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(12) **United States Design Patent**
Thompson, II et al.

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(54) **MICROFLUIDIC CHIP WITH MICROCHANNELS**

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(*) Notice: This patent is subject to a terminal disclaimer.

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

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Related U.S. Application Data

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(51) **LOC (12) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/224**

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CPC B01L 3/5027; B01L 3/502715; B01L 3/502723; B01L 3/50273; B01L 3/502738; B01L 3/502761; B01L 3/502784; C12M 23/16

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D296,193 S * 6/1988 Keeler D9/435
6,001,231 A * 12/1999 Kopf-Sill B01L 3/502746
204/451

6,176,962 B1 * 1/2001 Soane B01D 57/02
156/273.5
6,495,104 B1 * 12/2002 Unno B01L 3/5027
204/601
6,536,477 B1 * 3/2003 O'Connor B01L 3/5027
137/833
6,755,211 B1 * 6/2004 O'Connor B01L 3/502738
137/315.01
7,112,444 B2 * 9/2006 Beebe G01N 33/6818
422/417
7,391,020 B2 * 6/2008 Bousse B05B 5/025
250/281
7,608,160 B2 * 10/2009 Zhou B01F 5/0683
156/272.2
8,763,642 B2 * 7/2014 Vangbo B01L 3/502738
137/859
9,561,506 B2 * 2/2017 Taylor
9,670,541 B2 * 6/2017 Mehta C12Q 1/6874
D816,861 S * 5/2018 Levner D24/224
D842,493 S * 3/2019 Levner D24/224
2002/0134907 A1 * 9/2002 Benett B29C 39/10
249/135
2002/0187074 A1 * 12/2002 O'Connor B01F 5/0682
422/82.05
2004/0211054 A1 * 10/2004 Morse B01D 65/003
29/623.4

(Continued)

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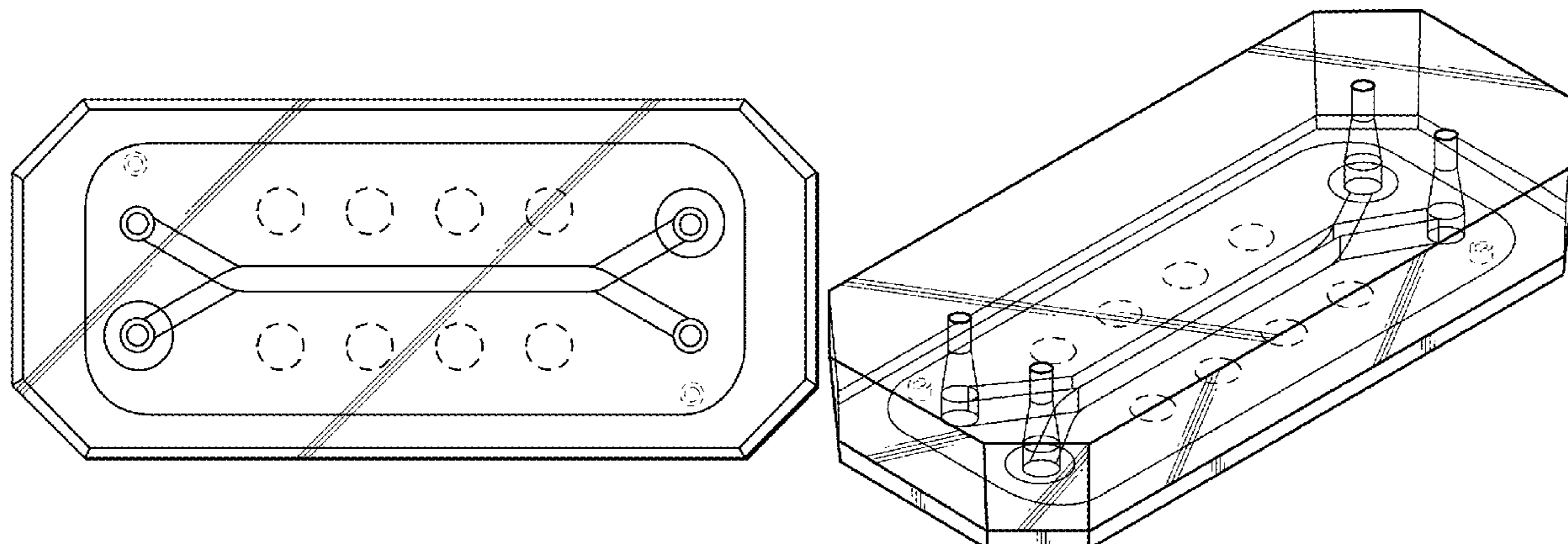
(57) **CLAIM**

The ornamental design for a microfluidic chip with microchannels, as shown and described.

DESCRIPTION

FIG. 1 is a top plan view of an ornamental microfluidic chip with microfluidic channels; and, FIG. 2 is a perspective view, thereof. The broken lines indicate features that do not form part of the claimed design.

