



US00D989668S

(12) **United States Design Patent**
Choi et al.

(10) **Patent No.:** **US D989,668 S**
(45) **Date of Patent:** **** Jun. 20, 2023**

(54) **VEHICLE FRONT BUMPER**

(71) Applicant: **GM GLOBAL TECHNOLOGY OPERATIONS LLC**, Detroit, MI (US)

(72) Inventors: **Hojun Choi**, Seoul (KR); **Sungjin Kim**, Incheon (KR); **Dongwan Jo**, Incheon (KR)

(73) Assignee: **GM Global Technology Operations LLC**, Detroit, MI (US)

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

(21) Appl. No.: **29/805,387**

(22) Filed: **Aug. 26, 2021**

(51) **LOC (14) Cl.** **12-16**

(52) **U.S. Cl.**
USPC **D12/169**

(58) **Field of Classification Search**
USPC D12/169, 196, 86, 90-92, 163, 190, 98, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

(56) **References Cited**
U.S. PATENT DOCUMENTS

D600,602 S * 9/2009 Endoh D12/169
D664,904 S * 8/2012 Koyama D12/169
D708,997 S * 7/2014 Koizumi D12/169
D717,703 S 11/2014 Munson et al.
D720,668 S 1/2015 Pevovar et al.
D736,683 S * 8/2015 Glover D12/169
D745,837 S 12/2015 Smith et al.
D749,021 S 2/2016 Boniface et al.
D753,034 S 4/2016 Thole et al.
D753,559 S 4/2016 McMahan et al.
D753,560 S 4/2016 McMahan et al.

D771,532 S 11/2016 Kapitonov et al.
D771,533 S 11/2016 Kapitonov
D772,766 S 11/2016 Kozub et al.
D772,767 S 11/2016 Kim
D775,007 S 12/2016 Thole et al.
D775,010 S 12/2016 Kim et al.
D776,583 S 1/2017 Scheer et al.
D786,149 S 5/2017 Pevovar et al.
D787,990 S 5/2017 Kozub et al.
D792,293 S 7/2017 McCabe et al.
D792,295 S 7/2017 McCabe et al.
D792,815 S 7/2017 Kozub
D792,816 S 7/2017 Kozub
D793,292 S 8/2017 Lee
D793,293 S 8/2017 Lee et al.
D793,296 S 8/2017 Smith et al.
D793,297 S 8/2017 Smith et al.
D793,301 S 8/2017 Kozub
D793,302 S 8/2017 Kozub
D798,204 S 9/2017 Mainville
D802,496 S 11/2017 Mainville
D811,957 S 3/2018 Whitla et al.

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Primary Examiner — Melody N Brown

