



US00D781502S

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

(10) **Patent No.: US D781,502 S**

(45) **Date of Patent: \*\* \*Mar. 14, 2017**

(54) **PROTECTIVE HELMET**

5,012,528 A 5/1991 Pernicka  
D393,933 S 4/1998 Huh  
D398,421 S \* 9/1998 Crafoord ..... D29/110  
6,032,297 A 3/2000 Barthold et al.

(Continued)

(71) Applicant: **Illinois Tool Works Inc.**, Glenview, IL  
(US)

(72) Inventors: **Nishank R. Patel**, Appleton, WI (US);  
**Eric T. Sommers**, Appleton, WI (US)

FOREIGN PATENT DOCUMENTS

(73) Assignee: **ILLINOIS TOOL WORKS INC.**,  
Glenview, IL (US)

EP 2 184 039 A1 5/2010  
EP 2 462 825 A2 6/2012

(Continued)

(\* ) Notice: This patent is subject to a terminal dis-  
claimer.

OTHER PUBLICATIONS

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

International Search Report and Written Opinion for PCT/US2015/  
065213 dated Mar. 16, 2016, 11 pages.

(Continued)

(21) Appl. No.: **29/565,465**

*Primary Examiner* — Robert Delehanty

(22) Filed: **May 20, 2016**

(74) *Attorney, Agent, or Firm* — Klintworth & Rozenblat  
IP LLC

(51) **LOC (10) Cl.** ..... **23-03**

(52) **U.S. Cl.**  
USPC ..... **D29/106**

(57) **CLAIM**

(58) **Field of Classification Search**  
USPC ..... D29/102–110, 112, 122; D2/866  
CPC .... A42B 3/18; A42B 3/22; A42B 1/06; A42B  
1/24; A42B 1/08; A62B 18/08; A62B  
18/00; A62B 18/24; A62B 18/045; A61F  
9/06; A61F 9/068; A61F 9/025  
See application file for complete search history.

We claim the ornamental design for a protective helmet, as  
shown and described.

