UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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Alexandria, Virginia 22313-1450
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/397,605	05/25/2021	11013291	ATZ00002C6	8531

34399 7590 05/05/2021

GARLICK & MARKISON
100 CONGRESS AVENUE
SUITE 2000
AUSTIN, TX 78701

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Michael R. Adair, Woodruff, SC;
Athalonz, LLC, Mesa, AZ;
Timothy W. Markison, Mesa, AZ;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

Petitioner Under Armour, Inc.
Exhibit 1004

Issue Fee Transmittal Form

Application Number	Filing Date	First Named Inventor	Atty. Docket No.	Confirmation No.
16397605	29-Apr-2019	Michael Adair	ATZ00002C6	8531

TITLE OF INVENTION :

ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF

Entity Status	Application Type	Art Unit	Class - Subclass	EXAMINER
Small	Utility under 35 USC 111(a)	3732	092000	MARIE BAYS

Issue Fee Due	Publication Due	Total Fee(s) Due	Date Due	Prev. Paid Fee
$600	$0	$600	10-May-2021	$0

1.Change of Correspondence Address and/or Indication Of Fee Address (37 CFR 1.33 & 1.363)

Current Correspondence Address:	Current Indicated Fee Address :
34399 GARLICK & MARKISON 100 CONGRESS AVENUE SUITE 2000 AUSTIN TX 78701 UNITED STATES 2149382452 MMurdock@TEXASPATENTS.COM	
☐ Change of correspondence address requested, system generated AIA/122-EFS form attached	☐ Fee Address indication requested, system generated SB/47-EFS form attached

2.Entity Status

Change in Entity Status

○ Applicant certifying micro entity status; system generated Micro Entity certification form attached. See 37 CFR 1.29.
Note: Absent a valid certification of micro entity status, issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment. If this box is checked, you will be prompted to choose a micro entity status on the gross income basis (37 CFR 1.29(a)) or the institution of higher education basis (37 CFR 1.29(d)), and make the applicable certification online.

◉ Applicant asserting small entity status. See 37 CFR 1.27.
Note: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

○ Applicant changing to regular undiscounted fee status.
Note: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

3.The Following Fee(s) Are Submitted:

☒ Issue Fee

☐ I authorize USPTO to apply my previously paid issue fee to the current fees due

☐ Publication Fee

☐ The Director is hereby authorized to apply my previously paid issue fee to the current fee due and to charge deficient fees to Deposit Account Number _____

☐ Advance Order - # of copies _____

☐ If **in addition to** the payment of the issue fee amount submitted with this form, there are any discrepancies in any amount(s) due, the Director is authorized to charge any deficiency, or credit any overpayment, to Deposit Account Number _____. The **issue fee must be submitted** with this form. **If payment of the issue fee does not accompany this form, checking this box and providing a deposit account number will NOT be effective to satisfy full payment of the fee(s) due.**

4.Firm and/or Attorney Names To Be Printed

NOTE: If no name is listed, no name will be printed
For printing on the patent front page, list to be displayed as entered

1. Garlick & Markison
2. Timothy W. Markison
3.

5.Assignee Name(s) and Residence Data To Be Printed

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

Name	City	State	Country	Category
Athalonz, LLC	Mesa	ARIZONA	united states	corporation

6.Signature

I certify, in accordance with 37 CFR 1.4(d)(4) that I am an attorney or agent registered to practice before the Patent and Trademark Office who has filed and has been granted power of attorney in this application. I also certify that this Fee(s) Transmittal form is being transmitted to the USPTO via EFS-WEB on the date indicated below.

Signature	/Timothy W. Markison/	**Date**	04-21-2021
Name	Timothy W. Markison	**Registration Number**	33534

Electronic Patent Application Fee Transmittal

Application Number:	16397605
Filing Date:	29-Apr-2019
Title of Invention:	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF
First Named Inventor/Applicant Name:	Michael R. Adair
Filer:	Timothy W. Markison/Kimberly Brown
Attorney Docket Number:	ATZ00002C6

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY APPL ISSUE FEE	2501	1	600	600
PUBL. FEE- EARLY, VOLUNTARY, OR NORMAL	1504	1	0	0
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**600**

Electronic Acknowledgement Receipt

EFS ID:	42516313
Application Number:	16397605
International Application Number:	
Confirmation Number:	8531
Title of Invention:	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF
First Named Inventor/Applicant Name:	Michael R. Adair
Customer Number:	34399
Filer:	Timothy W. Markison/Kimberly Brown
Filer Authorized By:	Timothy W. Markison
Attorney Docket Number:	ATZ00002C6
Receipt Date:	21-APR-2021
Filing Date:	29-APR-2019
Time Stamp:	17:39:29
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$600
RAM confirmation Number	E20214KH39252768
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	Web85b.pdf	46262 1a0eca32dd7511a9f22a0a3c4e3a32aca31f c871	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	32315 8c9f03d35e7823eca73d077528062771d87 6901d	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	78577		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

34399 7590 02/09/2021
GARLICK & MARKISON
100 CONGRESS AVENUE
SUITE 2000
AUSTIN, TX 78701

EXAMINER
BAYS, MARIE D

ART UNIT	PAPER NUMBER
3732	

DATE MAILED: 02/09/2021

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/397,605	04/29/2019	Michael R. Adair	ATZ00002C6	8531

TITLE OF INVENTION: ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$600	$0.00	$0.00	$600	05/10/2021

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

34399 7590 02/09/2021

GARLICK & MARKISON
100 CONGRESS AVENUE
SUITE 2000
AUSTIN, TX 78701

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)

(Signature)

(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/397,605	04/29/2019	Michael R. Adair	ATZ00002C6	8531

TITLE OF INVENTION: ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$600	$0.00	$0.00	$600	05/10/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
BAYS, MARIE D	3732	036-092000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑ Issue Fee ❑ Publication Fee (if required) ❑ Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/397,605	04/29/2019	Michael R. Adair	ATZ00002C6	8531

34399 7590 02/09/2021
GARLICK & MARKISON
100 CONGRESS AVENUE
SUITE 2000
AUSTIN, TX 78701

EXAMINER
BAYS, MARIE D

ART UNIT	PAPER NUMBER
3732	

DATE MAILED: 02/09/2021

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 16/397,605	Applicant(s) Adair et al.	
	Examiner MARIE D BAYS	Art Unit 3732	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to TD and amendment filed 1/27/21.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 1-8 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____ .
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____ .
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____ .
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____ .

/MARIE D BAYS/
Primary Examiner, Art Unit 3732

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/397,605	Adair et al.
	Examiner	Art Unit
	MARIE D BAYS	3732

CPC - Searched*		
Symbol	Date	Examiner
A43B 7/14, 7/141, 7/142, 7/143, 7/144, 7/1445, 7/1465, 7/24, 11/00, 13/148, 13/189, 13/26, 5/00, 13/143, 13/14	07/23/2020	/MB/
update above	02/01/2021	/MB/

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
36	142-144, 114, 25R	07/23/2020	/MB/
update	above	02/01/2021	/MB/

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
Consulted parent applications	07/23/2020	/MB/
as attached	07/23/2020	/MB/
update above	02/01/2021	/MB/

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/397,605	Adair et al.
	Examiner	Art Unit
	MARIE D BAYS	3732

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
A43B	A43B7/14.cpc. or A43B7/141.cpc. or A43B7/142.cpc. or A43B7/143.cpc. or A43B7/144.cpc. or A43B7/1445.cpc. or A43B7/24.cpc. or A43B13/148.cpc. or A43B13/143.cpc. or A43B13/14.cpc.	02/01/2021	/MB/

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/397,605	Adair et al.
	Examiner	**Art Unit**
	MARIE D BAYS	3732

CPC

Symbol					Type	Version
A43B	/	7	/	14	F	2013-01-01
A43B	/	13	/	14	I	2013-01-01
A43B	/	13	/	143	I	2013-01-01
A43B	/	7	/	141	I	2013-01-01
A43B	/	7	/	142	I	2013-01-01
A43B	/	7	/	143	I	2013-01-01
A43B	/	7	/	144	I	2013-01-01
A43B	/	7	/	1445	I	2013-01-01
A43B	/	13	/	148	I	2013-01-01
A43B	/	7	/	24	I	2013-01-01

CPC Combination Sets

Symbol					Type	Set	Ranking	Version
	/		/					

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 8	
/MARIE D BAYS/ Primary Examiner, Art Unit 3732 (Primary Examiner)	01 February 2021 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 5

U.S. Patent and Trademark Office

Part of Paper No.: 20210201

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/397,605	Adair et al.
	Examiner	**Art Unit**
	MARIE D BAYS	3732

INTERNATIONAL CLASSIFICATION				
CLAIMED				
A43B	/	7	/	14

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE (Assistant Examiner)	(Date)	Total Claims Allowed: 8	
/MARIE D BAYS/ Primary Examiner, Art Unit 3732 (Primary Examiner)	01 February 2021 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 5

U.S. Patent and Trademark Office

Part of Paper No.: 20210201

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/397,605	Adair et al.
	Examiner	**Art Unit**
	MARIE D BAYS	3732

☑ Claims renumbered in the same order as presented by applicant ☐ CPA ☑ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1														
2	2														
3	3														
4	4														
5	5														
6	6														
7	7														
8	8														

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 8	
/MARIE D BAYS/ Primary Examiner, Art Unit 3732 (Primary Examiner)	01 February 2021 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 5

U.S. Patent and Trademark Office

Part of Paper No.: 20210201

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

BIB DATA SHEET

CONFIRMATION NO. 8531

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
16/397,605	04/29/2019 **RULE**	036	3732	ATZ00002C6

APPLICANTS
Athalonz, LLC, Mesa, AZ;

INVENTORS
Michael R. Adair, Woodruff, SC;
Timothy W. Markison, Mesa, AZ;

**** CONTINUING DATA ***************************
This application is a CON of 14/563,135 12/08/2014 PAT 10271611
which is a CON of 13/355,778 01/23/2012 PAT 8938893
which claims benefit of 61/450,485 03/08/2011

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
05/09/2019

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☑ No Verified and Acknowledged /MARIE D BAYS/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		SC	92	8	1

ADDRESS
GARLICK & MARKISON
100 CONGRESS AVENUE
SUITE 2000
AUSTIN, TX 78701
UNITED STATES

TITLE
ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF

FILING FEE RECEIVED		
985	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	5,997	A43B7/14.cpc. or A43B7/141.cpc. or A43B7/142.cpc. or A43B7/143.cpc. or A43B7/144.cpc. or A43B7/1445.cpc. or A43B7/24.cpc. or A43B13/148.cpc. or A43B13/143.cpc. or A43B13/14.cpc.	US-PGPUB; USPAT	OR	OFF	2021/02/01 10:43

2/1/2021 10:45:25 AM
C:\Users\mpatterson\Documents\EAST\Workspaces\ribbons.wsp

Doc Code: DIST.E.FILE **Document Description: Electronic Terminal Disclaimer - Filed**	PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT**
Application Number	16397605
Filing Date	29-Apr-2019
First Named Inventor	Michael Adair
Attorney Docket Number	ATZ00002C6
Title of Invention	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF

☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent Interest
ATHALONZ, LLC	100%

The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

10271611

8938893

as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:
- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

- [x] Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.
- [ ] I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.

Applicant claims the following fee status:

- [x] Small Entity
- [ ] Micro Entity
- [ ] Regular Undiscounted

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

- [x] An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

  Registration Number 33534

- [ ] A sole inventor
- [ ] A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application
- [ ] A joint inventor; all of whom are signing this request

Signature	/Timothy W. Markison/
Name	/Timothy W. Markison/

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal

Application Number:	16397605
Filing Date:	29-Apr-2019
Title of Invention:	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF
First Named Inventor/Applicant Name:	Michael R. Adair
Filer:	Timothy W. Markison/Kimberly Brown
Attorney Docket Number:	ATZ00002C6

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
STATUTORY OR TERMINAL DISCLAIMER	2814	1	170	170
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**170**

Doc Code: DISQ.E.FILE
Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 16397605

Filing Date: 29-Apr-2019

Applicant/Patent under Reexamination: Adair

Electronic Terminal Disclaimer filed on January 27, 2021

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt

EFS ID:	41756565
Application Number:	16397605
International Application Number:	
Confirmation Number:	8531
Title of Invention:	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF
First Named Inventor/Applicant Name:	Michael R. Adair
Customer Number:	34399
Filer:	Timothy W. Markison/Kimberly Brown
Filer Authorized By:	Timothy W. Markison
Attorney Docket Number:	ATZ00002C6
Receipt Date:	27-JAN-2021
Filing Date:	29-APR-2019
Time Stamp:	12:05:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$170
RAM confirmation Number	E20211QC05050917
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer-Filed (Electronic)	eTerminal-Disclaimer.pdf	33568 30d6ee0a0ff9dc5012cdccf87f483b0aabce8a06	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30799 6d25a40dc006036629e4ee03c083e656878d22b7	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	64367		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Certification under 37 C.F.R. §1.8

Date of Mailing or Transmission: 1/27/2021

I hereby certify that I have caused the document indicated herein on the date indicated above to be transmitted via the Office electronic filing system in accordance with 37 C.F.R. §1.6(a)(4).

BY: /Kimberly Brown/ (Signature) **Name:** Kimberly Brown (Typed Name)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

1st Named Inventor:	Michael R. Adair	**Examiner:**	BAYS, MARIE D
Application No.:	16/397,605	**Art Unit:**	3732
Filing Date:	29 Apr 2019	**Docket No.:**	ATZ00002C6
Confirmation No.:	8531		
Title:	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF		

RESPONSE TO NON-FINAL OFFICE ACTION

Date: 1/27/2021

United States Patent and Trademark Office

P. O. Box 1450

Alexandria, VA 22313-1450

In response to an office action dated July 28, 2020 regarding the above-captioned patent application, the Applicant respectfully submits the following amendment and response.

AMENDMENT TO THE CLAIMS

1. (currently amended) A shoe comprises:

an upper section;

a midsole coupled to the upper section;

an insole positioned proximal to the midsole and within the upper section; and

a bottom outsole coupled to the midsole, wherein a combination of the midsole, the insole, and the bottom outsole form an athletic positioning shape, wherein the athletic positioning shape has:

a first height ~~from~~ at an inside edge ~~to~~ and at an outside edge of the shoe along a heel section of the shoe,

a second height on the outside edge of the shoe at a toe section of the shoe,

a third height on the inside edge of the shoe at the toe section of the shoe, and

the first height being greater than the second height and the second height being greater than the third height, wherein a first slope is formed by the first height and the second height, wherein a second sloped is formed by the first height and the third height, and wherein a third slope is formed by the second height and the third height.

2. (Original) The shoe of claim 1 further comprises:

the athletic positioning shape including the heel section, a mid-foot section, and a toe section, wherein the mid-foot section is between the heel section and the toe section, and wherein the heel section has the first height throughout.

3. (Original) The shoe of claim 2 further comprises:

a fourth height at the outside edge of the shoe at a transition from the mid-foot section to the toe section, wherein the fourth height is greater than the second height and wherein the fourth height is less than the first height.

4. (Original) The shoe of claim 3 further comprises:

a fifth height at the inside edge of the shoe at the transition from the mid-foot section to the toe section, wherein the fifth height is greater than the third height and wherein the fifth height is less than the first height and less than the fourth height.

5. (Original) The shoe of claim 2 further comprises:

a fourth height at the inside edge of the shoe at the transition from the mid-foot section to the toe section, wherein the fourth height is greater than the third height and wherein the fourth height is less than the first height.

6. (currently amended) The shoe of claim 1 further comprises:

the first slope is a first linear slope ~~from the first height to the second height~~;

the second slope is a second linear slope ~~from the first height to the third height~~; and

the third slope is a third linear slope ~~from the second height to the third height~~.

7. (currently amended) The shoe of claim 1 further comprises:

the first slope is a first non-linear slope ~~from the first height to the second height~~;

the second slope is a second non-linear slope ~~from the first height to the third height~~; and

the third slope is a third non-linear slope ~~from the second height to the third height~~.

8. (Original) The shoe of claim 1 further comprises:

the second height including an insole second height component, a midsole second height component, and a bottom outsole second height component; and

the third height including an insole third height component, a midsole third height component, and a bottom outsole third height component, wherein the bottom outsole third height component is greater than the bottom outsole second height component.

REMARKS/ARGUMENTS

1. In the above referenced Office Action:

a. Status of the claims.

- Claims 1-8 are pending;
- Claims 1-8 are rejected;
- Claims 6-8 are objected to.

b. Claims 1-8 have been rejected on the ground of nonstatutory double patenting as being unpatentable over claims (U.S. Patent No. 8,938,893 or 10,271,611);

c. Claims 1-5 have been rejected under pre-AIA 35 USC §103(a) as being unpatentable over Talarico II (U.S. Patent No. 4,620,376) in view of Darby (U.S. Patent No. 2,616,190);

d. Claims 6-8 have been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and the filing of a proper Terminal Disclaimer.

The rejections and objections have been traversed. Applicant respectfully requests reconsideration of the allowability of claims 1-8.

2. Claims 1-8 have been rejected on the ground of nonstatutory double patenting as being unpatentable over claims (U.S. Patent No. 8,938,893 or 10,271,611). The applicant respectfully disagrees, but is nevertheless filing a terminal disclaimer herewith.

3. Claims 1-5 have been rejected under pre-AIA 35 USC §103(a) as being unpatentable over Talarico II (U.S. Patent No. 4,620,376) in view of Darby (U.S. Patent No. 2,616,190). The Applicant respectfully disagrees with this rejection and the reasoning thereof.

The applicant has amended claim 1 to include similar limitations of claims 6 and 7. As such, the applicant believes that claims 1-5 are in condition for allowance.

CONCLUSION

For the foregoing reasons, the Applicant believes that claims 1-8 are in condition for allowance and respectfully requests that they be passed to allowance.

The Applicant hereby rescinds any disclaimer of claim scope made in the parent application or any predecessor application in relation to the instant application. The Examiner is advised that any such previous disclaimer and the prior art that it was made to avoid, may need to be revisited. Further, the claims in the instant application may be broader than those of a parent application. Moreover, the Examiner should also be advised that any disclaimer made in the instant application should not be read into or against the parent application.

No additional fees are believed to be due. In the event that additional fees are due or a credit for an overpayment is due, the Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Deposit Account No. 50-2126.

The Examiner is invited to contact the undersigned by e-mail if the Examiner believes that such a communication would advance the prosecution of the present invention.

RESPECTFULLY SUBMITTED,

By: /Timothy W. Markison/Reg. No. 33534
Timothy W. Markison
Garlick & Markison
100 Congress Avenue, Suite 2000
Austin, TX 78701
Phone: (214) 676-1020
E-mail: tmarkison@texaspatents.com

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

1st Named Inventor:	Michael R. Adair	**Examiner:**	BAYS, MARIE D
Application No.:	16/397,605	**Art Unit:**	3732
Filing Date:	29 Apr 2019	**Docket No.:**	ATZ00002C6
Confirmation No.:	8531		
Title:	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF		

AUTHORIZATION FOR INTERNET COMMUNICATIONS IN A PATENT APPLICATION OR REQUEST TO WITHDRAW AUTHORIZATION FOR INTERNET COMMUNICATIONS

I. To authorize permission for Internet Communications.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned and practitioners in accordance with 37 CFR 1.33 and 37 CFR 1.34 concerning any subject matter of this application via video conferencing, instant messaging, or electronic mail. I understand that a copy of these communications will be made of record in the application file. (MPEP 502.03).

I am the attorney or agent of record. Registration No. 33534.

RESPECTFULLY SUBMITTED,

By: /Timothy W. Markison/Reg. No. 33534
Timothy W. Markison
Garlick & Markison
100 Congress Avenue, Suite 2000
Austin, TX 78701
Phone: (214) 676-1020
E-mail: tmarkison@texaspatents.com

Electronic Patent Application Fee Transmittal

Application Number:	16397605
Filing Date:	29-Apr-2019
Title of Invention:	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF
First Named Inventor/Applicant Name:	Michael R. Adair
Filer:	Timothy W. Markison/Kimberly Brown
Attorney Docket Number:	ATZ00002C6

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 3 months with $0 paid	2253	1	740	740
Miscellaneous:				
			Total in USD ($)	**740**

Electronic Acknowledgement Receipt

EFS ID:	41756490
Application Number:	16397605
International Application Number:	
Confirmation Number:	8531
Title of Invention:	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF
First Named Inventor/Applicant Name:	Michael R. Adair
Customer Number:	34399
Filer:	Timothy W. Markison/Kimberly Brown
Filer Authorized By:	Timothy W. Markison
Attorney Docket Number:	ATZ00002C6
Receipt Date:	27-JAN-2021
Filing Date:	29-APR-2019
Time Stamp:	12:00:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$740
RAM confirmation Number	E20211QC00290853
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		ATZ00002C6_NFOA_Response.pdf	120484 cf9d220f0427ddd67a5594de7a7de9c978a2b99e	yes	7

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	4
	Applicant Arguments/Remarks Made in an Amendment	5	6
	Internet Communications Authorized	7	7

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30929 24b1ccb4a37c230d8d524dc647e8c35dbab09a1b	no	2

Warnings:

Information:

Total Files Size (in bytes):	151413

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New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/397,605	04/29/2019	Michael R. Adair	ATZ00002C6	8531

34399 7590 07/28/2020
GARLICK & MARKISON
100 Congress Avenue, Suite 2000
AUSTIN, TX 78701

EXAMINER
BAYS, MARIE D

ART UNIT	PAPER NUMBER
3732	

NOTIFICATION DATE	DELIVERY MODE
07/28/2020	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

MMurdock@TEXASPATENTS.COM
bpierotti@texaspatents.com

Office Action Summary	Application No. 16/397,605	Applicant(s) Adair et al.	
	Examiner MARIE D BAYS	Art Unit 3732	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-8 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1-8 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Claim Rejections - 35 USC § 103

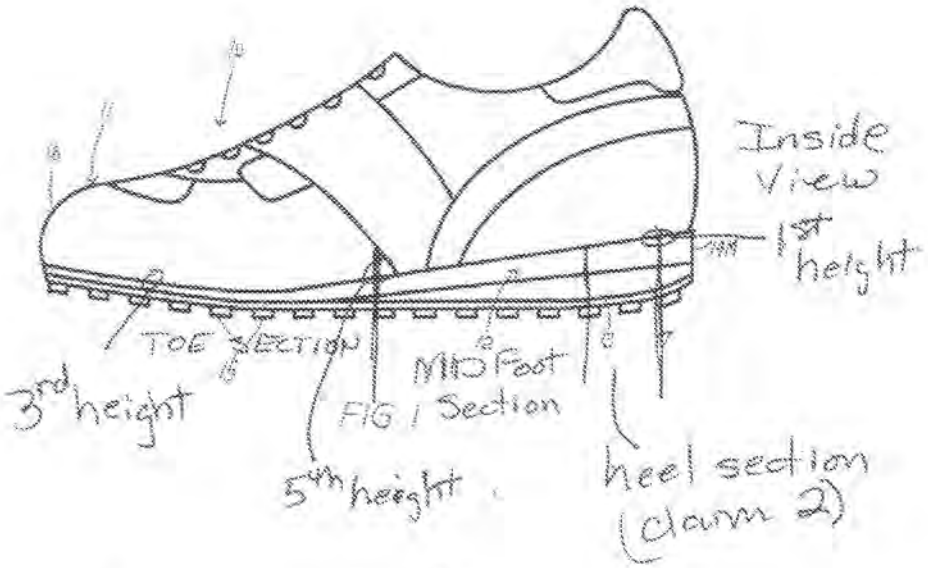
2. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

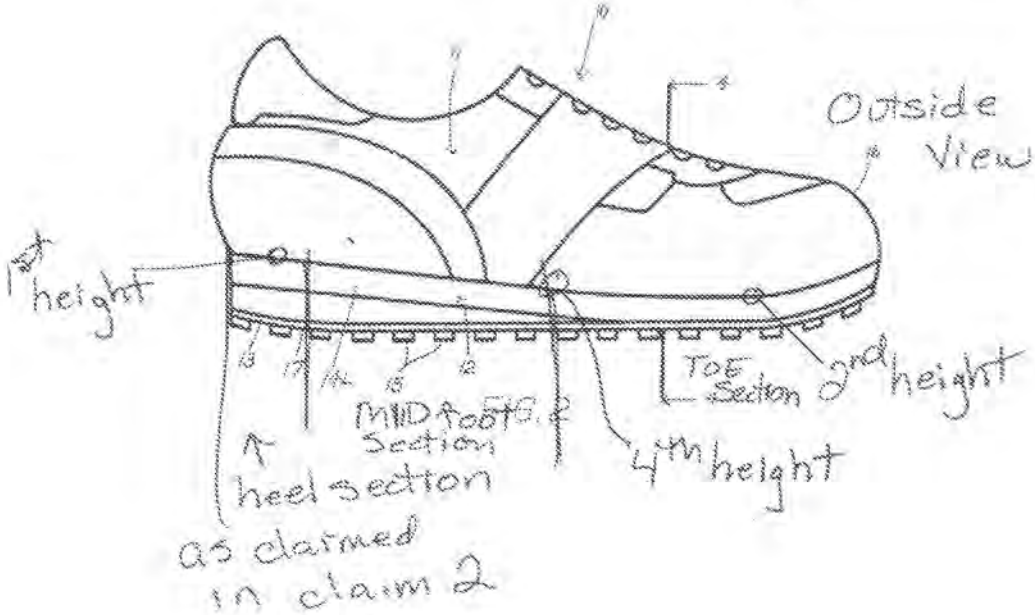
> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-5 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Talarico II (4620376) in view of Darby (2616190).

Talarico, II shows a shoe having an upper section (11), a midsole (14), an insole (see specification column 8 paragraph starting on line 47), an outsole (13), and the combination of the midsole, insole and outsole having overall heights (as noted in the marked up drawings below) substantially as claimed except for specifically showing the individual height of an insole. Darby teaches and shows a conventional and well known insole (56) which is thin and of uniform thickness (see specifically figures 3 and 4) over a combination midsole and outsole (layers 48, 58, and 46). It would have been obvious to use a thin, uniformly thick insole as taught by Darby for the insole in the shoe of Talarico, II to increase comfort and facilitate attachment of the sole to the upper.

U.S. Patent Nov. 4, 1986 Sheet 1 of 10 4,620,376





7/23/2020, EAST Version: 4.3.6.1

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP §§ 706.02(l)(1) - 706.02(l)(3) for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission.

For more information about eTerminal Disclaimers, refer to

www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

5. Claims 1-8 are rejected on the ground of nonstatutory double patenting as being unpatentable over the claims of U.S. Patent No. 8938893 or 10271611. Although the claims at issue are not identical, they are not patentably distinct from each other because all claim footwear which has heights and slopes oriented as claimed.

Allowable Subject Matter

6. Claims 6-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and the filing of a proper Terminal Disclaimer.

7. The prior art cited and not relied upon by the Examiner for the above rejections are considered to be pertinent in that the references cited are considered to be the nearest prior art to the subject matter defined in the claims as required by MPEP707.05.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see **http://pair-direct.uspto.gov**. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Other useful information can be obtained at the PTO Home Page at www.uspto.gov.

In order to avoid potential delays, Technology Center 3700 is encouraging FAXing of responses to Office Actions directly into the Center at *(571)273-8300* **(FORMAL FAXES ONLY)**. Please identify Examiner Marie Bays of Art Unit 3732 at the top of your cover sheet.

Any inquiry concerning the MERITS of this examination from the examiner should be directed to Marie Bays whose telephone number is (571) 272-4559. The examiner can normally be reached from Mon-Thurs 6-4.

/MARIE D BAYS/
Primary Examiner, Art Unit 3732

Notice of References Cited	Application/Control No. 16/397,605	Applicant(s)/Patent Under Reexamination Adair et al.	
	Examiner MARIE D BAYS	Art Unit 3732	Page 1 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-5632104-A	05-1997	Zohar; Itzchak	A43B7/14	36/103
*	B	US-5345701-A	09-1994	Smith; Leland R.	A43B7/24	36/127
*	C	US-4620376-A	11-1986	Talarico, II; Louis C.	A43B7/14	36/103
*	D	US-2616190-A	11-1952	DARBY REUBEN U	A43B7/142	36/144
*	E	US-20020005000-A1	01-2002	Choi, Byoung-Hoon	A43B7/1435	36/144
*	F	US-8631592-B2	01-2014	Adair; Michael R.	A43C15/162	36/142
*	G	US-8387277-B2	03-2013	Andriacchi; Thomas	A61F5/0127	36/25R
*	H	US-7464428-B2	12-2008	Norton; Daniel Eugene	A43B13/04	12/142R
*	I	US-7299568-B2	11-2007	Tager; Steven E.	A61F5/14	36/140
*	J	US-6725578-B2	04-2004	Kerrigan; D. Casey	A43B7/142	36/144
*	K	US-6604301-B1	08-2003	Manoli, II; Arthur	A43B7/141	36/144
*	L	US-4862605-A	09-1989	Gardner; Harris L.	A43B13/38	36/43
*	M	US-4685227-A	08-1987	Simmons; Ronald G.	A43B17/02	36/127

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Notice of References Cited	Application/Control No. 16/397,605	Applicant(s)/Patent Under Reexamination Adair et al.	
	Examiner MARIE D BAYS	Art Unit 3732	Page 2 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-2909854-A	10-1959	MARIE EDELSTEIN	A43B7/1425	36/140
*	B	US-1477825-A	12-1923	GEORGE HEITLER	A43B7/142	36/162
*	C	US-10271611-B2	04-2019	Adair; Michael R.	A43B7/144	1/1
	D					
	E					
	F					
	G					
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	K					
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FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
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	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
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	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/397,605	Adair et al.
	Examiner	Art Unit
	MARIE D BAYS	3732

CPC - Searched*		
Symbol	Date	Examiner
A43B 7/14, 7/141, 7/142, 7/143, 7/144, 7/1445, 7/1465, 7/24, 11/00, 13/148, 13/189, 13/26, 5/00, 13/143, 13/14	07/23/2020	/MB/

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
36	142-144, 114, 25R	07/23/2020	/MB/

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
Consulted parent applications	07/23/2020	/MB/
as attached	07/23/2020	/MB/

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	42	(A43B$/$.cpc. or 36/$.ccls.) and (adair.in. or markison.in.)	US-PGPUB; USPAT	OR	OFF	2020/07/23 12:59

7/23/2020 12:59:50 PM

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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/397,605	04/29/2019	Michael R. Adair	ATZ00002C6

CONFIRMATION NO. 8531

34399
GARLICK & MARKISON
100 Congress Avenue, Suite 2000
AUSTIN, TX 78701

PUBLICATION NOTICE

OC000000110423662

Title:ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF

Publication No.US-2019-0246735-A1
Publication Date:08/15/2019

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently https://portal.uspto.gov/pair/PublicPair. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number
16/397,605

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	75		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	330		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	380		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	8 minus 20 =	*	x 50 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 =	*	x 230 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			200			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	985		TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)	OR	RATE($)	ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
16/397,605	04/29/2019	3765	985	ATZ00002C6	8	1

CONFIRMATION NO. 8531

FILING RECEIPT

34399
GARLICK & MARKISON
100 Congress Avenue, Suite 2000
AUSTIN, TX 78701

OC000000108077535

Date Mailed: 05/10/2019

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Michael R. Adair, Woodruff, SC;
Timothy W. Markison, Mesa, AZ;

Applicant(s)

Athalonz, LLC, Mesa, AZ;

Assignment For Published Patent Application

Athalonz, LLC, Mesa, AZ

Power of Attorney: The patent practitioners associated with Customer Number 34399

Domestic Priority data as claimed by applicant

This application is a CON of 14/563,135 12/08/2014 PAT 10271611
which is a CON of 13/355,778 01/23/2012 PAT 8938893
which claims benefit of 61/450,485 03/08/2011

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 05/09/2019

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/397,605**

Projected Publication Date: 08/15/2019

Non-Publication Request: No

Early Publication Request: No
**** SMALL ENTITY ****
Title

ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF

Preliminary Class

036

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

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PTO/AIA/82A (07-13)
Approved for use through 11/30/2014. OMB 0651-0051
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	**TBD**
Filing Date	**Herewith**
First Named Inventor	**Michael R. Adair**
Title	**ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF**
Art Unit	
Examiner Name	
Attorney Docket Number	**ATZ00002C6**

SIGNATURE of Applicant or Patent Practitioner

Signature	**/Timothy W. Markison/**	Date (Optional)	**4/29/2019**
Name	**Timothy W. Markison**	Registration Number	**33,534**
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☒ *Total of **1** forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/AIA/82B (07-13)
Approved for use through 11/30/2014. OMB 0651-0051
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date
TBD	**Herewith**

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 34399

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☑ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

Athalonz, LLC

☐ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature		Date (Optional)	
Name	Timothy W. Markison		
Title	Managing Member		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Docket No.:	ATZ00002C6
First Named Inventor:	Michael R. Adair
Filing Date:	Herewith

Title: ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF

Date: 4/29/2019

United States Patent and Trademark Office
P. O. Box 1450
Alexandria, VA 22313-1450

The present application claims priority, as a continuation, continuation-in-part, or a divisional of U.S. Utility Application No. 14/563,135, filed 12/8/2014, co-pending, entitled "ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF," may also claim priority to one or more other applications and/or patents, and may be related to other applications and/or related patents, as detailed within the Application Data Sheet and/or the Specification of the present application along with any other applications and/or patents that claim priority from any of the foregoing (collectively, "Predecessor Applications").

The Examiner is advised that the prior art cited in the Predecessor Applications should be reviewed and cited during examination of the present application per the Manual of Patent Examining Procedure Section 904. The Examiner is advised that the rejections made, amendments made, and arguments made in the Predecessor Applications should be reviewed and considered during examination of the present application.

The Examiner is advised that any disclaimer that may be made in the present application should not be read into or against the Predecessor Applications or any patents issuing therefrom. Further, the Examiner is also advised that any disclaimer made in a Predecessor Application is not to be read into or against the present application.

RESPECTFULLY SUBMITTED,

By: /Timothy W. Markison/Reg. No. 33534
Timothy W. Markison

Garlick & Markison
100 Congress Avenue, Suite 2000
Austin, TX 78701
Phone: (214) 676-1020
E-mail: tmarkison@texaspatents.com

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF
First Named Inventor/Applicant Name:	Michael R. Adair
Filer:	Timothy W. Markison/Kimberly Brown
Attorney Docket Number:	ATZ00002C6

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY FILING FEE (ELECTRONIC FILING)	4011	1	75	75
UTILITY SEARCH FEE	2111	1	330	330
UTILITY EXAMINATION FEE	2311	1	380	380
Pages:				
UTILITY APPL SIZE FEE PER 50 SHEETS >100	2081	1	200	200
Claims:				
Miscellaneous-Filing:				
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	985

Electronic Acknowledgement Receipt

EFS ID:	35862861
Application Number:	16397605
International Application Number:	
Confirmation Number:	8531
Title of Invention:	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF
First Named Inventor/Applicant Name:	Michael R. Adair
Customer Number:	34399
Filer:	Timothy W. Markison/Kimberly Brown
Filer Authorized By:	Timothy W. Markison
Attorney Docket Number:	ATZ00002C6
Receipt Date:	29-APR-2019
Filing Date:	
Time Stamp:	16:31:50
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$985
RAM confirmation Number	043019INTEFSW16340601
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	ATZ00002C6_ADS.pdf	1793216 553ced790a7f5e4258a693e27efdf4af2172b458	no	9
Warnings:					
Information:					
2		ATZ00002C6_patent_application.pdf	349139 a6de009a32771bfaea0dafd2771b87831451e8d5	yes	64

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Abstract	64	64
	Claims	61	63
	Specification	1	60

Warnings:					
Information:					
3	Drawings-only black and white line drawings	ATZ00002C6_figures.pdf	2400875 b501536f9c38168711849aa1430ac9aac08d7ece	no	92
Warnings:					
Information:					
4	Oath or Declaration filed	ATZ00002C4_Declaration.pdf	216981 fa3e6c5967a1116fa0423151ce9837f887f569d9	no	2
Warnings:					
Information:					
5	Power of Attorney	ATZ00002C6_POA.pdf	650872 03196056bf6522dd1c795ada84578bd485a8539f	no	2

Warnings:					
Information:					
6	Transmittal Letter	ATZ00002C6_AppStmt.pdf	67010 b95f50b385040a9934da506d9e636b59634db58d	no	1
Warnings:					
Information:					
7	Fee Worksheet (SB06)	fee-info.pdf	37162 d6e6a254653b2cf9fde7ed135e835c0f6c6b94b5	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	5515255		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
<u>National Stage of an International Application under 35 U.S.C. 371</u>
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ATZ00002C6
	Application Number	
Title of Invention	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or **all** of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Michael	R.	Adair	

Residence Information (Select One) ● US Residency Non US Residency Active US Military Service

City	Woodruff	State/Province	SC	Country of Residence i	US

Mailing Address of Inventor:

Address 1	419 Winding Oak Dr.		
Address 2			
City	Woodruff	State/Province	SC
Postal Code	29388	Country i	US

Inventor 2 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Timothy	W.	Markison	

Residence Information (Select One) ◉ US Residency Non US Residency Active US Military Service

City	Mesa	State/Province	AZ	Country of Residence i	US

Mailing Address of Inventor:

Address 1	3702 E. Brown Road		
Address 2			
City	Mesa	State/Province	AZ
Postal Code	85205	Country i	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ATZ00002C6
	Application Number	
Title of Invention	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF	

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	34399		
Email Address	TMARKISON@TEXASPATENTS.COM	Add Email	Remove Email

Application Information:

Title of the Invention	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF		
Attorney Docket Number	ATZ00002C6	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	92	**Suggested Figure for Publication (if any)**	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	● Customer Number	US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	34399		

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ATZ00002C6
	Application Number	
Title of Invention	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF	

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	14/563135	2014-12-08

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14563135	Continuation of	13355778	2012-01-23	8938893	2015-01-27

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
13355778	Claims benefit of provisional	61450485	2011-03-08

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button. Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ATZ00002C6
	Application Number	
Title of Invention	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF	

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ATZ00002C6
	Application Number	
Title of Invention	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ATZ00002C6
	Application Number	
Title of Invention	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1 Remove

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

● Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.	Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	Athalonz, LLC		
Mailing Address Information For Applicant:			
Address 1	3702 E. Brown Road		
Address 2			
City	Mesa	**State/Province**	AZ
Country	US	Postal Code	85205
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button. Add

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ATZ00002C6
	Application Number	
Title of Invention	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF	

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

Remove

If the Assignee or Non-Applicant Assignee is an Organization check here. ☒

Organization Name	Athalonz, LLC

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1	3702 E. Brown Road		
Address 2			
City	Mesa	**State/Province**	AZ
Country i	US	Postal Code	85205
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button. Add

Signature:

Remove

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Timothy W. Markison/			Date (YYYY-MM-DD)	2019-04-29
First Name	Timothy	Last Name	Markison	Registration Number	33534

Additional Signature may be generated within this form by selecting the Add button. Add

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ATZ00002C6
	Application Number	
Title of Invention	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF	

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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ABSTRACT OF THE DISCLOSURE

An apparatus includes a heel section, a mid-foot section, and a toe section. The heel section, the mid-foot section, and the toe section collectively have a geometric shape having a first slope of a polarity along an inner edge of the apparatus from the toe section to the heel section and a second slope of the polarity along the inner edge of the apparatus to an outer edge of the apparatus at the toe section.

CLAIMS

What is claimed is:

1. A shoe comprises:

an upper section;

a midsole coupled to the upper section;

an insole positioned proximal to the midsole and within the upper section; and

a bottom outsole coupled to the midsole, wherein a combination of the midsole, the insole, and the bottom outsole form an athletic positioning shape, wherein the athletic positioning shape has:

a first height from inside edge to outside edge of the shoe along a heel section of the shoe,

a second height on the outside edge of the shoe at a toe section of the shoe,

a third height on the inside edge of the shoe at the toe section of the shoe, and

the first height being greater than the second height and the second height being greater than the third height.

2. The shoe of claim 1 further comprises:

the athletic positioning shape including the heel section, a mid-foot section, and a toe section, wherein the mid-foot section is between the heel section and the toe section, and wherein the heel section has the first height throughout.

3. The shoe of claim 2 further comprises:

a fourth height at the outside edge of the shoe at a transition from the mid-foot section to the toe section, wherein the fourth height is greater than the second height and wherein the fourth height is less than the first height.

4. The shoe of claim 3 further comprises:

a fifth height at the inside edge of the shoe at the transition from the mid-foot section to the toe section, wherein the fifth height is greater than the third height and wherein the fifth height is less than the first height and less than the fourth height.

5. The shoe of claim 2 further comprises:

a fourth height at the inside edge of the shoe at the transition from the mid-foot section to the toe section, wherein the fourth height is greater than the third height and wherein the fourth height is less than the first height.

6. The shoe of claim 1 further comprises:

a first linear slope from the first height to the second height;

a second linear slope from the first height to the third height; and

a third linear slope from the second height to the third height.

7. The shoe of claim 1 further comprises:

a first non-linear slope from the first height to the second height;

a second non-linear slope from the first height to the third height; and

a third non-linear slope from the second height to the third height.

8. The shoe of claim 1 further comprises:

the second height including an insole second height component, a midsole second height component, and a bottom outsole second height component; and

the third height including an insole third height component, a midsole third height component, and a bottom outsole third height component, wherein the bottom outsole third height component is greater than the bottom outsole second height component.

TITLE OF THE INVENTION

ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF

CROSS REFERENCE TO RELATED PATENTS

The present U.S. Utility Patent Application claims priority pursuant to 35 U.S.C. § 120 as a continuation of U.S. Utility Application No. 14/563,135, entitled "ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF," filed 12/08/2014, issuing as U.S. Patent No. 10,271,611 on 04/30/2019, which claims priority pursuant to 35 U.S.C. § 120 as a continuation of U.S. Utility Application No. 13/355,778, entitled "ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF," filed 01/23/2012, issued as U.S. Patent No. 8,938,893 on 01/27/2015, which claims priority pursuant to 35 U.S.C. § 119(e) to U.S. Provisional Application No. 61/450,485, entitled "ATHLETIC POSITIONING FOOTWEAR," filed 03/08/2011, expired, all of which are hereby incorporated herein by reference in their entirety and made part of the present U.S. Utility Patent Application for all purposes.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT – NOT APPLICABLE

INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC – NOT APPLICABLE

BACKGROUND OF THE INVENTION

TECHNICAL FIELD OF THE INVENTION

This invention relates generally to footwear and more particularly to athletic positioning footwear.

DESCRIPTION OF RELATED ART

As is known, a wide variety of shoes are available in today's market. The types, designs, and style of the shoes vary greatly depending on their use. For example, dress shoes have a particular design and style based on a more formal use. As another example, athletic shoes have a particular design and style based on their use while playing sports. For instance, each of tennis shoes, golf shoes, running shoes, cross training shoes, hiking shoes, basketball shoes, etcetera

have a particular sole pattern, a sole design, an insole design, and upper shoe portion design. In addition, each type of athletic shoe may further include a lateral stability design, an arch support design, a pronation compensation design, and/or a supination compensation design.

As another specific example, Figures 1 and 2 illustrate a cross sectional front view and a cross-sectional side view of a pair of baseball spikes. As is shown, the baseball spikes include a sole, a padded insole, an upper shoe portion, and cleats (or spikes). The positioning of the cleats facilitates better traction in grass and/or dirt while playing baseball. In these figures, the sole and/or the padded insole provide a relatively flat platform for the foot within the baseball spikes. In some designs of baseball spikes, the heel portion of the shoe may be higher than the toe portion of the shoe from a side perspective.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S)

Figure 1 illustrates a cross-sectional front view diagram of baseball spikes of the prior art;

Figure 2 illustrates a cross-sectional side view diagram of baseball spikes of the prior art;

Figure 3 illustrates a cross-sectional side view diagram of an embodiment of a shoe having an athletic positioning insole and/or sole in accordance with the present invention;

Figure 4 illustrates a cross-sectional front view diagram of an embodiment of a shoe having an athletic positioning insole and/or sole in accordance with the present invention;

Figure 5 illustrates an isometric diagram of an embodiment of an athletic positioning shape in accordance with the present invention;

Figure 6 illustrates a cross-sectional side view diagram of an embodiment of an athletic positioning shape in accordance with the present invention;

Figure 7 illustrates a cross-sectional front view diagram of an embodiment of an athletic positioning shape in accordance with the present invention;

Figure 8 illustrates an isometric diagram of another embodiment of an athletic positioning shape in accordance with the present invention;

Figure 9 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning shape in accordance with the present invention;

Figure 10 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning shape in accordance with the present invention;

Figure 11 illustrates an isometric diagram of another embodiment of an athletic positioning shape in accordance with the present invention;

Figure 12 illustrates an isometric diagram of another embodiment of an athletic positioning shape in accordance with the present invention;

Figure 13 illustrates an isometric diagram of another embodiment of an athletic positioning shape in accordance with the present invention;

Figure 14 illustrates an isometric diagram of another embodiment of an athletic positioning shape in accordance with the present invention;

Figure 15 illustrates an isometric diagram of another embodiment of an athletic positioning shape in accordance with the present invention;

Figure 16 illustrates a top view diagram of an embodiment of an athletic positioning insole and/or sole having one or more cups in accordance with the present invention;

Figure 17 illustrates a cross-sectional front view diagram of an embodiment of an athletic positioning insole and/or sole having a toe cup in accordance with the present invention;

Figure 18 illustrates a cross-sectional front view diagram of an embodiment of an athletic positioning insole and/or sole having a ball of foot cup in accordance with the present invention;

Figure 19 illustrates a topographical diagram of another embodiment of an athletic positioning shape in accordance with the present invention;

Figure 20 illustrates a topographical diagram of another embodiment of an athletic positioning shape in accordance with the present invention;

Figure 21 illustrates a topographical diagram of another embodiment of an athletic positioning shape in accordance with the present invention;

Figure 22 illustrates a topographical diagram of another embodiment of an athletic positioning shape in accordance with the present invention;

Figure 23 illustrates a topographical diagram of another embodiment of an athletic positioning shape in accordance with the present invention;

Figures 24 – 33 illustrate layers of another embodiment of an athletic positioning shape in accordance with the present invention;

Figure 34 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 35 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 36 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 37 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 38 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 39 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 40 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 41 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 42 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 43 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 44 illustrates an isometric diagram of an embodiment of an athletic positioning sole in accordance with the present invention;

Figure 45 illustrates an isometric diagram of another embodiment of an athletic positioning sole in accordance with the present invention;

Figure 46 illustrates an isometric diagram of another embodiment of an athletic positioning sole in accordance with the present invention;

Figure 47 illustrates an isometric diagram of another embodiment of an athletic positioning sole in accordance with the present invention;

Figure 48 illustrates a cross-sectional side view diagram of an embodiment of an athletic positioning sole and an athletic positioning insole in accordance with the present invention;

Figure 49 illustrates a top view diagram of an embodiment of an athletic positioning sole and an athletic positioning insole in accordance with the present invention;

Figure 50 illustrates a bottom view diagram of an embodiment of an athletic positioning sole and an athletic positioning insole in accordance with the present invention;

Figure 51 illustrates a cross-sectional front view diagram of an embodiment of an athletic positioning sole and an athletic positioning insole in accordance with the present invention;

Figure 52 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole and an athletic positioning insole in accordance with the present invention;

Figure 53 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole and an athletic positioning insole in accordance with the present invention;

Figure 54 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole and an athletic positioning insole in accordance with the present invention;

Figure 55 illustrates a cross-sectional outside view diagram of another embodiment of an athletic positioning insole in accordance with the present invention;

Figure 56 illustrates a top view diagram of another embodiment of an athletic positioning insole in accordance with the present invention;

Figure 57 illustrates a cross-sectional inside view diagram of another embodiment of an athletic positioning insole in accordance with the present invention;

Figure 58 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning insole in accordance with the present invention;

Figure 59 illustrates a top view diagram of another embodiment of an athletic positioning sole in accordance with the present invention;

Figure 60 illustrates a cross-sectional outside view diagram of another embodiment of an athletic positioning sole in accordance with the present invention;

Figure 61 illustrates a cross-sectional inside view diagram of another embodiment of an athletic positioning sole in accordance with the present invention;

Figure 62 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole in accordance with the present invention;

Figure 63 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole and/or insole with compensating sport specific bottom in accordance with the present invention;

Figure 64 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole and/or insole with compensating sport specific bottom in accordance with the present invention;

Figure 65 illustrates a cross-sectional front view diagram of another embodiment of shoe having an athletic positioning sole and/or insole in accordance with the present invention;

Figure 66 illustrates a cross-sectional heel view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 67 illustrates an isometric diagram of an embodiment of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 68 illustrates a cross-sectional side view diagram of another embodiment of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 69 illustrates a top view diagram of another embodiment of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 70 illustrates a cross-sectional front view diagram of an embodiment of an adjustable toe section of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 71 illustrates a cross-sectional side view diagram of an embodiment of an adjustable toe section of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 72 illustrates a top view diagram of another embodiment of an adjustable ball of foot section of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 73 illustrates a cross-sectional front view diagram of an embodiment of an adjustable ball of foot section of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 74 illustrates a cross-sectional inside view diagram of an embodiment of an adjustable ball of foot section of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 75 illustrates a top view diagram of another embodiment of an adjustable heel section of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 76 illustrates a cross-sectional heel view diagram of an embodiment of an adjustable heel section of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 77 illustrates a side view diagram of an embodiment of a shoe having an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 78 illustrates a front view diagram of an embodiment of a shoe having an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 79 illustrates an expanded view diagram of another embodiment of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 80 illustrates a top view diagram of an embodiment of removable plates of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 81 illustrates a cross-sectional side view diagram of an embodiment of removable plates of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 82 illustrates a cross-sectional side view diagram of an embodiment of a securing mechanism for removable plates of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 83 illustrates an expanded cross-sectional side view diagram of another embodiment of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 84 illustrates a cross-sectional side view diagram of another embodiment of a securing mechanism for removable plates of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 85 illustrates a cross-sectional side view diagram of another embodiment of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 86 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 87 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 88 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 89 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 90 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 91 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 92 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 93 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 94 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 95 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 96 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 97 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 98 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 99 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 100 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole and/or insole in accordance with the present invention;

Figure 101 illustrates a cross-sectional front view diagram of another embodiment of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 102 illustrates a cross-sectional front view diagram of another embodiment of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 103 illustrates a cross-sectional front view diagram of another embodiment of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 104 illustrates a side view diagram of an embodiment of a panel of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 105 illustrates a cross-sectional front view diagram of an embodiment of a panel of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 106 illustrates a cross-sectional front view diagram of another embodiment of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 107 illustrates a cross-sectional front view diagram of another embodiment of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 108 illustrates a cross-sectional side view diagram of another embodiment of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 109 illustrates a cross-sectional side view diagram of another embodiment of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 110 illustrates a cross-sectional top view diagram of another embodiment of an adjustable athletic positioning sole and/or insole in accordance with the present invention;

Figure 111 illustrates a cross-sectional heel view diagram of another embodiment of a varying positioning athletic positioning sole and/or insole in accordance with the present invention;

Figure 112 illustrates a cross-sectional front view diagram of another embodiment of a varying positioning athletic positioning sole and/or insole in accordance with the present invention;

Figure 113 illustrates a cross-sectional front view diagram of another embodiment of a varying positioning athletic positioning sole and/or insole in accordance with the present invention;

Figure 114 illustrates a cross-sectional front view diagram of another embodiment of a varying positioning athletic positioning sole and/or insole in accordance with the present invention;

Figure 115 illustrates a cross-sectional front view diagram of another embodiment of a varying positioning athletic positioning sole and/or insole in accordance with the present invention;

Figure 116 illustrates a side view diagram of an embodiment of a training shoe that includes an athletic positioning sole in accordance with the present invention;

Figure 117 illustrates a front view diagram of an embodiment of a training shoe that includes an athletic positioning sole in accordance with the present invention;

Figure 118 illustrates an isometric view diagram of an embodiment of an athletic positioning sole of a training shoe in accordance with the present invention;

Figure 119 illustrates a side view diagram of another embodiment of a training shoe that includes an athletic positioning sole in accordance with the present invention;

Figure 120 illustrates a front view diagram of another embodiment of an athletic positioning sole of a training shoe in accordance with the present invention;

Figure 121 illustrates a bottom view diagram of another embodiment of an athletic positioning sole of a training shoe in accordance with the present invention;

Figure 122 illustrates a side view diagram of an embodiment of baseball spikes that include an athletic positioning spike pattern in accordance with the present invention;

Figure 123 illustrates a front view diagram of an embodiment of baseball spikes that include an athletic positioning spike pattern in accordance with the present invention;

Figure 124 illustrates a top view diagram of another embodiment of baseball spikes that include an athletic positioning spike pattern in accordance with the present invention;

Figure 125 illustrates a top view diagram of another embodiment of baseball spikes that include an athletic positioning spike pattern in accordance with the present invention;

Figure 126 illustrates a heel view diagram of another embodiment of baseball spikes that include an athletic positioning spike pattern in accordance with the present invention;

Figure 127 illustrates a heel view diagram of another embodiment of baseball spikes that include an athletic positioning spike pattern in accordance with the present invention;

Figure 128 illustrates a diagram of an embodiment of a spike for baseball spikes that include an athletic positioning spike pattern in accordance with the present invention;

Figure 129 illustrates a cross-section front view diagram of another embodiment of an athletic positioning pattern in accordance with the present invention;

Figure 130 illustrates a side view diagram of an embodiment of an athletic positioning heel attachment for baseball spikes in accordance with the present invention;

Figure 131 illustrates a bottom view diagram of an embodiment of an athletic positioning heel attachment for baseball spikes in accordance with the present invention;

Figure 132 illustrates a bottom view diagram of another embodiment of an athletic positioning heel attachment for baseball spikes in accordance with the present invention;

Figure 133 illustrates a bottom view diagram of an embodiment of an athletic positioning toe and ball-of-foot attachment for baseball spikes in accordance with the present invention;

Figure 134 illustrates a heel view diagram of another embodiment of an athletic positioning heel attachment for baseball spikes in accordance with the present invention;

Figure 135 illustrates a side view diagram of another embodiment of an athletic positioning heel attachment and athletic positioning toe and ball-of-foot attachment for baseball spikes in accordance with the present invention;

Figure 136 illustrates a bottom view diagram of an embodiment of an athletic positioning attachment for baseball spikes in accordance with the present invention;

Figure 137 illustrates an inside view diagram of an embodiment of an athletic positioning attachment for baseball spikes in accordance with the present invention;

Figure 138 illustrates an outside view diagram of an embodiment of an athletic positioning attachment for baseball spikes in accordance with the present invention;

Figure 139 illustrates a topological view diagram of an embodiment of an athletic positioning attachment for baseball spikes in accordance with the present invention;

Figure 140 illustrates an isometric view diagram of an embodiment of a pitching training aid that includes an athletic positioning shape in accordance with the present invention;

Figure 141 illustrates an isometric view diagram of another embodiment of a pitching training aid that includes an athletic positioning shape in accordance with the present invention;

Figure 142 illustrates an isometric view diagram of an embodiment of a pitching rubber that includes an athletic positioning shape in accordance with the present invention;

Figure 143 illustrates an isometric view diagram of another embodiment of a pitching rubber that includes an athletic positioning shape in accordance with the present invention;

Figure 144 illustrates a cross-section view diagram of an embodiment of a fitting mechanism for a shoe that includes an athletic positioning shape in accordance with the present invention;

Figure 145 illustrates a top front view diagram of an embodiment of a fitting mechanism for a shoe that includes an athletic positioning shape in accordance with the present invention;

Figure 146 illustrates a side view diagram of an embodiment of a fitting mechanism for a shoe that includes an athletic positioning shape in accordance with the present invention;

Figure 147 illustrates a side view diagram of another embodiment of a fitting mechanism for a shoe that includes an athletic positioning shape in accordance with the present invention;

Figure 148 illustrates a side view diagram of another embodiment of a fitting mechanism for a shoe that includes an athletic positioning shape in accordance with the present invention;

Figure 149 illustrates a side view diagram of another embodiment of a fitting mechanism for a shoe that includes an athletic positioning shape in accordance with the present invention; and

Figure 150 illustrates an isometric view diagram of another embodiment of a fitting mechanism for a shoe that includes an athletic positioning shape in accordance with the present invention.

DETAILED DESCRIPTION OF THE INVENTION

Figures 3 and 4 illustrate a cross-sectional side view and a cross-sectional front view, respectively, of an embodiment of footwear having an apparatus that facilitates athletic positioning via an insole and/or a sole of a shoe. The shoe includes an upper section 18, and insole section 12, and a sole section 10. The apparatus, which may be the insole section 12 and/or the sole section 10, of a shoe, has an athletic positioning shape as formed by a heel section 21, a mid-foot section 23, and/or a toe section 25. In general, the athletic positioning shape has the heel section 21 higher than the toe section by a particular angle (e.g., Ø1, which may range from a fraction of a degree to 10's of degrees) and the outside edge of the shoe higher than the inside edge of the shoe by another angle (e.g., Ø2, which may range from a fraction of a degree to 10's of degrees) at the ball of foot and/or toe section of the shoe.

