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

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(54) **HEEL SHROUD**

(71) Applicant: **Caterpillar Inc.**, Peoria, IL (US)

(72) Inventors: **Douglas Serrurier**, Peoria, IL (US);  
**Arun Venugopal**, Chennai (IN)

(73) Assignee: **Caterpillar Inc.**, Peoria, IL (US)

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

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**Related U.S. Application Data**

(63) Continuation of application No. 29/508,614, filed on Nov. 7, 2014, now Pat. No. Des. 751,610.

(51) **LOC (10) Cl.** ..... **15-04**

(52) **U.S. Cl.**  
USPC ..... **D15/28**

(58) **Field of Classification Search**  
USPC ..... D15/11, 21, 28, 29, 32  
CPC ... E02F 9/2883; E02F 3/76; E02F 3/28; E02F  
3/3417-3/358  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

- 5,241,765 A 9/1993 Jones et al.
- 5,564,508 A 10/1996 Renski
- D378,006 S \* 2/1997 Clendenning ..... D32/54
- D381,484 S \* 7/1997 Clendenning ..... D32/54
- 5,937,549 A 8/1999 Bender et al.
- 6,194,080 B1 2/2001 Stickling
- 6,240,663 B1 6/2001 Robinson
- 6,393,739 B1 5/2002 Shamblin et al.
- 7,266,914 B2 \* 9/2007 Grant ..... E02F 3/40  
37/444
- 7,275,338 B2 \* 10/2007 LaHood ..... E02F 9/2883  
37/449
- D567,825 S \* 4/2008 Clendenning ..... D15/29

- D567,826 S \* 4/2008 Clendenning ..... D15/29
- D567,827 S \* 4/2008 Clendenning ..... D15/29
- D576,644 S \* 9/2008 Clendenning ..... D15/29

(Continued)

**FOREIGN PATENT DOCUMENTS**

- AU 143850 5/2001
- EM 000655535-001 1/2007

(Continued)

**OTHER PUBLICATIONS**

<http://www.mtg.es/en/disenio.php?did=174>, available at least as early as Dec. 25, 2009.

(Continued)

*Primary Examiner* — Mitchell Siegel

(74) *Attorney, Agent, or Firm* — Saidman Design Law Group

(57) **CLAIM**

The ornamental design for a heel shroud, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of a heel shroud showing our new design;

FIG. 2 is another perspective view thereof;

FIG. 3 is 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;

