



US00D825568S

(12) **United States Design Patent** (10) **Patent No.:** **US D825,568 S**
Morris et al. (45) **Date of Patent:** **** Aug. 14, 2018**

(54) **DUAL-CONNECTOR WIRELESS VEHICLE COMMUNICATION INTERFACE**

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

(21) Appl. No.: **29/593,273**

(22) Filed: **Feb. 7, 2017**

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

(52) **U.S. Cl.**
USPC **D14/433**

(58) **Field of Classification Search**
USPC D14/356, 432-434, 453, 454, 511, 203.8, D14/209.1, 238.1, 240, 125, 435.1; 439/638, 928, 105, 502; 710/303, 304, 710/305; 361/679.41, 679.55, 679.56; D13/110, 133, 146, 108; 320/111
CPC G06K 19/005; G06K 19/07732; H05K 5/0278; G09F 23/10
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D356,296 S	3/1995	Chapman	
6,296,522 B1 *	10/2001	Ho	H01R 25/003 439/640
D484,097 S *	12/2003	Drane	D13/139.4
D525,202 S *	7/2006	Bihrer	D13/146
7,134,275 B2	11/2006	Tsutsumoto et al.	
D534,495 S *	1/2007	Gershfeld	D13/139.4
D575,288 S *	8/2008	Chen	D14/432

(Continued)

OTHER PUBLICATIONS

Design U.S. Appl. No. 29/616,392, inventors: Dan O. Morris and Ivan Wei, filed Sep. 6, 2017, title: Dual-connector wireless vehicle communication interface.

(Continued)

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(57) **CLAIM**

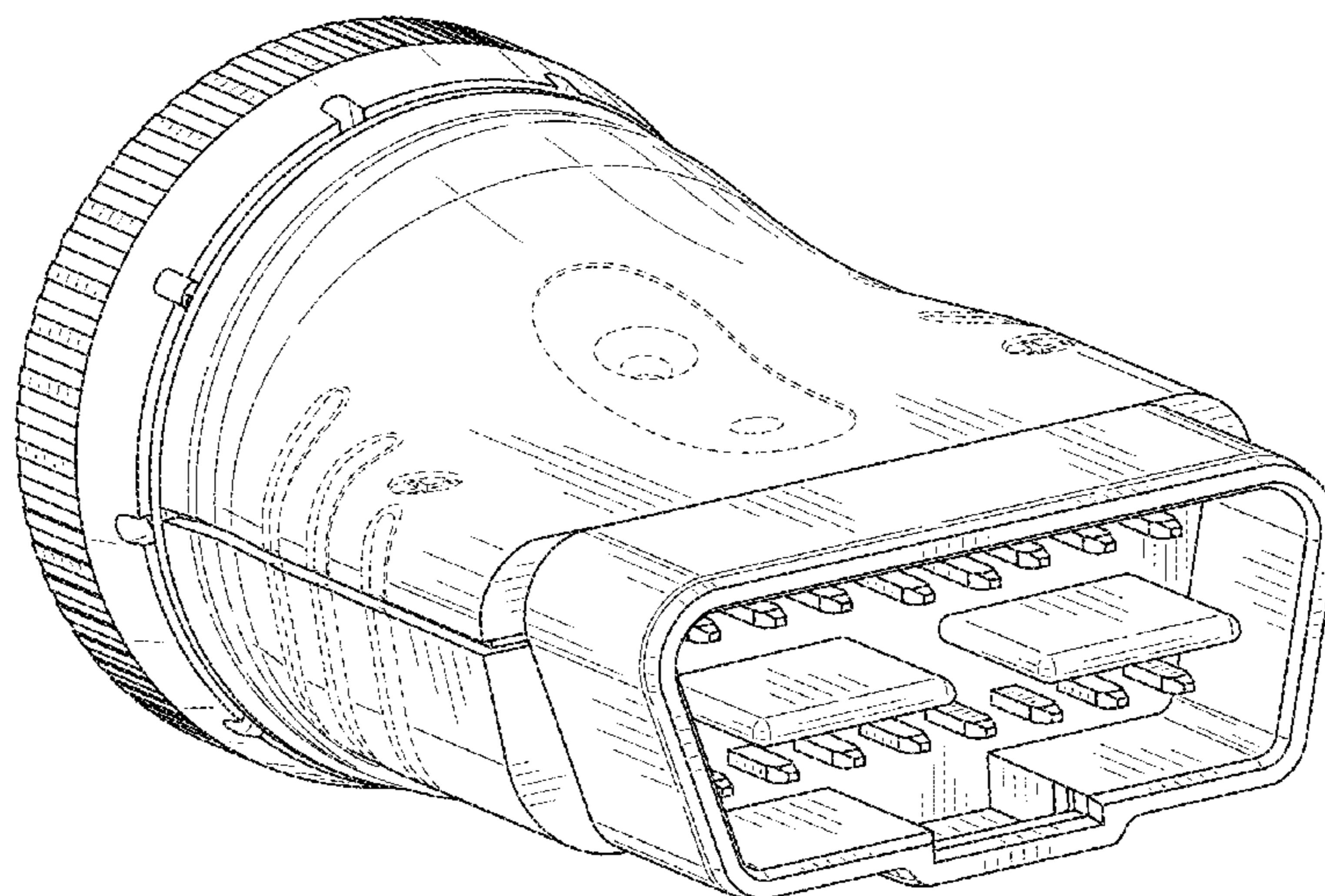
The ornamental design for a dual-connector wireless vehicle communication interface, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view showing the top, front, and right side of a dual-connector wireless vehicle communication interface (VCI) having the inventive design; FIG. 2 is a left side elevational view of the dual-connector wireless VCI shown in FIG. 1; FIG. 3 is a right side elevational view of the dual-connector wireless VCI shown in FIG. 1; FIG. 4 is a front elevational view of the dual-connector wireless VCI shown in FIG. 1; FIG. 5 is a back elevational view of the dual-connector wireless VCI shown in FIG. 1; FIG. 6 is a top view of the dual-connector wireless VCI shown in FIG. 1; FIG. 7 is a bottom view of the dual-connector wireless VCI shown in FIG. 1; and, FIG. 8 is a perspective view showing the bottom, back, and left side of the dual-connector wireless VCI shown in FIG. 1.

