



US00D855833S

(12) **United States Design Patent** (10) **Patent No.:** **US D855,833 S**  
**Foley et al.** (45) **Date of Patent:** **\*\* Aug. 6, 2019**

- (54) **LADDER RAIL**
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- (73) Assignee: **Tricam Industries, Inc.**, Eden Prairie, MN (US)
- (\*\*) Term: **15 Years**
- (21) Appl. No.: **29/589,670**
- (22) Filed: **Jan. 4, 2017**
- (51) **LOC (12) Cl.** ..... **25-04**
- (52) **U.S. Cl.**  
USPC ..... **D25/68**
- (58) **Field of Classification Search**  
USPC ..... D25/119-125, 62-69; 182/228.6, 219, 182/194, 93, 113; 52/481.1, 831, 241, 52/846, 232; 33/483; 403/109.1  
CPC ..... B21D 39/063; E06C 7/083; E06C 7/187; E04F 11/108; E04F 11/163; E04F 11/104  
See application file for complete search history.

- 935,306 A 9/1909 Jennings
- 1,283,212 A 10/1918 Kloepfer et al.
- 1,702,249 A 2/1929 Davidson
- 1,778,898 A 10/1930 Joseph
- 1,942,210 A 1/1934 Walter
- 2,090,331 A 8/1937 Kutscheid
- 2,109,886 A 3/1938 Lewis
- 2,144,440 A 1/1939 Gaffers
- 2,186,119 A 1/1940 Moen
- 2,207,923 A 7/1940 Kelso
- 2,280,691 A 4/1942 Edelmann
- 2,385,171 A 9/1945 Vaiden
- 2,525,104 A 10/1950 St. Cyr
- 2,587,177 A 2/1952 Larson
- 2,596,521 A 5/1952 Bell
- 2,650,014 A 8/1953 Harrison
- 2,805,104 A 9/1957 Johnson-Ross
- 2,899,011 A 8/1959 Babits
- 2,952,301 A 9/1960 Ervin et al.
- D189,419 S 12/1960 Bair

(Continued)

**FOREIGN PATENT DOCUMENTS**

- CA 348116 2/1935
- CA 2315585 A1 2/2001

(Continued)

