  
 8,948,482 B2 2/2015 Levin  
 D742,518 S 11/2015 Barak et al.  
 9,192,305 B2 11/2015 Levin  
 9,261,356 B2 2/2016 Lampert et al.  
 9,261,358 B2 2/2016 Atiya et al.  
 9,299,192 B2 3/2016 Kopelman  
 D760,901 S 7/2016 Barak et al.  
 9,393,087 B2 7/2016 Moalem  
 9,408,679 B2 8/2016 Kopelman  
 9,431,887 B2 8/2016 Boltanski  
 9,439,568 B2 9/2016 Atiya et al.  
 9,451,873 B1 9/2016 Kopelman et al.  
 D768,861 S 10/2016 Barak et al.  
 D771,817 S 11/2016 Barak et al.  
 9,491,863 B2 11/2016 Boltanski  
 D774,193 S 12/2016 Makmel et al.  
 9,510,757 B2 12/2016 Kopelman et al.  
 9,660,418 B2 5/2017 Atiya et al.  
 9,668,829 B2 6/2017 Kopelman  
 9,675,430 B2 6/2017 Verker et al.  
 9,693,839 B2 7/2017 Atiya et al.  
 9,717,402 B2 8/2017 Lampert et al.  
 9,724,177 B2 8/2017 Levin  
 9,844,426 B2 12/2017 Atiya et al.  
 D818,579 S \* 5/2018 Yao ..... D24/127  
 10,076,389 B2 9/2018 Wu et al.  
 10,098,714 B2 10/2018 Kuo  
 10,108,269 B2 10/2018 Sabina et al.  
 10,111,581 B2 10/2018 Makmel  
 10,111,714 B2 10/2018 Kopelman et al.  
 10,123,706 B2 11/2018 Elbaz et al.  
 10,136,972 B2 11/2018 Sabina et al.  
 10,258,227 B1 4/2019 Wilson et al.  
 10,380,212 B2 8/2019 Elbaz et al.  
 10,390,913 B2 8/2019 Sabina et al.  
 D862,692 S \* 10/2019 Leon Rovira ..... D24/127  
 10,453,269 B2 10/2019 Furst  
 10,456,043 B2 10/2019 Atiya et al.

10,499,793 B2 12/2019 Ozerov et al.  
 10,504,386 B2 12/2019 Levin et al.  
 10,507,087 B2 12/2019 Elbaz et al.  
 10,517,482 B2 12/2019 Sato et al.  
 D875,925 S \* 2/2020 Archat ..... D24/127  
 D884,175 S \* 5/2020 Aubailly ..... D24/152  
 10,695,150 B2 6/2020 Kopelman et al.  
 10,708,574 B2 7/2020 Furst et al.  
 10,772,506 B2 9/2020 Atiya et al.  
 10,813,727 B2 10/2020 Sabina et al.  
 10,888,399 B2 1/2021 Kopelman et al.  
 D910,850 S \* 2/2021 Hansen ..... D24/152  
 10,952,816 B2 3/2021 Kopelman  
 D916,288 S \* 4/2021 Hansen ..... D24/152  
 10,980,613 B2 4/2021 Shanjani et al.  
 10,986,982 B2 4/2021 Wu et al.  
 11,013,581 B2 5/2021 Sabina et al.  
 D925,739 S 7/2021 Ariel et al.  
 11,096,765 B2 8/2021 Atiya et al.  
 D941,464 S \* 1/2022 Nock ..... D24/127  
 D966,503 S \* 10/2022 Leard ..... D24/127  
 D987,078 S \* 5/2023 Frenkler ..... D16/208  
 D988,513 S \* 6/2023 Bassir ..... D24/152  
 D989,311 S \* 6/2023 Frenkler ..... D24/152  
 2002/0123664 A1 9/2002 Mitsumori  
 2003/0107652 A1 6/2003 Williams  
 2006/0048319 A1 3/2006 Morgan et al.  
 2006/0089627 A1 4/2006 Burnett et al.  
 2007/0007360 A1 1/2007 Ogino et al.  
 2007/0121786 A1 5/2007 Okawa et al.  
 2008/0021276 A1 1/2008 Wax  
 2009/0069763 A1 3/2009 DiCarlo et al.  
 2010/0010308 A1 1/2010 Braun et al.  
 2010/0041952 A1 2/2010 Castellucci et al.  
 2010/0063359 A1 3/2010 Okoniewski  
 2010/0081878 A1 4/2010 Byers et al.  
 2010/0273355 A1 10/2010 Gleason et al.  
 2010/0308038 A1 12/2010 Davidson  
 2011/0065991 A1 3/2011 Sarvazyan et al.  
 2011/0106029 A1 5/2011 Garren et al.  
 2012/0029280 A1 2/2012 Kucklick  
 2012/0029289 A1 2/2012 Kucklick  
 2012/0077142 A1 3/2012 Maurer et al.  
 2012/0156634 A1 6/2012 Duff, Jr. et al.  
 2012/0323069 A1 12/2012 Stout  
 2013/0023770 A1 1/2013 Courtney et al.  
 2016/0089002 A1 3/2016 Burton et al.  
 2017/0027421 A1 2/2017 Imai  
 2017/0112589 A1 4/2017 Ramkhelawan  
 2017/0311781 A1 11/2017 O'Brien  
 2018/0353062 A1 \* 12/2018 Makmel ..... A61B 1/00142  
 2019/0029784 A1 1/2019 Moalem et al.  
 2019/0150722 A1 5/2019 Yamaya  
 2019/0275307 A1 9/2019 Kamler  
 2019/0388193 A1 12/2019 Saphier et al.  
 2020/0163533 A1 5/2020 Kim et al.  
 2020/0187754 A1 6/2020 Furukawa et al.  
 2020/0281700 A1 9/2020 Kopelman et al.  
 2020/0281702 A1 9/2020 Kopelman et al.  
 2020/0288959 A1 9/2020 Lahti et al.  
 2020/0315434 A1 10/2020 Kopelman et al.  
 2020/0349698 A1 11/2020 Minchenkov et al.  
 2020/0349705 A1 11/2020 Minchenkov et al.  
 2020/0404243 A1 12/2020 Saphier et al.  
 2021/0030503 A1 2/2021 Shalev et al.  
 2021/0059796 A1 3/2021 Weiss et al.  
 2021/0068773 A1 3/2021 Moshe et al.  
 2021/0121049 A1 4/2021 Rudnitsky et al.  
 2021/0128281 A1 5/2021 Peleg  
 2021/0137653 A1 5/2021 Saphier et al.  
 2021/0196152 A1 7/2021 Saphier et al.  
 2021/0236110 A1 8/2021 Williams et al.  
 2021/0259535 A1 8/2021 Shani et al.  
 2021/0369087 A1 12/2021 Kodama et al.  
 2021/0401267 A1 12/2021 Kodama et al.  
 2022/0079426 A1 3/2022 Christiansen et al.  
 2022/0240770 A1 8/2022 Sagiv et al.

(56)

**References Cited**

U.S. PATENT DOCUMENTS

2022/0409347 A1 12/2022 Lee et al.  
2023/0218149 A1 7/2023 Hansen et al.  
2024/0164624 A1\* 5/2024 Shalev ..... A61C 9/0053

FOREIGN PATENT DOCUMENTS

JP 1601874 S 4/2018  
JP 1723255 S 8/2022  
WO D201984-002 \* 7/2016

OTHER PUBLICATIONS

Angelino et al.; Near-infrared imaging for detecting caries and structural deformities in teeth; IEEE journal of translational engineering in health and medicine; vol. 5; pp. 1-7; Apr. 19, 2017.

