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(12) **United States Design Patent** (10) **Patent No.:** **US D891,498 S**
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(54) **VEHICLE-MOUNTED STEREO CAMERA**

5/23238; H04N 7/00; H04N 13/239;
H04N 2101/00; F16M 13/00

See application file for complete search history.

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(56)

References Cited

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U.S. PATENT DOCUMENTS

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

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(30) **Foreign Application Priority Data**

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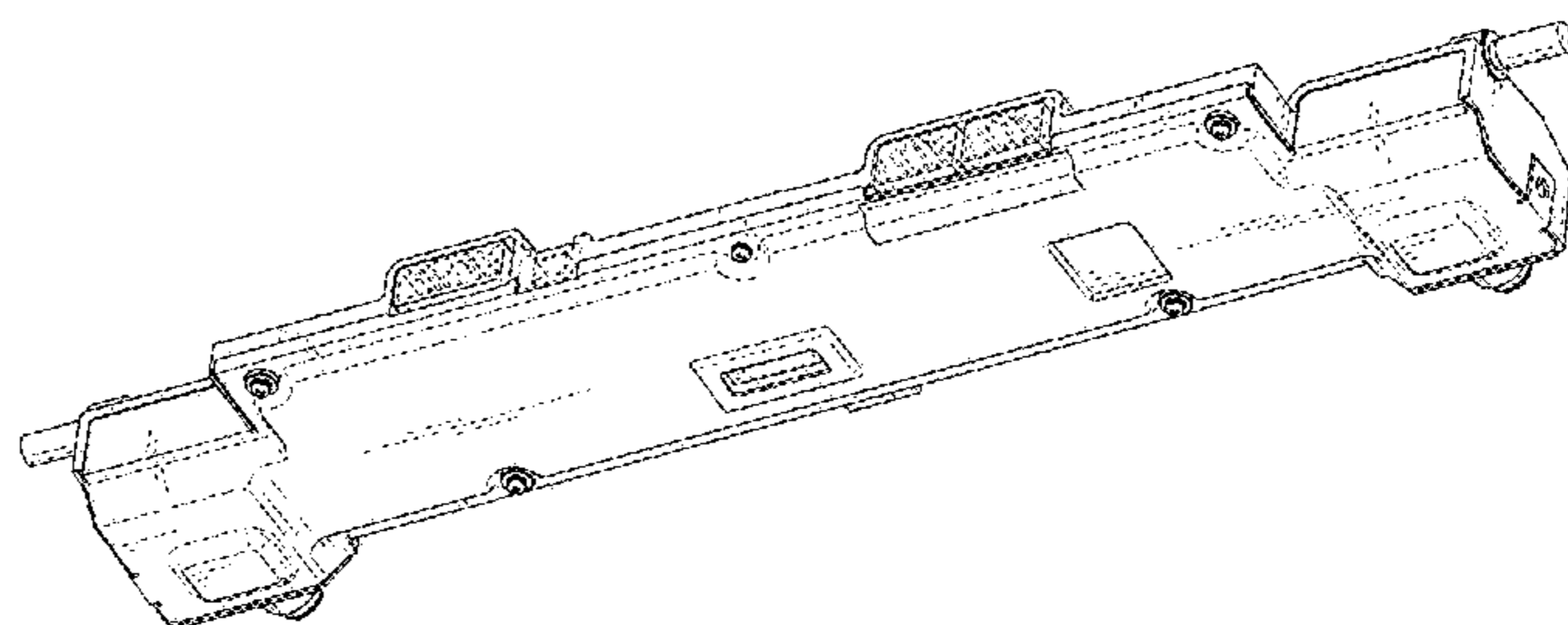
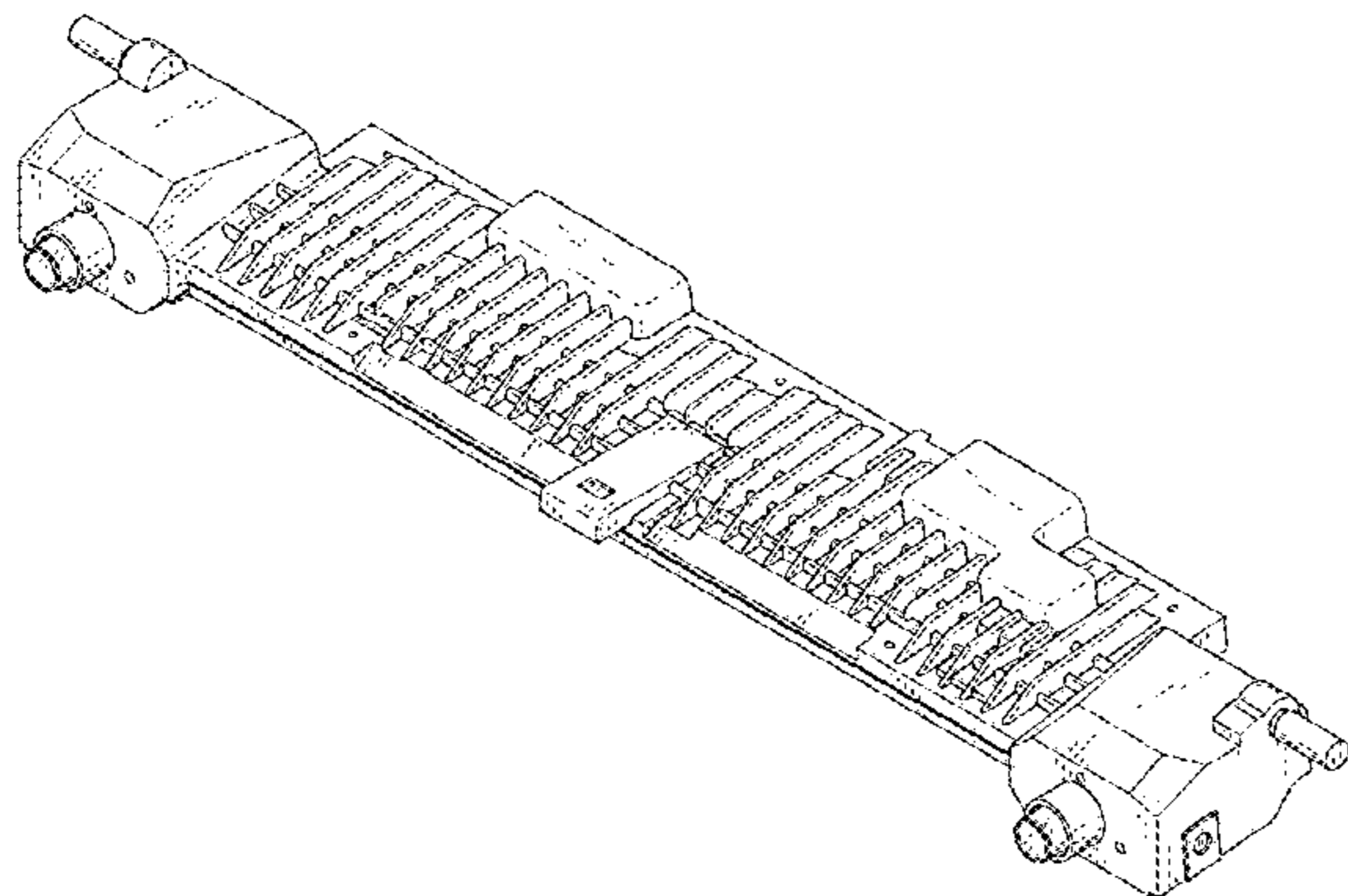
(51) **LOC (12) Cl.** **16-01**

