



US00D615005S

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

(10) **Patent No.:** **US D615,005 S**

(45) **Date of Patent:** **\*\* May 4, 2010**

(54) **SPRING HOUSING FOR A SUSPENSION**

(75) Inventors: **Shawn D. Noble**, Naperville, IL (US);  
**Michael P. Robinson**, Chicago, IL (US)

(73) Assignee: **Hendrickson USA, L.L.C.**, Itasca, IL (US)

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

(21) Appl. No.: **29/329,357**

(22) Filed: **Dec. 12, 2008**

**Related U.S. Application Data**

(63) Continuation-in-part of application No. 12/045,069, filed on Mar. 10, 2008.

(51) **LOC (9) Cl.** ..... **12-16**

(52) **U.S. Cl.** ..... **D12/159**

(58) **Field of Classification Search** ..... D12/400,  
D12/340, 161, 159, 120, 118, 114; 280/11.225,  
280/86.752; 188/315, 316, 298, 274, 281,  
188/286, 297; 293/134; 267/195; 279/2.01,  
279/2.17

See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

3,279,820 A 10/1966 Hickman  
3,997,151 A 12/1976 Leingang

(Continued)

**OTHER PUBLICATIONS**

Hendrickson USA, L.L.C., Technical Procedure R/RS/RT Heavy Duty, Lit. No. 17730-149, Revision C, Jul. 2006.

(Continued)

*Primary Examiner*—T. Chase Nelson

*Assistant Examiner*—Michael A Pratt

(74) *Attorney, Agent, or Firm*—McDonnell Boehnen Hulbert & Berghoff, LLP

(57) **CLAIM**

The ornamental design for a spring housing for a suspension, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view showing the top, front, and right side of a first embodiment of a spring housing having the inventive design;

FIG. 2 is a front elevational view of the spring housing shown in FIG. 1;

FIG. 3 is a top view of the spring housing shown in FIG. 1;

FIG. 4 is a bottom view of the spring housing shown in FIG. 1;

FIG. 5 is a right side elevational view of the spring housing shown in FIG. 1 and includes sectional lines 10—10;

FIG. 6 is a left side elevational view of the spring housing shown in FIG. 1;

FIG. 7 is a back elevational view of the spring housing shown in FIG. 1 and includes sectional lines 8—8 and 9—9;

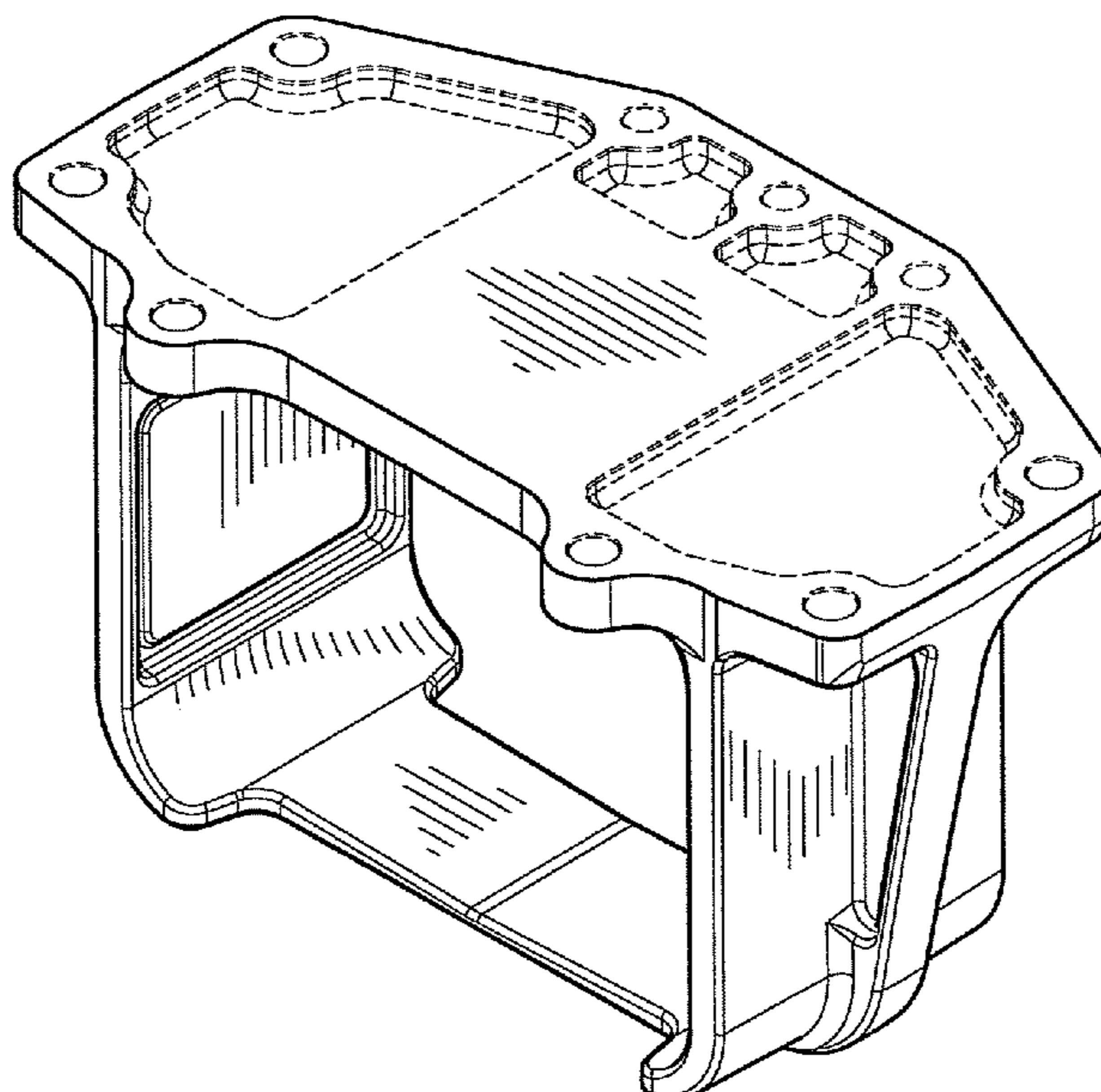
FIG. 8 is a sectional view of the spring housing illustrated in FIG. 7, taken along sectional lines 8—8 thereof;

FIG. 9 is a sectional view of the spring housing illustrated in FIG. 7, taken along sectional lines 9—9 thereof;

FIG. 10 is a sectional view of the spring housing illustrated in FIG. 5, taken along sectional lines 10—10 thereof; and,

FIG. 11 is a perspective view showing the bottom, front, and left side of the spring housing shown in FIG. 1.

**1 Claim, 11 Drawing Sheets**



U.S. PATENT DOCUMENTS

4,132,433	A	1/1979	Willett	
4,144,978	A	3/1979	Drake	
4,162,799	A	7/1979	Willett	
4,182,338	A	1/1980	Stanulis	
4,193,612	A	3/1980	Masser	
4,358,096	A	11/1982	Paton et al.	
4,371,189	A	2/1983	Raidel	
4,420,171	A	12/1983	Raidel	
4,486,029	A	12/1984	Raidel	
4,504,080	A	3/1985	VanDenberg	
4,753,456	A	6/1988	Booher	
4,793,597	A	12/1988	Smith	
5,114,178	A	5/1992	Baxter	
5,150,918	A	9/1992	Heitzmann	
5,237,933	A	8/1993	Bucksbee	
5,676,356	A *	10/1997	Ekonen et al.	267/294
5,810,337	A	9/1998	McLaughlin	
5,868,384	A	2/1999	Anderson	
5,957,441	A	9/1999	Tews	
6,276,674	B1	8/2001	Randell	
6,328,294	B1	12/2001	Palinkas	
6,478,321	B1	11/2002	Heitzmann	
6,572,087	B2	6/2003	Schleinitz et al.	
6,585,286	B2	7/2003	Adema et al.	
6,659,438	B2 *	12/2003	Michael et al.	267/294
D496,887	S *	10/2004	Carlson	D12/159
6,817,301	B1	11/2004	Bullock	
6,877,623	B2	4/2005	Salis	
7,185,903	B2	3/2007	Dove	
D543,492	S *	5/2007	Lyew	D12/159
7,229,088	B2	6/2007	Dudding et al.	
7,234,723	B2 *	6/2007	Sellers	280/686
7,303,200	B2	12/2007	Ramsey	
2004/0262877	A1 *	12/2004	Sellers	280/124.165
2006/0071441	A1 *	4/2006	Mathis	280/124.128
2008/0030006	A1 *	2/2008	Sellers	280/686
2009/0008846	A1	1/2009	Yamakawa et al.	

OTHER PUBLICATIONS

U.S. Appl. No. 12/045,069, entitled "Elastomeric Spring Vehicle Suspension" and filed on Mar. 10, 2008.

Hendrickson, A Boler Company, Hendrickson Frame Hanger Selection Guide, May 1990.

Hendrickson, A Boler Company, Hendrickson RS Series, Single Axle Suspension, Sep. 1995.

Hendrickson, RS Series Rubber Load Cushion, Only Hendrickson makes choosing a heavy-duty suspension this easy, Jun. 1993.

Hendrickson, A Boler Company, HN Series Technical Sales Publication, Jun. 1997.

Hendrickson Suspension, RS Series rubber load cushion, Jul. 1991.

Hendrickson Mfg., Tandem Division, Wide spread equalizing beams, sales bulletin, May 1981.

Hendrickson Mfg. Co., Tandem Division, Hendrickson Tandem Suspensions for GMC Trucks, Aug. 1979.

Hendrickson, The Boler Company, RS Frame Hanger, Dec. 1997.

Hendrickson, A Boler Company, RS Series Rubber Load Cushion Suspensions, Mar. 1996.

Hendrickson, A Boler Company, RS Series Rubber Load Cushion Suspensions, Jul. 1996.

Hendrickson, A Boler Company, RS Series Rubber Load Cushion, Mar. 1998.

Hendrickson Suspension, HN Series Premium Rubber, Hendrickson introduces a completely new concept in Walking Beam Suspension, Jun. 1993.

Hendrickson Suspension, A Boler Company, Hendrickson HNT Series, Feb. 1992.

Hendrickson Suspension, Sales Engineering Update, Mar. 1993.

Hendrickson Truck Suspension Systems, A Boler Company, RS Series Rubber Load Cushion, Dec. 1996.

Hendrickson Truck Suspension Systems, A Boler Company, RS Series Rubber Load Cushion, Apr. 1998.

Hendrickson Truck Suspension Systems, A Boler Company, HN Series VariRate Spring System, May 1997.

Hendrickson Truck Suspension Systems, A Boler Company, HN Series VariRate Spring System, Nov. 1997.

Hendrickson Truck Suspension Systems, A Boler Company, HN Series VariRate Spring System, Sep. 1998.

Hendrickson Truck Suspension Systems, A Boler Company, HN Series VariRate Spring System, Jul. 1999.

Hendrickson, HN Series VariRate Spring System, Nov. 2000.

Hendrickson, HN Series VariRate Spring System, Nov. 2005.

Hendrickson Truck Suspension Systems, A Boler Company, HN 402, Feb. 1996.

Hendrickson Truck Suspension Systems, A Boler Company, R Series Solid Mount, Jul. 1999.

Hendrickson Truck Suspension Systems, A Boler Company, RS Series Rubber Load Cushion, Jun. 1999.

Hendrickson, Haulmaax Heavy Duty Suspension, Oct. 2001.

Hendrickson, Haulmaax Heavy Duty Suspension, Dec. 2003.

Hendrickson, Haulmaax Heavy Duty Suspension, Mar. 2005.

Hendrickson, Haulmaax Heavy Duty Suspension, Jan. 2007.

Hendrickson, Haulmaax Heavy Duty Suspension, Mar. 2008.

Hendrickson, Assembly Instructions Haulmaax, Subject: Kit Nos. 64178-003 & 004, Feb. 2003.

Hendrickson, Assembly Instructions Haulmaax, Subject: Tie-bar Bolster Spring Kit Nos. 64179-037, Jun. 2006.

Hendrickson, Assembly Instructions Haulmaax, Subject: Outboard Frame Bracket for Paccar Vehicles Built after May 1, 2005 through Aug. 31, 2006, Oct. 2006.

Hendrickson, Assembly Instructions Haulmaax Saddle Assembly, Subject: Service Kit No. 57974-048, Dec. 2008.

Hendrickson, Technical Bulletin HN 402/462/522, Subject: Auxiliary Spring Shim Design, Oct. 2000.

Hendrickson, Technical Bulletin HN 402/462/522, Subject: Auxiliary Spring Shim Design, Dec. 2000.

Hendrickson, Technical Bulletin HN 402/462/522, Subject: Auxiliary Spring Shim Design, Jun. 2006.

Hendrickson, Technical Bulletin Haulmaax Series, Subject: Mandatory Shock Applications, Nov. 2004.

Hendrickson, Technical Bulletin R, RS, RT/RTE 46K Capacity, Subject: 46K Heavy-Duty Beam Option, Dec. 2004.

Hendrickson, Technical Bulletin Haulmaax, Subject: 54" Equalizing Beam Assembly, Oct. 2005.

Hendrickson, Technical Bulletin Haulmaax 460, Subject: Bolster Spring Assembly with Tie-bar, Jun. 2006.

Hendrickson Truck Suspension Systems, A Boler Company, Sales engineering update, Subject: HN-402/462 Auxiliary Spring Assembly, Aug. 1998.

Hendrickson Truck Suspension Systems, A Boler Company, Sales engineering update, Subject: Model Designation and Discontinuation, Aug. 1999.

Hendrickson Truck Suspension Systems, a Boler Company, Sales engineering update, Subject: Equalizer Beam, Aug. 1999.

Hendrickson, Parts List Rs Series, Nov. 2004.

Hendrickson, Parts List Haulmaax, May 2002.

Hendrickson, Parts List Haulmaax, Jul. 2003.

Hendrickson, Parts List Haulmaax, Jul. 2006.

Hendrickson, Parts List Haulmaax, Dec. 2007.

Hendrickson, Parts List RS 400/460/480/520 Jan. 1998.

Hendrickson, Parts List HN 402/462, Sep. 1997.

Hendrickson, Parts List HN Series, Dec. 2004.

Hendrickson Truck Suspension Systems, A Boler Company, Technical Publication RS-340 thru 520, Subject: Springing: Frame Hangers, Load Cushions and Saddle Assembly, Jul. 1993.

Hendrickson Truck Suspension Systems, A Boler Company, Technical Publication HN Series Truck & Trailer Suspension No. 17730-198, Mar. 1993.

Hendrickson, Technical Procedure HN/HNT-400/460 Truck & Trailer Suspension in Production Nov. 1988-Sep. 1996, Apr. 1998.

Hendrickson Truck Suspension Systems, A Boler Company, Technical Publication HN 402 Series, Subject: Service Instructions, Aug. 1996.

Hendrickson Truck Suspension Systems, A Boler Company, Technical Publication HN 402/462 Series, Subject: Service Instructions, Aug. 1998.

Hendrickson, Technical Procedure Haulmaax, Subject: Service Instructions, May 2002.

Hendrickson, Technical Procedure Haulmaax, Subject: Service Instructions, Jun. 2007.

Hendrickson, Technical Procedure Haulmaax, Subject: Pre-delivery Inspection and Preventive Maintenance, Apr. 2006.

Hendrickson, Technical Procedure Haulmaax, Subject: Service Instructions, Dec. 2007.

Hendrickson, Technical Procedure R/RS/RT Heavy Duty, Subject: 650K/850K/1000K Pound Capacity Beam End Connection Tightening Torque Procedure, Jul. 2006.

Hendrickson, RS Series Rubber Load Cushion, Feb. 2000.

Mor/Ryde, The Mor/ryde Steer and Drive Axle Suspension Systems, Mar. 7, 2008.

Mor/Ryde, Company Profile, downloaded from the World Wide Web at <http://vwww.morrydede.com/php/about/profile/php> on Feb. 28, 2008.

