

8336242



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

January 17, 2023

**THIS IS TO CERTIFY THAT ANNEXED IS A TRUE COPY FROM THE
RECORDS OF THIS OFFICE OF THE FILE WRAPPER AND CONTENTS
OF:**

APPLICATION NUMBER: 16/792,426

FILING DATE: February 17, 2020

PATENT NUMBER: 10799745

ISSUE DATE: October 13, 2020



Certified by

Kathi

Performing the Functions and Duties of the
Under Secretary of Commerce
for Intellectual Property
and Director of the United States
Patent and Trademark Office

**CERTIFICATION AND REQUEST FOR PRIORITIZED EXAMINATION
UNDER 37 CFR 1.102(e) (Page 1 of 1)**

First Named Inventor:	Douglas G. Bayerlein	Nonprovisional Application Number (if known):	Not yet Assigned
Title of Invention:	MANUAL TREADMILL AND METHODS OF OPERATING THE SAME		

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS PRIORITIZED EXAMINATION FOR THE ABOVE-IDENTIFIED APPLICATION.

1. The processing fee set forth in 37 CFR 1.17(i)(1) and the prioritized examination fee set forth in 37 CFR 1.17(c) have been filed with the request. The publication fee requirement is met because that fee, set forth in 37 CFR 1.18(d), is currently \$0. The basic filing fee, search fee, and examination fee are filed with the request or have been already been paid. I understand that any required excess claims fees or application size fee must be paid for the application.
2. I understand that the application may not contain, or be amended to contain, more than four independent claims, more than thirty total claims, or any multiple dependent claims, and that any request for an extension of time will cause an outstanding Track I request to be dismissed.
3. The applicable box is checked below:

I. ☒ Original Application (Track One) - Prioritized Examination under § 1.102(e)(1)

- i. (a) The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a). This certification and request is being filed with the utility application via EFS-Web.
---OR---
(b) The application is an original nonprovisional plant application filed under 35 U.S.C. 111(a). This certification and request is being filed with the plant application in paper.
- ii. An executed inventor's oath or declaration under 37 CFR 1.63 or 37 CFR 1.64 for each inventor, or the application data sheet meeting the conditions specified in 37 CFR 1.53(f)(3)(i) is filed with the application.

II. ☐ Request for Continued Examination - Prioritized Examination under § 1.102(e)(2)

- i. A request for continued examination has been filed with, or prior to, this form.
- ii. If the application is a utility application, this certification and request is being filed via EFS-Web.
- iii. The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a), or is a national stage entry under 35 U.S.C. 371.
- iv. This certification and request is being filed prior to the mailing of a first Office action responsive to the request for continued examination.
- v. No prior request for continued examination has been granted prioritized examination status under 37 CFR 1.102(e)(2).

Signature <u>/R.J. McKenna/</u>	Date <u>02-17-2020</u>
Name (Print/Typed) <u>Richard J. McKenna</u>	Practitioner Registration Number <u>35,610</u>

Note: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required.*

☒ *Total of 1 forms are submitted.

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.

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	097208-0296
		Application Number	
Title of Invention	MANUAL TREADMILL AND METHODS OF OPERATING THE SAME		
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	
	Douglas	G.	Bayerlein		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Oconomowoc	State/Province	WI	Country of Residence	US

Mailing Address of Inventor:

Address 1	34675 Bartlett Road				
Address 2					
City	Oconomowoc	State/Province	WI		
Postal Code	53066	Country	US		

Inventor	2				Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Vance	E.	Emons		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Hartland	State/Province	WI	Country of Residence	US

Mailing Address of Inventor:

Address 1	N79 W28251 Tourmaline Court				
Address 2					
City	Hartland	State/Province	WI		
Postal Code	53029	Country	US		

Inventor	3				Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Nicholas	A.	Oblamski		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	097208-0296
		Application Number	
Title of Invention	MANUAL TREADMILL AND METHODS OF OPERATING THE SAME		

City	Waukesha	State/Province	WI	Country of Residence	US
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Mailing Address of Inventor:

Address 1	W271N525 Jills Dr.				
Address 2					
City	Waukesha	State/Province	WI		
Postal Code	53188	Country	US		
Inventor	4				Remove
Legal Name					

Prefix	Given Name	Middle Name	Family Name	Suffix	
	Scott	D.	Hoerig		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Brookfield	State/Province	WI	Country of Residence	US

Mailing Address of Inventor:

Address 1	15755 Sky Cliff Drive				
Address 2					
City	Brookfield	State/Province	WI		
Postal Code	53005	Country	US		
Inventor	5				Remove
Legal Name					

Prefix	Given Name	Middle Name	Family Name	Suffix	
	Matthew	J.	Zank		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Milwaukee	State/Province	WI	Country of Residence	US

Mailing Address of Inventor:

Address 1	4677 N. 41st Street				
Address 2					
City	Milwaukee	State/Province	WI		
Postal Code	53209	Country	US		
Inventor	6				Remove
Legal Name					

Prefix	Given Name	Middle Name	Family Name	Suffix	
	Robert	L.	Zimpel		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Menomonee Falls	State/Province	WI	Country of Residence	US

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	097208-0296
		Application Number	
Title of Invention	MANUAL TREADMILL AND METHODS OF OPERATING THE SAME		

Mailing Address of Inventor:

Address 1	N55 W21289 Logan Dr.		
Address 2			
City	Menomonee Falls	State/Province	WI
Postal Code	53051	Country i	US
Inventor	7	Remove	
Legal Name			
Prefix	Given Name	Middle Name	Family Name
	Joel	W.	Richards
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service			
City	Wauwatosa	State/Province	WI
		Country of Residence i	US

Mailing Address of Inventor:

Address 1	2145 N. 65th St.		
Address 2			
City	Wauwatosa	State/Province	WI
Postal Code	53213	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).	
☐ An Address is being provided for the correspondence Information of this application.	
Customer Number	26371
Email Address	IPDocketing@foley.com Add Email Remove Email

Application Information:

Title of the Invention	MANUAL TREADMILL AND METHODS OF OPERATING THE SAME		
Attorney Docket Number	097208-0296	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	20	Suggested Figure for Publication (if any)	1

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	097208-0296
		Application Number	
Title of Invention	MANUAL TREADMILL AND METHODS OF OPERATING THE SAME		

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	26371		

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		Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	15/958339	2018-04-20

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	097208-0296
		Application Number	
Title of Invention	MANUAL TREADMILL AND METHODS OF OPERATING THE SAME		

Prior Application Status		Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
15/958339	Continuation of	14/832708	2015-08-21
Prior Application Status		Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
14/832708	Continuation of	14/076912	2013-11-11
Prior Application Status		Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
14/076912	Continuation of	13/235065	2011-09-16
Prior Application Status		Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
13/235065	Continuation in part of	PCT/US10/27543	2010-03-16
Prior Application Status		Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
PCT/US10/27543	Claims benefit of provisional	61/161027	2009-03-17
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).

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)	Remove
Additional Foreign Priority Data may be generated within this form by selecting the Add button.				Add

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	097208-0296
		Application Number	
Title of Invention	MANUAL TREADMILL AND METHODS OF OPERATING THE SAME		

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

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.	
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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	097208-0296
		Application Number	
Title of Invention	MANUAL TREADMILL AND METHODS OF OPERATING THE SAME		

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.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	097208-0296
		Application Number	
Title of Invention	MANUAL TREADMILL AND METHODS OF OPERATING THE SAME		

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	Woodway USA, Inc.	
Mailing Address Information For Applicant:		
Address 1	W229 N591 Foster Court	
Address 2		
City	Waukesha	State/Province
Country	US	Postal Code
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.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	097208-0296
		Application Number	
Title of Invention	MANUAL TREADMILL AND METHODS OF OPERATING THE SAME		

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	Woodway USA, Inc.		
Mailing Address Information For Assignee including Non-Applicant Assignee:			
Address 1	W229 N591 Foster Court		
Address 2			
City	Waukesha	State/Province	WI
Country ⁱ	US	Postal Code	53186
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:

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	/R.J. McKenna/		Date (YYYY-MM-DD)	2020-02-17	
First Name	Richard J.	Last Name	McKenna	Registration Number	35610
Additional Signature may be generated within this form by selecting the Add button.					Add

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	097208-0296
		Application Number	
Title of Invention	MANUAL TREADMILL AND METHODS OF OPERATING THE SAME		

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.**

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 the Freedom of Information Act requires disclosure of these records.
- 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 inspections 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.

MANUAL TREADMILL AND METHODS OF OPERATING THE SAME

CROSS-REFERENCE TO RELATED PATENT APPLICATIONS

[0001] This application is a continuation of U.S. Patent Application No. 15/958,339, filed April 20, 2018, which is continuation of U.S. Patent Application No. 14/832,708, filed August 21, 2015, which is a continuation of U.S. Patent Application No. 14/076,912 now U.S. Pat. No. 9,114,276, filed November 11, 2013, which is a continuation of U.S. Patent Application No. 13/235,065, filed September 16, 2011, which is a continuation-in-part of prior international Application No. PCT/US2010/027543, filed March 16, 2010, which claims priority to U.S. Provisional Application Serial No. 61/161,027, filed March 17, 2009, all of which are incorporated herein by reference in their entireties.

BACKGROUND

[0002] The present invention relates generally to the field of treadmills. More specifically, the present invention relates to manual treadmills. Treadmills enable a person to walk, jog, or run for a relatively long distance in a limited space. It should be noted that throughout this document, the term “run” and variations thereof (e.g., running, etc.) in any context is intended to include all substantially linear locomotion by a person. Examples of this linear locomotion include, but are not limited to, jogging, walking, skipping, scampering, sprinting, dashing, hopping, galloping, etc.

[0003] A person running generates force to propel themselves in a desired direction. To simplify this discussion, the desired direction will be designated as the forward direction. As the person's feet contact the ground (or other surface), their muscles contract and extend to apply a force to the ground that is directed generally rearward (i.e., has a vector direction substantially opposite the direction they desire to move). Keeping with Newton's third law of motion, the ground resists this rearwardly directed force from the person, resulting in the person moving forward relative to the ground at a speed related to the force they are creating.

[0004] To counteract the force created by the treadmill user so that the user stays in a relatively static fore and aft position on the treadmill, most treadmills utilize a belt that is driven by a motor. The motor operatively applies a rotational force to the belt, causing that portion of the belt on which the user is standing to move generally rearward. This force must be sufficient to overcome all sources of friction, such as the friction between the belt and other treadmill components in contact therewith and kinetic friction, to ultimately rotate the belt at a desired speed. The desired net effect is that, when the user is positioned on a running surface of the belt, the forwardly directed velocity achieved by the user is substantially negated or balanced by the rearwardly directed velocity of the belt. Stated differently, the belt moves at substantially the same speed as the user, but in the opposite direction. In this way, the user remains at substantially the same relative position along the treadmill while running. It should be noted that the belts of conventional, motor-driven treadmills must overcome multiple, significant sources of friction because of the presence of the motor and configurations of the treadmills themselves.

[0005] Similar to a treadmill powered by a motor, a manual treadmill must also incorporate some system or means to absorb or counteract the forward velocity generated by a user so that the user may generally maintain a substantially static position on the running surface of the treadmill. The counteracting force driving the belt of a manual treadmill is desirably sufficient to move the belt at substantially the same speed as the user so that the user stays in roughly the same static position on the running surface. Unlike motor-driven treadmills, however, this force is not generated by a motor.

SUMMARY

[0006] One embodiment of the disclosure relates to a manually operated treadmill comprising a treadmill frame having a front end and a rear end opposite the front end, a front shaft rotatably coupled to the treadmill frame at the front end, a rear shaft rotatably coupled to the treadmill frame at the rear end, and a running belt including a curved running surface upon which a user of the treadmill may run. The running belt is disposed about the front and rear shafts such that force generated by the user causes rotation of the front shaft and the rear shaft

and also causes the running surface of the running belt to move from the front shaft toward the rear shaft. The treadmill is configured to control the speed of the running belt to facilitate the maintenance of the contour of the curved running surface.

[0007] Another embodiment of the disclosure relates to a manually operated treadmill comprising a treadmill frame, a front support member rotatably coupled to the treadmill frame, a rear support member rotatably coupled to the treadmill frame, a running belt including a curved running surface upon which a user of the treadmill may run, wherein the running belt is supported by the front support member and the rear support member, and a synchronizing system configured to cause the front support member and the rear support member to rotate at substantially the same speeds. The force generated by the user causes rotation of the front support member and the rear support member and also causes the running belt to rotate relative to the treadmill frame.

[0008] Another embodiment of the disclosure relates to a manually operated treadmill comprising a treadmill frame, a front shaft rotatably coupled to the treadmill frame, a rear shaft rotatably coupled to the treadmill frame, a running belt including a contoured running surface upon which a user of the treadmill may run, wherein the running belt is disposed about the front and rear shafts such that force generated by the user causes rotation of the front shaft and the rear shaft and also causes the running belt to rotate about the front shaft and the rear shaft without the rotation of the running belt being generated by a motor, and a one-way bearing assembly configured to prevent rotation of the running surface of the running belt in one direction.

[0009] Another embodiment of the disclosure relates to manually operated treadmill comprising a treadmill frame, a running belt including a running surface upon which a user of the treadmill may run, a front support member rotatably coupled to the treadmill frame, the front support member comprising the forwardmost support for the running belt, a rear support member rotatably coupled to the treadmill frame, the rear support member comprising the rearwardmost support for the running belt. The running surface comprises at least in part a complex curve located intermediate the front support member and the rear support member and incorporating a minimum of two geometric configurations.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] FIG. 1 is a perspective view of an exemplary embodiment of a manual treadmill having a non-planar running surface.

[0011] FIG. 2 is a left-hand partially exploded perspective view of a portion of the manual treadmill according to the exemplary embodiment shown in FIG. 1.

[0012] FIG. 3 is a right-hand partially exploded perspective view of a portion of the manual treadmill according to the exemplary embodiment shown in FIG. 1.

[0013] FIG. 4 is a perspective view of the right-hand side of the manual treadmill of FIG. 1 with a portion of the rear of the treadmill cut-away to show a portion of the arrangement of elements.

[0014] FIG. 5 is a cross-sectional view of a portion of the manual treadmill taken along line 5-5 of FIG. 1.

[0015] FIG. 6 is an exploded view of a portion of the manual treadmill of FIG. 1 having the side panels and handrail removed.

[0016] FIG. 7a is a side schematic view of the profile of the running surface of the manual treadmill according to an exemplary embodiment.

[0017] FIGS. 7b-7j are side schematic views of alternative profiles of the running surfaces of manual treadmills according to alternative exemplary embodiments.

[0018] FIG. 8 is a partially exploded, perspective view of a bearing rail for the manual treadmill according to the exemplary embodiment shown in FIG. 1.

[0019] FIG. 9 is a side elevation view of the bearing rail of FIG. 6.

[0020] FIG. 10 is a top elevation view of a front shaft assembly for the manual treadmill according to the exemplary embodiment shown in FIG. 1.

[0021] FIG. 11 is a top elevation view of a rear shaft assembly for the manual treadmill according to the exemplary embodiment shown in FIG. 1.

[0022] FIG. 12 is a partial, cross-sectional view of the manual treadmill taken along line 12-12 of FIG. 1.

[0023] FIG. 13 is an alternative exemplary embodiment of the partial, cross-sectional view of the manual treadmill similar to FIG. 12.

[0024] FIG. 14 is a perspective view of an alternative embodiment of a synchronizing system integrated into a manual treadmill.

[0025] FIG. 15 is a partial, cross-sectional view of a manual treadmill including an exemplary embodiment of a braking system taken along line 15-15 of FIG. 4.

[0026] FIG. 16 is a partial, cross-sectional view of a manual treadmill including another exemplary embodiment of a braking system taken along line 16-16 of FIG. 4.

[0027] FIG. 17 is a perspective side view of a portion of the manual treadmill according to the exemplary embodiment shown in FIG. 1 including a plurality of rollers used in place of bearing rails.

[0028] FIG. 18 is a side perspective view of a track system for use with the exemplary embodiment of a manual treadmill shown in FIG. 1 and configured to help induce and maintain a running belt in a desired non-planar shape to define a running surface.

[0029] FIG. 19 is a detail view of the track system of FIG. 18 taken along line 19-19.

[0030] FIG. 20 is a partial cross-sectional view of the track system of FIG. 18 taken along line 20-20.

[0031] FIG. 21 is a detail view of the track system of FIG. 20 taken along line 21-21.

[0032] FIG. 22 is a side perspective view of another exemplary embodiment of a track system for use with the exemplary embodiment of a manual treadmill shown in FIG. 1 and configured

to help induce and maintain a running belt in a desired non-planar shape to define a running surface.

[0033] FIG. 23 is a detail view of the track system of FIG. 22 taken along line 23-23.

[0034] FIG. 24 is a partial cross-sectional view of the track system of FIG. 18 taken along line 24-24.

[0035] FIG. 25 is a side perspective view of another exemplary embodiment of a track system for use with the exemplary embodiment of a manual treadmill shown in FIG. 1 and configured to help induce and maintain a running belt in a desired non-planar shape to define a running surface.

[0036] FIG. 26 is a detail view of the track system of FIG. 25 taken along a line 26-26.

[0037] FIG. 27 is a partial cross-sectional view of the track system of FIG. 25 taken along line 27-27.

[0038] FIG. 28 is a detail view of the track system of FIG. 27 taken along line 28-28.

[0039] FIG. 29 is a partially exploded, right-hand perspective view of a track system for use with the exemplary embodiment of a manual treadmill shown in FIG. 1 and configured to help induce and maintain a running belt in a desired non-planar shape to define a running surface.

[0040] FIG. 30 is a detail view of the track system of FIG. 29 taken along line 30-30.

[0041] FIG. 31 is a side perspective view of another exemplary embodiment of a track system for use with the exemplary embodiment of a manual treadmill shown in FIG. 1 and configured to help induce and maintain a running belt in a desired non-planar shape to define a running surface.

[0042] FIG. 32 is a detail view of the track system of FIG. 31 taken along a line 32-32.

[0043] FIG. 33 is a partial cross-sectional view of the track system of FIG. 31 taken along a line 33-33.

[0044] FIG. 34 is a detail view of the track system of FIG. 32 taken along a line 34-34.

[0045] FIG. 35 is a perspective view of an exemplary embodiment of a manual treadmill according to another embodiment having a substantially planar running surface.

[0046] FIG. 36 is a perspective view of a one-way bearing for the manual treadmill according to the exemplary embodiment shown in FIG. 1.

[0047] FIG. 37 is a left-hand partially exploded perspective view of a portion of the manual treadmill according to the exemplary embodiment shown in FIG. 1 including an incline adjustment system.

[0048] FIG. 38 is a perspective view of a one-way bearing for the manual treadmill shown in FIG. 1, according to another embodiment.

DETAILED DESCRIPTION

[0049] Referring to FIG. 1, a manual treadmill 10 generally comprises a base 12 and a handrail 14 mounted to the base 12 as shown according to an exemplary embodiment. The base 12 includes a running belt 16 that extends substantially longitudinally along a longitudinal axis 18. The longitudinal axis 18 extends generally between a front end 20 and a rear end 22 of the treadmill 10; more specifically, the longitudinal axis 18 extends generally between the centerlines of a front shaft and a rear shaft, which will be discussed in more detail below.

[0050] A pair of side panels 24 and 26 (e.g., covers, shrouds, etc.) are preferably provided on the right and left sides of the base 12 to effectively shield the user from the components or moving parts of the treadmill 10. The base 12 is supported by multiple support feet 28, which will be described in greater detail below. A rearwardly extending handle 30 is provided on the rear end of the base 12 and a pair of wheels 32 are provided at the front of the base 12, however, the wheels 32 are mounted so that they are generally not in contact with the ground when the treadmill is in an operating position. The user can easily move and relocate the treadmill 10 by lifting the rear of the treadmill base 12 a sufficient amount so that the multiple support feet 28 are no longer in contact with the ground, instead the wheels 32 contact the

ground, thereby permitting the user to easily roll the entire treadmill 10. It should be noted that the left and right-hand sides of the treadmill and various components thereof are defined from the perspective of a forward-facing user standing on the running surface of the treadmill 10.

[0051] Referring to FIGS. 2–6, the base 12 is shown further including a frame 40, a front shaft assembly 44 positioned near a front end 48 of the frame 40, and a rear shaft assembly 46 positioned near the rear end 50 of frame 40, generally opposite the front end 48. Specifically, the front shaft assembly 44 is coupled to the frame 40 at the front end 48, and the rear shaft assembly 46 is coupled to the frame 40 at the rear end 50 so that the frame supports these two shaft assemblies.

[0052] The frame 40 comprises longitudinally-extending, opposing side members, shown as a left-hand side member 52 and a right-hand side member 54, and one or more lateral or cross-members 56 extending between and structurally connecting the side members 52 and 54 according to an exemplary embodiment. Each side member 52, 54 includes an inner surface 58 and an outer surface 60. The inner surface 58 of the left-hand side member 52 is opposite to and faces the inner surface 58 of the right-hand side member 54. According to other exemplary embodiments, the frame may have substantially any configuration suitable for providing structure and support for the manual treadmill.

[0053] Similar to most motor-driven treadmills, the front shaft assembly 44 includes a pair of front running belt pulleys 62 interconnected with, and preferably directly mounted to, a shaft 64, and the rear shaft assembly 46 includes a pair of rear running belt pulleys 66 interconnected with, and preferably directly mounted to, a shaft 68. The front and rear running belt pulleys 62, 66 are configured to facilitate movement of the running belt 16. The running belt 16 is disposed about the front and rear running belt pulleys 62, 66, which will be discussed in more detail below. As the front and rear running belt pulleys 62, 66 are preferably fixed relative to shafts 64 and 68, respectively, rotation of the front and rear running belt pulleys 62, 66 causes the shafts 64, 68 to rotate in the same direction. The front and rear running belt pulleys 62, 66 are formed of a material sufficiently rigid and durable to maintain shape under load. Preferably, the material is of a relatively light weight so as to reduce the inertia of the pulleys 62, 66. The pulleys 62, 66 may be formed of any material having one or more of these

characteristics (e.g., metal, ceramic, composite, plastic, etc.). According to the exemplary embodiment shown, the front and rear running belt pulleys 62, 66 are formed of cast aluminum. According to another embodiment, the front and rear running belt pulleys 62, 66 are formed of a glass-filled nylon, for example, Grivory® GV-5H Black 9915 Nylon Copolymer available from EMS-GRIVORY of Sumter, SC 29151, which may save cost and reduce the weight of the pulleys 62, 66 relative to metal pulleys. To prevent a static charge due to operation of the treadmill 10 from building on a pulley 62, 66 formed of electrically insulative materials (e.g., plastic, composite, etc.), an antistatic additive, for example Antistat 10124 from Nexus Resin Group of Mystic, CT 06355, maybe may be blended with the GV-5H material.

[0054] As noted above, the manual treadmill disclosed herein includes a force translation system that incorporates a variety of innovations to translate the forward force created by the user into rotation of the running belt and permit the user to maintain a substantially static fore and aft position on the running belt while running. One of the ways to translate this force is to configure the running belt 16 to be more responsive to the force generated by the user. For example, by minimizing the friction between the running belt 16 and the other relevant components of the treadmill 10, more of the force the user applies to the running belt 16 to propel themselves forward can be utilized to rotate the running belt 16.

[0055] Another way to counteract the user-generated force and convert or translate it into rotational motion of the running belt 16 is to integrate a non-planar running surface, such as non-planar running surface 70. Depending on the configuration, non-planar running surfaces can provide a number of advantages. First, the shape of the non-planar running surface may be such that, when a user is on the running surface, the force of gravity acting upon the weight of the user's body helps rotate the running belt. Second, the shapes may be such that it creates a physical barrier to restrict or prevent the user from propelling themselves off the front end 20 of the treadmill 10 (e.g., acting essentially as a stop when the user positions their foot thereagainst, etc.). Third, the shapes of some of the non-planar running surfaces can be such that it facilitates the movement of the running belt 16 there along (e.g., because of the curvature, etc). Accordingly, the force the user applies to the running belt is more readily able to be translated into rotation of the running belt 16.

[0056] As seen in FIGS 1 and 4-5, the running surface 70 is generally non-planar and shown shaped as a substantially complex curve according to an exemplary embodiment. The running surface can be generally divided up into three general regions each having a particular geometric configuration, the front portion 72, which is adjacent to the front shaft assembly 44, the rear portion 74, which is adjacent to the rear shaft assembly 46, and the central portion 76, which is intermediate the front portion 72 and the rear portion 74. In the exemplary embodiment seen in FIGS 1 and 4, the running surface 70 includes a substantially concave curve 80 and a substantially convex curve 82. At the front portion 72 of the running surface 70, the relative height or distance of the running surface 70 relative to the ground is generally increasing moving forward along the longitudinal axis 18 from the central portion 76 toward the front shaft assembly 44. This increasing height configuration provides one structure to translate the forward running force generated by the user into rotation of the running belt 16. To initiate the rotation of the running belt 16, the user places her first foot at some point along the upwardly-inclined front portion 72 of the running surface 70. As the weight of the user is transferred to this first foot, gravity exerts a downward force on the user's foot and causes the running belt 16 to move (e.g., rotate, revolve, advance, etc.) in a generally clockwise direction as seen in FIGS 1 (or counterclockwise as seen in FIG. 4). As the running belt 16 rotates, the user's first foot will eventually reach the lowest point in the non-planar running surface 70 found in the central portion 76, and, at that point, gravity is substantially no longer available as a counteracting source to the user's forward running force. Assuming a typical gait, at this point the user will place her second foot at some point along the upwardly-inclined front portion 72 of the running belt 16 and begin to transfer weight to this foot. Once again, as weight shifts to this second foot, gravity acts on the user's foot to continue the rotation of the running belt 16 in the clockwise direction as seen in FIG. 1. This process merely repeats itself each and every time the user places her weight-bearing foot on the running belt 16 at any position vertically above the lowest point of central portion 76 of the running surface 70 of the running belt 16. The upwardly-inclined front portion 72 of the running belt 16 also acts substantially as a physical stop, reducing the chance the user can inadvertently step off the front end 20 of the treadmill 10.

[0057] A user can generally utilize the force translation system of the treadmill 10 to control the speed of the treadmill 10 by the relative placement of her weight-bearing foot along the running belt 16 of the base 12. Generally, the rotational speed of the running belt 16 increases as greater force is applied thereto in the rearward direction. The generally upward-inclined shape of the front portion 72 thus provides an opportunity to increase the force applied to the running belt 16, and, consequently, to increase the speed of the running belt 16. For example, by increasing her stride and/or positioning her weight-bearing foot vertically higher on the front portion 72 relative to the lowest portion of the running belt 16, gravity will exert a greater and greater amount of force on the running belt 16 to drive it rearwardly. In the configuration of the running belt 16 seen in FIG 1, this corresponds to the user positioning her foot closer to the front end 20 of the treadmill 10 along the longitudinal axis 18. This results in the user applying more force to the running belt 16 because gravity is pulling her mass downward along a greater distance when her feet are in contact with the front portion 72 of the running surface 70. As a result, the relative rotational speed of the running belt 16 and the relative running speed the user experiences is increased. Accordingly, the force translation system is adapted to convert a variable level of force generated by the user into a variable speed of rotation of the belt.

[0058] FIG. 5 illustrates a number of possible locations where a user may position her feet. A-C indicate locations along the front portion 72 of the running surface 70 where a user may place their weight bearing foot. When the user positions her weight bearing foot at location A, she will be running with greater speed than if her weight bearing foot was positioned at locations B or C based upon the fact that the force of gravity is able to have a greater effect as the user's weight bearing foot moves from location A towards the rear of the non-planar running surface 70 as the running belt 16 rotates. At location A, gravity is able to have the greatest impact on the user so that the greatest amount of force is translated into rotation of the running belt 16. A user can decrease her relative running speed by positioning her weight bearing foot at locations B or C. As location B is relatively higher along the front portion 72 than C, gravity is able to exert a greater force on the user and the running belt 16 than if the user's weight bearing foot was positioned at location C.

[0059] Another factor which will increase the speed the user experiences on the treadmill 10 is the relative cadence the user assumes. As the user increases her cadence and places her

weight-bearing foot more frequently on the upwardly extending front portion 72, more gravitational force is available to counteract the user-generated force, which translates into greater running speed for the user on the running belt 16. It is important to note that speed changes in this embodiment are substantially fluid, substantially instantaneous, and do not require a user to operate electromechanical speed controls. The speed controls in this embodiment are generally the user's cadence and relative position of her weight-bearing foot on the running surface. In addition, the user's speed is not limited by speed settings as with a driven treadmill.

[0060] In the embodiment shown in FIGS. 1-6, gravity is also utilized as a means for slowing the rotational speed of the running belt. At a rear portion 74 of the running surface 70, the distance of the running surface 70 relative to the ground generally increases moving rearward along the longitudinal axis 18 from the lowest point in the non-planar running surface 70. As each of the user's feet move rearward during her stride, the rear portion 74 acts substantially as a physical stop to discourage the user from moving too close to the rear end of the running surface. To this point, the user's foot has been gathering rearward momentum while moving from the front portion 72, into the central portion 76, and toward the rear portion 74 of the running surface 70. Accordingly, the user's foot is exerting a significant rearwardly-directed force on the running belt 16. Under Newton's first law of motion, the user's foot would like to continue in the generally rearward direction. The upwardly-inclined rear portion 74, interferes with this momentum and provides a force to counter the rearwardly-directed force of the user's foot by providing a physical barrier. As the user's non-leading foot moves up the incline (see position D in FIG. 5), the running surface 70 provides a force that counters the force of the user's foot, absorbing some of the rearwardly-directed force from the user and preventing it from being translated into increasing speed of the running belt 16. Also, gravity acts on the user's weight bearing foot as it moves upward, exerting a downwardly-directed force on the user's foot that the user must counter to lift their foot and bring it forward to continue running. In addition to acting as a stop, the rear portion 74 provides a convenient surface for the user to push off of when propelling themselves forward, the force applied by the user to the rear portion 74 being countered by the force the rear portion 74 applies to the user's foot.

[0061] One benefit of the manual treadmill according to the innovations described herein is positive environmental impact. A manual treadmill such as that disclosed herein does not utilize electrical power to operate the treadmill or generate the rotational force on the running belt. Therefore, such a treadmill can be utilized in areas distant from an electrical power source, conserve electrical power for other uses or applications, or otherwise reduce the “carbon footprint” associated with the operation of the treadmill 10.

[0062] A manual treadmill according to the innovations disclosed herein can incorporate one of a variety of shapes and complex contours in order to translate the user’s forward force into rotation of the running belt or to provide some other beneficial feature or element. FIG. 7a generally depicts the curve defined by the running surface 70 of the exemplary embodiment shown in FIG 1, specifically, substantially a portion of a curve defined by a third-order polynomial. The front portion 72 and the central portion 76 define a concave curve and the rear portion 74 of the running surface 70 defines a convex curve. As the central portion 76 of the running surface 70 transitions to the rear portion 74, the concave curve transitions to the convex curve. In the embodiment shown, the curvature of the front portion 72 and the central portion 76 is substantially the same; however, according to other exemplary embodiments, the curvature of the front portion 72 and the central portion 76 may differ. Please note, the description of the running surfaces as concave and convex provided herein is related to the relative curve which the user’s foot would experience on the running surface 70.

[0063] FIGS. 7b-7h illustrate the side profiles of some exemplary non-planar, contoured running surfaces according to the innovations disclosed herein, each including a front portion, a central portion, and a rear portion. Each portion has a particular geometric configuration that is concave, convex, or linear; collectively, the portions define the non-planar running surface. For example, FIG. 7b shows an exemplary embodiment of the profile of a non-planar surface including a concave front portion 100, a concave central portion 102, and a concave rear portion 104 according to an exemplary embodiment. In this embodiment, the front portion 100, central portion 102, and rear portion 104 each have different curvatures. According to other exemplary embodiments, one or more of the front, central, and rear portions may have the same curvature.

[0064] FIG. 7c shows an exemplary embodiment of the profile of a non-planar surface including a convex front portion 110, a concave central portion 112, and a concave rear portion 114 according to an exemplary embodiment. Once again, this embodiment incorporates a smooth transition between the different curvatures of the front, central, and rear portions.

[0065] FIG. 7d shows an exemplary embodiment of the profile of a non-planar surface including a convex front portion 120, a concave central portion 122, and a convex rear portion 124 according to an exemplary embodiment. In this embodiment, the front portion 120 and the rear portion 122 have different curvatures, but these curvatures may be the same according to other exemplary embodiments.

[0066] FIG. 7e shows an exemplary embodiment of the profile of a non-planar surface including a convex front portion 130, a convex central portion 132, and a convex rear portion 134 according to an exemplary embodiment. In this embodiment, the front portion 130, the central portion 132, and the rear portion 134 each have the same convex curvature, but the curvature of one or more of the front portion 130, the central portion 132, and the rear portion 134 may differ according to other exemplary embodiments.

[0067] FIG. 7f shows an exemplary embodiment of the profile of a non-planar surface including a concave front portion 140, a convex central portion 142, and a convex rear portion 144 according to an exemplary embodiment. In this embodiment, the central portion 142 and the rear portion 144 having the same curvatures, but these curvatures may differ from each other according to other exemplary embodiments.

[0068] FIG. 7g shows an exemplary embodiment of the profile of a non-planar surface including a convex front portion 150, a convex central portion 152, and a concave rear portion 154 according to an exemplary embodiment. In this embodiment, the front portion 150 and the central portion 152 having the same curvatures, but these curvatures may differ from each other according to other exemplary embodiments.

[0069] FIG. 7h shows an exemplary embodiment of the profile of a non-planar surface including a concave front portion 160, a convex central portion 162, and a concave rear portion 164 according to an exemplary embodiment. In this embodiment, the front portion 160 and the

rear portion 164 have different curvatures, but these curvatures may be the same according to other exemplary embodiments.

[0070] According to one exemplary embodiment, the non-planar running surface of the manual treadmill 10 is substantially curved, but that curve integrates one or more linear portions (e.g., that replace a “curved portion” or the curve or that are added/inserted into the curve). The linear portions may be substantially parallel to the longitudinal axis 18 or disposed at an angle relative thereto. FIG. 7i illustrates the profile of a non-planar surface wherein a substantially linear portion 170 has been integrated with a concave curve having a first concave portion 174 to one side of the linear portion 170 and a second concave portion 176 to the opposite side of the linear portion 170 according to an exemplary embodiment. In addition to the linear portion 170, the first concave portion 174 and the second concave portion 176, the profile further includes a fourth portion shown as a convex portion 178. According to an another exemplary embodiment, a linear portion may replace all or a portion of the curve. Alternatively, multiple linear portions may be included in a profile of a non-planar surface.

[0071] FIG. 7j illustrates a linear portion 180 provided at the front of the running surface which transitions into a concave curve 182 which then transitions into a convex curve 184.

[0072] According to an exemplary embodiment, the non-planar running surface of the manual treadmill 10 may include (or be so defined as to include) more or less than three portions. For example, FIG. 7g could be interpreted as defined two portions, the first portion including the front portion and the central portion, which comprise a convex curve having the same curvature throughout the front portion 150 and the central portion 152, and the second portion including the rear portion 154 which generally comprises a concave curve. According to some exemplary embodiments, some non-planar running surfaces include at least three or more portions.

[0073] According to an exemplary embodiment, the profile defined by the non-planar running surface is substantially a portion of a curve defined by any suitable second-order polynomial, but, as clearly demonstrated in FIGS. 7a-j, the profile defined by the non-planar running surface can be a portion of a curve that is a third-order polynomial or a fourth-order

polynomial. According to yet another exemplary embodiment, the running surface profile can be substantially defined by a first-order polynomial, in other words, the running surface is substantially planar. An exemplary embodiment of a manual treadmill including a planar running surface will be discussed in more detail below (see e.g., FIG. 35).

[0074] According to an exemplary embodiment, the relative length of each portion of the running surface may vary. In the exemplary embodiment shown, the central portion is the longest. In other exemplary embodiments, the rear portion may be the longest, the front portion may be shorter than the intermediate portion, or the front portion may be longer than the rear portion, etc. It should be noted that the relative length may be evaluated based on the distance the portion extends along the longitudinal axis or as measured along the surface of the running belt itself. One of the benefits of integrating one or more of the various curves or contours into the running surface is that the contour of the running surface can be used to enhance or encourage a particular running style. For example, a curve integrated into the front portion of the running surface can encourage the runner to run on the balls of her feet rather than having the heel strike the running belt first. Similarly, the contour of the running surface can be configured to improve a user's running biomechanics and to address common running induced injuries (e.g., plantar fasciitis, shin splints, knee pain, etc.). For example, integrating a curved contour on the front portion of the running surface can help to stretch the tendons and ligaments of the foot and avoid the onset of plantar fasciitis.