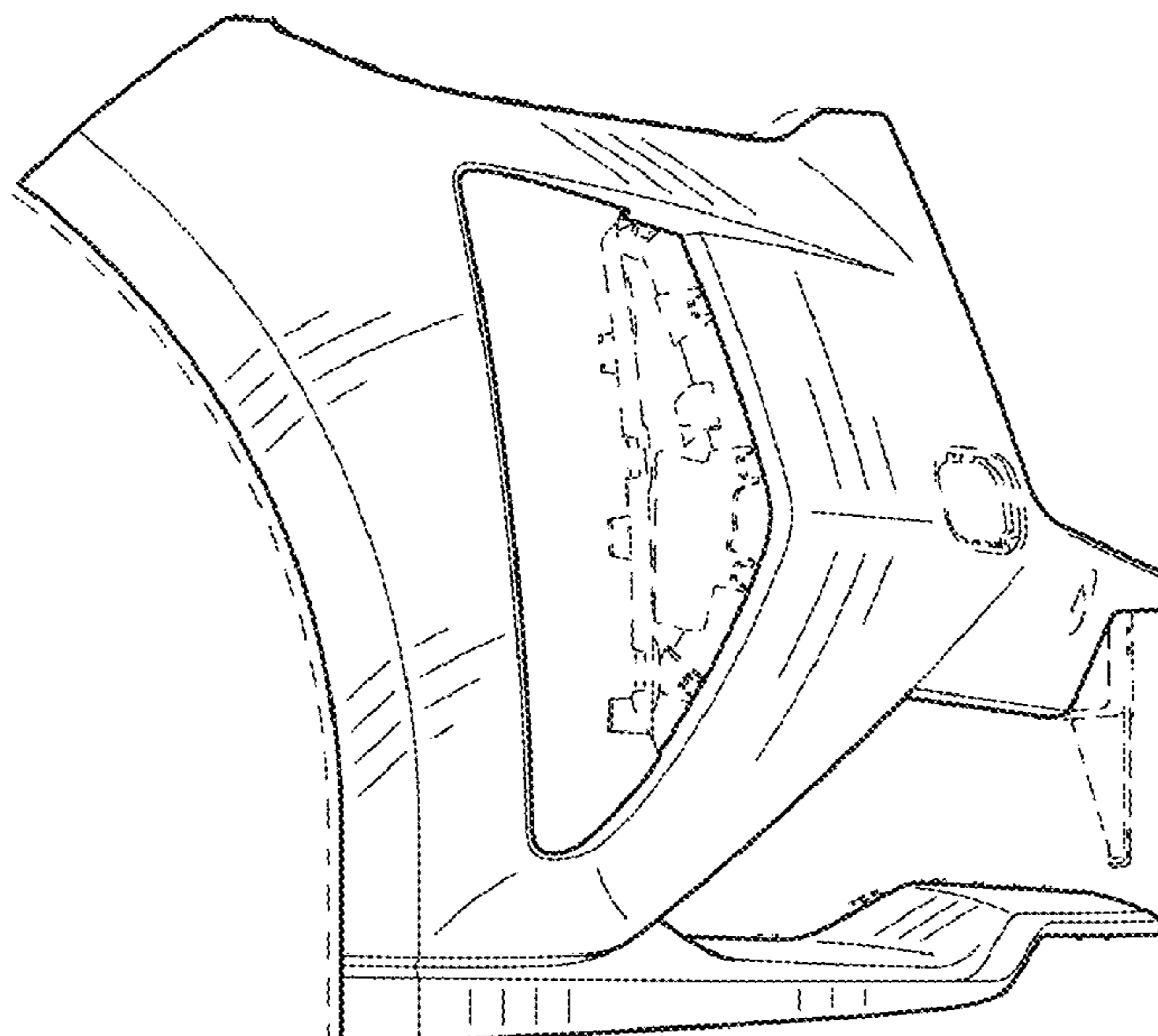
(57) **CLAIM**

The ornamental design for a vehicle front bumper, as shown and described.

DESCRIPTION

FIG. 1 is a front and left side perspective view of a vehicle front bumper showing our new design;
FIG. 2 is a front elevation view thereof;
FIG. 3 is a left side elevation view thereof;
FIG. 4 is a right side elevation view thereof;
FIG. 5 is a top plan view thereof;
FIG. 6 is a rear elevation view thereof; and,
FIG. 7 is a bottom plan view thereof.
The broken lines in the drawings depict portions of the vehicle front bumper that form no part of the claimed design.

1 Claim, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D811,960 S 3/2018 Nakamura
 D811,964 S 3/2018 Perkins
 D812,526 S 3/2018 Zipfel et al.
 D812,527 S 3/2018 Perkins
 D812,528 S 3/2018 Nakamura
 D813,109 S 3/2018 Zipfel et al.
 D813,734 S 3/2018 Nakamura
 D814,369 S 4/2018 Loeb
 D816,558 S 5/2018 McMahan et al.
 D816,559 S 5/2018 McMahan et al.
 D816,561 S 5/2018 McMahan
 D816,562 S 5/2018 Whitla et al.
 D816,564 S 5/2018 Kim
 D816,566 S 5/2018 Loeb
 D818,406 S 5/2018 McMahan et al.
 D820,173 S 6/2018 McMahan
 D820,174 S 6/2018 Whitla et al.
 D821,941 S 7/2018 Mack et al.
 D821,950 S 7/2018 Kozub
 D822,550 S 7/2018 Wassell et al.
 D826,114 S 8/2018 Smith et al.
 D826,803 S 8/2018 Smith et al.
 D835,549 S * 12/2018 Tamura D12/169
 D837,109 S 1/2019 Kozub et al.
 D840,293 S 2/2019 Koo et al.
 D841,532 S 2/2019 Koo et al.
 D843,275 S 3/2019 Koo et al.
 D843,898 S * 3/2019 Luk D12/169
 D845,187 S 4/2019 Pinazzo et al.
 D845,190 S 4/2019 Zipfel
 D845,196 S 4/2019 Kozub
 D847,042 S 4/2019 Pinazzo et al.
 D847,044 S 4/2019 Zipfel
 D847,704 S 5/2019 Zipfel
 D847,705 S 5/2019 Zipfel
 D847,707 S 5/2019 Park Cheng et al.
 D847,714 S 5/2019 Mack et al.
 D848,318 S 5/2019 McMahan et al.
 D848,322 S 5/2019 Mack et al.
 D848,323 S 5/2019 Mack et al.
 D848,324 S 5/2019 Thurber et al.
 D848,325 S 5/2019 Thurber et al.
 D850,989 S 6/2019 Kozub
 D851,555 S 6/2019 Whitla et al.
 D851,556 S 6/2019 Thurber et al.
 D851,557 S 6/2019 Thurber et al.
 D851,560 S 6/2019 Yong et al.
 D851,561 S 6/2019 Yong et al.
 D853,904 S 7/2019 Koo et al.
 D854,979 S 7/2019 Krieg et al.
 D855,502 S * 8/2019 Behmer D12/163
 D855,508 S 8/2019 Wilkins et al.
 D855,509 S 8/2019 Wilkins
 D856,204 S 8/2019 Kapitonov
 D856,206 S 8/2019 De Leon
 D856,864 S 8/2019 Kapitonov
 D856,874 S 8/2019 Kozub
 D856,875 S 8/2019 Kozub