Mor/Ryde, T/A Modular Rubber Suspension System, Service Manual, Mar. 5, 2003.

Mor/Ryde, Tandem Axle Rubber Suspension Sytem, Service Manual, Suspension Codes: T01-01 and L01-01, Mar. 5, 2003.

Mor/Ryde, RL Rubber Leaf Suspension System, Owner's Manual, Mar. 12, 2003.

Mor/Ryde, Commercial Trailer Suspension, Jun. 1973.

Mor/Ryde, School Bus Suspension, Aug. 1973.

Mor/Ryde, A rubber spring . . . heart of the Mor/ryde system, Aug. 1973.

Jorn, Technology in Rubber—Metal, Sep. 29, 2008.

Hendrickson, Parts List RS Series, Apr. 2008.

Hendrickson, Technical Procedure, R/RS Heavy Duty, Subject: 85K/100K/120K lbs Capacity Tightening Torgue for Torque Rod and Saddle Assembly Fasteners, Oct. 2008.

U.S. Appl. No. 29/339,128, filed Jun. 24, 2009 and entitled "Spring Mount."

U.S. Appl. No. 29/339,134, filed Jun. 24, 2009 and entitled "Suspension Assembly."

U.S. Appl. No. 12/545,828, filed Aug. 22, 2009 and entitled "Tie-plate and Frame Hanger of a Suspension Assembly."

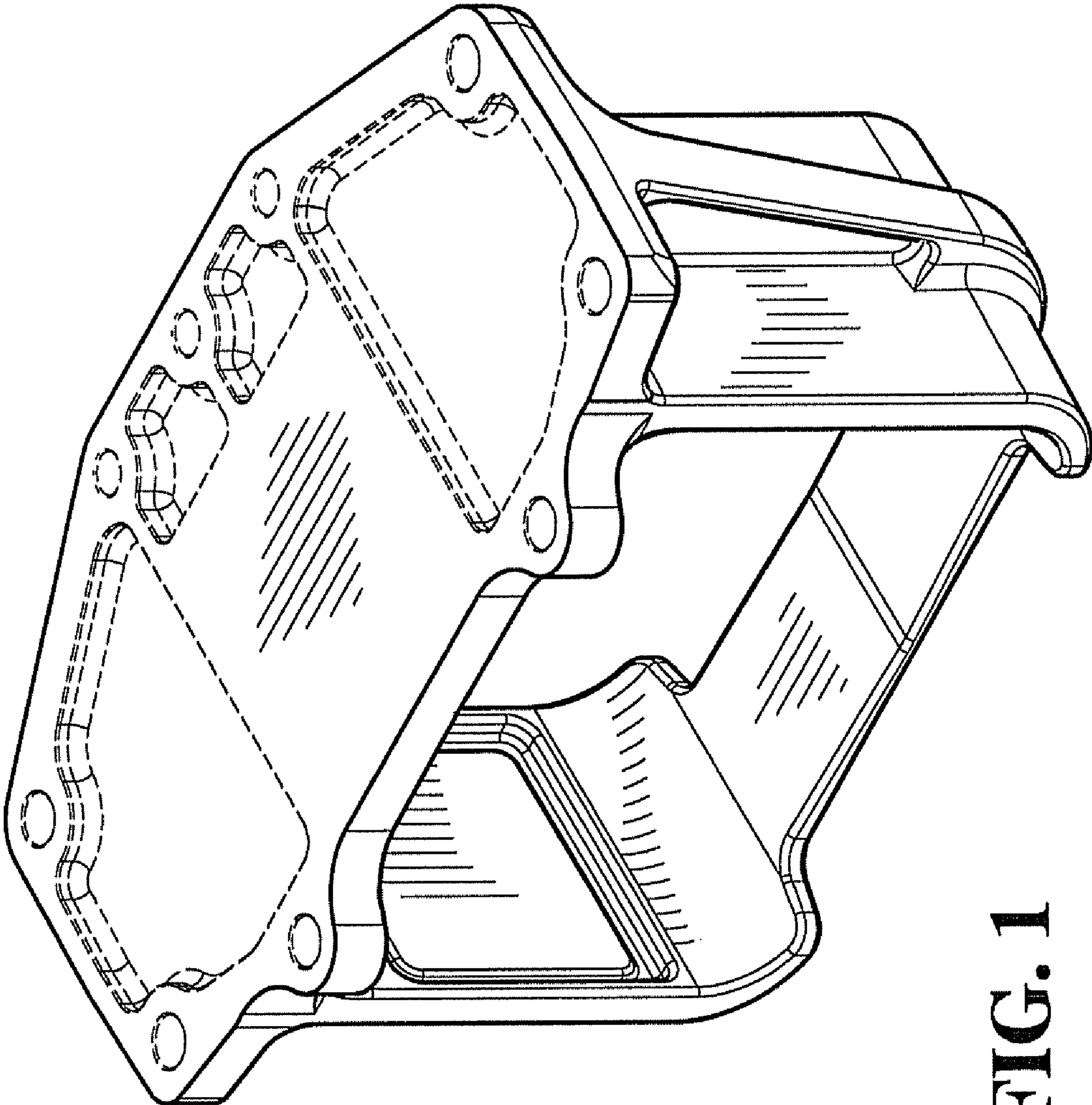
U.S. Appl. No. 29/337,985, filed Jun. 2, 2009 and entitled "Spring Housing for a Suspension."

U.S. Appl. No. 29/339,132, filed Jun. 24, 2009 and entitled "Spring Housing."

U.S. Appl. No. 29/315,182, filed Jun. 2, 2009 and entitled "Suspension Assembly."

U.S. Appl. No. 12/334,195, filed Dec. 12, 2008 and entitled "Modular Suspension System and Components Thereof."

\* cited by examiner



**FIG. 1**

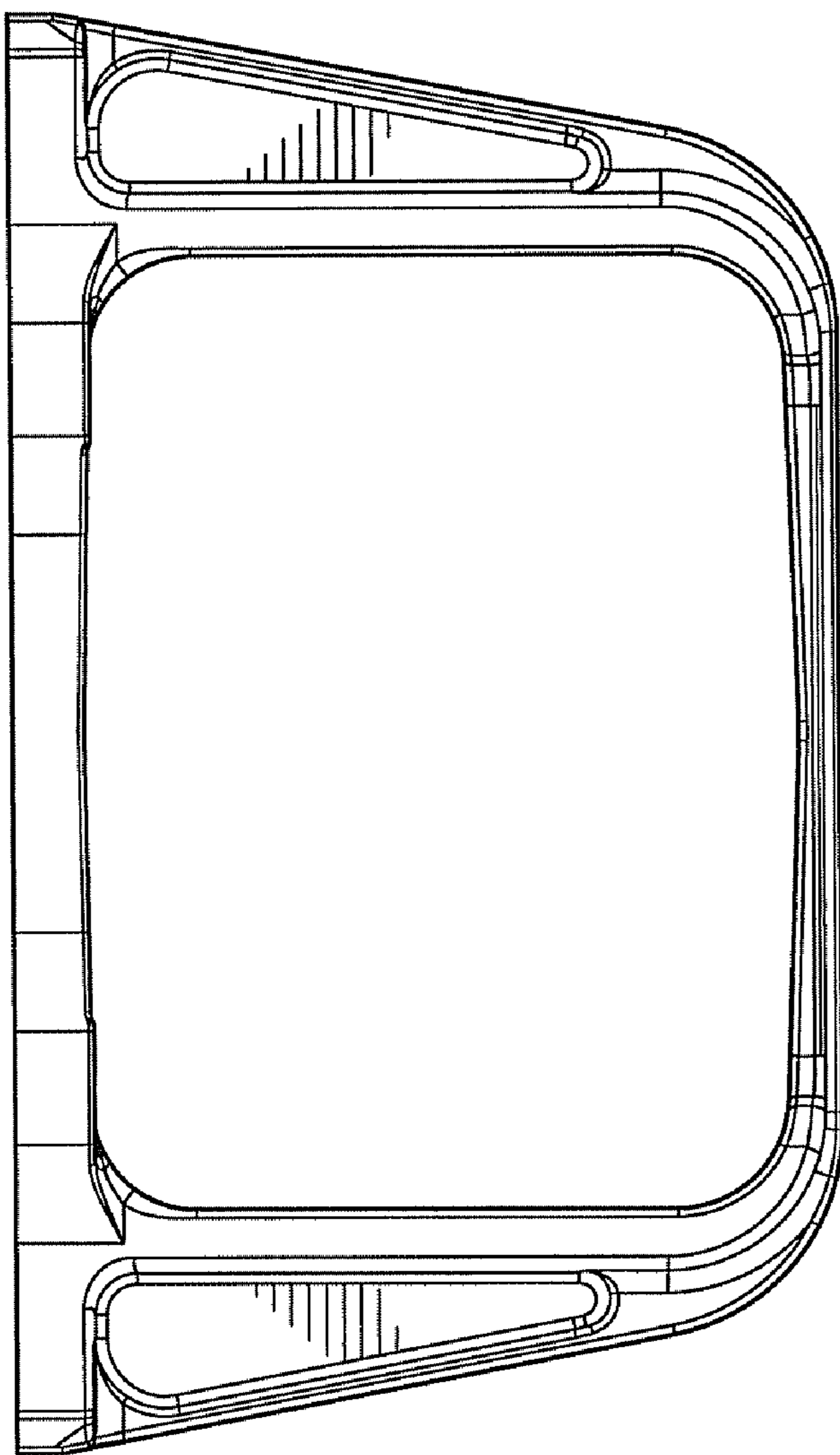


FIG. 2

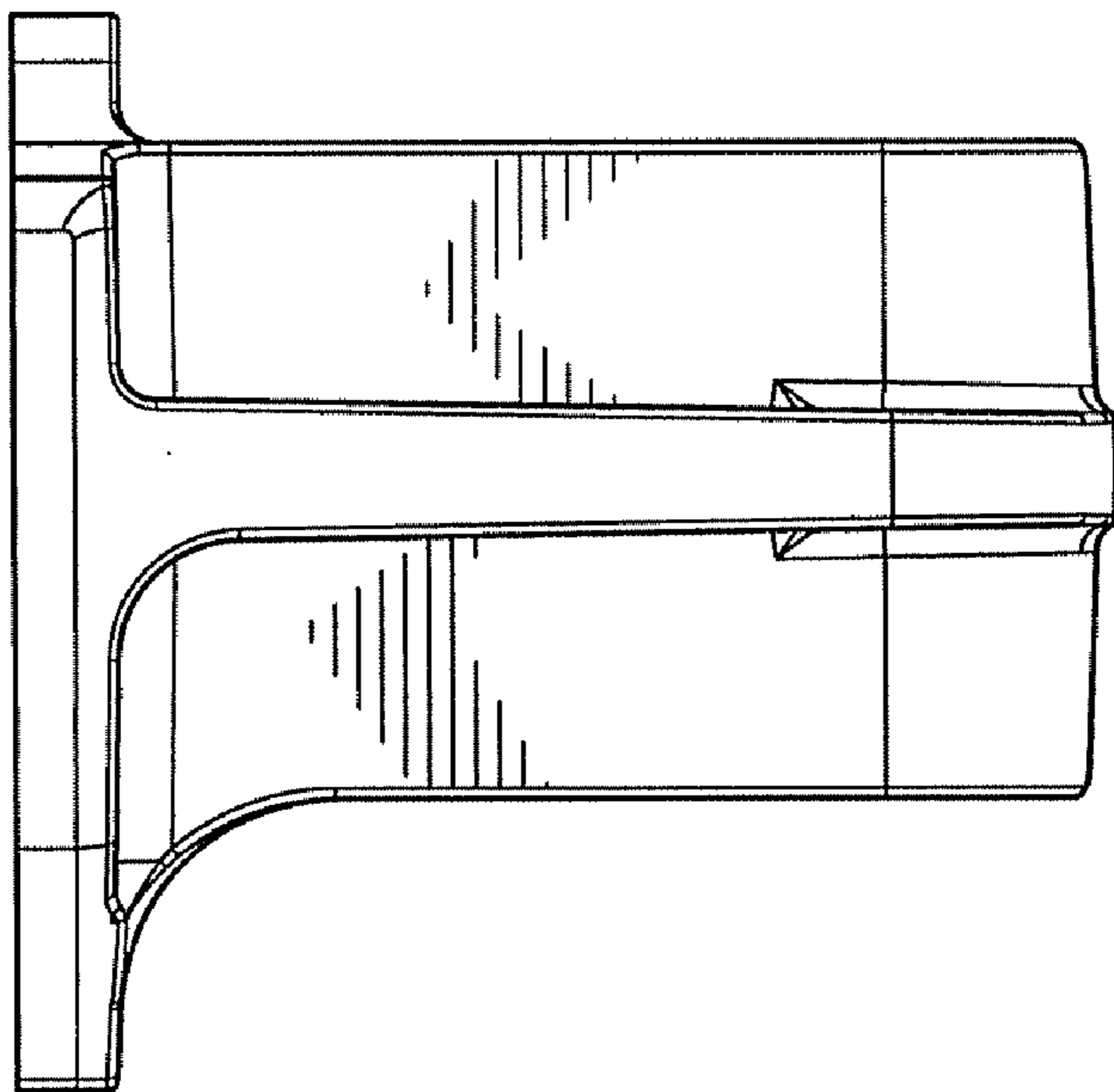
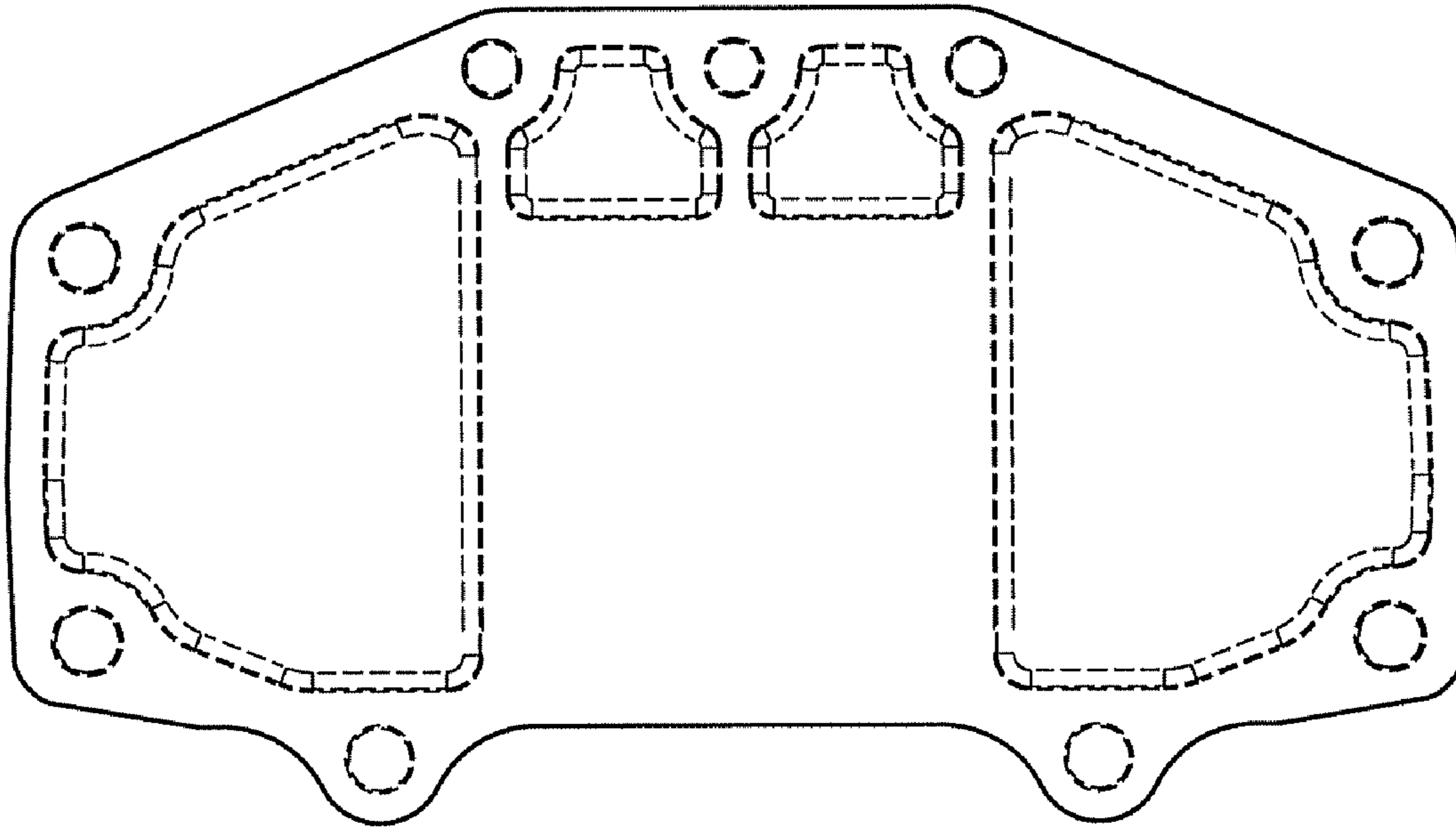
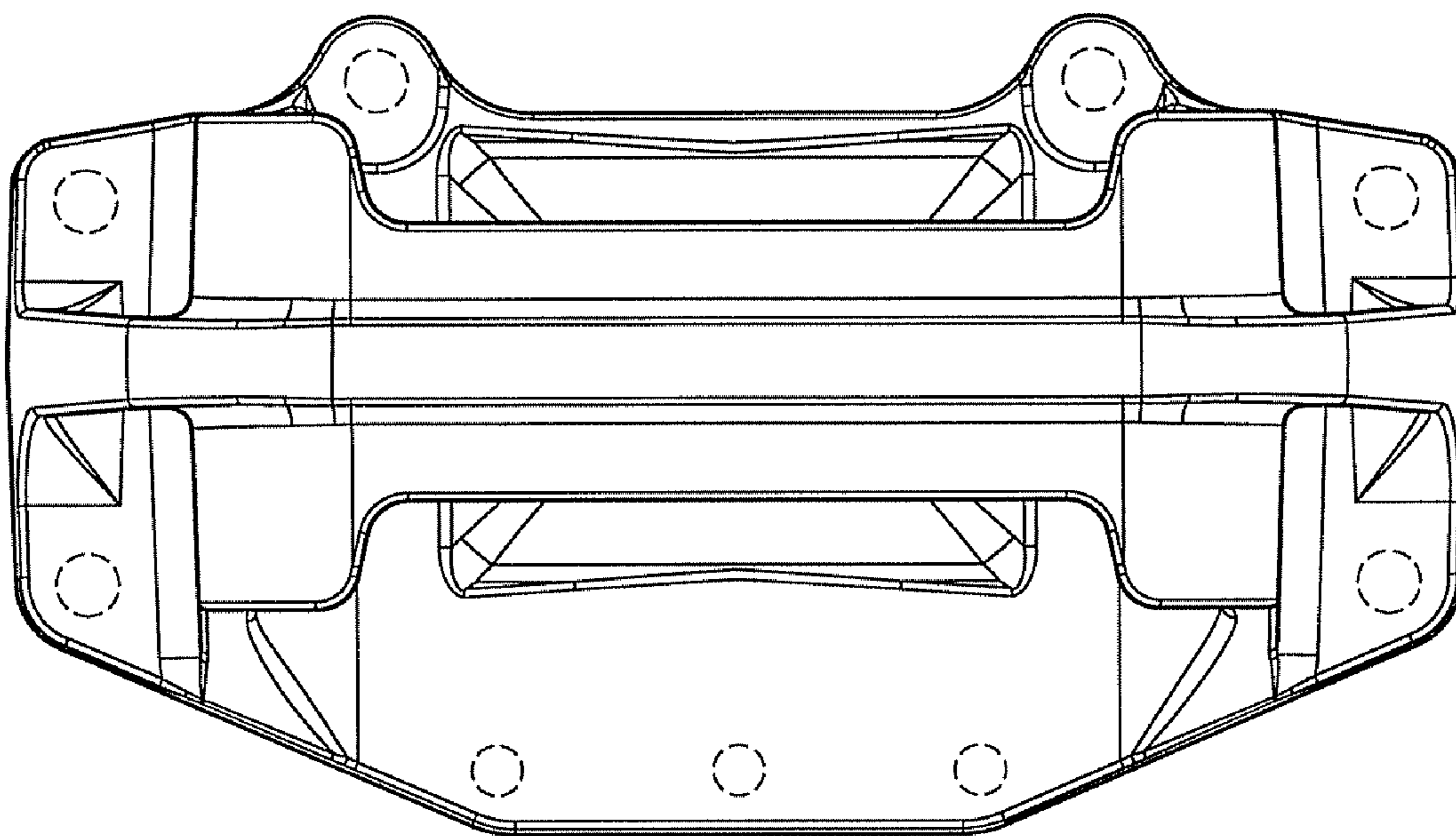