(52) **U.S. Cl.**
USPC **D16/202**; D16/203

(58) **Field of Classification Search**
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D14/417, 138 C, 240, 248, 203.1, 203.3,
D14/203.7, 218, 207, 440, 402, 454, 407,
D14/408, 480.6, 436; D10/104.1, 50, 65,
D10/74, 70, 118.2, 66; D18/43;
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CPC G03B 17/00; G03B 17/02; G03B 17/56;
G03B 17/04; G03B 17/14; G03B 17/08;
G03B 15/03; G03B 15/06; H04N
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|-------------|-----------|------------------|--------|
| 2,078,651 A | 4/1937 | Crocker | |
| D150,230 S | 7/1948 | Hertzler | |
| D171,045 S | 12/1953 | Noe | |
| D204,148 S | 3/1966 | Boyd et al. | |
| D241,820 S | 10/1976 | Jewell | |
| D241,821 S | 10/1976 | Jewell | |
| 4,026,457 A | 5/1977 | Schubert | |
| 4,057,169 A | 11/1977 | Payne | |
| D251,657 S | 4/1979 | Jewell | |
| D269,088 S | 5/1983 | Genaro et al. | |
| D276,201 S | 11/1984 | Wolff | |
| D277,167 S | 1/1985 | Dart | |
| D289,300 S | * 4/1987 | Saito | D18/43 |
| 4,673,955 A | 6/1987 | Ameyama et al. | |
| D298,336 S | * 11/1988 | Masaki | D18/43 |
| 4,830,320 A | 5/1989 | Bellows | |
| D302,140 S | 7/1989 | Johnston | |
| D305,422 S | 1/1990 | Steer et al. | |
| D308,826 S | 6/1990 | Cyr et al. | |
| D316,001 S | 4/1991 | Guard | |
| D318,207 S | 7/1991 | Anderson | |
| D324,024 S | 2/1992 | Nagele et al. | |
| D338,135 S | 8/1993 | Anderson | |
| D338,808 S | 8/1993 | Anderson | |
| D353,516 S | 12/1994 | Anderson | |
| D355,333 S | 2/1995 | Campbell | |
| D357,896 S | 5/1995 | Berry | |
| D359,323 S | 6/1995 | Ross | |
| D362,415 S | 9/1995 | Takimoto | |
| D363,856 S | 11/1995 | Westbrooks, Jr. | |
| D366,187 S | 1/1996 | Van Den Kieboom | |
| D375,519 S | * 11/1996 | Tsumuki | D18/40 |
| D378,726 S | 4/1997 | Dunn | |
| D389,848 S | 1/1998 | James | |
| D402,257 S | 12/1998 | Richards et al. | |
| D407,667 S | 4/1999 | Homeier | |
| D409,561 S | 5/1999 | Chintala et al. | |
| D411,528 S | 6/1999 | Tien | |
| D420,855 S | 2/2000 | Hurley | |
| D422,262 S | 4/2000 | Peterzell et al. | |
| D431,226 S | 9/2000 | Frye et al. | |
| D452,459 S | 12/2001 | Riley | |
| D467,932 S | 12/2002 | Jones | |
| D473,139 S | 4/2003 | Jowett | |
| D479,127 S | 9/2003 | Jowett | |



