



US00D980410S

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

(10) **Patent No.:** **US D980,410 S**  
(45) **Date of Patent:** **\*\* Mar. 7, 2023**

(54) **FILTER HOUSING FOR MASK TYPE AIR PURIFIER**

(71) Applicant: **LG ELECTRONICS INC.**, Seoul (KR)

(72) Inventors: **Byeongwook Kim**, Seoul (KR);  
**Dongsoon Kim**, Seoul (KR)

(73) Assignee: **LG ELECTRONICS INC.**, Seoul (KR)

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

(21) Appl. No.: **29/751,942**

(22) Filed: **Sep. 24, 2020**

(30) **Foreign Application Priority Data**

Jul. 10, 2020 (KR) ..... 30-2020-0031645

(51) **LOC (14) Cl.** ..... **29-02**

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

USPC ..... **D24/110.1; D24/127**

(58) **Field of Classification Search**

USPC ..... D24/108, 110, 110.1–110.6, 129, 162,  
D24/164, 186, 127; D10/30, 32, 70;

(Continued)

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

2,160,317 A \* 5/1939 Schwartz ..... A62B 18/025  
128/206.15

D284,300 S \* 6/1986 Hodgkins ..... A62B 23/025  
D23/209

(Continued)

**FOREIGN PATENT DOCUMENTS**

CN 304724957 \* 7/2018

CN 305855541 \* 6/2020

CN 306789100 \* 8/2021

**OTHER PUBLICATIONS**

[The Atmoblue Wearable Smart-Purifier Delivers 99.9% Purified Air to Let You Breathe Clean Air Freely], yankodesign.com, by

[Sarang Sheth], Published: [Apr. 15, 2020] [online], site visited: [Mar. 17, 2022], URL: <<https://www.yankodesign.com/2020/04/15/the-atmoblue-wearable-smart-purifier-delivers-99-9-purified-air-to-let-you-breathe-clean-air-freely/>>. (Year: 2020).\*

(Continued)

*Primary Examiner* — Jonathan J Han

*Assistant Examiner* — Amanda J Berlinski

(74) *Attorney, Agent, or Firm* — Birch, Stewart, Kolasch & Birch, LLP

(57) **CLAIM**

The ornamental design for a filter housing for mask type air purifier, as shown and described.