When a person wears such a shoe, the athletic positioning shape of the insole and/or sole, places the person in an athletic position (e.g., knees slightly bent, weight more on the inside of the legs than the outside of the legs, knees position aligned with ankles and hips, and/or other athletic positioning characteristics). For example, when a pitcher wears a pair of baseball spikes that include the athletic positioning shape insole 12 and/or sole 10, the pitcher's toe and ball of foot are a primary contact point with the ground, which shifts the pitcher's weight to the inside of

his/her legs and slightly bends the pitcher's knees. In this position, the pitcher's lower half is in a more optimal position for pitching.

As another example, a batter may wear a pair of baseball spikes that include the athletic positioning shape insole 12 and/or sole 10. When in the batter's box, the baseball spikes enable the batter to place more weight on his/her big toe and ball of foot than on the outer edge of the foot. In addition, the batter's knees are flexed and his/her weight is shifted to the inside portion of the leg as opposed to the outside portion of the leg, which promotes a better hitting stance.

The athletic positioning insole 12 and/or sole 10 may be used in any type of shoe (e.g., a dress shoe, a casual shoe, a sport specific shoe, a training shoe, and/or a combination thereof) For example, the athletic positioning insole 12 and/or sole 10 may be used in basketball shoes, tennis shoes, golf shoes, ski boots, ice skates, baseball cleats, football cleats, soccer shoes, running shoes, track shoes, cross fitness shoes, etc. For each of these sport specific shoes, the athletic positioning insole 12 and/or sole 10 are coupled to a specific bottom and a corresponding upper shoe section to promote a better athletic position for an athlete. The specific bottom may comprise one or more of a cleat pattern bottom, a baseball spike bottom, a basketball bottom, a tennis bottom, a golf bottom, an ice skate bottom, a ski boot bottom, a cross-trainer bottom, a running shoe bottom, a walking shoe bottom, a dress shoe bottom and a snowboard boot bottom. The upper section of a shoe may also have a sandal structure that includes one or more straps for securing the shoe to a foot.

Figures 5-7 illustrate an isometric diagram 20, a cross-sectional side view diagram 22, and a cross-sectional front view diagram 24 of an embodiment of an athletic positioning shape, which may be used in an insole 12 and/or sole 10 of a shoe. The athletic positioning shape includes a heel section 21, a mid-foot section 23, and a toe section that collectively have an overall geometric shape that corresponds to the shape of a shoe, but is shown in block form for ease of illustration. The heel section 21, mid-foot section 23, and toe section 25 may each be separate pieces, a uniform piece, and/or two of the sections may be a uniform piece while the other is a separate piece.

The heel section 21 has a first dimension that is substantially uniform from the outer edge to the inner edge along a back edge of the apparatus and from the back edge of the apparatus to a front portion of the heel section 21. The toe section 25 has a second dimension at the front outer edge of the apparatus and a third dimension at the front inner edge of the apparatus. The first

dimension has a magnitude that is greater than or equal to a magnitude of the second dimension and the magnitude of the second dimension is greater than a magnitude of the third dimension.

As shown, the heel section 21 of the shoe has a particular height (e.g., h1, which may be 1 to 10's of mm) that has a first slope (e.g., corresponding to Ø1) of the polarity through the mid-foot section 23 to the toe section 25 on the inside edge of the shoe. The inside edge of the shoe at the toe section may have a height of zero to a few millimeters.

As also shown, the athletic positioning shape includes a second height (e.g., h2) at the outer edge of the shoe at the toe section 25, which has a second slope (e.g., corresponding to Ø2) of the polarity to the inside edge of the shoe. Accordingly, a third angle exists from the heel to the toe section 25 on the outer edge of the shoe.

The heel section 21 may also include a first structure corresponding to a first portion of the geometric shape, while the mid-foot section 23 may include a second structure corresponding to a second portion of the geometric shape, and the toe section 25 may include a third structure corresponding to a third portion of the geometric shape, wherein the heel section 21 is juxtaposed to the mid-foot section 23, which is juxtaposed to the toe section 25. For example, the heal section may be mechanically coupled to the mid-foot section 23 and the mid-foot section 23 may be mechanically coupled to the toe section 25, wherein spacing between the sections maybe near zero to several centimeters. The apparatus may also include a cushioning layer on a first surface covering at least a portion of the heel, mid-foot and/or toe sections.

While the surface on which the foot lies, the angles, and the perimeter lines are shown as straight lines and/or flat surfaces, they may be contoured lines and/or angles, contoured surfaces, contour slopes, concave and/or convex slopes and/or surfaces, and/or a combination thereof to provide a more comfortable and/or custom fit.

Figures 8-10 illustrate an isometric diagram 30, a cross-sectional side view diagram 32, and a cross-sectional front view diagram 34 of an embodiment of an athletic positioning shape, which may be used in an insole 12 and/or sole 10 of a shoe. The athletic positioning shape includes an overall geometric shape that corresponds to the shape of a shoe, but is shown in block form for ease of illustration. The athletic positioning shape further includes a heel platform 38 and an angled support platform 36. The heel platform includes a height (h1) and width (w).

The angled support platform 36 includes a length (L – heel platform length), the width (w), a first height (h1), a second height (h2), an inner toe section height (e.g., 0 to a few mm), a first angle (e.g., Ø1) from the heel platform 38 to the toe on the inside edge of the shoe, a second angle (e.g., Ø2) from the outer edge of the shoe to the inside edge of the shoe, and a third angle (e.g., Ø3) from the heel platform 38 to the toe section 25 on the outer edge of the shoe.

In an example, the toe section 25 and the mid-foot section 23 collectively have a geometric shape having a first dimension along an abutment edge of the heel platform section 38 and the mid-foot section 23, a second dimension at front outer edge of the apparatus, and a third dimension at front inner edge of the apparatus. The first dimension is substantially uniformly throughout the heel platform section 38 and has a magnitude that is greater than or equal to a magnitude of the second dimension. The magnitude of the second dimension is greater than a magnitude of the third dimension.

Figure 11 illustrates an isometric diagram of another embodiment of an athletic positioning shape 40, which may be used in an insole 12 and/or sole 10 of a shoe. The athletic positioning shape includes an overall geometric shape that corresponds to the shape of a shoe, but is shown in block form for ease of illustration. The athletic positioning shape further includes a heel platform 38, an angled support platform 36, and a toe area 42. The heel platform 38 includes a height (h1), a width (w), a first length (L4) and a second length (L3), where L3 is greater than L4.

The angled support platform 36 includes a length (L – L3 and L – L4), a first width (w1), a second width corresponding to the toe area 42 (w1-w2), a first height (h1), a second height (h2), a first angle (e.g., Ø1) from the heel platform to the toe on the outside edge of the shoe, a second angle (e.g., Ø2) from the outer edge of the shoe to the edge of the toe area 42, and a third angle (e.g., Ø3) from the heel platform 38 to the toe area 42 on the inner edge of the shoe.

Figure 12 illustrates an isometric diagram 50 of another embodiment of an athletic positioning shape, which may be used in an insole 12 and/or sole 10 of a shoe. The athletic positioning shape includes an overall geometric shape that corresponds to the shape of a shoe, but is shown in block form for ease of illustration. The athletic positioning shape further includes a heel platform 38, an angled support platform 36, an angled edge platform 52, and a ball-of-foot/toe area 54. The heel platform 38 includes a height (h1), a width (w), and a length.

The angled support platform 36 includes a length (L – heel length), a first width (w2 - w1) at heel platform 38, a second width (w2-w1) at toe area, a first height (h1), a second height (h2), a first angle (e.g., Ø1) from the heel platform 38 to the toe on the outside edge of the shoe, and a second angle (e.g., Ø2) from the outer edge of the shoe to the edge of the toe area. The angled edge platform 52 includes a length (L – heel length), a first width (w4) at heel platform 38, a second width (w2) at toe area, a first height (h1), a second height (h2), and a first angle (e.g., Ø1) from the heel platform 38 to the toe on the outside edge of the shoe.

Figure 13 illustrates an isometric diagram 60 of another embodiment of an athletic positioning shape, which may be used in an insole 12 and/or sole 10 of a shoe. The athletic positioning shape includes an overall geometric shape that corresponds to the shape of a shoe, but is shown in block form for ease of illustration. The athletic positioning shape further includes an angled heel platform 62 and an angled support platform 36. The angled heel platform 62 includes a first height (h1), a second height (h2), a length, a width (w), and an angle (Ø1), which may be in the range of -10 to 10 degrees. As shown, the angle (Ø1) is shown to be a positive angle such that the heel platform 62 is slightly angled from the outer edge of the shoe to the inner edge, which may be to facilitate the athletic position and/or to adjust for supination. While not shown, if the angle (Ø1) is negative, the heel platform 62 is slightly angled from the inner edge of the shoe to the outer edge, which may be to facilitate the athletic position and/or to adjust for pronation.

The angled support platform 36 includes a length (L – heel platform length), the width (w), a first height (h1), a second height (h2), an inner toe section height (e.g., 0 to a few mm), a first angle (e.g., Ø4) from the heel platform to the toe on the inside edge of the shoe, a second angle (e.g., Ø3) from the outer edge of the shoe to the inside edge of the shoe, and a third angle (e.g., Ø2) from the angled heel platform 62 to the toe section 25 on the outer edge of the shoe.

Figure 14 illustrates an isometric diagram of another embodiment of an athletic positioning shape 70, which may be used in an insole 12 and/or sole 10 of a shoe. The athletic positioning shape includes an overall geometric shape that corresponds to the shape of a shoe, but is shown in block form for ease of illustration. The athletic positioning shape further includes a heel platform 38, an angled arch support platform 72, an angled toe platform 74, and a big toe area 76. Note that the inside portion of the ball of foot may be in the big toe area and the rest of the ball of foot may be in the angle arch support platform.

The heel platform includes a height (h1), a width, and a length. The angled arch support platform includes a length (L – heel length and the big toe area length), a width, a first height (h1), a second height (h2), a first angle (e.g., Ø2) from the heel platform to the toe on the outside edge of the toe platform, and a second angle (e.g., Ø2) from the outer edge of the shoe to the edge of the big toe area. The toe platform includes a length (L – heel length and the length of the arch platform), a width, a first height (h2), a second height (h3), and a first angle (e.g., Ø1) from the arch platform 72 to the toe platform 74 and a second angle (e.g., Ø3) from the outside edge of the shoe to the big toe area. In this embodiment, Ø1 is greater than Ø2 such that the angle of the toes is greater than the angle of the arch platform and allows for more flexing of the toes.

Figure 15 illustrates an isometric diagram 80 of another embodiment of an athletic positioning shape, which may be used in an insole 12 and/or sole 10 of a shoe. The athletic positioning shape includes an overall geometric shape that corresponds to the shape of a shoe, but is shown in block form for ease of illustration. The athletic positioning shape further includes a heel platform 38, an angled arch support platform 72, an angled toe platform 74, and a big toe area 76. Note that the inside portion of the ball of foot may be in the big toe area and the rest of the ball of foot may be in the angle arch support platform.

The heel platform includes a height (h1), a width, and a length. The angled arch support platform includes a length (L – heel length and the big toe area length), a width, a first height (h1), a second height (h2), a first angle (e.g., Ø2) from the heel platform to the toe on the outside edge of the toe platform, and a second angle (e.g., Ø2) from the outer edge of the shoe to the edge of the big toe area. The toe platform includes a length (L – heel length and the length of the arch platform), a width, a first height (h2), a second height (h3), and a first angle (e.g., Ø1) from the arch platform to the toe platform and a second angle (e.g., Ø3) from the outside edge of the shoe to the big toe area. In this embodiment, Ø2 is greater than Ø1 such that the angle of the toes is less than the angle of the arch platform, which allows for less flexing of the toes.

While the surfaces on which the foot and toes lie, the angles, and the perimeter lines are shown as straight lines and/or flat surfaces in each of the embodiments of Figures 5 – 15, they may be contoured lines and/or angles, contoured surfaces, contour slopes, concave and/or convex slopes and/or surfaces, and/or a combination thereof to provide a more comfortable and/or custom fit. Note that the shoe may further include arch support as a separate layer of the insole or integrated into the insole. Further note that the present athletic positioning shape may be used

in a standalone athletic positioning insole product, in a standalone athletic positioning sole attachment, in a training shoe, and/or a sock. Still further note that with the combination of height and angles of the embodiments of Figures 5-15, the wearer of a shoe that incorporates an athletic positioning insole and/or sole having one of the athletic positioning shapes is placed in an athletic position, which may promote better athletic performance and/or which may promote better biomechanical body functioning.

Figure 16 illustrates a top view diagram of an embodiment of an athletic positioning insole 12 and/or sole 10 having one or more positioning and/or stabilizing cups. The athletic positioning insole 12 and/or sole 10 may include one or more of the athletic positioning shapes of the previous figures and/or of the subsequent figures. In this example embodiment, the athletic positioning insole 12 and/or sole 10 includes a big toe stabilizing and/or positioning cup 90 and an inner-ball of foot stabilizing and/or positioning cup 92. The cup helps with positioning the foot on the athletic positioning insole and/or sole and may further help with stabilizing the foot in its position on the athletic positioning insole and/or sole during athletic activities. Each of the cups may be a few millimeters in depth, have sloped sides, may be of a different material then the insole and/or sole, and/or a combination thereof.

Figure 17 illustrates a cross-sectional front view diagram of an embodiment of an athletic positioning insole and/or sole having a toe cup. As shown, the big toe fits within the toe cup 42 to provide positioning and/or stabilization of the foot within the insole 12 and/or sole 10.

Figure 18 illustrates a cross-sectional front view diagram of an embodiment of an athletic positioning insole 12 and/or sole 10 having a ball of foot cup. As shown, the inner portion of the ball of the foot fits within the ball of foot cup 92 to provide positioning and/or stabilization of the foot within the insole 12 and/or sole 10.

Figure 19 illustrates a topographical diagram 100 of another embodiment of an athletic positioning shape, which may be used in an insole 12 and/or sole 10 of a shoe. The athletic positioning shape further includes a heel platform 38, an angled support platform 36, a toe cup 42, and a ball-of-foot cup 92. With respect to the toe cup and/or the ball of foot cup, the heel platform may be 10 to 30 mm higher and may have a shape corresponding to the heel of a shoe.

The angle support platform includes a contoured shape that angles from the outer edge of the foot to the inner edge of the foot with a greater slope in the ball of foot area than in the toe area. The gradient at which the angled support platform angles may vary depending on the

desired athletic positioning. In alternate implementations of this embodiment, the athletic positioning shape may omit one or both of the cups.

Figure 20 illustrates a topographical diagram 110 of another embodiment of an athletic positioning shape, which may be used in an insole 12 and/or sole 10 of a shoe. The athletic positioning shape further includes a heel platform 38, an angled support platform 36, and a toe area 112. With respect to the toe area 112, the heel platform 38 may be 10 to 30 mm higher and may have a shape corresponding to the heel of a shoe.

The angle support platform 36 includes a contoured shape that angles from the outer edge of the foot to the inner edge of the foot with a lesser slope along the outer edge of the shape than along the inner edge of the shape. The gradient at which the angled support platform angles may vary depending on the desired athletic positioning.

Figure 21 illustrates a topographical diagram of another embodiment of an athletic positioning shape, which may be used in an insole 12 and/or sole 10 of a shoe. The athletic positioning shape further includes a heel platform 38, an angled support platform 36, a toe cup 42, and/or a ball-of-foot cup 92. With respect to the toe cup and/or the ball-of-foot cup, the heel platform may be 10 to 30 mm higher and may have a shape corresponding to the heel of a shoe.

The angle support platform 36 includes a contoured shape that includes two angled sections. The first angled section is along the outer edge of the shape and slopes from the heel to the toe. The second angled section is from the first angled section to the inner edge of the shape and angles from the heel to the toe and from the outer edge to the inner edge. The gradient at which each of the angled section angles may vary depending on the desired athletic positioning.

Figure 22 illustrates a topographical diagram 120 of another embodiment of an athletic positioning shape, which may be used in an insole 12 and/or sole 10 of a shoe. The athletic positioning shape further includes a heel platform 38 and an angled support platform 36. The athletic positioning shape may further include a toe layer 122 and/or a partial ball-of-foot cup layer 124. With respect to the big toe and/or ball of foot, the heel platform may be 10 to 30 mm higher and may have a shape corresponding to the heel of a shoe.

The angle support platform 36 includes a contoured shape that angles from the outer edge of the foot to the inner edge of the foot with a lesser slope along the outer edge of the shape than along the inner edge of the shape. The gradient at which the angled support platform angles may vary depending on the desired athletic positioning.

Figure 23 illustrates a topographical diagram of another embodiment of an athletic positioning shape, which may be used in an insole 12 and/or sole 10 of a shoe. The athletic positioning shape further includes a heel platform 38 and an angled support platform 36 where the big toe is the lowest point 130. Alternatively, the athletic positioning shape may further include a toe layer and omit the layer under the inside ball-of-foot to allow the inside ball-of-foot to be the lowest point. With respect to the big toe and/or ball of foot, the heel platform 38 may be 10 to 30 mm higher and may have a shape corresponding to the heel of a shoe.

The angle support platform 36 includes a contoured shape that angles from the outer edge of the foot to the inner edge of the foot with a lesser slope along the outer edge of the shape than along the inner edge of the shape. The gradient at which the angled support platform angles may vary depending on the desired athletic positioning.

With the combination of heights and angles of the embodiments of Figures 19 - 23, the wearer of a shoe that incorporates an athletic positioning insole and/or sole having one of the athletic positioning shapes is placed in an athletic position, which may promote better athletic performance and/or which may promote better biomechanical body functioning. Note that a shoe, which incorporates one of the athletic positioning shapes of Figures 19-23, may further include arch support as a separate layer of the insole and/or integrated into the insole. Further note that one or more of the athletic positioning shapes may be used in a standalone athletic positioning insole product, in a standalone athletic positioning sole attachment, in a training shoe, and/or a sock.

Figures 24 – 33 illustrate layers of another embodiment of an athletic positioning shape for an insole 12 and/or a sole 10. Each layer may be of the same material (e.g., leather, rubber, foam, etc.), of a different material, or a combination thereof. For example, layers 1-4 may be of a rigid material (e.g., rubber, leather, plastic, carbon fiber, etc.) while layers 5-10 may be of a compressible material (e.g., foam, liquid material such as water, gel, etc.).

Figures 34 and 35 illustrate a cross-sectional side view diagram and a cross-sectional front view diagram of another embodiment of an athletic positioning sole 10 and/or insole 12 that includes a compressible material section 140 and a rigid material section 142. In this embodiment, the compressible material section 140 is on top of the rigid material section 142 (i.e., closer to the foot). The compressible material section 140 includes one or more of the athletic positioning shapes and comprises a compressible material (e.g., foam, a soft rubber,

memory foam, compressible housing that holds a liquid material (e.g., water, gel, etc.), and/or any other material that compresses under pressure and substantially returns to its uncompressed shape when the pressure is removed).

The rigid section 142 includes one or more the athletic positioning shapes, which may be the same one as used in the compressible material section 140 or different, and comprises a rigid material. The rigid material has minimal compression under pressure but allows for a desired level of flexion of the foot during use of the shoe. For example, the rigid material may be a rubber, a carbon fiber, leather, plastic, Polyurethane, any material that provides a rigid structure for the shoe, and/or a combination thereof.

Figures 36 and 37 illustrate a cross-sectional side view diagram and a cross-sectional front view diagram of another embodiment of an athletic positioning sole 10 and/or insole 12 that includes a compressible material section and a rigid material section. In this embodiment, the compressible material section 140 is under the rigid material section 142 (i.e., farther from the foot). The compressible material section 140 includes one or more of the athletic positioning shapes and comprises a compressible material (examples previously provided). The rigid section 142 includes one or more the athletic positioning shapes, which may be the same one as used in the compressible material section 140 or different, and comprises a rigid material. The rigid material has minimal compression under pressure but allows for a desired level of flexion of the foot during use of the shoe (examples previously provided).

Figure 38 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole 10 and/or insole 12 that includes a compressible material section 140, a rigid material section 142, and a recoil material section 144. In this embodiment, the compressible material section is layered on top of the recoil material section 144, which is layered on top of the rigid material section 142. The compressible material section 140 includes one or more of the athletic positioning shapes and comprises a compressible material (examples previously provided). The rigid section includes one or more the athletic positioning shapes, which may be the same one as used in the compressible material section or different, and comprises a rigid material. The rigid material has minimal compression under pressure but allows for a desired level of flexion of the foot during use of the shoe (examples previously provided).

The recoil section 144 includes one or more the athletic positioning shapes, which may be the same as one of the ones used in the compressible material section 140 and/or on the rigid material section 142, or a different shape. The recoil section 144 comprises a recoil material that, when placed under a force 146, converts the force into a potential energy and, when the force is released, converts the potential energy into kinetic energy 148. In this manner, the force that is generated by pushing off in the shoe is used to propel the foot in a desired direction when the force is released. For example, when a pitcher loads his/her drive leg, a force is applied to the shoe. When the pitcher begins his/her motion and pushes off the rubber, the force is released and the recoil material section 144 applies a force to the foot in a direction toward home plate.

The recoil material 144 may be a series of springs embedded in the recoil material layer, may be a resilient rubber material, some other material that provides a recoil effect, and/or a combination thereof. In addition, the recoil material may be imbalanced such that the direction of the recoil force is between perpendicular and parallel to the foot force. For example, if the recoil material includes a series of springs, the springs along the outer edge of the shoe may have a greater recoil force than those on the inner edge of the shoe. As such, when the foot force is released, the springs on the outer edge of the shoe "push" harder than the springs on the inner edge of the shoe, thus creating a more horizontal force.

Figure 39 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole and/or insole that includes a compressible material section and a recoil material section. In this embodiment, the compressible material section is layered on top of the recoil material section. The compressible material section includes one or more of the athletic positioning shapes and comprises a compressible material (examples previously provided).

The recoil section includes one or more the athletic positioning shapes, which may be the same as the one used in the compressible material section or a different shape. The recoil section comprises a recoil material that, when placed under a force, converts the force into a potential energy and, when the force is released, converts the potential energy into kinetic energy.

Figure 40 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole 10 and/or insole 12 that includes a compressible material section 140, a rigid material section 142, and a recoil material section 144. In this embodiment, the compressible material section 140 is layered on top of the rigid material section 142, which is layered on top of the recoil material section 144. The compressible material section 140 includes

one or more of the athletic positioning shapes and comprises a compressible material (examples previously provided). The rigid section 142 includes one or more the athletic positioning shapes, which may be the same one as used in the compressible material section 140 or different, and comprises a rigid material. The rigid material 142 has minimal compression under pressure but allows for a desired level of flexion of the foot during use of the shoe (examples previously provided).

The recoil section 144 includes one or more the athletic positioning shapes, which may be the same as one of the ones used in the compressible material section 140 and/or on the rigid material section 142, or a different shape. The recoil section 144 comprises a recoil material that, when placed under a force, converts the force into a potential energy and, when the force is released, converts the potential energy into kinetic energy.

Figure 41 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole 10 and/or insole 12 that includes a compressible material section 140 and a recoil material section 144. In this embodiment, the compressible material section 140 is layered below the recoil material section 144. The compressible material section 140 includes one or more of the athletic positioning shapes and comprises a compressible material (examples previously provided).

The recoil section 144 includes one or more the athletic positioning shapes, which may be the same as the one used in the compressible material section 140 or a different shape. The recoil section 144 comprises a recoil material that, when placed under a force, converts the force into a potential energy and, when the force is released, converts the potential energy into kinetic energy.

Figure 42 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole 10 and/or insole 12 that includes a first compressible material section 150, a second compressible material section 152, and a rigid material section 142. In this embodiment, the second compressible material section 152 is layered above the first compressible material section 150, which is layered above the rigid material section 142. The first compressible material section 150 includes one or more of the athletic positioning shapes and comprises a first compressible material. The second compressible material section 152 includes one or more of the athletic positioning shapes and comprises a second compressible

material. For example, the first compressible material may comprise a flexible housing containing a gel and the second compressible material may comprise a memory foam.

The rigid section 142 includes one or more the athletic positioning shapes, which may be the same as one of the ones used in the first or second compressible material sections or different. The rigid section 142 comprises a rigid material, which has minimal compression under pressure but allows for a desired level of flexion of the foot during use of the shoe.

Figure 43 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole 10 and/or insole 12 that includes a first compressible material section 150, a second compressible material section 152, and a recoil material section 144. In this embodiment, the first compressible material section 150 is layered above the recoil material section 144, which is layered above the second compressible material section 152. The first compressible material section 150 includes one or more of the athletic positioning shapes and comprises a first compressible material. The second compressible material section 152 includes one or more of the athletic positioning shapes and comprises a second compressible material. For example, the first compressible material may be more compressible material than that of the second compressible material.

The recoil section 144 includes one or more the athletic positioning shapes, which may be the same as the one of the ones used in the first or second compressible material sections or different. The recoil section 144 comprises a recoil material that, when placed under a force, converts the force into a potential energy and, when the force is released, converts the potential energy into kinetic energy.

Figure 44 illustrates an isometric diagram of an embodiment of an athletic positioning sole that includes an overall geometric shape that corresponds to the shape of a shoe, but is shown in block form for ease of illustration. As shown, the heel of the sole has a particular height (e.g., h1, which may be 1's to 10's of mm) that slopes at an angle (e.g., Ø1) to the toe on the inside edge of the sole. The inside edge of the sole at the toe section 25 may have a height of zero to a few millimeters with respect to the insole of the shoe.

As also shown, the athletic positioning sole includes a second height (e.g., h2) at the outer edge of the sole at the toe section, which tapers at an angle (e.g., Ø2) to the inside edge of the sole. Accordingly, a third angle exists from the heel to the toe section 25 on the outer edge of the sole.

Figure 45 illustrates an isometric diagram of another embodiment of an athletic positioning sole that includes an overall geometric shape that corresponds to the shape of a shoe, but is shown in block form for ease of illustration. The athletic positioning sole further includes a heel platform and an angled support platform. The heel platform includes a height (h1), a length (L1), and a width (w).

The angled support platform includes a length (L – heel platform length), the width (w), a first height (h1), a second height (h2), an inner toe section height (e.g., 0 to a few mm), a first angle (e.g., Ø1) from the heel platform to the toe on the inside edge of the shoe, a second angle (e.g., Ø2) from the outer edge of the shoe to the inside edge of the shoe, and a third angle from the heel platform 38 to the toe section 25 on the outer edge of the shoe.

Figure 46 illustrates an isometric diagram of another embodiment of an athletic positioning sole that includes an overall geometric shape that corresponds to the shape of a shoe, but is shown in block form for ease of illustration. The athletic positioning sole further includes a heel platform 38, an angled support platform 36, and an angled edge platform 160. The heel platform includes a height (h1), a width (w), and a length.

The angled support platform 36 includes a length (L – heel length), a first width (w – width of the angled edge platform), a first height (h1), a second height (h2), a first angle (e.g., Ø1) from the heel platform 38 to the toe on the outside edge of the shoe, and a second angle (e.g., Ø2) from the outer edge of the shoe to the edge of the toe area. The angled edge platform includes a length (L – heel length), a first width (w – width of the angled support platform), a first height (h1), a second height (h2), and a first angle (e.g., Ø1) from the heel platform to the toe on the outside edge of the shoe.

Figure 47 illustrates an isometric diagram of another embodiment of an athletic positioning sole that includes an overall geometric shape that corresponds to the shape of a shoe, but is shown in block form for ease of illustration. The athletic positioning sole further includes a heel platform 38, an angled support platform 36, and a ball-of-foot/toe area 112. The heel platform 38 includes a height (h1), a width (w), and a length (L1).

The angled support platform 36 includes a length (L –L1), a first width (w), a second width corresponding to the toe area (w-width of toe area), a first height (h1), a second height (h2), a first angle (e.g., Ø1) from the heel platform 38 to the toe on the outside edge of the shoe,

a second angle (e.g., Ø2) from the outer edge of the shoe to the edge of the toe area, and a third angle (e.g., Ø3) from the heel platform 38 to the toe area 112 on the inner edge of the shoe.

For each of the athletic positioning soles of Figures 44-47, the surface on which the specific sole pattern lies, the angles, and the perimeter lines are shown as straight lines and/or flat surfaces; however, they may be contoured lines and/or angles, contoured surfaces, contour slopes, concave and/or convex slopes and/or surfaces, and/or a combination thereof to provide a more comfortable and/or custom fit. In addition, each of the athletic positioning soles of Figures 44-47 may be flipped such that the angled surface is coupled to the shoe and the other side is coupled to a specific sole pattern (e.g., basketball, tennis, baseball, football, dress shoe, casual shoe, cross-training, etc.). In either implementation of coupling the athletic positioning sole to the remainder of the shoe, the wearer of the shoe is placed in an athletic position that may promote better athletic performance.

Figures 48 - 51 illustrates a cross-sectional side view diagram, a top view diagram, a bottom view diagram, and a cross-sectional front view diagram of an embodiment of an athletic positioning sole 10 and an athletic positioning insole 12. The athletic positioning insole may have one of the athletic positioning shapes and may be comprised of a compressible material 140, a recoil material 144, and/or a rigid material 142. Similarly, the athletic positioning sole may have one of the athletic positioning shapes and may be comprised of a compressible material, a recoil material, and/or a rigid material.

In this embodiment, the combination of the sole and the insole provide the overall athletic positioning shape for a shoe. For example, the heel height of the combined insole and sole is h1, which may be 10-30 mm or more, and the outer edge toe height of the combined insole and sole is h2, which may be 5-15 mm. In the present example, the sole and the insole contribute equally to the heights (h1 and h2); however the ratio of may range from 50/50 to 90/10 to 10/90 (insole/sole).

The heel-to-toe angles (e.g., Ø1 for inner edge and Ø3 for outer edge) are provided by a combination of the heel to toe angles of each of the insole and the sole. In the present example, the sole 10 and the insole 12 contribute equally to the heel-to-toe angles (Ø1 and Ø3); however the ratio of may range from 50/50 to 90/10 to 10/90 (insole/sole). Similarly, the insole 12 and sole 10 are shown to equally contribute to the outer edge to inner edge angle (e.g., Ø2), however the ratio of may range from 50/50 to 90/10 to 10/90 (insole/sole).

Figure 52 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole and an athletic positioning insole. The athletic positioning insole may have one of the athletic positioning shapes and may be comprised of one or more compressible materials 170 and/or of one or more rigid materials 172. The athletic positioning sole may have one of the athletic positioning shapes and may be comprised of one or more compressible materials 170 and/or of one or more rigid materials 172. For example, the rigid material 172 may be a rubber, carbon fiber, and/or plastic that is/are traditionally used for athletic shoe soles and the compressible material 170 may be memory foam, foam, and/or a gel that is/are traditionally used for athletic shoe insoles.

Figure 53 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole and an athletic positioning insole. The athletic positioning insole may have one of the athletic positioning shapes and may be comprised of one or more compressible materials 170 and/or of one or more rigid materials 172. The athletic positioning sole may have one of the athletic positioning shapes and may be comprised of one or more rigid materials 172.

Figure 54 illustrates a cross-sectional side view diagram of another embodiment of an athletic positioning sole and an athletic positioning insole. The athletic positioning insole may have one of the athletic positioning shapes and may be comprised of one or more compressible materials 170. The athletic positioning sole may have one of the athletic positioning shapes and may be comprised of one or more rigid materials 172. For example, the sole may be comprised of a rubber, carbon fiber, and/or plastic that is/are traditionally used for athletic shoe soles and the insole may be comprised of memory foam, foam, and/or a gel that is/are traditionally used for athletic shoe insoles.

For each of the athletic positioning soles of Figures 48-54, the angled surfaces of the sole and/or insole, the angles, and the perimeter lines are shown as straight lines and/or flat surfaces; however, they may be contoured lines and/or angles, contoured surfaces, contour slopes, concave and/or convex slopes and/or surfaces, and/or a combination thereof to provide a more comfortable and/or custom fit. In addition, the athletic positioning soles of Figures 48-54 may be flipped such that the angled surface is coupled to the shoe and the other side is coupled to a specific sole pattern (e.g., basketball, tennis, baseball, football, dress shoe, casual shoe, cross-training, etc.). In either implementation of coupling the athletic positioning sole to the remainder

of the shoe, the wearer of the shoe is placed in an athletic position that may promote better athletic performance.

Figures 55 - 58 illustrate a cross-sectional outside view diagram, a top view diagram, a cross-sectional inside view diagram, and a cross-sectional front view diagram of a specific embodiment of an athletic positioning insole. The insole includes a heel platform, an angled support platform, and a partial ball-of-foot cup. The insole may have one of the athletic positioning shapes and is comprised of one or more compressible materials. For a given athletic positioning shape, the height of the heel section 21 is 3/8 inch and the length and width of the insole correspond to an 11-1/2 size man's shoe (which can be adjusted for any shoe size). The big toe section is 1/8 inch thick and the little toe section is ¼ inch thick. The angles are based on the dimensions of the lengths, widths, and heights of the insole, where the dimensions may be for a pre-compressed condition or a compressed condition.

Figures 59 - 62 illustrate a top view diagram, a cross-sectional outside view diagram, a cross-sectional inside view diagram, and a cross-sectional front view diagram of a specific embodiment of an athletic positioning sole. The sole includes a heel platform 38, an angled support platform 36, and an upper shoe connecting sides 180. The sole may have one of the athletic positioning shapes and is comprised of one or more rigid materials 172 and/or compressible materials 170. For a given athletic positioning shape, the height of the heel section 21 is ½ inch and the length and width of the sole correspond to an 11-1/2 size man's shoe (which can be adjusted for any shoe size). The big toe section is 1/8 inch thick and the little toe section is ¼ inch thick. The angles are based on the dimensions of the lengths, widths, and heights of the insole, where the dimensions may be for a pre-compressed condition or a compressed condition. The sizing of the sides may vary depending on the connecting mechanism (e.g., stitch, glue, stable, fuse, etc.) to the upper shoe section.

Figures 63 - 64 illustrate a cross-sectional front view diagram and a cross-sectional inside view diagram of another embodiment of an athletic positioning sole 10 and/or insole 12 with compensating sport specific bottom 190. The athletic positioning insole may have one of the athletic positioning shapes and may be comprised of a compressible material, a recoil material, and/or a rigid material. Similarly, the athletic positioning sole may have one of the athletic positioning shapes and may be comprised of a compressible material, a recoil material, and/or a rigid material. Note that a shoe implemented in accordance with this embodiment may include

the athletic positioning sole and a conventional insole, a conventional sole and an athletic positioning insole, or may include an athletic positioning insole and an athletic positioning sole.

In an athletic position, more pressure is applied on the inside edge of the shoe at the ball-of-foot area than on other parts of the shoe. To compensate for this increased pressure, which could lead to greater wear and tear, the sport specific bottom 190 is thicker in this region than along the outer edge of the shoe. In addition, the sport specific sole may be thicker or equally as thick in the inner ball-of-foot region as in the heel region of the shoe. The sport specific bottom 190 may have an overall shape that reduces shock on the body when running and/or when making explosive movement.

Figure 65 illustrates a cross-sectional front view diagram of another embodiment of a shoe having an athletic positioning sole and/or insole and a sport specific bottom that includes an upper shoe securing area 200. The athletic positioning insole may have one of the athletic positioning shapes and may be comprised of a compressible material, a recoil material, and/or a rigid material. Similarly, the athletic positioning sole may have one of the athletic positioning shapes and may be comprised of a compressible material, a recoil material, and/or a rigid material. Note that a shoe implemented in accordance with this embodiment may include the athletic positioning sole and a conventional insole, a conventional sole and an athletic positioning insole, or may include an athletic positioning insole and an athletic positioning sole.

The sport specific bottom 190 includes a sport specific tread pattern (e.g., tennis, basketball, training, running, etc.), a spike and/or cleat pattern (e.g., baseball, football, golf, soccer, etc.), or a sliding coupling pattern (e.g., ice skates, ski boots, snowboard boots, rollerblades, etc.). In addition, the sport specific bottom 190 includes the upper securing area 200 to secure the sole assembly (e.g., sport specific bottom, the athletic positioning insole, and/or the athletic positioning sole) to an upper shoe 202, which may be a conventional upper shoe for a given sport, activity, or dress, or may an upper shoe as described in subsequent figures. The sole assembly may be secured to the upper shoe 202 by stitching, gluing, stapling, fusing, riveting, etc. The sport specific bottom may also include a sloped bottom as discussed with reference to Figures 63 and 64.

Figure 66 illustrates a cross-sectional heel view diagram of another embodiment of an athletic positioning sole 10 and/or insole 12 and a sport specific bottom 190. The athletic positioning insole may have one of the athletic positioning shapes and may be comprised of a

compressible material, a recoil material, and/or a rigid material. Similarly, the athletic positioning sole may have one of the athletic positioning shapes and may be comprised of a compressible material, a recoil material, and/or a rigid material. Note that a shoe implemented in accordance with this embodiment may include the athletic positioning sole and a conventional insole, a conventional sole and an athletic positioning insole, or may include an athletic positioning insole and an athletic positioning sole.

The sport specific bottom 190 includes a sport specific tread pattern (e.g., tennis, basketball, training, running, etc.), a spike and/or cleat pattern (e.g., baseball, football, golf, soccer, etc.), or a sliding coupling pattern 212 (e.g., ice skates, ski boots, snowboard boots, rollerblades, etc.). In addition, the sport specific bottom 190 includes a wider base than its upper portion to provide lateral stability. As shown, the outer edge of the sport specific bottom 190 angles in at a first angle (e.g., Ø1) and the inner edge of the bottom angles in at a second angle (e.g., Ø2). When the shoe includes the athletic positioning insole 12 and/or sole 10, it may be desirable to have the first angle larger than the second to provide more lateral stability, but both angles may be equal. The sport specific bottom 190 may also include a sloped bottom as discussed with reference to Figures 63 and 64. Note that the heel section may include a heel cup area 214

Figure 67 illustrates an isometric diagram of an embodiment of an adjustable athletic positioning sole 10 and/or insole 12. The insole 12 and/or sole 10 includes a fixed area 220 and an adjustable area 222, each area may be of one of the athletic positioning shapes. The fixed area 220 provides a positioning of a big toe area 76 at a lower position than a heel area 21 and at a lower position than an outer edge area. In addition, the fixed area 220 may include one or more compressible materials, one or more rigid materials, and/or one or more recoil materials.

The adjustable area 222 may be implemented in a variety of ways, which will be discussed in subsequent drawings. In general, the adjustable area 222 allows for the heights, widths, lengths, and/or angles of the athletic positioning insole and/or athletic positioning sole to be adjusted from a minimum setting (e.g., the fixed area dimensions) to a maximum setting (e.g., the fixed area dimensions plus the adjustable area dimensions). The present figures illustrate a left shoe implementation, but the concepts are equally applicable to a right shoe.

Figure 68 illustrates a cross-sectional side view diagram of another embodiment of an adjustable athletic positioning sole 10 and/or insole 12 having an alternating fixed area 222 and

adjustable area 220. The first adjustable area (e.g., the lowest one) allows the height of the heel platform 38 to be adjusted. The second adjustable area (e.g., the next one up) allows for the angled support platform 36 to be adjusted with minimal adjustment to the toe area. The third adjustable area (e.g., the top one) allows for the overall athletic position shape to be adjusted.

In an example, the fixed section 222 includes a plurality of fixed subsections and the adjustable section 220 includes a plurality of adjustable subsections, which are layered to vary the lower positioning of the big toe area 76 with respect to the heel area 21 and/or the big toe area 76 with respect to the outer edge area.

Figure 69 illustrates a top view diagram of another embodiment of an adjustable athletic positioning sole 10 and/or insole 12 that includes an adjustable heel section 230, an adjustable ball of foot and arch area 232, and an adjustable toe area 234. Each adjustable area 220 may be implemented using an air bladder structure that can be expanded from a minimal size (e.g., height, width, length, and/or angles) to a maximum size. Accordingly, each section would need an air intake nozzle to allow a needle to be inserted to add or remove air from the air bladder. In this instance, the air bladder would maintain the minimal shape even when all of the air is removed and expands to the maximum shape when sufficient air is added.

Alternatively, each adjustable area may include a fixed section 222 and an adjustable section 220. In an example, the fixed section 222 includes a fixed toe area, a fixed mid-foot area and a fixed heel area and the adjustable section 220 includes an adjustable toe area that is positioned proximal to the fixed toe area, an adjustable mid-foot area that is positioned proximal to the fixed mid-foot area, and an adjustable heel area that is positioned proximal to the fixed heel area. The fixed section 222 has a shape as shown and is comprised of one or more compressible materials, one or more rigid materials, and/or one or more recoil materials. The adjustable section 220 may be an air bladder, stackable plates, and/or another adjusting mechanism.

Figures 70 and 71 illustrate a cross-sectional front view diagram and a cross-sectional side view diagram of an embodiment of an adjustable toe section 234 of an athletic positioning sole 10 and/or insole 12. The adjustable toe section 234 may be adjusted from a minimal size (e.g., height, width, length, and/or angles) to a maximum size. For example, the toe section 234 includes an air bladder that has a minimal shape corresponding to the toe section 234 of one of the athletic positioning shapes, which can be expanded to a maximum shape. As another

example, the toe section 234 includes a fixed section 222 that has a minimal shape corresponding to the toe section 234 of one of the athletic positioning shapes and an adjustable section 220 (e.g., air bladder, stackable plates, etc.) that allows the toe section 234 to expand to its maximum shape.

Figures 72-74 illustrate a top view diagram, a cross-sectional front view diagram, and a cross-sectional inside view diagram of another embodiment of an adjustable ball of foot section of an athletic positioning sole 10 and/or insole 12. The adjustable ball of foot section 232 may be adjusted from a minimal size (e.g., height, width, length, and/or angles) to a maximum size. For example, the ball of foot section 232 includes an air bladder that has a minimal shape corresponding to the ball of foot and/or arch section 232 of one of the athletic positioning shapes, which can be expanded to a maximum shape. As another example, the ball of foot section includes a fixed section that has a minimal shape corresponding to the ball of foot and/or arch section of one of the athletic positioning shapes and an adjustable section (e.g., air bladder, stackable plates, etc.) that allows the ball of foot section to expand to its maximum shape.

Figures 75 and 76 illustrate a top view diagram and a cross-sectional heel view diagram of another embodiment of an adjustable heel section of an athletic positioning sole 10 and/or insole 12. The adjustable heel section 230 may be adjusted from a minimal size (e.g., height, width, length, and/or angles) to a maximum size. For example, the heel section includes an air bladder that has a minimal shape corresponding to the heel section of one of the athletic positioning shapes, which can be expanded to a maximum shape. As another example, the heel section 230 includes a fixed section that has a minimal shape corresponding to the heel section of one of the athletic positioning shapes and an adjustable section (e.g., air bladder, stackable plates, etc.) that allows the heel section to expand to its maximum shape.

Figure 77 illustrates a side view diagram of an embodiment of a shoe 246 having an adjustable athletic positioning sole. The shoe includes a sport specific lower plate 240 of the sole (which includes the sport specific sole pattern), one or more removable plates of the sole 242, a fixed upper plate of the sole 244, and a shoe top 246. The shoe may further include an athletic positioning insole (not shown), which may be fixed or adjustable.

The fixed upper plate 244 is secured to the shoe top 246 using conventional means (e.g., glue, stitching, fusing, stapling, riveting, etc.). The fixed upper plate 244 includes a securing mechanism that allows a removable plate or the sport specific bottom (if no removable plates are

used) to be mechanically coupled thereto. In addition, the fixed upper plate 244 includes a shape that corresponds to one of the athletic positioning shapes (or a relatively flat shape) and is comprised of one or more rigid materials and/or one or more recoil materials.

The sport specific plate includes a sport specific pattern 240 and a securing mechanism that allows it to be mechanically coupled to a removable plate 242 or to the sport specific bottom 240 (if no removable plates are used). The sport specific lower plate 240 includes a shape that corresponds to one of the athletic positioning shapes (or a relatively flat shape) and is comprised of one or more rigid materials and/or one or more recoil materials.

Each of the removable plates 242 includes a securing mechanism that allows it to be mechanically coupled to another removable plate, to the fixed upper plate 244, or to the sport specific bottom 240. Each of the removable plates includes a shape that corresponds to one of the athletic positioning shapes (which, from plate to plate, may be different and/or of the same shape but of different dimensions) and is comprised of one or more rigid materials and/or one or more recoil materials (which, from plate to plate, may be different or the same).

Figure 78 illustrates a front view diagram of an embodiment of a shoe having an adjustable athletic positioning sole. The shoe, as discussed with reference to Figure 77, includes a sport specific lower plate of the sole 240 (which includes the sport specific sole pattern), one or more removable plates of the sole 242, a fixed upper plate of the sole 244, and a shoe top 246. The shoe may further include an athletic positioning insole (not shown), which may be fixed or adjustable.

Figure 79 illustrates an expanded view diagram of another embodiment of an adjustable athletic positioning sole, which includes the fixed upper plate 244, one or more removable plates 242, and a sport specific lower plate 240. Each of the plates includes a securing mechanism, a shape that corresponds to one of the athletic positioning shapes (or a relatively flat shape) and is comprised of one or more rigid materials and/or one or more recoil materials.

An adjustable athletic positioning insole includes a fixed upper insole plate 244, one or more removable insole plates 242, and a lower insole plate 240. Each of the plates includes a securing mechanism, a shape that corresponds to one of the athletic positioning shapes (or a relatively flat shape) and is comprised of one or more rigid materials, one or more compressible materials, and/or one or more recoil materials.

Figure 80 illustrates a top view diagram of an embodiment of the fixed upper plate, one or more of the removable plates, and a lower plate of an adjustable athletic positioning sole and/or of an adjustable athletic positioning insole. The securing mechanisms 250 are positioned throughout the plate to provide secure and reliable mechanical fastening of one plate to another. Note that more or less locations of the securing mechanisms 250 may be included on each plate. Further note that each plate includes substantially the same pattern of securing mechanisms.

Figure 81 illustrates a cross-sectional side view diagram of an embodiment of plates of an adjustable athletic positioning sole 10 and/or insole 12 mechanically coupled together at one of the securing mechanisms 268 of the pattern of securing mechanisms. The fixed upper plate 262 (of the sole or insole) includes a base securing mechanism 260 (e.g., a custom nut having an encircling flange to maintain its position in the fixed upper plate) at one or more securing mechanism positions of the securing mechanism pattern. Each of the other plates 264 (e.g., the lower plate 270 and the removable plates) includes a securing mechanism 268 (e.g., a custom bolt with a threaded receptacle head) at one or more securing mechanism positions of the securing mechanism pattern. Each of the plates 264 includes a notched receptacle 272, which may be tapered, for holding the respective securing mechanism 268 in place. In addition, each plate includes a securing ledge, which allows the securing mechanisms to be screwed together to produce a secure butt joint between the plates.

The lower plate securing mechanism 268 may include a threaded plug 274, which may include a cap, to substantially cover the open area of the securing mechanism holding area. Each of the securing mechanisms 268 includes a standard drive head pattern (e.g., Phillips, straight blade, star, Allen wrench, etc.) or a custom drive head pattern, which requires a proprietary tool for securing and unsecuring plates.

Figure 82 illustrates a cross-sectional side view diagram of an embodiment of a securing mechanism 268 for removable plates of an adjustable athletic positioning sole and/or insole. The securing mechanism 268 includes a threaded bolt section 280, a fastening ledge 282, a pressure fit ring 284, and a threaded receptacle 286. The thread count may be any number so long as at least one full turn is required to secure the plates together. The fastening ledge presses against the inside edge of the plate as it is screwed into the threaded receptacle of the securing mechanism of the other plate, which presses against the notched receptacle 272.

Figure 83 illustrates an expanded cross-sectional side view diagram of another embodiment of an adjustable athletic positioning sole 10 and/or insole 12 at one of the securing mechanisms 268 of the pattern of securing mechanisms. The adjustable insole and/or sole includes a fixed upper plate 244, one or more removable plates 242, and a lower plate 240. The fixed upper plate 244 includes a keyhole receptacle 290, which is illustrated in Figure 84, at one or more securing mechanism positions of the securing mechanism pattern. Each of the removable plates includes a keyhole receptacle and a mating peg 292 at one or more securing mechanism positions of the securing mechanism pattern. The lower plate 240 includes a mating peg 292 at one or more securing mechanism positions of the securing mechanism pattern.

Figure 85 illustrates a cross-sectional side view diagram of another embodiment of an adjustable athletic positioning sole 10 and/or insole 12 at one of the securing mechanisms 268 of the pattern of securing mechanisms. In this example, the mating pegs 292 are inserted and moved into position to provide mechanical coupling of the plates together. In an example, the keyhole 290 and peg assembly 292 may be used at the big toe – ball of foot area where the material is thinner and the securing mechanism of Figures 81 and 82 would be used at other securing mechanism positions.

Figure 86 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole 10 and/or insole 12 that includes a recoil component. The recoil component may be achieved by including a series of springs, stiffened memory foam, and/or resilient rubber material. The recoil component may have one of the athletic positioning shapes or it may be a layer in an athletic positioning sole and/or insole.

The recoil component functions to provide a recoil force 300 after a foot force 302 is removed. The force may be in the opposite direction of the foot force or at some angle thereof.

Figure 87 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole 10 and/or insole 12 that includes a recoil component within a housing. The recoil component may have one of the athletic positioning shapes or it may be a layer in an athletic positioning sole and/or insole. The recoil component 310 includes a series of springs, stiffened memory foam, and/or resilient rubber material that have more recoil force on the outer edge of the shoe 312 versus the inner edge of the shoe 314. In this manner, the direction of the recoil force is not opposite that of the foot force, but more horizontal and in the direction from the outside of the shoe to the inside of the shoe.

Figure 88 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole 10 and/or insole 12 that includes a recoil layer 320, a base layer 322, and a foot layer 324. The base layer 322 includes one of the athletic positioning shapes and may be comprises of one or more rigid materials and/or one or more compressible materials. The foot layer may include arch support and may include a relatively flat shape or it may include one of the athletic positioning shapes. In addition, the foot layer 324 may be comprised of one or more compressible materials. The recoil layer 320 includes one or more recoil materials and may include a relatively flat shape or it may include one of the athletic positioning shapes.

Figure 89 illustrates a cross-sectional front view diagram of another embodiment of a shoe that includes an athletic positioning sole 10, an athletic positioning insole 12, and an upper shoe 330. From the font perspective, the upper shoe 330 forms a toe box around and over the toe area. From a side perspective, the upper shoe 330 forms the remainder of the shoe for containing the foot. The upper shoe 330 may include one or more materials (e.g., leather, a synthetic material, plastic, cotton, a wicking material, etc.) to form the sides, heel, tongue, and/or toe areas of the shoe. The upper shoe 330 may further include a toe cover area of material similar to that of the sole 10, which provides at least a portion of the toe box.

In this embodiment, the insole comprises a compressible material, which, under a load of the wearer, compresses by a few millimeters to 10 or more millimeters. The upper shoe 330 is mechanically coupled (e.g., stitched, glued, fused, stapled, etc.) to the insole and/or sole such that, as the insole 12 compresses and decompresses, the upper shoe moves accordingly to maintain the toe box at a desired size and/or shape. For example, the upper shoe 330 is mechanically coupled to the upper portion of the insole 12, which is within a vertically extended outersole portion of the sole 10, such that the upper shoe 330 moves with the compression and decompression of the insole 12.

As another example, the upper shoe includes a compressible coupling section for mechanically coupling to the sole 10 and/or insole 12. As the insole 12 compresses and decompresses, the compressible coupling section, which includes a compressible material, compresses and decompresses similarly. In this manner, the size and/or shape of the toe box is substantially maintained.

Figure 90 illustrates a cross-sectional front view diagram of another embodiment of a shoe that includes a sole 10, an insole 12, and an upper shoe 330. The insole 12 and/or sole 10

are/is adjustable and at least one of the sole and insole has a shape corresponding to one of the athletic positioning shapes. The upper shoe 330 may include one or more materials (e.g., leather, a synthetic material, plastic, cotton, a wicking material, etc.) to form the sides, heel, tongue, and/or toe areas of the shoe. The upper shoe 330 may further include a toe cover area of material similar to that of the sole 10, which provides at least a portion of the toe box.

The upper shoe 330 is mechanically coupled to the sole/insole assembly such that, as the sole/insole assembly is adjusted, the upper shoe maintains a desired size and shape of the toe box. For example, the upper shoe 330 is mechanically coupled to the upper portion of the sole/insole assembly, which is within a vertically extended outersole portion of the sole, such that the upper shoe tracks the adjustment of the sole/insole assembly.

Figure 91 illustrates a cross-sectional front view diagram of another embodiment of a sole/insole assembly that includes a sole 10, an athletic positioning insole 340, and an arch support 342. The sole may include a conventional sole design for a specific sport (or other use) or it may include one of the athletic positioning shapes discussed herein. In addition, the sole 10 may be comprised of a conventional sole material and/or one or more rigid materials. Note that the conventional sole material and the rigid materials are not mutually exclusive.

The athletic positioning insole 340 has a shape corresponding to one of the athletic positioning shapes, may be adjustable, and is comprised of one or more rigid materials, one or more recoil materials, and/or one or more compressible materials. The athletic positioning insole may be mechanically coupled to the sole or it may just rest on the sole (i.e., not glued, stitched, fused, etc.).

The arch support may be integrated into the athletic positioning insole 340 or it may be a separate piece that is mechanically coupled to the sole and/or insole or rests on the sole and/or insole. The arch support may be shaped to compensate for one or more of flat feet, plantar fasciitis, high arches, low arches, pronation, supination, etc. The arch support 342 may be of a custom design, a conventional design, etc., and/or may be comprised of one or more of a graphite material, leather, a rigid material, a compressible material, etc.

Figure 92 illustrates a cross-sectional front view diagram of another embodiment of a sole/insole assembly that includes an athletic positioning sole 10 and an insole 12 with an integrated arch support 342. The sole 10 includes one of the athletic positioning shapes 344 discussed herein and may be adjustable. In addition, the sole 10 may be comprised of a

conventional sole material and/or one or more rigid materials. Note that the conventional sole material and the rigid materials are not mutually exclusive.

The insole 12 has a conventional insole shape or a shape corresponding to one of the athletic positioning shapes and has an arch support integrated therein. The arch support may be shaped to compensate for one or more of flat feet, plantar fasciitis, high arches, pronation, supination, etc. The insole with the integrated arch support 342 may be of a custom design, a conventional design, etc., and may be comprised of one or more of a graphite material, leather, a rigid material, a compressible material, etc.

Figures 93 and 94 illustrate a cross-sectional front view diagram and a cross-sectional side view diagram of another embodiment of an integrated athletic positioning sole and insole. The integrated sole 10 and insole 12 is comprised of one or more materials that provides a more compressible area towards the big toe/ball of foot area and increasingly less compressible away from the big toe/ball of foot area to facilitate an athletic position. The integrated sole and insole may be adjustable to adjust the athletic position (e.g., include removable plates, air bladders, etc.).

For example, the integrated sole and insole may include a rigid material as an outersole (e.g., a sport specific bottom) to provide a base. On top of the base, the integrated sole and insole includes one or more varying compressible materials. For example, the next layer is a single resilient material (e.g., rubber, gel, foam, synthetic material, etc.) of varying density to provide a compressible gradient. As another example, the next layer includes a plurality of materials, each having a shape to collectively provide the athletic positioning shape. In addition, at least some of the materials have a different level of compressibility to facilitate the compressible gradient.

The integrated sole and insole may further include an insole cover layer and/or an arch support cover layer. The insole cover layer may be of a compressible material to provide a more comfortable fit. The arch support may be shaped to compensate for one or more of flat feet, plantar fasciitis, high arches, pronation, supination, etc. The arch support may be of a custom design, a conventional design, etc., and may be comprised of one or more of a graphite material, leather, a rigid material, a compressible material, etc.

Figure 95 illustrates a cross-sectional front view diagram of another embodiment of an integrated athletic positioning sole and insole. The integrated sole and insole is comprised of a

flexible and resilient material that creates a chamber (which may be filled with gel, air, another liquid material, oil, water, etc), which provides a more compressible area towards the big toe/ball of foot area 350 and increasingly less compressible away from the big toe/ball of foot area 352 to facilitate an athletic position. The material may be one or more of rubber, a synthetic material, plastic, fiberglass, carbon fiber, etc. In addition, the integrated sole and insole may be adjustable to adjust the athletic position (e.g., include removable plates, air bladders, etc.). Further, the integrated sole and insole may include an outsole of a rigid material (e.g., a sport specific bottom).

As shown, the walls of the integrated sole and insole are thicker on the outer edge 352 of the shoe than on the inner edge of the shoe 350. As such, the outer edge of the sole/insole is less compressible than the inner edge. Similarly, the walls of the sole/insole at big toe and ball of foot area are thinner than the walls towards the heel of the shoe. Accordingly, when a shoe that includes the present insole/sole assembly is worn, the more compressible areas on the insole/sole assembly compress more than the less compressible areas, putting the wearer in an athletic position (e.g., one or more of heel higher than toes, knees bent, more weight on big toe and/or ball-foot, more weight on inside of leg versus outside of leg, etc.).