D860,075 S 9/2019 Riggs et al.
 D860,076 S 9/2019 Bartels et al.
 D860,078 S 9/2019 O'Donnell et al.
 D862,337 S 10/2019 Pinazzo et al.
 D863,140 S 10/2019 Wilkins et al.
 D863,147 S 10/2019 Zipfel
 D863,149 S 10/2019 Luke et al.
 D863,150 S 10/2019 Krieg et al.
 D863,152 S 10/2019 Kozub
 D864,057 S 10/2019 Krieg et al.
 D867,232 S 11/2019 Izard
 D868,639 S 12/2019 Wilkins et al.
 D868,650 S 12/2019 Gifford
 D868,651 S 12/2019 Gifford
 D868,656 S 12/2019 De Leon
 D870,619 S 12/2019 Gifford
 D873,733 S 1/2020 Kozub
 D874,362 S 2/2020 Izard
 D877,001 S 3/2020 Izard
 D877,002 S 3/2020 Izard
 D877,003 S 3/2020 Izard
 D877,004 S 3/2020 Wilkins et al.
 D877,007 S 3/2020 Zipfel
 D877,009 S 3/2020 Luke et al.
 D877,668 S * 3/2020 Bucher D12/169
 D881,083 S 4/2020 Blanski et al.
 D882,466 S 4/2020 Yong et al.
 D885,265 S 5/2020 Zipfel
 D885,994 S * 6/2020 Metros D12/163
 D887,317 S * 6/2020 Metros D12/163
 D887,323 S 6/2020 Zipfel
 D889,331 S 7/2020 O'Donnell et al.
 D892,003 S 8/2020 Zipfel
 D894,060 S 8/2020 Izard
 D894,061 S 8/2020 Zipfel
 D901,342 S * 11/2020 Yang D12/163
 D902,093 S * 11/2020 Behmer D12/163
 D902,802 S 11/2020 Choi et al.
 D902,803 S 11/2020 Choi et al.
 D902,817 S 11/2020 Choi et al.
 D902,818 S 11/2020 Choi et al.
 D903,567 S 12/2020 Choi et al.
 D910,503 S * 2/2021 Battams D12/163
 D911,231 S * 2/2021 Bucher D12/169
 D914,554 S * 3/2021 Bischoff D12/169
 D915,957 S * 4/2021 Bischoff D12/169
 D932,387 S * 10/2021 Montoya Bueloni D12/169
 D932,388 S * 10/2021 Montoya Bueloni D12/169
 D932,391 S * 10/2021 Montoya Bueloni D12/169
 D932,392 S * 10/2021 Akcay D12/169
 D932,396 S * 10/2021 Giumentaro D12/169
 D934,751 S * 11/2021 Taubert D12/169
 D934,757 S * 11/2021 Akcay D12/169
 D939,401 S * 12/2021 Becker D12/169
 D939,406 S * 12/2021 Bischoff D12/169
 D971,801 S * 12/2022 Akcay D12/169
 D971,802 S * 12/2022 Akcay D12/169
 D972,469 S * 12/2022 Akcay D12/169
 D974,973 S * 1/2023 Mockenhaupt D12/169

