



US009510636B2

(12) **United States Patent**
Dua et al.

(10) **Patent No.:** **US 9,510,636 B2**
(45) **Date of Patent:** **Dec. 6, 2016**

(54) **ARTICLE OF FOOTWEAR
INCORPORATING A KNITTED
COMPONENT WITH AN INTEGRAL KNIT
TONGUE**

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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 703 days.

(21) Appl. No.: **13/781,525**

(22) Filed: **Feb. 28, 2013**

(65) **Prior Publication Data**

US 2013/0239438 A1 Sep. 19, 2013

Related U.S. Application Data

(63) Continuation-in-part of application No. 13/474,531,
filed on May 17, 2012, now Pat. No. 8,621,891, which
(Continued)

(51) **Int. Cl.**
D04B 1/22 (2006.01)
A43B 1/04 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC **A43B 1/04** (2013.01); **A43B 23/0205**
(2013.01); **A43B 23/0245** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC D04B 1/126; D04B 1/22; D04B 1/24;
D04B 7/24; D04B 15/56
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

601,192 A 3/1898 Woodside
1,215,198 A 2/1917 Rothstein
(Continued)

FOREIGN PATENT DOCUMENTS

CN 1317061 10/2001
CN 1782156 6/2006
(Continued)

OTHER PUBLICATIONS

Taiwanese Office Action dated Nov. 14, 2014 in Taiwanese Patent
Application No. 102105769.
International Preliminary Report on Patentability (including Written
Opinion of the ISA) mailed Sep. 4, 2014 in International Applica-
tion No. PCT/US2013/026618.
Non-Final Office Action mailed Dec. 19, 2012 in U.S. Appl. No.
13/474,531.

(Continued)

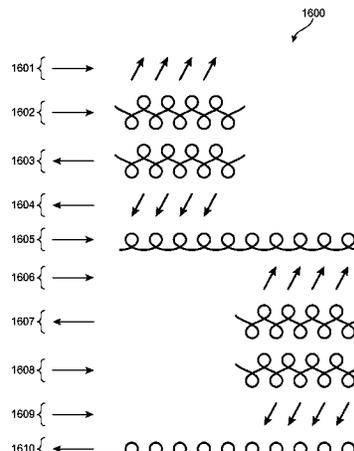
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(57) **ABSTRACT**

Articles of footwear are described that incorporate a knitted
component that has an upper and an integral knit tongue. The
integral knit tongue is formed of unitary knit construction
with the upper and extends through a throat area of the
knitted component. The integral knit tongue includes raised
elements formed of unitary knit construction with the
tongue. Methods of manufacturing a knitted component for
an article of footwear may include knitting the upper and the
integral knit tongue during a knitting process on a knitting
machine.

27 Claims, 28 Drawing Sheets



Related U.S. Application Data

is a continuation of application No. 13/400,511, filed on Feb. 20, 2012, now Pat. No. 8,448,474.

(51) **Int. Cl.**

- A43B 23/02** (2006.01)
- A43B 23/26** (2006.01)
- D04B 15/56** (2006.01)
- D04B 1/24** (2006.01)
- D04B 7/28** (2006.01)

(52) **U.S. Cl.**

- CPC **A43B 23/0265** (2013.01); **A43B 23/26** (2013.01); **D04B 1/22** (2013.01); **D04B 1/24** (2013.01); **D04B 7/28** (2013.01); **D04B 15/56** (2013.01); **D10B 2403/0113** (2013.01); **D10B 2403/0243** (2013.01); **D10B 2403/02411** (2013.01); **D10B 2403/032** (2013.01); **D10B 2501/043** (2013.01)

(56)