Figure 96 illustrates a cross-sectional front view diagram of another embodiment of an integrated athletic positioning sole and insole. The integrated sole and insole is comprised of a flexible and resilient material and includes a plurality of supporting columns and/or panels. The columns and/or panels create a plurality of chambers (which may be filled with gel, air, oil, another liquid material, water, etc). The number and/or thickness of the columns and/or panels is greater at the outer edge 362 of the shoe than on the inner edge of the shoe 360, which provides a more compressible area towards the big toe/ball of foot area and increasingly less compressible away from the big toe/ball of foot area. The material may be one or more of rubber, a synthetic material, plastic, fiberglass, carbon fiber, etc. In addition, the integrated sole 10 and insole 12 may be adjustable to adjust the athletic position (e.g., include removable plates, air bladders, etc.). Further, the integrated sole and insole may include an outsole of a rigid material (e.g., a sport specific bottom).

As shown, the number of columns is greater at the outer edge of the shoe than at the inner edge of the shoe. As such, the outer edge 362 of the sole/insole is less compressible than the inner edge 360. Similarly, the number of columns and/or the thickness of the columns is less at

the sole/insole at big toe and ball of foot area than the number and/or thickness of columns towards the heel of the shoe. Accordingly, when a shoe that includes the present insole/sole assembly is worn, the more compressible areas on the insole/sole assembly compress more than the less compressible areas, putting the wearer in an athletic position.

Figure 97 illustrates a cross-sectional front view diagram of another embodiment of an athletic positioning sole/insole assembly that includes a sole 10, an insole 12, a rigid outer edge 362, and padding 360. The insole 12 has a conventional insole shape or a shape corresponding to one of the athletic positioning shapes. The insole 12 may have an arch support integrated therein, where the arch support is shaped to compensate for one or more of flat feet, plantar fasciitis, high arches, pronation, supination, etc. In addition, the insole may be comprised of one or more of a graphite material, leather, a rigid material, a compressible material, etc.

The sole 10 includes a conventional shape or a shape corresponding to one of the athletic positioning shapes. In addition, the sole may be adjustable and may be comprised of a conventional sole material and/or one or more rigid materials. Note that the conventional sole material and the rigid materials are not mutually exclusive.

The sole 10 may further include an outersole (e.g., sport specific bottom) that includes an inner supporting wall 364 and may further include the rigid outer edge 362. The outersole may be comprised of a conventional sole material and/or of one or more rigid materials. Regardless of the material, the inner supporting wall is, at least on the inside edge by the toe, substantially perpendicular to the slope of the insole/sole assembly to minimize pinching of the big toe and/or the ball-of-foot. Similarly, the rigid outer edge 362 (or wall) is, at least on the inside edge by the little toe, substantially perpendicular to the slope of the insole/sole assembly to provide a rigid surface to push against when a lateral force is applied (i.e., the horizontal or near horizontal force component of the foot force during an athletic move) and/or to minimize a "give" of the shoe (e.g., foot sliding in the shoe, which may detract from the athletic move). Note that there may be padding on the inside of the rigid outer wall and/or on the inside of the inside supporting wall.

Alternatively, the rigid outer edge 362 may be coupled to, or integrated into, the insole 12. In this alternative, the outersole would further include an outer supporting wall 364, which is outside of the rigid outer edge 362. In this instance, both the rigid outer edge 362 and the outer supporting wall 364 provide a rigid surface to push against for the lateral force.

Figure 98 illustrates a cross-sectional front view diagram of another embodiment of a sole/insole assembly that includes an athletic positioning sole 10 and an insole 12. The insole 12 has a conventional insole shape and may be comprised of a compressible material. In addition, the insole may include an arch support integrated therein, where the arch support is shaped to compensate for one or more of flat feet, plantar fasciitis, high arches, pronation, supination, etc.

The sole 10 includes a shape corresponding to one of the athletic positioning shapes. In addition, the sole may be adjustable and may be comprised of a conventional sole material and/or one or more rigid materials. Note that the conventional sole material and the rigid materials are not mutually exclusive.

Figure 99 illustrates a cross-sectional front view diagram of another embodiment of a shoe that includes an athletic positioning sole 10, an insole 12, and a shoe housing 372. The sole 10 and insole 12 are similar to the sole 10 and insole 12 of Figure 98. The shoe housing 372 (e.g., the shoe upper) includes a decompressible material 370 (e.g., similar material to a compressible material, but its normal state is compressed as opposed to decompressed) on the inside of the shoe housing 372.

When the shoe is place on a foot and with minimal foot force, the compressible material insole is not substantially compressed and the decompressible material is substantially compressed. When a foot force is applied (e.g., wearer of the shoe is standing, running, et.), the compressible insole compresses and, when the foot force is removed (e.g., foot off ground), the compressible insole decompresses. As the foot force varies from minimal force (e.g., foot off ground) to maximal force (e.g., leg on ground while running), the compression of the compressible insole varies proportionally.

The compression and/or decompression of the decompressible material during the variations of the foot force depend on how the shoe housing is anchored 374 (e.g., mechanically coupled) to the sole/insole assembly. In this figure, the shoe housing 372 is anchored 374 to the top of the compressible material; as such the shoe housing moves with the compression and decompression of the compressible insole. The decompressible material, however, stays in the substantially compressed state.

Figure 100 illustrates the shoe housing anchored to the rigid sole 374. In this example, the shoe housing does not move with the compression and decompression of the compressible insole. Accordingly, the decompressible material decompresses as the compressible insole

compresses and the decompressible material compresses as the compressible insole decompresses. In either of the examples of Figures 99 and 100, the decompressible material facilitates a snug fit of the shoe, which may reduce energy loss during an athletic move that results from a loose fitting shoe.

Figures 101 and 102 illustrate a cross-sectional front view diagram of another embodiment of a sole/insole assembly that includes a dynamic athletic positioning sole-insole and a sport specific bottom (e.g., an outersole). The athletic positioning sole-insole has a shape corresponding to one of the athletic positioning shapes, which is adaptable based on the force applied.

As shown in Figure 101, when a downward force (e.g., approximately perpendicular to the sport specific bottom 190 or slightly off perpendicular from the outer edge to the inner edge) is applied to the insole/sole assembly during a forward or backward movement (e.g., running, walking, jumping, etc., in a forward or backward direction), the angle from the outside edge of the shoe to the inside edge of shoe is of a first value (e.g., Ø1). The first value of the angle may be in the range of near zero degrees to less than 10 degrees to simulate a more conventional insole/sole assembly for forward/backward movements. In addition, the angle between the big toe/ inner ball of foot area and the heel may be in the range of near zero degrees to less than 10 degrees to simulate a more conventional insole/sole assembly for forward/backward movements.

As shown in Figure 102, when a force (e.g., off perpendicular from the inner edge to the outer edge) is applied to the insole/sole assembly during a lateral movement (e.g., pitching, hitting, making a cut while running, etc.), the angle from the outside edge of the shoe to the inside edge of shoe is of a second value (e.g., Ø2). The second value of the angle may be in the range of a fraction of a degree to 10-20 degrees (or more) to provide an athletic position for lateral movements. In addition, the angle between the big toe/ inner ball of foot area and the heel may be in the range of a fraction of a degree to 10 – 20 degrees (or more) to provide an athletic position for lateral movements.

Figure 103 illustrates a cross-sectional front view diagram of an embodiment of the varying athletic positioning sole/insole assembly of Figure 101 and 102. The sole/insole assembly includes an elastic housing 380, a plurality of support and pressure shifting panels 382, and a liquid material 384. The elastic housing 380 is comprised of an elastic material such as one or more of rubber, a synthetic material, plastic, etc. In addition, the elastic housing 380 may

be more elastic at the outer edge of the sole/insole assembly (and towards the heel) and less elastic at the inner edge of the sole/insole assembly towards the big toe/inner ball of foot area.

In a no load, steady-state condition, the flaps of the panels are closed and the liquid material is approximately equally distributed in the chambers between the panels. Note that equal distribution of the liquid material (e.g., gel, water, an oil, etc.) may be volume based and/or based on substantially equal pressure applied on the panels. In this state, the sole/insole assembly has a shape corresponding to one of the athletic positioning shapes.

Figures 104 and 105 illustrate a side view diagram and a cross-sectional view diagram of an embodiment of a panel of the sole/insole assembly of Figure 103. The panel includes a plurality of larger release holes 390, a plurality of larger release flaps 392, a plurality of smaller release holes 394, and a plurality of smaller flaps 396. The panel 398 may be comprised of a semi rigid, elastic, and resilient material such as one or more of rubber, a synthetic material, plastic, etc.

The larger 392 and smaller flaps 396 are comprised of the substantially the same semi rigid, elastic, and resilient material as the panel and function to block flow of the liquid material through the corresponding release hole in one direction and enable flow of the liquid material through the corresponding release hole in the opposite direction. The size of the holes and/or the ratio between the sizes of the holes is dependent on the desired levels of flow of the liquid material in the given directions.

Figure 106 illustrates a cross-sectional front view diagram of another embodiment of the sole/insole assembly of Figure 103 under a force (e.g., due to a lateral movement) as shown. In this example, more force 400 is being applied at the big toe and inner ball of foot area than at the outer edge. This puts greater force on the chambers below the big toe and inner ball of foot area than in the chambers under the outer edge of the foot. Once the pressure between an inner chamber and an adjacent outer chamber exceeds a rigidity factor of the larger flaps (e.g., a measure of how much force is needed for the flap to open), the flaps open and the liquid material 384 flows through the corresponding larger holes from the inner chamber to the adjacent outer chamber.

In this load condition, the panels under the big toe and ball of foot area are compressed. Conversely, the panels under the outer edge of the sole/insole assembly are expanded. In addition, since the elastic housing 380 is more elastic at the outer edge of the sole/insole

assembly than at the inner edge, the liquid material 394 expands the outer chambers 404 more readily than the inner chambers 406. Accordingly, the angle form the outer edge to the inner edge increases with respect to the angle during the no load steady-state condition. To insure that the holes do not close during such forces, the holes may include grommets to hold their shape.

If too much pressure builds up in the outer chambers versus an adjacent inner chamber, one or more of the smaller flaps may open to allow the liquid material to flow to the adjacent inner chamber. Note that ratio between the larger holes and the smaller holes favors flow 410 of the liquid material from the inner chambers to the outer chambers. Further note that when the force is removed (e.g., return to a no load steady state), the larger flaps close and some of the smaller flaps open until the no load steady state condition is substantially achieved.

Figure 107 illustrates a cross-sectional front view diagram of another embodiment of the sole/insole assembly of Figure 103 under a force 400 (e.g., due to a forward or backward movement or on the outer edge of the shoe) as shown. In this example, less force 400 is being applied at the big toe and inner ball of foot area than at the outer edge. This puts less force on the chambers below the big toe and inner ball of foot area than in the chambers under the outer edge of the foot. Once the pressure between an outer chamber and an adjacent inner chamber exceeds a rigidity factor of the larger flaps 382 (e.g., a measure of how much force is needed for the flap to open), the flaps open and the liquid material flows 410 through the corresponding smaller holes from the outer chamber to the adjacent inner chamber.

In this load condition, the panels under the big toe and ball of foot area are substantially uncompressed. Conversely, the panels under the outer edge of the sole/insole assembly are compressed. In addition, since the elastic housing 380 is more elastic at the outer edge of the sole/insole assembly than at the inner edge, the liquid material contracts the outer chambers less readily than the inner chambers. Accordingly, the angle form the outer edge to the inner edge decreases (or at least stays approximately the same) with respect to the angle during the no load steady-state condition.

If too much pressure builds up in the inner chambers versus an adjacent outer chamber, one or more of the larger flaps may open to allow the liquid material to flow to the adjacent outer chamber. Note that when the force is removed (e.g., return to a no load steady state), the smaller flaps close and some of the larger flaps open until the no load steady state condition is substantially achieved.

Figure 108 illustrates a cross-sectional side view diagram of another embodiment of the sole/insole assembly of Figure 103 in the no load steady state condition. From a side perspective, the sole/insole assembly includes the elastic housing 380, a plurality of support panels 420, the plurality of support and pressure shifting panels 382, and the liquid material 384. The plurality of support panels 420 is located under the heel platform and provides substantially equal support for the heel. In the heel section 21, the panels do not include release holes or flaps, so the liquid material 384 does not flow between the chambers of the heel section.

Under the support platform for the remainder of the foot, and in the no load, steady-state condition, the flaps of the panels are closed and the liquid material 384 is approximately equally distributed in the chambers between the panels. Note that equal distribution of the liquid material 384 (e.g., gel, water, an oil, etc.) may be volume based and/or based on substantially equal pressure applied on the panels. In this state, the sole/insole assembly has a shape corresponding to one of the athletic positioning shapes.

Figure 109 illustrates a cross-sectional side view diagram of another embodiment of the sole 10/insole 12 assembly of Figure 103 under a force 400 (e.g., due to a lateral movement or forward/backward movement) as shown. In this example, more force 400 is being applied at the big toe and ball of foot area than near the heel. This puts greater force on the chambers below the big toe and ball of foot area than in the chambers under the heel. Once the pressure between a forward chamber and an adjacent rearward chamber exceeds a rigidity factor of the larger flaps (e.g., a measure of how much force is needed for the flap to open), the flaps open and the liquid material 384 flows through the corresponding larger holes from the forward chamber to the adjacent rearward chamber.

In this load condition, the panels 382 under the big toe and ball of foot area are compressed. Conversely, the panels under the near heel section are expanded. In addition, since the elastic housing is more elastic at the near heel section of the sole/insole assembly than at the toe section 25, the liquid material 384 expands the rearward chambers more readily than the forward chambers. Accordingly, the angle form the near heel section to the toe section 25 increases with respect to the angle during the no load steady-state condition.

If too much pressure builds up in the rearward chambers versus an adjacent forward chamber, one or more of the smaller flaps may open to allow the liquid material 384 to flow to the adjacent forward chamber. Note that when the force 400 is removed (e.g., return to a no load

steady state), the larger flaps close and some of the smaller flaps open until the no load steady state condition is substantially achieved.

Figure 110 illustrates a cross-sectional top view diagram of another embodiment of the sole/insole assembly of Figure 103. The heel section 21 includes fixed chambers 430 that do not allow the liquid material 384 to flow between the heel section chambers. The remaining sections of the sole/insole assembly include chambers that have panels 382 that allow the liquid metal to flow between the chambers. To promote an athletic position, the panels are orientated such that the flow of the liquid material favors the direction of the arrow during a lateral movement.

Figure 111 illustrates a cross-sectional heel view diagram of another embodiment of a varying positioning athletic positioning sole/insole assembly, which includes a sole 10, an insole 12, and a sport specific bottom 190. The sole 10 may include a conventional sole design for a specific sport (or other use) or it may include one of the athletic positioning shapes. In addition, the sole may be comprised of a conventional sole material and/or one or more rigid materials. Note that the conventional sole material and the rigid materials are not mutually exclusive.

The insole 12 may have a conventional insole shape or a shape corresponding to one of the athletic positioning shapes. The insole may be adjustable and is comprised of one or more rigid materials, one or more recoil materials, and/or one or more compressible materials. The insole may be mechanically coupled to the sole or it may just rest on the sole (i.e., not glued, stitched, fused, etc.) and may further include an integrated arch support.

From the heel perspective, the sole/insole assembly further includes an inward slope from a near middle point to the inner edge, which has an angle (e.g., Ø1). The angle may be in the range of a fraction of a degree to about 10 degrees. When a forward or backward movement force is applied to the sole/insole assembly, the non-angled section primarily supports the heel, which remains substantially parallel to the bottom of the sole/insole assemble. When a lateral movement force is applied, the angled section at least partially supports the heel such that a greater inward angling of the foot is achieved during athletic positioning.

Figure 112 illustrates a cross-sectional front view diagram of another embodiment of a varying positioning athletic positioning sole/insole assembly that includes an outersole, a sole-insole section, and an inner sole. The outersole may be a sport specific bottom, a casual shoe bottom, or a dress shoe bottom. The inner sole includes a rigid-flexible platform that may include a padding layer and/or an arch support layer.

The sole/insole section includes a rigid material section 142 and an easily compressible section 140. The rigid material section is comprised of one or more rigid materials and has a shape corresponding to one of the athletic positioning shapes. The easily compressible section is comprised of one or more easily compressible materials (e.g., foam, memory foam, soft rubber, a housing filled with a liquid material, etc.) and has a mating shape to that of the rigid material section 142 such that, under a no load condition, the combination of the rigid material section and the easily compressible material section provide a conventional sole shape or a slight athletic positioning shape (e.g., angles less than a few degrees).

Under a forward or backward movement force 440, the easily compressible material compresses slightly, such that the sole/insole assembly substantially maintains its no load shape. This condition is achieved by having more of the force 400 supported by the flat section of the rigid material section than the angled section.

Figure 113 illustrates a cross-sectional front view diagram of another embodiment of a varying positioning athletic positioning sole/insole assembly of Figure 112 under a lateral movement force 442. In this diagram, the angled section of the rigid material 142 is supporting more of the force than that being supported by the flat section such that the easily compressible material 140 compresses and the inner sole tilts. The tilting of the inner sole facilitates an athletic positioning. Note that the inner sole may be somewhat flexible to allow it to conform to the athletic positioning shape.

Figure 114 illustrates a cross-sectional front view diagram of another embodiment of a varying positioning athletic positioning sole/insole assembly that includes an outersole, a sole-insole section, and an inner sole. The outersole may be a sport specific bottom, a casual shoe bottom, or a dress shoe bottom. The inner sole includes a rigid-flexible platform that may include a padding layer and/or an arch support layer.

The sole-insole section includes a rigid material section 142 and an easily compressible section 140. The rigid material section 142 is comprised of one or more rigid materials and has a basic shape corresponding to one of the athletic positioning shapes, but has two angles for the angled support platform. The easily compressible section 140 is comprised of one or more easily compressible materials (e.g., foam, memory foam, soft rubber, a housing filled with a liquid material, etc.) and has a mating shape to that of the rigid material section such that, under a no load condition, the combination of the rigid material section and the easily compressible material

section provide a conventional sole shape or a slight athletic positioning shape (e.g., angles less than a few degrees).

Under a forward or backward movement force 440, the easily compressible material 140 compresses slightly, such that the sole/insole assembly substantially maintains its no load shape. This condition is achieved by having more of the force supported by the flat section of the rigid material section 142 than the angled section.

Figure 115 illustrates a cross-sectional front view diagram of another embodiment of a varying positioning athletic positioning sole/insole assembly of Figure 114 under a lateral movement force 442. In this diagram, the angled sections of the rigid material are supporting more of the force than the flat section such that the easily compressible material 140 compresses and the inner sole tilts. The more lateral movement force the greater the tilt of the inner sole. The tilting of the inner sole facilitates an athletic positioning.

Figures 116 - 118 illustrate a side view diagram, a front view diagram, and an isometric view diagram of an embodiment of a training shoe that includes an athletic positioning sole. The sole 10 includes an angled notch portion to facilitate achieving the desired athletic position. The angles of the angled notch portion may be greater than the angles of an insole/sole assembly to accentuate training the body to achieve a desired athletic positioning.

Figures 119 - 121 illustrate a side view diagram, a front view diagram, and a bottom view diagram of another embodiment of a training shoe that includes an athletic positioning sole. The sole 10 includes an athletic positioning shape to facilitate achieving the desired athletic position. The angles of the athletic positioning shape may be greater than the angles of an insole/sole assembly to accentuate training the body to achieve a desired athletic positioning.

Figures 122 and 123 illustrate a side view diagram and a front view diagram of an embodiment of baseball spikes that include an athletic positioning spike pattern. The baseball spikes include an insole/sole assembly, an outersole, and an upper shoe (not shown). The insole/sole assembly includes a sole 10 and an insole 12. The sole 10 may include a conventional sole design or it may include one of the athletic positioning shapes. In addition, the sole 10 may be comprised of a conventional sole material and/or one or more rigid materials. Note that the conventional sole material and the rigid materials are not mutually exclusive.

The insole 12 may have a conventional insole shape or a shape corresponding to one of the athletic positioning shapes. The insole may be adjustable and is comprised of one or more

rigid materials, one or more recoil materials, and/or one or more compressible materials. The insole may be mechanically coupled to the sole or it may just rest on the sole (i.e., not glued, stitched, fused, etc.) and may further include an integrated arch support.

The spikes may have differing heights to form one of the athletic positioning shapes. Accordingly, the spikes underneath the heel are the longest and the spike or spikes underneath the big toe and/or inner ball of foot are the shortest. The other spikes are of a length between the longest and shorted depending on their position. Note that the spikes may be metal spikes, plastic cleats, changeable plastic cleats, and/or a combination thereof. Further note that the same concept applies to football cleats, soccer cleats, golf shoes, track shoes, and any other sport shoes that include cleats and/or spikes.

Figure 124 illustrates a bottom view diagram of another embodiment of baseball spikes that include spike pattern for the drive leg of a pitcher. The spike pattern may also include the athletic positioning pattern of Figures 122 and 123. The baseball spikes may also include the sole/insole assembly of Figures 122 and 123.

The pitcher drive leg spike pattern includes two or three spikes aligned with the big toe and the inner ball of the foot. This row of spikes may be used to engage the pitching rubber such that multiple spikes are engaging the rubber. The pitcher drive leg spike pattern further includes two or three spikes along the outer edge of the toe and ball of foot area. These spikes may be linearly aligned, may be positioned along a line that outlines the outer edge of the toes and ball of foot, or may be positioned in another manner. A set of heel spikes may be positioned in a conventional manner. Note that the pitcher's drive leg spike pattern does not include a spike at the top of the shoe under the middle toe(s). Further note that the spikes may be metal spikes and/or plastic cleats.

Figure 125 illustrates a bottom view diagram of another embodiment of baseball spikes that includes a spike pattern for the plant leg of a pitcher. The spike pattern may also include the athletic positioning pattern of Figures 122 and 123. The baseball spikes may also include the sole/insole assembly of Figures 122 and 123.

The spike pattern for the plant leg of pitcher includes a conventional heel spike configuration and a ball of foot and toe pattern to firmly plant the spikes into the pitching mound. The ball of foot and toe spike pattern may be as shown.

Note that a pair of baseball spikes may include outer-soles that allow for the spike pattern to be changed depending on whether the wearer is left-handed or right-handed. For example, a left-handed pitcher would configure the spike pattern of Figure 124 for his/her left foot and the spike pattern of Figure 125 for his/her right foot. Conversely, a right-handed pitcher would configure the spike pattern of Figure 125 for his/her right foot and the spike pattern of Figure 125 for his/her left foot.

Figures 126 and 127 illustrate heel view diagrams of another embodiment of baseball spikes of Figures 122 – 125 engaging a pitching rubber 460. As shown in Figure 126, the row of spikes 462 under the big toe and inner ball of foot area is engaging the rubber. As shown in Figure 127, the outer row of spikes 462 is engaging the rubber 460. Note that the angles of the spike pattern of figures 122 and 123 may be adjusted depending on whether the inner or outer row of spikes 462 is used to engage the rubber. For instance, if the inner row of spikes are used to engage the rubber 460, the angles of the spike pattern may be less than when the outer row of spikes 462 are used since the rubber adds to achieving the desired athletic positioning when the inner row of spikes 462 are engaging the rubber 460.

Figure 128 illustrates a diagram of an embodiment of a spike for baseball spikes. The baseball spikes may include a spike pattern of one or more of Figures 122-127 and may further include the sole/insole assembly of Figures 122 and 123. In this embodiment, one or more of the spikes 462 that engage the rubber 460 includes a notch to facilitate a secure engagement with the rubber 460. The notch may be along a major edge of the spike 462 (e.g., a rear view of the spike is shown in the present figure). Alternatively, the spike may include one or more sides (forming an L or a C shape from a top perspective) where one or more of the sides include the notch.

In another embodiment, the spike pattern of Figure 124 further includes one or more spikes 462 that are perpendicular to the spikes at the big toe and/or ball of foot. The perpendicular spike(s) include a notch that is aligned with the inner row of spikes 462 to further improve engagement with the rubber 460.

Figure 129 illustrates a cross-section front view diagram of another embodiment of an insertable sole/insole assembly that may be inserted into a pair of sport specific shoes (e.g., baseball spikes). The insertable sole/insole assembly includes a sole 10, an insole 12, and may further include an arch support. The sole 10 may include a conventional sole design for a specific sport (or other use) or it may include one of the athletic positioning shapes discussed

herein. In addition, the sole 10 may be comprised of a conventional sole material and/or one or more rigid materials. Note that the conventional sole material and the rigid materials are not mutually exclusive.

The insole 12 includes a conventional insole shape or it has a shape corresponding to one of the athletic positioning shapes. The insole 12 may be adjustable and is comprised of one or more rigid materials, one or more recoil materials, and/or one or more compressible materials. The insole 12 may be mechanically coupled to the sole 10 or it may just rest on the sole 10 (i.e., not glued, stitched, fused, etc.). The arch support may be integrated into the athletic positioning insole or it may be a separate piece that is mechanically coupled to the insole or rests on the insole. The insertable sole/insole assembly may be used in combination with one or more of the heel attachments of Figures 130 – 139 to modify a conventional pair of baseball spikes into athletic positioning baseball spikes.

Figures 130 - 132 illustrate a side view diagram and a bottom view diagram of an embodiment of an athletic positioning heel attachment for baseball spikes. The heel attachment 472 includes a height, width, and depth to raise the heel of the baseball spikes with respect to the toe of the spikes by 5-20 mm. In addition, the heel attachment 472 may include one or more notches or holes to clear one or more of the spikes on the heel section 470 of the baseball spikes. Further, the heel attachment 472 may be comprised of one or more of the rigid materials and may be mechanically coupled (e.g., glued, stitched, riveted, fused, etc.) to the heel of the baseband spikes.

Figure 133 illustrates a bottom view diagram of another embodiment of an athletic positioning attachment for baseball spikes that attaches to the outer edge of the ball of foot and toe section of the baseball spikes. The athletic positioning attachment 480 has a shape corresponding to the non-heel section of one of the athletic positioning shapes. In addition, the athletic positioning attachment may include one or more notches or holes to clear one or more spikes of the baseball spikes. Further, the athletic positioning attachment may be comprised of one or more of the rigid materials and may be mechanically coupled (e.g., glued, stitched, riveted, fused, etc.) to the heel of the baseband spikes.

Figure 134 illustrates a heel view diagram of another embodiment of an athletic positioning attachment for baseball spikes. In this diagram, the athletic positioning attachment

490 is attached to a pitcher's drive leg baseball spike to provide a desired athletic positioning of the drive leg.

Figure 135 illustrates a side view diagram of another embodiment of a heel attachment 472 and an athletic positioning attachment 490 attached to one of a pair of baseball spikes. The heel 472 and athletic positioning attachments 490 may be separate attachments as previously discussed with reference to Figures 130-134. Alternatively, the attachments may be a single attachment as discussed below.

Figures 136 - 138 illustrate a bottom view diagram, an inside view diagram, and an outside view diagram of an embodiment of an athletic positioning attachment for baseball spikes. The attachment 500 may have a shape corresponding to one of the athletic positioning shapes and may be comprised of one or more rigid materials. In addition, the attachment 500 may be mechanically coupled (e.g., glued, stitched, riveted, fused, etc.) to the outer-sole of the baseband spikes and may include one or more notches to provide clearance for one or more spikes.

Figure 139 illustrates a topological view diagram of an embodiment of an athletic positioning attachment of Figures 136 – 138. The attachment has a topology that ranges from a thickness of 1-4 mm under the ball of foot to 10-20 mm under the heel.

Figure 140 illustrates an isometric view diagram of an embodiment of a pitching training aid that includes a platform 510, a push-off platform that has one of the athletic positioning shapes, and a plurality of anchoring cleats 514. In an example, the training aid has dimensions that include a height (h1) of 20-50 mm, a second height (h3) of 5-20 mm, a width of 75-125 mm, a length of 250-350 mm, and corresponding angles (Ø2, Ø3, and Ø4).

In use, the pitching training aid is placed in front of the rubber and secured into the pitching mound via the anchoring cleats. The pitcher places his/her drive leg shoe on the training aid 512 (e.g., on the push-off platform) such that his/her big toe and/or ball of foot is positioned at the lowest point the training aid and the heel is positioned at a higher point. This will help place the pitcher's drive leg to be in an athletic position.

Figure 141 illustrates an isometric view diagram of another embodiment of a pitching training aid that includes one of the athletic positioning shapes, a notch for engaging the rubber (no notch shown), and a plurality of anchoring cleats 514. In an example, the training aid has dimensions that include a height (h1) of 20-50 mm, a second height (h3) of 5-20 mm, a width of 75-125 mm, a length of 250-350 mm, and corresponding angles (Ø2, Ø3, and Ø4).

In use, the pitching training aid is placed such that the notch engages the front edge of the rubber. The training aid is secured the pitching mound via the anchoring cleats 514. The pitcher places his/her drive leg shoe on the training aid 512 such that his/her big toe and/or ball of foot is positioned at the lowest point the training aid and the heel is positioned at a higher point.

Figure 142 illustrates an isometric view diagram of an embodiment of a pitching rubber that includes a left-handed side and a right-handed side. Each side includes one of the athletic positioning shapes to facilitate achieving an athletic position for pitching. The pitching rubber may further include a ledge to ensure a proper height for engaging the athletic positioning ends of the rubber.

Figure 143 illustrates an isometric view diagram of another embodiment of a pitching rubber that includes a left-handed middle section and a right-handed middle section. Each middle section includes one of the athletic positioning shapes to facilitate achieving an athletic position for pitching. The pitching rubber may further include a ledge to ensure a proper height for engaging the athletic positioning ends of the rubber.

Figures 144 and 145 illustrate a top view diagram and a cross-section front view diagram of an embodiment of a shoe that includes an athletic positioning insole/sole assembly, an upper shoe 534, one or more tightening sections, and one or more securing mechanisms 526. The upper shoe 534 includes a toe cover section, sides, and an Achilles heel section. The one or more tightening sections include one or more flaps (one shown), where each flap includes one or more securing tabs attached thereto. A flap 532 may be comprised of a similar material as a tongue on a conventional shoe and/or of a similar material as at least a portion of the upper shoe 534.

The upper shoe 534 is attached to the one or more tightening sections via a hinged coupling mechanism 524 (e.g., a flexible and durable material mechanically coupling (e.g., stitched, glued, fused, stapled, riveted, etc.) the upper shoe 534 to the tightening section, a fabric hinge, a plastic and/or rubber hinge, etc.). The one or more securing mechanisms 526 (e.g., Velcro, buckles, shoe laces, hook and eyelets, clasps, etc.) include one mating element mechanically coupled to the vertical component of the outer-sole and/or to the sole/insole assembly on the inside edge of the shoe and another mating element mechanically coupled to the securing tabs 530 of the tightening section.

In use, the tightening section 532 is open to allow the wearer to easily insert his/her foot. Once the foot is placed within the shoe, the wearer pulls the tightening section 532 over the top of his/her foot. Due to the sole/insole assembly, the outer edge of the foot is higher than the inside edge (especially towards the toes and ball of foot areas) and the heel is higher than the toes and ball of foot areas. With this orientation of the foot, applying a force 400 from the outside edge to the inside edge while closing and fastening the tightening section 532 to the securing mechanism 526 provides a desired snug fit and may further promote the athletic positioning. Padding within the shoe provides added comfort.

Figure 146 illustrates a side view diagram of an embodiment of the shoe of Figures 144 and 145 with the one or more tightening sections 532 (e.g., pull over top) securely fastened to the one or more securing mechanisms 326, which are securely mounted on the vertical outer-sole section on the inside edge of the shoe. With the tightening section 532 securely fastened, it is applying a force from the outer edge of the shoe to the inner edge of the shoe, which provides the desired snug fit and promotes the athletic positioning.

Figures 147 and 148 illustrate side view diagrams of another embodiment of a shoe that includes an athletic positioning insole/sole assembly, an upper shoe, one or more tightening sections 532, and one or more securing mechanisms 526. The securing mechanism 526(s) includes an anchoring mechanism 548, a first set of hoops 560, a second set of hoops 546, a shoelace 544 (which are shown in Figure 147), and a hook section (which is shown in Figure 148).

The first set of hoops 550 (which may be eyelets, holes with grommets, etc.) is secured to the tightening section 532 and the second set of hoops 546 is secured to the sole or outersole and is horizontal offset from the first set of hoops. The shoelace 544 is woven through the sets of hooks and is anchored at one by the anchoring mechanism 548 (e.g., stitching, riveting, gluing, etc.) to the sole, outersole, or the toe box cover. The shoelace 544, which may have some to no elasticity, includes a holding tab 540 and a hook 560 (or eyelet 564) at its other end. The hook section 560 (Figure 148) includes a plurality of hooks 560 arranged in a pattern (e.g., linearly aligned, aligned in an upward angle, aligned in a downward angle, equally spaced, unequally spaced, etc.) and includes a cover with a Velcro 568(or other) securing tab.

In use, the wearer provides slack to the shoelace 544 such that the tightening section 532 can be opened enough to enable the wearer to insert his/her foot into the shoe. In this position,

the first set of hoops 546 is vertically offset from the second set of hoops 550. Once the foot is in the shoe, the wearer pulls the shoelace 544 via the holding tab 542, which causes the first set of hoops 546 to be pulled downward towards the second set of hoops 550. This motion causes the tightening section 532 to tighten around the foot. Once the wearer has achieved the desired snug fit, he/she couples the eyelet 564 of the shoelace 544 on one of the hooks 560 (Figure 148) to maintain the present fit of the shoe. The wearer then secures the hook cover 562 over the hooks 560. To remove the shoe, the wearer performs the process in reverse.

Figure 149 illustrates a side view diagram of another embodiment of shoe that includes an athletic positioning insole/sole assembly, an upper shoe, one or more tightening sections 532, and one or more securing mechanisms 526. The securing mechanism(s) 526 includes anchoring mechanisms 548, a first set of hoops 576, a second set of hoops 578, a third set of hoops 580, a first shoelace 582, a second shoelace 584, a first hook section 570, and a second hook section 572.

The first set of hoops 576 (which may be eyelets, holes with grommets, etc.) is secured to the tightening section 532; the second set of hoops 578 is free floating; and the third set of hoops 580 is secured to the sole or outersole. The first shoelace 582 is woven through the first 570 and second sets of hooks 572 and is anchored at one by the first anchoring mechanism 548 to the sole, outersole, or the toe box cover. The second shoelace 584 is woven through the second 578 and third sets of hooks 580 and is anchored at one by the second anchoring mechanism 548 to the sole, outersole, or the toe box cover.

Each of the shoelaces, which may have some to no elasticity, includes a holding tab and a hook 564 (or eyelet) at its other end. Each of the hook sections 560 includes a plurality of hooks arranged in a pattern (e.g., linearly aligned, aligned in an upward angle, aligned in a downward angle, equally spaced, unequally spaced, etc.). A shoe may further include a cover that covers the hook sections.

In use, the wearer provides slack to the shoelaces such that the tightening section 532 can be opened enough to enable the wearer to insert his/her foot into the shoe. In this position, the first set of hoops 576 is vertically offset from the second set of hoops, 578 which are vertically offset from the third set of hoops 580. Once the foot is in the shoe, the wearer pulls the second shoelace 584 via the holding tab, which causes the second set of hoops 578 to be pulled downward towards the third set of hoops 580. The wearer then pulls (or pulls

contemporaneously) the first shoe via its holding tab, which causes the first set of hoops 576 to be pulled downward toward the second 578 and third set of hoops 580. These motions cause the tightening section to tighten around the foot. Once the wearer has achieved the desired snug fit, he/she couples the eyelets of the shoelaces on hooks 570 of the respective hook sections to maintain the present fit of the shoe. The wearer then secures the hook cover 562 over the hook sections. To remove the shoe, the wearer performs the process in reverse.

Figure 150 illustrates an isometric view diagram of another embodiment of shoe that includes an athletic positioning insole/sole assembly, an upper shoe 590, one or more tightening sections 532, and one or more securing mechanisms 526. The securing mechanism 526 may be any one or a combination of the securing mechanisms previously discussed. The tightening section 532 is shown as being an integral part of the upper shoe 590 to include one or more flaps 532 that pull over the top of the shoe towards the instep. The upper shoe 590 is further shown to include a tongue 592.

In use, the wearer unsecures the pull over flap (s) 532 from the securing mechanisms 526 or loosens the pull over flaps 532 from the securing mechanisms 526 depending on the type of the securing mechanism. In this condition, the wearer inserts his/her foot into the shoe and positions the tongue 592, if needed. Once the foot is inserted into the shoe, the wearer pulls the pull over flap(s) 532 and secures it/them using the securing mechanisms 526.

A shoe (sport, dress, casual, etc.) may be implemented using one or more of the concepts presented with reference to the preceding figures. For instance, a shoe may include a combination of concepts discussed with reference to different figures even if the discussion of one figure did not specifically mentioned that the concept(s) it is presenting can be combined with one or more concepts discussed with reference to another figure. In addition, one or more of the concepts presented with reference to one or more of the figures may be used in a stand alone athletic positioning insole, a standalone athletic positioning attachment, a standalone training aid, and/or in a combination thereof. Further, the concepts presented in the preceding figures may be diagramed for left footwear (e.g., sole, insole, bottom, sock, shoe, etc.) or right footwear. Regardless of which footed footwear is illustrated, the concepts apply equally to left footed footwear and to right footed footwear. Still further, a sole/insole assembly (i.e., a sole and an insole that individually or collectively have an athletic positioning shape) may be

incorporated into any type of shoe along with other shoe parts (e.g., an outersole (e.g., a sport specific bottom), a upper shoe, a toe cover, etc.).

As may be used herein, the terms "substantially" and "approximately" provides an industry-accepted tolerance for its corresponding term and/or relativity between items. Such an industry-accepted tolerance ranges from less than one percent to fifty percent and corresponds to, but is not limited to, component values, integrated circuit process variations, temperature variations, rise and fall times, and/or thermal noise. Such relativity between items ranges from a difference of a few percent to magnitude differences. As may also be used herein, the term(s) "operably coupled to", "coupled to", and/or "coupling" includes direct coupling between items and/or indirect coupling between items via an intervening item (e.g., an item includes, but is not limited to, a component, an element, a circuit, and/or a module) where, for indirect coupling, the intervening item does not modify the information of a signal but may adjust its current level, voltage level, and/or power level. As may further be used herein, inferred coupling (i.e., where one element is coupled to another element by inference) includes direct and indirect coupling between two items in the same manner as "coupled to". As may even further be used herein, the term "operable to" or "operably coupled to" indicates that an item includes one or more of power connections, input(s), output(s), etc., to perform, when activated, one or more its corresponding functions and may further include inferred coupling to one or more other items. As may still further be used herein, the term "associated with", includes direct and/or indirect coupling of separate items and/or one item being embedded within another item. As may be used herein, the term "compares favorably", indicates that a comparison between two or more items, signals, etc., provides a desired relationship. For example, when the desired relationship is that signal 1 has a greater magnitude than signal 2, a favorable comparison may be achieved when the magnitude of signal 1 is greater than that of signal 2 or when the magnitude of signal 2 is less than that of signal 1.

As may also be used herein, the terms "processing module", "processing circuit", and/or "processing unit" may be a single processing device or a plurality of processing devices. Such a processing device may be a microprocessor, micro-controller, digital signal processor, microcomputer, central processing unit, field programmable gate array, programmable logic device, state machine, logic circuitry, analog circuitry, digital circuitry, and/or any device that manipulates signals (analog and/or digital) based on hard coding of the circuitry and/or

operational instructions. The processing module, module, processing circuit, and/or processing unit may be, or further include, memory and/or an integrated memory element, which may be a single memory device, a plurality of memory devices, and/or embedded circuitry of another processing module, module, processing circuit, and/or processing unit. Such a memory device may be a read-only memory, random access memory, volatile memory, non-volatile memory, static memory, dynamic memory, flash memory, cache memory, and/or any device that stores digital information. Note that if the processing module, module, processing circuit, and/or processing unit includes more than one processing device, the processing devices may be centrally located (e.g., directly coupled together via a wired and/or wireless bus structure) or may be distributedly located (e.g., cloud computing via indirect coupling via a local area network and/or a wide area network). Further note that if the processing module, module, processing circuit, and/or processing unit implements one or more of its functions via a state machine, analog circuitry, digital circuitry, and/or logic circuitry, the memory and/or memory element storing the corresponding operational instructions may be embedded within, or external to, the circuitry comprising the state machine, analog circuitry, digital circuitry, and/or logic circuitry. Still further note that, the memory element may store, and the processing module, module, processing circuit, and/or processing unit executes, hard coded and/or operational instructions corresponding to at least some of the steps and/or functions illustrated in one or more of the Figures. Such a memory device or memory element can be included in an article of manufacture.

The present invention has been described above with the aid of method steps illustrating the performance of specified functions and relationships thereof. The boundaries and sequence of these functional building blocks and method steps have been arbitrarily defined herein for convenience of description. Alternate boundaries and sequences can be defined so long as the specified functions and relationships are appropriately performed. Any such alternate boundaries or sequences are thus within the scope and spirit of the claimed invention. Further, the boundaries of these functional building blocks have been arbitrarily defined for convenience of description. Alternate boundaries could be defined as long as the certain significant functions are appropriately performed. Similarly, flow diagram blocks may also have been arbitrarily defined herein to illustrate certain significant functionality. To the extent used, the flow diagram block boundaries and sequence could have been defined otherwise and still perform the certain

significant functionality. Such alternate definitions of both functional building blocks and flow diagram blocks and sequences are thus within the scope and spirit of the claimed invention. One of average skill in the art will also recognize that the functional building blocks, and other illustrative blocks, modules and components herein, can be implemented as illustrated or by discrete components, application specific integrated circuits, processors executing appropriate software and the like or any combination thereof.

The present invention may have also been described, at least in part, in terms of one or more embodiments. An embodiment of the present invention is used herein to illustrate the present invention, an aspect thereof, a feature thereof, a concept thereof, and/or an example thereof. A physical embodiment of an apparatus, an article of manufacture, a machine, and/or of a process that embodies the present invention may include one or more of the aspects, features, concepts, examples, etc., described with reference to one or more of the embodiments discussed herein. Further, from figure to figure, the embodiments may incorporate the same or similarly named functions, steps, modules, etc., that may use the same or different reference numbers and, as such, the functions, steps, modules, etc., may be the same or similar functions, steps, modules, etc., or different ones.

Unless specifically stated to the contra, signals to, from, and/or between elements in a figure of any of the figures presented herein may be analog or digital, continuous time or discrete time, and single-ended or differential. For instance, if a signal path is shown as a single-ended path, it also represents a differential signal path. Similarly, if a signal path is shown as a differential path, it also represents a single-ended signal path. While one or more particular architectures are described herein, other architectures can likewise be implemented that use one or more data buses not expressly shown, direct connectivity between elements, and/or indirect coupling between other elements as recognized by one of average skill in the art.

The term "module" is used in the description of the various embodiments of the present invention. A module includes a processing module, a functional block, hardware, and/or software stored on memory for performing one or more functions as may be described herein. Note that, if the module is implemented via hardware, the hardware may operate independently and/or in conjunction software and/or firmware. As used herein, a module may contain one or more sub-modules, each of which may be one or more modules.

While particular combinations of various functions and features of the present invention have been expressly described herein, other combinations of these features and functions are likewise possible. The present invention is not limited by the particular examples disclosed herein and expressly incorporates these other combinations.

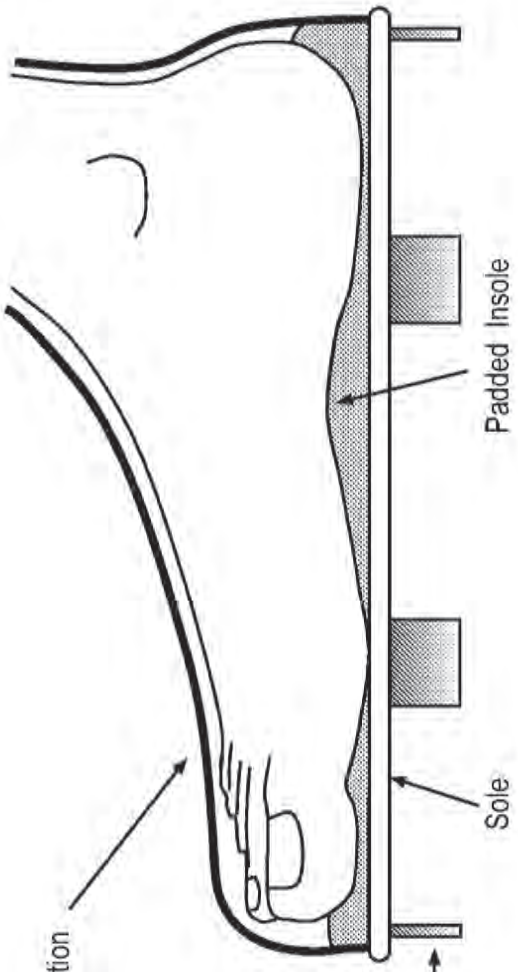


FIG. 2

Side Cross Section of Drive Leg Shoe

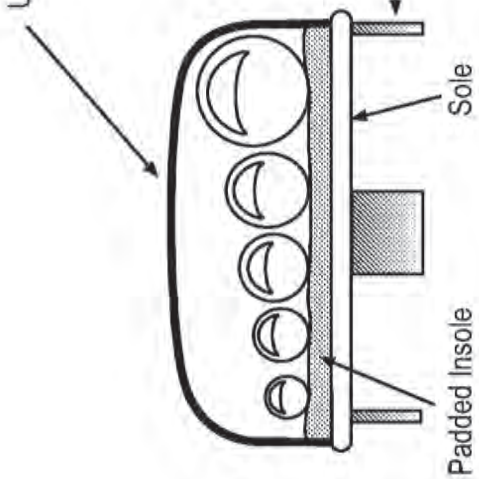


FIG. 1

Front Cross Section of Drive Leg Shoe

Prior Art

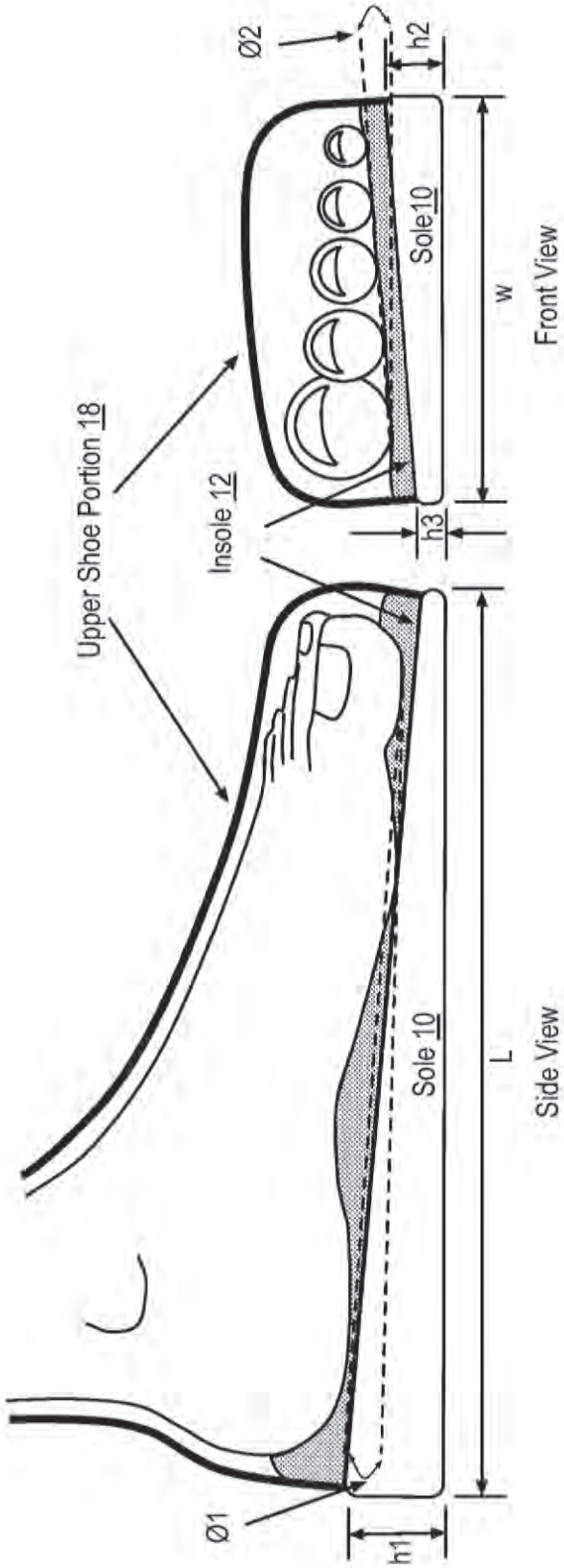

Upper Shoe Portion 18
Insole 12
Sole 10
Ø1
h1
L
Side View
Ø2
h2
Sole10
h3
w
Front View

FIG. 3

FIG. 4

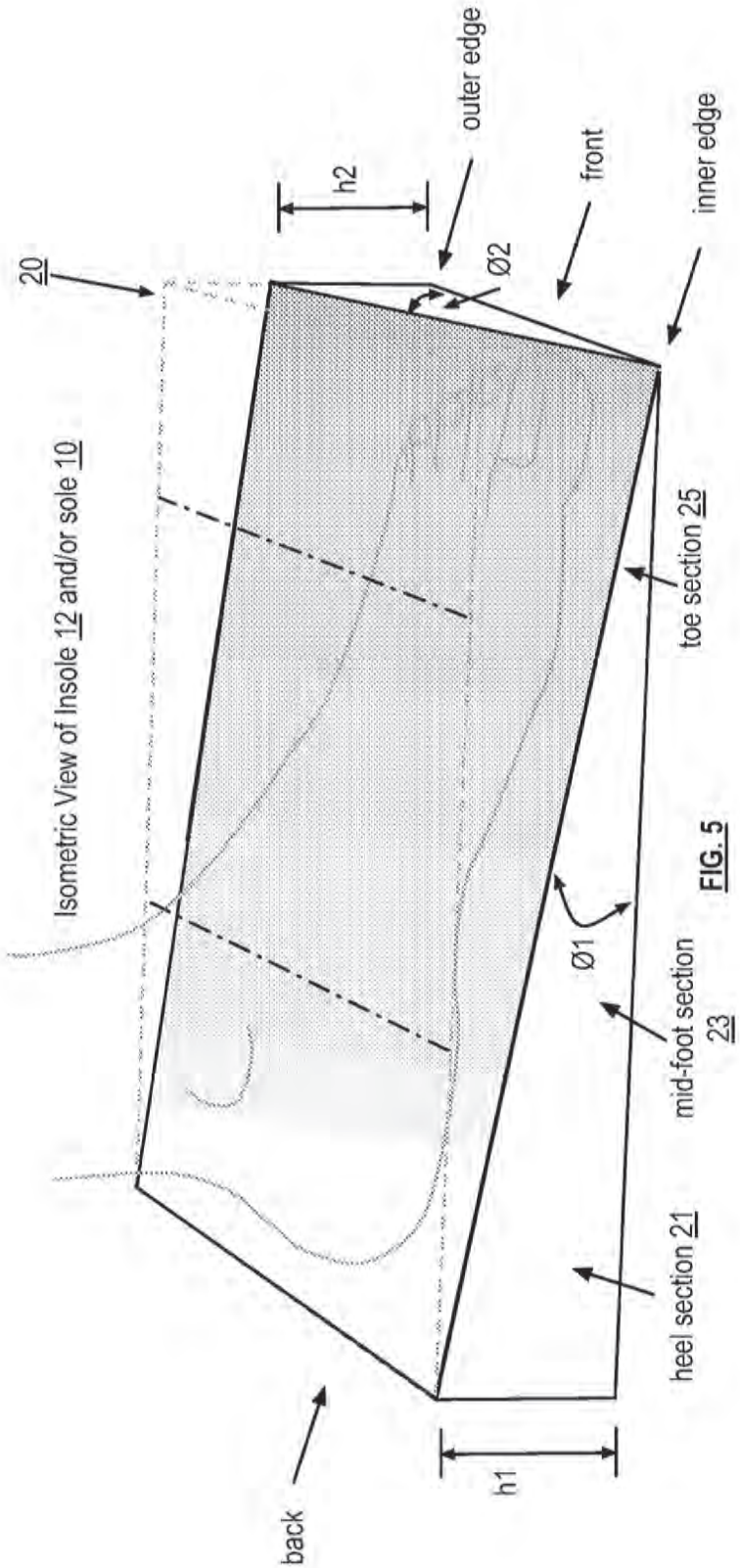

20
Isometric View of Insole 12 and/or sole 10
h2
outer edge
Ø2
front
inner edge
toe section 25
Ø1
mid-foot section
23
heel section 21
h1
back