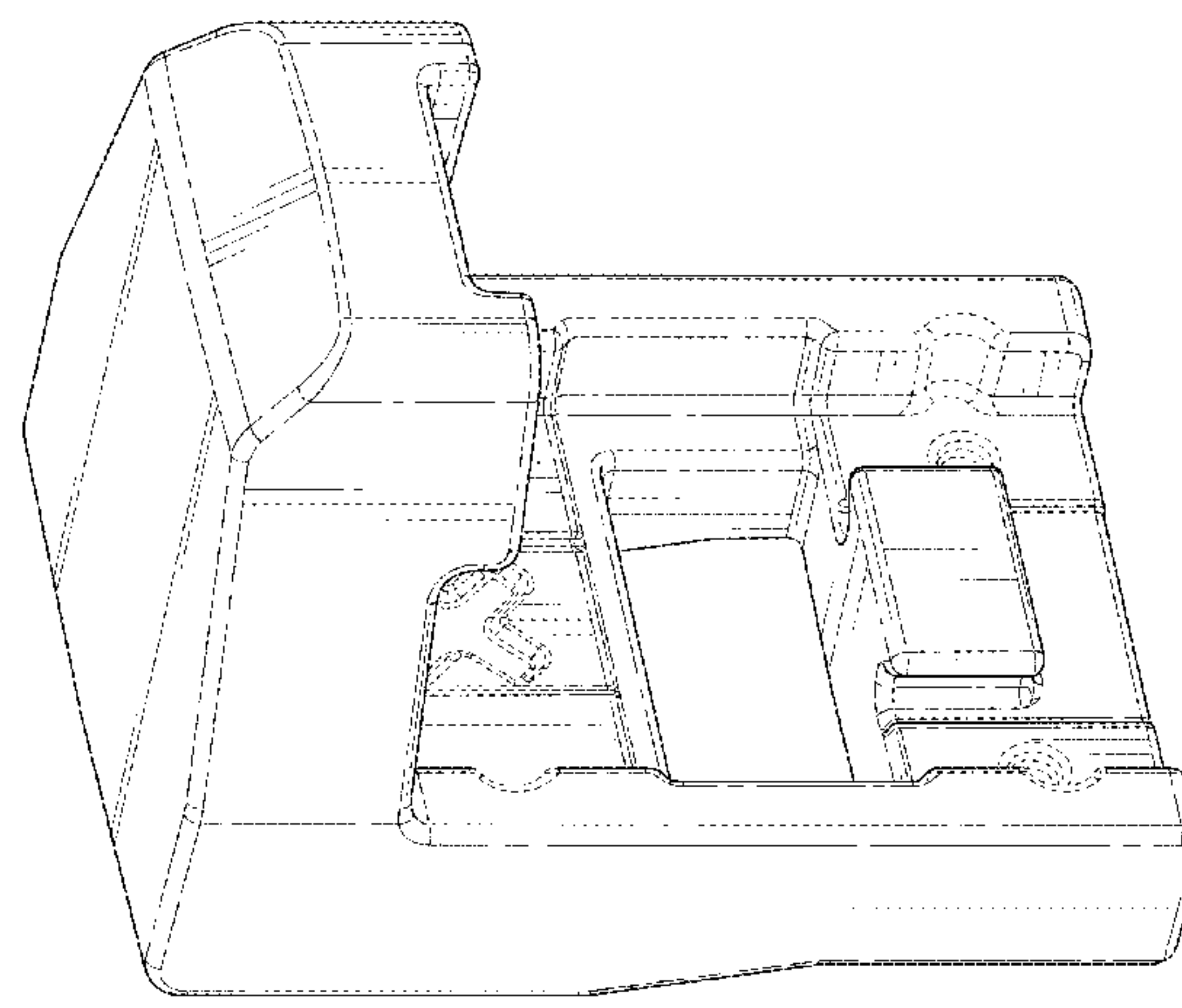
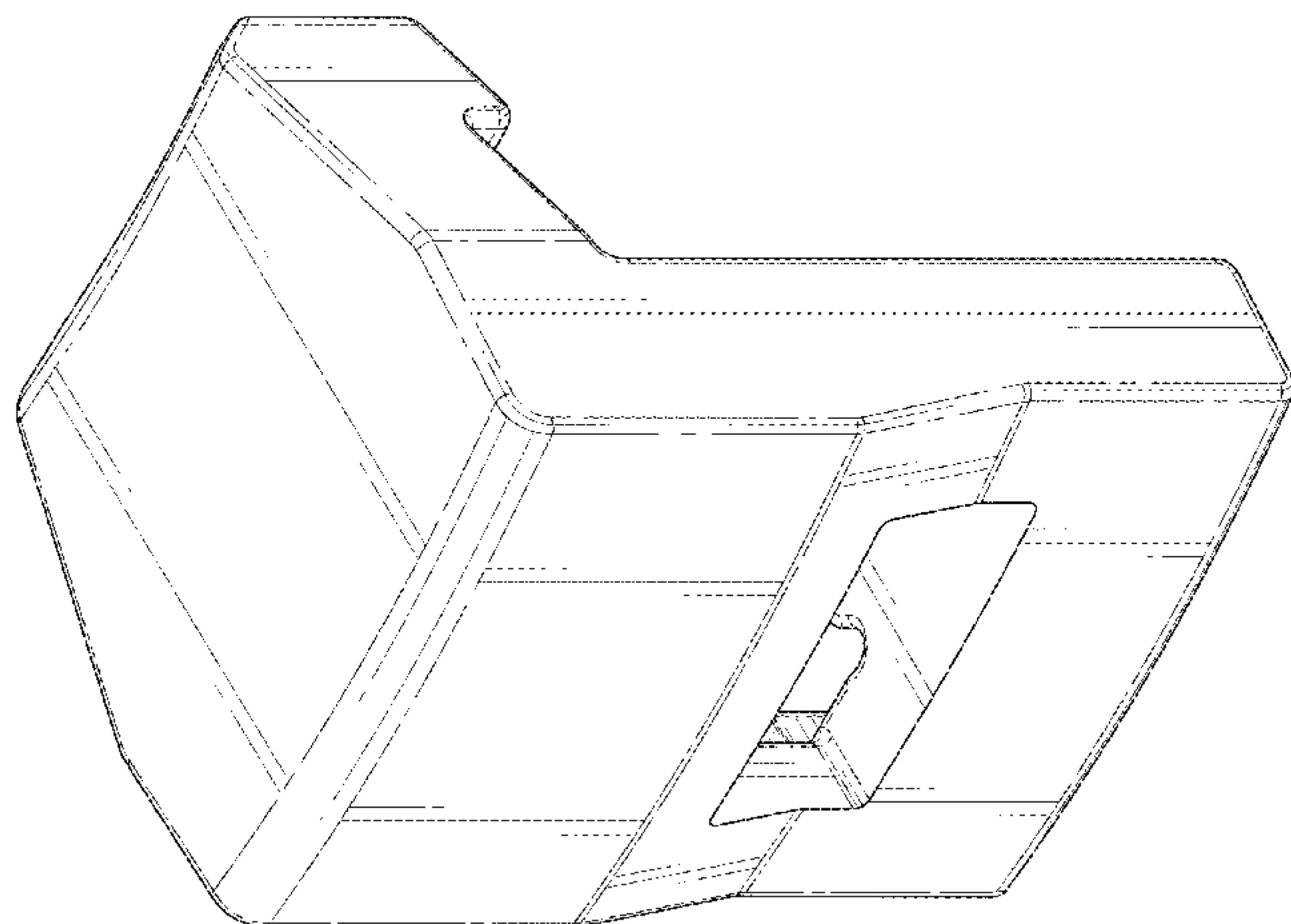
FIG. 7 is a top view thereof; and,

FIG. 8 is a bottom view thereof.

The uniform dashed broken lines illustrate structure or features that form no part of the claimed design.

The drawings include surface shading that represents contour and not surface ornamentation.

**1 Claim, 8 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

D643,049	S *	8/2011	Nickels .....	D15/28
8,356,432	B2	1/2013	Carpenter	
D676,066	S *	2/2013	Attwood .....	D15/28
D676,067	S *	2/2013	Attwood .....	D15/28
D676,465	S *	2/2013	Attwood .....	D15/28
D700,632	S *	3/2014	Luyendijk .....	D15/28
D726,775	S *	4/2015	Ley .....	D15/28
D726,777	S *	4/2015	Ley .....	D15/28
D751,610	S *	3/2016	Serrurier .....	D15/28
2004/0216335	A1	11/2004	Jones	
2008/0092413	A1	4/2008	McClanahan et al.	
2013/0160335	A1 *	6/2013	Maher .....	E02F 9/285 37/453
2014/0173949	A1	6/2014	Karlsson et al.	