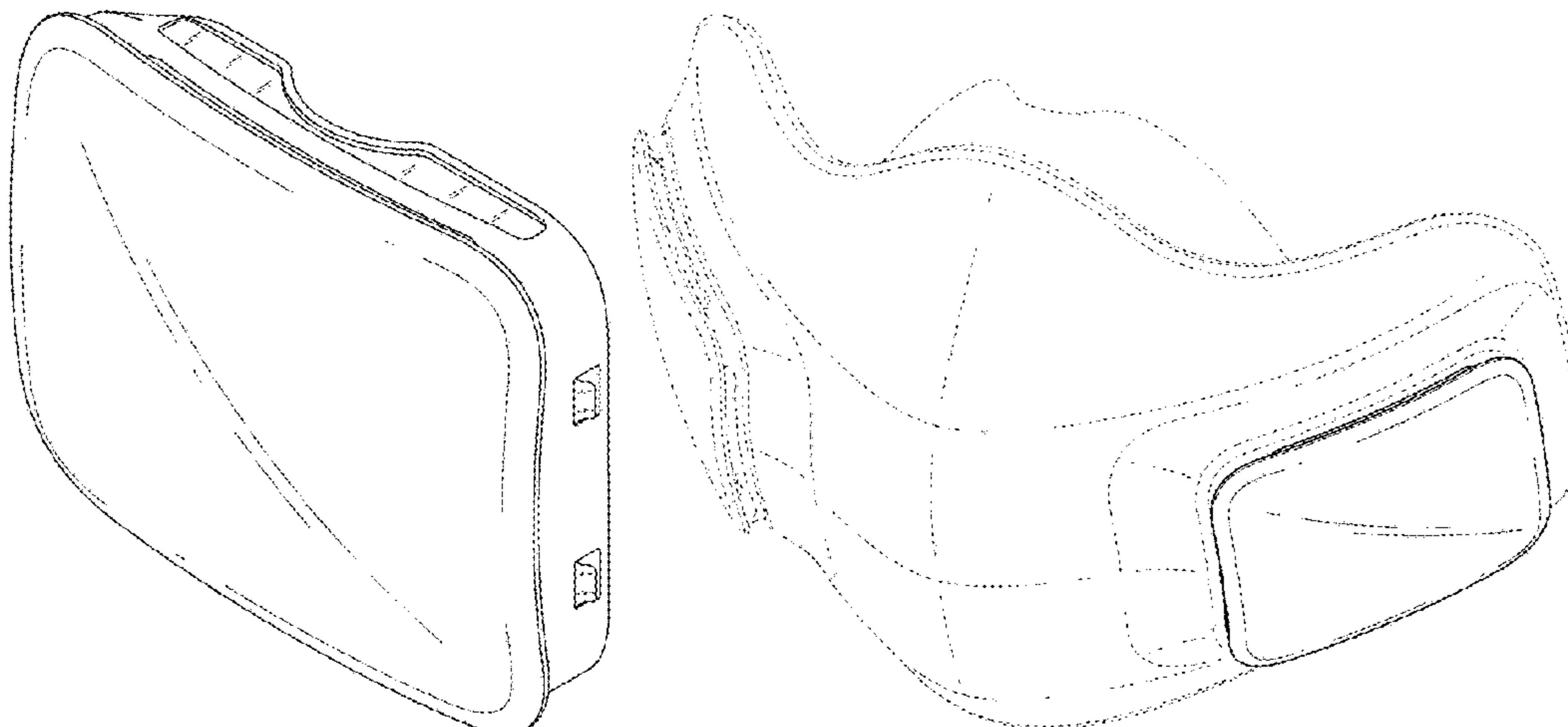
**DESCRIPTION**

FIG. 1 is a front, right side perspective view of a filter housing for mask type air purifier showing our new design; FIG. 2 is a rear, right side perspective view thereof; FIG. 3 is a front view thereof; FIG. 4 is a rear view thereof; FIG. 5 is a left side view thereof; FIG. 6 is a right side view thereof; FIG. 7 is a top view thereof; FIG. 8 is a bottom view thereof; and, FIG. 9 is a perspective view showing the design of FIG. 1 within a mask type air purifier.

The present design is a filter housing for mask type air purifier, which includes a plurality of horizontally long air intake holes so that sufficient air flows in both sides of the filter housing for mask type air purifier, and has an overall smooth front shape.

The broken lines shown in the figures depict portions of the filter housing for mask type air purifier that form no part of the claimed design. The broken lines showing portions of a mask type air purifier in FIG. 9 are for the purpose of illustrating environmental structure that forms no part of the claimed design.

**1 Claim, 9 Drawing Sheets**



# US D980,410 S

Page 2

(58) **Field of Classification Search**

USPC ..... D14/344, 496; D23/209, 261, 365;  
D29/108, 110, 111

CPC ..... A62B 18/10; A62B 9/00; A62B 23/00;  
A62B 23/02; A62B 23/025

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,427,092 A \* 6/1995 Shiao ..... A62B 23/00  
128/206.17  
D386,094 S \* 11/1997 Ventrella ..... A62B 19/00  
D10/18  
D388,510 S \* 12/1997 Rick ..... A61L 2/10  
D23/355  
D451,602 S \* 12/2001 Juhlin ..... F16K 15/16  
D24/162  
D456,877 S \* 5/2002 Wilder ..... A62B 18/08  
D23/209  
6,736,137 B1 \* 5/2004 Resnick ..... A62B 17/04  
128/205.27  
7,114,496 B1 \* 10/2006 Resnick ..... A62B 23/02  
128/206.17  
D574,852 S \* 8/2008 Grant ..... A62B 18/025  
D15/5  
D613,851 S \* 4/2010 Pilgrim ..... A62B 23/02  
D24/110.1  
7,849,856 B2 \* 12/2010 Mittelstadt ..... F16K 15/16  
128/206.28  
D631,552 S \* 1/2011 Kasabach ..... A61B 5/02055  
D24/186  
D645,935 S \* 9/2011 Kulikov ..... A61L 9/12  
D23/209  
D672,031 S \* 12/2012 Hunt ..... D24/106  
D678,508 S \* 3/2013 Choi ..... F16K 15/16  
D24/110.1  
D745,962 S \* 12/2015 Dwyer ..... D24/110.1  
D752,044 S \* 3/2016 Akana ..... D14/344  
D757,247 S \* 5/2016 Dwyer ..... D24/110.1  
D757,248 S \* 5/2016 Fleming ..... D24/110.1  
D760,380 S \* 6/2016 Tang ..... D24/110.6  
D778,430 S \* 2/2017 Blomberg ..... D24/110.1  
D811,596 S \* 2/2018 Verbrugge ..... D24/164  
D827,811 S \* 9/2018 Eitzman ..... D24/129  
D836,762 S \* 12/2018 Kim ..... D23/365

