



US00D648686S

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

(10) **Patent No.:** **US D648,686 S**

(45) **Date of Patent:** **\*\* Nov. 15, 2011**

(54) **LIGHT EMITTING DIODE (LED) PACKAGE**

(75) Inventors: **Christopher P. Hussell**, Cary, NC (US);  
**Shuying Huang**, Apex, NC (US)

(73) Assignee: **Cree, Inc.**, Durham, NC (US)

(\*\*) Term: **14 Years**

(21) Appl. No.: **29/360,791**

(22) Filed: **Apr. 30, 2010**

(51) **LOC (9) Cl.** ..... **13-03**

(52) **U.S. Cl.** ..... **D13/180**

(58) **Field of Classification Search** ..... D13/180;  
D26/2; 257/79, 80, 81, 88, 89, 95, 98, 99,  
257/100, E33.058; 313/483, 498, 500; 362/555,  
362/800

See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,679,118	A	7/1987	Johnson et al.	
6,610,563	B1	8/2003	Waitl	
6,943,433	B2	9/2005	Kamada	
D514,073	S *	1/2006	Suenaga	D13/180
7,081,661	B2 *	7/2006	Takehara et al.	257/433
7,224,047	B2	5/2007	Carberry et al.	
7,244,965	B2	7/2007	Andrews et al.	
7,249,790	B2	7/2007	Condie et al.	
D566,055	S *	4/2008	Kim	D13/180
D573,113	S	7/2008	Bando	
D573,114	S	7/2008	Min et al.	
7,400,049	B2	7/2008	Shim	
7,432,589	B2	10/2008	Yamamoto et al.	
D580,375	S	11/2008	Yen	
D580,381	S	11/2008	Bando	
D580,891	S *	11/2008	Sung et al.	D13/180
7,456,499	B2	11/2008	Loh	
7,462,870	B2	12/2008	Nakashima	
D584,699	S	1/2009	Bando	
D594,827	S	6/2009	Loh et al.	
D595,675	S *	7/2009	Wang et al.	D13/180
7,564,180	B2	7/2009	Brandes	
D597,971	S *	8/2009	Kobayakawa et al.	D13/180

D598,400 S 8/2009 Bando  
D614,592 S 4/2010 Hussell et al.  
D615,504 S 5/2010 Keller et al.  
7,719,024 B2 5/2010 Bando

(Continued)

**FOREIGN PATENT DOCUMENTS**

CN 200930286397.5 10/2010

(Continued)

**OTHER PUBLICATIONS**

Description Model No. NS6G083 issued by Nichia Corporation—at least as early as Aug. 31, 2007.

(Continued)

*Primary Examiner* — Selina Sikder

(74) *Attorney, Agent, or Firm* — Jenkins, Wilson, Taylor & Hunt, P.A.

(57) **CLAIM**

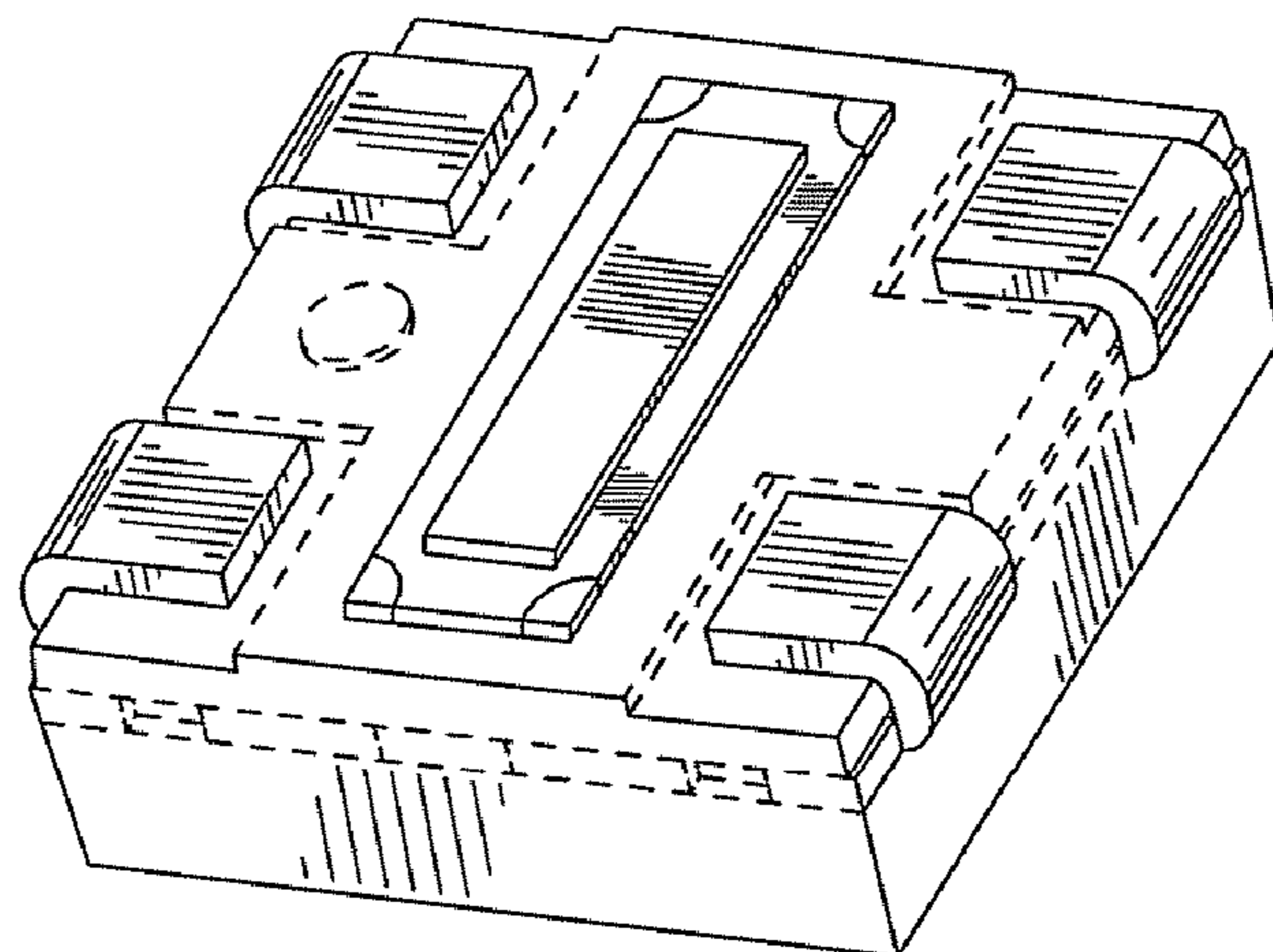
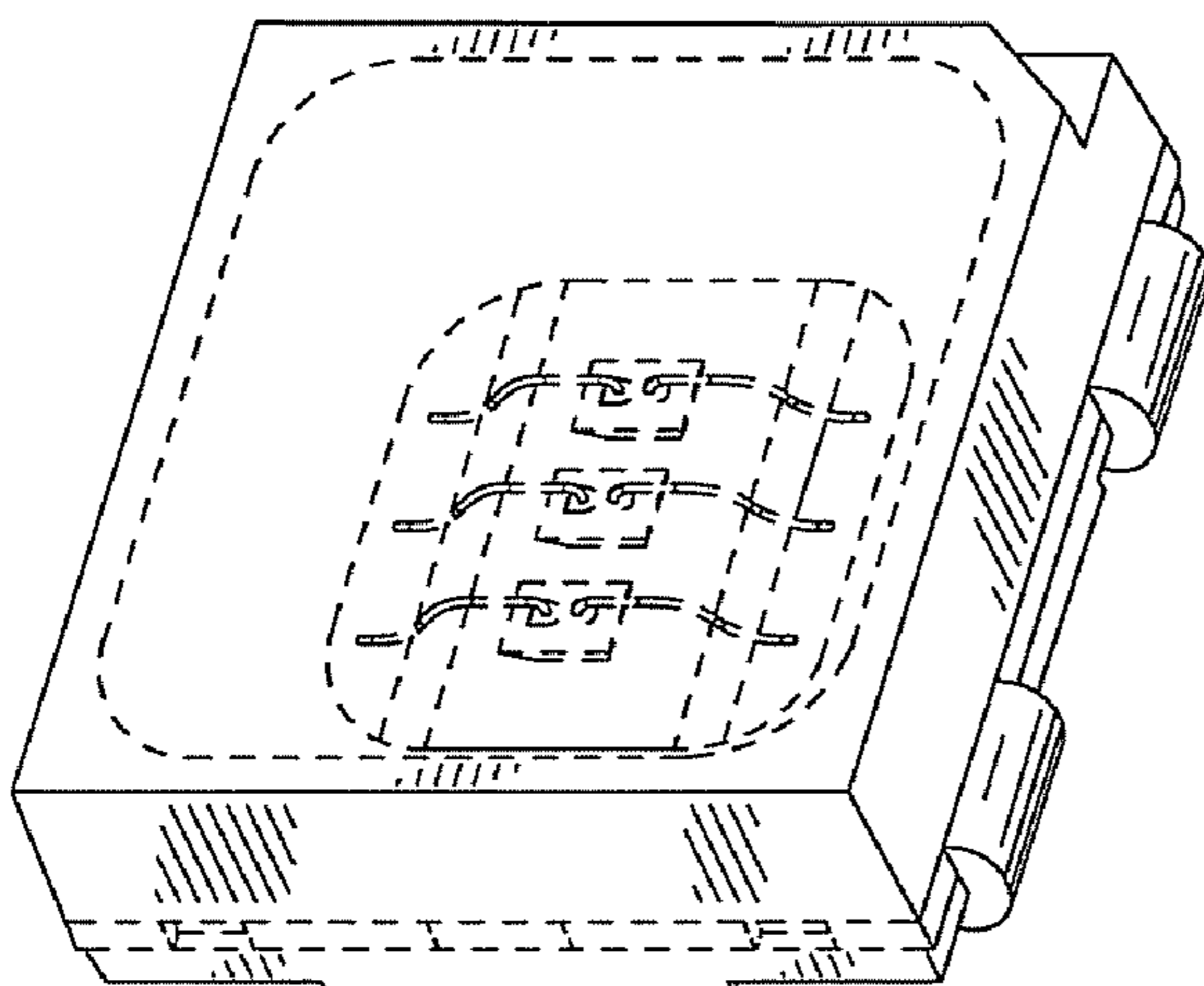
The ornamental design for a light emitting diode (LED) package, as shown and described.

**DESCRIPTION**

FIG. 1 is a top perspective view of an light emitting diode (LED) package showing our design;  
FIG. 2 is a top view thereof;  
FIG. 3 is a top end view thereof;  
FIG. 4 is an opposing bottom end view thereof;  
FIG. 5 is a bottom view thereof opposite the view of FIG. 2;  
FIG. 6 is a side view thereof;  
FIG. 7 is an opposing side view thereof; and,  
FIG. 8 is a back perspective view thereof.

The broken lines immediately adjacent to the shaded areas represent the boundaries of the claimed design. Other broken lines are for illustrative purpose only and form no part of the claimed design. None of the broken lines form part of the claimed design.

**1 Claim, 2 Drawing Sheets**



U.S. PATENT DOCUMENTS

D621,798 S \* 8/2010 Lu et al. .... D13/180  
 D621,799 S \* 8/2010 Hussell et al. .... D13/180  
 D635,527 S 4/2011 Hussell et al.  
 7,923,739 B2 4/2011 Hussell  
 2002/0004251 A1 1/2002 Roberts et al.  
 2004/0126913 A1 7/2004 Loh  
 2006/0220050 A1\* 10/2006 Higaki et al. .... 257/99  
 2007/0075325 A1\* 4/2007 Baek et al. .... 257/99  
 2008/0006837 A1 1/2008 Park et al.  
 2008/0185605 A1\* 8/2008 Wada et al. .... 257/98  
 2008/0258162 A1\* 10/2008 Koung et al. .... 257/98  
 2008/0290353 A1 11/2008 Medendorp et al.  
 2009/0189178 A1 7/2009 Kim et al.  
 2010/0133554 A1 6/2010 Hussell  
 2010/0133578 A1 6/2010 Pickard et al.  
 2011/0031865 A1 2/2011 Hussell et al.

