



US00D826172S

(12) **United States Design Patent** (10) **Patent No.:** **US D826,172 S**  
**Morris et al.** (45) **Date of Patent:** **\*\* Aug. 21, 2018**

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

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(73) Assignee: **IDSC Holdings, LLC**, Kenosha, WI (US)

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

(21) Appl. No.: **29/616,392**

(22) Filed: **Sep. 6, 2017**

**Related U.S. Application Data**

(62) Division of application No. 29/593,272, filed on Feb. 7, 2017, now Pat. No. Des. 806,040.

(51) **LOC (11) Cl.** ..... **13-03**

(52) **U.S. Cl.**  
USPC ..... **D13/147**

(58) **Field of Classification Search**  
USPC ..... D13/133, 146, 147, 154, 184, 199  
CPC .... H01R 4/183; H01R 4/2404; H01R 13/405;  
H01R 13/5202; H01R 13/5205; H01R 13/5216; H01R 13/5219; H01R 13/6273;  
H01R 13/74

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
D484,097 S	12/2003	Drane et al.
D525,202 S	7/2006	Bihrer
7,134,275 B2	11/2006	Tsutsumoto et al.
D534,495 S	1/2007	Gershfeld
D575,288 S	8/2008	Chen

7,806,723 B2	10/2010	Chong et al.
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 et al.
8,919,098 B2	12/2014	Barucchi et al.
D722,024 S	2/2015	Smith
D722,971 S	2/2015	Smith

(Continued)

**OTHER PUBLICATIONS**

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

(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 top, back, and left side perspective view of a dual-connector wireless vehicle communication interface showing our new design;

FIG. 2 is a left side elevational view thereof;

FIG. 3 is a right side elevational view thereof;

FIG. 4 is a front elevational view thereof;

FIG. 5 is a back elevational view thereof;