The elements of the dual-connector wireless VCI shown by broken lines in FIG. 1 to FIG. 8 are for illustrative purposes only and form no part of the claimed design shown in FIG. 1 to FIG. 8.

1 Claim, 5 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

7,806,723 B2 * 10/2010 Chong H02G 3/22
439/571

8,479,499 B2 7/2013 Berke et al.

8,589,018 B2 11/2013 Samacke et al.

8,731,627 B2 5/2014 Inabathuni et al.

D714,726 S * 10/2014 Byrne D13/137.1

8,919,098 B2 12/2014 Barucchi et al.

D722,024 S * 2/2015 Smith D13/147

D722,971 S * 2/2015 Smith D13/147

8,963,023 B2 * 2/2015 Phillips H02G 3/123
16/365

9,002,554 B2 4/2015 Chen

9,634,435 B1 * 4/2017 Raschilla H01R 13/652

D786,255 S * 5/2017 Kaminaga D14/433

D786,875 S * 5/2017 Kaminaga D14/433

D788,777 S * 6/2017 Bargetzi D14/433

D790,556 S * 6/2017 Heath D14/480.3

D794,104 S 8/2017 Zou

D803,908 S * 11/2017 Yamaguchi D15/130

D806,040 S * 12/2017 Morris D13/147

2007/0271906 A1 11/2007 Berke et al.

2012/0305868 A1 * 12/2012 Callahan H02G 3/12
254/134.3 R

2013/0327569 A1 * 12/2013 Stathis H02G 3/0406
174/650

2014/0120750 A1 * 5/2014 Johnson H01R 27/00
439/131

2015/0008805 A1 * 1/2015 Kramer A47B 97/00
312/24

2015/0118902 A1 4/2015 Data et al.

2016/0327754 A1 11/2016 Hill et al.

OTHER PUBLICATIONS

Autel Maxi Check User Manual V3, Intelligent Technology Corp., Ltd., Jun. 7, 2016 (159 pages (Table of Contents to p. 156)).

Campbell, Bruce and Reavell, Kingsley, Cambustion Ltd., Accelerated ash load testing of particulate filters on an automated test rig, Technical Innovations, Testing, Powertrain, magazine article, Off-Highway Engineering, Apr. 2016 (2 pages).

DG Technologies Product Pinouts and Industry Connectors References Guide, DG Technologies Vehicle Network Solutions, Dearborn Group, Inc., document date: Apr. 23, 2014, document revision: 2.5.6, (38 pages).

Diesel Particulate Filter (DPF) Service Regeneration, ALLDATA Repair, 2012 Chevy Truck Silverado 2500 4WD V8-6.6L Turbo, downloaded from the World Wide Web at https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0ahUKEwiNyrDuldbTAhUh4oMKHck4CNEQFgg_MAM&url=http%3A%2F%2Faskatech.com%2FaskATechLive%2Fforums%2FResourceHandler.ashx%3Fa%3D7419&usg=AFQjCNHhGuQFTxU510J-m9EFookmndJ5eg&cad=rja, Jul. 19, 2014 (5 pages).

Diesel particulate filter, Wikipedia, the free encyclopedia, web page downloaded Feb. 12, 2016 from https://en.wikipedia.org/wiki/Diesel_particulate_filter (8 pages).

DPF Diagnostic Tool, European Exhaust and Catalyst EEC, web page downloaded Feb. 12, 2016 from <http://www.eurocats.co.uk/products/dpf-tool/> (2 pages).

HD Mobile, CanDo International Inc., web page downloaded from <http://www.vehicleservicepros.com/directory/computers-and-software/mobile-apps/product/20851004/cando-international-inc-hd-mobile>, Feb. 2, 2017 (2 pages).

Jaltest Multibrand Diagnostics Global Solution, Cojali Group, www.jaltest.com, catalog downloaded May 1, 2017 from www.m2kinc.com/pdf/445-reference.pdf (11 pages (cover sheet, index and pp. 4-12)).

Kvaser, J1939 Standards Overview, web page downloaded Sep. 9, 2016 from <https://kvaser.com/about-can/higher-layer-protocols/j1939-standards-overview/> (4 pages).

LADD Distribution, TE Connectivity's Industrial & Commercial Transportation Products, Sep. 8, 2016 (164 pages).

Mack Trucks, Inc. Operator's Handbook, Maintenance and Lubrication, MP7, MP8, and MP10 Engines, 21394653, Apr. 2010 (167 pages).

Mack Trucks, Service Manual, Trucks, Group 28, Engine Control Module (ECM), Diagnostic Trouble Code (DTC), Guide 2010 Emissions CHU, CXU, GU, TD, PV776-88961816, manual downloaded from [Mack Trucks service manual trucks_group_28_ECM_DTC_guide_manual.pdf](http://www.macktrucks.com/service_manual_trucks_group_28_ECM_DTC_guide_manual.pdf), Mar. 2, 2010, (98 pages).

The SAE J1939 Communications Network, an SAE White Paper, an overview of the J1939 family of standards and how they are used, SAE International, Sep. 11, 2011 (7 pages).