**DESCRIPTION**

(56) **References Cited**

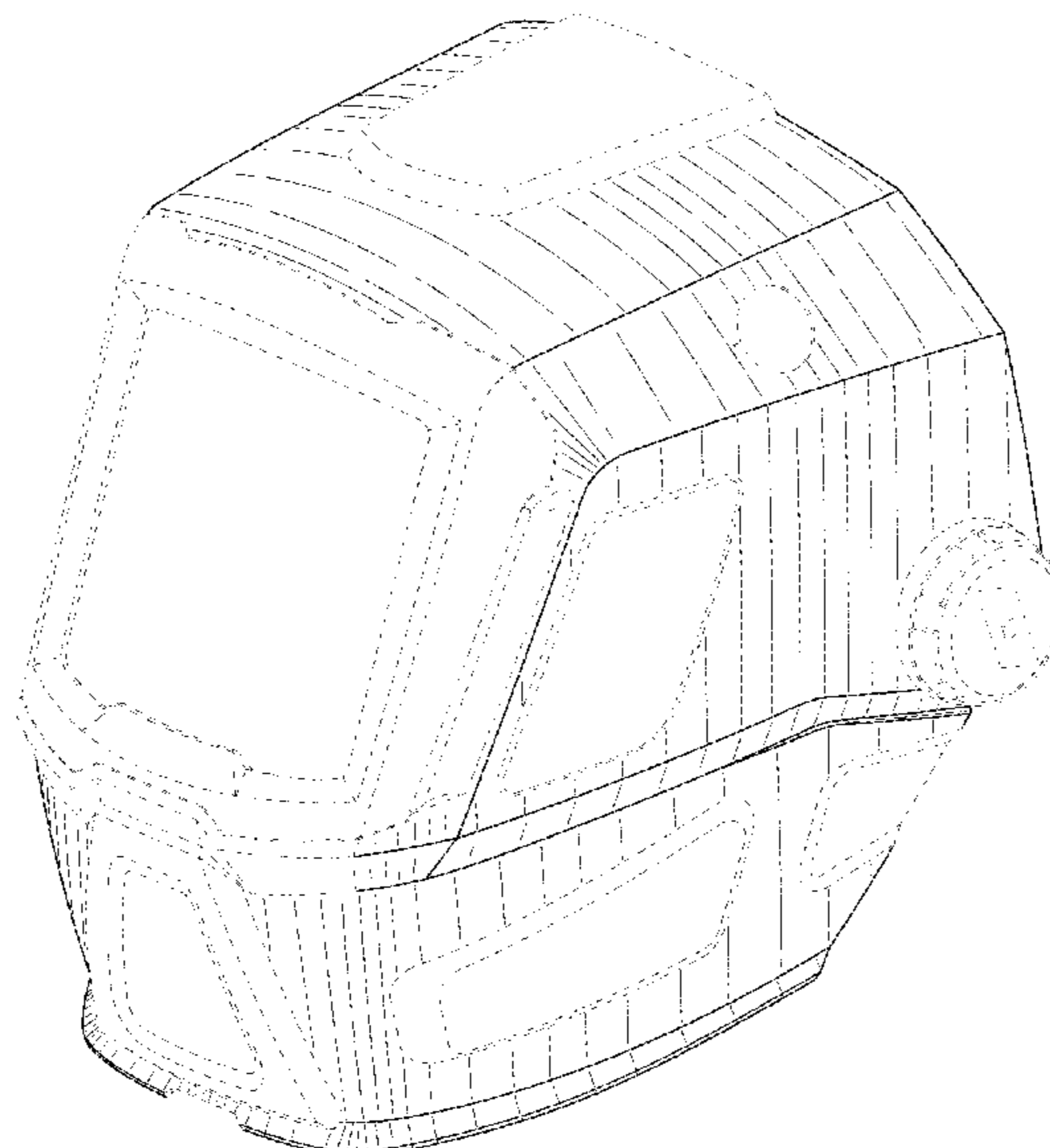
U.S. PATENT DOCUMENTS

3,413,972 A 12/1968 Depping  
3,430,263 A 3/1969 Newcomb  
4,109,320 A 8/1978 Anderson  
4,293,757 A 10/1981 Niemi  
D270,642 S 9/1983 Watts  
4,479,738 A 10/1984 Kubnick  
4,499,630 A 2/1985 Harris  
5,003,632 A 4/1991 Claude

FIG. 1 is a top, front perspective view of a protective helmet.  
FIG. 2 is a front view of the protective helmet shown in FIG.  
1.  
FIG. 3 is a left side view of the protective helmet shown in  
FIG. 1.  
FIG. 4 is a right side view of the protective helmet shown in  
FIG. 1; and,  
FIG. 5 is a top view of the protective helmet shown in FIG.  
1.

Portions of the protective helmet and any exemplary envi-  
ronment shown in broken lines are for illustrative purposes  
only and form no part of the claimed design.