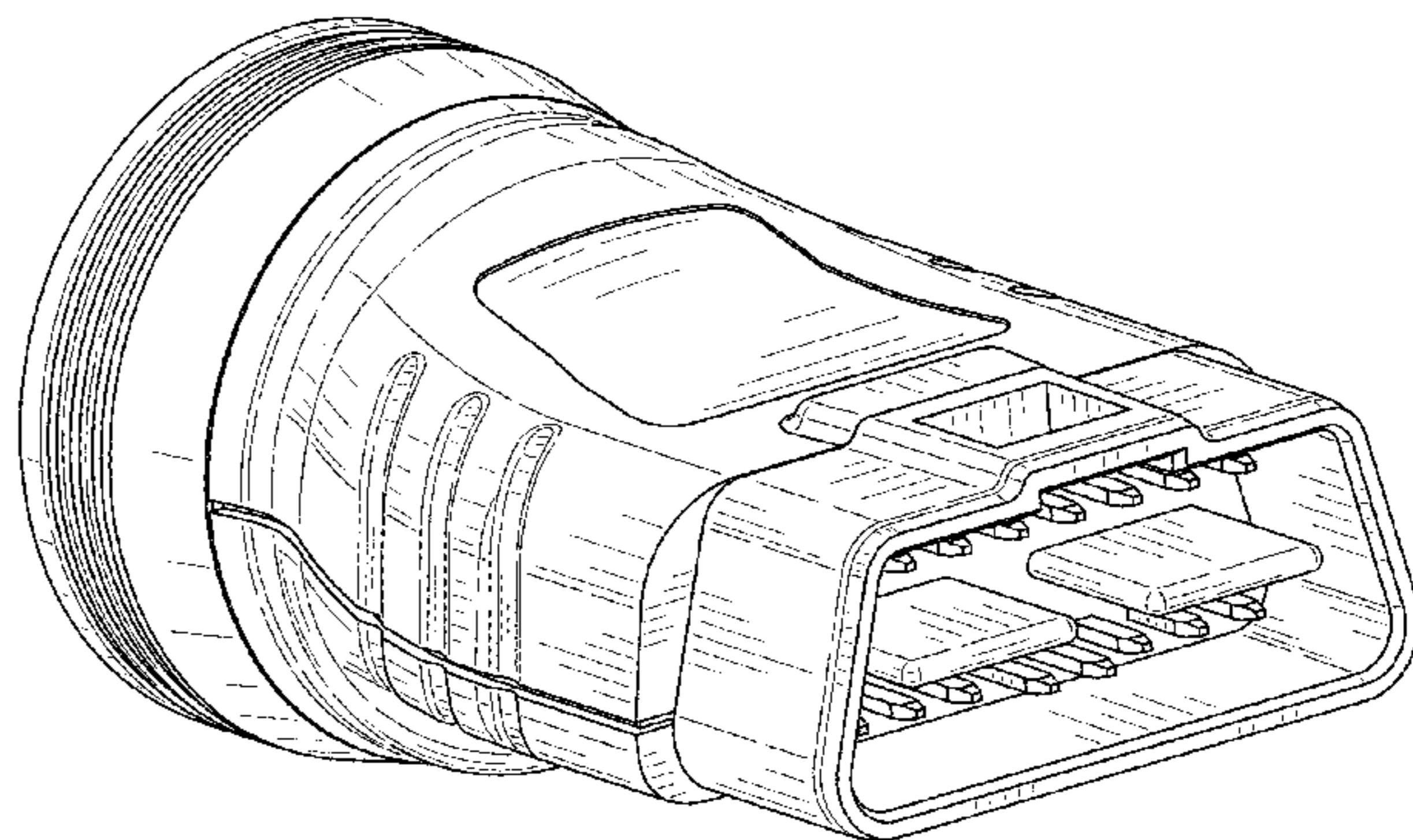
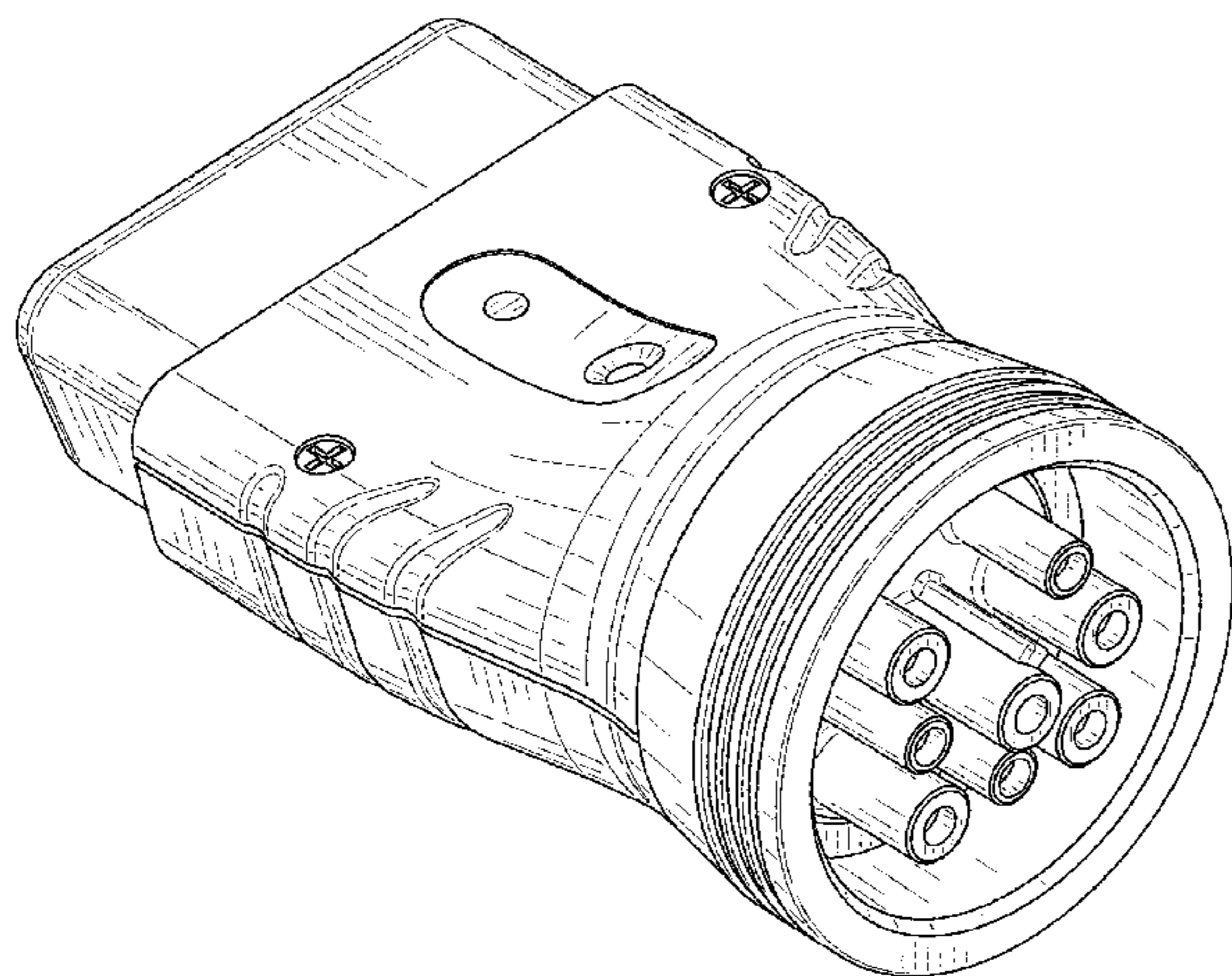
FIG. 6 is a top plan view thereof;

FIG. 7 is a bottom plan view thereof; and,

FIG. 8 is a bottom, front and right side perspective view thereof.

In the drawing views, the elements shown in broken line represents unclaimed environment and forms no part of the claimed design.

**1 Claim, 6 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

8,963,023	B2	2/2015	Phillips et al.	
9,002,554	B2	4/2015	Chen	
9,634,435	B1	4/2017	Raschilla et al.	
D786,255	S	5/2017	Kaminaga	
D786,875	S	5/2017	Kaminaga	
D788,777	S	6/2017	Bargetzi	
D790,556	S	6/2017	Heath et al.	
D794,104	S *	8/2017	Zou .....	D13/147
D803,908	S	11/2017	Yamaguchi et al.	
D806,040	S	12/2017	Morris et al.	
2007/0271906	A1	11/2007	Berke et al.	
2012/0305868	A1	12/2012	Callahan et al.	
2013/0327569	A1	12/2013	Stathis et al.	
2014/0120750	A1	5/2014	Johnson	
2015/0008805	A1	1/2015	Kramer	
2015/0118902	A1	4/2015	Data et al.	
2016/0327754	A1	11/2016	Hill et al.	