FOREIGN PATENT DOCUMENTS

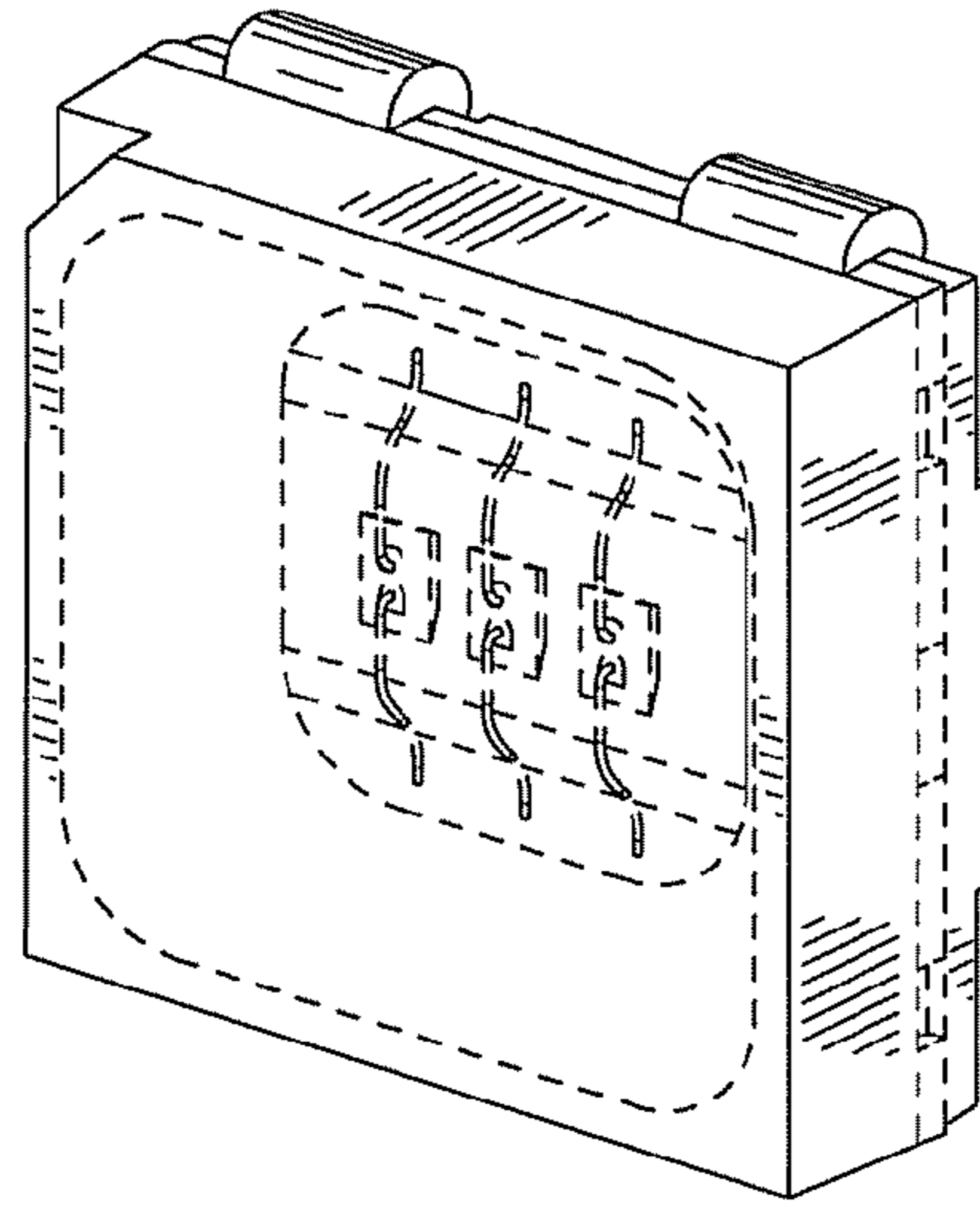
EP 001242234 1/2011  
 JP 2008-091792 4/2008  
 JP 2008-103480 5/2008  
 JP D1102760 3/2011  
 JP 1416396 5/2011  
 KR 1020070000130 A 1/2007  
 KR 1020090003378 A 1/2009  
 WO WO 2007/126720 11/2007

OTHER PUBLICATIONS

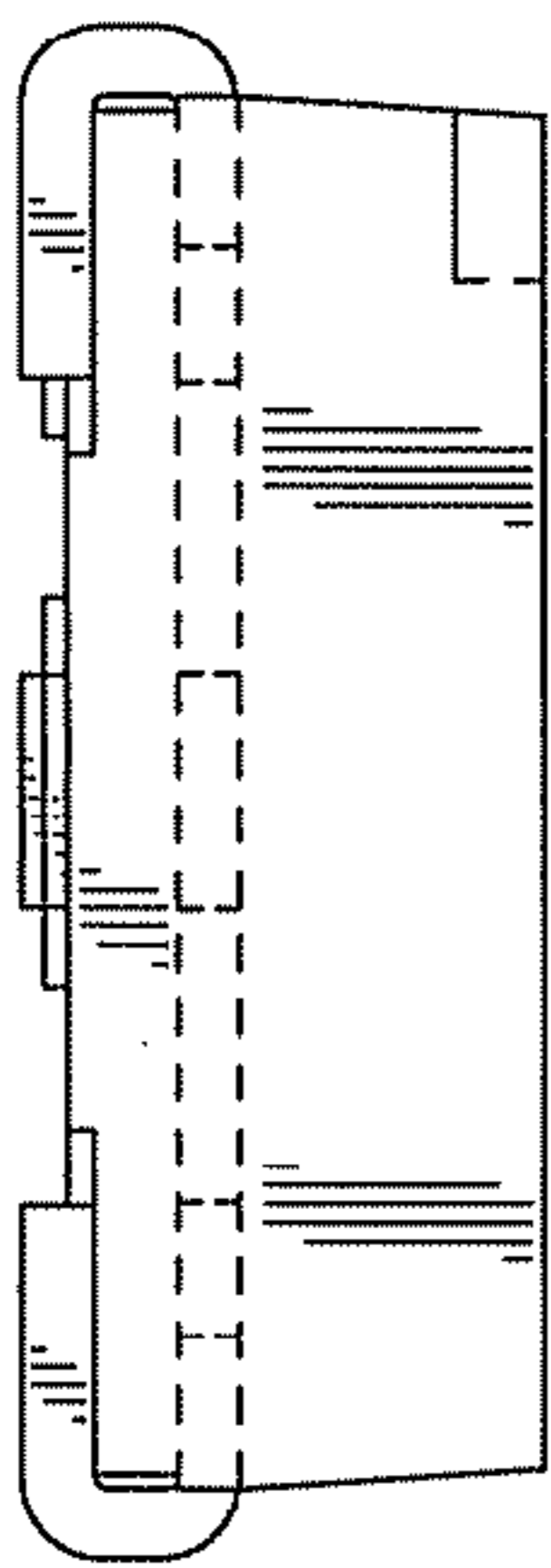
Description Model No. NS6x083x issued by Nichia Corporation—at least as early as Feb. 17, 2007.  
 U.S. Appl. No. 29/338,186 filed Jun. 5, 2009.  
 Co-pending U.S. Appl. No. 12/498,856 filed Jul. 7, 2009.  
 Notice of Allowance from U.S. Appl. No. 29/330,657 dated Sep. 25, 2009.

U.S. Appl. No. 29/353,652 filed Jan. 12, 2010.  
 Notice of Allowance from U.S. Appl. No. 29/338,186 dated Apr. 16, 2010.  
 Non-Final Office Action for U.S. Appl. No. 12/479,318 dated Jun. 2, 2010.  
 Related U.S. Appl. No. 29/365,939 filed Jul. 16, 2010.  
 U.S. Appl. No. 12/853,812 filed Aug. 10, 2010.  
 Notice of Allowance for U.S. Appl. No. 29/353,652 dated Aug. 24, 2010.  
 U.S. Appl. No. 61/404,985 filed Oct. 13, 2010.  
 Non-final Office Action for U.S. Appl. No. 12/479,318 dated Nov. 10, 2010.  
 Notice of Allowance for U.S. Appl. No. 29/353,652 dated Nov. 26, 2010.  
 Supplemental Notice of Allowance for U.S. Appl. No. 29/353,652 dated Dec. 8, 2010.  
 Related CIP U.S. Appl. No. 12/969,267 filed Dec. 15, 2010 (Filed With Non-Publication Request).  
 Notice of Allowance for U.S. Appl. No. 29/365,939 dated Dec. 27, 2010.  
 Related U.S. Appl. No. 29/382,394 filed Jan. 3, 2011.  
 International Search Report/Written Opinion dated Jan. 5, 2011 for PCT/US2010/035379.  
 U.S. Appl. No. 12/011,609 filed Jan. 21, 2011.  
 U.S. Appl. No. 12/479,318 dated Feb. 17, 2011.  
 U.S. Appl. No. 29/338,186 dated Mar. 10, 2011.  
 Notice of Allowance for Japanese Design Appl. No. 2010-026186 dated Mar. 29, 2011.  
 Notice of Allowance for U.S. Appl. No. 29/365,939 dated Apr. 12, 2011.  
 Supplemental Notice of Allowance for U.S. Appl. No. 29/338,186 dated May 20, 2011.