FOREIGN PATENT DOCUMENTS

EM	002281048-0026	7/2013
WO	WO 2011/156834	12/2011
WO	WO2012/159155	11/2012

OTHER PUBLICATIONS

<http://www.getsolutions.no/en/produkter/heel-shrouds/>, available at least as early as Feb. 1, 2014.

[http://hensleyind.com/parts\\_book/wear\\_protection/pdf/Misc\\_Wear\\_Products/Weld-on\\_Bucket\\_Heel\\_Shrouds.pdf](http://hensleyind.com/parts_book/wear_protection/pdf/Misc_Wear_Products/Weld-on_Bucket_Heel_Shrouds.pdf), available at least as early as Nov. 21, 2011.

<http://www.futuraweartech.com/futura-bucket-product-range/>, available at least as early as Aug. 25, 2014.

Sandvik, Quick and Safe Heel Shroud Change Out, [www.quarrymagazine.com/article.aspx?id=3813&h=Quick-and-safe-heel-shroud-change-out](http://www.quarrymagazine.com/article.aspx?id=3813&h=Quick-and-safe-heel-shroud-change-out), available as early as Jun. 10, 2014.

BYG, BYG Mining Products, available as early as Jul. 9, 2014.

U.S. Appl. No. 62/076,969, filed Nov. 7, 2014, entitled "Wear Member for Tool." (unpublished).

U.S. Appl. No. 62/076,966, filed Nov. 7, 2014, entitled "Mounting Base for Wear Member." (unpublished).

