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(12) **United States Design Patent** (10) **Patent No.:** **US D1,054,504 S**
Ewing et al. (45) **Date of Patent:** **** Dec. 17, 2024**

(54) **MODEL VEHICLE AXLE HOUSING**

FOREIGN PATENT DOCUMENTS

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DE 102008057196 A1 7/2009
EM 007721154-0004 3/2020

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(Continued)

OTHER PUBLICATIONS

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Traxxas TRX-4M Axle Housing (2) (Front & Rear), Part # TRA9741, as shown in www.hobbytown.com, May 23, 2023. (Year: 2023).*

(Continued)

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

Primary Examiner — Gino Colan

(21) Appl. No.: **29/852,462**

Assistant Examiner — Gregory G McLemore

(22) Filed: **Sep. 7, 2022**

(74) *Attorney, Agent, or Firm* — Daryl R. Wright; Greg Carr

(51) **LOC (14) Cl.** **21-01**

(57) **CLAIM**

(52) **U.S. Cl.**

The ornamental design for a model vehicle axle housing as shown and described.

USPC **D12/160**; D21/561; D21/495; D21/562

(58) **Field of Classification Search**

USPC D21/495, 561, 562; D12/159, 160

CPC B60K 2001/001; B60K 7/0007; A63H

17/262; A63H 19/22; A63H 19/10

See application file for complete search history.

DESCRIPTION

FIG. 1 is an upper, left, front perspective view of a model vehicle axle housing showing our new design;

FIG. 2 is a front elevation view thereof;

FIG. 3 is a rear elevation view thereof;

FIG. 4 is a right side elevation view thereof;

FIG. 5 is a left side elevation view thereof;

FIG. 6 is an upper plan view thereof;

FIG. 7 is a lower plan view thereof;

FIG. 8 is an upper, right, rear perspective view thereof; and

FIG. 9 is a lower, right, rear perspective view thereof; and,

FIG. 10 is a lower, right, front perspective view of the model vehicle axle housing.

In the drawings, the broken lines illustrate portions of the model vehicle axle housing that form no part of the claimed design.

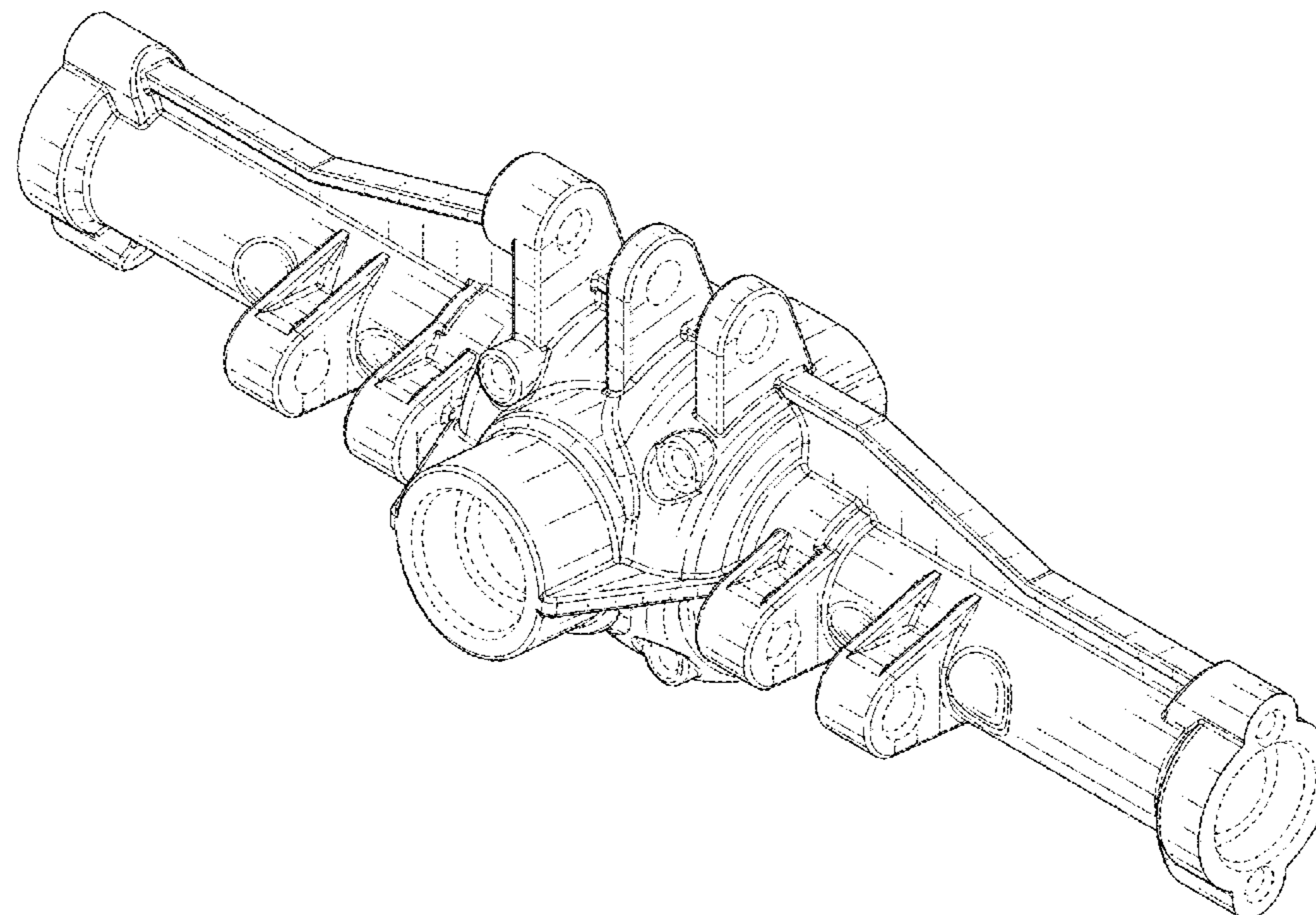
(56) **References Cited**

U.S. PATENT DOCUMENTS

1,377,905 A	5/1921	Martz	
1,455,706 A	5/1923	Bower et al.	
2,041,992 A	5/1936	Noel	
2,083,085 A	6/1937	Palmer	
2,132,545 A	10/1938	Smith	
2,547,435 A	4/1951	Bouchard	
3,306,077 A	2/1967	Piatti	
3,333,654 A	8/1967	Price-Stephens	
3,767,221 A	10/1973	Asberg	
D242,442 S	11/1976	Garrison	
D246,451 S *	11/1977	Shealy	D12/160
D246,921 S	1/1978	Moline	

(Continued)