FIG. 6

**FIG. 3**



**FIG. 4**



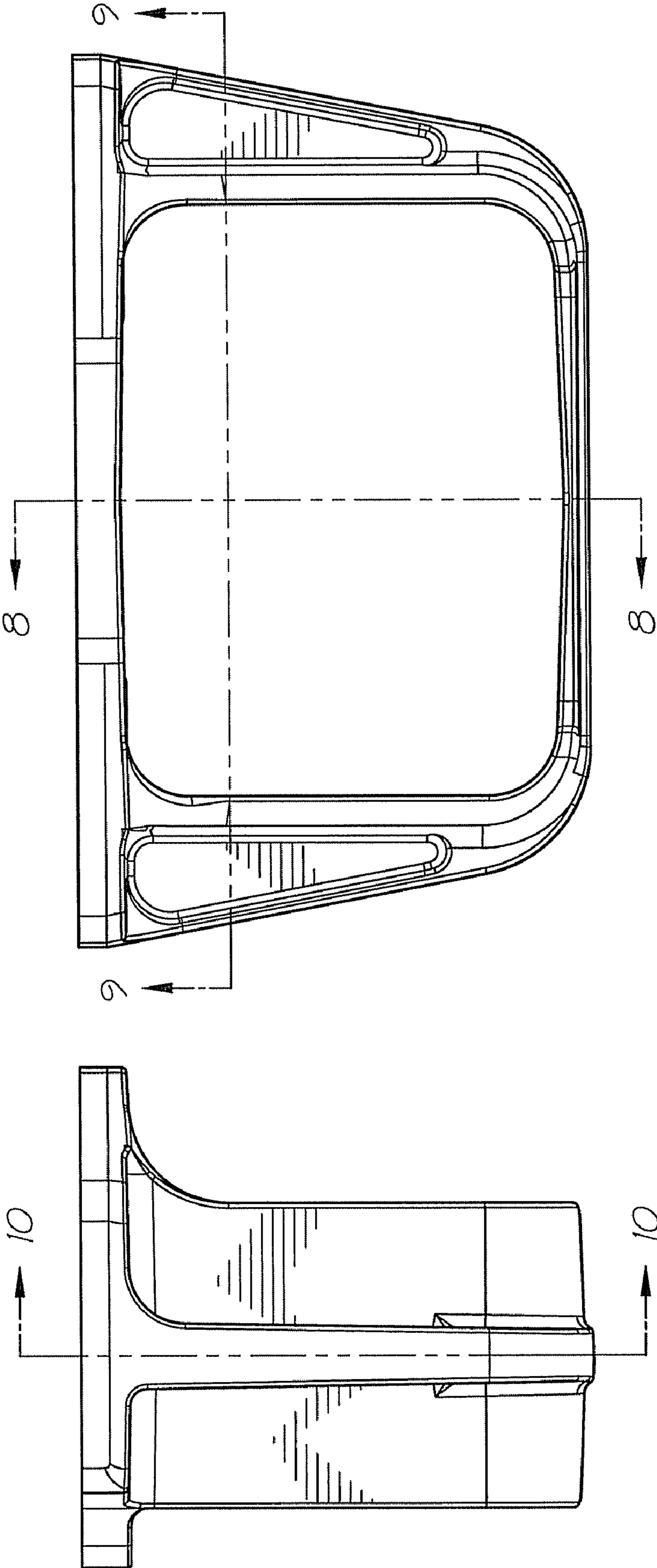


FIG. 7

FIG. 5

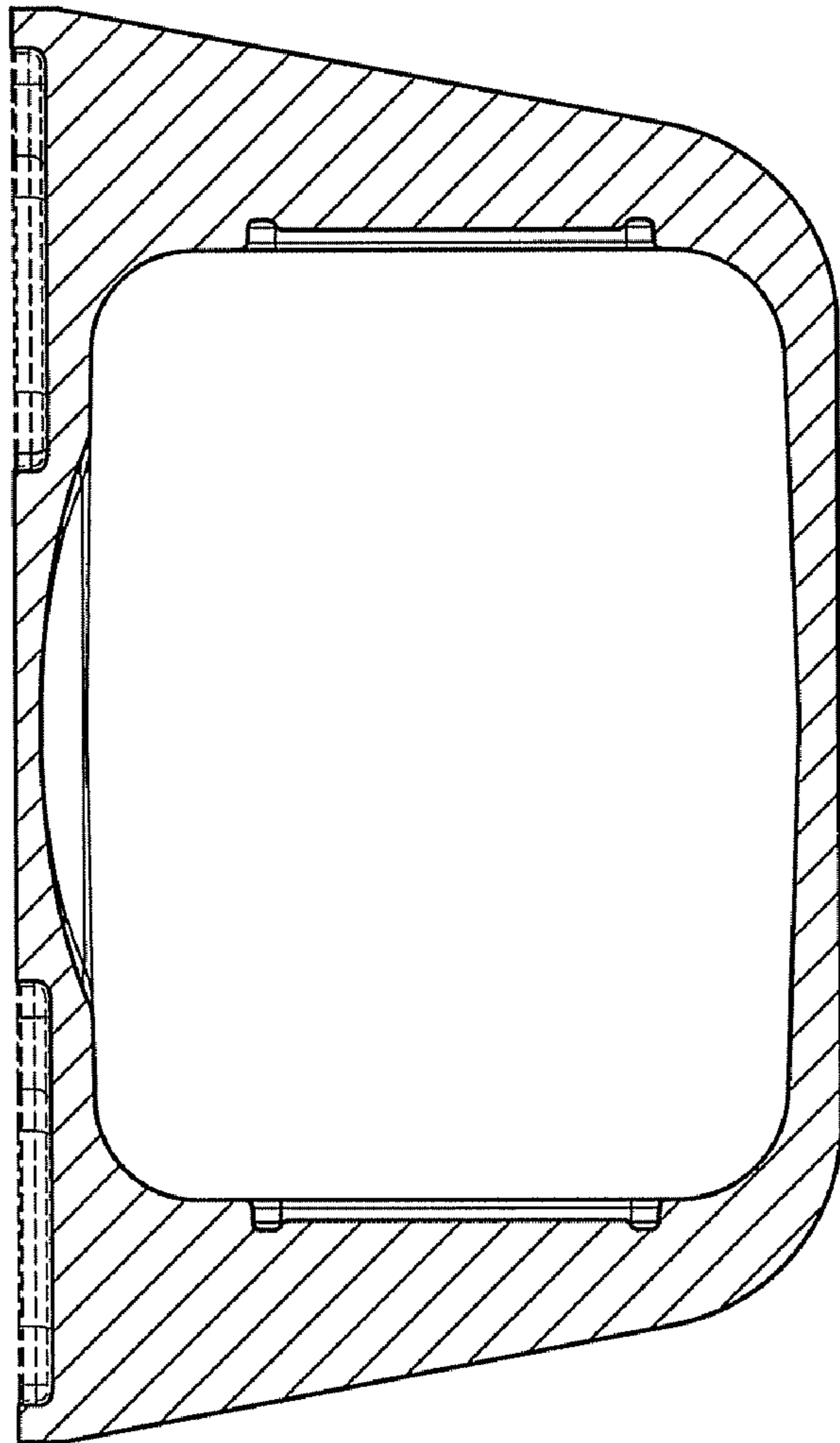


FIG. 10

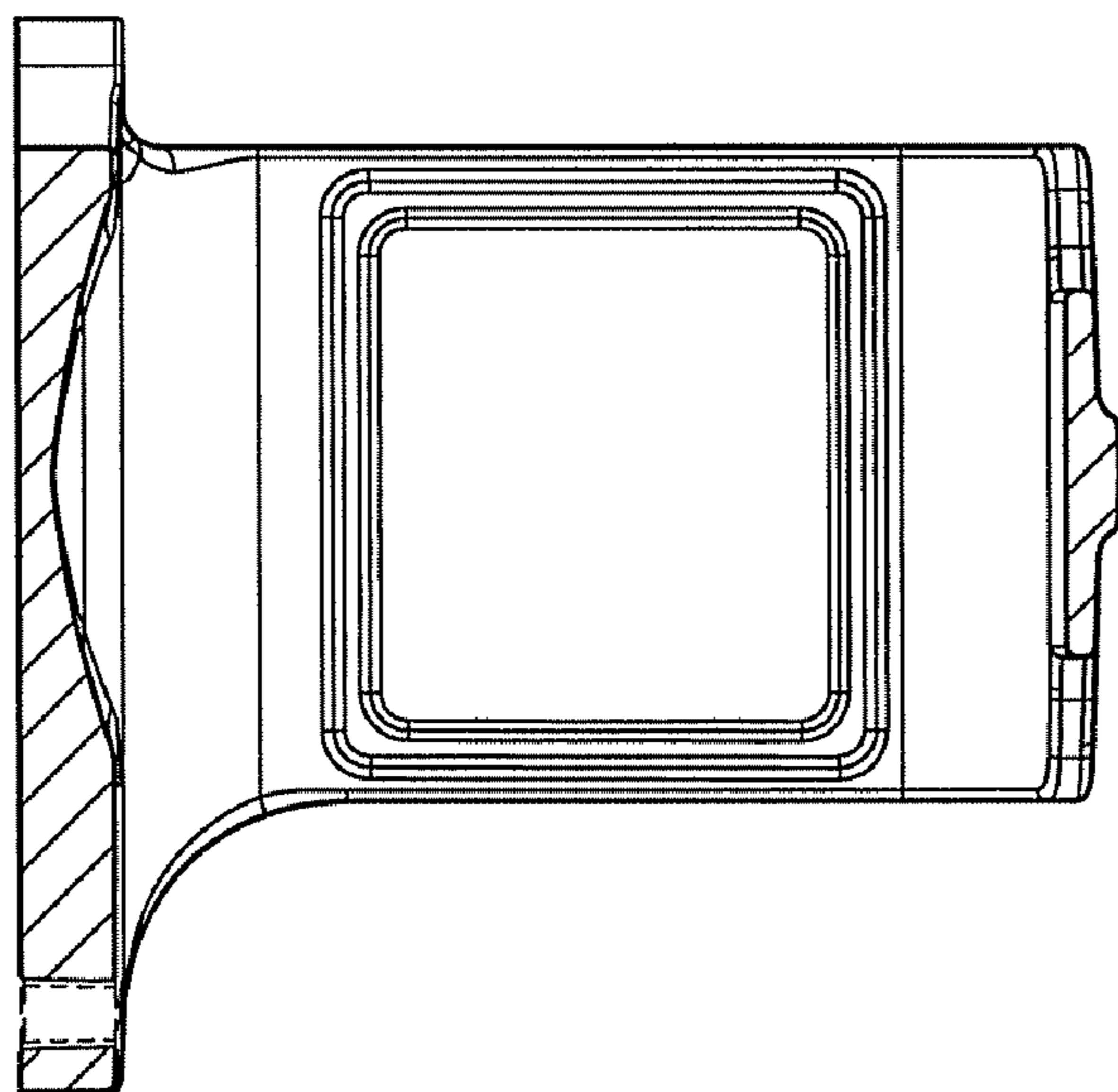
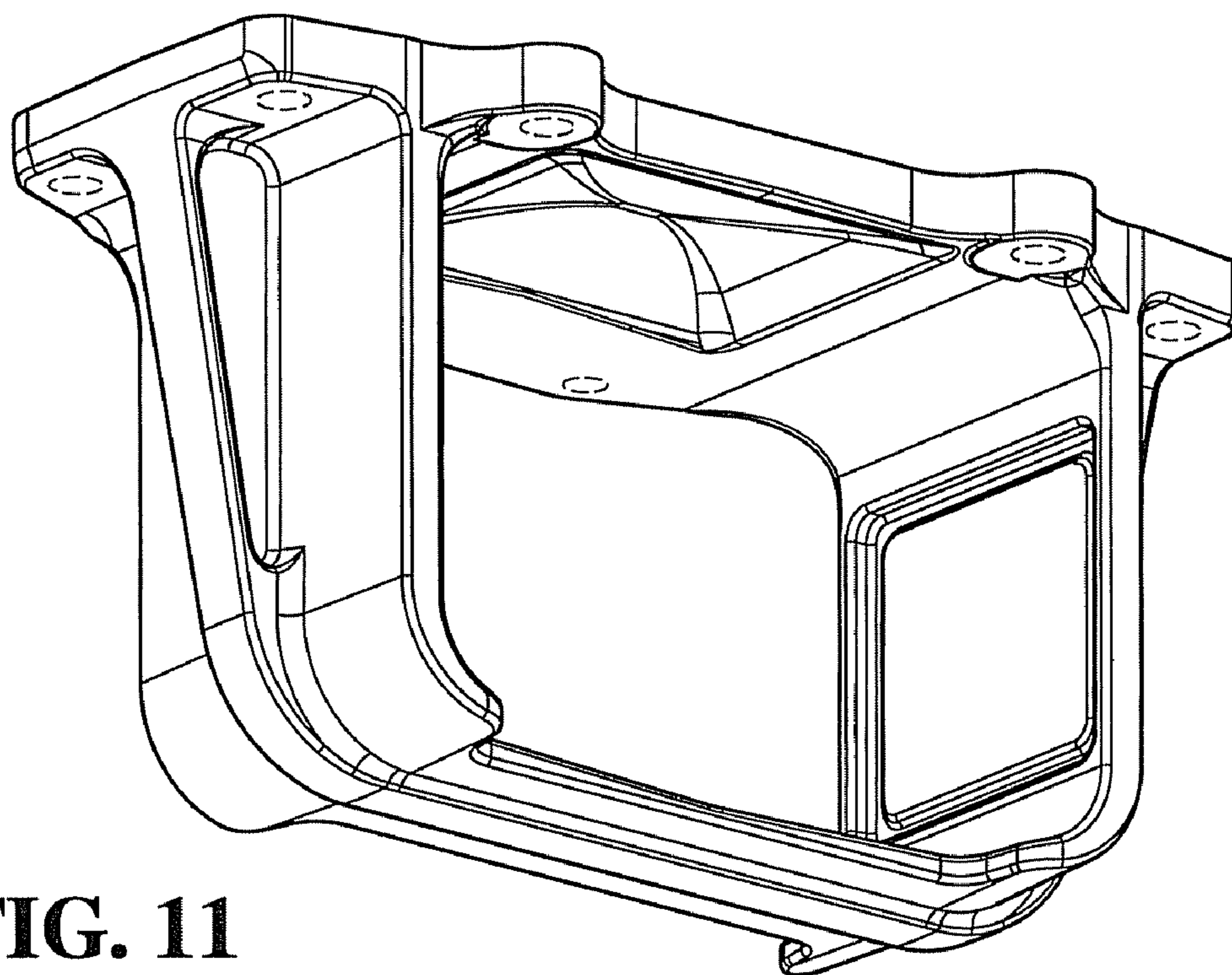
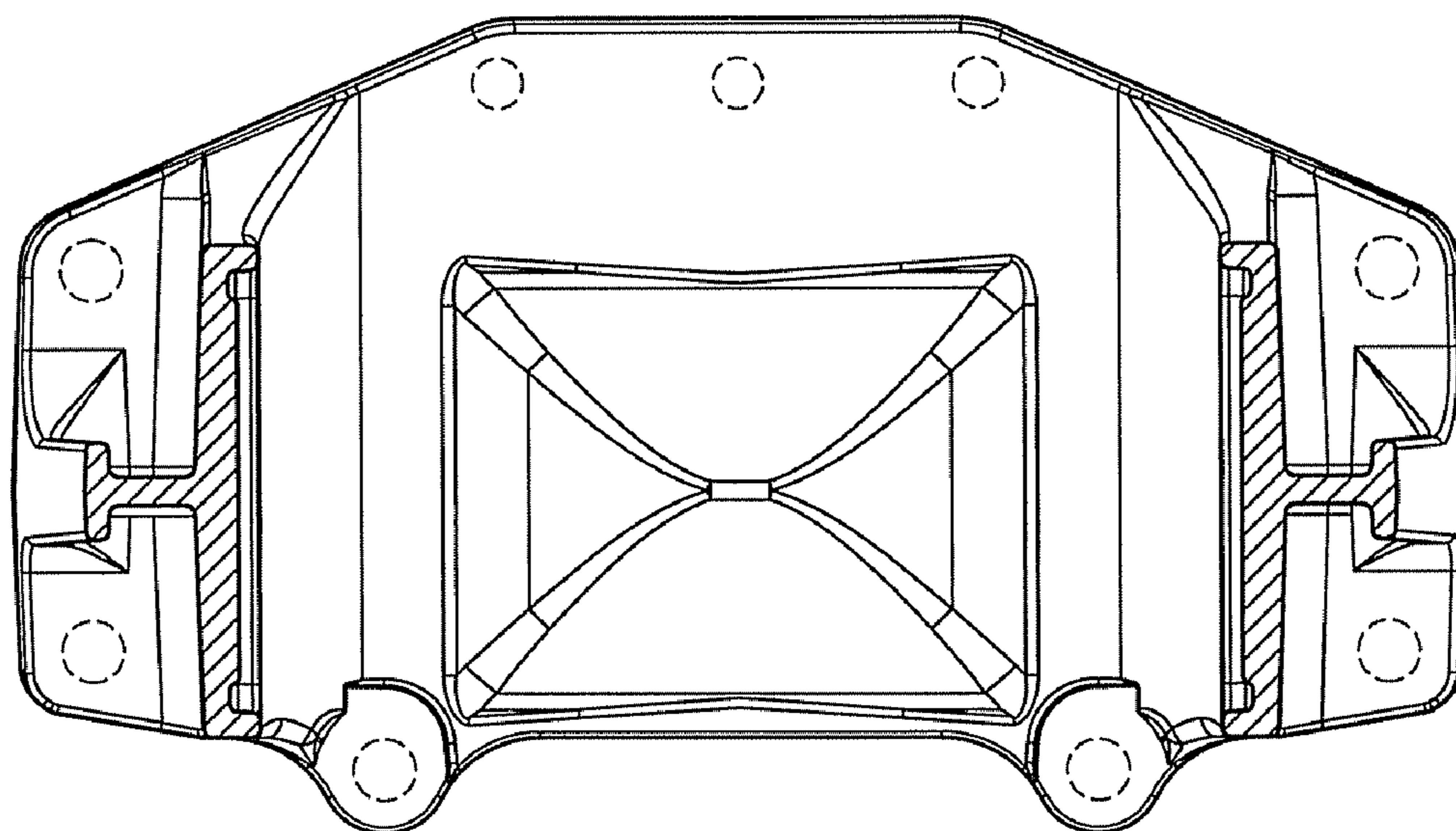