1 Claim, 2 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

2005/0026134	A1 *	2/2005	Miller	.....	B01L 3/502746	506/14
2006/0228749	A1 *	10/2006	Wang	.....	G01N 33/5438	435/6.11
2007/0166199	A1 *	7/2007	Zhou	.....	B01L 3/5025	422/400
2009/0098659	A1 *	4/2009	Abhyankar	.....	B01L 3/5027	436/180
2009/0234332	A1 *	9/2009	Borenstein	.....	A61M 37/00	604/891.1
2009/0305326	A1 *	12/2009	Beebe	.....	B01J 19/0093	435/29
2011/0079513	A1 *	4/2011	Stelzle	.....	C12M 21/08	204/451
2011/0082563	A1 *	4/2011	Charest	.....	A61F 2/022	623/23.65
2011/0120562	A1 *	5/2011	Tan	.....	B01L 3/50273	137/1
2011/0250585	A1 *	10/2011	Ingber	.....	C12N 5/0696	435/5
2012/0070878	A1 *	3/2012	Fink	.....	B01L 3/502707	435/243
2012/0318726	A1 *	12/2012	Charest	.....	A61M 1/14	210/321.6
2013/0019688	A1 *	1/2013	Tung	.....	G01L 9/0058	73/719
2013/0288292	A1 *	10/2013	Meyvantsson	.....	B01L 3/50273	435/30
2014/0234954	A1 *	8/2014	Lee	.....	C12M 33/14	435/297.1
2014/0273223	A1 *	9/2014	Cho	.....	C12M 23/16	435/396
2016/0097028	A1 *	4/2016	Tung	.....	C12M 23/12	435/29
2016/0136646	A1 *	5/2016	Ingber	.....	B01L 3/563	435/309.1
2016/0136895	A1 *	5/2016	Beyer	.....	C12M 33/00	264/241
2016/0229683	A1 *	8/2016	Phommarine	.....	B81B 1/004	
2016/0313306	A1 *	10/2016	Ingber; Donald E	.....	C12M 21/08	
2017/0022464	A1 *	1/2017	Novak	.....	C12M 23/16	
2017/0058257	A1 *	3/2017	Levner	.....	C12M 35/04	
2017/0121659	A1 *	5/2017	Hinojosa	.....	C12M 23/16	