1 Claim, 9 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

4,509,932 A 4/1985 Weible
 4,632,203 A 12/1986 Krude
 4,690,656 A 9/1987 Waler et al.
 D304,472 S 11/1989 Poulsen
 D304,473 S 11/1989 Poulsen
 D311,942 S 11/1990 Dideriksen
 D327,280 S 6/1992 Macomber
 D332,978 S 2/1993 Tsuchiya
 D341,560 S 11/1993 Fabris et al.
 5,338,247 A 8/1994 Miles
 5,498,208 A 3/1996 Braun
 5,516,130 A 5/1996 Mitchell
 D385,835 S 11/1997 Webster
 D403,023 S 12/1998 Araki
 5,954,586 A 9/1999 Kirson
 D424,988 S 5/2000 Rothlisberger
 6,394,878 B1 5/2002 Wang
 6,416,136 B1 7/2002 Smith
 6,478,709 B1 11/2002 Irwin et al.
 6,513,614 B2 2/2003 Knutson et al.
 6,773,353 B2 8/2004 Cornay et al.
 6,779,755 B1 8/2004 Thomsen
 6,796,404 B1 9/2004 Dick, Jr. et al.
 6,820,707 B1 11/2004 Cantemir
 D516,582 S 3/2006 Giddens
 7,144,326 B2 12/2006 Thompson
 D564,951 S * 3/2008 Gile D12/160
 D605,985 S 12/2009 Pennala
 7,690,660 B2 4/2010 Dudding et al.
 7,810,604 B2 10/2010 Byers et al.
 7,841,923 B2 11/2010 Marzetta et al.
 D677,608 S 3/2013 Kientzy
 D686,677 S 7/2013 Simonds
 D686,952 S 7/2013 Rau et al.
 8,540,260 B1 9/2013 Batdorf et al.
 8,574,022 B2 11/2013 Grisolia et al.
 D717,216 S 11/2014 Dunn et al.
 8,893,364 B2 11/2014 Rode
 D788,653 S 6/2017 Smith
 D798,906 S 10/2017 Bennett et al.
 D799,552 S 10/2017 McGinley
 D822,125 S 7/2018 Ewing et al.
 D826,340 S 8/2018 Ewing et al.
 D840,282 S 2/2019 Coste
 D843,273 S 3/2019 Audley-Coote
 D845,182 S * 4/2019 Sagawa D12/160
 D845,398 S 4/2019 Wood
 D845,842 S 4/2019 Sun
 D847,911 S 5/2019 Wood
 D847,912 S 5/2019 Wood
 D866,683 S 11/2019 Ewing et al.
 D868,171 S 11/2019 Wood
 D869,348 S 12/2019 Kucharski
 D871,273 S 12/2019 Bhaskar
 D878,974 S 3/2020 McGaughy
 D880,279 S 4/2020 Marchesan
 D880,375 S 4/2020 McGaughy
 D887,359 S 6/2020 McCoy, Jr.
 D891,998 S 8/2020 Smith
 D900,250 S 10/2020 Ewing et al.
 D902,089 S 11/2020 Ewing et al.
 D902,091 S 11/2020 Ewing et al.
 D904,532 S 12/2020 Ewing et al.
 D905,799 S 12/2020 Ewing et al.
 D913,166 S 3/2021 Kiska
 D923,115 S 6/2021 Ewing et al.
 D923,116 S 6/2021 Ewing et al.
 D923,722 S 6/2021 Ewing et al.
 D931,151 S 9/2021 Wade et al.
 D944,901 S 3/2022 Ewing et al.
 D945,488 S 3/2022 Mathura
 D945,897 S 3/2022 Brumbach
 D947,290 S 3/2022 Christensen et al.
 D947,958 S 4/2022 Christensen et al.
 D947,959 S 4/2022 Christensen et al.

D951,150 S 5/2022 Ewing et al.
 D951,299 S 5/2022 Nyren
 D954,610 S 6/2022 Owens et al.
 D954,611 S 6/2022 Owens et al.
 D954,612 S 6/2022 Owens et al.
 11,378,176 B2 7/2022 Fast
 D961,690 S 8/2022 Ewing
 D996,528 S 8/2023 Christensen et al.
 D1,014,657 S 2/2024 Christensen et al.
 D1,014,658 S 2/2024 Christensen et al.
 D1,032,424 S 6/2024 Smith
 D1,040,937 S * 9/2024 Ewing D21/562
 2002/0065021 A1 5/2002 Wang
 2002/0077025 A1 6/2002 Wu
 2002/0160688 A1 10/2002 Rehkemper et al.
 2002/0165031 A1 11/2002 Riefe
 2003/0110885 A1 6/2003 Beutler
 2004/0005931 A1 1/2004 Wang et al.
 2004/0231910 A1 11/2004 Mercier et al.
 2005/0156399 A1 7/2005 Chu
 2005/0206222 A1 9/2005 Swanson
 2006/0240897 A1 10/2006 Carlini et al.
 2007/0256659 A1 11/2007 Anderson et al.
 2007/0293328 A1 12/2007 Mazziotti
 2008/0238015 A1 10/2008 Duddling et al.
 2008/0303227 A1 12/2008 Chi Chun Idiot
 2009/0020973 A1 1/2009 Richardson
 2009/0029821 A1 1/2009 Martin, III et al.
 2009/0039700 A1 2/2009 Gradu et al.
 2009/0173033 A1 7/2009 Baxter, Jr.
 2011/0001350 A1 1/2011 Schmitz et al.
 2011/0057408 A1 3/2011 Koschinat
 2011/0079978 A1 4/2011 Schreiner et al.
 2011/0315468 A1 12/2011 Sellars et al.
 2013/0278047 A1 10/2013 Gottschalk
 2014/0361507 A1 12/2014 Park et al.
 2015/0191064 A1 7/2015 Gielisch et al.
 2015/0266350 A1 9/2015 Morino
 2016/0046151 A1 2/2016 Kelly et al.
 2016/0167432 A1 6/2016 Szczepanski
 2016/0169367 A1 6/2016 Orr et al.
 2017/0028517 A1 2/2017 Ferrari
 2017/0050483 A1 2/2017 Gordon et al.
 2017/0370465 A1 12/2017 Fast et al.
 2019/0030700 A1 1/2019 Huang
 2019/0054818 A1 2/2019 Garcia et al.
 2019/0210661 A1 7/2019 Cao et al.
 2020/0164708 A1 5/2020 Lim et al.
 2020/0198426 A1 6/2020 Rosene et al.
 2020/0282792 A1 9/2020 Horst et al.
 2023/0219010 A1 7/2023 Christensen et al.
 2024/0115964 A1 4/2024 Christensen et al.
 2024/0115965 A1 4/2024 Christensen et al.