US D891,498 S

D480,646 S 10/2003 Borchard et al.
 D484,521 S 12/2003 Isomoto
 D487,165 S 2/2004 Hammond et al.
 D487,372 S 3/2004 Ku
 D490,184 S 5/2004 McLeish
 D491,594 S 6/2004 Senda
 D491,595 S 6/2004 Senda
 D492,195 S 6/2004 Shabaz
 D502,181 S 2/2005 Hong et al.
 D507,297 S 7/2005 Sasaki et al.
 D507,677 S 7/2005 McLeish
 D508,872 S 8/2005 Hoepfner
 D527,129 S 8/2006 Hodgson
 D545,026 S 6/2007 Martin et al.
 D556,763 S 12/2007 Hsiao
 D559,256 S 1/2008 Gilbert
 D563,727 S 3/2008 Lovett
 D573,038 S 7/2008 Picken
 D573,997 S 7/2008 Kim et al.
 D582,417 S 12/2008 Sheba et al.
 D588,471 S 3/2009 Fluegel et al.
 D589,342 S 3/2009 Maslowski
 D589,531 S 3/2009 Fullerton
 D592,646 S 5/2009 Sun et al.
 D599,611 S 9/2009 Hoekstra
 D601,152 S 9/2009 Moshes et al.
 D607,922 S 1/2010 Sato
 D611,385 S 3/2010 Yair
 D612,385 S 3/2010 Aoki
 D621,718 S 8/2010 Mehdizadeh
 D626,063 S 10/2010 Cutter et al.
 D626,551 S 11/2010 Julien
 D631,058 S 1/2011 Chin et al.
 D635,972 S 4/2011 Miyazawa et al.
 D638,423 S 5/2011 Anderson et al.
 D647,096 S 10/2011 Tung et al.
 D650,408 S * 12/2011 Kim D16/202
 D654,853 S 2/2012 Bacon et al.
 D659,902 S 5/2012 Mehdizadeh
 D666,201 S 8/2012 Gallagher et al.
 D667,339 S 9/2012 Bailey et al.
 D672,667 S 12/2012 Mix
 D675,198 S 1/2013 Andre et al.
 D676,075 S 2/2013 Ku
 8,367,130 B1 2/2013 Tsengas
 D680,123 S 4/2013 Benois
 D680,124 S 4/2013 Benois
 D682,196 S 5/2013 Leung
 D684,873 S * 6/2013 Steinich D10/66
 D690,307 S 9/2013 Huang
 D693,086 S 11/2013 Rana
 D693,296 S 11/2013 Lin et al.
 8,616,373 B2 12/2013 Hansen et al.
 D697,066 S 1/2014 Chung et al.
 D697,473 S 1/2014 Guccione et al.
 D702,134 S 4/2014 Hjalmarsson
 D702,693 S 4/2014 Gallagher et al.
 D704,134 S 5/2014 Cullen et al.
 D705,107 S 5/2014 Corso et al.
 D709,054 S 7/2014 McConnell et al.
 D709,895 S 7/2014 Son
 D710,824 S 8/2014 Mackiewicz et al.
 D712,939 S 9/2014 Jeon et al.
 D718,381 S * 11/2014 Itabashi D18/43
 D723,532 S 3/2015 Stevinson
 D723,533 S 3/2015 Stevinson
 D724,599 S 3/2015 Lin et al.
 D729,090 S 5/2015 Phillips et al.
 D729,796 S 5/2015 Song
 D732,011 S 6/2015 Stevinson
 D736,295 S 8/2015 Katori et al.
 D736,308 S * 8/2015 Han D18/43
 D738,752 S 9/2015 Edgar
 D739,385 S 9/2015 James et al.
 D743,561 S 11/2015 Maisch
 D745,514 S 12/2015 Jung et al.
 D752,594 S 3/2016 Matsuoka
 D755,785 S 5/2016 Sirotich
 9,351,526 B1 5/2016 Taylor