\* cited by examiner

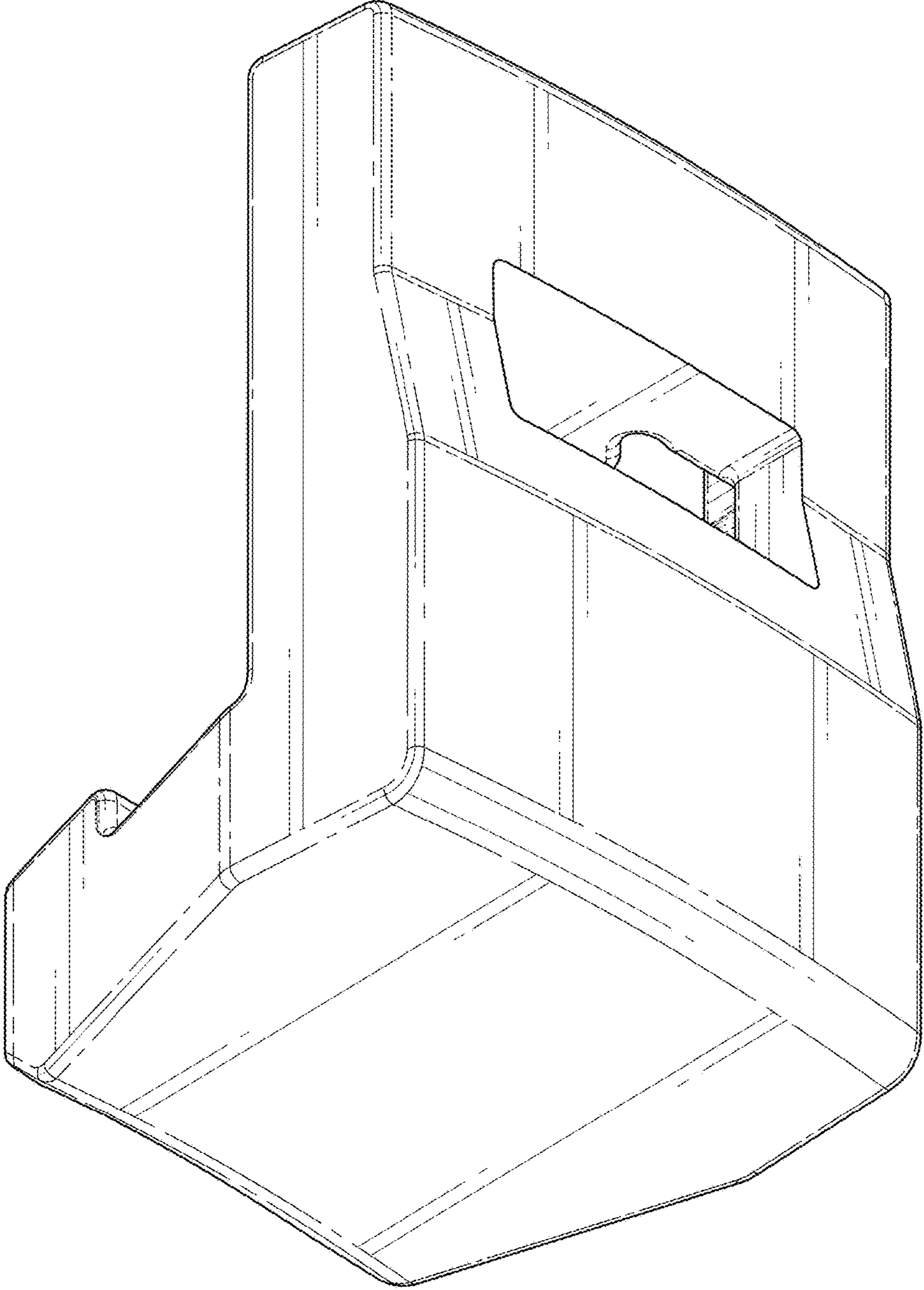


FIG. 1