OTHER PUBLICATIONS

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=0ahUKewiNyrDuldbTAhU4oMKHck4CNEQFgg\\_MAM&url=http%3A%2F%2Faskatech.com%2FaskATechLive%2Fforums%2FResourceHandler.ashx%3Fa%3D7419&usq=AFQjCNHhGuQFTxU51QJ-m9EFookmndJ5eg&cad=rja](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0ahUKewiNyrDuldbTAhU4oMKHck4CNEQFgg_MAM&url=http%3A%2F%2Faskatech.com%2FaskATechLive%2Fforums%2FResourceHandler.ashx%3Fa%3D7419&usq=AFQjCNHhGuQFTxU51QJ-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](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](http://www.jaltest.com), catalog downloaded May 1, 2017 from [www.m2kinc.com/pdf/445-reference.pdf](http://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://Mack_Trucks_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 Particular 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).

Nelcome to ZED, Simple & Affordable ELD Compliance and GPS Tracking, The Lowest Cost ELD and Fleet Management Solutions, ZED, LLC, web page downloaded May 1, 2017 from [ZED\\_The\\_Simple\\_Affordable\\_ELD\\_Solution\\_For\\_Truck\\_Drivers\\_and\\_Fleets](https://ZED_The_Simple_Affordable_ELD_Solution_For_Truck_Drivers_and_Fleets), <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](https://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](https://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. 29/593,273, inventors: Dan O. Morris and Ivan Wei, filed Feb. 7, 2017, title: Dual-connector wireless vehicle communication interface (14 pages).