SAE J1962: Diagnostic Connector Equivalent to ISO/DIS, Society of Automotive Engineers, 40 CFR 86.094-17(h)(4), Jan. 1995 (8 pages).

Sanders, Kevin, How Diesel Particulate Filters Work, Extend Regen Cycles, Protect Your Engine, DPF Remedy, web page downloaded Feb. 12, 2016 from <http://dpfremedy.com/2015/10/how-diesel-particulate-filters-work/> (5 pages).

Taylor, Drew, FSX Equipment, Ask the Expert: Is there ever a time when a forced regeneration of a diesel particulate filter is necessary?, web page downloaded Apr. 7, 2016 from <http://www.vehicleservicepros.com/article/12182625/ask-the-expert-is-there-ever-a-time-when-a-forced-regeneration-of-a-diesel-particulate-filter-is-necessary> (6 pages).

Vehicle Identification Number Requirements, Department of Transportation, National Highway Traffic Safety Administration, 49 CFR Part 565, RIN 2127-AJ99, Apr. 25, 2008 (77 pages).

Welcome to ZED, Simple & Affordable ELD Compliance and GPS Tracking, The Lowest Cost ELD and Fleet Vlanagement Solutions, ZED, LLC, web page downloaded May 1, 2017 from [ZED The Simple Affordable ELD Solution For Truck Drivers and Fleets](http://zed-eld.com/), <https://zed-eld.com/> (5 pages).

ZED 16-Pin Converted Cable, ZED, LLC, web page downloaded May 1, 2017 from [ZED 16 Pin Converter Cable.pdf](http://zed-eld.com/collections/related-products/products/j1939-9-pin-type-1-male-to-j1939-9-pin-type-2-female), <https://zed-eld.com/collections/related-products/products/j1939-9-pin-type-1-male-to-j1939-9-pin-type-2-female> (4 pages).

ZED Bluetooth Adapter, ZED, LLC, web page downloaded May 1, 2017 from [ZED Bluetooth Adapter for Truck Driver E Log.pdf](http://zed-eld.com/products/bluetooth-data-link-adapter), <https://zed-eld.com/products/bluetooth-data-link-adapter> (4 pages).

Design U.S. Appl. No. 29/593,270, inventors: Dan O. Morris and Ivan Wei, filed Feb. 7, 2017, title: Dual-connector wireless vehicle communication interface (16 pages).

Design U.S. Appl. No. 29/593,271, inventors: Dan O. Morris and Ivan Wei, filed Feb. 7, 2017, title: Dual-connector wireless vehicle communication interface (14 pages).

Design U.S. Appl. No. 29/593,272, inventors: Dan O. Morris and Ivan Wei, filed Feb. 7, 2017, title: Dual-connector wireless vehicle communication interface (16 pages).