\* cited by examiner

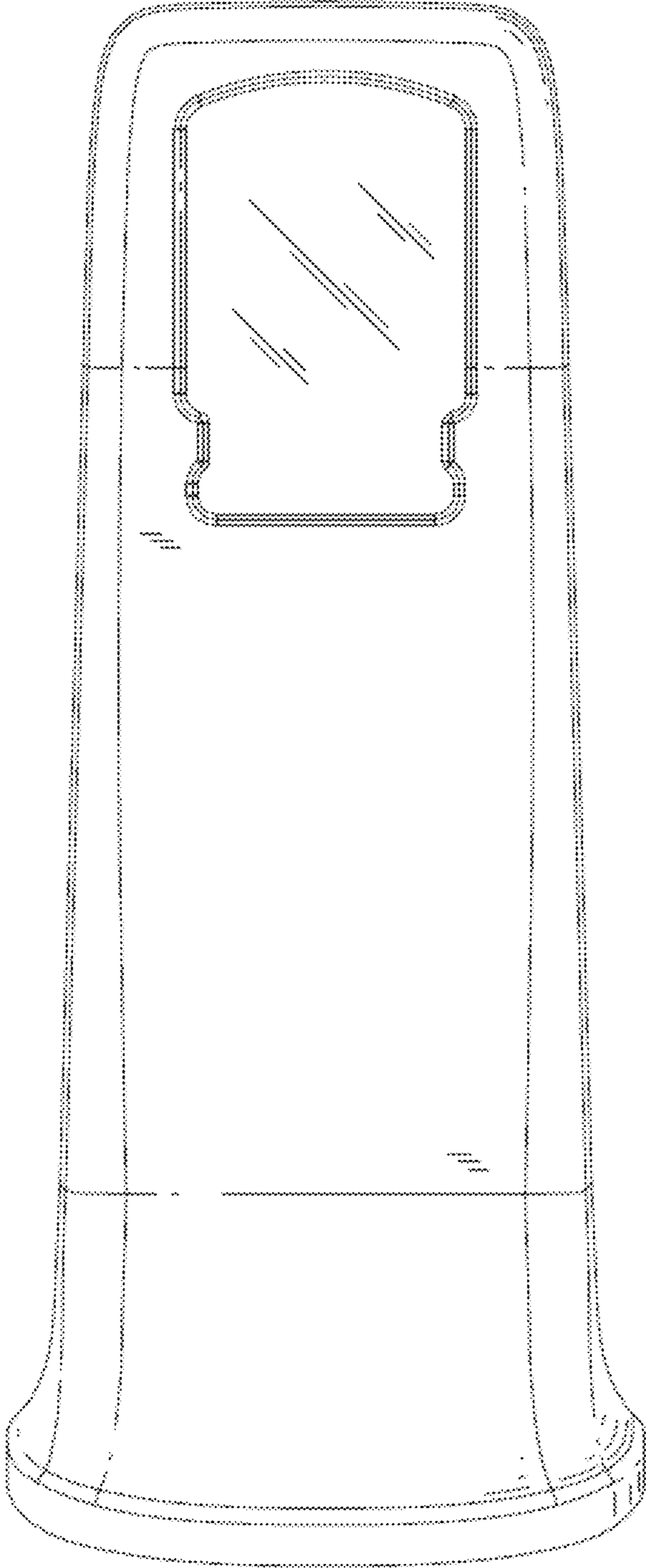


FIG. 1

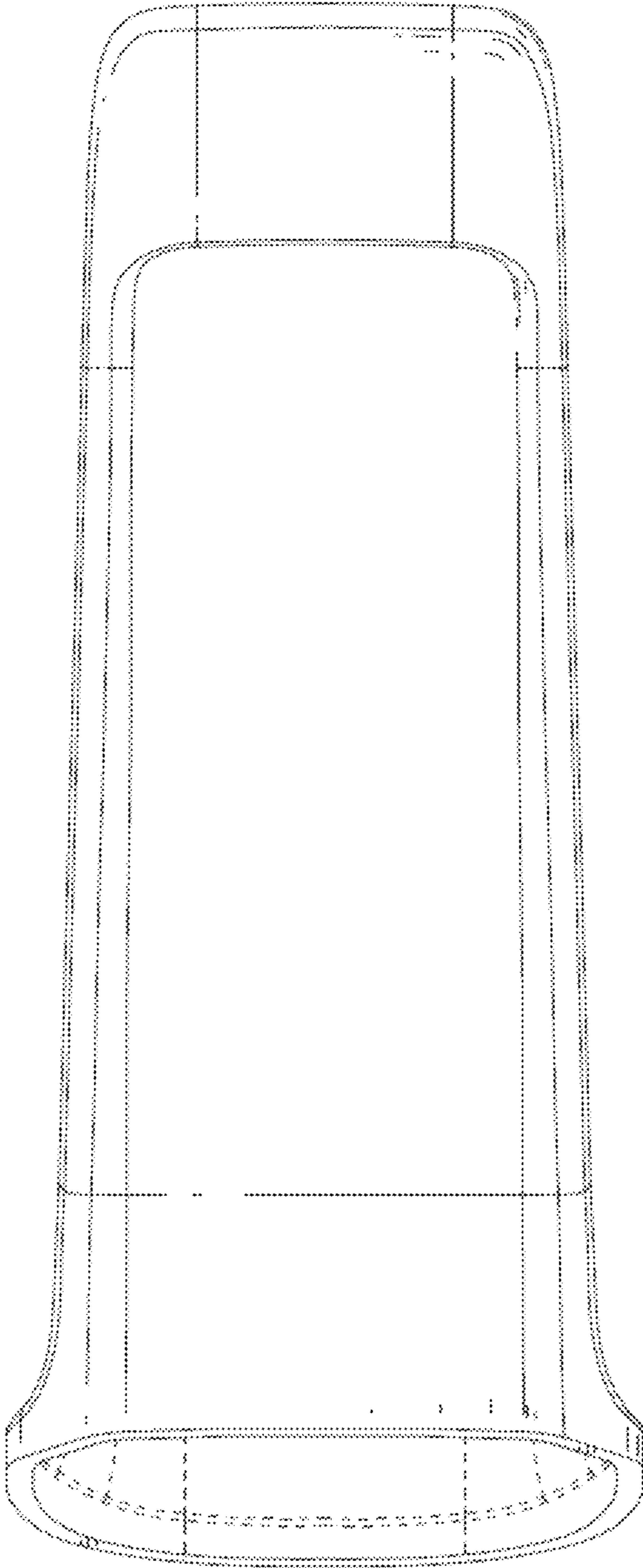


FIG. 2