FOREIGN PATENT DOCUMENTS

EM 007721154-0006 3/2020
 EM 015013355-0018 * 3/2023
 GB 6228967 10/2022
 GB 6265731 * 3/2023
 TW 179940-0001 12/2016
 WO D095551-013 4/2017
 WO D095551-014 4/2017
 WO D095551-016 4/2017

OTHER PUBLICATIONS

Traxxas 9744 Axle Rear (Assembled) M2.5x0.45 NL (2) TRX-4M, ASIN B0C4TM58T6, as shown in www.amazon.com, May 11, 2023. (Year: 2023).*

Injora Rear Axle Housing CNC Aluminum for TRX4M 1/18 RC Crawler Upgrade, ASIN B0BV6LPYQK as shown in www.amazon.com, Jul. 24, 2023. (Year: 2023).*

Wacece Brand, Rear Axle Housing CNC Aluminum Portal Axles High Trail Axles Perfect Substitution for TRX4M 1/18 RC Crawler Upgrade Accessories, ASIN B0CXXMN1PM, as shown in www.amazon.com, no date listed, date found, Oct. 10, 2024. (Year: 2024).*

(56)

References Cited

OTHER PUBLICATIONS

Meus Racing TRX4M Portal Axles +8mm Ground Clearance for Traxxas TRX4M Defender/Bronco/K10/F150 1/8 RC Crawler (Version 2.0), ASIN B0D14HS837, as shown in www.amazon.com, Jun. 10, 2024. (Year: 2024).*

KYX Racing Metal Axle Housing Axle Shell with Cover for 1/10 RC Crawler SCX10 II 90046 90047, ASIN B07THY3Q59, as shown in www.amazon.com, Apr. 11, 2020. (Year: 2020).*

Element RC Enduro SE Axle Housings, Part # ASC42307, as shown in www.amainhobbies.com, Dec. 5, 2022. (Year: 2022).*

Traxxas XRT Steering Blocks (2), as shown in www.hobbytown.com, May 16, 2023, Part # TRA7836. (Year: 2023).

Arrma 4S Blx Steering Block (2), as shown in www.hobbytown.com, Jul. 16, 2019, Part # ARA330523. (Year: 2019).

RPM Oversized Front Axle Carriers for Traxxas X-Maxx w/Bearings (2), as shown in www.amainhobbies.com, Jan. 18, 2021, Part # RPM80662. (Year: 2021).

Aluminum Alloy Front Hubs Steering Blocks for Traxxas X-MAXX 1/5 Scale RC Car Upgrade Parts (Red), ZXYRC Store, as shown in www.amazon.com, Apr. 10, 2022. (Year: 2022).

Traxxas 7836—Gray Steering Blocks Alum Gray, as shown in www.rc-powerhouse.com, no date listed, date found Jun. 18, 2024. (Year: 2024).

Traxxas XRT Caster Blocks (2), as shown in www.hobbytown.com, May 16, 2023, Part # TRA7832. (Year: 2023).

Hot Racing Aluminum Rear Hubs w/Over Size Bearings for Traxxas X-Maxx/XRT, as shown in www.amainhobbies.com, Apr. 9, 2024, Part # HRAXMX22M01. (Year: 2024).

Hot Racing Aluminum C-Hub Caster Blocks for Traxxas Maxx (Black) (2), as shown in www.hobbytown.com, May 4, 2021, Part # HRAMXX1901. (Year: 2021).

Yokomo Graphite Front Steering Hub Carrier (4°) (-1mm Tread) (Hard Type), as shown in www.hobbytown.com, Jan. 30, 2018, Part # YOKB8-413GH1. (Year: 2018).

Traxxas Rear Stub Axle Carriers (2), as shown in www.hobbytown.com, May 16, 2023, Part # TRA7852. (Year: 2023).

Measjimi Brand, 2pcs Alloy Rear Stub Axle Hub Carrier 7752 for RC Hobby Car 1/5 1/6 X-MAXX (Red), as shown in www.amazon.com, no date listed, Jun. 17, 2024, date found, ASIN B09MH1V2Q. (Year: 2024).

Weiqian brand, 1 Pair RC Rear Hub Carrier Portable Flexible CNC Aluminum Alloy Rear Stub Axle Carrier Replacement for TRAXXAS 1/5 Black, as shown in www.walmart.com, no date listed, Jun. 17, 2024, date found. (Year: 2024).

RPM Oversized Rear Axle Carriers for Traxxas X-Maxx, as shown in www.hobbytown.com, Sep. 27, 2016, Part # RPM81732. (Year: 2016).

Globact Brass LCG Heavy Weight Caster Blocks Portal Drive C-Hubs 84g Counterweight for 1/10 TRX4 TRX6 RC Crawler Car Upgrades Parts (2PCS), as shown in www.amazon.com, Aug. 9, 2023, ASIN B0C9SWT276. (Year: 2023).

Carriers stub axle, First Date Available: Unknown, Imaged retrieved on: Jun. 3, 2023, <<https://traxxas.com/products/parts/9552>>.

Traxxas TRX-4M Axle Cover (Black Chrome), Amain Hobbies Webpage [online], [Site Visit Nov. 20, 2023], URL: <https://www.amainhobbies.com/traxxas-trx4m-axle-cover-black-chrome-2-tra9738->

[blker/p1451999?gclid=EAlalQobChMInZan4p3TggMV-TWtBh3KAA8AEAKYAiABEgKPqPD_BWE](https://www.michaelsrhobbies.com/tra9738-red-trx-4m-axle-cover-front-or-rear-red-2.html) (Year: 2023).

TRA9738-Red TRX-4M Axle Cover Front or Rear (Traxxas), Michael's RC Hobbies Webpage [online], [Site Visit Nov. 20, 2023], URL: <https://www.michaelsrhobbies.com/tra9738-red-trx-4m-axle-cover-front-or-rear-red-2.html> (Year: 2023).

Chen, Xingyu; U.S. Pat. No. D1,002,447; Axle Housing; Oct. 24, 2023.

Axial; Axial SCX10 II; Aug. 2016.

Bomber; Bomber Fabrication Gusset Kit; Aug. 2016.

Wikipedia; Dana 44 Axle; Aug. 2016.

Reid Racing; Reid Racing Axle Products; Aug. 2016.

Currie; Currie RockJock 79 Axle; Aug. 2016.

Xray Model Racing Cars; "T1R Raycer—Instruction Manual;" Xray Model Racing Cars, Trencin, Slovak Republic, Europe.

Traxxas; "T-Maxx Assemblies-Front Assembly;" Traxxas LP, Plano, Texas.

Traxxas Rear Stub Axle Carrier (1.5 Degree), Earliest Available Date Oct. 29, 2007 [Online], [Site Visited Oct. 28, 2020] Available From Internet, URL: <[https://www.amainhobbies.com/traxxas-rear-stub-axle-carrier-1.5-degree-tra4352/b17759?gclid=EAlalQobChMlyY7Ak_](https://www.amainhobbies.com/traxxas-rear-stub-axle-carrier-1.5-degree-tra4352/b17759?gclid=EAlalQobChMlyY7Ak_TX7AIVWQiICR1dzw2fEAYBCABEgL99vD_BwE)

[TX7AIVWQiICR1dzw2fEAYBCABEgL99vD_BwE](https://www.amainhobbies.com/traxxas-rear-stub-axle-carrier-1.5-degree-tra4352/b17759?gclid=EAlalQobChMlyY7Ak_TX7AIVWQiICR1dzw2fEAYBCABEgL99vD_BwE)> (Year: 2007).

