



US00D938887S

(12) **United States Design Patent** (10) **Patent No.:** **US D938,887 S**
Richardson (45) **Date of Patent:** **** Dec. 21, 2021**

(54) **SEALING DEVICE**
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(52) **U.S. Cl.**
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(58) **Field of Classification Search**
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D8/394, 395; D11/78.1; D12/223;
D19/32, 86
CPC Y10T 24/1394; Y10T 24/44778; Y10T
24/44923; Y10T 24/205; B42F 1/02;
B42F 1/06; B42F 1/10; B62D 27/00;
B62D 27/02; B62D 27/023; B62D 27/06;
B62D 65/02
See application file for complete search history.

(56) **References Cited**
U.S. PATENT DOCUMENTS
625,559 A 5/1899 Keeler
1,621,008 A * 3/1927 Fricker B42F 1/06
24/563
1,807,100 A * 5/1931 Graff B42F 21/08
40/641
D161,143 S * 12/1950 Walters et al. D8/395
2,861,309 A * 11/1958 Saviolides B42F 1/02
24/562
D199,348 S * 10/1964 Mussy et al. D28/40
3,155,298 A * 11/1964 Brown A45D 44/06
224/268
D199,828 S * 12/1964 Regan et al. D19/88

D204,446 S * 4/1966 Bardon et al. D6/541
3,324,823 A * 6/1967 Peters B42F 21/00
116/234
D239,147 S * 3/1976 Karlsen et al. D11/215
(Continued)

FOREIGN PATENT DOCUMENTS

CN 1315990 A 10/2001
CN 1812909 A 8/2006
(Continued)

OTHER PUBLICATIONS

Peter Born; Bernd Mayer Structural Bonding in Automotive Appli-
cations.
(Continued)

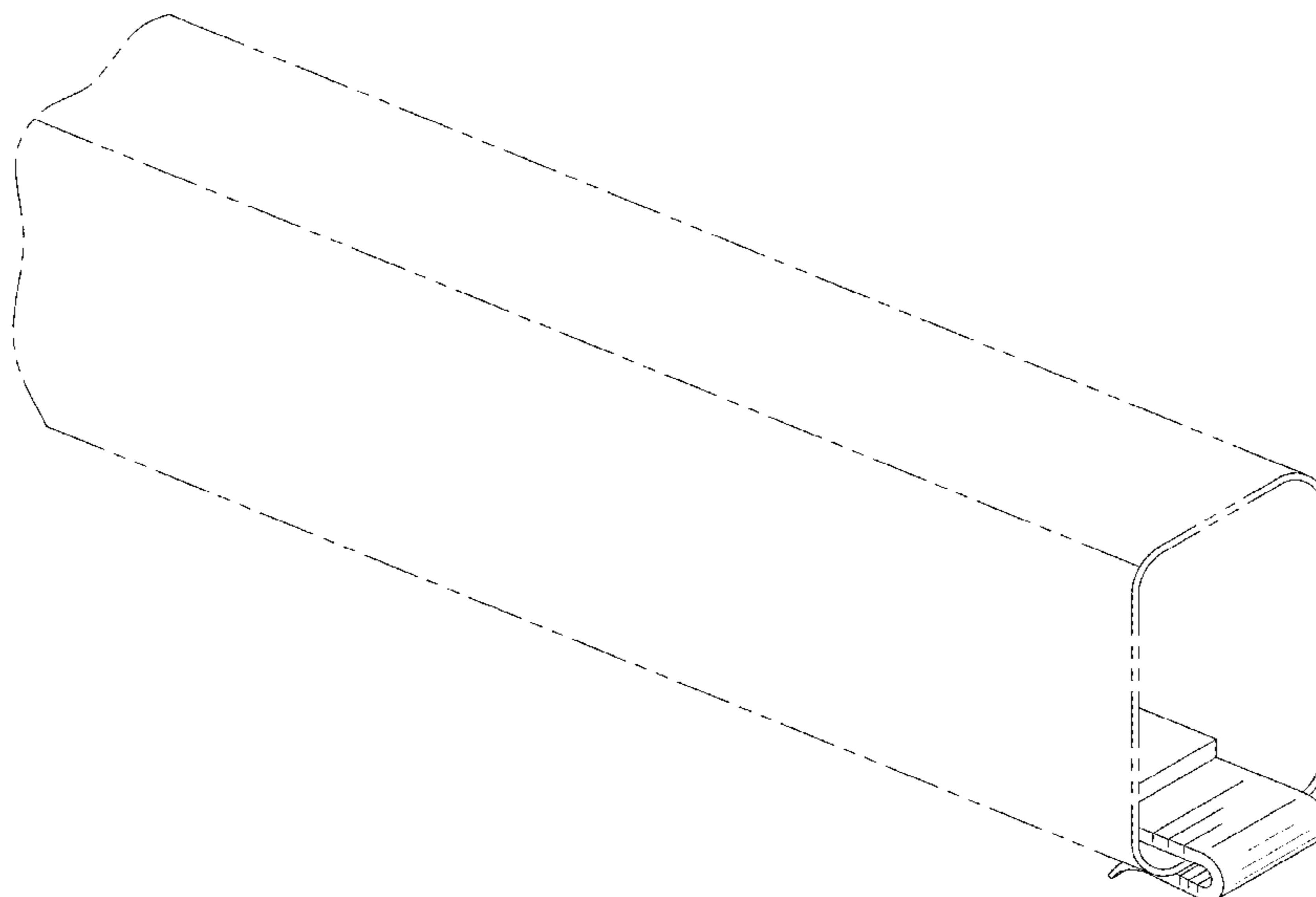
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PC