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(57) **CLAIM**

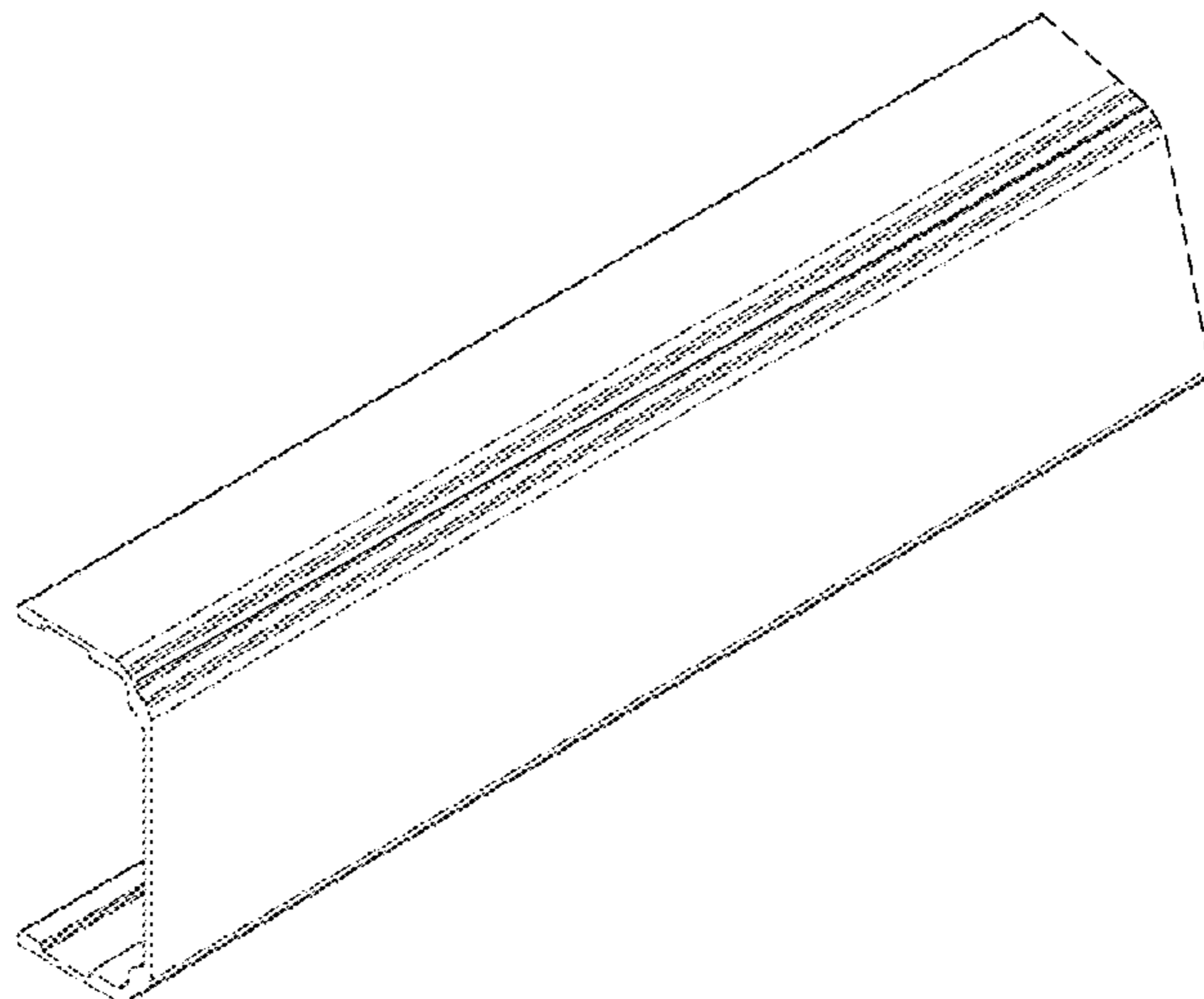
The ornamental design for a ladder rail, as shown and described.

**DESCRIPTION**

FIG. 1 is a perspective view of a ladder rail showing our new design; and,  
FIG. 2 is an end elevation view thereof.  
The broken lines shown in the figures define the bounds of the claimed design and form no part of the claimed design.

**1 Claim, 2 Drawing Sheets**

- (56) **References Cited**  
U.S. PATENT DOCUMENTS  
53,566 A 4/1866 Brown  
140,156 A 6/1873 Olsson  
162,075 A 4/1875 Isaacs et al.  
317,024 A 5/1885 Schumann  
413,730 A 10/1889 Palmer  
445,453 A 1/1891 Nowland  
502,967 A 8/1893 Hetrick et al.  
749,670 A 1/1904 Gardner  
834,653 A 10/1906 Barrett



(56)