\* cited by examiner

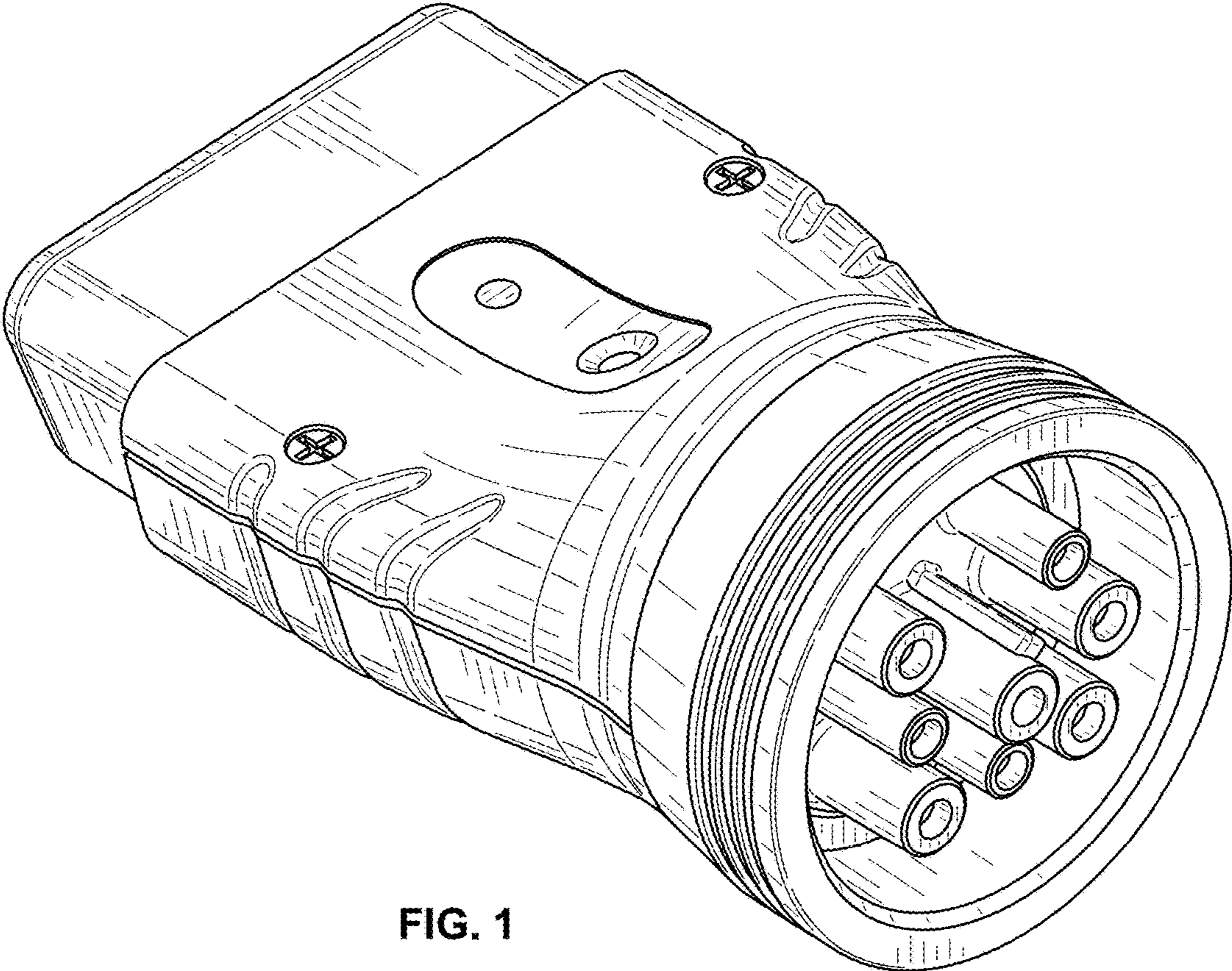


FIG. 1