**1 Claim, 5 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

6,035,451 A 3/2000 Burns et al.  
 6,154,881 A 12/2000 Lee  
 6,185,739 B1 2/2001 Verkic et al.  
 6,260,197 B1 7/2001 Hoogewind  
 6,264,392 B1 7/2001 Wise  
 6,298,498 B1 10/2001 Burns et al.  
 D467,489 S 12/2002 Rubinson  
 D489,492 S \* 5/2004 Wu ..... D29/110  
 D521,190 S \* 5/2006 Wu ..... D29/110  
 D530,185 S 10/2006 Osiecki  
 7,120,939 B1 10/2006 Howard  
 7,178,932 B1 \* 2/2007 Buckman ..... A61F 9/068  
 2/8.6  
 D557,128 S 12/2007 Sawdon  
 D584,003 S 12/2008 Juhlin  
 D589,654 S \* 3/2009 Juhlin ..... D29/122  
 7,534,005 B1 5/2009 Buckman  
 D602,639 S 10/2009 Ho  
 D635,721 S \* 4/2011 Cheng ..... D29/110  
 3,056,152 A1 11/2011 Brace  
 D654,224 S \* 2/2012 Wu ..... D29/110  
 D654,634 S \* 2/2012 Wu ..... D29/110  
 8,214,920 B1 7/2012 Edgar  
 D667,173 S 9/2012 Juhlin et al.  
 8,336,114 B1 12/2012 Lee  
 D674,150 S 1/2013 Juhlin et al.  
 D674,153 S \* 1/2013 Daniels ..... D29/122  
 8,387,162 B2 3/2013 Huh  
 8,584,265 B2 11/2013 Lilenthal et al.  
 8,627,517 B2 1/2014 Ahlgren et al.  
 8,826,464 B2 9/2014 Wu  
 8,990,963 B2 3/2015 Matthews  
 D735,949 S 8/2015 Dion  
 D735,951 S 8/2015 Birath  
 9,155,923 B2 10/2015 Proctor  
 D742,596 S \* 11/2015 Peng ..... D29/102  
 D743,629 S 11/2015 Peng  
 D747,556 S \* 1/2016 Fujita ..... D29/107  
 D749,796 S 2/2016 Barmore  
 2003/0135911 A1 7/2003 Wang-Lee  
 2006/0080761 A1 4/2006 Huh  
 2007/0220649 A1 9/2007 Huh

2008/0060102 A1 3/2008 Matthews  
 2009/0210989 A1 8/2009 Becker et al.  
 2010/0229274 A1 9/2010 Ahlgren  
 2011/0101890 A1 5/2011 Robinson  
 2011/0219506 A1 9/2011 Uttrachi  
 2011/0265790 A1 11/2011 Walker et al.  
 2013/0152919 A1 6/2013 Billingsley et al.  
 2015/0143669 A1 5/2015 Pereira et al.  
 2016/0081856 A1 3/2016 Hofer-Kraner