* cited by examiner

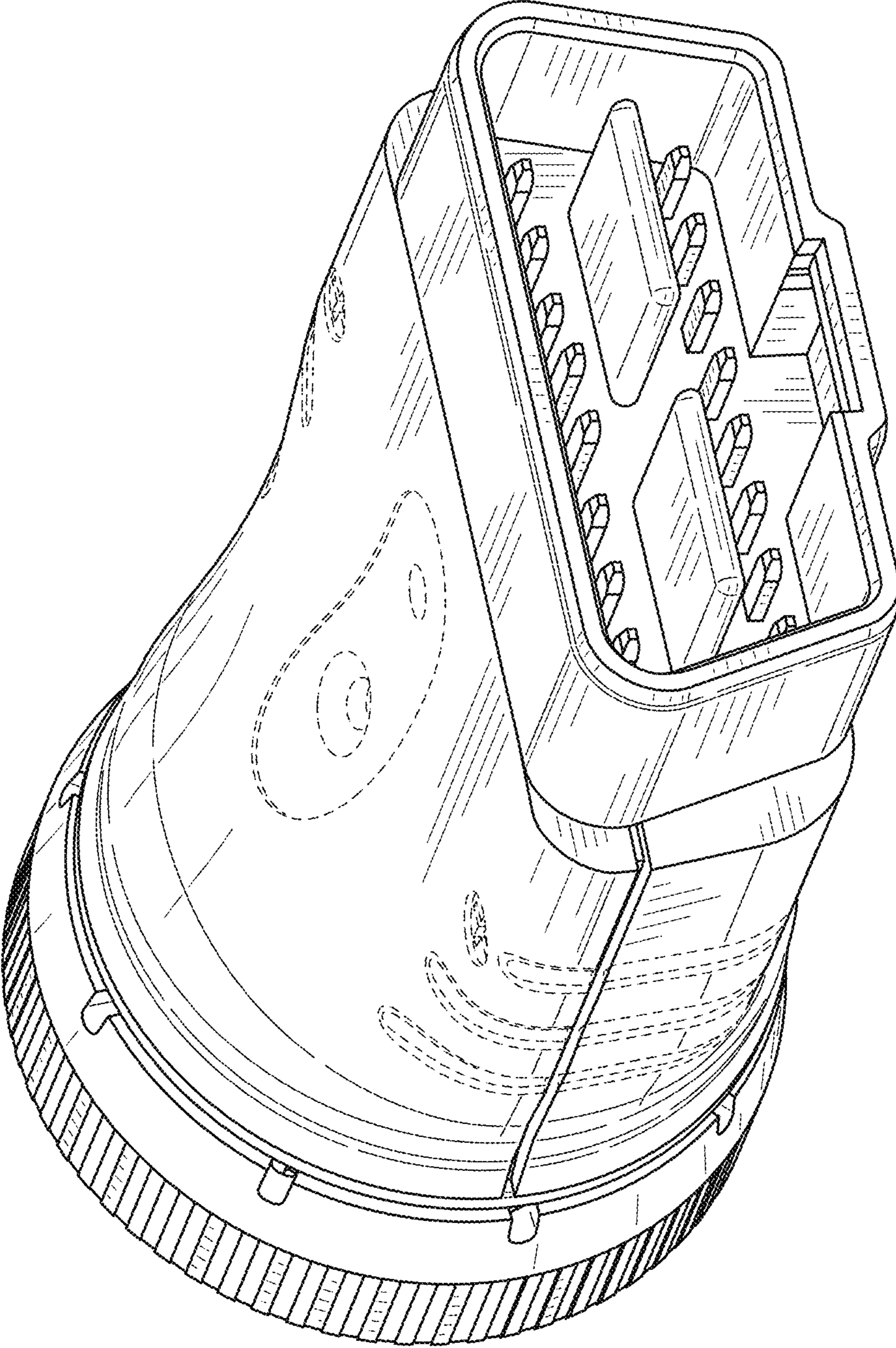


FIG. 1

