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(12) **United States Design Patent** (10) **Patent No.: US D1,043,459 S**
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(54) **MODEL VEHICLE SHOCK TOWER**

FOREIGN PATENT DOCUMENTS

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CN 304904483 11/2018
DE 2137757 B2 2/1973

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USPC **D12/159**

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CPC A63H 17/26; A63H 17/262; A63H 17/264; A63H 17/266; A63H 17/00; A63H 17/36; A63H 17/002; B60G 13/003; B60G 2204/128; B60G 2204/124; B62D 25/00; B62D 35/00

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,135,577 A	4/1915	Hague
1,647,438 A	11/1927	De Ram
1,695,379 A	12/1928	Keck
1,998,477 A	4/1935	Wikander
2,123,681 A	7/1938	Willgoos
2,126,085 A	8/1938	Balz
2,131,661 A	9/1938	Heyermans et al.

(Continued)

OTHER PUBLICATIONS

Traxxas TRX4M Shock Mount Battery Tray, Amazon Webpage[online], [Site Visit Jul. 18, 2024], URL: <https://www.amazon.com/TRAXXAS-TRX4M-Shock-mounts-battery/dp/B0C4TQSG7V> (Year: 2024).*

(Continued)

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(57) **CLAIM**

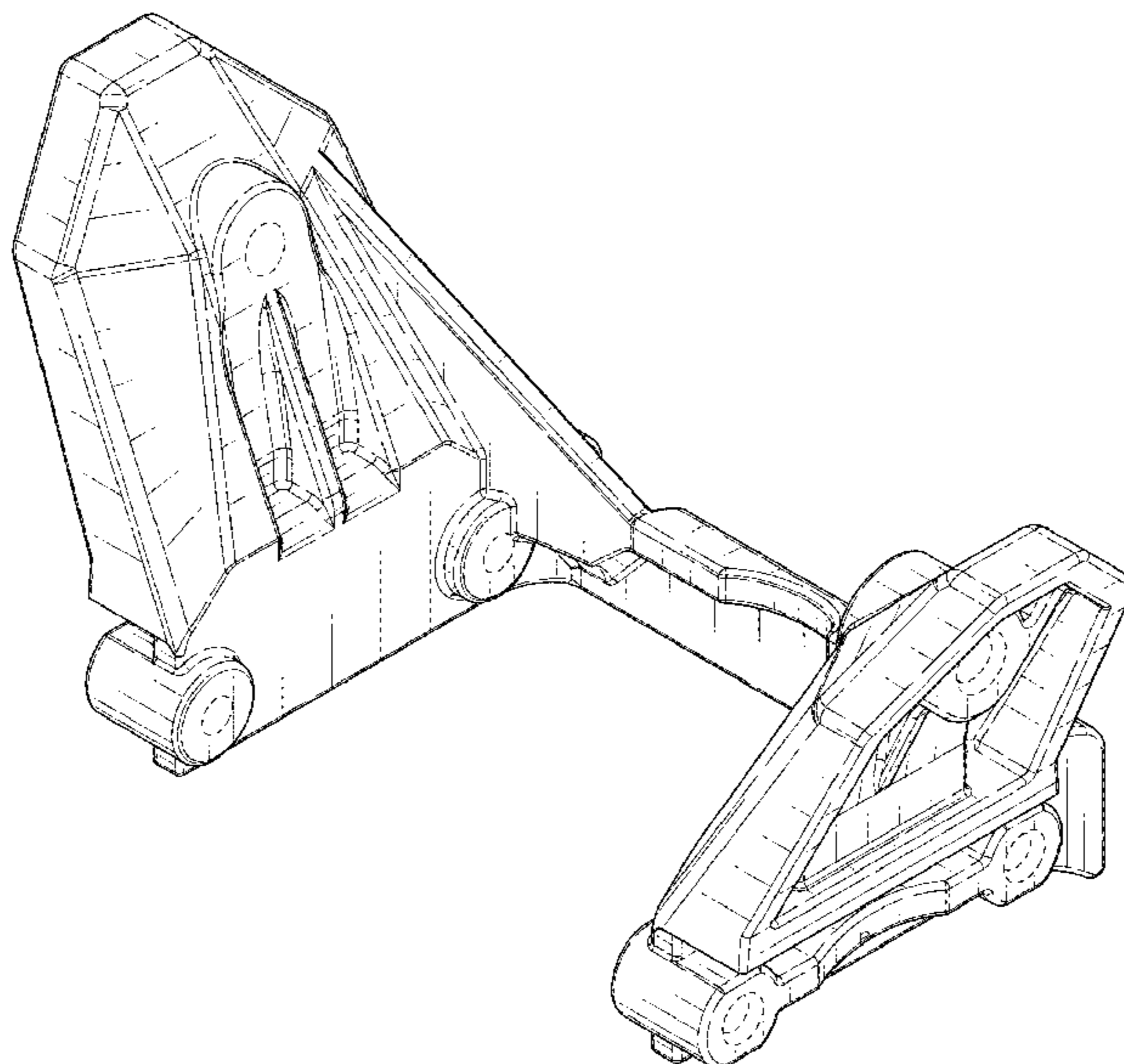
We claim the ornamental design for a model vehicle shock tower, as shown and described.

DESCRIPTION

FIG. 1 is an upper, left, front perspective view of a model vehicle shock tower 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; FIG. 9 is a lower, right, rear perspective view thereof; and, FIG. 10 is a lower, right, front perspective view of the model vehicle shock tower.

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

1 Claim, 9 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

2,186,065 A 1/1940 Fischer
 2,219,361 A 10/1940 Haberstump
 2,580,559 A 1/1952 Kolbe
 2,643,110 A 6/1953 Gregoire
 2,776,147 A 1/1957 Bamford
 2,913,253 A 11/1959 Taber
 2,931,663 A 4/1960 Ferand
 2,992,014 A 7/1961 Muller
 3,177,004 A 4/1965 Schmidt
 3,448,991 A 6/1969 Leggett
 3,545,125 A 12/1970 Okuma
 3,591,198 A 7/1971 Brando
 3,632,127 A 1/1972 Grosseau
 3,671,694 A 6/1972 Masuda
 3,721,455 A 3/1973 Blanton
 3,727,938 A 4/1973 Goodbary et al.
 3,738,631 A 6/1973 Haley
 3,787,073 A 1/1974 Lievore
 D262,959 S 2/1982 Cowan
 4,470,611 A 9/1984 Dunphily et al.
 D277,952 S 3/1985 Nakano et al.
 4,534,575 A 8/1985 Grove et al.
 D281,772 S 12/1985 Heidman et al.
 D295,769 S * 5/1988 Olsen D21/562
 4,786,075 A 11/1988 Takahashi
 D304,221 S 10/1989 Poulsen
 4,881,752 A 11/1989 Tanaka
 4,955,634 A 9/1990 Smith
 5,071,384 A 12/1991 Poulsen
 5,080,389 A 1/1992 Kawano et al.
 5,108,126 A 4/1992 Banse
 D337,555 S 7/1993 McNab et al.
 D341,170 S * 11/1993 Olsen D21/562
 5,536,035 A * 7/1996 Bautz B60G 7/02
 280/124.147
 5,682,489 A 10/1997 Harrow et al.
 5,774,984 A 7/1998 Kotani
 5,839,742 A 11/1998 Holt
 5,845,926 A 12/1998 Davis et al.
 D409,681 S 5/1999 Poulsen
 D411,263 S 6/1999 Korsholm
 6,047,988 A 4/2000 Aloe et al.
 6,142,268 A 11/2000 Kuo-An
 D435,236 S 12/2000 Hanlon et al.
 6,170,838 B1 1/2001 Laurent et al.
 D446,263 S 8/2001 Heys
 6,394,878 B1 5/2002 Wang
 D468,252 S 1/2003 Morris
 6,550,796 B2 4/2003 Behr
 6,641,457 B1 11/2003 Lai
 6,655,118 B1 12/2003 Thompson et al.
 6,668,779 B2 12/2003 Hendriksma et al.
 6,702,307 B2 3/2004 Becker et al.
 6,719,313 B2 4/2004 Zadok
 6,761,372 B2 7/2004 Bryant
 D493,848 S 8/2004 Dunst
 6,881,122 B2 4/2005 Bloch et al.
 6,945,843 B1 9/2005 Motosko
 7,185,902 B1 3/2007 Lloyd
 D546,751 S 7/2007 Laatz
 D549,787 S 8/2007 Chen
 D567,886 S 4/2008 Lampert et al.
 7,367,573 B2 5/2008 Kudo et al.
 D570,735 S 6/2008 Ogihara
 7,887,074 B2 2/2011 Byers et al.
 D647,826 S 11/2011 Goettker
 D682,950 S * 5/2013 Johansson D21/495
 D701,922 S 4/2014 Andersen
 D731,368 S 6/2015 Miller et al.
 D731,554 S 6/2015 Turuvekere Gurudatt et al.
 9,120,511 B1 9/2015 Beard
 D779,392 S 2/2017 Hare
 D800,785 S 10/2017 Kallur Parasuraman
 9,776,481 B2 10/2017 Deckard et al.
 9,855,975 B2 1/2018 Amemiya