FIG. 5

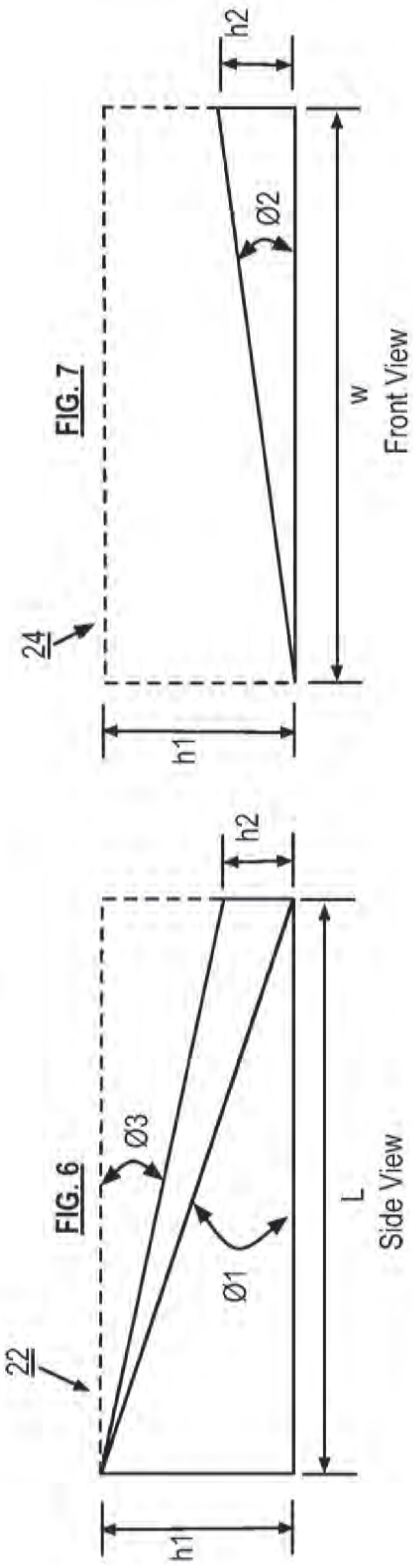


FIG. 7
24
h1
Ø2
h2
w
Front View
FIG. 6
22
h1
Ø3
Ø1
h2
L
Side View

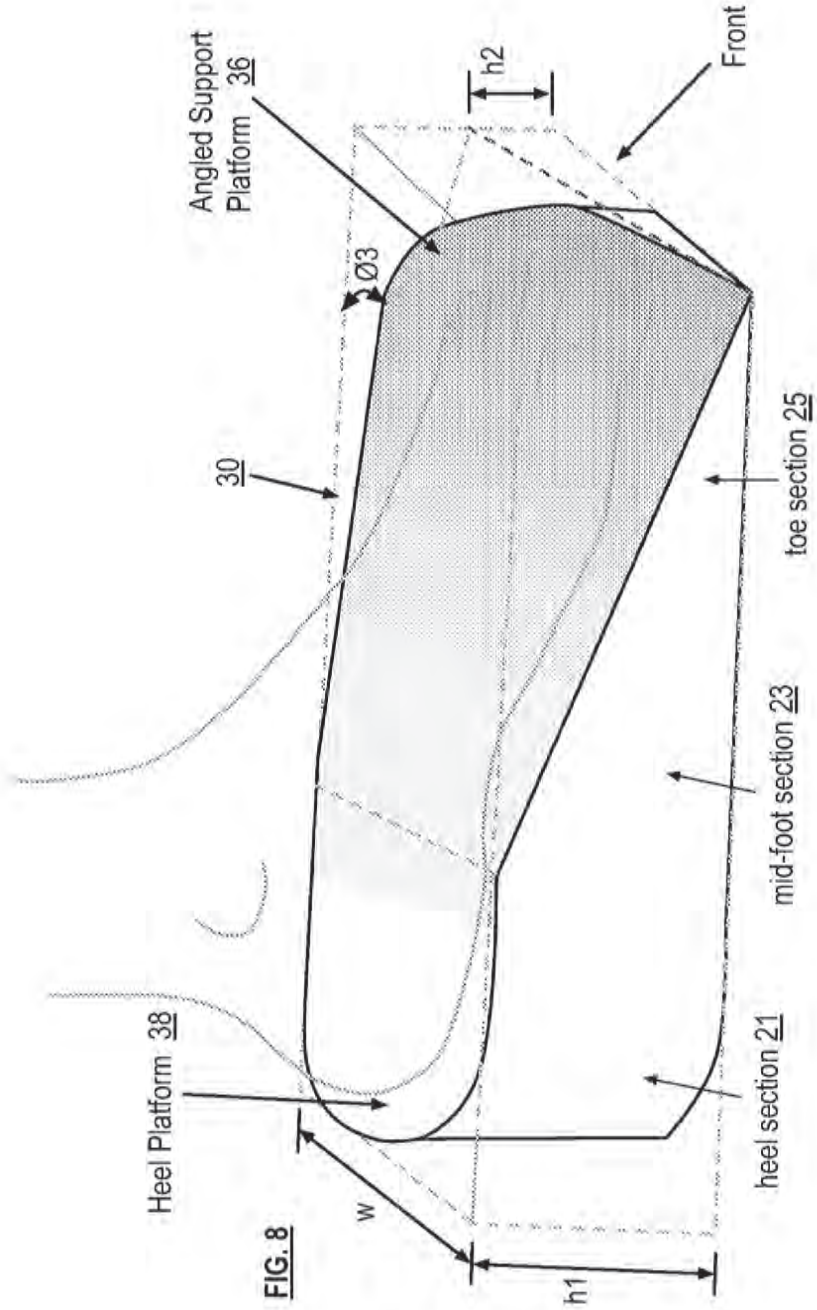


FIG. 8

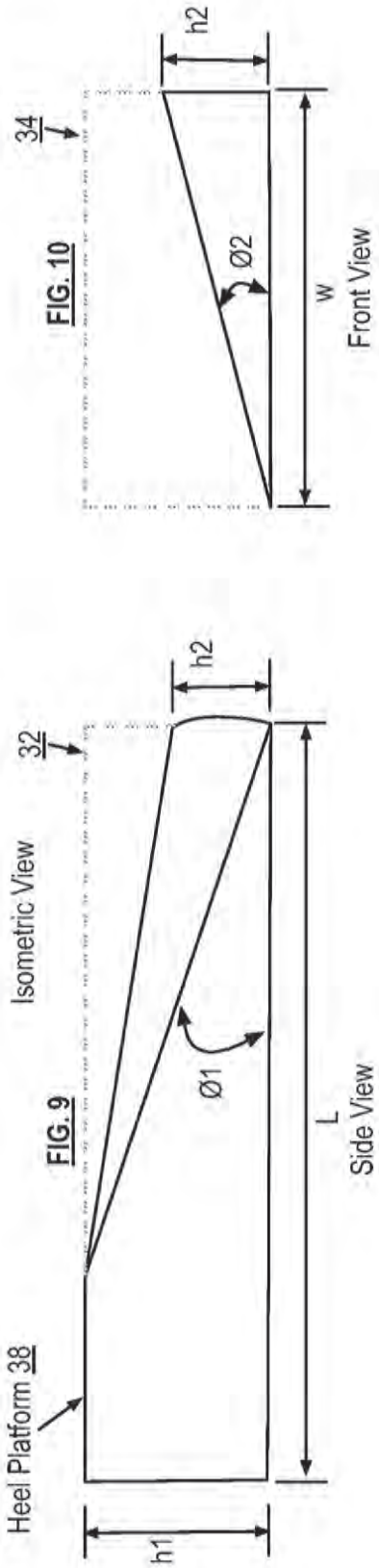


FIG. 10

FIG. 9

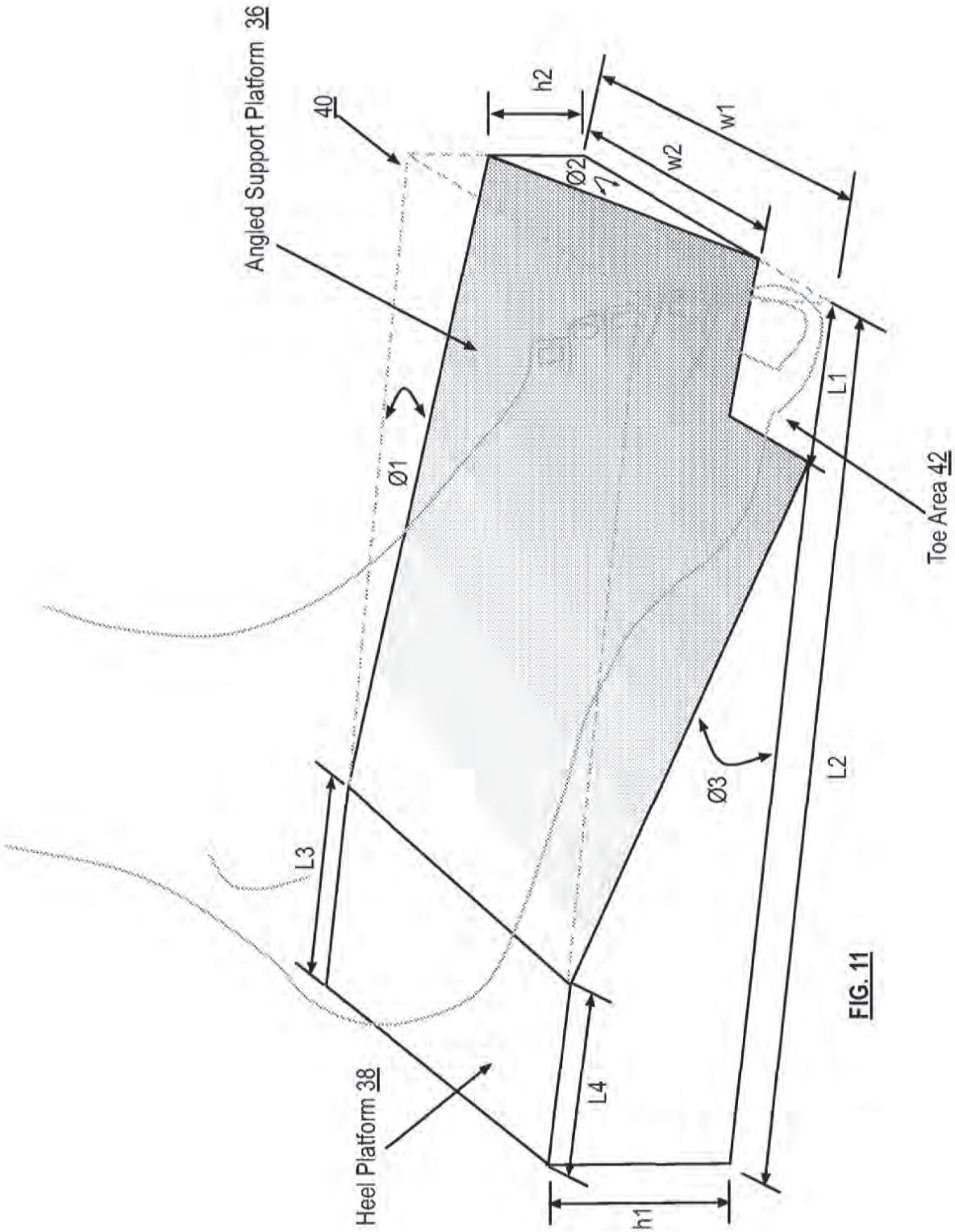

Angled Support Platform 36
40
h2
w1
w2
Ø2
Ø1
L1
Toe Area 42
Ø3
L2
L3
L4
Heel Platform 38
h1

FIG. 11

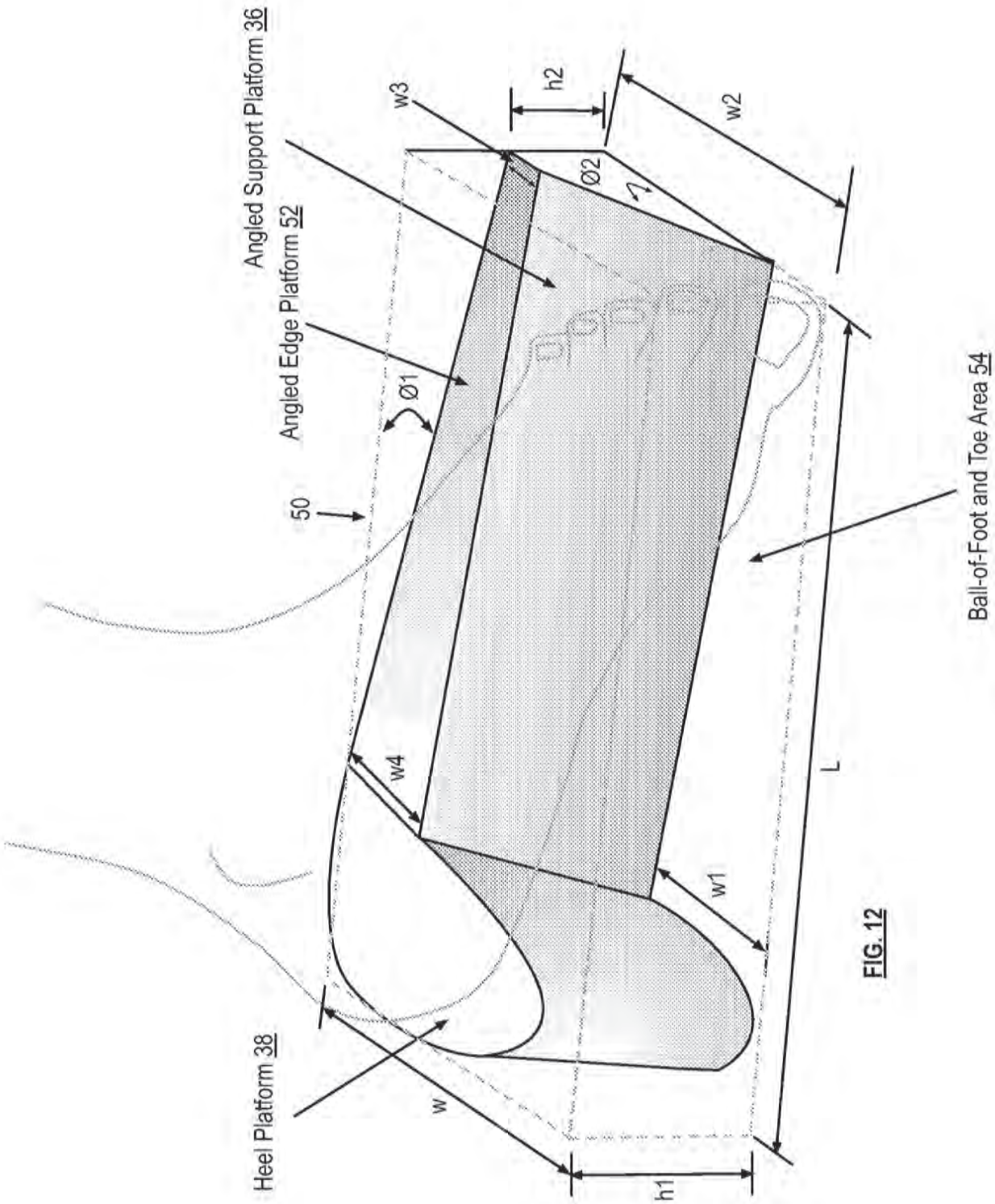

Angled Support Platform 36
Angled Edge Platform 52
50
Heel Platform 38
w3
h2
w2
Ø2
Ø1
w4
w
w1
h1
L
Ball-of-Foot and Toe Area 54

FIG. 12

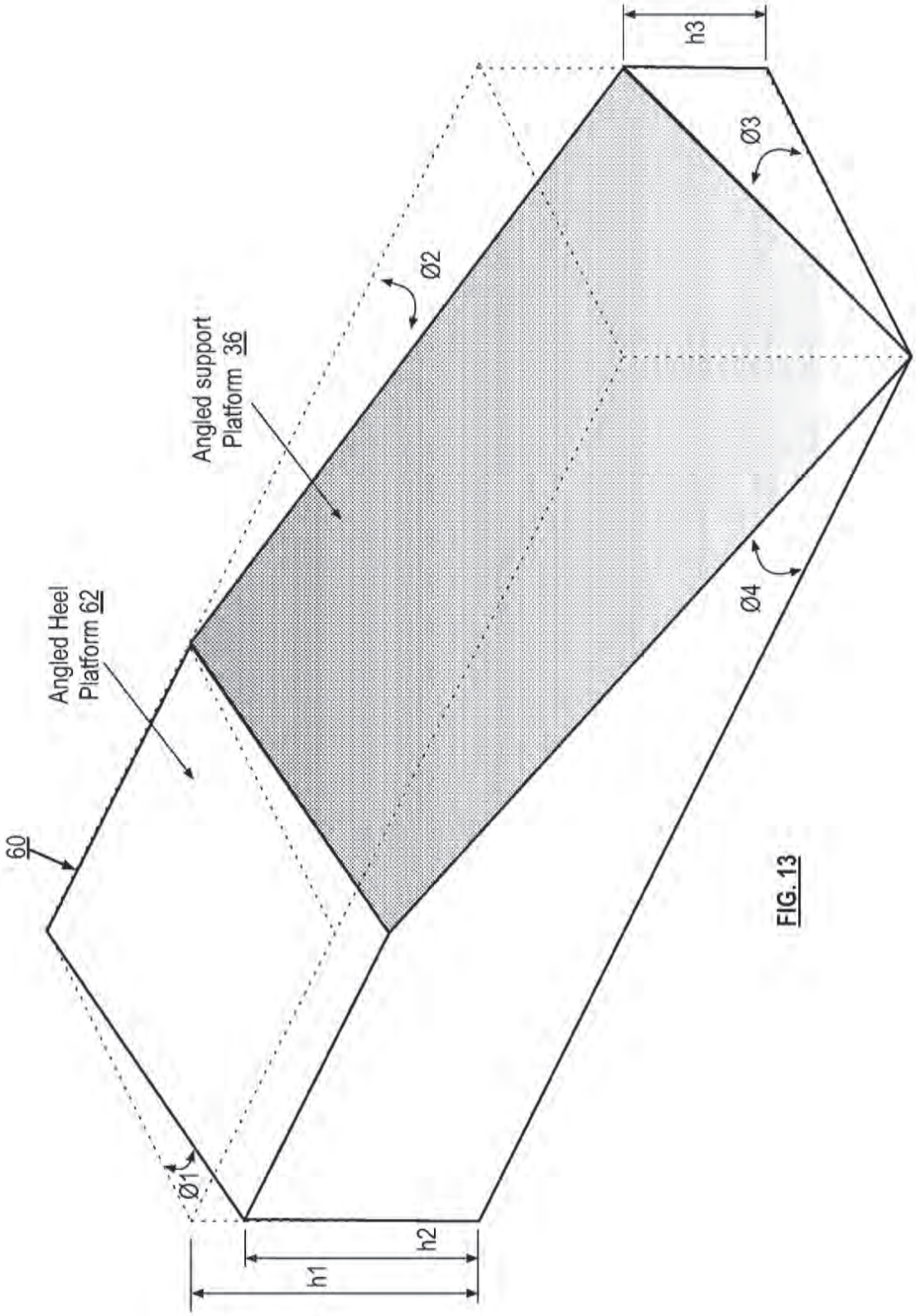

60
Angled Heel Platform 62
Angled support Platform 36
Ø1
Ø2
Ø3
Ø4
h1
h2
h3

FIG. 13

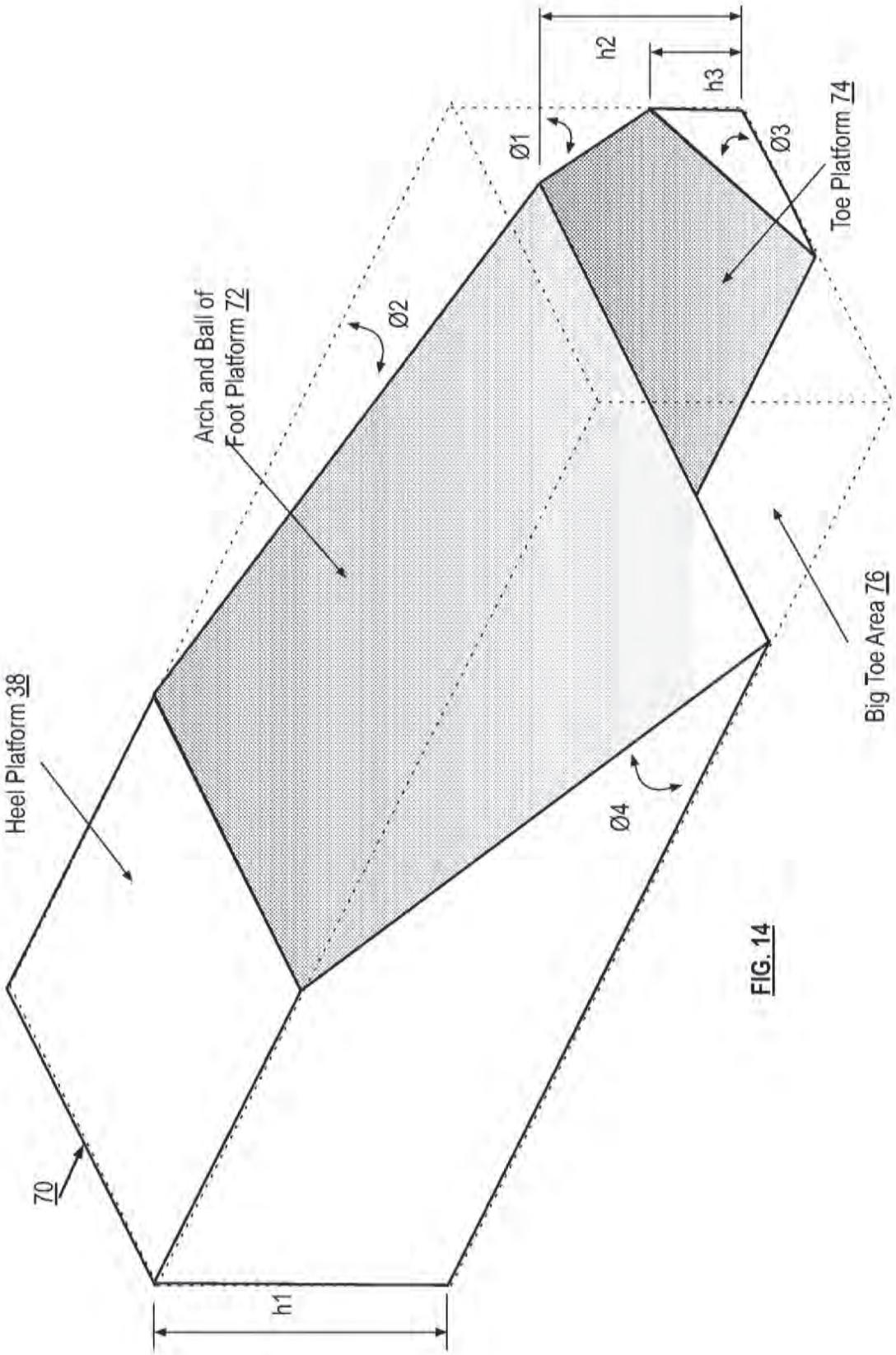

70
Heel Platform 38
h1
Arch and Ball of Foot Platform 72
Ø2
Ø4
Ø1
h2
h3
Ø3
Toe Platform 74
Big Toe Area 76

FIG. 14

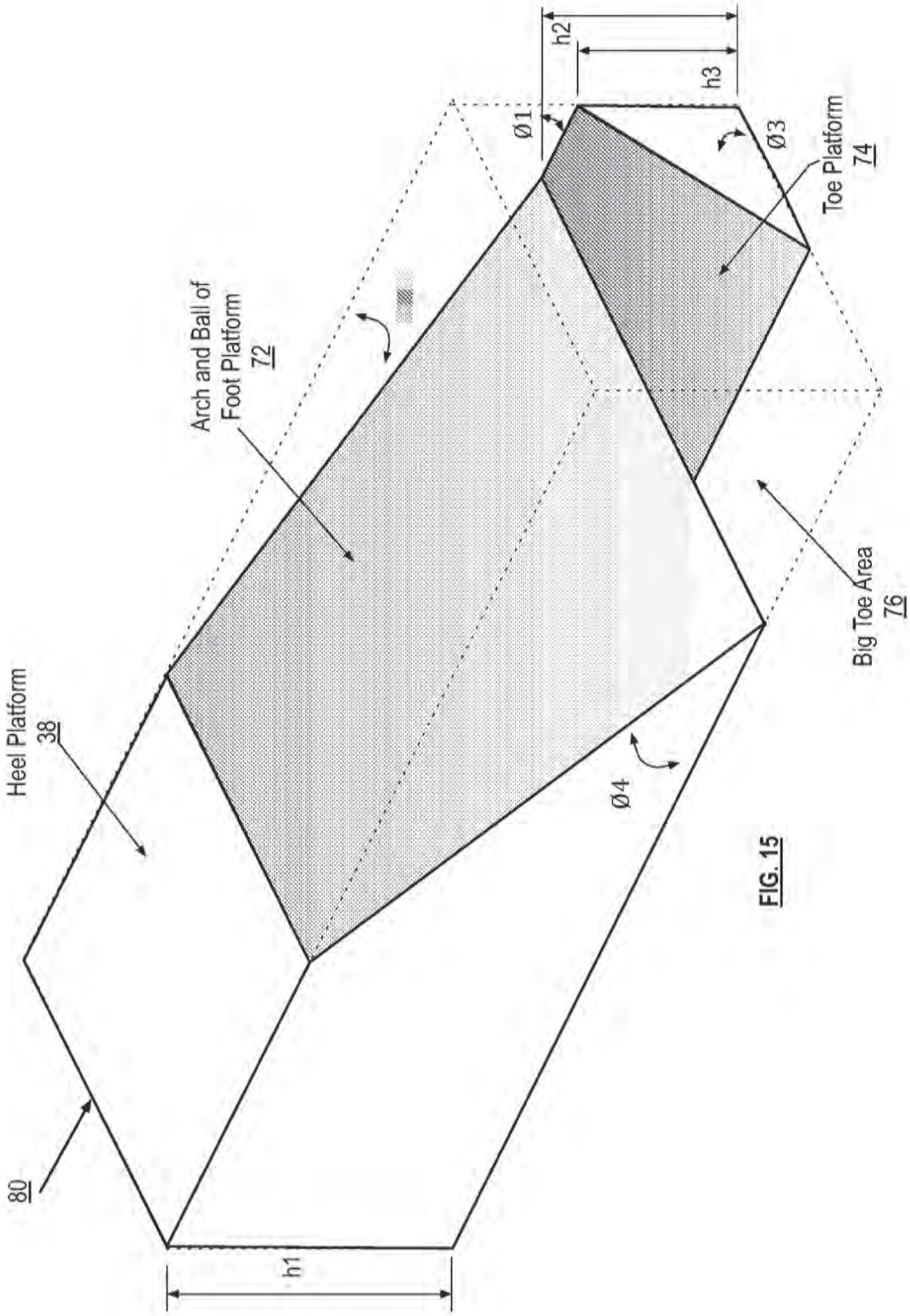

80
Heel Platform
38
h1
Arch and Ball of
Foot Platform
72
Ø1
h2
h3
Ø3
Toe Platform
74
Ø4
Big Toe Area
76

FIG. 15

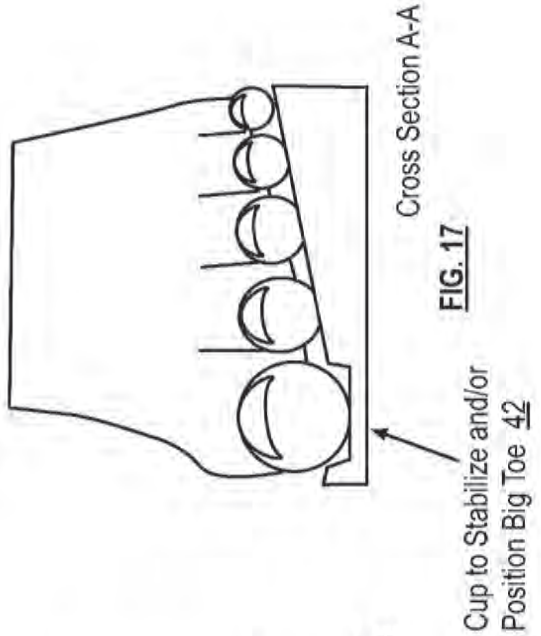


FIG. 17

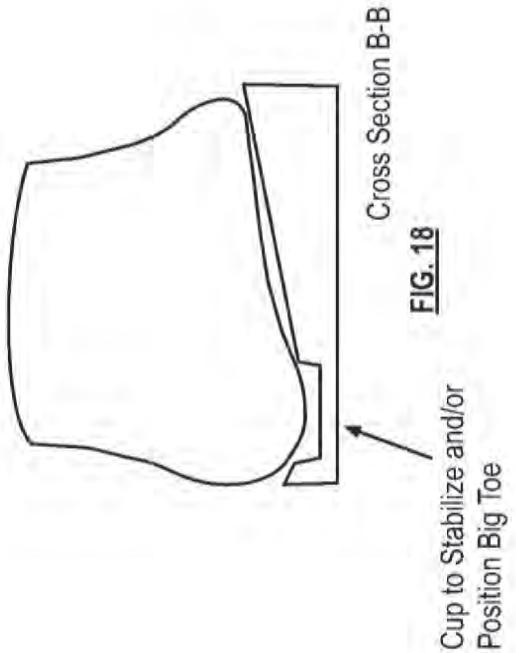


FIG. 18

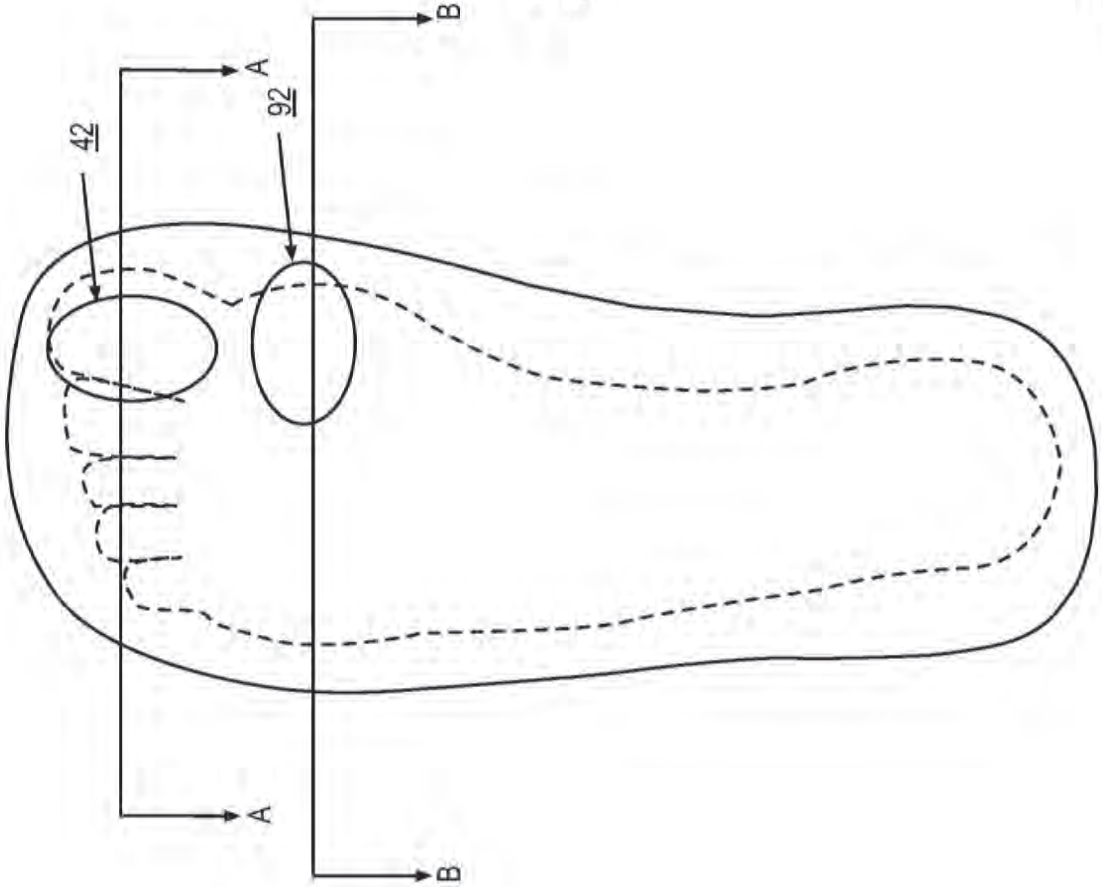


FIG. 16

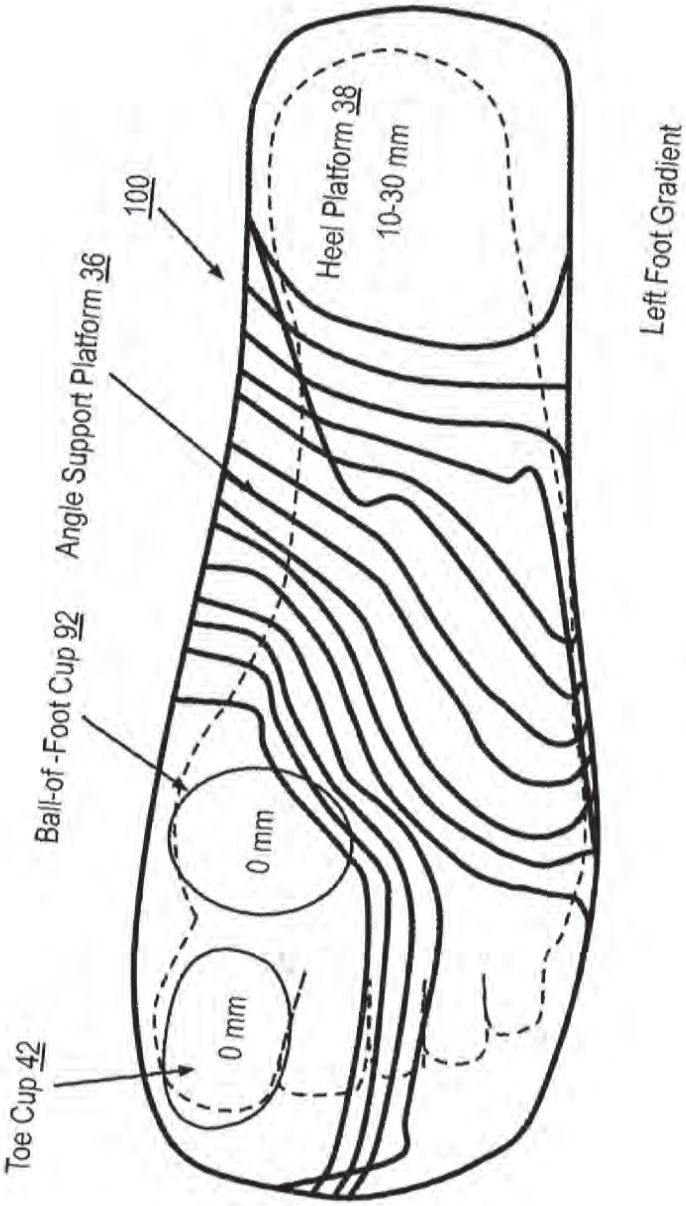

100
Angle Support Platform 36
Ball-of -Foot Cup 92
Toe Cup 42
0 mm
0 mm
Heel Platform 38
10-30 mm
Left Foot Gradient

FIG. 19

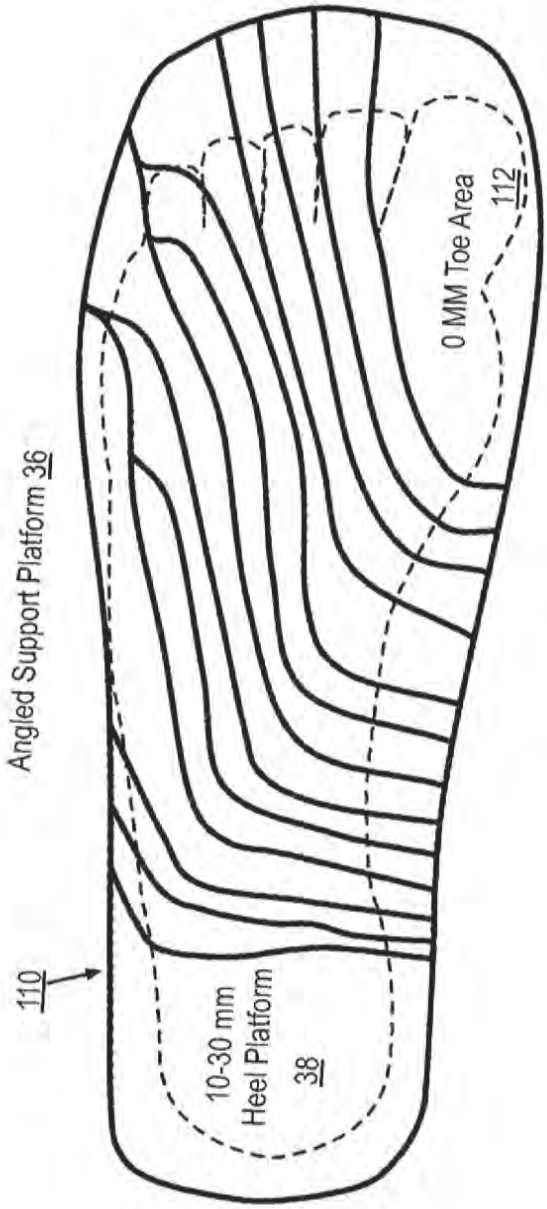

110
Angled Support Platform 36
10-30 mm
Heel Platform
38
0 MM Toe Area
112

FIG. 20

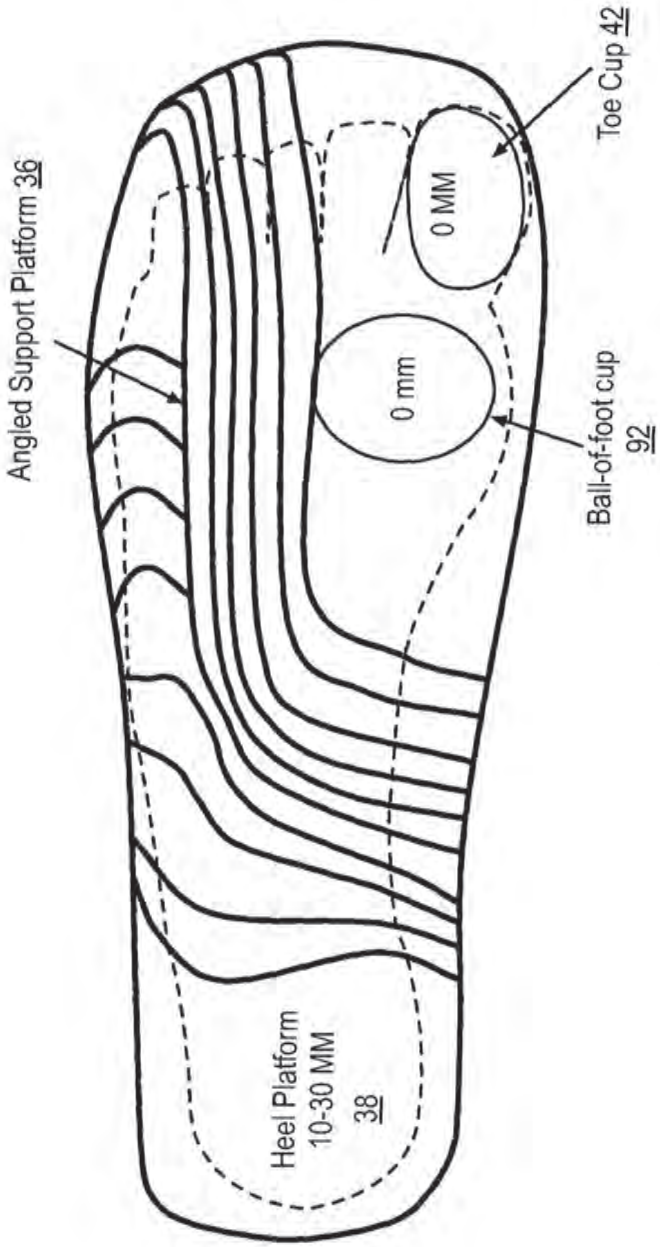

Angled Support Platform 36
Heel Platform
10-30 MM
38
0 mm
0 MM
Ball-of-foot cup
92
Toe Cup 42

FIG. 21

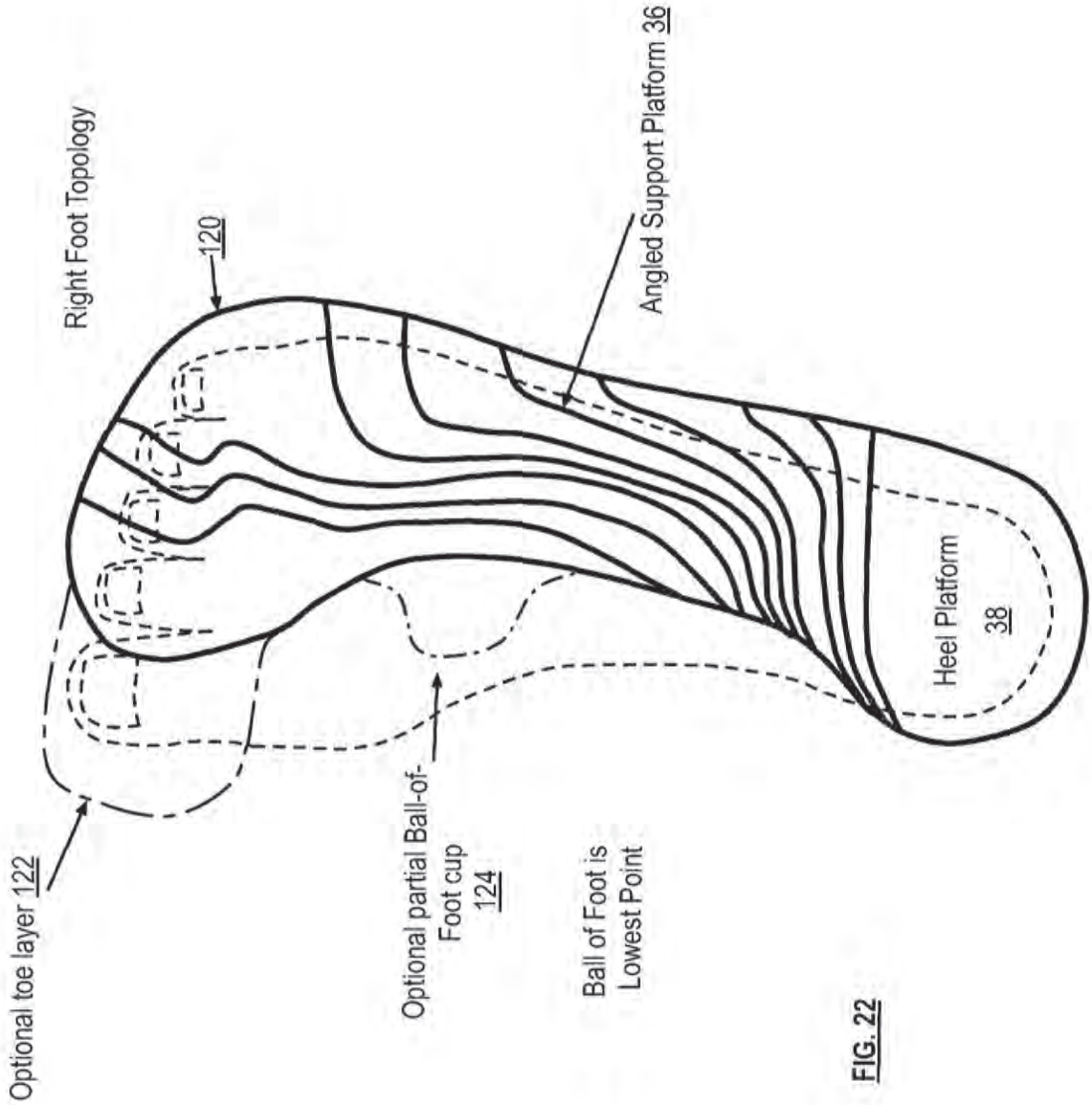

Right Foot Topology
120
Angled Support Platform 36
Heel Platform
38
Optional toe layer 122
Optional partial Ball-of-Foot cup
124
Ball of Foot is Lowest Point

FIG. 22

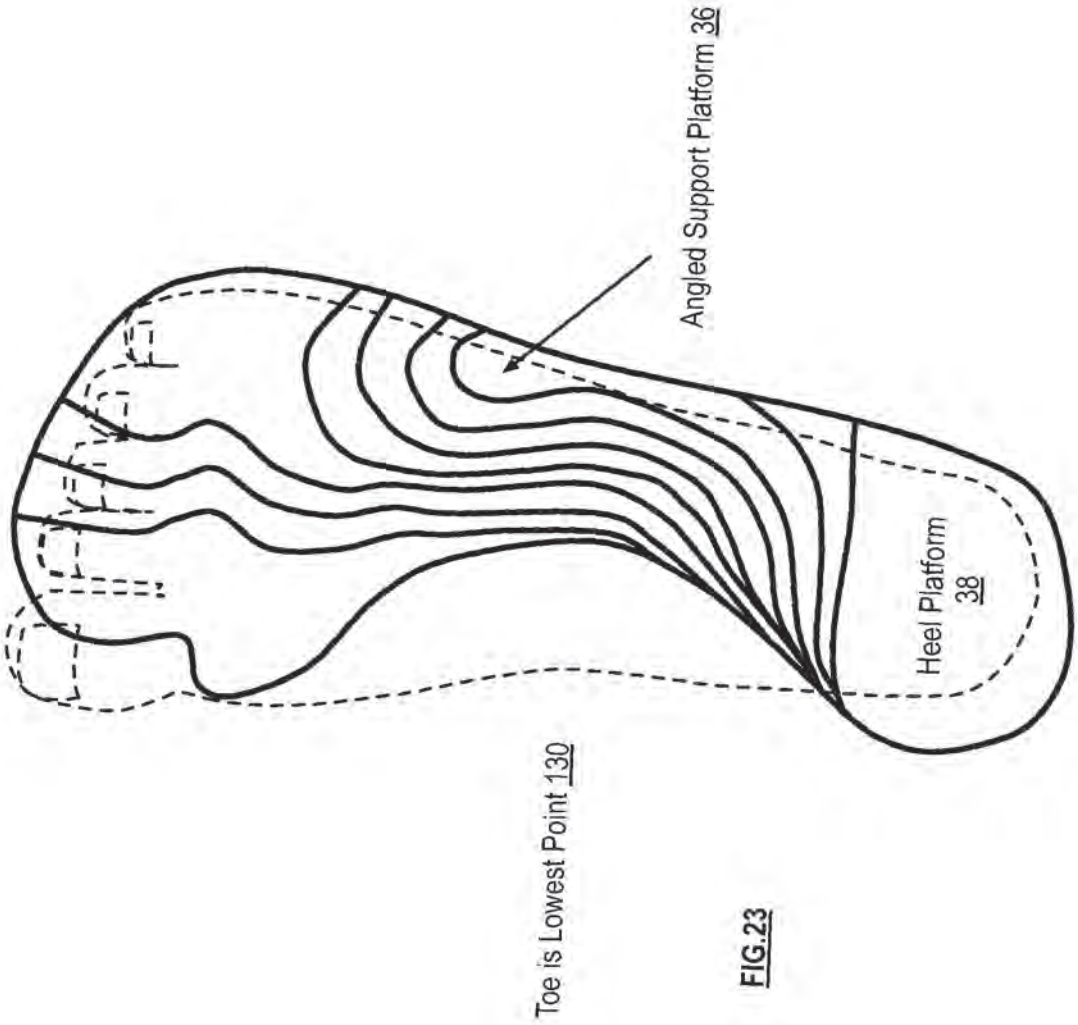

Angled Support Platform 36
Heel Platform 38
Toe is Lowest Point 130

FIG.23

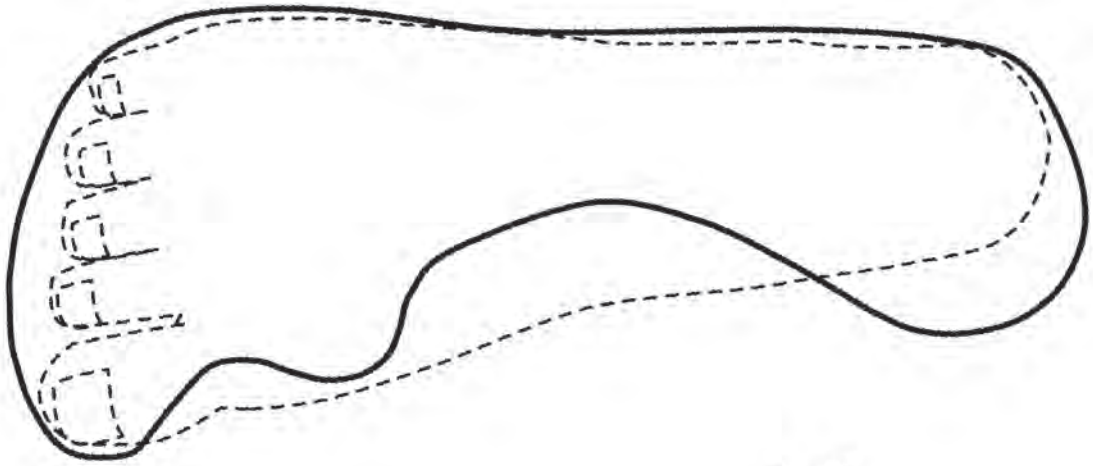


FIG. 24
Layer 1

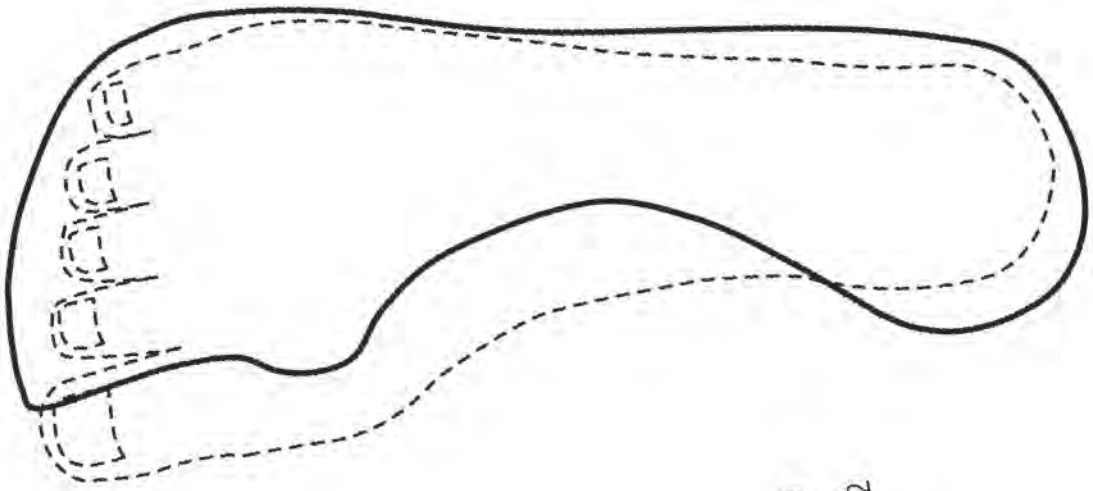


FIG. 25
Layer 2

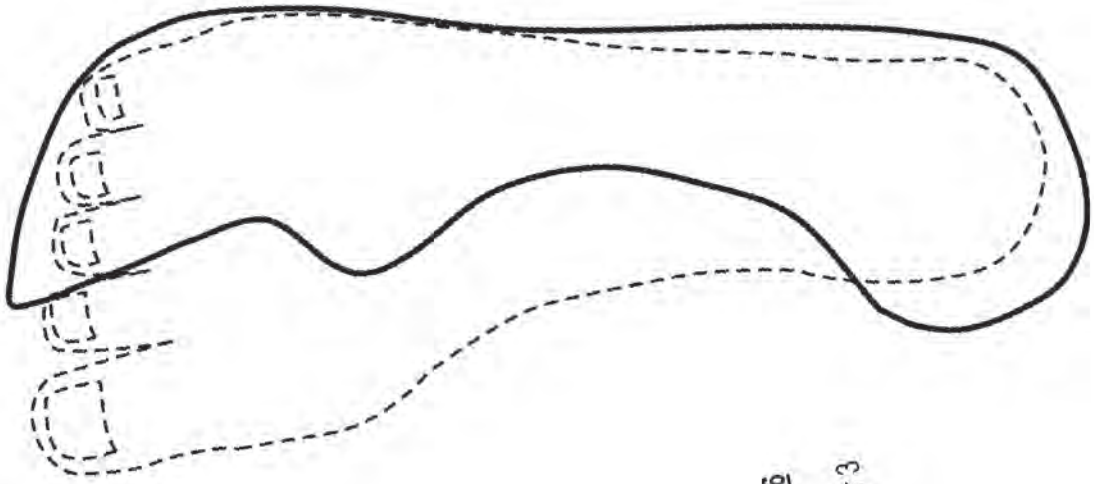


FIG. 26

Layer 3

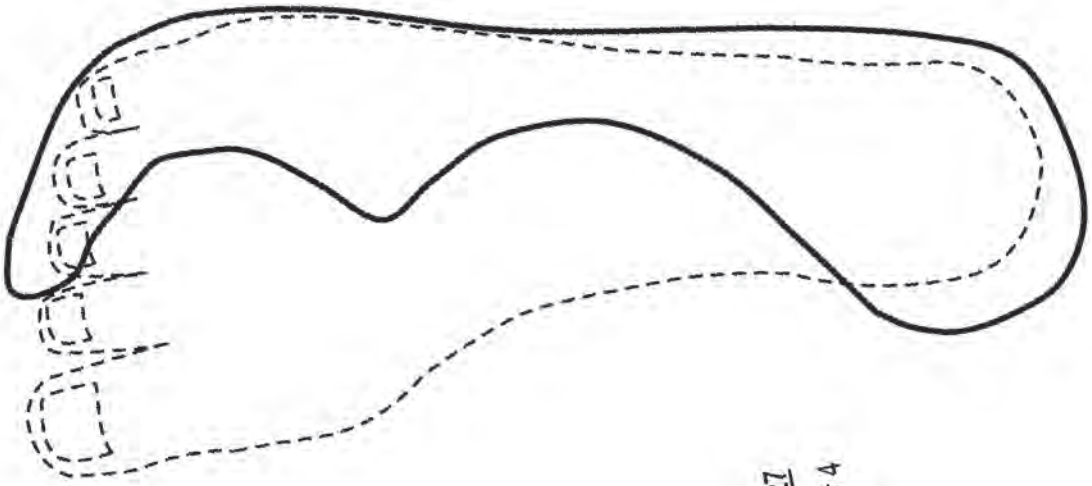


FIG. 27
Layer 4

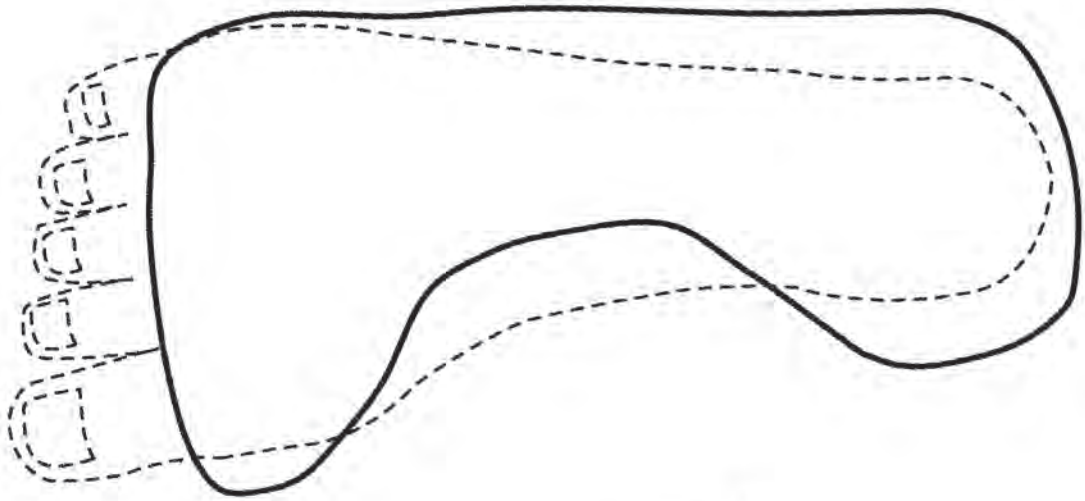


FIG.28
Layer 5

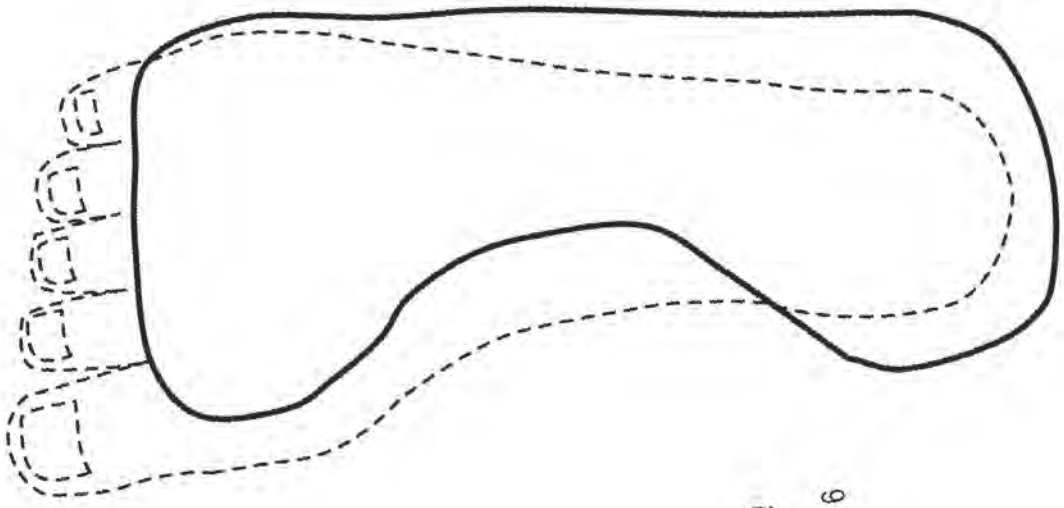


FIG.29

Layer 6

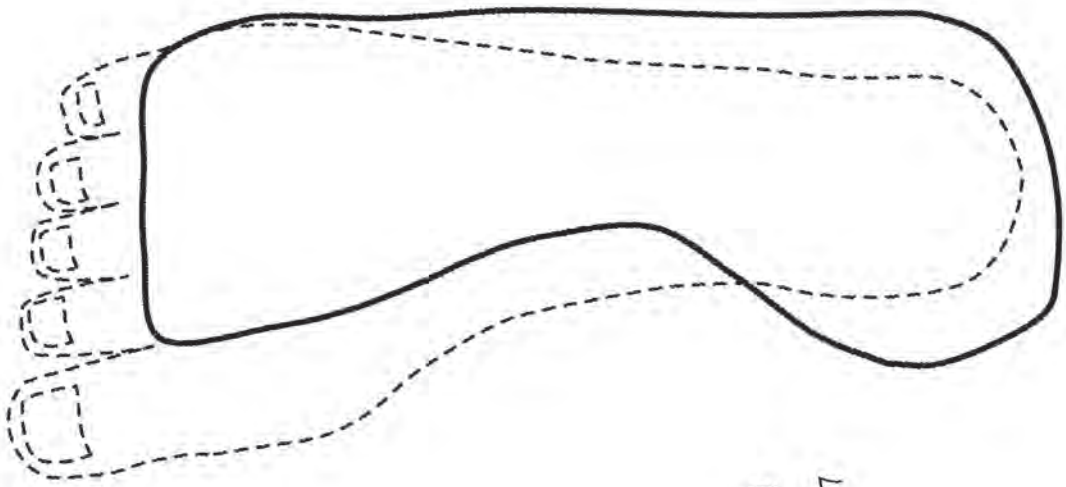


FIG.30

Layer 7

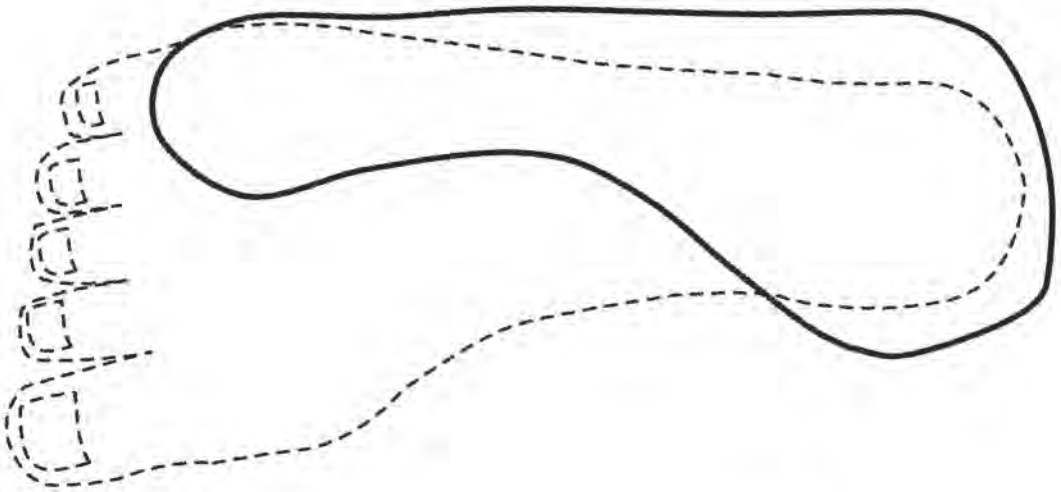


FIG.31

Layer 8

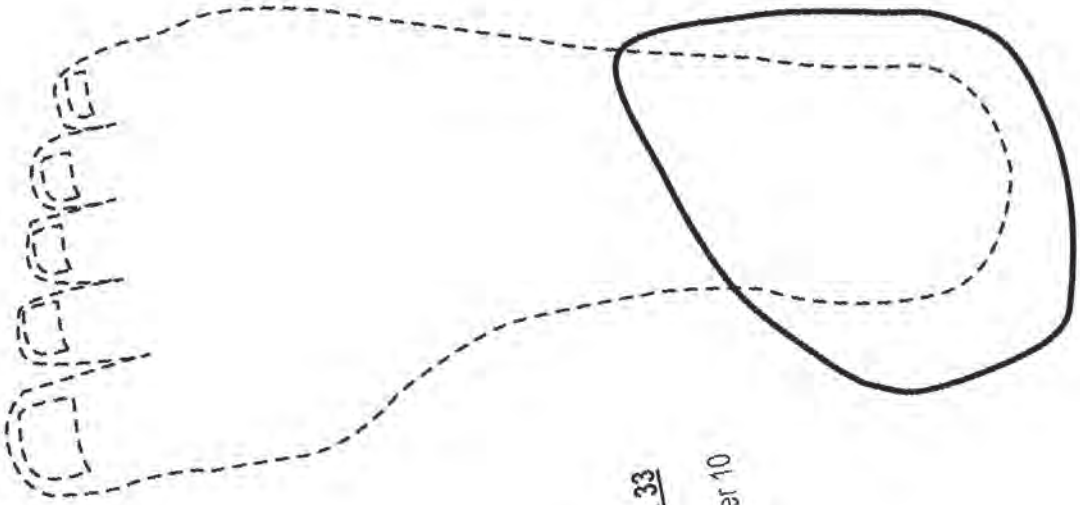


FIG. 33
Layer 10

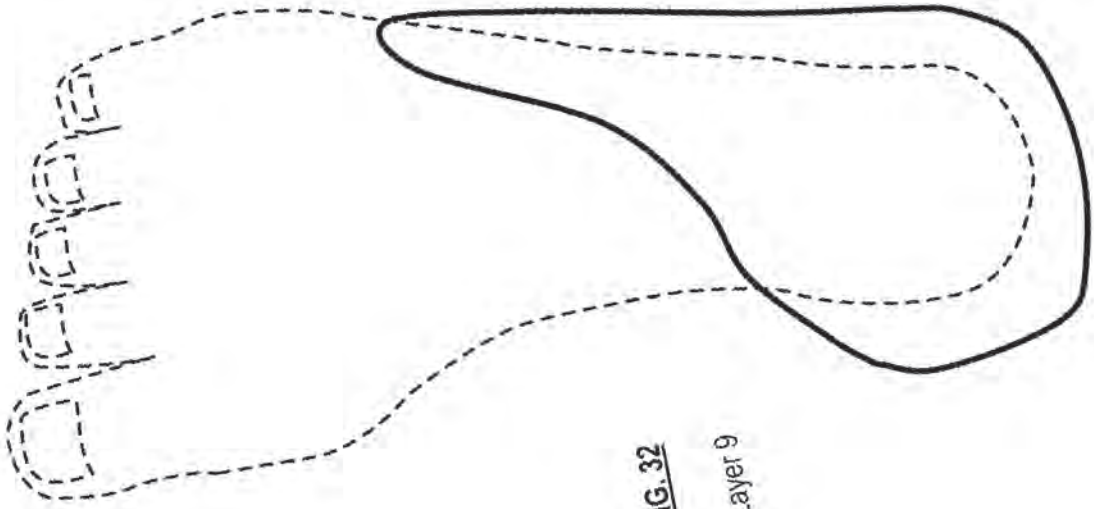


FIG. 32
Layer 9

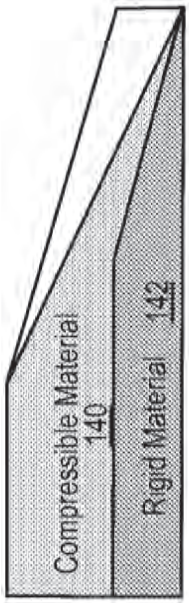


FIG. 34
Insole Side View

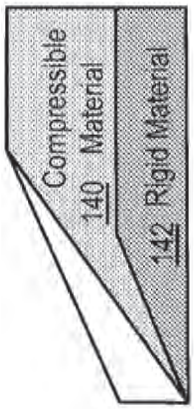


FIG. 35
Front View

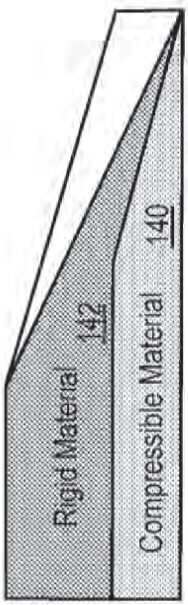


FIG. 36
Insole Side View

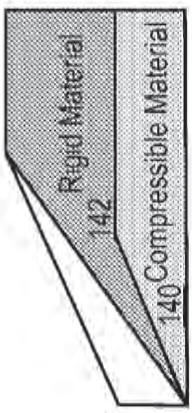


FIG. 37
Front View

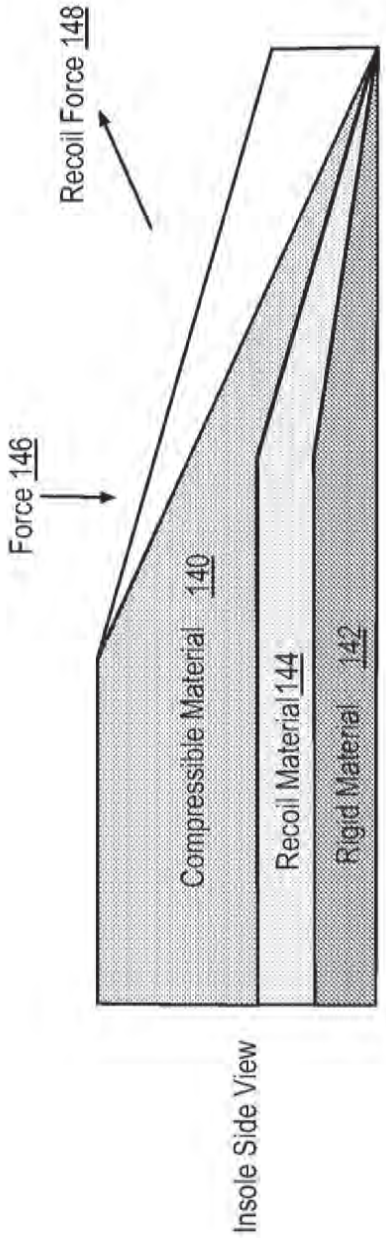

Force 146
Recoil Force 148
Compressible Material 140
Recoil Material 144
Rigid Material 142
Insole Side View

