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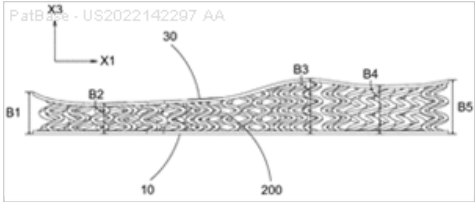
Records: 17 (1-17 of 17)
Export type: Family Export

1. Family 91363990 (US2022142297 AA)

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Title
[EN] SHOE MIDSOLE WITH VARIABLE DIMENSION HELICAL SPRING MADE BY ADDITIVE MANUFACTURING PROCESS

Abstract
[EN] A shoe midsole having a structure formed by additive manufacturing process, including a bottom pad, an upper pad and a shock-absorbing layer. The bottom pad has foot-shaped profile and includes a plurality of stress zones. The upper pad is arranged opposite to the bottom pad and has foot-shaped profile almost identical to that of the bottom pad. The shock-absorbing layer is arranged between the bottom pad and the upper pad and includes a plurality of pressure-bearing units. The pressure-bearing unit is arranged between the bottom pad and the upper pad in the manner that two ends of each pressure-bearing unit abut against the bottom pad and the upper pad respectively. The pressure-bearing unit has excellent mechanical properties such as higher energy absorption and force bearing capacity for bearing pressures or stress put by the foot, good flexibility and higher deflection capacity that can be elastically deformed in the longitudinal direction.



International Class: A43B13/14; A43B13/24; A43B21/24; A43B13/18

Cooperative Patent Class: A43B13/182

Family Information

	Patent Number	Publication Date	Application Number	Application Date
	TW202218574 A	20220516	TW20200144118	20201214
	US2022142297 AA	20220512	US20200093573	20201109

Priority Numbers: US20200093573 [20201109]

Probable Patent Assignee: NATIONAL TAIWAN UNIV OF SCIENCE AND TECHNOLOGY

Assignees: UNIV NAT TAIWAN SCIENCE AND TECHNOLOGY

Non Std Assignees: NATIONAL TAIWAN UNIV OF SCIENCE AND TECHNOLOGY

Inventors: NAZIR AAMER; JENG JENG YWAN; ALI MUBASHER

2. Family 69963124 (USD819307 S1)

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Title
[EN] MASSAGE SANDAL

Abstract
[EN] [Source: Claim 1] I claim the ornamental design for a massage sandal, as shown and described.

International Class: A43B13/22; A43B13/40; A43B3/12; A43B7/14; A43B7/26; A61H39/00; A43B13/18; A43B17/02; A43B17/14; A43B7/22; A43B7/32; A43B1/10; A43B13/12

Cooperative Patent Class: A43B13/22; A43B13/40; A43B7/14; A43B7/146; A43B17/02; A43B7/141; A43B1/10; A43B17/14; A43B7/32; A43B1/0009; A43B13/223; A43B3/108; A43B3/12; A43B3/128; A43B7/142; A43B7/1425; A43B7/143; A43B7/1475; A43B7/26; A43B17/00; A43B17/023; A43B7/144; A43B13/125; A43B7/1445; A43B7/149

US Class: 1/1; D2/916; D2/961

Locarno Class: 02/04; 02/99

Family Information

	Patent Number	Publication Date	Application Number	Application Date
	CA3098477 AA	20201026	CA20193098477	20190419
	CA3098480 AA	20201026	CA20193098480	20190419
	MX2020011192 A1	20210416	MX20200011192	20190419
	MX2020011193 A1	20210416	MX20200011193	20190419
	US10149512 BA	20181211	US20180961243	20180424
	US10188172 BA	20190129	US20180961300	20180424
	US2019116922 AA	20190425	US20180194622	20181119
	USD819307 S1	20180605	US20170623223F	20171024
	USD819317 S1	20180605	US20170623224F	20171024
	WO19209641 A1	20191031	WO2019US28240	20190419
	WO19209642 A1	20191031	WO2019US28244	20190419

Priority Numbers: US20180961243 [20180424]; WO2019US28240 [20190419]; US20180961300 [20180424]; WO2019US28244 [20190419]; US20170623224F [20171024]; US20170623223F [20171024]; US20180194622 [20181119]

Probable Patent Assignee: HEALTH SHOES PLUS INC

Assignees: HEALTH SHOES PLUS INC; HAPPY FEET PLUS INC

Non Std Assignees: WURTZ JACOB; HFPLUS LLC

Inventors: WURTZ JACOB

Non Std Inventors: JACOB WURTZ

Agent(s): GOWLING WLG CANADA LLP; DANIEL SANCHEZ Y BEJAR; LARSON AND LARSON PA; LARSON AND LARSON PA; LIEBENOW FRANK; MILLER JUSTIN P; JUSTIN P; PATRICK A; MILLER JUSTIN P ET AL; LARSON AND LARSON PA

Designated States: AE; AG; AL; AM; AO; AT; AU; AZ; BA; BB; BE; BF; BG; BH; BJ; BN; BR; BW; BY; BZ; CA; CF; CG; CH; CI; CL; CM; CN; CO; CR; CU; CY; CZ; DE; DJ; DK; DM; DO; DZ; EC; EE; EG; ES; FI; FR; GA; GB; GD; GE; GH; GM; GN; GQ; GR; GT; GW; HN; HR; HU; ID; IE; IL; IN; IR; IS; IT; JO; JP; KE; KG; KH; KM; KN; KP; KR; KW; KZ; LA; LC; LK; LR; LS; LT; LU; LV; LY; MA; MC; MD; ME; MG; MK; ML; MN; MR; MT; MW; MX; MY; MZ; NA; NE; NG; NI; NL; NO; NZ; OM; PA; PE; PG; PH; PL; PT; QA; RO; RS; RU; RW; SA; SC; SD; SE; SG; SI; SK; SL; SM; SN; ST; SV; SY; SZ; TD; TG; TH; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; ZA; ZM; ZW