References Cited

U.S. PATENT DOCUMENTS

3,005,513 A	10/1961	Larson	5,228,535 A	7/1993	McCarty	
3,085,651 A	4/1963	Howard	5,353,892 A	10/1994	Lu	
3,224,530 A	12/1965	Marvin et al.	5,366,051 A	11/1994	Bartnicki et al.	
3,269,485 A	8/1966	Larson	5,368,347 A	11/1994	Holtman et al.	
D212,086 S	8/1968	Gilman	5,386,907 A	2/1995	Kahl et al.	
3,476,211 A	11/1969	Cormier	5,419,409 A	5/1995	Corulla	
3,481,026 A	12/1969	Lindesmith et al.	5,438,938 A	8/1995	Meeker et al.	
3,495,684 A	2/1970	Homery	5,460,240 A	10/1995	Jones	
3,625,388 A	12/1971	Golden et al.	5,487,207 A	1/1996	Rey	
3,647,606 A	3/1972	Notaro	5,505,302 A	4/1996	Ferley	
3,692,143 A	9/1972	Kummerlin et al.	5,507,460 A	4/1996	Schneider et al.	
D225,493 S	12/1972	Rossi	5,547,080 A	8/1996	Klimas	
3,744,591 A	7/1973	Lucci et al.	5,603,405 A	2/1997	Smith	
3,811,151 A	5/1974	Kuemmerlin	5,613,574 A	3/1997	Melanson	
3,842,936 A	10/1974	De Luca	5,620,272 A	4/1997	Sheng	
3,869,901 A	3/1975	Neary	5,636,706 A	6/1997	Plotner et al.	
3,999,629 A	12/1976	Schaffer et al.	5,673,885 A	10/1997	Pham	
4,027,741 A	6/1977	Derrick	5,685,121 A *	11/1997	DeFrancesco	E04C 3/07 52/241
4,031,981 A	6/1977	Spencer	D387,878 S	12/1997	Jacques	
4,060,150 A	11/1977	Hughes	D388,882 S	1/1998	Kain	
4,061,203 A	12/1977	Spencer et al.	5,722,507 A	3/1998	Kain	
D248,777 S	8/1978	Spencer et al.	5,727,649 A	3/1998	Buckley	
4,153,137 A	5/1979	Johnson	5,740,883 A	4/1998	Trank	
4,155,422 A	5/1979	Larson et al.	5,762,163 A	6/1998	Kain	
RE30,020 E	6/1979	Spencer et al.	5,775,460 A	7/1998	Stone	
4,182,431 A	1/1980	Wing	5,788,072 A	8/1998	Chen	
4,204,587 A	5/1980	Larson	5,791,439 A	8/1998	Plotner et al.	
4,210,224 A	7/1980	Kummerlin et al.	5,826,719 A	10/1998	Chen	
4,216,844 A	8/1980	Ulrich	D401,353 S	11/1998	Bell et al.	
4,276,955 A	7/1981	Hickman	5,873,433 A	2/1999	Katz	
4,298,093 A	11/1981	Wing	5,873,463 A	2/1999	Purcell	
4,306,700 A	12/1981	Bell	D410,550 S	6/1999	Meyers	
4,310,134 A	1/1982	Schopp et al.	5,913,380 A	6/1999	Gugel et al.	
4,356,854 A	11/1982	McGee	D411,888 S	7/1999	King	
4,371,055 A	2/1983	Ashton et al.	5,930,872 A	8/1999	McBride et al.	
4,376,470 A	3/1983	Ashton	5,937,968 A	8/1999	Gibson et al.	
4,407,045 A	10/1983	Boothe	D414,566 S	9/1999	Gibson et al.	
4,440,264 A	4/1984	Knoke et al.	5,954,157 A	9/1999	Grimes et al.	