[0075] One of the difficulties associated with using a running surface that has a non-planar shape is inducing the running belt 16 to assume the non-planar shape and then maintaining the running belt 16 in that non-planar shape when the treadmill is being operated. In addition to discussing this difficulty in more detail below, a number of running belt retention systems providing ways to induce and maintain a belt in a desired non-planar shape to define the running surface are discussed below. Generally, these running belt retention systems are adapted to control the relative contour of the running belt so that the running belt substantially follows the contour of the running surface

[0076] One embodiment of a running belt retention system used to induce the running belt 16 to take-on the non-planar shape and then maintaining that shape, as shown in FIG. 5, is

discussed in reference to FIGS. 5-6 and 8-11 in which base 12 is shown further including a pair of opposed bearing rails 200 to support the running belt 16 along with a front synchronizing belt pulley 202, a rear synchronizing belt pulley 204, and a synchronizing belt 206 all of which are interconnected to the running belt 16. The front rear synchronizing belt pulleys 202, 204 may be formed of the same or different materials as the front and rear running belt pulleys 62, 66.

[0077] Referring to FIGS. 6 and 8-9, in particular, the bearing rails 200 are shown including a plurality of bearings 208 and an upper or top profile 210, shown shaped as a complex curve, according to an exemplary embodiment. The bearing rails 200 shown are supported by and preferably mounted to the frame 40 substantially between the front shaft assembly 44 and the rear shaft assembly 46, the support members or elements about which the running belt 16 is disposed. One bearing rail 200 is coupled to one or more of the cross-members 56 proximate to the inner surface 58 of the left-hand side member 52 and the other bearing rail 200 is coupled to one of more of the cross-members 56 proximate to the inner surface 58 of the right-hand side member 54 thereby fixing the position of the bearing rails 200 relative to the frame 40.

[0078] The bearing rails 200 are preferably configured to facilitate movement of the running belt 16. In the exemplary embodiment seen in FIGS. 8-9, the running belt 16 moves substantially along the top profile 210 of the bearing rails 200. The running belt 16 contacts and is supported in part by the bearings 208 of the bearing rails and bearing 208 are configured to rotate, thereby decreasing the friction experienced by the running belt 16 as the belt moves along the top profile 210. The bearing rails 200 are configured to help achieve the desired shape of the running surface. The shape of the top profile 210 of the bearing rails 200 at least partially corresponds to the desired shape for the running surface 70. The at least somewhat flexible running belt 16 substantially assumes the shape of top profile 210 of the bearing rails 200 by being maintained substantially thereagainst, as will be discussed in more detail later. Accordingly, the running surface 70 has a shape that substantially corresponds to the shape of the top profile 210 of the bearing rails 200. It should be noted that the front and/or rear running belt pulleys may also help define a portion of the shape of the running surface. Also, other suitable shape-providing components may be used in combination with the bearing rails.

[0079] FIG. 9 provides a side view of one of the bearing rails 200 to more clearly show the top profile 210 according to an exemplary embodiment. Similar to the running surface 70, discussed above, the top profile 210 of the bearing rails 200 can be generally divided up into three general regions, the front portion 212 which is adjacent to the front shaft assembly 44 (see e.g., FIG. 5), the rear portion 214 which is adjacent to the rear shaft assembly 46 (see e.g., FIG. 5), and the central portion 216, intermediate the front portion 212 and the rear portions 214. The central portion 216 is shown as a concave curve 218 that has a radius of curvature R_1 . The front portion 212 is further shown as a continuation of the concave curve 218 of the central portion 216, and, thus, also has a radius of curvature of R_1 . The rear portion 214 is shown as a convex curve 220 that has a radius of curvature R_2 . The front portion 212 is shown disposed substantially tangential to the central portion 216, providing a smooth transition therebetween, and helping provide a smooth shape for the running surface 70. The shape of the rear portion 214 also helps provide a smooth transition for the running belt 16 from the bearing rails 200 onto the rear running belt pulleys 66, which helps ensure as much contact as possible between the running belt 16 and the rear running belt pulleys 66. As the shape of the running surface substantially corresponds to the shape of top profile the bearing rails, the shape of the top profile of the bearing rails can necessarily be any of the shapes and/or have any of the variations (e.g., in length of portions, etc.) discussed above in FIGS. 7a through 7j with reference to possible shapes of the running surface.

[0080] According to an exemplary embodiment, each portion of the top profile is disposed substantially tangential to the portions adjacent thereto. According to other exemplary embodiments, less than all of the adjacent portions are disposed substantially tangential to the portions adjacent thereto, meaning the profile does not have an entirely smooth contour.

[0081] According to an exemplary embodiment shown in FIG. 9, R_1 is approximately 7.26 feet. However, it is understood that a radius anywhere from 5 feet to 100-plus feet can be used. The size of the radius which can be used is typically a function of the length of the treadmill which can be accommodated. The range of possible radiuses for a convex bearing rail depends on the shaft-to-shaft distance of the treadmill (see e.g., measurement “x” in FIG. 5, discussed in more detail below). Assuming that the radius of curvature of the curve is R_c , the radius of the front running belt pulley is R_f , and the radius of the rear running belt pulley is R_r , the range of

possible radiuses is approximately: $\infty > R_C > (x - R_f - R_r)/2$. For most commercial-available treadmills, x is approximately between 14 inches and 10 feet but the treadmill can certainly be as great as 25 feet in length. According to the exemplary embodiment shown in FIG. 5, x is approximately 57.8 inches in length. According to another exemplary embodiment, x is approximately 77.2 inches in length, with a radius R_1 of approximately 8.67 feet, wherein the greater length x and radius R_1 may facilitate use of the treadmill 10 by users with a longer running gait. The limiting factors in the length are the available space to accommodate the treadmill and the relative cost of constructing such a large treadmill.

[0082] When the treadmill 10 is being operated, the running belt 16 is driven rearwardly and the goal is to ensure that the running belt 16 follows the profile defined by a portion of the circumference of the front running pulleys 62, the contoured profile defined by the bearings 208 supported on the bearing rails 200 and finally by a portion of the circumference of the rear running belt pulleys 66. The particular contour which the running belt 16 assumes on the bottom of the base 12 between the rear running belt pulleys 66 and front running belt pulleys 62 is not terribly critical provided that the running belt continues to move with minimal friction and is not subject to excessive wear or obstruction.

[0083] Following the shape of the bearing rails 200 is not the natural tendency of the running belt for the particular contour seen in FIG. 5. Rather, without more, the running belt 16 tends to be pulled upward, away from the curved bearing rails and across the central portion 76 of the treadmill 10. Under the force of gravity, the weight of the running belt 16 coupled with the relative spacing between the front and rear running belt pulleys 62 and 66, respectively, would likely result in the top surface of the running belt 16 assuming a position of the shortest distance between the two pulleys, namely, a substantially straight line between the two pulleys with any excess length of the running belt 16 collecting on the bottom of the treadmill and hanging below the front and rear running belt pulleys 62 and 66, respectively. Therefore, a system of some sort needs to be integrated into a non-planar running surface treadmill to ensure that the running belt 16 follows the desired contour over the running surface.

[0084] Further referring to FIGS. 5–6 and 8–11, one way to ensure that the running belt 16 follows the contour of the bearing rails 200 and the front and rear running belt pulleys 62, 66 is

to utilize the weight of the running belt 16 itself in addition to adjusting the relative size of the front and rear running belt pulleys 62, 66; and/or providing a synchronizing system 222 according to an exemplary embodiment.

[0085] As discussed above, the running belt 16 is disposed about the front and rear running belt pulleys 62, 66 which in turn are disposed about front and rear shafts 64, 68, respectively. Measured along the longitudinal axis 18 between the centerlines of the front and rear shafts 64, 68, the front and rear shafts 64, 68 are spaced a distance x from each other, as shown in FIG. 5. Accordingly, when positioning the running belt 16 about the front and rear running belt pulleys 62, 66, the length of the running belt 16 provided therebetween must be at least x (e.g., the straight-line distance therebetween). It follows that, when the profile of the running surface 70 is non-planar, the length of the running belt provided between the front and rear shafts 64, 68 will be greater than x .

[0086] In the exemplary embodiment shown in FIG. 5, when positioning the running belt 16 about the front and rear running belt pulleys 62, 66, a length of the running belt 16 sufficient to permit the running belt 16 to correspond to (e.g., follow, be positioned against or above, etc.) the desired contours of the bearing rails 200 and the front and rear running belt pulleys 62, 66 is generally disposed between the front and rear shafts 64, 68. At each location between the front and rear shafts 64, 68, the force of gravity pulls downward on the running belt 16. Generally, this force will help pull the running belt 16 downward and against the desired components of base 12. However, gravity can also cause slippage (e.g., over the front running belt pulley 62, over the rear running belt pulley 66, down along curves of the bearing rail 200, etc.) in an amount that is undesirable and the magnitude of these slippage-problems tends to increase when the treadmill 10 is being operated. Accordingly, the solution typically relies on more than the weight of the running belt alone.

[0087] Further referring to FIGS. 5–6 and 8–11, the preferred embodiment of the running belt 16 is shown including two reinforcing belts shown as endless belts 226 and a plurality of slats 228 according to an exemplary embodiment. The endless belts 226 are configured to provide support for the running belt 16 in order to support the weight of a user. The endless belts 226 are shown disposed on opposite sides of the running belt 16, generally interior to the outer,

lateral edge of the slats 228. The endless belts 226 are themselves reinforced, and thus help stabilize the sides of the running belt and help prevent stretching of the running belt 16. For example, the endless belts may be reinforced with metal wiring, which is surrounded by a molded plastic coating. According to some exemplary embodiments, more or less than two endless belts may be used. According to other exemplary embodiments, other suitable support elements may be used to provide support for the running belt. Further details regarding the structure of the running belt and endless belt structure are seen in US Pat. No. 5,470,293, titled “Toothed-Belt, V-Belt, and Pulley Assembly, for Treadmills,” which is incorporated by reference herein.

[0088] The endless belts 226 are further configured to interact with the front running belt pulleys 62 and the rear running belt pulleys 66. The location of each endless belt 226 laterally, along the width of the running belt 16, substantially corresponds to the location of a longitudinally aligned front running belt pulley 62 and rear running belt pulley 66. Each endless belt 226 includes a first or inner portion 230 and a second or outer portion 232 at an interior surface 236 according to an exemplary embodiment. The inner portion 230 is in contact with an exterior surface 234 of the corresponding running belt pulleys 62, 66. According to some exemplary embodiments, the outer portion 232 is also in contact with the exterior surface 234 of the corresponding running belt pulleys 62, 66.

[0089] FIG. 12 illustrates a running belt and running belt pulley combination wherein the exterior surfaces 234 of the front running belt pulleys 62 are substantially smooth and are in contact with the interior surface 236 of the endless belts 226, which is also substantially smooth according to an exemplary embodiment. The outer portion 232 is shown substantially not in contact with the exterior surfaces 234 of the front running belt pulleys 62. The outer portion 232 is further shown including a plurality of teeth 238 (e.g., being toothed); however, according to other exemplary embodiments, the outer portion may be smooth or have any suitable texture and/or configuration. In this embodiment, both of the running belt pulleys come in contact with the inner, substantially smooth portion of the endless belts, and a toothed portion of the endless belts is disposed to the outside of the running belt pulleys on both sides.

[0090] FIG. 13 illustrates an alternative running belt and running belt pulley combination according to an exemplary embodiment. In this exemplary embodiment, the front running belt pulleys 62' include a first or inner portion 230' and a second or outer portion 232'. The inner portion 230' of the front running belt pulleys 62' is substantially smooth, while the outer portion 232' includes a plurality of teeth, to correspond to the inner and outer portions 230', 232', of the endless belts 226', respectively. In this embodiment, both of the running belt pulleys include an inner, smooth portion and an outer, toothed portion. These portions correspond to an inner, smooth portion of the endless belt and an outer, toothed portion of the endless belt. This endless belt/front running belt pulley configuration is discussed in more detail in U.S. Patent No. 5,470,293, titled "Toothed-Belt, V-Belt, and Pulley Assembly, for Treadmills," which is herein incorporated by reference in its entirety.

[0091] According to still another an exemplary embodiment, a combination of the endless belt/front running belt pulley configurations shown in FIGS. 12 and 13 is used. In this exemplary embodiment, the smooth belt and pulley configuration shown in FIG. 12 is used for the front running belt pulleys and the combination of smooth and toothed belt and pulley configuration shown in FIG. 13 is used for the rear running belt pulleys. In another exemplary embodiment, the configuration shown in FIG. 13 is used for the front running belt pulleys and the configuration shown in FIG. 12 is used for the rear running belt pulleys.

[0092] The slats 228 of the running belt 16 are configured to help support a user of the treadmill 10. The slats 228 may be made of substantially any suitably sturdy material (e.g., wood, plastic, metal, etc.) and extend generally laterally between the endless belts 226. Each slat 228 is coupled at its ends 252, 254 to the second portions 232 of the endless belts 226 using fasteners. According to other exemplary embodiments, the slats may be otherwise coupled to the endless belts (e.g., adhered, welded, etc.) in the manner disclosed in US Pat. No. 5,470,293, titled "Toothed-Belt, V-Belt, and Pulley Assembly, for Treadmills," which is incorporated herein by reference. Each slat is shown to include a portion 229 (e.g., stem, web, etc.) extending inwardly from an interior surface 256 of the slat 228.

[0093] According to an exemplary embodiment, the running belt may be substantially any suitable, continuous loop element, including, but not limited to, a continuous urethane (e.g.,

polyurethane) loop, a continuous loop made of plastics other than polyurethane, a plastic belt reinforced with reinforcing elements (e.g., metal wire, a relatively harder plastic, wood, etc.), a continuous foam loop, a loop formed by a plurality of interconnected members (e.g., metallic members, wooden members, etc.) in a manner to provide at least some flexibility, etc.

[0094] Referring to FIGS. 6, 10 and 11, another aspect of the solution to ensuring the running belt 16 follows the desired contour involves the utilizing front running belt pulleys 62 that are slightly larger than the rear running belt pulleys 66. That is, the radius of the front running belt pulleys, R_f , is greater than the radius of the rear running belt pulleys, R_r . Assuming the front running belt pulleys 62 are rotating with the same rotational velocity (e.g., angular speed) as the rear running belt pulleys 66, the tangential velocity of the front running belt pulleys 62 is slightly greater than the tangential velocity of the rear running belt pulleys 66. Thus, as the running belt 16 is driven, the portion of the running belt 16 disposed proximate the front end 20 of the treadmill 10 will be moved over the front running belt pulleys 62 and rearward with slightly greater speed than the rear running belt pulleys 66 move the portion of the running belt 16 proximate thereto. Thus, the front running belt pulleys 62 essentially “push” the running belt 16 rearward, creating a slight amount of excess running belt 16 in the area between the front running belt pulleys 62 and the rear running belt pulleys 66, which helps to counter the force of gravity which would attempt to gather any excess length of running belt 16 on the bottom of the treadmill 10 thereby causing the top surface of the running belt 16 to assume a position of the shortest distance between the two pulleys, namely, a substantially straight line between the two pulleys. Obviously the system cannot tolerate too much excess length of running belt feeding off the front running belt pulley 62 so periodically, a portion of this excess running belt 16 will slip over the rear running belt pulley 66. By specifically balancing the excess running belt 16 coming off the front running belt pulley 62 against the slippage allowed on the rear running belt pulley 66, the running belt 16 will follow the desired concave, convex or linear (or combinations thereof) contours of the running surface.

[0095] If the difference between the radius of the front running belt pulleys 62 and the radius of the rear running belt pulleys 66 is too large, the running belt 16 will begin to bunch up atop the base 12 as too much excess is generated. Accordingly, there is a practical limit of differences between the radius of each of the front running belt pulleys 62 and the radius of

each of the rear running belt pulleys 66. Generally, this range may be dependent on the length of the running surface, as measured along the running belt, and/or the shape of the running surface. According to an exemplary embodiment, the size difference between the radii of the front and rear running belt pulleys, $R_f - R_r$, is within the range of approximately $0 < R_f - R_r < 0.100$ inches. Preferably, the size difference between the radii of the front and rear running belt pulleys, $R_f - R_r$, is within the range of approximately $0.005 < R_f - R_r < 0.035$ inches. In one embodiment, the radius of the front running belt pulleys is approximately $7.00'' \pm 0.010''$ and the radius of the rear running belt pulleys is approximately $6.985'' \pm 0.010$. According to another exemplary embodiment, instead of using front and rear running belt pulleys having a radial size difference, the synchronizing belt pulleys may have a radial size difference. Similar to the differently sized front and rear running belt pulleys, the differently sized front and rear synchronizing pulleys would be used to essentially “push” the running belt rearward, creating a slight amount of excess running belt 16 in the area between the front running belt pulleys and the rear running belt pulleys.

[0096] Another means for ensuring that the running belt 16 follows the desired complex curve is to match the rotational velocity of the front running belt pulleys 62 to that of the rear running belt pulleys 66 utilizing a synchronizing system 222. Further referring to FIGS. 5-6 and 8-11, the synchronizing system 222 is shown generally to comprise the front synchronizing belt pulley 202, the rear synchronizing belt pulley 204, and the synchronizing belt 206 according to an exemplary embodiment.

[0097] The front synchronizing belt pulley 202 is rotatably mounted relative to the front shaft 64, similar to the front running belt pulleys 62. Preferably, the front synchronizing belt pulley 202 is securely mounted directly to the front shaft 64. Similarly, the rear synchronizing belt pulley 204 is fixed relative to the rear shaft 68 and preferably securely mounted to the rear shaft 68. Accordingly, the front synchronizing belt pulley 202 will move with substantially the same rotational speed as the front running belt pulleys 62, and the rear synchronizing belt pulley 204 will move with the same rotational speed as the rear running belt pulleys 66. When the front shaft assembly 44 and the rear shaft assembly 46 are coupled to the frame 40, the front and rear synchronizing belt pulleys 202, 204 are shown disposed exterior to the outer surface 60 of the left-hand side member 52. According to another exemplary embodiment, the front and rear

synchronizing belt pulleys may be placed exterior to the outer surface of the right-hand side member of the frame. According to other exemplary embodiments, the synchronizing system may be disposed substantially between the left-hand side member and the right-hand side member of the frame.

[0098] The synchronizing belt 206 is configured to provide a force that helps ensure that the front and rear shafts 64, 68 are rotating (e.g., moving, spinning, etc.) at the same rotational velocity. The synchronizing belt 206 is shown as an endless belt that is adapted to be supported in tension about the front synchronizing belt pulley 202 and the rear synchronizing belt pulley 204, as shown in FIGS. 4–5. As the running belt pulleys 62, 66 and the synchronizing belt pulleys 202, 204 are both substantially fixed relative to the front shaft 64 and the rear shaft 68, the rotation of the front shaft 64 and the rear shaft 68 causes the front synchronizing belt pulley 202 and the rear synchronizing belt pulley 204 to similarly rotate. In response to the motion of the front synchronizing belt pulley 202 and the rear synchronizing belt pulley 204, the synchronizing belt 206, which connects the front shaft assembly 44 and the rear shaft assembly 46, similarly rotates. Because of the tension in the synchronizing belt 206 and the fact that the synchronizing belt pulleys 202, 204 are the same size, the synchronizing belt 206 provides a counter force in response to any deviation in rotational velocity between the front shaft assembly 44 and the rear shaft assembly 46. For example, if the rear shaft assembly 46 was induced to start moving with greater rotational velocity than the front shaft assembly 44, the tension in the upper portion of the synchronizing belt (i.e., that portion of the synchronizing belt that extends generally between the tops of the synchronizing pulleys) would resist any differential rotation between the front and rear synchronizing belt pulleys 202, 204. Continuing with the example, any discrepancy between the rotational velocity of the front and rear shafts 64, 68 is similarly resisted by the engagement of the synchronizing belt 206. Thus, by constraining the relative motion of the front shaft assembly 44 and the rear shaft assembly 46, the synchronizing system 222 keeps their rotational velocity in sync, substantially preventing the front and rear running belt pulleys 62, 66 from becoming unsynchronized and moving at different rotational velocities.

[0099] So, in practice, the running belt 16 is initially installed on the front and rear running belt pulleys 62, 66 and the running belt 16 is manually positioned in the desired position so that

a sufficient length of the running belt 16 is positioned along the top of the treadmill and the running belt 16 assumes the desired contour. While the running belt 16 is maintained in this position, the synchronizing belt 206 is mounted to the synchronizing belt pulleys 202, 204 and once the synchronizing belt 206 is installed, it effectively resists differential rotation of the running belt pulleys 62, 66 which could result in loss of the desired contour of the running belt 16.

[0100] It should be noted that the tension in the synchronizing belt 206 also helps maintain the position of the synchronizing belt 206 relative to the synchronizing belt pulleys 202, 204. The tension helps enhance friction between an interior surface 244 of the synchronizing belt 206 and exterior surfaces 246 of the synchronizing belt pulleys 202, 204, making it less likely that the synchronizing belt 206 will slip relative to the synchronizing belt pulleys 202, 204.

[0101] One or more tensioning assemblies 248 may be provided to adjust the tension in the synchronizing belt 206 (see e.g., FIGS. 3 and 6 illustrating tensioning assemblies 248). Tensioning assemblies 248 are configured to move portions of the synchronizing belt 206 relative to one another, stretching the synchronizing belt 206 and maintaining this stretch so that the synchronizing belt 206 can provide the necessary resistance to differential rotation of the front and rear running belt pulleys 62, 66. Alternatively, the tensioning assemblies 248 can be adjusted to release some of the tension in the synchronizing belt 206. Releasing some of the tension may be desirable if the synchronizing belt 206 is too tight, causing excess friction between the synchronizing belt 206 that makes it too difficult to rotate the front and rear shaft assemblies 44, 46 (e.g., greater than desired by the user, too great to function, etc.). The tensioning assemblies 248 are also used when the synchronizing belt 206 is being installed and removed. According to another exemplary embodiment, a single tensioning assembly is used in conjunction with one or more stationary idlers. According to still another exemplary embodiments, any devices or elements suitable for maintaining and/or adjusting the tension in the synchronizing belt may be used.

[0102] Referring to FIG. 14, a synchronizing system 300 is shown according to another exemplary embodiment. The synchronizing system 300 would typically be used in lieu of the previously described synchronizing system 222. In this next exemplary embodiment, the

synchronizing system 300 is shown comprising a synchronizing shaft 302 mechanically connected at a first end 304 to a front gear 306 and at a second end 308 to a rear gear 310. The front gear 306 is interconnected with, and preferably directly mounted and fixed relative to, the front shaft 64, and the rear gear 310 is interconnected with, and preferably directly mounted and fixed relative to, the rear shaft 68. Accordingly, the front gear 306 will move with substantially the same rotational speed as the front running belt pulleys 62, and the rear gear 310 will move with the same rotational speed as the rear running belt pulleys 66. When the front shaft assembly 44 and the rear shaft assembly 46 are coupled to the frame 40, the front and rear gears 306, 310 are shown disposed exterior to the outer surface 60 of the right-hand side member 54. According to another exemplary embodiment, the front and rear gears 306, 310 may be placed exterior to the outer surface of the left-hand side member of the frame. According to other exemplary embodiments, the synchronizing system may be disposed substantially between the left-hand side member and the right-hand side member of the frame.

[0103] The synchronizing shaft 302 is configured to provide a force that helps ensure that the front and rear shafts 64, 68 are rotating (e.g., moving, spinning, etc.) at the same rotational velocity. The synchronizing shaft 302 is shown as an elongated, substantially cylindrical member that extends generally between the front shaft 64 and the rear shaft 68. A first threaded portion 312 including a plurality of threads 314 is shown located at the first end 304 of the synchronizing shaft 302 and is configured to mesh with a plurality of teeth 316 of the front gear 306 that is fixed relative to the front shaft 64. A second threaded portion 318 including a plurality of threads 320 is shown located at the second end 308 of the synchronizing shaft 302 and is configured to mesh with a plurality of teeth 322 of the rear gear 310 that is fixed relative to the rear shaft 68.

[0104] The synchronizing shaft 302 rotates in response to the motion of the front gear 306 and the rear gear 310. When the front shaft 64 and the rear shaft 68 rotate in response to the user driving the running belt 16, the front gear 306 and the rear gear 310, which are fixed relative to the front shaft 64 and the rear shaft 68, respectively, similarly rotate. The front gear 306 meshes with and imparts rotational motion to the first threaded portion 312, and, thereby, imparts rotational motion to the synchronizing shaft 302. The rear gear 310 meshes with and

imparts rotational motion to the second threaded portion 318, and, thereby, imparts rotational motion to the synchronizing shaft 302.

[0105] Because the synchronizing shaft 302 is rigid and the front and rear gears 306, 310 are the same size, the synchronizing shaft 302 provides a counter force in response to any deviation in rotational velocity between the front shaft assembly 44 and the rear shaft assembly 46. For example, if the rear shaft assembly 46 was induced to start moving with greater rotational velocity than the front shaft assembly 44, the rear gear 310 would be prevented from moving with greater rotational velocity than the front gear 306 because of the synchronizing shaft 302. The second threaded portion 318 is meshed with the rear gear 310. The second threaded portion 318 is fixed relative to the first threaded portion 312. The first threaded portion 312 is meshed with the front gear 306, which is moving with less rotational velocity than the rear gear 310. The front gear 306, being fixed relative to the front shaft assembly 44 which is also traveling at the same rotational velocity, seeks to continue at this rotational velocity. Thus, the force transmitted to the front gear 306 from the rear gear 310 by the synchronizing shaft 302 is met with a counter force. Specifically, the teeth 322 of the front gear 306 counter the force applied thereto by the threads 314 of the first threaded portion 312 at the first end 304. This counter force substantially prevents the rotational velocity of the synchronizing shaft 302, which includes the second threaded portion 318, from increasing. Stated otherwise, the force applied is sufficient to prevent the second end 308 of the synchronizing shaft 302 from rotationally advancing ahead of the first end 304. As the second threaded portion 318 is prevented from experiencing an increase in rotational velocity, the second threaded portion 318 provides a counter force to the rear gear 310. Specifically, the threads 320 of the second threaded portion 318 counter the force applied thereto by the teeth 322 of the rear gear 310. Thus, the synchronizing shaft 302 constrains the relative motion of the front gear 306 and rear gear 310, and, thereby constrains the relative motion of the front shaft assembly 44 and the rear shaft assembly 46.

[0106] Another embodiment of a running belt retention system used to induce and maintain the running belt in a desired non-planar shape to define the running surface is seen in FIG. 15, specifically a braking system 400 configured to help induce and maintain the running belt in a desired non-planar shape to define the running surface is shown according to an exemplary

embodiment. Please note, the section lines 15-15 shown in FIG. 4 do not necessarily suggest that the braking system 400 seen in FIG. 15 is integrated into the manual treadmill depicted in FIG. 4, rather, the section line 15-15 is included in FIG. 4 to show one potential location for the integration of a braking system into a manual treadmill according to the various innovations disclosed herein. The braking system 400 is shown in cooperation with the rear shaft assembly 402 and the synchronizing system 222. The rear shaft assembly 402 differs from the above-discussed rear shaft assembly 46 in that the rear shaft assembly 402 includes a pair of rear running belt pulleys 404 that are substantially the same size as the front running belt pulleys (not shown).

[0107] The braking system 400 has substantially the same effect as the differently sized front and rear running belt pulleys discussed above. That is, the braking system 400 causes a slight amount of excess running belt 16 in the area between the front running belt pulleys and the rear running belt pulleys. More specifically, the braking system 400 causes the rotational velocity of the rear shaft assembly 402 to be slightly lower than the rotational velocity of the front shaft assembly by applying a frictional force to the rear synchronizing belt pulley 204. Thus, the braking system 400 acts on the synchronizing system 222 to force (e.g., urge, push, move, etc.) the rear shaft assembly 402 out of synch with the front shaft assembly.

[0108] The braking system 400 includes a generally elongated member 406 in cooperation with the synchronizing system 222. The elongated member 406 is coupled to the rear shaft assembly 402 by a bracket 408 having a first side 410 spaced a distance apart from an outer surface 250 of the rear synchronizing belt pulley 204. The elongated member 406 is disposed through an aperture 412 of the bracket 408 and includes a first end 414 disposed to the inside of the first side 410 and a second end 416 disposed to the outside of the first side 410. The first end 414 includes a surface 418 configured to contact the outer surface 250 of the rear synchronizing belt pulley 204. The second end 416 includes a knob 420 configured to be gripped by a person (e.g., a user, a trainer, etc.) and to have a rotational force imparted thereto. An exterior surface of the elongated member 406 is at least partially threaded to correspond to threading at an interior surface defining the aperture 412. Rotating the knob 420, and, thereby, the elongated member 406, in one direction, causes the surface 418 to be advanced toward the outer surface 250 of the rear synchronizing belt pulley 204, and rotating the knob 420 in the

opposite direction causes the surface 418 to retreat or be moved away from the outer surface 250 of the rear synchronizing belt pulley 204.

[0109] During operation of the treadmill, the surface 418 of the elongated member 406 is substantially in contact with the outer surface 250 of the rear synchronizing belt pulley 204, creating friction therebetween. As the rear synchronizing belt pulley 204 of the synchronizing system 222 is fixed relative to the rear shaft assembly 402, some of the force directed to the rear shaft assembly 402 to impart rotation thereto must be used to overcome the frictional force between the surface 418 of the elongated member 406 and the outer surface of the rear synchronizing belt pulley 204. As the force needed to overcome the frictional force between the surface 418 of the elongated member 406 and the outer surface 250 of the rear synchronizing belt pulley 204 is no longer being directed into rotation of the rear shaft assembly 402, the rotational velocity of the rear shaft assembly 402 is less than the rotational velocity of the front shaft assembly. Thus, the front running belt pulleys of the front shaft assembly will “push” the running belt rearward, creating a slight amount of excess running belt 16 in the area between the front running belt pulleys and the rear running belt pulleys. This excess length of running belt 16 helps to counter the force of gravity, discussed in more detail above. It should be noted that, because the friction between the surface 418 of the elongated member 406 and the outer surface 250 of the rear synchronizing belt pulley 204 is substantially constant during operation, the rotational velocity will be substantially maintained at the lower rotational velocity.

[0110] The length of excess running belt “pushed” rearward by the front running belt pulleys can be varied by adjusting the position of the surface 418 relative to the outer surface 250 of the rear synchronizing belt pulley 204. If one moves the surface 418 laterally closer to the outer surface 250, the friction therebetween will increase, the differential between the rotational velocity of the rear shaft assembly and the front shaft assembly will increase, and the length of the excess will increase. If one moves the surface 418 away from the outer surface 250, the friction therebetween will decrease (or be removed if they are brought out of contact), the differential between the rotational velocity of the rear shaft assembly and the front shaft assembly will decrease, and the length of the excess will decrease.

[0111] According to another exemplary embodiment, the braking system 400 may be used with front and rear running belt pulleys that have a size differential. In such an embodiment, the braking system 400 would be used to fine tune the length of excess running belt pushed rearward with each rotation of the front and rear running belt pulleys.

[0112] FIG. 16 illustrates another exemplary embodiment of a braking system, shown as braking system 500, configured to help induce and maintain the running belt in a desired non-planar shape to define the running surface. Please note, the section lines 16-16 shown in FIG. 4 do not necessarily suggest that the braking system 500 seen in FIG. 16 is integrated into the manual treadmill depicted in FIG. 4, rather, the section line 16-16 is included in FIG. 4 to show one potential location for the integration of a braking system into a manual treadmill according to the various innovations disclosed herein. The braking system 500 includes a pulley 502 mounted to a rear shaft assembly 504 generally opposite a front shaft assembly, both shaft assemblies having running belt pulleys that are substantially the same size. A belt 506 rotationally couples the pulley 502 to an idler pulley 508. The idler pulley 508 is configured to be adjustable so that it may be moved towards or away from the pulley 502 along an axis generally parallel to the longitudinal axis 18. Though, it should be noted that the idler pulley may be moved relative to the pulley 502 mounted to the rear shaft assembly along an axis other than one generally parallel to the longitudinal axis 18.

[0113] By adjusting the position of the idler pulley 508 relative to the pulley 502, one can adjust the friction between the belt 506 and the pulleys 502, 508. Moving the idler pulley 508 away from the pulley 502, increases the tension in the belt 506, and, accordingly, increases the friction between the belt 506 and the pulleys 502, 508. Moving the idler pulley 508 toward the pulley 502, decreases the tension in the belt 506, and, accordingly, decreases the friction between the belt 506 and the pulleys 502, 508.

[0114] Similar to the discussion of braking system 400, increasing the friction between the belt 506 and the pulleys 502, 508, increases the differential between the rotation of the rear shaft assembly to which the braking system 500 is coupled and the front shaft assembly. As a corollary, decreasing the friction between the belt 506 and the pulleys 502, 508, decreases the differential between the rotational velocity of the rear shaft assembly 504 and the front shaft

assembly. As discussed above, the greater the differential, the greater the length of the excess that the front running belt pulleys push rearward.

[0115] FIG. 17 illustrates another exemplary embodiment of a running belt retention system of the treadmill 10 used to help induce and maintain the running belt in a desired non-planar shape to define the running surface. The treadmill 10 is shown including a plurality of rollers 600 used to support the running belt 16 in place of bearing rails 200, discussed above.

[0116] The each roller 600 is shown extending laterally generally between the left-hand side member 52 and the right-hand side member 54 of the frame 40. Along the longitudinal axis 18, the rollers 600 are disposed adjacent to one another generally between one or more front running belt pulleys 604 and one or more rear running belt pulleys 606. Typically, the running belt used with this exemplary embodiment is a continuous polymer belt without slats; the use of a continuous polymer belt having greater flexibility in the lateral direction than running belt 16 improves the ease of movement of the running belt along the rollers 600. However, other suitable continuous belts may be used according to other exemplary embodiment

[0117] In the exemplary embodiment shown, the one or more front running belt pulleys is shown as a single, front running belt pulley 604 that is substantially a large roller, disposed at the front end 48 of the frame 40. Similarly, the one or more rear running belt pulleys is shown as a single, rear running belt pulley 606 that is a substantially a large roller, disposed at the rear portion of the frame 40. According to other exemplary embodiments, any multiple of running pulleys may be used at one or both of the front end and the rear end, such as front running belt pulleys 62.

[0118] Collectively, the rollers 600 define a top profile 608 similar to the top profile 210 defined by the bearing rails 200, discussed above, and provide for a running belt to move therealong. Similar to the top profile of the bearing rails, the top profile 608 defined by the rollers may be varied (e.g., may include a convex portion and a concave portion, may be modeled by a third-order polynomial, may be modeled by a fourth-order polynomial, etc.).

[0119] The front and rear running belt pulleys 604, 606 and the rollers 600 help define the running surface. In use, the running belt is disposed over the front running belt pulley 604,

along the top profile 602 defined by the rollers 600, and over the rear running belt pulley 606. The running belt is maintained in a position substantially along these elements primarily by the weight of the running belt; however, according to other exemplary embodiments, a synchronizing system may also be used to ensure that the running belt is maintained in the desired position.

[0120] Referring to FIGS. 18-21, an embodiment of a running belt retention system including a track system 700 and configured to help induce and maintain the running belt in a desired non-planar shape to define the running surface according to an exemplary embodiment.

[0121] A treadmill according to this exemplary embodiment does not include front and rear shaft assemblies or bearing rails, but, rather, includes a pair of opposed tracks 702 configured to provide for movement of a running belt 16 therealong. The tracks 702 are spaced apart, generally define the path that the running belt 16 will travel, and substantially replicate at least a portion of the running surface. Each track 702 includes a side support wall 708 and a guide portion 710 generally centrally-disposed along the side support wall 708. The guide portion 710 extends from an inner side 712 of the side support wall 708 towards the interior of the treadmill frame, defined generally between the left-hand side member and the right-hand side member. The guide portion 710 generally defines the contour of the running surface that is defined by the running belt 16 when coupled to the tracks 702. An outer side 714 each side support wall 708 is disposed substantially adjacent to an inner surface of one of the side members of the treadmill frame.

[0122] A plurality of roller or wheel assemblies 716 are connected with, preferably mounted directly to or integral with, each of a plurality of slats 228 of the running belt 16. Each a laterally-oriented slat 228 includes a left-hand end 252 generally opposite a right-hand end 254. One of a plurality of wheel assemblies 716 is coupled at each end 252, 254 of each slat 228 at an interior surface 256. The wheel assemblies 716 are configured to be mated with the tracks 702 and provide for motion of the running belt 16 along the tracks 702.