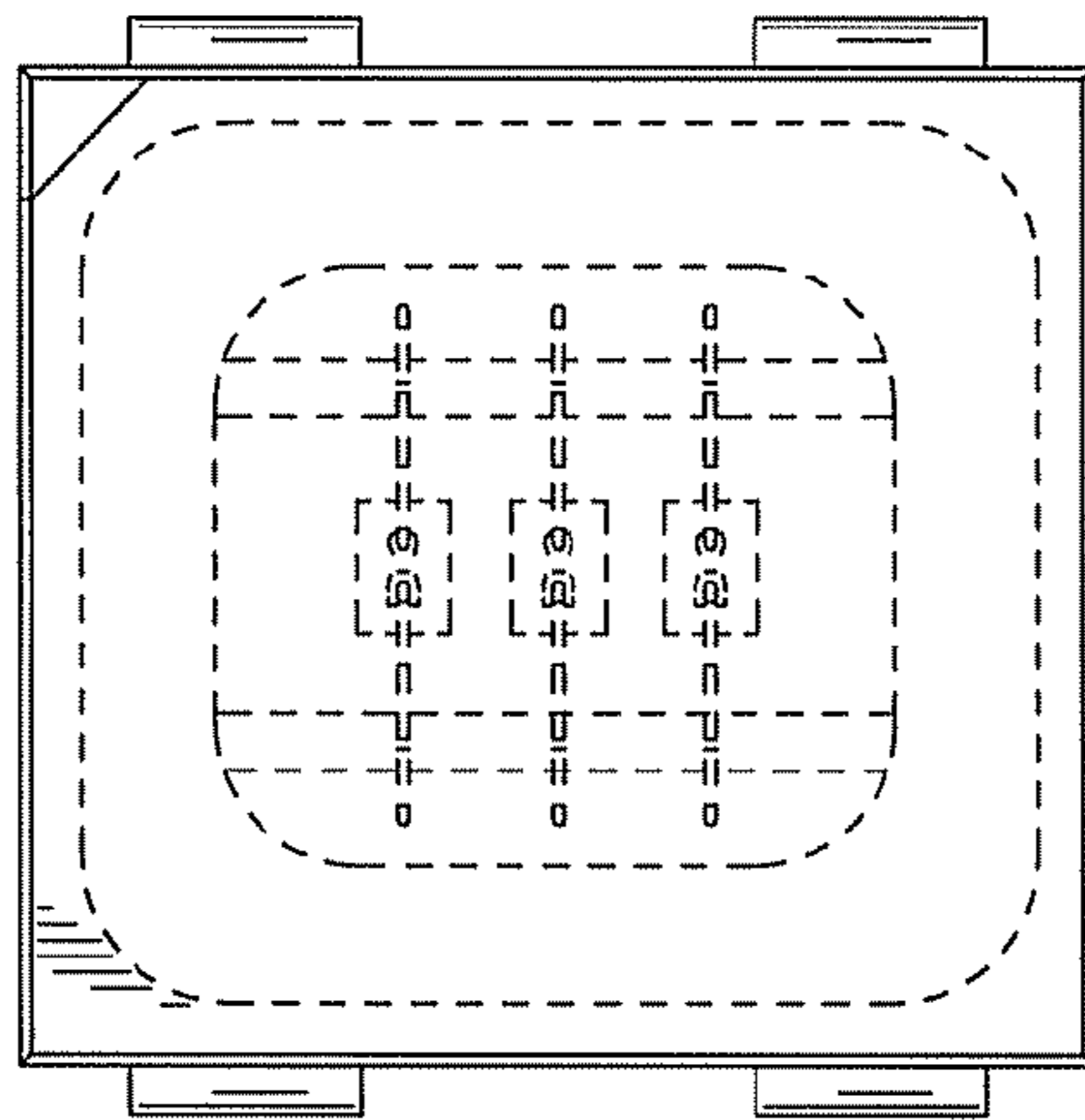
\* cited by examiner



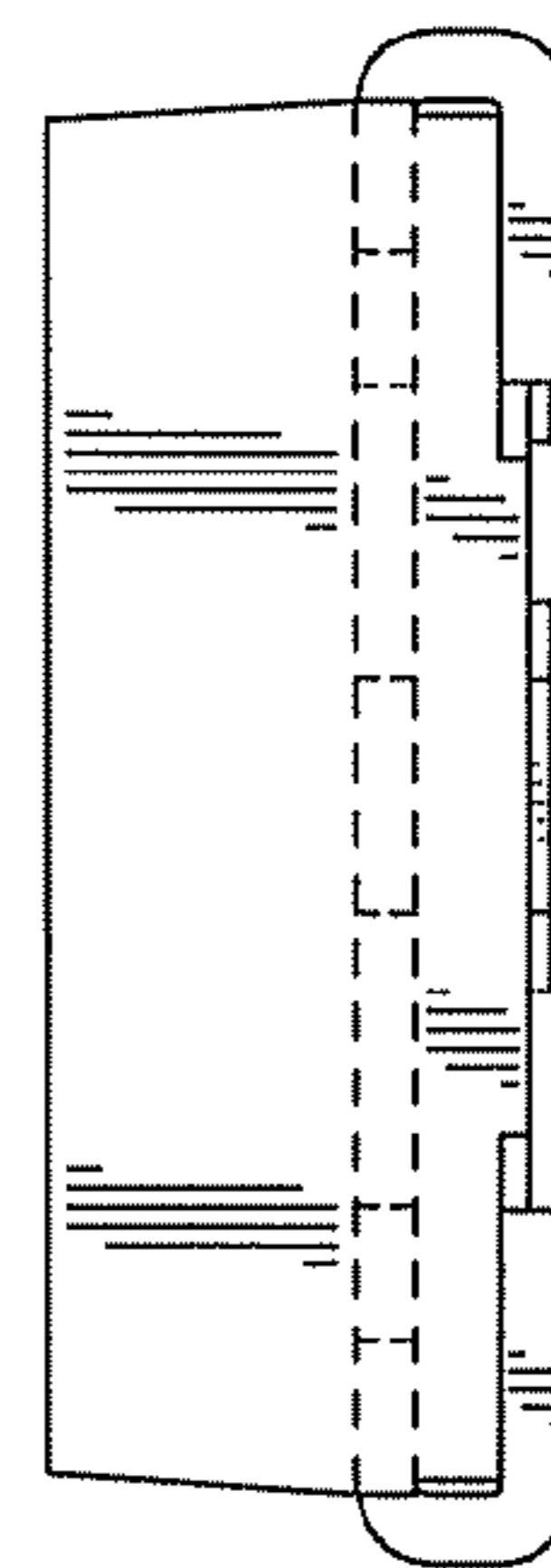
**FIG. 1**



**FIG. 3**



**FIG. 2**



**FIG. 4**

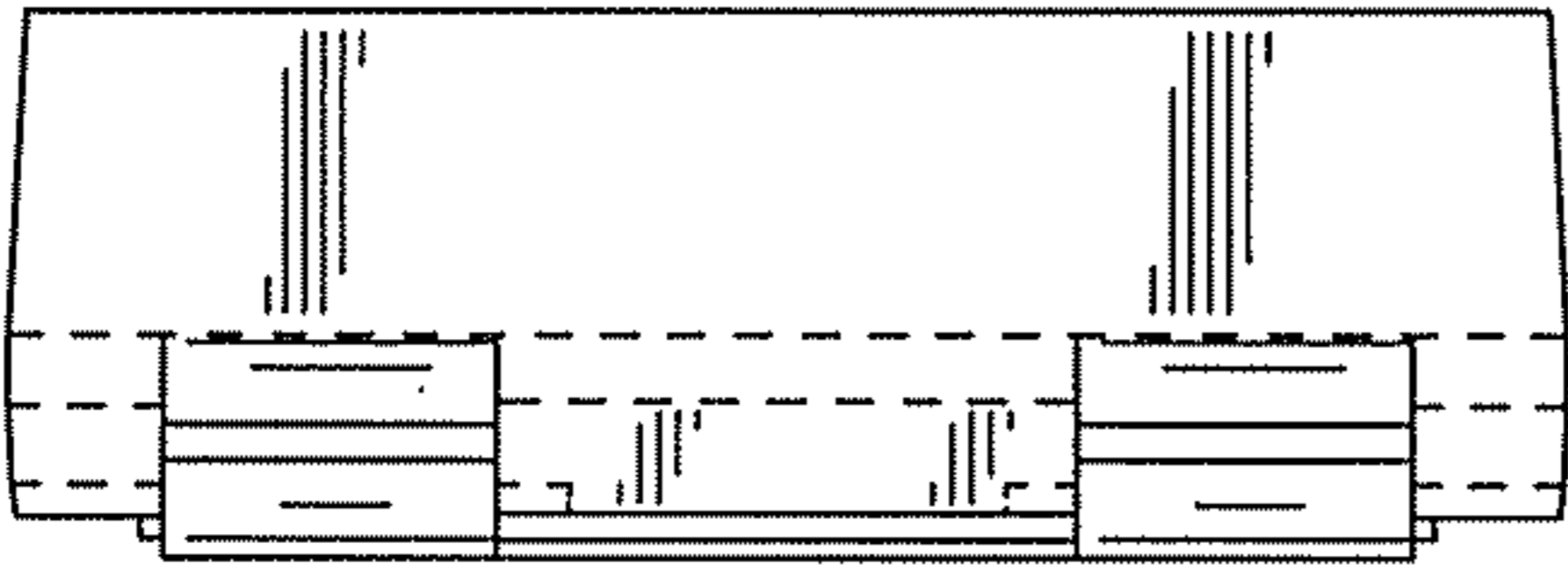


FIG. 7

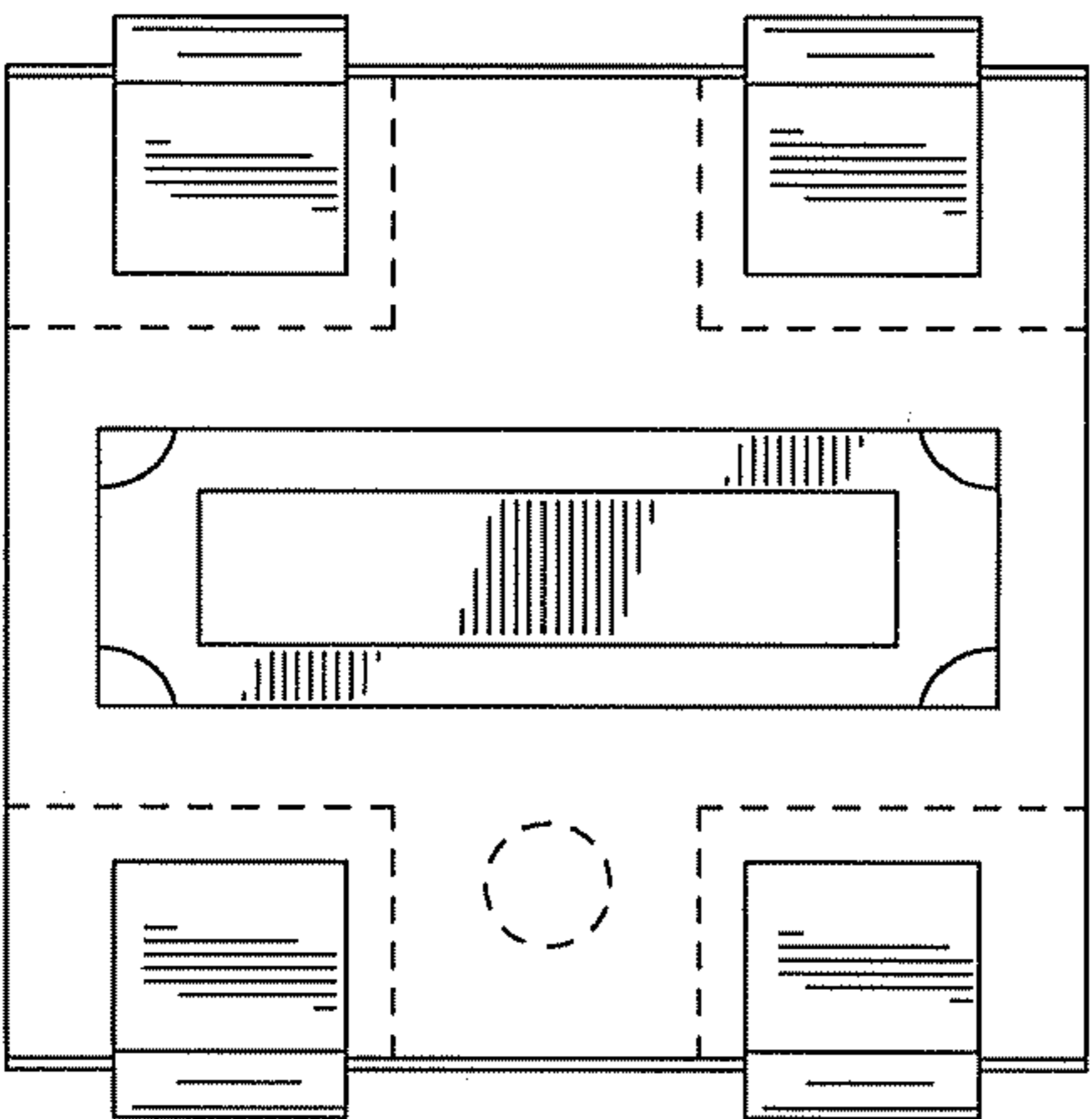


FIG. 5

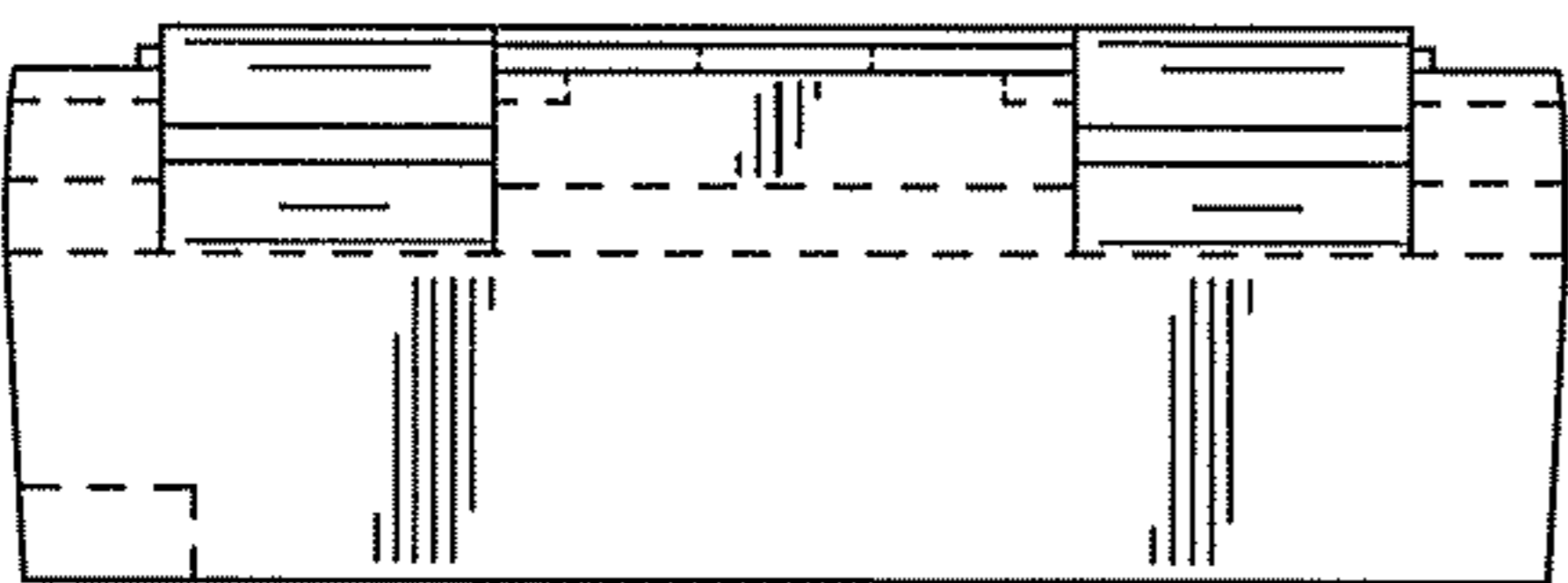


FIG. 6

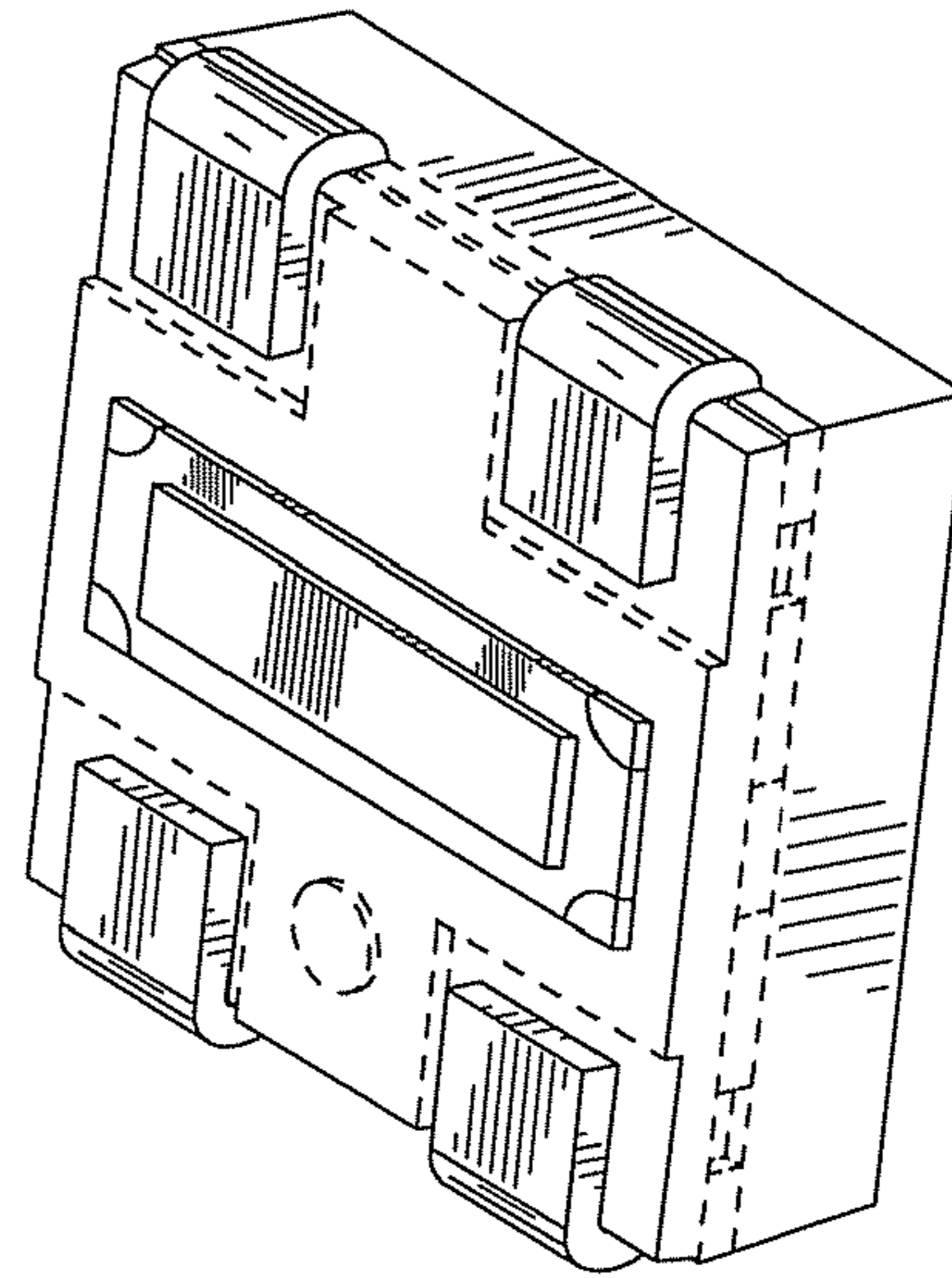


FIG. 8

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : D648,686 S  
APPLICATION NO. : 29/360791  
DATED : November 15, 2011  
INVENTOR(S) : Christopher P. Hussell et al.