Axle Bearing Carrier Suzuki LTZ400 Kawasaki KFX400 Arctic DVX400, Earliest Available Date Jun. 13, 2018 [Online], [Site Visited Oct. 28, 2020] Available From Internet, URL: <<https://www.amazon.com/Bearing-Carrier-SUZUKI-LTZ400-KAWASAKI/dp/B07F22WBPI>> (Year: 2018).

Traxxas C-Hubs, Published date unavailable [online], [retrieved on Feb. 5, 2022]. Retrieved from the Internet: <https://www.rcsuperstore.com/traxxas-caster-blocks-c-hubs-left-right-slash-4x4/> (Year: 2022).

Traxxas Rear Stub Axle Carrier, Published date unavailable [online], [retrieved on Feb. 5, 2022]. Retrieved from the Internet: <https://www.rcmart.com/traxxas-rear-left-and-right-stub-axle-carrier-for-jato-5555-00036488> (Year: 2022).

Palumma RC Gearbox Cover, available in Amazon.com, date first available Jun. 9, 2023 [online], [site visited Apr. 16, 2024], Available from the internet URL: https://www.amazon.com/Palumma-Gearbox-Aluminum-Transmission-Differential/dp/B0C7JW49ZB/ref=sr_1_6?crid=30VAI2L9URG6D&dib=eyJ21joiMSJ9._JgbGBev5Lj (Year: 2023).

Ewing, Adam Cole, et al.; US Patent D1,018,382; Model Vehicle Differential Cover; Mar. 19, 2024.

Collins, Trent, et al.; US Patent D1,019,480; Model Vehicle Differential Cover; Mar. 26, 2024.

Traxxas Sledge Left & Right Steering Blocks, as shown in www.hobbytown.com, Jul. 27, 2022, Part # TRA9537. (Year: 2022).

Traxxas Sledge Caster Blocks L/R w/ Kingpin Bushings, as shown in www.hobbytown.com, Jul. 5, 2022, Part # TRA9532. (Year: 2022).

Carriers, stub axle, 6061-T6 aluminum, posted date unknown [online], [retrieved Jul. 5, 2024]. Retrieved from internet, <https://traxxas.com/products/parts/9552T> (Year: 2024).

RiToEasysports 2Pcs RC Rear Axle Carrier, posted date unknown [online], [retrieved xx/xx/xx]. Retrieved from internet, https://www.amazon.com/RiToEasysports-Carrier-Aluminum-Alloy-Compatible/dp/B09JGDWWVSK/ref=sr_1_28 (Year: 2024).