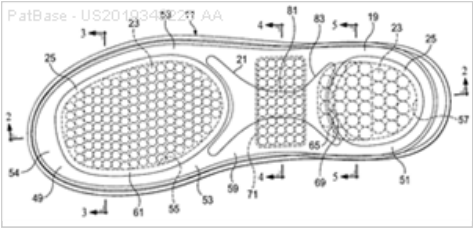


3. Family 76523802 (US2019343225 AA)

[View in PatBase](#)

Title
[EN] CUSHIONING FOR SHOE SOLE

Abstract
[EN] An article of footwear has an upper, an outsole and a midsole. The outsole has upper and lower surfaces. The midsole has a midsole lower surface that contacts the upper surface of the outsole. The midsole has at least one cavity located in a heel or a forefoot portion, which cavity opens to a midsole upper surface. A cushion is located in the cavity. The cushion includes resilient balls located in a resilient matrix material. The balls have a first durometer and the matrix material has a second durometer that is different than the first durometer. The midsole has a lower cavity in the lower surface of the midsole, which lower cavity is aligned with an opening in the outsole. Balls are located in the lower cavity. A retainer keeps the balls in the lower cavity and provides a visual indication of the balls in the lower cavity.



International Class: A43B13/12; A43B13/18; A43B13/42; A43B17/02; A43B17/14
Cooperative Patent Class: A43B13/125; A43B13/187; A43B13/42; A43B17/02; A43B17/14

Family Information				
	Patent Number	Publication Date	Application Number	Application Date
	US11330863 BB	20220517	US20190407972	20190509
	US2019343225 AA	20191114	US20190407972	20190509
	US2022167710 AA	20220602	US20220672859	20220216

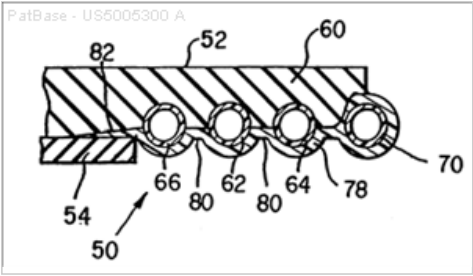
Priority Numbers: US20180671085P [20180514]; US20190407972 [20190509]; US20220672859 [20220216]
Probable Patent Assignee: TWISTED X INC
Assignees: TWISTED X INC; REDDY PRASAD; LE TUAN
Inventors: REDDY PRASAD; LE TUAN
Agent(s): DECKER JONES PC; DECKER JONES PC; YOST BRIAN K

4. Family 4524912 (US5005300 A)

[View in PatBase](#)

Title
[EN] TUBULAR CUSHIONING SYSTEM FOR SHOES

Abstract
[EN] The present invention utilizes an upper and a midsole which is disposed in a conventional manner below the upper. The midsole includes an elastomeric material and has a number of spaced-apart horizontal tubes extending the width of the midsole which are encapsulated in the elastomeric material. The tubes are hollow and lay side by side in a direction either perpendicular to the longitudinal axis of the shoe, parallel to the axis, or in any other direction functional for foot and shoe mechanics. The elastomeric material has a hardness less than the tubes and fills the space between the tubes. To visualize the midsole, a transparent window may be utilized.



International Class: A43B13/18; A43B13/20; A43B13/38; A43B13/40; A43B17/00; A43B17/03; A43B5/00

Cooperative Patent Class: A43B13/203; A43B13/206; A43B17/03; A43B17/035; A43B1/0072; A43B13/181

US Class: 36/114; 36/28; 36/31

Family Information

Patent Number	Publication Date	Application Number	Application Date
EP0298449 A2	19890111	EP19880110786	19880706
EP0298449 A3	19890823	EP19880110786	19880706
JP1086902 A2	19890331	JP19880168325	19880706
JP64086902 A2	19890331	JP19880168325	19880706
KR19890701037 A	19891219	KR19890700402	19890306
KR19897001037 A	19891219	KR19897000402	19880706
US5005300 A	19910409	US19900492434	19900307
WO8900017 A1	19890112	WO1988US02280	19880706

Priority Numbers: US19870070214 [19870706]; WO1988US02280 [19880706]; US19890304615 [19890201]; US19900492434 [19900307]

Probable Patent Assignee: REEBOK INT LTD

Assignees: REEBOK INT LTD; RIIBOTSUKU INTERNATL LTD

Non Std Assignees: REEBOK INTERNATIONAL LTD

Inventors: DIAZ JUAN A; MILLER DAVID E; LE TUAN; LITCHFIELD PAUL E; BURRIS STEVEN J; POORU II RITSUCHIFUIIRUDO; JIYUAN EE DEIAZU; SUTEIIBUN JIEI BARISU; TSUAN RII; DEBITSUDO II MIRAA; LEGASSIE CHARLES P; WHITE SPENCER; RINGEL JUDITH C; RUSSELL WAYNE; GOLDSTON MARK R

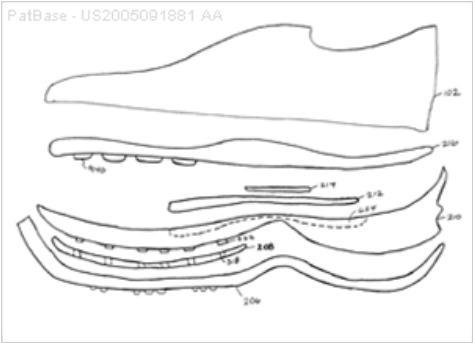
Designated States: AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; NL; SE; KR

5. Family 31870713 (US2005091881 AA)

[View in PatBase](#)

Title
[EN] SOLE FOR INCREASED CIRCULATION

Abstract
[EN] A sole for a shoe to increase circulation in the wearer's foot during forefoot intensive activities. The sole includes a midsole having at least one protrusion disposed in a forefoot region thereof and a plate having at least one receptacle disposed therein wherein the plate is fixedly attached to the midsole such that the receptacle aligns with the protrusion. The diameter of the receptacle is approximately equal to the diameter of the protrusion, so that the protrusions flex within the receptacles in a trampoline-like fashion. An outsole is fixedly attached to the plate and the midsole, wherein the outsole is disposed underneath the entire length of the sole. A forefoot region of the outsole includes an exterior portion and a softer interior portion. Several projections are disposed on the softer interior portion to provide additional pressure points in the sole.