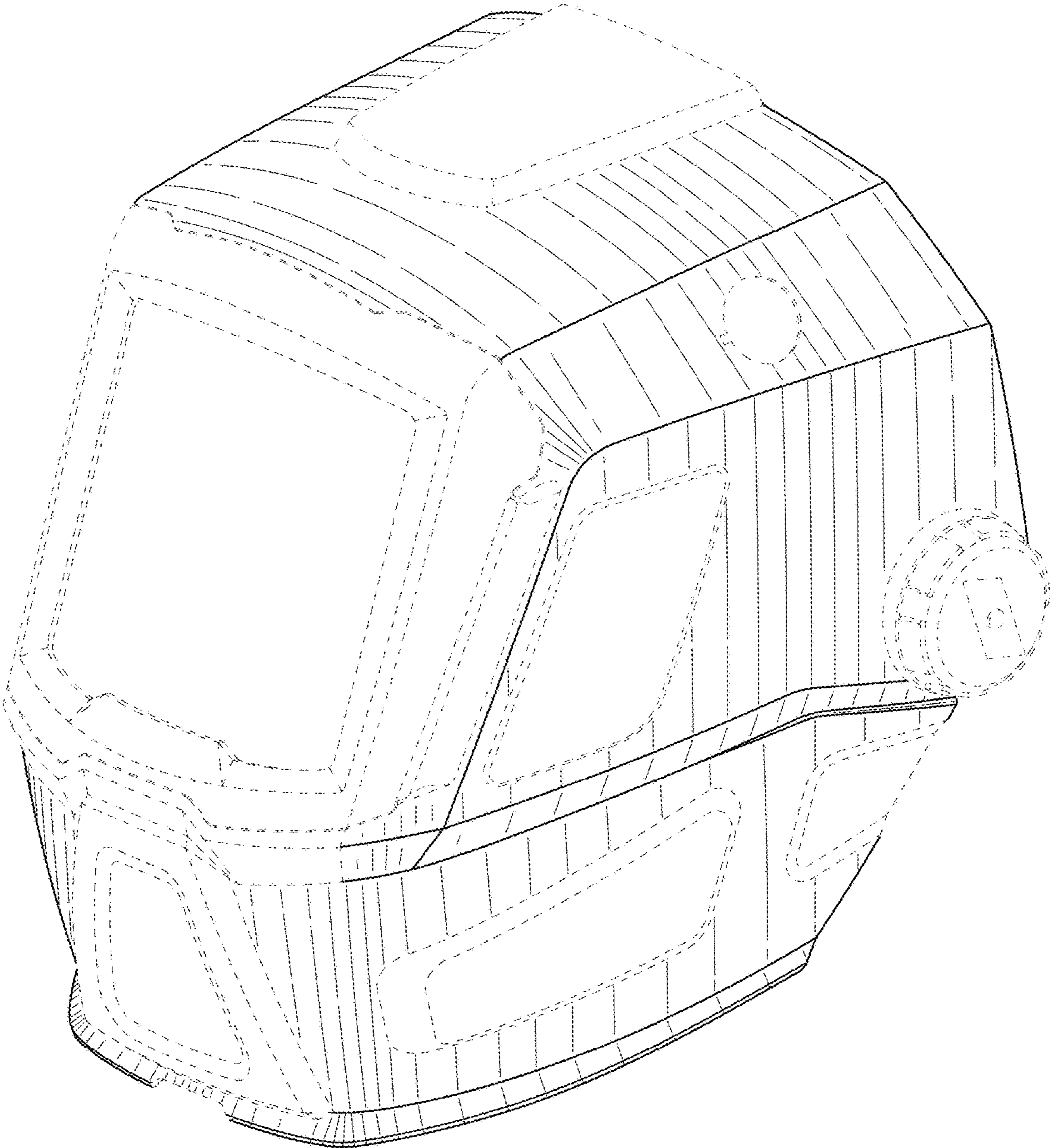
FOREIGN PATENT DOCUMENTS

EP 2 462 826 A2 6/2012  
 WO 2009/048829 A1 4/2009  
 WO 2009/048836 A1 4/2009

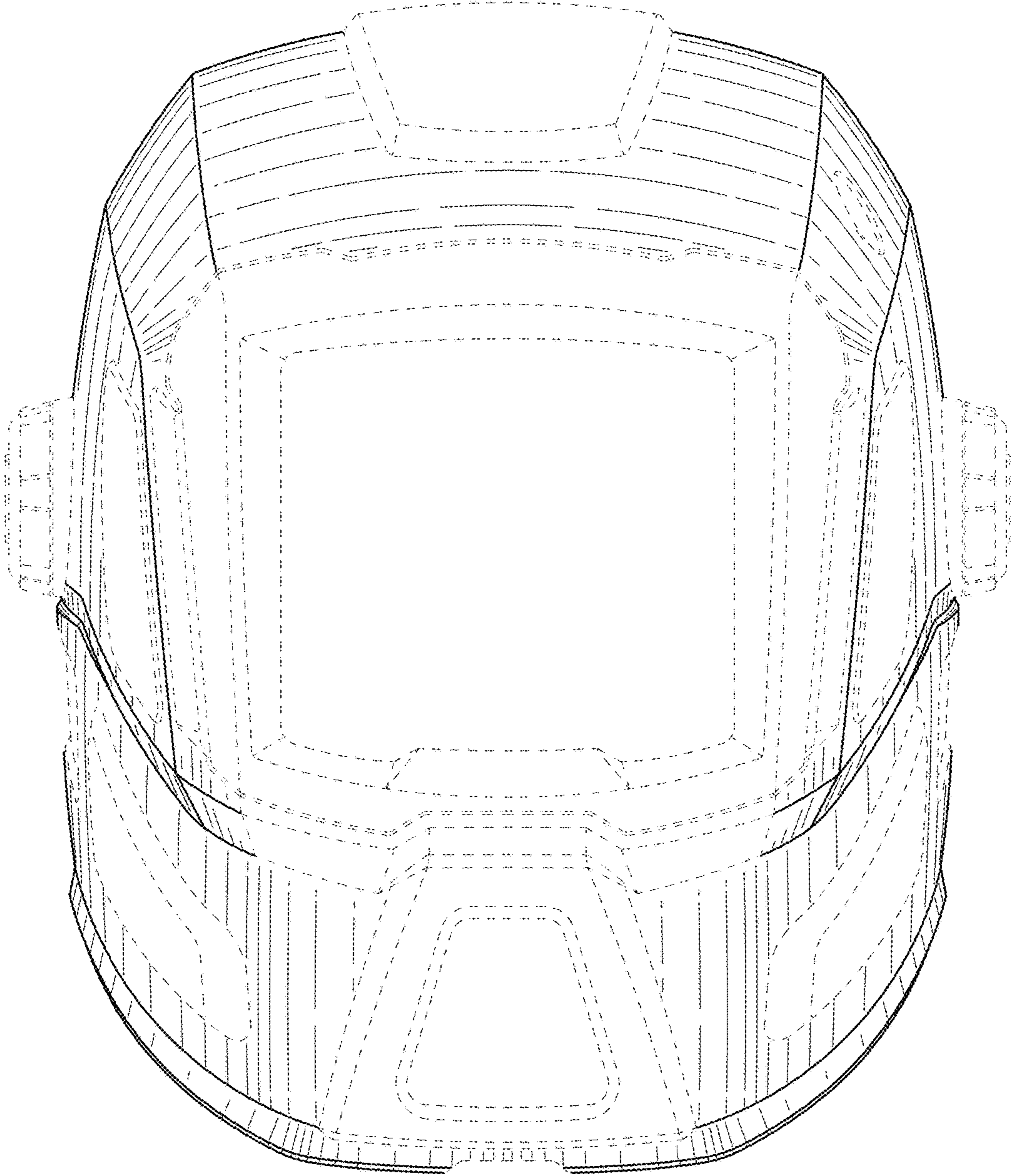
OTHER PUBLICATIONS

Miller 9400i welding helmet with an integrated grind shield, published at least as early as Jun. 16, 2014, 1 page.  
 Speedglas 9100FX welding helmet with an integrated grind shield, published at least as early as Jun. 16, 2014, 1 page.  
 Speedglas 9002X Flexview welding helmet with an integrated grind shield, published at least as early as Jun. 16, 2014, 1 page.  
 Miller 9400i PAPR welding helmet with powered air purifying system, belt mounted blower with breathing tube connecting to manifold inside head assembly, published at least as early as Jun. 16, 2014, 1 page.  
 Speedglas 9100X Air Adflo welding helmet with airflow delivery mechanism, published at least as early as Jun. 16, 2014, 1 page.  
 Speedglas 9100FX Air Adflo welding helmet with airflow delivery mechanism, published at least as early as Jun. 16, 2014, 1 page.  
 Miller headgear for a welding helmet, published at least as early as Jun. 16, 2014, 1 page.  
 Speedglas headgear for a welding helmet, published at least as early as Jun. 16, 2014, 1 page.  
 International Search Report and Written Opinion for PCT/US2015/033054 dated Aug. 31, 2015, 12 pages.  
 International Search Report and Written Opinion for PCT/US2015/035714 dated Oct. 8, 2015, 11 pages.  
 International Search Report and Written Opinion for PCT/US2015/035713 dated Oct. 27, 2015, 17 pages.