D759,004 S 6/2016 Stevinson
 D759,031 S 6/2016 Ozolins et al.
 D759,826 S 6/2016 Martinez et al.
 D763,107 S 8/2016 Nielsen et al.
 D763,706 S 8/2016 Shum et al.
 D764,273 S 8/2016 Klag et al.
 D764,317 S 8/2016 Martinez
 D766,664 S 9/2016 Wilson et al.
 D775,114 S 12/2016 Khalili
 D777,727 S 1/2017 Maicon et al.
 D780,737 S 3/2017 Yoshida et al.
 D787,508 S 5/2017 Takiguchi
 D795,260 S 8/2017 Schlossberg et al.
 D798,738 S 10/2017 Tilahun et al.
 D800,887 S 10/2017 Patton
 D801,170 S 10/2017 Wu
 D802,600 S 11/2017 Roberts
 D804,610 S 12/2017 Rubio et al.
 D805,502 S 12/2017 Zhuang
 D808,289 S 1/2018 Kim
 D808,335 S 1/2018 Corander
 D809,335 S 2/2018 Bouveret
 D811,465 S * 2/2018 Nokuo D16/218
 D813,234 S 3/2018 Nadler
 D820,897 S * 6/2018 Rusz D16/203
 D821,224 S 6/2018 Mecker et al.
 D823,239 S 7/2018 Gupta et al.
 D829,212 S 9/2018 Bidwell et al.
 D831,090 S * 10/2018 Ahman D16/203
 D832,783 S 11/2018 Leabman
 D832,906 S * 11/2018 Hasegawa D16/203
 D834,633 S * 11/2018 Carlson D16/208
 D835,533 S 12/2018 Zheng
 D837,606 S 1/2019 Dwork
 D837,608 S 1/2019 Dwork
 D844,428 S 4/2019 Stadelmaier et al.
 D845,957 S 4/2019 Guzie et al.
 D847,816 S 5/2019 Dentamaro
 D853,470 S 7/2019 Ridinger
 D855,813 S 8/2019 Hu
 D860,857 S 9/2019 Taylor et al.
 D862,248 S 10/2019 Arendt et al.
 D865,029 S * 10/2019 Fook D16/218
 D868,007 S 11/2019 Wild et al.
 D871,328 S 12/2019 Yang
 D875,152 S 2/2020 McCormack et al.
 D880,214 S 4/2020 Lisenbee et al.
 D883,364 S * 5/2020 Masuda D16/219
 2005/0258023 A1 11/2005 Nagai et al.
 2009/0135246 A1 * 5/2009 Uchiyama G01C 3/18
 348/42
 2009/0173036 A1 7/2009 Hand
 2011/0069151 A1 * 3/2011 Orimoto G03B 35/00
 348/42
 2013/0060398 A1 3/2013 Sip
 2014/0290469 A1 10/2014 Michaud et al.
 2015/0042798 A1 * 2/2015 Takeda H04N 5/2252
 348/148
 2015/0158435 A1 * 6/2015 Ohsumi G01C 3/18
 348/375
 2016/0167595 A1 * 6/2016 Kang B60R 11/04
 348/148
 2018/0188022 A1 * 7/2018 Leikert G01B 11/2755
 2018/0222408 A1 * 8/2018 Shigyo H02G 3/14
 2018/0255658 A1 * 9/2018 Kaneko H05K 5/00
 2018/0343439 A1 * 11/2018 Furutake H04N 5/2258
 2019/0033579 A1 * 1/2019 Ohsumi G02B 27/0006
 2019/0104244 A1 * 4/2019 Kobayashi H04N 5/247
 2019/0320159 A1 * 10/2019 Ishii H04N 5/2252

FOREIGN PATENT DOCUMENTS

EP 1 280 225 A2 1/2003

OTHER PUBLICATIONS

Hitachi Automotive Systems stereo camera, published Jun. 24, 2019 [online], [retrieved Dec. 19, 2019], Available from Internet, URL:

<https://www.hitachi.com/New/cnews/month/2019/06/190624.html>.*

U.S. Appl. No. 29/663,977, filed Sep. 20, 2018.

U.S. Appl. No. 29/663,995, filed Sep. 20, 2018.

United States Ex parte Quayle Office Action issued in U.S. Appl. No. 29/663,995 dated Jan. 27, 2020 (15 pages).

Notice of Allowance issued in U.S. Appl. No. 29/663,977 dated Jan. 9, 2020, (15 pages).

U.S. Corrected Notice of Allowability issued in U.S. Appl. No. 29/663,977, dated Mar. 20, 2020 (11 pages).

Notice of Allowance issued in U.S. Appl. No. 29/663,995 dated May 20, 2020 (10 pages).

* cited by examiner

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(57) **CLAIM**

The ornamental design for a vehicle-mounted stereo camera, as shown and described.

DESCRIPTION

FIG. 1 is a front, top and right side perspective view of a vehicle-mounted stereo camera according to the design;

FIG. 2 is a rear, bottom and left side perspective view thereof;

FIG. 3 is a front elevational view thereof;

FIG. 4 is a rear elevational view thereof;

FIG. 5 is a left side elevational view thereof;

FIG. 6 is a right side elevational view thereof;

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

FIG. 8 is a bottom plan view thereof.

The broken lines illustrate portions of the vehicle-mounted stereo camera that form no part of the claimed design.