4,469,193 A	9/1984	Rumsey, Jr.	D414,879 S	10/1999	Meyers	
4,470,045 A	9/1984	Anderson	5,967,260 A	10/1999	Spak	
4,483,415 A	11/1984	Disston et al.	5,971,102 A	10/1999	Brown	
4,485,892 A	12/1984	Maloney et al.	D416,092 S	11/1999	Meyers	
4,491,354 A	1/1985	Williams	5,992,566 A	11/1999	Yeh	
4,494,626 A	1/1985	Ast	5,992,567 A	11/1999	Chiu	
4,502,556 A	3/1985	Bartholet	6,000,497 A	12/1999	Kain et al.	
4,502,564 A	3/1985	Kuemmerlin et al.	6,012,548 A	1/2000	Kim	
4,502,566 A	3/1985	Wing	D420,149 S *	2/2000	Hersh	D25/119
4,560,030 A	12/1985	Mucelli	6,024,412 A	2/2000	Kain et al.	
4,566,150 A	1/1986	Boothe	6,026,933 A	2/2000	King et al.	
4,577,986 A	3/1986	Wang	6,039,149 A	3/2000	Bedja et al.	
4,602,889 A	7/1986	Mu-Shan	D433,156 S	10/2000	Gibson et al.	
4,666,327 A	5/1987	Su	6,142,255 A	11/2000	Plotner et al.	
4,666,328 A	5/1987	Ryu	D434,855 S	12/2000	Ullum et al.	
4,697,305 A	10/1987	Boothe	6,158,749 A	12/2000	Roudebush	
4,715,297 A	12/1987	Lichter	D444,574 S	7/2001	Gibson et al.	
4,723,631 A	2/1988	Tremblay	D447,572 S	9/2001	Rosko	
4,770,559 A	9/1988	Yoo	D447,817 S	9/2001	Rosko	
4,773,503 A	9/1988	Purkapile	D449,385 S	10/2001	Rosko	
4,793,163 A	12/1988	Macfarlane et al.	6,334,509 B1	1/2002	Ryszkiewicz	
4,824,278 A	4/1989	Chang	6,341,666 B1	1/2002	Allen	
4,834,216 A	5/1989	Wallick, Jr.	6,347,687 B1	2/2002	Alim	
4,859,109 A	8/1989	Targetti	D455,842 S	4/2002	Rosko	
4,890,950 A	1/1990	Yoo	6,390,237 B1	5/2002	Kim et al.	
D309,502 S	7/1990	Wing et al.	6,390,238 B1	5/2002	Gibson et al.	
4,949,811 A	8/1990	Bailey	D458,385 S	6/2002	Rosko	
4,951,780 A	8/1990	Kim	6,401,862 B1	6/2002	Caron	
4,974,701 A	12/1990	Parise	D460,566 S	7/2002	Henschel et al.	
5,026,198 A	6/1991	Lin	6,427,805 B1	8/2002	Gibson et al.	
5,052,581 A	10/1991	Christ et al.	6,443,260 B1	9/2002	Katz et al.	
5,056,620 A	10/1991	Zumwalt et al.	6,443,261 B1	9/2002	Gibson et al.	
5,058,239 A	10/1991	Lee	6,450,290 B1	9/2002	Spak	
5,074,377 A	12/1991	Krause	6,454,050 B2	9/2002	Gibson et al.	
5,137,240 A	8/1992	Van Meter	6,467,577 B1	10/2002	Charlebois	
5,163,532 A	11/1992	McCarty	D465,289 S	11/2002	Gibson et al.	
D335,966 S	6/1993	Schwartzkopf et al.	D466,225 S	11/2002	Rosko	
			6,536,557 B2	3/2003	Gibson et al.	
			6,550,579 B2	4/2003	Gibson et al.	
			6,622,340 B2	9/2003	Rosa	