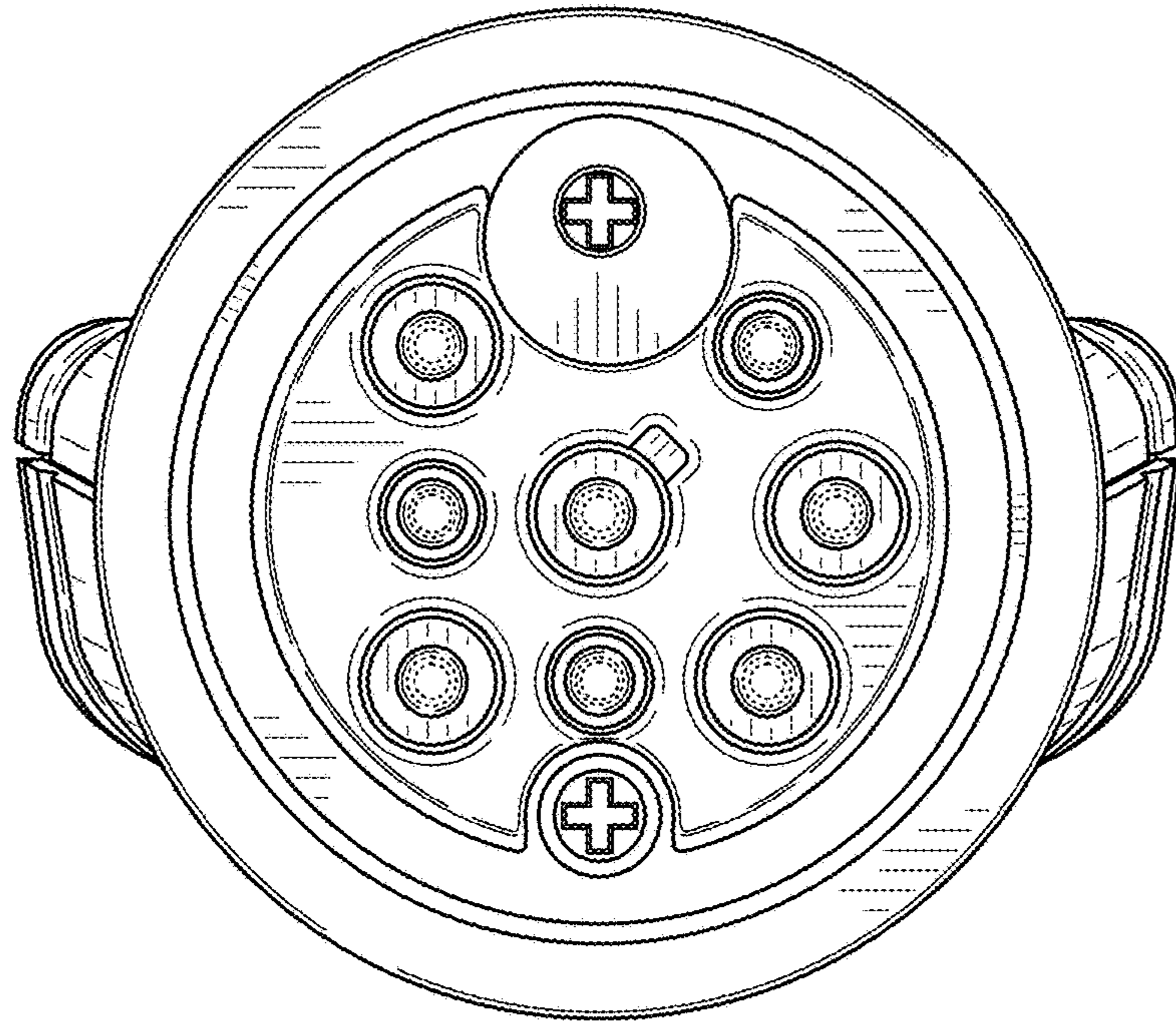


FIG. 2

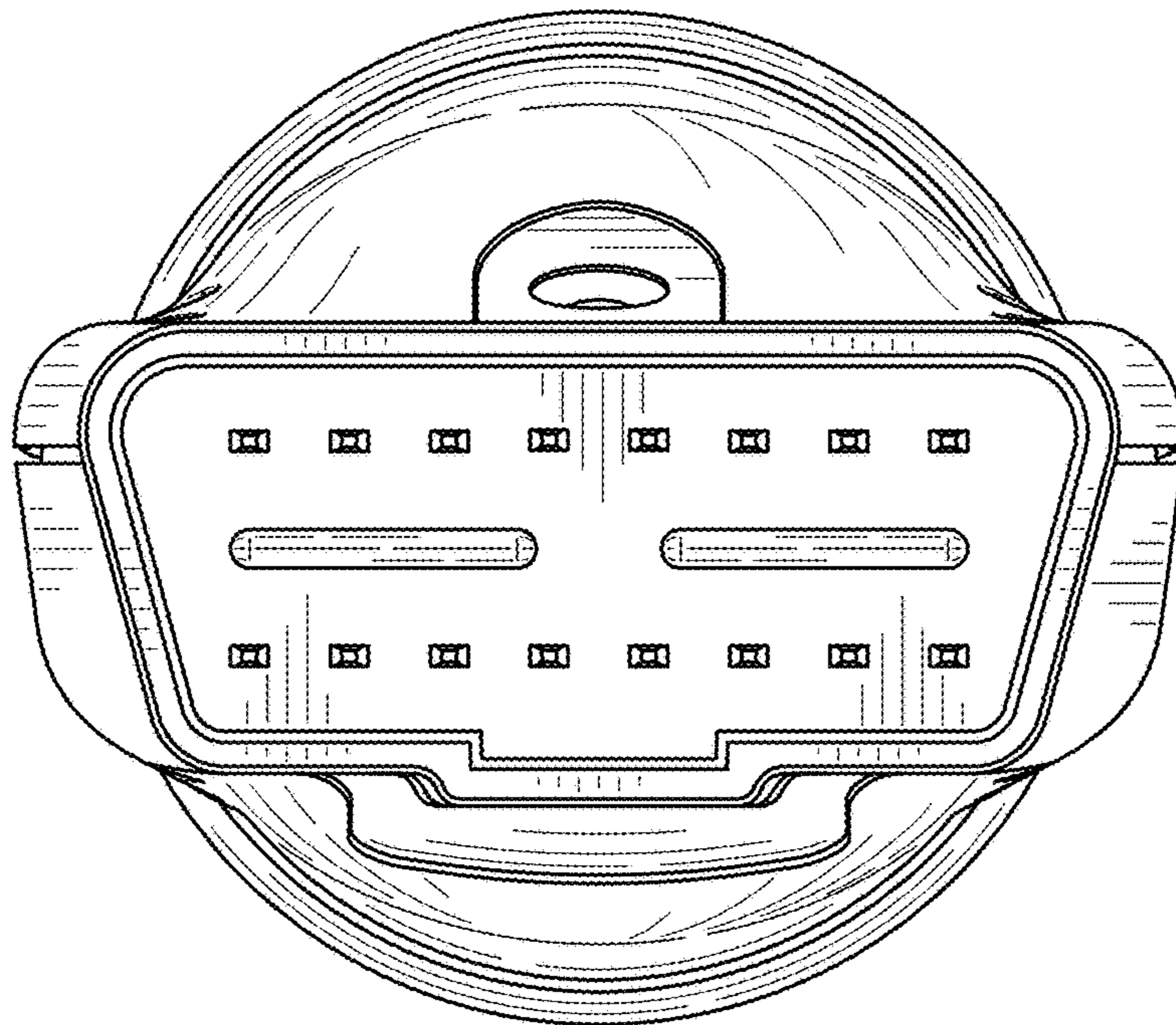


FIG. 3