[0123] Each wheel assembly 716 is shown including first roller or wheel 720 and a second roller or wheel 722 rotatably coupled to a support shown as an elongated connecting member

724. The connecting member 724 connects each wheel assembly 716 to a slat 228 and maintains the relative position of the first wheel 720 and the second wheel 722. When coupled to the track 702, the first wheel 720 of a wheel assembly 716 is disposed to one side the guide portion 710 and rotatably movable therealong, and the second wheel 722 of the wheel assembly 716 is disposed generally opposite the first wheel 720 to the other side of the central guide portion 710.

[0124] The wheels 720, 722 and the tracks 702 are shaped such that when they are mated, the wheels 720, 722 cannot be pulled inwardly off of or pushed outwardly off of the track 702. In the exemplary embodiment shown, the guide portion 710 is shown having a substantially-circular cross section 724 and the wheels 720, 722 are shown having circumferentially-disposed arcuate depressions 726 that receive and travel along an outer curved portion 728 and an inner curved portion 730 of the guide portion 710 of the track 702. According to other exemplary embodiments, the wheels and the track guide portion can have substantially any corresponding shapes that provide for the wheels and the track to mate and that provide for movement of the wheels therealong.

[0125] When the running belt 16 is being driven by a user, the interaction of the guide portion 710 and the first and second wheels 720, 722 helps maintain the belt in the desired non-planar shape. As mentioned above, the tracks 702 generally defines the contour of the running surface defined by the running belt 16. Being coupled to the guide portion 710 of the track 702, each wheel assembly 716 rotates about the track 702, following the contour defined thereby.

[0126] If the running belt 16 began to deviate from the desired path, the interaction between the wheels 720, 722 and the guide portion 710 would substantially prevent undesirable shifting. While being rotatably coupled to the elongated connecting member 724, the axes 732 and 734 of the first wheel 720 and second wheel 722, respectively, are a fixed distance apart. Further, the arcuate depressions 726 of the wheels 720, 722 are in contact with the outer curved portion 728 and inner curved portion 730, respectively. Thus, as a result the interactions between the arcuate depressions 726 and the curved portions 728, 730, any movement of a wheel assembly 716 relative to the track 702 other than along the path defined by the track 702 is countered by a force from the guide portion 710. It should also be noted that the interactions between the

depressions 726 of adjacent wheel assemblies 716 and the curved portions 728, 730 of the track 702 may also help keep a wheel assembly 716 in place.

[0127] Referring to FIGS. 22-24, the treadmill 10 is shown including another exemplary embodiment of a track system configured to help induce and maintain the running belt in a desired non-planar shape to define the running surface, shown as a track system 800. Similar to track system 700, a treadmill according to this exemplary embodiment does not include front and rear shaft assemblies or bearing rails, but, rather, includes a pair of tracks 802 configured to provide for movement of a running belt 16 therealong. In this exemplary embodiment, each track 802 is shown as an elongated member having a substantially C-shaped cross section that defines a channel 804 having an opening 806 that faces the interior of the frame 40. An outer wall 808 each of the tracks 802 is disposed substantially adjacent to an inner surface of a left-hand or right-hand side member 52, 54 (shown, e.g., in FIG. 2) such that the openings 806 face each other. The outer wall 808 is substantially opposite an inner wall 810

[0128] As discussed above, the running belt 16 includes a plurality of laterally-oriented slats 228 each having a left-hand end 252 generally opposite a right-hand end 254. One of a plurality of roller or wheel assemblies 812 is coupled at each end 252, 254 of each slat 228 to mate with the tracks 802 and to provide for motion of the running belt 16 along the tracks 802.

[0129] Each wheel assembly 812 is shown including a support shown as a mounting block 814 and a wheel 816 rotatably coupled to the mounting block 814. The mounting block 814 is mounted to an interior surface 256 of a slat 228. The wheel 816 is supported relative to the mounting block 814 by an axis 818 that extends substantially parallel to the slats 228 to facilitate positioning the wheel 816 in the channel 804. The wheel 816 is received in the channel 804 and is rotatably movable therewithin to facilitate travel of the running belt 16 along the contour defined by the channel 804. The shape of the channel 804 generally corresponds to the shape of the wheel 816.

[0130] When the running belt 16 is being driven by a user, the walls of the track 802 defining the C-shaped channel 804 help forcibly retain the wheel 816 therein, preventing the wheel from moving in any direction other than along the contour defined by the channel 804, and, thereby,

maintaining the running belt 16 in the desired non-planar shape to define the running surface. The outer wall 808 and the inner wall 810 limit the side-to-side, lateral movement of the wheel 816 when it is disposed in the channel 804. Limiting the motion of the wheel 816, similarly limits the motion of the wheel assembly 812 and the slat 228 fixed relative thereto. Further, a first wall 820 substantially opposite a second wall 822 substantially limits the up-and-down motion of the wheel 816 relative to the channel 804. In circumstances where side-to-side and/or up-and-down motion of the wheel 816 occurs, the walls 808, 810, 820, 822 defining the channel 804, providing counter forces to maintain the wheel 816 in the desired position and help direct the wheel 816 along the desired path.

[0131] Referring to FIGS. 25-28, the treadmill 10 is shown including still another exemplary embodiment of a track system configured to help induce and maintain the running belt in a desired non-planar shape to define the running surface, shown as a track system 900. Similar to track system 800, the treadmill according to this exemplary embodiment does not include bearing rails, but, rather, includes a pair of tracks 902 configured to provide for movement of a running belt 16 therealong. In this exemplary embodiment, each track 902 is shown as an elongated member having a substantially C-shaped cross section that defines a channel 904 having an opening 906 that faces the exterior of the track 902. Stated otherwise, each channels 904 extend about an outer periphery 908 of a tracks 902.

[0132] As discussed above, the running belt 16 includes a plurality of laterally-oriented slats 228 each having a left-hand end 252 generally opposite a right-hand end 254. One of a plurality of roller or wheel assemblies 910 is coupled at each end 252, 254 of each slat 228 to mate with the tracks 902 and to provide for motion of the running belt 16 along the tracks 902.

[0133] Each wheel assembly 910 is shown including a support shown as a connecting bar 912 that is substantially T-shaped and connected to a first wheel 914 and a second wheel 916. A first portion 918 of the connecting bar 912 is fixed relative to the interior surface 256 of a slat 228. A second portion 920 extends substantially perpendicular to the first portion 918 and away from the interior surface 256 of the slat 228. The first wheel 914 and the second wheel 916 are connected to the connecting bar 912 by an axis 922 that extends generally parallel to the first portion 918 and perpendicular to the second portion 920 of the connecting bar 912.

The first wheel 914 is disposed to one side of the second portion 920 of the connecting bar 912 and the second wheel 916 is disposed opposite the first wheel 914 to the other side of the second portion 920.

[0134] When the wheel assemblies 910 are mated with the tracks 902, the second portion of the connecting bar 912 extends partially into the channel 904, the first wheel 914 is received within a first portion 924 of the channel 904 and the second wheel 916 is disposed within a second portion 926 of the channel 904. The first portion 924 of each channel 904 is disposed proximate to an outer surface 928 of the track 902 relative to the second portion 926.

[0135] When the running belt 16 is being driven by a user, the first wheel 914 and the second wheel 916 of a given wheel assembly rotate within the channel 904, facilitating movement of the running belt 16 in the path defined by the track 902. As the running belt 16 is rotated, the slats 228 are disposed generally exterior to the periphery 908 of the track 902. The walls of the track 902 defining the channel 904 help forcibly retain the wheels 914, 916. An outer wall 930 and an inner wall 932 limit the side-to-side movement of the wheels 914, 916, either by coming into contact with the wheels 914, 916 themselves or by coming into contact with another part of the wheel assembly 910 (e.g., the connecting bar 912). Limiting the motion of the wheels 914, 916 and the wheel assembly 910 similarly limits the motion of the slat fixed relative thereto, helping each slat, and, thereby, the running belt 16 to follow the desired path. Further, a first wall 934 substantially opposite a second wall 936 substantially limits the up-and-down motion of the wheels 914, 916 relative to the channel 904. In circumstances where side-to-side and/or up-and-down motion of the wheel 916 occurs, the walls 930, 932, 934, 936 defining the channel 904, providing counter forces to maintain the wheels 914, 916 in the desired position and help direct the wheels 914, 916 along the desired path.

[0136] Referring to FIGS. 29-30, the treadmill 10 is shown including another exemplary embodiment of a track system configured to help induce and maintain the running belt in a desired non-planar shape to define the running surface, shown as a track system 1000.

[0137] Instead of using wheel assemblies, such as 716 and 910, discussed above, the treadmill according to this exemplary embodiment utilizes a plurality of magnets 1002 to

maintain the running belt 16 in the desired position. One or more magnets 1002 are fixed relative to the interior surface 256 of the slats 228 at locations substantially corresponding to the position of a track 1004, which is typically along the left-hand end 252 and the right-hand end 254 of the slats 228. The magnets 1002 may be coupled by any variety of fasteners or fastening mechanisms. Generally, it is preferable that, when the magnets 1002 are fixed relative to the slats, the fasteners do not directly contact the periphery 1006 of the tracks 1004 to avoid scratching and damage thereto. While it is generally desirable to mount a magnet 1002 to each slat, 228, the number of magnets used will vary depending upon a variety of factors such as the relative weight of the belt and the relative magnetic strength of each magnet.

[0138] The magnets 1002 are configured to magnetically couple the running belt 16 to the track 1004, which is made of metal (e.g., steel) or includes a peripheral metal portion. The magnets 1002 have strength suitable to maintain the running belt 16 in close proximity to a periphery 1006 of the tracks 1004.

[0139] When the treadmill is driven by a user, the force imparted to the running belt 16 is sufficient to permit the magnets to move relative bearing rails, but not to lose the magnetic connection therebetween. According to one exemplary embodiment, as the running belt 16 moves relative to the track 1004, the magnets 1002 are generally spaced a small distance from the periphery 1006 of the track 1004, helping to further reduce the noise associated with operation of the treadmill. According to other exemplary embodiments, the magnets 1002 are in physical contact with the periphery 1006 of the track 1004 in addition to being magnetically coupled thereto.

[0140] According to an exemplary embodiment similar to track system 1000, a plurality of magnets may be positioned on the frame, track, or other fixed component of the treadmill base to apply a downwardly-directed force to the metal slats of the running belt as it passes over the magnets. For example, the magnets may be positioned on the cross-members 56. As the running belt rotates, the portion passing above the magnets will be drawn downward by the force of the magnets, helping maintain that portion of the running belt (i.e., defining the running surface) in the desired shape.

[0141] Referring to FIGS. 31-34, the treadmill 10 is shown including another exemplary embodiment of a track system configured to help induce and maintain the running belt in a desired non-planar shape to define the running surface, shown as a track system 1100.

[0142] The track system 1100 is substantially similar to track system 700, but configured to be operable with a running belt 1102 that is a conventional running belt rather than a slatted running belt 16. The track system 1100 includes a pair of tracks 702 and a wheel assemblies 1104 having substantially the same configuration as wheel assembly 716 with the exception that a securing device shown as a clip 1106 is used to connect the wheel assembly 1104 to the running belt 1102, rather than the elongated connecting member 724. The clip 1106 is shown extending and having a first portion 1108 and a second portion 1110 that opening towards the interior of the treadmill 10 before being secured. When the running belt 1102 shown as a continuous polymer (e.g., urethane) belt is in position, a first edge 1112 of the running belt 1102 is received between a first portion 1108 and a second portion 1110 of the clip 1106 and fixed relative thereto (e.g., by a fastener, etc.). The polymer belt is a urethane belt according to an exemplary embodiment. The urethane belt is desirable heavy enough to help assume the shape of the rollers, but not so thick or heavy that it undesirably impedes movement. The clips extend along the first edge 1112 and the second edge 1114 of the running belt 1102, substantially suspending the belt between the tracks 702. According to an exemplary embodiment, the securing device may be any securing device suitable for securing an edge portion of the running belt 1102 relative thereto (e.g., a bolt, a clamp, etc.).

[0143] According to still another exemplary embodiment, a treadmill has a track system including a pair of tracks and wheel assemblies. The wheel assemblies include hangers (e.g., magnetic hangers) that are received in channels that are interior to the track, the hangers being slidably movable within the channels. According to one exemplary embodiment, the hangers are substantially I-shaped, having one transverse portion received in the channel and the other transverse portion fixed to an interior side of a slat. According to some exemplary embodiments, the system further includes bearing rails that facilitate motion of the running belt itself and the hangers within the track. The hangers and the channel of the track may have any configuration suitable for facilitating movement of the running belt and maintaining the running belt in the desired non-planar shape.

[0144] The above-described ways of inducing and maintaining the running belt in the desired non-planar shape can also be used with or adapted to a manual treadmill having a planar running surface, such as treadmill 1200 having planar running surface 1202 shown in FIG. 35. The treadmill 1200 is shown substantially similar to treadmill 10, but the running surface is substantially planar. Accordingly, the ability to manually drive the treadmill is substantially dependent on the incline of the running surface 1202 relative to the ground. Ways to adjust this incline for any treadmill disclosed herein will be discussed in more detail later.

[0145] In the exemplary embodiment shown, the running surface 1202 is defined by a running belt 1204 that is disposed about front and rear running belt pulleys of a front and rear shaft assembly, respectively. The running belt 1204 also travels along a pair of bearing rails having a substantially linear top profile that facilitate motion of the running belt 1204.

[0146] As discussed above, the speed controls for the manual treadmill 10 and the various embodiments thereof are generally the user's cadence and relative position of her weight-bearing foot on the running surface. More generally, the running belt 16 of the treadmill 10 is responsive to the weight of the user mounting, dismounting, or running on the treadmill 10. While it is generally desirable for the running belt 16 to be moved rearward, the running belt is capable of rotating forward. Forward rotation of the running belt can create safety concerns. For example, if a user were to mount the treadmill by placing her weight bearing foot at a location (e.g., location D shown in FIG. 5) along the rear portion 74 of the running surface 70, the running belt 16 may move forward and cause them to lose their footing, resulting in an injury or simply an unpleasant user experience.

[0147] A number of safety devices may be used with the treadmill 10 to help prevent undesirable forward rotation of the running belt 16. FIG. 36 illustrates a safety device shown as a one-way bearing assembly 1300 according to an exemplary embodiment. The one-way bearing assembly 1300 is a motion restricting element that is configured to permit rotation of at least one of the front and rear shaft assemblies 44, 46 (and hence the running belt 16) in only one direction, preferably clockwise as seen in FIGS 1 and 5.

[0148] In the exemplary embodiment shown, the one way bearing assembly 1300 is disposed about and cooperates with the rear shaft 68 as shown in FIG. 2. The one-way bearing assembly 1300 comprises a housing 1302 which supports an inner ring 1304 that cooperates with the rear shaft 68 and supports an outer ring 1306 fixed relative to the housing 1302. A plurality of sprags (not shown) are disposed between the inner ring 1304 and the outer ring 1306. The sprags are asymmetric, and, thus, provide for motion in one direction and prevent rotation in the opposite direction. The housing 1302 is fixed to a bracket 1310 that is connected to, and preferably directly mounted to, the frame 40 to fix the location of the housing 1302 and prevent movement of the housing 1302 in response to the rotation of the rear shaft 68. It should be noted that the location at which the bracket 1310 is mounted to the frame 40 can be adjusted depending on the location of the rear shaft 68, which may change depending on the shape of the non-planar running surface or the desired tension in the running belt. According to another exemplary embodiment, the one-way bearing may be transitionally fit into the housing, rather than press fit. According to yet another exemplary embodiment, the one-way bearing may include rollers in addition to sprags.

[0149] The one-way bearing assembly 1300 further includes a key 1312 that is fixed relative to the inner ring 1304 and configured to cooperate with a keyway 1314 formed in the rear shaft 68. Viewed from the perspective shown in FIGS. 1 and 5, when the running belt 16 is moving rearward, rotating in the clockwise direction, the rear shaft 68 similarly rotates in the clockwise direction. The inner ring 1304 of the one-way bearing assembly 1300 rotates with rotational velocity corresponding to the rotational velocity of the rear shaft 68 because of the interaction between the key 1312 and the keyway 1314. If a force is applied by the user to the running belt 16 that urges the rear shaft 68 to rotate counterclockwise, the one-way bearing assembly 1300 provides a counter force, preventing the counterclockwise rotation of the rear shaft 68 and the forward rotation of the running belt 16. Specifically, as the rear shaft 68 begins to move counterclockwise, the interaction of the key 1312 and the keyway 1314 begins to drive the inner ring 1304 of the one-way bearing assembly 1300 rearward. The sprags become wedged between the inner ring 1304 and the outer ring 1306, preventing the counterclockwise rotation of the inner ring and key 1312 disposed therein. The key 1312, by virtue of its inability to rotate, provides a counterforce to the keyway 1314 as the keyway continues to attempt to rotate

counterclockwise. By preventing the keyway 1314 from moving counterclockwise, the one-way bearing assembly 1300 thus prevents the rear shaft 68, the rear running belt pulleys 66, and running belt 16 from rotating counterclockwise as seen in FIGS 1 and 5.

[0150] FIG. 38 illustrates another safety device that may be used with the treadmill 10, shown as a one-way bearing assembly 1500 according to an exemplary embodiment. The one-way bearing assembly 1500 is a motion restricting element that is configured to permit rotation of at least one of the front and rear shaft assemblies 44, 46 (and hence the running belt 16) in only one direction, preferably clockwise as seen in FIGS 1 and 5.

[0151] In the exemplary embodiment shown, the one-way bearing assembly 1500 is disposed about and cooperates with the rear shaft 68. The one-way bearing assembly 1500 comprises a housing 1502 which supports an inner ring 1504 that cooperates with the rear shaft 68 and supports an outer ring 1506 fixed relative to the housing 1502. A plurality of sprags (not shown) are disposed between the inner ring 1504 and the outer ring 1506. The sprags are asymmetric, and, thus, provide for motion in one direction and prevent rotation in the opposite direction. The one-way bearing assembly 1500 is further shown to include a first snap ring 1532 and a second snap ring 1534, which are configured to seat in a first circumferential groove 1536 and a second circumferential groove 1538 on the rear shaft 68, respectively. When installed, the first snap ring 1532 is supported inboard of and adjacent to the inner ring 1504, and the second snap ring 1534 is supported outboard of and adjacent to the inner ring 1504, thereby further restricting axial motion of the one-way bearing assembly 1500 relative to the rear shaft 68.

[0152] The housing 1502 is supported by a stud 1520 which is coupled to the frame 40. The stud 1520 may be separated or spaced apart from the housing 1502 by a spacer 1522 and a sleeve 1523 which may be restrained on the stud 1520 by a nut 1524 and a washer 1526. The sleeve 1523 of the embodiment shown is formed of rubber and is configured to reduce noise, wear, and shock load between the housing 1502 and the stud 1520 and/or the spacer 1522. The housing 1502 includes a plurality of legs, shown as a first leg 1516 and a second leg 1518, which extend on either side of the stud 1520. Accordingly, the stud 1520 resists rotational motion of the housing 1502 in response to rotation of the rear shaft 68 and may provide

sufficient reactive or counter force to the housing 1502 to enable the one-way bearing assembly 1500 to prevent counterclockwise rotation of the rear shaft 68. Supporting the one-way bearing assembly 1500 in this manner negates the need for fixing the housing 1502 to the frame 40 or an intermediary bracket. Accordingly, the housing 1502 may move with the rear shaft 68 (e.g., the housing 1502 may pivot about the stud 1520) as the rear shaft 68 flexes under load, thereby reducing side loading on the inner ring 1504, which in turn reduces wear on, and extends the life of, the one-way bearing assembly 1500.

[0153] It should be noted that the location at which the stud 1520 is mounted to the frame 40 can be adjusted depending on the location of the rear shaft 68, which may change depending on the shape of the non-planar running surface or the desired tension in the running belt. Furthermore, the stud 1520 need not be positioned below or downward from the rear shaft 68, as shown, but may be located in any direction relative to the rear shaft 68. According to another exemplary embodiment, the one-way bearing may be transitionally fit into the housing, rather than press fit. According to yet another exemplary embodiment, the one-way bearing may include rollers in addition to sprags.

[0154] The one-way bearing assembly 1500 further includes a key 1512 that is fixed relative to the inner ring 1504 and configured to cooperate with a keyway 1514 formed in the rear shaft 68. Viewed from the perspective shown in FIGS. 1 and 5, when the running belt 16 is moving rearward, rotating in the clockwise direction, the rear shaft 68 similarly rotates in the clockwise direction. The inner ring 1504 of the one-way bearing assembly 1500 rotates with rotational velocity corresponding to the rotational velocity of the rear shaft 68 because of the interaction between the key 1512 and the keyway 1514. If a force is applied by the user to the running belt 16 that urges the rear shaft 68 to rotate counterclockwise as seen in FIGS. 1 and 5, the one-way bearing assembly 1500 provides a counter force, preventing the counterclockwise rotation of the rear shaft 68 and the forward rotation of the running belt 16. Specifically, as the rear shaft 68 begins to move counterclockwise, the interaction of the key 1512 and the keyway 1514 begins to drive the inner ring 1504 of the one-way bearing assembly 1500 rearward. The sprags become wedged between the inner ring 1504 and the outer ring 1506, preventing the counterclockwise rotation of the inner ring and key 1512 disposed therein. The key 1512, by virtue of its inability to rotate, provides a counterforce to the keyway 1514 as the keyway

continues to attempt to rotate counterclockwise. By preventing the keyway 1514 from moving counterclockwise, the one-way bearing assembly 1500 thus prevents the rear shaft 68, the rear running belt pulleys 66, and running belt 16 from rotating counterclockwise as seen in FIGS 1 and 5.

[0155] Other safety devices to help prevent undesirable forward rotation of the running belt 16 may include cam locking systems, which may be particularly well-suited for use in conjunction with track systems 700, 800, and 900. Also, taper locks, a user operated pin system, or a band brake system with a lever may be utilized.

[0156] Controlling the operation of the running belt 16 in ways in addition to preventing rearward rotation, can help improve the safety of the treadmill and/or help a user adjust the treadmill for a desirable level of performance. Including an incline or elevation adjustment system is one way to provide these benefits. As mentioned above, as the increasing or decreasing of the relative height or distance of the running surface relative to the ground is one way that the operation, most typically the speed, of the treadmill can be adjusted. Accordingly, adjusting the incline of the base of the treadmill results in an adjustment to the speeds a user can achieve and/or how easy or challenging it is for the user to achieve certain speeds.

[0157] Referring back to FIGS. 1-6, a plurality of nuts 270 are fixed, and more preferably welded, to the bottom of the frame 40 allow the feet 28 to be adjusted. The feet 38 include a lower or base portion 272 and a threaded shaft 274 extending vertically upward from the base portion 272 according to an exemplary embodiment. Generally, by increasing the distance between the nuts 270 and the base portions 272 of the feet 28 at the front end 48 of the frame 40 relative to the rear end 50, the incline of the base 12 will increase. Stated otherwise, the angle between the longitudinal axis 18 and the ground will increase. Similarly, the distance between the nuts 270 and the base portions 272 of the feet at the rear end 50 may be decreased relative to the feet 28 at the front end 48, thereby increasing the incline. By increasing the incline, a user is typically able to achieve greater speeds on the treadmill 10.

[0158] Treadmill 1200 shown in FIG. 35 preferably has at least some incline (i.e., the longitudinal axis of the treadmill to be other than parallel to the ground) when in operation as

the shape of the running surface, substantially planar, does not provide for increases and decreases in height in and of itself. On the other hand, the longitudinal axes of the treadmills having non-planar running surfaces may be parallel to the ground or at an incline thereto during operation. It should be noted that, while it is generally desirable to have the front shaft at a height at or above the height of the rear shaft, with some running surface configurations, desirable orientations can be achieved by raising the rear shaft to a location above the front shaft relative to the ground.

[0159] In some cases, the user may want to decrease the incline of the treadmill (e.g., to decrease the speeds the treadmill can achieve, etc.). For example, the user may want to utilize a relatively long stride, but does not want to be running at such high speeds. This can be accomplished by lowering the incline of the treadmill from the higher incline position. Once in the lowered position, the same stride the user was using at the higher incline position will typically result in the user running at lower speeds in the lower incline position. This same principle can also be applied for the purposes of safety. That is, keeping the front of the treadmill at a lower incline position or lowering the treadmill to a lower incline position can help prevent a user from achieving speeds that are too great for them (e.g., that would cause them to be off-balance, lose control, be injured, etc.).

[0160] Because the treadmill is preferably manually operated, it does not have an external power source which can be utilized to operate a height adjusting motor as is found in conventional treadmills. Therefore, a manual height adjusting system is preferably integrated into the treadmill. Referring to FIG. 37, an example of a manual incline or elevation adjustment system 1400 is shown according to an exemplary embodiment. A hand crank 1402 configured to be operated by a person, such as the user, is provided allow a user to operate the incline adjustment system 1400 to adjust the incline of the base 12 of the treadmill 10 relative to the ground. The front shaft 64 may be lowered relative to the rear shaft 68 and/or the front shaft 64 may be raised relative to the rear shaft 68 using the hand crank 1402. In an alternative exemplary embodiment, the front shaft may be maintained at a position above the ground, and the rear shaft may be raised or lowered relative thereto adjust the incline.

[0161] Generally, the hand crank 1402 includes a handle portion 1404 disposed parallel to and spaced a distance from a shaft 1406 that is coupled to the frame 40 (e.g., with a bracket). When assembled, a drive belt or chain 1407 is disposed about a gear 1408 that is positioned about the shaft 1406 of the hand crank 1402. Rotational motion can be imparted to the gear 1408 by rotating the handle portion 1404. In response to rotation of the gear 1408, the drive belt 1407 causes a sprocket 1410 is fixed relative to an internal connecting shaft 1412 of the internal connecting shaft assembly 1414 to rotate. The internal connecting shaft assembly 1414 further includes a pair of drive belts or chains 1416 that are operably coupled to gears 1418 of rack and pinion blocks 1420. The rotation of the internal connecting shaft 1412 causes the drive belts or chains 1416 to rotate gears 1418. As the gears 1418 rotate, a pinion (not shown) disposed within the rack and pinion blocks 1420 imparts linear motion to the racks 1422, thereby operably raising or lowering the base 12 of the treadmill 10 depending on the direction of rotation of the handle portion 1404 of the hand crank 1402.

[0162] According to another exemplary embodiment, an incline adjustment system that is a gas assisted un-weighting incline adjustment system may be utilized. According to other exemplary embodiments, any suitable linear actuator may serve as an incline adjustment system for the manual treadmill disclosed herein.

[0163] According to an exemplary embodiments, the incline of one or more portions of the running surface may be adjusted independent of adjusting the incline of the base. For example, one or more portions of a bearing rail may be configured to be movable relative to one or more other portion of the bearing rail. In one exemplary embodiment, a bearing rail is divided into a first portion and a second portion movable relative to each of the about a pivot point disposed therebetween. A person (e.g., a user, trainer, technician, etc.) can adjust the operational characteristics of the treadmill (similar to the discussion of using running surfaces having different curved profiles above) by merely adjusting the relative position of the bearing rail portions. If the user wants to achieve greater speeds, they may increase the incline of the front portion, while leaving the center and rear portions unchanged. If the user would like to alter the configuration of the treadmill to more strongly encourage running on the balls of their feet, they might increase the incline of the front and rear portions from a higher radius of curvature

so that they collectively define a lower radius of curvature. Adjustments to the position of the bearing rails may be imparted using a crank, or other suitable device.

[0164] It is further contemplated that, because the treadmill 10 does not require an electric motor for operation, it is well suited for operation in an aquatic environment. For example, the treadmill 10 may be at least partially submerged in a pool, thereby providing added resistance due to hydrodynamic drag on a user and/or reducing footfall impact due to the buoyancy of the user. Accordingly, a submerged embodiment of the treadmill 10 may be used for training and/or rehabilitation purposes. Modifications may be made to the treadmill 10 for use in an aquatic environment. For example, the treadmill 10 may include sealed bearings and components formed of corrosion-resistant materials (e.g., plastic, composite, stainless steel, brass, etc.) to extend its useful life. Further, the shape of the running surface 70 may also be modified to compensate for the buoyancy of the user in water and to compensate for the effects of salinity on buoyancy. For example, it is contemplated that the shape of the running surface 70 may be different for a treadmill 10 used in a freshwater environment and a highly saline environment.

[0165] A number of other devices, both mechanical and electrical, may be used in conjunction with or cooperate with a treadmill according to this disclosure. FIG. 1, for example, shows a display 280 adapted to calculate and display performance data relating to operation of the treadmill according to an exemplary embodiment. The display 280 includes an independent power source (e.g., a battery) that provides for the display 280 to be electrically-operative. The feedback and data performance analysis from the display may include, but are not limited to, speed, time, distance, calories burned, heart rate, etc. For example, a the display may include a sensor that is responsive to the position of a magnet on one of the running belt pulleys. The sensor is configured to recognize every time the magnet rotates past (e.g., moves past, crosses, etc.) a certain location. With this data, the display may calculate the speed at which the user is running and then provide this data to them via a user interface. According to other exemplary embodiments, other displays, cup holders, cargo nets, heart rate grips, arm exercisers, TV mounting devices, user worktops, and/or other devices may be incorporated into the treadmill.

[0166] As utilized herein, the terms “approximately,” “about,” “substantially,” and similar terms are intended to have a broad meaning in harmony with the common and accepted usage by those of ordinary skill in the art to which the subject matter of this disclosure pertains. It should be understood by those of skill in the art who review this disclosure that these terms are intended to allow a description of certain features described and claimed without restricting the scope of these features to the precise numerical ranges provided. Accordingly, these terms should be interpreted as indicating that insubstantial or inconsequential modifications or alterations of the subject matter described and are considered to be within the scope of the disclosure.

[0167] It should be noted that the term “exemplary” as used herein to describe various embodiments is intended to indicate that such embodiments are possible examples, representations, and/or illustrations of possible embodiments (and such term is not intended to connote that such embodiments are necessarily extraordinary or superlative examples).

[0168] For the purpose of this disclosure, the term “coupled” means the joining of two members directly or indirectly to one another. Such joining may be stationary or moveable in nature. Such joining may be achieved with the two members or the two members and any additional intermediate members being integrally formed as a single unitary body with one another or with the two members or the two members and any additional intermediate members being attached to one another. Such joining may be permanent in nature or may be removable or releasable in nature.

[0169] It should be noted that the orientation of various elements may differ according to other exemplary embodiments, and that such variations are intended to be encompassed by the present disclosure.

[0170] It is important to note that the constructions and arrangements of the manual treadmill as shown in the various exemplary embodiments are illustrative only. Although only a few embodiments have been described in detail in this disclosure, those skilled in the art who review this disclosure will readily appreciate that many modifications are possible (e.g., variations in sizes, dimensions, structures, shapes and proportions of the various elements,

values of parameters, mounting arrangements, use of materials, colors, orientations, etc.) without materially departing from the novel teachings and advantages of the subject matter recited in the claims. For example, elements shown as integrally formed may be constructed of multiple parts or elements, the position of elements may be reversed or otherwise varied, and the nature or number of discrete elements or positions may be altered or varied. The order or sequence of any process or method steps may be varied or re-sequenced according to alternative embodiments. Other substitutions, modifications, changes and omissions may also be made in the design, operating conditions and arrangement of the various exemplary embodiments without departing from the scope of the present disclosure.

What is Claimed:

1. A treadmill, comprising:
 - a frame;
 - a front running belt pulley coupled to the frame;
 - a rear running belt pulley coupled to the frame and spaced a distance from the front running belt pulley;
 - a plurality of bearings coupled to the frame;
 - a running belt at least partially supported by at least one of the front running belt pulley and the rear running belt pulley, wherein the running belt includes a running surface, at least a portion of which is curved;
 - a support element coupled to the frame; and
 - a safety device coupled to the running belt, the safety device at least partially supported by the support element, wherein the running belt freely rotates in a first direction of rotation relative to the frame, however, in a second direction of rotation, opposite the first direction of rotation, engagement between the support element and at least a portion of the safety device substantially prevents rotation the running belt relative to the frame.
2. The treadmill of claim 1, wherein at least a portion of the support element defines a keyway.

3. The treadmill of claim 2, wherein the keyway is configured to receive a key such that the key engages with the support element and the portion of the safety device, the interaction between the key and keyway contributing to the engagement between the support element and at least a portion of the safety device.

4. The treadmill of claim 1, wherein the safety device comprises a one-way bearing.

5. The treadmill of claim 4, wherein the one-way bearing comprises said portion of the safety device and an element.

6. The treadmill of claim 5, wherein the element is substantially restricted from rotation during operation of the treadmill in either the first or second direction of rotation.

7. The treadmill of claim 1, further comprising a braking system coupled to the frame and configured to selectively resist rotation of the running belt.

8. The treadmill of claim 7, wherein the braking system utilizes friction to apply a variable amount of force to resist the rotation of the running belt in the first direction of rotation.

9. The treadmill of claim 1, wherein the treadmill is a manually powered, non-motorized treadmill.

10. The treadmill of claim 1, further comprising at least one support foot coupled to the frame, wherein the at least one support foot is adjustable to adjust a relative vertical incline of at least a portion of the treadmill relative to a surface supporting the treadmill.

11. The treadmill of claim 1, wherein the frame comprises a left side member, a right side member, and at least one cross-member extending between the left side member and the right side member.

12. A treadmill, comprising:
a frame;
a rotatable element coupled to the frame;
a running belt at least partially supported by the rotatable element, wherein the running belt includes a running surface, at least a portion of which is curved; and

a first safety element and a second safety element, both of which are coupled to the running belt, wherein at least one of the first and second safety elements is adapted for rotation relative to the frame;

wherein one of the first and second safety elements and the running belt freely rotate in a first direction of rotation relative to the frame, however, in a second direction of rotation, opposite the first direction of rotation, engagement between the first safety element and the second safety element substantially prevents rotation of the running belt relative to the frame.

13. The treadmill of claim 12, wherein the treadmill is a manually powered, non-motorized treadmill.

14. The treadmill of claim 12, wherein the first and second safety elements of the safety device at least partly form a one-way bearing.

15. The treadmill of claim 12, wherein one of the first and second safety elements surrounds or substantially surrounds the other of the first and safety second elements.

16. The treadmill of claim 12, further comprising a braking system coupled to the frame and configured to selectively resist rotation of the running belt in the first direction of rotation.

17. The treadmill of claim 12, wherein the rotatable element comprises a running belt pulley coupled to the frame.

18. The treadmill of claim 12, wherein the running belt comprises a plurality of slats, and wherein at least one slat in the plurality of slats comprises a roller.

19. The treadmill of claim 18, wherein the at least one slat includes a top surface and wherein the roller is coupled to a member extending away from the top surface of the at least one slat.

20. The treadmill of claim 12, wherein the rotatable element comprises a plurality of bearings coupled to the frame, the plurality of bearings at least partially supporting the running belt.

21. A method, comprising:
- providing a treadmill having a frame with a front end and a rear end;
 - providing a plurality of bearings coupled to the frame, wherein the plurality of bearings define at least a portion of a curved top profile;
 - disposing a running belt on the plurality of bearings such that the curved top profile of the plurality of bearings define at least a portion of a curved running surface of the running belt;
 - providing a first safety element coupled to the frame and to the running belt and a second safety element coupled to the frame, wherein at least one of the first and second safety elements is adapted for rotation relative to the frame;
 - permitting rotation of one of the first and second safety elements and the running belt in a first direction of rotation; and
 - substantially preventing rotation of one of the first and second safety elements and the running belt in a second direction, opposite the first direction, by engagement between the first safety element and the second safety element.
22. The method of claim 21, further comprising providing for a selective application of a braking force to resist rotation of the running belt in the first direction.
23. The method of claim 21, wherein the treadmill is a manually powered, non-motorized treadmill.
24. A treadmill, comprising:
- a frame;
 - a rotatable element coupled to the frame;
 - a running belt at least partially supported by the rotatable element, wherein the running belt includes a running surface, at least a portion of which is curved;
 - a support element coupled to the frame; and
 - a safety device coupled to the running belt, the safety device at least partially supported by the support element, wherein the running belt freely rotates in a first direction of rotation relative to the frame, however, in a second direction of rotation, opposite the first direction of

rotation, engagement between the support element and a portion of the safety device substantially prevents rotation of the running belt.

25. The treadmill of claim 24, wherein the rotatable element comprises at least one of a front running belt pulley coupled to the frame and a rear running belt pulley coupled to the frame and spaced apart from the front running belt pulley.

26. The treadmill of claim 24, wherein the rotatable element comprises at least one of a front rotatable shaft coupled to the frame and a rear rotatable shaft coupled to the frame and spaced apart from the front rotatable shaft.