(56)

References Cited

U.S. PATENT DOCUMENTS

6,766,881 B2 7/2004 Carty  
 6,769,515 B2 8/2004 Hillebrecht et al.  
 6,840,583 B1 1/2005 Turner et al.  
 6,854,803 B2 2/2005 Tomas et al.  
 6,857,503 B2 2/2005 Simpson et al.  
 6,871,470 B1 \* 3/2005 Stover ..... E04B 2/7457  
 403/109.1  
 6,886,659 B2 5/2005 Simpson  
 6,902,035 B2 6/2005 Baumgartner et al.  
 6,966,404 B2 11/2005 Meeker  
 6,986,405 B2 1/2006 Meeker  
 6,991,063 B2 1/2006 Latimer et al.  
 7,007,771 B2 3/2006 Rawlings et al.  
 7,093,321 B2 8/2006 Burbrink et al.  
 7,095,428 B2 8/2006 Harrison  
 7,104,362 B2 9/2006 Meeker  
 7,108,103 B2 9/2006 Meeker  
 7,128,187 B2 10/2006 Simpson  
 7,140,072 B2 11/2006 Leng  
 7,159,694 B2 1/2007 Gibson  
 7,182,176 B2 2/2007 Gibson et al.  
 7,188,706 B2 3/2007 Simpson  
 D548,364 S 8/2007 Skubic et al.  
 D548,855 S 8/2007 Meyers  
 7,264,082 B2 9/2007 Simpson et al.  
 D553,370 S 10/2007 Meyers et al.  
 D554,771 S 11/2007 Skubic et al.  
 D558,473 S 1/2008 Mendenhall  
 D562,991 S 2/2008 Meyers et al.  
 D565,745 S 4/2008 Meyers et al.  
 7,370,727 B2 5/2008 Meeker  
 7,383,920 B2 6/2008 Meeker  
 D576,290 S 9/2008 Meyers et al.  
 7,516,817 B2 4/2009 Pate et al.  
 7,617,643 B2 \* 11/2009 Pilz ..... E04B 1/948  
 52/232  
 D606,211 S \* 12/2009 Frobosilo ..... D25/121  
 7,648,108 B2 1/2010 Peterson  
 D620,618 S \* 7/2010 Teffenhart, Jr. .... D25/123  
 D620,619 S \* 7/2010 Teffenhart, Jr. .... E04C 3/06  
 D25/123  
 D621,964 S \* 8/2010 Zadeh ..... E04B 2/767  
 D25/121  
 7,849,640 B2 \* 12/2010 Rice ..... E04B 2/7457  
 33/483  
 7,861,826 B2 1/2011 Meyers et al.  
 7,931,123 B2 4/2011 Moldthan et al.  
 7,967,111 B2 6/2011 Meyers et al.  
 D644,339 S \* 8/2011 Sutton ..... D25/121  
 8,002,084 B2 8/2011 Huang  
 8,042,653 B2 10/2011 Grebinoski et al.  
 8,056,303 B2 \* 11/2011 Frobosilo ..... E04C 3/09  
 52/831  
 8,087,205 B2 \* 1/2012 Pilz ..... E04B 1/948  
 52/232  
 8,146,710 B2 4/2012 Moldthan et al.  
 8,186,481 B2 5/2012 Moss et al.  
 8,186,550 B2 5/2012 Sampson  
 8,210,313 B2 7/2012 Astor  
 8,579,083 B2 11/2013 Astor  
 8,661,991 B2 3/2014 Eveleth  
 D709,628 S \* 7/2014 Rice ..... D25/125  
 D709,629 S \* 7/2014 Rice ..... D25/125  
 D710,031 S 7/2014 Simpson et al.  
 8,869,937 B2 10/2014 Lampe et al.  
 8,919,497 B2 12/2014 Rund  
 8,997,931 B2 4/2015 Parker et al.  
 9,016,434 B2 4/2015 Moss et al.  
 9,163,455 B2 10/2015 Moss et al.  
 D749,715 S 2/2016 Lammel  
 9,380,760 B2 7/2016 Rorke et al.  
 9,404,305 B1 8/2016 Messick  
 9,416,591 B2 8/2016 Kieffer et al.  
 9,422,767 B2 8/2016 Russell et al.