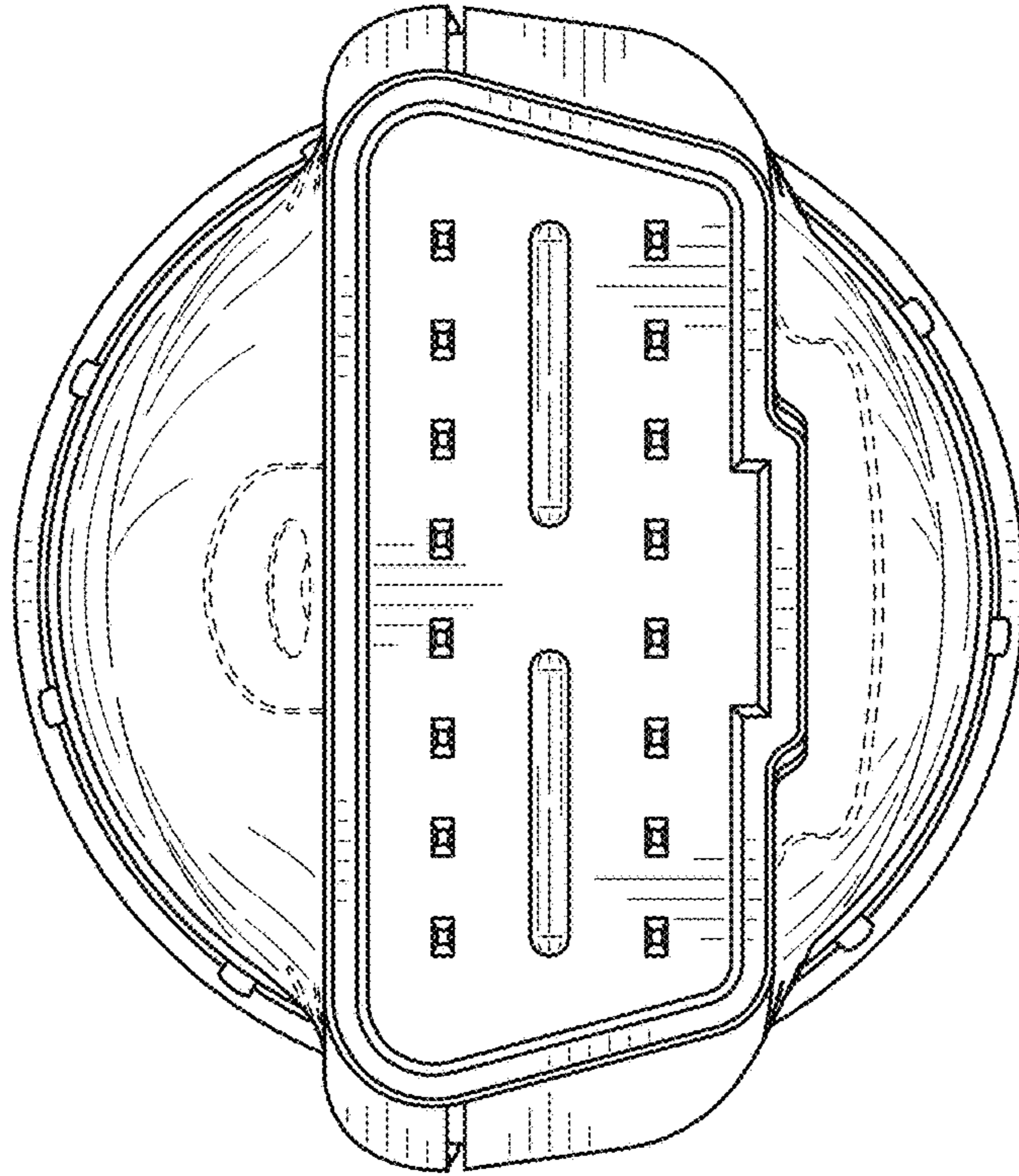


FIG. 3

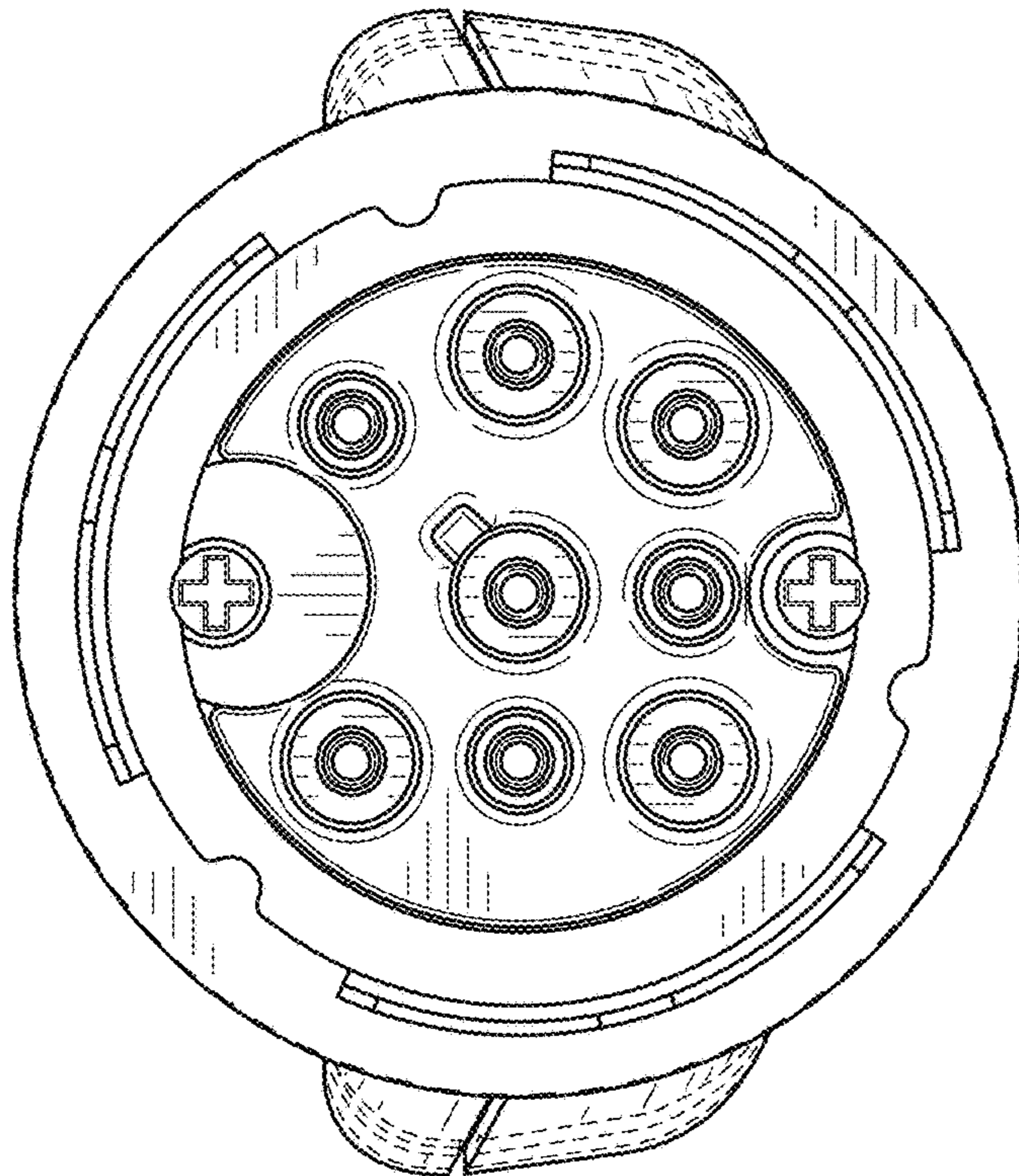


FIG. 2