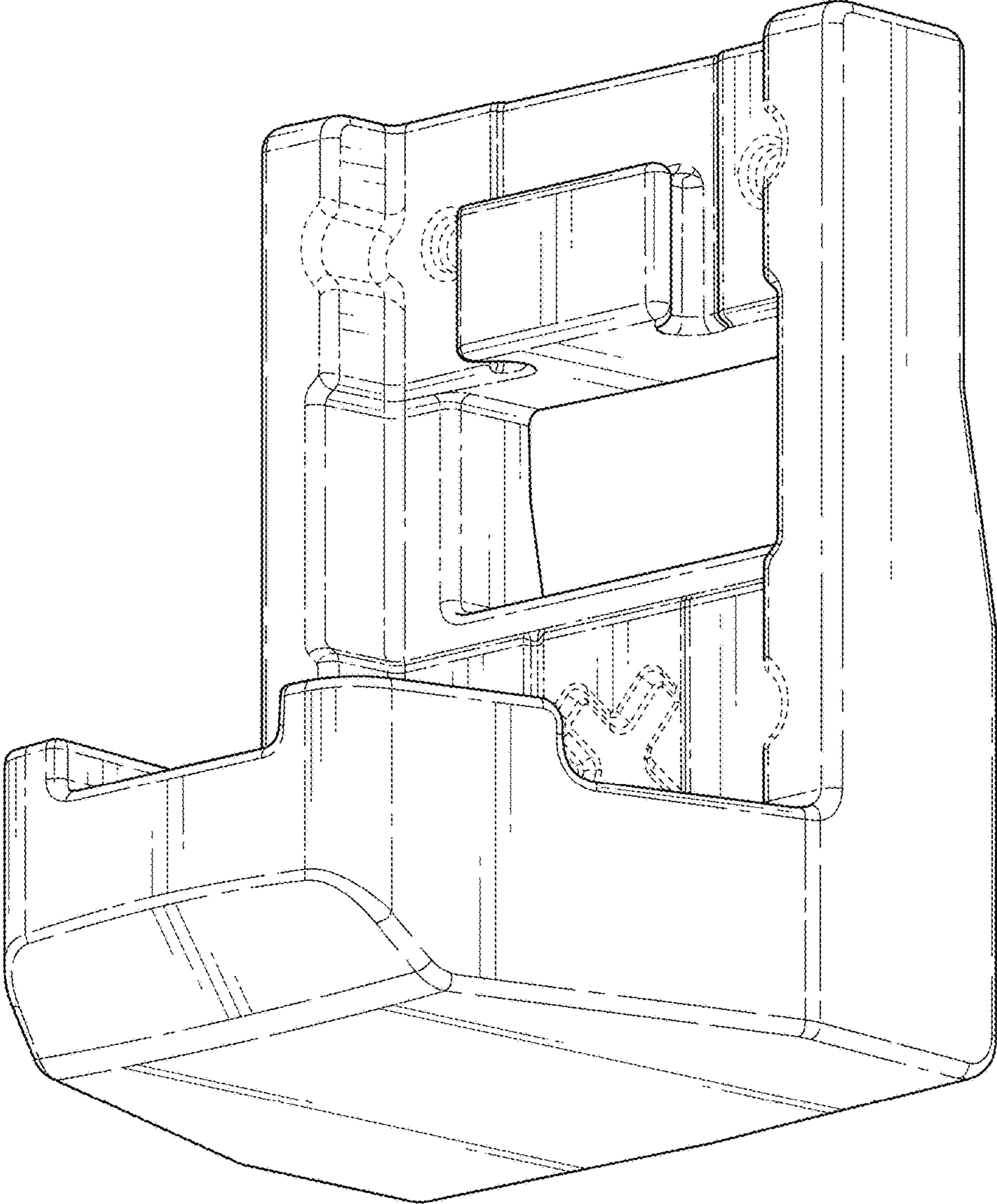


FIG. 2



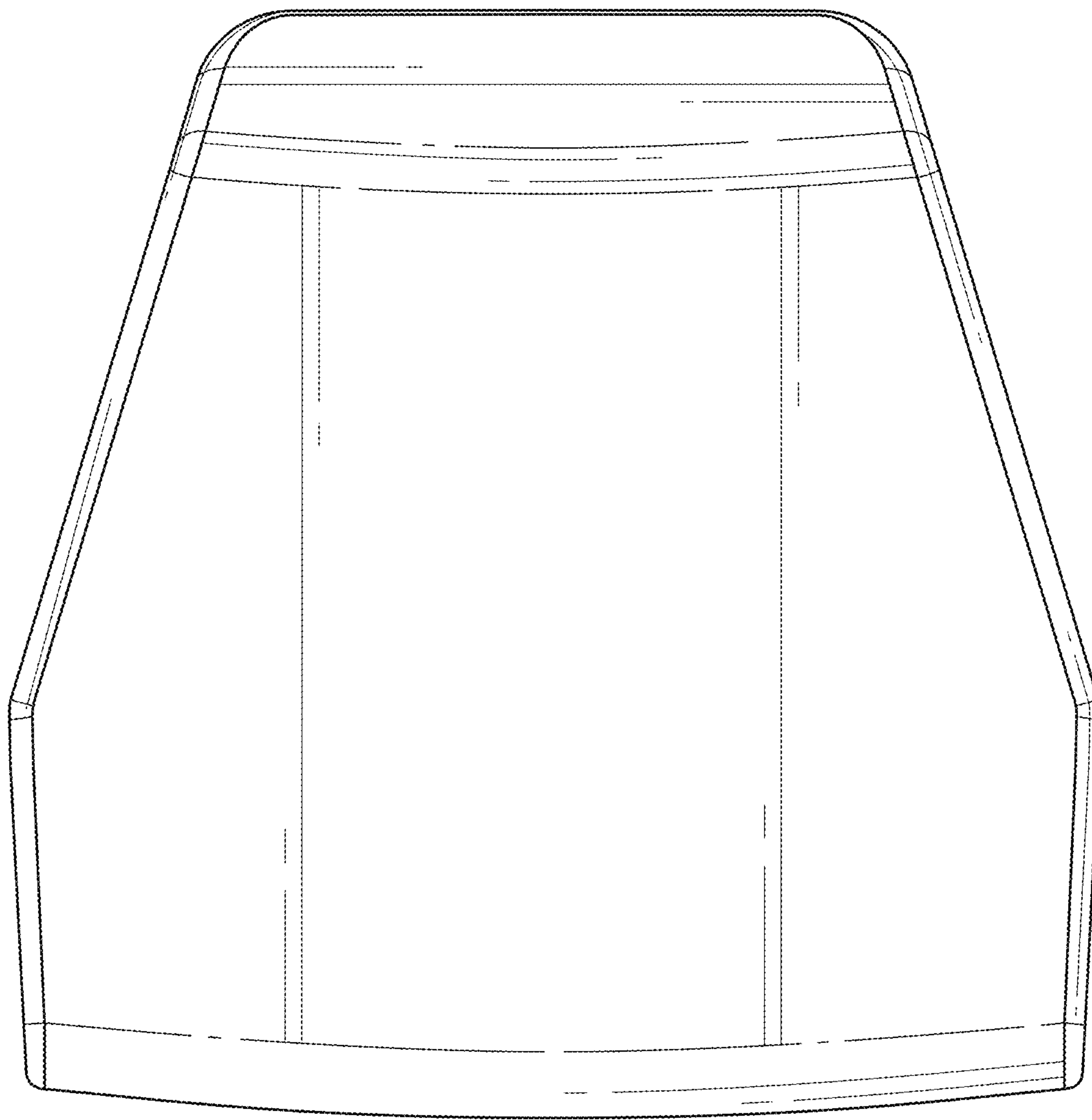