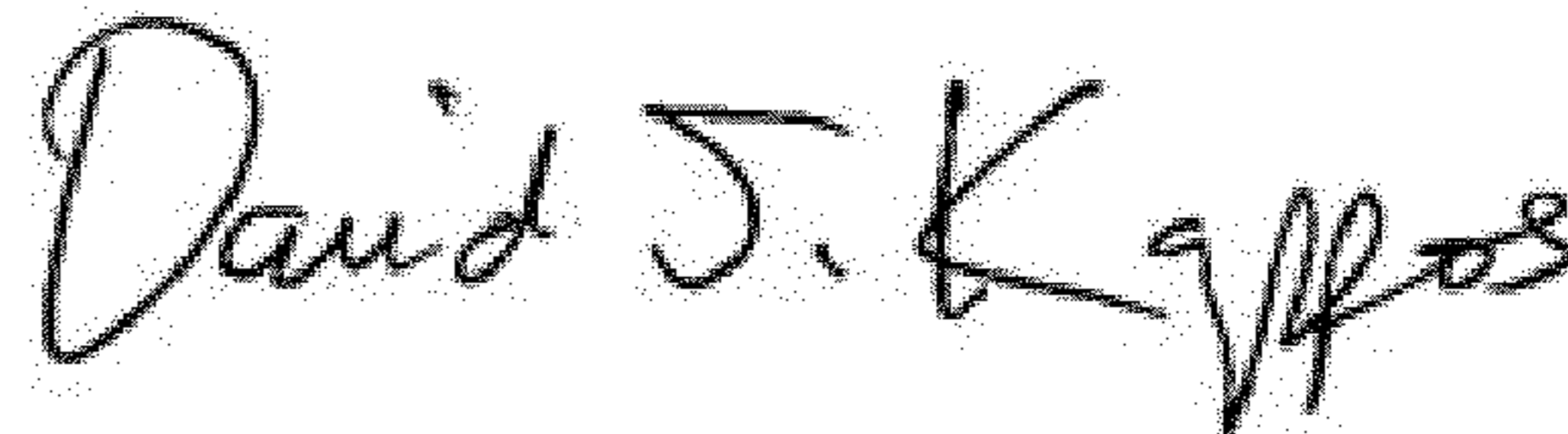
Page 1 of 3

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the title page, delete illustrative figures 1 and 8 and substitute with FIGS. 1 and 8 as shown on replacement sheets 1 and 2.

Delete Drawing Sheets 1 and 2 and substitute therefore with the attached replacement Drawing Sheets 1 and 2. (FIGS. 3, 6, 7 and 8 have been corrected)

Signed and Sealed this  
Twenty-second Day of January, 2013

A handwritten signature in black ink that reads "David J. Kappos". The signature is written in a cursive, slightly slanted style.