1 Claim, 4 Drawing Sheets

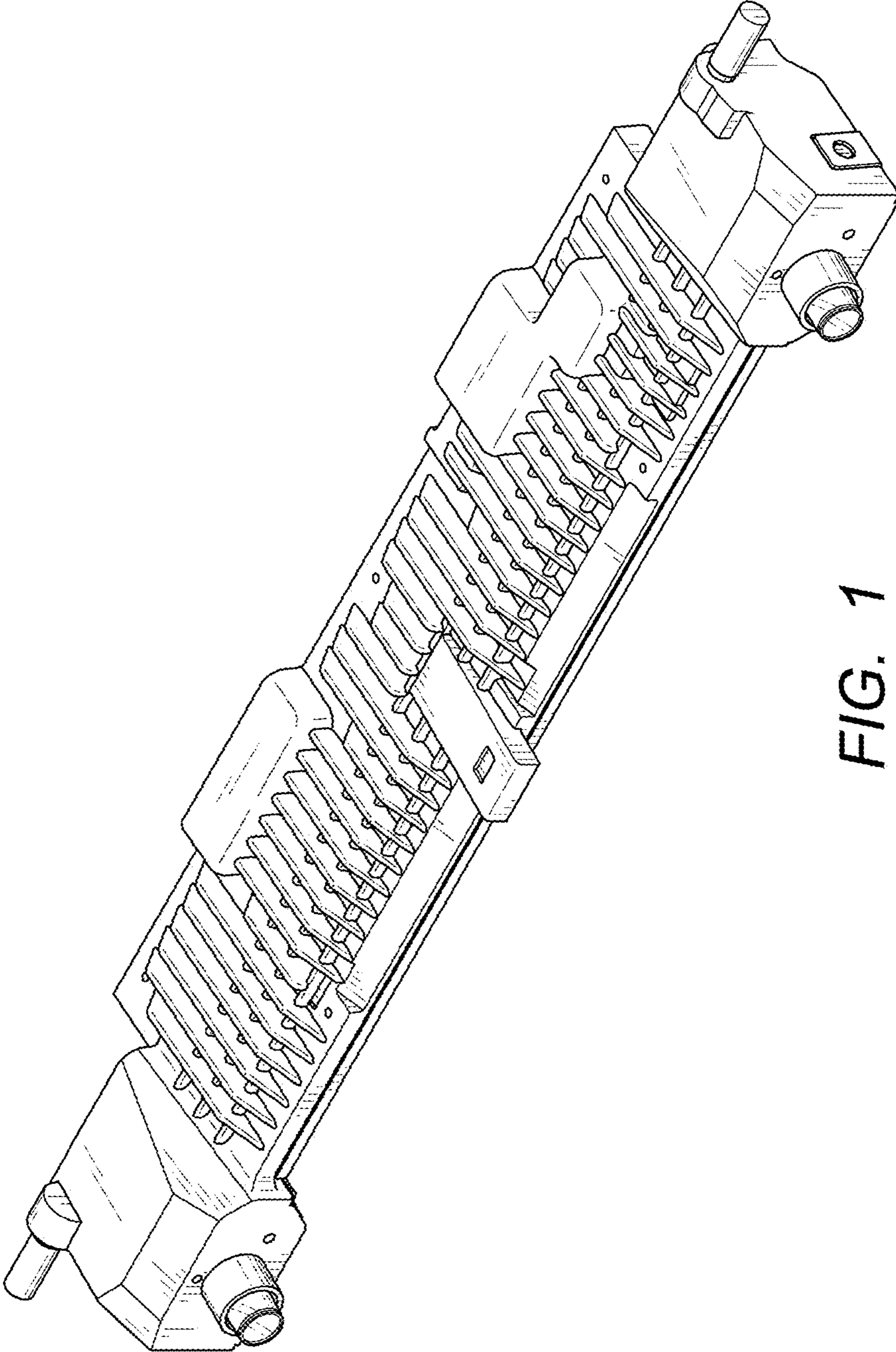


FIG. 1

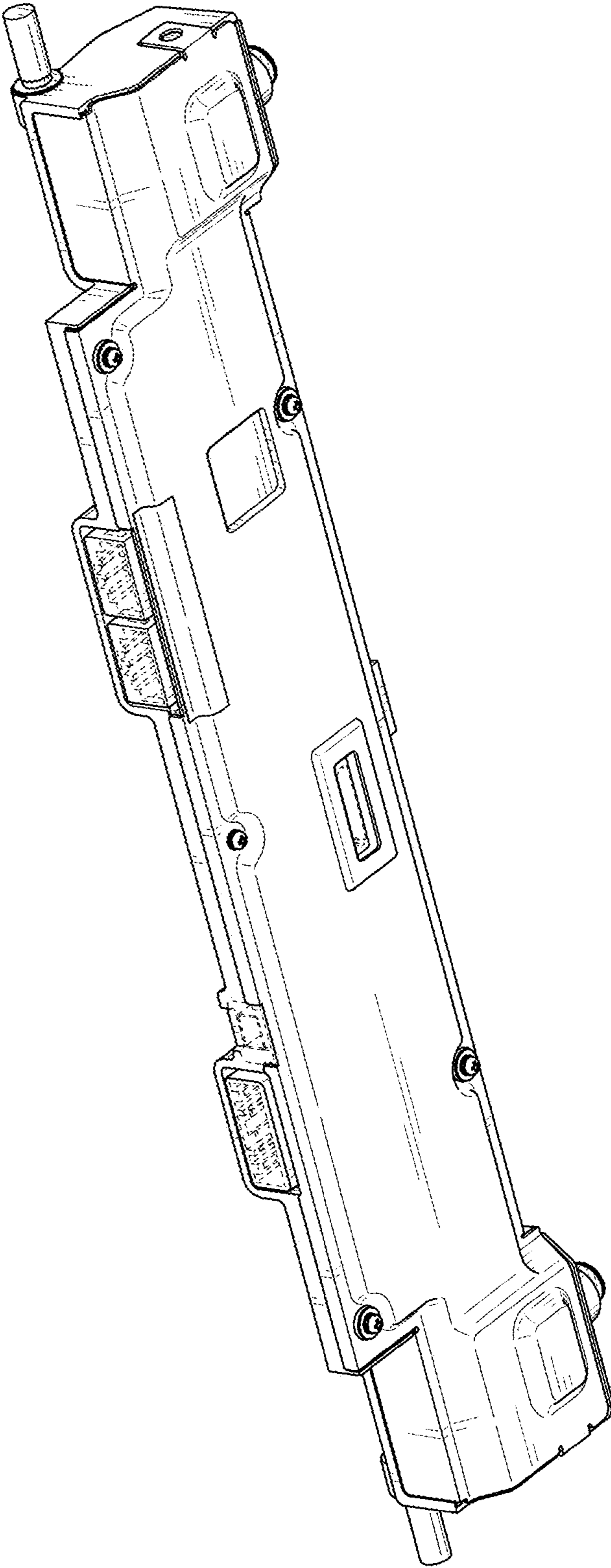


FIG. 2