International Class: A43B13/02; A43B13/12; A43B13/18; A43B13/20; A43B5/00; A43B7/00; A43B7/06

Cooperative Patent Class: A43B1/0009; A43B13/10; A43B13/12; A43B13/187; A43B13/20; A43B5/00; A43B7/144; A43B7/1445; A43B7/146

US Class: 36/30.00R; 36/30R; 36/3B; 36/3R

Family Information

	Patent Number	Publication Date	Application Number	Application Date
	US2005091881 AA	20050505	US20030696555	20031030
	US7386945 BB	20080617	US20030696555	20031030

Priority Numbers: US20030696555 [20031030]

Probable Patent Assignee: REEBOK INT LTD

Assignees: REEBOK INT LTD

Non Std Assignees: REEBOK INTERNATIONAL LTD; REEBOK INT

Inventors: BURGESS IAN

Agent(s): STERNE KESSLER GOLDSTEIN AND FOX PLLC

6. Family 11658812 (US5932336 A)

[View in PatBase](#)

Title
[EN] SHOE SOLE

Abstract
[EN] The present invention is an improved golf shoe which incorporates a spike socket spine frame system that extends throughout the shoe sole for receiving all of the spike receptacles and is embedded in the outsole. The spine frame provides improved shoe performance and spike location and is made of a material that is stiffer than the outsole material. More particularly, the shoe sole is comprised of a spike socket spine having seventeen spike socket locations: three spike sockets in the toe section, six spike sockets in the metatarsal section, four spike sockets in the shank section and four spike sockets in the heel section, for receiving the posts of the golf spikes.

International Class: A43B13/02; A43B13/12; A43B13/18; A43B5/00; A43C15/00; A43C15/02; A43C15/16; A43B15/00; B32B5/18; B32B5/28

Cooperative Patent Class: A43B13/026; A43B13/12; A43B13/189; A43B13/223; A43B5/001; A43C15/02; A43C15/161; Y10T428/24331; Y10T428/249921; Y10T428/249958; Y10T428/249972; Y10T428/249978; Y10T428/31551; Y10T428/31554

US Class: 36/102; 36/127; 36/28; 36/29; 36/30A; 36/32R; 36/67A; 36/67D; 428/138; 428/221; 428/308.4; 428/313.5; 428/315.5; 428/423.1; 428/423.3; 521/137; 521/59; 521/60

Family Information

	Patent Number	Publication Date	Application Number	Application Date
	AU199659524 A1	19961224	AU19960059524	19960530
	TH38149 A	20000421	TH19961001822	19960604
	TW314456 B	19970901	TW19960106819	19960605
	US5932336 A	19990803	US19970839819	19970418
	US5987783 A	19991123	US19950462310	19950605
	WO9639059 A1	19961212	WO1996US07993	19960530
	ZA9604610 A	19961212	ZA19960004610	19960604

Priority Numbers: US19950462310 [19950605]; WO1996US07993 [19960530]; US19970839819 [19970418]

Probable Patent Assignee: ACUSHNET CO

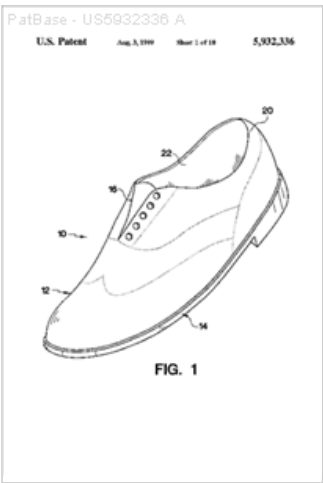
Assignees: ACUSHNET CO

Non Std Assignees: ACUSHNET COMPANY; ACUSHNET COUS

Inventors: PETROVIC ZORAN; ALLEN BERNIE

Non Std Inventors: BERNIE ALLEN; ZORAN PETROVIC

Designated States: AL; AM; AT; AU; AZ; BB; BE; BF; BG; BJ; BR; BY; CA; CF; CG; CH; CI; CM; CN; CZ; DE; DK; EE; ES; FI; FR; GA; GB; GE; GN; GR; HU; IE; IS; IT; JP; KE; KG; KP; KR; KZ; LK; LR; LS; LT; LU; LV; MC; MD; MG; MK; ML; MN; MR; MW; MX; NE; NL; NO; NZ; PL; PT; RO; RU; SD; SE; SG; SI; SK; SN; SZ; TD; TG; TJ; TM; TR; TT; UA; UG; UZ; VN



7. Family 30304625 (US5896680 A)

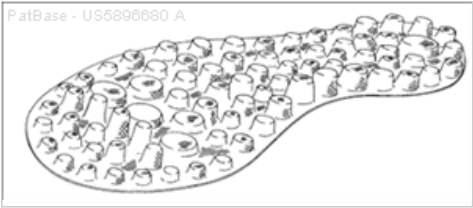
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Title

[EN] Shoes comprising three-dimensional formed fiber product

Abstract

[EN] Shoes for use in demanding applications, primarily athletics, are made from a three-dimensional fiber network that is semi-rigid and resilient. The fiber network is made from a textile fabric that has an array of projections made from the same fabric rising from the plane of the fabric.