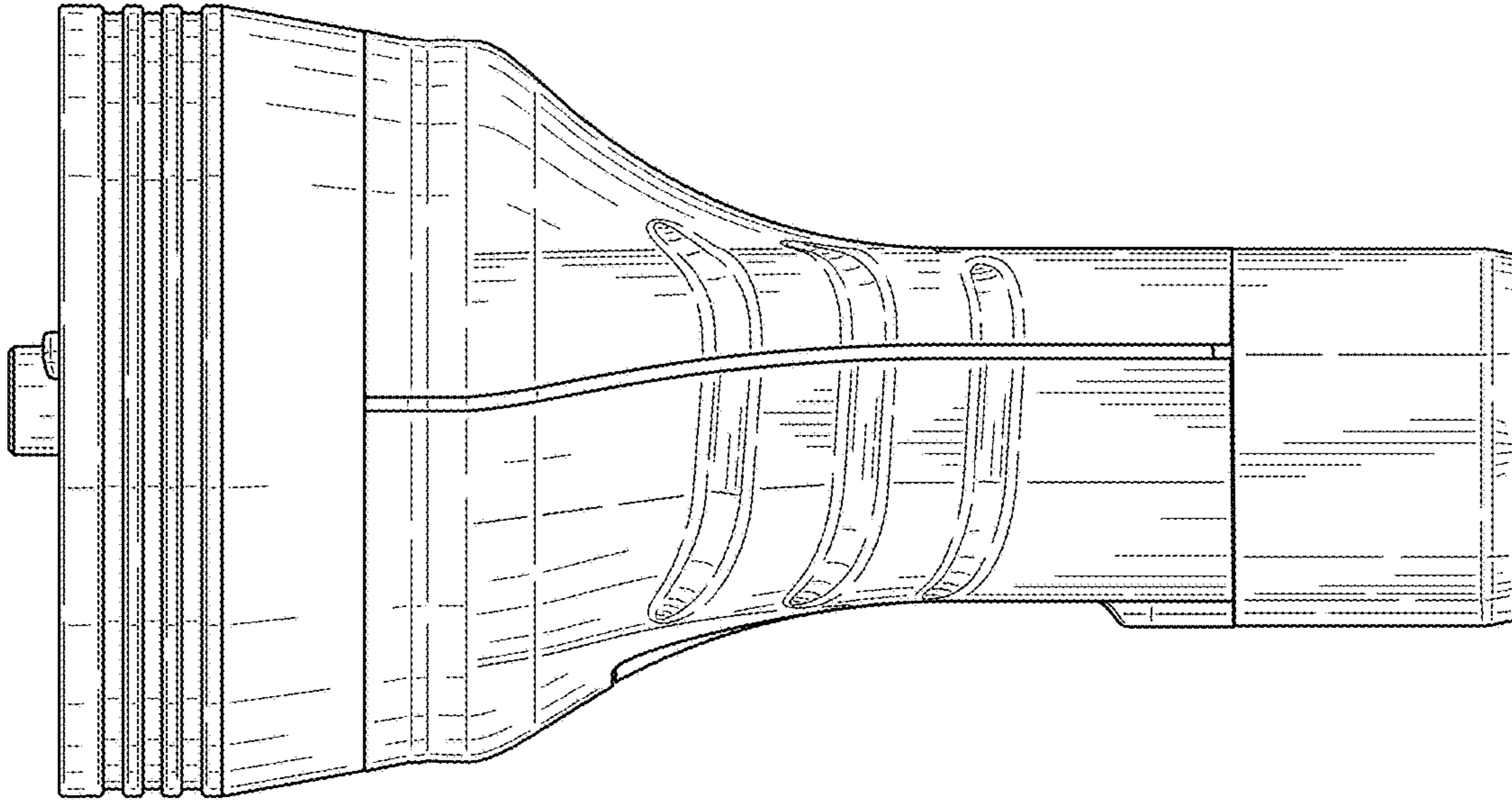


FIG. 4

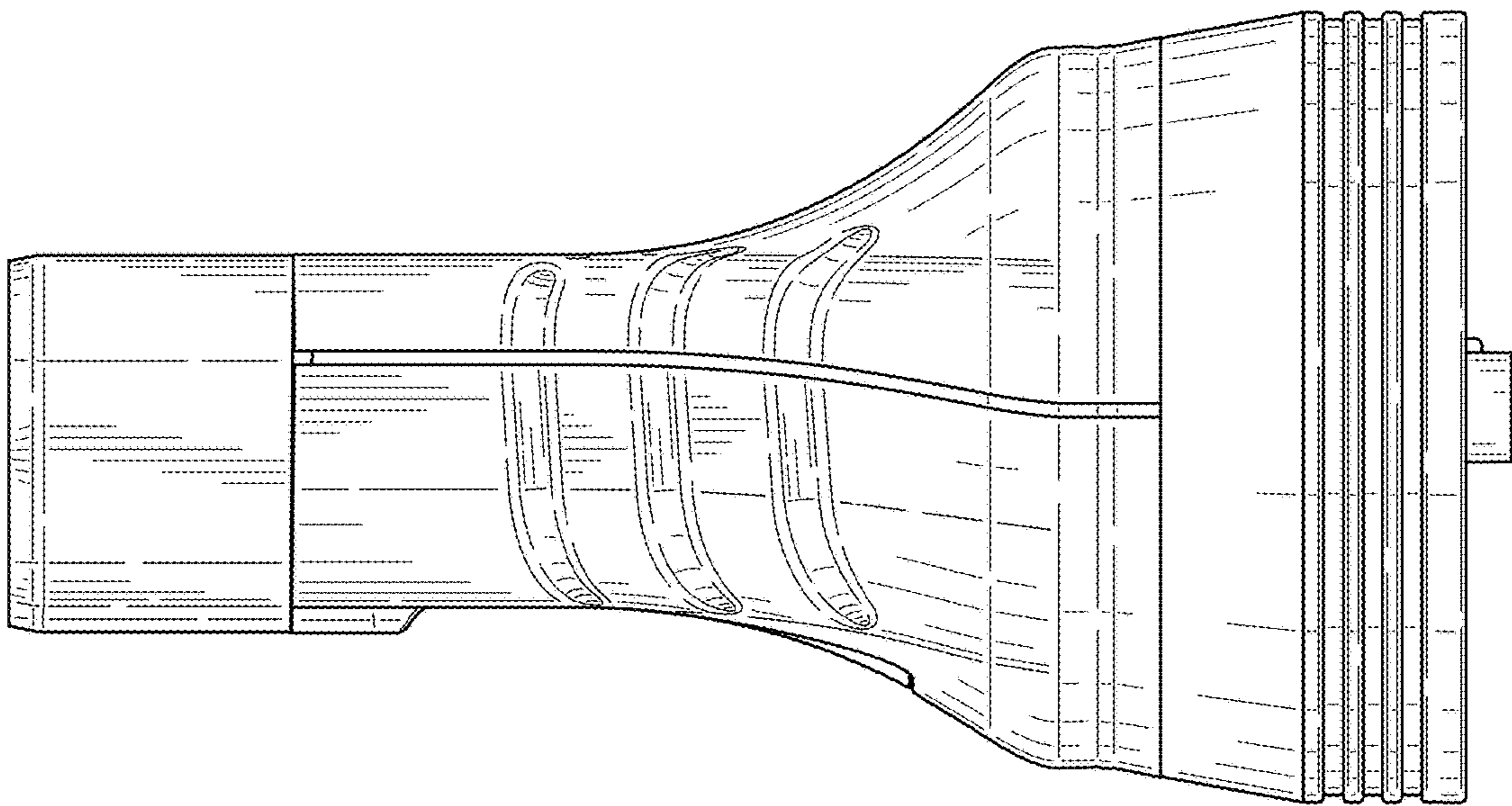