* cited by examiner

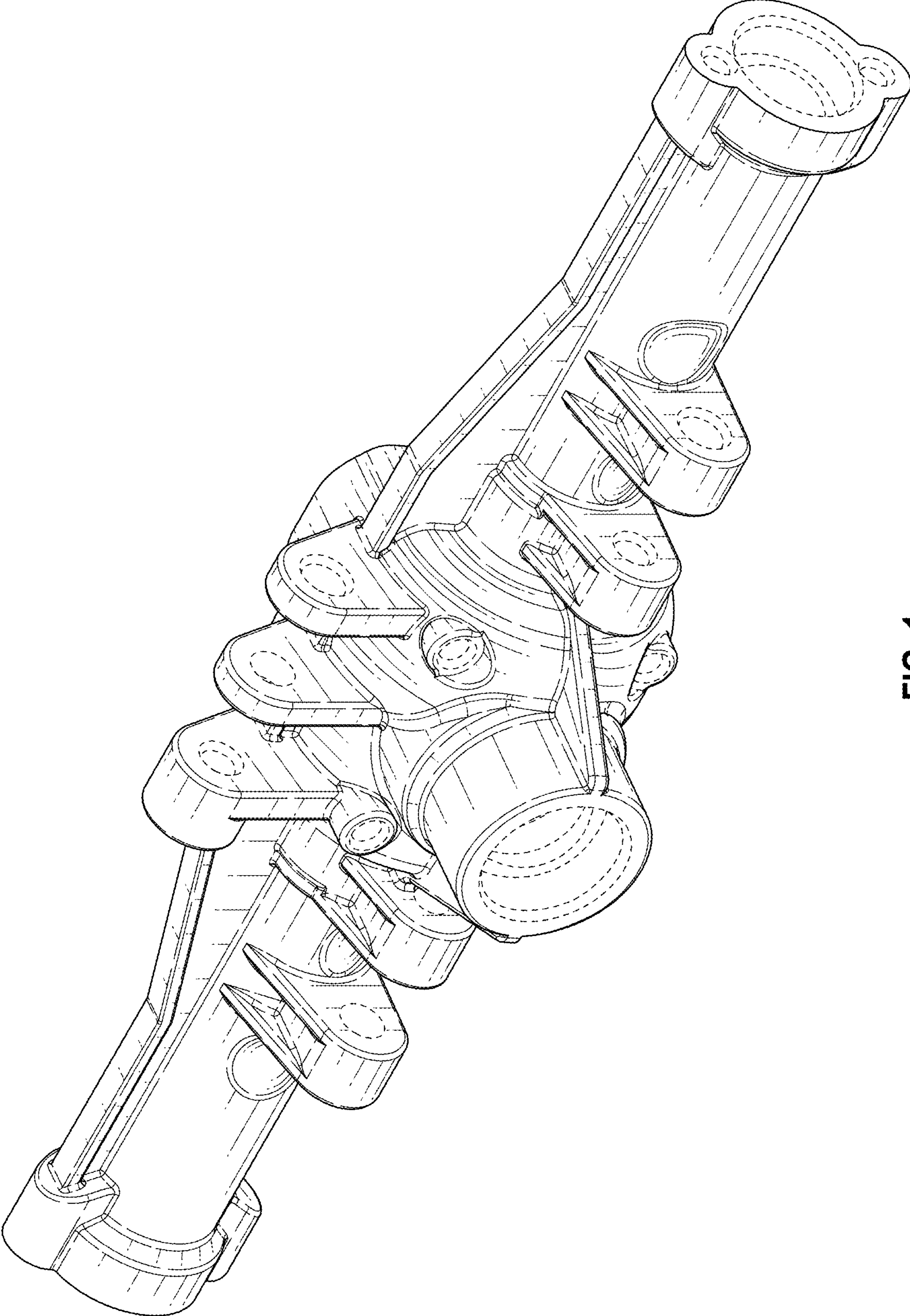


FIG. 1

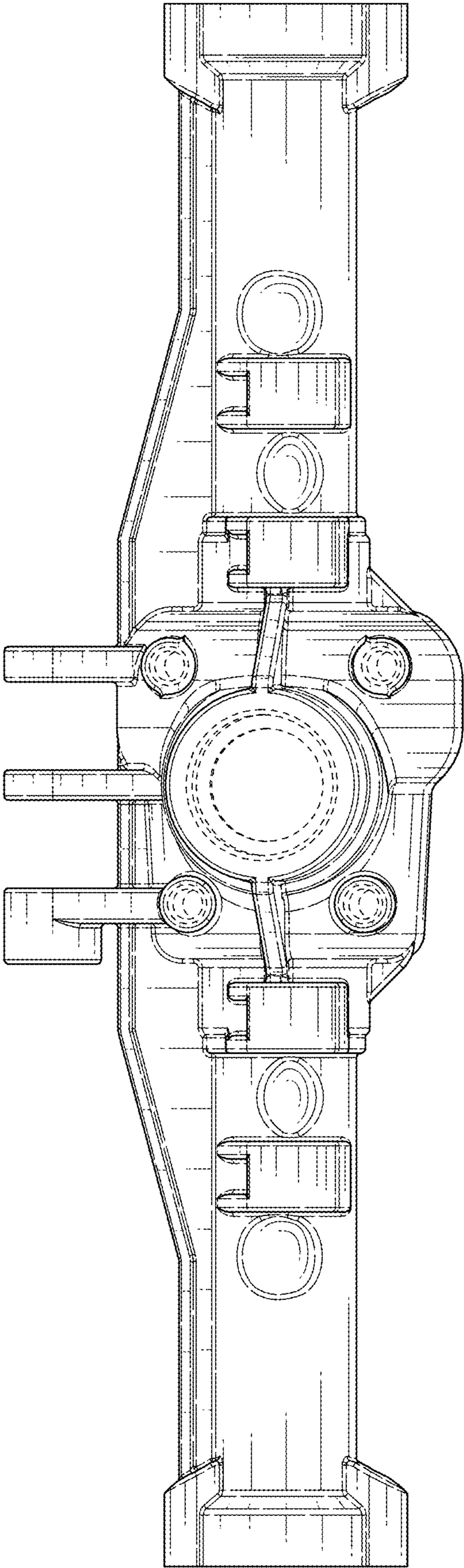


FIG. 2