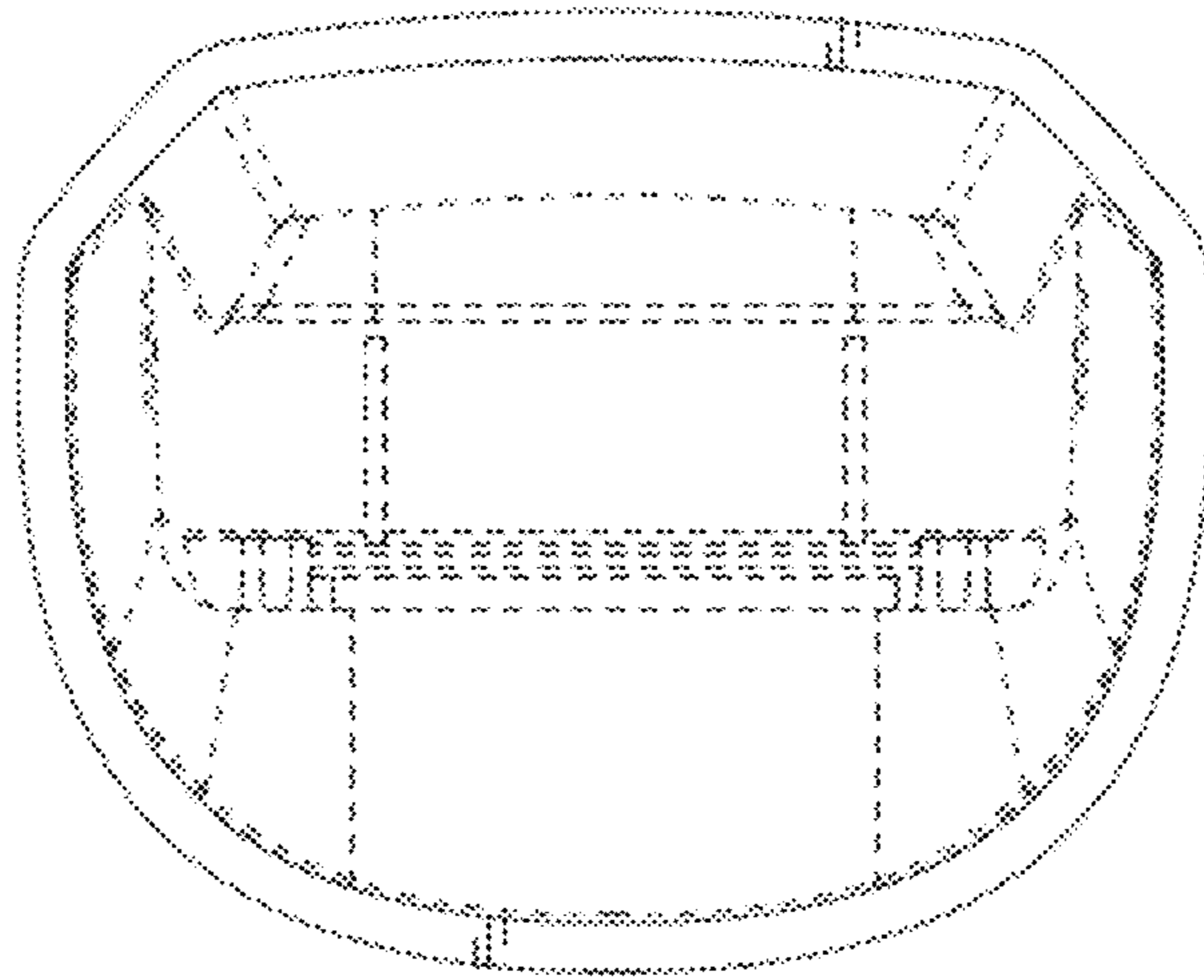


FIG. 3

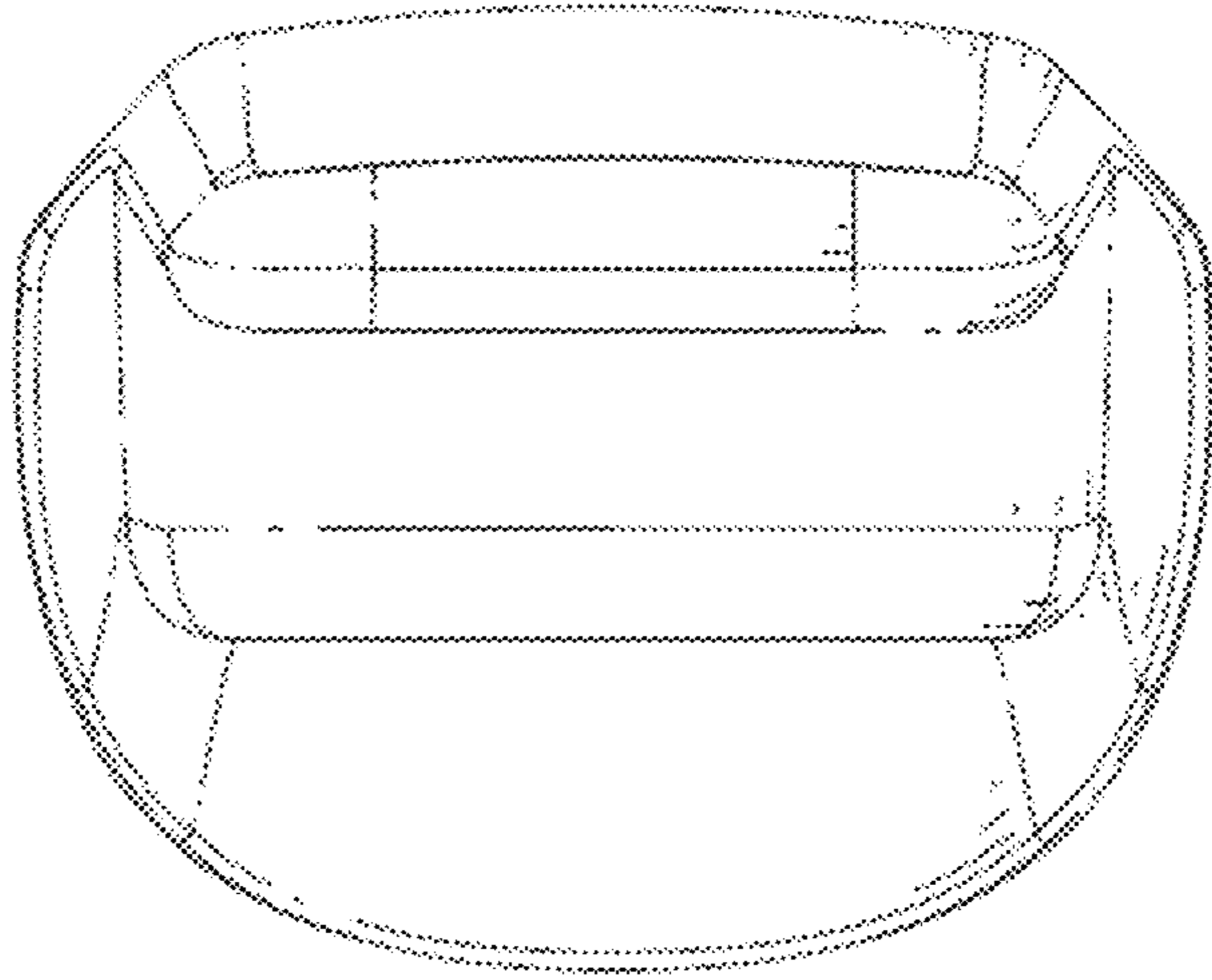


FIG. 4