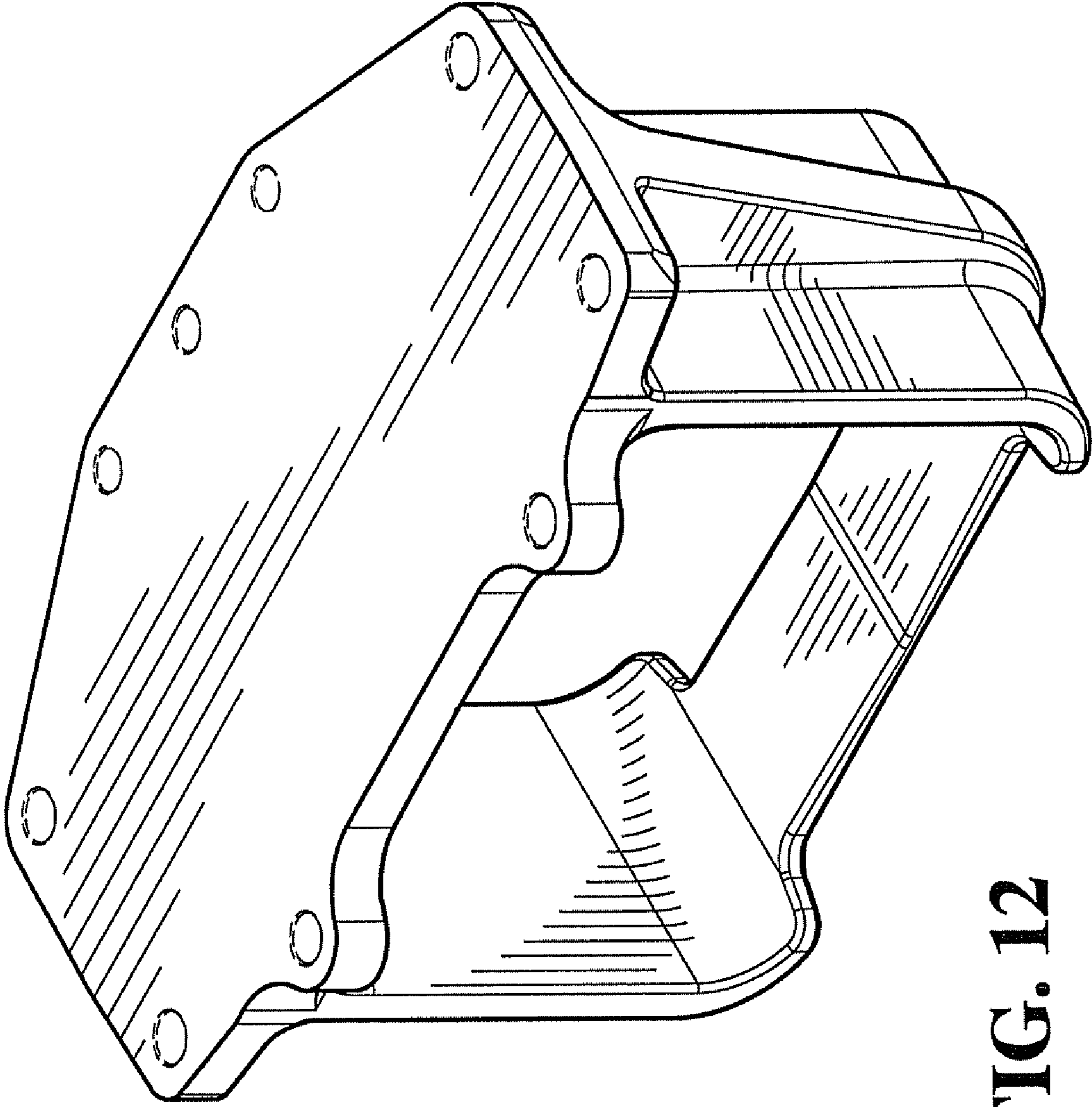
FIG. 8



**FIG. 9**



**FIG. 11**



**FIG. 12**

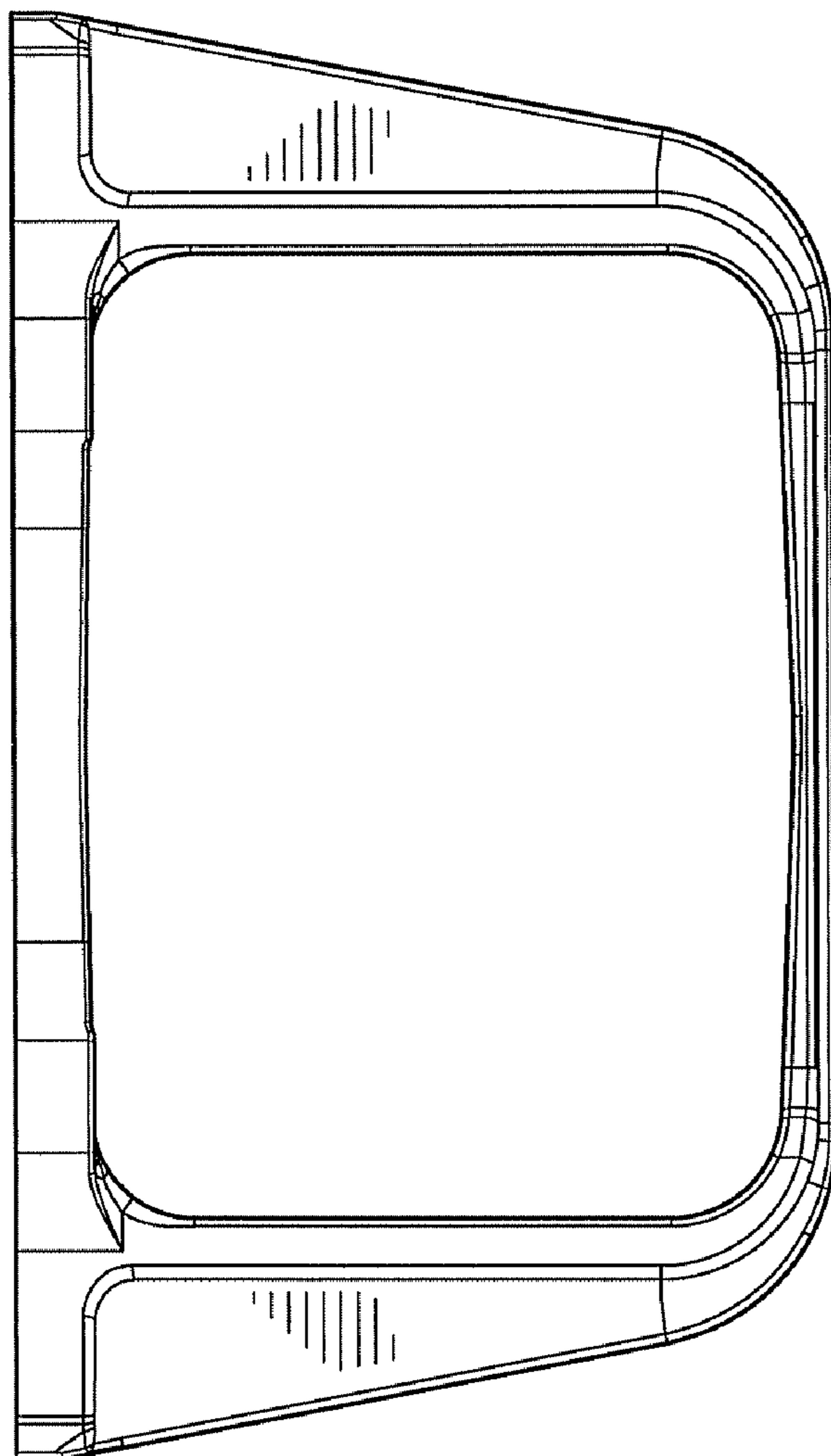


FIG. 13

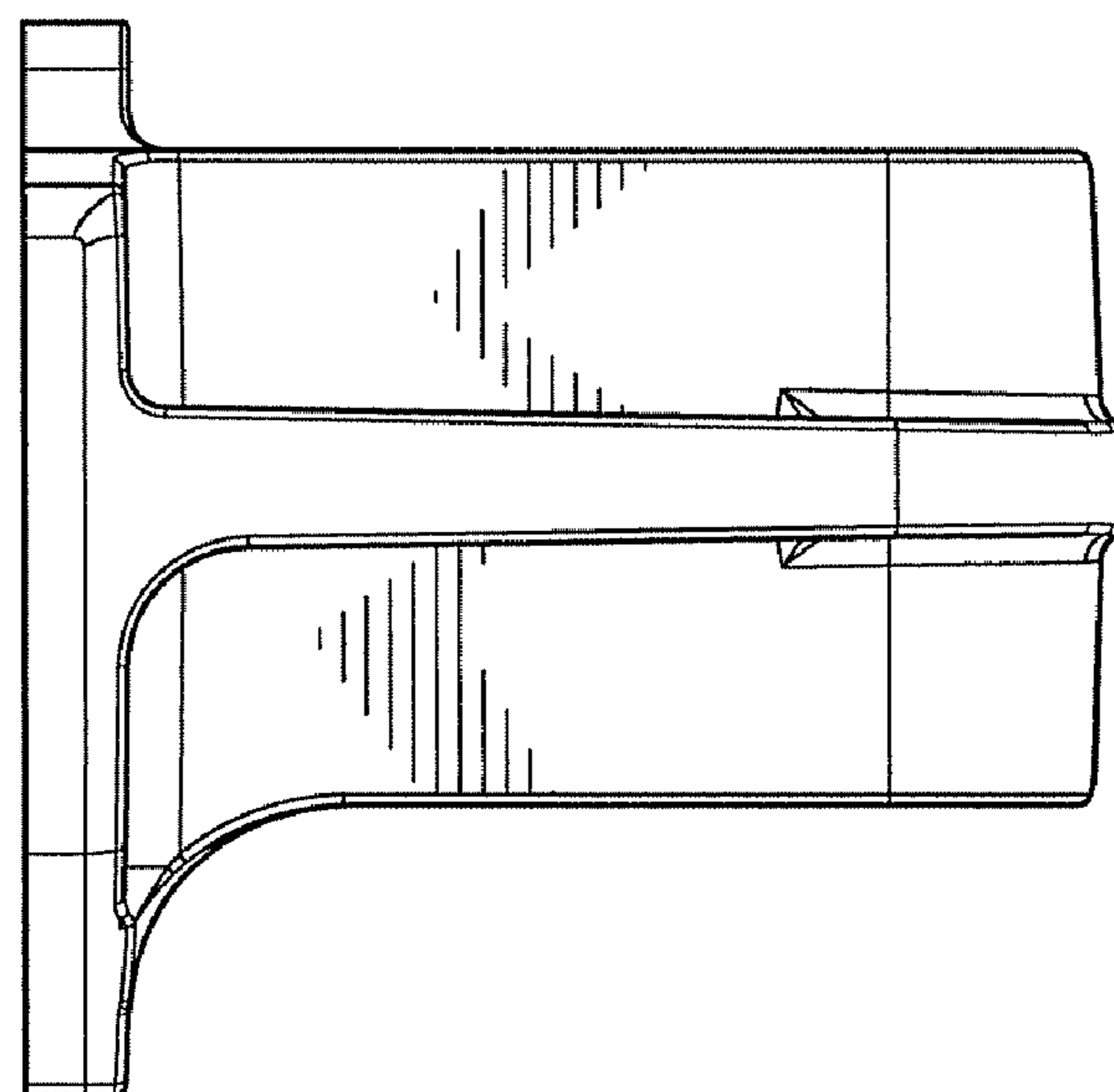
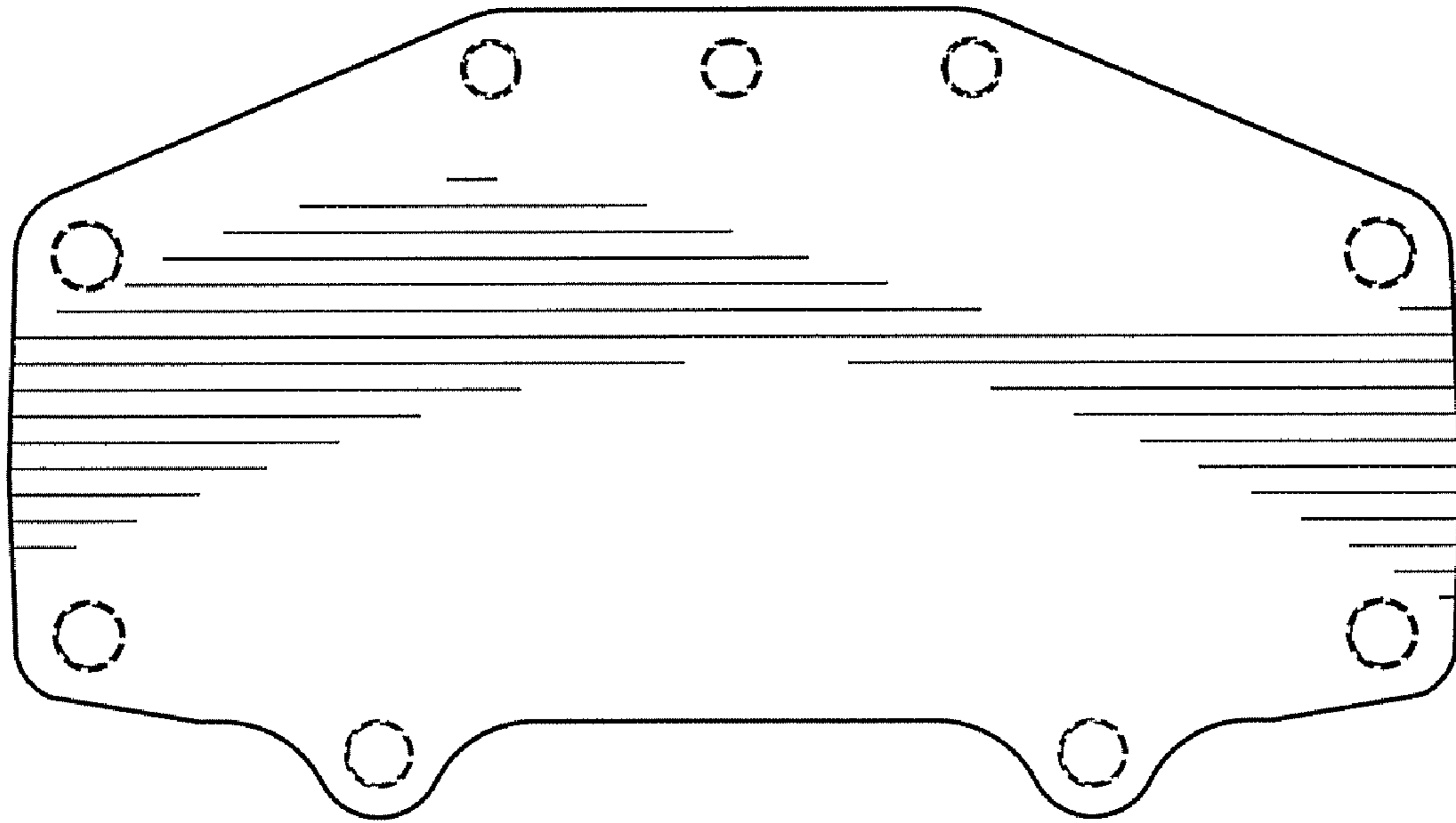
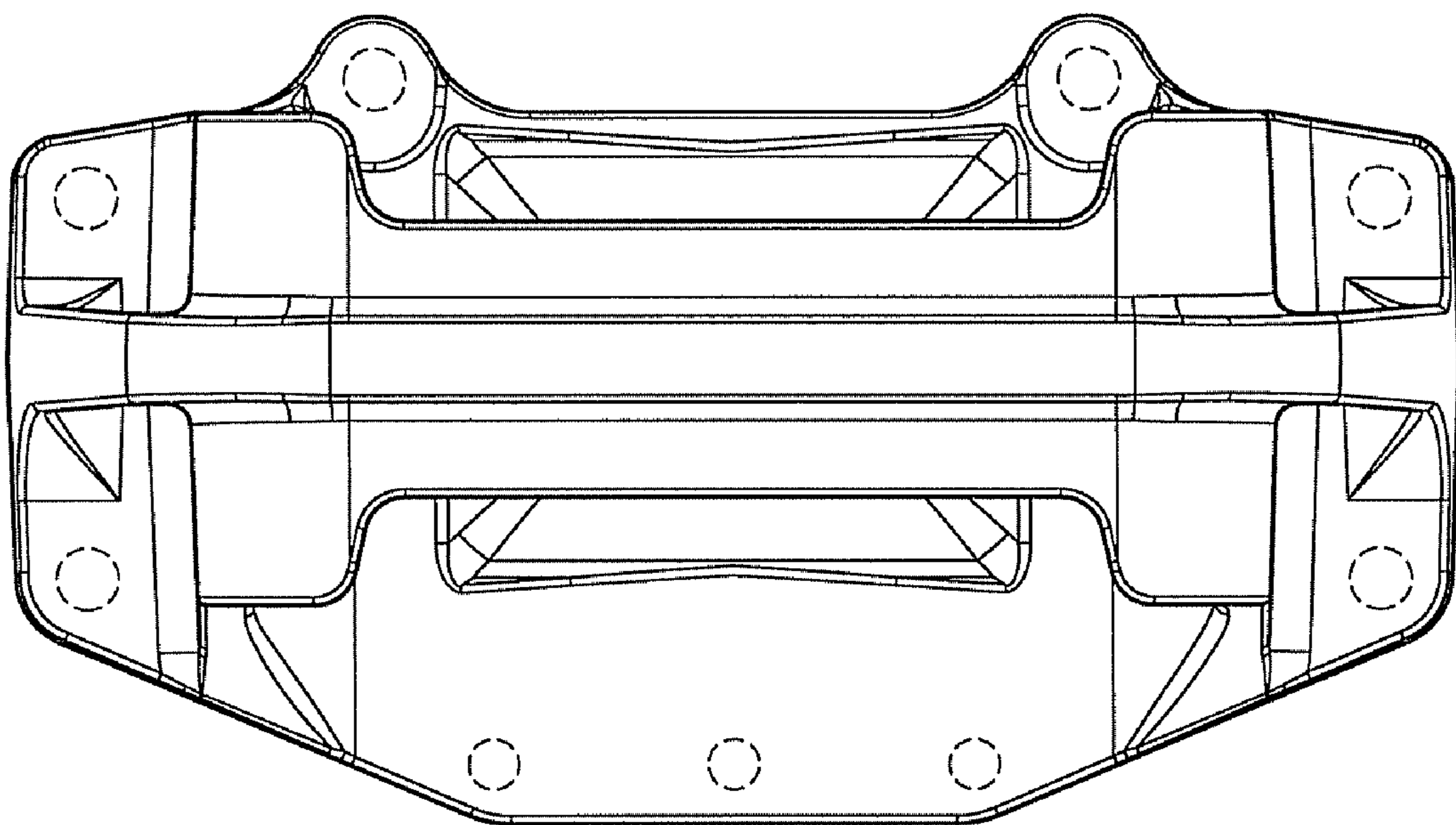