FIG. 5

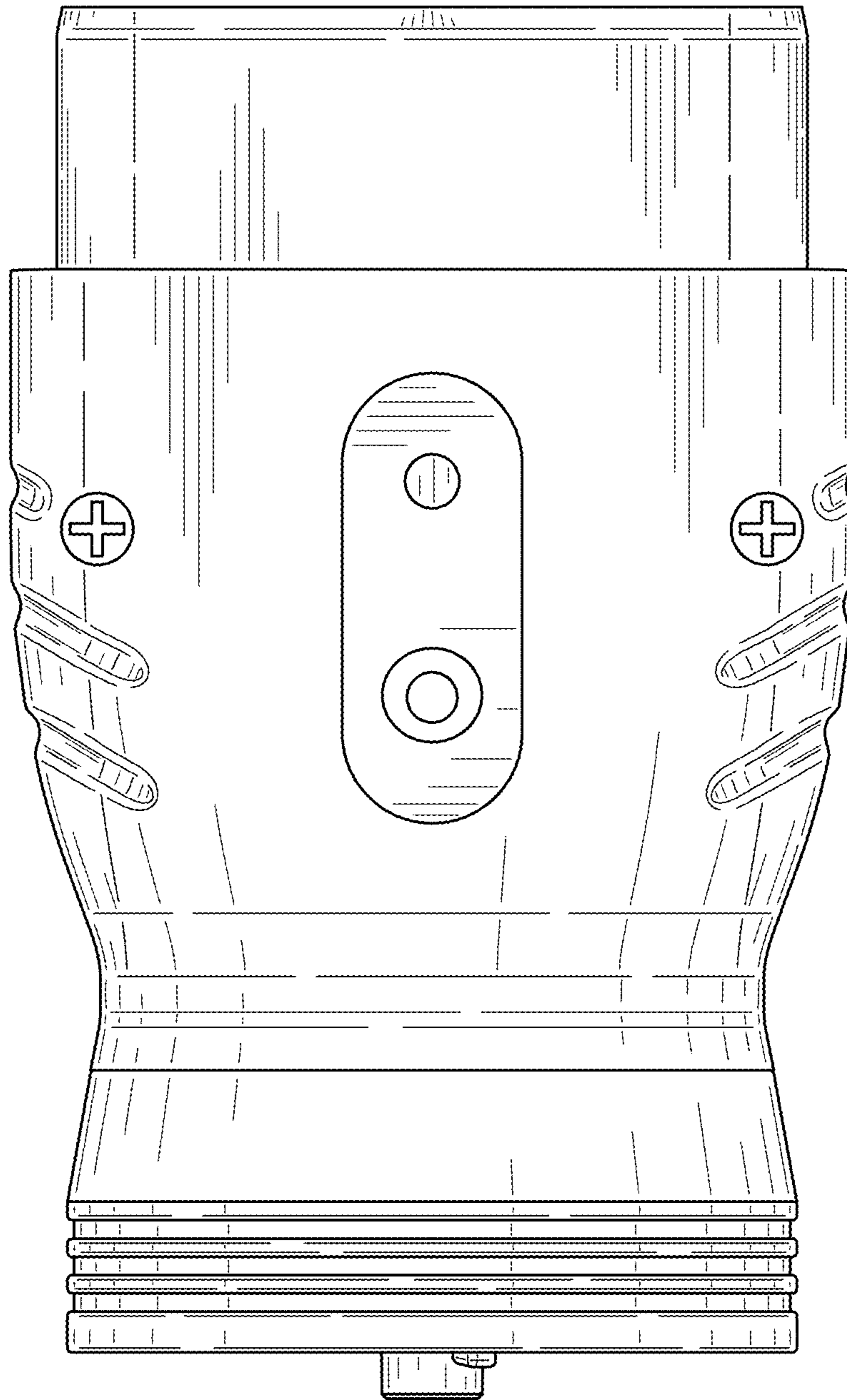


FIG. 6