D810,837 S 2/2018 Liu et al.
 D822,126 S 7/2018 Allmendinger et al.
 D828,460 S * 9/2018 Wood D21/561
 D839,363 S 1/2019 Ewing et al.
 D856,432 S 8/2019 Ewing et al.
 D865,079 S 10/2019 Ewing
 D867,475 S 11/2019 Ewing et al.
 D868,659 S 12/2019 Mikhailov
 10,562,570 B2 2/2020 Kirtland et al.
 D896,709 S 9/2020 Ewing et al.
 D900,160 S 10/2020 Hudnall et al.
 D902,091 S * 11/2020 Ewing D12/159
 D929,507 S 8/2021 Ewing et al.
 D930,088 S 9/2021 Ewing et al.
 D935,532 S * 11/2021 Ewing D21/562
 D952,051 S 5/2022 Xu
 D952,052 S 5/2022 Xu
 D955,503 S 6/2022 Ewing et al.
 D955,952 S 6/2022 Lopera et al.
 D964,482 S * 9/2022 Ewing D21/562
 D975,204 S 1/2023 Xu
 11,628,722 B2 4/2023 Rasa et al.
 D996,529 S 8/2023 Allmendinger et al.
 D998,058 S 9/2023 Allmendinger et al.
 D1,012,788 S * 1/2024 Zohar D12/159
 D1,020,915 S * 4/2024 Christensen D21/562
 D1,026,743 S * 5/2024 Ewing D12/159
 2002/0041076 A1 4/2002 Becker et al.
 2002/0077025 A1 6/2002 Wu
 2002/0125676 A1 9/2002 Bryant
 2003/0122336 A1 7/2003 Zadok
 2003/0209217 A1 11/2003 Hendriksma et al.
 2004/0045518 A1 3/2004 Abe
 2004/0261739 A1 12/2004 Shimizuya
 2005/0040619 A1 2/2005 Melcher
 2005/0156399 A1 * 7/2005 Chu B60G 3/20
 280/124.134
 2006/0006622 A1 * 1/2006 Gesmer A63C 17/01
 280/87.042
 2007/0108712 A1 * 5/2007 Ryan B60G 15/067
 280/124.1
 2008/0303227 A1 12/2008 Chi Chun Idiot
 2010/0240276 A1 9/2010 Chu et al.
 2012/0169023 A1 7/2012 Rawlinson et al.
 2013/0278047 A1 10/2013 Gottschalk
 2014/0227941 A1 8/2014 Suzuki
 2016/0318362 A1 11/2016 Watanabe et al.
 2017/0050483 A1 2/2017 Gordon et al.
 2017/0080350 A1 3/2017 Allmendinger et al.
 2017/0274932 A1 9/2017 Byrnes, Jr.
 2018/0126290 A1 5/2018 Hodge et al.
 2019/0070919 A1 3/2019 Andou et al.
 2019/0367117 A1 12/2019 Fischer et al.
 2021/0171132 A1 6/2021 Underwood
 2024/0115965 A1 4/2024 Christensen et al.

FOREIGN PATENT DOCUMENTS

GB 8095551000-7000 3/2016
 TW D135320 S 6/2010
 TW D139245 S 3/2011
 TW 185102-0001 8/2017
 WO D095551-001 4/2017
 WO D095551-008 4/2017

OTHER PUBLICATIONS

Traxxas TRX4M Shock Mount Battery Tray, Amain Hobbies
 Webpage[online], [Site Visit Jul. 18, 2024], URL: <https://www.amainhobbies.com/traxxas-trx4m-shock-mounts-battery-tray-tra9726/p1451986> (Year: 2024).
 Traxxas XRT 8S Extreme 4WD Brushless RTR Race Monster Truck (Green) w/TQi 2.4GHz Radio & TSM, as shown in www.hobbytown.com, Nov. 18, 2022, Part # TRA78086-4-GRN. (Year: 2022).
 Arrma Composite Front/Rear Upper Gearbox Covers & Shock Tower, as shown in www.amainhobbies.com, Jun. 17, 2019. (Year: 2019).

(56)

References Cited

OTHER PUBLICATIONS

Treal Hobby Redcat Gen9 Aluminum Front Shock Towers (Titanium) (2), as shown in www.amainhobbies.com, May 10, 2024, Part # TLHTGEN9-38. (Year: 2024).

A. Ewing et al.; U.S. Pat. No. D. 1,023,847; Model Vehicle Shock Tower; Apr. 23, 2024.

A. Ewing et al.; U.S. Pat. No. D. 1,023,849; Model Vehicle Shock Tower; Apr. 23, 2024.

A. Ewing et al.; U.S. Pat. No. D. 1,026,743; Model Vehicle Shock Tower; May 14, 2024.

Traxxas XRT Shock Tower, Front (Left & Right Halves), Traxxas Webpage [online], [Site Visit Dec. 19, 2023], URL: <https://traxxas.com/products/parts/7839> (Year: 2023).

TRA 7839 Traxxas XRT Front Shock Tower, Jun. 15, 2023, Amain Hobbies Webpage [online], [Site Visit Dec. 19, 2023], URL: https://www.amainhobbies.com/traxxas-xrt-front-shock-tower-tra7839/p1454424?gclid=EAlalQobChMlnfK574acgwMVS0RyCh0gVwHrEAKYAiABEGLV_D_BwE (Year: 2023).

Traxxas XRT Rear Shock Tower Halves, May 24, 2023, Amain Hobbies Webpage [online], [Site Visit Dec. 19, 2023], URL: <https://www.amainhobbies.com/traxxas-xrt-rear-shock-tower-halves-tra7838/p1454423> (Year: 2023).

Traxxas Rr Shock Tower—XRT, Hobby Works Webpage [online], [Site Visit Dec. 19, 2023], URL: <https://www.hobbyworks.com/product/31085%2Ftraxxas-rr-shock-tower-%28left%2C-right%29-%28xrt%29> (Year: 2023).

Traxxas TRX-4M Shock Mount (Front & Rear)/Battery Tray, Traxxas Webpage [online], [Site Visit Dec. 19, 2023], URL: <https://traxxas.com/products/parts/9726> (Year: 2023).

TRA9726 Traxxas Shock Mounts F/R, Fast Eddies RC Webpage [online], [Site Visit Dec. 19, 2023], <https://www.fasteddiesrc.com/tra9726-traxxas-shock-mounts-f-r.html> (Year: 2023).

Shock tower front 6061-T6 aluminum, First Date Available: Unknown, Image retrieved on: Jun. 1, 2023, <<https://traxxas.com/products/parts/9539A>>.

TeamSR XB4 shock towers, First Date Available: Unknown, Image retrieved on: Jun. 1, 2023, <<https://www.redrc.net/2012/12/teamsr-xb4-shock-towers/>>.