27. The treadmill of claim 24, wherein the rotatable element comprises a running belt pulley coupled to the frame..

28. The treadmill of claim 24, wherein the safety device comprises a one-way bearing.

29. The treadmill of claim 24, wherein the support element comprises a rod.

30. The treadmill of claim 29, wherein at least a portion of the rod defines a keyway, wherein the keyway is configured to receive a key such that the key engages with the rod and the portion of the safety device.

ABSTRACT

A treadmill includes a frame; a front running belt pulley; a rear running belt pulley; a plurality of bearings coupled to the frame; a running belt at least partially supported by at least one of the front running belt pulley and the rear running belt pulley, the running belt including a running surface, at least a portion of which is curved; a support element coupled to the frame; and a safety device coupled to the running belt. The safety device is at least partly supported by the support element. The running belt freely rotates in a first direction of rotation relative to the frame, however, in a second direction of rotation, opposite the first direction of rotation, engagement between the support element and at least a portion of the safety device substantially prevents rotation the running belt relative to the frame.

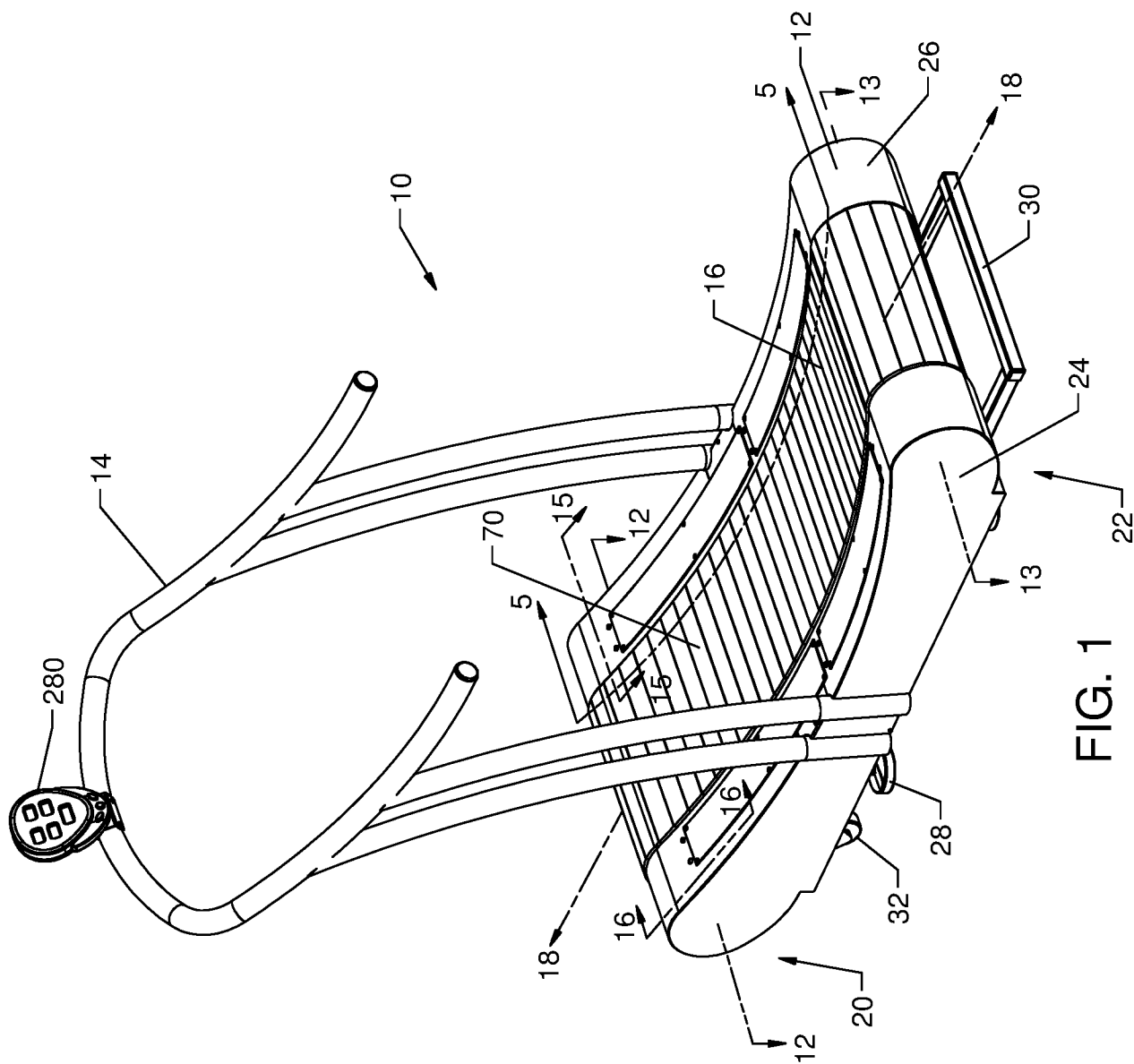


FIG. 1

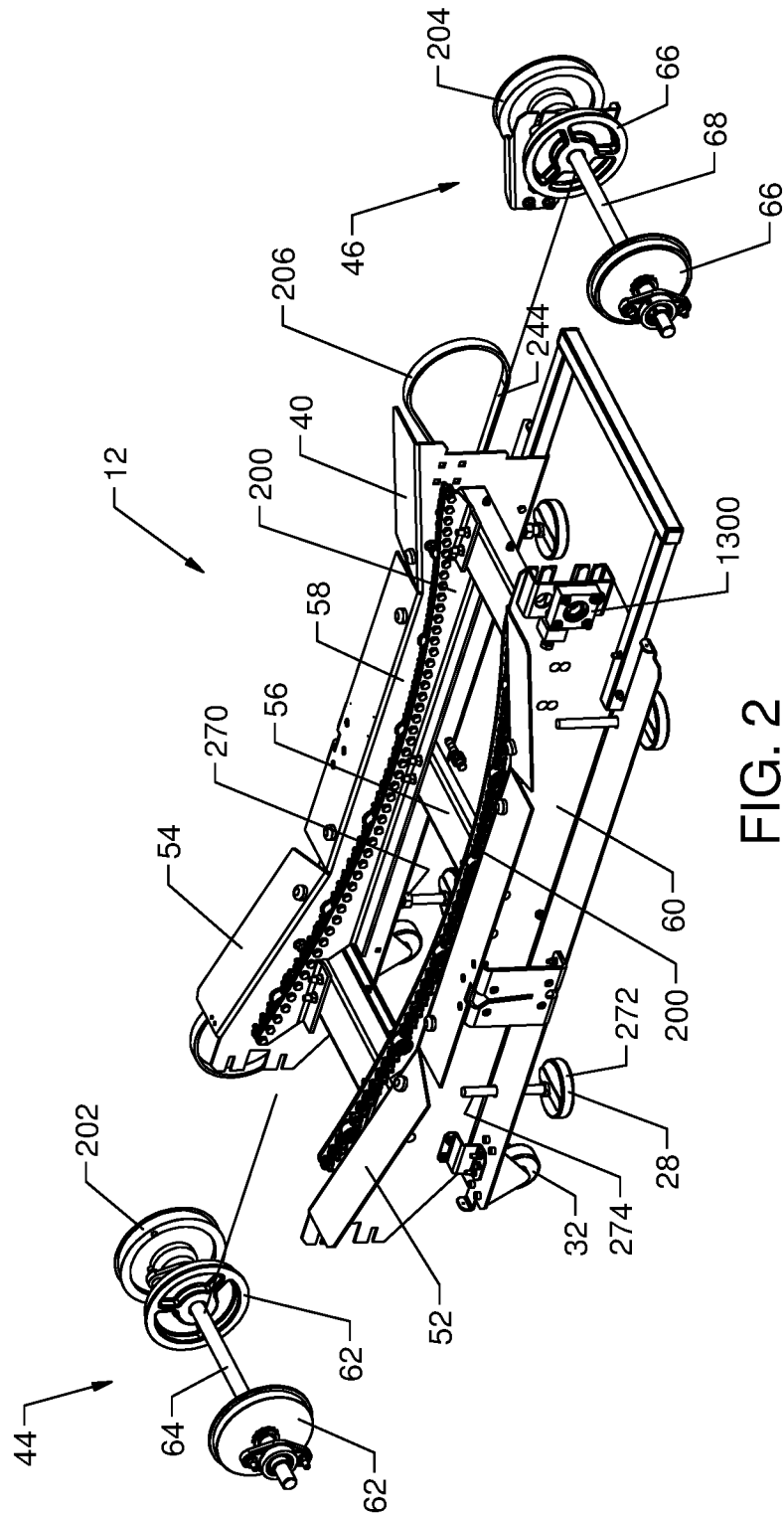


FIG. 2

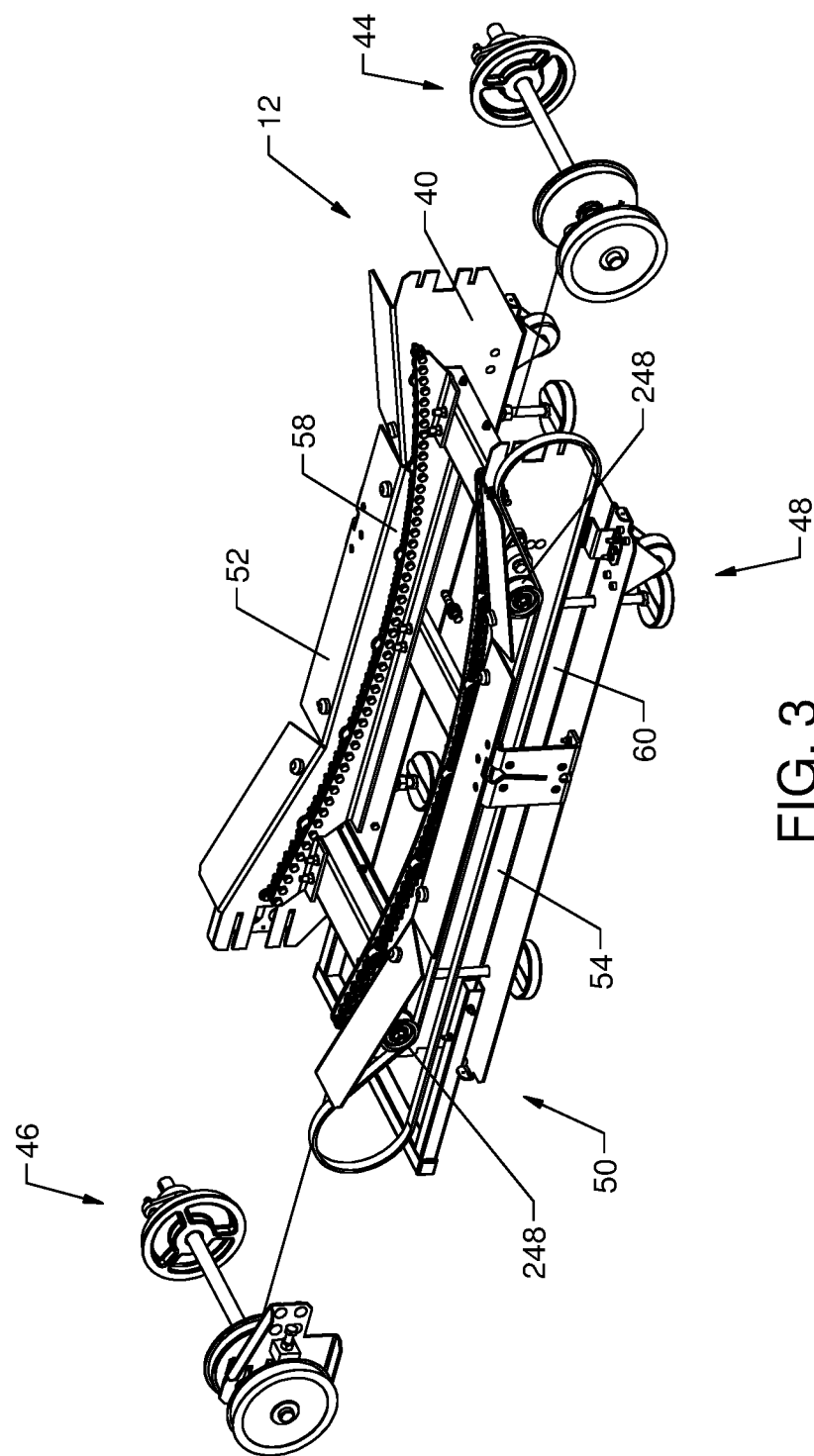
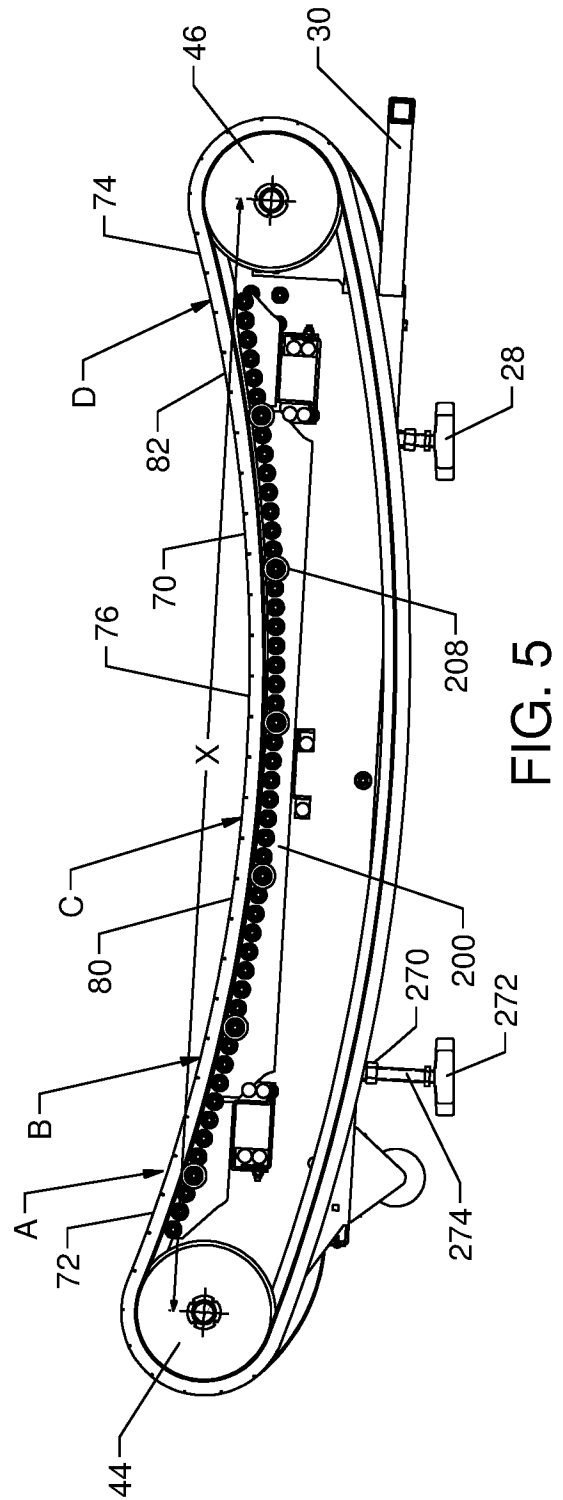
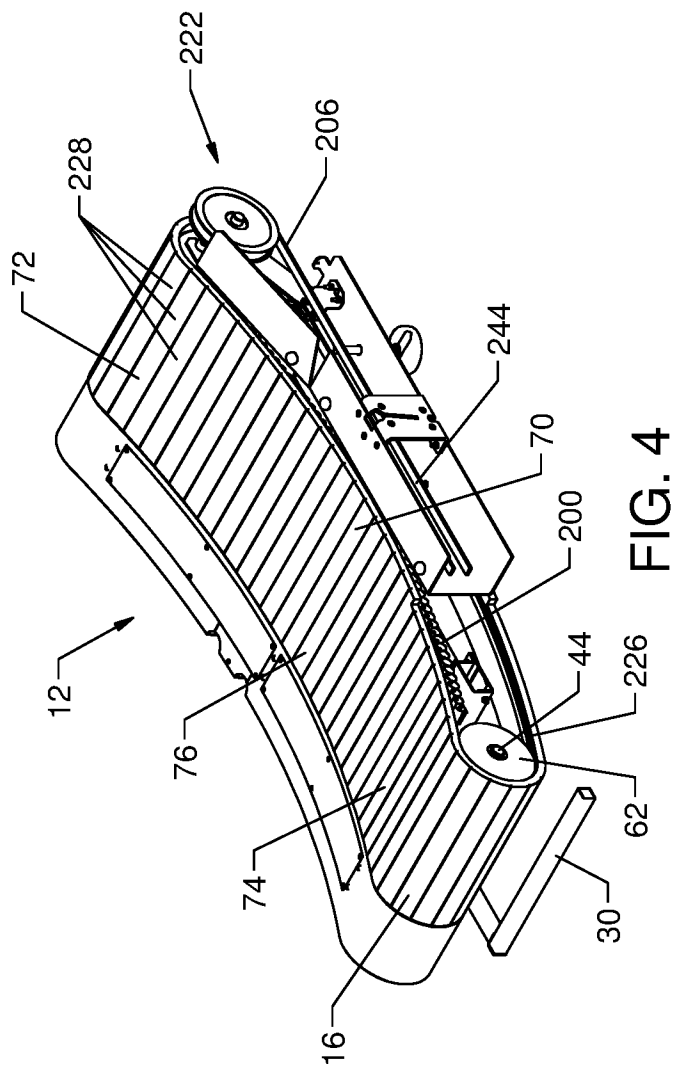


FIG. 3



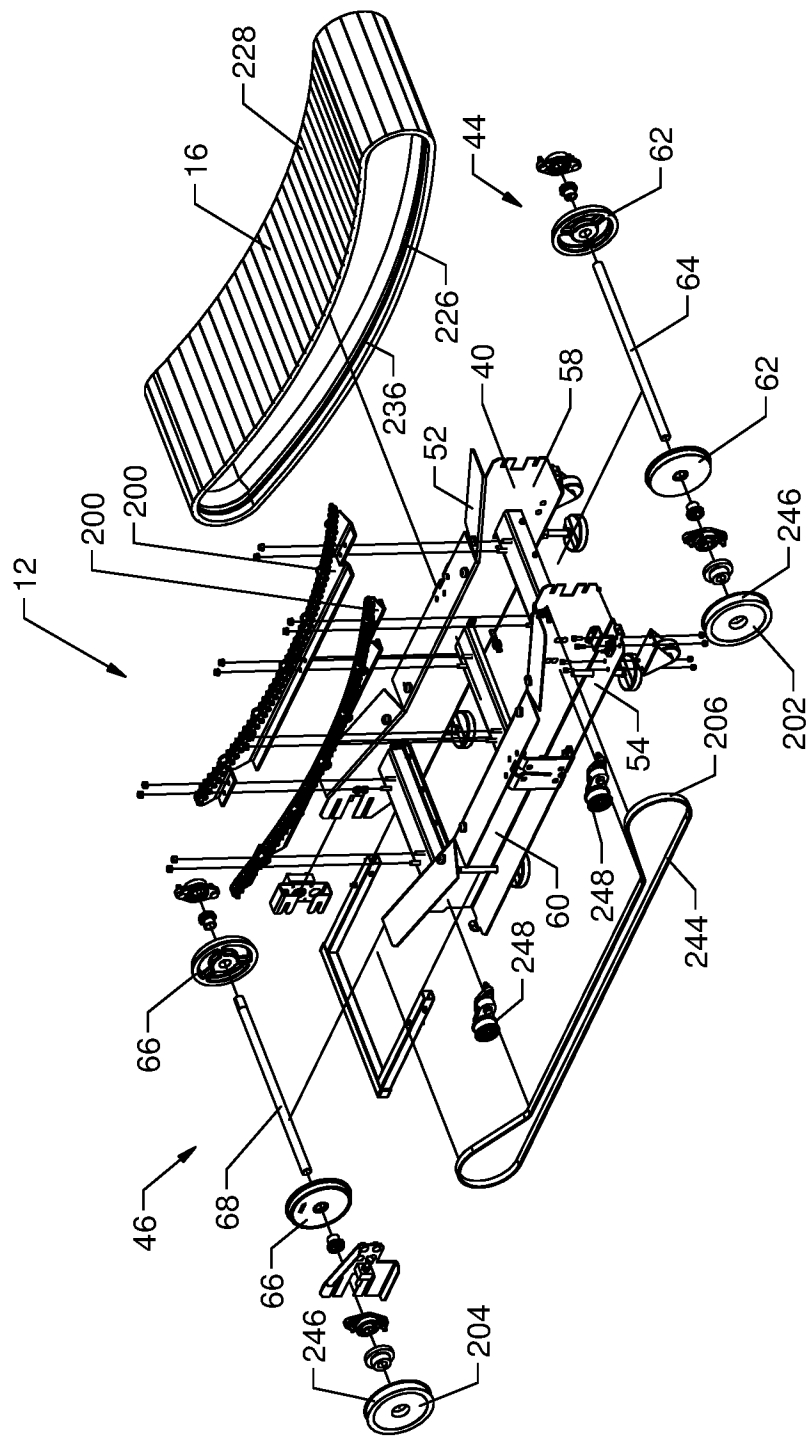


FIG. 6

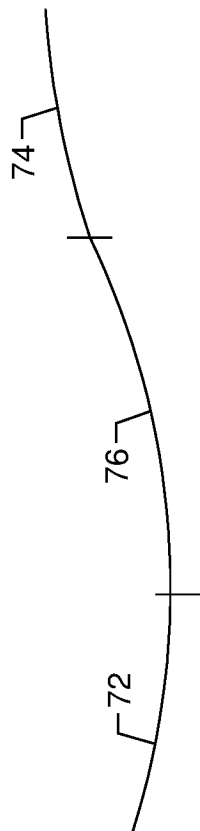


FIG. 7a

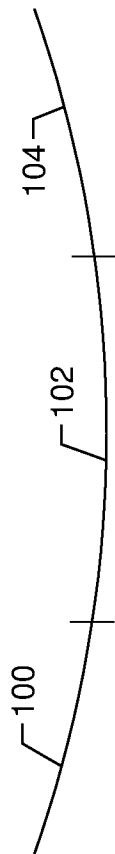


FIG. 7b

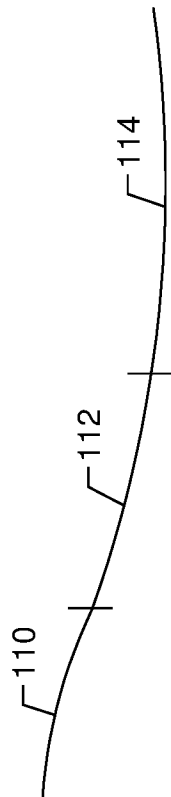


FIG. 7c

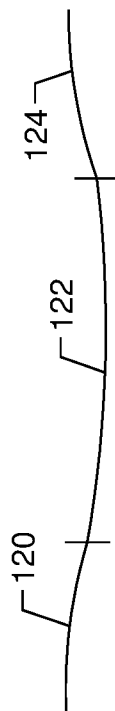


FIG. 7d

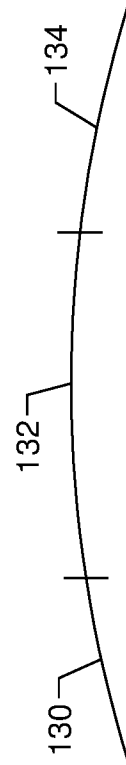


FIG. 7e

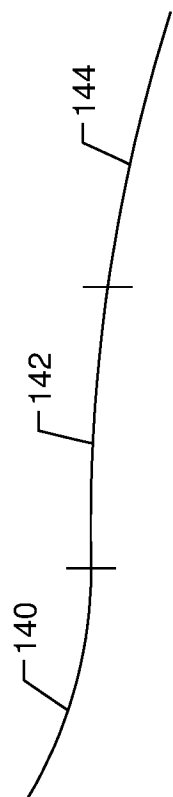


FIG. 7f

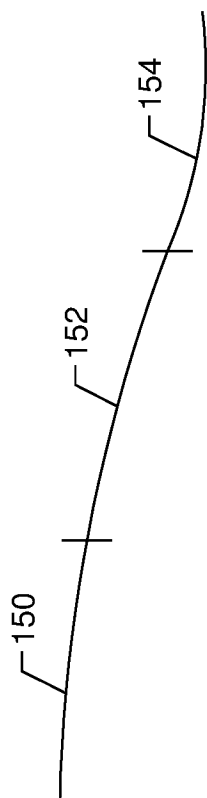


FIG. 7g

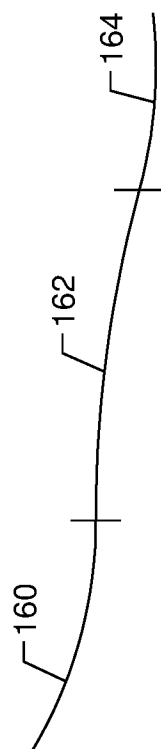


FIG. 7h

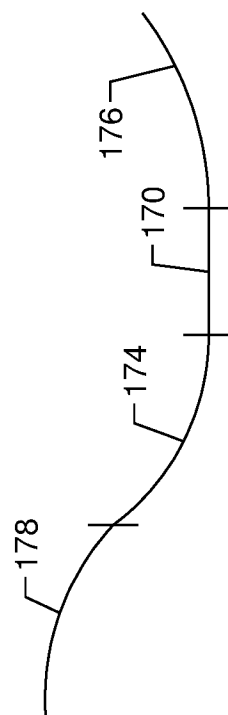


FIG. 7i

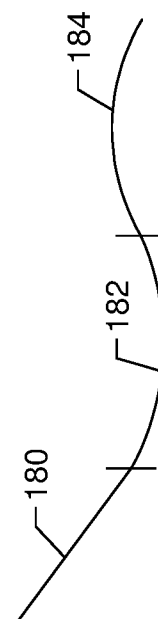
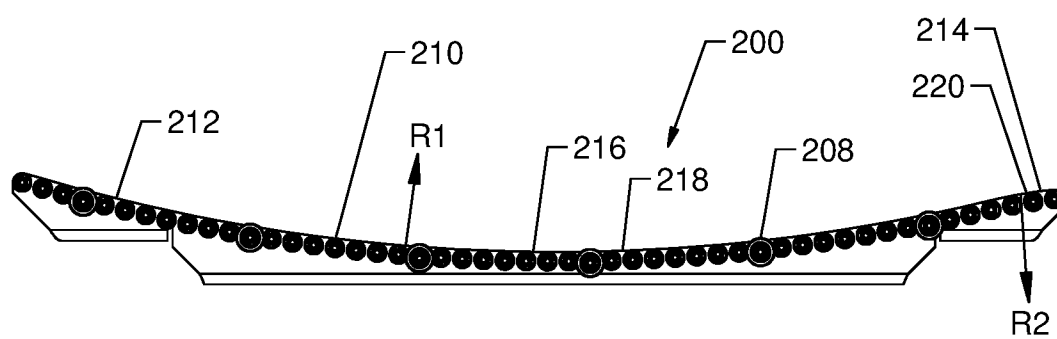
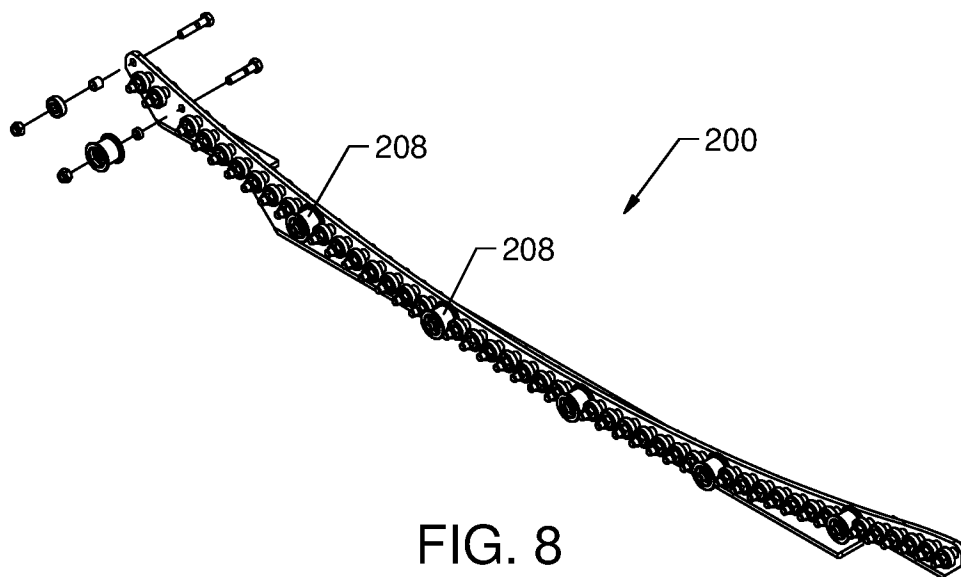