David J. Kappos  
*Director of the United States Patent and Trademark Office*

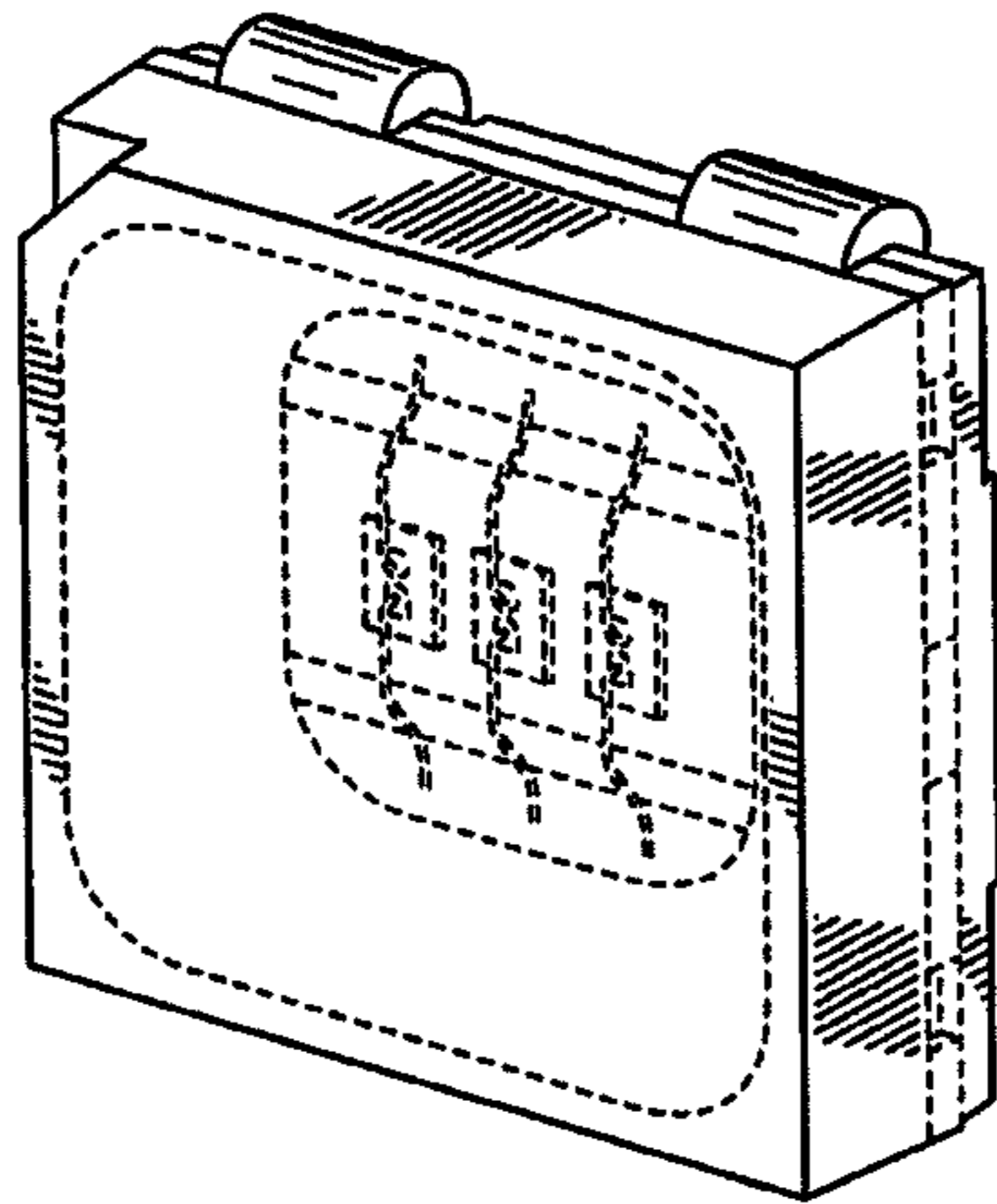


FIG. 1

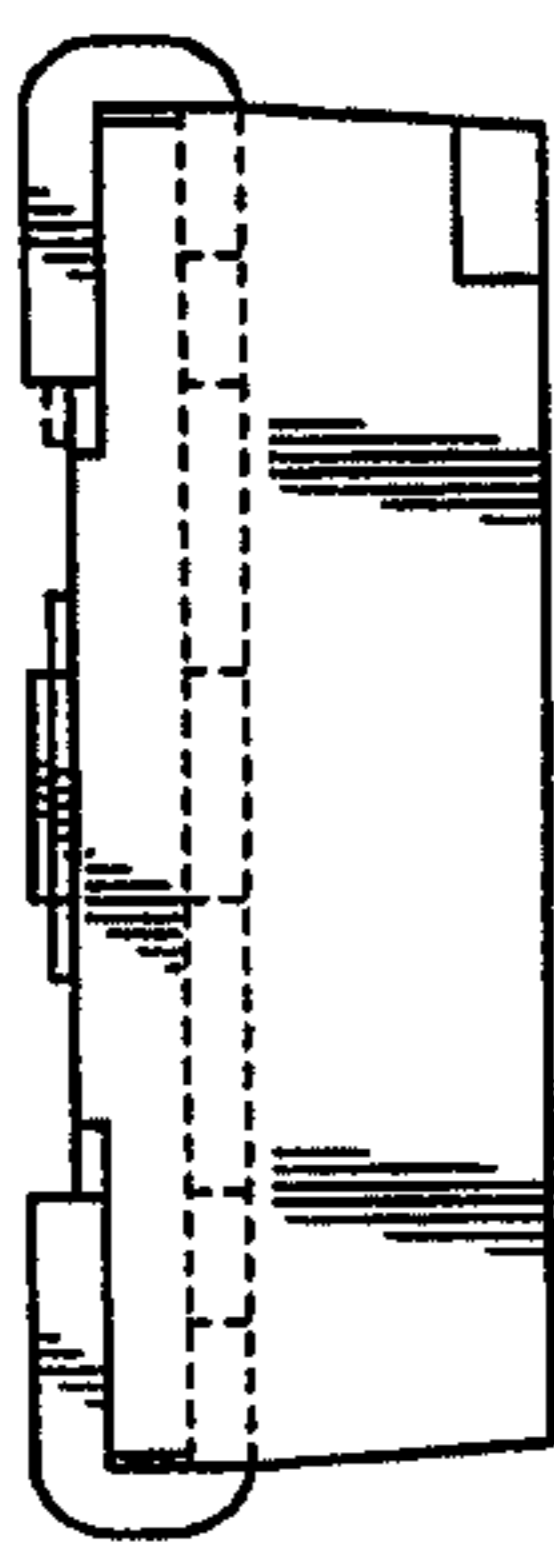


FIG. 3

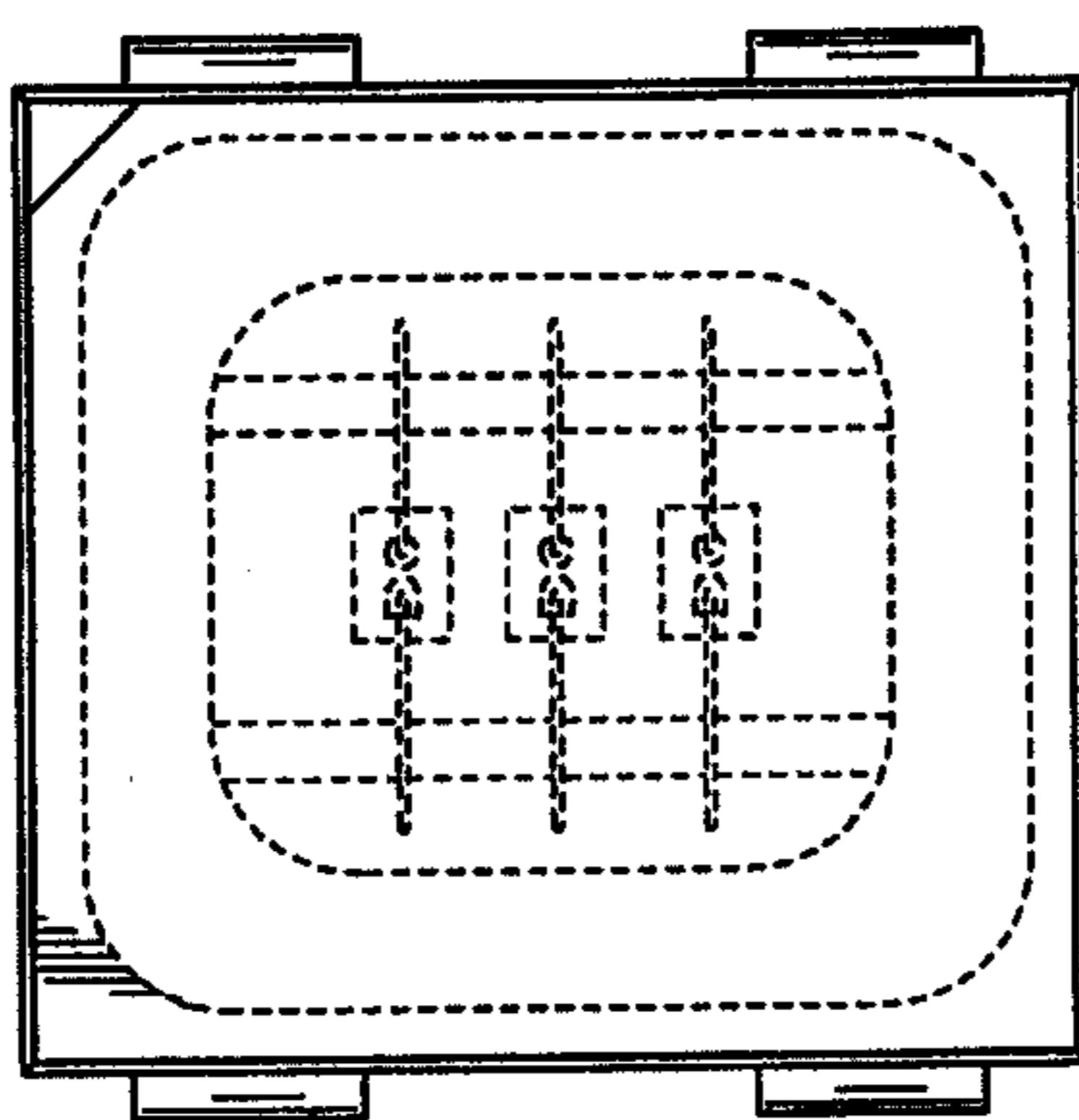


FIG. 2

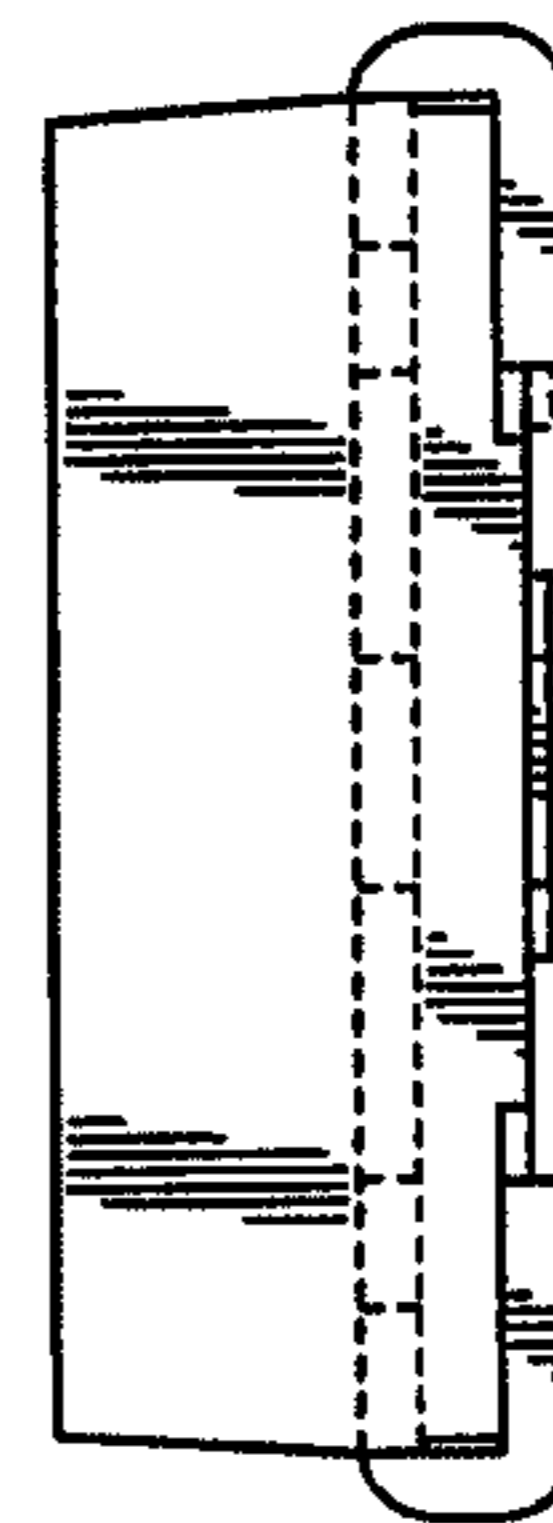


FIG. 4

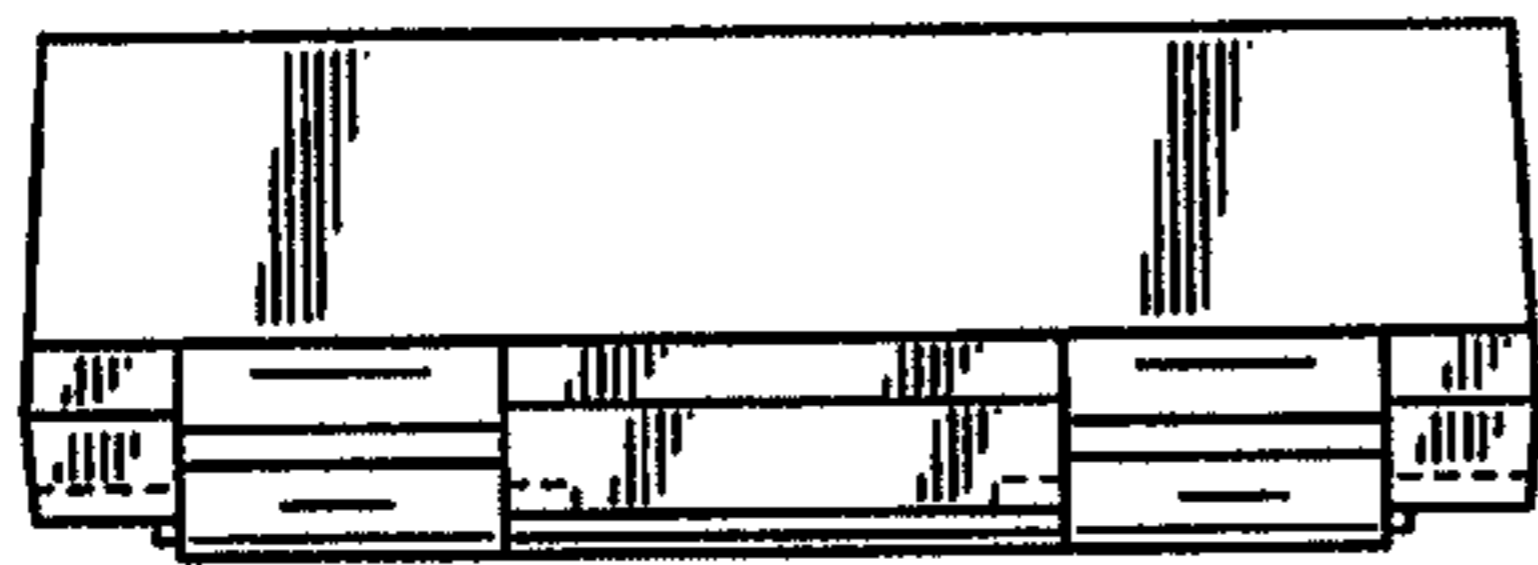


FIG. 7

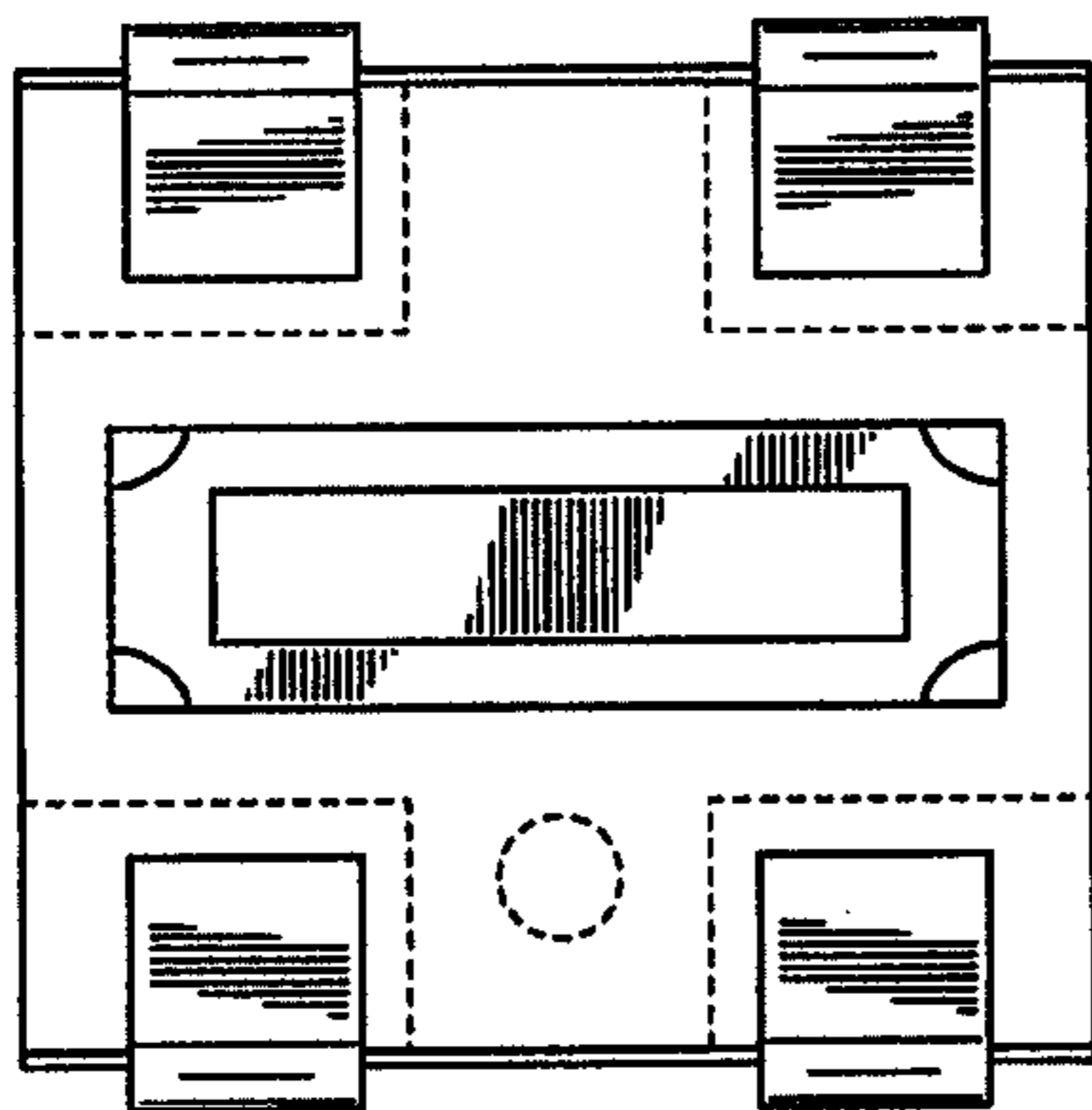


FIG. 5

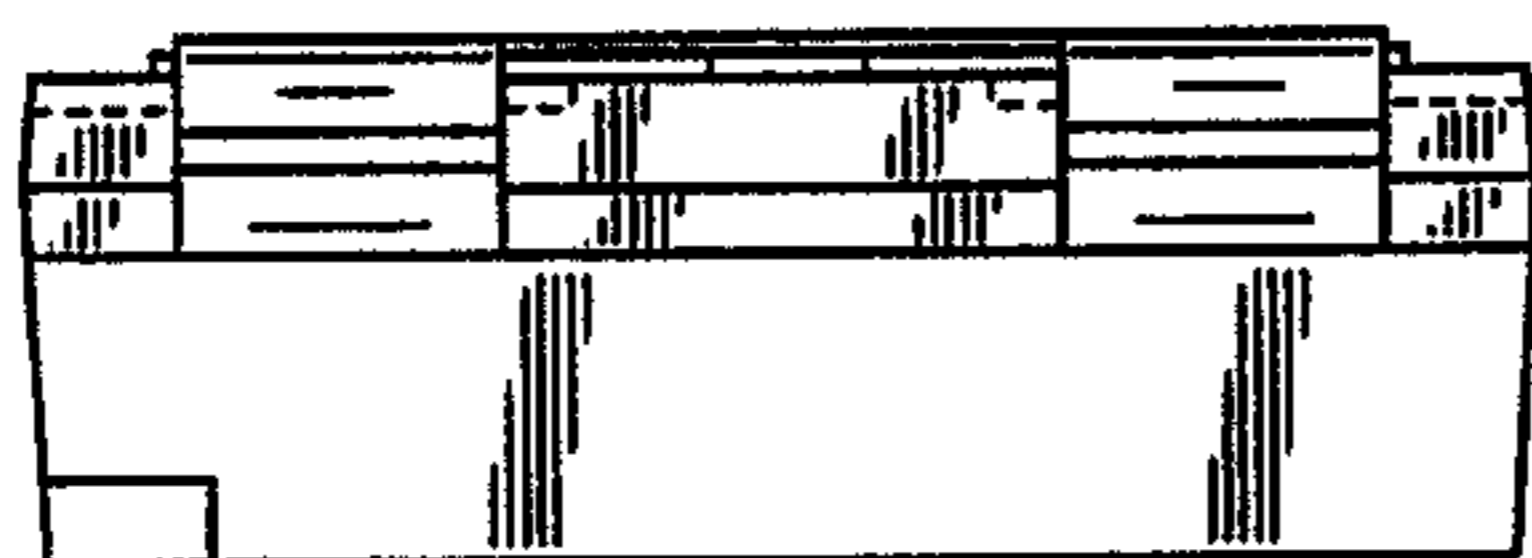


FIG. 6

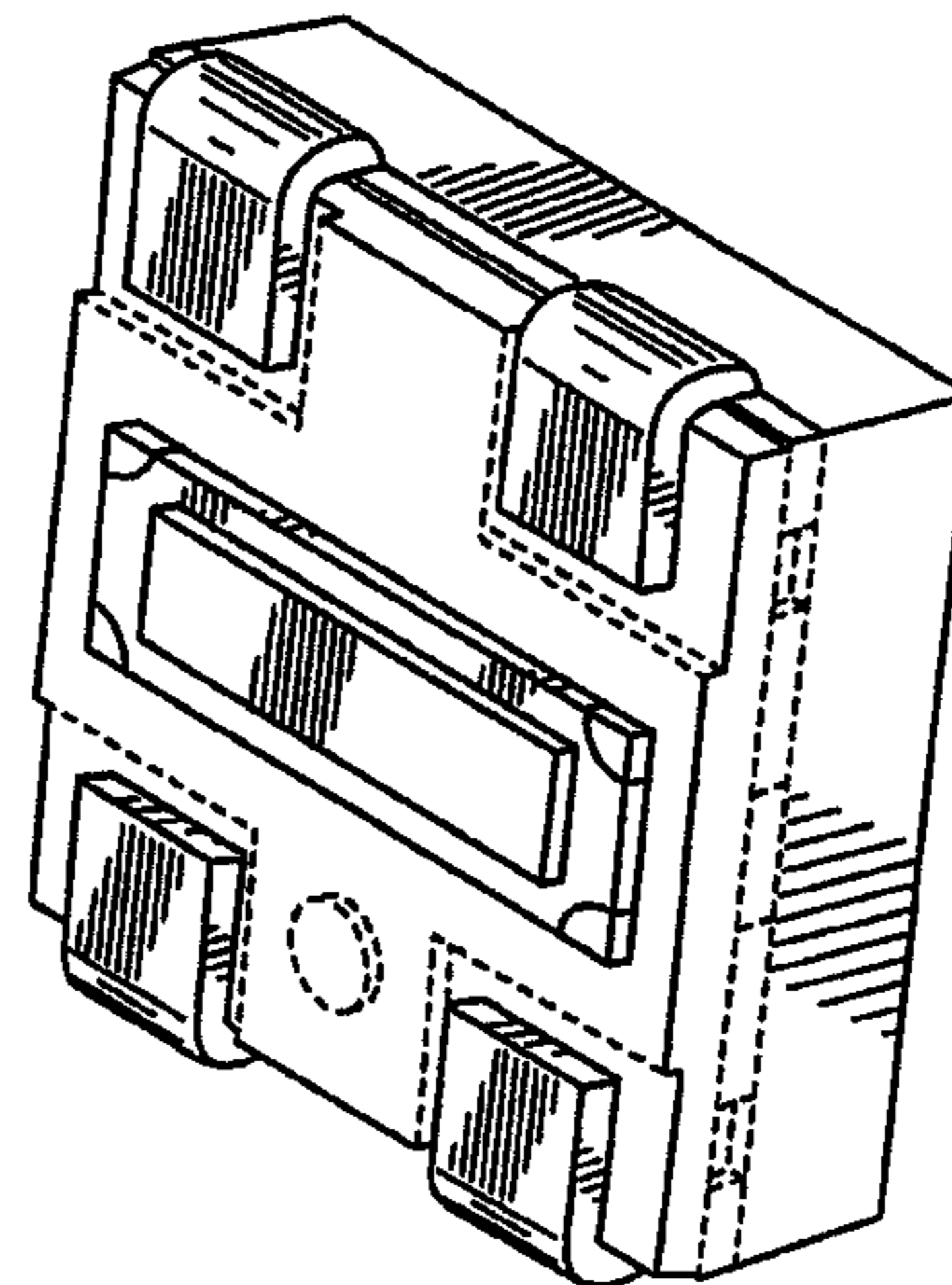


FIG. 8

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : D648,686 S  
APPLICATION NO. : 29/360791  
DATED : November 15, 2011  
INVENTOR(S) : Christopher P. Hussell et al.

Page 1 of 4

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Delete the title page and substitute therefore with the attached title page consisting of corrected illustrative figures 1 and 8.

Delete Drawing Sheets 1 and 2 and substitute therefore with the attached replacement Drawing Sheets 1 and 2. (FIGS. 3, 6, 7 and 8 have been corrected)

This certificate supersedes the Certificate of Correction issued January 22, 2013.

Signed and Sealed this  
Ninth Day of April, 2013



Teresa Stanek Rea  
*Acting Director of the United States Patent and Trademark Office*



(12) **United States Design Patent** (10) **Patent No.:** **US D648,686 S**  
**Hussell et al.** (45) **Date of Patent:** **\*\* Nov. 15, 2011**

(54) **LIGHT EMITTING DIODE (LED) PACKAGE**  
 (75) Inventors: **Christopher P. Hussell**, Cary, NC (US);  
**Shuying Huang**, Apex, NC (US)  
 (73) Assignee: **Cree, Inc.**, Durham, NC (US)  
 (\*\*) Term: **14 Years**  
 (21) Appl. No.: **29/360,791**  
 (22) Filed: **Apr. 30, 2010**  
 (51) **LOC (9) CI.** ..... **13-03**  