D766,461 S 9/2016 Moss et al.  
 D766,462 S 9/2016 Moss et al.  
 9,488,002 B2 11/2016 Parker et al.  
 9,512,675 B1 12/2016 Fast  
 D800,347 S \* 10/2017 Blick ..... D25/119  
 D812,782 S \* 3/2018 Dorman ..... D25/119  
 2002/0017430 A1 2/2002 Rosko  
 2002/0017431 A1 2/2002 Gibson et al.  
 2002/0166727 A1 11/2002 Cramer et al.  
 2003/0146046 A1 8/2003 Simpson  
 2003/0146047 A1 8/2003 Simpson  
 2003/0217888 A1 11/2003 Simpson et al.  
 2004/0000449 A1 1/2004 Meeker  
 2004/0007424 A1 1/2004 Simpson  
 2004/0140156 A1 7/2004 Moss et al.  
 2004/0140409 A1 7/2004 Radda  
 2005/0029043 A1 2/2005 Latimer et al.  
 2005/0029050 A1 2/2005 Baumgartner et al.  
 2005/0051386 A1 3/2005 Simpson  
 2005/0056233 A1 3/2005 O'Leary et al.  
 2005/0065029 A1 3/2005 Harrison et al.  
 2005/0109558 A1 5/2005 Simpson et al.  
 2005/0173194 A1 8/2005 Pate et al.  
 2005/0274571 A1 12/2005 Simpson et al.  
 2006/0070806 A1 4/2006 Simpson  
 2006/0102425 A1 5/2006 Moldthan  
 2006/0225961 A1 10/2006 Elliott  
 2006/0266585 A1 11/2006 Simpson  
 2007/0181367 A1 8/2007 Astor  
 2007/0181368 A1 8/2007 Simpson  
 2007/0193202 A1 \* 8/2007 Rice ..... E04B 2/7457  
 52/481.1  
 2007/0284192 A1 12/2007 Meyers et al.  
 2008/0006480 A1 1/2008 Simpson et al.  
 2008/0053751 A1 3/2008 Meyers et al.  
 2008/0142301 A1 6/2008 Meyers et al.  
 2008/0251317 A1 10/2008 Johnson  
 2008/0251319 A1 10/2008 Meyers et al.  
 2008/0296447 A1 12/2008 Peterson  
 2009/0078504 A1 3/2009 Astor  
 2009/0113846 A1 \* 5/2009 Knauf ..... E04B 2/789  
 52/846  
 2009/0179455 A1 7/2009 Ogden  
 2009/0229918 A1 9/2009 Moss et al.  
 2010/0101012 A1 4/2010 Sampson  
 2010/0200334 A1 8/2010 Moldthan et al.  
 2010/0236866 A1 9/2010 Huang  
 2011/0011674 A1 1/2011 Kim  
 2011/0024234 A1 2/2011 Lin  
 2011/0056766 A1 3/2011 Maglieri et al.  
 2011/0272923 A1 11/2011 Chen  
 2012/0181109 A1 7/2012 Rund  
 2012/0273304 A1 11/2012 Lampe et al.  
 2014/0054112 A1 2/2014 Astor  
 2014/0123910 A1 5/2014 Rorke et al.  
 2014/0131138 A1 5/2014 Simpson et al.  
 2014/0190768 A1 7/2014 Moss et al.  
 2014/0224585 A1 8/2014 Russell  
 2015/0074980 A1 3/2015 Wesgardh et al.  
 2015/0159434 A1 6/2015 Leng  
 2015/0211297 A1 7/2015 Parker et al.  
 2015/0308190 A1 10/2015 Skubic et al.  
 2016/0143444 A1 5/2016 Lan  
 2016/0222730 A1 8/2016 Yeh  
 2016/0348434 A1 12/2016 Williams et al.

FOREIGN PATENT DOCUMENTS

CA 2354696 A1 2/2002  
 CA 2418581 8/2003  
 CA 2381213 C 7/2004  
 CA 2465252 A1 11/2004  
 CA 2476584 3/2005  
 CA 2341556 C 9/2005  
 CA 2354996 C 10/2005  
 CA 2466777 C 1/2008  
 CA 2466856 C 4/2008  
 CA 2881525 A1 9/2015  
 CN 1601043 A 3/2005

(56)

**References Cited**

FOREIGN PATENT DOCUMENTS

CN	102431801	A	5/2012
CN	103485709	A	1/2014
DE	189419	C	9/1906
DE	3320315	A1	12/1984
EP	0135666	A2	4/1985
EP	1388638	A1	2/2004
EP	1473432	A1	11/2004
EP	1375816	B1	1/2006
EP	1865143	A2	12/2007
EP	1561898	A3	5/2008
EP	2090740	A1	8/2009
FR	2554501	A1	5/1985
GB	2175948	A	12/1986
GB	2175948	B	10/1988
GB	2322897	A	9/1998
GB	2486938	B	9/2015
WO	WO2000042286		7/2000
WO	WO2000050725		8/2000
WO	WO2001012926		2/2001
WO	WO2016090041		6/2016