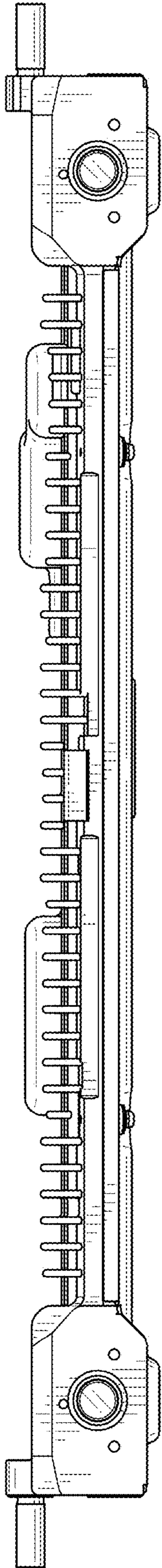


FIG. 3

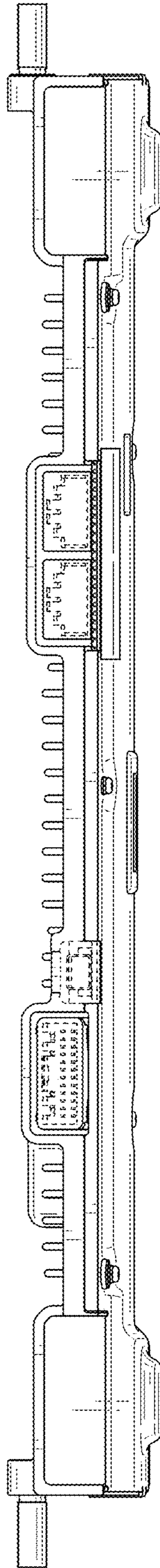


FIG. 4

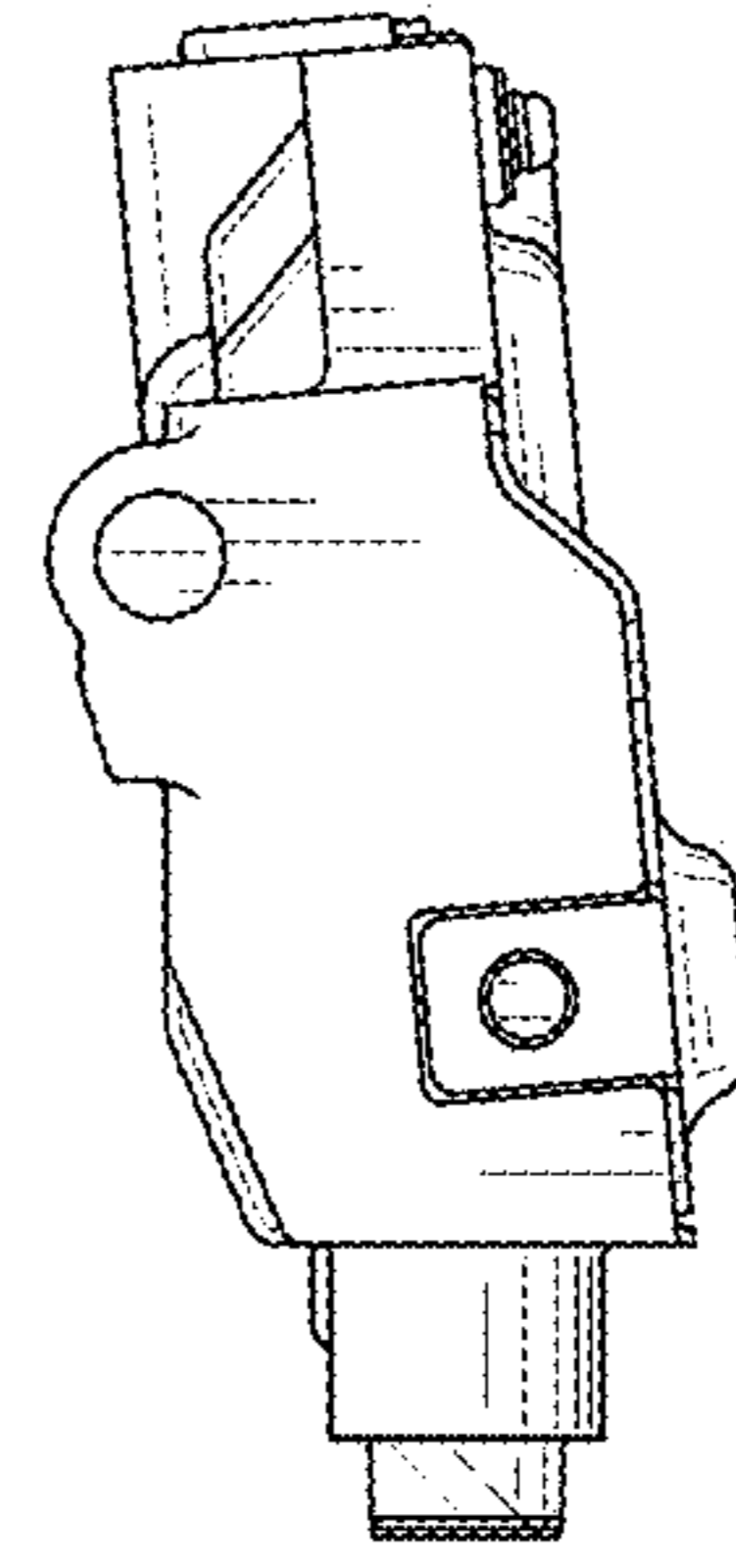