FIG. 14

**FIG. 15**



**FIG. 16**



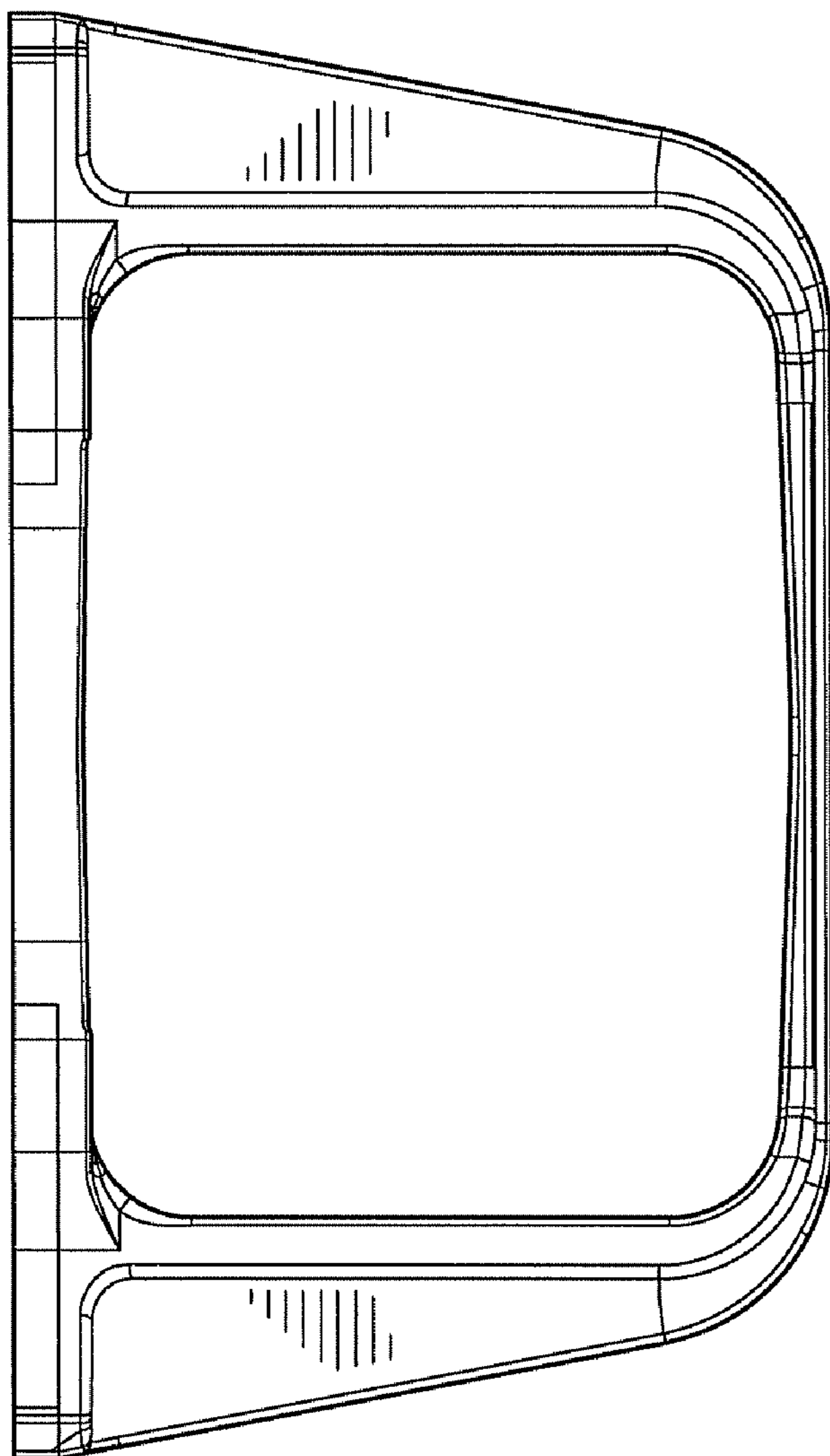


FIG. 18

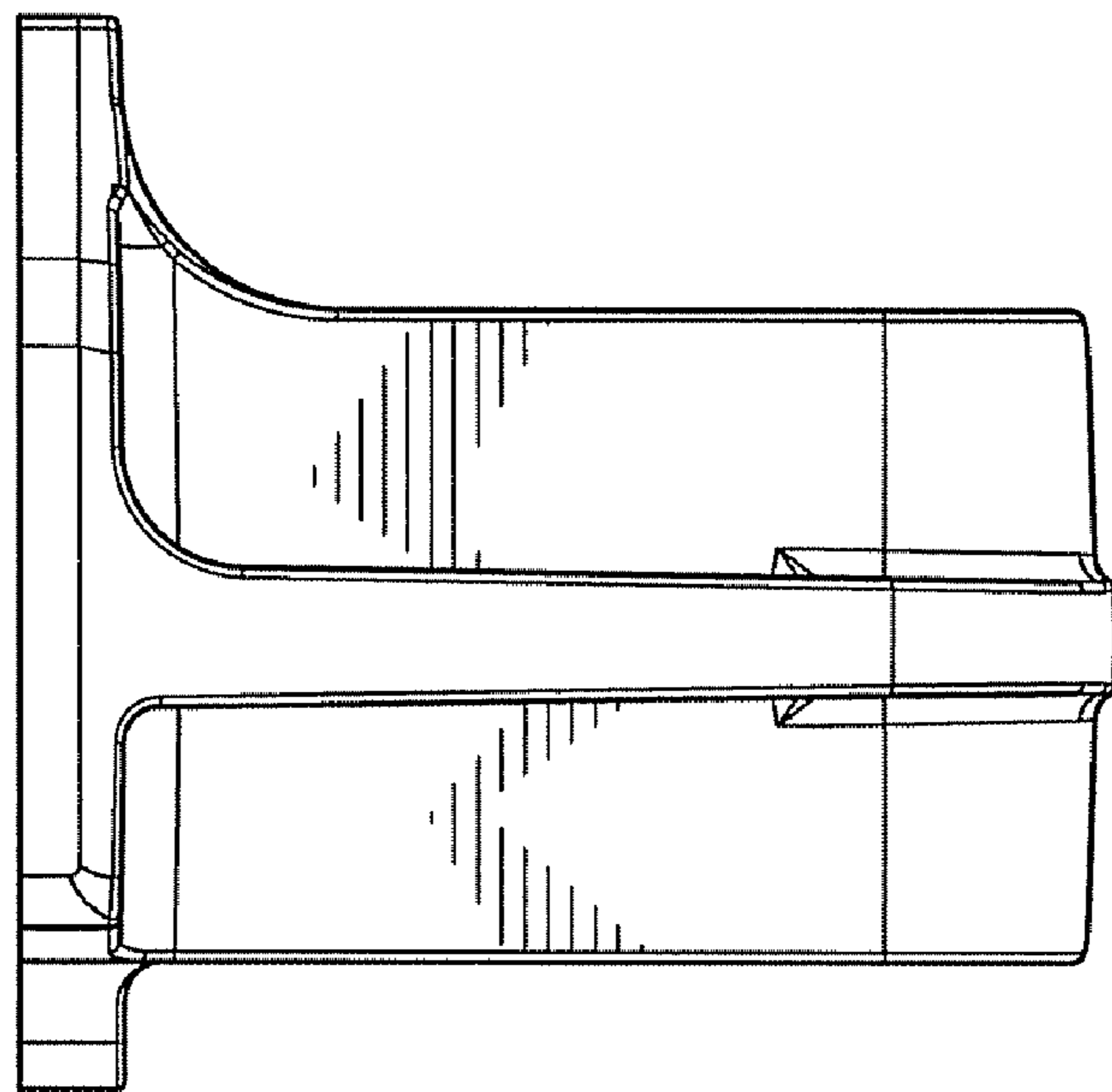
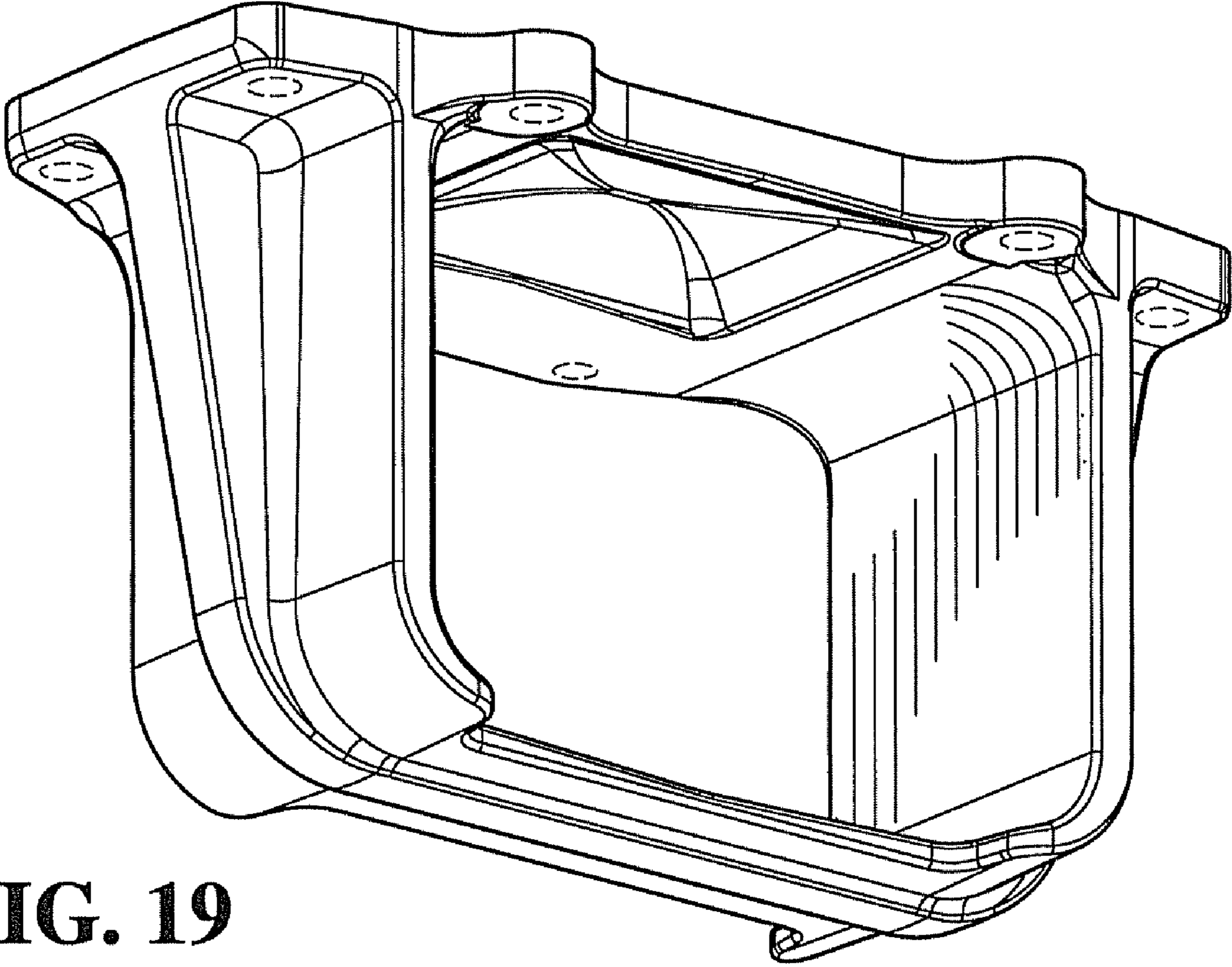


FIG. 17



**FIG. 19**

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

PATENT NO. : Des. 615,005 S  
APPLICATION NO. : 29/329357  
DATED : May 4, 2010  
INVENTOR(S) : Shawn D. Noble et al.

Page 1 of 8

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 the attached title page showing the corrected number of drawing sheets.

Delete Drawing Sheets 1-11 consisting of FIGS. 1-19 and substitute therefore the attached Drawing Sheets 1-6 consisting of FIGS. 1-11.

Signed and Sealed this

Nineteenth Day of October, 2010

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

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

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

(10) **Patent No.:** **US D615,005 S**  
(45) **Date of Patent:** **\*\* May 4, 2010**

(54) **SPRING HOUSING FOR A SUSPENSION**

*Primary Examiner*---F. Chase Nelson

(75) Inventors: **Shawn D. Noble**, Naperville, IL (US);  
**Michael P. Robinson**, Chicago, IL (US)

*Assistant Examiner*--- Michael A Pratt

(74) *Attorney, Agent, or Firm*---McDonnell Boehnen Hulbert & Berghoff, LLP

(73) Assignee: **Hendrickson USA, L.L.C.**, Itasca, IL (US)

(57) **CLAIM**

The ornamental design for a spring housing for a suspension, as shown and described.

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

(21) Appl. No.: **29/329,357**

**DESCRIPTION**

(22) Filed: **Dec. 12, 2008**

**Related U.S. Application Data**

(63) Continuation-in-part of application No. 12/045,069, filed on Mar. 10, 2008.