* cited by examiner

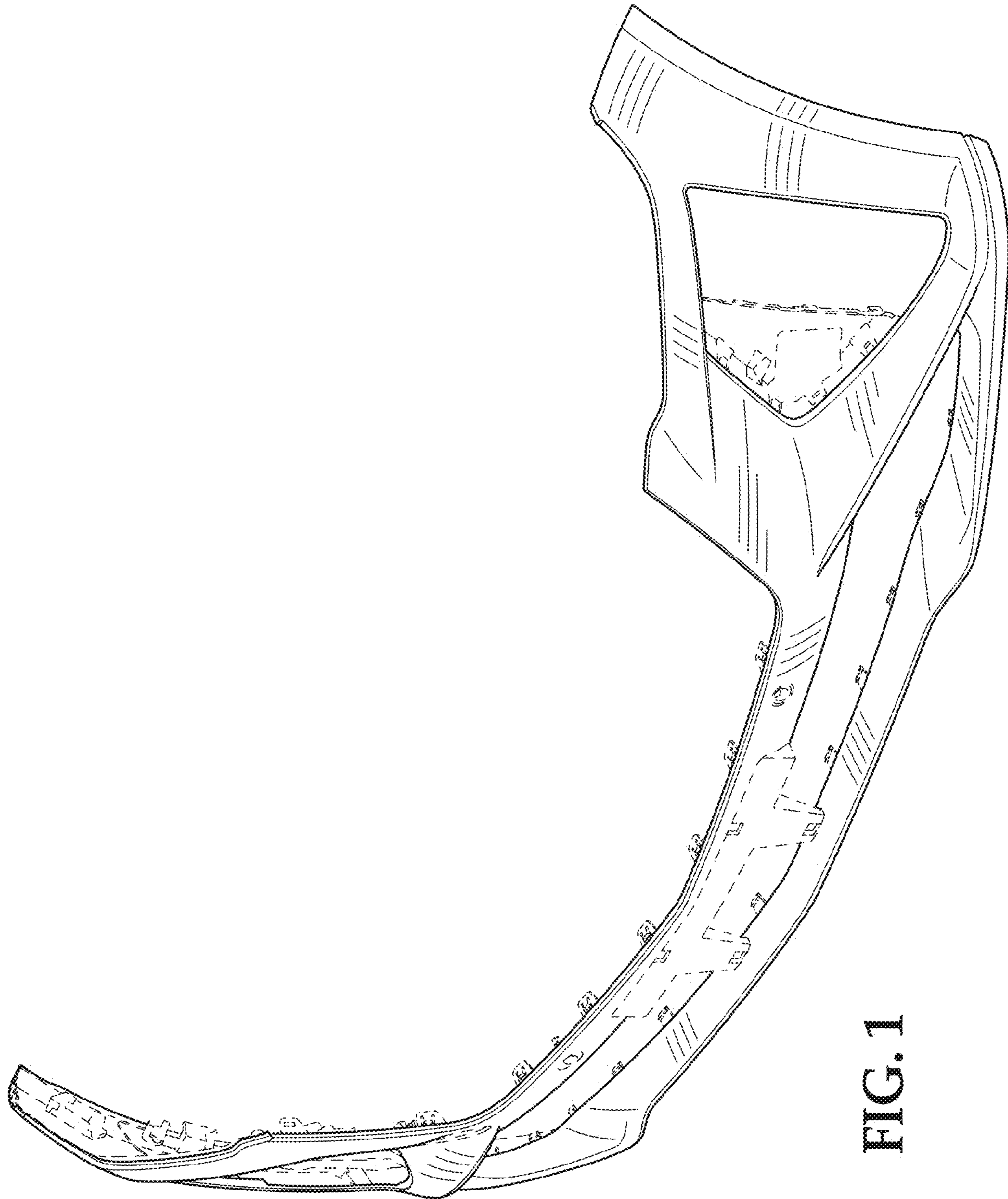


FIG. 1