FIG. 6

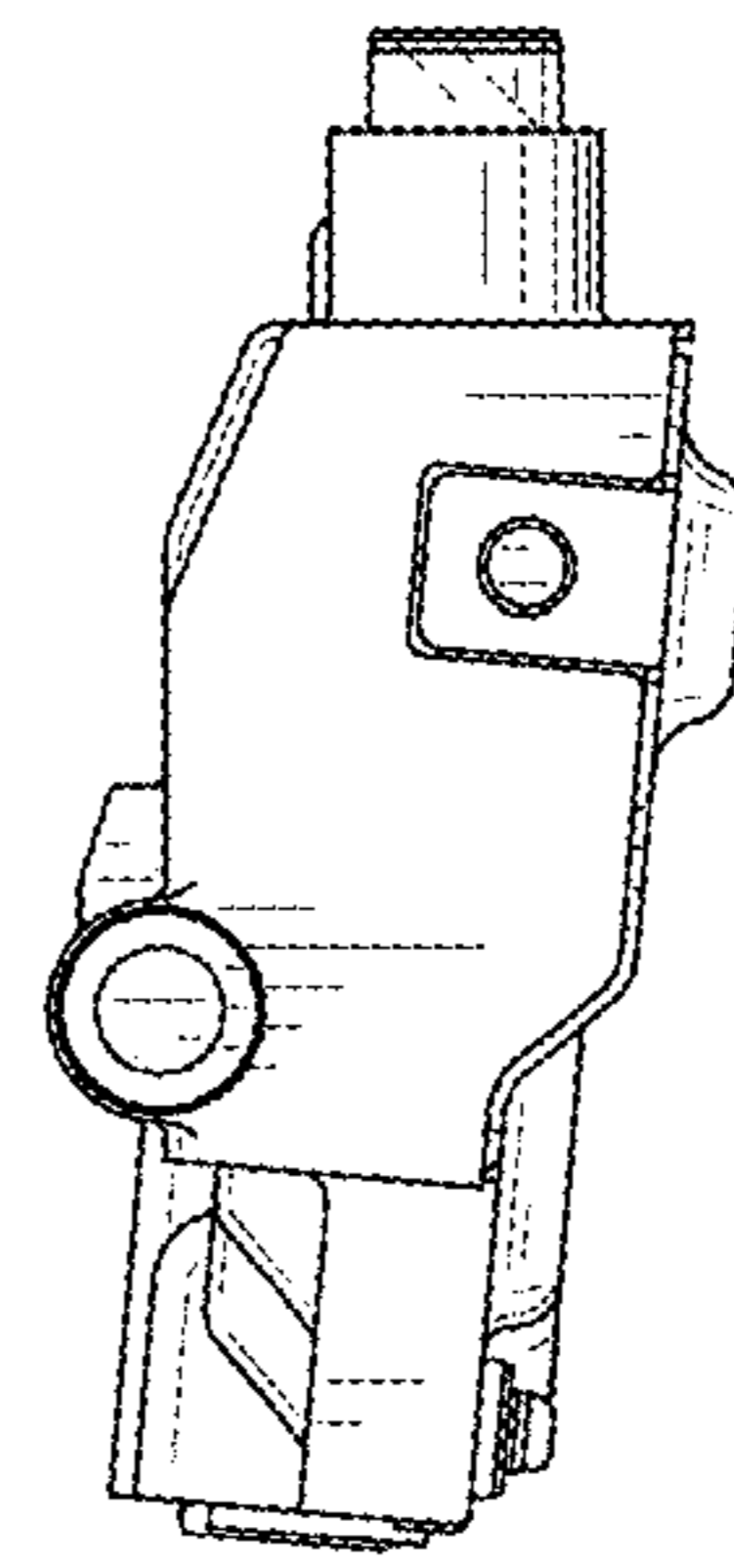


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