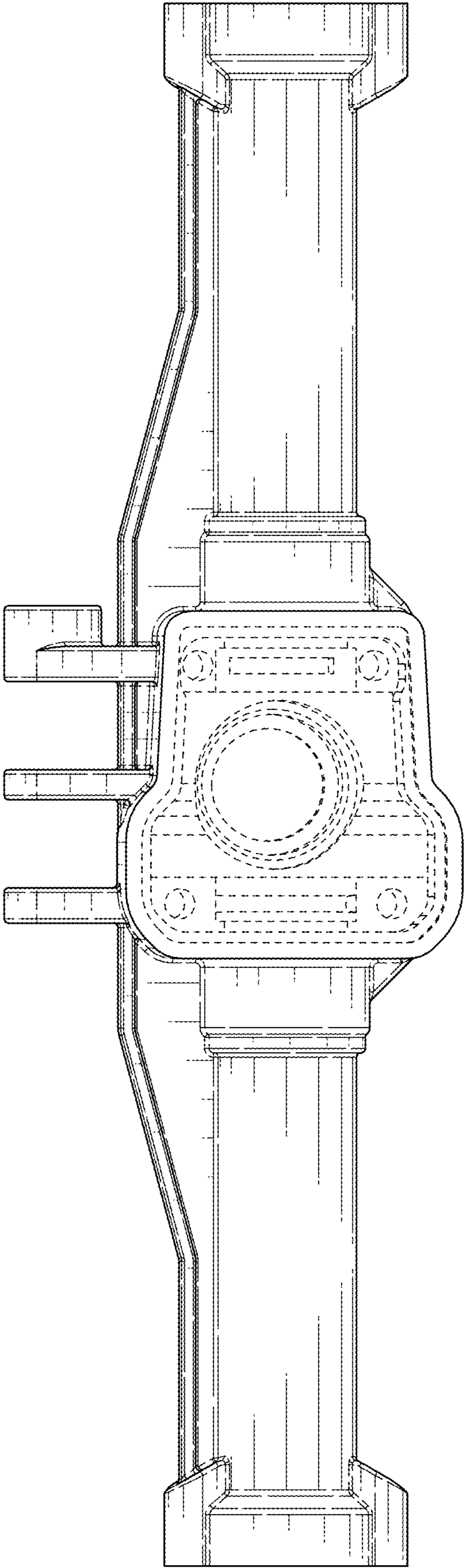


FIG. 3

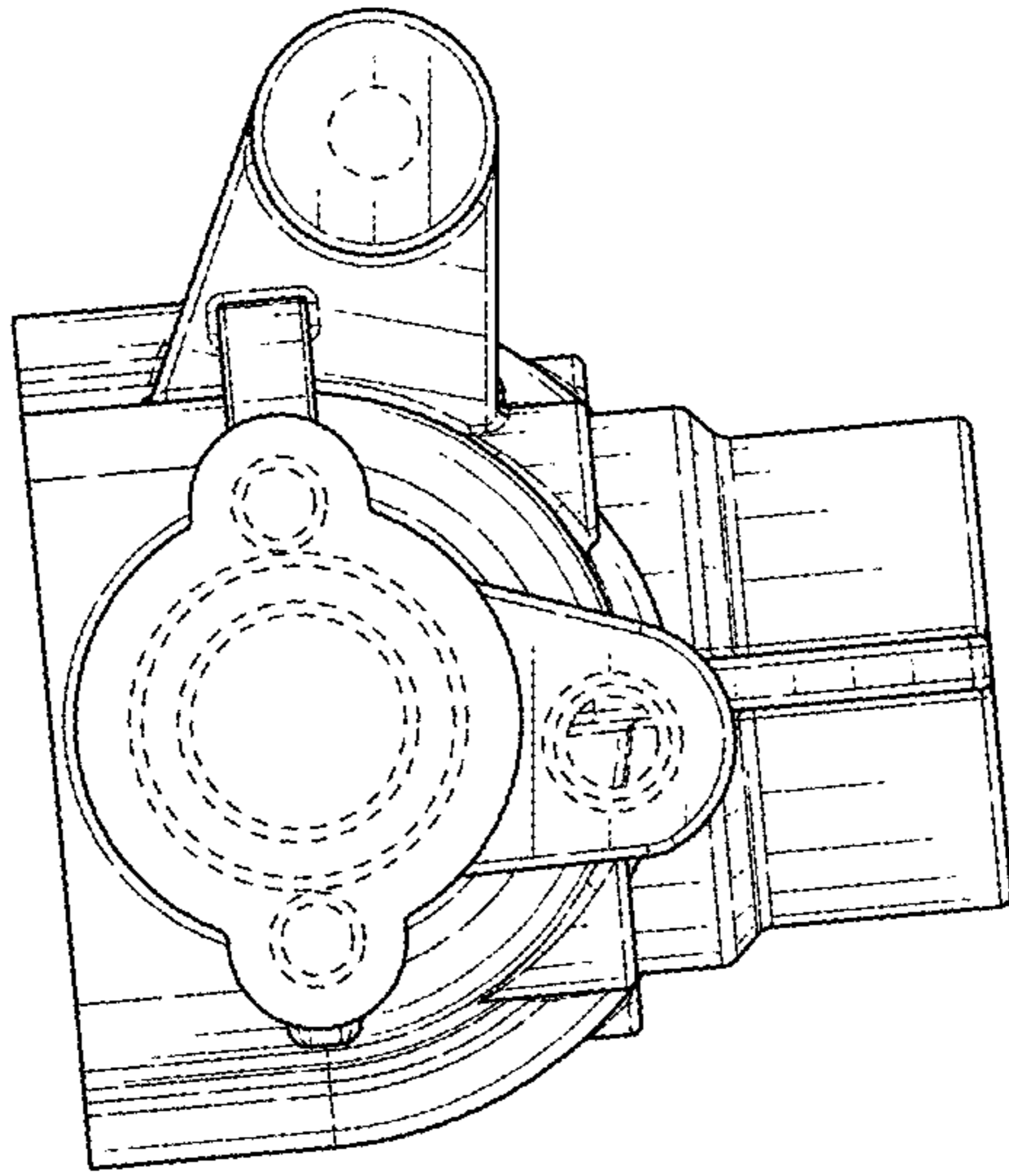


FIG. 4

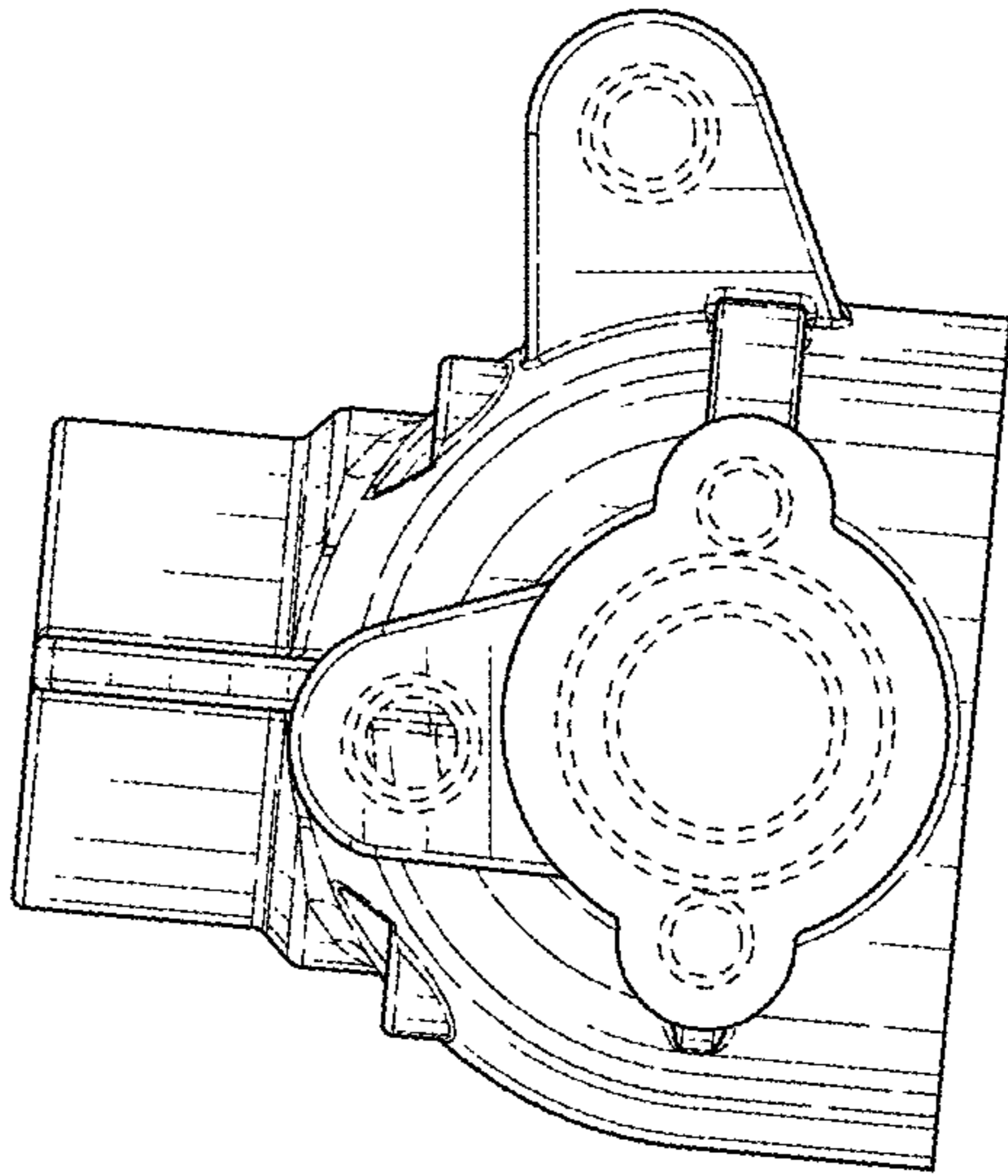