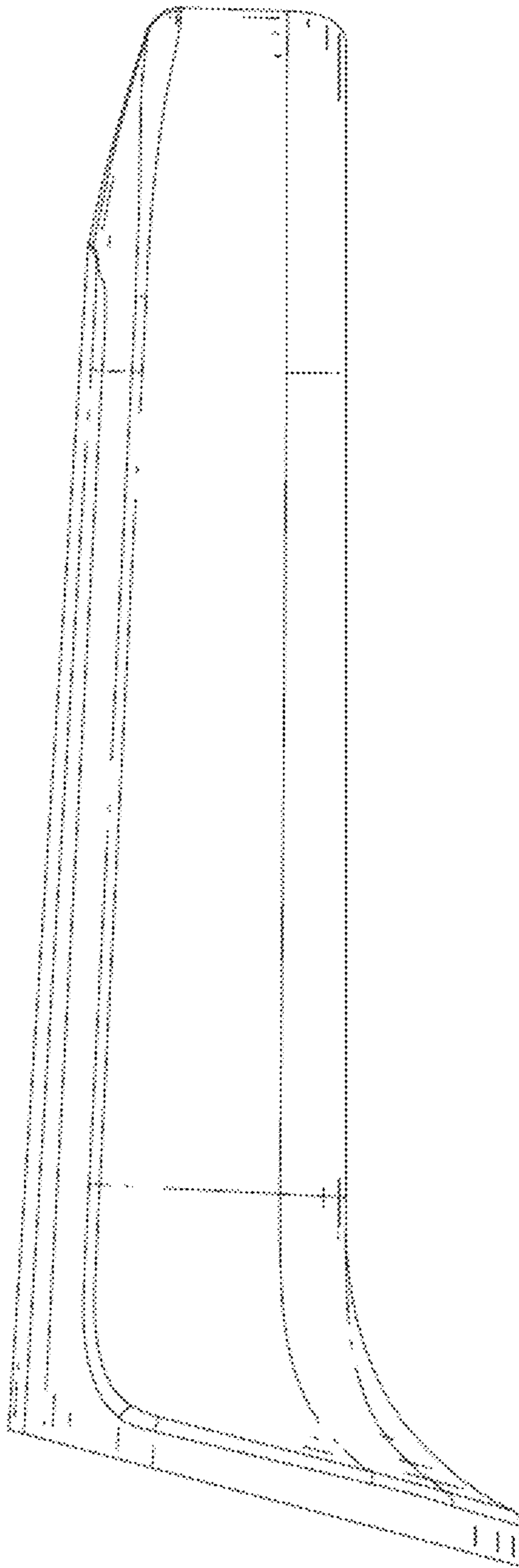


FIG. 5



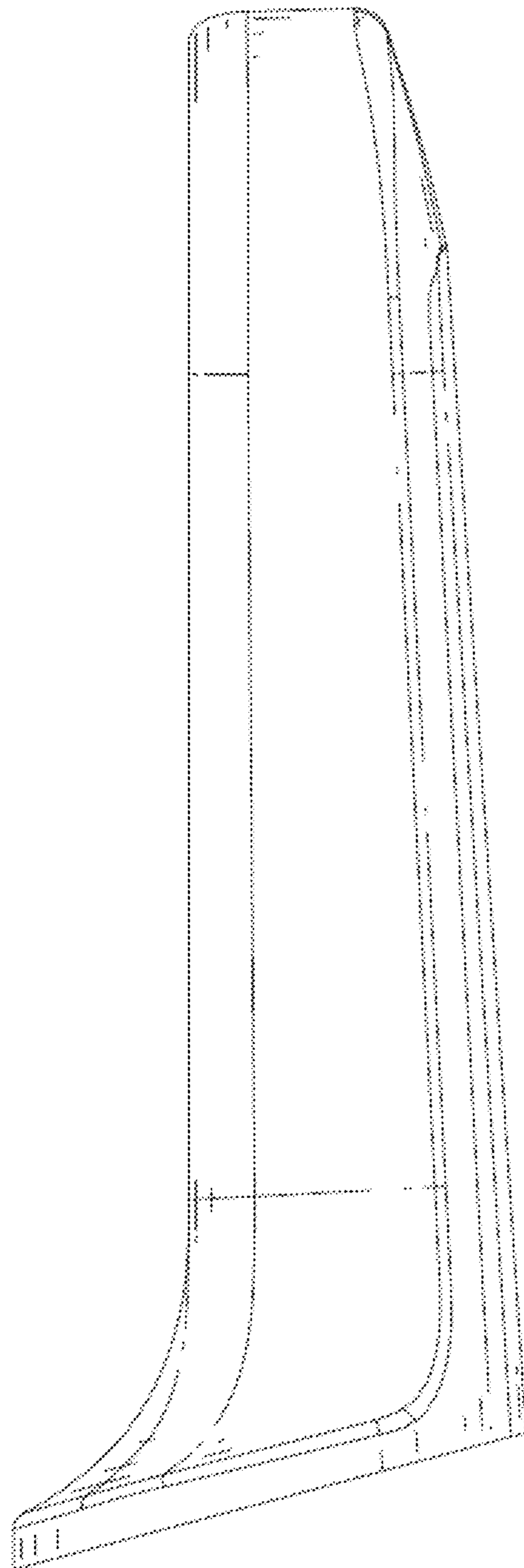


FIG. 6

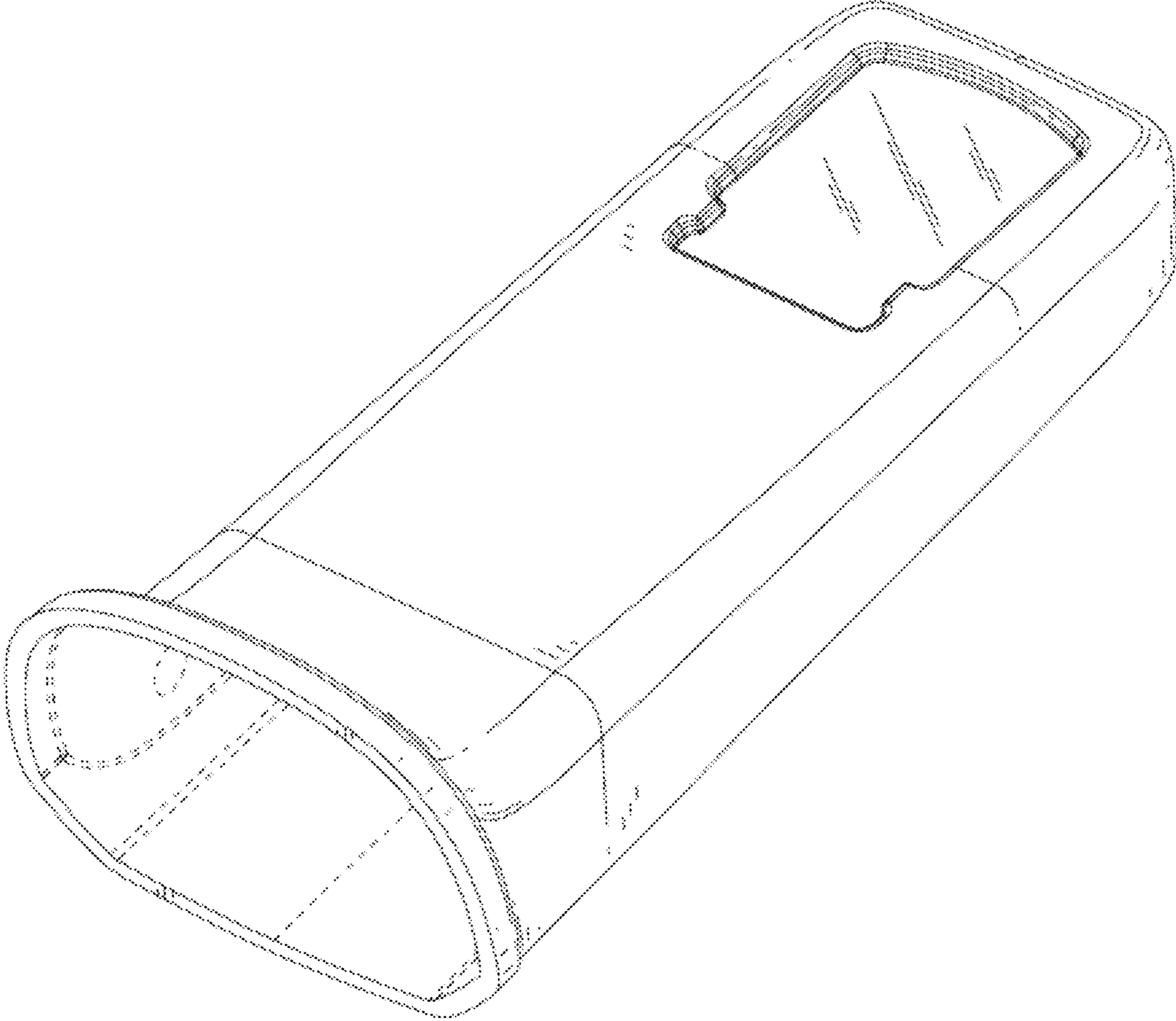