FIG. 1 is a perspective view showing the top, front, and right side of a first embodiment of a spring housing having the inventive design;

(51) **LOC (9) Cl.** ..... **12-16**

(52) **U.S. Cl.** ..... **D12/159**

(58) **Field of Classification Search** ..... D12/400,  
D12/340, 161, 159, 120, 118, 114; 280/11.225,  
280/86.752; 188/315, 316, 298, 274, 281,  
188/286, 297; 293/134; 267/195; 279/2.01,  
279/2.17

FIG. 2 is a front elevational view of the spring housing shown in FIG. 1;

FIG. 3 is a top view of the spring housing shown in FIG. 1;

FIG. 4 is a bottom view of the spring housing shown in FIG. 1;

FIG. 5 is a right side elevational view of the spring housing shown in FIG. 1 and includes sectional lines 10--10;

See application file for complete search history.

FIG. 6 is a left side elevational view of the spring housing shown in FIG. 1;

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

3,279,820 A 10/1966 Hickman  
3,997,151 A 12/1976 Leingang

FIG. 7 is a back elevational view of the spring housing shown in FIG. 1 and includes sectional lines 8--8 and 9--9;

FIG. 8 is a sectional view of the spring housing illustrated in FIG. 7, taken along sectional lines 8--8 thereof;

FIG. 9 is a sectional view of the spring housing illustrated in FIG. 7, taken along sectional lines 9--9 thereof;

(Continued)

**OTHER PUBLICATIONS**

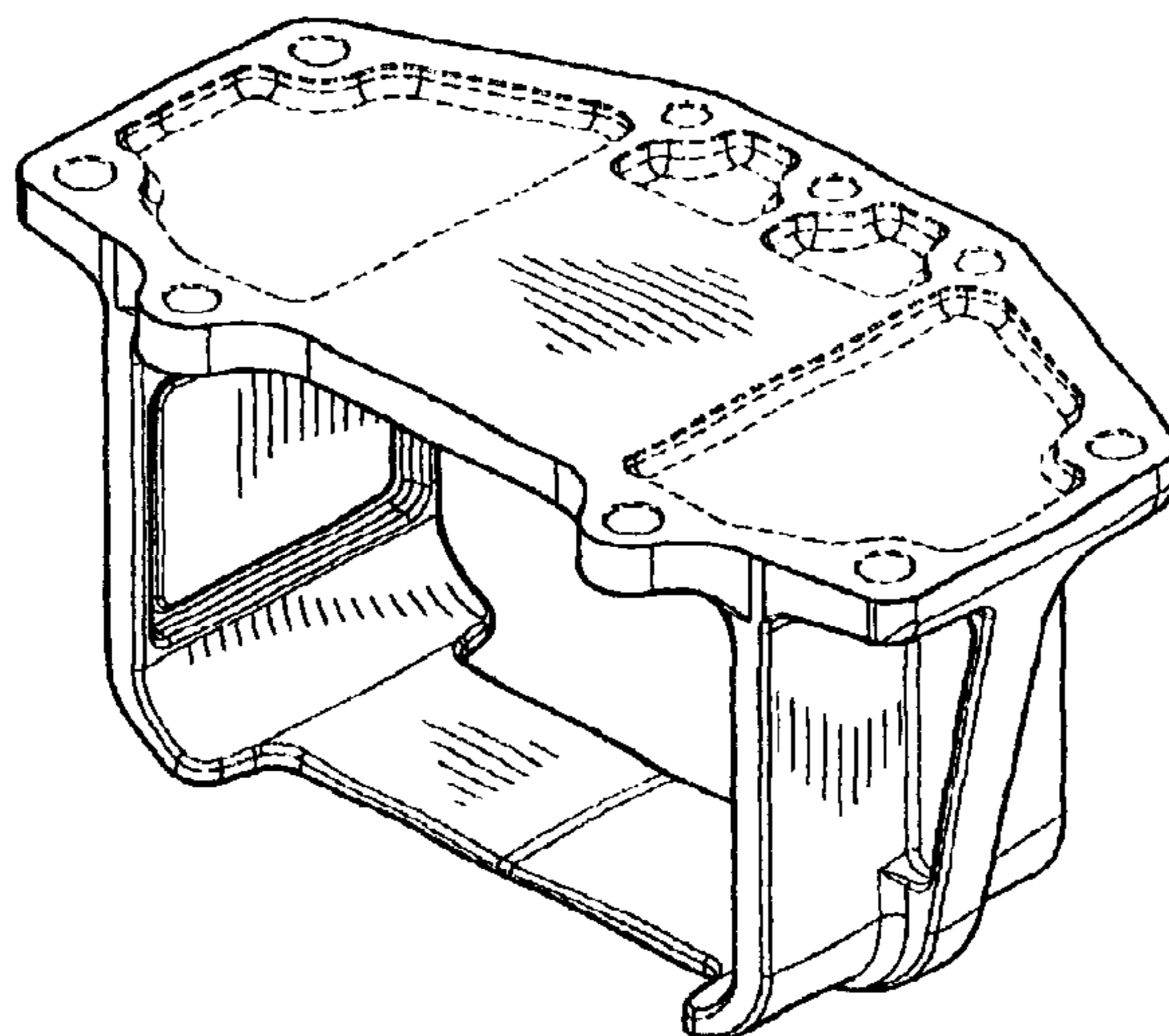
Hendrickson USA, L.L.C., Technical Procedure R/RS/RT Heavy Duty, Lit. No. 17730-149, Revision C, Jul. 2006.

FIG. 10 is a sectional view of the spring housing illustrated in FIG. 5, taken along sectional lines 10--10 thereof; and

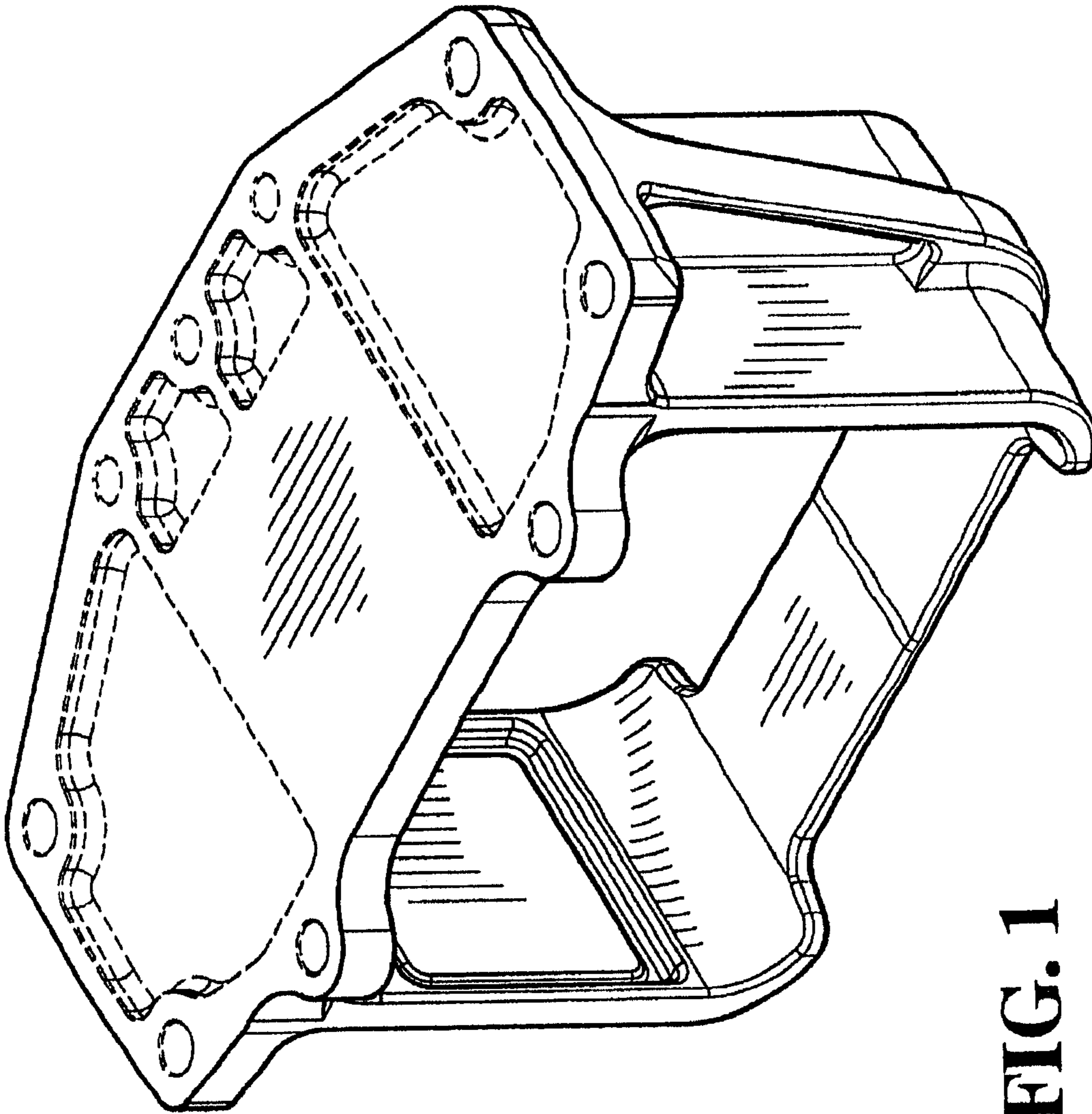
FIG. 11 is a perspective view showing the bottom, front, and left side of the spring housing shown in FIG. 1.