FIG. 5

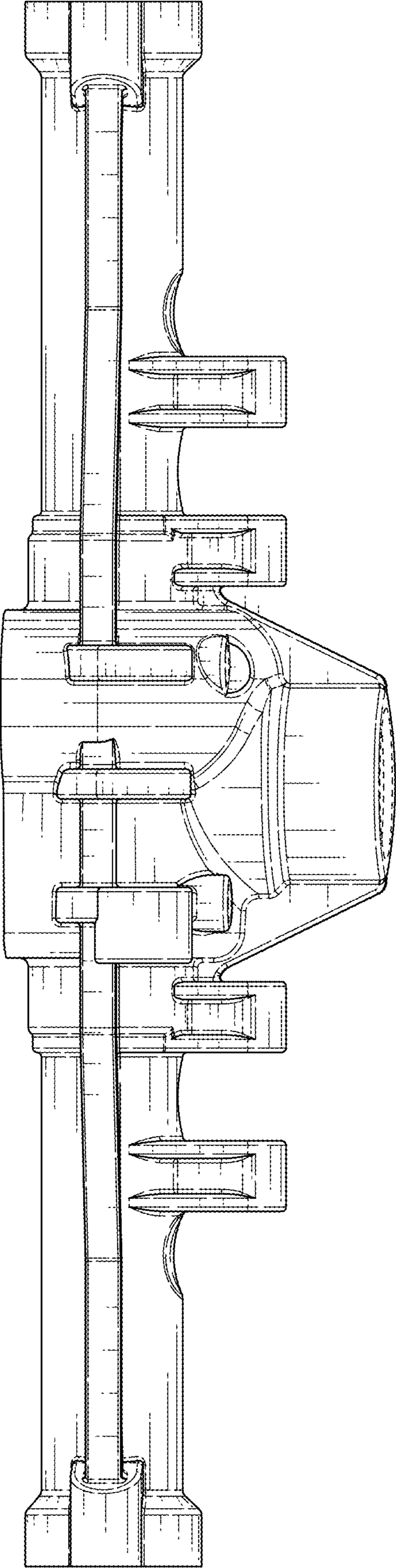


FIG. 6

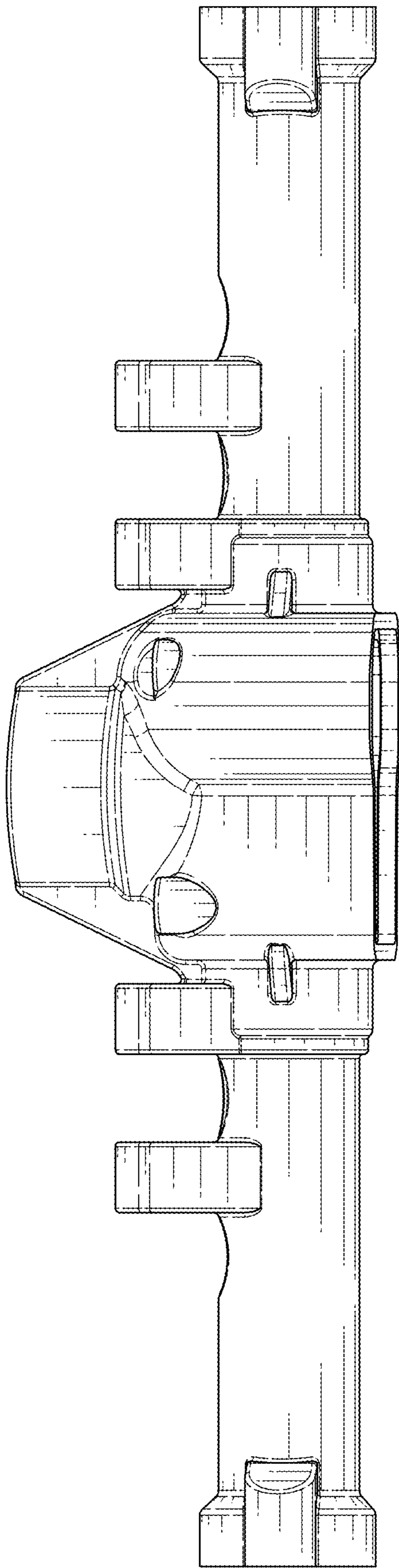


FIG. 7