FIG. 7

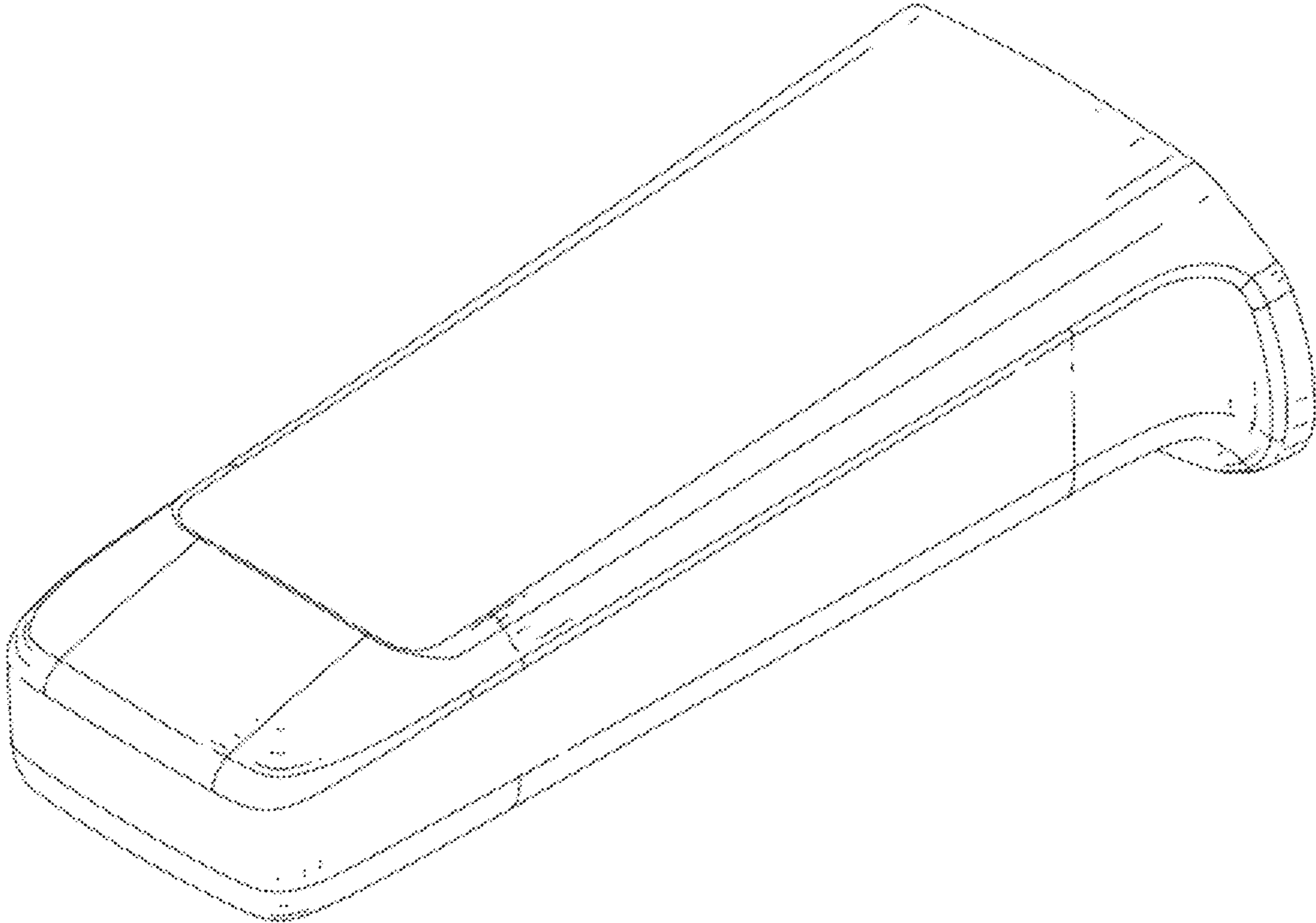


FIG. 8

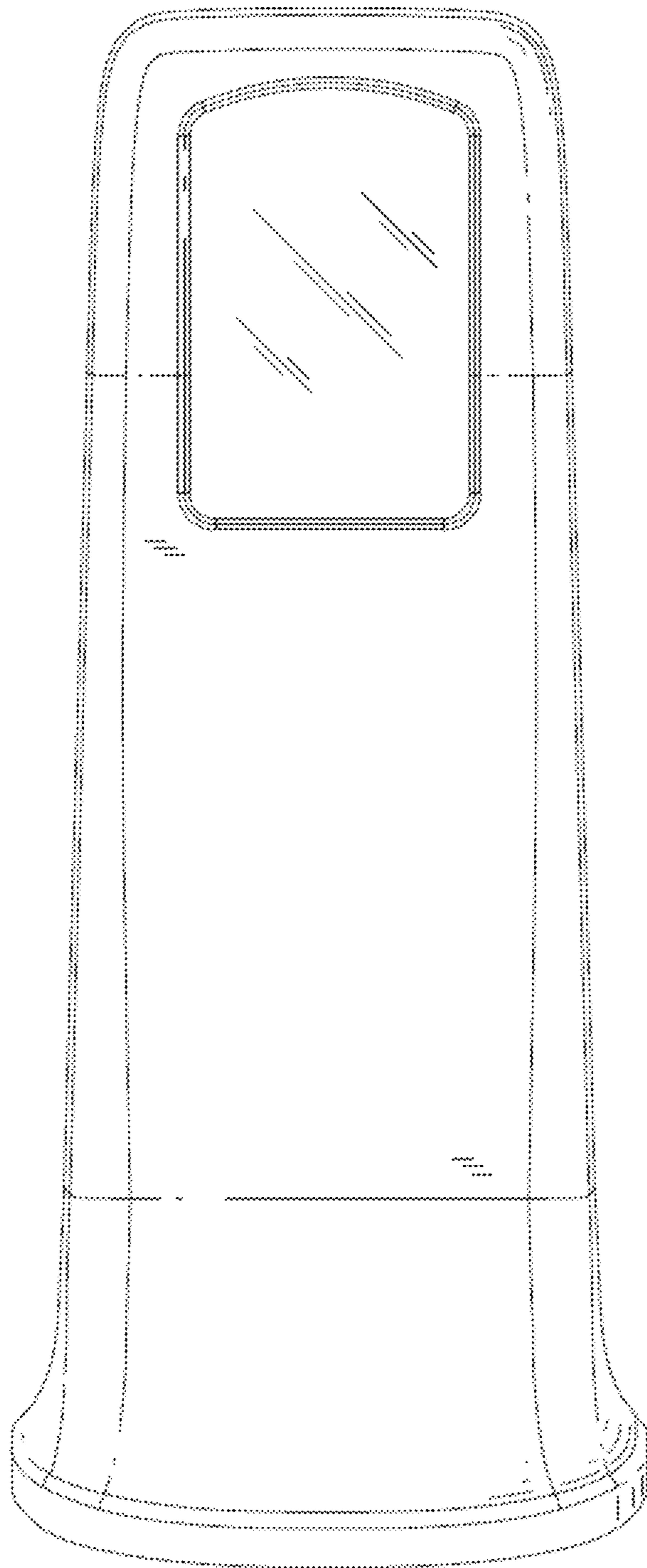


FIG. 9