FIG. 7j



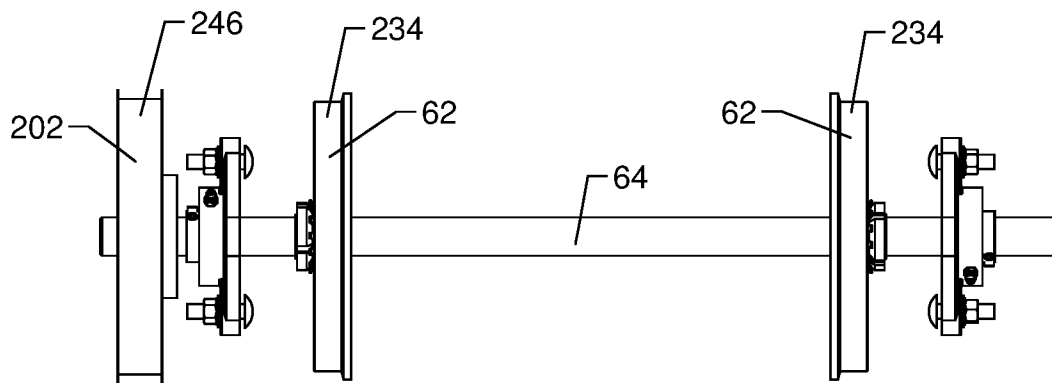


FIG. 10

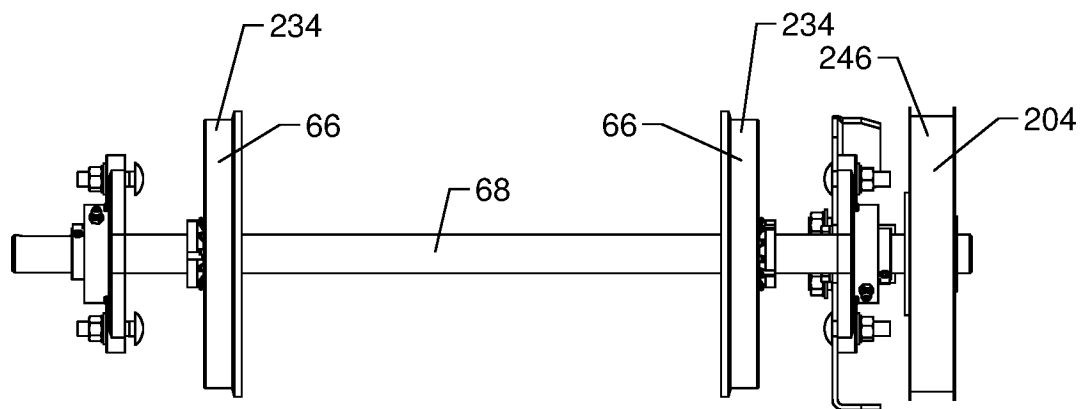


FIG. 11

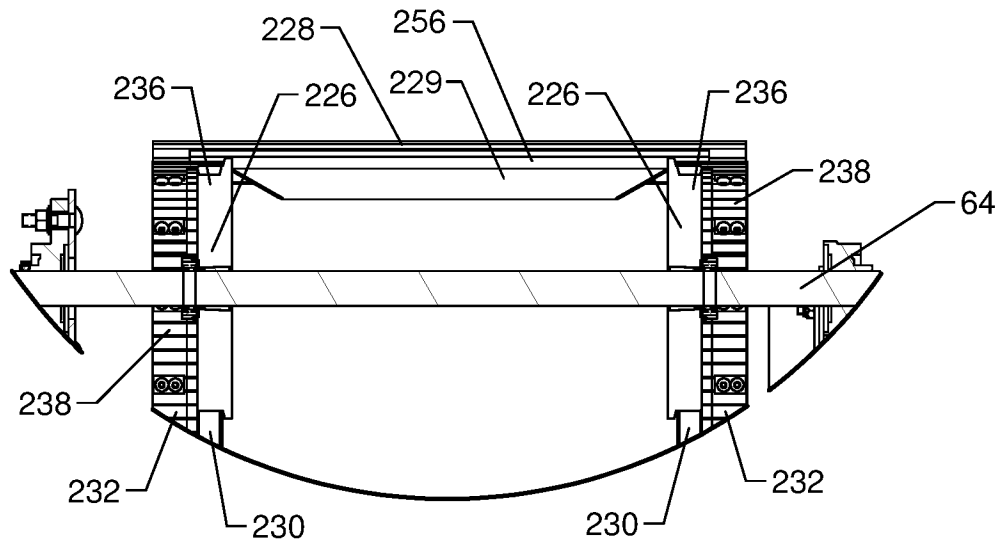


FIG. 12

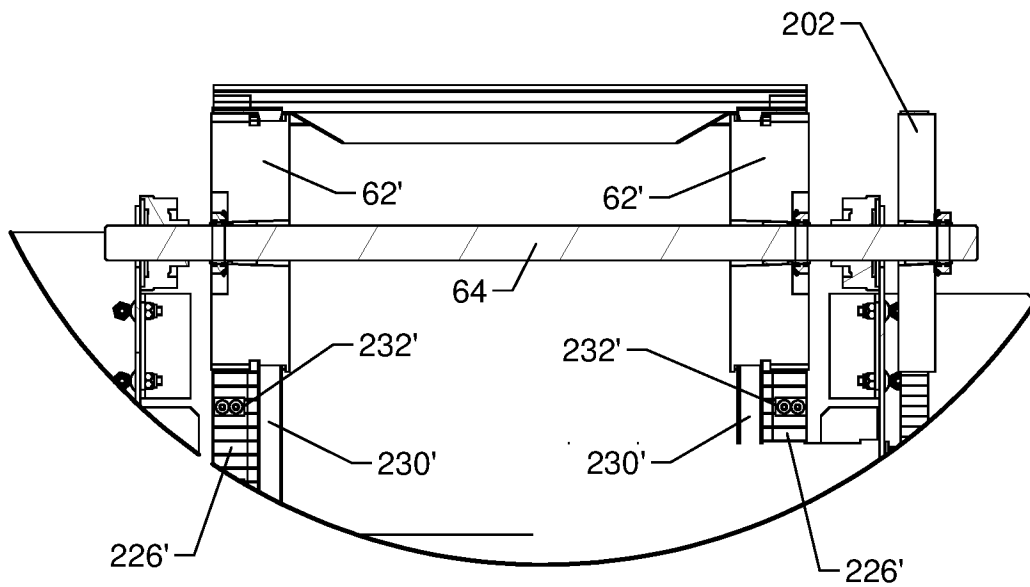


FIG. 13

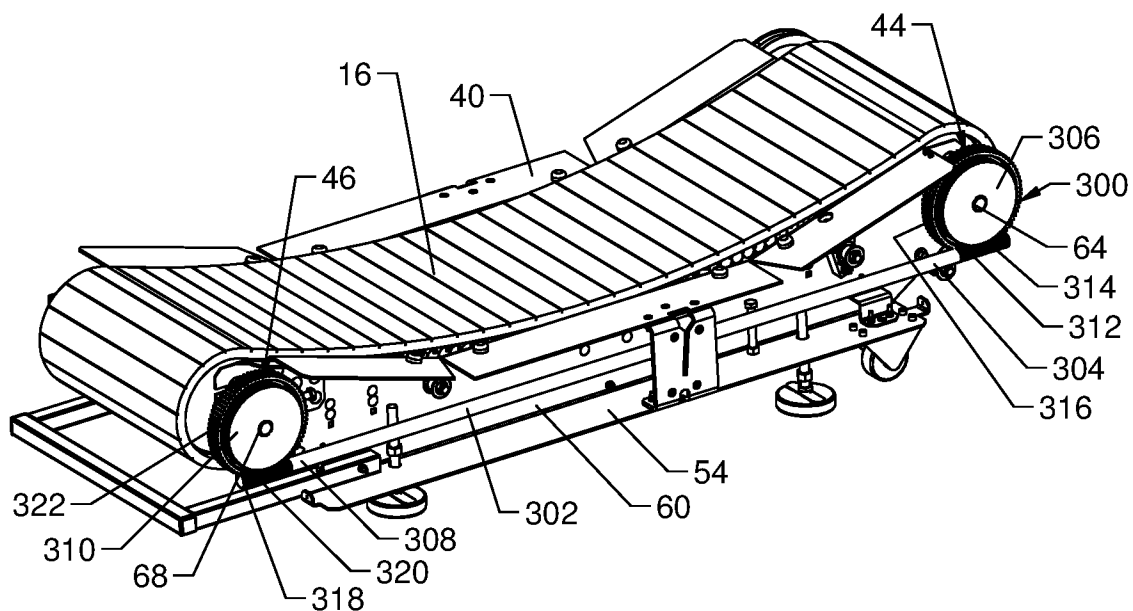


FIG. 14

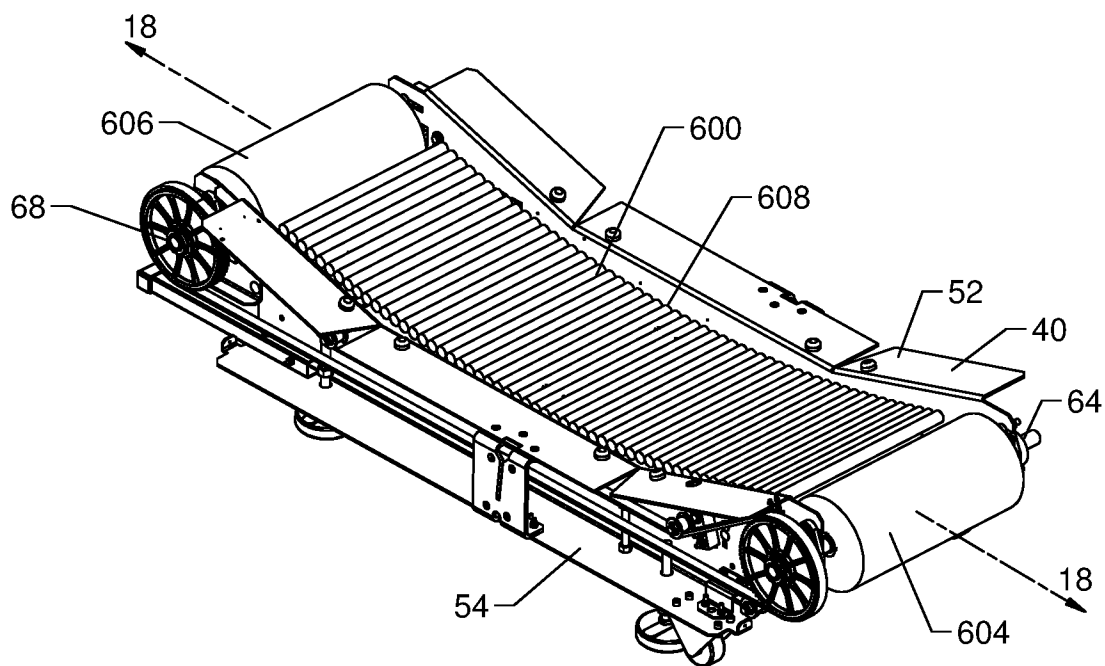


FIG. 17

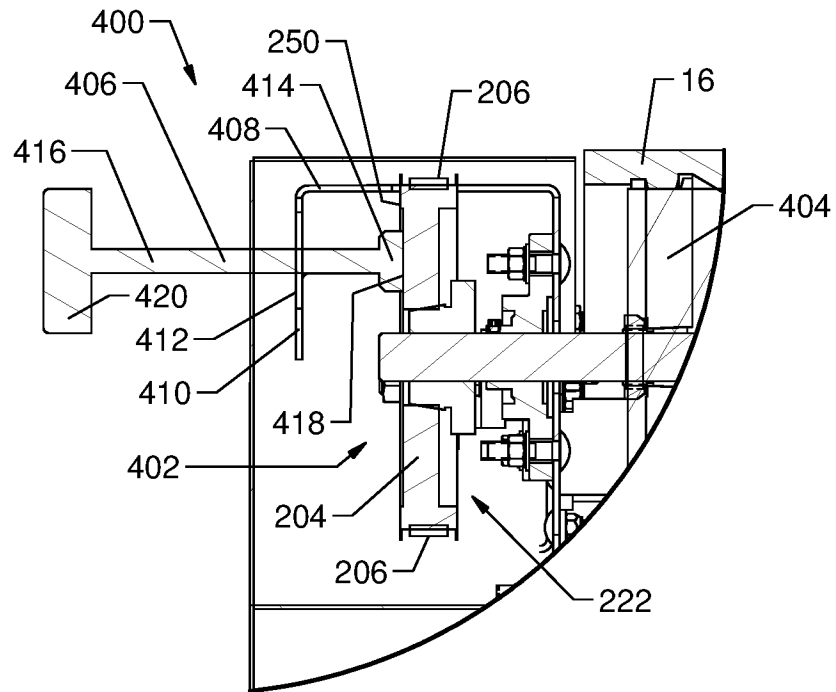


FIG. 15

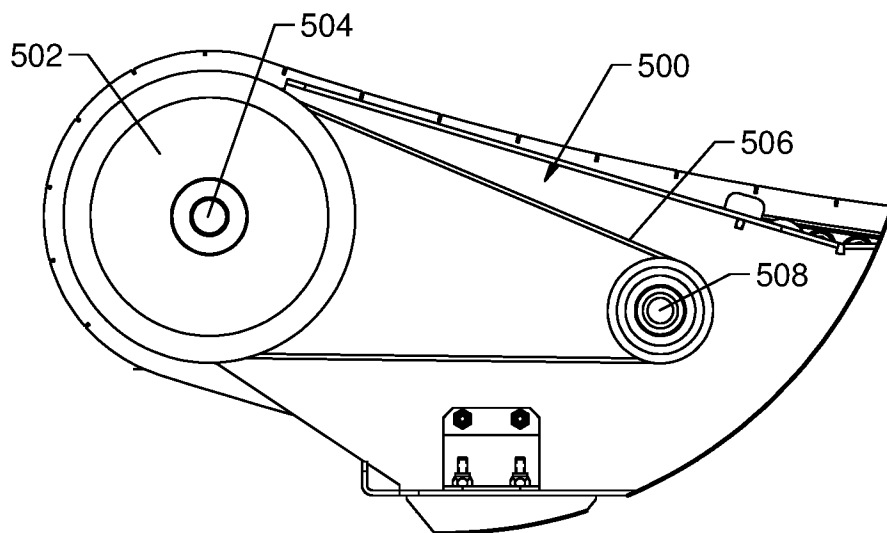


FIG. 16

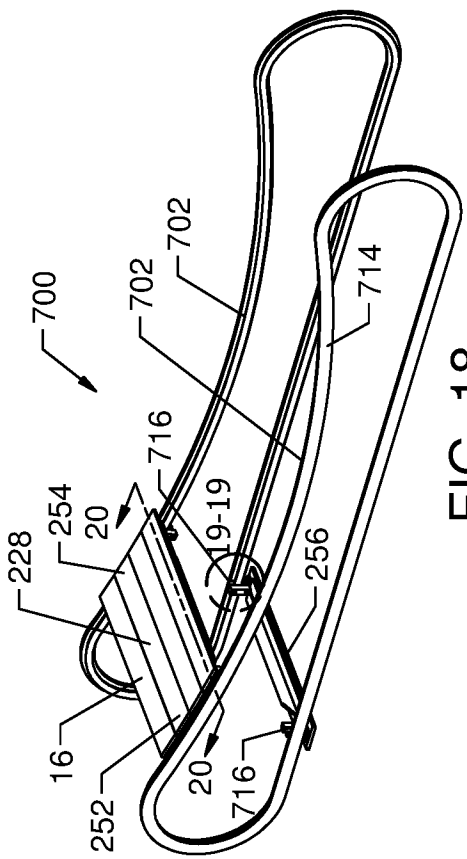


FIG. 18

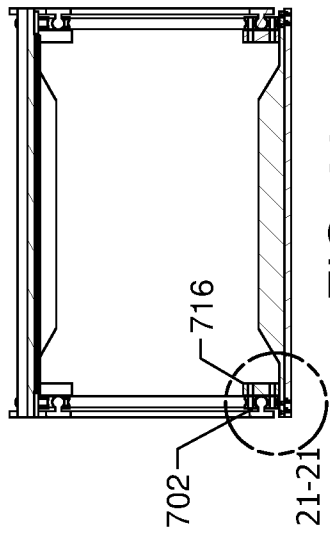


FIG. 20

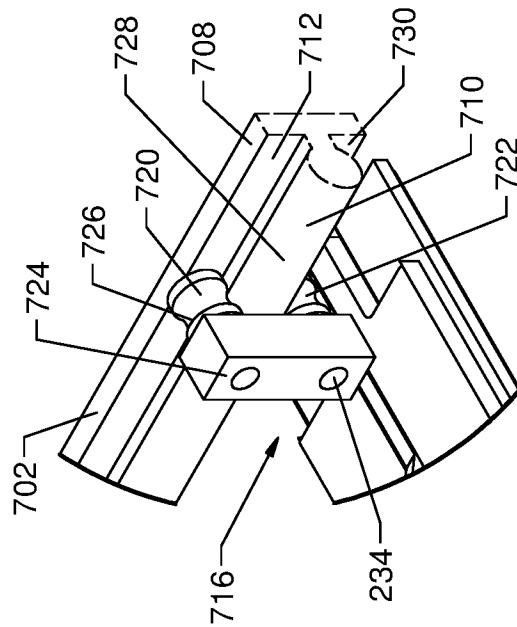


FIG. 19

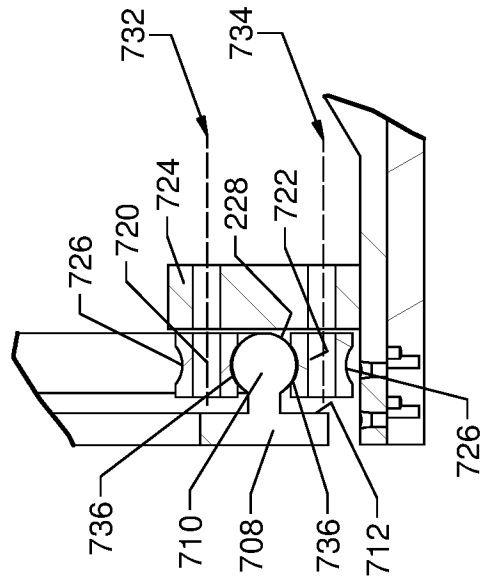


FIG. 21

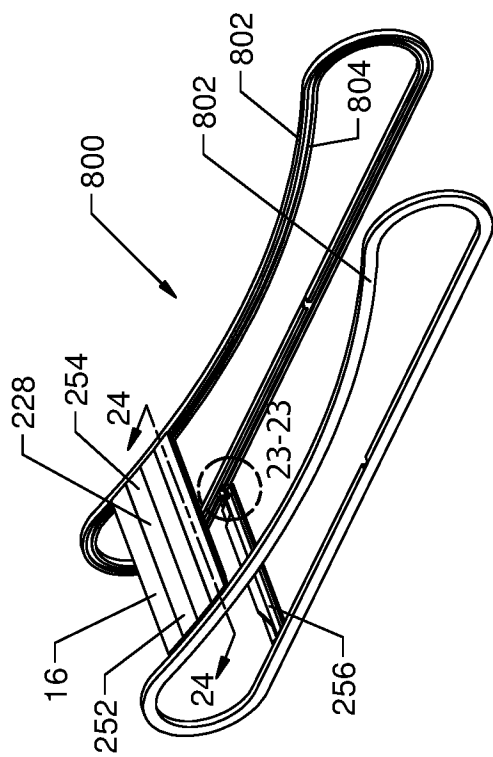


FIG. 22

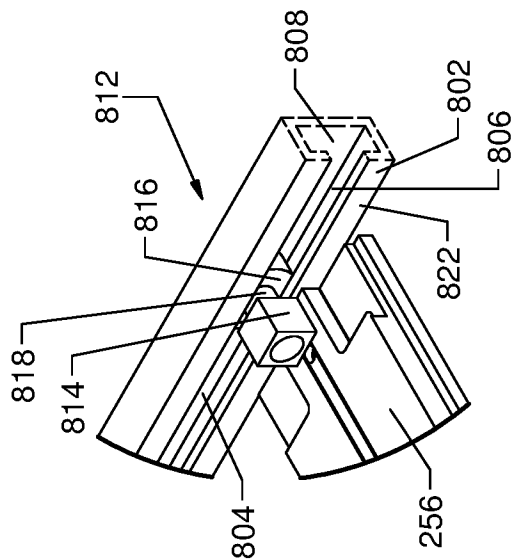


FIG. 23

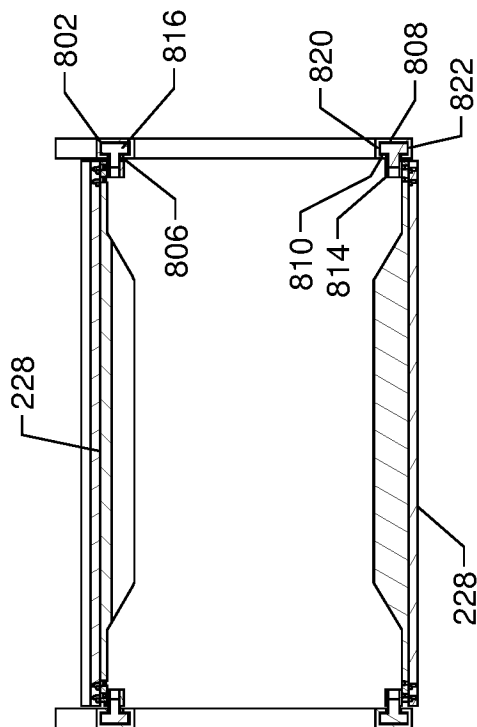


FIG. 24

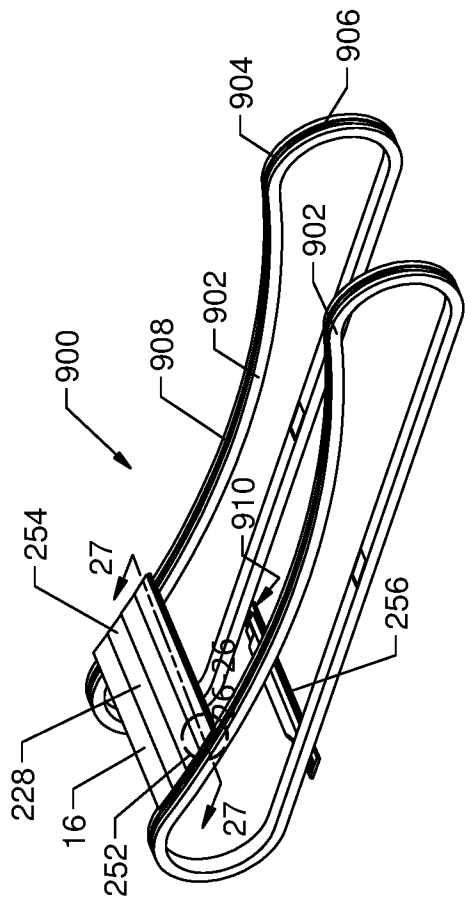


FIG. 25

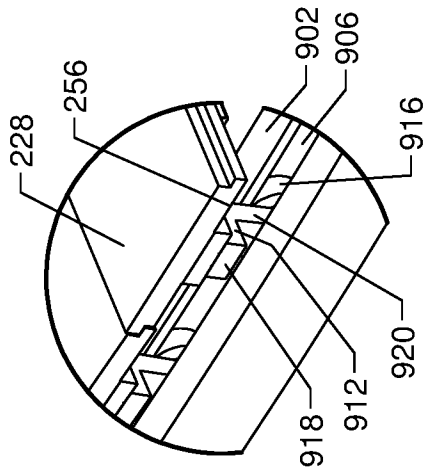


FIG. 26

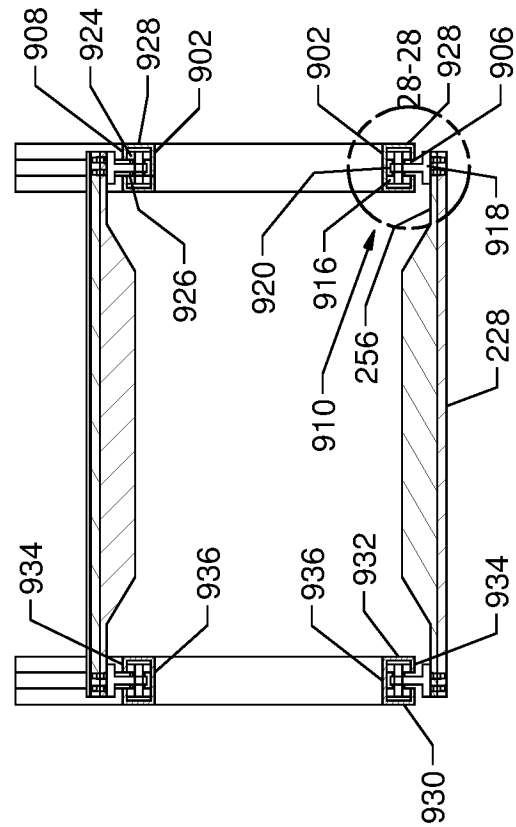


FIG. 27

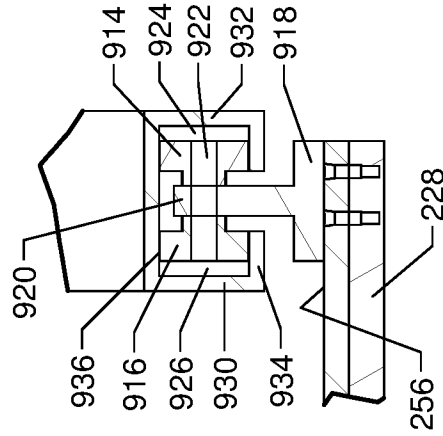


FIG. 28

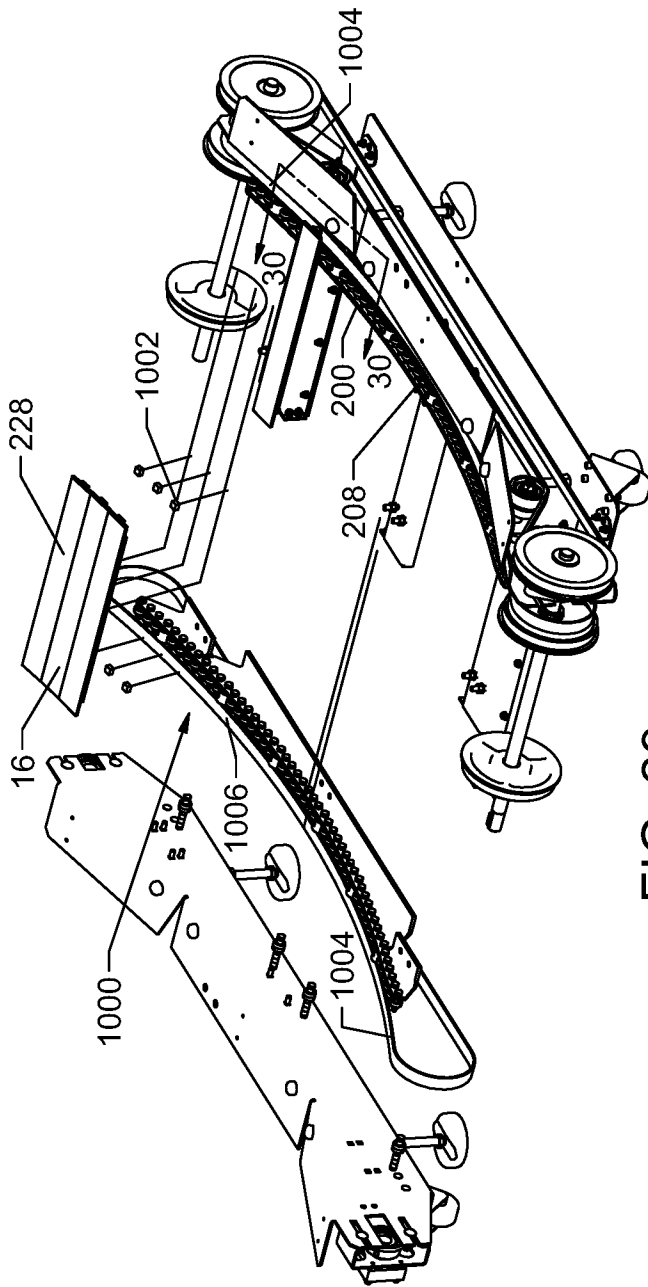


FIG. 29

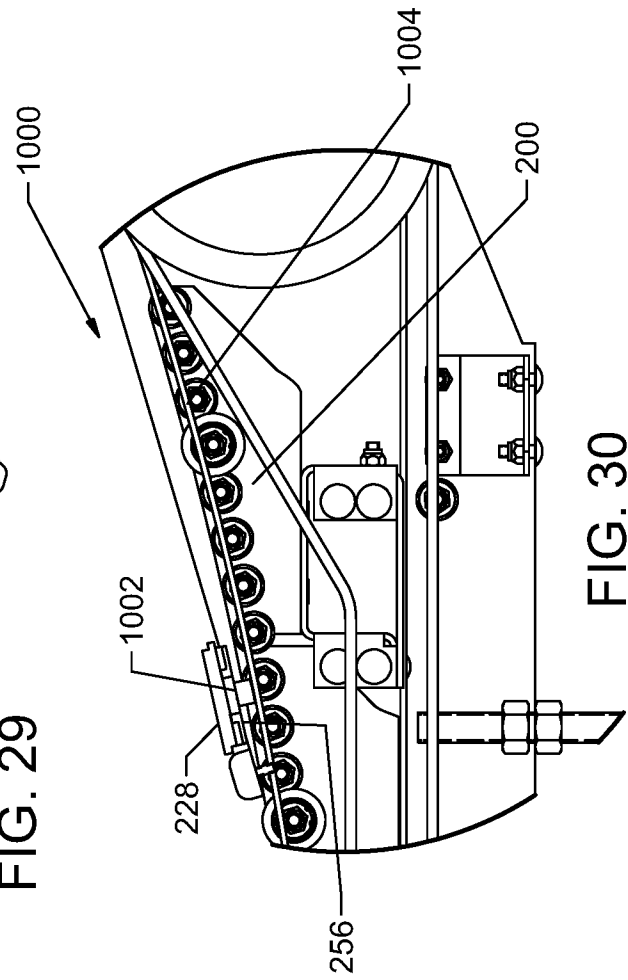


FIG. 30

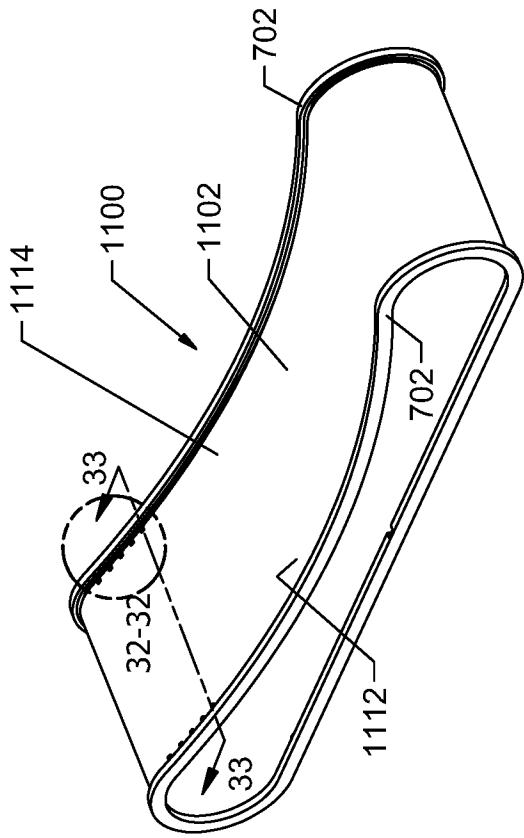


FIG. 31

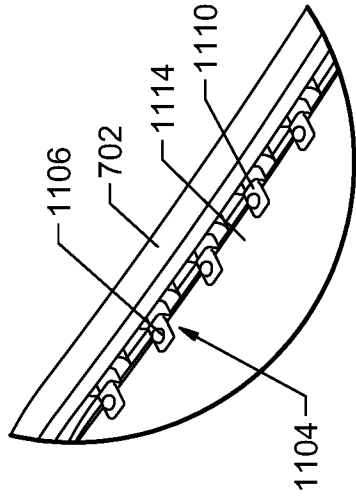


FIG. 32

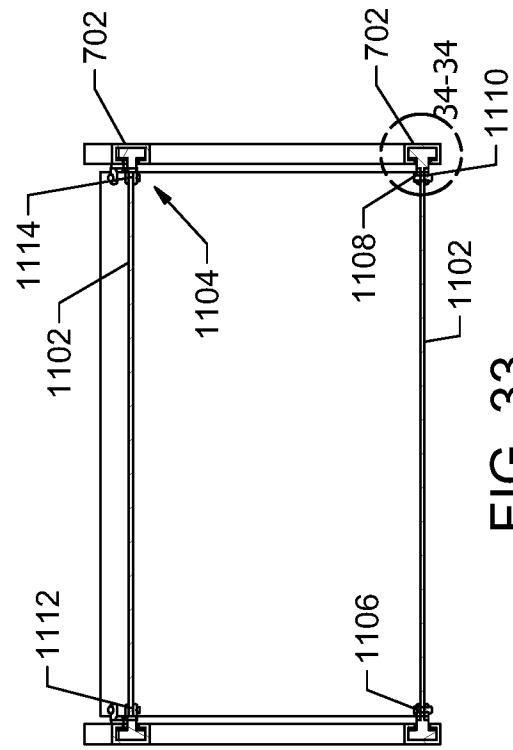


FIG. 33

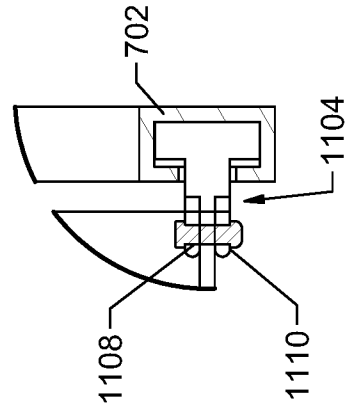


FIG. 34

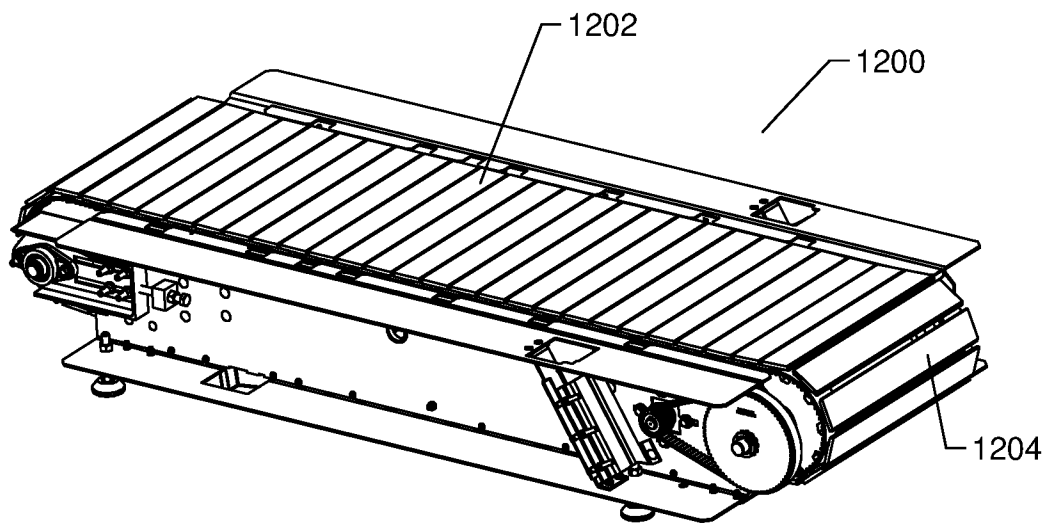


FIG. 35

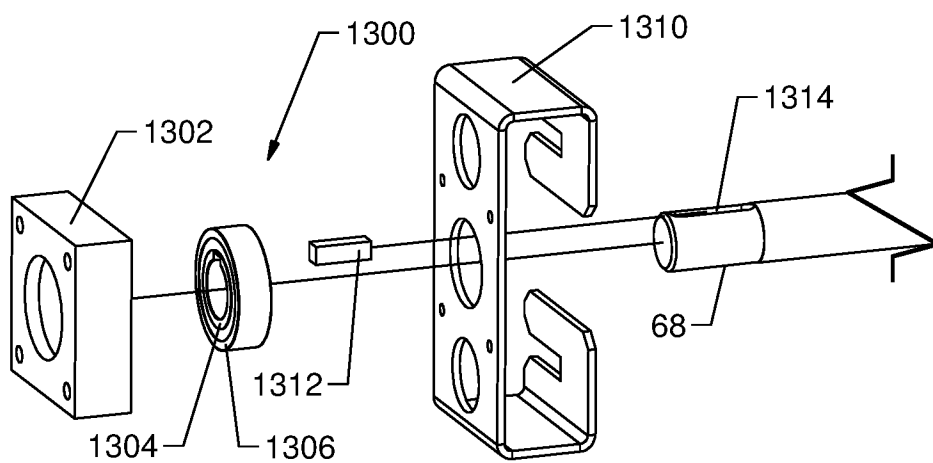


FIG. 36

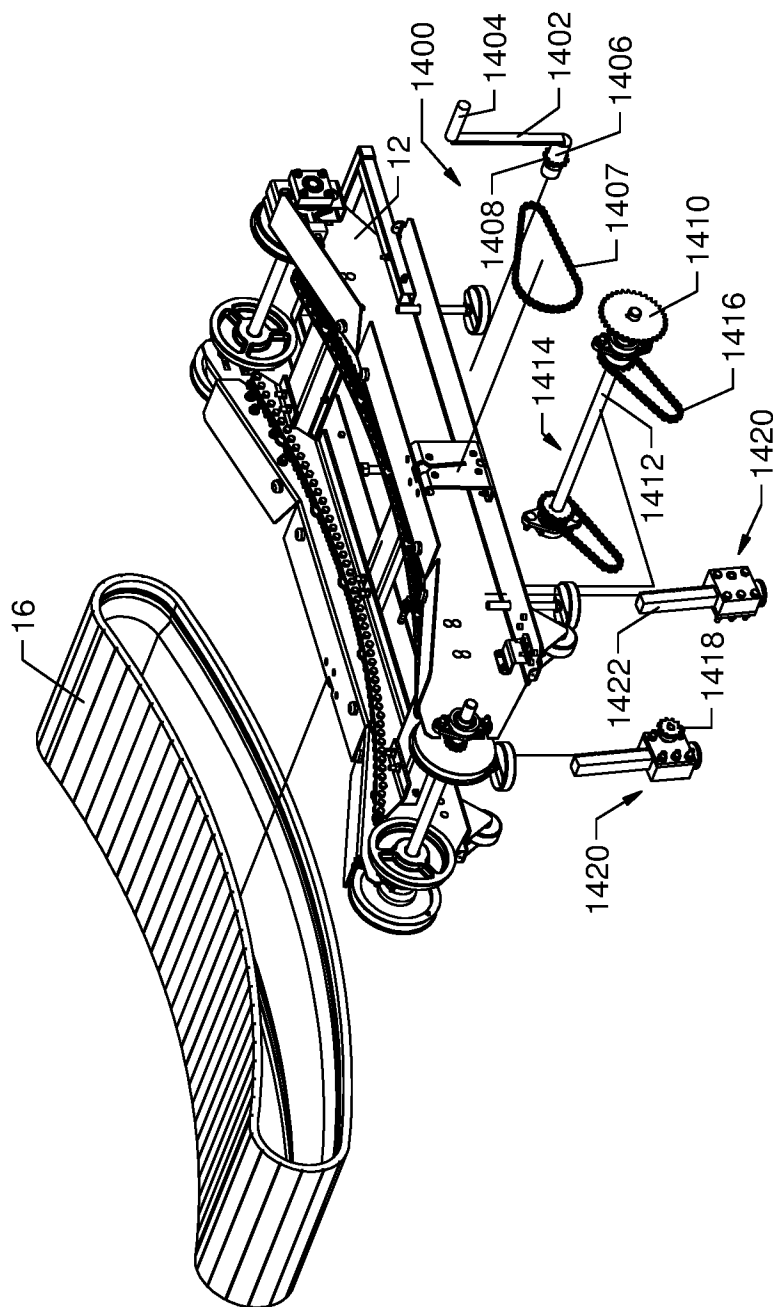


FIG. 37

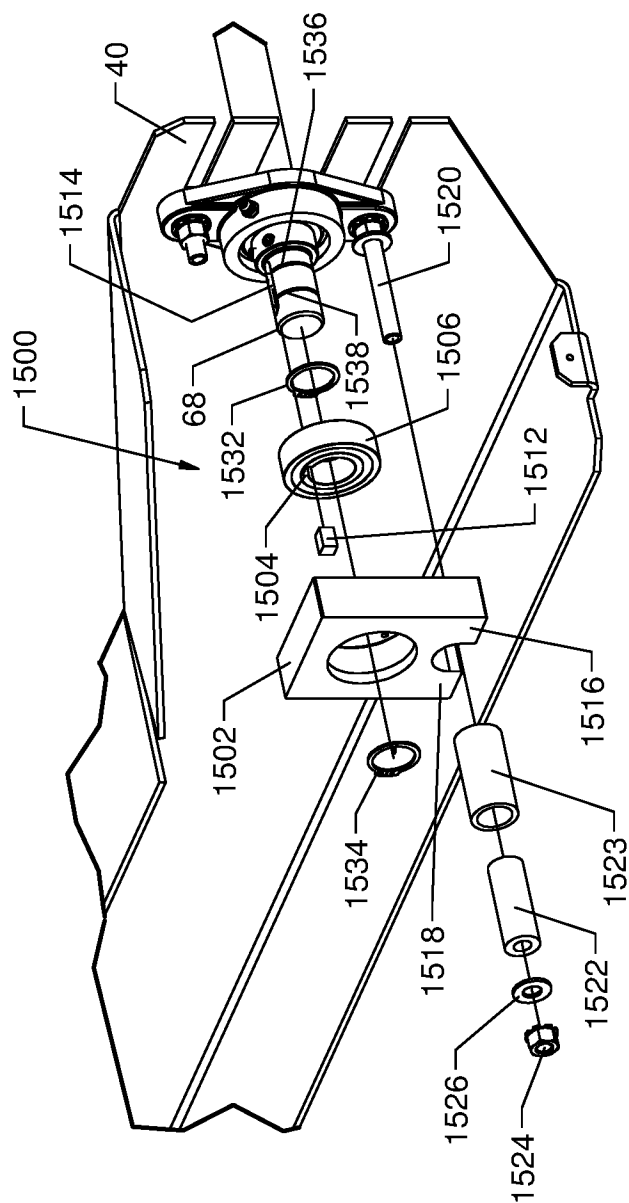


FIG. 38

**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION
USING AN APPLICATION DATA SHEET (37 CFR 1.76)**

097208-0190

**Title of
Invention**

MANUAL TREADMILL AND METHODS OF OPERATING THE SAME

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 14/076,912
filed on 11/11/2013.

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 (5) years, or both.**WARNING:**

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Douglas G. Bayerlein

Date (Optional): _____

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.

**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN
APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)**

097208-0190

**Title of
Invention**

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LEGAL NAME OF INVENTOR

Inventor: Vance E. Emons

Date (Optional):

11/25/2013

Signature:

Vance E. Emons

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: Nicholas A. Oblamski

Date (Optional): _____

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: Scott D. Hoerig

Date (Optional): _____

Signature: _____

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LEGAL NAME OF INVENTOR

Inventor: Matthew J. Zank

Date (Optional): _____

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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097208-0190

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LEGAL NAME OF INVENTOR

Inventor: Robert L. Zimpel

Date (Optional): _____

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: Joel W. Richards

Date (Optional): 11/27/13

Signature: Joel Richards

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.