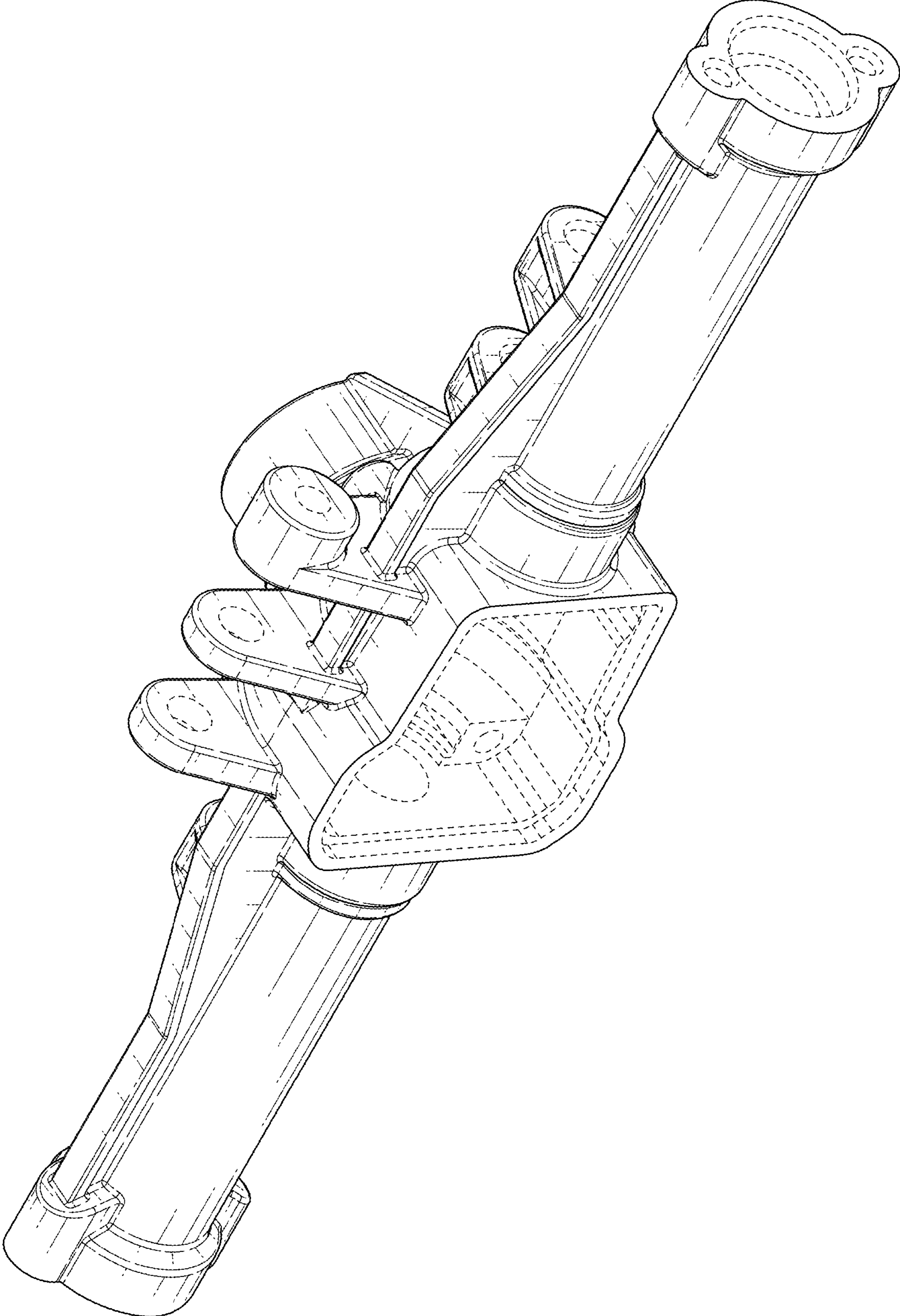


FIG. 8

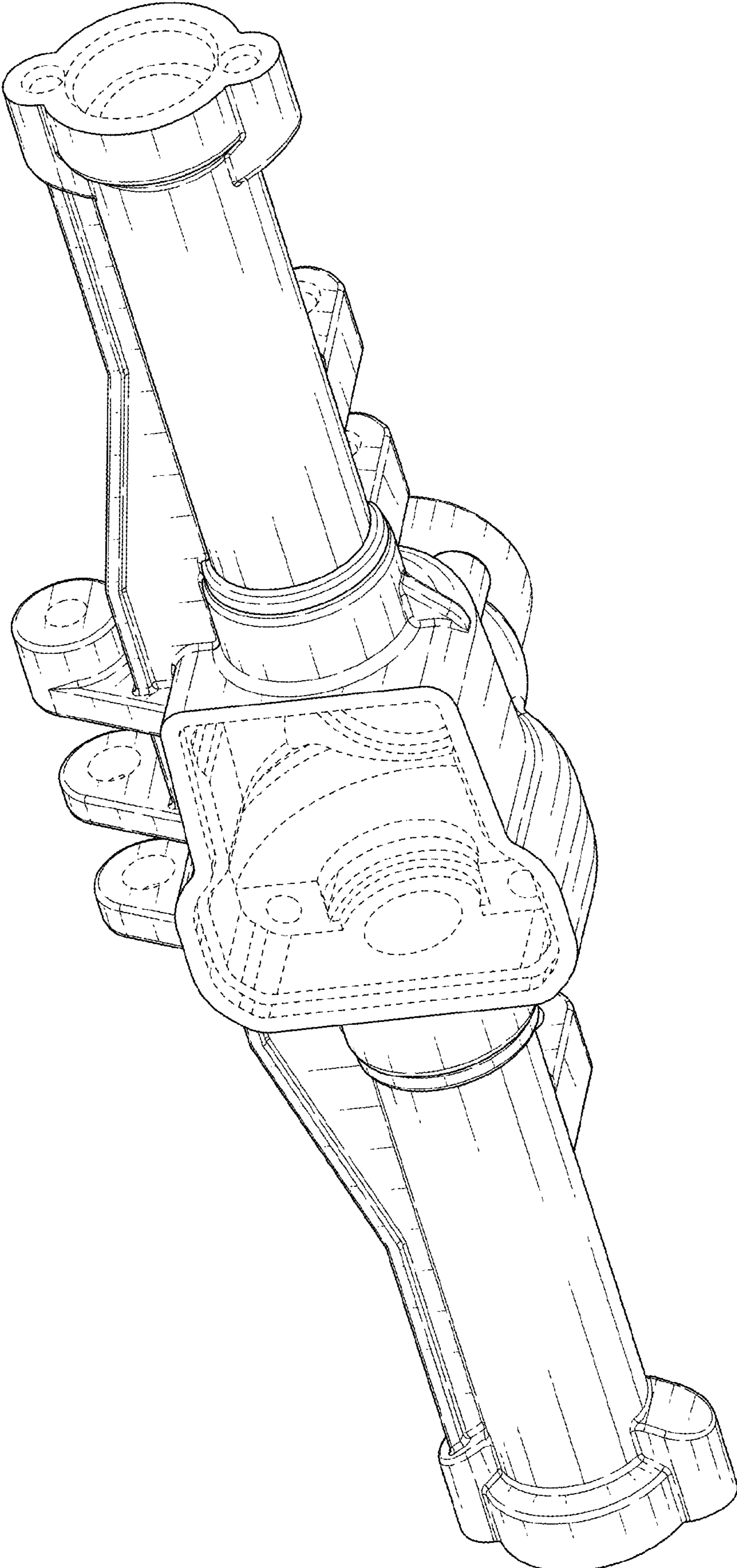


FIG. 9

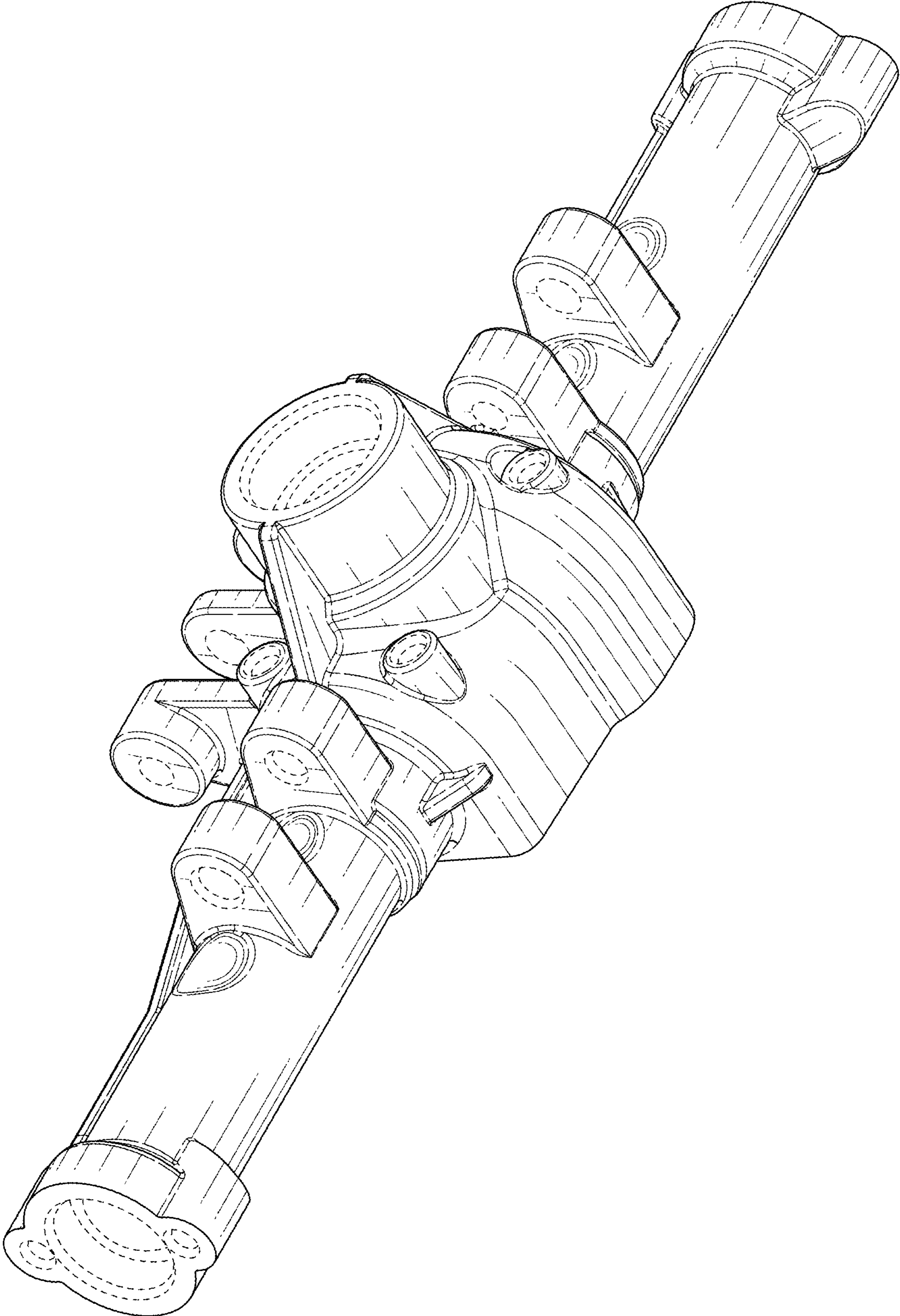


FIG. 10