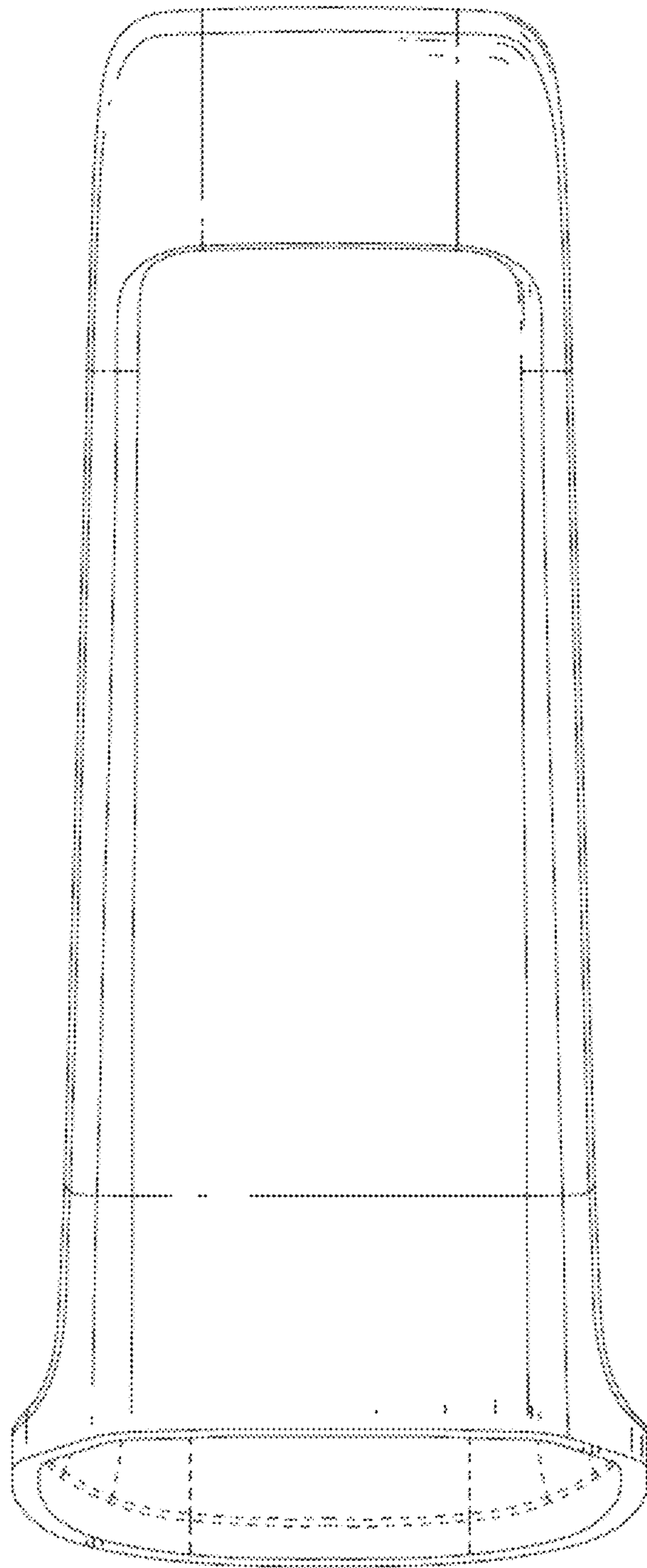


FIG. 10

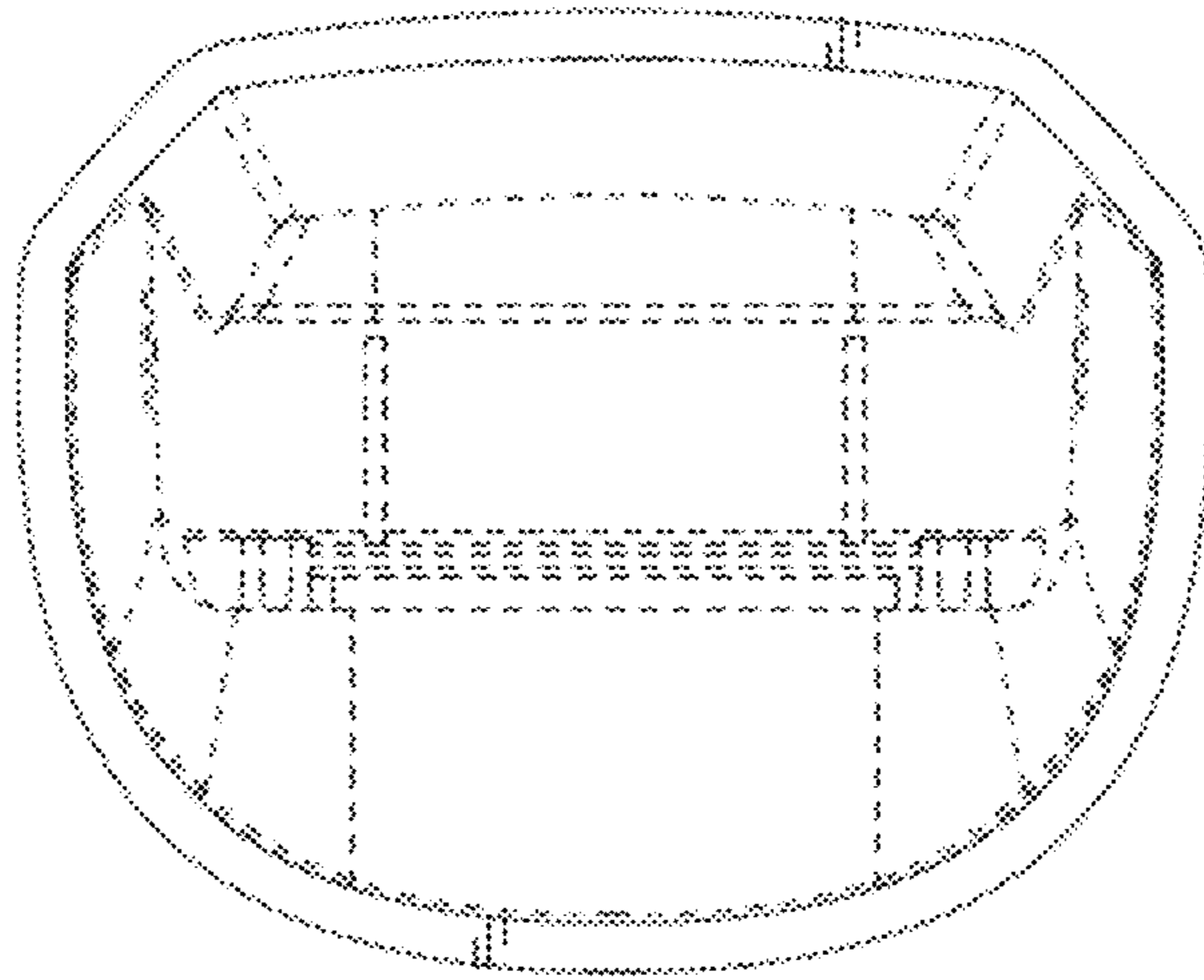


FIG. 11