Associated Electrics, “Monster GT” model truck; Associated Electrics, Inc., Costa Mesa, California, 1 photograph.

Associated Electrics, “RC10GT” model vehicle; Associated Electrics, Inc., Costa Mesa, California, 1 photograph.

Bradley, John; “The Racing Motorcycle”; 1996, pp. 246-273, 322-325; Broadland Leisure Publications, England.

Ellsworth, Tony; “Suspension Design Enhancements—The Ellsworth Dare”; Dreamride Mountain Bike Tours and Film Services, Moab, Utah, 2001.

Horizon Hobby, “Losi XXX buggy”; Horizon Hobby, Inc., Champaigne, Illinois; 1 sketch of suspension geometry.

HPI Racing, “Savage 21” model truck; Hobby Products International, Foothill Ranch, California; 1 sketch of suspension geometry.

Hyperpro_USA; “What is Progressive Suspension?” HyperPRO_USA.com.

Kyosho Inferno MP7.5 model car; Kyosho America, Lake Forest, California; 2 sketches of suspension geometry.

Milliken, William F. and Milliken, Douglas L.; “Race Car Vehicle Dynamics” 1995, pp. 580-583, 595-597, 628-631; SAE Publications Group, Pennsylvania USA.

Phillipotts, Peter; “Rising Rate Suspension”; Off Road Design, 2001.

Race Tech, “Profile—Chalmers Formula SAE Car” Race Tech magazine, Oct./Nov. 2003, p. 74; Racecar Graphic Ltd, London, England.

Racecar Engineering, Jun. 2003—vol. 13 No. 06, pp. 15, 106; Country & Leisure Media Ltd./IPC Media Ltd., Croydon, England.

Salven, Michael; “Progressive Suspension” Nov. 10, 2000; myTSN—Publication, Netherlands.

Serpent, Veteq; Serpent Model Racing Cars, Noord-Holland, Netherlands; 3 pictures.

Serpent, Veteq; Serpent Model Racing Cars, Noord-Holland, Netherlands; 1 sketch of suspension geometry.

Staniforth, Allan; “Competition Car Suspension” 1988, pp. 76-81, 84-85; Haynes Publications, Newbury Park, California.

Tamiya, “Terra Crusher” model truck; Tamiya America, Inc., Aliso Viejo, California; 1 sketch of suspension geometry.

Traxxas, “Nitro Rustler” model vehicle; Traxxas LP, Plano, Texas; 1 photograph.

Traxxas; “T-Maxx Assemblies, Front Assembly” exploded view; Traxxas LP, Plano, Texas.

Traxxas, “T-Maxx” model vehicle; Traxxas LP, Plano, Texas; 1 photograph.

Full size vehicle with suspension linkage #1.

Full size vehicle with suspension linkage #2.

Axial SCX10 II Shock Hoops AX131380; <http://www.axialracing.com/products/ax31380>; Aug. 2016.

HPI Venture FJ Cruiser; <http://www.hpiracing.com/en/article/view/2016012702>; Jan. 27, 2016.

Taiwan IPO Search Report, Taiwan Design App No. 105301437; Aug. 4, 2016.

Taiwan IPO Search Report, Taiwan Design App No. 106300762; May 16, 2017.

L. Granieri; U.S. Pat. No. 903,080; Road Vehicle Wheel Axle; Nov. 3, 1908.

H. Ewing; U.S. Pat. No. 951,000; Spring Controlled Vehicle Wheel Link; Mar. 1, 1910.

Hobby Town; Front_Rear_Shock_Tower_set [online] found on Mar. 5, 2018 from URL <https://www.hobbytown.com/rx-front-rear-shock-tower-set-by-traxxas-tra8216/p668322>.

2Pcs RC Model Car Shock Tower Upgrade Parts for Xinlehong Q901, Q902, Q903, Earliest Available Date Oct. 22, 2019 [Online], [Site Visited Oct. 20, 2020] Available From Internet, URL: <<https://www.newegg.com/p/1SW-00TF-00H35>> (Year: 2019).

1_28 RC Car Upgraded Metal Part Shock Tower for Wltoys P929 P939 K969 K979 K989 K999, Earliest Available Date Oct. 20, 2020 [Online], [Site Visited Oct. 20, 2020] Available From Internet, URL: <https://www.gearbest.com/rc-car-parts/pp_009793593021.html> (Year: 2020).

1_28 RC Car Upgraded Metal Part Shock Tower for Wltoys P929 P939 K969 K979 K989 K999, Earliest Available Date Oct. 20, 2020 [Online], [Site Visited Oct. 20, 2020] Available From Internet, URL: <https://www.gearbest.com/rc-car-parts/pp_009793593021.html> (Year: 2020).

1_28 RC Car Upgraded Metal Part Shock Tower for Wltoys P929 P939 K969 K979 K989 K999, Earliest Available Date Oct. 20, 2020 [Online], [Site Visited Oct. 20, 2020] Available From Internet, URL: <https://www.gearbest.com/rc-car-parts/pp_009793593021.html> (Year: 2020).

1_28 RC Car Upgraded Metal Part Shock Tower for Wltoys P929 P939 K969 K979 K989 K999, Earliest Available Date Oct. 20, 2020 [Online], [Site Visited Oct. 20, 2020] Available From Internet, URL: <https://www.gearbest.com/rc-car-parts/pp_009793593021.html> (Year: 2020).

1_28 RC Car Upgraded Metal Part Shock Tower for Wltoys P929 P939 K969 K979 K989 K999, Earliest Available Date Oct. 20, 2020 [Online], [Site Visited Oct. 20, 2020] Available From Internet, URL: <https://www.gearbest.com/rc-car-parts/pp_009793593021.html> (Year: 2020).

1_28 RC Car Upgraded Metal Part Shock Tower for Wltoys P929 P939 K969 K979 K989 K999, Earliest Available Date Oct. 20, 2020 [Online], [Site Visited Oct. 20, 2020] Available From Internet, URL: <https://www.gearbest.com/rc-car-parts/pp_009793593021.html> (Year: 2020).

1_28 RC Car Upgraded Metal Part Shock Tower for Wltoys P929 P939 K969 K979 K989 K999, Earliest Available Date Oct. 20, 2020 [Online], [Site Visited Oct. 20, 2020] Available From Internet, URL: <https://www.gearbest.com/rc-car-parts/pp_009793593021.html> (Year: 2020).

1_28 RC Car Upgraded Metal Part Shock Tower for Wltoys P929 P939 K969 K979 K989 K999, Earliest Available Date Oct. 20, 2020 [Online], [Site Visited Oct. 20, 2020] Available From Internet, URL: <https://www.gearbest.com/rc-car-parts/pp_009793593021.html> (Year: 2020).

1_28 RC Car Upgraded Metal Part Shock Tower for Wltoys P929 P939 K969 K979 K989 K999, Earliest Available Date Oct. 20, 2020 [Online], [Site Visited Oct. 20, 2020] Available From Internet, URL: <https://www.gearbest.com/rc-car-parts/pp_009793593021.html> (Year: 2020).

1_28 RC Car Upgraded Metal Part Shock Tower for Wltoys P929 P939 K969 K979 K989 K999, Earliest Available Date Oct. 20, 2020 [Online], [Site Visited Oct. 20, 2020] Available From Internet, URL: <https://www.gearbest.com/rc-car-parts/pp_009793593021.html> (Year: 2020).

1_28 RC Car Upgraded Metal Part Shock Tower for Wltoys P929 P939 K969 K979 K989 K999, Earliest Available Date Oct. 20, 2020 [Online], [Site Visited Oct. 20, 2020] Available From Internet, URL: <https://www.gearbest.com/rc-car-parts/pp_009793593021.html> (Year: 2020).

1_28 RC Car Upgraded Metal Part Shock Tower for Wltoys P929 P939 K969 K979 K989 K999, Earliest Available Date Oct. 20, 2020 [Online], [Site Visited Oct. 20, 2020] Available From Internet, URL: <https://www.gearbest.com/rc-car-parts/pp_009793593021.html> (Year: 2020).