\* cited by examiner

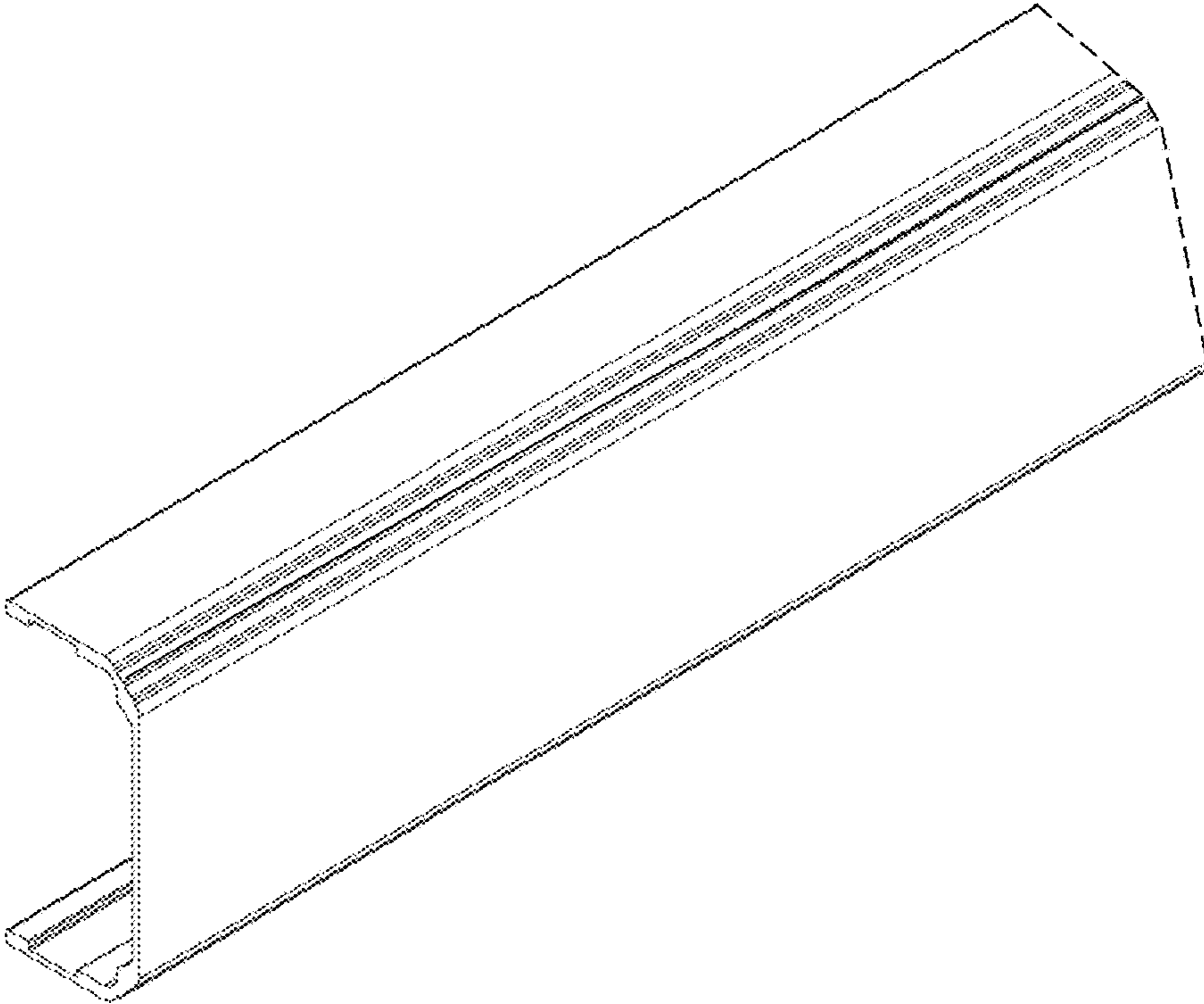