D882,563 S \* 4/2020 Akana ..... D14/344  
D925,725 S \* 7/2021 Kim ..... D24/110.1  
D931,468 S \* 9/2021 Huang ..... D24/186  
D939,365 S \* 12/2021 Nothacker ..... A62B 23/00  
D10/70  
D959,643 S \* 8/2022 Kim ..... D29/108  
D959,644 S \* 8/2022 Kim ..... A62B 18/08  
D29/108  
D963,157 S \* 9/2022 Kim ..... D29/108  
D968,031 S \* 10/2022 Hatzlhofer ..... A62B 18/08  
D29/108  
2002/0195108 A1 \* 12/2002 Mittelstadt ..... F16K 15/16  
128/206.15  
2005/0145249 A1 \* 7/2005 Solyntjes ..... A62B 23/02  
128/206.16  
2007/0007873 A1 \* 1/2007 Cosma ..... H01J 29/073  
313/407  
2011/0284006 A1 \* 11/2011 Legare ..... A62B 7/10  
128/205.27  
2013/0222139 A1 \* 8/2013 Gouge ..... A61B 5/02055  
340/573.1  
2014/0216473 A1 \* 8/2014 Dwyer ..... A62B 18/025  
128/863  
2014/0251327 A1 \* 9/2014 Mittelstadt ..... A62B 18/10  
128/205.24  
2015/0314147 A1 \* 11/2015 Fleming ..... A62B 7/10  
128/206.17  
2015/0336718 A1 \* 11/2015 Dwyer ..... B65D 85/70  
220/4.23  
2016/0030778 A1 \* 2/2016 Skov ..... A62B 18/025  
128/206.15  
2017/0311661 A1 \* 11/2017 Henderson ..... A62B 23/025  
2018/0353783 A1 \* 12/2018 Dwyer ..... A62B 19/00  
2019/0046818 A1 \* 2/2019 Mou ..... A62B 18/08  
2020/0206546 A1 \* 7/2020 Kim ..... A62B 23/025  
2021/0187147 A1 \* 6/2021 O'Toole, III ..... A61L 9/12  
2021/0386136 A1 \* 12/2021 Yates ..... A41D 13/1138  
2022/0008761 A1 \* 1/2022 Adams ..... A61L 2/10

OTHER PUBLICATIONS

[LG officially announces its battery-powered air purifier mask with two fans designed to make it easier to breathe], theverge.com, by: Jon Porter, Posted: Aug. 27, 2020 [online], site visited: [Mar. 17, 2022], URL: <<https://www.theverge.com/2020/8/27/21403762/lg-puricare-wearable-air-purifier-mask-coronavirus-filter>>. (Year: 2020).\*