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		MANUAL TREADMILL AND METHODS OF OPERATING THE SAME		
First Named Inventor/Applicant Name:		Douglas G. Bayerlein		
Filer:		Richard J. McKenna/Laura Buhs		
Attorney Docket Number:		097208-0296		
Filed as Small Entity				
Filing Fees for Track I Prioritized Examination - Nonprovisional Application 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
REQUEST FOR PRIORITIZED EXAMINATION	2817	1	2000	2000
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	2202	10	50	500
INDEPENDENT CLAIMS IN EXCESS OF 3	2201	1	230	230

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous-Filing:				
PROCESSING FEE, EXCEPT PROV. APPLS.	2830	1	70	70
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				3585

Electronic Acknowledgement Receipt

EFS ID:	38602268
Application Number:	16792426
International Application Number:	
Confirmation Number:	1040
Title of Invention:	MANUAL TREADMILL AND METHODS OF OPERATING THE SAME
First Named Inventor/Applicant Name:	Douglas G. Bayerlein
Customer Number:	26371
Filer:	Richard J. McKenna/Laura Buhs
Filer Authorized By:	Richard J. McKenna
Attorney Docket Number:	097208-0296
Receipt Date:	17-FEB-2020
Filing Date:	
Time Stamp:	11:48:56
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$3585
RAM confirmation Number	E20202GB49533159
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	Transmittal Letter	097208-0296_Transmittal.pdf	108173	no	3
			a4095d0e497bbe86524f54a9c570e2415a5333fa		
Warnings:					
Information:					
2	TrackOne Request	097208-0296_Track1.pdf	114542	no	2
			c5da1cdf07046b98fe29e8c8d59b5f24342cd4b1		
Warnings:					
Information:					
3	Application Data Sheet	097208-0296_ADS.pdf	1256520	no	11
			7ebc2f05e96d4f01f86a52beb4b61fbc28a2759c		
Warnings:					
Information:					
4		097208-0296_Application.pdf	239679	yes	54
			6573e6f6786f16900472ba20f316a2d6507aded5		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Specification		1	48	
	Claims		49	53	
	Abstract		54	54	
Warnings:					
Information:					
5	Drawings-only black and white line drawings	097208-0296_Figures_Processed.pdf	877585	no	20
			7b48e21cbb5811fb5eb2cde4b3f24f65b1bd4cc8		

Warnings:					
Information:					
6	Oath or Declaration filed	097208-0296_ParentDeclarationns.pdf	3443476 566e4d7171c453f95db8b53c8978379428fa5e4	no	7
Warnings:					
Information:					
7	Fee Worksheet (SB06)	fee-info.pdf	41799 51e0f30439345d327c51e80875058b36b8301e61	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			6081774		
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.					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor Name: Douglas G. Bayerlein

Title: MANUAL TREADMILL AND METHODS OF OPERATING
THE SAME

Prior Appl. No.: 15/958339

Prior Appl. Filing Date: 4/20/2018

CONTINUING PATENT APPLICATION
TRANSMITTAL LETTER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

Transmitted herewith for filing under 37 C.F.R. § 1.53(b) is a:

☒ Continuation ☐ Division ☐ Continuation-In-Part (CIP)

of the above-identified copending prior application in which no patenting, abandonment, or termination of proceedings has occurred. Priority to the above-identified prior application is hereby claimed under 35 U.S.C. § 120 for this continuing application. The entire disclosure of the above-identified prior application is considered as being part of the disclosure of the accompanying continuing application and is hereby incorporated by reference therein.

☒ Applicant claims small entity status under 37 CFR 1.27.

Enclosed are:

☒ PTO/SB/424 - Request for Prioritized Examination.

☒ Description, Claims, and Abstract (54 pages).

☒ Formal drawings (20 sheets, Figures 1-38).

☒ Application Data Sheet (37 CFR 1.76) (11 pages).

☒ Executed Declarations (7 pages).

The adjustment to the number of sheets for EFS-Web filing follows:

Number of Sheets		EFS-Web Adjustment	Number of Sheets for EFS-Web
74	x	75%	56

The filing fee is calculated below at the small entity rate:

	Number Filed	Included in Basic Fee	Extra		Rate	Fee Totals
Basic Filing Fee					\$75.00 =	\$75.00
Search Fee					\$330.00	\$330.00
Examination Fee					\$380.00	\$380.00
Sequence Listing fee						\$0.00
Size Fee	56	- 100	= 0	x	\$200.00	\$0.00
Total	30	- 20	= 10	x	\$50.00 =	\$500.00
Claims:						
Independents	4	- 3	= 1	x	\$230.00 =	\$230.00
:						
If any Multiple Dependent Claim(s) present:				+	\$410.00 =	\$0.00
Surcharge under 37 CFR 1.16(e) for late filing of Executed Declaration or late payment of filing fee				+	\$80.00 =	\$0.00
Prioritized Examination fee (Track I) under 37 C.F.R. § 1.17 (c)						\$2,000.00
Processing Fee (Track I) under 37 C.F.R. § 1.17 (i)						\$70.00
TOTAL FILING FEE:					=	\$3,585.00

The above-identified fees of \$3,585.00 are being paid by credit card via EFS-Web.

The Commissioner is hereby authorized to charge any fees required to secure a filing date and maintain pendency of this application to Deposit Account No. 19-0741.

Respectfully submitted,

Date: February 17, 2020

By: /R.J. McKenna/

FOLEY & LARDNER LLP

Customer Number: 26371

Telephone: (414) 297-5723

Facsimile: (414) 297-4900

Richard J. McKenna

Attorney for Applicant

Registration No. 35,610

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 16/792,426				
APPLICATION AS FILED - PART I										
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	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), (l), 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(j))	30 minus 20 =	*	x 50 =	500	OR					
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4 minus 3 =	*	x 230 =	230						
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).			0.00						
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00						
			TOTAL	1515		TOTAL				
* If the difference in column 1 is less than zero, enter "0" in column 2.										
APPLICATION AS AMENDED - PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	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))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	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))							OR		
	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.										



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 NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
16/792,426	02/17/2020	3784	1515	097208-0296	30	4

CONFIRMATION NO. 1040

26371
FOLEY & LARDNER LLP
3000 K STREET N.W.
SUITE 600
WASHINGTON, DC 20007-5109

FILING RECEIPT



0000000115150014

Date Mailed: 03/05/2020

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)

Douglas G. Bayerlein, Oconomowoc, WI;
Vance E. Emons, Hartland, WI;
Nicholas A. Oblamski, Waukesha, WI;
Scott D. Hoerig, Brookfield, WI;
Matthew J. Zank, Milwaukee, WI;
Robert L. Zimpel, Menomonee Falls, WI;
Joel W. Richards, Wauwatosa, WI;

Applicant(s)

Woodway USA, Inc., Waukesha, WI;

Assignment For Published Patent Application

Woodway USA, Inc., Waukesha, WI

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 15/958,339 04/20/2018 PAT 10561884
which is a CON of 14/832,708 08/21/2015 PAT 10265566
which is a CON of 14/076,912 11/11/2013 PAT 9114276
which is a CON of 13/235,065 09/16/2011 ABN
which is a CIP of PCT/US10/27543 03/16/2010
which claims benefit of 61/161,027 03/17/2009

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: 03/03/2020

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/792,426**

Projected Publication Date: To Be Determined - pending completion of Corrected Papers

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

MANUAL TREADMILL AND METHODS OF OPERATING THE SAME

Preliminary Class

482

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

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

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 Assets Control, 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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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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/792,426	02/17/2020	Douglas G. Bayerlein	097208-0296

CONFIRMATION NO. 1040

FORMALITIES LETTER



26371
FOLEY & LARDNER LLP
3000 K STREET N.W.
SUITE 600
WASHINGTON, DC 20007-5109

Date Mailed: 03/05/2020

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Filing Date Granted

An application number and filing date have been accorded to this application. The application is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given **TWO MONTHS** from the date of this Notice within which to correct the informalities indicated below. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

The required item(s) identified below must be timely submitted to avoid abandonment:

- Replacement claim(s) commencing on a separate sheet in compliance with 37 CFR 1.75(h) and 1.121 is required. Claims must be consecutively numbered and the same claim number cannot be used for more than one claim. See 37 CFR 1.126.

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web, including a copy of this Notice and selecting the document description "Applicant response to Pre-Exam Formalities Notice".
<https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/dmnguyen/

To: ipdocketing@foley.com,,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 26371

Mar 05, 2020 04:22:58 AM

Dear PAIR Customer:

FOLEY & LARDNER LLP
3000 K STREET N.W.
SUITE 600
WASHINGTON, DC 20007-5109
UNITED STATES

The following USPTO patent application(s) associated with your Customer Number, 26371 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

Disclaimer:

The list of documents shown below is provided as a courtesy and is not part of the official file wrapper. The content of the images shown in PAIR is the official record.

Application	Document	Mailroom Date	Attorney Docket No.
16792426	APP.FILE.REC	03/05/2020	097208-0296
	NT.CR.APP.PA	03/05/2020	097208-0296

To view your correspondence online or update your email addresses, please visit us anytime at <https://sportal.uspto.gov/secure/myportal/privatepair>.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor Name: Douglas G. Bayerlein
Title: MANUAL TREADMILL AND METHODS OF OPERATING THE
SAME
Appl. No.: 16/792,426
Filing Date: 2/17/2020
Examiner: Not yet assigned
Art Unit: 3784
Confirmation Number: 1040

Response to Notice to File Corrected Application Papers

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

This communication is responsive to the Notice to File Corrected Application Papers
mailed March 5, 2020.

A Listing of the Claims begins on page 2 of this document.

Remarks begin on page 7 of this document.

Listing of Claims:

1. (Original) A treadmill, comprising:
 - a frame;
 - a front running belt pulley coupled to the frame;
 - a rear running belt pulley coupled to the frame and spaced a distance from the front running belt pulley;
 - a plurality of bearings coupled to the frame;
 - a running belt at least partially supported by at least one of the front running belt pulley and the rear running belt pulley, wherein the running belt includes a running surface, at least a portion of which is curved;
 - a support element coupled to the frame; and
 - a safety device coupled to the running belt, the safety device at least partially supported by the support element, wherein the running belt freely rotates in a first direction of rotation relative to the frame, however, in a second direction of rotation, opposite the first direction of rotation, engagement between the support element and at least a portion of the safety device substantially prevents rotation the running belt relative to the frame.
2. (Original) The treadmill of claim 1, wherein at least a portion of the support element defines a keyway.
3. (Original) The treadmill of claim 2, wherein the keyway is configured to receive a key such that the key engages with the support element and the portion of the safety device, the interaction between the key and keyway contributing to the engagement between the support element and at least a portion of the safety device.
4. (Original) The treadmill of claim 1, wherein the safety device comprises a one-way bearing.

5. (Original) The treadmill of claim 4, wherein the one-way bearing comprises said portion of the safety device and an element.

6. (Original) The treadmill of claim 5, wherein the element is substantially restricted from rotation during operation of the treadmill in either the first or second direction of rotation.

7. (Original) The treadmill of claim 1, further comprising a braking system coupled to the frame and configured to selectively resist rotation of the running belt.

8. (Original) The treadmill of claim 7, wherein the braking system utilizes friction to apply a variable amount of force to resist the rotation of the running belt in the first direction of rotation.

9. (Original) The treadmill of claim 1, wherein the treadmill is a manually powered, non-motorized treadmill.

10. (Original) The treadmill of claim 1, further comprising at least one support foot coupled to the frame, wherein the at least one support foot is adjustable to adjust a relative vertical incline of at least a portion of the treadmill relative to a surface supporting the treadmill.

11. (Original) The treadmill of claim 1, wherein the frame comprises a left side member, a right side member, and at least one cross-member extending between the left side member and the right side member.

12. (Original) A treadmill, comprising:
a frame;
a rotatable element coupled to the frame;
a running belt at least partially supported by the rotatable element, wherein the running belt includes a running surface, at least a portion of which is curved; and
a first safety element and a second safety element, both of which are coupled to the running belt, wherein at least one of the first and second safety elements is adapted for rotation relative to the frame;

wherein one of the first and second safety elements and the running belt freely rotate in a first direction of rotation relative to the frame, however, in a second direction of rotation, opposite the first direction of rotation, engagement between the first safety element and the second safety element substantially prevents rotation of the running belt relative to the frame.

13. (Original) The treadmill of claim 12, wherein the treadmill is a manually powered, non-motorized treadmill.

14. (Original) The treadmill of claim 12, wherein the first and second safety elements of the safety device at least partly form a one-way bearing.

15. (Original) The treadmill of claim 12, wherein one of the first and second safety elements surrounds or substantially surrounds the other of the first and safety second elements.

16. (Original) The treadmill of claim 12, further comprising a braking system coupled to the frame and configured to selectively resist rotation of the running belt in the first direction of rotation.

17. (Original) The treadmill of claim 12, wherein the rotatable element comprises a running belt pulley coupled to the frame.

18. (Original) The treadmill of claim 12, wherein the running belt comprises a plurality of slats, and wherein at least one slat in the plurality of slats comprises a roller.

19. (Original) The treadmill of claim 18, wherein the at least one slat includes a top surface and wherein the roller is coupled to a member extending away from the top surface of the at least one slat.

20. (Original) The treadmill of claim 12, wherein the rotatable element comprises a plurality of bearings coupled to the frame, the plurality of bearings at least partially supporting the running belt.

21. (Original) A method, comprising:
- providing a treadmill having a frame with a front end and a rear end;
 - providing a plurality of bearings coupled to the frame, wherein the plurality of bearings define at least a portion of a curved top profile;
 - disposing a running belt on the plurality of bearings such that the curved top profile of the plurality of bearings define at least a portion of a curved running surface of the running belt;
 - providing a first safety element coupled to the frame and to the running belt and a second safety element coupled to the frame, wherein at least one of the first and second safety elements is adapted for rotation relative to the frame;
 - permitting rotation of one of the first and second safety elements and the running belt in a first direction of rotation; and
 - substantially preventing rotation of one of the first and second safety elements and the running belt in a second direction, opposite the first direction, by engagement between the first safety element and the second safety element.
22. (Original) The method of claim 21, further comprising providing for a selective application of a braking force to resist rotation of the running belt in the first direction.
23. (Original) The method of claim 21, wherein the treadmill is a manually powered, non-motorized treadmill.
24. (Original) A treadmill, comprising:
- a frame;
 - a rotatable element coupled to the frame;
 - a running belt at least partially supported by the rotatable element, wherein the running belt includes a running surface, at least a portion of which is curved;
 - a support element coupled to the frame; and
 - a safety device coupled to the running belt, the safety device at least partially supported by the support element, wherein the running belt freely rotates in a first direction of rotation relative to the frame, however, in a second direction of rotation, opposite the first direction of

rotation, engagement between the support element and a portion of the safety device substantially prevents rotation of the running belt.

25. (Original) The treadmill of claim 24, wherein the rotatable element comprises at least one of a front running belt pulley coupled to the frame and a rear running belt pulley coupled to the frame and spaced apart from the front running belt pulley.

26. (Original) The treadmill of claim 24, wherein the rotatable element comprises at least one of a front rotatable shaft coupled to the frame and a rear rotatable shaft coupled to the frame and spaced apart from the front rotatable shaft.

27. (Original) The treadmill of claim 24, wherein the rotatable element comprises a running belt pulley coupled to the frame..

28. (Original) The treadmill of claim 24, wherein the safety device comprises a one-way bearing.

29. (Original) The treadmill of claim 24, wherein the support element comprises a rod.

30. (Original) The treadmill of claim 29, wherein at least a portion of the rod defines a keyway, wherein the keyway is configured to receive a key such that the key engages with the rod and the portion of the safety device.

REMARKS

Applicant respectfully requests that the foregoing amendments be made prior to examination of the present application.

Status of Claims

No claims have been amended. No claims are new. No claims are canceled. No new matter has been added.

Claims 1-30 remain pending in this application for examination. Applicant respectfully requests favorable reconsideration of these claims.

Notice to File Corrected Application Papers

In the Notice to File Corrected Application Papers mailed March 5, 2020, the Office indicated the “required item(s) identified below must be timely submitted to avoid abandonment:

- Replacement claim(s) commencing on a separate sheet in compliance with 37 CFR 1.75(h) and 1.121 is required. ...”

(Notice to File Corrected Application Papers, p. 1).

Applicant is submitting originally-filed claims 1-30 on a separate sheet herewith to address this Notice to File Corrected Application Papers.

Withdrawal of the Notice to File Corrected Application Papers is respectfully requested.

Concluding Remarks

Applicant believes that the application is in condition for allowance. Favorable consideration is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance prosecution.

The Commissioner is hereby authorized to charge any additional fees which may be required for this application to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, applicant hereby petitions for such extensions under 37 CFR § 1.136 and authorizes payment of any such extension fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date /5-4-2020/

FOLEY & LARDNER LLP
Customer Number: 26371
Telephone: (414) 319-7029
Facsimile: (414) 297-4900

By /Alexander J. Neuworth/

Attorneys for Applicant

Richard J. McKenna
Registration No. 35,610

Alexander J. Neuworth
Registration No. 72,021

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor Name: Douglas G. Bayerlein
Title: MANUAL TREADMILL AND METHODS OF OPERATING
THE SAME
Application No.: 16/792,426
Filing Date: 2/17/2020
Examiner: Not yet assigned
Art Unit: 3784
Confirmation No.: 1040

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §1.56

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

Applicant submits herewith documents for the Examiner's consideration in accordance with 37 CFR §§1.56, 1.97 and 1.98.

Applicant respectfully requests that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

Applicant requests that, in accordance with 37 CFR §1.98(d), the Examiner review all applications relied on for an earlier effective filing date under 35 U.S.C. 120, including Application No. PCT/US10/27543, filed 3/16/2010; Application No. 13/235,065, filed 9/16/2011; Application No. 14/076912, filed 11/11/2013; Application No. 14/832,708, filed 8/21/2015; Application No. 15/958339, filed 4/20/2018, for copies of references of record

therein that are not being provided here; although Applicant would be pleased to provide copies of any such documents at the Examiner's request.

The submission of any document herewith is not an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicant does not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document submitted herewith.

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(b), within three (3) months of the filing date of the application.

Although Applicant believes that no fee is required, the Commissioner is hereby authorized to charge any additional fees which may be due to Deposit Account No. 19-0741.

Respectfully submitted,

Date /5-4-2020/

By /Alexander J. Neuworth/

FOLEY & LARDNER LLP
Customer Number: 26371
Telephone: (414) 319-7029
Facsimile: (414) 297-4900

Alexander J. Neuworth
Attorney for Applicant
Registration No. 72,021

Substitute for form 1449/PTO
**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

Date Submitted: May 4, 2020

(use as many sheets as necessary)

Sheet 1 of 16

Complete if Known

Application Number	16/792,426
Filing Date	2/17/2020
First Named Inventor	Douglas G. Bayerlein
Art Unit	3784
Examiner Name	Not yet assigned
Attorney Docket Number	097208-0296

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	A1	8,308-X	08-26-1851	SEYMOUR	
	A2	219,439	09-09-1879	BLEND	
	A3	411,986	10-01-1889	FRAZEUR ET AL	
	A4	641,424	01-16-1900	TAITEL ET AL	
	A5	759,296	05-10-1904	MORAIRTY	
	A6	767,221	08-09-1904	HAGEN	
	A7	783,769	02-28-1905	WRIGHT	
	A8	931,394	08-17-1909	DAY	
	A9	1,211,765	01-09-1917	SCHMIDT	
	A10	2,117,957	05-17-1938	HELLER	
	A11	2,399,915-A	05-07-1946	DRAKE, WARD A.	
	A12	2,842,365	07-08-1958	KELLEY	
	A13	3,637,206	01-25-1972	CHICKERING, III, KENTON	
	A14	3,968,543-	07-13-1976	SHINO ET AL.	
	A15	4,389,047-	06-21-1983	HALL, LAWRENCE W.	
	A16	4,406,451-A	09-27-1983	GAETANO, SALVATORE	
	A17	4,544,152-	10-01-1985	TAITEL, CHARLES M.	
	A18	4,548,405	10-22-1985	LEE ET AL.	
	A19	4,576,352	03-18-1986	OGDEN, RALPH	
	A20	4,614,337-	09-30-1986	SCHONENBERGER, ROLF	
	A21	4,635,928	01-13-1987	OGDEN ET AL.	
	A22	4,659,074	04-21-1987	TAITEL ET AL.	
	A23	4,726,581-	02-23-1988	CHANG, SHAO-YING	
	A24	4,886,266	12-12-1989	TRULASKE, JAMES A.	
	A25	4,938,469	07-03-1990	CRANDELL, RAYMOND H.	
	A26	5,031,901-A	07-16-1991	SAARINEN, SULEVI	
	A27	5,094,447-A	03-10-1992	WANG, LEO	
	A28	5,145,480-A	09-08-1992	WANG, KUO-LIANG	
	A29	5,162,988-	11-10-1992	SEMERAU ET AL.	
	A30	5,242,339	09-07-1993	THORNTON, WILLIAM E.	
	A31	5,290,205	03-01-1994	DENSMORE ET AL.	
	A32	5,310,392-A	05-10-1994	LO, PETER K.	
	A33	5,318,487-A	06-07-1994	GOLEN ET AL.	
	A34	5,368,532	11-29-1994	FARNET, MICHAEL G.	
	A35	5,378,213	01-03-1995	QUINT, JEFFREY T.	
	A36	5,411,279-	05-02-1995	MAGID, SIDNEY H.	
	A37	5,411,455	05-02-1995	HABER ET AL.	
	A38	5,431,612-	07-11-1995	HOLDEN, EDWARD R.	
	A39	5,470,293	11-28-1995	SCHONENBERGER	
	A40	5,575,740	11-19-1996	PIAGET ET AL.	
	A41	5,577,598-	11-26-1996	SCHOENENBERGER, WILLI	
	A42	5,643,144	07-01-1997	TRULASKE, JAMES A.	
	A43	5,669,856-	09-23-1997	LIU, CHIEN-HSING	
	A44	5,683,332	11-04-1997	WATTERSON ET AL.	
	A45	5,688,209-A	11-18-1997	TRULASKE ET AL.	
	A46	5,709,632	01-20-1998	SOCWELL, JEFF D.	
	A47	5,856,736	01-05-1999	ROTUNDA ET AL.	
	A48	5,887,579-	03-30-1999	ERIKSSON ET AL.	
	A49	5,897,461	04-27-1999	SOCWELL, JEFF D.	

Examiner
Signature

Date
Considered

Substitute for form 1449/PTO
**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

Date Submitted: May 4, 2020

(use as many sheets as necessary)

Sheet 2 of 16

Complete if Known

Application Number	16/792,426
Filing Date	2/17/2020
First Named Inventor	Douglas G. Bayerlein
Art Unit	3784
Examiner Name	Not yet assigned
Attorney Docket Number	097208-0296

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	A50	6,042,514	03-28-2000	ABELBECK, KEVIN G.	
	A51	6,053,848	04-25-2000	ESCHENBACH, PAUL WILLIAM	
	A52	6,095,952	08-01-2000	ALI ET AL.	
	A53	6,146,315	11-14-2000	SCHONENBERGER	
	A54	6,152,854	11-28-2000	CARMEIN, DAVID E. E.	
	A55	6,180,210-B1	01-30-2001	DEBUS, JAMES WALTER	
	A56	6,328,676-B1	12-11-2001	ALESSANDRI, NERIO	
	A57	6,334,839	01-01-2002	LIM ET AL.	
	A58	6,348,025-B1	02-19-2002	SCHONENBERGER, WILLI	
	A59	6,454,679-B1	09-24-2002	RADOW, SCOTT BRIAN	
	A60	6,500,097	12-31-2002	HALL, LAWRENCE	
	A61	6,652,424-B2	11-25-2003	DALEBOUT, WILLIAM T.	
	A62	6,740,009	05-25-2004	HALL, LAWRENCE	
	A63	6,824,502	11-30-2004	HUANG, PING-HUI	
	A64	6,837,830	01-04-2005	ELDRIDGE, MARK W.	
	A65	6,893,382-	05-17-2005	MOON ET AL.	
	A66	6,923,746	08-02-2005	SKOWRONSKI ET AL.	
	A67	7,090,620	08-15-2006	BARLOW, MICHAEL J.	
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				First Named Inventor	Douglas G. Bayerlein
				Art Unit	3784
Examiner Name	Not yet assigned				
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**INFORMATION DISCLOSURE
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First Named Inventor	Douglas G. Bayerlein
Art Unit	3784
Examiner Name	Not yet assigned
Attorney Docket Number	097208-0296

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		First Named Inventor	Douglas G. Bayerlein
		Art Unit	3784
Examiner Name	Not yet assigned		
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	A244	LIEBERMAN ET AL., Running Barefoot: FAQ, http://www.barefootrunning.fas.harvard.edu/6FAQ.html , February 26, 2010, 3 pages.	
	A245	LIEBERMAN ET AL., Running Barefoot: Heel Striking & Running Shoes, http://www.barefootrunning.fas.harvard.edu/2FootStrikes&RunningShoes.html , February 26, 2010, 2 pages.	
	A246	LIEBERMAN ET AL., Running Barefoot: Running Before the Modern Shoe, http://www.barefootrunning.fas.harvard.edu/3RunningBeforeTheModernShoe.html , February 26, 2010, 4 pages.	
	A247	LIEBERMAN ET AL., Running Barefoot: Why Consider Foot Strike, http://www.barefootrunning.fas.harvard.edu/1WhyConsiderFootStrike.html , February 26, 2010, 1 page.	
	A248	LISZEWSKI, ANDREW, "EcoMill Treadmill Generates Its Own Power", June 1, 2009, http://www.ohgizmo.com/2009/06/04/ecomill-treadmill-generates-its-own-power/ , 1 page.	
	A249	Memorandum and Order filed December 28, 2016 between Speedfit LLC and Aurel Astilean versus Woodway USA, Inc., 22 pages.	
	A250	Memorandum and Order filed October 10, 2014 between Speedfit LLC and Aurel Astilean versus Woodway USA, Inc., 39 pages.	
	A251	Memorandum and Order filed October 19, 2015 between Speedfit LLC and Aurel Astilean versus Woodway USA, Inc., 11 pages.	
	A252	Memorandum of Law in Support of Plaintiffs' Motion for Leave to Amend the Second Amended Complaint filed July 7, 2015, 13 pages.	
	A253	Memorandum of Law in Support of Plaintiffs' Motion Under 35 USC 256 to Correct Inventorship of SPN 8,308,619 and USPN 8,342,016 between Speedfit LLC and Aurel Astilean versus Woodway USA, Inc., 14 pages.	
	A254	Minute Entry and Order for Markman Hearing, dated June 13, 2018, 2 pps.	
	A255	Minute Entry for Proceedings on November 10, 2015 and Exhibit G.	
	A256	Minute Order Regarding Claim Construction, Speedfit LLC v. Woodway, Docket No. 2:17-cv-00768-KAM-AKT, June 13, 2018, 2 pages.	
	A257	MOODY, The Effects Resisted Sprint Training on Speed, Agility and Power Production in Young Athletes, believed to be publically available before December 31, 2006, 5 pages.	
	A258	Motion to Dismiss filed October 30, 2015 and Exhibits A - H.	
	A259	NASA, "Combined Operational Load Bearing External Resistance Treadmill (COLBERT)", August 2009, 3 pages.	

Examiner Signature		Date Considered	
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Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT Date Submitted: May 4, 2020 <i>(use as many sheets as necessary)</i>		Complete if Known			
		Application Number	16/792,426		
		Filing Date	2/17/2020		
		First Named Inventor	Douglas G. Bayerlein		
		Art Unit	3784		
Examiner Name	Not yet assigned				
Sheet	10	of	16	Attorney Docket Number	097208-0296

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	A260	NASA, "International Space Station: Combined Operational Load Bearing External Resistance Treadmill (COLBERT)", July 19, 2017, https://www.nasa.gov/mission_pages/station/research/experiments/765.html , 4 pages.	
	A261	NASA, "International Space Station: Do Tread on Me", August 19, 2009, https://www.nasa.gov/mission_pages/station/behindscenes/colbert_feature.html , 2 pages.	
	A262	NASA, "International Space Station: Treadmill with Vibration Isolation and Stabilization System (TVIS)", May 17, 2018, https://www.nasa.gov/mission_pages/station/research/experiments/976.html , 5 pages.	
	A263	NASA, "Space Shuttle Mission STS-128: Racking Up New Science", Press Kit, August 2009, 116 pages.	
	A264	Nexus Resin Group, 10124 Antistat, believed to be publically available before September 16, 2011, 2 pages.	
	A265	Non-Final Office Action on US 15/958339 DTD 08/05/2019	
	A266	Notice of Motion filed July 7, 2015 between Speedfit LLC and Aurel Astilean versus Woodway USA, Inc., 2 pages.	
	A267	Notice of Motion Under 35 USC 256 to Correct Inventorship of USPN 8,308,619 and USPN 8,342,016 filed June 15, 2015 between Speedfit LLC and Aurel Astilean versus Woodway USA, Inc., 3 pages.	
	A268	Notice of Woodway USA, Inc.'s Motion for Summary Judgment of Invalidity of U.S. Patent Nos. 8,308,619 and 8,343,016 filed June 5, 2017, 9 pages.	
	A269	Notice of Woodway USA, Inc.'s motion to preclude the testimony of plaintiffs' technical expert James Whelan, Case 2:13-cv-01276-KAM-AKT, Document 211, filed 8/8/2018, 3 pps.	
	A270	Opening expert report of Dr. Robert Giachetti re: invalidity of United States Patent No. 8,986,169 and United States Patent No. 9,039,580, Case 3:15-CV-01665-JCH, Document 216-1, filed 4/5/2018, 67 pps., marked on its face as Exhibit 1.	
	A271	Order Denying Motion for Reconsideration (Doc. No. 248), dated June 20, 2018, 12 pps.	
	A272	OSHA 1926.307, 9 pps.	
	A273	Owners Manual for NordicTrack WalkFit Classic Treadmill, received on March 2, 2017, 30 pps.	
	A274	Owners Manual, Force 1, November 29, 2007, 44 pages.	
	A275	Owners Manual, Force 3, January 28, 2009, 45 pages.	
	A276	Owners Manual, The Force, December 18, 2008, 68 pages.	

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		First Named Inventor	Douglas G. Bayerlein
		Art Unit	3784
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Attorney Docket Number	097208-0296		
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	A277	Photographs of public display of Speedfit Speedboard by Woodway presented at IHRSA Tradeshow on March 17, 2009, 8 pages	
	A278	Photographs produced to Woodway at least by November 10, 2014 in litigation, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc., No. 2:13-cv-01276-KAM-AKT, 11 pages.	
	A279	Plaintiff's memorandum in support of motion for summary judgment of non-infringement and invalidity on Claim 25 of U.S. Patent No. 9,039,580, Case 3:15-CV-01665-JCH, Document 253, filed 6/8/2018, 45 pps.	
	A280	Plaintiff's Reply to Defendant Woodway's Answer, Affirmative Defenses and Counterclaims to Plaintiff's Second Amended Complaint filed March 27, 2015, 6 pages.	
	A281	Plaintiff's Reply to Defendant Woodway's Answer, Affirmative Defenses and Counter-Claims to Plaintiffs' Supplemental Complaint filed March 17, 2017, 8 pages.	
	A282	Plaintiff's supplemental responses and objections to defendant's first set of interrogatories, Case 2:17-cv-00768-KAM-AKT, Document 38-3, filed 3/14/2018, 22 pps., marked on its face as Exhibit C.	
	A283	Plaintiffs Memorandum of Law in Opposition to Woodway's Motion for Summary Judgment of Invalidity and Opening Claim Construction Brief, Cross-Motion for Summary Judgment Upholding Validity, Cross-Motion for Summary Judgment for Infringement and Motion to Extend the Page Limitation for this Memorandum filed June 6, 2017, 46 pages.	
	A284	Plaintiffs' Initial Claims Construction Memorandum filed July 31, 2017.	
	A285	Plaintiffs' Local Rule 56(a)1 statement of undisputed material facts, Case 3:15-CV-01665-JCH, Document 254, filed 6/8/2018, 14 pps.	
	A286	Plaintiffs' Local Rule 56(a)2 statement of facts in opposition to summary judgment, Case 3:15-CV-01665-JCH, Document 265, filed 6/29/2018, 17 pps.	
	A287	Plaintiffs' Memorandum of Law in further Opposition to Defendant's Motion to Dismiss Certain of Plaintiffs' Claims filed November 19, 2015, 19 pages.	
	A288	Plaintiffs' memorandum of law in support of their motion for partial reconsideration, Case 3:15-CV-01665-JCH, Document 249, filed 5/8/2018, 9 pps.	
	A289	Plaintiffs' motion for partial reconsideration, Case 3:15-CV-01665-JCH, Document 248, filed 5/7/2018, 3 pps.	
	A290	Plaintiffs' motion for summary judgment of non-infringement and invalidity on Claim 25 of U.S. Patent No. 9,039,580, Case 3:15-CV-01665-JCH, Document 252, 2 pps.	
	A291	Plaintiffs' Opposition to Woodway USA, Inc.'s motion for summary judgment of infringement on Claim 25 of U.S. Patent No. 9,039,580, Case 3:15-CV-01665-JCH, Document 264, filed 6/29/2018, 35 pps.	
	A292	Plaintiffs' preliminary invalidity contentions, Case 3:15-CV-01665-JCH, Document 254-16, filed 6/8/2018, 205 pps., marked on its face as Exhibit 16.	

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				Art Unit	3784
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Attorney Docket Number	097208-0296				
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	A293	Plaintiffs' preliminary non-infringement contentions, Case 3:15-cv-01165-JCH, Document 96-3, filed May 2, 2017, 56 pps.		
	A294	Plaintiffs' Reply in Support of motion for partial reconsideration, Case 3:15-CV-01665-JCH, Document 251, filed 5/29, 2018, 4 pps.		
	A295	Plaintiffs' supplemental non-infringement contentions, Case 3:15-CV-01665-JCH, Document 98-8, filed May 2, 2017, 60 pps.		
	A296	Plantar Fascia, http://en.wikipedia.org/wiki/Plantar_fascia , March 3, 2010, 3 pages.		
	A297	Rebuttal expert report of Kim B. Blair, Ph.D., Case 2:13-cv-01276-KAM-AKT, Document 213-3, filed 8/8/2018, 24 pps., marked on its face as Exhibit C.		
	A298	Rebuttal Expert Report of Kim B. Blair, Ph.D., Case 3:15-CV-01665-JCH, Document 254-15, 184 pps., marked on its face as Exhibit 15.		
	A299	Reply in Opposition to D126 filed November 6, 2015 and Exhibits A and B.		
	A300	Reply Memorandum of Law in Further Support of Plaintiffs' Motion for Leave to Amend the Second Amended Complaint filed July 7, 2015 between Speedfit LLC and Aurel Astilean versus Woodway USA, Inc., 13 pages.		
	A301	Response in Opposition re [117] First Motion to Amend Second Amended Complaint filed July 7, 2015, 2 pages.		
	A302	Response in Opposition to [110] Motion to Amend-Corret-Supplement filed June 15, 2015, 2 pages.		
	A303	Revised Answer to Counterclaims filed December 12, 2014 between Speedfit LLC and Aurel Astilean versus Woodway USA, Inc., 5 pages.		
	A304	ROSS ET AL., The Effects of Treadmill Sprint Training and Resistance Training on Maximal Running Velocity and Power, National Strength and Conditioning Association, March 2009, 10 pages.		
	A305	Rule 56.1 Counter-Statement by Plaintiffs Speedfit LLC, and Aurel A. Astilean filed June 6, 2017, 13 pages.		
	A306	Ruling Re: Plaintiffs' Motion for Summary Judgment of Non-Infringement and Invalidity (Doc. No. 252) and Woodway's Motion for Summary Judgment of Infringement (Doc. No. 255), Chapco, Inc. and Samsara Fitness, LLC v. Woodway USA, Inc., Docket No. 3:15-cv-01665-JCH, July 24, 2018, 26 pages.		
	A307	Second Amended Complaint filed February 17, 2015 between Speedfit LLC and Aurel Astilean versus Woodway USA, Inc., 18 pages.		
	A308	Second Supplemental Expert Report of Kim B. Blair, PhD., Case 3:15-CV-01665-JCH, Document 254-3, 41 pps., marked on its face as Exhibit 3.		