References Cited

U.S. PATENT DOCUMENTS

1,597,934 A	8/1926	Stimpson	5,511,323 A	4/1996	Dahlgren
1,888,172 A	11/1932	Joha	5,572,860 A	11/1996	Mitsumoto
1,902,780 A	3/1933	Holden	5,575,090 A	11/1996	Condini
1,910,251 A	5/1933	Joha	5,623,840 A	4/1997	Roell
2,001,293 A	5/1935	Wilson	5,729,918 A	3/1998	Smets
2,047,724 A	7/1936	Zuckerman	5,735,145 A	4/1998	Pernick
2,147,197 A	2/1939	Glidden	5,746,013 A	5/1998	Fay
2,314,098 A	3/1943	McDonald	5,765,296 A	6/1998	Ludemann et al.
2,330,199 A	9/1943	Basch	5,823,012 A	10/1998	HacsKaylo
2,343,390 A	3/1944	Ushakoff	5,884,419 A	3/1999	Davidowitz et al.
2,400,692 A	5/1946	Herbert	5,996,189 A	12/1999	Wang
2,440,393 A	4/1948	Clark	6,029,376 A	2/2000	Cass
2,569,764 A	10/1951	Jonas	6,032,387 A	3/2000	Johnson
2,586,045 A	2/1952	Hoza	6,052,921 A	4/2000	Oreck
2,608,078 A	8/1952	Anderson	6,088,936 A	7/2000	Bahl
2,641,004 A	6/1953	Whiting	6,151,802 A	11/2000	Reynolds
2,675,631 A	4/1954	Doughty	6,170,175 B1	1/2001	Funk
2,994,322 A	8/1961	Cullen et al.	6,308,438 B1	10/2001	Throneburg
3,583,081 A	6/1971	Hayashi	6,321,574 B1	11/2001	Marker et al.
3,694,940 A	10/1972	Stohr	6,333,105 B1	12/2001	Tanaka et al.
3,704,474 A	12/1972	Winkler	6,401,364 B1	6/2002	Burt
3,766,566 A	10/1973	Tadokoro	6,558,784 B1	5/2003	Norton
3,778,856 A	12/1973	Christie	6,588,237 B2	7/2003	Cole
3,952,427 A	4/1976	Von den Benken	6,754,983 B2	6/2004	Hatfield et al.
3,972,086 A	8/1976	Belli	6,910,288 B2	6/2005	Dua
4,027,402 A	6/1977	Liu	6,922,917 B2	8/2005	Kerns et al.
4,031,586 A	6/1977	Von den Benken	6,931,762 B1	8/2005	Dua
4,211,806 A	7/1980	Civardi	D517,297 S	3/2006	Jones et al.
4,232,458 A	11/1980	Bartels	7,051,460 B2	5/2006	Orei
4,255,949 A	3/1981	Thorneburg	7,056,402 B2	6/2006	Koerwien
4,258,480 A	3/1981	Famolare, Jr.	7,347,011 B2	3/2008	Dua
4,317,292 A	3/1982	Melton	7,441,348 B1	10/2008	Dawson
4,373,361 A	2/1983	Thorneburg	7,543,397 B2	6/2009	Kilgore et al.
4,447,967 A	5/1984	Zaino	7,568,298 B2	8/2009	Kerns
4,465,448 A	8/1984	Aldridge	7,682,219 B2	3/2010	Falla
4,499,741 A	2/1985	Harris	7,752,775 B2	7/2010	Lyden
4,607,439 A	8/1986	Sogabe et al.	7,770,306 B2	8/2010	Lyden
4,737,396 A	4/1988	Kamat	7,774,956 B2	8/2010	Dua
4,750,339 A	6/1988	Simpson et al.	7,814,598 B2	10/2010	Dua
4,756,098 A	7/1988	Boggia	8,196,317 B2	6/2012	Dua
4,785,558 A	11/1988	Shiomura	8,215,033 B2	7/2012	Carboy
4,813,158 A	3/1989	Brown	8,225,530 B2	7/2012	Sokolowski
5,031,423 A	7/1991	Ikenaga	8,266,749 B2	9/2012	Dua
5,095,720 A	3/1992	Tibbals	8,448,474 B1	5/2013	Tatler et al.
5,117,567 A	6/1992	Berger	8,490,299 B2	7/2013	Dua et al.
5,152,025 A	10/1992	Hirmas	8,621,891 B2*	1/2014	Dua A43B 23/0245 36/47
5,192,601 A	3/1993	Neisler	8,650,916 B2	2/2014	Dua et al.
5,345,638 A	9/1994	Nishida	8,745,895 B2	6/2014	Sokolowski et al.
5,353,524 A	10/1994	Brier	8,800,172 B2	8/2014	Dua et al.
			2002/0078599 A1	6/2002	Delgorgue
			2002/0148258 A1	10/2002	Cole et al.
			2003/0126762 A1	7/2003	Tseng
			2003/0191427 A1	10/2003	Jay et al.
			2003/0200679 A1	10/2003	Wilson et al.
			2004/0118018 A1	6/2004	Dua
			2004/0181972 A1	9/2004	Csorba
			2005/0115284 A1*	6/2005	Dua A43B 1/04 66/178 R
			2005/0193592 A1	9/2005	Dua
			2005/0273988 A1	12/2005	Christy
			2005/0284000 A1	12/2005	Kerns
			2006/0059715 A1	3/2006	Aveni
			2006/0162187 A1	7/2006	Byrnes et al.
			2007/0022627 A1	2/2007	Sokolowski et al.
			2007/0180730 A1	8/2007	Greene et al.
			2007/0294920 A1	12/2007	Baychar
			2008/0017294 A1	1/2008	Bailey et al.
			2008/0078102 A1	4/2008	Kilgore et al.
			2008/0110048 A1	5/2008	Dua et al.
			2008/0189830 A1	8/2008	Egglefield
			2008/0313939 A1	12/2008	Ardill
			2009/0068908 A1	3/2009	Hinchcliff
			2010/0051132 A1	3/2010	Glenn
			2010/0154256 A1	6/2010	Dua
			2010/0170651 A1	7/2010	Scherb et al.
			2011/0030244 A1	2/2011	Motawi et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