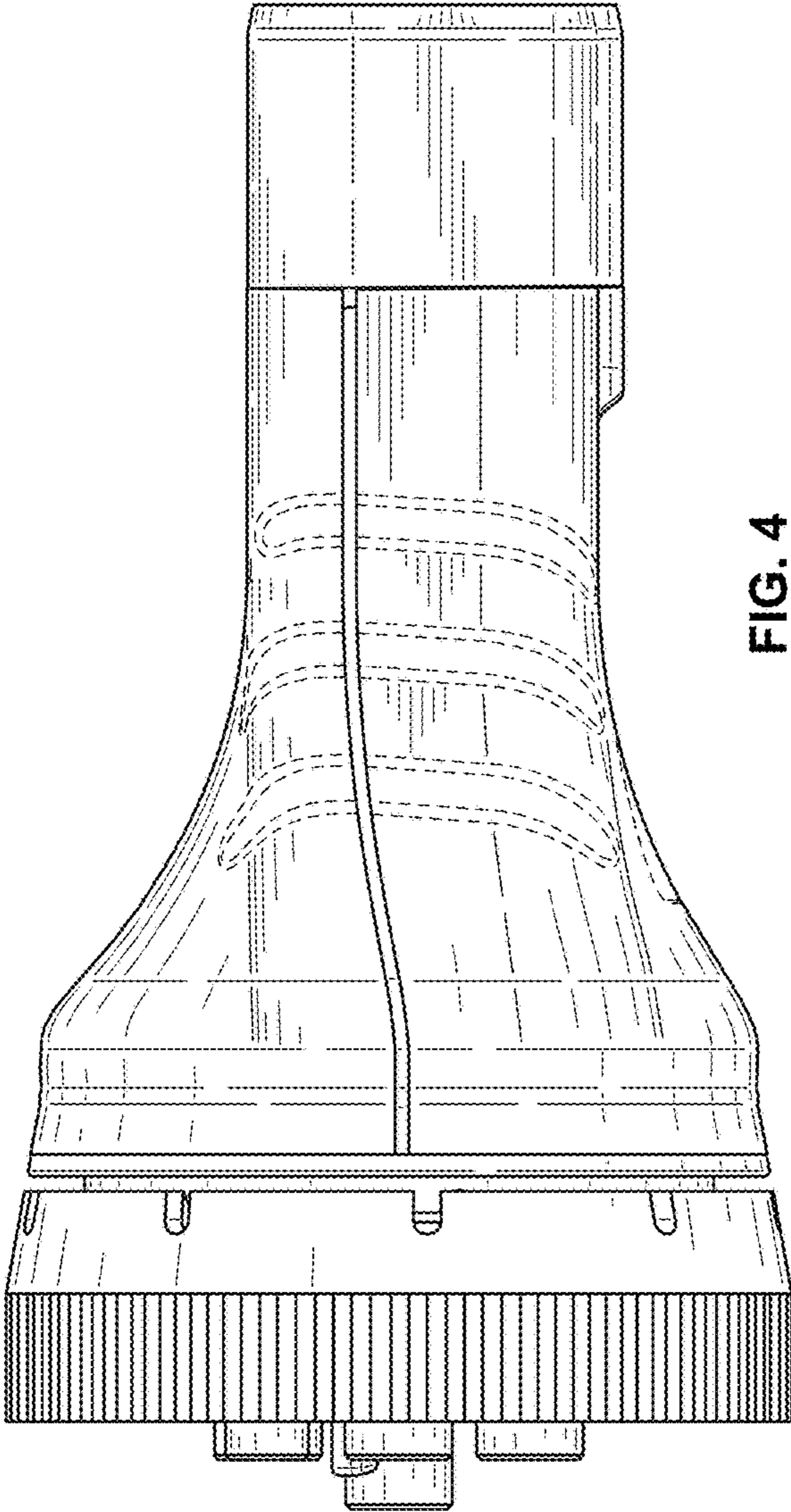


FIG. 4

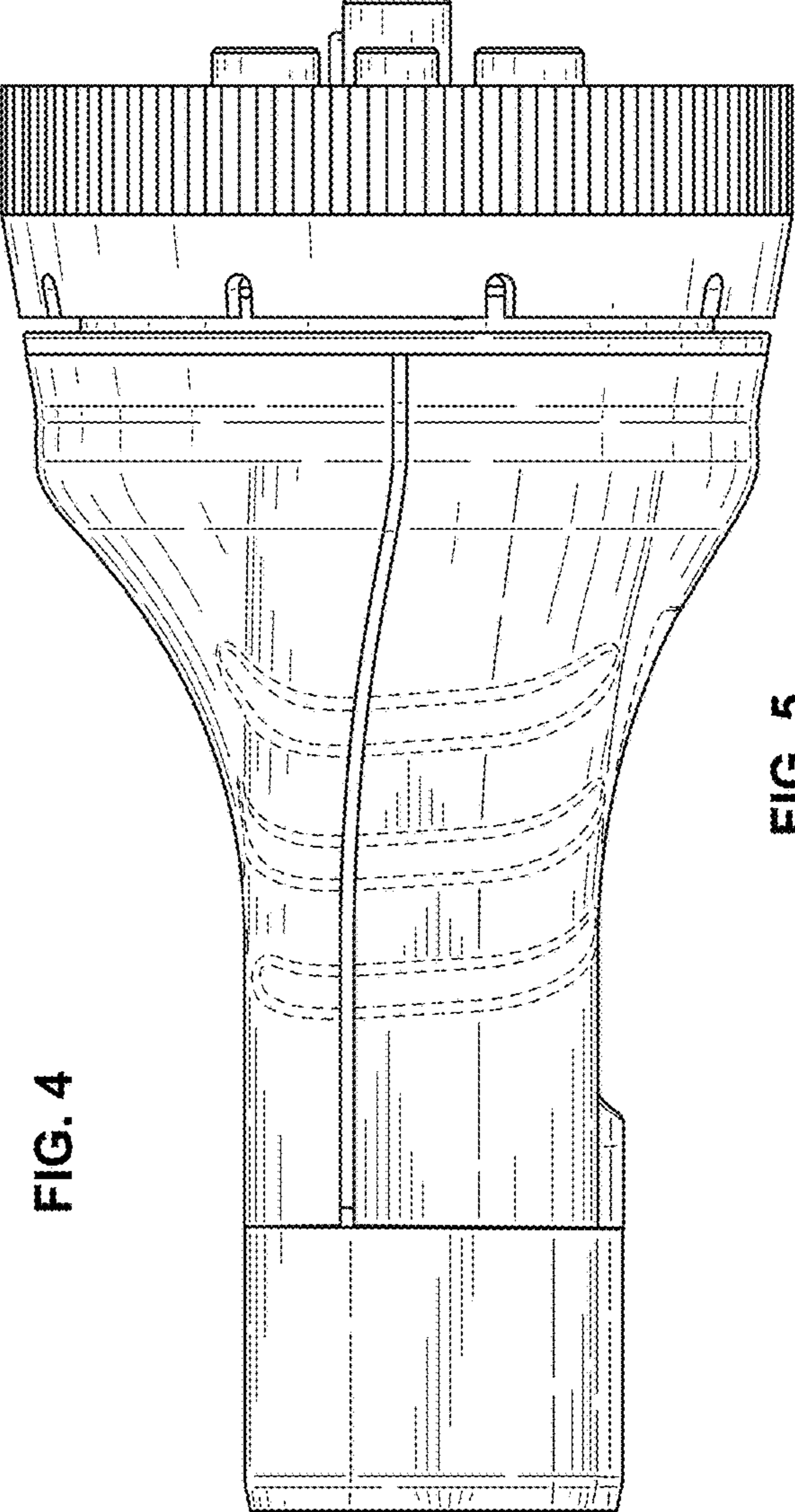