International Class: B32B3/28; D04H1/00; D04H13/00; D06C23/00; D06C23/04; A43B13/18; A43B13/26; A43B13/41; B29C70/06; B29C70/08; B29C70/22; B29K267/00; B29K277/00; B29L31/50; A43B23/07; A43B7/06; B29C70/24

Cooperative Patent Class: A43B13/187; A43B13/26; B29C70/085; B29C70/222; B29L2031/507

US Class: 36/28; 36/3A; 36/3B; 36/3R; 36/43; 36/55; 36/87; 36/3.00R; 36/3.00B; 36/3.00A

Family Information

	Patent Number	Publication Date	Application Number	Application Date
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	EP0869723 A1	19981014	EP19960944864	19961219
	JP2000502575 T2	20000307	JP19970523785T	19961219
	US5896680 A	19990427	US19960770026	19961219
	WO9723142 A1	19970703	WO1996US20179	19961219

Priority Numbers: CN19961099140 [19961210]; US19950009061P [19951222]; WO1996US20179 [19961219]; US19960770026 [19961219]

Probable Patent Assignee: NORTH CAROLINA STATE UNIV

Assignees: HOECHST CELANESE CORP

Non Std Assignees: CNA HOLDINGS INC; HNA HOLDINGS INC; NORTH CAROLINA STATE UNIV

Inventors: BESSEY W E; HAAS J S W; KIM D W; KIM DAI W; CLARK GREGORY M; BESSEY WILLIAM E; OAKLEY ETHERIDGE O JR; HAAS JOSEPH S W; NAGEL JOHN; OAKLEY JR ETHERIDGE O

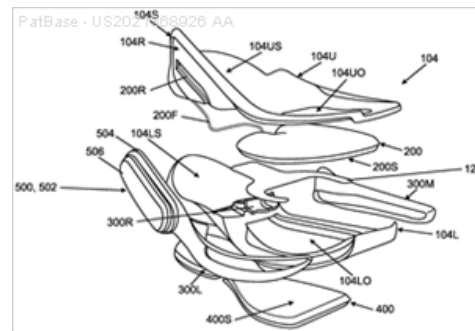
Non Std Inventors: D W KIM; W E BESSEY; J S W HAAS; HAAS JOSEPH S; NAGEL JOHN C O TERESA BECK; OAKLEY ETHERIDGE O

Designated States: AT; DE; FR; GB; IE; IT; SE; BE; CH; DK; ES; FI; GR; JP; LU; MC; NL; PT

[View in PatBase](#)

[EN] FOOT SUPPORT SYSTEMS INCLUDING FLUID MOVEMENT CONTROLLERS AND ADJUSTABLE FOOT SUPPORT PRESSURE

[EN] Foot support systems include a fluid flow control system that facilitates movement of fluid into, out of, and/or within a sole structure and/or article of footwear, e.g., to change and/or control pressure in fluid filled bladder(s). Aspects of this technology may relate to one or more of: (a) footwear structures in which such systems are incorporated; (b) valve stem based fluid flow transfer systems; (c) solenoid based fluid flow transfer systems; (d) user input button features; (e) air filter features; (f) fluid tube to fluid distributor connection features; (g) fluid distributor to footwear connection features; (h) valve position sensor features; (i) valve transmission features; (j) pressure control algorithm features; (k) electronic communication features; (l) system sealing features; and/or (m) pressure sensor mounting features.



Cooperative Patent Class: A43B13/186; A43B13/189; A43B13/203; A43B13/206; A43B3/34; F16K11/0856; F16K27/065

	Patent Number	Publication Date	Application Number	Application Date
	TW202207830 A	20220301	TW20210119574	20210528
	US2021368926 AA	20211202	US20210333309	20210528
	US2021368927 AA	20211202	US20210333333	20210528
	US2021368928 AA	20211202	US20210333493	20210528
	US2021368929 AA	20211202	US20210333555	20210528
	US2021368930 AA	20211202	US20210333630	20210528
	US2021368931 AA	20211202	US20210333683	20210528
	US2021368932 AA	20211202	US20210333735	20210528
	US2021368933 AA	20211202	US20210333785	20210528
	US2021368934 AA	20211202	US20210333867	20210528
	US2021368935 AA	20211202	US20210333919	20210528
	US2021368936 AA	20211202	US20210333974	20210528
	US2021368937 AA	20211202	US20210334015	20210528
	US2021368938 AA	20211202	US20210334049	20210528
	WO21243124 A1	20211202	WO2021US34716	20210528
	WO21243128 A1	20211202	WO2021US34720	20210528
	WO21243130 A1	20211202	WO2021US34726	20210528
	WO21243135 A1	20211202	WO2021US34733	20210528
	WO21243138 A1	20211202	WO2021US34737	20210528
	WO21243140 A1	20211202	WO2021US34741	20210528
	WO21243146 A1	20211202	WO2021US34749	20210528
	WO21243150 A1	20211202	WO2021US34755	20210528
	WO21243164 A1	20211202	WO2021US34775	20210528
	WO21243181 A1	20211202	WO2021US34803	20210528
	WO21243187 A1	20211202	WO2021US34812	20210528
	WO21243228 A1	20211202	WO2021US34886	20210528
	WO21243232 A1	20211202	WO2021US34892	20210528

Page 8 of 22

US20210333735 [20210528]; US20210333785 [20210528]; US20210333867 [20210528]; US20210333919 [20210528];
US20210333974 [20210528]; US20210334015 [20210528]; US20210334049 [20210528]