(Continued)

**1 Claim, 6 Drawing Sheets**







**FIG. 1**

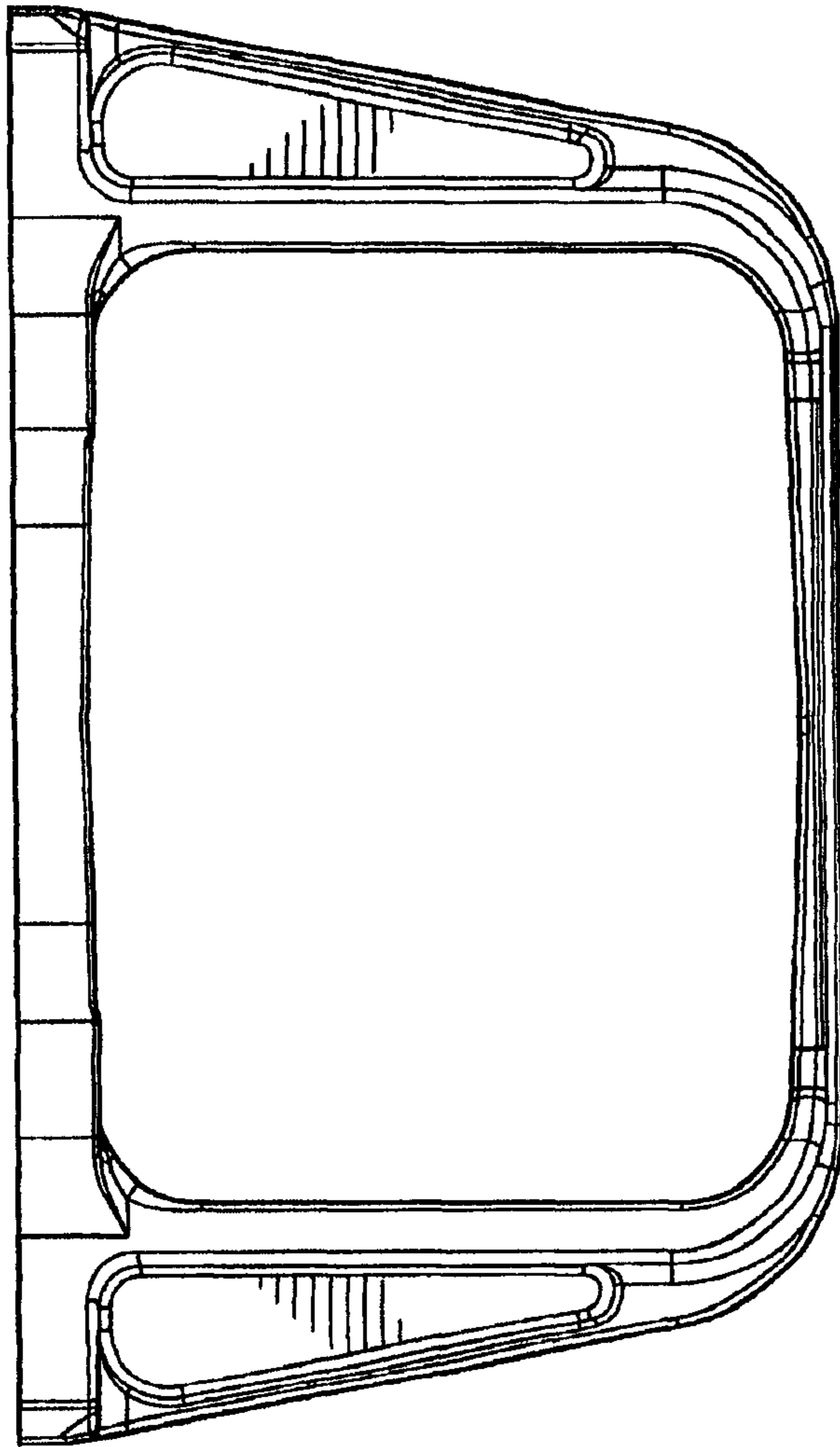


FIG. 2

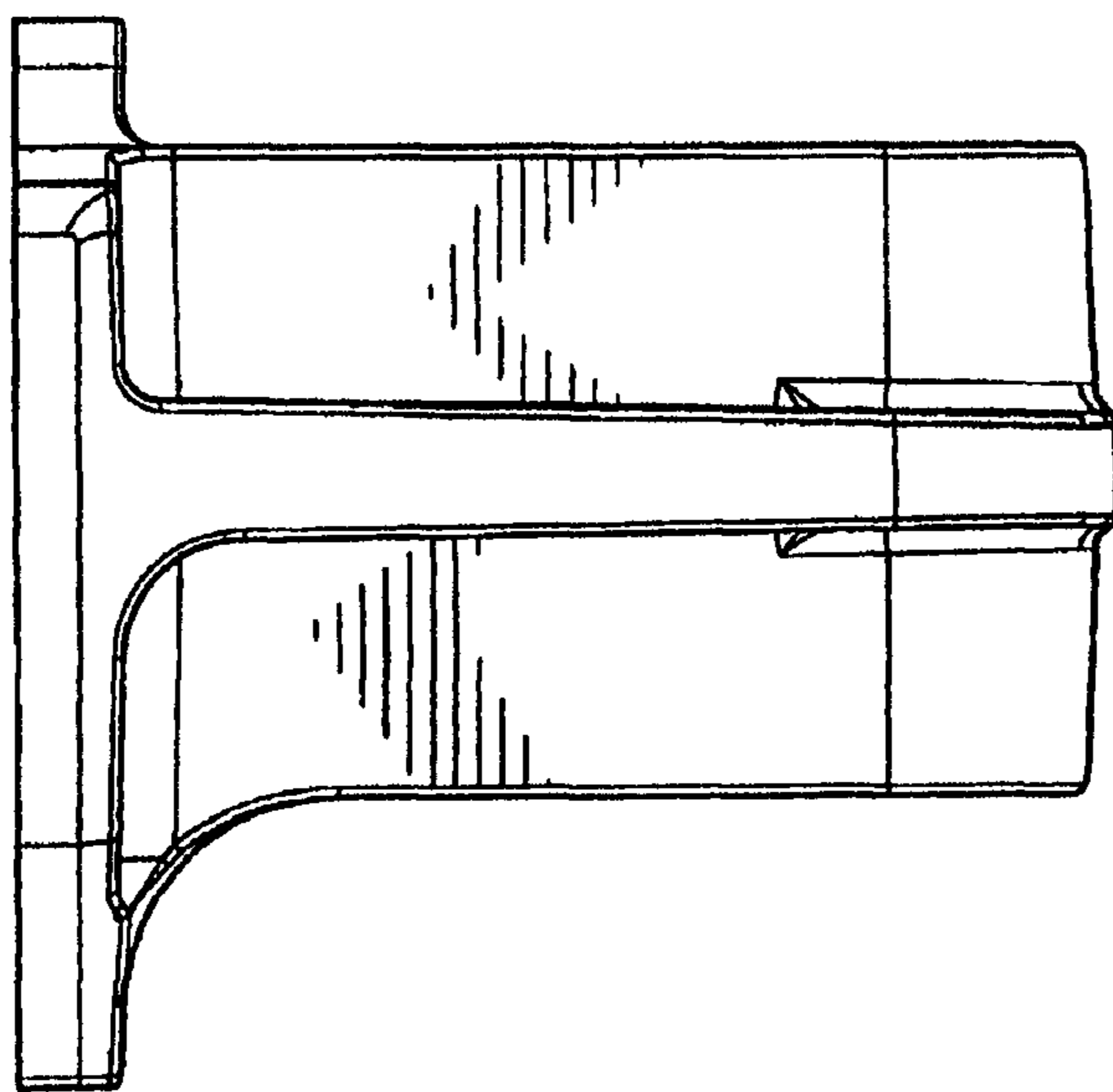
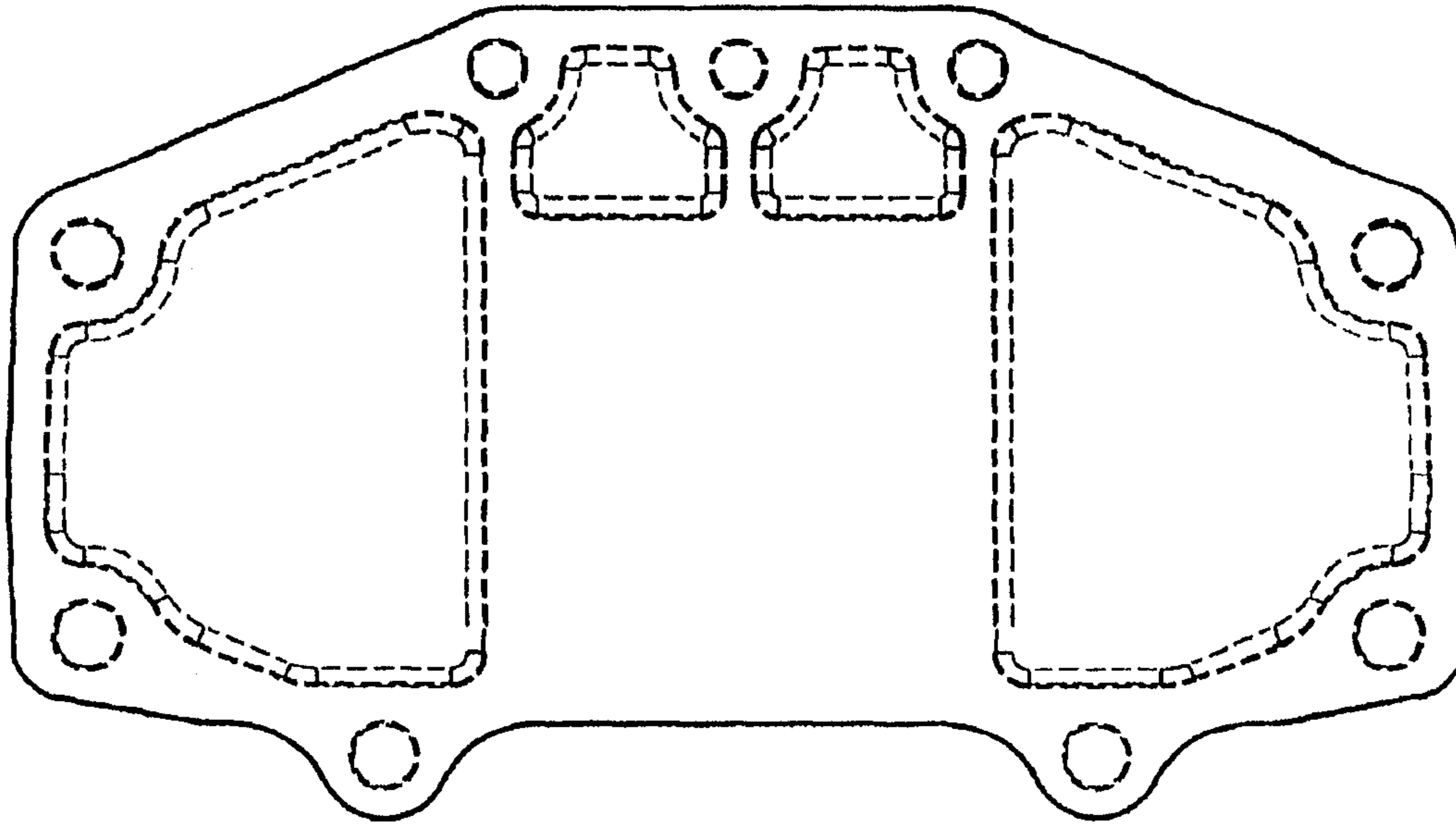
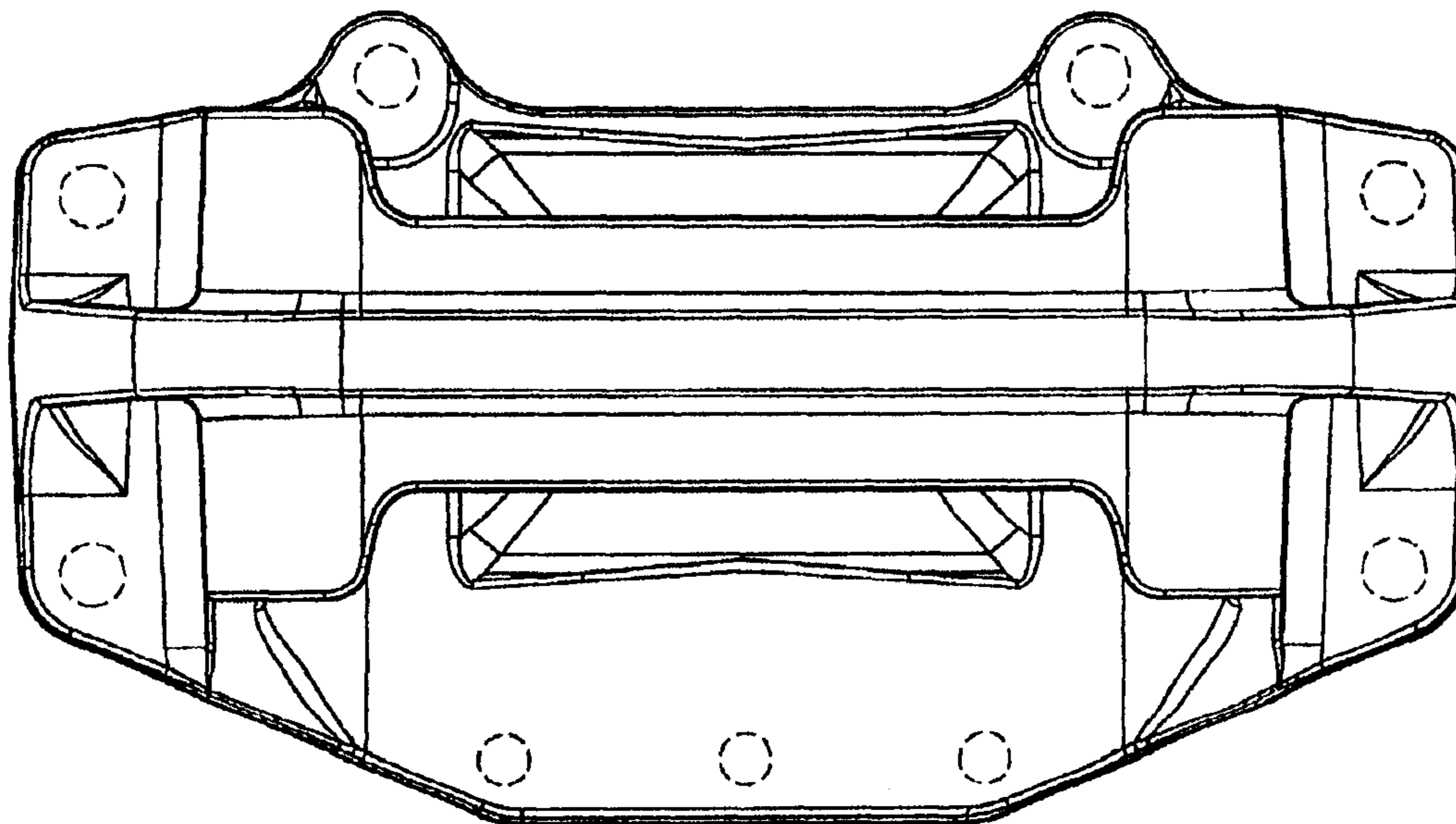