\* cited by examiner

Fig. 1

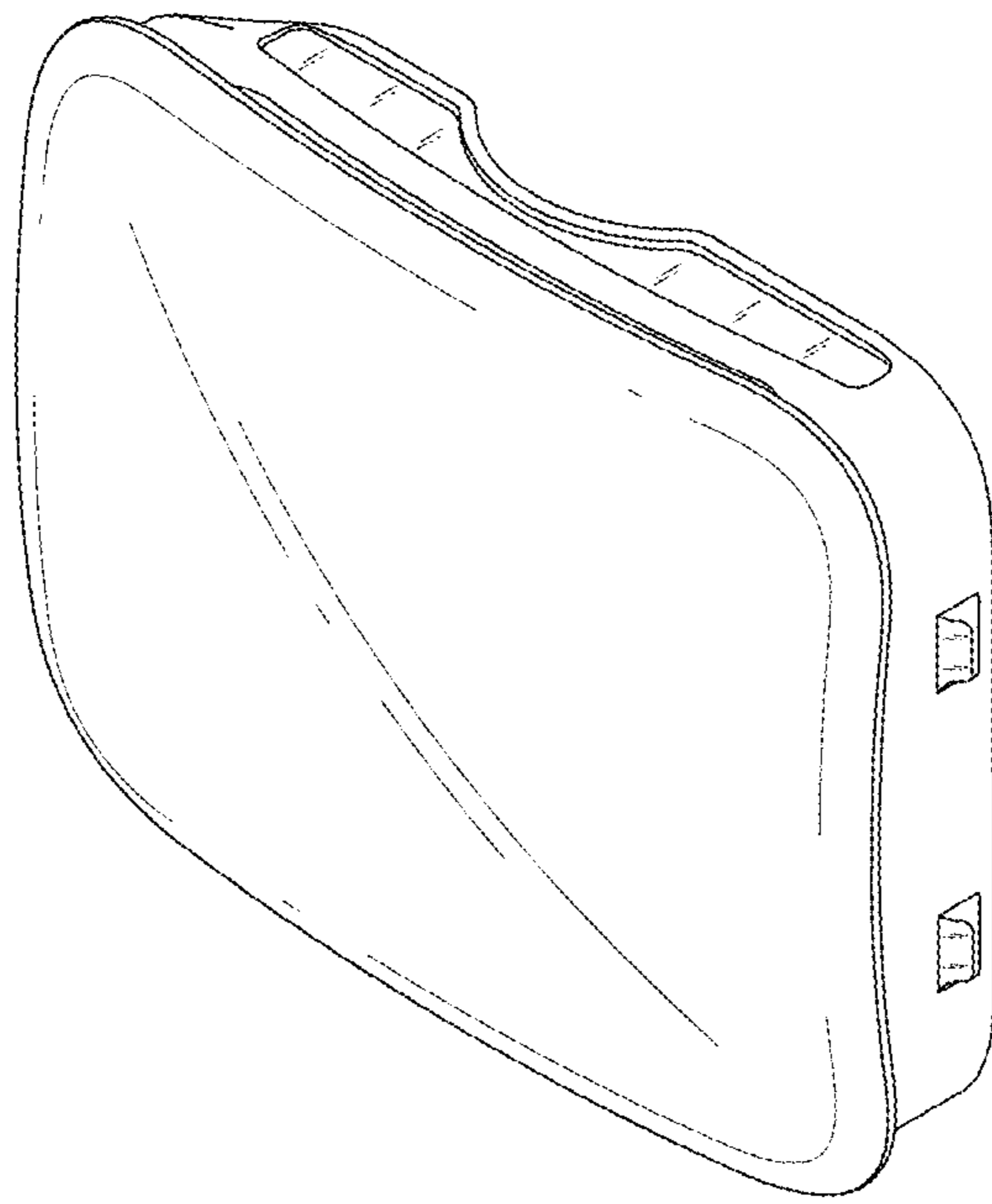


Fig. 2