(57) **CLAIM**
The ornamental design for a sealing device, as shown and
described.

DESCRIPTION

FIG. 1 is a perspective view of the present invention in an
installed state.
FIG. 2 is a front elevational view of the embodiment shown
in FIG. 1.
FIG. 3 is a rear elevational view of the embodiment shown
in FIG. 1.
FIG. 4 is a top-down view of the embodiment shown in FIG.
1.
FIG. 5 is a bottom-up view of the embodiment shown in
FIG. 1; and,
FIG. 6 is a mirror image side profile view of the embodiment
shown in FIG. 1.
The broken lines showing environment in the drawings are
for illustrative purposes only and form no part of the claimed
design.

1 Claim, 2 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

4,126,916 A * 11/1978 Thomas B42F 1/02
24/546
D252,669 S * 8/1979 Muttart D8/366
D255,983 S * 7/1980 Armstrong D8/382
4,226,006 A * 10/1980 Toyama A45C 13/18
24/3.12
4,280,435 A * 7/1981 Loomis B63B 21/04
114/219
D272,412 S * 1/1984 Shanklin D8/343
4,751,249 A 6/1988 Wycech
4,813,690 A * 3/1989 Coburn, Jr. B60R 13/06
277/647
4,901,500 A 2/1990 Wycech
D312,773 S * 12/1990 Salinas D16/336
D322,389 S * 12/1991 Harmon D8/380
5,266,133 A 11/1993 Hanley et al.
5,344,208 A 9/1994 Bien et al.
5,358,397 A 10/1994 Ligon
D363,453 S * 10/1995 Herdt D11/78.1
D364,269 S * 11/1995 Sabosky D3/207
5,575,526 A 11/1996 Wycech
5,631,027 A 5/1997 Takabatake
D382,592 S * 8/1997 Maruchi 24/562
D384,591 S * 10/1997 Richards D11/78.1
5,697,131 A * 12/1997 Hunt B42F 1/06
24/336
5,708,042 A 1/1998 Hasegawa
D392,872 S * 3/1998 St-Louis D8/330
D394,454 S * 5/1998 Williams D19/34
5,755,486 A 5/1998 Wycech
5,759,049 A * 6/1998 Gerber H01R 12/57
439/74
5,766,719 A 6/1998 Rimkus
D405,224 S * 2/1999 Falconio D27/183
5,932,680 A 8/1999 Heider
5,992,887 A * 11/1999 Maruchi B42D 9/005
24/67.9
6,068,922 A 5/2000 Vercesi et al.
6,131,897 A 10/2000 Barz et al.
6,150,428 A 11/2000 Hanley, IV
6,199,940 B1 3/2001 Hopton
6,207,244 B1 3/2001 Hesch
6,258,862 B1 7/2001 Matz
6,270,600 B1 8/2001 Wycech
6,276,105 B1 8/2001 Wycech
6,287,666 B1 * 9/2001 Wycech B29C 44/1228
428/122
6,292,995 B1 9/2001 Corbin
6,296,298 B1 10/2001 Barz
D451,785 S * 12/2001 Chaney D8/354
6,328,575 B1 * 12/2001 Burrell H01R 12/57
362/84
D453,294 S * 2/2002 Bitzer D8/395
6,368,438 B1 4/2002 Chang
6,389,775 B1 5/2002 Steiner
6,413,611 B1 7/2002 Roberts
6,422,575 B1 7/2002 Czaplicki
6,455,146 B1 9/2002 Fitzgerald
6,457,218 B1 * 10/2002 Lawrence B42F 1/10
24/3.12
6,546,693 B2 4/2003 Wycech
6,620,501 B1 9/2003 Kassa
6,706,772 B2 3/2004 Czaplicki
6,786,533 B2 9/2004 Bock
6,811,864 B2 11/2004 Czaplicki
6,820,923 B1 11/2004 Bock
6,846,559 B2 1/2005 Czaplicki
6,920,693 B2 7/2005 Hankins
6,926,784 B2 8/2005 Bock
6,991,237 B2 1/2006 Kassa
7,011,315 B2 3/2006 Czaplicki
7,043,815 B2 5/2006 Lande et al.
D523,330 S * 6/2006 Mattesky D8/395
7,077,460 B2 7/2006 Czaplicki