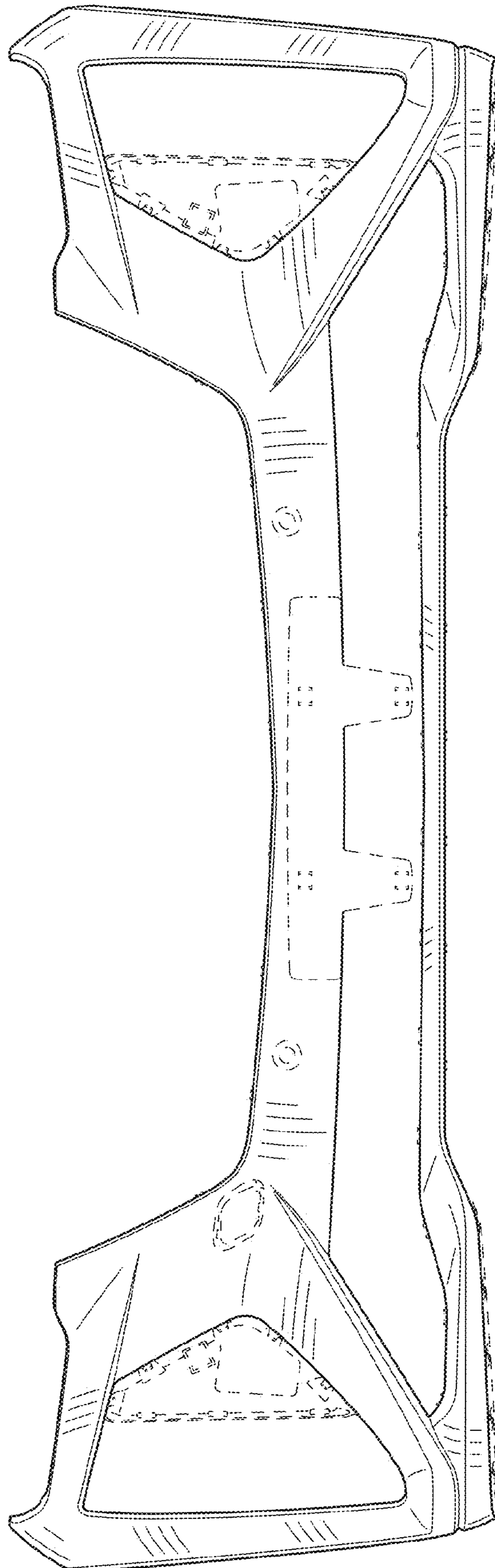


FIG. 2

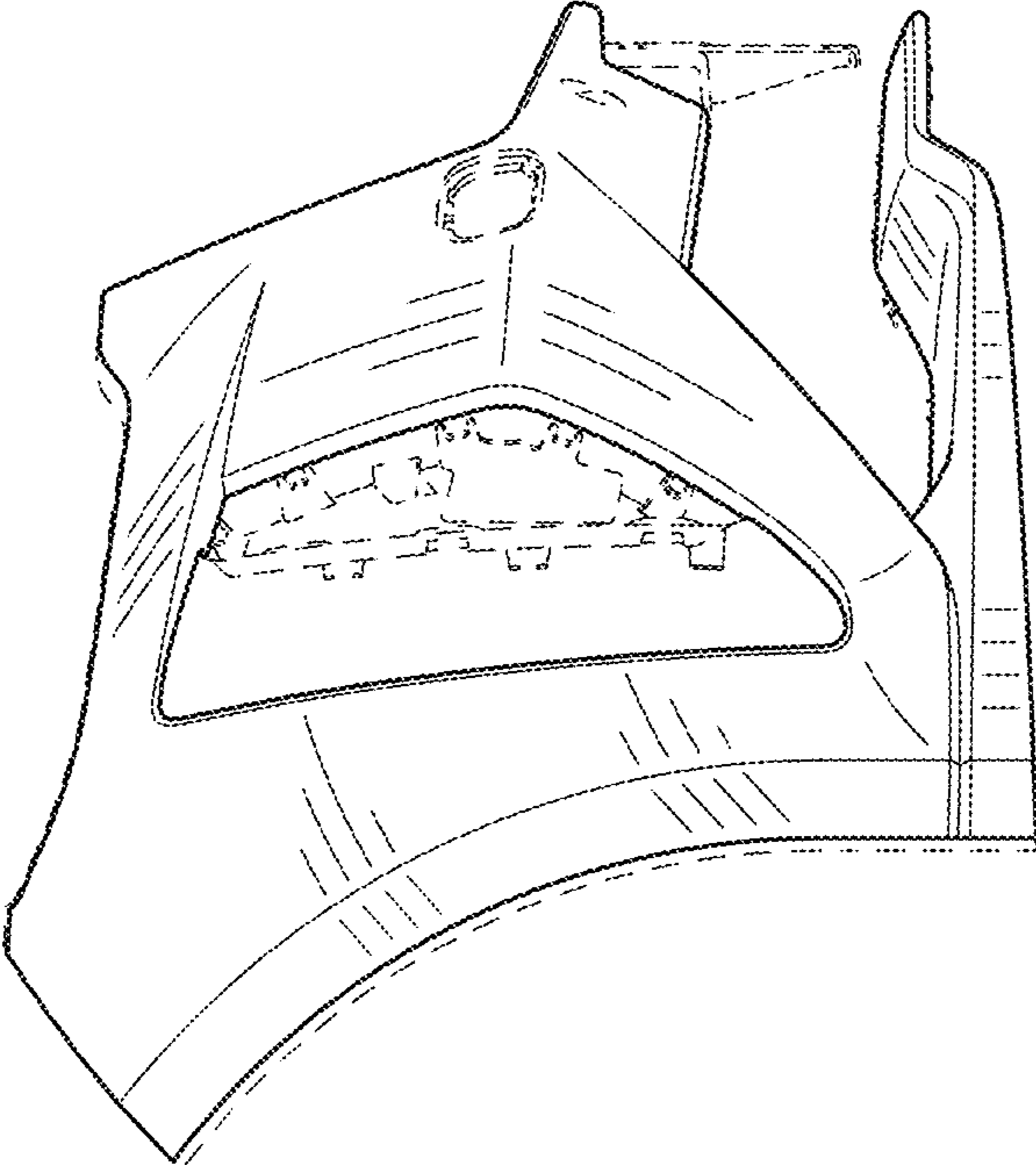