FIG. 38

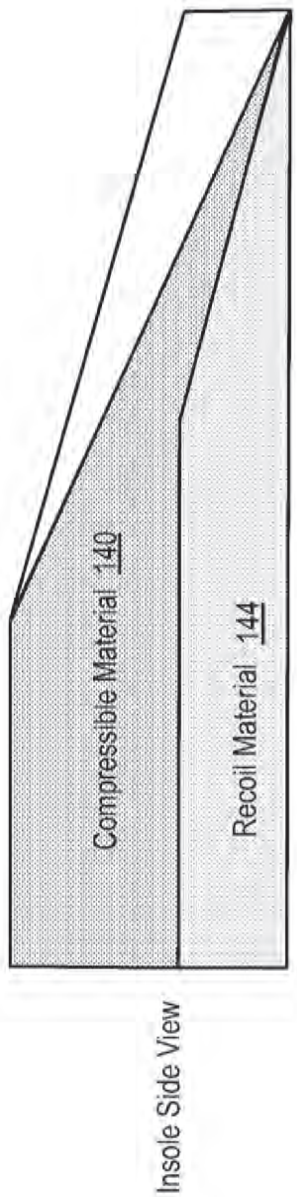

Compressible Material 140
Recoil Material 144
Insole Side View

FIG. 39

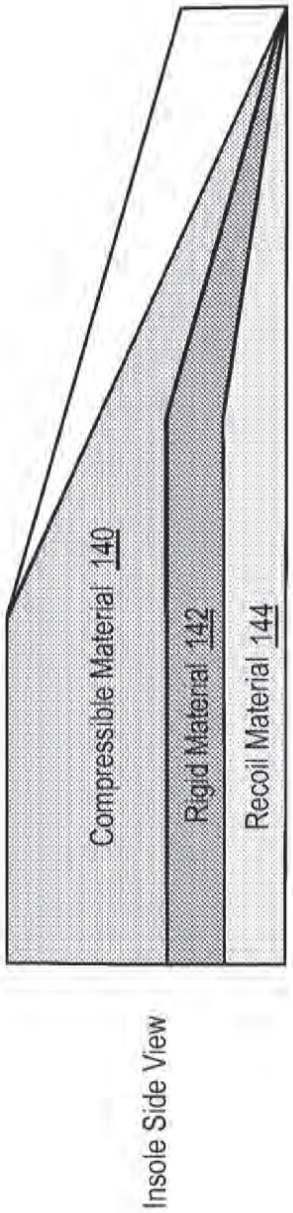

Compressible Material 140
Rigid Material 142
Recoil Material 144
Insole Side View

FIG. 40

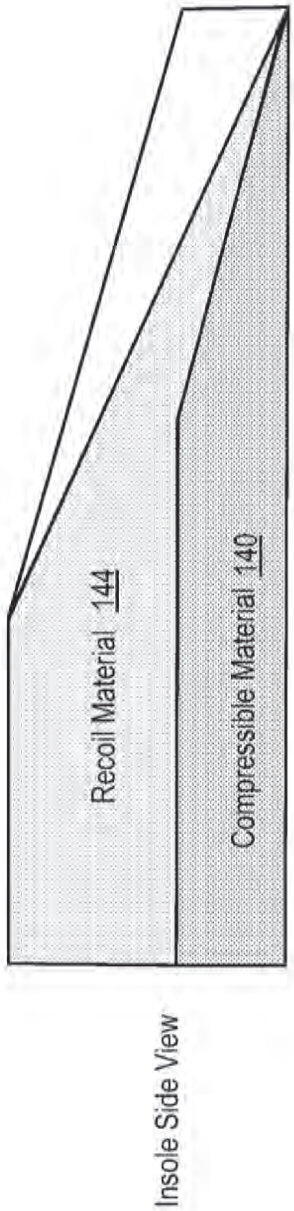
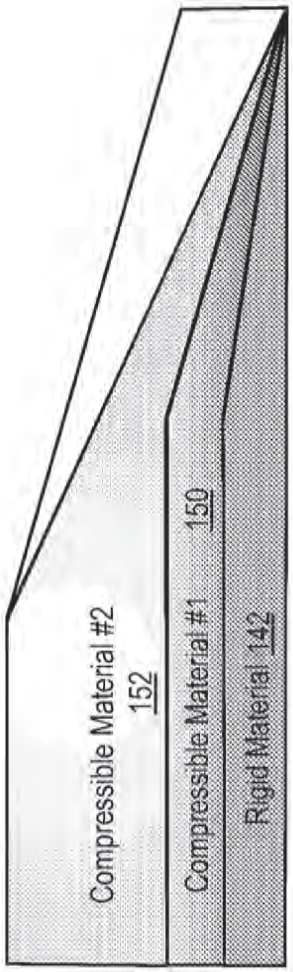
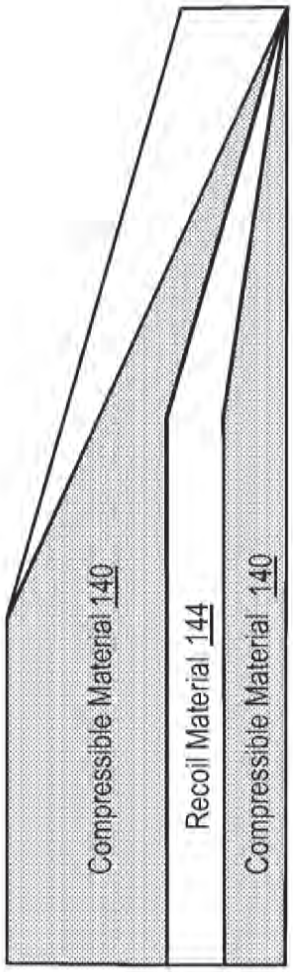

Recoil Material 144
Compressible Material 140
Insole Side View

FIG. 41



Insole Side View

FIG. 42



Insole Side View

FIG. 43

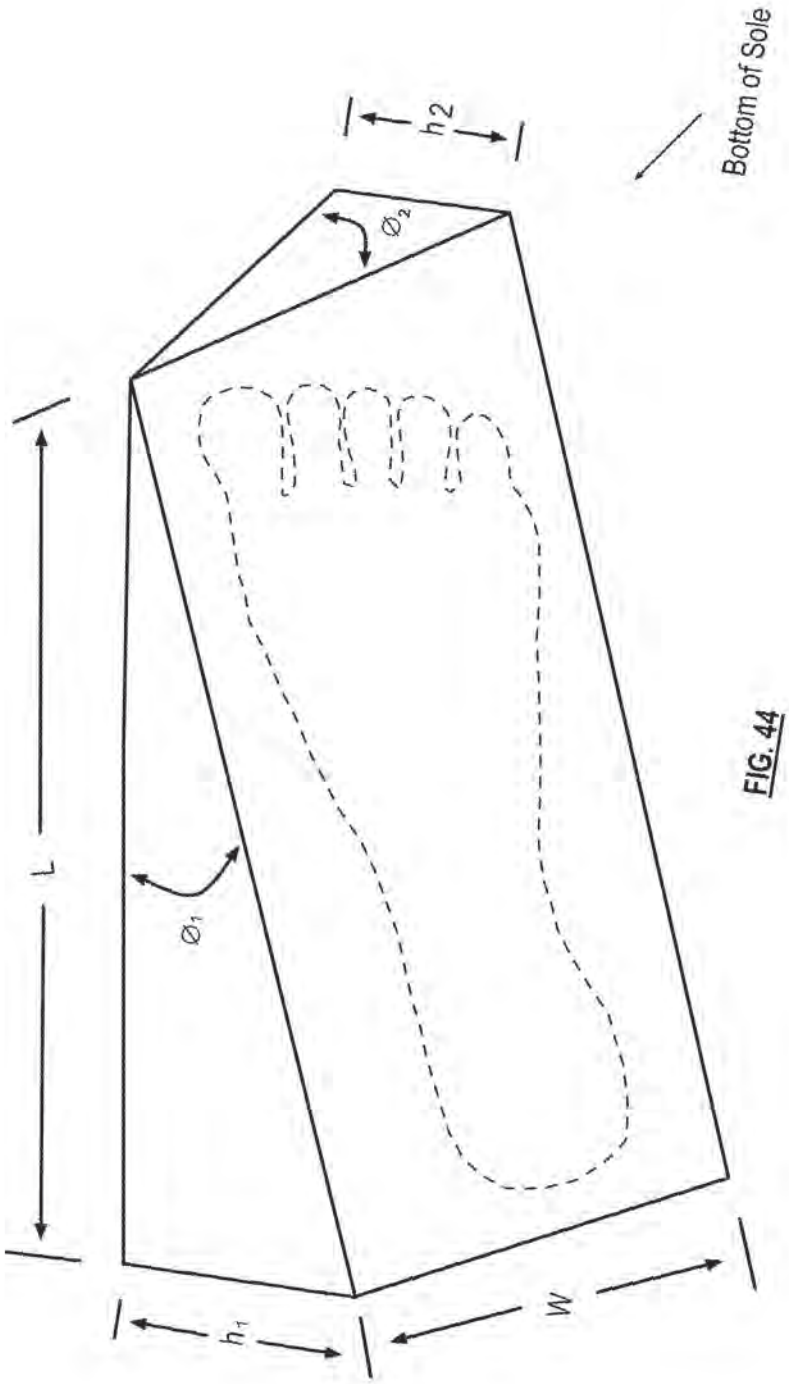
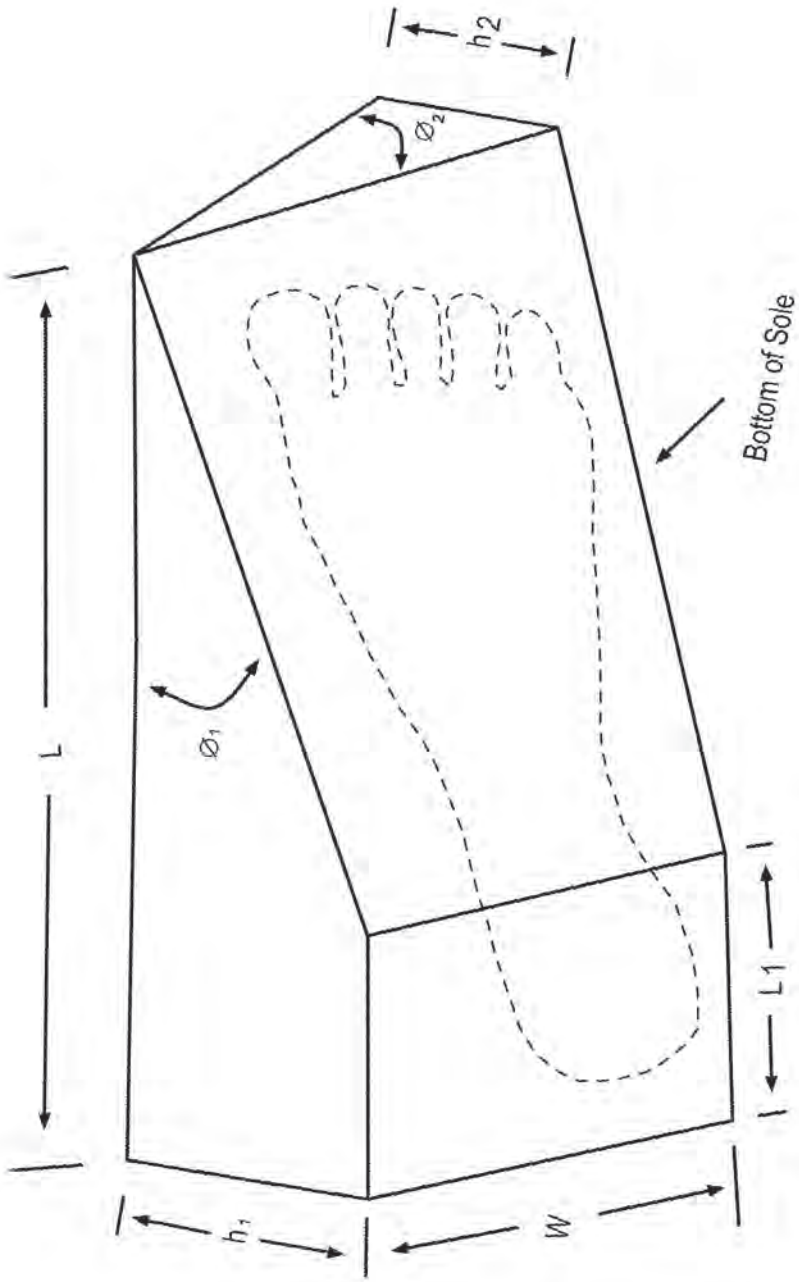


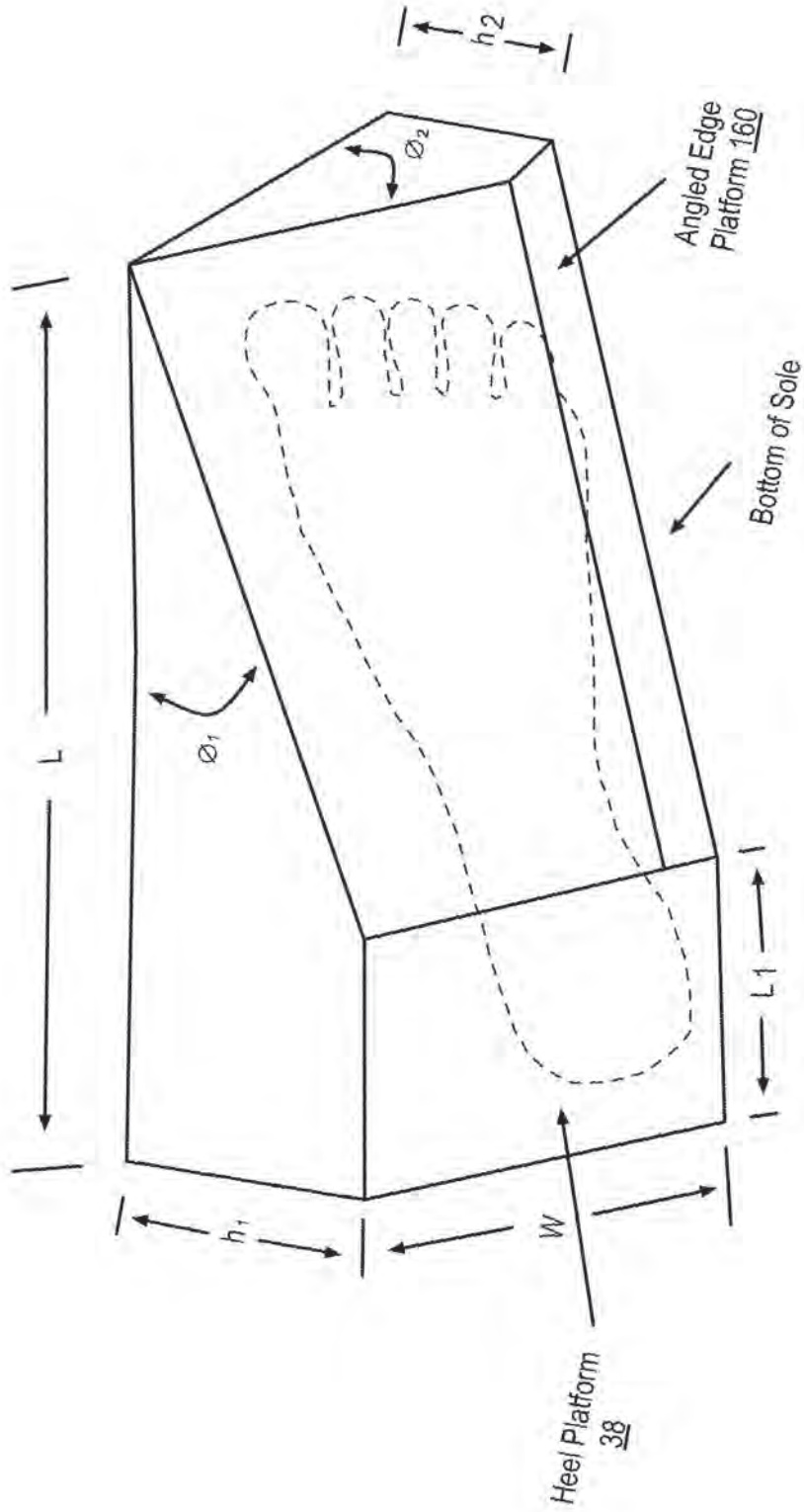
FIG. 44

Isometric View of Sole



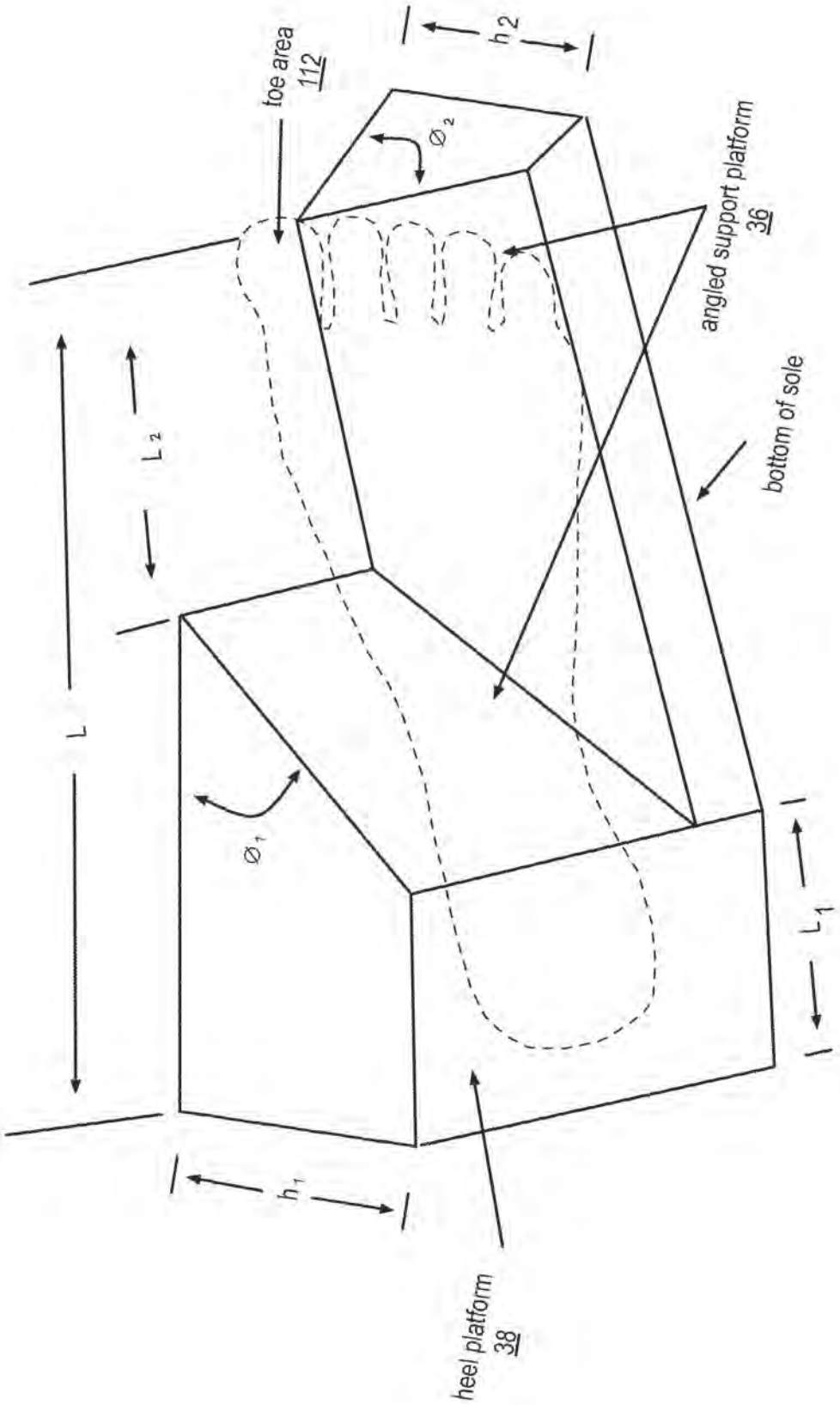
Isometric View of Sole

FIG. 45



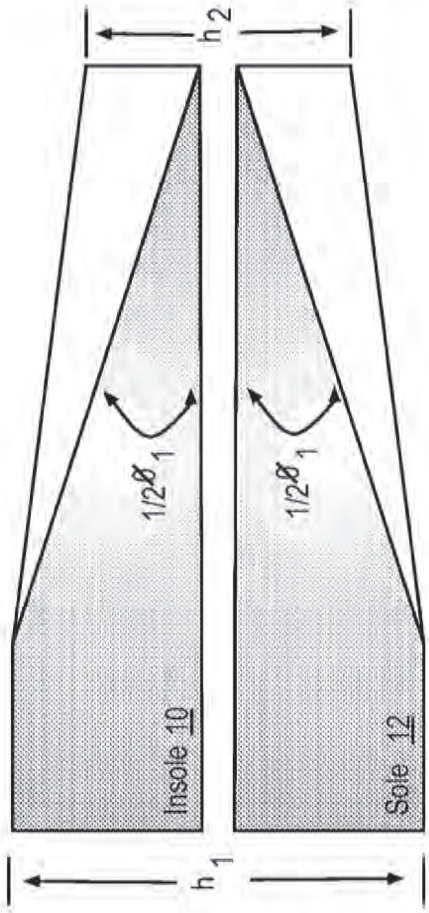
Isometric View of Sole

FIG. 46



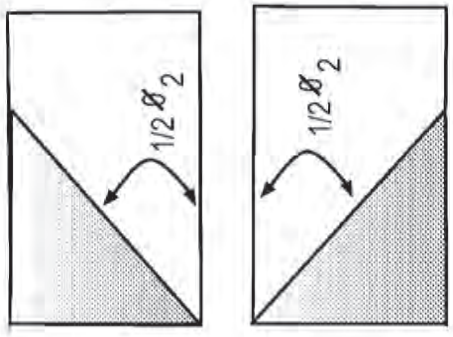
Isometric View of Sole

FIG. 47

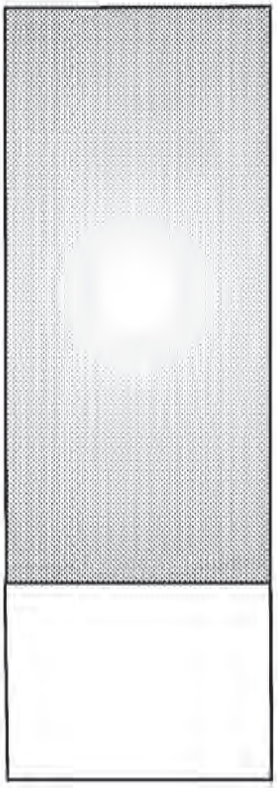


Side
FIG. 48

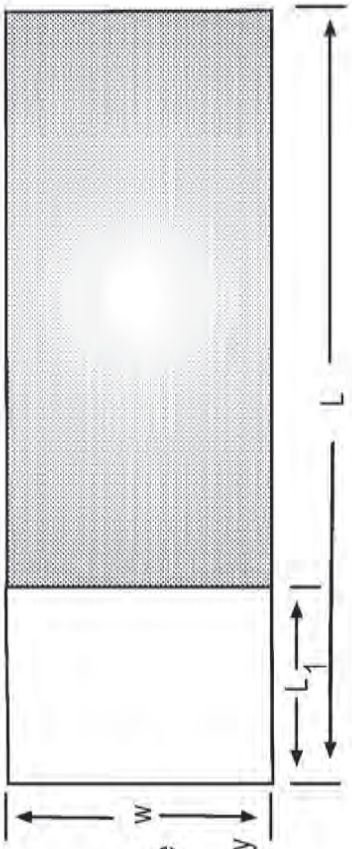
Can be other ratio than 50/50 could have more or less insole.



Front
FIG.51



Top
FIG. 49



Bottom
FIG. 50

NOTE: Could have various rounding of corners, overall shape more like a sole or insole. Shown this way for slopes

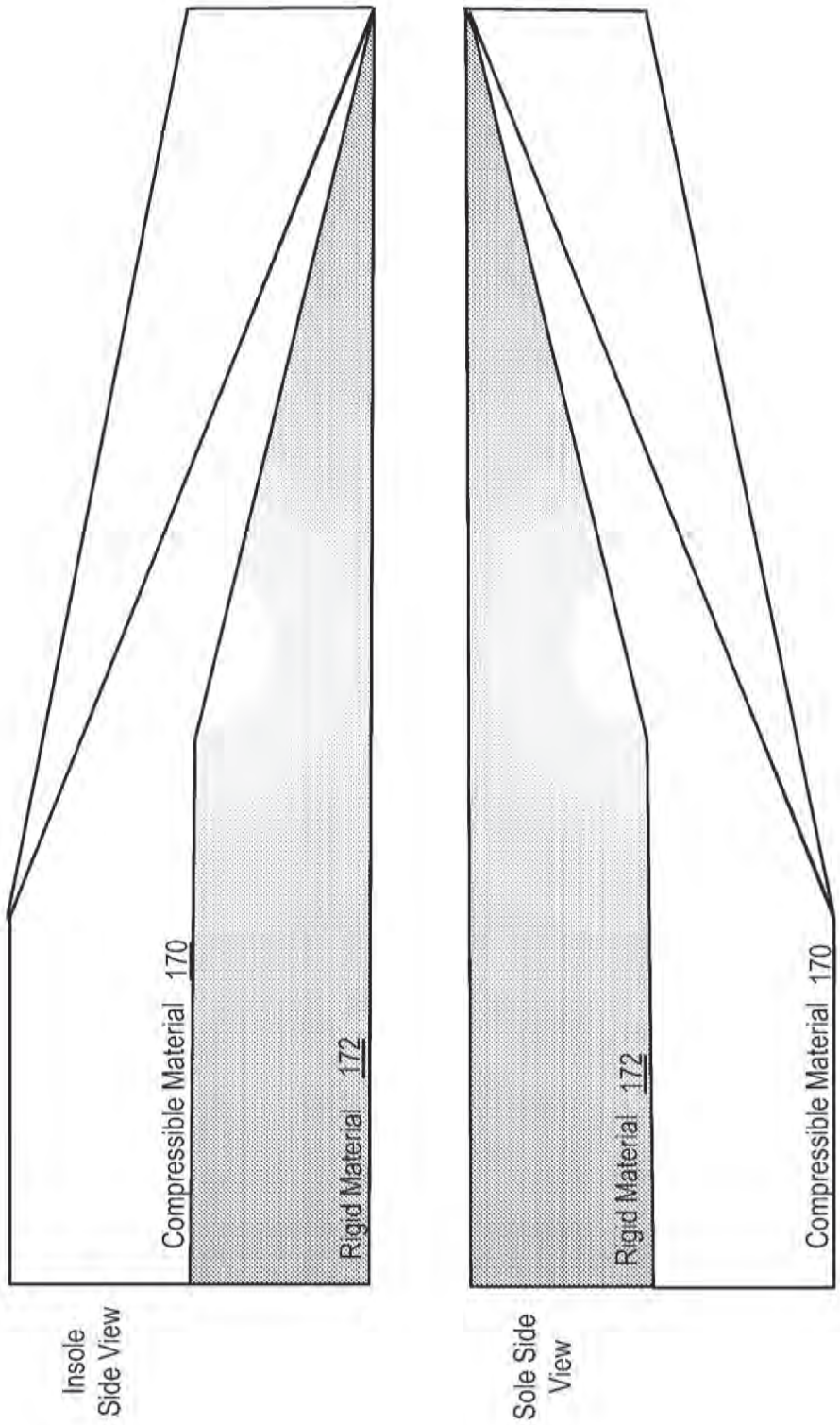

Insole
Side View
Compressible Material 170
Rigid Material 172
Sole Side
View
Rigid Material 172
Compressible Material 170

FIG. 52

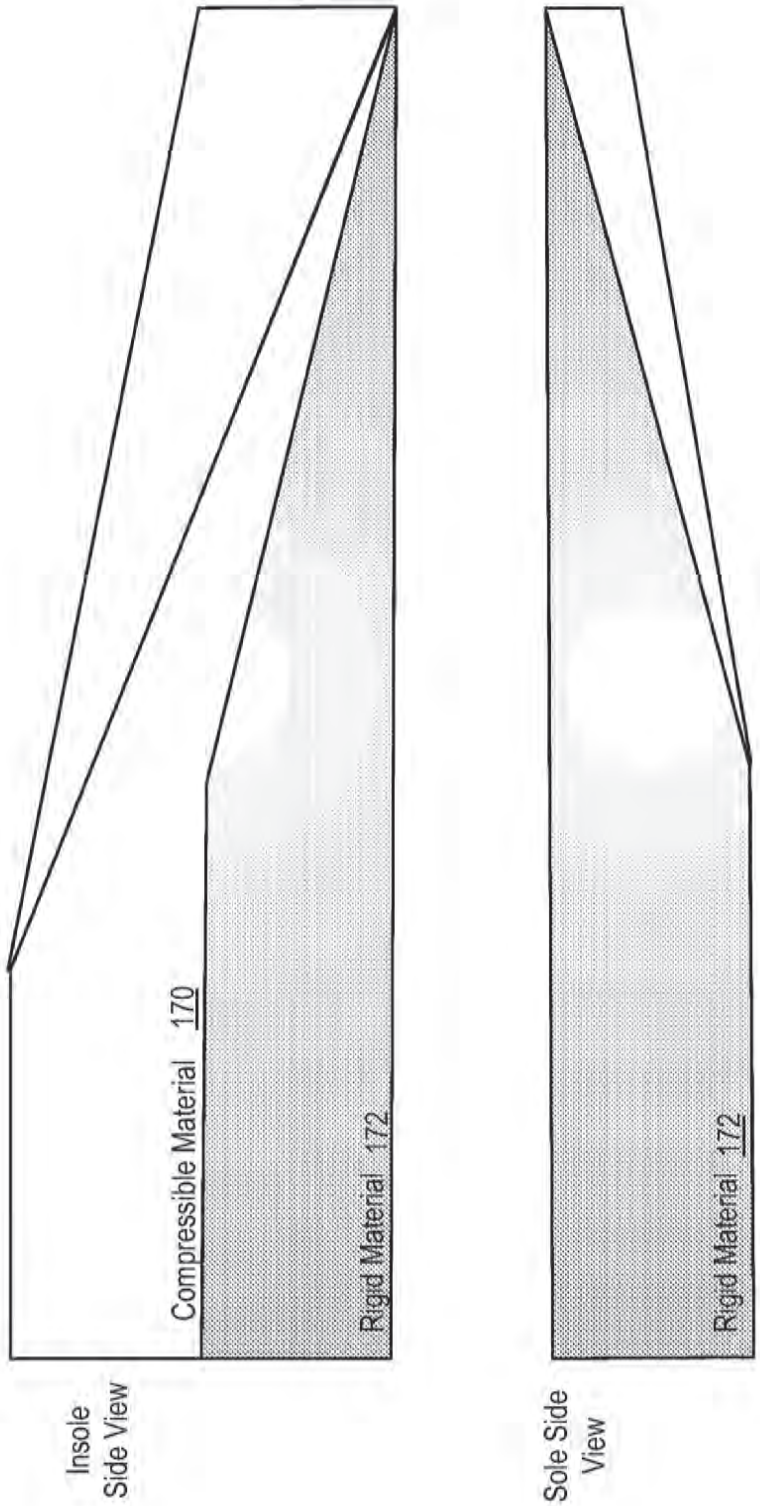

Insole
Side View
Compressible Material 170
Rigid Material 172
Sole Side
View
Rigid Material 172

FIG. 53

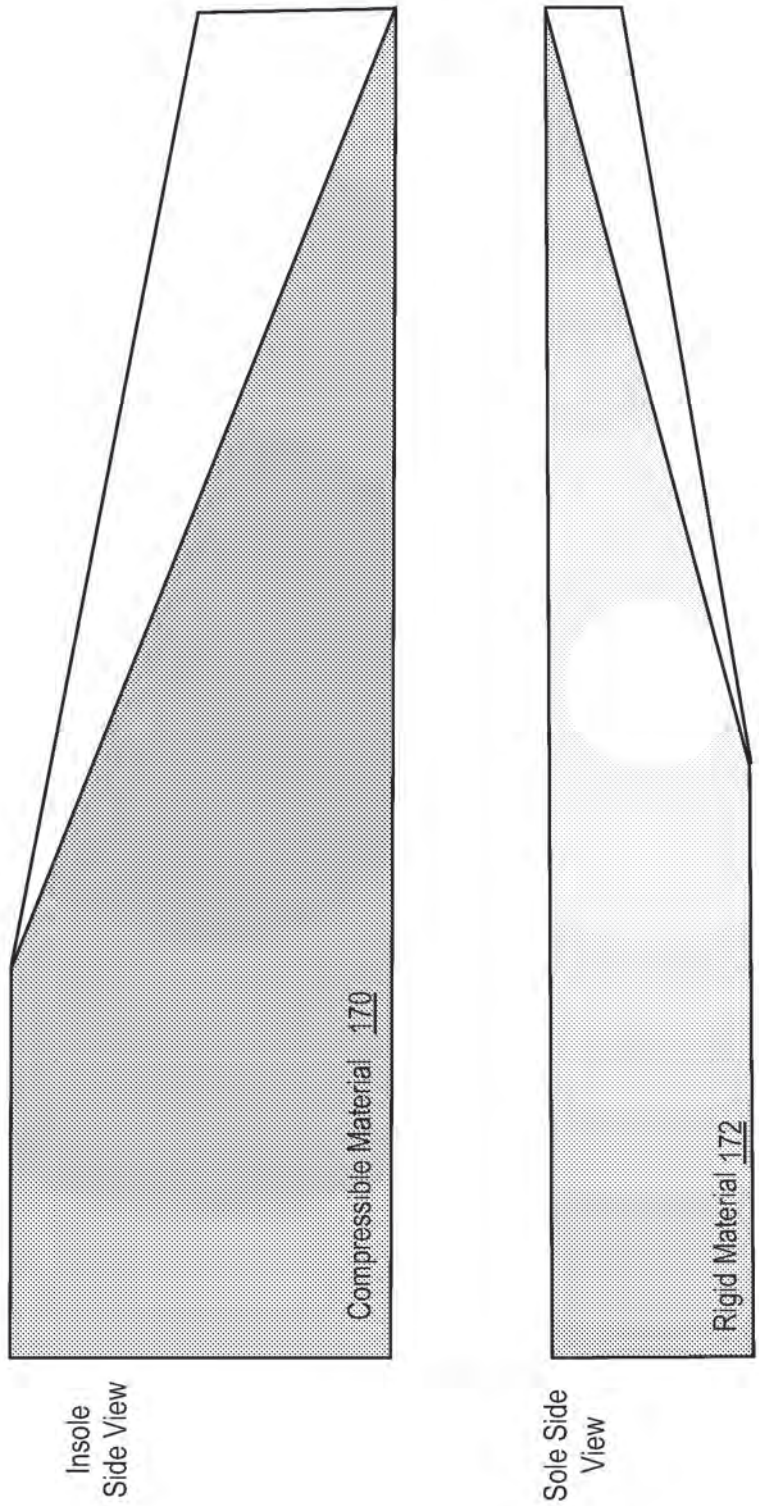
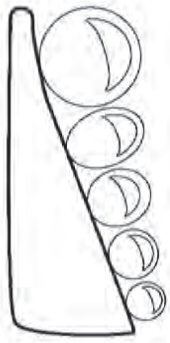
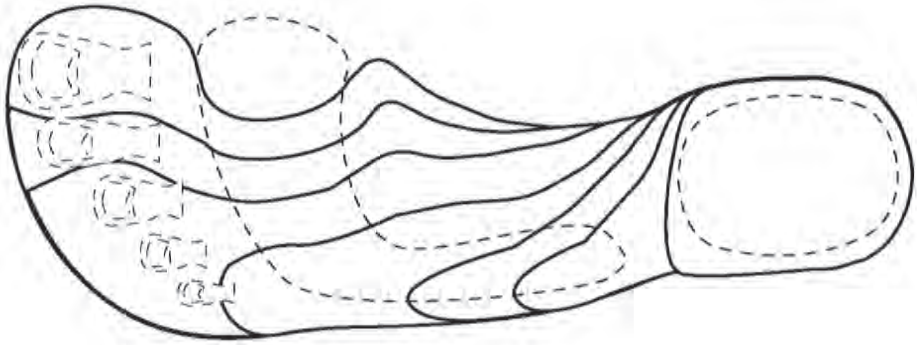

Insole
Side View
Compressible Material 170
Sole Side
View
Rigid Material 172

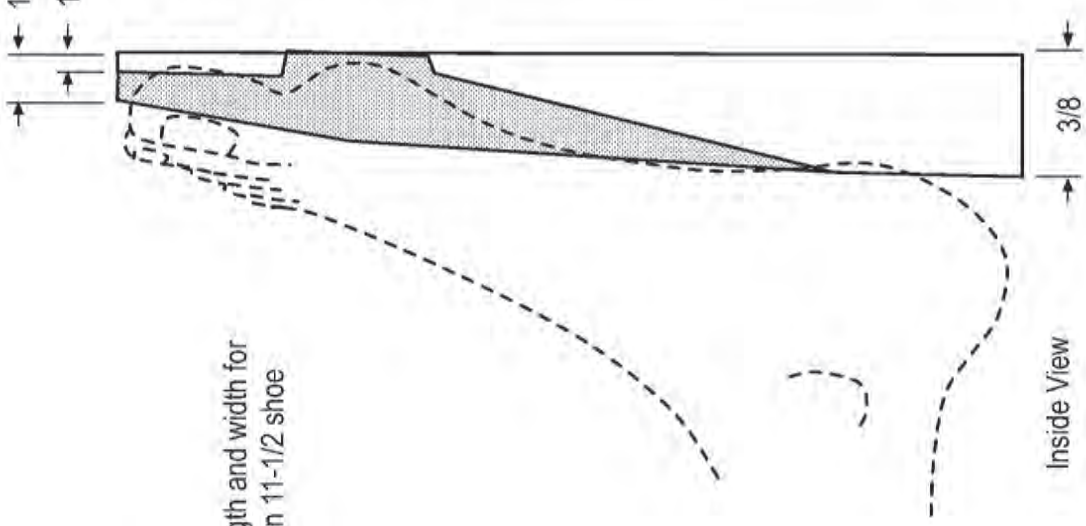
FIG. 54



Front View
FIG. 58

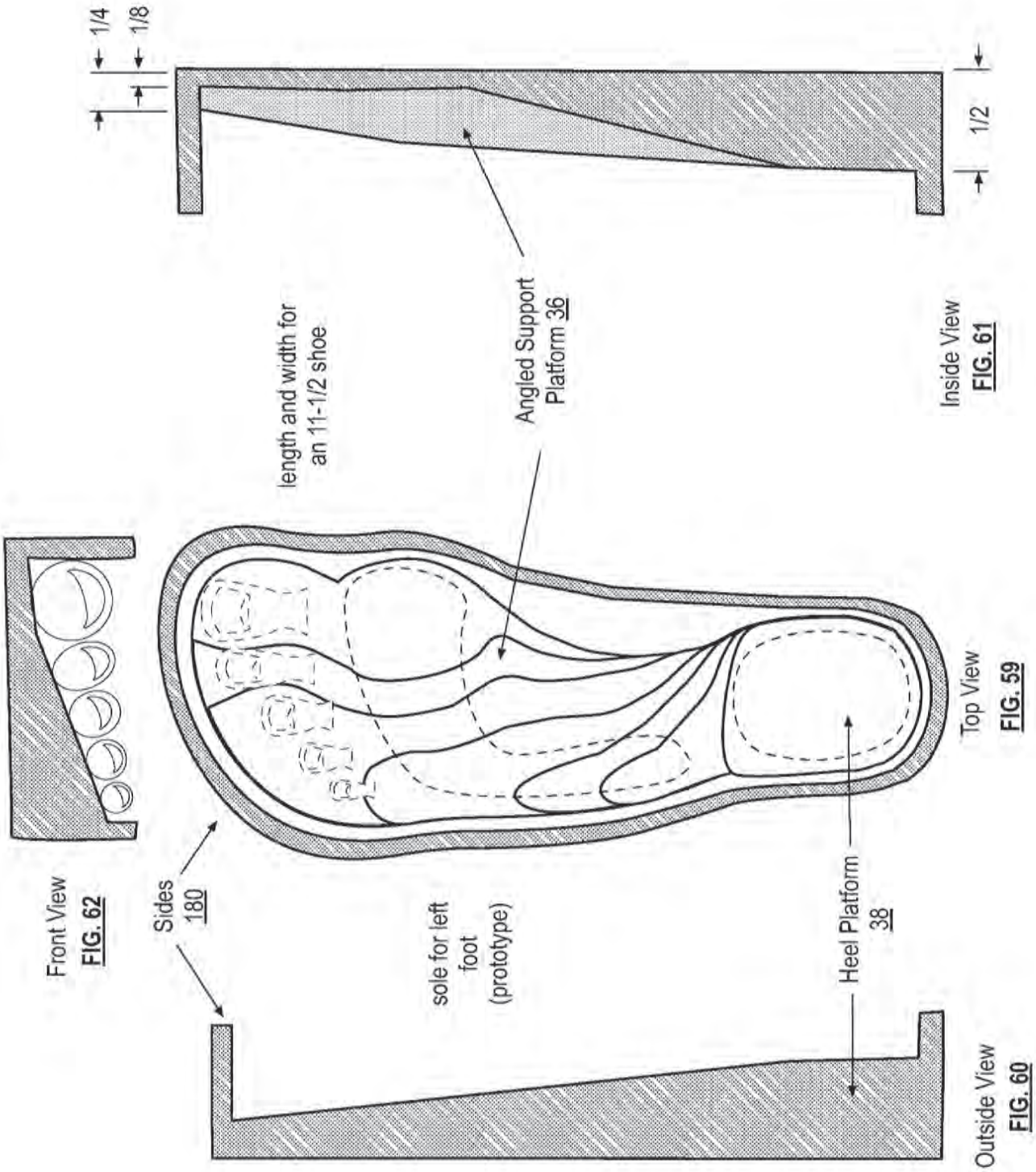


Top View
FIG. 56



Inside View
FIG. 57

Outside View
FIG. 55


1/4
1/8
1/2
Angled Support Platform 36
Inside View
FIG. 61
length and width for an 11-1/2 shoe
Top View
FIG. 59
Front View
FIG. 62
Sides 180
sole for left foot (prototype)
Heel Platform 38
Outside View
FIG. 60

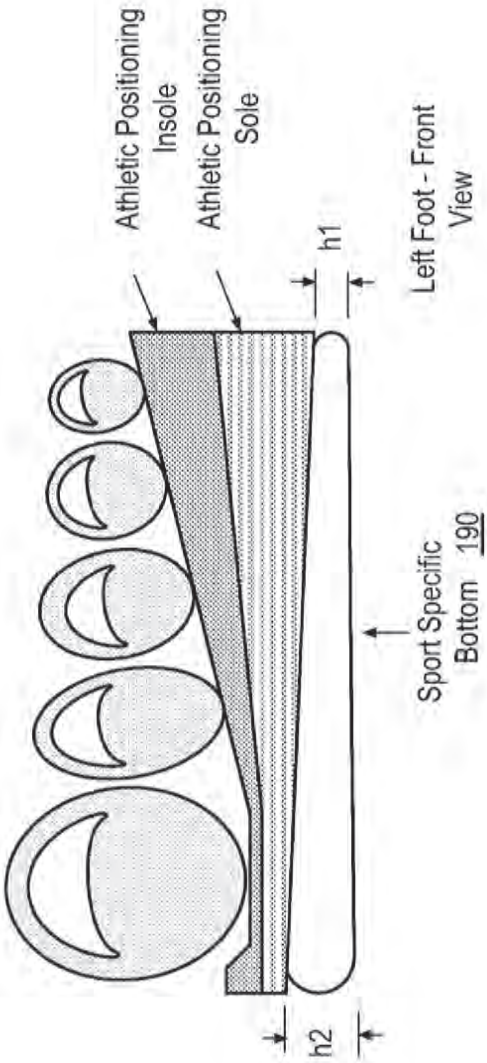

Athletic Positioning Insole
Athletic Positioning Sole
h1
Left Foot - Front View
Sport Specific Bottom 190
h2

FIG. 63

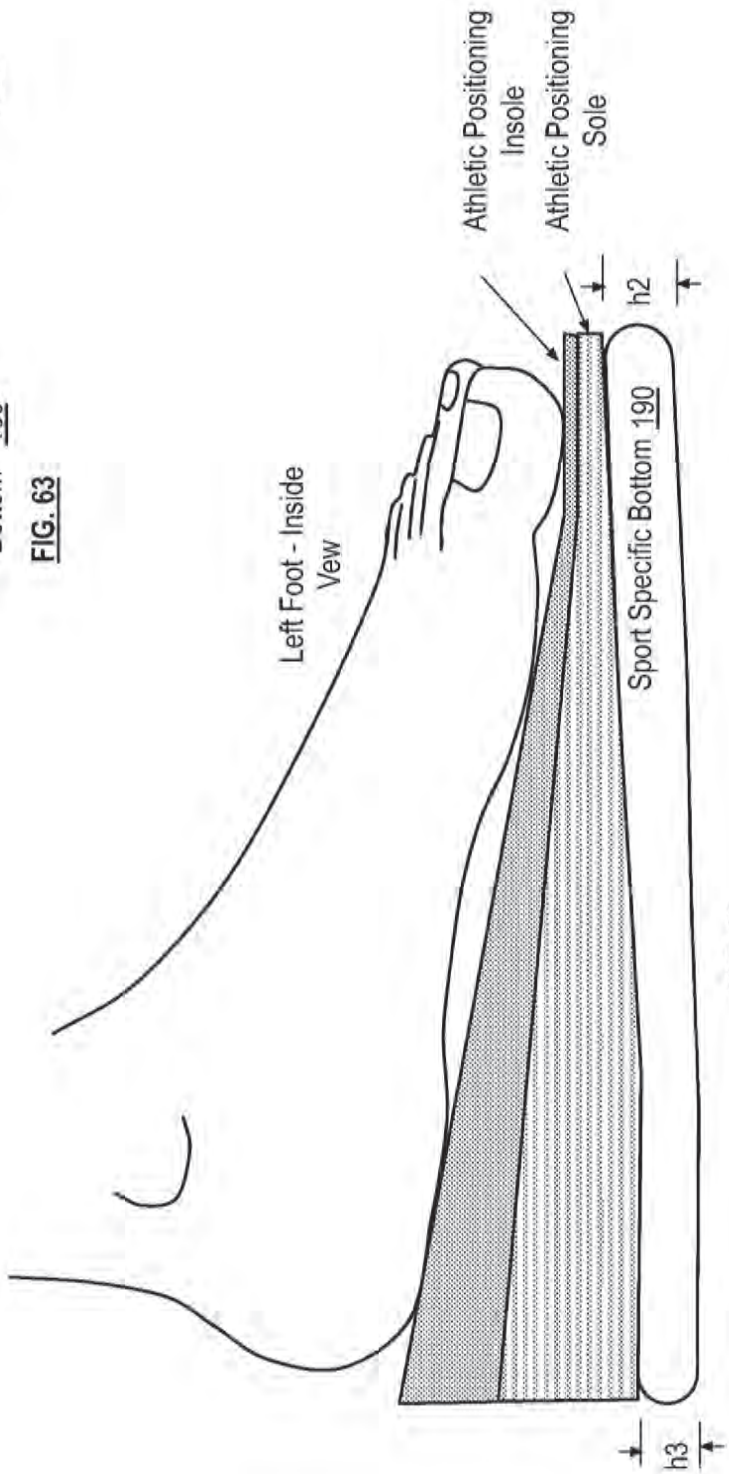

Athletic Positioning Insole
Athletic Positioning Sole
h2
Left Foot - Inside Vew
Sport Specific Bottom 190
h3