1_28 RC Car Upgraded Metal Part Shock Tower for Wltoys P929 P939 K969 K979 K989 K999, Earliest Available Date Oct. 20, 2020 [Online], [Site Visited Oct. 20, 2020] Available From Internet, URL: <https://www.gearbest.com/rc-car-parts/pp_009793593021.html> (Year: 2020).

1_28 RC Car Upgraded Metal Part Shock Tower for Wltoys P929 P939 K969 K979 K989 K999, Earliest Available Date Oct. 20, 2020 [Online], [Site Visited Oct. 20, 2020] Available From Internet, URL: <https://www.gearbest.com/rc-car-parts/pp_009793593021.html> (Year: 2020).

1_28 RC Car Upgraded Metal Part Shock Tower for Wltoys P929 P939 K969 K979 K989 K999, Earliest Available Date Oct. 20, 2020 [Online], [Site Visited Oct. 20, 2020] Available From Internet, URL: <https://www.gearbest.com/rc-car-parts/pp_009793593021.html> (Year: 2020).

* cited by examiner

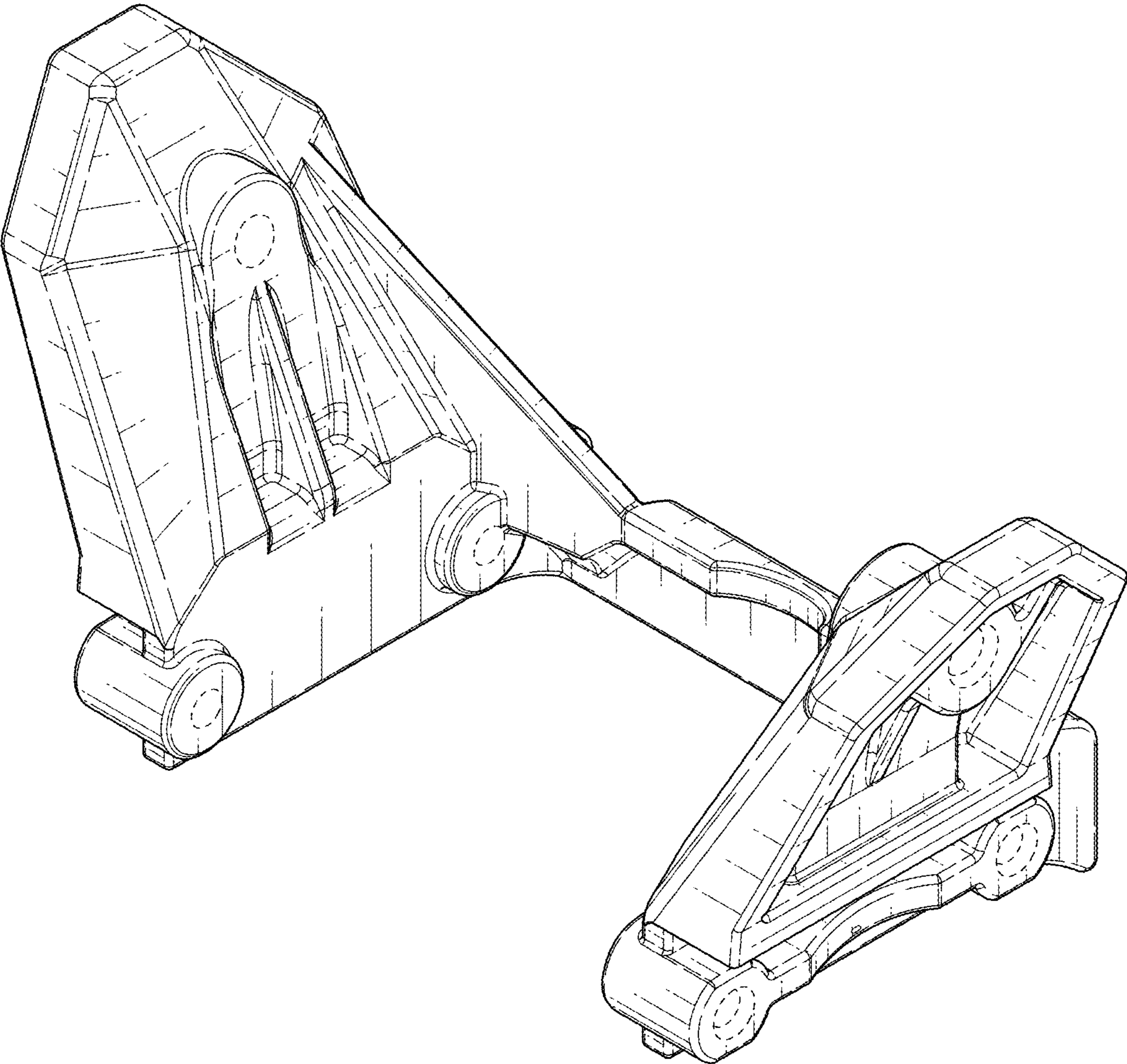


FIG. 1

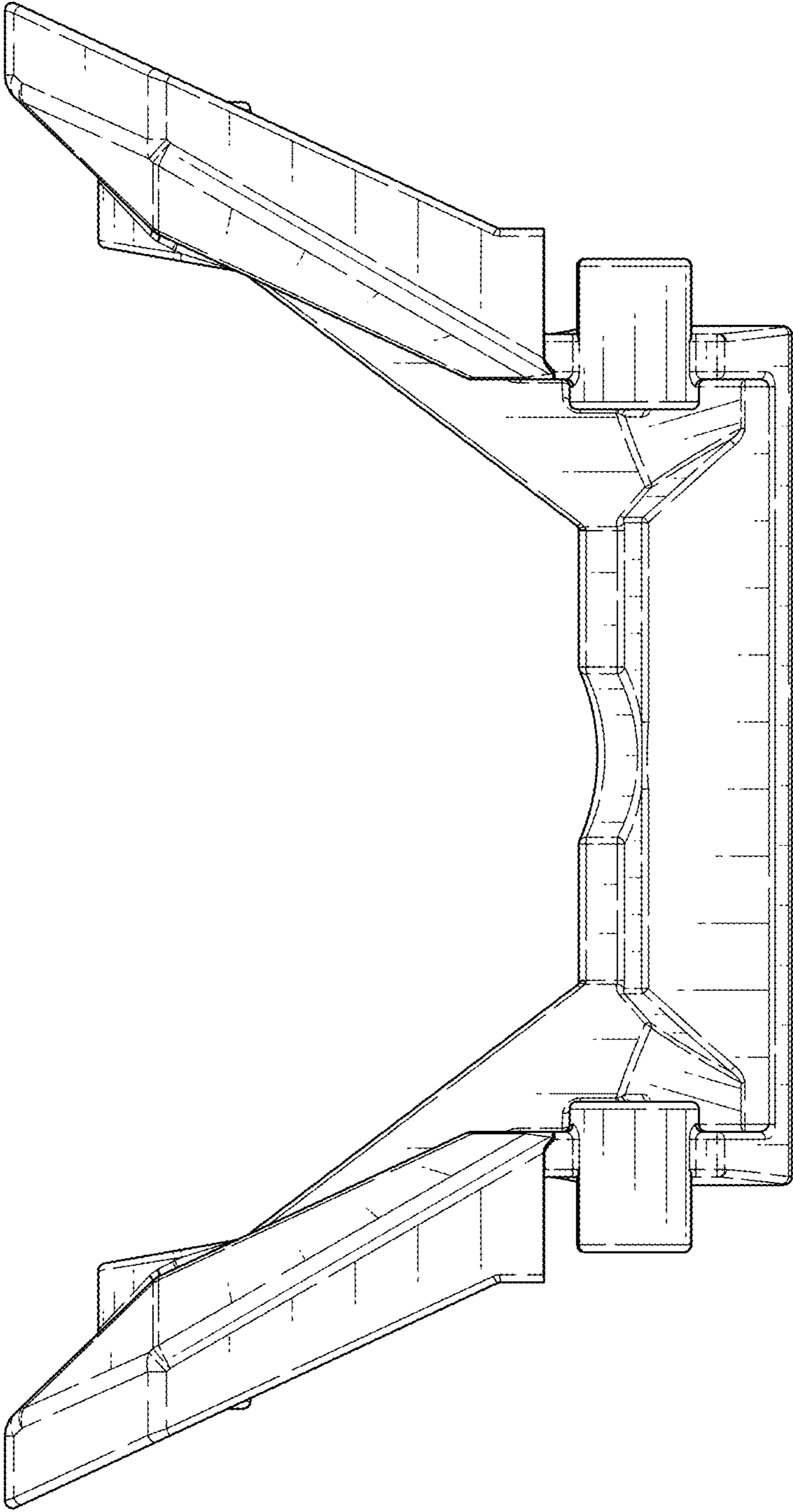


FIG. 2

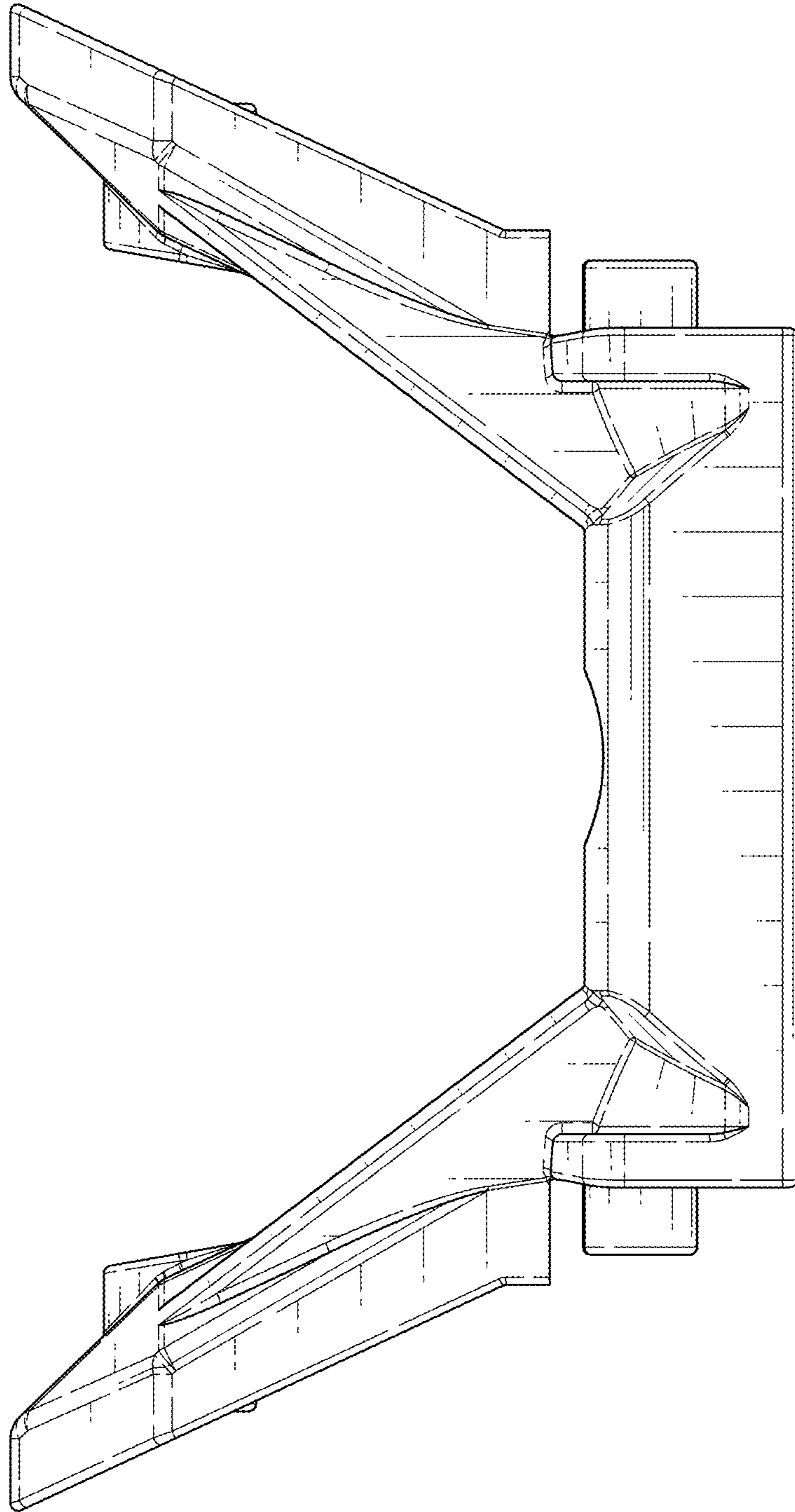


FIG. 3

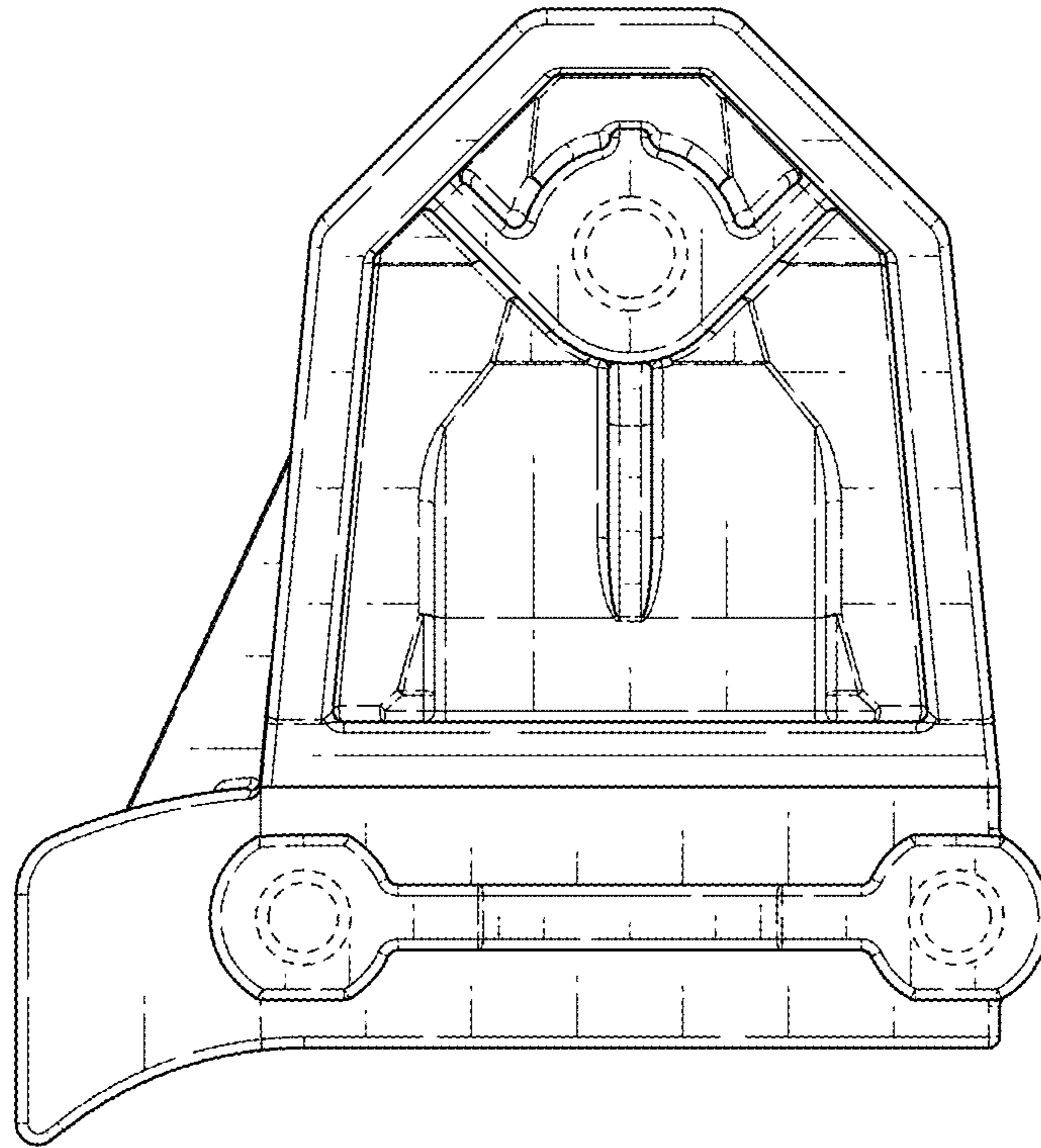


FIG. 4

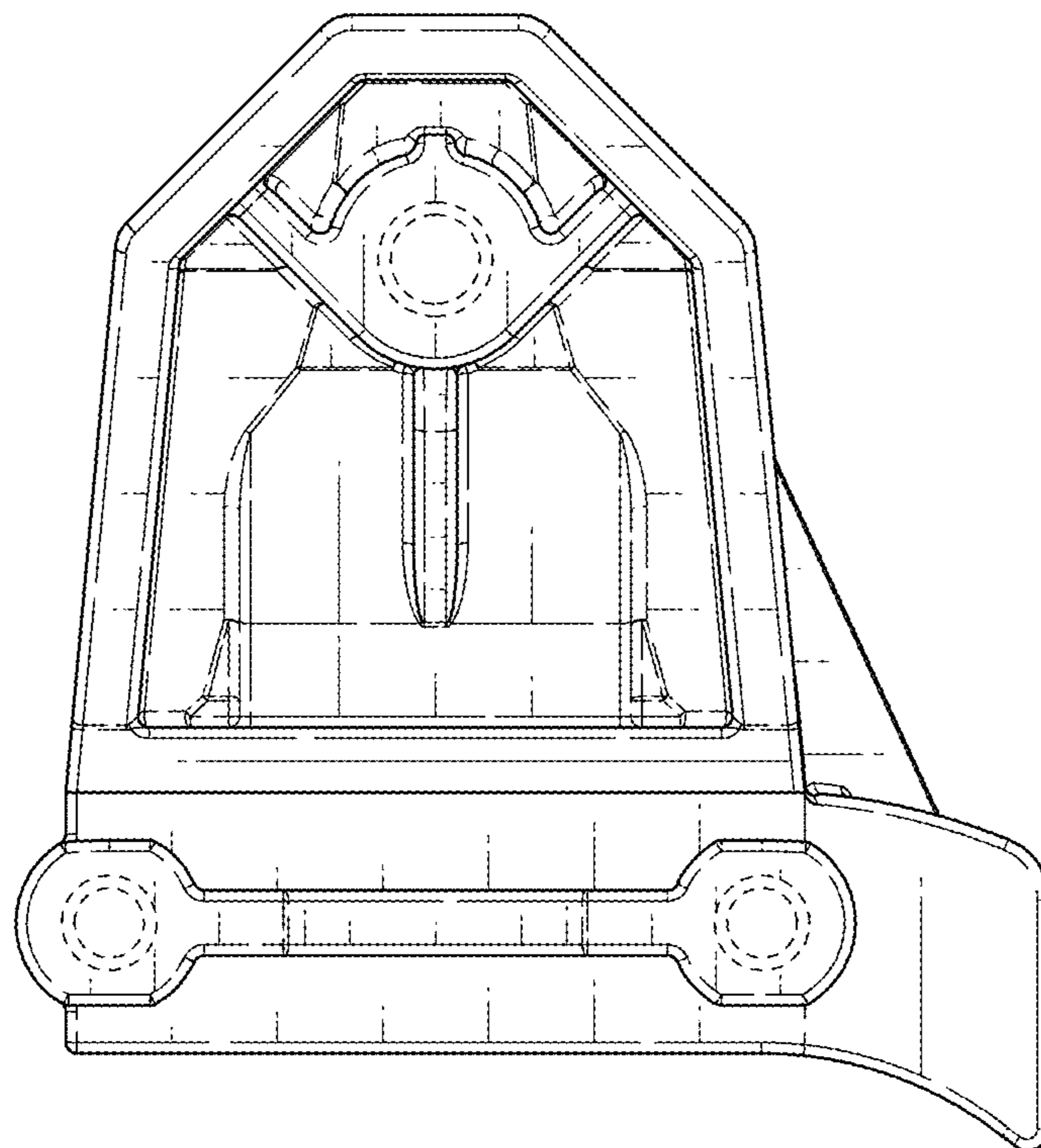