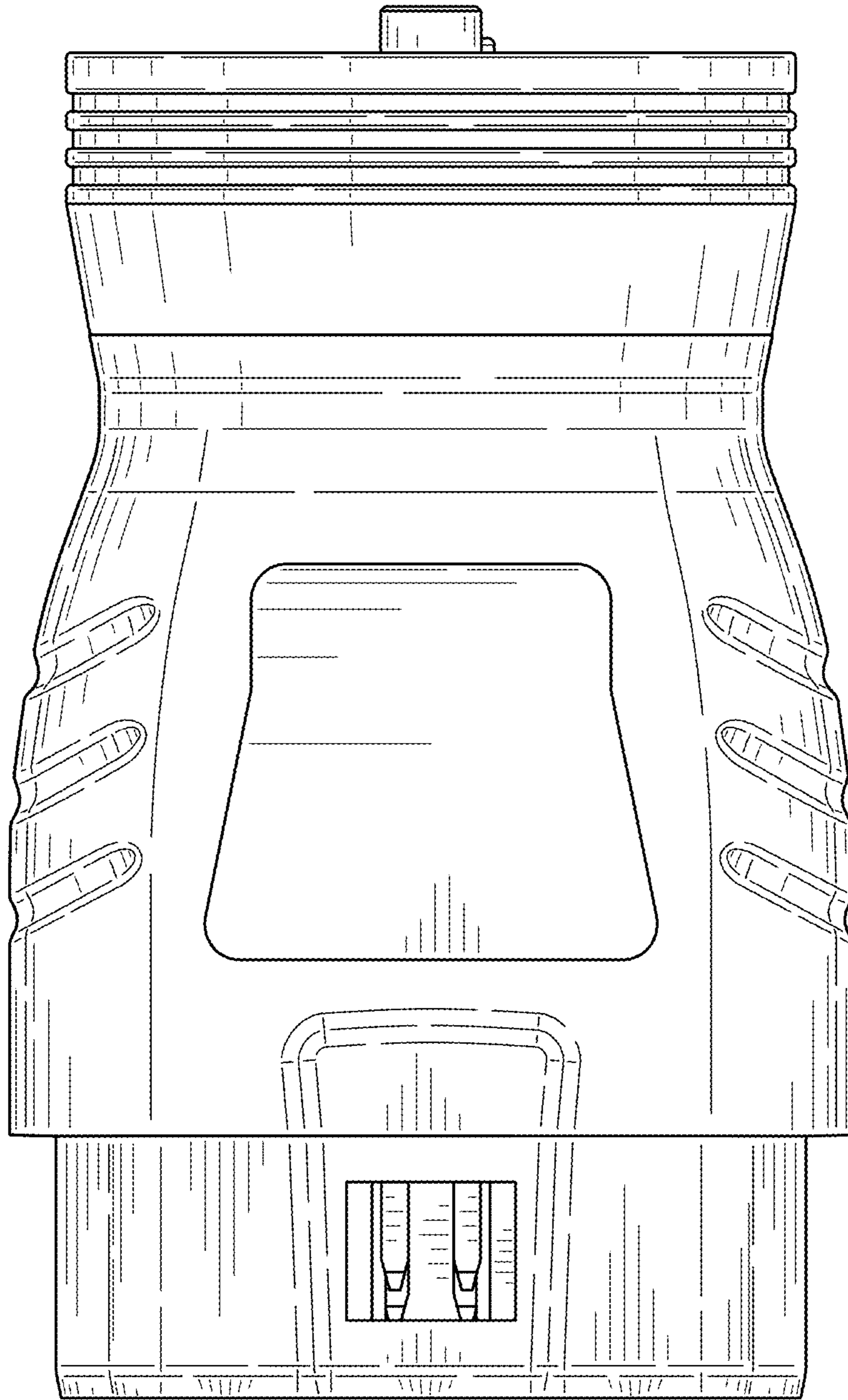


FIG. 7

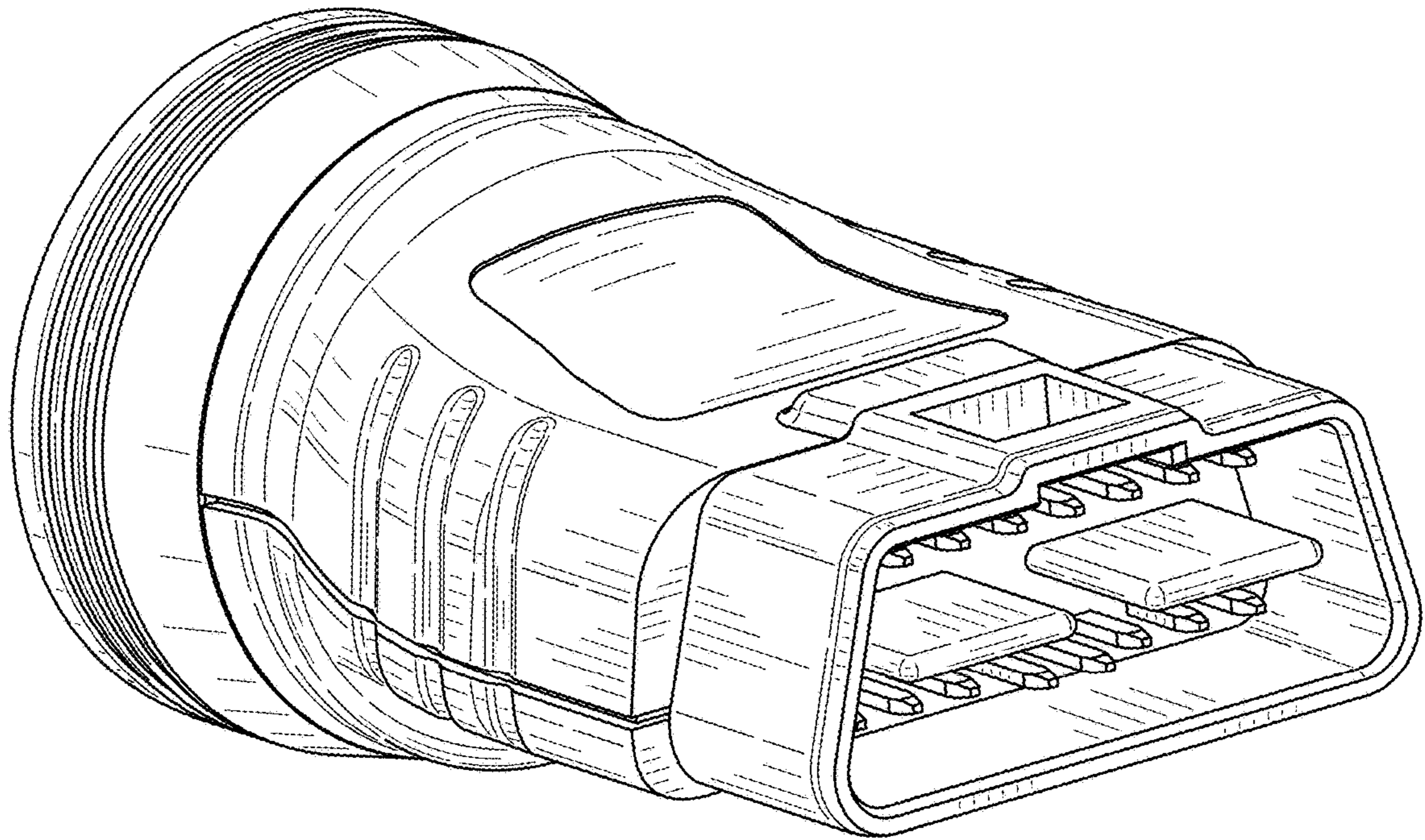


FIG. 8