Probable Patent Assignee: NIKE INC

Assignees: NIKE INNOVATE CV; NIKE INC

Non Std Assignees: NIKE 360 HOLDING BV

Inventors: BROWNE MATTHEW; RYABININ STEPAN; VOLLMER ADAM; ALLISON MICHAEL; VELLA ETHAN; BAILLY DEVIN;
CHANG NARISSA Y; LANGVIN ELIZABETH; PARK SOOMAN; PATTON LEVI J; PIERON REMY; QUINONEZ HECTOR R;
WOODMAN PHILIP; FAIRCHILD MICHAEL; WEEKS DANIEL; COBBETT JAMIAN R; SABANOVIC MIRZA; CORTEZ
MARGARITA L; FARR ISAAC; YOUNG SAMANTHA; CALLAWAY ROBERT; HARRIMAN DOUGLAS; POLLOCK KRISTIN;
PEAVEY BRIAN; PATTON LEVI

Agent(s): RAUCHHOLZ WILLIAM F ET AL

Designated States: AE; AG; AL; AM; AO; AT; AU; AZ; BA; BB; BE; BF; BG; BH; BJ; BN; BR; BW; BY; BZ; CA; CF; CG; CH; CI;
CL; CM; CN; CO; CR; CU; CY; CZ; DE; DJ; DK; DM; DO; DZ; EC; EE; EG; ES; FI; FR; GA; GB; GD; GE; GH; GM; GN; GQ; GR;
GT; GW; HN; HR; HU; ID; IE; IL; IN; IR; IS; IT; JO; JP; KE; KG; KH; KM; KN; KP; KR; KW; KZ; LA; LC; LK; LR; LS; LT; LU; LV; LY;
MA; MC; MD; ME; MG; MK; ML; MN; MR; MT; MW; MX; MY; MZ; NA; NE; NG; NI; NL; NO; NZ; OM; PA; PE; PG; PH; PL; PT; QA;
RO; RS; RU; RW; SA; SC; SD; SE; SG; SI; SK; SL; SM; SN; ST; SV; SY; SZ; TD; TG; TH; TJ; TM; TN; TR; TT; TZ; UA; UG; US;
UZ; VC; VN; WS; ZA; ZM; ZW

9. Family 30225053 (US2004016144 AA)

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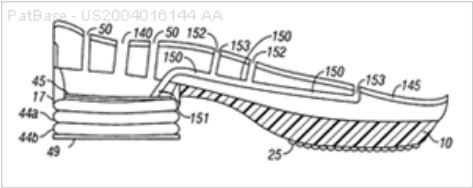
Title
[EN] VENTILATING FOOTWEAR AND METHOD OF VENTILATING FOOTWEAR

Abstract
[EN] Ventilating footwear provides air circulation under and around the foot. Apertures in the heel and/or sole and/or midsole communicate with an air compartment in the heel and/or sole and/or midsole, and as the wearer strides, the heel and/or sole and/or midsole are compressed, expelling the air from the compartment and into the footwear upper. The top side surface of the sole or midsole may also be provided with a plurality of air channels which direct and circulate air from the compartment around and underneath the wearer's foot. The footwear may also provide shock absorbence and energy return through the compressible heel and/or sole and/or midsole, and may have a rigid or semi-rigid midsole, which provides support, as well as cushioning below the midsole for comfort.

International Class: A43B21/00; A43B21/30; A43B7/00; A43B7/08; A43B13/00; A43B13/28; A43B7/06

Cooperative Patent Class: A43B21/30; A43B7/081

US Class: 36/27; 36/28; 36/3; 36/35B; 36/35R; 36/3B; 36/3R



Family Information

	Patent Number	Publication Date	Application Number	Application Date
	US2004016144 AA	20040129	US20020202796	20020725
	US7055264 BB	20060606	US20020202796	20020725

Priority Numbers: US20020202796 [20020725]

Probable Patent Assignee: GALLEGOS ALVARO Z

Assignees: GALLEGOS ALVARO Z

Inventors: GALLEGOS ALVARO Z

Non Std Inventors: ALVARO Z GALLEGOS

Agent(s): KENNETH L

10. Family 69817931 (US2018140041 AA)

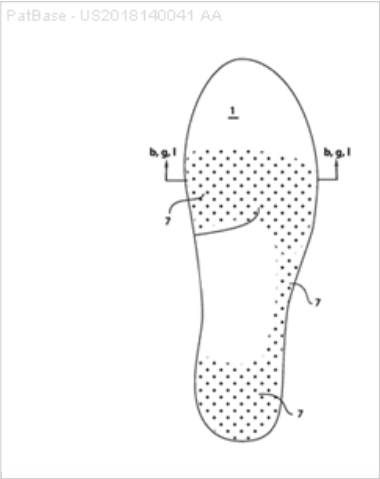
[View in PatBase](#)

Title

[EN] RANDOM VARIABLE STIMULUS INSOLES AND FOOTWEAR TO OPTIMIZE HUMAN NEUROMUSCULAR GAIT MECHANICS

Abstract

[EN] A midsole or insole device for a shoe includes a first variable stimulation mechanism positioned to interface one of the metatarsal heads and the heel and a second variable stimulation mechanism positioned to interface a lateral aspect of the foot between the fifth metatarsal head and the heel. During gait-related activities, the first variable stimulation mechanism produces stimulus of an intensity greater than the second variable stimulation mechanism. At least one of the first variable stimulation mechanism and the second variable stimulation mechanism comprises two bonded layers including a resilient stimulating upper layer and a less resilient stimulus-enhancing lower layer. The upper layer includes a plurality of holes that pass through the entirety of the upper layer, and the lower layer includes a plurality of equally spaced upwardly facing projections aligned substantially perpendicular to an upper surface of the upper layer.