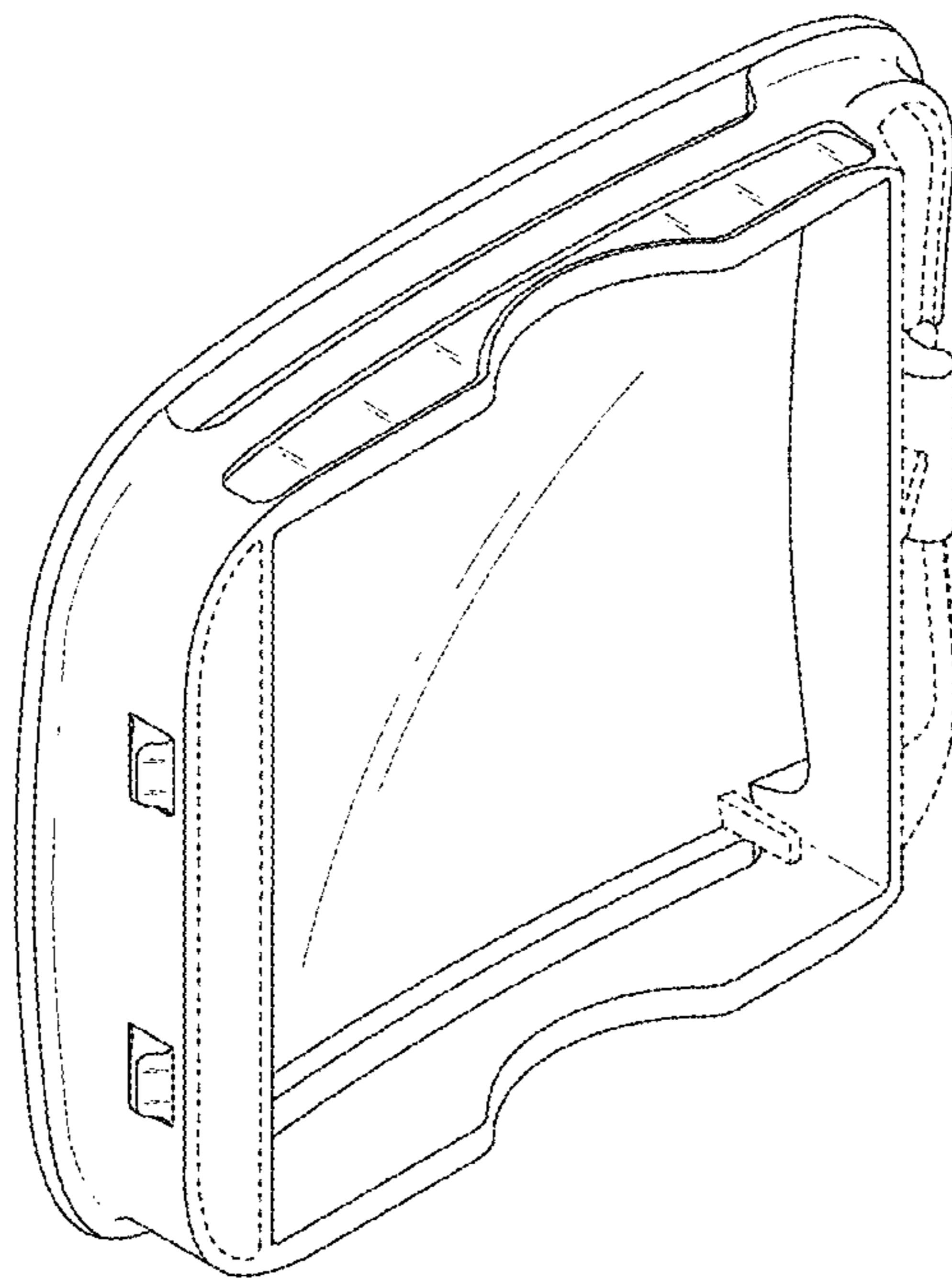




Fig. 3

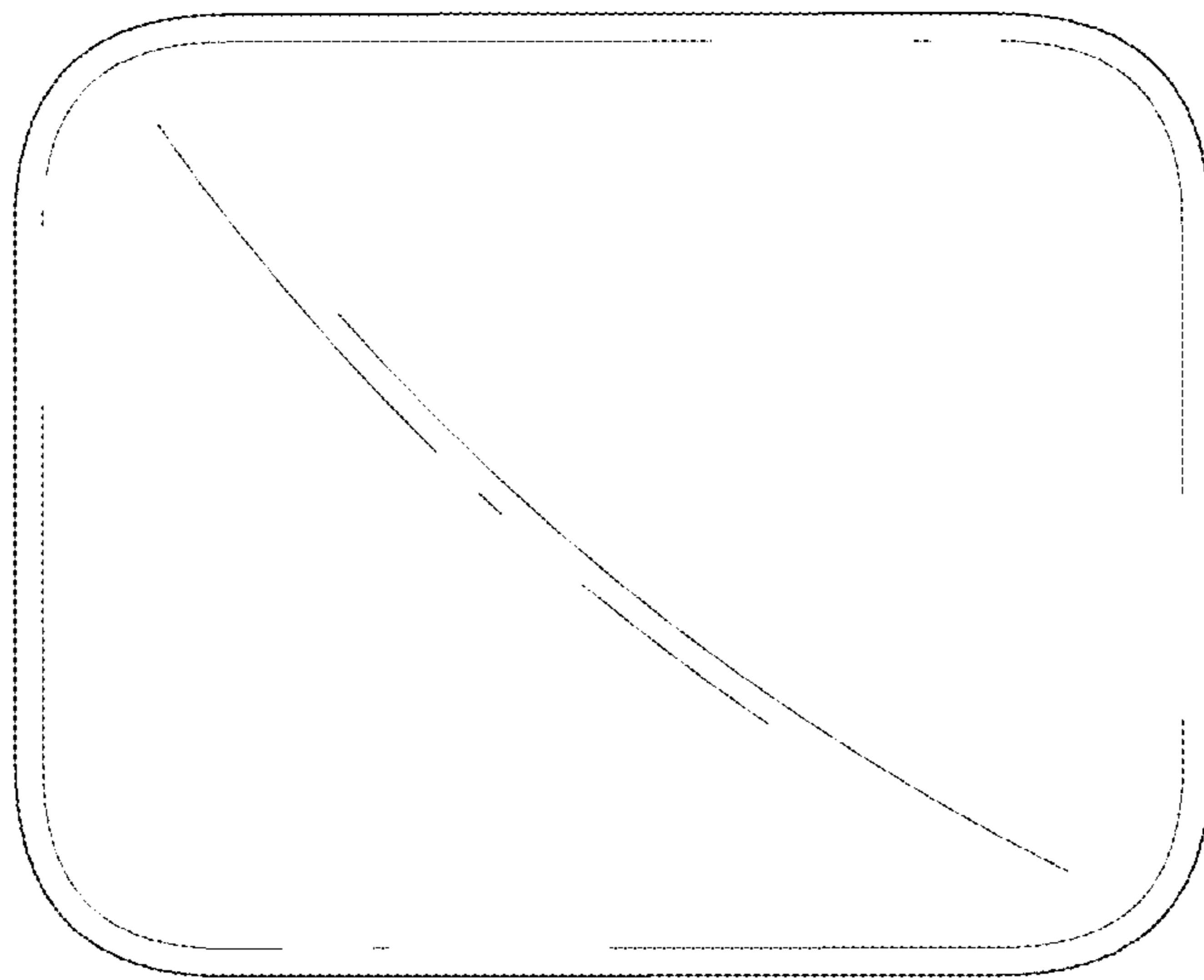