FIG. 3

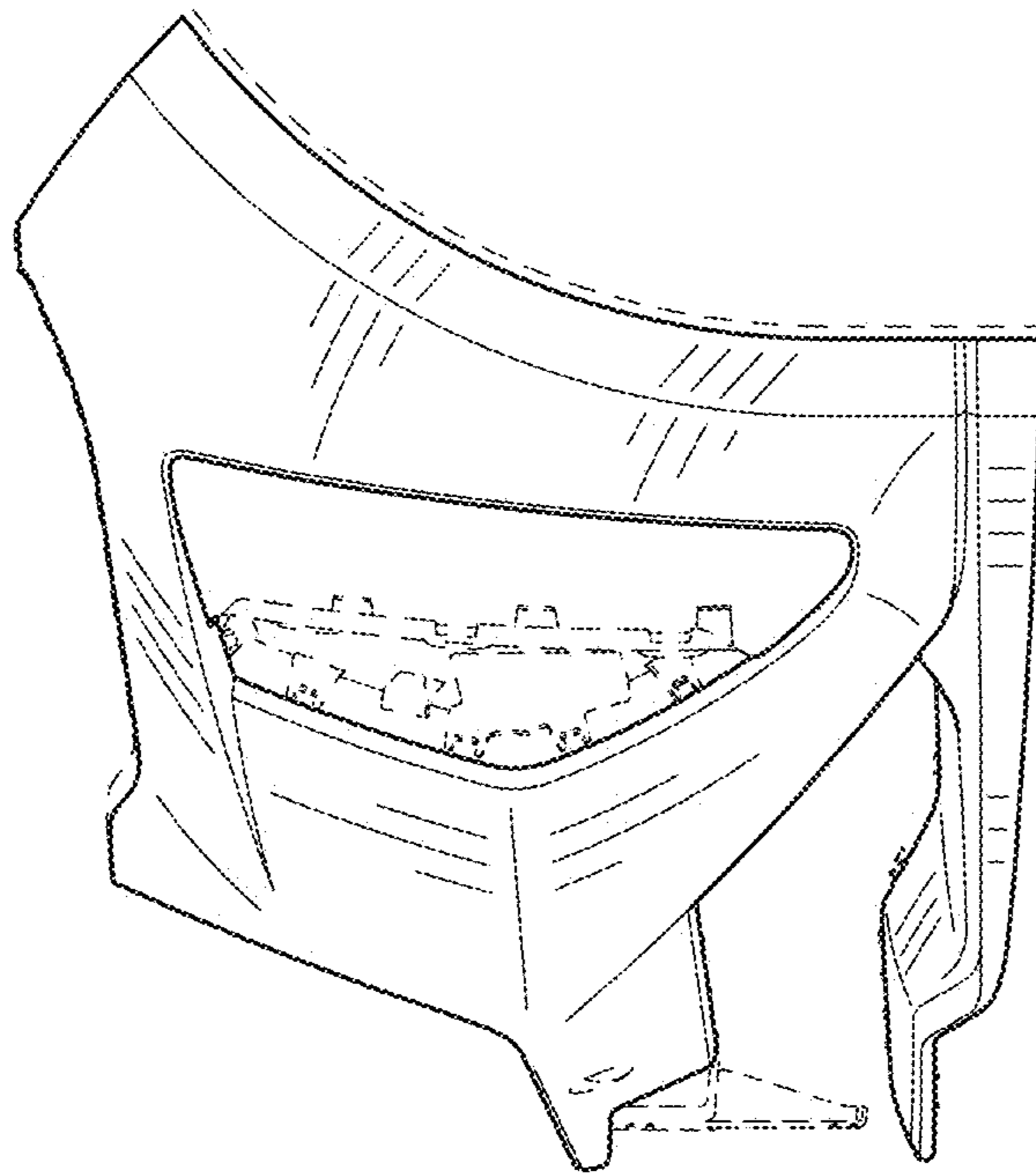


FIG. 4