FIG. 5

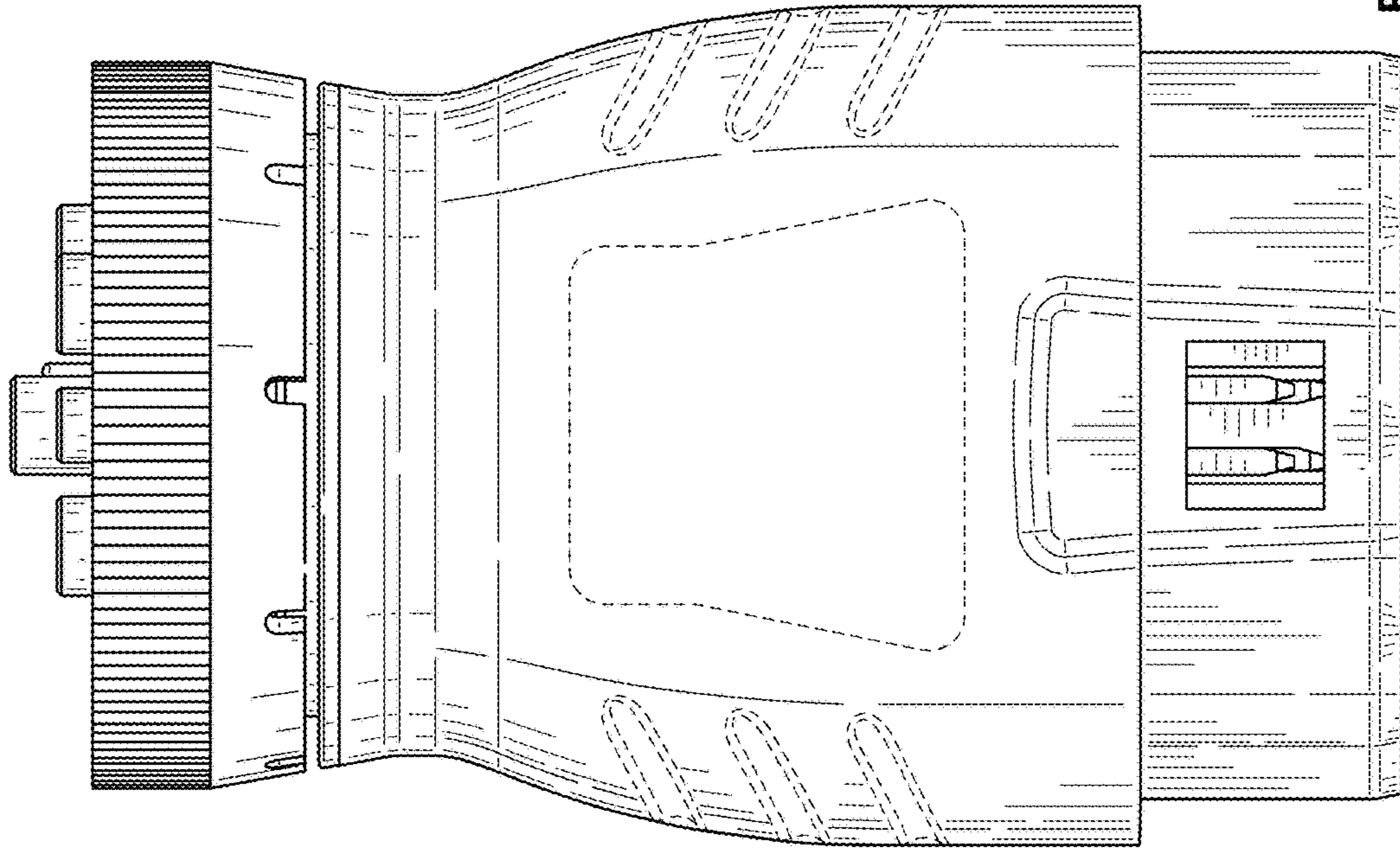


FIG. 7