D530,192 S * 10/2006 Becerra D8/395
7,169,467 B2 1/2007 Wilson
D536,606 S * 2/2007 Cox D8/395
7,199,165 B2 4/2007 Kassa
D566,539 S * 4/2008 Hicks D8/395
D581,311 S * 11/2008 Cornett D11/78.1
D586,201 S * 2/2009 Day D8/354
D597,827 S * 8/2009 Brassard D8/395
D601,882 S * 10/2009 Mirer D8/395
7,597,382 B2 * 10/2009 Vilcek B29C 44/18
296/187.02
D608,631 S * 1/2010 Preminger D8/395
D623,048 S * 9/2010 Moy G09F 23/00
D8/395
7,877,916 B2 * 2/2011 Chamandy G09F 3/06
40/658
8,117,719 B1 * 2/2012 O'Brien B42F 1/06
24/67.9
D659,264 S * 5/2012 Wennerholm D25/136
8,276,235 B2 * 10/2012 Naughton A45F 5/02
15/209.1
D686,910 S * 7/2013 Towell, Jr. D8/395
D710,741 S * 8/2014 Hirschorn D11/78.1
D715,686 S * 10/2014 Crafton D11/202
D716,181 S * 10/2014 McAdams D11/202
D716,182 S * 10/2014 McAdams D11/202
8,914,949 B2 * 12/2014 Thomson B42F 1/06
24/67.9
D723,998 S * 3/2015 Hansen B42F 1/02
D12/223
D727,713 S * 4/2015 Greene D8/331
D750,473 S * 3/2016 Albo D8/371
D753,472 S * 4/2016 Pan D8/371
D756,644 S * 5/2016 Murphy, Jr. D3/266
D770,887 S * 11/2016 Sudol D8/395
D787,925 S * 5/2017 Moerer D8/394
D813,087 S * 3/2018 Siders D11/206
D818,357 S * 5/2018 Cummings D8/394
D854,406 S * 7/2019 Chen D8/395
D856,114 S * 8/2019 Poppell D8/349
D856,784 S * 8/2019 Zeilinger A45F 5/02
D8/354
D860,762 S * 9/2019 Gibson D8/354
D864,698 S * 10/2019 Wilson A45F 5/102
D8/367
D879,007 S * 3/2020 Dimovski D12/223
D879,701 S * 3/2020 Dimovski D12/223
D885,875 S * 6/2020 Ryszawy D8/394
D911,159 S * 2/2021 Black D8/394
2003/0045620 A1 3/2003 Carlson et al.
2003/0101551 A1 * 6/2003 Levesque A44B 99/00
24/545
2003/0183317 A1 10/2003 Czaplicki
2004/0204551 A1 10/2004 Czaplicki et al.
2006/0020076 A1 1/2006 Finerman
2007/0045866 A1 3/2007 Gray
2007/0193171 A1 8/2007 Finerman
2008/0029200 A1 2/2008 Sheasley
2009/0246506 A1 10/2009 Zaluzec et al.
2010/0197882 A1 8/2010 Imai
2014/0138388 A1 5/2014 Synnestvedt

FOREIGN PATENT DOCUMENTS

CN 101557914 A 10/2009
CN 101835677 A 9/2010
CN 101977807 A 2/2011
CN 102164809 A 8/2011
DE 3838655 A1 5/1990
DE 19812288 C1 2/1998
DE 19856255 C1 3/1998
DE 19648164 A1 5/1998
DE 29904705 U1 6/1999
EP 0383498 A2 8/1990
EP 0625559 A1 11/1994
EP 0697956 B1 2/1996
EP 1122152 A2 8/2001
EP 1149679 A2 10/2001