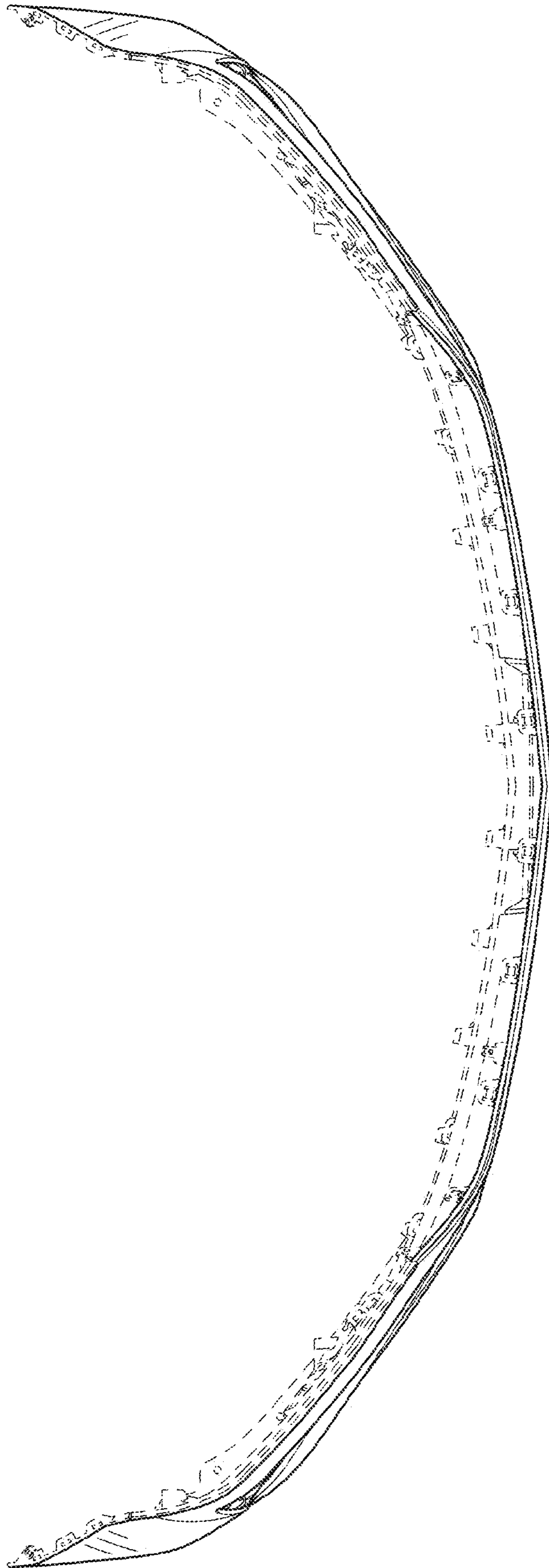


FIG. 5

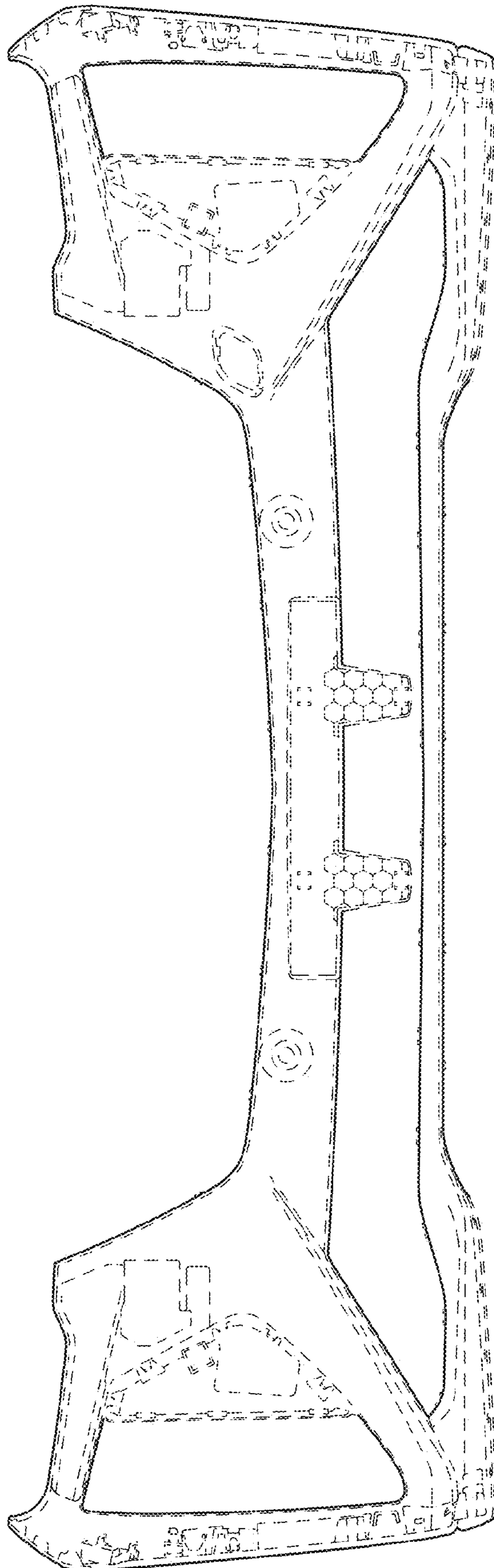