2012/0011744	A1	1/2012	Bell et al.	
2012/0233882	A1	9/2012	Huffa et al.	
2012/0233884	A1	9/2012	Greene	
2012/0240429	A1	9/2012	Sokolowski et al.	
2012/0255201	A1	10/2012	Little	
2013/0212907	A1*	8/2013	Dua A43B 23/0245 36/83
2013/0239438	A1*	9/2013	Dua A43B 1/04 36/84
2013/0239625	A1	9/2013	Meir et al.	
2014/0245545	A1	9/2014	Meir et al.	

FOREIGN PATENT DOCUMENTS

CN	101460072	6/2009
CN	101583294	11/2009
CN	102271548	12/2011
CN	102655776	9/2012
DE	870963 C	3/1953
DE	1084173	6/1960
DE	29700546	5/1997
DE	19738433	4/1998
DE	19728848	1/1999
EP	0279950	8/1988
EP	0448714	10/1991
EP	0569159	11/1993
EP	0728860	8/1996
EP	0649286	9/1996
EP	0758693	2/1997
EP	0898002	2/1999
EP	1233091	8/2002
EP	1437057	7/2004
EP	1563752 A1	8/2005
EP	1602762	12/2005
EP	1972706	9/2008
FR	2171172	9/1973
GB	538865	8/1941
GB	2018837	10/1979
GB	1603487	11/1981
JP	H06113905	4/1994
JP	H08109553	4/1996
JP	H11302943	11/1999
JP	2005000234	1/2005
JP	2005058301	3/2005
JP	2005160697	6/2005
JP	2007090040	4/2007
JP	2008-291402 A	12/2008
JP	2012-512698 A	6/2012
NL	7304678	10/1974
WO	9003744	4/1990
WO	WO94/00033	1/1994
WO	00/30480	6/2000
WO	0030480	6/2000
WO	0032861	6/2000
WO	0231247	4/2002
WO	WO 2010/080182 A1	7/2010
WO	WO 2011/043998	4/2011
WO	2013126313	8/2013

OTHER PUBLICATIONS

Non-Final Office Action mailed Oct. 17, 2012 in U.S. Appl. No. 13/400,511.
 Notice of Allowance mailed Jan. 31, 2013 in U.S. Appl. No. 13/400,511.
 Chinese Office Action and Chinese Search Report issued Jun. 3, 2015 in Chinese Patent Application 201380020780.X.
 International Search Report and Written Opinion mailed Jun. 20, 2014 in International Application No. PCT/US2014/018852.
 Taiwanese Office Action dated May 26, 2015 in Taiwanese Patent Application No. 103106632.
 International Search Report and Written Opinion mailed Jul. 30, 2014 in International Application No. PCT/US2014/018845.
 Letter from Bruce Huffa dated Dec. 23, 2013 (71 Pages).
 Declaration of Dr. Edward C. Frederick from the US Patent and Trademark Office Inter Partes Review of U.S. Pat. No. 7,347,011 (178 pp).
 David J. Spencer, Knitting Technology: A Comprehensive Handbook and Practical Guide (Third ed., Woodhead Publishing Ltd. 2001) (413 pp).
 Excerpt of Hannelore Eberle et al., Clothing Technology (Third English ed., Beuth-Verlag GmNH 2002) (book cover and back; pp. 2-3, 83).
 International Search Report and Written Opinion in connection with PCT/US2009/056795 mailed on Apr. 20, 2010, 16 pages.
 International Search Report and Written Opinion in connection with PCT/US2012/028576 mailed on Oct. 1, 2012, 12 pages.
 International Search Report and Written Opinion in connection with PCT/US2012/028559 mailed on Oct. 19, 2012, 11 pages.
 International Search Report and Written Opinion in connection with PCT/US2012/028534 mailed on Oct. 17, 2012, 16 pages.
 International Preliminary Report on Patentability in connection with PCT/US2012/028576 mailed Sep. 17, 2013, 7 pages.
 Office Action in corresponding European Application No. 14717892.5, dated Oct. 6, 2015, 2 pages.
 International Preliminary Report on Patentability in connection with PCT/US2012/028534 mailed on Sep. 17, 2013, 8 pages.
 Office Action, and English language translation therein, in corresponding Japanese Application No. 2014-557864, dated Mar. 31, 2016, 6 pages.
 Office Action and Search Report, and English language translation therein, in corresponding Taiwanese Application No. 103143383, dated Dec. 9, 2015, 7 pages.
 Office Action and Search Report, and English language translation therein, in corresponding Japanese Application No. 2014-557864, dated Sep. 10, 2015, 7 pages.
 Office Action and Search Report, and English language translation therein, in corresponding Korean Application No. 10-2014-7026058, dated Feb. 29, 2016, 8 pages.
 Office Action in corresponding U.S. Appl. No. 13/869,398, dated Feb. 29, 2016, 8 pages.
 Invitation to Pay Additional Fees, and, Where Applicable, Protest Fee (with Search Report) mailed Aug. 6, 2013 in PCT Application No. PCT/US2013/026618, 5 pages.
 International Search Report and the Written Opinion mailed Oct. 15, 2013 in PCT Application No. PCT/US2013/026618, 13 pages.