FIG. 64

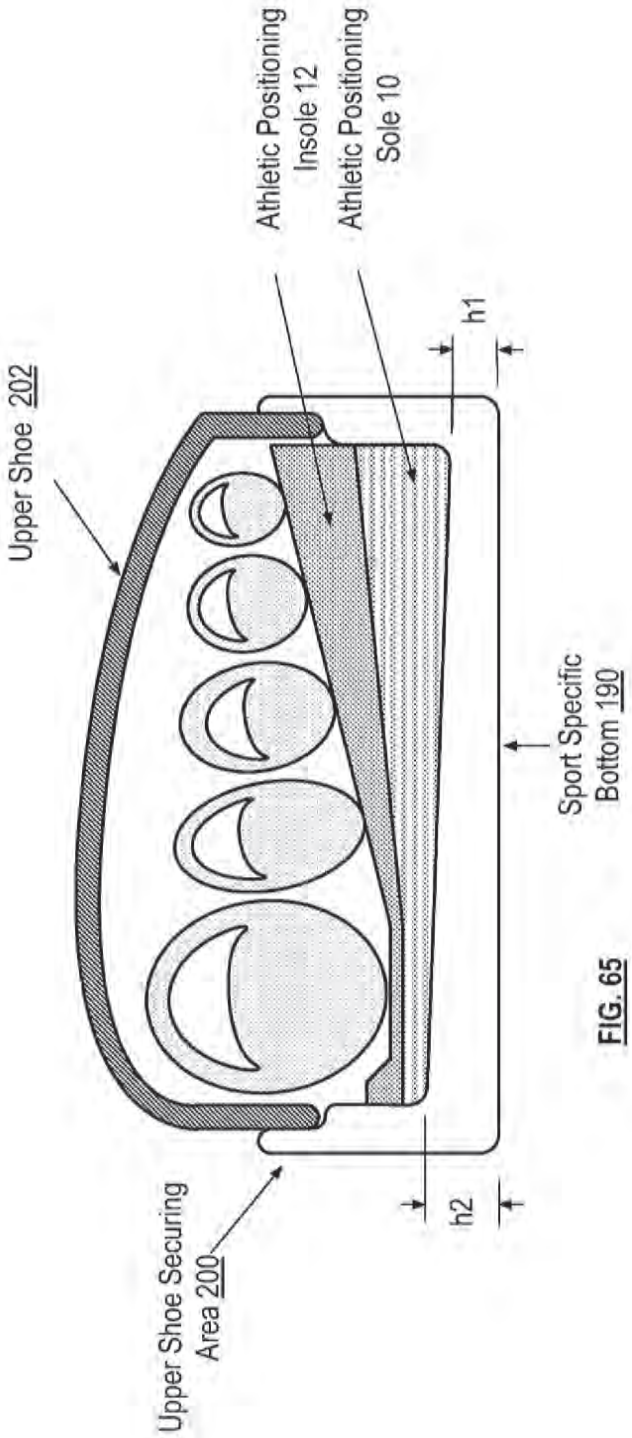
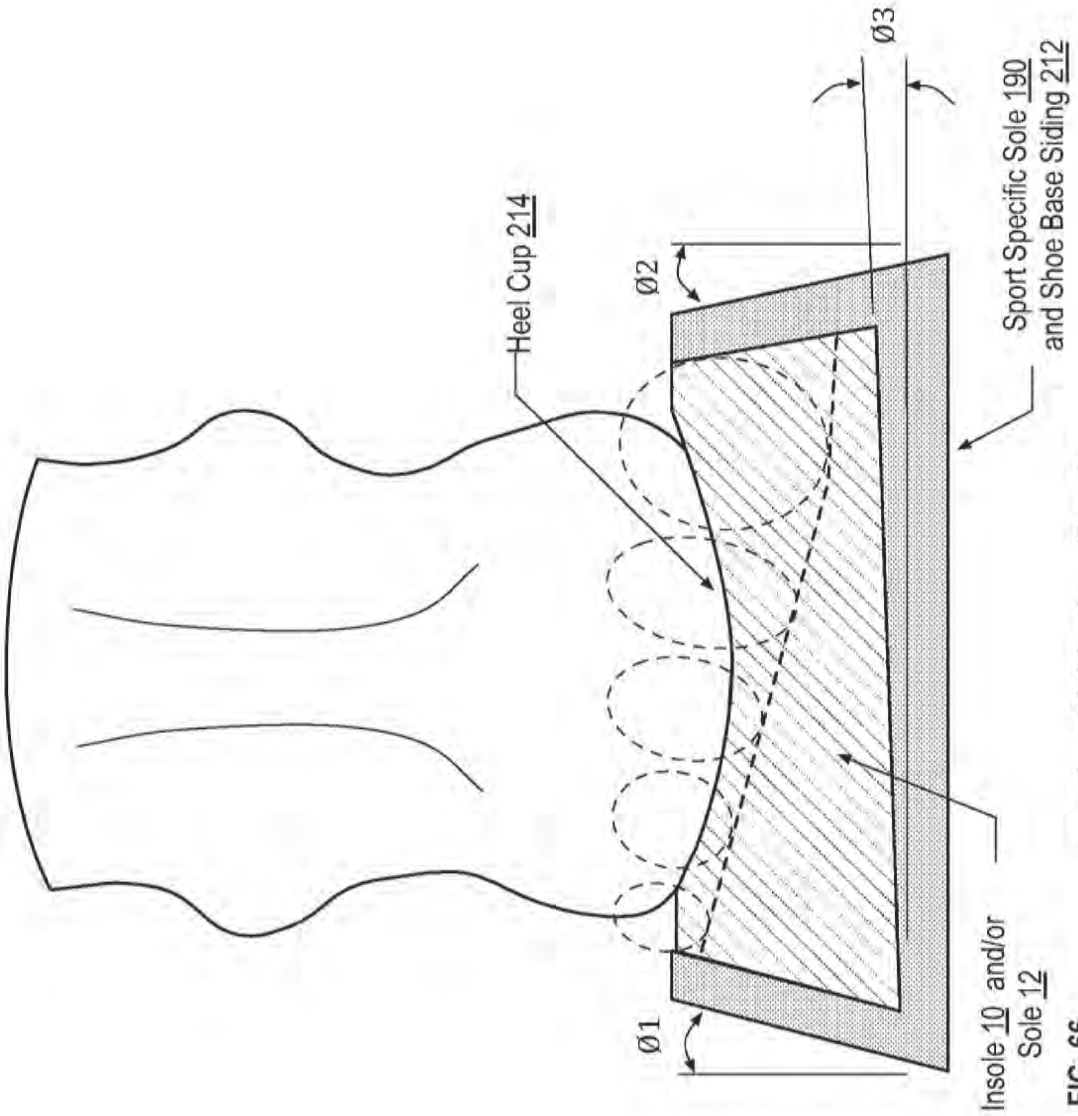


FIG. 65

Left Foot - Front View



rear view of left insole and/or sole

FIG. 66

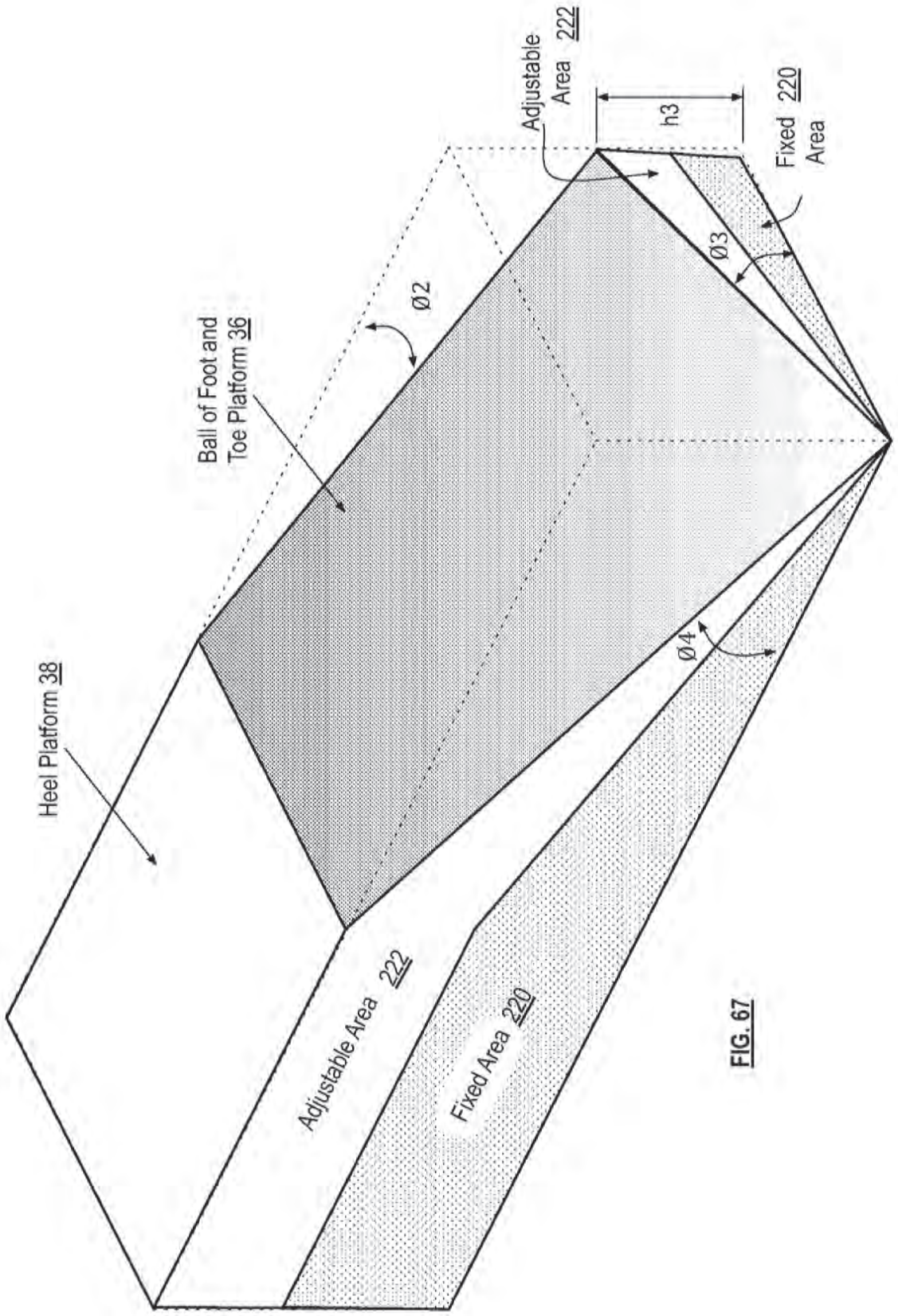
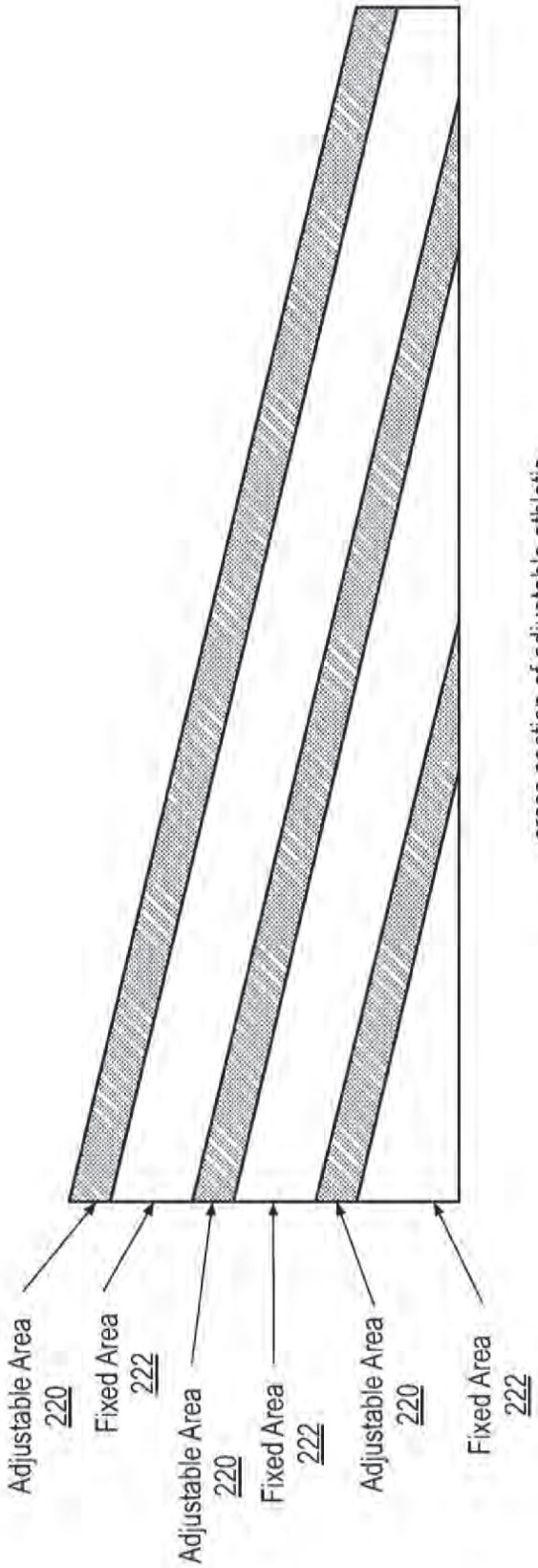
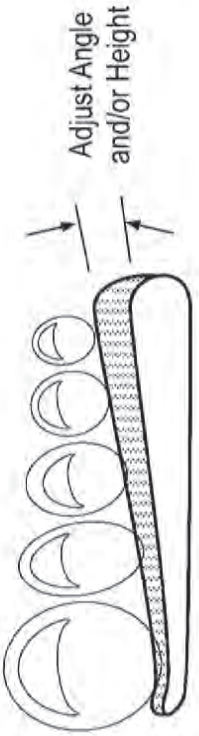

Heel Platform 38
Ball of Foot and Toe Platform 36
Ø2
Adjustable Area 222
h3
Fixed 220 Area
Ø3
Ø4
Adjustable Area 222
Fixed Area 220

FIG. 67



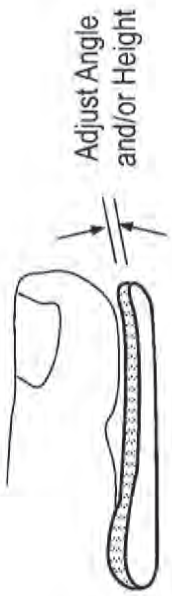
cross section of adjustable athletic positioning insole and/or sole

FIG. 68



Front View of Left Adjustable Toe Area 234

FIG. 70



Side View of Left Adjustable Toe Area 234

FIG. 71

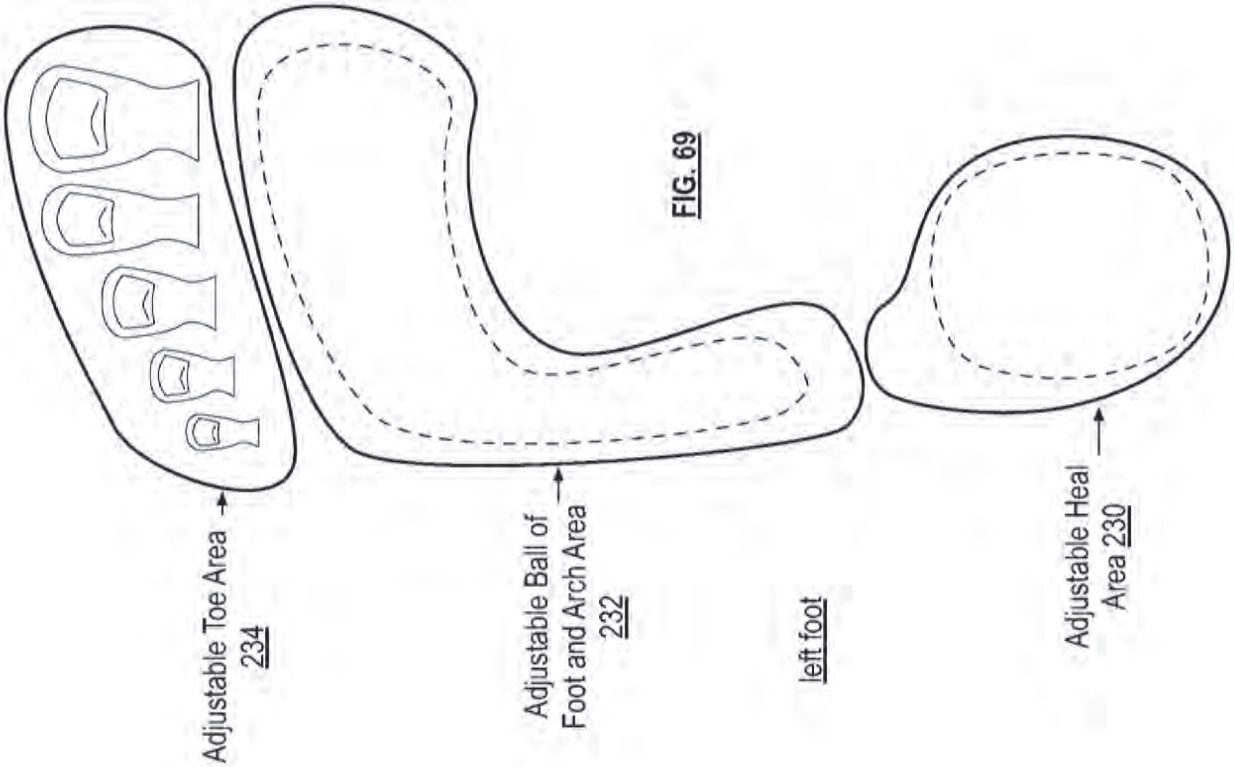


FIG. 69

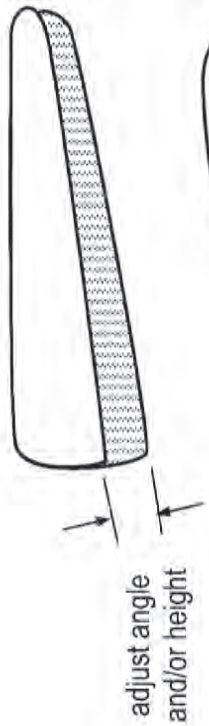
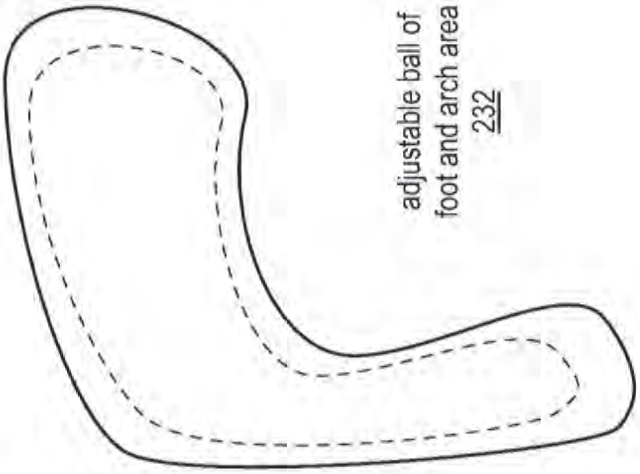


FIG. 73
Front View



Top View
FIG. 72

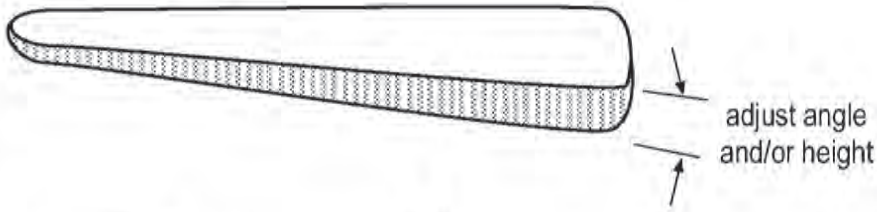
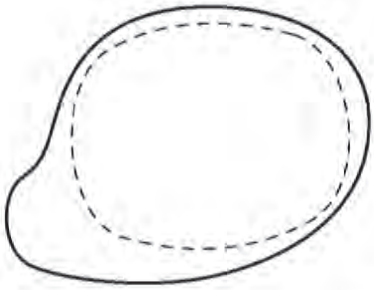
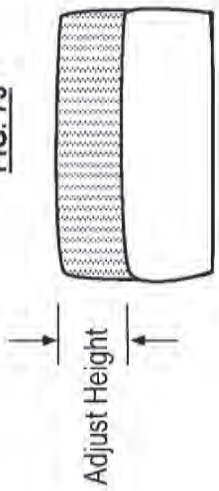


FIG. 74
Inside View



Top View
FIG. 75



Bottom View
FIG. 76

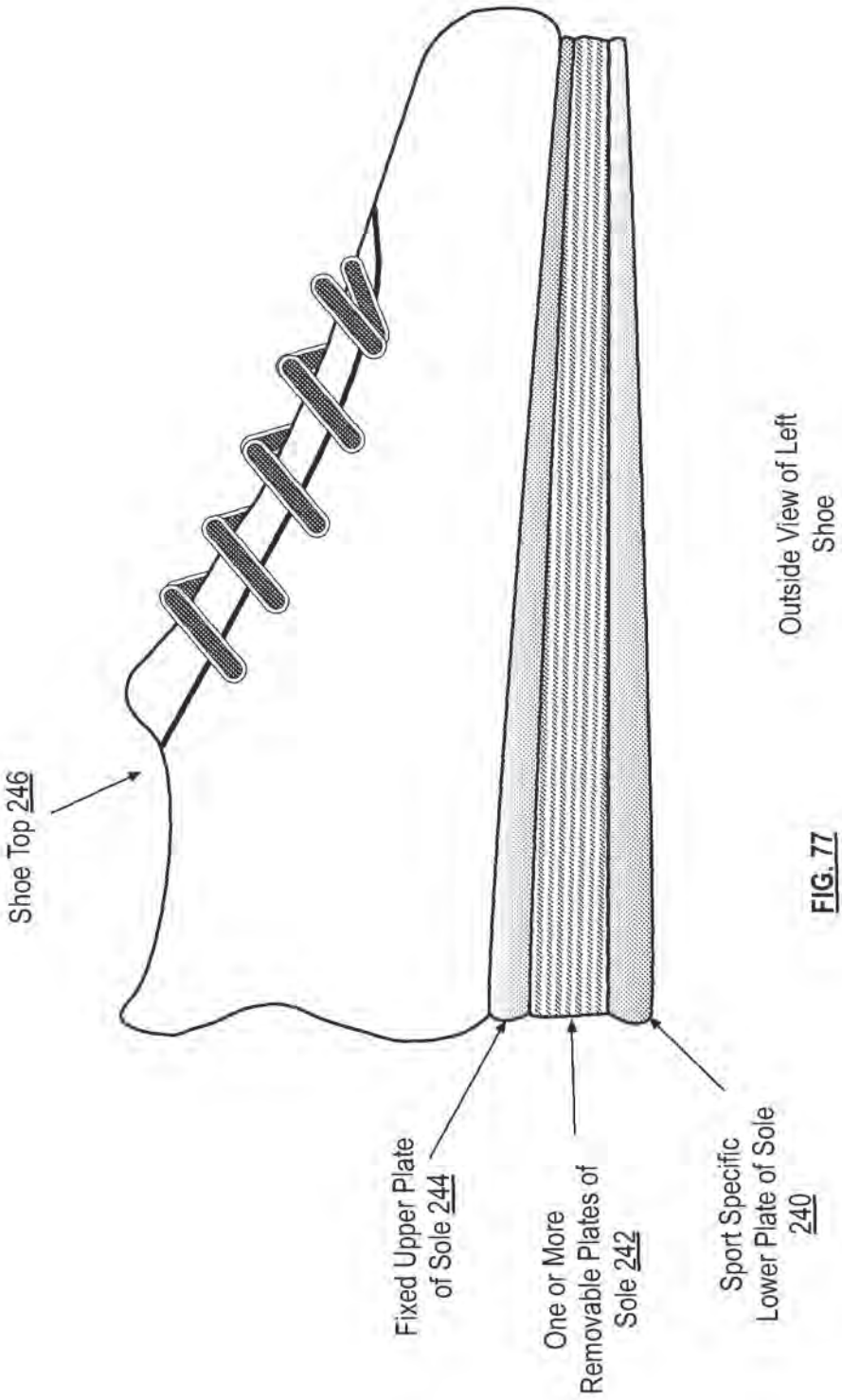

Shoe Top 246
Fixed Upper Plate of Sole 244
One or More Removable Plates of Sole 242
Sport Specific Lower Plate of Sole 240
Outside View of Left Shoe

FIG. 77

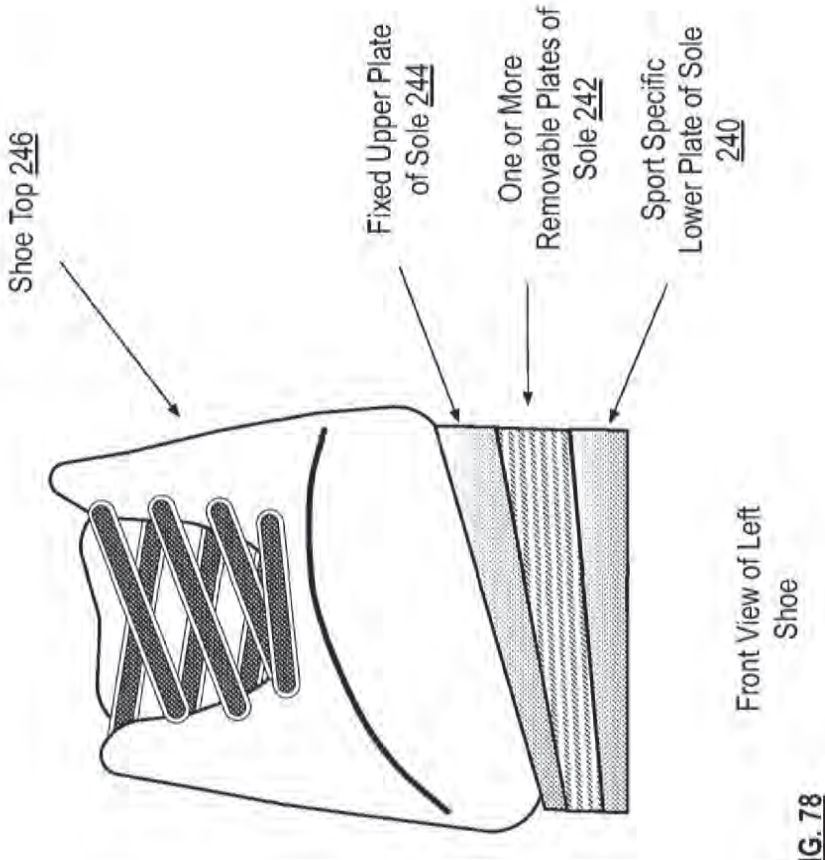

Shoe Top 246
Fixed Upper Plate of Sole 244
One or More Removable Plates of Sole 242
Sport Specific Lower Plate of Sole 240
Front View of Left Shoe

FIG. 78

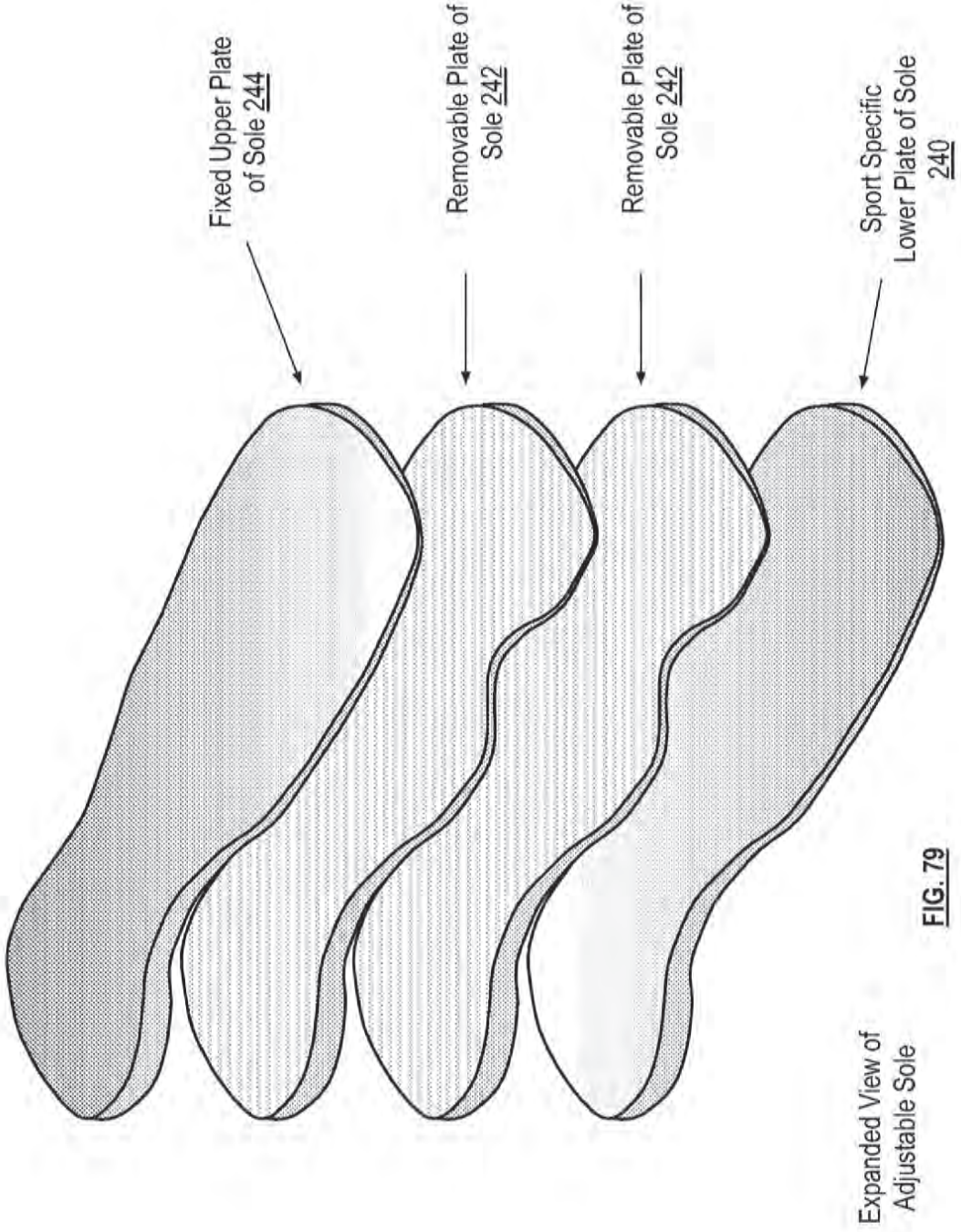

Fixed Upper Plate of Sole 244
Removable Plate of Sole 242
Removable Plate of Sole 242
Sport Specific Lower Plate of Sole 240
Expanded View of Adjustable Sole

FIG. 79

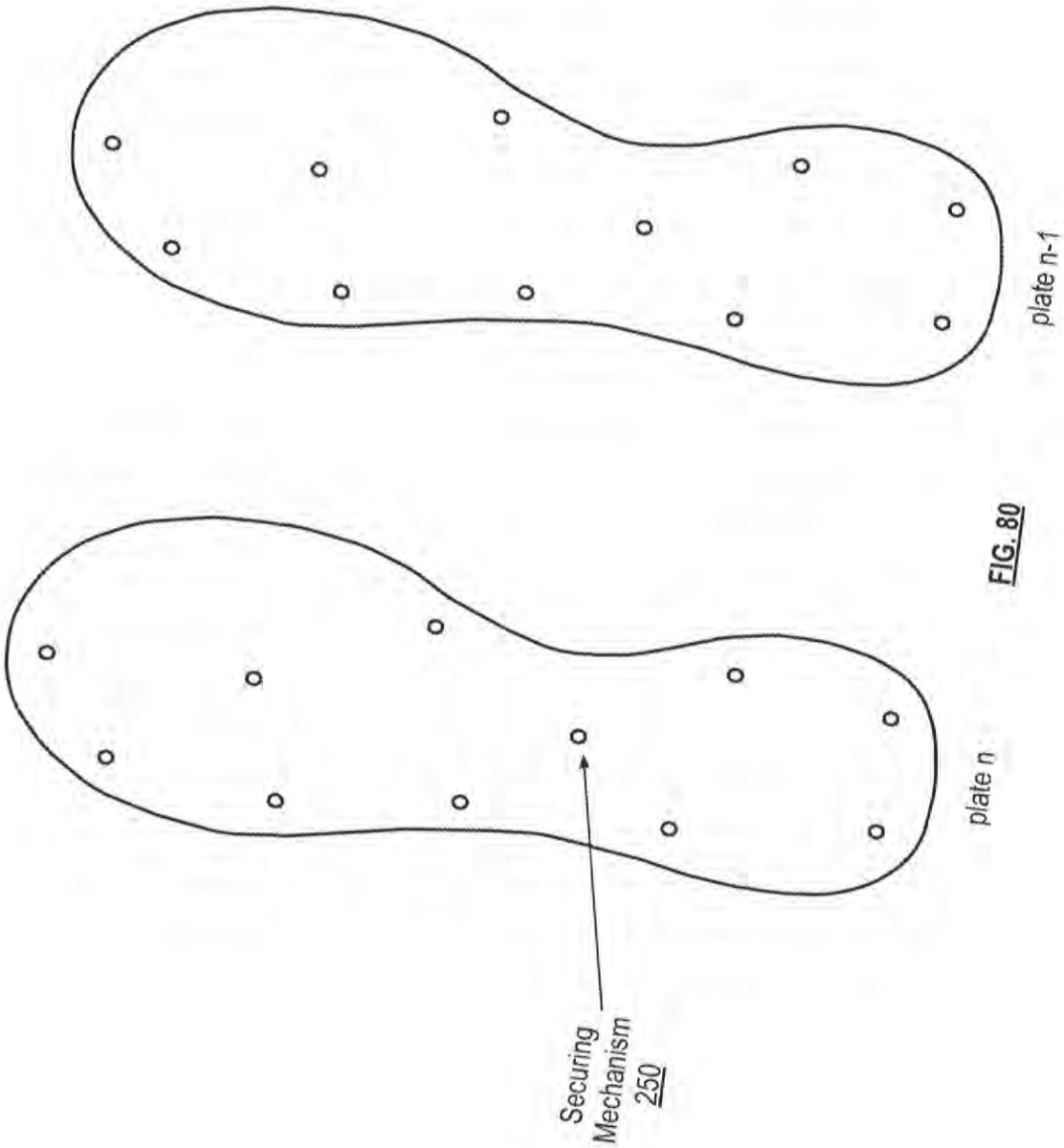


FIG. 80

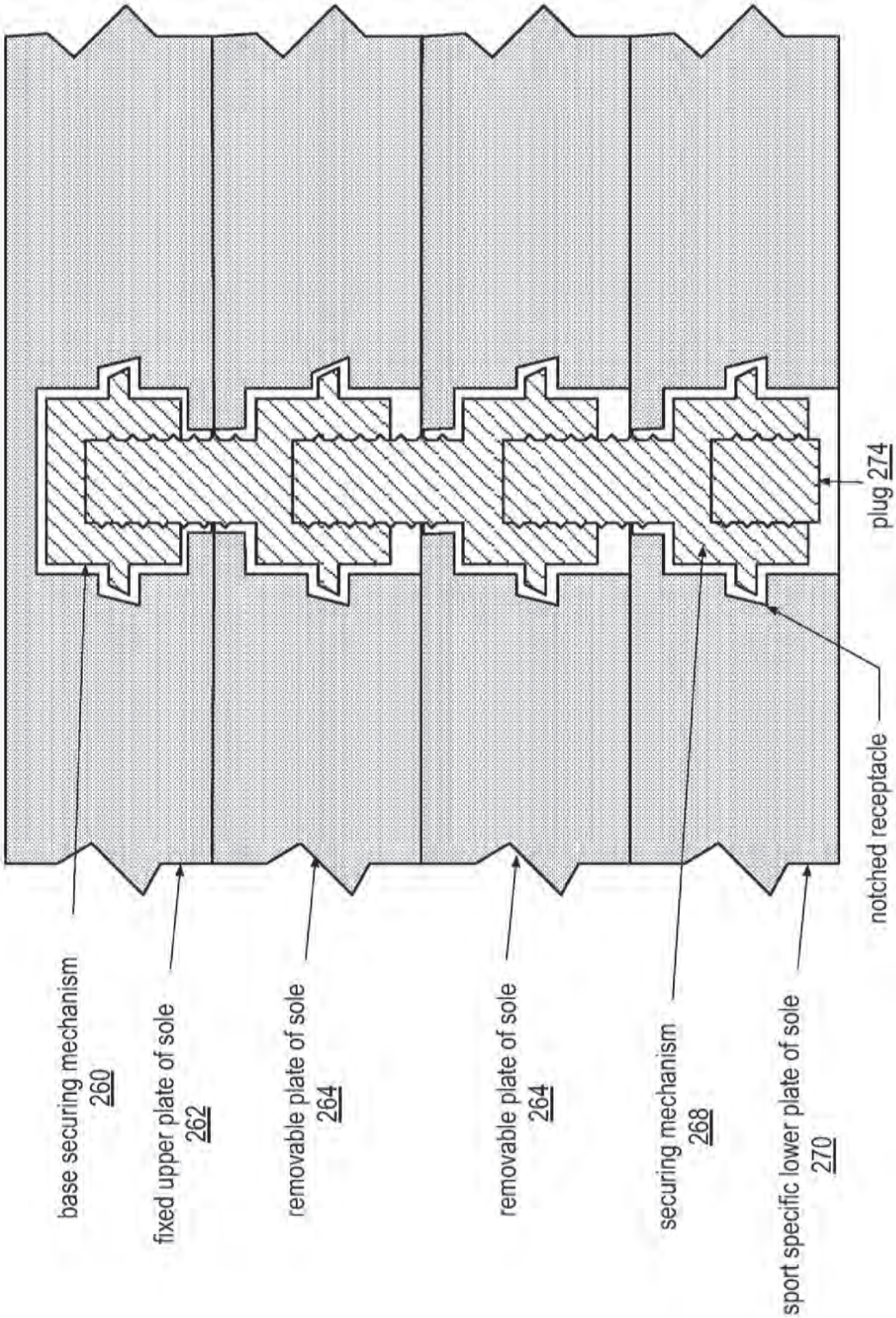

base securing mechanism 260
fixed upper plate of sole 262
removable plate of sole 264
removable plate of sole 264
securing mechanism 268
sport specific lower plate of sole 270
notched receptacle 272
plug 274

FIG. 81

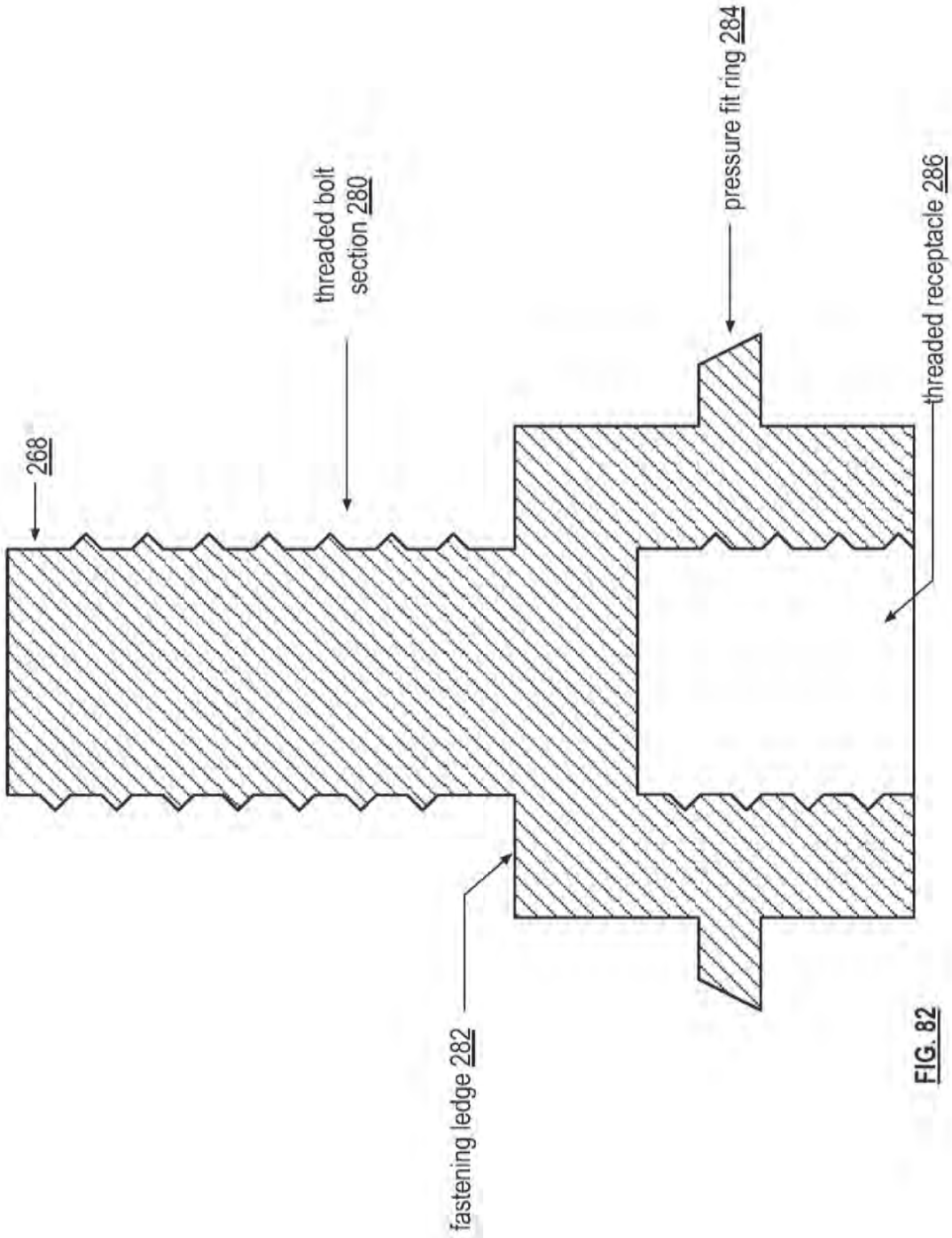

268
threaded bolt section 280
fastening ledge 282
pressure fit ring 284
threaded receptacle 286

FIG. 82

keyhole receptacle 290
bottom view

FIG. 84

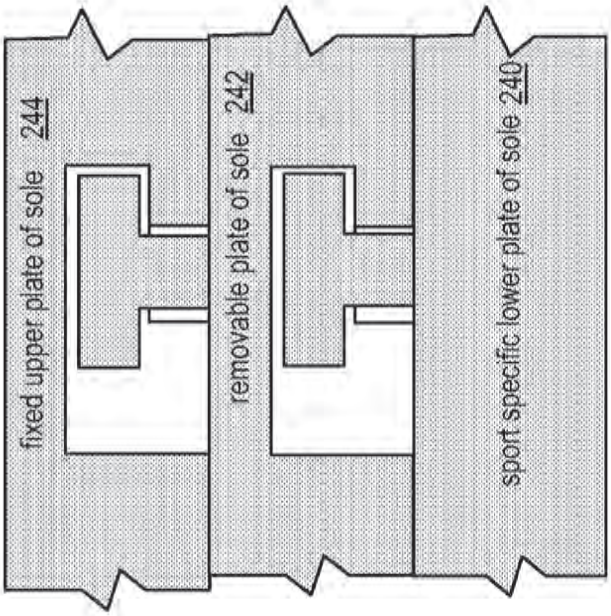
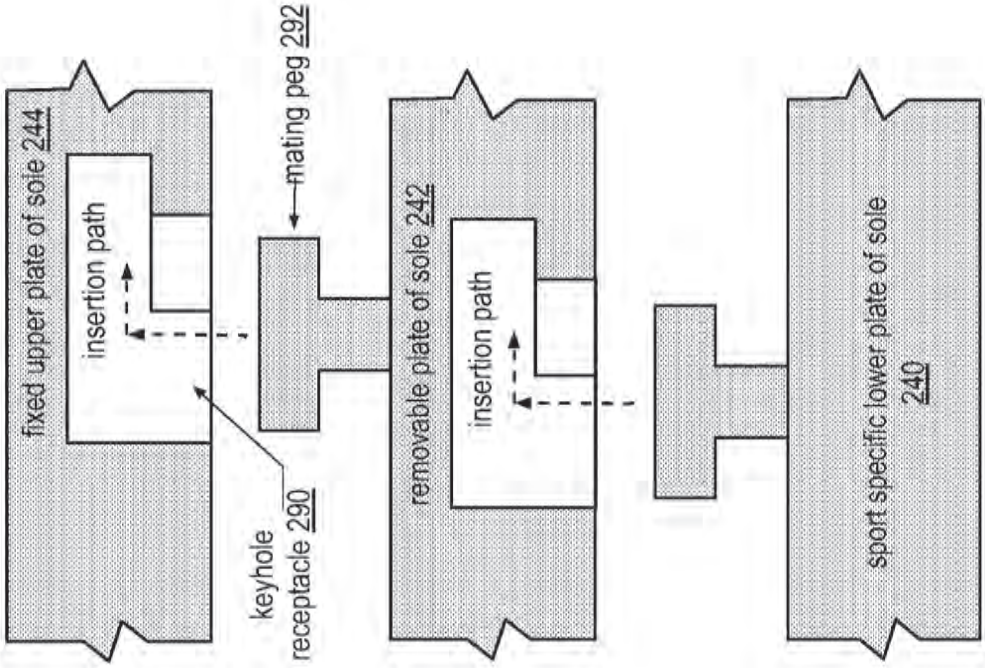


FIG. 85



securing mechanism 268

FIG. 83

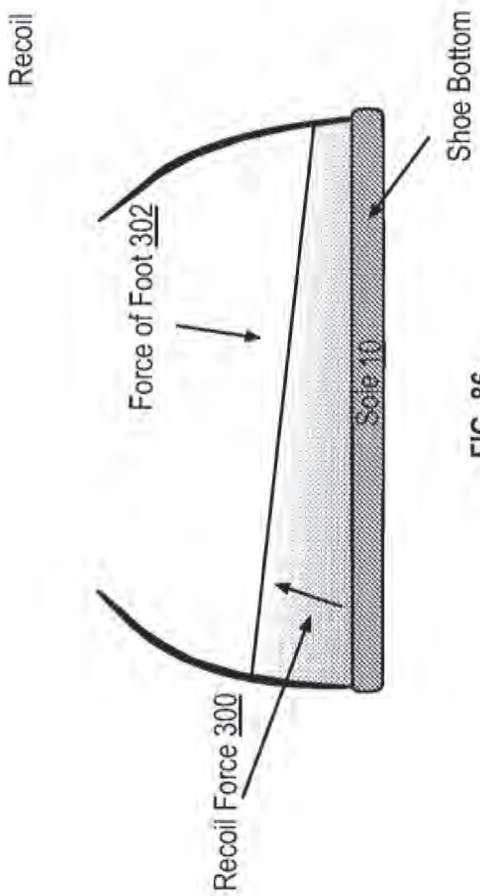

Recoil
Force of Foot 302
Recoil Force 300
Sole 10
Shoe Bottom

FIG. 86

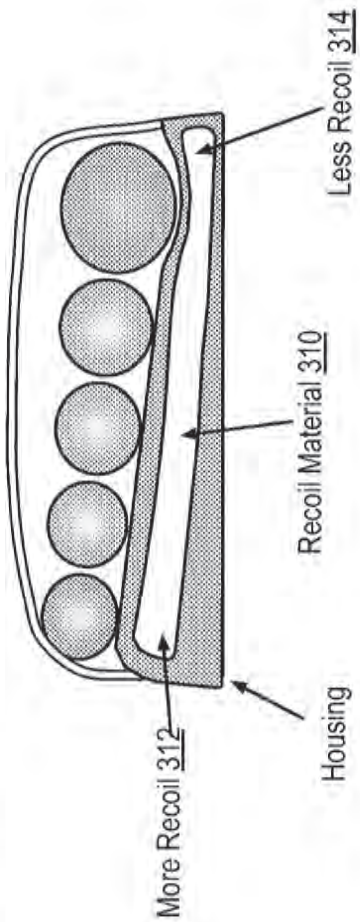

Less Recoil 314
Recoil Material 310
More Recoil 312
Housing

FIG.87

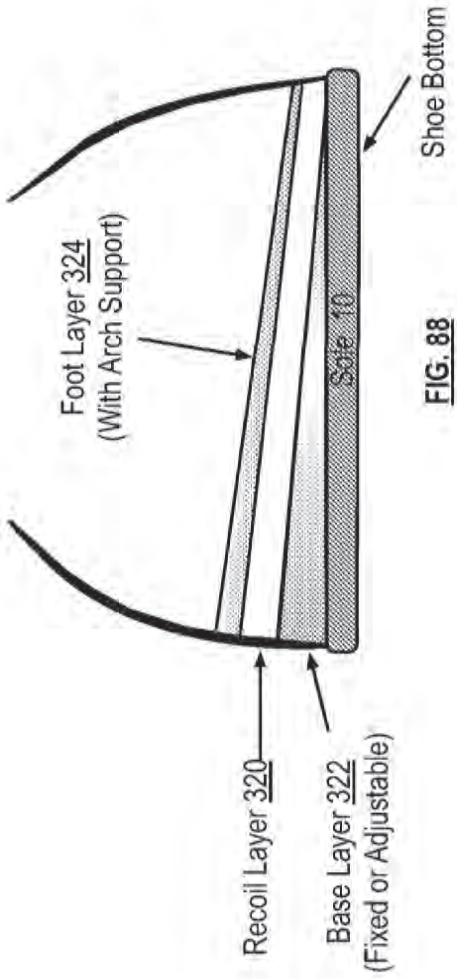

Foot Layer 324
(With Arch Support)
Recoil Layer 320
Base Layer 322
(Fixed or Adjustable)
Sole 10
Shoe Bottom

FIG. 88

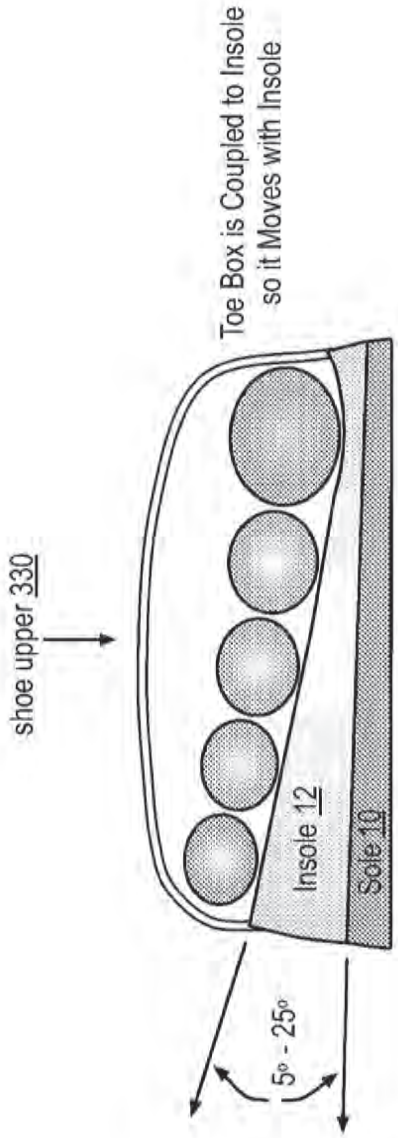

shoe upper 330
Toe Box is Coupled to Insole
so it Moves with Insole
Insole 12
Sole 10
5° - 25°

FIG. 89

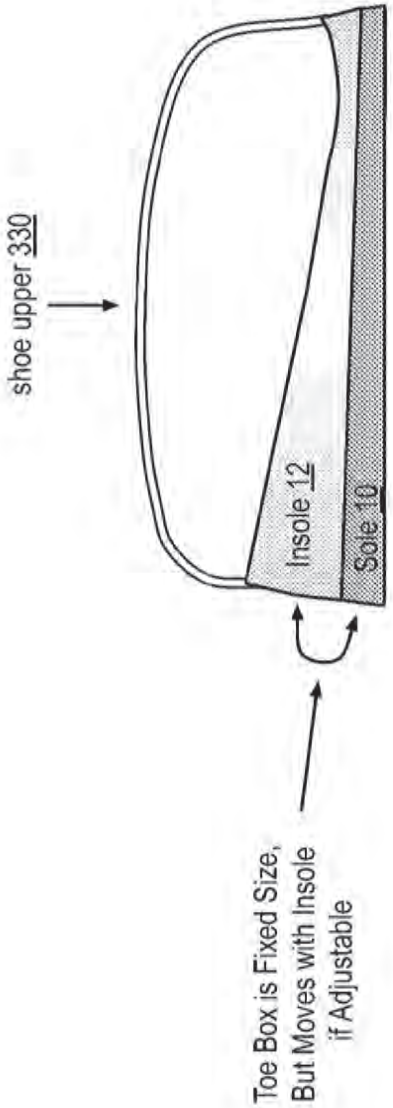

shoe upper 330
Insole 12
Sole 10
Toe Box is Fixed Size,
But Moves with Insole
if Adjustable

FIG. 90

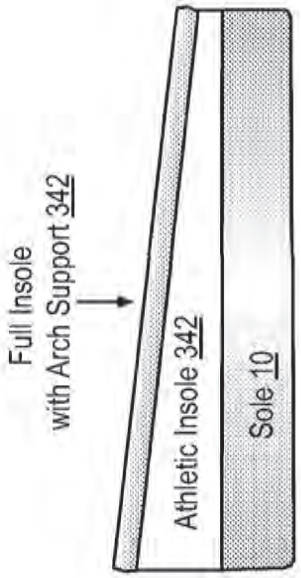

Full Insole
with Arch Support 342
Athletic Insole 342
Sole 10

FIG. 91

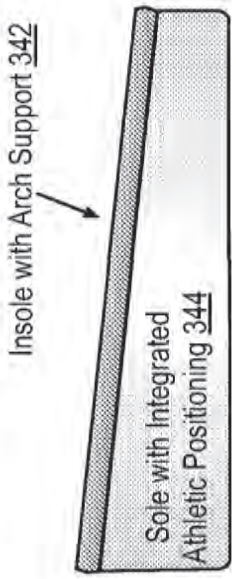

Insole with Arch Support 342
Sole with Integrated
Athletic Positioning 344

FIG. 92

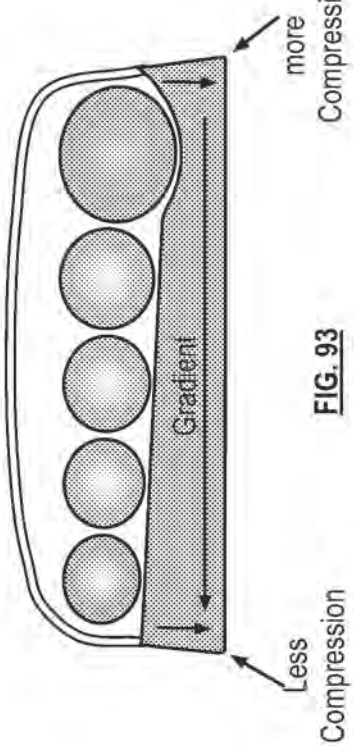

more
Compression
Gradient
Less
Compression

FIG. 93

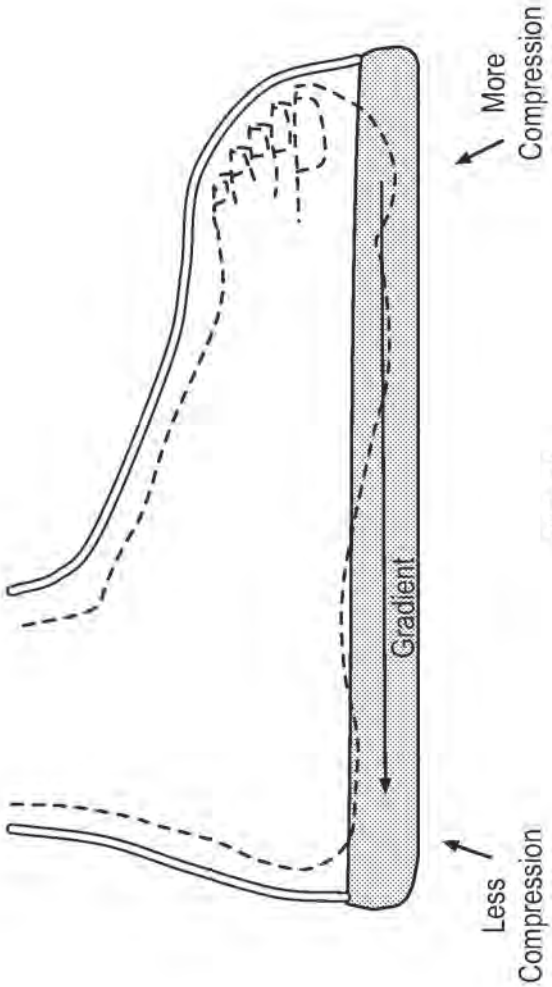

More
Compression
Gradient
Less
Compression

FIG. 94

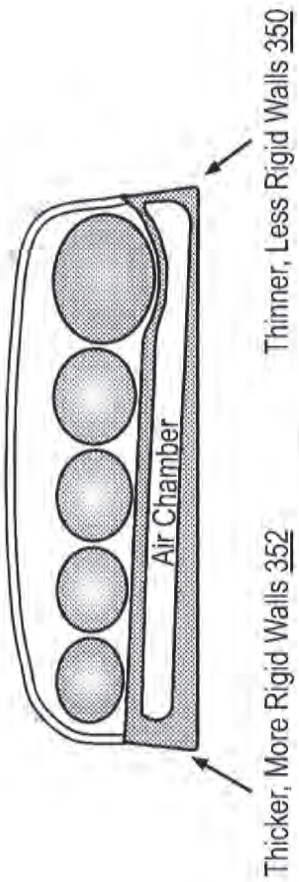

Thicker, More Rigid Walls 352
Air Chamber
Thinner, Less Rigid Walls 350

FIG. 95

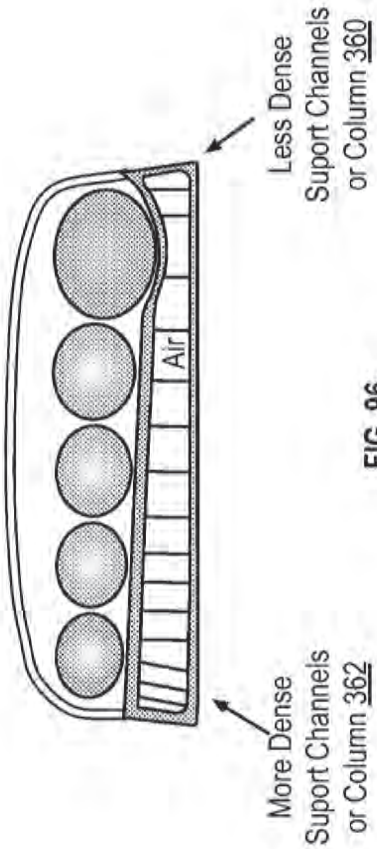

More Dense
Suport Channels
or Column 362
Air
Less Dense
Suport Channels
or Column 360

FIG. 96

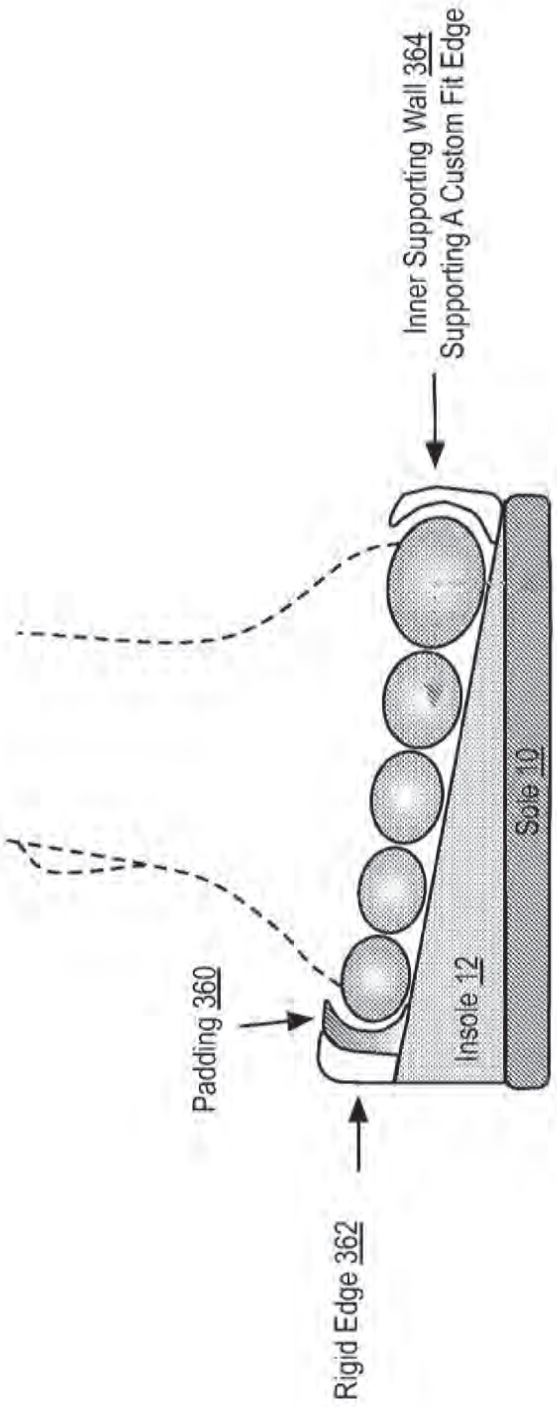

Inner Supporting Wall 364
Supporting A Custom Fit Edge
Padding 360
Rigid Edge 362
Insole 12
Sole 10