International Class: A43B13/18; A43B13/40; A43B17/00; A43B17/02; A43B7/14; A43B7/18; A61H39/00; A43B1/00; A43B13/12; A43B13/14; A43B13/04; A43B17/14

Cooperative Patent Class: A43B1/0009; A43B13/04; A43B13/125; A43B13/127; A43B13/14; A43B13/141; A43B13/187; A43B17/006; A43B17/02; A43B17/14; A43B7/141; A43B7/142; A43B7/146

US Class: 1/1; 36/28

Family Information

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Green	AU2017362719 BB	20210211	AU20170362719	20171118
Red	EP3541223 A1	20190925	EP20170872450	20171118
Red	EP3541223 A4	20200722	EP20170872450	20171118
Green	US11058169 BB	20210713	US20170817204	20171118
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Priority Numbers: US20160424123P [20161118]; WO2017US62438 [20171118]; US20170817204 [20171118]; US20210374408 [20210713]

Probable Patent Assignee: BIOPODS LLC

Assignees: BIOPODS LLC

Inventors: COMSTOCK BRUCE; GARDINER ROY; HORVATH STEVE

Agent(s): IP STUDIO; LUCAS JENNIFER MRS; POTTER IP LTD; CAMERON INTELLECTUAL PROPERTY LTD; K AND L GATES LLP; K AND L GATES LLP; RICHARDS PATRICK

Designated States: AL; AT; BA; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HR; HU; IE; IS; IT; LI; LT; LU; LV; MC; ME; MK; MT; NL; NO; PL; PT; RO; RS; SE; SI; SK; SM; TR; AE; AG; AM; AO; AU; AZ; BB; BF; BH; BJ; BN; BR; BW; BY; BZ; CA; CF; CG; CI; CL; CM; CN; CO; CR; CU; DJ; DM; DO; DZ; EC; EG; GA; GD; GE; GH; GM; GN; GQ; GT; GW; HN; ID; IL; IN; IR; JO; JP; KE; KG; KH; KM; KN; KP; KR; KW; KZ; LA; LC; LK; LR; LS; LY; MA; MD; MG; ML; MN; MR; MW; MX; MY; MZ; NA; NE; NG; NI; NZ; OM; PA; PE; PG; PH; QA; RU; RW; SA; SC; SD; SG; SL; SN; ST; SV; SY; SZ; TD; TG; TH; TJ; TM; TN; TT; TZ; UA; UG; US; UZ; VC; VN; ZA; ZM; ZW

11. Family 63943197 (US2016324260 AA)

[View in PatBase](#)

Title
[EN] MIDSOLE LATTICE WITH HOLLOW TUBES FOR FOOTWEAR

Abstract
[EN] An article of footwear includes an upper and a midsole connected to upper. The midsole includes a lattice structure with a plurality of laths. The lattice structure includes at least one hollow lath such that an inner void is formed within the at least one hollow lath. A loose granular material is provided within the inner void of the at least one hollow lath.

International Class: A43B13/02; A43B13/04; A43B13/12; A43B13/14; A43B13/16; A43B13/18; A43B13/20; A43B3/00; A43B7/14; B29C64/00; B33Y80/00; A43B13/00; B29C64/153

Cooperative Patent Class: A43B13/02; A43B13/04; A43B13/125; A43B13/127; A43B13/14; A43B13/143; A43B13/16; A43B13/181; A43B13/186; A43B13/188; A43B13/20; A43B13/206; A43B3/0052; A43B7/14; A43B7/1405; A43B7/1415; A43D2200/60; B29C64/00; B29C64/153; B33Y80/00

US Class: 1/1; 36/88

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US2018303199 AA	20181025	US20180956535	20180418

Priority Numbers: US20150158974P [20150508]; US20160148578 [20160506]; US20180956535 [20180418]

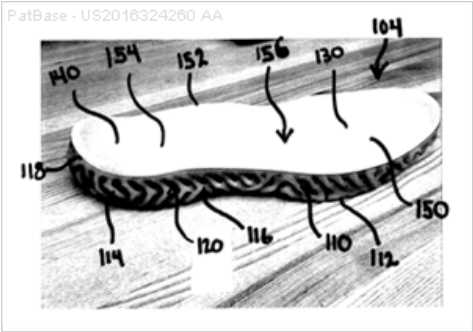
Probable Patent Assignee: UNDER ARMOUR INC

Assignees: UNDER ARMOUR INC

Non Std Assignees: JPMORGAN CHASE BANK NA ADMINISTRATIVE AGENT AS

Inventors: GUYAN ALAN

Agent(s): MAGINOT MOORE AND BECK LLP



12. Family 75426238 (DE102018102406 A1)

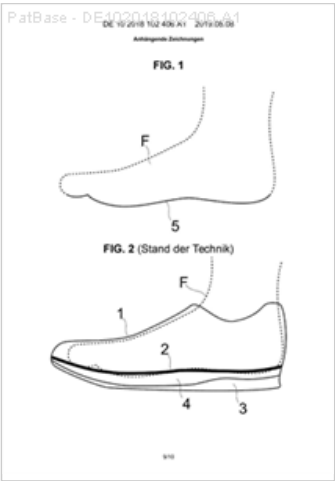
[View in PatBase](#)

Title
[MT] Shoe TO THE FOOT RELIEF

Abstract
[MT] The invention relates to a shoe comprising a shank, a fire relief for foot sole and an outsole, characterized in that the fire in the area of the bale, the sole heel bale and/or the toe compared with the negative profile an average human foot sole at least a counter region in the direction of the outsole that is deeper than the normal run is conducive to feel.The invention relates further to a corresponding insert, a shoe system and a method of manufacturing a shoe.