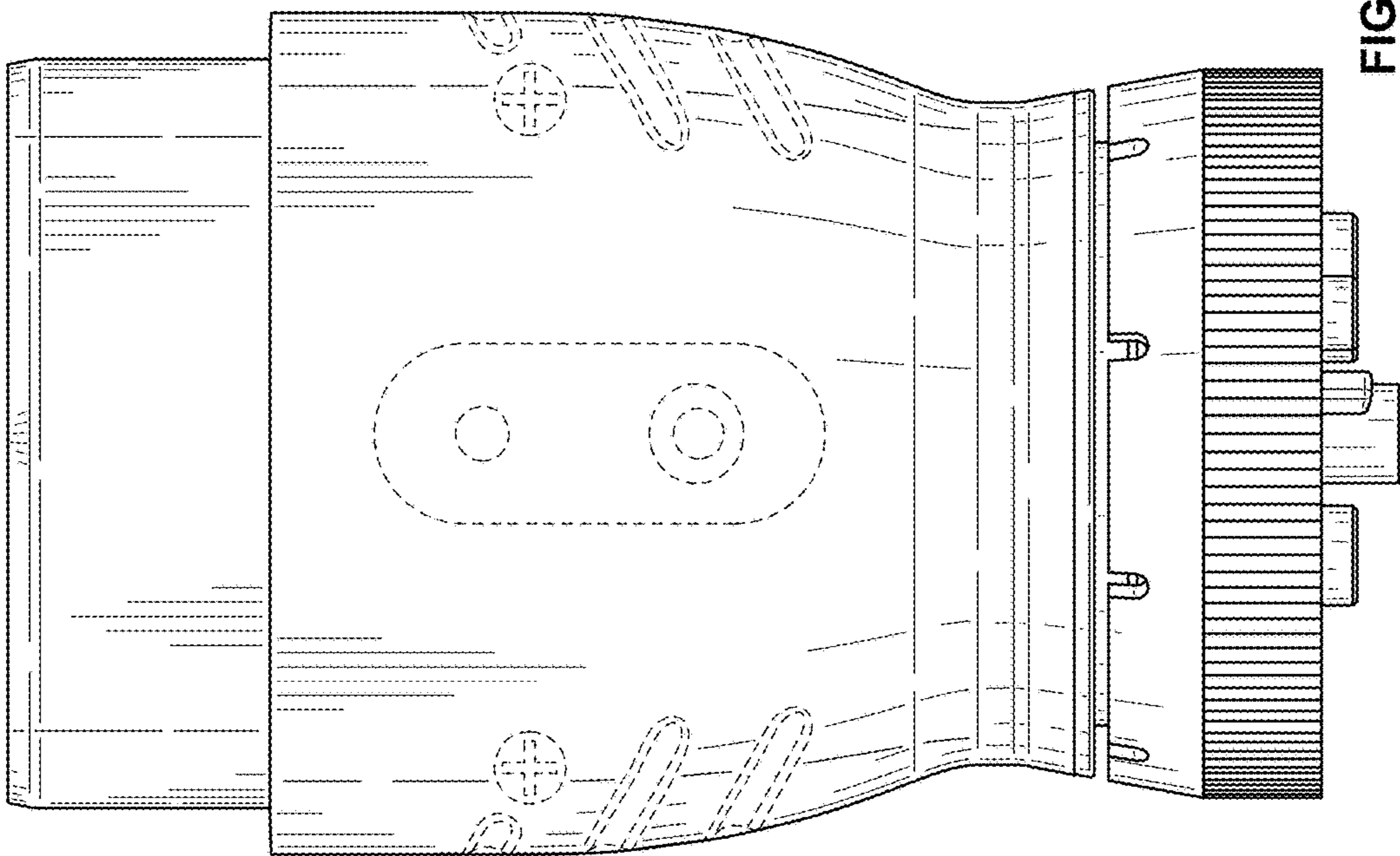


FIG. 6

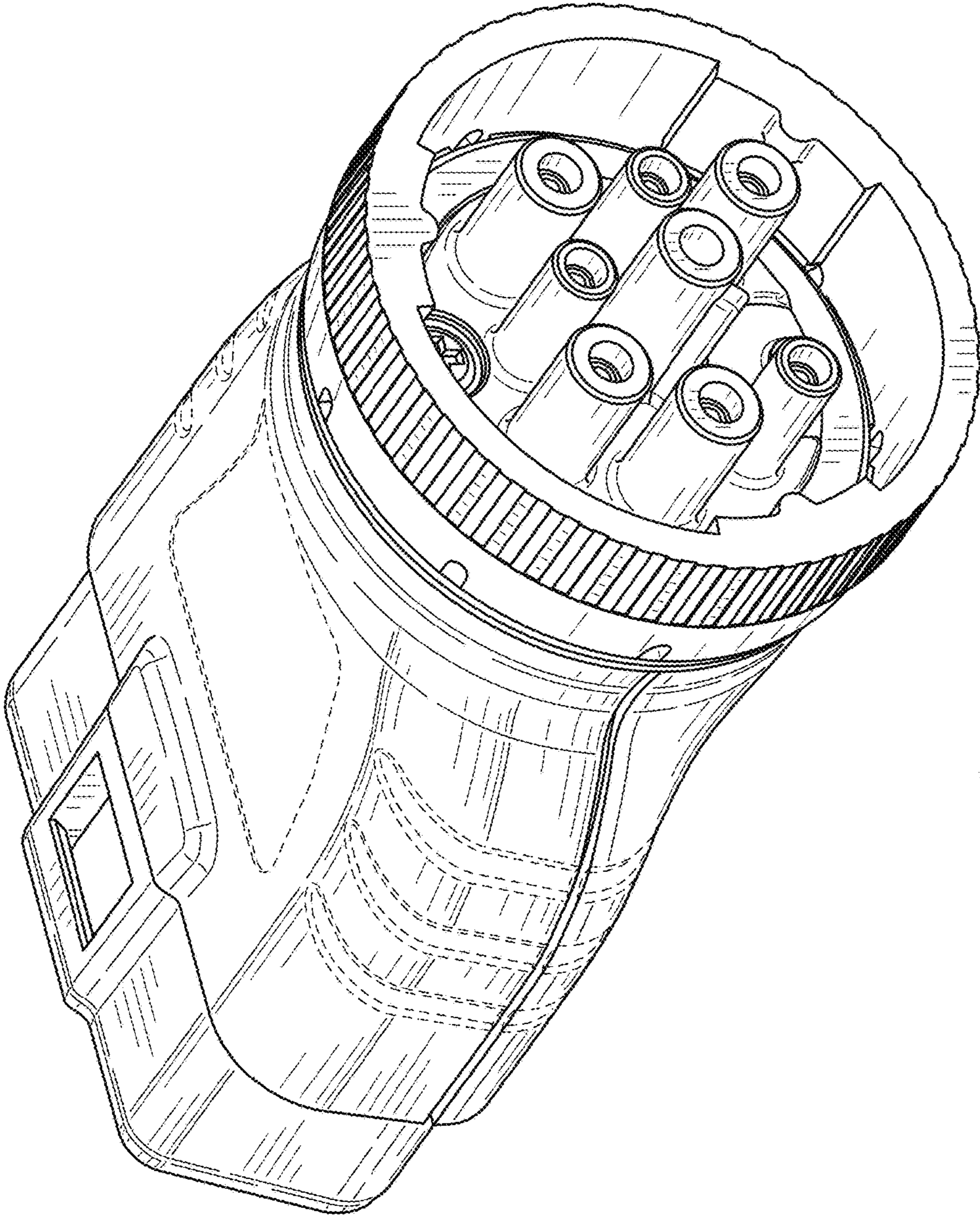


FIG. 8