FIG. 97

insole 12
sole 10
Compressible
Rigid

FIG. 98

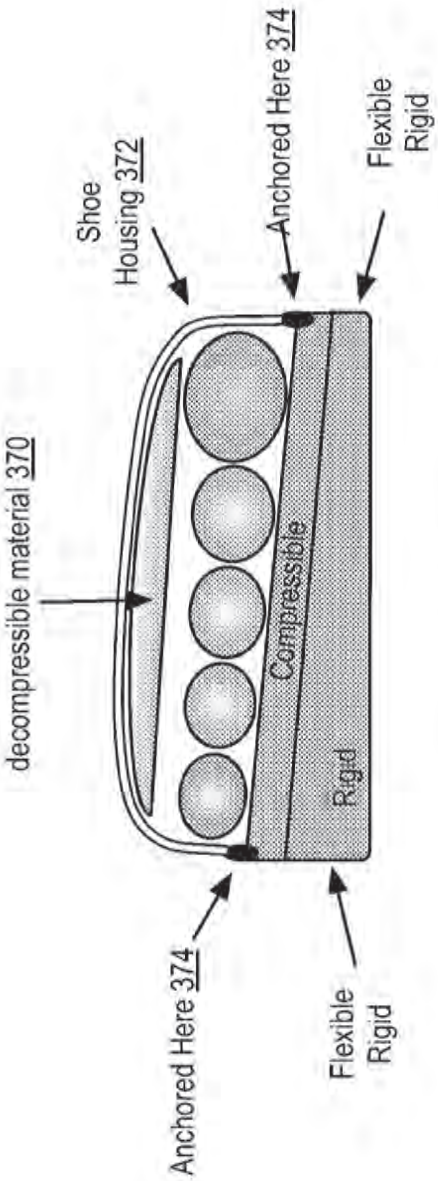

Shoe
Housing 372
Anchored Here 374
Flexible
Rigid
decompressible material 370
Compressible
Rigid
Anchored Here 374
Flexible
Rigid

FIG. 99

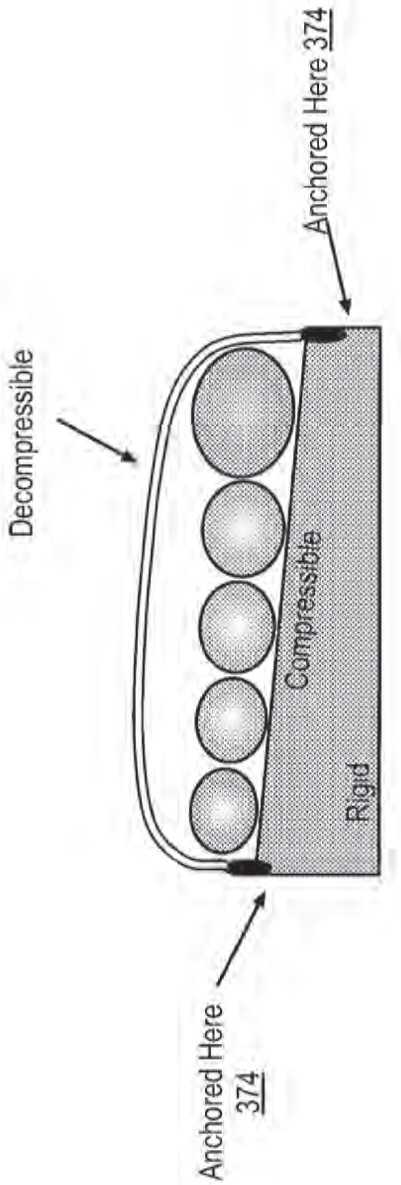
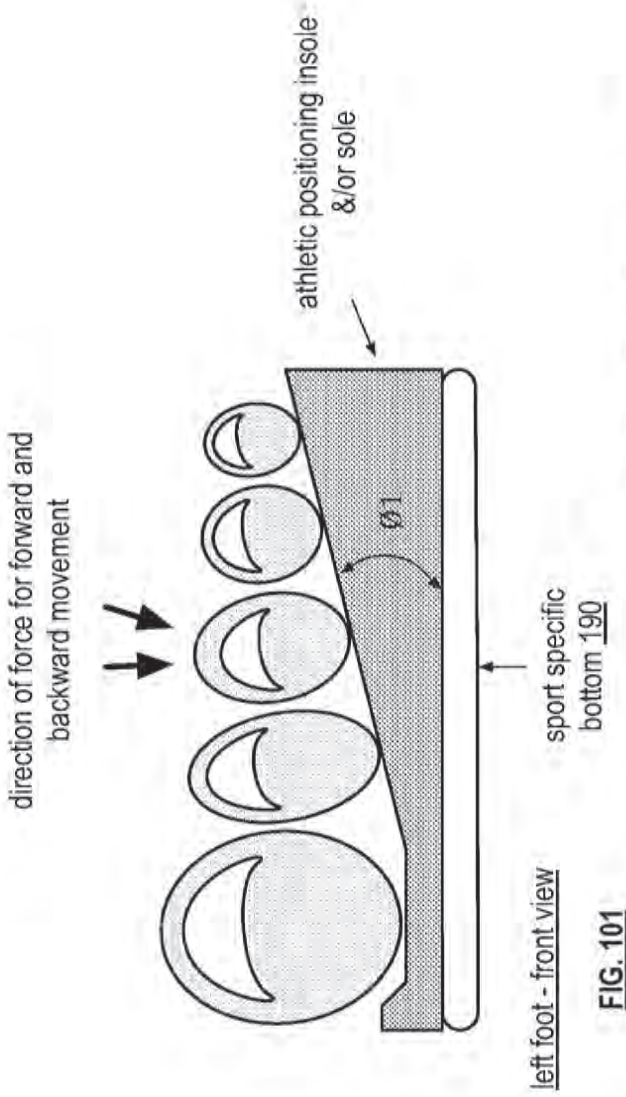


FIG. 100

Sole Front Cross Sectional View



left foot - front view

FIG. 101

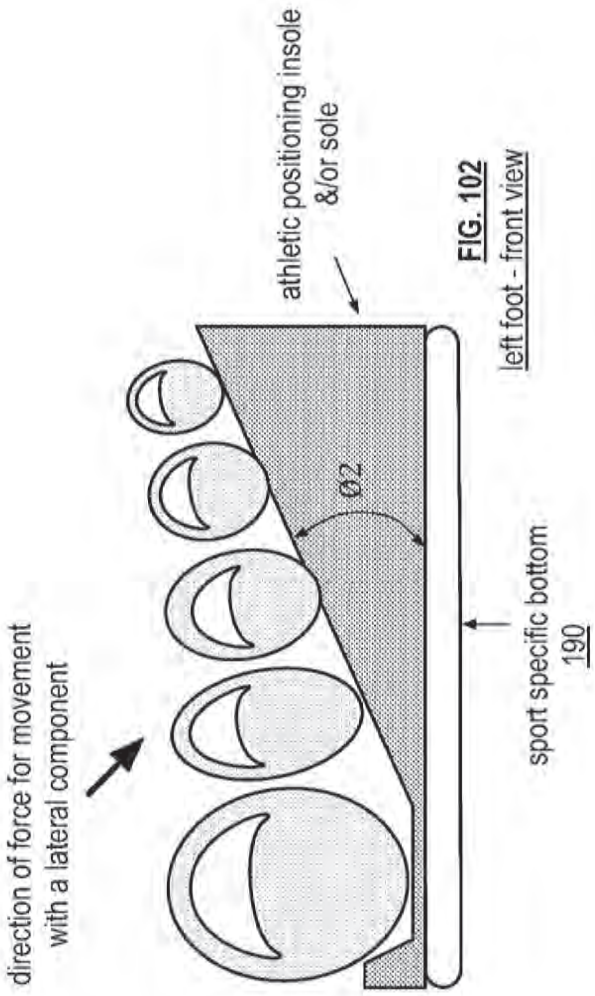


FIG. 102

left foot - front view

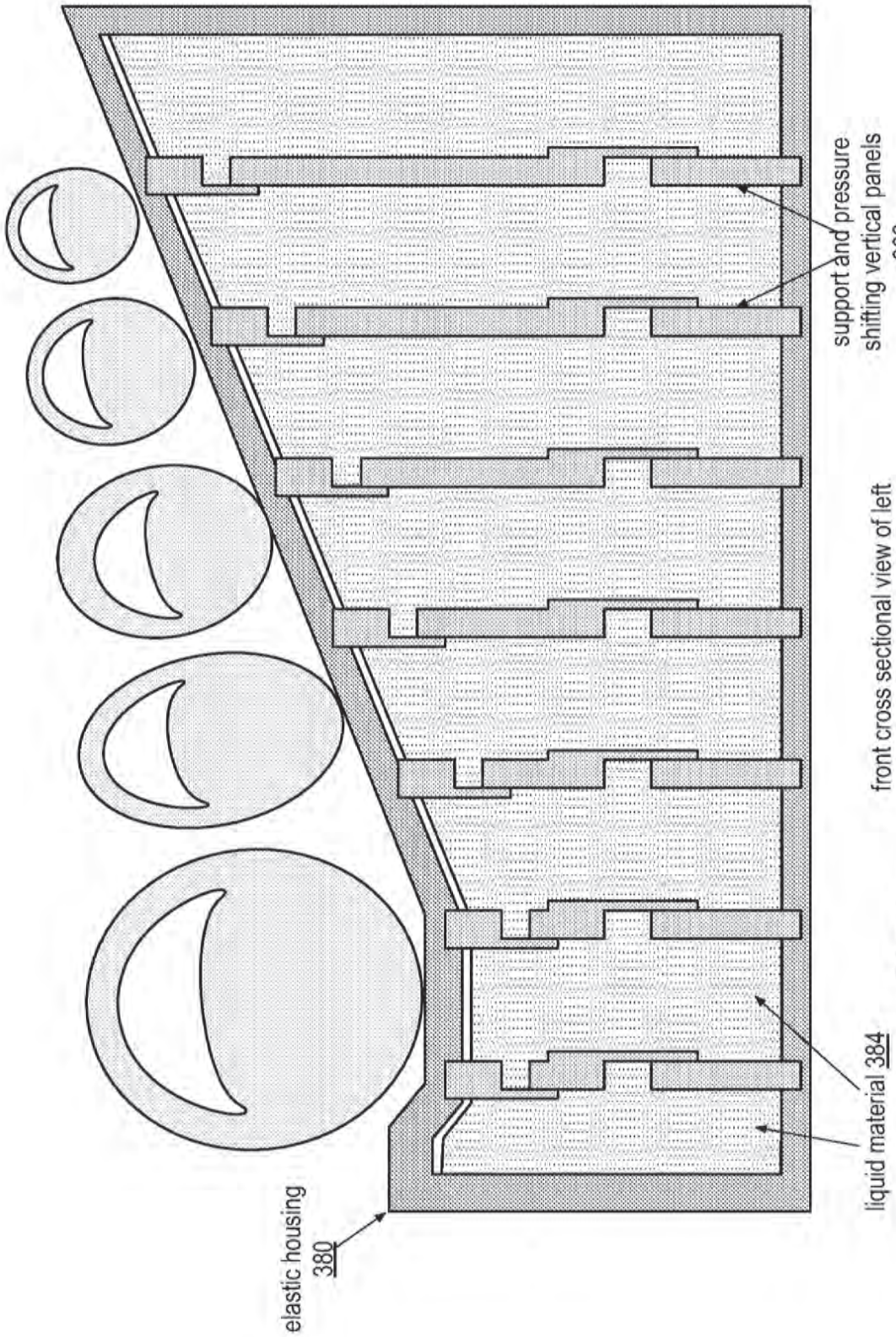


FIG. 103

front cross sectional view of left insole 12 and/or sole 10 (no load steady state condition)

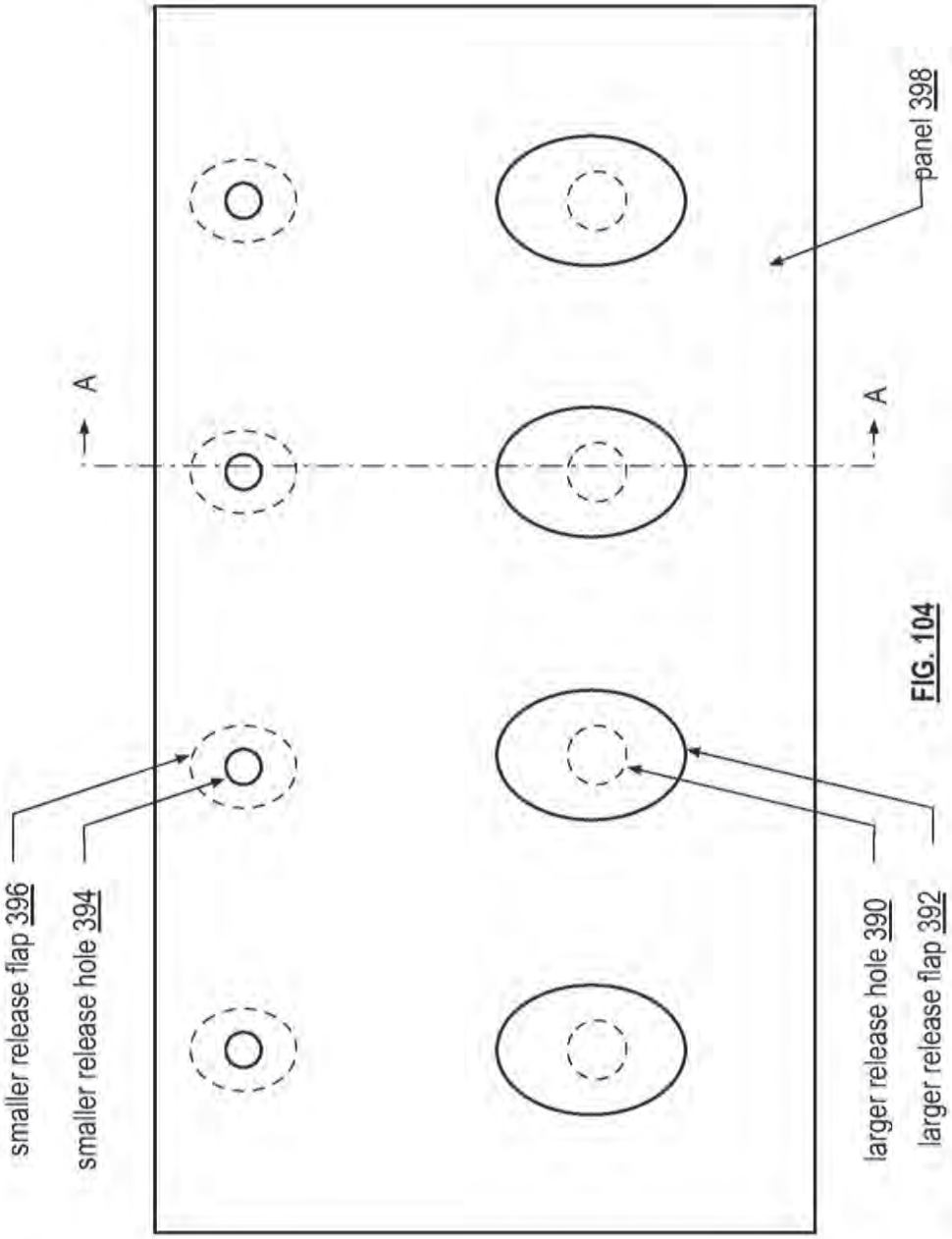


FIG. 104

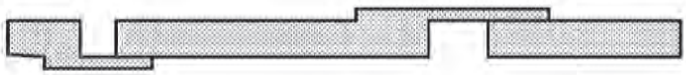


FIG. 105

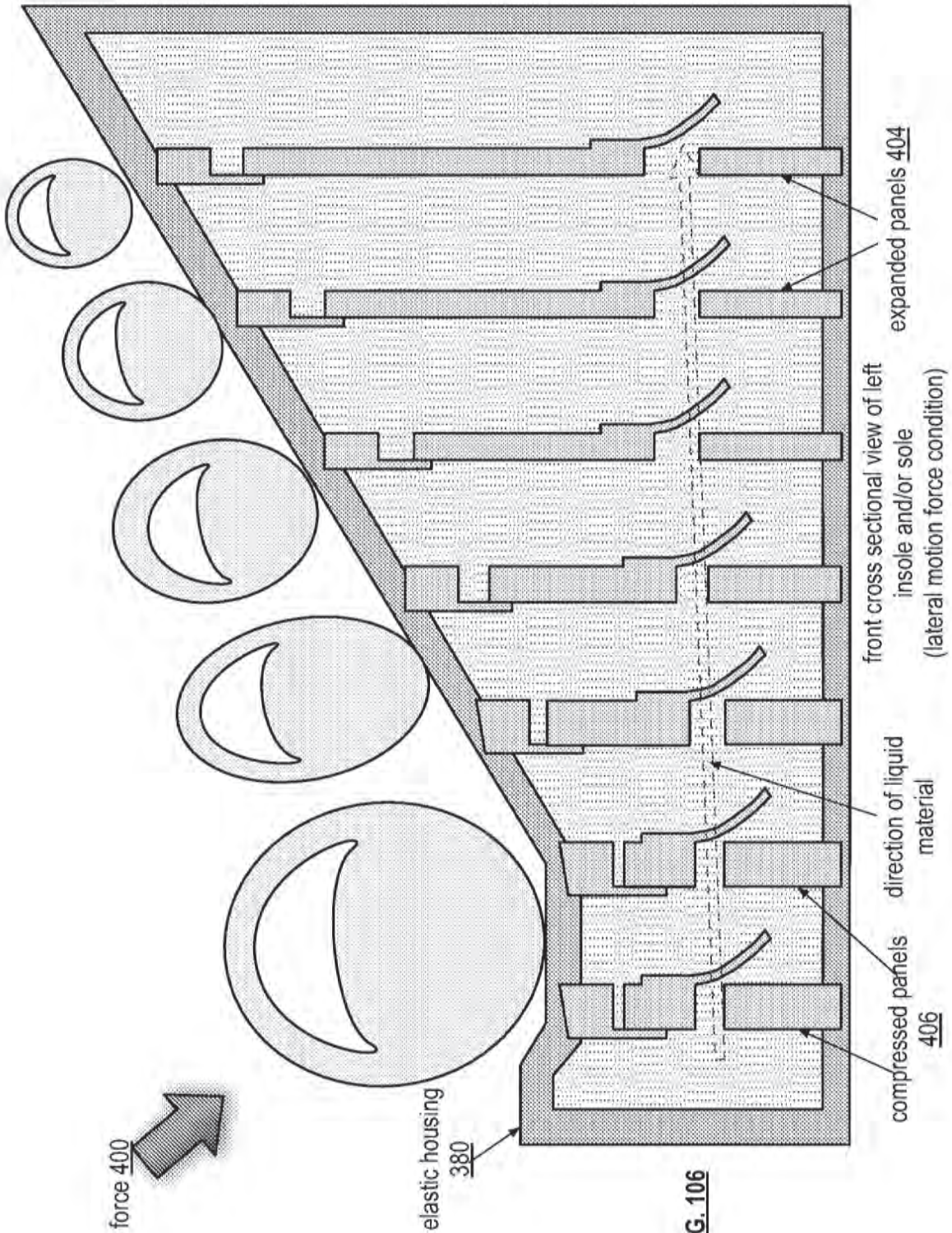

force 400
elastic housing 380
compressed panels 406
direction of liquid material
front cross sectional view of left insole and/or sole (lateral motion force condition)
expanded panels 404

FIG. 106

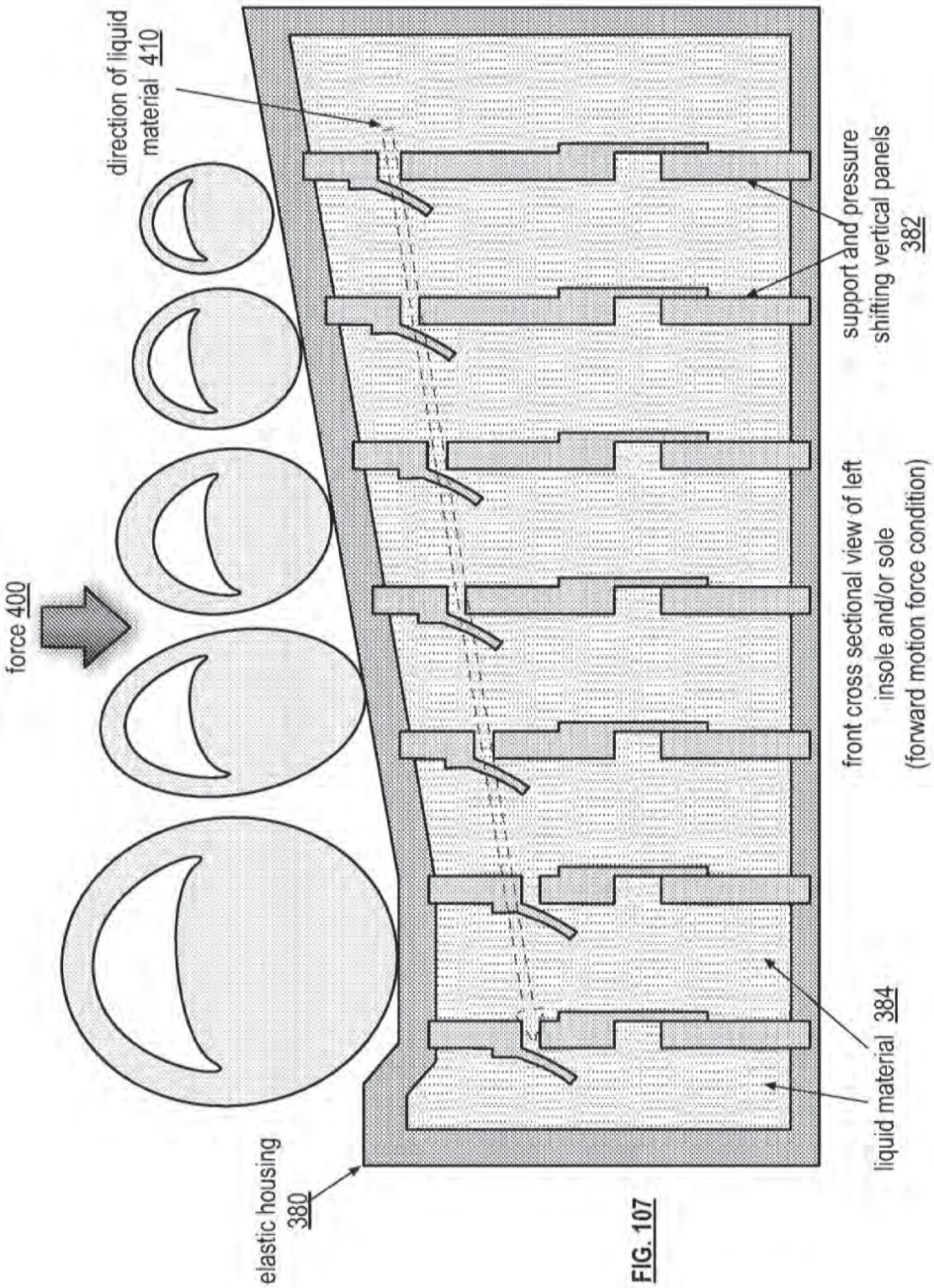

force 400
direction of liquid material 410
elastic housing 380
support and pressure shifting vertical panels 382
front cross sectional view of left insole and/or sole (forward motion force condition)
liquid material 384

FIG. 107

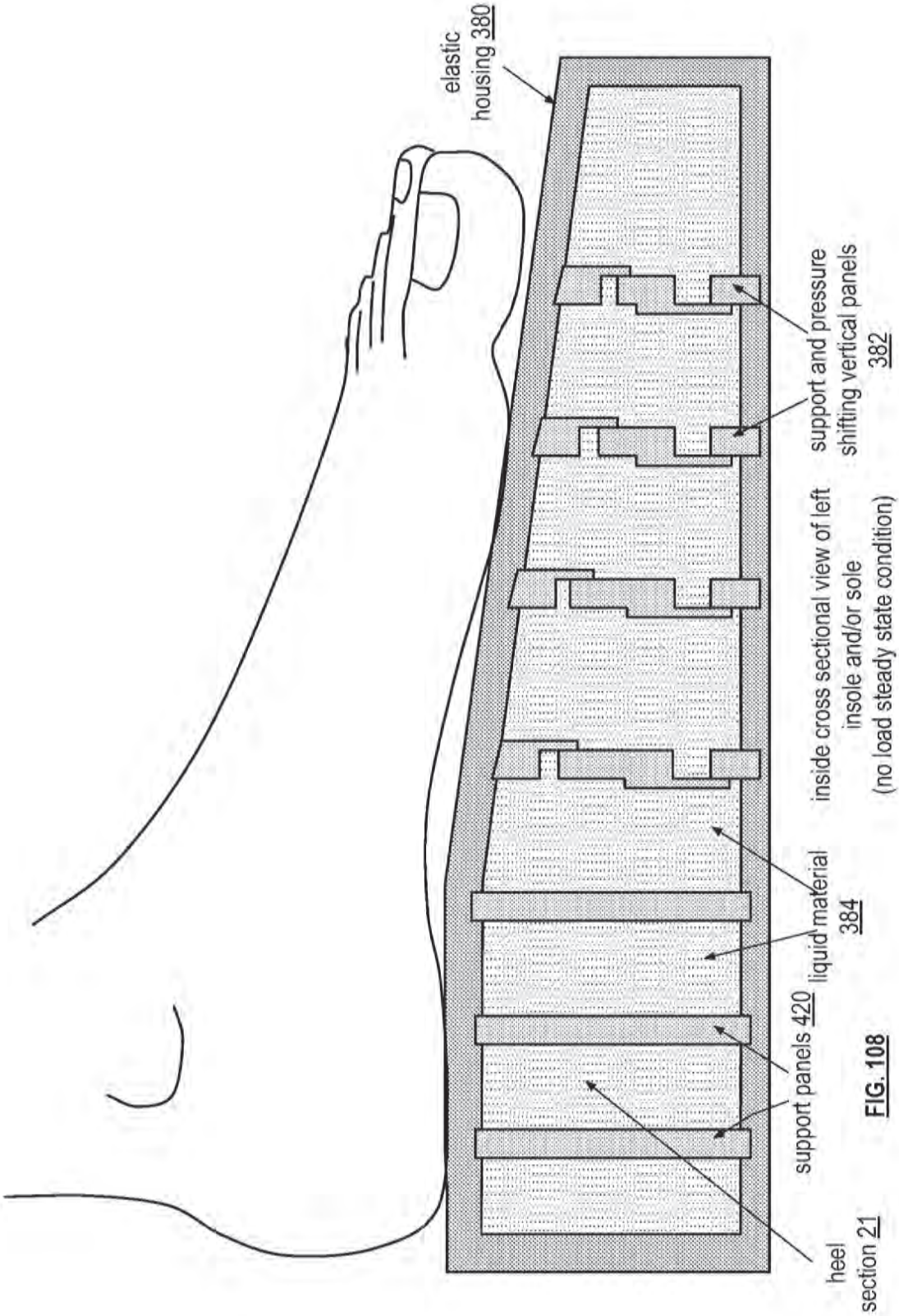

elastic housing 380
support and pressure shifting vertical panels 382
inside cross sectional view of left insole and/or sole (no load steady state condition)
liquid material 384
support panels 420
heel section 21

FIG. 108

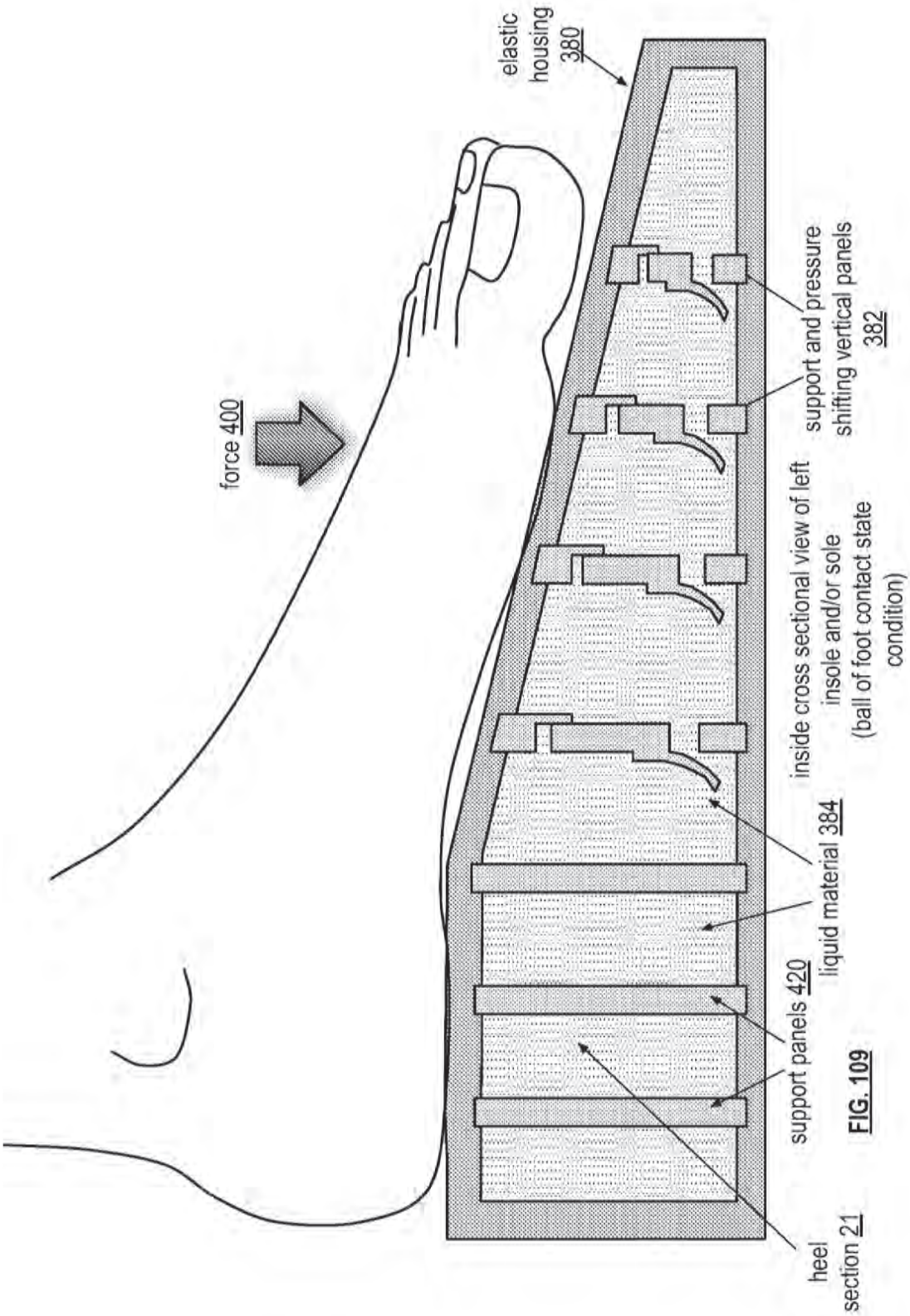

force 400
elastic housing 380
support and pressure shifting vertical panels 382
inside cross sectional view of left insole and/or sole (ball of foot contact state condition)
liquid material 384
support panels 420
heel section 21

FIG. 109

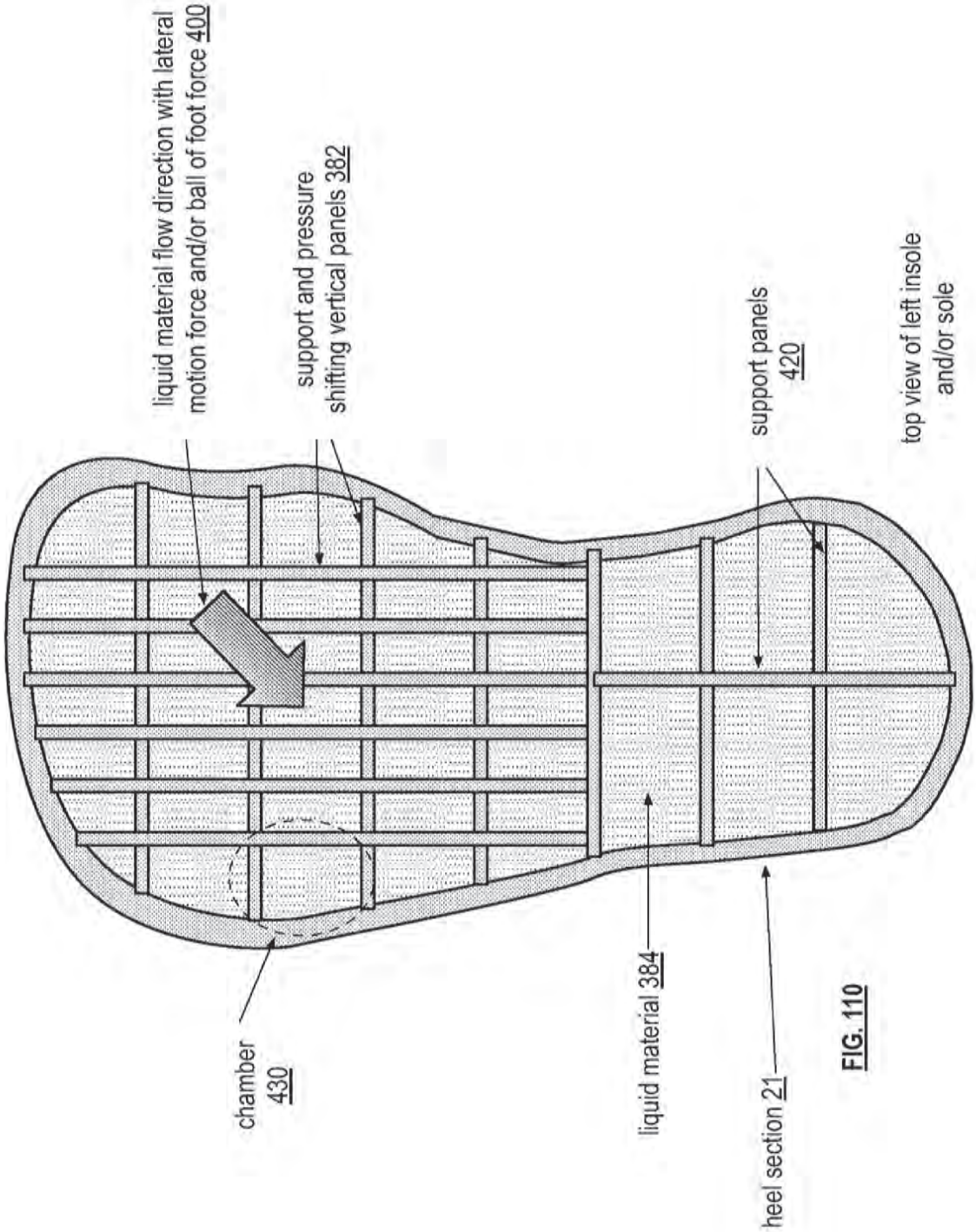

liquid material flow direction with lateral motion force and/or ball of foot force 400
support and pressure shifting vertical panels 382
support panels 420
top view of left insole and/or sole
chamber 430
liquid material 384
heel section 21

FIG. 110

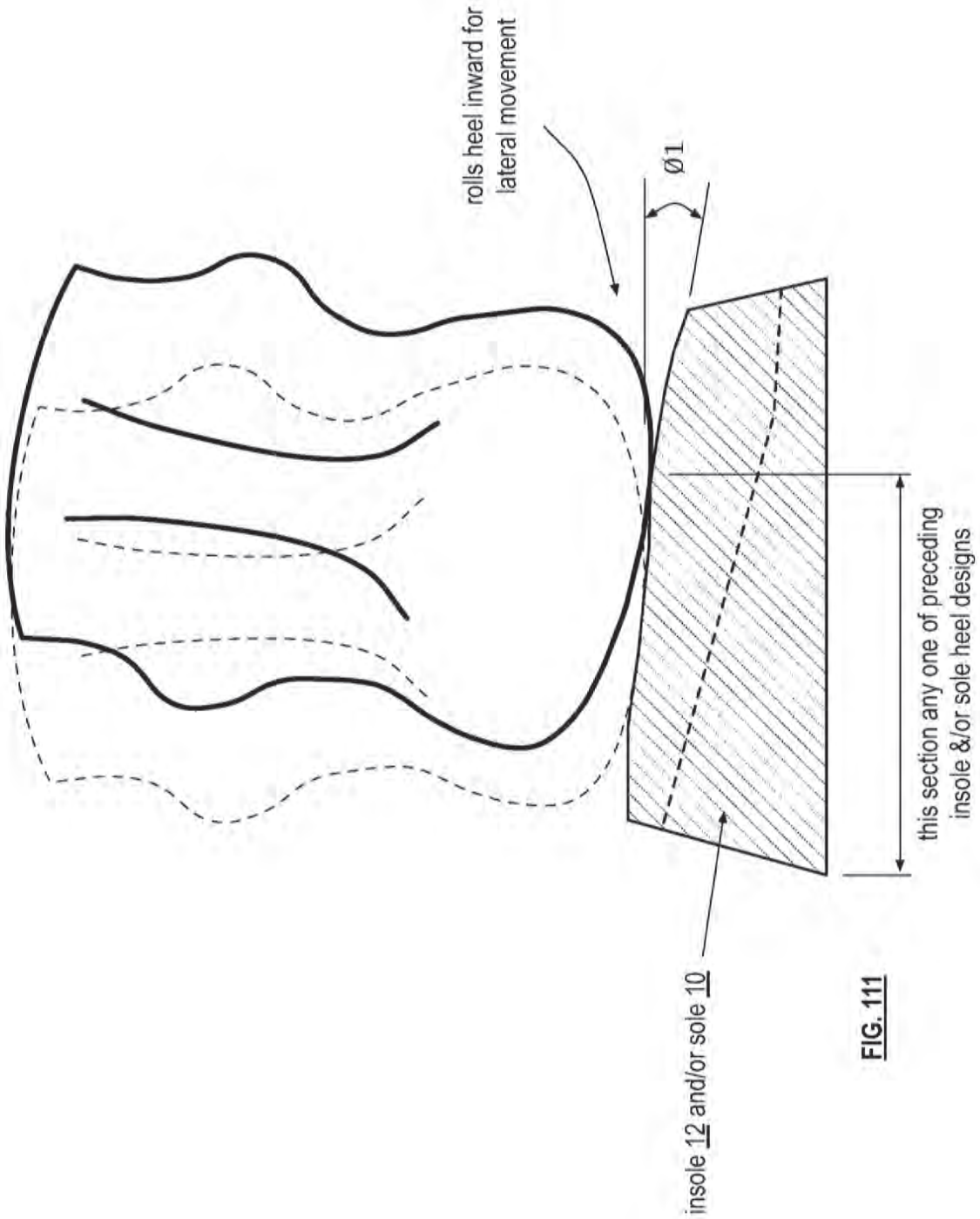

rolls heel inward for lateral movement
Ø1
insole 12 and/or sole 10
this section any one of preceding insole &/or sole heel designs

FIG. 111

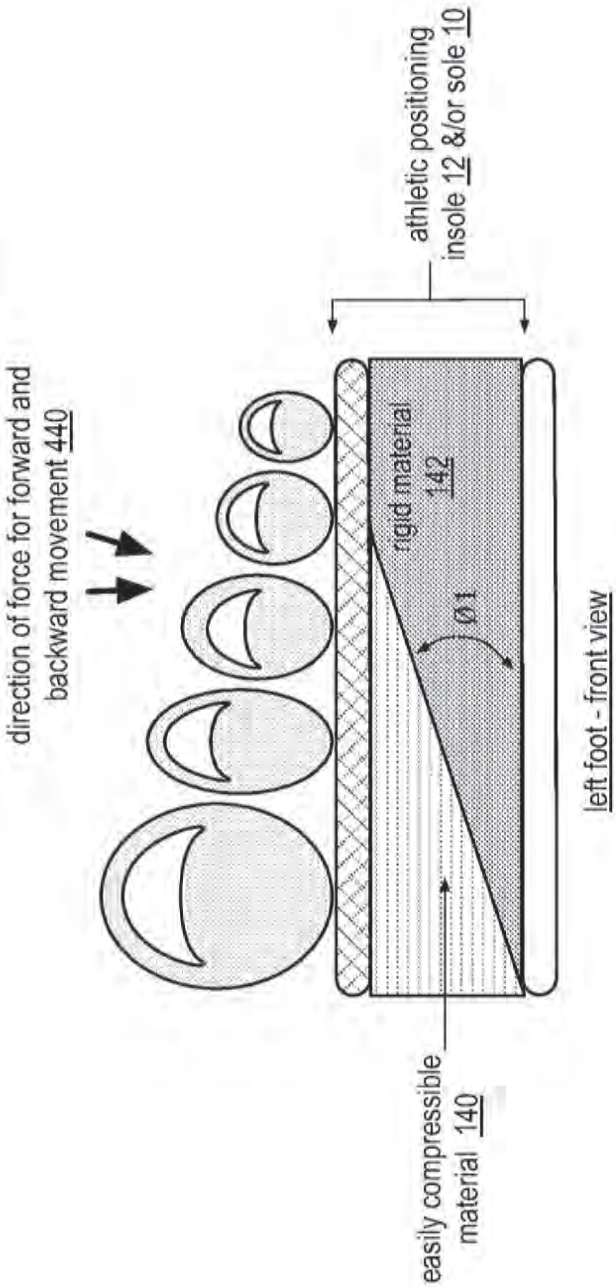


FIG. 112
left foot - front view

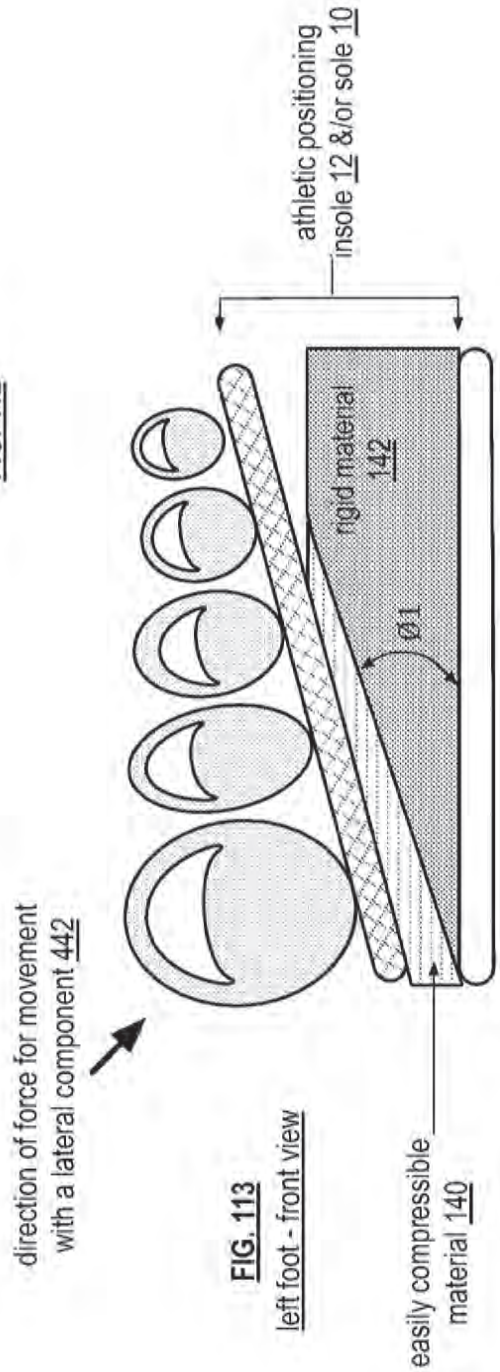


FIG. 113
left foot - front view

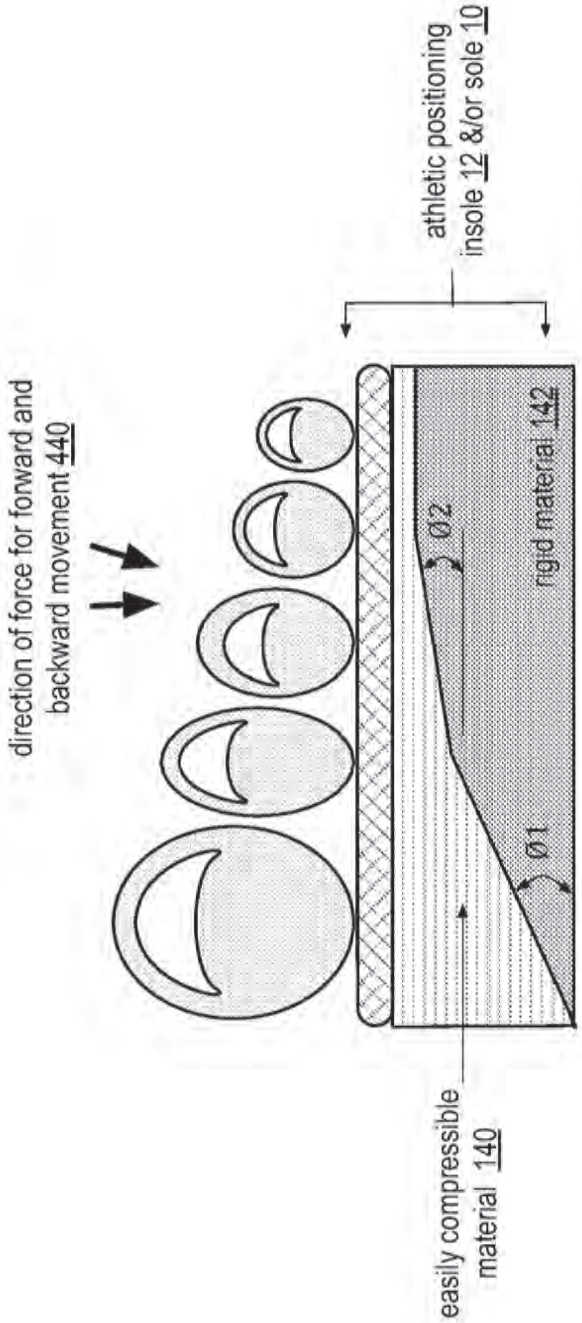


FIG. 114
left foot - front view

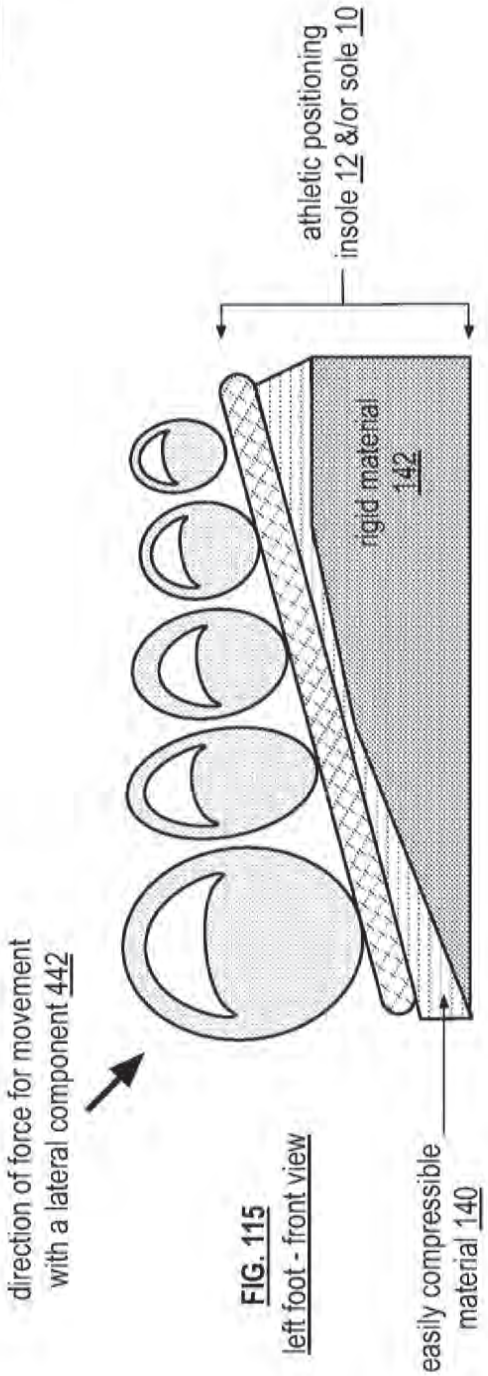


FIG. 115
left foot - front view

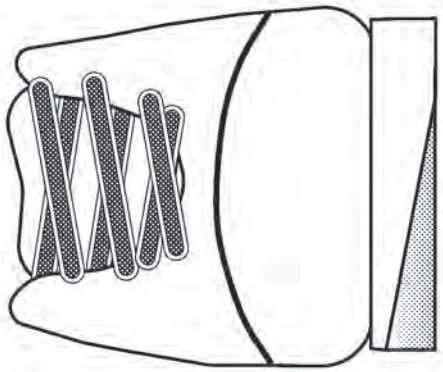


FIG. 117

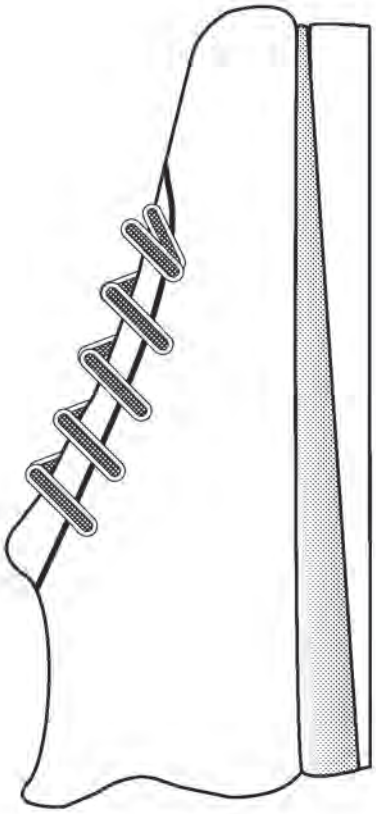


FIG. 116

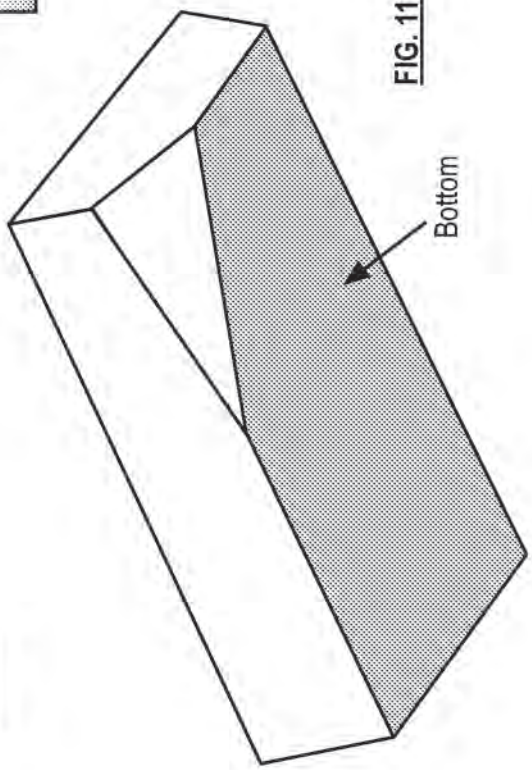
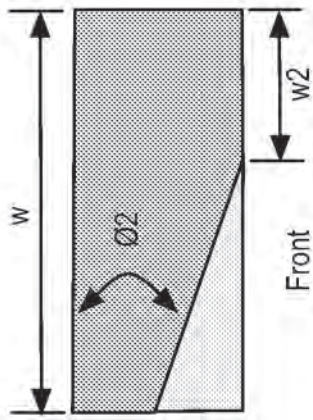


FIG. 118



Front
FIG. 120

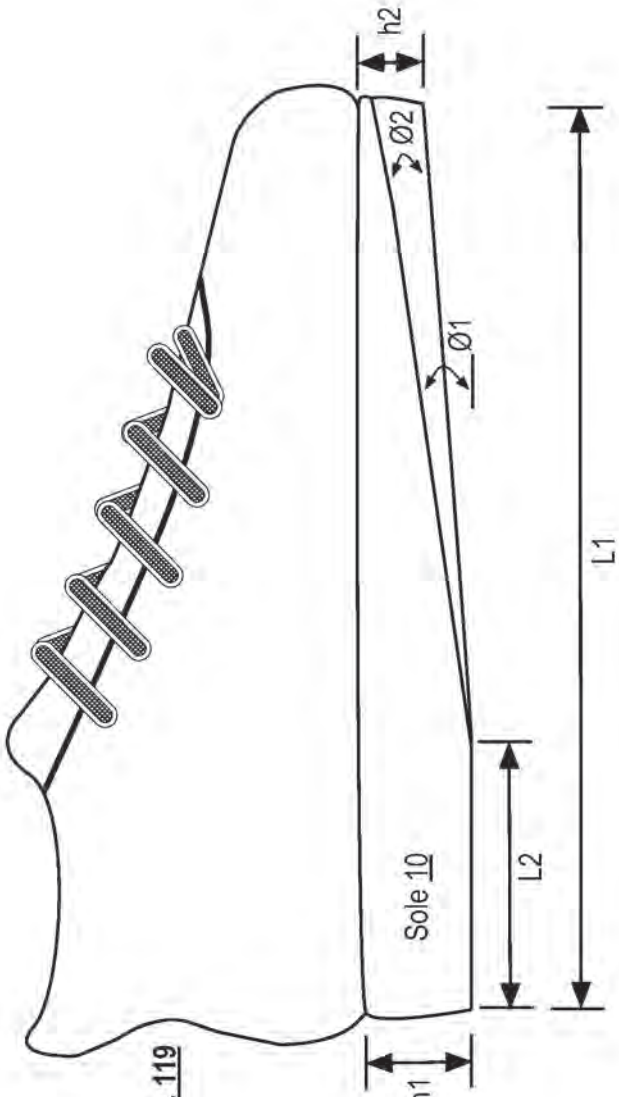
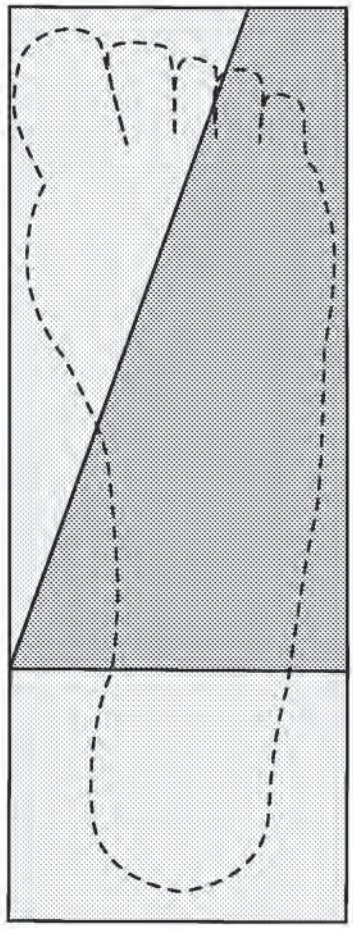
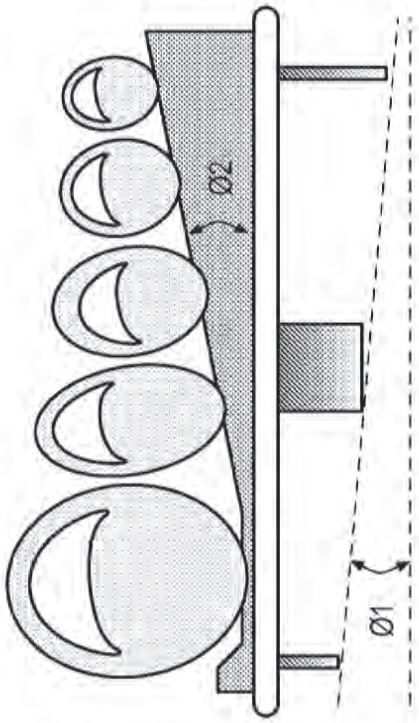