Fig. 4

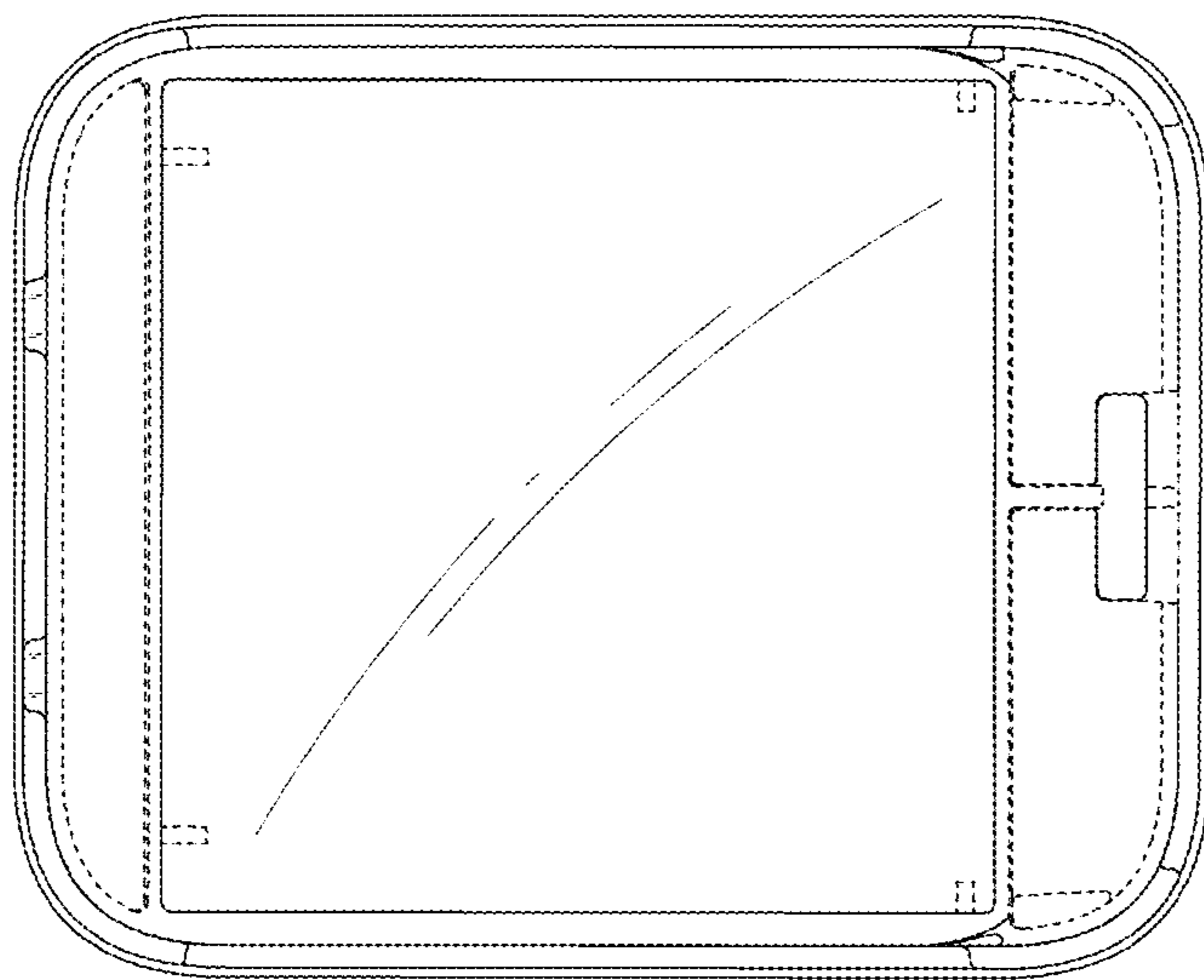


Fig. 5

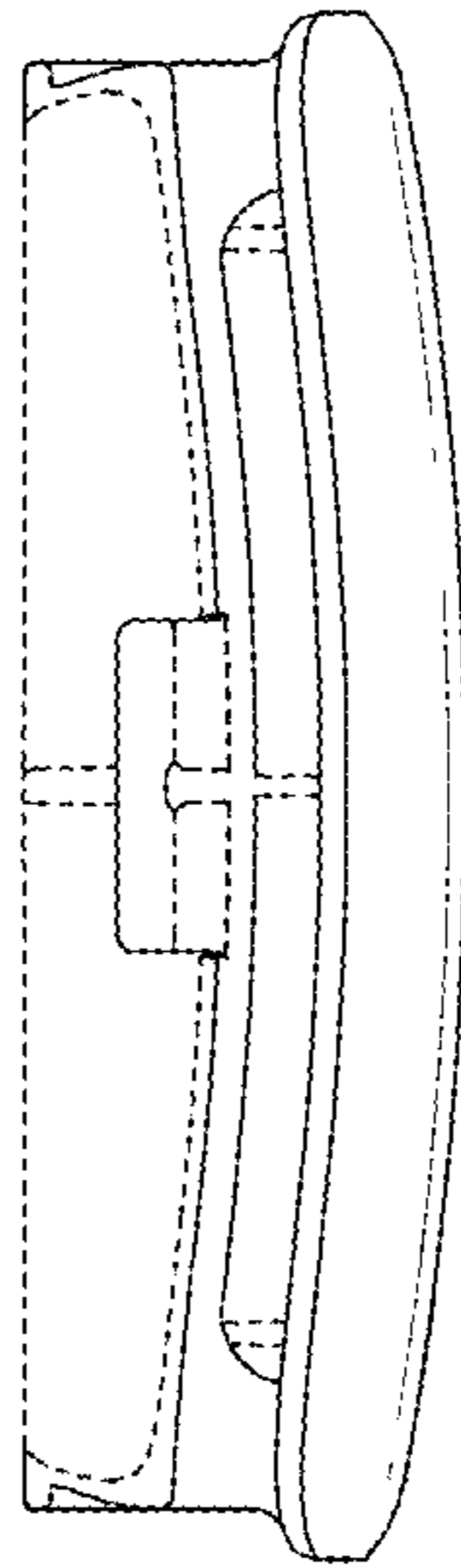