* cited by examiner

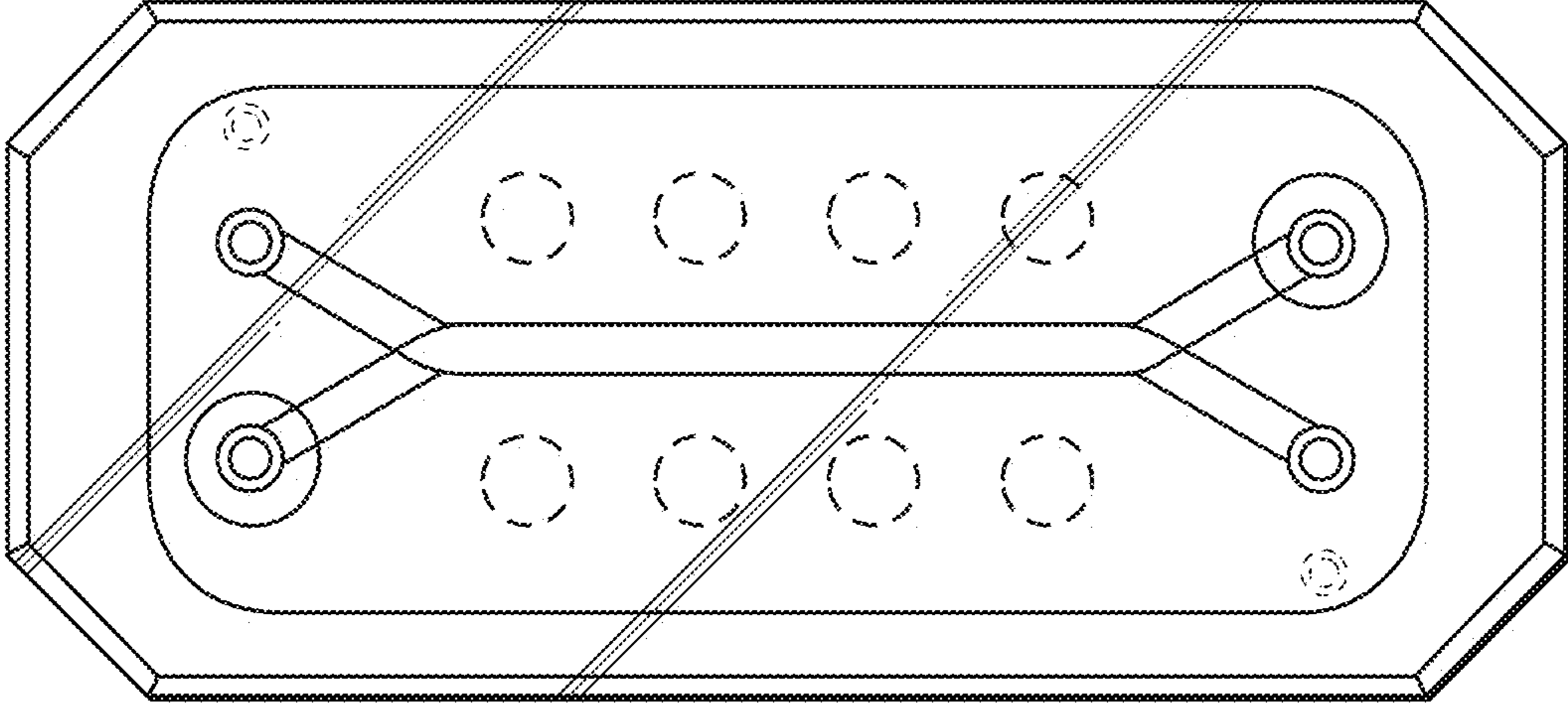


FIG. 1

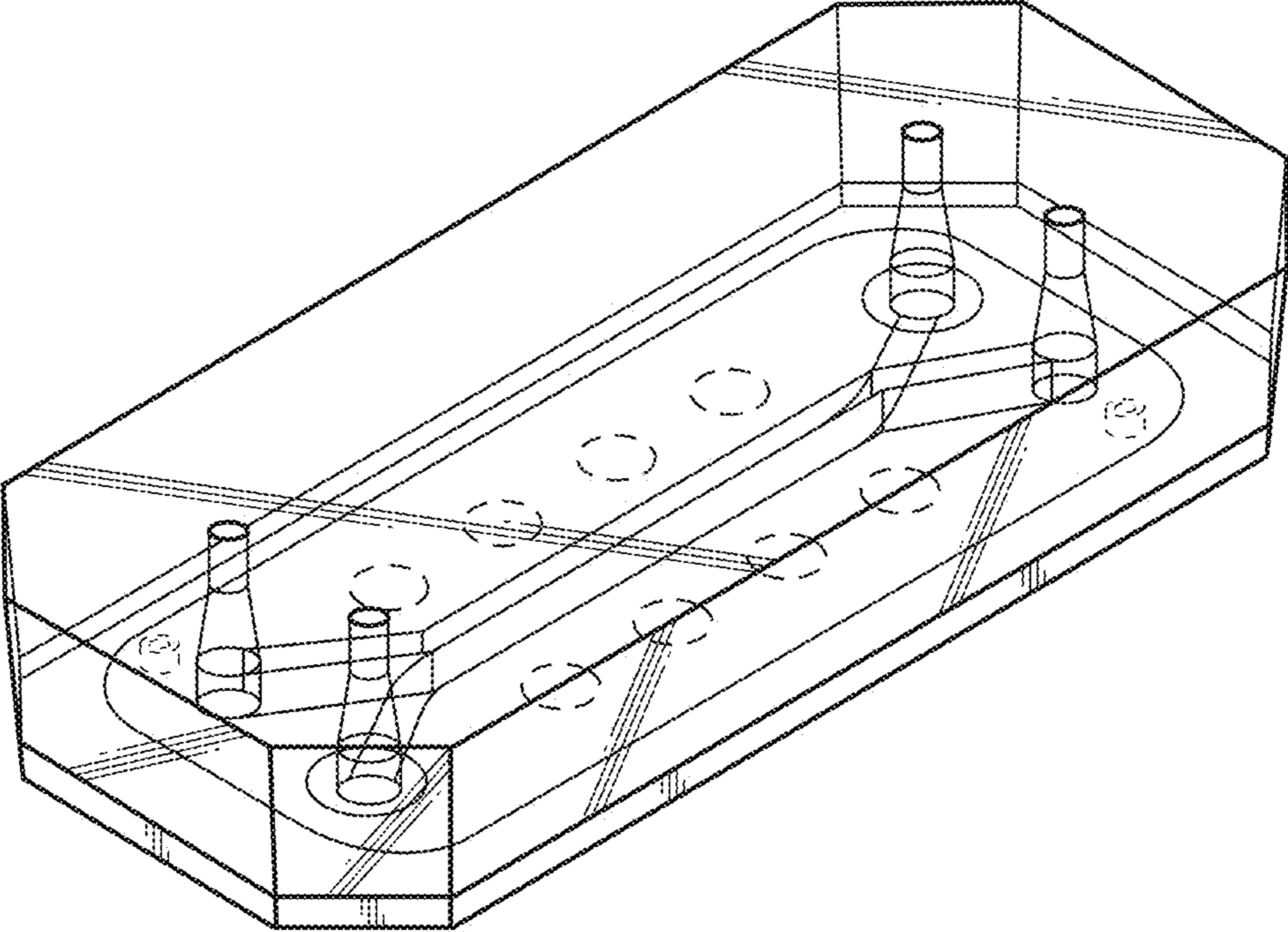


FIG. 2