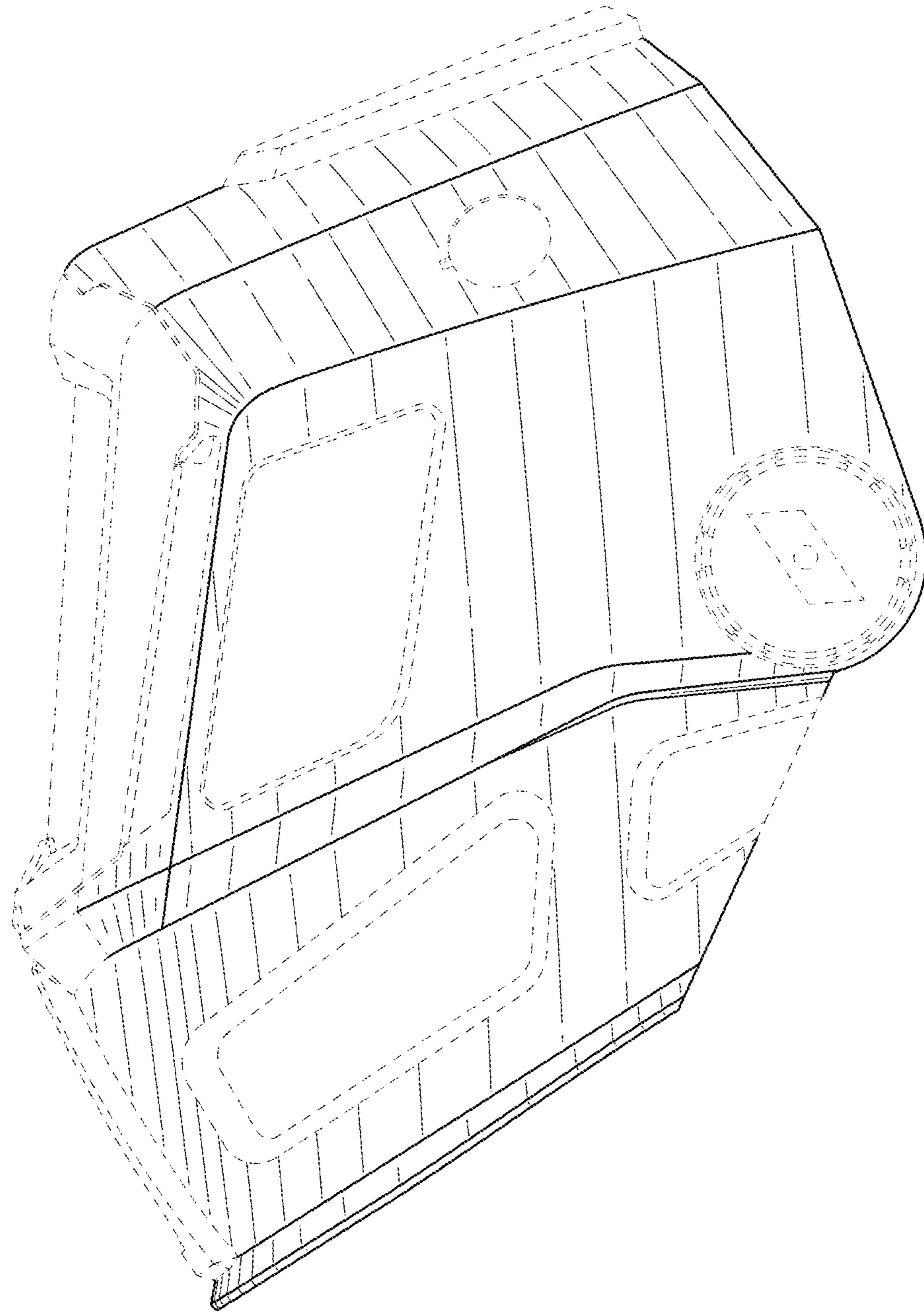
\* cited by examiner