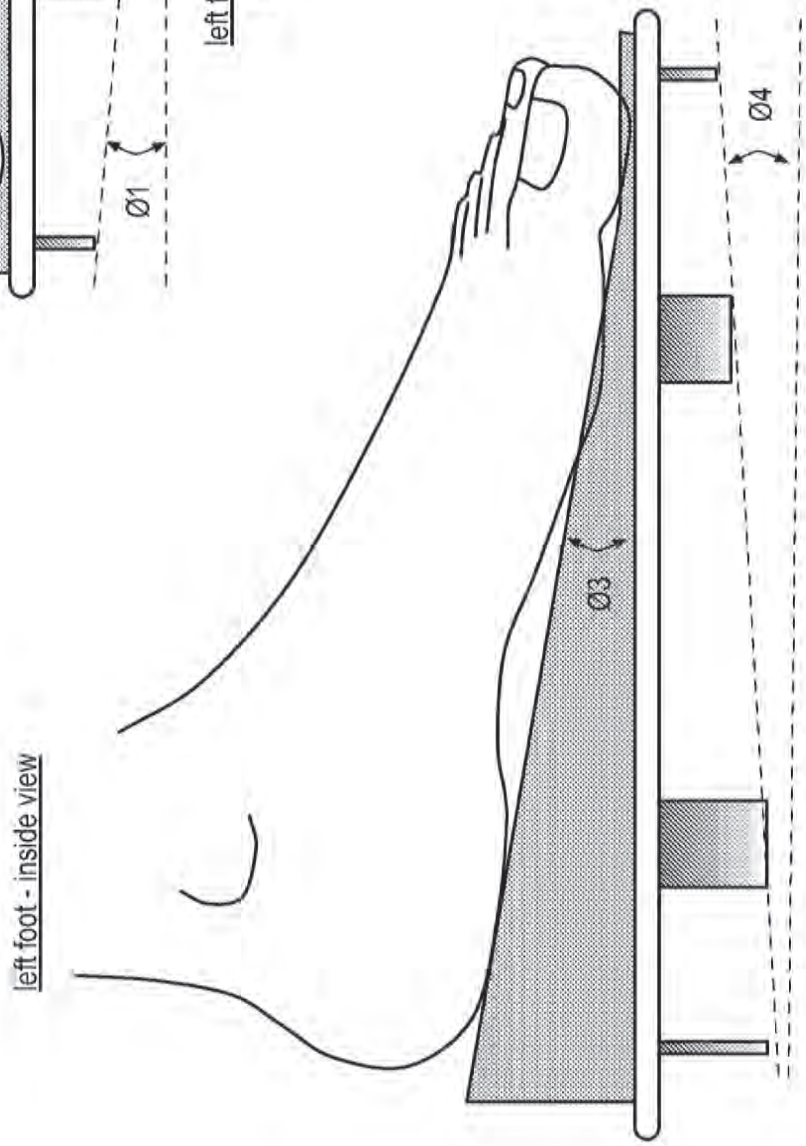
FIG. 119



Bottom
FIG. 121



left foot - front view
FIG. 123



left foot - inside view

FIG. 122

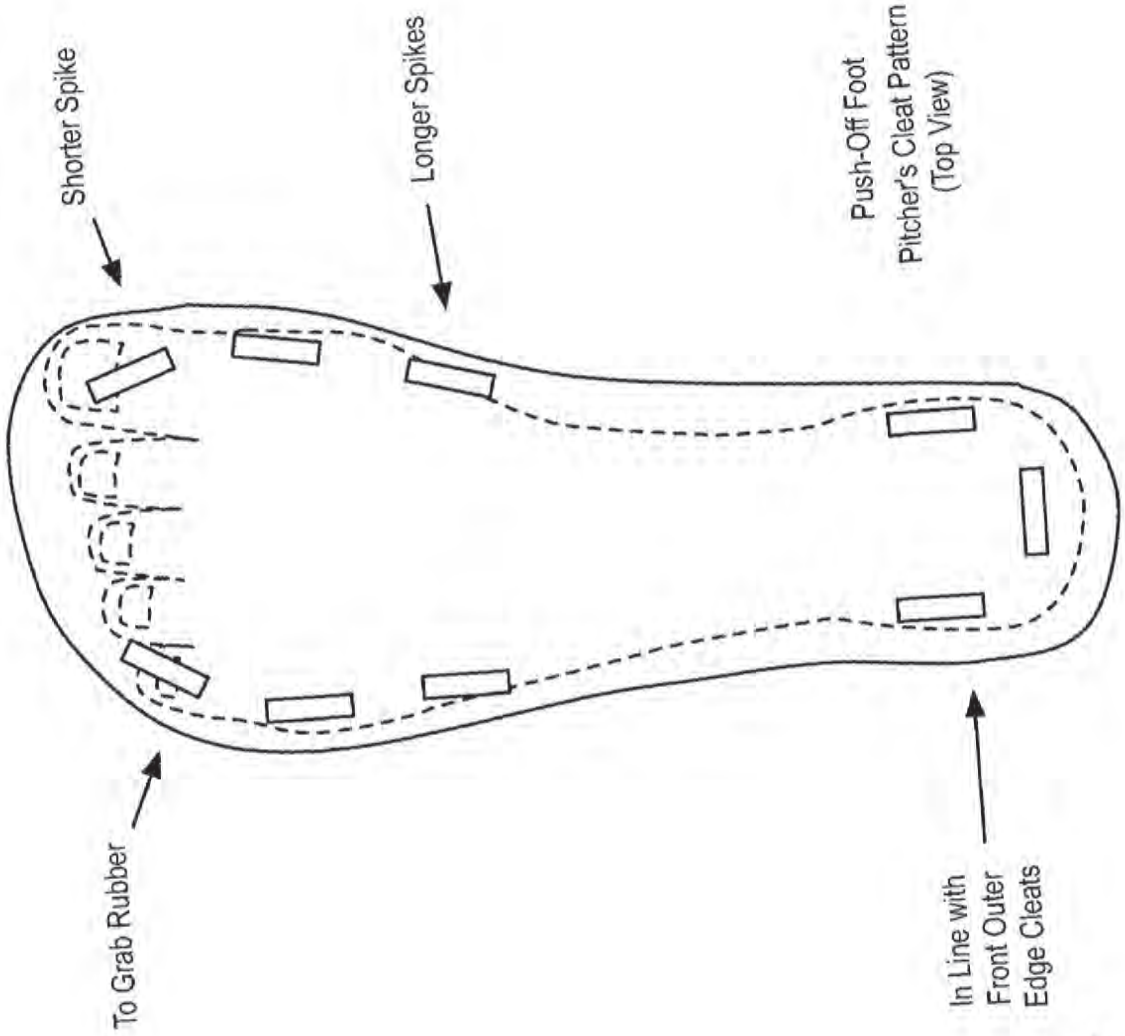
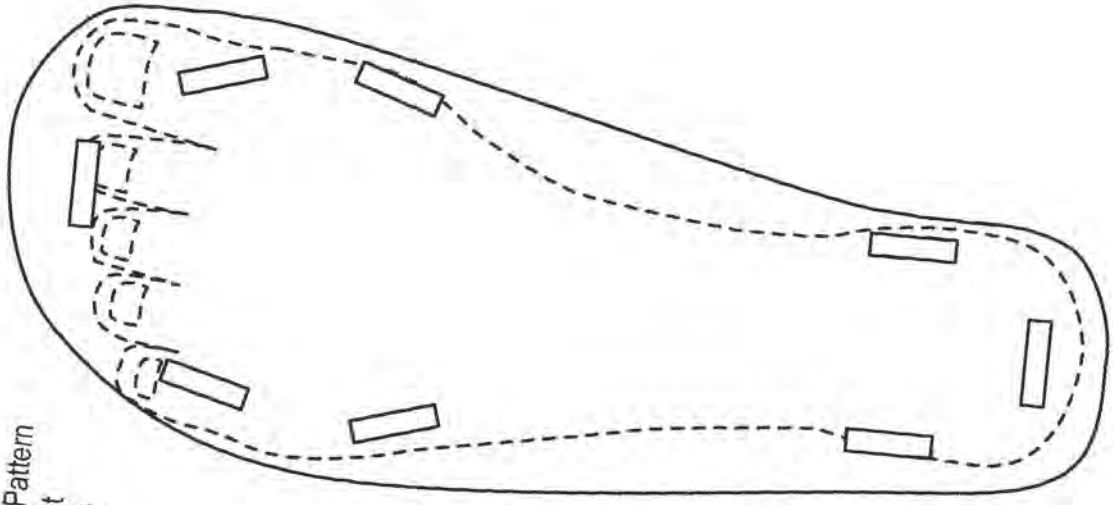

Shorter Spike
Longer Spikes
Push-Off Foot
Pitcher's Cleat Pattern
(Top View)
To Grab Rubber
In Line with
Front Outer
Edge Cleats

FIG. 124



Pitcher's Cleat Pattern
Plant Foot
(top view)

FIG. 125

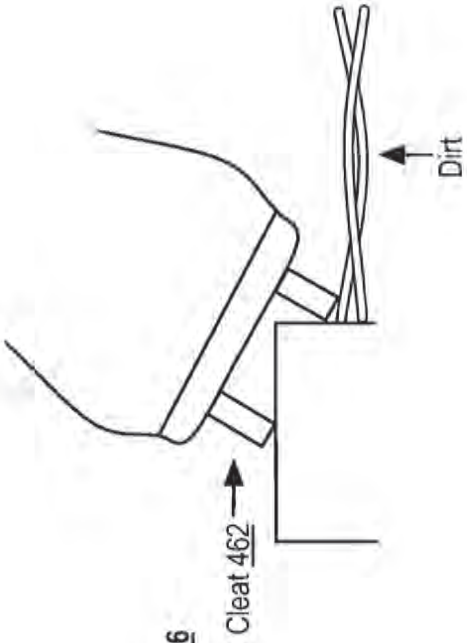


FIG. 126

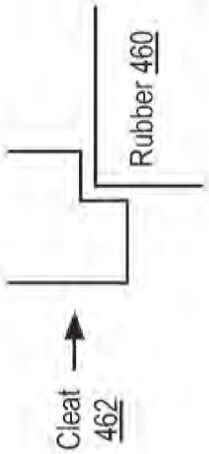


FIG. 128

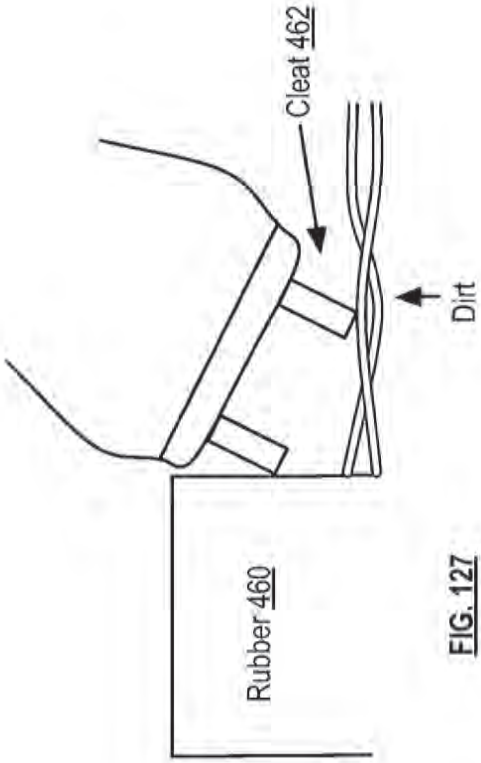


FIG. 127

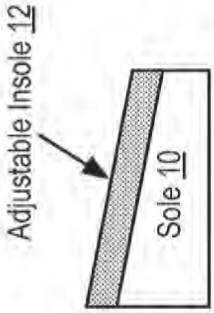


FIG. 129

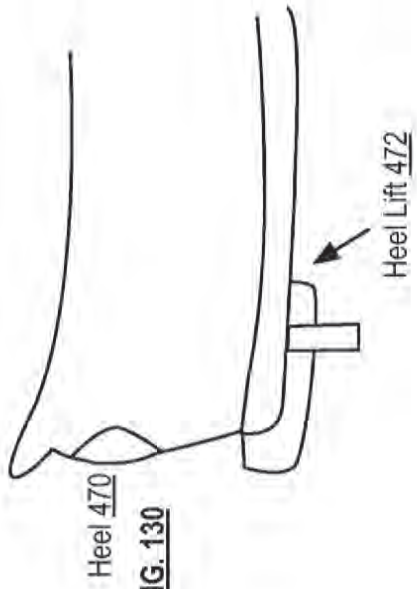


FIG. 130

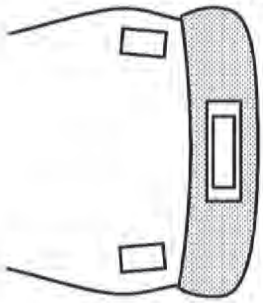


FIG. 131

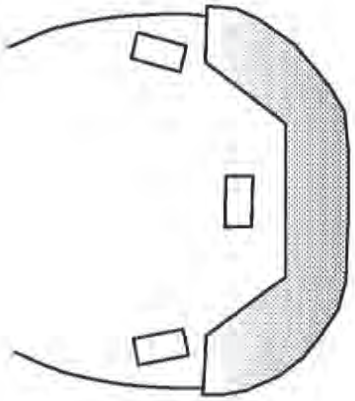
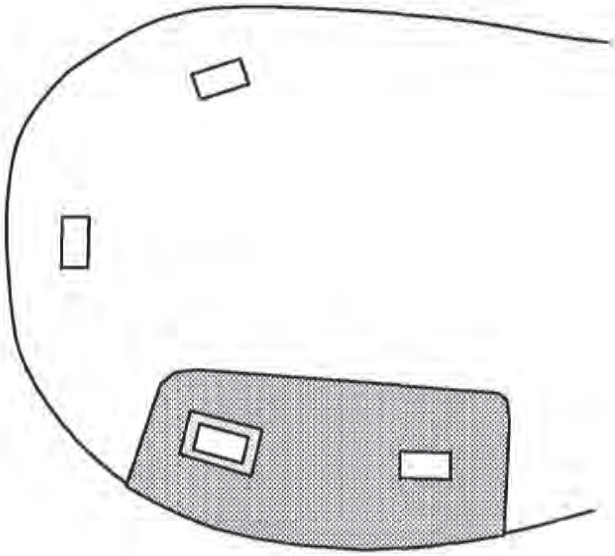


FIG. 132



Athletic positioning attachment
480

FIG. 133

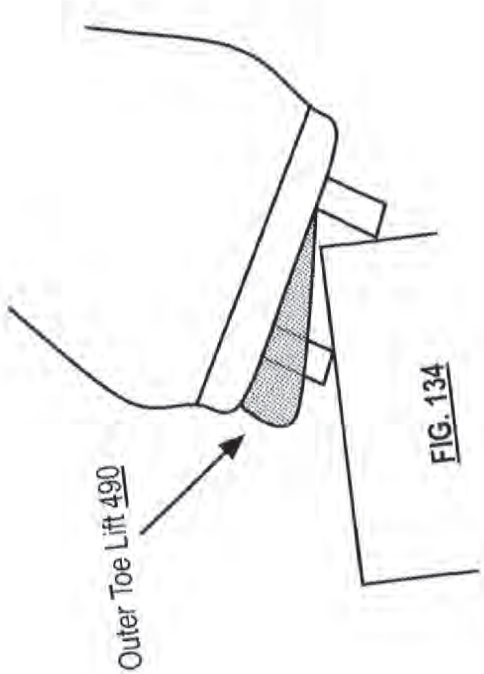


FIG. 134

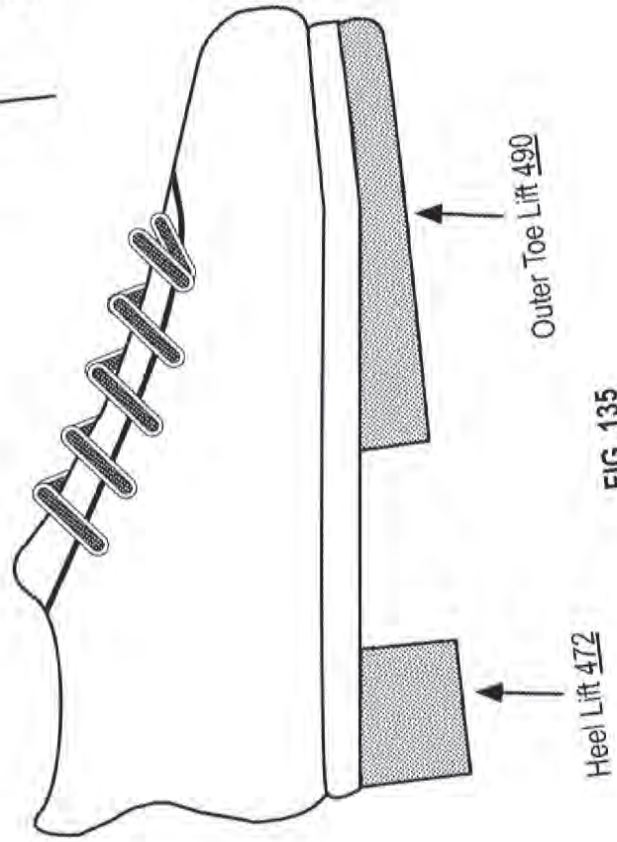


FIG. 135

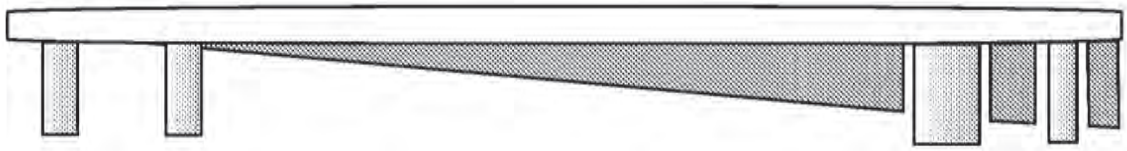


FIG. 138

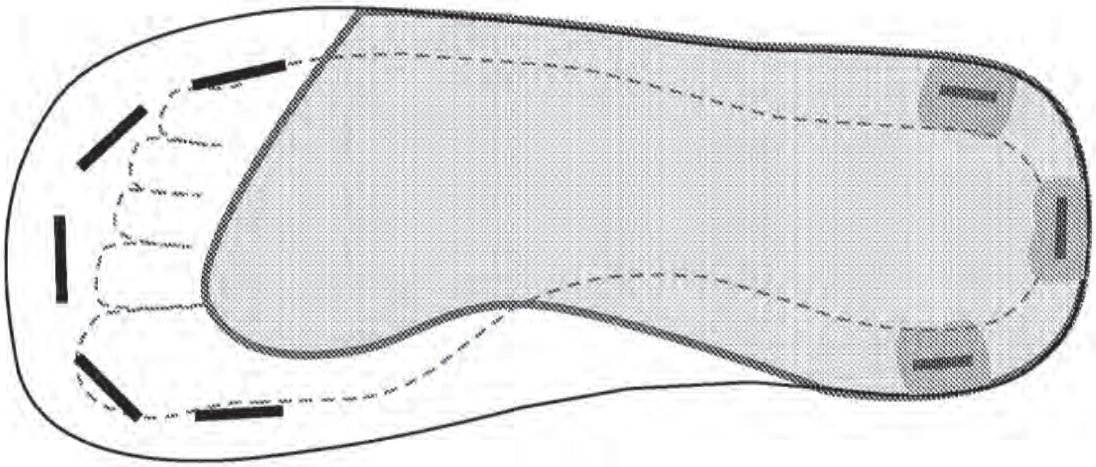


FIG. 136
Bottom of Left Drive Shoe

Sole
Attachment
500

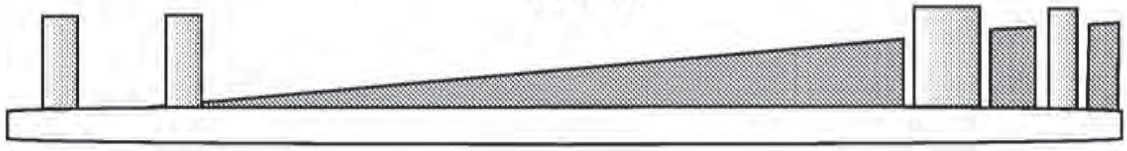
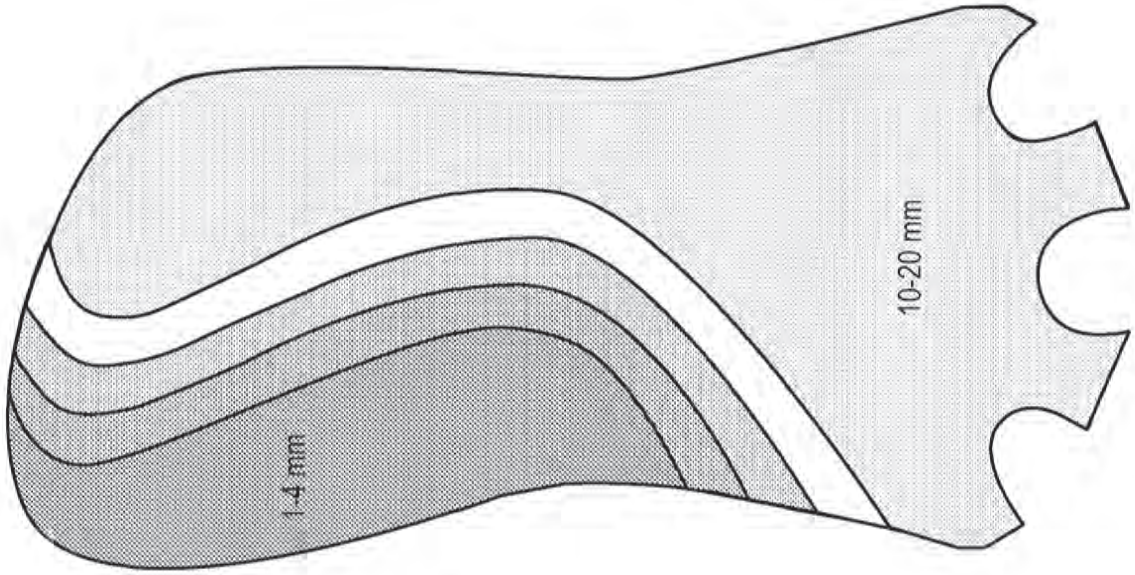


FIG. 137



Topography of Sole Attachment

FIG. 139

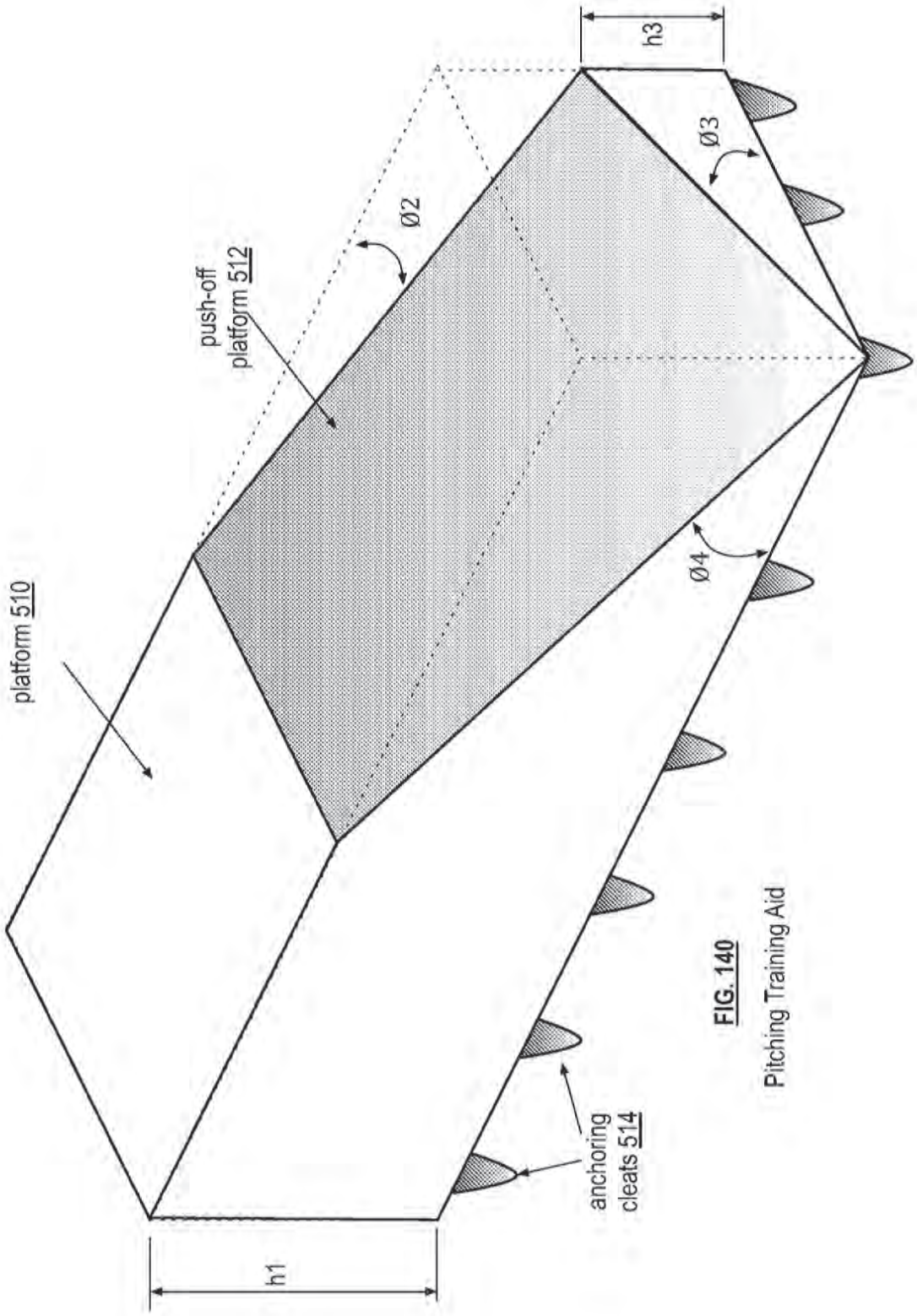


FIG. 140
Pitching Training Aid

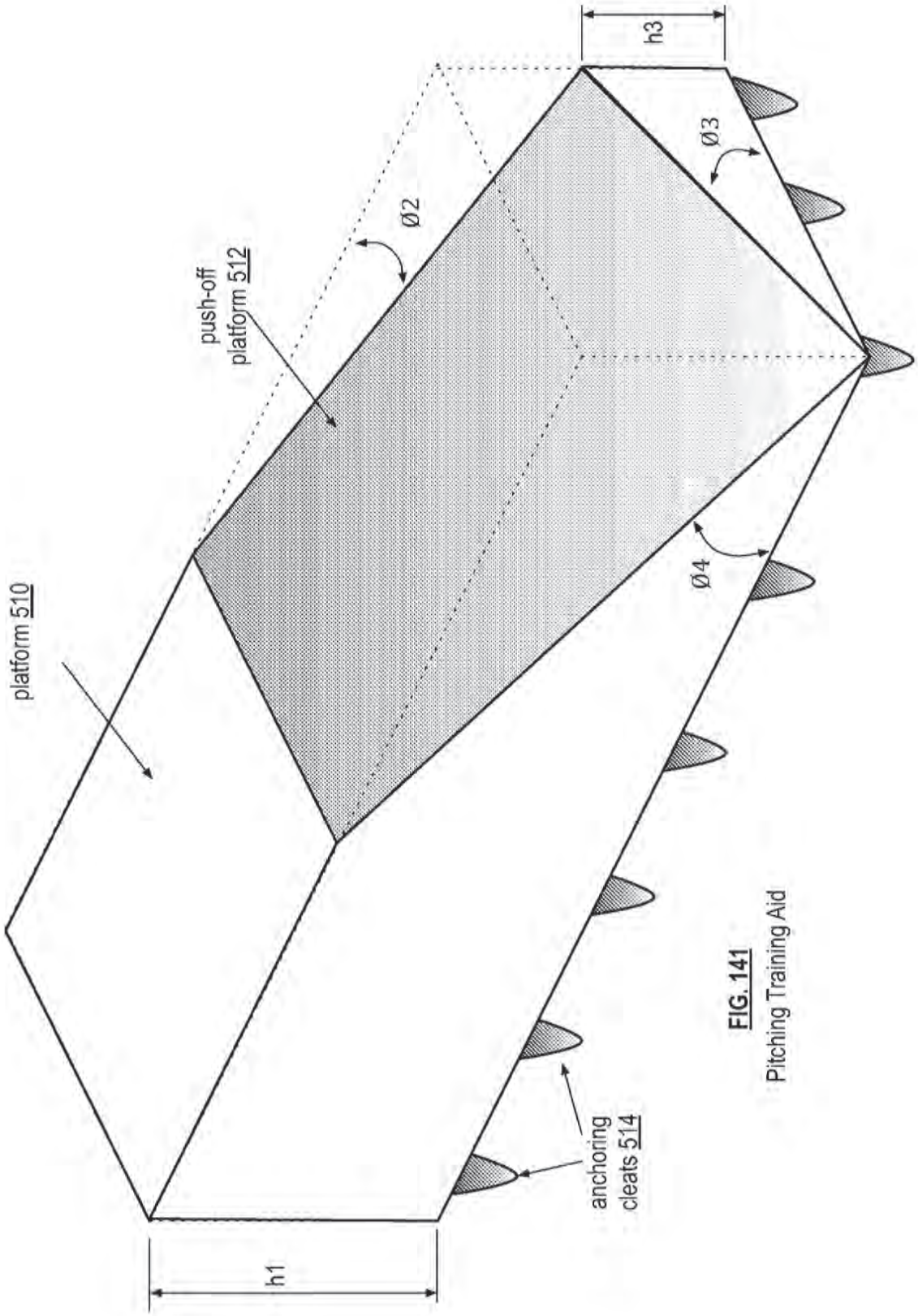


FIG. 141
Pitching Training Aid

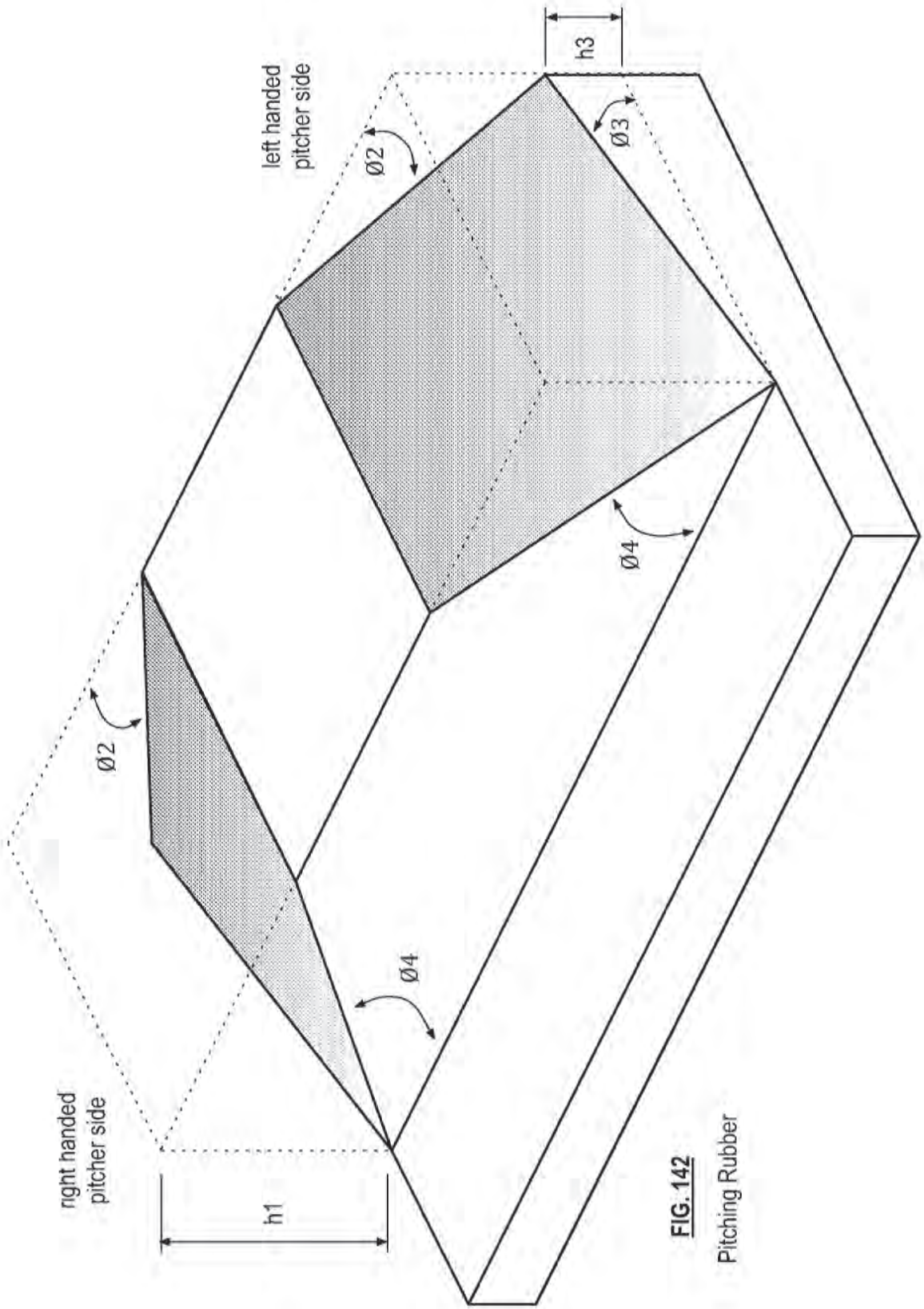


FIG. 142
Pitching Rubber

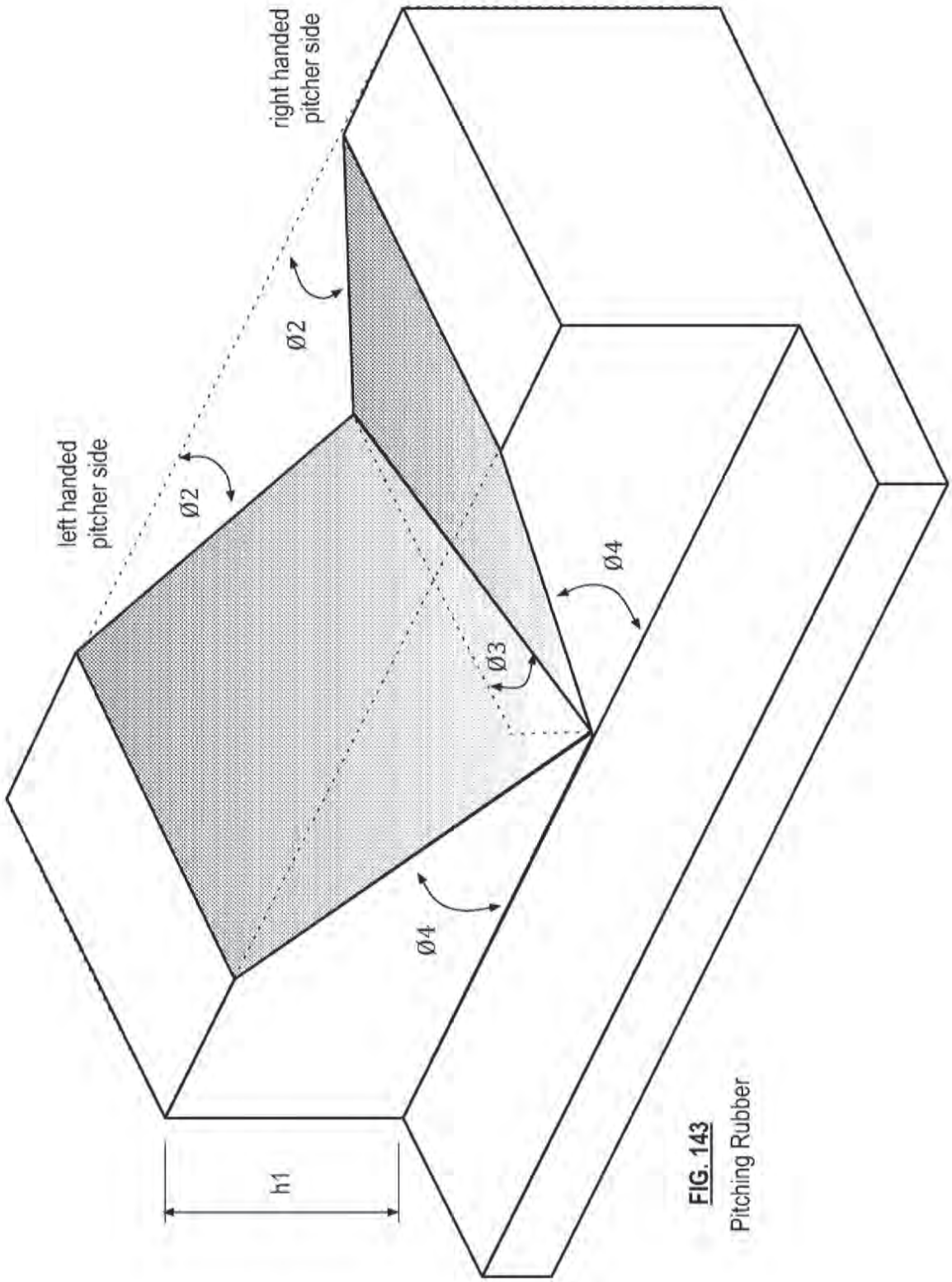


FIG. 143
Pitching Rubber

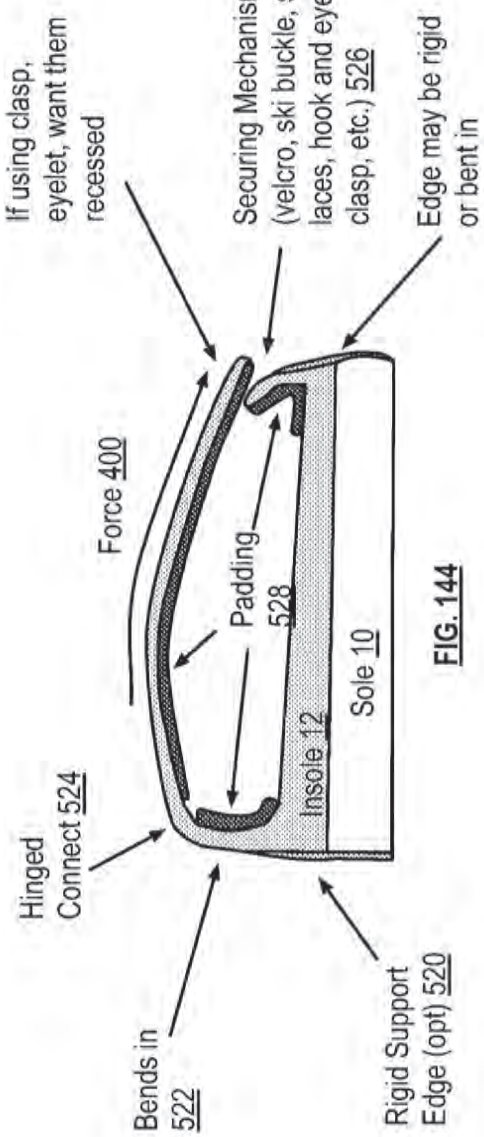


FIG. 144

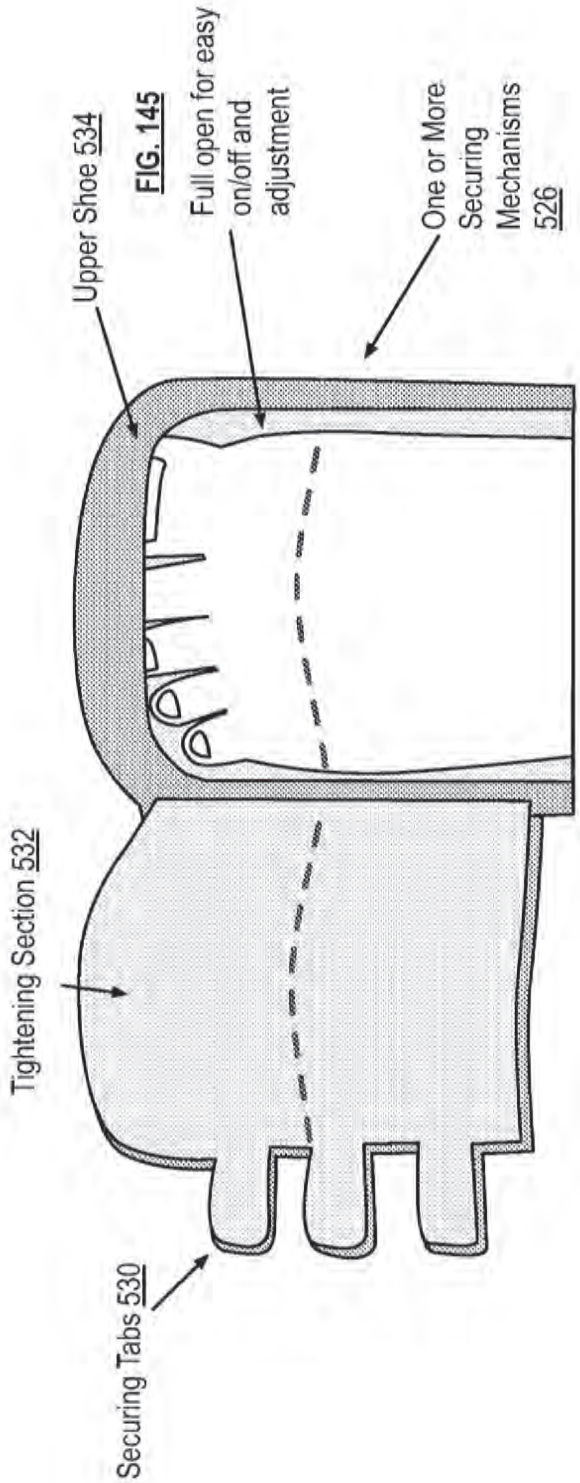


FIG. 145

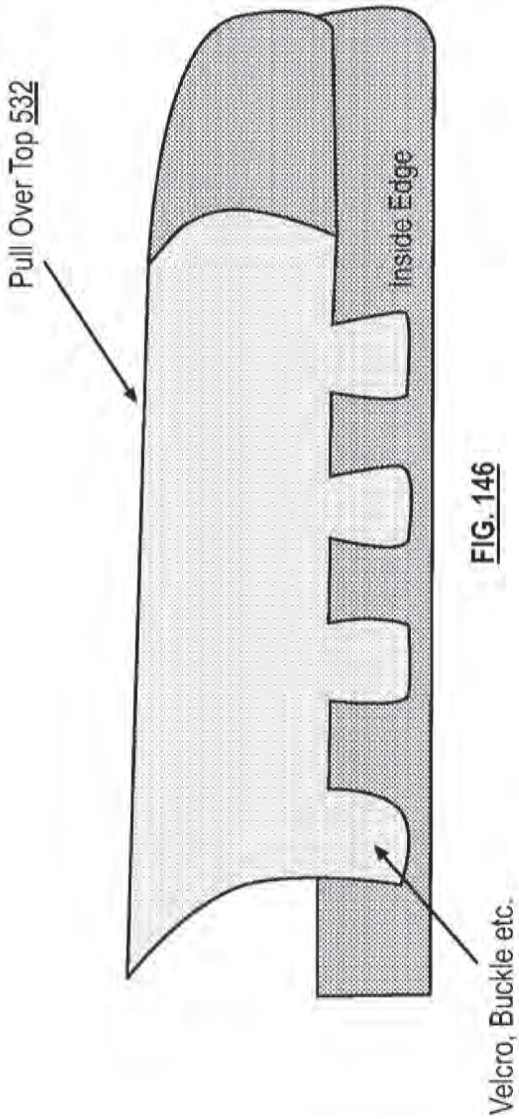


FIG. 146

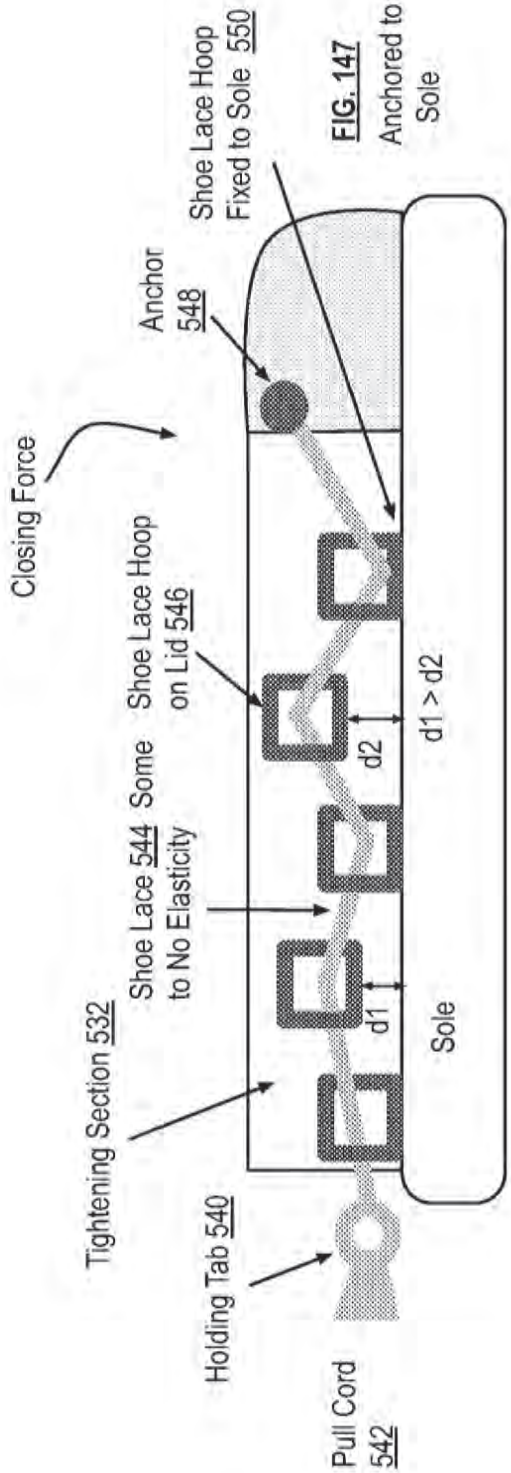


FIG. 147
Anchored to Sole

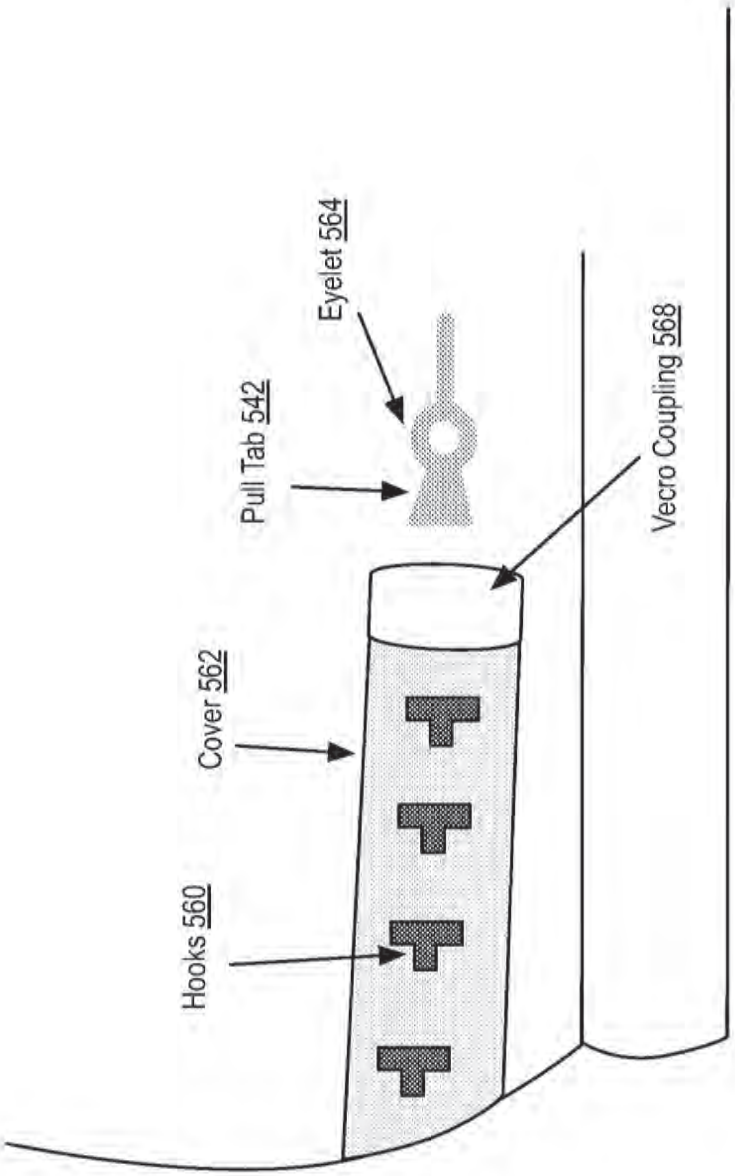

Hooks 560
Cover 562
Pull Tab 542
Eyelet 564
Vecro Coupling 568

FIG. 148

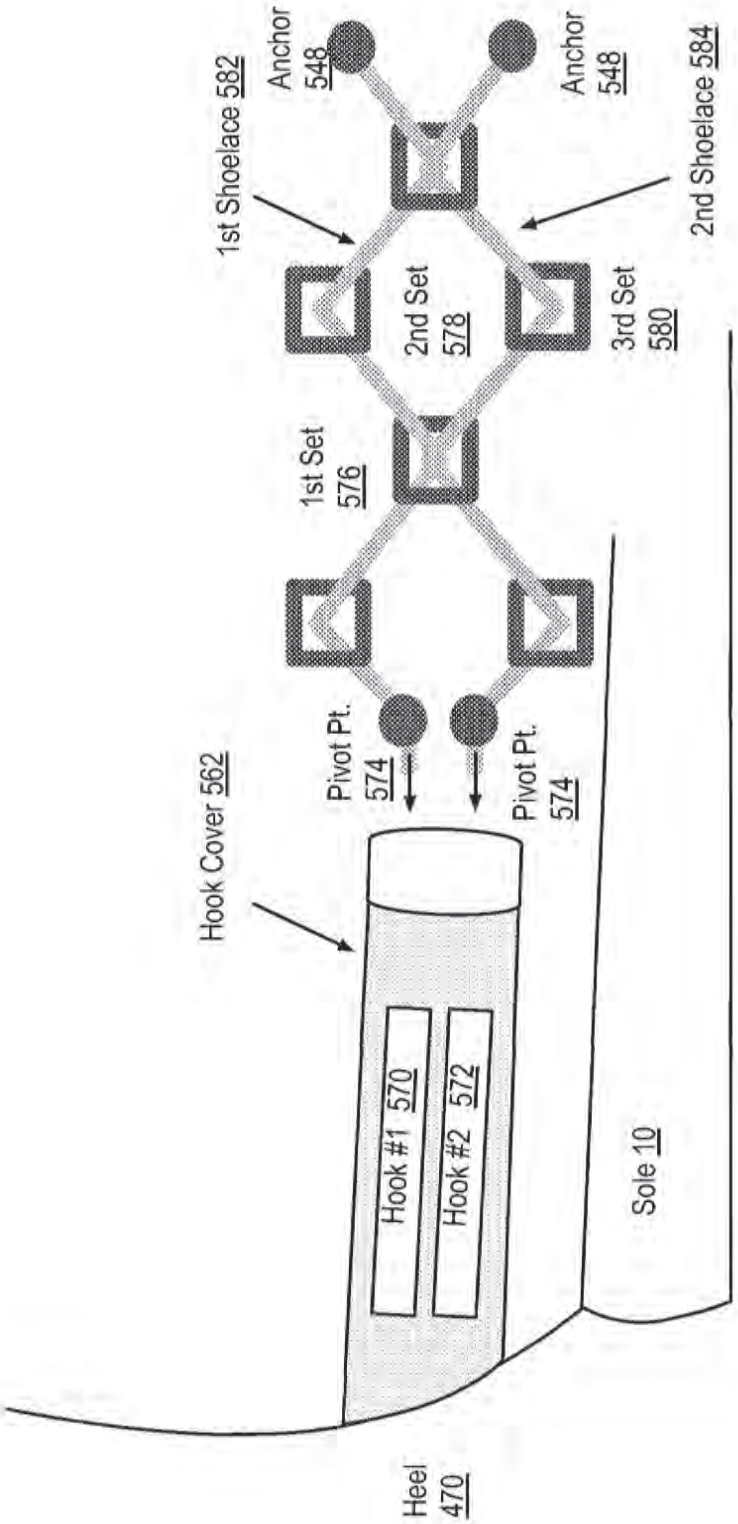

1st Shoelace 582
Anchor 548
Anchor 548
2nd Shoelace 584
2nd Set 578
3rd Set 580
1st Set 576
Pivot Pt. 574
Pivot Pt. 574
Hook Cover 562
Hook #1 570
Hook #2 572
Sole 10
Heel 470

FIG. 149

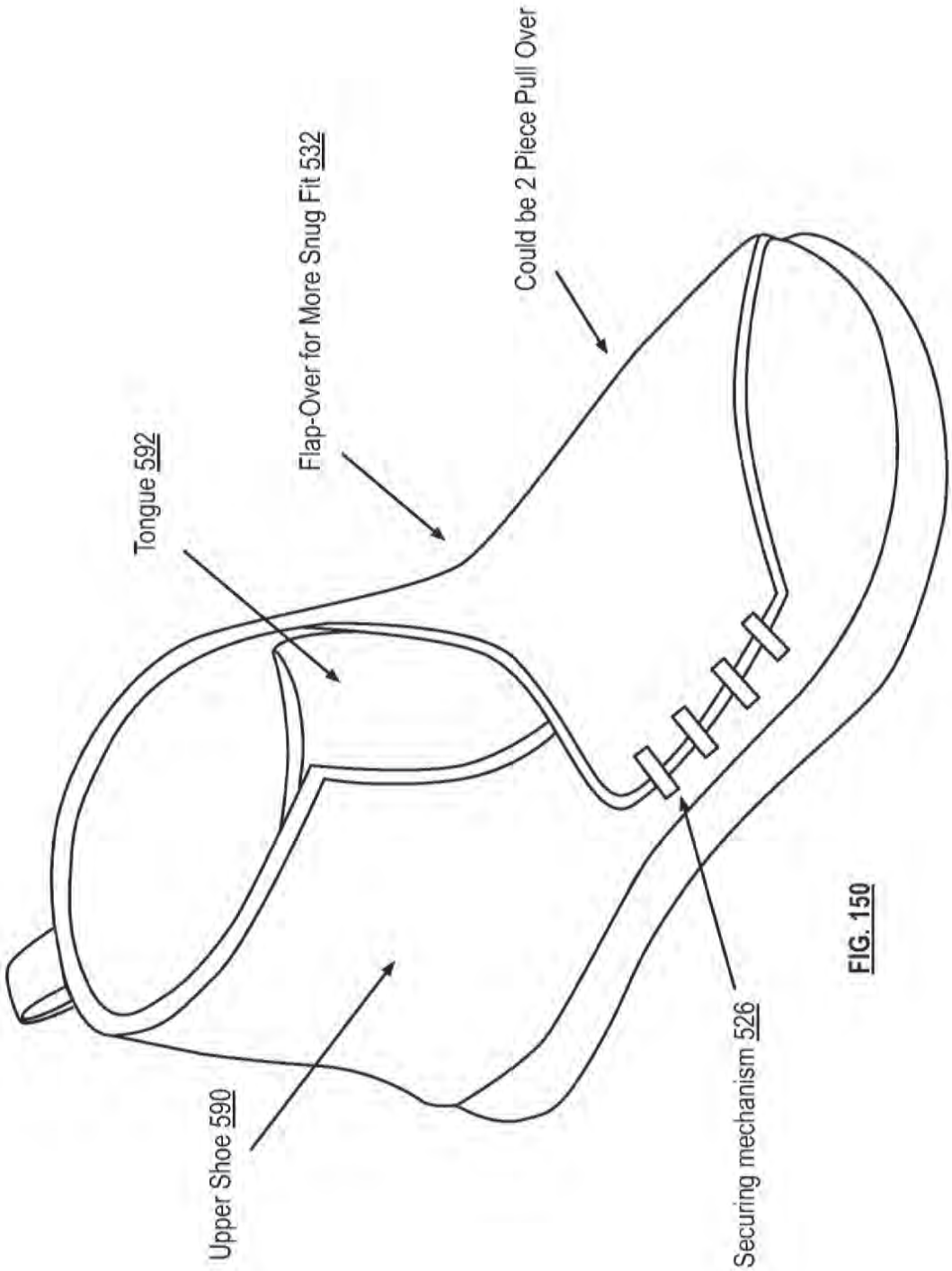

Tongue 592
Flap-Over for More Snug Fit 532
Could be 2 Piece Pull Over
Upper Shoe 590
Securing mechanism 526

FIG. 150

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Title of Invention	ATHLETIC POSITIONING APPARATUS AND APPLICATIONS THEREOF

As the below named inventor, I hereby declare that:

This declaration is directed to:

☒ The attached application, or

☐ United States application or PCT international application number _____

filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

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LEGAL NAME OF INVENTOR

Inventor: Michael R. Adair Date (Optional) : 12/06/2014

Signature: _____

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

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LEGAL NAME OF INVENTOR

Inventor: Timothy W. Markison Date (Optional) : 12/06/2014

Signature: _____

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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