Fig. 6

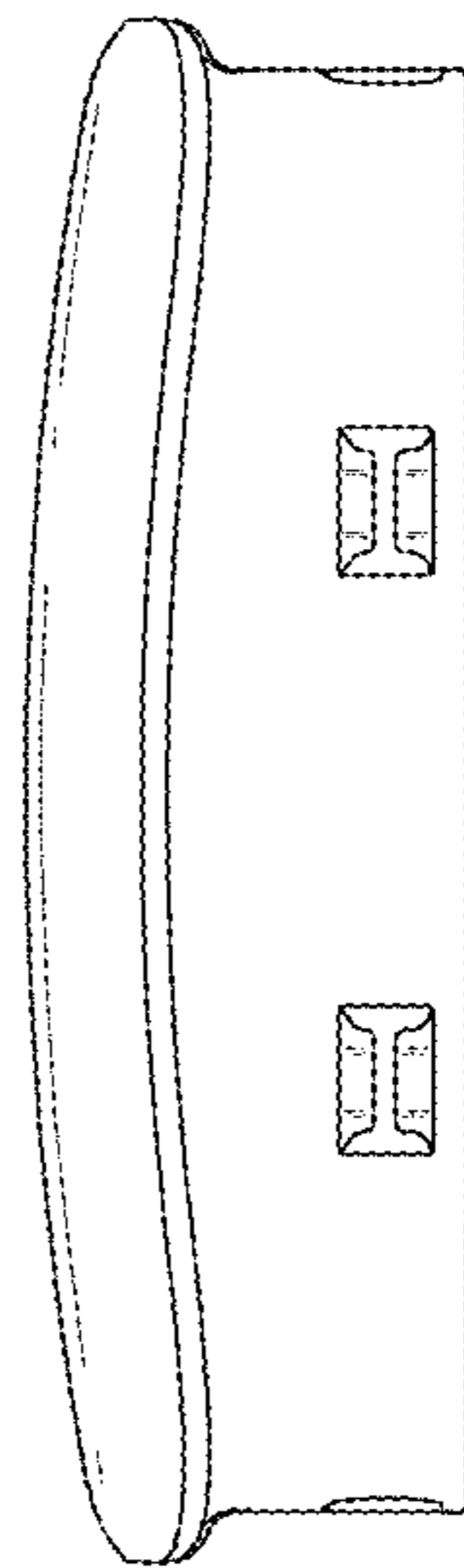




Fig. 7