(56)

References Cited

FOREIGN PATENT DOCUMENTS

EP	0893332	B1	3/2002
EP	1435320	A	7/2004
EP	1458594	B1	8/2006
GB	903146		8/1962
JP	9328568	A	12/1997
JP	2002221968	A	8/2002
JP	2002331960	A	11/2002
WO	95/25005		9/1995
WO	97/02967		1/1997
WO	98/50221		5/1998
WO	1998/36944	A1	8/1998
WO	99/08854		2/1999
WO	00/46017		8/2000
WO	2001/19667	A1	3/2001
WO	01/54936		8/2001
WO	01/88033		11/2001
WO	05/077634	A2	8/2002
WO	2005/002950	A2	1/2005
WO	05/113689		12/2005

OTHER PUBLICATIONS

Gregory W. Hopton; Philip E. Weber; Leslie J. Osenkowski; Gerald J. Renaud, Application of a Structural Reinforcing Material to Improve Vehicle NVH Characteristics.

Kurt Lilley; Eric Seifferlein; Anita Zalobsky Comparison of Pre-formed Acoustic Baffles and Two-Component Polyurethane Foams for Filling Body Cavities.

Kurt M. Lilley; Michael J. Fasse; Philip E. Weber A Comparison of NVH Treatments for Vehicle Floorplan Applications.

Kurt M. Lilley; Phil E. Weber Vehicle Acoustic Solutions.

Opposition Forwarding of Submission to Parties dated Oct. 8, 2015 (Appeal No. T0656/15-3.2.01)(Appln. No. EP07003645.4).

Opposition Reply to Appeal, Letter Relating to Appeal Procedure, Letter, Cited Documents dated Oct. 2, 2015 (Appln. No. EP07003645.4).

Opposition Forwarding of Submissions to Parties dated May 26, 2015 (Appln. No. EP07003645.4).

Opposition Statement of Grounds of Appeal dated May 19, 2015 (Appln. No. EP07003645.4).

Opposition Processing of an Appeal dated Mar. 31, 2015 (Appln. No. EP07003645.4).

Opposition Notice of Appeal dated Mar. 27, 2015 (Appln. No. EP07003645.4).

Opposition Minutes of Oral Proceedings dated Jan. 19, 2015 (Appln. No. EP07003645.4).

Opposition Information about the result of oral proceedings dated Oct. 9, 2014 (Appln. No. EP07003645.4).

Opposition Non Patent Literature Cited During Opposition Procedure dated Sep. 9, 2014 (Appln. No. EP07003645.4).

Opposition to EP1790554, Proprietor's Observations dated Sep. 24, 2014.

Opposition to EP1790554, Proprietor's Submissions for Oral Proceedings dated Sep. 5, 2014.

Opposition to EP1790554, Opponent Sika's Submissions for Oral Proceedings dated Sep. 9, 2014.

Opposition to EP1790554, Opponent Henkel's Submissions for Oral Proceedings dated Sep. 9, 2014.

International Search Report for corresponding PCT/US2004/020112; filed Jun. 23, 2004.

Final Rejection dated Feb. 8, 2011 for corresponding Korean Application 2005-7024978, filed Dec. 26, 2005.

Office Action dated Oct. 8, 2010 for corresponding Japanese Application 2006-517571, filed Jun. 23, 2004.

Summons to attend oral proceedings pursuant to Rule 115(1) EPC dated Jan. 17, 2014 (Appln. No. EP07003645.4).

Opposition for European Patent No. 1790554B1; Dated Jun. 20, 2012.

Original Opposition Notice dated Mar. 7, 2012.

Surface Tension Measurement of a Sample Reinforcer, dated May 2008.

Polymer Handbook, Fourth Edition, vol. 2, J. Bradrup, 1999.

Kruss Drop Shape Analysis, vol. 1.91, 2004-2009.

Handling and Storage Instructions for Injection Molders, Sika Technology AG, Version 1, Sep. 8, 2016.

Notice of Opposition dated May 6, 2015, Application No. EP11710363.0.

Handbook of Polymeric Foams and Foam Technology, Daniel Klempner, Nov. 14, 1991.

Collins English Dictionary, Harper Collins Publishers 1979, 1986, 1991, 1994, 1998.