 (52) **U.S. CI.** ..... **D13/180**  
 (58) **Field of Classification Search** ..... D13/180;  
 D26/2; 257/79, 80, 81, 88, 89, 95, 98, 99,  
 257/100, E33.058; 313/483, 498, 500; 362/555,  
 362/800  
 See application file for complete search history.

D598,400 S 8/2009 Bando  
 D614,592 S 4/2010 Hussell et al.  
 D615,504 S 5/2010 Keller et al.  
 7,719,024 B2 5/2010 Bando  
 (Continued)

FOREIGN PATENT DOCUMENTS  
 CN 200930286397.5 10/2010  
 (Continued)

OTHER PUBLICATIONS  
 Description Model No. NS6G083 issued by Nichia Corporation—at  
 least as early as Aug. 31, 2007.  
 (Continued)  
 Primary Examiner — Selina Sikder  
 (74) Attorney, Agent, or Firm — Jenkins, Wilson, Taylor &  
 Hunt, P.A.

(56) **References Cited**

U.S. PATENT DOCUMENTS

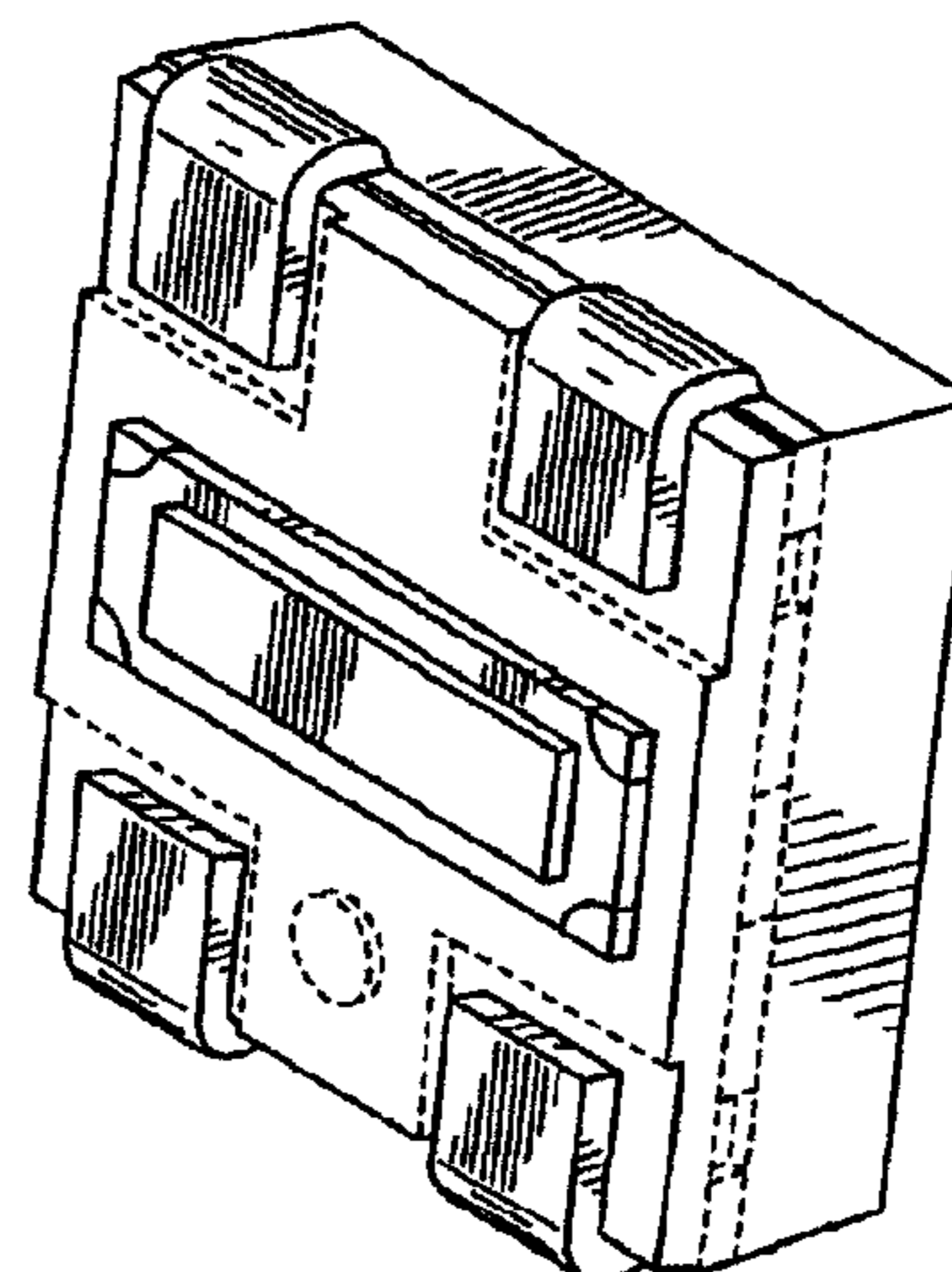
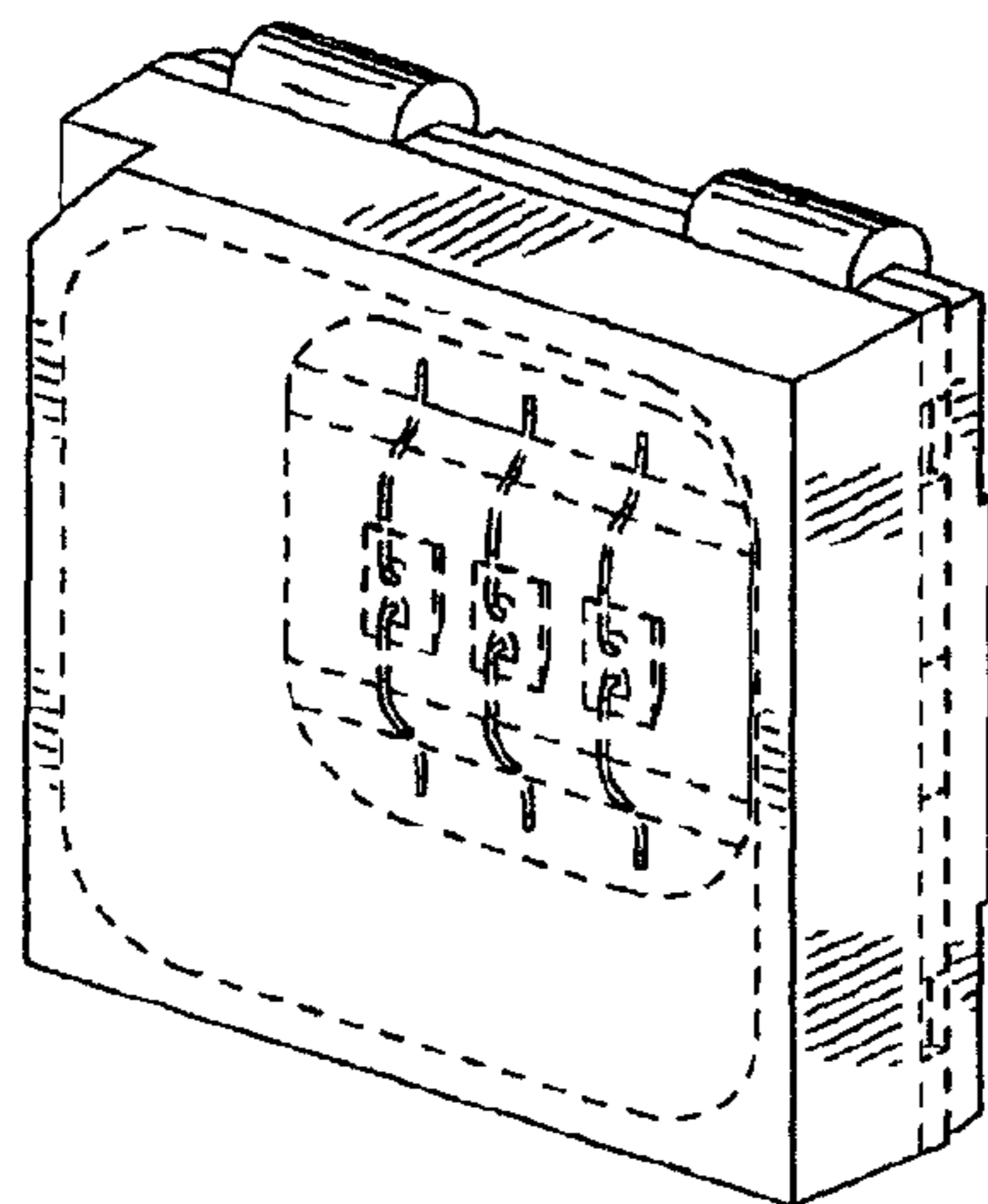
4,679,118	A	7/1987	Johnson et al.	
6,610,563	B1	8/2003	Waitl	
6,943,433	B2	9/2005	Kamada	
D514,073	S *	1/2006	Sucnaga	D13/180
7,081,661	B2 *	7/2006	Takehara et al.	257/433
7,224,047	B2	5/2007	Carberry et al.	
7,244,965	B2	7/2007	Andrews et al.	
7,249,790	B2	7/2007	Condie et al.	
D566,055	S *	4/2008	Kim	D13/180
D573,113	S	7/2008	Bando	
D573,114	S	7/2008	Min et al.	
7,400,049	B2	7/2008	Shim	
7,432,589	B2	10/2008	Yamamoto et al.	
D580,375	S	11/2008	Yen	
D580,381	S	11/2008	Bando	
D580,891	S *	11/2008	Sung et al.	D13/180
7,456,499	B2	11/2008	Loh	
7,462,870	B2	12/2008	Nakashima	
D584,699	S	1/2009	Bando	
D594,827	S	6/2009	Loh et al.	
D595,675	S *	7/2009	Wang et al.	D13/180
7,564,180	B2	7/2009	Brandes	
D597,971	S *	8/2009	Kobayakawa et al.	D13/180

(57) **CLAIM**  
 The ornamental design for a light emitting diode (LED) pack-  
 age, as shown and described.