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		Art Unit	3784
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	A309	SIROTIC ET AL., Physiological and Performance Test Correlates of Prolonged, High-Intensity, Intermittent Running Performance in Moderately Trained Women Team Sport Athletes, Journal of Strength and Conditioning Research, 2007, 7 pages.	
	A310	SIROTIC ET AL., The Reliability of Physiological and Performance Measures During Simulated Team-Sport Running on a Non-Motorised Treadmill, Journal of Science and Medicine in Sport, April 11, 2007, 10 pages.	
	A311	Soccer International, The Red Devil's in the Details, dated June 2010, 4 pages.	
	A312	SOUTHERN RESEARCH ET AL., "AIMTech Project Brief", October 20, 2015, 2 pages.	
	A313	SOUTHERN RESEARCH ET AL., "Resist Force-Induced Treadmill", 2 pages.	
	A314	Speedfit LLC's Opening Claim Construction Brief, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc., Docket No. 2:17-cv-00768-KAM-AKT, March 26, 2018, 9 pages.	
	A315	SPEEDFIT, video produced to Woodway at least by April 28, 2015 in litigation, a copy of which is submitted herewith on DVD, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc.	
	A316	SPEEDFIT, video produced to Woodway at least by November 10, 2014 in litigation, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc., No. 2:13-cv-01276-KAM-AKT, 21 pages of screenshot excerpts.	
	A317	SPEEDFIT, video produced to Woodway at least by November 10, 2014 in litigation, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc., No. 2:13-cv-01276-KAM-AKT, 23 pages of screenshot excerpts.	
	A318	Supplemental Complaint filed February 10, 2017 between Speedfit LLC and Aurel Astilean versus Woodway USA, Inc.	
	A319	Supplemental Declaration of Kadie M. Jelenchick filed June 6.	
	A320	Supplemental declaration of Matthew W. Peters, Case 2:13-cv-01276-KAM-AKT, Document 227, filed 8/8/2018, 1 pg.	
	A321	Supplemental Expert Report of Kim B. Blair, PhD., Case 3:15-CV-01665-JCH, Document 184-8, filed 3/16/2018, 19 pps., marked on its face as Exhibit AA.	
	A322	Supplemental rebuttal expert report of Dr. Robert Giachetti responsive to second supplemental expert report of Dr. Kim Blair dated April 13, 2018, Case 3:15-CV-01665-JCH, Document 254-4, filed 6/8/2018, 18 pps., marked on its face as Exhibit 4.	
	A323	Supplemental rebuttal expert report of Dr. Robert Giachetti responsive to supplemental expert report of Dr. Kim Blair dated March 15, 2018, dated May 14, 2018, 12 pps.	
	A324	TECMACHINE, "Sprint Club: User's Guide", believed to have published 2002, 33 pages.	
	A325	The Australian Competition & Consumer Commission's Mandatory Safety Standard For Treadmills (Supplier Guide), 2009, 20 pps.	

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		First Named Inventor	Douglas G. Bayerlein
		Art Unit	3784
Examiner Name	Not yet assigned		
Attorney Docket Number	097208-0296		
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	A326	The Woodway Force Brochure, The Best Way to Train for Speed & Athletic Power, dated May 5, 2005, 2 pages.	
	A327	Third Amended Complaint filed October 23, 2015 between Speedfit LLC and Aurel Astilean versus Woodway USA, Inc. and Exhibits A - H.	
	A328	Transcript of civil cause for evidentiary hearing before the Honorable Kiyo A. Matsumoto, United States District Judge, Case 2:13-cv-01276-KAM-AKT, Document 213-4, filed 8/8/2018, 10 pps., marked on its face as Exhibit D.	
	A329	Transcript of civil cause for evidentiary hearing before the Honorable Kiyo A. Matsumoto, United States District Judge, Case 2:13-cv-01276-KAM-AKT, Document 227-3, filed 8/8/2018, 5 pps., marked on its face as Exhibit G.	
	A330	Transcript of videotaped deposition of Alex Astilean taken July 10, 2018 for Case 2:17-cv-00768-KAM-AKT, 75 pps.	
	A331	Transcript of videotaped deposition of Dan Bostan, Case 2:13-cv-01276-KAM-AKT, Document 227-2, filed 8/8/2018, 4 pps., marked on its face as Exhibit F.	
	A332	Transcript of videotaped deposition of Speedfit LLC by Alex Astilean taken July 10, 2018 for Case 2:17-cv-00768-KAM-AKT, 38 pps.	
	A333	Video deposition transcript of James D. Whelan taken on September 28, 2015, Case 2:13-cv-01276-KAM-AKT, Document 213-1, filed 8/8/2018, 23 pps., marked on its face as Exhibit A.	
	A334	WOODWAY USA, INC., "Treadmill Owner's Manual", October 2001, 56 pages.	
	A335	WOODWAY USA, INC., EcoMill Promotional Flyer, October 18, 2011, 1 page.	
	A336	WOODWAY USA, INC., Owner's Manual: EcoMill Non-Motorized, June 4, 2010, 35 pages.	
	A337	Woodway USA, Inc.'s Amended Supplemental Counterclaims, Case 3:15-CV-01665-JCH, Document 309, filed 9/14/2018, 28 pps.	
	A338	Woodway USA, Inc.'s Answer, Affirmative Defenses, and Counterclaims to Plaintiffs' First Amended Complaint filed October 24, 2014 and Exhibits 1 and 2.	
	A339	Woodway USA, Inc.'s Answer, Affirmative Defenses, and Counterclaims to Plaintiffs' Second Amended Complaint filed March 6, 2015, 17 pages.	
	A340	Woodway USA, Inc.'s Answer, Affirmative Defenses, and Counterclaims to Plaintiffs' Supplemental Complaint filed February 24, 2017, 18 pages.	
	A341	Woodway USA, Inc.'s first supplemental responses and objections to plaintiff's first set of interrogatories (Nos. 1-7), Case 2:17-cv-00768-KAM-AKT, Document 38-1, filed 3/14/2018, 18 pps., marked on its face as Exhibit A.	
	A342	Woodway USA, Inc.'s List of Claim Terms to be Considered and Proposed Constructions, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc., Docket No. 2:17-cv-00768-KAM-AKT, Exhibit D, March 26, 2018, 4 pages.	

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	A343	Woodway USA, Inc.'s local rule 56(a)1 statement of undisputed material facts in support of its motion summary judgment of infringement of U.S. Patent No. 9,039,580, Case 3:15-CV-01665-JCH, Document 257, 8 pps.		
	A344	Woodway USA, Inc.'s local rule 56(a)2 statement of facts in opposition to plaintiffs' motion for summary judgment, Case 3:15-CV-01665-JCH, Document 267, filed 6/29/2018, 34 pps.		
	A345	Woodway USA, Inc.'s Memorandum in response to Plaintiffs' Motion for Leave to Amend the Second Amended Complaint filed July 7, 2015, 16 pages.		
	A346	Woodway USA, Inc.'s Memorandum in Response to Plaintiffs' Motion Under 35 USC 256 to Correct Inventorship of USPN 8,308,619 and USPN 8,342,016 filed June 15, 2015, 20 pages.		
	A347	Woodway USA, Inc.'s memorandum in support of its motion to preclude the testimony of plaintiffs' technical expert James Whelan, Case 2:13-cv-01276-KAM-AKT, Document 212, filed 8/8/2018, 37 pps.		
	A348	Woodway USA, Inc.'s memorandum of law in opposition to plaintiffs' motion for summary judgment of non-infringement and invalidity of Claim 25 of U.S. Patent No. 9,039,580, Case 3:15-CV-01665-JCH, Document 266, filed 6/29/2018, 42 pps.		
	A349	Woodway USA, Inc.'s Memorandum of Law in support of its motion for summary judgment of infringement of U.S. Patent No. 9,039,580, Case 3:15-CV-01665-JCH, Document 256, 38 pps.		
	A350	Woodway USA, Inc.'s Memorandum of Law in Support of Its Motions for Summary Judgment of Invalidity of US Patent Nos. 8,308,619 and 8,343,016 and Opening Claim Construction Brief filed June 6, 2017, 38 pages.		
	A351	Woodway USA, Inc.'s motion for summary judgment of infringement of U.S. Patent No. 9,039,580, Case 3:15-CV-01665-JCH, Document 255, filed 6/8/2018, 3 pps.		
	A352	Woodway USA, Inc.'s Opening Claim Construction Brief, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc., Docket No. 2:17-cv-00768-KAM-AKT, March 26, 2018, 15 pages.		
	A353	Woodway USA, Inc.'s opposition to plaintiffs' motion for partial reconsideration, Case 3:15-CV-01665-JCH, Document 250, filed 5/14/2018, 19 pps.		
	A354	Woodway USA, Inc.'s Patents, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc., Docket No. 2:17-cv-00768-KAM-AKT, Exhibit B, March 26, 2018, 3 pages.		
	A355	Woodway USA, Inc.'s Reply Claim Construction Brief, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc., Docket No. 2:17-cv-00768-KAM-AKT, March 26, 2018, 9 pages.		
	A356	Woodway USA, Inc.'s reply memorandum in further support of its motion to preclude the testimony of Plaintiffs' technical expert James Whelan, Case 2:13-cv-01276-KAM-AKT, Document 226, filed 8/8/2018, 16 pps.		
	A357	Woodway USA, Inc.'s Reply Memorandum in Support of Its Motion to Dismiss filed November 25, 2015, 24 pages.		
	A358	Woodway USA, Inc.'s Responsive Claim Construction Brief filed July 28, 2017, 19 pages.		
	A359	WOODWAY, "Introducing the All New EcoMill Self Powered", published to YouTube on March 25, 2010, https://www.youtube.com/watch?v=NcPH92DAArc .		

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	A360	Woodway, Curve 3.0 Specification, May 25, 2011, 1 page.	
	A361	Woodway, Curve Specification, May 24, 2011, 1 page.	
	A362	Woodway, Curve Specification, May 25, 2011, 1 page.	
	A363	Woodway, Curve XL Specification, May 18, 2011, 1 page.	
	A364	Woodway, Force Specification, April 8, 2008, 1 page.	
	A365	Woodway, Force Specification, May 2, 2011, 1 page.	
	A366	Woodway, Force Specification, May 2, 2012, 1 page.	
	A367	Woodway's USA, Inc.'s Reply in Support of its Motion for Summary Judgment of Invalidity of US Patent Nos. 8,308,619 and 8,343,016 and Reply Claim Construction Brief filed June 6, 2017, 16 pages.	
	A368	Woodway's Opposition to Defendant's Notice of Motion and Motion to Dismiss Case and Transfer Litigation to EDNY, Woodway USA, Inc. v. Aurel A. Astilean, Civ. Dkt. No. 2:13-cv-00681-WERC (E.D. WI), October 18, 2013, 22 pages.	
	A369	Woodways USA, Inc.'s Supplemental Rule 56.1 Statement of Undisputed Material Facts and Responses to Rule 56.1 Counterstatement by Plaintiffs Speedfit LLC and Aurel A. Astilean filed June 6, 2017, 20 pages.	

Examiner Signature		Date Considered	
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Electronic Acknowledgement Receipt

EFS ID:	39338769
Application Number:	16792426
International Application Number:	
Confirmation Number:	1040
Title of Invention:	MANUAL TREADMILL AND METHODS OF OPERATING THE SAME
First Named Inventor/Applicant Name:	Douglas G. Bayerlein
Customer Number:	26371
Filer:	Alexander J. Neuworth/Michele Mathes
Filer Authorized By:	Alexander J. Neuworth
Attorney Docket Number:	097208-0296
Receipt Date:	04-MAY-2020
Filing Date:	17-FEB-2020
Time Stamp:	12:35:27
Application Type:	Utility under 35 USC 111(a)

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		097208-0296_Response_to_NT FCAP.pdf	136579	yes	8
			2cf9c72a5f8796ebf559cf4380823443bf5bf360		

	Multipart Description/PDF files in .zip description								
	Document Description		Start	End					
	Applicant Response to Pre-Exam Formalities Notice		1	1					
	Claims		2	6					
	Applicant Arguments/Remarks Made in an Amendment		7	8					
Warnings:									
Information:									
2	Transmittal Letter	097208-0296_IDS.pdf	115714	no	2				
			887e1857e36c6f182999974e4eb6e38b90cf85a5						
Warnings:									
Information:									
3	Information Disclosure Statement (IDS) Form (SB08)	097208-0296_SB08.pdf	228511	no	16				
			e86396ccb0964054b95f3984f3002ec960570cae						
Warnings:									
Information:									
This is not an USPTO supplied IDS fillable form									
Total Files Size (in bytes):			480804						
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.									



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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
16/792,426	02/17/2020	3784	1515	097208-0296	30	4

CONFIRMATION NO. 1040
UPDATED FILING RECEIPT

26371
FOLEY & LARDNER LLP
3000 K STREET N.W.
SUITE 600
WASHINGTON, DC 20007-5109



Date Mailed: 05/06/2020

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.

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Inventor(s)

Douglas G. Bayerlein, Oconomowoc, WI;
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Nicholas A. Oblamski, Waukesha, WI;
Scott D. Hoerig, Brookfield, WI;
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Applicant(s)

Woodway USA, Inc., Waukesha, WI;

Assignment For Published Patent Application

Woodway USA, Inc., Waukesha, WI

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 15/958,339 04/20/2018 PAT 10561884
which is a CON of 14/832,708 08/21/2015 PAT 10265566
which is a CON of 14/076,912 11/11/2013 PAT 9114276
which is a CON of 13/235,065 09/16/2011 ABN
which is a CIP of PCT/US10/27543 03/16/2010
which claims benefit of 61/161,027 03/17/2009

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: 03/03/2020

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/792,426**

Projected Publication Date: 08/13/2020

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

MANUAL TREADMILL AND METHODS OF OPERATING THE SAME

Preliminary Class

482

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.

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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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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 16/792,426	
APPLICATION AS FILED - PART I							
(Column 1)		(Column 2)		SMALL ENTITY		OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	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), (l), 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(j))	30	minus 20 = *	10	x 50 =	500		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4	minus 3 = *	1	x 230 =	230		
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).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
				TOTAL	1515	TOTAL	
* If the difference in column 1 is less than zero, enter "0" in column 2.							
APPLICATION AS AMENDED - PART II							
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	Total (37 CFR 1.16(i))	*	Minus **	=	x =		x =
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x =		x =
	Application Size Fee (37 CFR 1.16(s))						
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
				TOTAL ADD'L FEE		TOTAL ADD'L FEE	
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	Total (37 CFR 1.16(i))	*	Minus **	=	x =		x =
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x =		x =
	Application Size Fee (37 CFR 1.16(s))						
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
				TOTAL ADD'L FEE		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.							

To: ipdocketing@foley.com,,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 26371

May 06, 2020 03:59:29 AM

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WASHINGTON, DC 20007-5109
UNITED STATES

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Application	Document	Mailroom Date	Attorney Docket No.
16792426	APP.FILE.REC	05/06/2020	097208-0296

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/792,426	02/17/2020	Douglas G. Bayerlein	097208-0296	1040
26371	7590	05/11/2020		
FOLEY & LARDNER LLP 3000 K STREET N.W. SUITE 600 WASHINGTON, DC 20007-5109			EXAMINER JIMENEZ, LOAN B	
			ART UNIT	PAPER NUMBER
			3784	
			NOTIFICATION DATE	DELIVERY MODE
			05/11/2020	ELECTRONIC

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

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

ipdocketing@foley.com

<i>Decision Granting Request for Prioritized Examination (Track I)</i>	Application No. 16/792,426	Applicant(s) Bayerlein et al.	
	Examiner KIMBERLY A INABINET	Art Unit OPET	AIA (FITF) Status No

1. THE REQUEST FILED 17 February 2020 IS **GRANTED** .

The above-identified application has met the requirements for prioritized examination

A. ☒ for an original nonprovisional application (Track I).

B. ☐ for an application undergoing continued examination (RCE).

2. **The above-identified application will undergo prioritized examination.** The application will be accorded special status throughout its entire course of prosecution until one of the following occurs:

A. filing a **petition for extension of time** to extend the time period for filing a reply;

B. filing an **amendment to amend the application to contain more than four independent claims, more than thirty total claims**, or a multiple dependent claim;

C. filing a **request for continued examination** ;

D. filing a notice of appeal;

E. filing a request for suspension of action;

F. mailing of a notice of allowance;

G. mailing of a final Office action;

H. completion of examination as defined in 37 CFR 41.102; or

I. abandonment of the application.

Telephone inquiries with regard to this decision should be directed to KIMBERLY INABINET at (571) 272-4618. In his/her absence, calls may be directed to Petition Help Desk at (571) 272-3282.

/KIMBERLY A INABINET/ Paralegal Specialist, OPET	
---	--

To: ipdocketing@foley.com,,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 26371

May 12, 2020 03:49:43 AM

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Application	Document	Mailroom Date	Attorney Docket No.
16792426	TRACK1.GRANT	05/11/2020	097208-0296

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/792,426	02/17/2020	Douglas G. Bayerlein	097208-0296	1040
26371	7590	05/22/2020		
FOLEY & LARDNER LLP 3000 K STREET N.W. SUITE 600 WASHINGTON, DC 20007-5109			EXAMINER ROBERTSON, JENNIFER MARY DEICHL	
			ART UNIT	PAPER NUMBER
			3784	
			NOTIFICATION DATE	DELIVERY MODE
			05/22/2020	ELECTRONIC

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Office Action Summary**Application No.**

16/792,426

Applicant(s)

Bayerlein et al.

Examiner

JENNIFER ROBERTSON

Art Unit

3784

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 05/04/2020.

☐ 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) 1-30 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) 1-30 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 02/17/2020 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)

3) ☐ Interview Summary (PTO-413)

Paper No(s)/Mail Date ____.

2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)

4) ☐ Other: ____.

Paper No(s)/Mail Date ____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

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

Claim Rejections - 35 USC § 103

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 negated by the manner in which the invention was made.

Claims 1-14, 16-17, and 20-30 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Bostic (US 5,492,517) in view of Cutter (US 3,642,279) and Magid (US 5,607,376).

Regarding claim 1, Bostic teaches a treadmill, comprising: a frame (15); a front running belt pulley (25) coupled to the frame; a rear running belt pulley (19) coupled to the frame and spaced a distance from the front running belt pulley; a running belt (10) at least partially supported by at least one of the front running belt pulley and the rear running belt pulley, wherein the running belt includes a running surface.

Bostic fails to teach the running belt having a curved running surface and being supported by a plurality of bearings coupled to the frame. Cutter teaches a manually powered treadmill comprising a running belt (30) supported by a plurality of bearings (18) to provide a curved running surface. It would have been obvious to one of ordinary skill in the art before the invention was made to modify the device taught by Bostic by providing the bearings supporting the running belt in a curved orientation in order to provide for a more natural running experience (see Cutter, column 1 lines 24-70).

Bostic does not specifically disclose a safety device coupled to the running belt. Magid teaches a treadmill having a safety device coupled to a running belt, the safety device (62) at least partly supported by a support element (61) coupled to the frame, wherein the running belt freely rotates in a first direction of rotation relative to the frame, however, in a second direction of rotation, opposite the first direction of rotation, engagement between the support element and at least a portion of the safety device substantially prevents rotation the running belt relative to the frame (column 7 lines 23-33). It would have been obvious to one of ordinary skill in the art before the invention was made to modify the device taught by Bostic by providing the safety device taught by Magid in order to prevent accidental backwards motion of the belt.

Regarding claim 2, Bostic in view of Cutter and Magid teaches at least a portion of the support element (Magid 61) defines a keyway (valleys of sprocket 61 are considered to define keyways).

Regarding claim 3, Bostic in view of Cutter and Magid teaches the keyway is configured to receive a key (tip of 62) such that the key engages with the support element and the portion of the safety device, the interaction between the key and keyway contributing to the engagement between the support element and at least a portion of the safety device (see Magid, Fig. 5).

Regarding claim 4, Bostic in view of Cutter and Magid teaches the safety device comprises a one-way bearing (Magid, column 7 lines 23-33).

Regarding claim 5, Bostic in view of Cutter and Magid teaches the one-way bearing comprises said portion of the safety device and an element (absent further limitation, Magid's shaft 411' and/or Bostic's corresponding shaft 55 are considered to be an element).

Regarding claim 6, Bostic in view of Cutter and Magid teaches the element is substantially restricted from rotation during operation of the treadmill in either the first or second direction of rotation (Magid, column 7 lines 23-33).

Regarding claim 7, Bostic teaches a braking system (40) coupled to the frame and configured to selectively resist rotation of the running belt.

Regarding claim 8, Bostic teaches the braking system utilizes friction to apply a variable amount of force to resist the rotation of the running belt in the first direction of rotation (column 3 lines 27-33).

Regarding claim 9, Bostic teaches the treadmill is a manually powered, non- motorized treadmill (abstract).

Regarding claim 10, Bostic teaches at least one support foot (35) coupled to the frame, wherein the at least one support foot is adjustable to adjust a relative vertical incline of at least a portion of the treadmill relative to a surface supporting the treadmill (column 2 lines 36-37).

Regarding claim 11, Bostic teaches the frame comprises a left side member, a right side member, and at least one cross-member extending between the left side member and the right side member (see Fig. 14).

Regarding claim 12, Bostic teaches a treadmill, comprising: a frame (15); a rotatable element (25) coupled to the frame; a running belt (10) at least partially supported by the rotatable element, wherein the running belt includes a running surface.

Bostic fails to teach the running belt having a curved running surface and being supported by a plurality of bearings coupled to the frame. Cutter teaches a manually powered treadmill comprising a running belt (30) supported by a plurality of bearings (18) to provide a curved running surface. It would have been obvious to one of ordinary skill in the art before the invention was made to modify the device taught by Bostic by providing the bearings supporting the running belt in a curved orientation in order to provide for a more natural running experience (see Cutter, column 1 lines 24-70).

Bostic does not specifically disclose first and second safety elements. Magid teaches a treadmill comprising a first safety element (61) and a second safety element (62), both of which are coupled to the running belt, wherein at least one of the first and second safety elements is adapted for rotation

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relative to the frame; wherein one of the first and second safety elements and the running belt freely rotate in a first direction of rotation relative to the frame, however, in a second direction of rotation, opposite the first direction of rotation, engagement between the first safety element and the second safety element of the one-way bearing substantially prevents rotation of the running belt relative to the frame (column 4 lines 46-59). It would have been obvious to one of ordinary skill in the art before the invention was made to modify the device taught by Bostic by providing the safety device taught by Magid in order to prevent accidental backwards motion of the belt.

Regarding claim 13, Bostic teaches the treadmill is a manually powered, non- motorized treadmill (abstract).

Regarding claim 14, Bostic in view of Cutter and Magid teaches the first and second safety elements of the safety device at least partly form a one-way bearing.

Regarding claim 16, Bostic teaches a braking system (40) coupled to the frame and configured to selectively resist rotation of the running belt in the first direction of rotation (column 2 lines 46-48).

Regarding claim 17, Bostic teaches the rotatable element (25) comprises a running belt pulley coupled to the frame.

Regarding claim 20, Bostic in view of Cutter and Magid teaches the rotatable element comprises a plurality of bearings (Cutter, 18) coupled to the frame, the plurality of bearings at least partially supporting the running belt.

Regarding claim 21, Bostic teaches a method, comprising: providing a treadmill having a frame (15) with a front end and a rear end; disposing a running belt (10).

Bostic fails to teach the running belt having a curved running surface. Cutter teaches a manually powered treadmill comprising a running belt (30) supported by a plurality of bearings (18) to provide a curved running surface. It would have been obvious to one of ordinary skill in the art before the invention was made to modify the method taught by Bostic by providing the bearings supporting the

running belt in a curved orientation in order to provide for a more natural running experience (see Cutter, column 1 lines 24-70).

Bostic does not specifically disclose first and second safety elements. Magid teaches a treadmill comprising a first safety element (61) and a second safety element (62), both of which are coupled to the frame, wherein at least one of the first and second safety elements is adapted for rotation relative to the frame; wherein one of the first and second safety elements and the running belt freely rotate in a first direction of rotation relative to the frame, however, in a second direction of rotation, opposite the first direction of rotation, engagement between the first safety element and the second safety element of the one-way bearing substantially prevents rotation of the running belt relative to the frame (column 4 lines 46-59). It would have been obvious to one of ordinary skill in the art before the invention was made to modify the method taught by Bostic by providing the safety device taught by Magid in order to prevent accidental backwards motion of the belt.

Regarding claim 22, Bostic teaches providing for a selective application of a braking force to resist rotation of the running belt in the first direction (column 2 lines 46-48).

Regarding claim 23, Bostic teaches the treadmill is a manually powered, non- motorized treadmill (abstract).

Regarding claim 24, Bostic teaches a treadmill, comprising: a frame (15); a rotatable element (19, 25) coupled to the frame; a running belt (10) at least partially supported by the rotatable element, wherein the running belt includes a running surface.

Bostic fails to teach the running belt having a curved running surface. Cutter teaches a manually powered treadmill comprising a running belt (30) supported by a plurality of bearings (18) to provide a curved running surface. It would have been obvious to one of ordinary skill in the art before the invention was made to modify the device taught by Bostic by providing the bearings supporting the

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running belt in a curved orientation in order to provide for a more natural running experience (see Cutter, column 1 lines 24-70).

Bostic does not specifically disclose a safety device coupled to the running belt. Magid teaches a treadmill having a safety device coupled to a running belt, the safety device (62) at least partly supported by a support element (61) coupled to the frame, wherein the running belt freely rotates in a first direction of rotation relative to the frame, however, in a second direction of rotation, opposite the first direction of rotation, engagement between the support element and at least a portion of the safety device substantially prevents rotation the running belt relative to the frame (column 7 lines 23-33). It would have been obvious to one of ordinary skill in the art before the invention was made to modify the device taught by Bostic by providing the safety device taught by Magid in order to prevent accidental backwards motion of the belt.

Regarding claim 25, Bostic teaches the rotatable element comprises at least one of a front running belt pulley (25) coupled to the frame and a rear running belt pulley (19) coupled to the frame and spaced apart from the front running belt pulley.

Regarding claim 26, Bostic teaches the rotatable element comprises at least one of a front rotatable shaft (shaft through 25) coupled to the frame and a rear rotatable shaft (shaft through 19) coupled to the frame and spaced apart from the front rotatable shaft.

Regarding claim 27, Bostic teaches he rotatable element comprises a running belt pulley (25, 19) coupled to the frame.

Regarding claim 28, Bostic in view of Cutter and Magid teaches the safety device comprises a one-way bearing (Magid, column 7 lines 23-33).

Regarding claim 29, Bostic in view of Cutter and Magid teaches the support element comprises a rod (Magid's shaft 411'/Bostic's corresponding shaft 55).

Regarding claim 30, Bostic in view of Cutter and Magid teaches at least a portion of the rod defines a keyway (the rod contains sprocket 61, which has keyways), wherein the keyway is configured to receive a key (end of pawl 62) such that the key engages with the rod and the portion of the safety device.

Claim 15 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Bostic (US 5,492,517) in view of Cutter (US 3,642,279) and Magid (US 5,607,376) as applied to claim 12 above, and further in view of Benice (US 2,512,911).

Bostic in view of Cutter and Magid fails to teach one of the first and second safety elements surrounds or substantially surrounds the other of the first and safety second elements. Benice teaches an exercise device comprising a safety device having a first safety element (44) and a second safety element (48 and associated housing). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Bostic in view of Cutter and Magid by providing the second safety element with a housing, as taught by Benice, which surrounds the first safety housing, in order to prevent contact between the user and the safety device.

Claims 18-19 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Bostic (US 5,492,517) in view of Cutter (US 3,642,279) and Magid (US 5,607,376) as applied to claim 12 above, and further in view of Schonenberger (US 4,334,676).

Bostic fails to teach the running belt comprises a plurality of slats, wherein at least one slat in the plurality of slats includes a top surface, and wherein a roller is coupled to a member extending away from the top surface of the at least one slat. Schonenberger teaches a treadmill comprising a running belt comprising a plurality of slats (43) wherein at least one slat in the plurality of slats includes a top surface, and wherein a roller (12) is coupled to a member (2) extending away from the top surface of the

at least one slat (see Fig. 8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device taught by Bostic by providing the slat and roller running belt taught by Schonenberger in order to provide a belt that better maintains the running surface shape during use.

Double Patenting

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(I)(1) - 706.02(I)(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.

Claims 1-30 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-52 of U.S. Patent No. 10,561,883. Although the claims at issue are not identical, they are not patentably distinct from each other because the claims of the present application are all anticipated by, or obvious over, the patent claims.

Claims 1-30 are provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-30 of copending Application No. 16/792,444 (reference application). Although the claims at issue are not identical, they are not patentably distinct from each other because claims of the present application are all anticipated by, or obvious over, the claims of the reference application.

This is a provisional nonstatutory double patenting rejection because the patentably indistinct claims have not in fact been patented.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER ROBERTSON whose telephone number is (571)272-5001. The examiner can normally be reached on Monday-Friday, 8:30 am to 6:00 pm PST.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LoAn Jimenez can be reached on 571-272-4966. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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 <https://ppair-my.uspto.gov/pair/PrivatePair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JENNIFER ROBERTSON
Primary Examiner
Art Unit 3784

/JENNIFER ROBERTSON/
Primary Examiner, Art Unit 3784

<i>Notice of References Cited</i>	Application/Control No. 16/792,426		Applicant(s)/Patent Under Reexamination Bayerlein et al.	
	Examiner JENNIFER ROBERTSON		Art Unit 3784	Page 1 of 1

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Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<i>Search Notes</i> 	Application/Control No. 16/792,426	Applicant(s)/Patent Under Reexamination Bayerlein et al.
	Examiner JENNIFER ROBERTSON	Art Unit 3784

CPC - Searched*		
Symbol	Date	Examiner
A63B22/02-0292	05/19/2020	JR

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* 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
EAST text search	05/19/2020	JR

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

/JENNIFER ROBERTSON/ Primary Examiner, Art Unit 3784	
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PTO/SB/08 (modified)

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT Date Submitted: May 4, 2020 <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/792,426
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				First Named Inventor	Douglas G. Bayerlein
				Art Unit	3784
				Examiner Name	Not yet assigned
Sheet	1	of	16	Attorney Docket Number	097208-0296

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PTO/SB/08 (modified)

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT Date Submitted: May 4, 2020 <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/792,426
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				Art Unit	3784
				Examiner Name	Not yet assigned
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		Art Unit	3784
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		First Named Inventor	Douglas G. Bayerlein
		Art Unit	3784
		Examiner Name	Not yet assigned
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		Attorney Docket Number	097208-0296

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		First Named Inventor	Douglas G. Bayerlein
		Art Unit	3784
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		First Named Inventor	Douglas G. Bayerlein
		Art Unit	3784
Examiner Name	Not yet assigned		
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Date Submitted: May 4, 2020 <i>(use as many sheets as necessary)</i>		Filing Date	2/17/2020
		First Named Inventor	Douglas G. Bayerlein
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	A252	Memorandum of Law in Support of Plaintiffs' Motion for Leave to Amend the Second Amended Complaint filed July 7, 2015, 13 pages.	
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	A268	Notice of Woodway USA, Inc.'s Motion for Summary Judgment of Invalidity of U.S. Patent Nos. 8,308,619 and 8,343,016 filed June 5, 2017, 9 pages.	
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	A274	Owners Manual, Force 1, November 29, 2007, 44 pages.	
	A275	Owners Manual, Force 3, January 28, 2009, 45 pages.	
	A276	Owners Manual, The Force, December 18, 2008, 68 pages.	

Examiner Signature		Date Considered	
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PTO/SB/08 (modified)

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT Date Submitted: May 4, 2020 <i>(use as many sheets as necessary)</i>		Complete if Known	
		Application Number	16/792,426
		Filing Date	2/17/2020
		First Named Inventor	Douglas G. Bayerlein
		Art Unit	3784
Examiner Name	Not yet assigned		
Attorney Docket Number	097208-0296		
Sheet	11	of	16

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	A277	Photographs of public display of Speedfit Speedboard by Woodway presented at IHRSA Tradeshow on March 17, 2009, 8 pages	
	A278	Photographs produced to Woodway at least by November 10, 2014 in litigation, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc., No. 2:13-cv-01276-KAM-AKT, 11 pages.	
	A279	Plaintiff's memorandum in support of motion for summary judgment of non-infringement and invalidity on Claim 25 of U.S. Patent No. 9,039,580, Case 3:15-CV-01665-JCH, Document 253, filed 6/8/2018, 45 pps.	
	A280	Plaintiff's Reply to Defendant Woodway's Answer, Affirmative Defenses and Counterclaims to Plaintiff's Second Amended Complaint filed March 27, 2015, 6 pages.	
	A281	Plaintiff's Reply to Defendant Woodway's Answer, Affirmative Defenses and Counter-Claims to Plaintiffs' Supplemental Complaint filed March 17, 2017, 8 pages.	
	A282	Plaintiff's supplemental responses and objections to defendant's first set of interrogatories, Case 2:17-cv-00768-KAM-AKT, Document 38-3, filed 3/14/2018, 22 pps., marked on its face as Exhibit C.	
	A283	Plaintiffs Memorandum of Law in Opposition to Woodway's Motion for Summary Judgement of Invalidity and Opening Claim Construction Brief, Cross-Motion for Summary Judgment Upholding Validity, Cross-Motion for Summary Judgment for Infringement and Motion to Extend the Page Limitation for this Memorandum filed June 6, 2017, 46 pages.	
	A284	Plaintiffs' Initial Claims Construction Memorandum filed July 31, 2017.	
	A285	Plaintiffs' Local Rule 56(a)1 statement of undisputed material facts, Case 3:15-CV-01665-JCH, Document 254, filed 6/8/2018, 14 pps.	
	A286	Plaintiffs' Local Rule 56(a)2 statement of facts in opposition to summary judgment, Case 3:15-CV-01665-JCH, Document 265, filed 6/29/2018, 17 pps.	
	A287	Plaintiffs' Memorandum of Law in further Opposition to Defendant's Motion to Dismiss Certain of Plaintiffs' Claims filed November 19, 2015, 19 pages.	
	A288	Plaintiffs' memorandum of law in support of their motion for partial reconsideration, Case 3:15-CV-01665-JCH, Document 249, filed 5/8/2018, 9 pps.	
	A289	Plaintiffs' motion for partial reconsideration, Case 3:15-CV-01665-JCH, Document 248, filed 5/7/2018, 3 pps.	
	A290	Plaintiffs' motion for summary judgment of non-infringement and invalidity on Claim 25 of U.S. Patent No. 9,039,580, Case 3:15-CV-01665-JCH, Document 252, 2 pps.	
	A291	Plaintiffs' Opposition to Woodway USA, Inc.'s motion for summary judgment of infringement on Claim 25 of U.S. Patent No. 9,039,580, Case 3:15-CV-01665-JCH, Document 264, filed 6/29/2018, 35 pps.	
	A292	Plaintiffs' preliminary invalidity contentions, Case 3:15-CV-01665-JCH, Document 254-16, filed 6/8/2018, 205 pps., marked on its face as Exhibit 16.	

Examiner Signature		Date Considered	
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PTO/SB/08 (modified)

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT Date Submitted: May 4, 2020 <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	16/792,426
				Filing Date	2/17/2020
				First Named Inventor	Douglas G. Bayerlein
				Art Unit	3784
				Examiner Name	Not yet assigned
Sheet	12	of	16	Attorney Docket Number	097208-0296

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.		T ⁶
	A293	Plaintiffs' preliminary non-infringement contentions, Case 3:15-cv-01165-JCH, Document 96-3, filed May 2, 2017, 56 pps.		
	A294	Plaintiffs' Reply in Support of motion for partial reconsideration, Case 3:15-CV-01665-JCH, Document 251, filed 5/29, 2018, 4 pps.		
	A295	Plaintiffs' supplemental non-infringement contentions, Case 3:15-CV-01665-JCH, Document 98-8, filed May 2, 2017, 60 pps.		
	A296	Plantar Fascia, http://en.wikipedia.org/wiki/Plantar_fascia , March 3, 2010, 3 pages.		
	A297	Rebuttal expert report of Kim B. Blair, Ph.D., Case 2:13-cv-01276-KAM-AKT, Document 213-3, filed 8/8/2018, 24 pps., marked on its face as Exhibit C.		
	A298	Rebuttal Expert Report of Kim B. Blair, Ph.D., Case 3:15-CV-01665-JCH, Document 254-15, 184 pps., marked on its face as Exhibit 15.		
	A299	Reply in Opposition to D126 filed November 6, 2015 and Exhibits A and B.		
	A300	Reply Memorandum of Law in Further Support of Plaintiffs' Motion for Leave to Amend the Second Amended Complaint filed July 7, 2015 between Speedfit LLC and Aurel Astilean versus Woodway USA, Inc., 13 pages.		
	A301	Response in Opposition re [117] First Motion to Amend Second Amended Complaint filed July 7, 2015, 2 pages.		
	A302	Response in Opposition to [110] Motion to Amend-Corret-Supplement filed June 15, 2015, 2 pages.		
	A303	Revised Answer to Counterclaims filed December 12, 2014 between Speedfit LLC and Aurel Astilean versus Woodway USA, Inc., 5 pages.		
	A304	ROSS ET AL., The Effects of Treadmill Sprint Training and Resistance Training on Maximal Running Velocity and Power, National Strength and Conditioning Association, March 2009, 10 pages.		
	A305	Rule 56.1 Counter-Statement by Plaintiffs Speedfit LLC, and Aurel A. Astilean filed June 6, 2017, 13 pages.		
	A306	Ruling Re: Plaintiffs' Motion for Summary Judgment of Non-Infringement and Invalidity (Doc. No. 252) and Woodway's Motion for Summary Judgment of Infringement (Doc. No. 255), Chapco, Inc. and Samsara Fitness, LLC v. Woodway USA, Inc., Docket No. 3:15-cv-01665-JCH, July 24, 2018, 26 pages.		
	A307	Second Amended Complaint filed February 17, 2015 between Speedfit LLC and Aurel Astilean versus Woodway USA, Inc., 18 pages.		
	A308	Second Supplemental Expert Report of Kim B. Blair, PhD., Case 3:15-CV-01665-JCH, Document 254-3, 41 pps., marked on its face as Exhibit 3.		