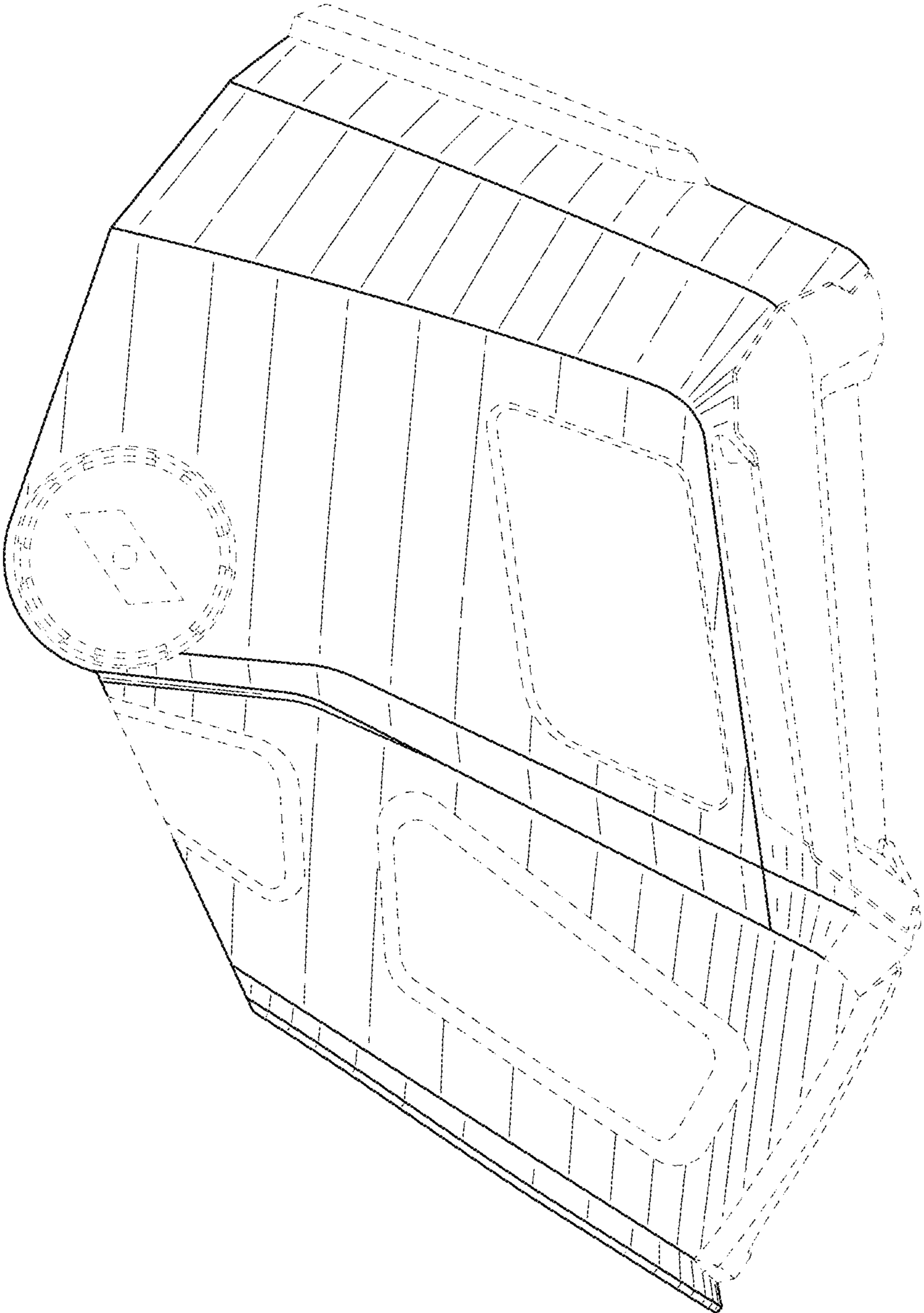
**FIG. 1**



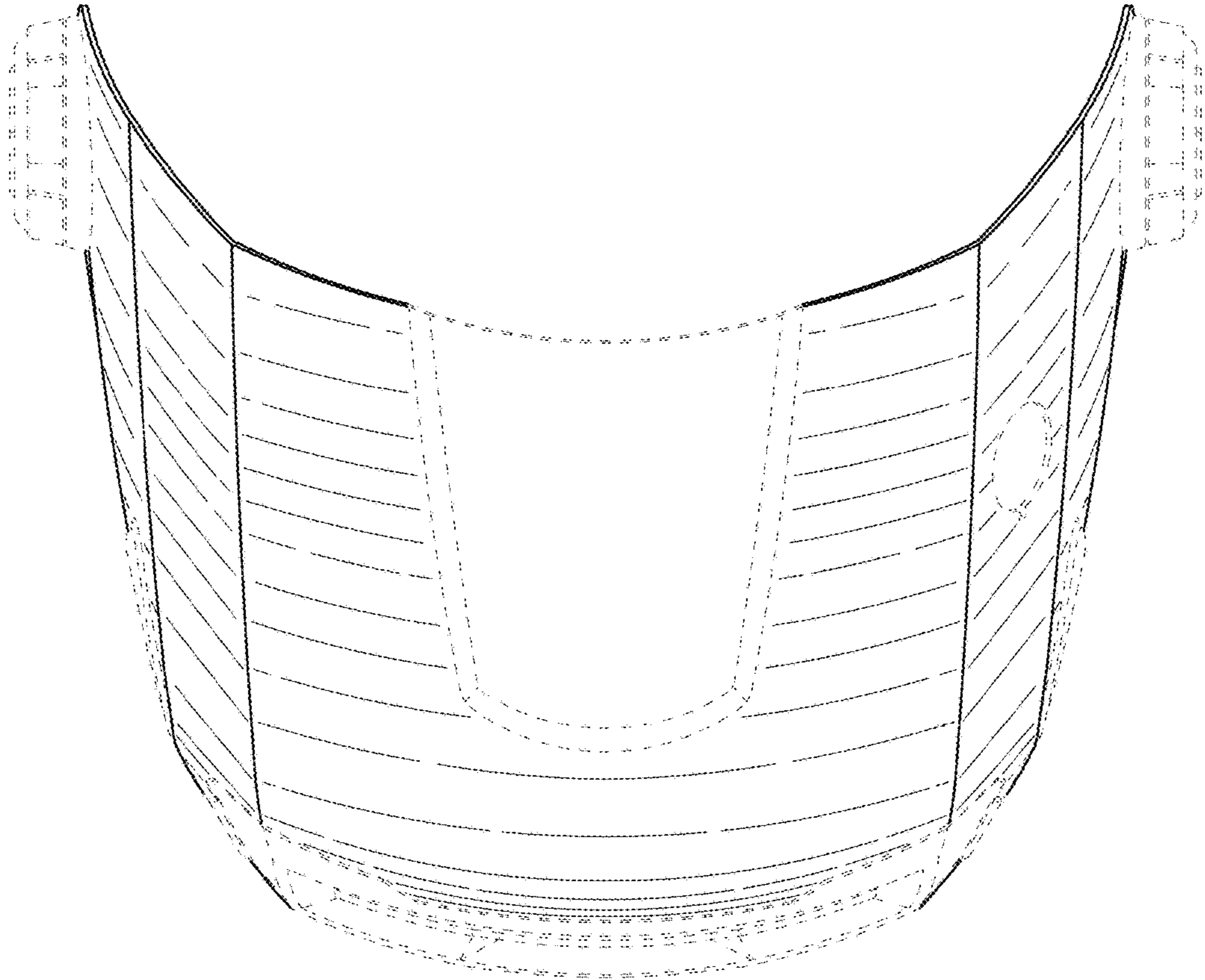
**FIG. 2**



**FIG. 3**



**FIG. 4**



**FIG. 5**