FIG. 3

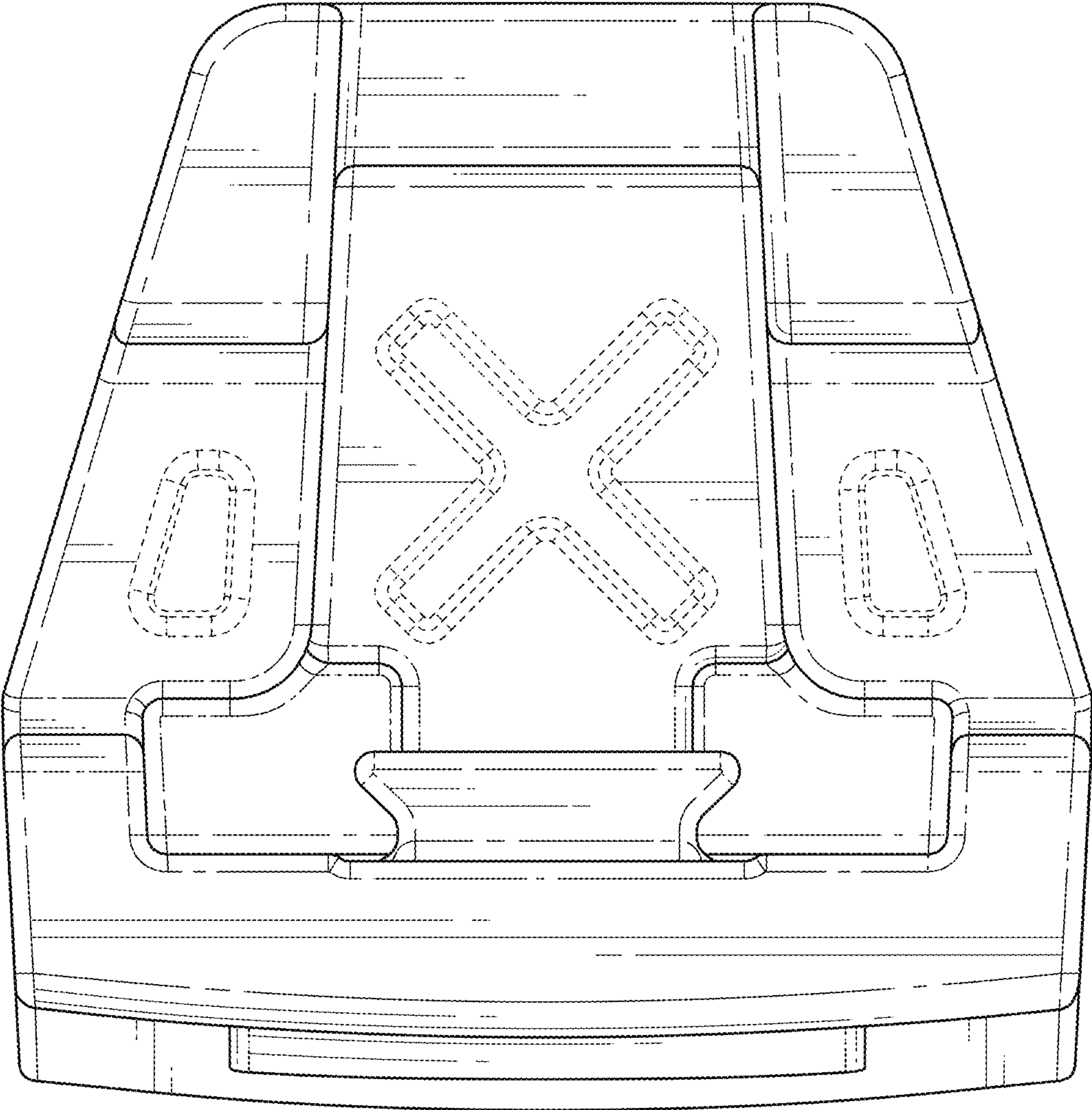


FIG. 4

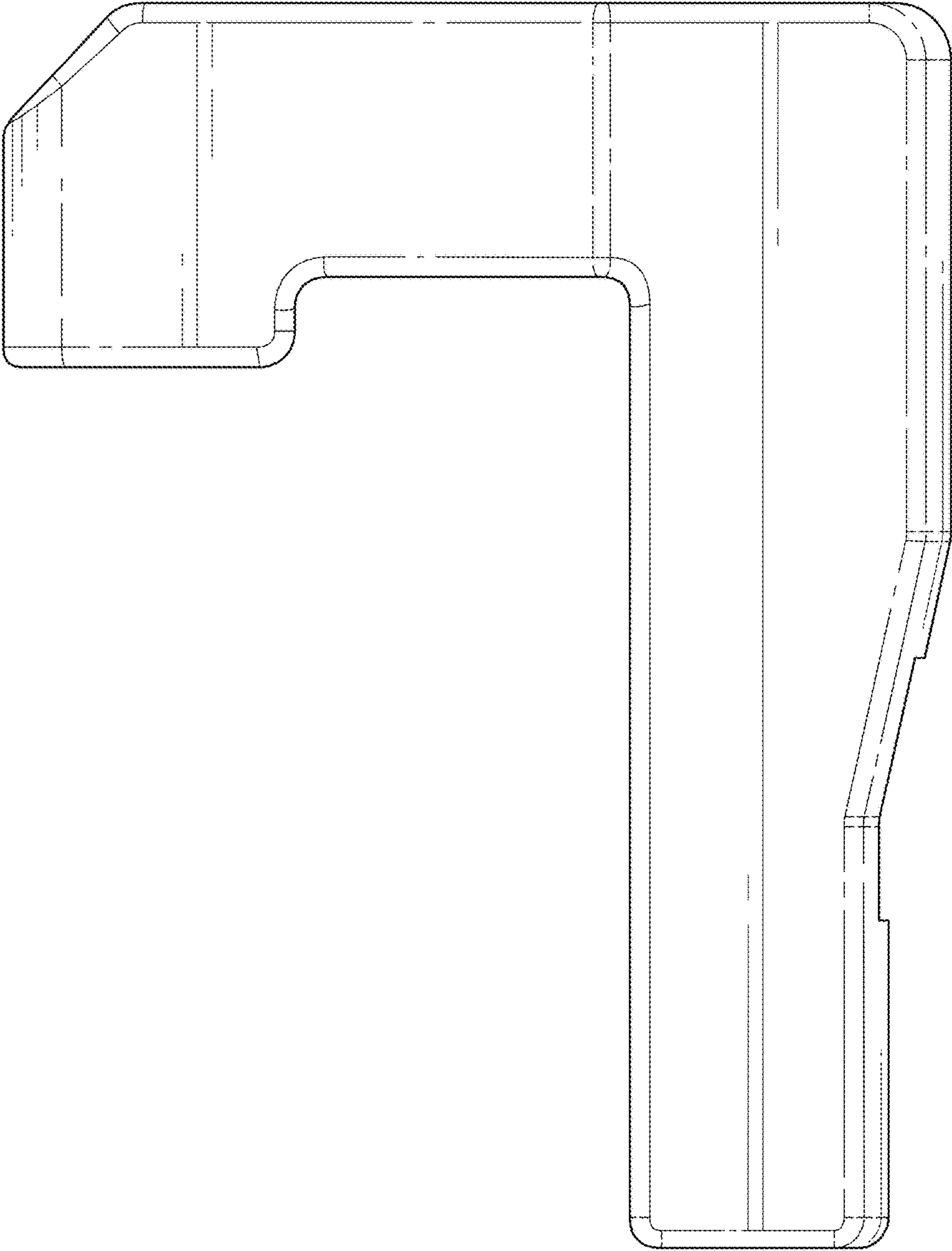