FIG. 1

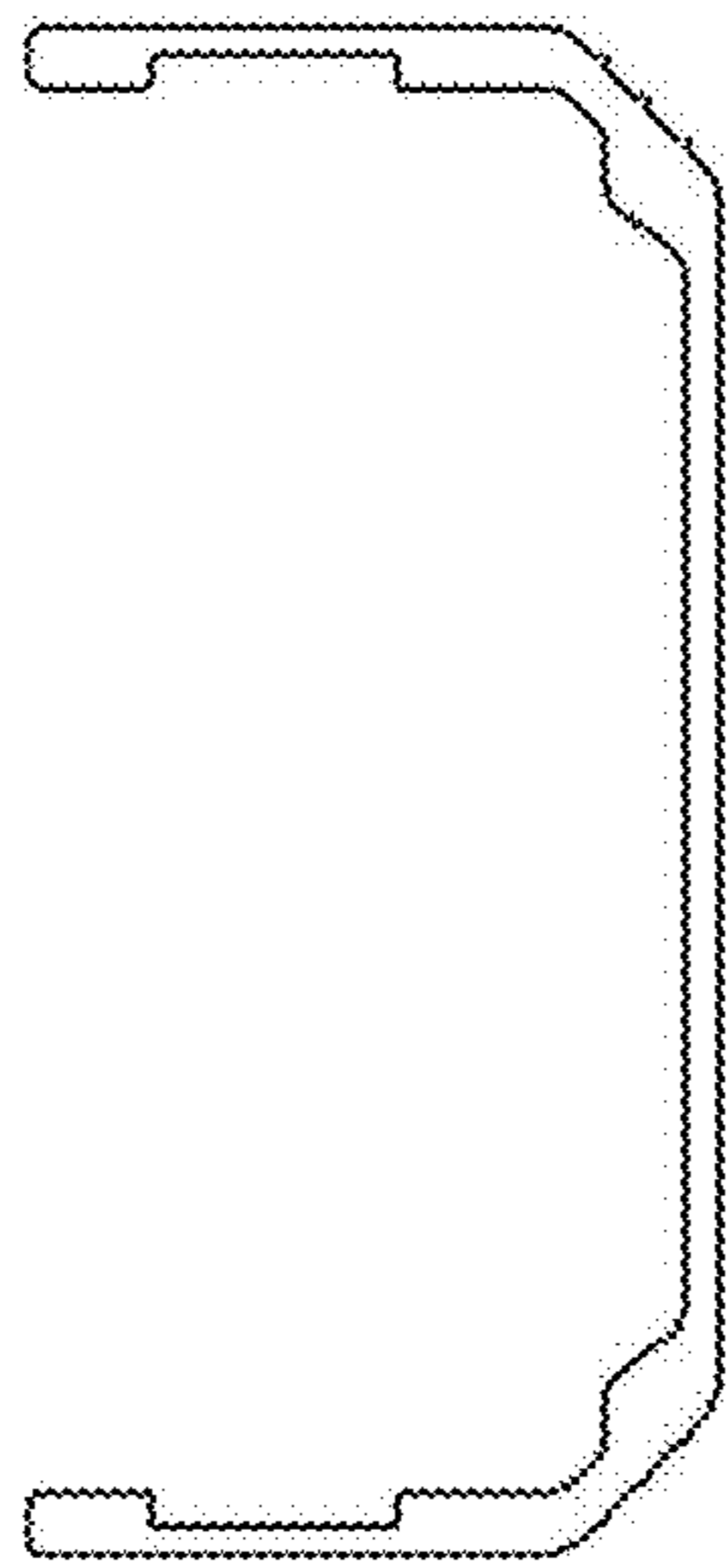


FIG. 2