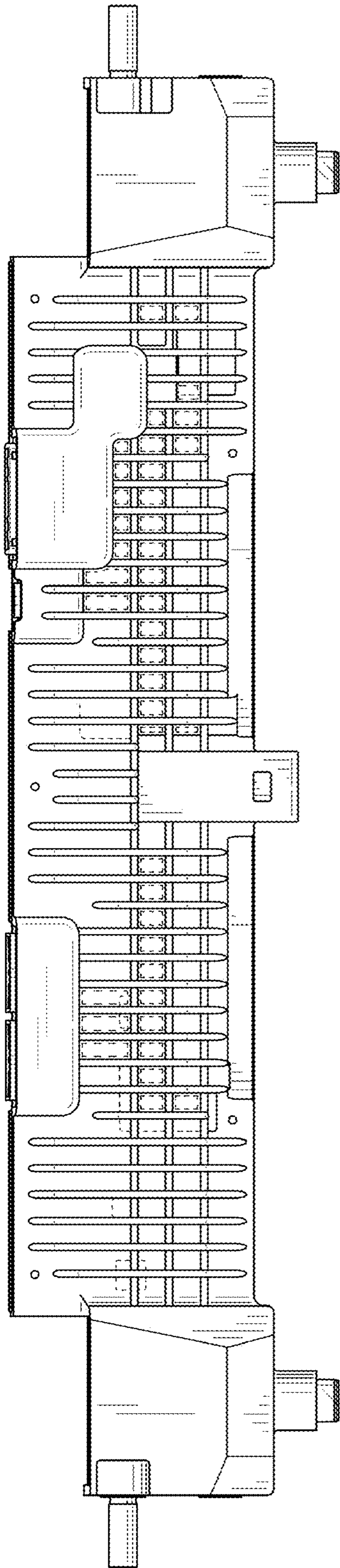


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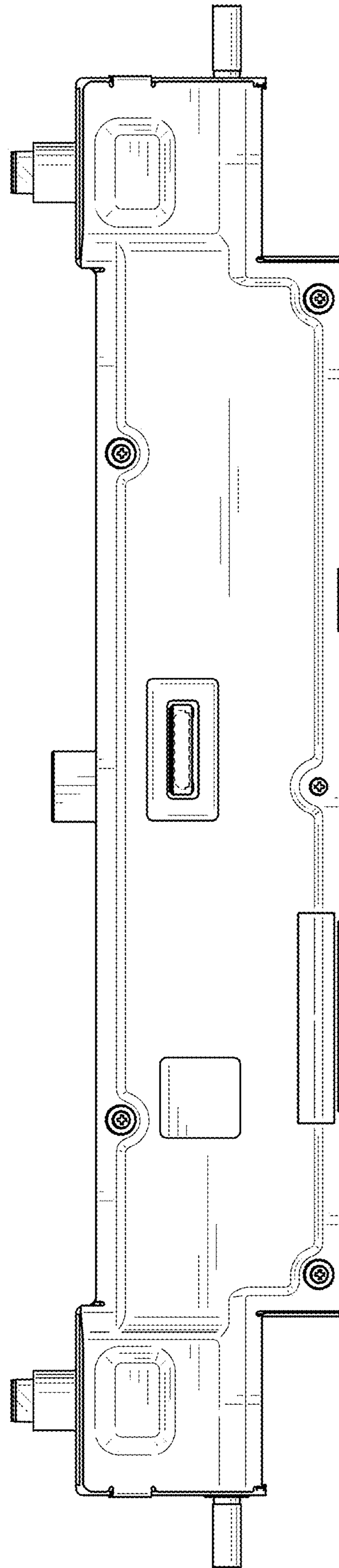


FIG. 8