FIG. 6

**FIG. 3**



**FIG. 4**



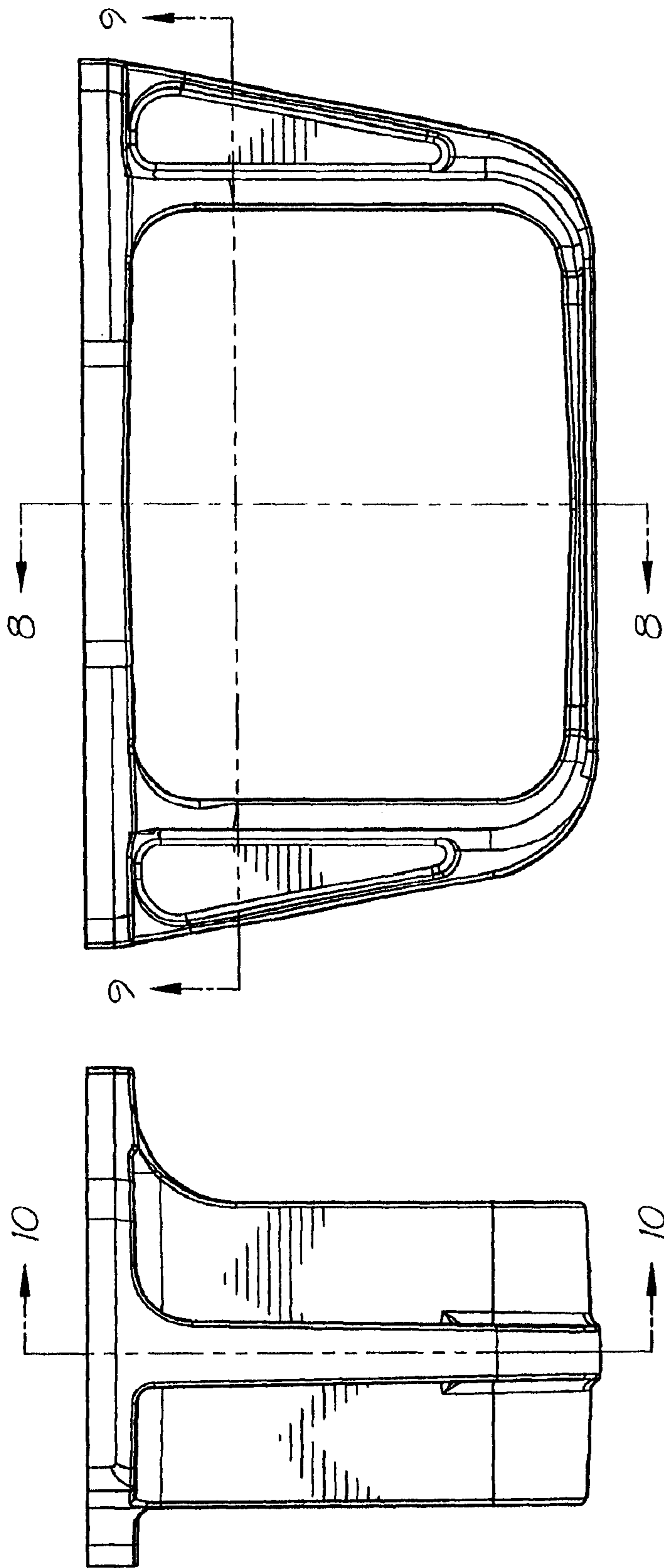


FIG. 7

FIG. 5

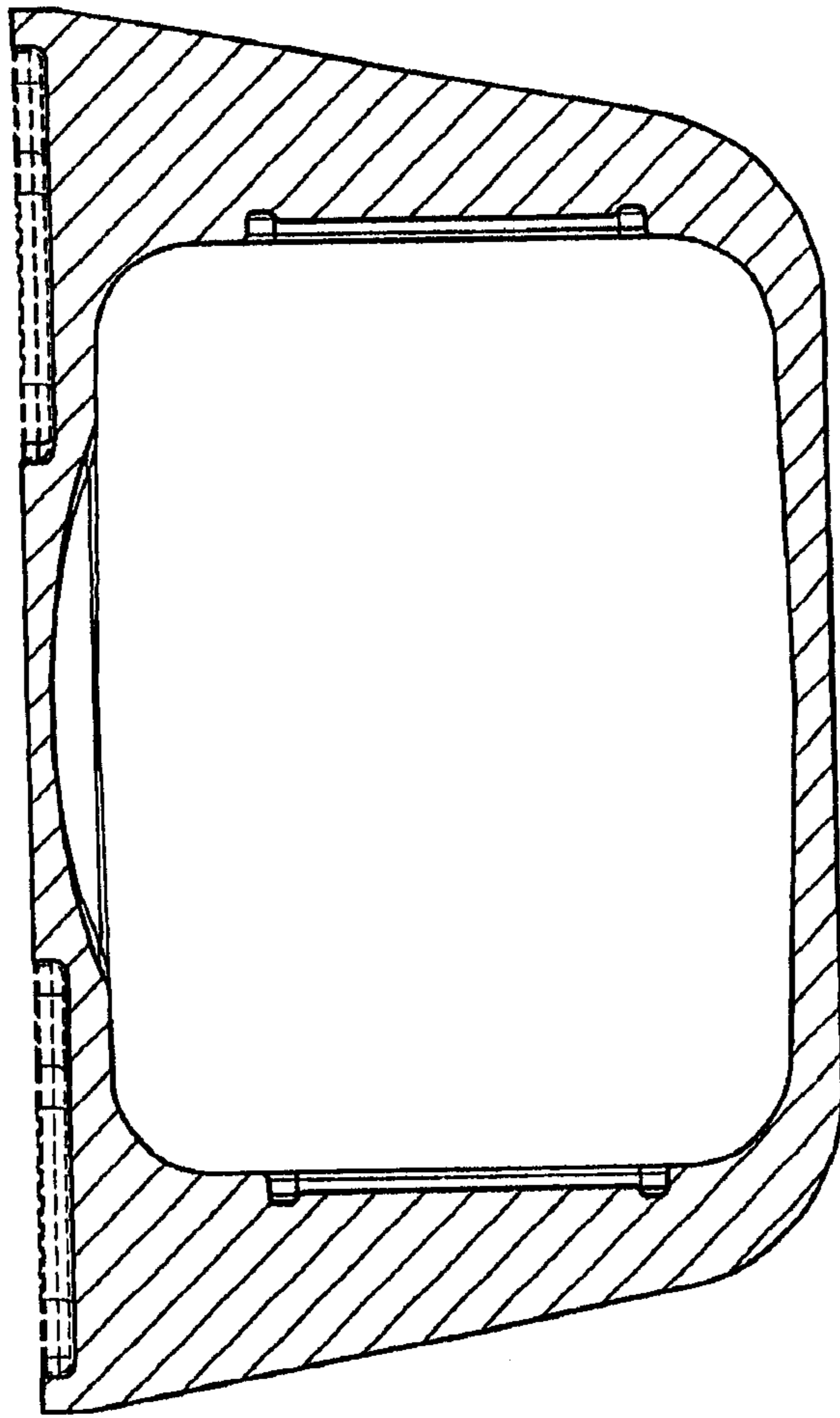


FIG. 10

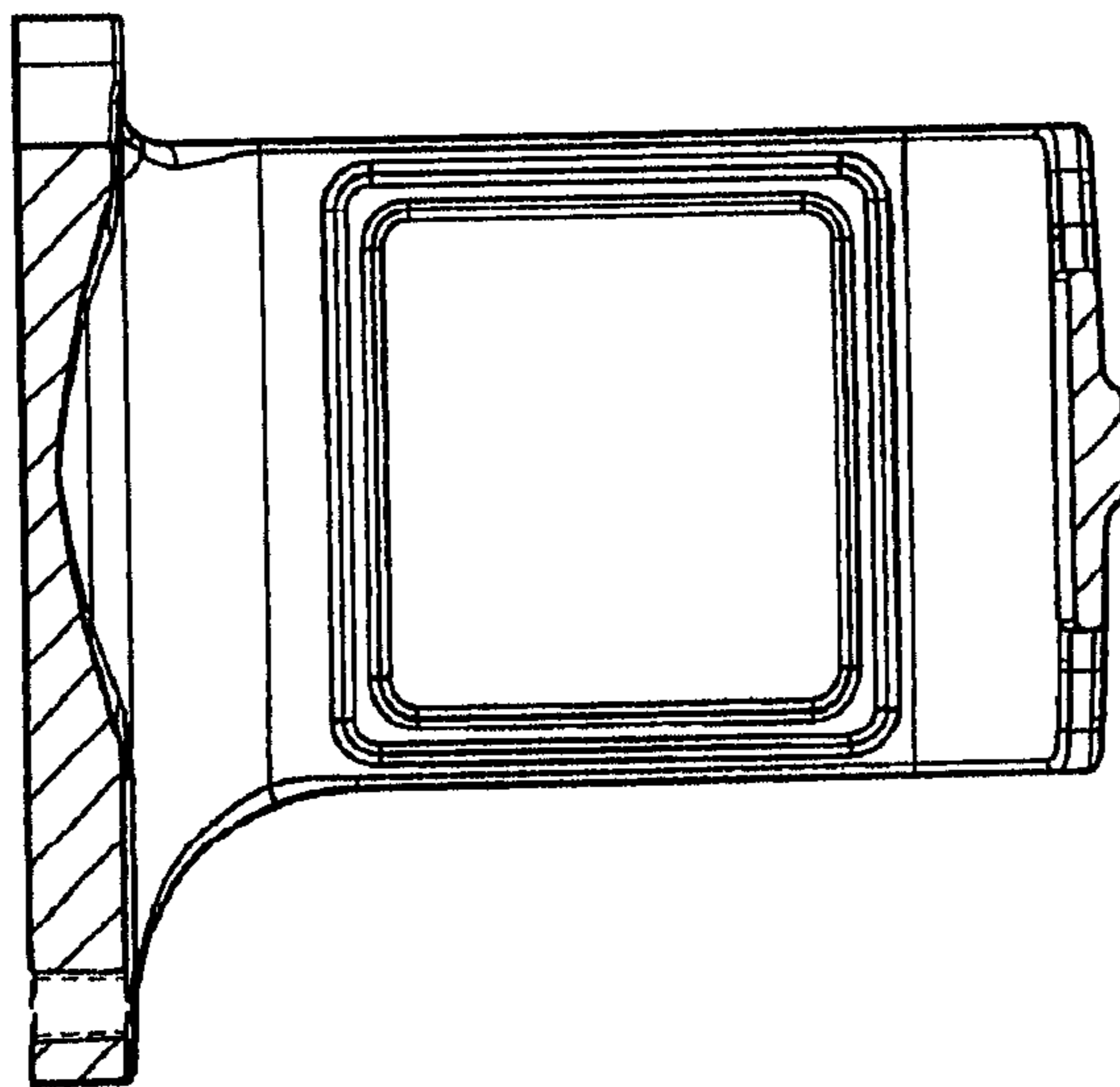
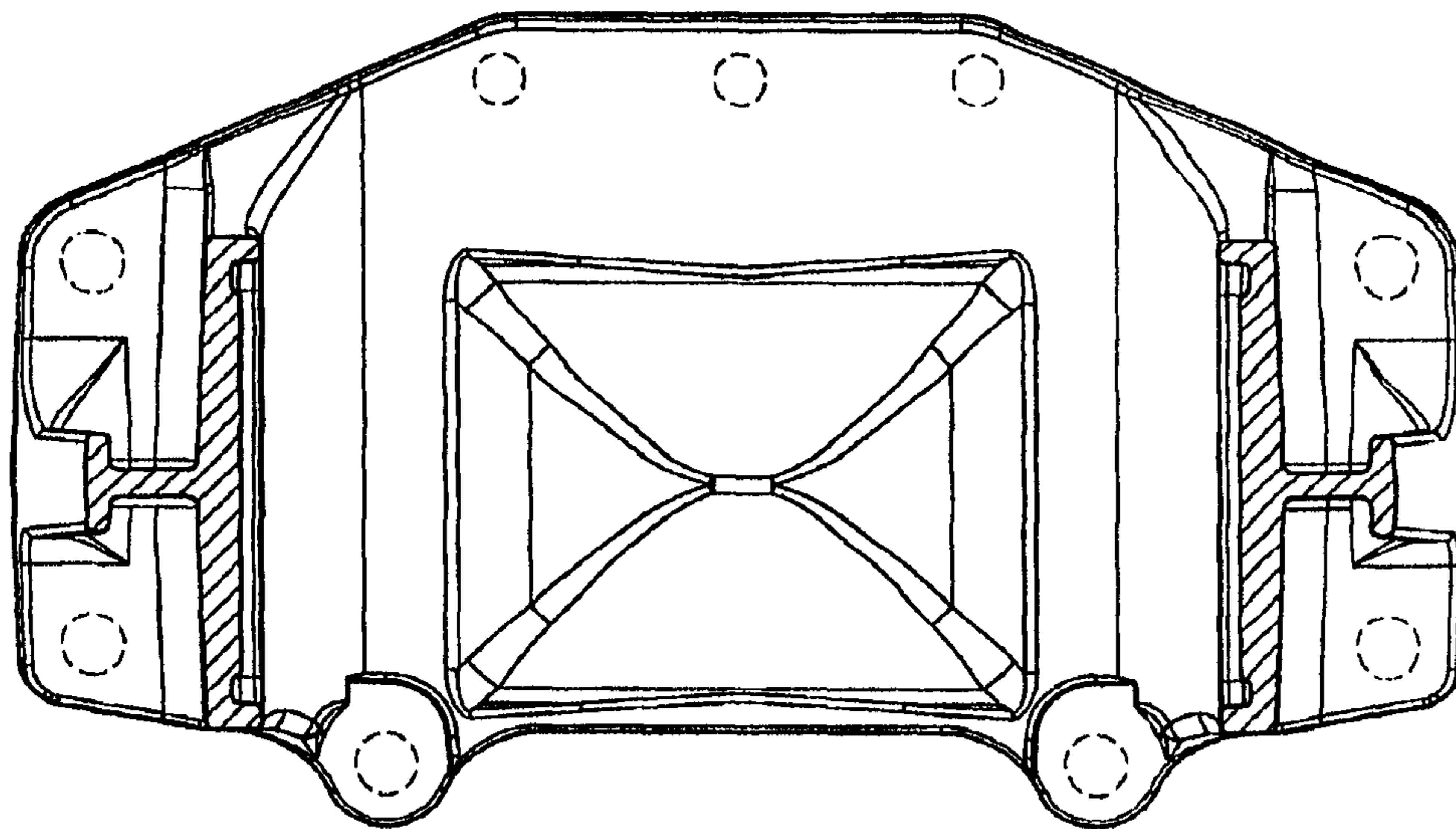


FIG. 8

**FIG. 9**



**FIG. 11**