* cited by examiner

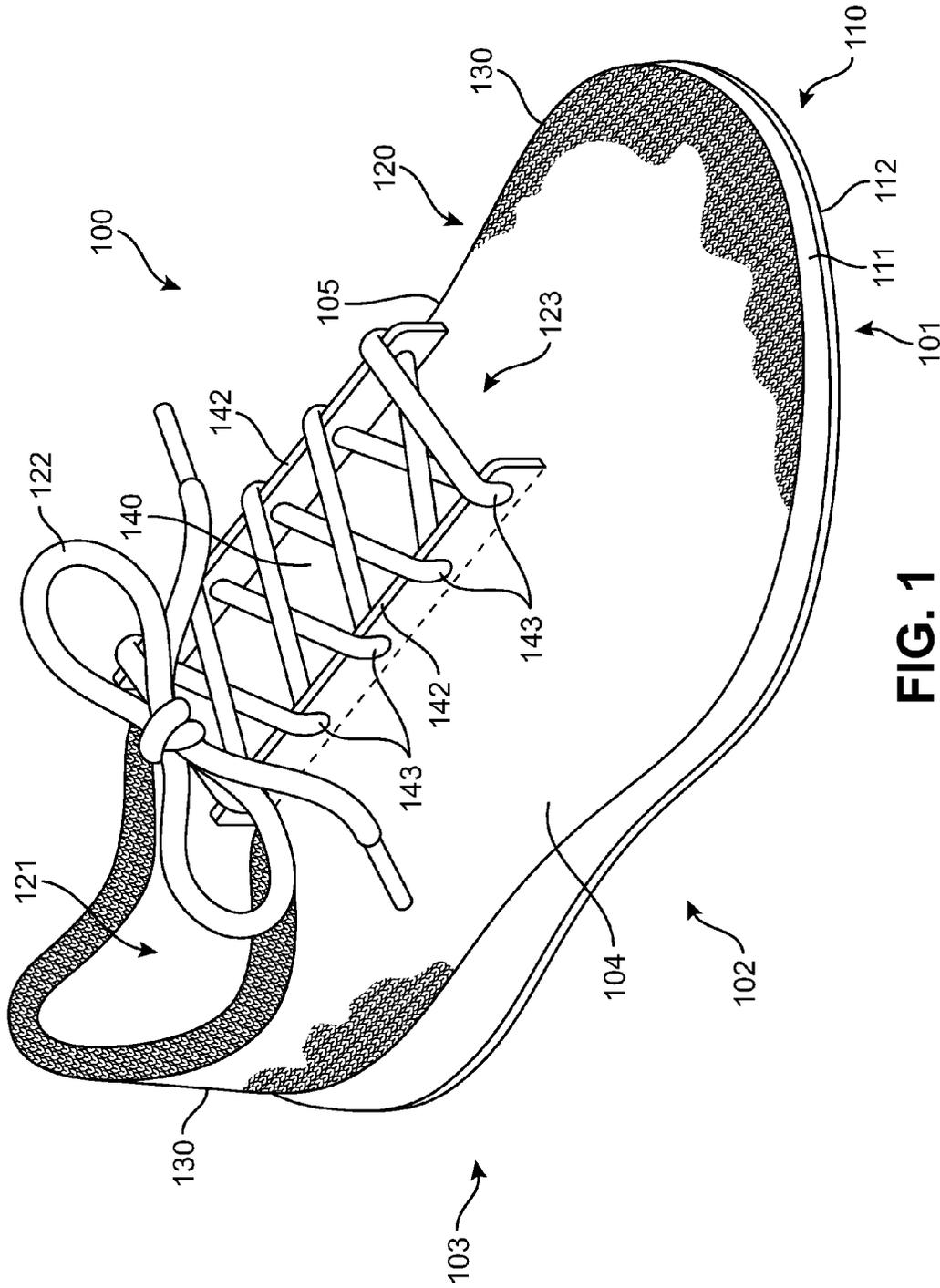


FIG. 1