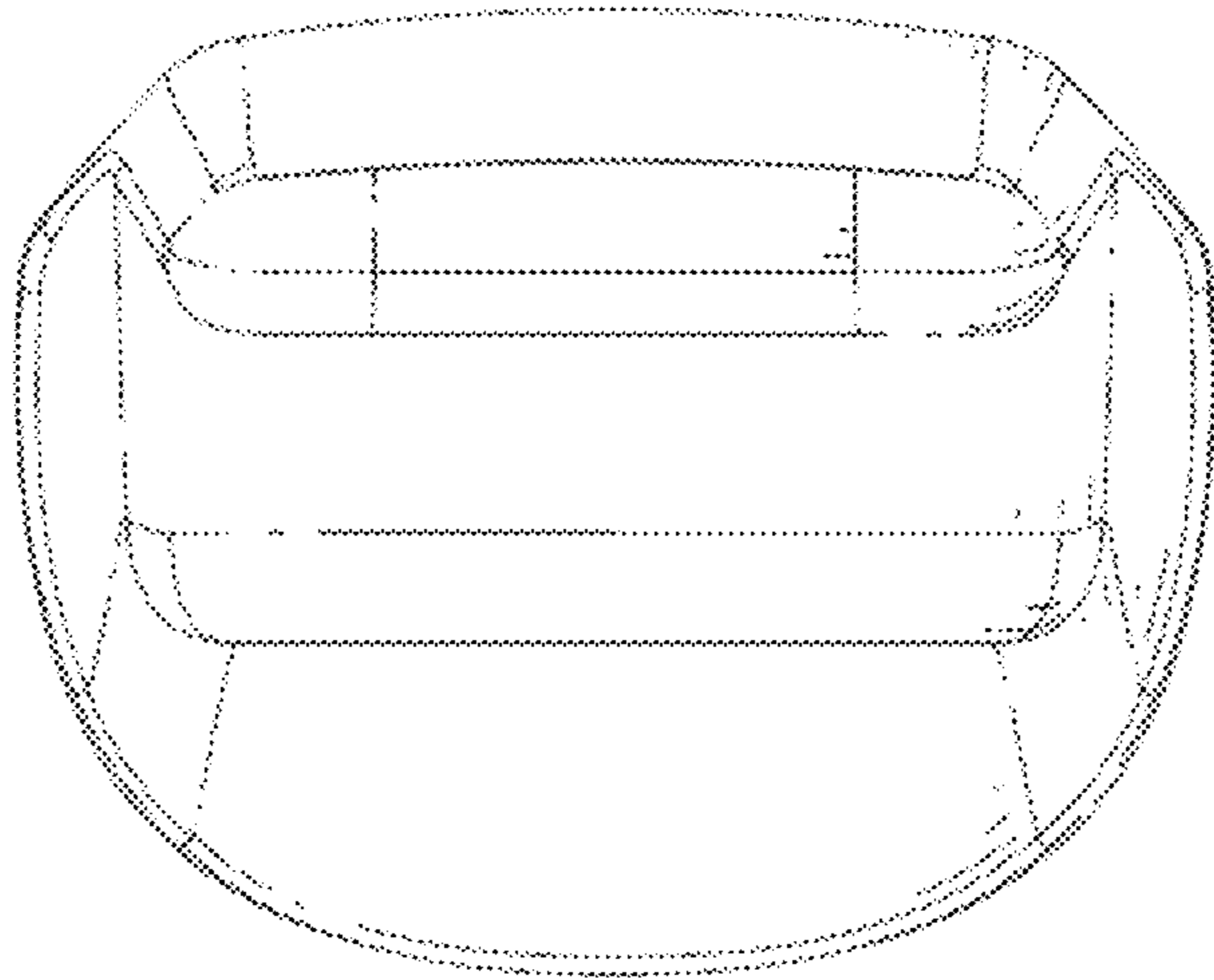


FIG. 12

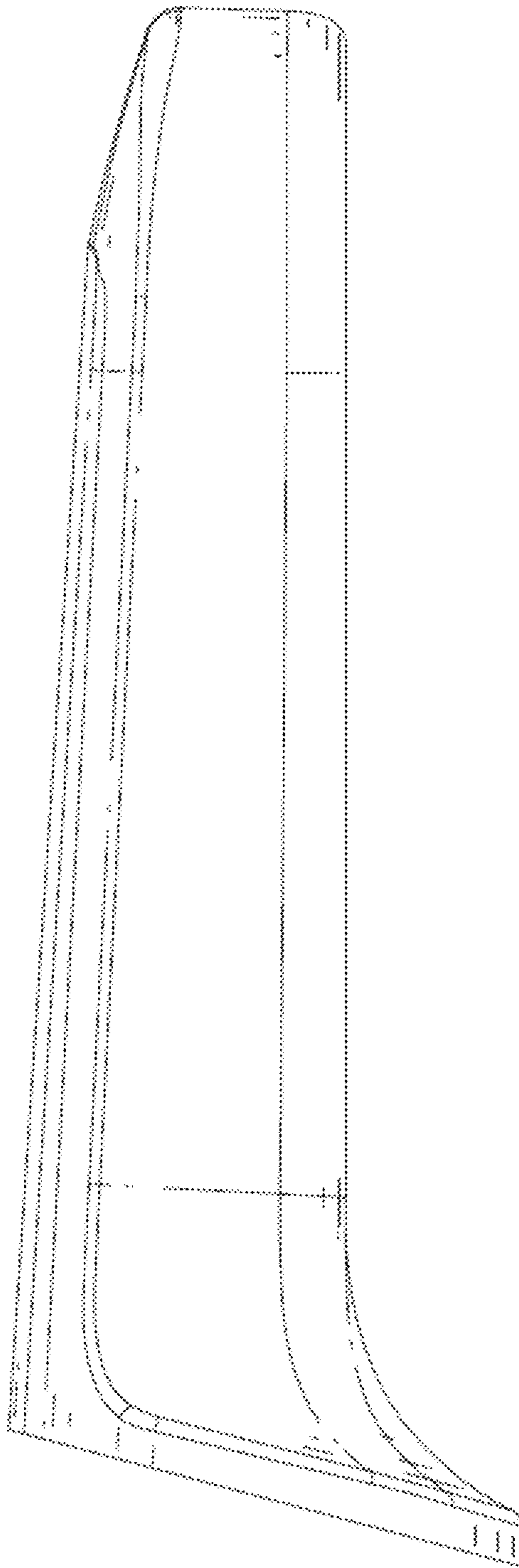


FIG. 13



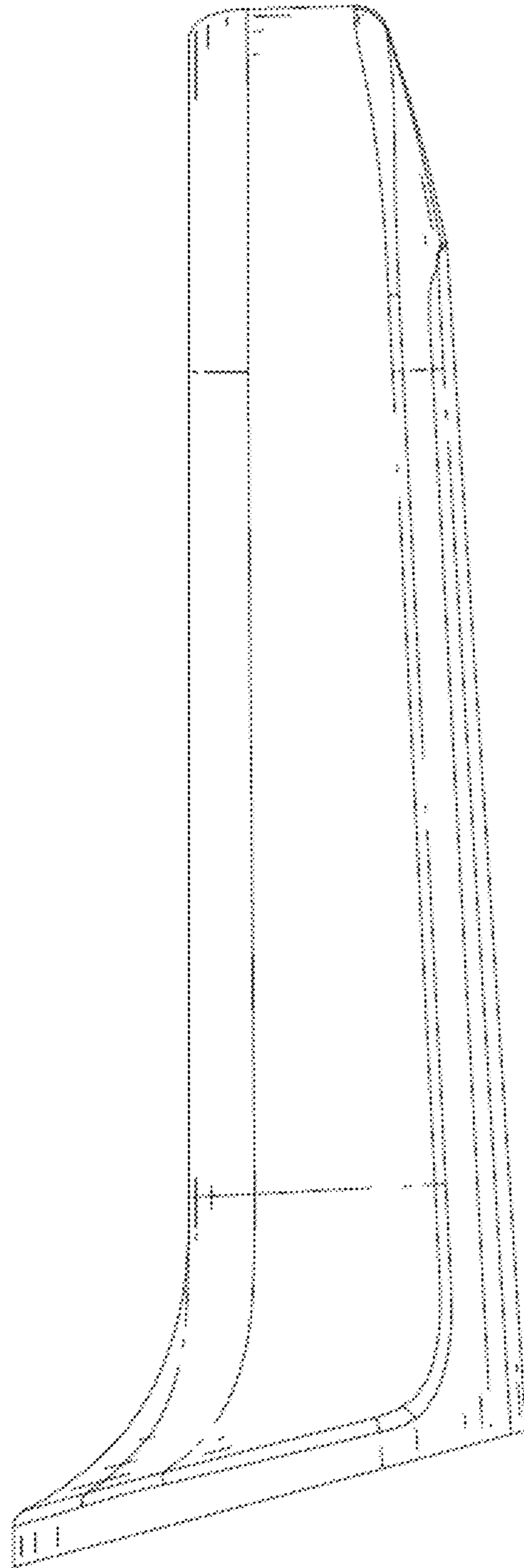