International Class: A43B7/28

Cooperative Patent Class: A43B13/125; A43B17/00; A43B7/1405; A43B7/1415; A43B7/1425; A43B7/144; A43B7/145; A43B7/28



Family Information

Patent Number	Publication Date	Application Number	Application Date
DE102018102406 A1	20190808	DE201810102406	20180202

Priority Numbers: DE201810102406 [20180202]

Probable Patent Assignee: VPAM HOLDING GMBH

Assignees: VPAM HOLDING GMBH

Agent(s): KONRAD MICHAEL DIPL PHYS DR RER NAT

13. Family 80678888 (US2020268098 AA)

[View in PatBase](#)

Title

[EN] SHOE MIDSOLE STRUCTURE AND METHOD FOR MANUFACTURING SAME

Abstract

[EN] The present invention relates to a shoe midsole structure and a method for manufacturing the same. The shoe midsole has unique hollow particle units that may be additively manufactured without any support structure. Each of the hollow particle units has a specific thickness and a hollow interior. A housing layer of each of the hollow particle units has a plurality of openings, a plurality of planar annular portions surrounding each of the openings, and a plurality of curved portions connecting adjacent planar annular portions. The plurality of openings are disposed in pair on the housing layer symmetrically with respect to the geometric centroid of the hollow particle units. A plurality of hollow particle units are arranged into a multi-laminate structure in the shoe midsole. Some hollow particle units are bent when a compression force or a shearing force is applied during use.

International Class: A43B13/18; A43B13/04; A43B13/12; A43B13/14; A43B13/20; B29D35/14

Cooperative Patent Class: A43B13/04; A43B13/12; A43B13/141; A43B13/181; A43B13/20; A43B13/206; B29D35/122; B29D35/142; B32B2437/02; B33Y50/00; B33Y80/00

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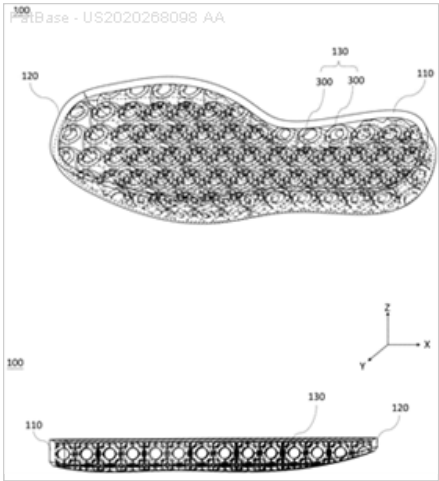
Priority Numbers: TW20190106078 [20190222]

Probable Patent Assignee: NATIONAL TAIWAN UNIV OF SCIENCE AND TECHNOLOGY

Assignees: JENG JENG YWAN

Non Std Assignees: NATIONAL TAIWAN UNIV OF SCIENCE AND TECHNOLOGY

Inventors: KUMAR AJEET; JENG JENG YWAN



14. Family 28718369 (WO03055342 A1)

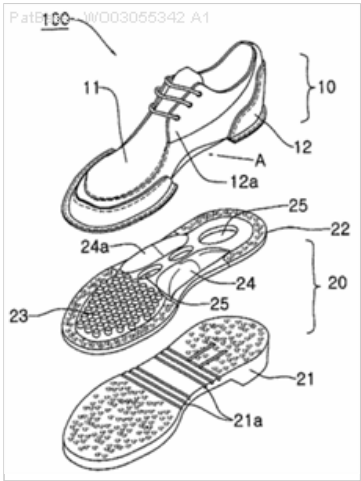
[View in PatBase](#)

Title
[EN] A MOCCASIN WITH IMPROVED FUNCTION

Abstract
[EN] Disclosed herein is a moccasin with improved cushion layers formed therein, and more particularly to satisfy the human being who is wearing shoes by choosing a structure for middle sole between the uppers of the leather and the outsole leather in moccasin, forming a integrated plurality of air-cushioned embossments, enlarged type cushioning parts and circulation path of outer air corresponding to the sole of a foot in human being for reducing weariness by finger-press effect, shock absorbing in walking and sanitation for example removing nasty smells.

International Class: A43B13/38; A43B13/40; A43B17/00; A43B17/03; A43B7/00; A43B7/06; A43B7/14; A43B7/28; A43B17/10; A43B3/00; A43B3/14

Cooperative Patent Class: A43B1/0045; A43B13/20; A43B13/28; A43B13/32; A43B3/14; A43B7/08; A43B7/142; A43B7/146; A43B17/102; A43B7/06



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Red	WO03055342 A1	20030710	WO2001KR02305	20011229

Priority Numbers: WO2001KR02305 [20011229]; KR20047011320 [20040722]

Probable Patent Assignee: JUNG TAE MOON

Assignees: JUNG TAE MOON

Inventors: JUNG TAE MOON

Designated States: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; JP; KR; LU; MC; NL; PT; SE; TR; US

15. Family 87450521 (WO21205006 A1)

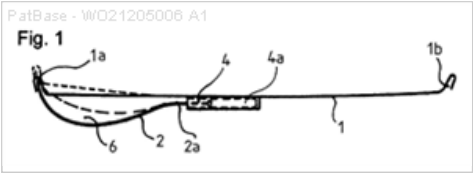
[View in PatBase](#)

Title

[EN] FOOTWEAR MIDSOLE AND RUNNING SHOE PRODUCED THEREWITH

Abstract

[EN] The invention relates to a footwear midsole for a running shoe, having spring/cushioning elements (2, 4, 4a) in order to achieve a good degree of cushion and running support. According to the invention, the lower face in the front foot region of the footwear midsole (1) is equipped with a bow-shaped spring step element (2), a first end of which is fixed to the front end of the footwear midsole (1) and the other end of which is fixed to a first spring/cushioning element (4, 4a), the movement direction of said spring/cushioning element lying parallel to the extension of the footwear midsole such that the spring/cushioning element exerts a pushing force on the spring step element (2) upon extending.