FIG. 5

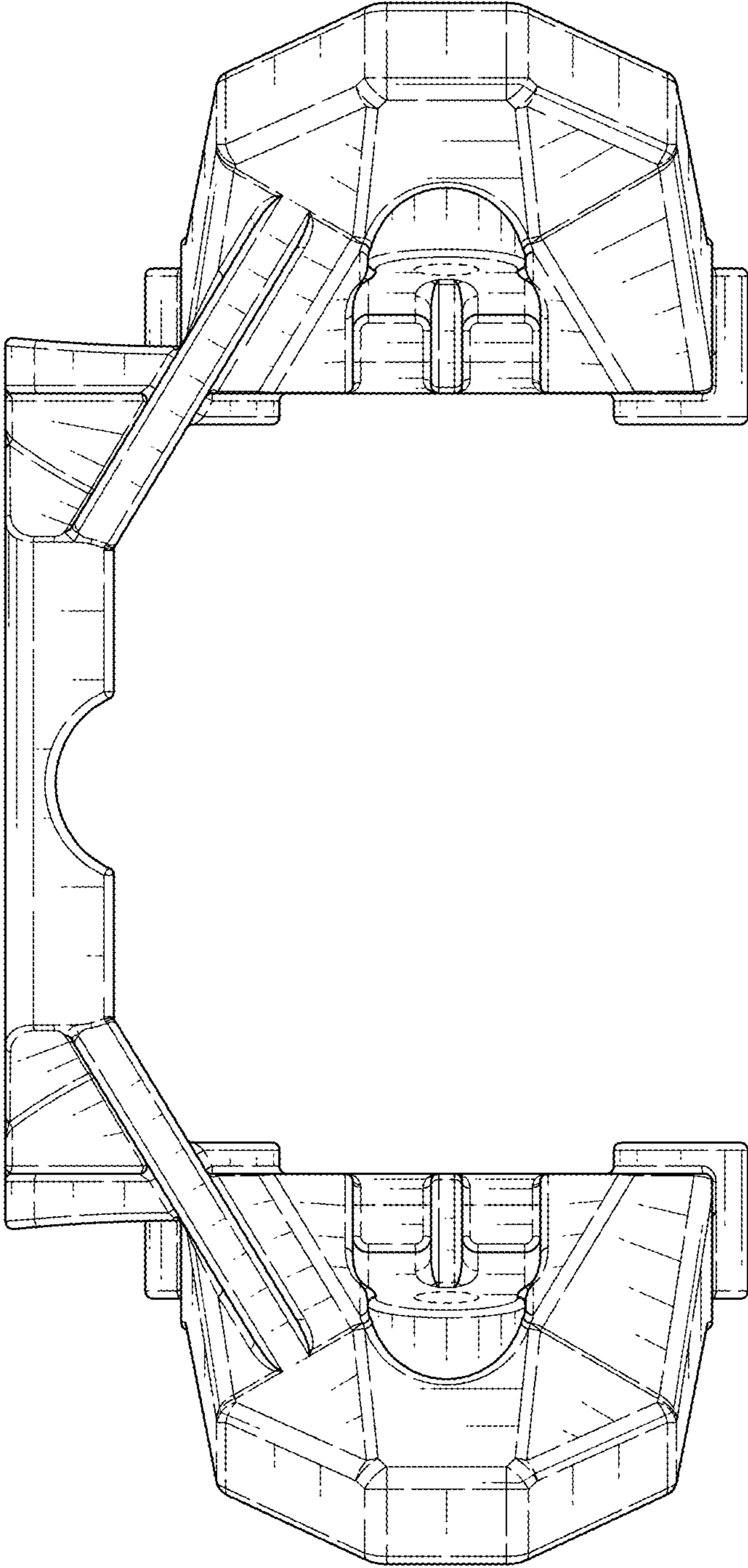


FIG. 6

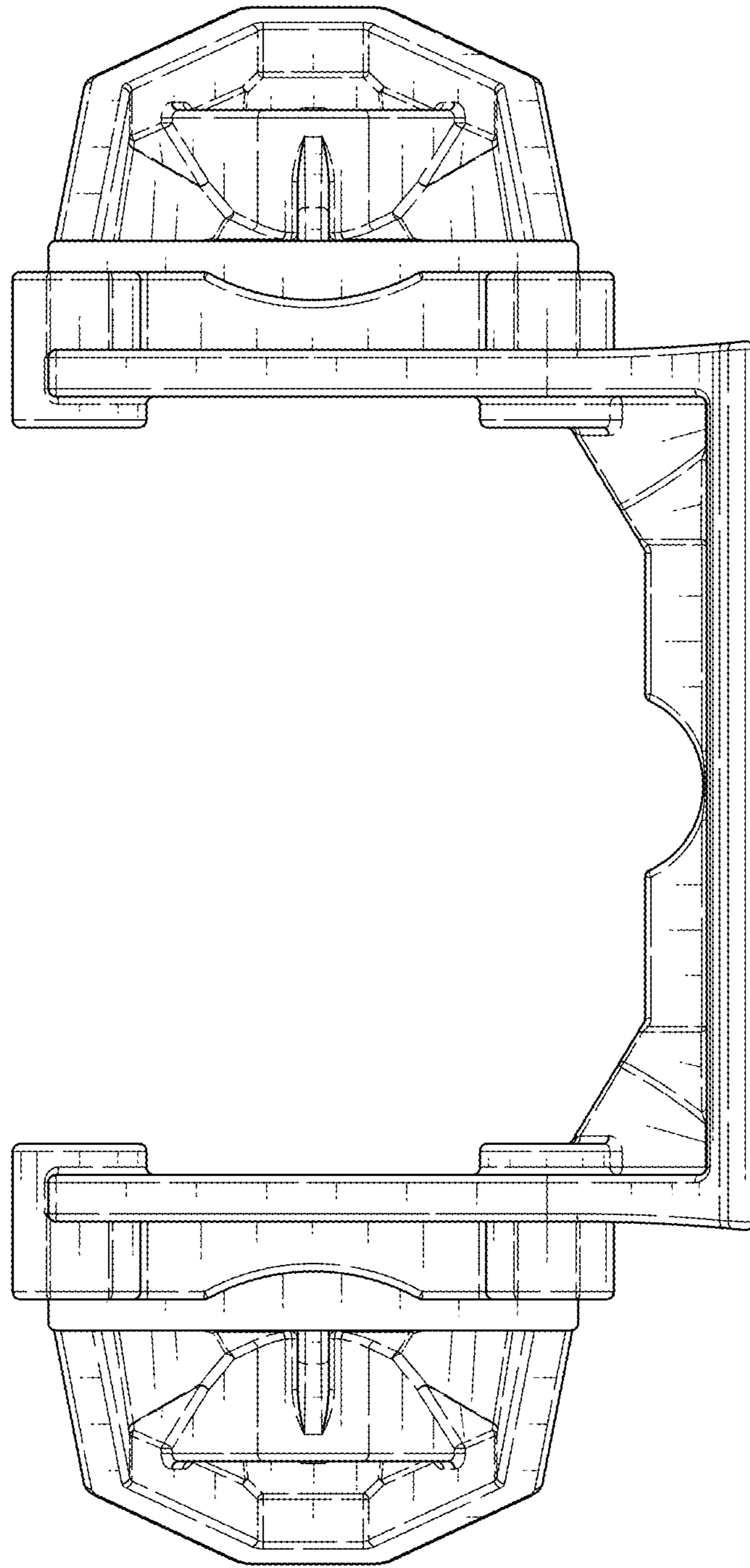


FIG. 7

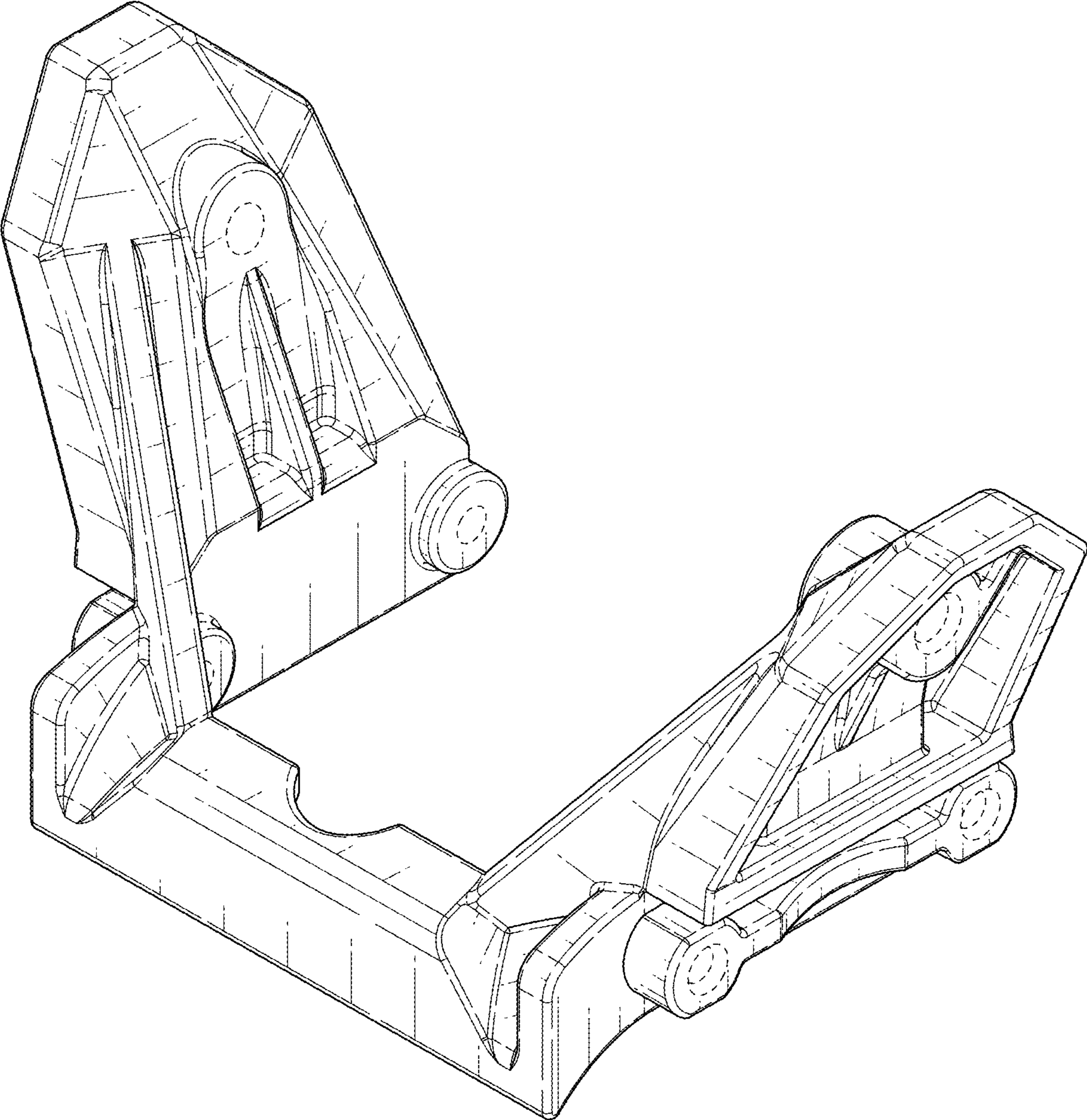


FIG. 8

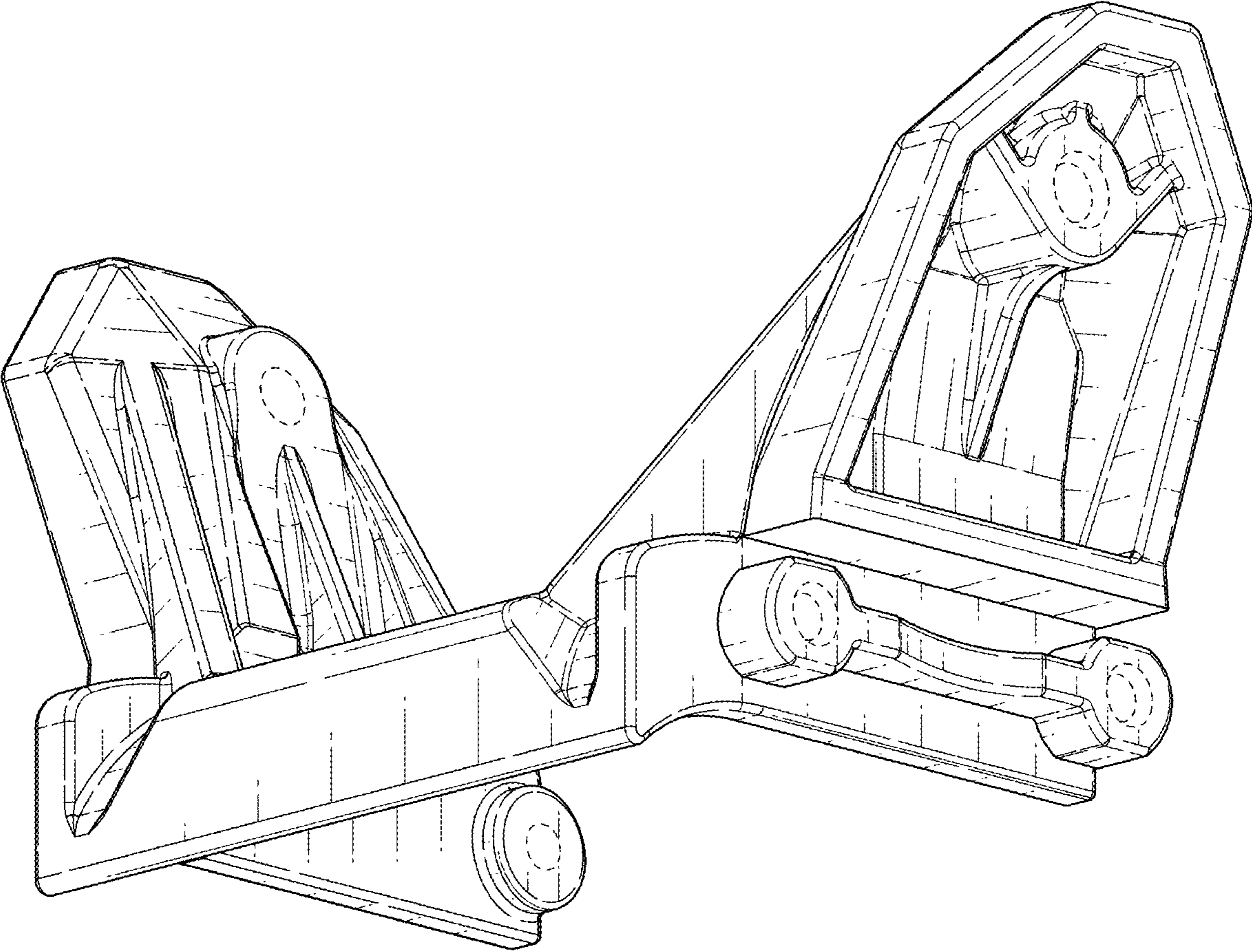


FIG. 9

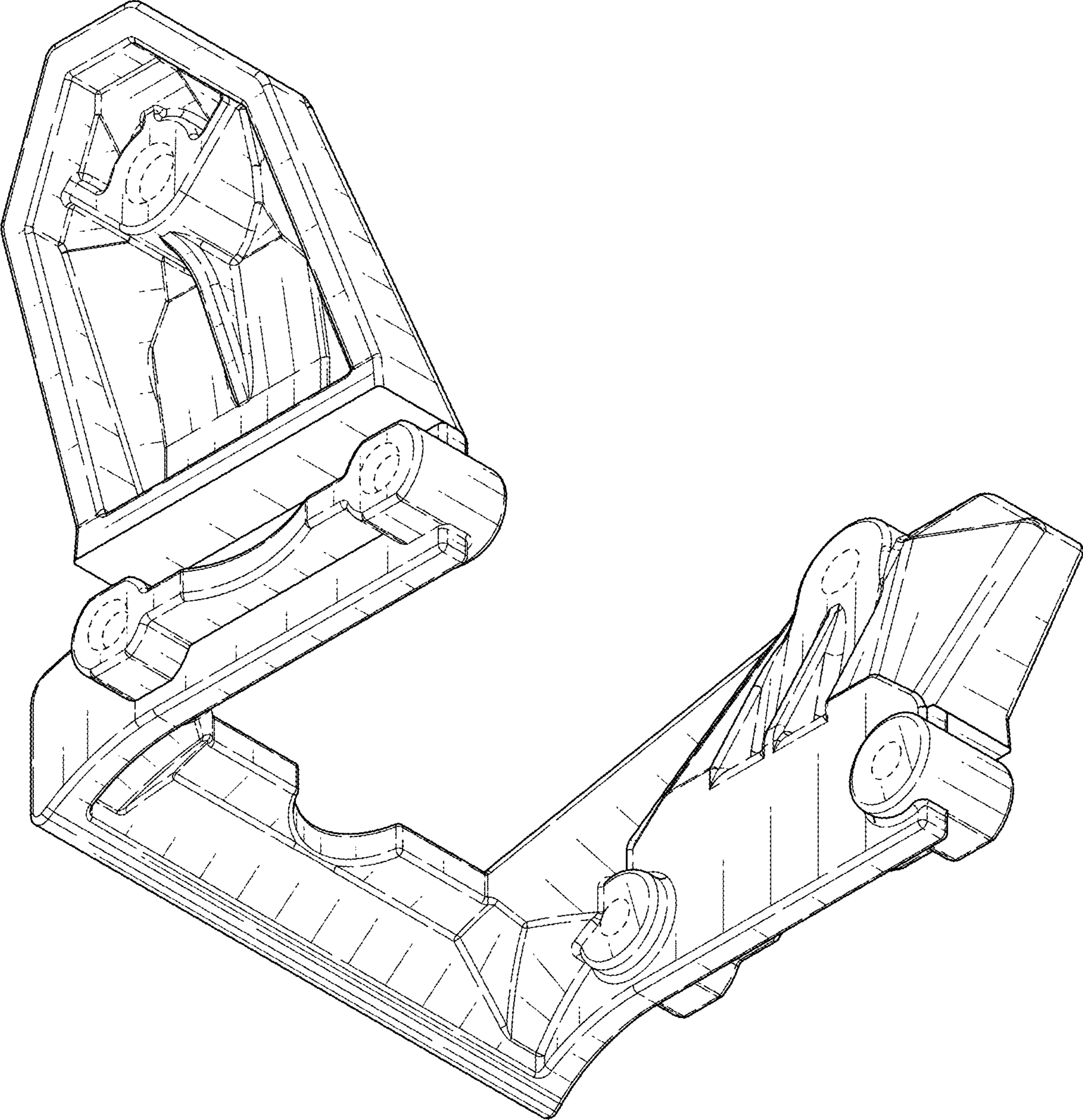


FIG. 10