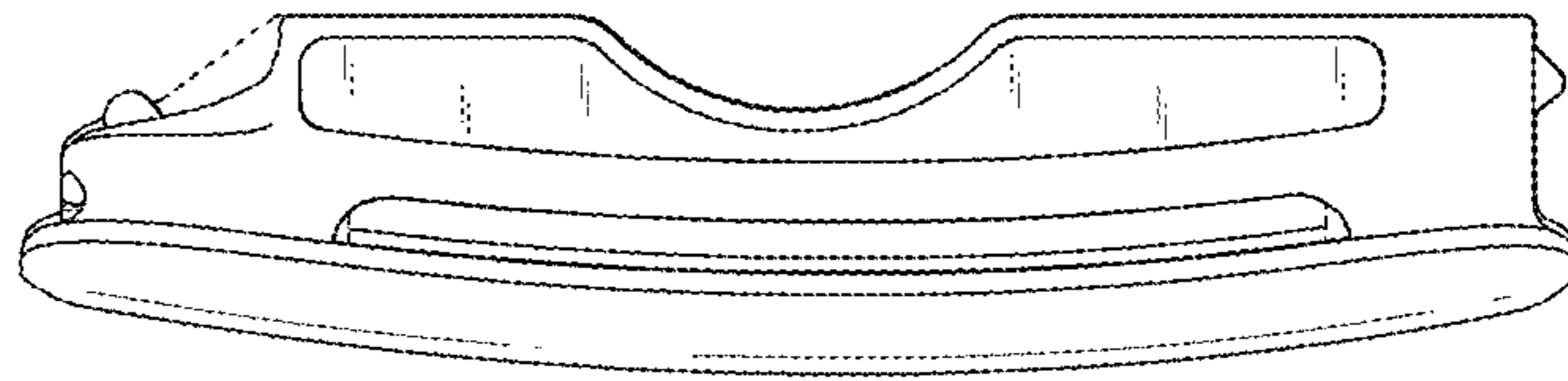


Fig. 8

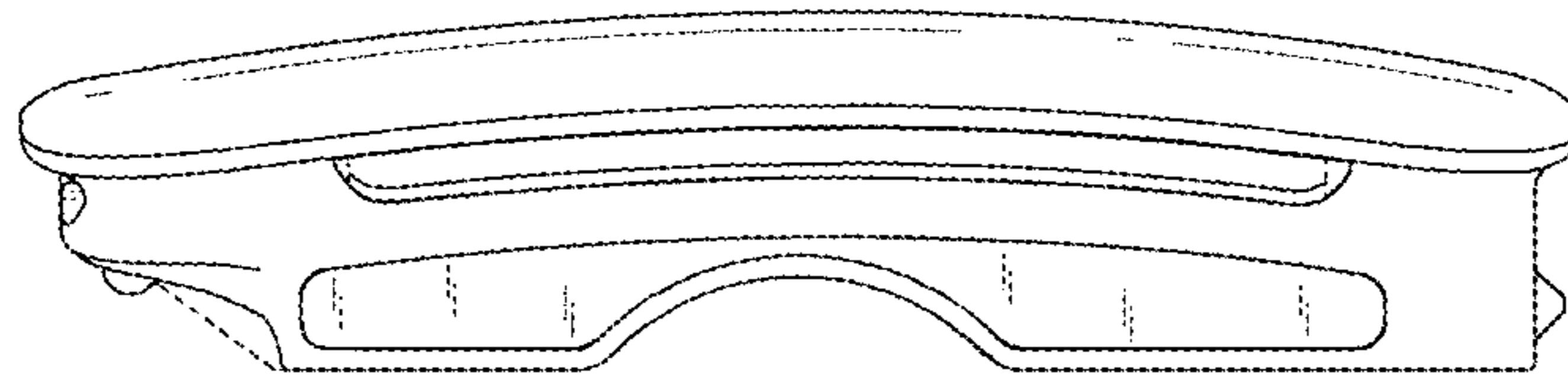


Fig. 9