FIG. 5

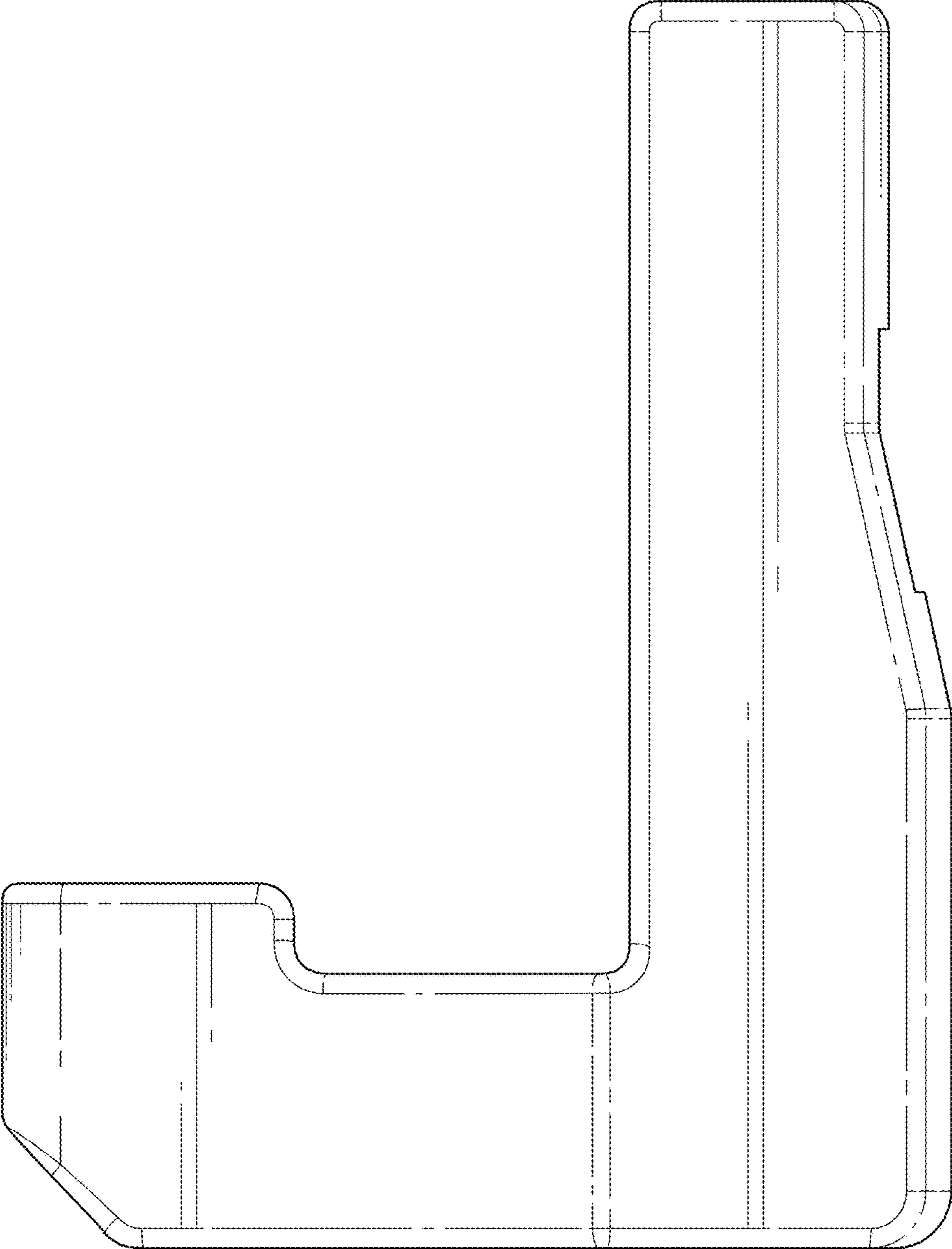


FIG. 6