Dictionary of Materials and Testing, Joan L. Tomsic, 2000.

European Patent 1790554B1, Opposition Thereto by Henkel AG & Co and Sika Tech. AG, Appendix I.

Kruss, Technical Note, Custom Made Models: from contact angle to surface free energy, Dec. 2008.

Standard Test Method for Measurement of the Surface Tension of Solid Coatings, Substrates and Pigments using Contact Angle Measurements, 2018.

ARDL, Test Report, PN 143946, Chemical Analytical Services, Sep. 20, 2018.

ARDL, Test Report, PN 142881, Chemical Analytical Services, Aug. 6, 2018.

Chinese Search Report dated Aug. 20, 2019, Application No. 2016800258330.

Chinese First Office Action dated Aug. 30, 2019, Application No. 2016800258330.

* cited by examiner

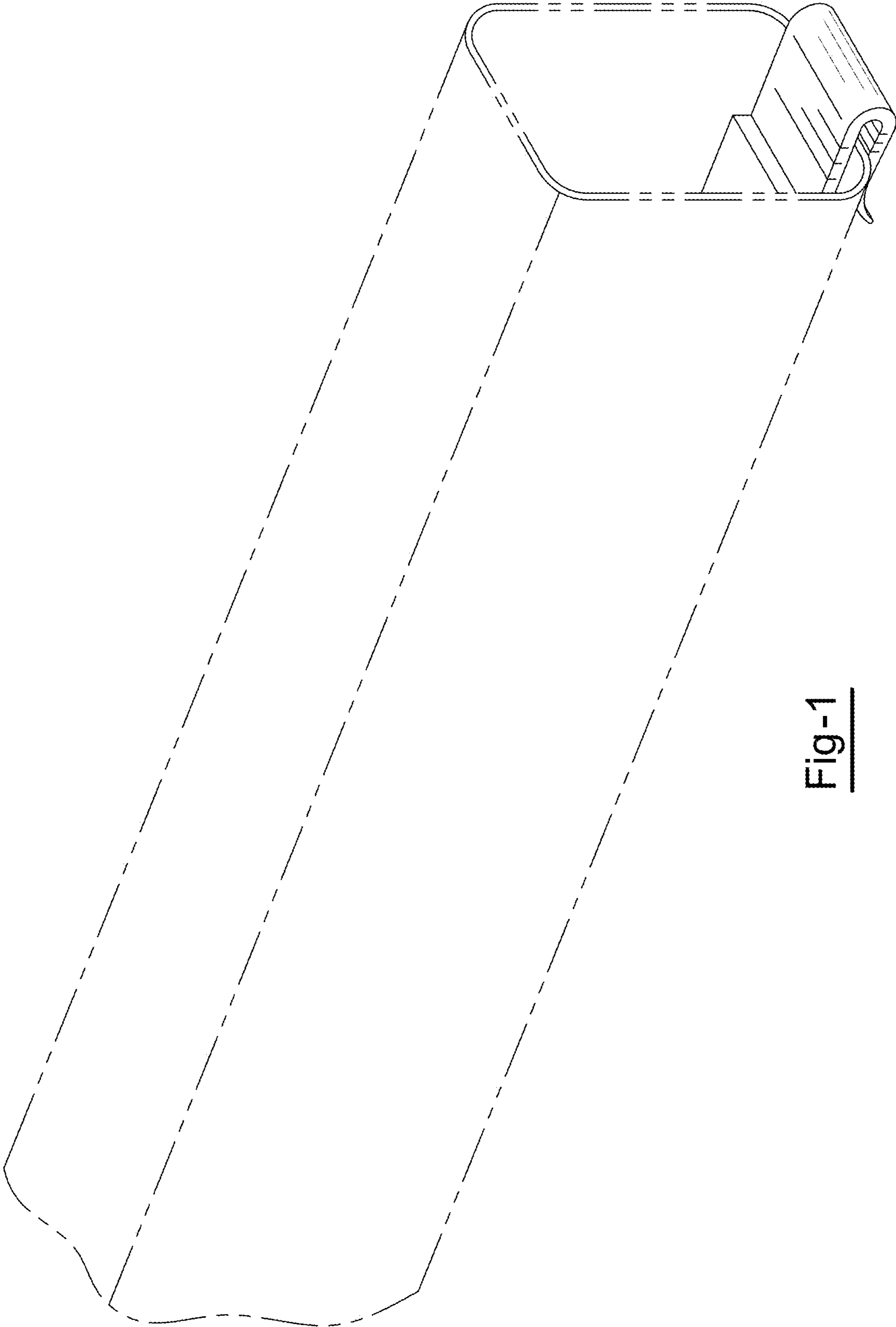


Fig-1

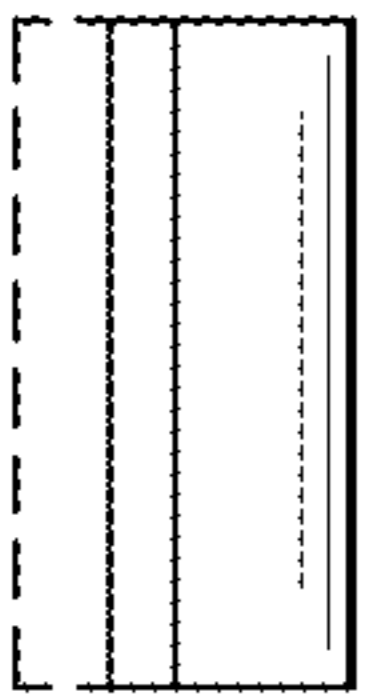


Fig-2

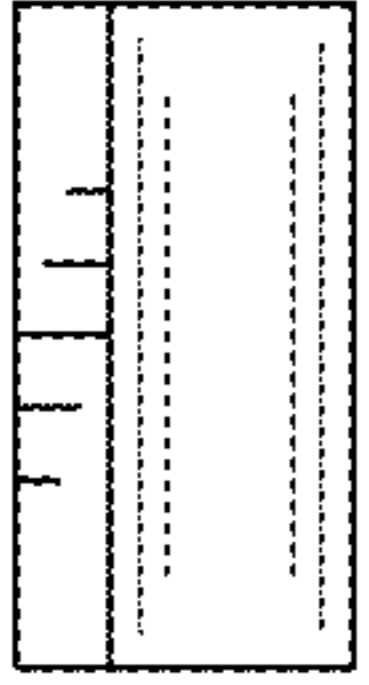


Fig-3

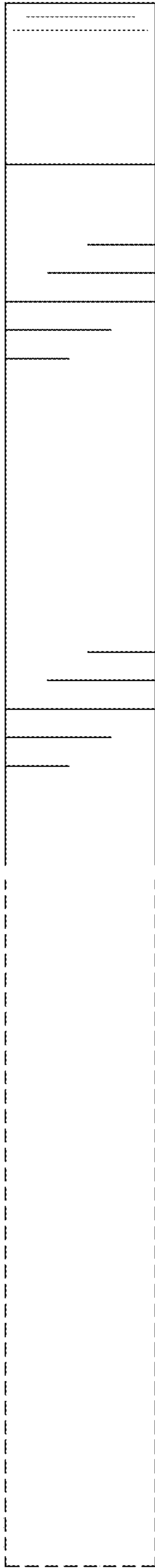


Fig-4

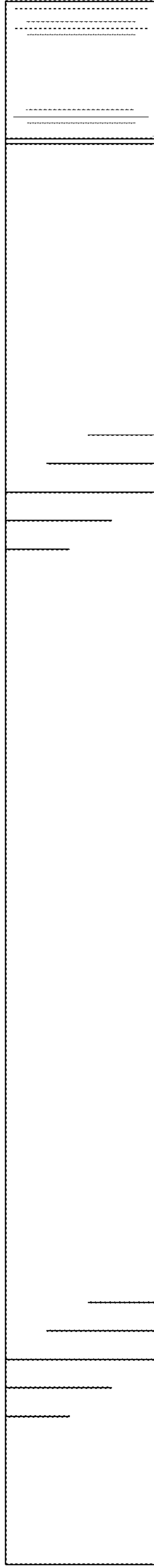


Fig-5

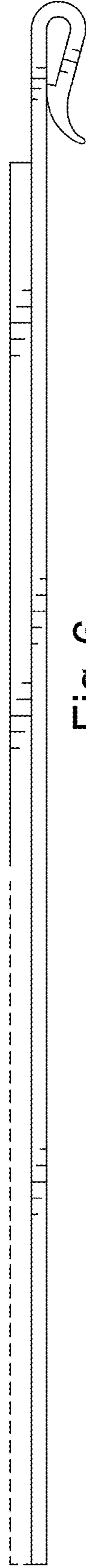


Fig-6