International Class: A43B13/18; A43B1/00; A43B13/12; B33Y80/00

Cooperative Patent Class: A43B13/026; A43B13/10; A43B13/145; A43B13/16; A43B13/185; A43B13/183; A43B1/0081; A43B13/122; A43B13/125; A43B13/186; B33Y80/00

Family Information

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Priority Numbers: DE202010002235 [20200409]; DE202010003058 [20200522]

Probable Patent Assignee: MANKAU DIETER

Assignees: MANKAU DIETER

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Designated States: AE; AG; AL; AM; AO; AT; AU; AZ; BA; BB; BE; BF; BG; BH; BJ; BN; BR; BW; BY; BZ; CA; CF; CG; CH; CI; CL; CM; CN; CO; CR; CU; CY; CZ; DE; DJ; DK; DM; DO; DZ; EC; EE; EG; ES; FI; FR; GA; GB; GD; GE; GH; GM; GN; GQ; GR; GT; GW; HN; HR; HU; ID; IE; IL; IN; IR; IS; IT; JO; JP; KE; KG; KH; KM; KN; KP; KR; KW; KZ; LA; LC; LK; LR; LS; LT; LU; LV; LY; MA; MC; MD; ME; MG; MK; ML; MN; MR; MT; MW; MX; MY; MZ; NA; NE; NG; NI; NL; NO; NZ; OM; PA; PE; PG; PH; PL; PT; QA; RO; RS; RU; RW; SA; SC; SD; SE; SG; SI; SK; SL; SM; SN; ST; SV; SY; SZ; TD; TG; TH; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; WS; ZA; ZM; ZW

16. Family 15325975 (US4956927 A)

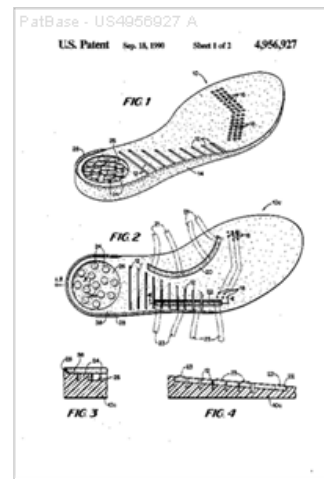
[View in PatBase](#)

Title

[EN] MONOLITHIC OUTSOLE

Abstract

[EN] An outsole construction for a shoe which provides all midsole and outsole functions with a single homogeneous moldable material thorough geometry alone is disclosed. The invention employs cut-out geometry for engineering various characteristics into an outsole of a uniform, monolithic material. Such characteristics are obtained by removing material or reinforcing the material so that it functions as if it had different densities. The invention is based on the principle of minimum sufficient thickness in order to maintain the foot as close to the ground as possible. Energy absorption/cushioning is achieved in the invention by the following features: (1) a series of transverse slots along the lateral border to provide cushion conformability to the lower foot column; (2) an array of compression columns or holes in the heel region to accept the known pressure distributions; (3) an array of small holes in the ball region to add both cushioning and flexibility; (4) a raised heel cup to constrain the heel fat pad expansion during impact and enhance the natural shock absorbing characteristics of the foot; and (5) relief of the rear lateral heel border to dynamically smooth and cushion initial heel strike. The outsole construction of the present invention may be advantageously employed to provide anchor sites for a transverse support sling having straps which are carried over the top of the midfoot and allowed to fan out with attachment to the outsole under the upper and lower columns of the foot. A further embodiment of the invention provides reference anchor points in the outsole for attachment of the shoe upper, thus eliminating the need for a shoe last in manufacturing.



International Class: A43B13/14; A43B13/18; A43B13/00; A43B13/04; A43B13/38; A43B3/12; A43B3/14

Cooperative Patent Class: A43B13/00; A43B13/14

US Class: 36/11; 36/25R; 36/28; 36/32R

Family Information

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US4956927 A	19900918	US19880286803	19881220

Priority Numbers: US19880286803 [19881220]; CA19892005954 [19891219]

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Designated States: CH; DE; FR; GB; IT; LI; SE

17. Family 31805438 (US2001019195 AA)

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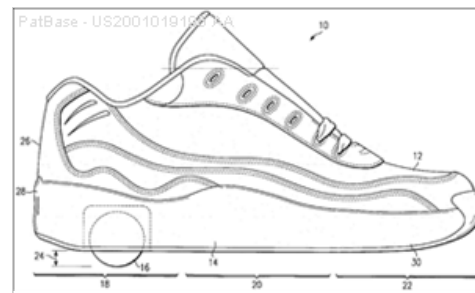
Title

[EN] HEELING APPARATUS AND METHOD

Abstract

[EN] Abstract of Disclosure

A heeling apparatus includes a shoe with a unique feature in the heel that allows one to walk, run, or roll seamlessly. The appearance is that of normal footwear because of the covert wheel assembly. The stealth wheel in the heel gives one the ability to roll or slide in areas you could only walk. Heeling is a new activity that employs a unique method of rolling and requires a newly learned skill set of balance, positioning, and coordination.



International Class: A43B5/16; A63C17/08; A63C17/20; A43B13/14; A43B5/00; A43C15/00; A43C15/04; A63C17/00; A63C17/04; A63C17/24; A63C17/26; A43B21/36; A43B21/00; A63C17/18; G01D18/00; G01D3/08; G01D5/48; G01R31/00; A63G17/20; A63C17/08; A63C17/02; A63C17/22

Cooperative Patent Class: A43B5/1633; A43B5/1641; A63C17/008; A63C17/08; A63C17/20; A63C17/24; A63C17/26; G01D18/006; G01D21/00; G01D3/08

US Class: 1/1; 277/551; 280/11.19; 280/11.190P; 280/11.221; 280/11.221P; 280/11.223; 280/11.233; 280/11.24; 280/11.240P; 280/11.240S; 280/11.25; 280/11.250S; 280/11.27; 280/11.270S; 280/7.13; 280/7.130P; 280/841; 280/843; 280/843S; 301/5.301; 324/117H; 324/158.1; 36/115; D2/946

Locarno Class: 02/04

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