FIG. 14

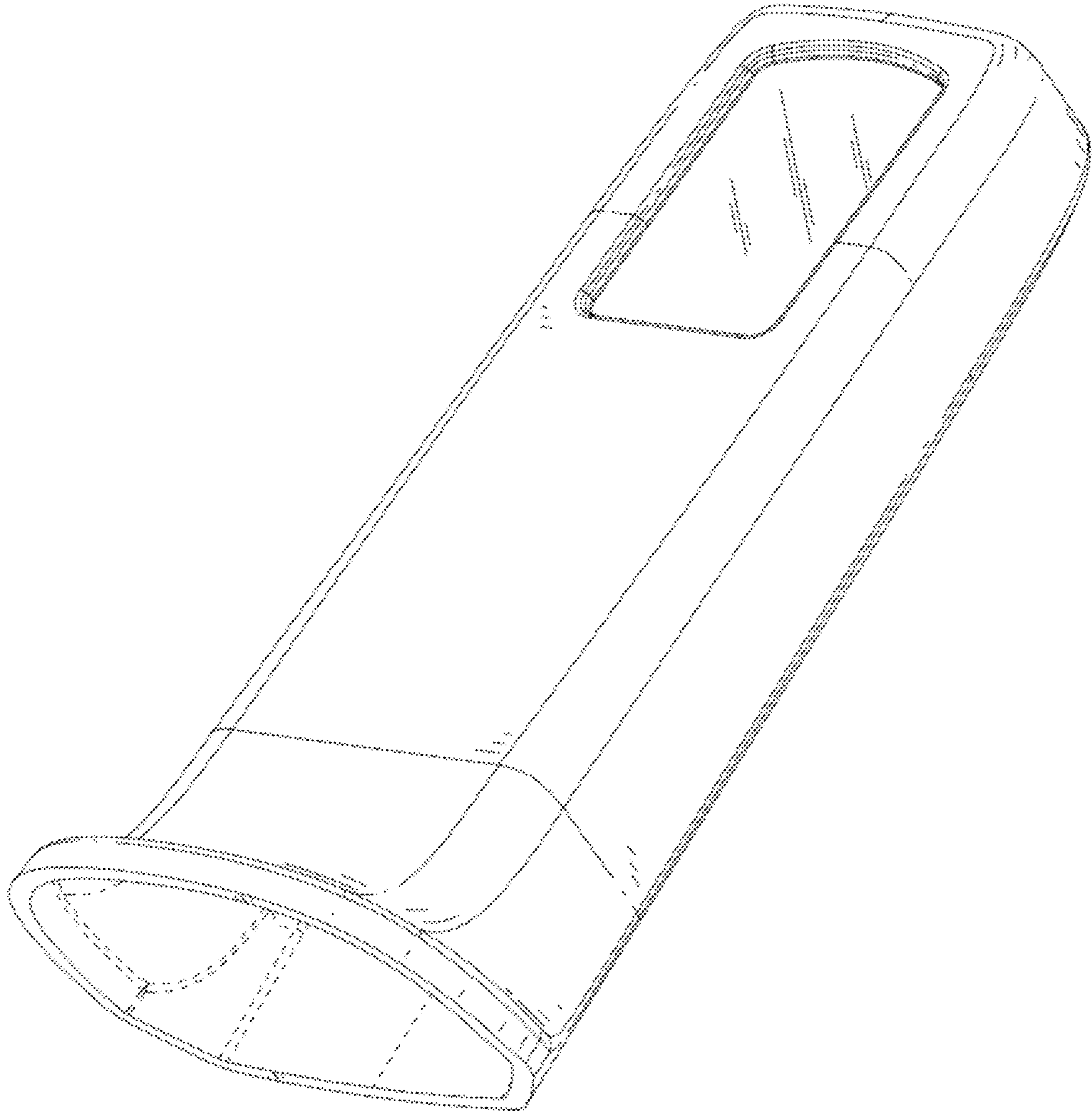


FIG. 15

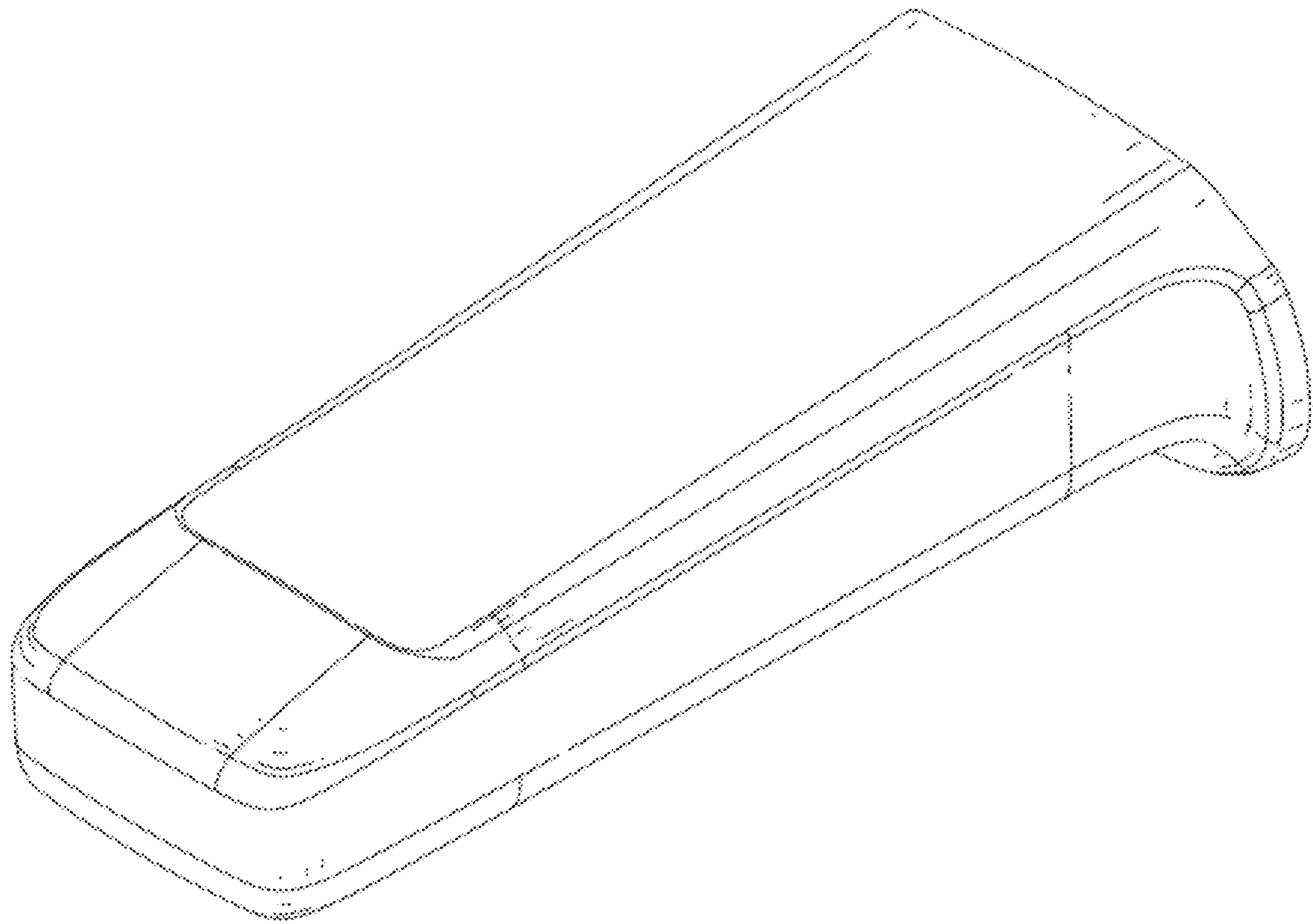


FIG. 16