FIG. 6

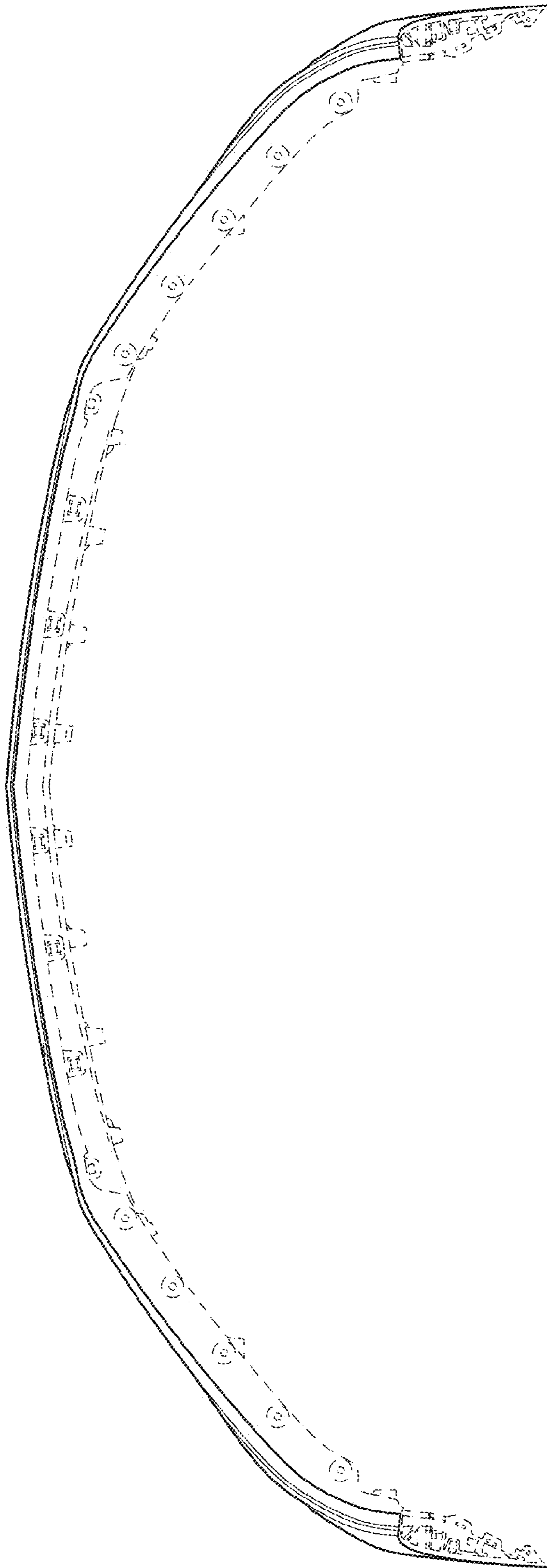


FIG. 7