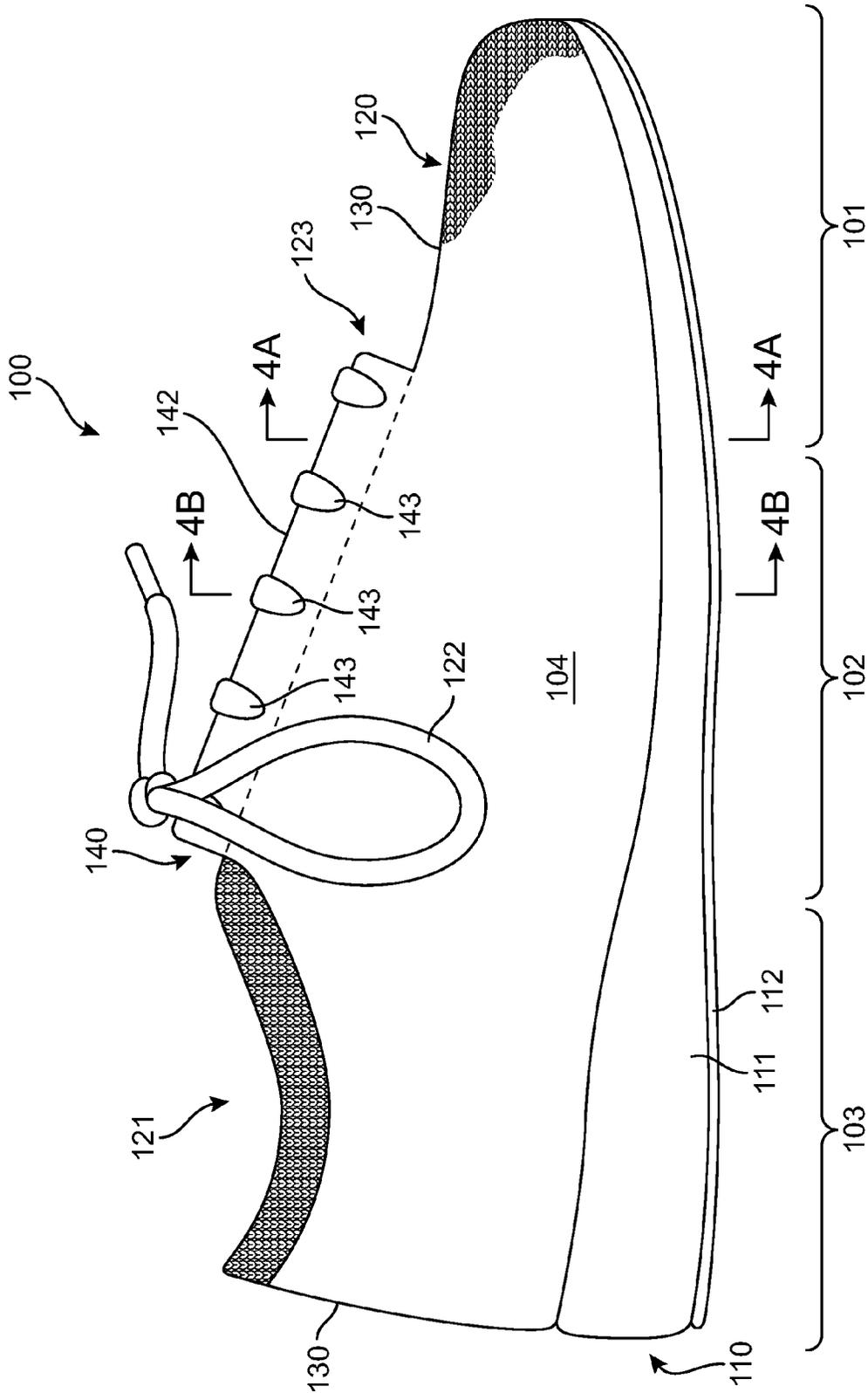


FIG. 2

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