**DESCRIPTION**

FIG. 1 is a top perspective view of an light emitting diode (LED) package showing our design;  
 FIG. 2 is a top view thereof;  
 FIG. 3 is a top end view thereof;  
 FIG. 4 is an opposing bottom end view thereof;  
 FIG. 5 is a bottom view thereof opposite the view of FIG. 2;  
 FIG. 6 is a side view thereof;  
 FIG. 7 is an opposing side view thereof; and,  
 FIG. 8 is a back perspective view thereof.  
 The broken lines immediately adjacent to the shaded areas represent the boundaries of the claimed design. Other broken lines are for illustrative purpose only and form no part of the claimed design. None of the broken lines form part of the claimed design.

**1 Claim, 2 Drawing Sheets**



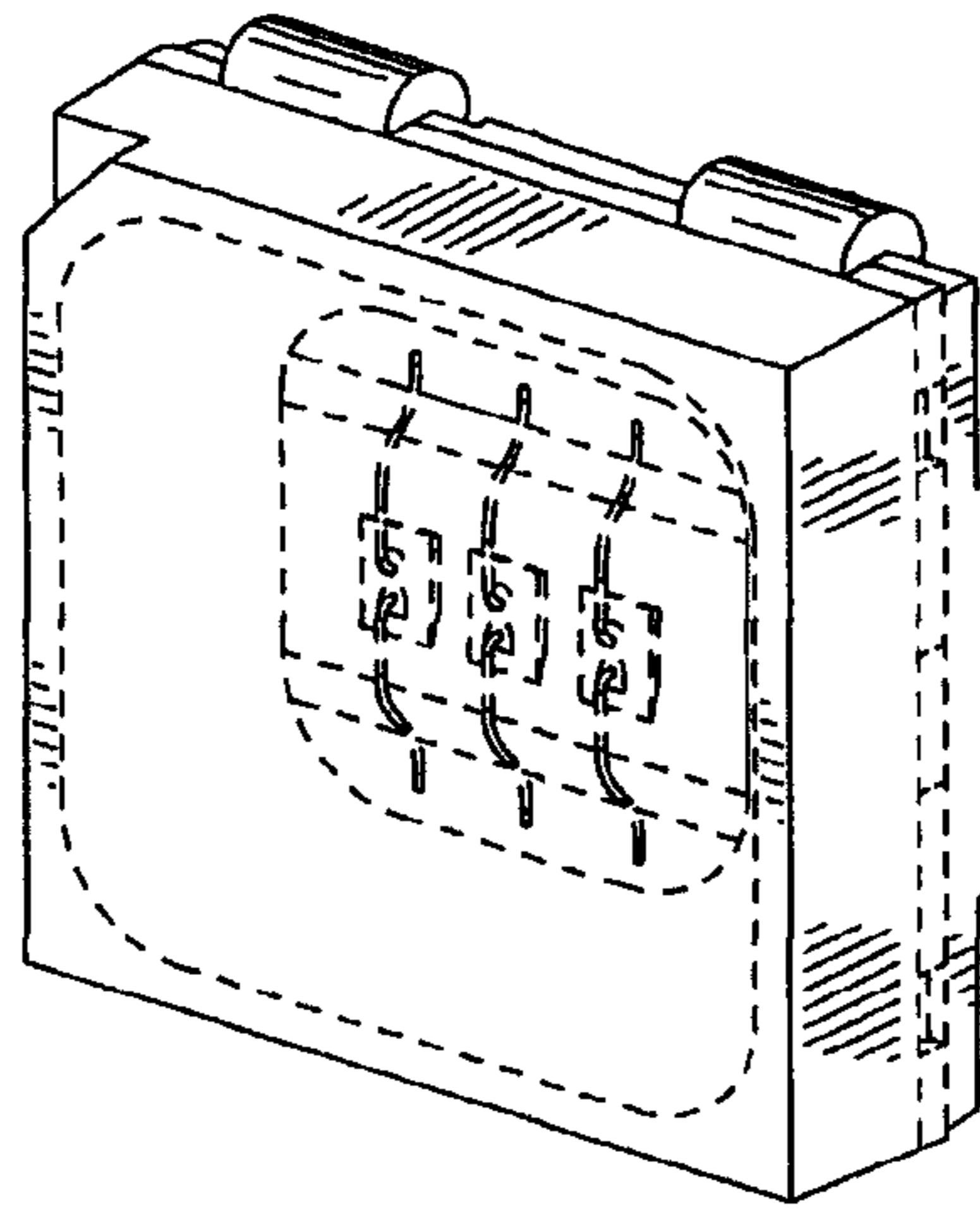


FIG. 1

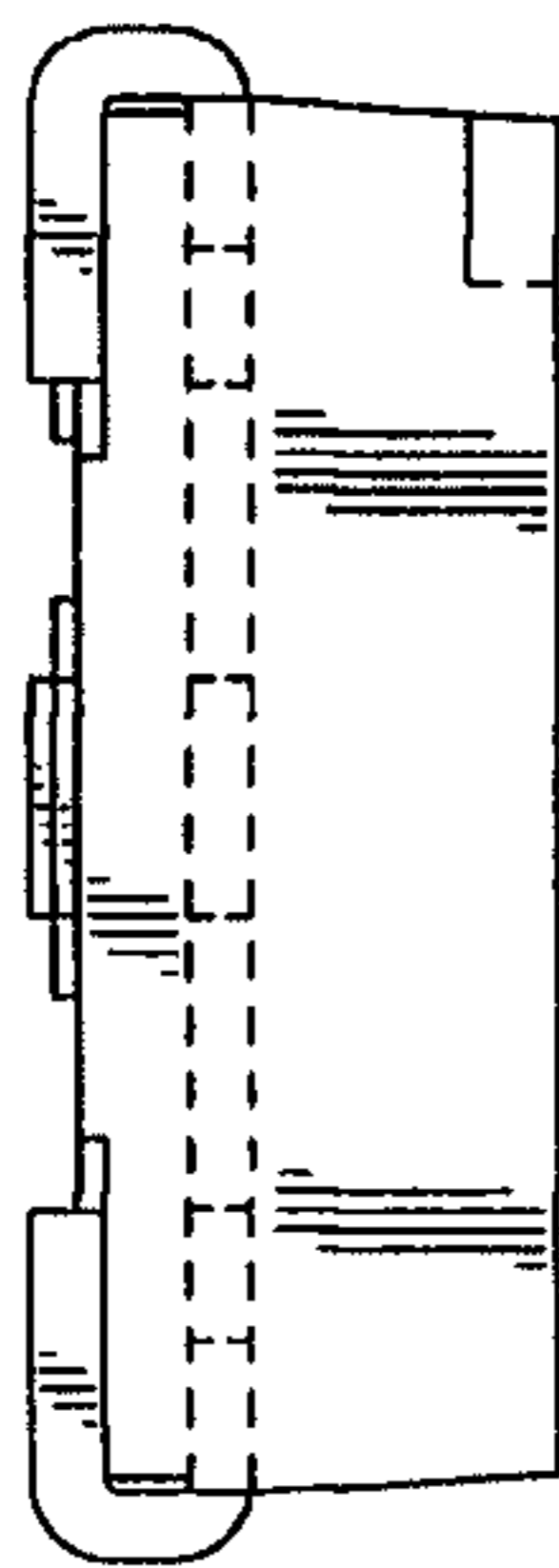


FIG. 3

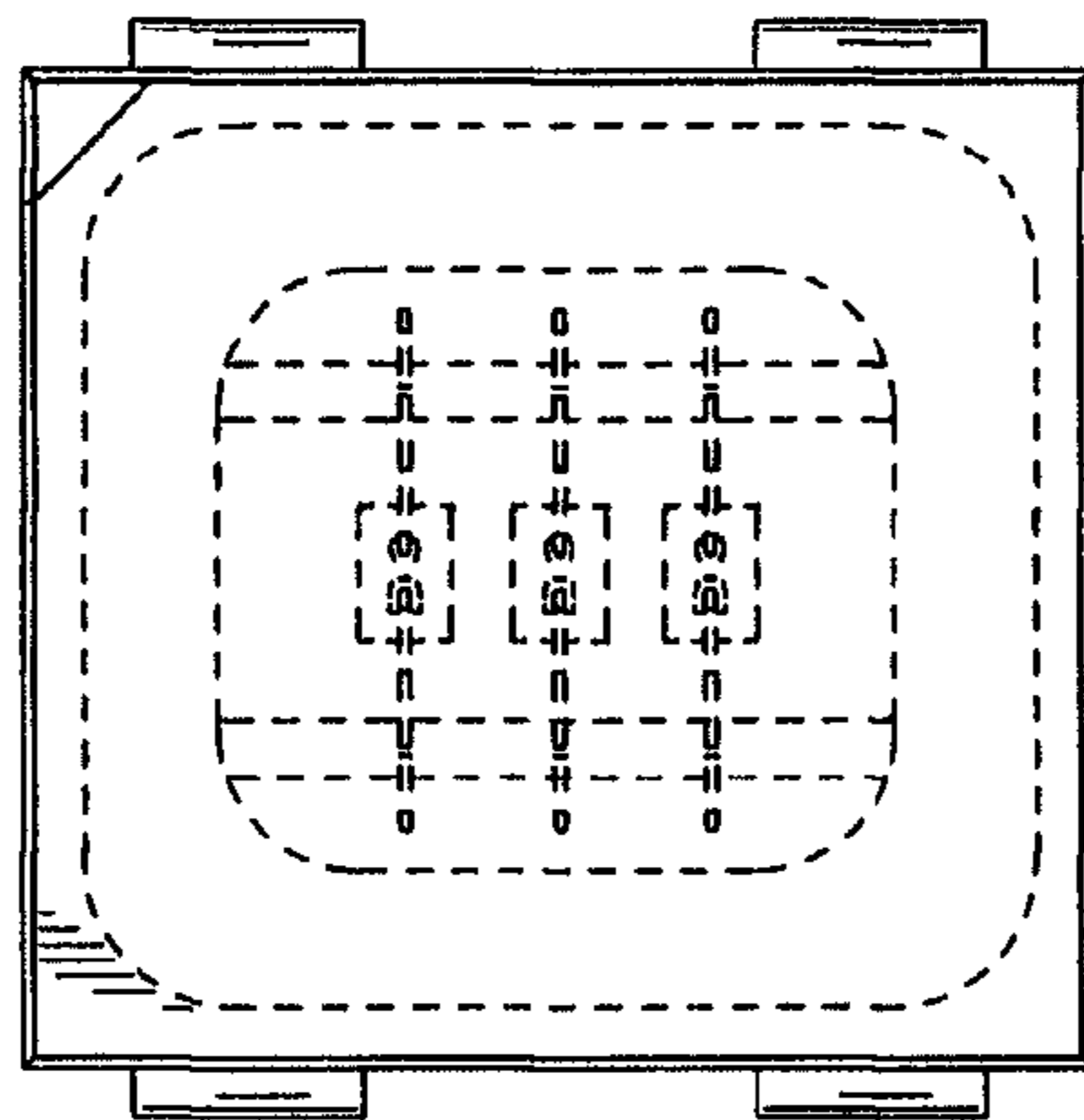


FIG. 2

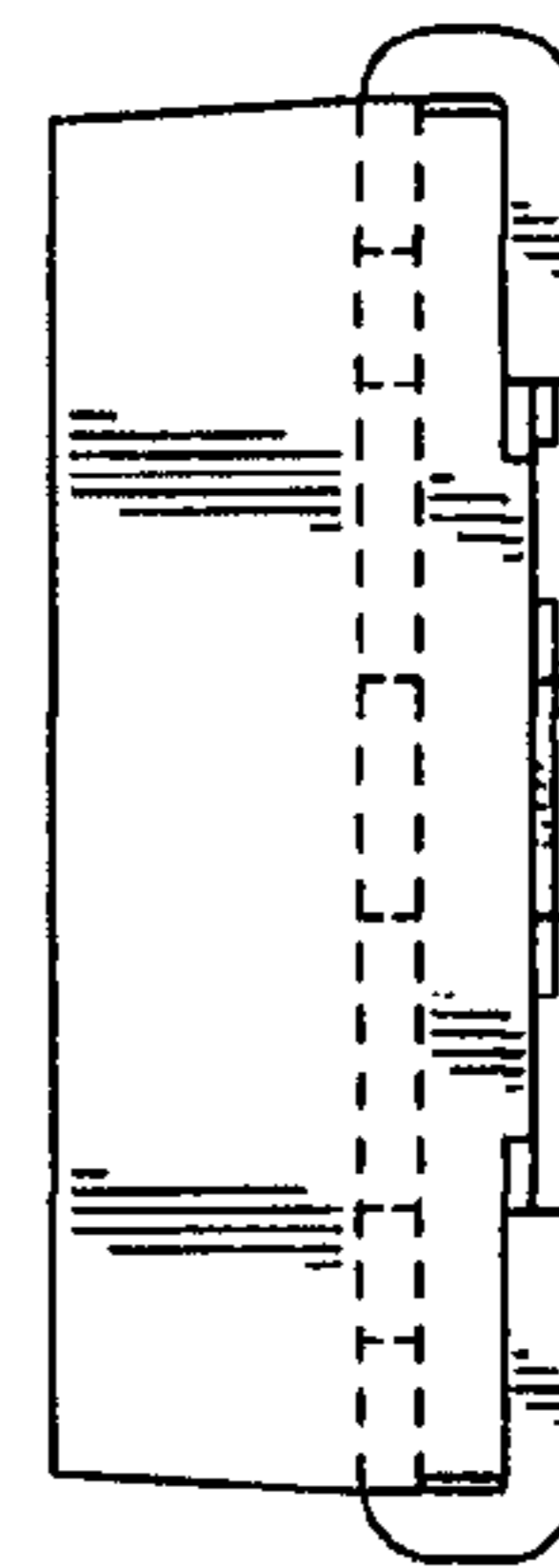


FIG. 4

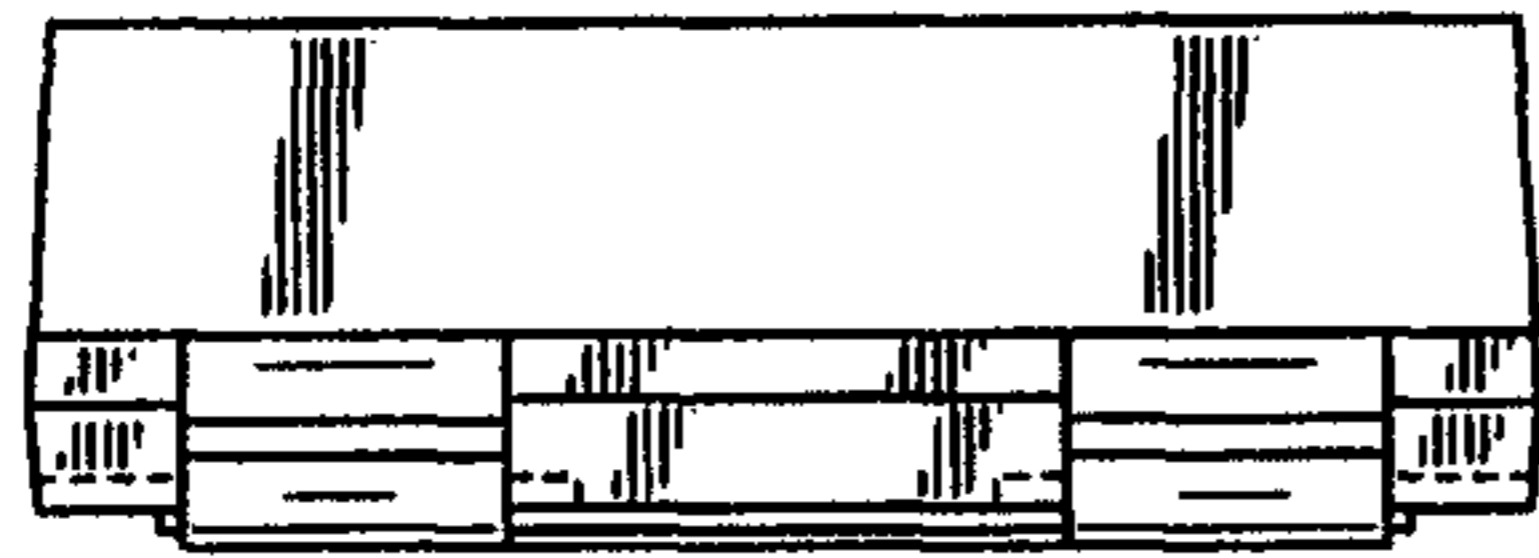


FIG. 7

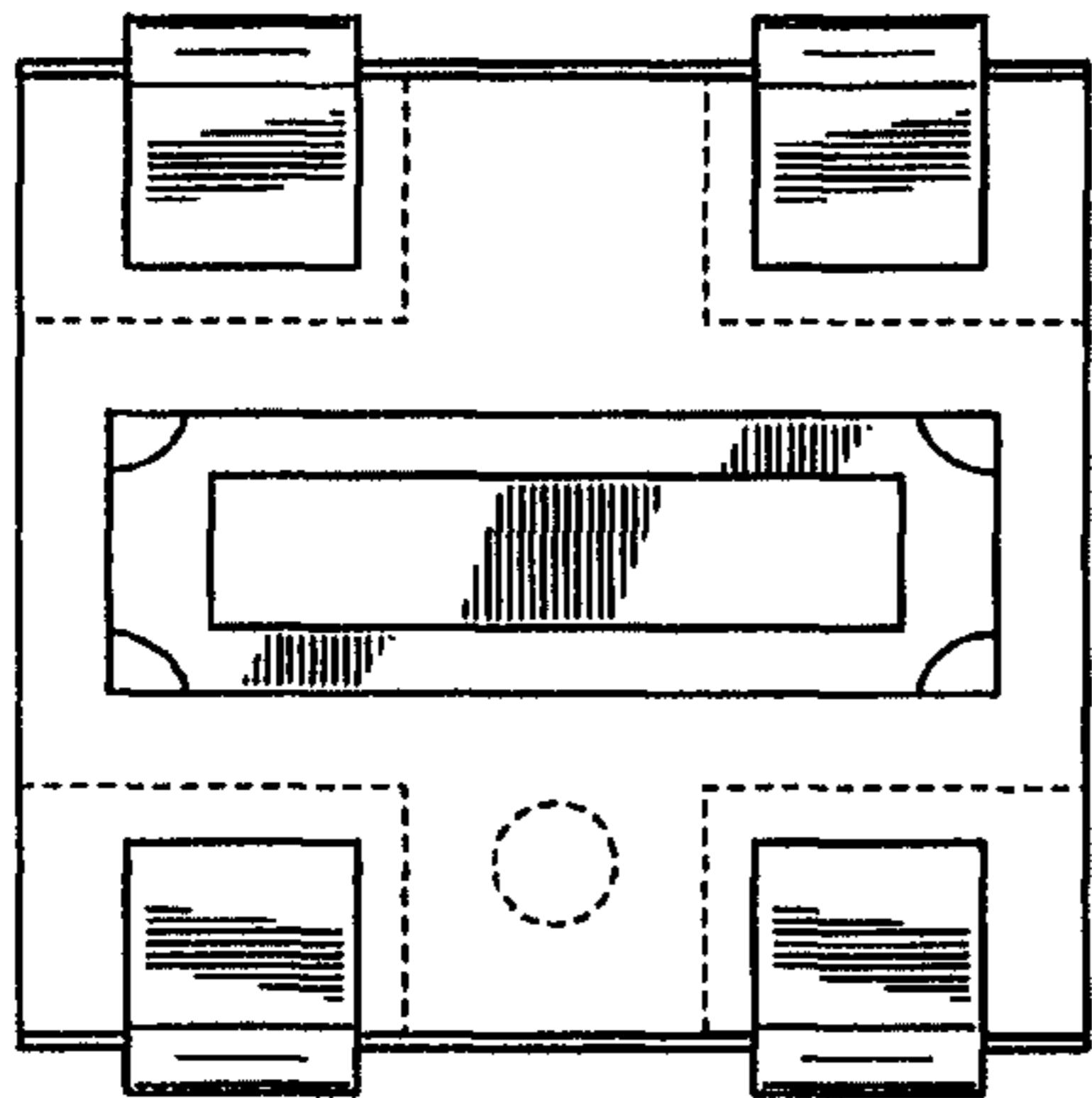


FIG. 5

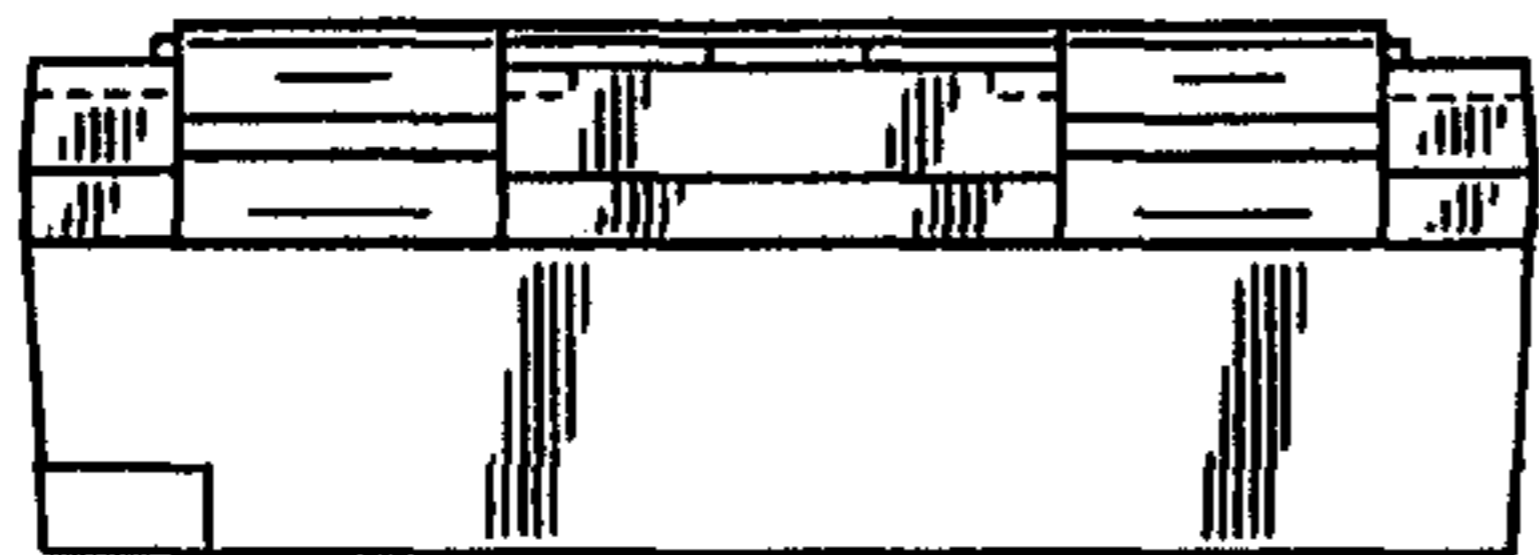


FIG. 6

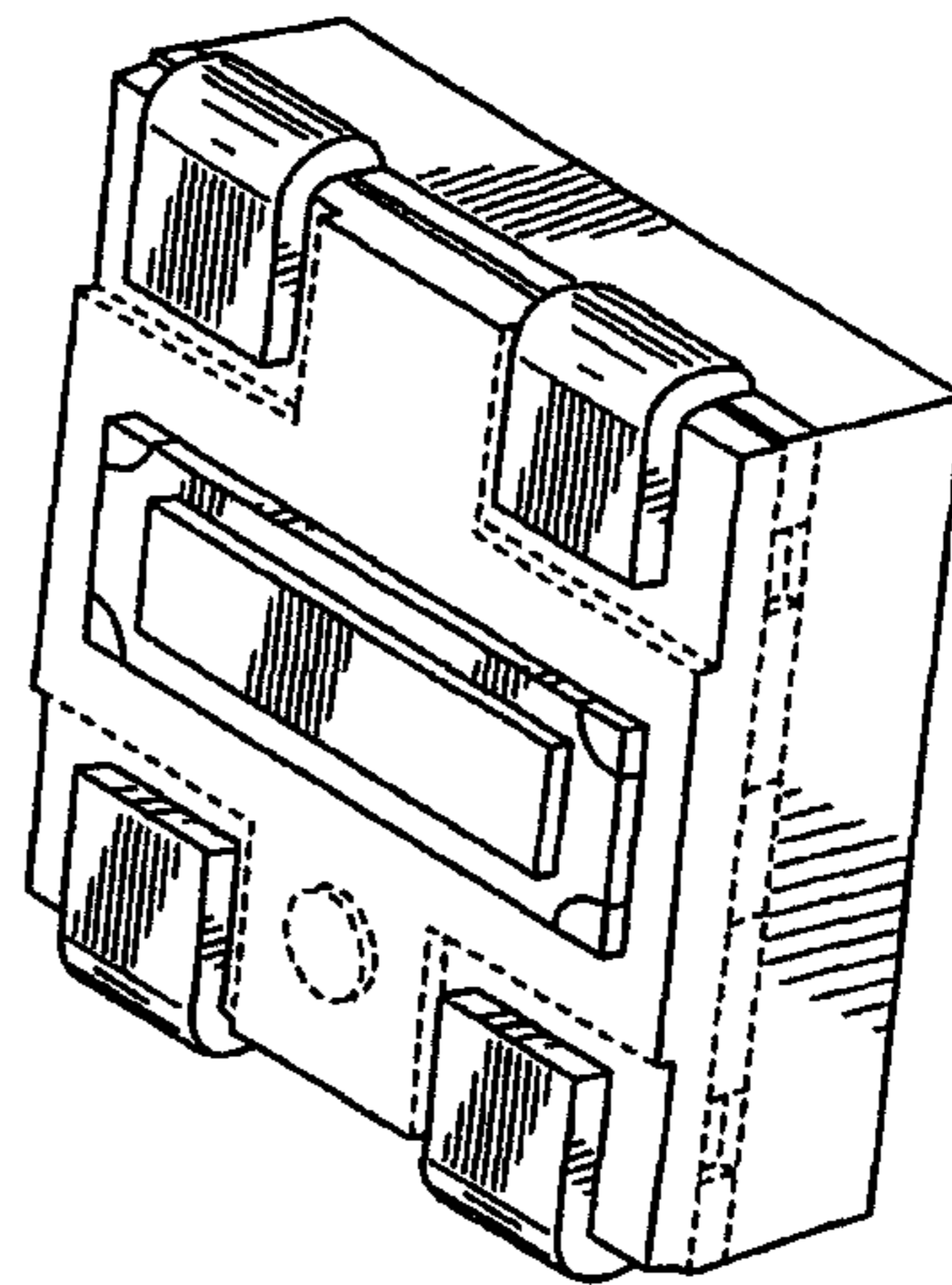


FIG. 8