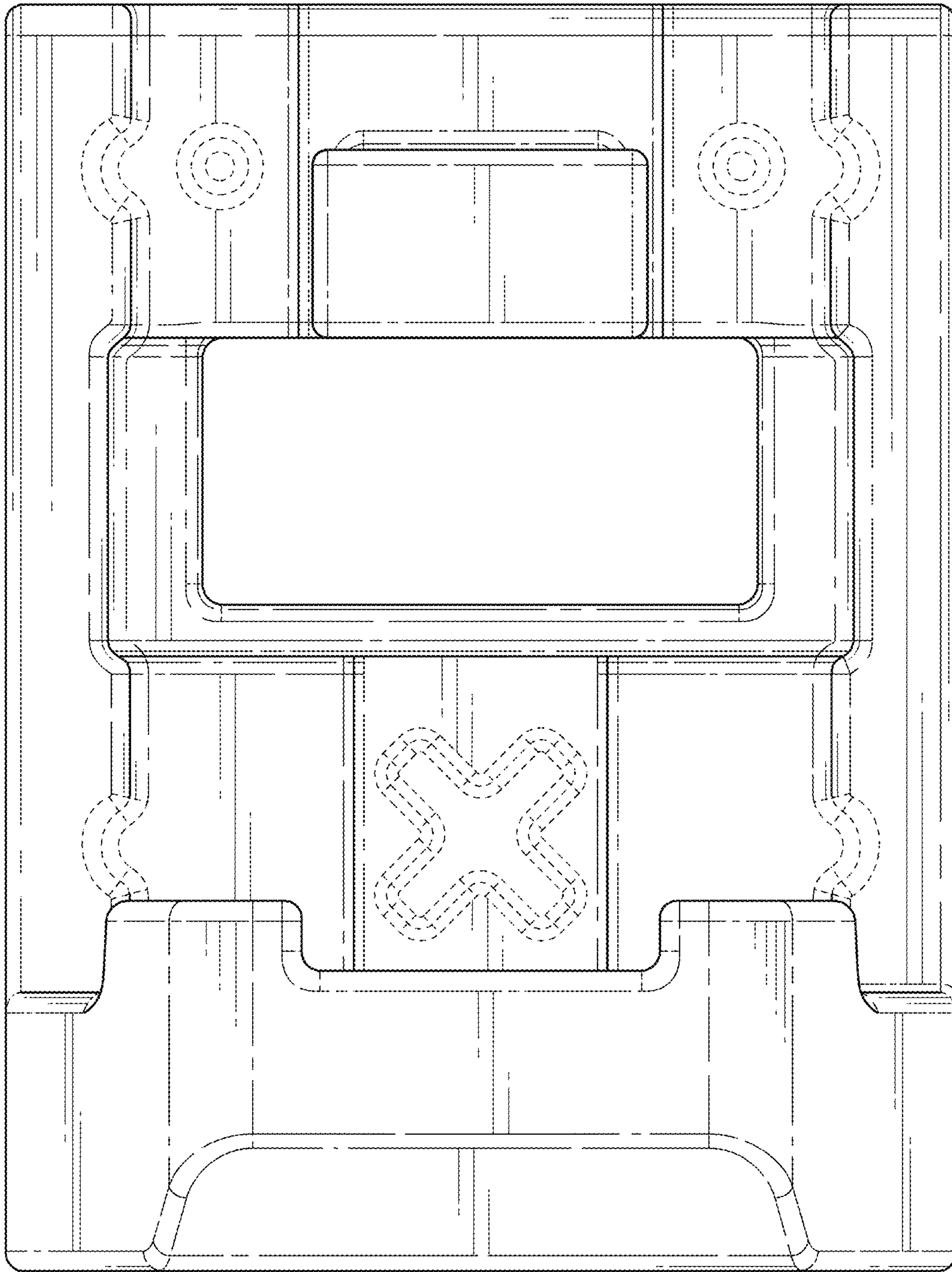


FIG. 7

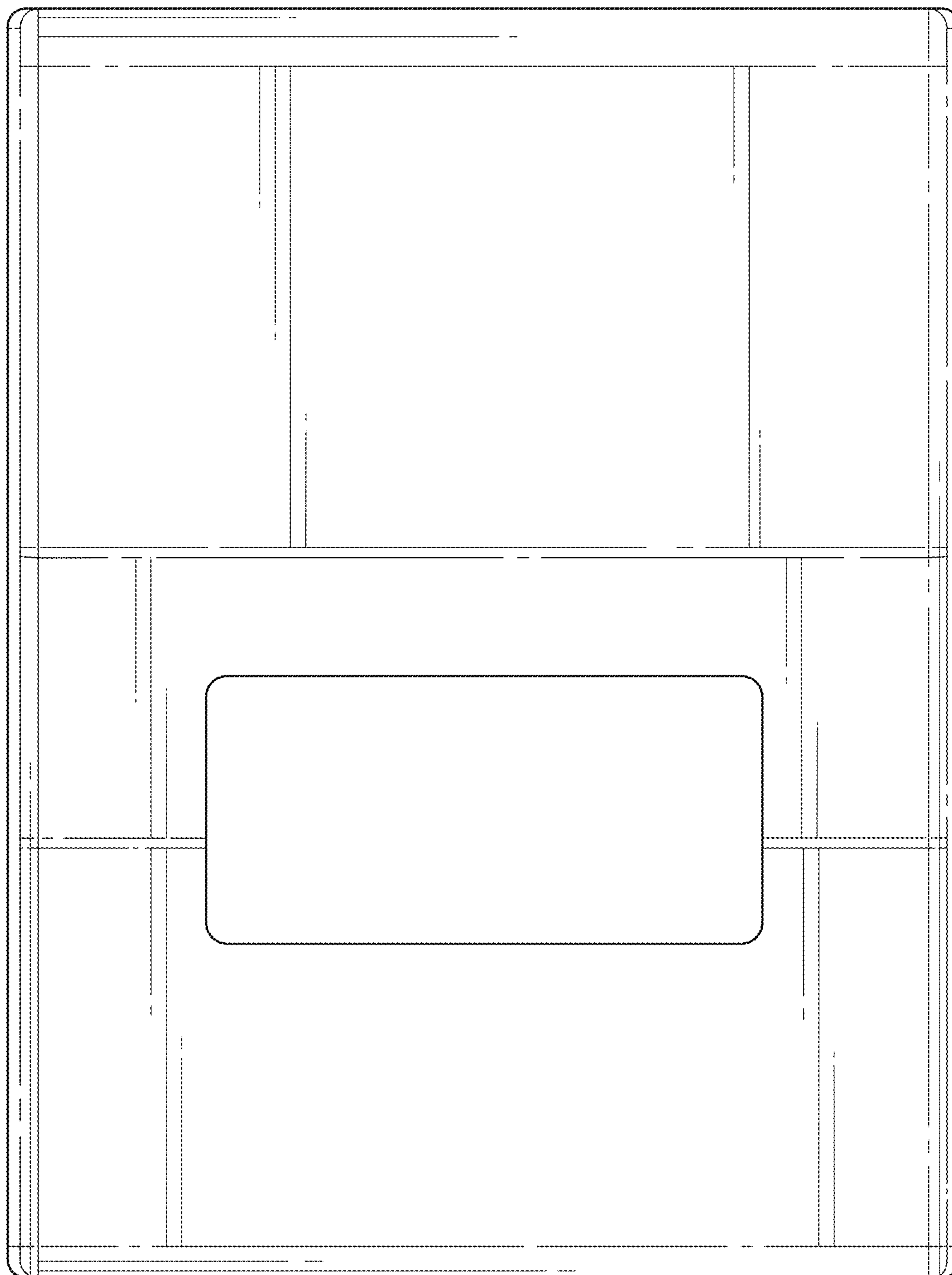


FIG. 8