Examiner Signature		Date Considered	
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PTO/SB/08 (modified)

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Complete if Known	
		Application Number	16/792,426
Date Submitted: May 4, 2020 <i>(use as many sheets as necessary)</i>		Filing Date	2/17/2020
		First Named Inventor	Douglas G. Bayerlein
Sheet 13 of 16		Art Unit	3784
		Examiner Name	Not yet assigned
		Attorney Docket Number	097208-0296

NON PATENT LITERATURE DOCUMENTS			
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	A309	SIROTIC ET AL., Physiological and Performance Test Correlates of Prolonged, High-Intensity, Intermittent Running Performance in Moderately Trained Women Team Sport Athletes, Journal of Strength and Conditioning Research, 2007, 7 pages.	
	A310	SIROTIC ET AL., The Reliability of Physiological and Performance Measures During Simulated Team-Sport Running on a Non-Motorised Treadmill, Journal of Science and Medicine in Sport, April 11, 2007, 10 pages.	
	A311	Soccer International, The Red Devil's in the Details, dated June 2010, 4 pages.	
	A312	SOUTHERN RESEARCH ET AL., "AIMTech Project Brief", October 20, 2015, 2 pages.	
	A313	SOUTHERN RESEARCH ET AL., "Resist Force-Induced Treadmill", 2 pages.	
	A314	Speedfit LLC's Opening Claim Construction Brief, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc., Docket No. 2:17-cv-00768-KAM-AKT, March 26, 2018, 9 pages.	
	A315	SPEEDFIT, video produced to Woodway at least by April 28, 2015 in litigation, a copy of which is submitted herewith on DVD, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc.	
	A316	SPEEDFIT, video produced to Woodway at least by November 10, 2014 in litigation, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc., No. 2:13-cv-01276-KAM-AKT, 21 pages of screenshot excerpts.	
	A317	SPEEDFIT, video produced to Woodway at least by November 10, 2014 in litigation, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc., No. 2:13-cv-01276-KAM-AKT, 23 pages of screenshot excerpts.	
	A318	Supplemental Complaint filed February 10, 2017 between Speedfit LLC and Aurel Astilean versus Woodway USA, Inc.	
	A319	Supplemental Declaration of Kadie M. Jelenchick filed June 6.	
	A320	Supplemental declaration of Matthew W. Peters, Case 2:13-cv-01276-KAM-AKT, Document 227, filed 8/8/2018, 1 pg.	
	A321	Supplemental Expert Report of Kim B. Blair, PhD., Case 3:15-CV-01665-JCH, Document 184-8, filed 3/16/2018, 19 pps., marked on its face as Exhibit AA.	
	A322	Supplemental rebuttal expert report of Dr. Robert Giachetti responsive to second supplemental expert report of Dr. Kim Blair dated April 13, 2018, Case 3:15-CV-01665-JCH, Document 254-4, filed 6/8/2018, 18 pps., marked on its face as Exhibit 4.	
	A323	Supplemental rebuttal expert report of Dr. Robert Giachetti responsive to supplemental expert report of Dr. Kim Blair dated March 15, 2018, dated May 14, 2018, 12 pps.	
	A324	TECMACHINE, "Sprint Club: User's Guide", believed to have published 2002, 33 pages.	
	A325	The Australian Competition & Consumer Commission's Mandatory Safety Standard For Treadmills (Supplier Guide), 2009, 20 pps.	

Examiner Signature	Date Considered
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PTO/SB/08 (modified)

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT Date Submitted: May 4, 2020 <i>(use as many sheets as necessary)</i>		Complete if Known	
		Application Number	16/792,426
		Filing Date	2/17/2020
		First Named Inventor	Douglas G. Bayerlein
		Art Unit	3784
Examiner Name	Not yet assigned		
Attorney Docket Number	097208-0296		
Sheet	14	of	16

NON PATENT LITERATURE DOCUMENTS			
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	A326	The Woodway Force Brochure, The Best Way to Train for Speed & Athletic Power, dated May 5, 2005, 2 pages.	
	A327	Third Amended Complaint filed October 23, 2015 between Speedfit LLC and Aurel Astilean versus Woodway USA, Inc. and Exhibits A - H.	
	A328	Transcript of civil cause for evidentiary hearing before the Honorable Kiyo A. Matsumoto, United States District Judge, Case 2:13-cv-01276-KAM-AKT, Document 213-4, filed 8/8/2018, 10 pps., marked on its face as Exhibit D.	
	A329	Transcript of civil cause for evidentiary hearing before the Honorable Kiyo A. Matsumoto, United States District Judge, Case 2:13-cv-01276-KAM-AKT, Document 227-3, filed 8/8/2018, 5 pps., marked on its face as Exhibit G.	
	A330	Transcript of videotaped deposition of Alex Astilean taken July 10, 2018 for Case 2:17-cv-00768-KAM-AKT, 75 pps.	
	A331	Transcript of videotaped deposition of Dan Bostan, Case 2:13-cv-01276-KAM-AKT, Document 227-2, filed 8/8/2018, 4 pps., marked on its face as Exhibit F.	
	A332	Transcript of videotaped deposition of Speedfit LLC by Alex Astilean taken July 10, 2018 for Case 2:17-cv-00768-KAM-AKT, 38 pps.	
	A333	Video deposition transcript of James D. Whelan taken on September 28, 2015, Case 2:13-cv-01276-KAM-AKT, Document 213-1, filed 8/8/2018, 23 pps., marked on its face as Exhibit A.	
	A334	WOODWAY USA, INC., "Treadmill Owner's Manual", October 2001, 56 pages.	
	A335	WOODWAY USA, INC., EcoMill Promotional Flyer, October 18, 2011, 1 page.	
	A336	WOODWAY USA, INC., Owner's Manual: EcoMill Non-Motorized, June 4, 2010, 35 pages.	
	A337	Woodway USA, Inc.'s Amended Supplemental Counterclaims, Case 3:15-CV-01665-JCH, Document 309, filed 9/14/2018, 28 pps.	
	A338	Woodway USA, Inc.'s Answer, Affirmative Defenses, and Counterclaims to Plaintiffs' First Amended Complaint filed October 24, 2014 and Exhibits 1 and 2.	
	A339	Woodway USA, Inc.'s Answer, Affirmative Defenses, and Counterclaims to Plaintiffs' Second Amended Complaint filed March 6, 2015, 17 pages.	
	A340	Woodway USA, Inc.'s Answer, Affirmative Defenses, and Counterclaims to Plaintiffs' Supplemental Complaint filed February 24, 2017, 18 pages.	
	A341	Woodway USA, Inc.'s first supplemental responses and objections to plaintiff's first set of interrogatories (Nos. 1-7), Case 2:17-cv-00768-KAM-AKT, Document 38-1, filed 3/14/2018, 18 pps., marked on its face as Exhibit A.	
	A342	Woodway USA, Inc.'s List of Claim Terms to be Considered and Proposed Constructions, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc., Docket No. 2:17-cv-00768-KAM-AKT, Exhibit D, March 26, 2018, 4 pages.	

Examiner Signature		Date Considered	
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PTO/SB/08 (modified)

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		Filing Date	2/17/2020		
		First Named Inventor	Douglas G. Bayerlein		
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Sheet	15	of	16	Attorney Docket Number	097208-0296

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	A343	Woodway USA, Inc.'s local rule 56(a)1 statement of undisputed material facts in support of its motion summary judgment of infringement of U.S. Patent No. 9,039,580, Case 3:15-CV-01665-JCH, Document 257, 8 pps.	
	A344	Woodway USA, Inc.'s local rule 56(a)2 statement of facts in opposition to plaintiffs' motion for summary judgment, Case 3:15-CV-01665-JCH, Document 267, filed 6/29/2018, 34 pps.	
	A345	Woodway USA, Inc.'s Memorandum in response to Plaintiffs' Motion for Leave to Amend the Second Amended Complaint filed July 7, 2015, 16 pages.	
	A346	Woodway USA, Inc.'s Memorandum in Response to Plaintiffs' Motion Under 35 USC 256 to Correct Inventorship of USPN 8,308,619 and USPN 8,342,016 filed June 15, 2015, 20 pages.	
	A347	Woodway USA, Inc.'s memorandum in support of its motion to preclude the testimony of plaintiffs' technical expert James Whelan, Case 2:13-cv-01276-KAM-AKT, Document 212, filed 8/8/2018, 37 pps.	
	A348	Woodway USA, Inc.'s memorandum of law in opposition to plaintiffs' motion for summary judgment of non-infringement and invalidity of Claim 25 of U.S. Patent No. 9,039,580, Case 3:15-CV-01665-JCH, Document 266, filed 6/29/2018, 42 pps.	
	A349	Woodway USA, Inc.'s Memorandum of Law in support of its motion for summary judgment of infringement of U.S. Patent No. 9,039,580, Case 3:15-CV-01665-JCH, Document 256, 38 pps.	
	A350	Woodway USA, Inc.'s Memorandum of Law in Support of Its Motions for Summary Judgment of Invalidity of US Patent Nos. 8,308,619 and 8,343,016 and Opening Claim Construction Brief filed June 6, 2017, 38 pages.	
	A351	Woodway USA, Inc.'s motion for summary judgment of infringement of U.S. Patent No. 9,039,580, Case 3:15-CV-01665-JCH, Document 255, filed 6/8/2018, 3 pps.	
	A352	Woodway USA, Inc.'s Opening Claim Construction Brief, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc., Docket No. 2:17-cv-00768-KAM-AKT, March 26, 2018, 15 pages.	
	A353	Woodway USA, Inc.'s opposition to plaintiffs' motion for partial reconsideration, Case 3:15-CV-01665-JCH, Document 250, filed 5/14/2018, 19 pps.	
	A354	Woodway USA, Inc.'s Patents, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc., Docket No. 2:17-cv-00768-KAM-AKT, Exhibit B, March 26, 2018, 3 pages.	
	A355	Woodway USA, Inc.'s Reply Claim Construction Brief, Speedfit LLC and Aurel A. Astilean v. Woodway USA, Inc., Docket No. 2:17-cv-00768-KAM-AKT, March 26, 2018, 9 pages.	
	A356	Woodway USA, Inc.'s reply memorandum in further support of its motion to preclude the testimony of Plaintiffs' technical expert James Whelan, Case 2:13-cv-01276-KAM-AKT, Document 226, filed 8/8/2018, 16 pps.	
	A357	Woodway USA, Inc.'s Reply Memorandum in Support of Its Motion to Dismiss filed November 25, 2015, 24 pages.	
	A358	Woodway USA, Inc.'s Responsive Claim Construction Brief filed July 28, 2017, 19 pages.	
	A359	WOODWAY, "Introducing the All New EcoMill Self Powered", published to YouTube on March 25, 2010, https://www.youtube.com/watch?v=NcPH92DAArc .	

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	A360	Woodway, Curve 3.0 Specification, May 25, 2011, 1 page.		
	A361	Woodway, Curve Specification, May 24, 2011, 1 page.		
	A362	Woodway, Curve Specification, May 25, 2011, 1 page.		
	A363	Woodway, Curve XL Specification, May 18, 2011, 1 page.		
	A364	Woodway, Force Specification, April 8, 2008, 1 page.		
	A365	Woodway, Force Specification, May 2, 2011, 1 page.		
	A366	Woodway, Force Specification, May 2, 2012, 1 page.		
	A367	Woodway's USA, Inc.'s Reply in Support of its Motion for Summary Judgment of Invalidity of US Patent Nos. 8,308,619 and 8,343,016 and Reply Claim Construction Brief filed June 6, 2017, 16 pages.		
	A368	Woodway's Opposition to Defendant's Notice of Motion and Motion to Dismiss Case and Transfer Litigation to EDNY, Woodway USA, Inc. v. Aurel A. Astilean, Civ. Dkt. No. 2:13-cv-00681-WERC (E.D. WI), October 18, 2013, 22 pages.		
	A369	Woodways USA, Inc.'s Supplemental Rule 56.1 Statement of Undisputed Material Facts and Responses to Rule 56.1 Counterstatement by Plaintiffs Speedfit LLC and Aurel A. Astilean filed June 6, 2017, 20 pages.		

Examiner Signature	/JENNIFER ROBERTSON /	Date Considered	05/19/2020
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Bibliographic Data

Application No: 16/792,426

Foreign Priority claimed: ☐ Yes ☒ No

35 USC 119 (a-d) conditions met: ☐ Yes ☒ No ☐ Met After Allowance

Verified and Acknowledged: /JENNIFER ROBERTSON /

Examiner's Signature

Initials

Title: MANUAL TREADMILL AND METHODS OF OPERATING THE SAME

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
02/17/2020	482	3784	097208-0296
RULE			

APPLICANTS

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CONTINUING DATA

This application is a CON of 15958339 04/20/2018 PAT 10561884

15958339 is a CON of 14832708 08/21/2015 PAT 10265566

14832708 is a CON of 14076912 11/11/2013 PAT 9114276

14076912 is a CON of 13235065 09/16/2011ABN

13235065 is a CIP of PCT/US10/27543 03/16/2010

PCT/US10/27543 has PRO of 61161027 03/17/2009

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

03/03/2020

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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S4	8	S2 and (crank same pinion)	US-PGPUB; USPAT; USOCR	OR	OFF	2016/10/23 17:51
S5	11	treadmill and deichl.xa.	US-PGPUB; USPAT	OR	OFF	2017/05/01 20:22
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S13	105	S12 and @pd>="20161015"	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/02 09:42
S14	25	("1211765" "20040082890" "2820454" "2842365" "3711090" "4204673" "4509510" "4603851" "5108094" "5383828" "5470293" "5951441" "6071354" "6152854" "6180210" "6455123" "8002674" "8033387" "8162769" "8206801" "8308592" "8439807").PN. OR ("8714346").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/02 09:46

S15	17	("3641601" "3659845" "3689066" "3711090" "4509510" "5018722").PN. OR ("6180210").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/02 09:47
S16	8	(US-20040077465-\$ US-4659074-\$ US-5290205-\$ US-5431612-\$ US-5856736-\$ US-7179205-\$ US-7618345-\$ US-7789800-\$).DID.	US-PGPUB; USPAT; USOCR	OR	ON	2017/07/11 13:28
S17	8	((("20040077465") or ("4,659,074") or ("5,290,205") or ("5,431,612") or ("5,856,736") or ("7,179,205") or ("7,618,345") or ("7,789,800"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/08/03 12:54
S18	21	((("20050209059~") or ("20140087922") or ("20160263429") or ("20170182356") or ("4,886,266") or ("4,938,469") or ("5,242,339") or ("5,368,532") or ("5,643,144") or ("5,683,332") or ("6,152,854") or ("6,334,839") or ("6,824,502") or ("6,837,830") or ("7,410,449") or ("7,780,573") or ("7,806,805") or ("8,241,187") or ("8,864,627") or ("8,920,347") or ("9,429,511"))).PN. or (2006/0122035).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/12/08 11:01
S19	2	((("8308619") or ("8343016"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/05/03 10:07
S20	35	("1211765" "20120010048" "20120010053" "20120157267" "3489408" "3637206" "3642279" "3669238" "4614337" "5470293" "5577598" "5709632" "6053848" "6146315" "6348025").PN. OR ("8343016").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2018/05/03 10:11
S21	5	("3489408").URPN.	USPAT	OR	ON	2018/05/03 10:32
S22	13	("0219439" "1895285" "3489408" "3536324" "4423864" "5387159").PN. OR ("7513832").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2018/05/03 10:32

S23	3	((("20030186787") or ("20120019973") or ("20140080679")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/05/03 10:36
S24	12	((("5,031,901") or ("5,094,447") or ("5,145,480") or ("5,310,392") or ("7,862,483") or ("8,585,561") or ("8,876,668") or ("9,044,635") or ("9,233,272") or ("9,254,409") or ("9,314,667") or ("9,974,997")).PN. or ((2007/0021278) or (2007/0298935) or (2008/0119332) or (2009/0156363) or (2012/0264569) or (2014/0171272) or (2015/0119202) or (2017/0113093)).CCLS.	USPAT; USOCR	OR	OFF	2018/07/06 13:17
S25	108	(US-20160150084-\$ US-0003871-\$ US-0003872-\$ US-0007886-\$ US-0009668-\$ US-0011642-\$ US-0018917-\$ US-0019973-\$ US-0020907-\$ US-0023039-\$ US-0077465-\$ US-0080679-\$ US-0087922-\$ US-0096064-\$ US-0122035-\$ US-0123396-\$ US-0147079-\$ US-0150084-\$ US-0157267-\$ US-0166877-\$ US-0170666-\$ US-0182356-\$ US-0186787-\$ US-0209059-\$ US-0215589-\$ US-0216607-\$ US-0231934-\$ US-0263429-\$ US-0266091-\$ US-0270705-\$ US-0280960-\$ US-0287165-\$ US-0287266-\$ US-0296789-\$ US-0306456-\$ US-0367175-\$ US-0367851-\$ US-1211765-\$ US-2117957-\$ US-2842365-\$ US-20020147079-\$ US-20030186787-\$ US-20040018917-\$ US-20040077465-\$ US-20050009668-\$ US-20050209059-\$ US-20060003871-\$ US-20060003872-\$ US-20060122035-\$ US-20060287165-\$ US-20070123396-\$ US-20080020907-\$ US-20080287266-\$ US-20090170666-\$ US-20090215589-\$ US-20090280960-\$ US-20100216607-\$ US-20110266091-\$ US-20120019973-\$ US-20120157267-\$ US-20120231934-\$ US-20120270705-\$ US-20140011642-\$ US-20140080679-\$ US-20140087922-\$ US-20150306456-\$ US-20150367175-\$ US-20160023039-\$ US-20160096064-\$ US-20160166877-\$ US-20160263429-\$ US-20160296789-\$ US-20160367851-\$ US-20170007886-	USPAT	OR	OFF	2018/07/06 13:19

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S26	1	("3642279").PN.	USPAT; USOCR	OR	OFF	2018/07/06 13:30
S27	0	("20060278165").PN.	USPAT; USOCR	OR	OFF	2018/07/06 13:31
S28	0	("20060287165").PN.	USPAT; USOCR	OR	OFF	2018/07/06 13:32
S29	0	("200600287165").PN.	USPAT; USOCR	OR	OFF	2018/07/06 13:32
S30	1	("20060287165").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/06 13:33

S31	1	("6095952").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/06 13:35
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S33	19	S32 and (resistance brak\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 13:36
S34	2765	A63B22/02-0292.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/06 13:39
S35	644	S34 and manual	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/06 13:39
S36	451	S35 and (resistance brak\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 13:39

S37	1956	A63B22/02-0228.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/06 13:45
S38	324	S37 and manual and (resistance brak\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 13:46
S39	888	S37 not motor	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 13:46
S40	383	S37 and resistance not motor	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 13:46
S41	264	S37 and "one way"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 13:54
S42	40	S37 and slat	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 13:56
S43	43	(US-20140011642-\$ or US-20120270705-\$ or US-20080287266-\$ or US-20060287165-\$ or US-20100216607-\$ or US-20170182356-\$ or US-20160263429-\$).did. or (US-8343016-\$ or US-8308619-\$	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/06 13:59

		or US-6053848-\$ or US-5709632-\$ or US-3637206-\$ or US-1211765-\$ or US-5833577-\$ or US-4406451-\$ or US-4635928-\$ or US-5897461-\$ or US-5538489-\$ or US-5411455-\$ or US-8968161-\$ or US-6152854-\$ or US-8714346-\$ or US-9352188-\$ or US-6180210-\$ or US-3669238-\$ or US-3642279-\$ or US-7513832-\$ or US-9486681-\$ or US-0219439-\$ or US-9005085-\$ or US-8864627-\$ or US-6923746-\$ or US-5577598-\$).did. or (US-5104120-\$ or US-3554541-\$ or US-4363480-\$ or US-4625962-\$ or US-5110117-\$ or US-5492517-\$ or US-5429563-\$ or US-4334676-\$).did. or (US-3489408-\$ or US-3332683-\$).did.				
S44	12	S43 and plastic	USPAT	OR	OFF	2018/07/06 14:00
S45	119	S37 and resistance with rear	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 14:02
S46	34	S37 and resistance with rear with (pulley roller)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 14:02
S47	21	S37 and resistance same (flywheel friction\$4) with rear with (pulley roller)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 14:03
S48	54	S37 and flywheel with rear	US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	OFF	2018/07/06 14:09

			JPO; DERWENT; IBM_TDB			
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S51	11	S43 and height with adjust\$4	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/06 14:29
S52	1	("4023795").PN.	USPAT; USOCR	OR	OFF	2018/07/07 15:24
S53	4	((("5709632") or ("5538489") or ("2399915"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/14 10:53
S54	3	((("5378213") or ("20050202936") or ("20180001134"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/12/19 10:06
S55	2	((("6652424") or ("20120010048"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/12/19 10:07
S56	0	(S54 S55) and clutch	US-PGPUB; USPAT; USOCR	OR	ON	2019/12/19 10:08
S57	44	(US-20140011642-\$ or US-20120270705-\$ or US-20080287266-\$ or US- 20060287165-\$ or US-20100216607-\$ or US-20170182356-\$ or US-20160263429- \$).did. or (US-8343016-\$ or US-8308619-\$ or US-6053848-\$ or US-5709632-\$ or US- 3637206-\$ or US-1211765-\$ or US- 5833577-\$ or US-4406451-\$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2019/12/19 10:08

		4635928-\$ or US-5897461-\$ or US-5538489-\$ or US-5411455-\$ or US-8968161-\$ or US-6152854-\$ or US-8714346-\$ or US-9352188-\$ or US-6180210-\$ or US-3669238-\$ or US-3642279-\$ or US-7513832-\$ or US-9486681-\$ or US-0219439-\$ or US-9005085-\$ or US-8864627-\$ or US-6923746-\$ or US-5577598-\$).did. or (US-5104120-\$ or US-3554541-\$ or US-4363480-\$ or US-4625962-\$ or US-5110117-\$ or US-5492517-\$ or US-5429563-\$ or US-4334676-\$ or US-5688209-\$).did. or (US-3489408-\$ or US-3332683-\$).did.				
S59	4	S57 and clutch	US-PGPUB; USPAT; USOCR	OR	ON	2019/12/19 10:09
S60	1	("4023795").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/12/19 10:09
S61	4	((("20110281649") or ("0604472") or ("20180104564"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/12/19 12:54
S62	3	((("20110281649") or ("6044772") or ("20180104564"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/12/19 13:07
S63	0	(manual\$2 and treadmill and frame and safety and housing and rotate and interference).clm.	US-PGPUB; USPAT; USOCR	OR	ON	2019/12/19 14:38
S69	5	("10561883" "3642279" "4334676" "5492517" "5538489").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 09:47
S70	158	("0000001" "0061280" "0219439" "0411986" "0641424" "0759296" "0767221" "0783769" "0931394" "10010748" "10561883" "1211765" "20020147079" "20030186787" "20040018917" "20040077465" "20040097341" "20050009668" "20050202936" "20050209059" "20060003871" "20060003872"	US-PGPUB; USPAT	OR	ON	2020/05/13 10:07

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S71	72	S70 and (clutch "one way" bearing)	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:08
S72	43	S70 and (clutch "one way")	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:08
S73	44	("3967720" "4650067" "4743008" "4757987" "5080383").PN. OR ("5411279").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:11
S74	22	S73 and (clutch "one way")	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:11
S75	3251	A63B22/02-0292.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/05/13 10:37
S76	3251	S75	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:37
S77	32	S75 and ratchet with pawl	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:37
S78	33	("4204673" "5411279" "5538489").PN. OR ("5607376").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:39
S79	1156	S75 and (clutch "one way" bearing)	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:42
S80	487	S75 and (clutch "one way")	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:42
S81	379	S75 and ("one way")	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:42

S82	14279	ratchet with clutch	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:48
S83	7295	ratchet near3 clutch	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:48
S84	23	S82 and treadmill	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:49
S85	49	S75 and pawl	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:54
S86	65	A63B\$.cpc. and ratchet with pawl with housing	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:56

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S64	0	(manual\$2 and treadmill and frame and safety and housing and rotate and interference).clm.	US-PGPUB; USPAT	OR	ON	2019/12/19 14:39
S65	0	(manual\$2 and treadmill and frame and bearing and rotate and interference).clm.	US-PGPUB; USPAT	OR	ON	2019/12/19 14:39
S66	0	(manual\$2 and treadmill and frame and bearing and rotation and interference).clm.	US-PGPUB; USPAT	OR	ON	2019/12/19 14:39
S67	0	(manual\$2 and treadmill and frame and safety and rotate and interference).clm.	US-PGPUB; USPAT	OR	ON	2019/12/19 14:46
S68	0	(manual\$2 and treadmill and frame and safety and rotation and interference).clm.	US-PGPUB; USPAT	OR	ON	2019/12/19 14:46

5/19/2020 12:06:37 PM

C:\Users\jdeichl\Documents\EAST\Workspaces\16792426.wsp

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Application	Document	Mailroom Date	Attorney Docket No.
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	892	05/22/2020	097208-0296
	1449	05/22/2020	097208-0296

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/792,426	02/17/2020	Douglas G. Bayerlein	097208-0296

CONFIRMATION NO. 1040

PUBLICATION NOTICE



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26371
FOLEY & LARDNER LLP
3000 K STREET N.W.
SUITE 600
WASHINGTON, DC 20007-5109

Title:MANUAL TREADMILL AND METHODS OF OPERATING THE SAME

Publication No.US-2020-0254293-A1

Publication Date:08/13/2020

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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 Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

To: ipdocketing@foley.com,,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 26371

Aug 15, 2020 06:46:58 AM

Dear PAIR Customer:

FOLEY & LARDNER LLP
3000 K STREET N.W.
SUITE 600
WASHINGTON, DC 20007-5109
UNITED STATES

The following USPTO patent application(s) associated with your Customer Number, 26371 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

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Application	Document	Mailroom Date	Attorney Docket No.
16792426	NTC.PUB	08/14/2020	097208-0296

To view your correspondence online or update your email addresses, please visit us anytime at <https://sportal.uspto.gov/secure/myportal/privatepair>.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

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Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor Name: Douglas G. Bayerlein
Title: MANUAL TREADMILL AND METHODS OF OPERATING THE
SAME
Appl. No.: 16/792,426
Filing Date: 2/17/2020
Examiner: ROBERTSON, JENNIFER MARY DEICHL
Art Unit: 3784
Confirmation Number: 1040

AMENDMENT AND REPLY UNDER 37 C.F.R. § 1.111

Mail Stop AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

This communication is responsive to the Non-Final Office Action mailed May 22, 2020, concerning the above-referenced patent application.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this document.

Remarks begin on page 8 of this document.

Please amend the application as follows:

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.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:



Practitioners associated with Customer Number:

26371

OR

Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignments documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:



The address associated with Customer Number:

26371

OR

☐	Firm or Individual Name		
	Address		
	City		
	Country		
	Telephone	Email	

Assignee Name and Address: Woodway USA, Inc.
W229 N591 Foster Court
Waukesha, WI 53186**A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of The practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.****SIGNATURE of Assignee of Record**

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature	<i>Douglas G. Bielewicz</i>	Date	9-12-12
Name	DOUGLAS G. BIELEWICZ	Telephone	262-548-6235 ext. 107
Title	PRESIDENT		

This collection of information is required by 37 CFR 1.31, 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.

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.

STATEMENT UNDER 37 CFR 3.73(c)Applicant/Patent Owner: Woodway USA, Inc.Application No./Patent No.: 16/792,426Filed/Issue Date: 2/17/2020Titled: MANUAL TREADMILL AND METHODS OF OPERATING THE SAMEWoodway USA, Inc., a Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose one of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.
2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):
- ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose one of options A or B below):

- A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 051405, Frame 0077, or for which a copy thereof is attached.
- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:
1. From: _____ To: _____
- The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.
2. From: _____ To: _____
- The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). 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 12 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.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
 Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
 Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
 Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
 Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☒ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Alexander J. Neuworth/

/8-24-2020/

Signature

Date

Alexander J. Neuworth

72,021

Printed or Typed Name

Title or Registration 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.

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**TERMINAL DISCLAIMER TO OBVIATE A PROVISIONAL DOUBLE PATENTING
REJECTION OVER A PENDING "REFERENCE" APPLICATION**

Docket Number (Optional)

097208-0296

In re Application of: Woodway USA, Inc.

Application No.: 16/792,426

Filed: 2/17/2020

For: MANUAL TREADMILL AND METHODS OF OPERATING THE SAME

The applicant, Woodway USA, Inc., owner of 100 percent interest 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 any patent granted on pending **reference** Application Number 16/792,444, filed, 2/17/2020, as the term of any patent granted on said **reference** application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending **reference** application. The applicant hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the **reference** application 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 applicant does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said **reference** application, "as the term of any patent granted on said **reference** application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending **reference** application," in the event that: any such patent granted on the pending **reference** application 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 shortened by any terminal disclaimer filed prior to its grant.

Check either box 1 or 2 below, if appropriate.

1. ☐ The undersigned is the applicant. If the applicant is an assignee, the undersigned is authorized to act on behalf of the assignee.

I hereby acknowledge that any willful false statements made are punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

2. ☒ The undersigned is an attorney or agent of record. Reg. No. 72,021

/Alexander J. Neuworth/

Signature

08-24-2020

Date

Alexander J. Neuworth

Typed or printed name

Foley & Lardner LLP Attorney

Title

(414) 319-7029

Telephone Number

- ☒ Terminal disclaimer fee under 37 CFR 1.20(d) is included.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.321. 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 12 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.

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.

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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.
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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.

**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING
REJECTION OVER A "PRIOR" PATENT**

Docket Number (Optional)

097208-0296

In re Application of: Woodway USA, Inc.

Application No.: 16/792,426

Filed: 2/17/2020

For: MANUAL TREADMILL AND METHODS OF OPERATING THE SAME

The applicant, Woodway USA, Inc., owner of 100 percent interest 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** No. 10,561,883 as the term of said **prior patent** is presently shortened by any terminal disclaimer. The applicant 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 applicant 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.

Check either box 1 or 2 below, if appropriate.

1. ☐ The undersigned is the applicant. If the applicant is an assignee, the undersigned is authorized to act on behalf of the assignee.

I hereby acknowledge that any willful false statements made are punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

2. ☒ The undersigned is an attorney or agent of record. Reg. No. 72,021

/Alexander J. Neuworth/

Signature

08-24-2020

Date

Alexander J. Neuworth

Typed or printed name

Foley & Lardner LLP Attorney

Title

(414) 319-7029

Telephone Number

- ☒ Terminal disclaimer fee under 37 CFR 1.20(d) included.

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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).
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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.
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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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor Name: Douglas G. Bayerlein
Title: MANUAL TREADMILL AND METHODS OF OPERATING THE SAME
Application No.: 16/792,426
Filing Date: 2/17/2020
Examiner: ROBERTSON, JENNIFER MARY DEICHL
Art Unit: 3784
Confirmation No.: 1040

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §1.56

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

Applicant submits herewith documents for the Examiner's consideration in accordance with 37 CFR §§1.56, 1.97 and 1.98.

Applicant respectfully requests that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

Applicant requests that, in accordance with 37 CFR §1.98(d), the Examiner review all applications relied on for an earlier effective filing date under 35 U.S.C. 120, including Application No. PCT/US10/27543, filed 3/16/2010; Application No. 13/235,065, filed 9/16/2011; Application No. 14/076912, filed 11/11/2013; Application No. 14/832,708, filed 8/21/2015; Application No. 15/958339, filed 4/20/2018, for copies of references of record therein that are not being provided here; although Applicant would be pleased to provide copies of any such documents at the Examiner's request.

The submission of any document herewith is not an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicant does not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document submitted herewith.

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(c), before the mailing date of any of a final action under 37 CFR §1.113, a notice of allowance under 37 CFR §1.311, or an action that otherwise closes prosecution in the application.

FEE

Fees in the amount of \$120.00 to cover the fee associated with an information disclosure statement are being paid by credit card via EFS-Web.

The Commissioner is hereby authorized to charge any additional fees which may be required for this application to Deposit Account Number 19-0741.

Respectfully submitted,

Date /8-24-2020/

By /Alexander J. Neuworth/

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Attorney for Applicant
Registration No. 72,021

Substitute for form 1449/PTO
**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

Date Submitted: August 24, 2020

(use as many sheets as necessary)

Sheet 1 of 1

Complete if Known

Application Number	16/792,426
Filing Date	2/17/2020
First Named Inventor	Douglas G. Bayerlein
Art Unit	3784
Examiner Name	ROBERTSON, JENNIFER MARY DEICHL
Attorney Docket Number	097208-0296

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
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	B7	7,837,596-B2	11-23-2010	ASTILEAN, AUREL A.	
	B8	8,007,422	08-30-2011	ZACCHERINI, LEO	
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	B41	2020/0215391	07-09-2020	PAGANELLI ET AL.	

Examiner
Signature

Date
Considered

Electronic Patent Application Fee Transmittal				
Application Number:		16792426		
Filing Date:		17-Feb-2020		
Title of Invention:		MANUAL TREADMILL AND METHODS OF OPERATING THE SAME		
First Named Inventor/Applicant Name:		Douglas G. Bayerlein		
Filer:		Alexander J. Neuworth/Laura Buhs		
Attorney Docket Number:		097208-0296		
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(\$)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	2806	1	120	120
STATUTORY OR TERMINAL DISCLAIMER	2814	2	160	320
Total in USD (\$)				440

Electronic Acknowledgement Receipt

EFS ID:	40366462
Application Number:	16792426
International Application Number:	
Confirmation Number:	1040
Title of Invention:	MANUAL TREADMILL AND METHODS OF OPERATING THE SAME
First Named Inventor/Applicant Name:	Douglas G. Bayerlein
Customer Number:	26371
Filer:	Alexander J. Neuworth/Laura Buhs
Filer Authorized By:	Alexander J. Neuworth
Attorney Docket Number:	097208-0296
Receipt Date:	24-AUG-2020
Filing Date:	17-FEB-2020
Time Stamp:	16:30:02
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 440
RAM confirmation Number	E20208NG30193735
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		097208-0296_Response.pdf	200920	yes	12
			e2e6af564c8f4fe0b7bc9b8ff98256f2579cb70d		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Applicant Arguments/Remarks Made in an Amendment		8	12	
	Claims		2	7	
	Amendment/Req. Reconsideration-After Non-Final Reject		1	1	
Warnings:					
Information:					
2	Power of Attorney	General_POA_for_Woodway.pdf	334104	no	1
			b3661cd5aedf7fc7c9707edb0d1fad4d41a927ed		
Warnings:					
Information:					
3	Assignee showing of ownership per 37 CFR 3.73	097208-0296_Statement.pdf	129654	no	3
			db873506180bad69b8c5c65e251104a4ee512162		
Warnings:					
Information:					
4	Terminal Disclaimer Filed	097208-0296_TD444.pdf	241351	no	2
			41ff5442a157409b367ab2ca4728948a46acd535		
Warnings:					
Information:					
5	Terminal Disclaimer Filed	097208-0296_TD883.pdf	163326	no	2
			951198fb1e73495f81661805cd4a98d928ef8348		

Warnings:					
Information:					
6	Transmittal Letter	097208-0296_IDS.pdf	117108 ffa126ff64420d8a9448832edb454d3cc1b58476	no	2
Warnings:					
Information:					
7	Information Disclosure Statement (IDS) Form (SB08)	097208-0296_SB08.pdf	106587 bf970834cce19c7bebd99ab3233428661225b48	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
8	Fee Worksheet (SB06)	fee-info.pdf	32132 e4af400340cba6cb7b6e0e6e0728a64c38d411f9	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			1325182		
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.					

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and the reasons that follow.

Status of Claims

Claims 1, 3, 4, 12, 14, 21, 24, 28, and 30 have been amended. Claims 5, 6, and 15 are cancelled. No claims are new. Support for the amendments may be found at least at currently cancelled claim 15, at paragraphs [0148]-[0154], and at Figures 1, 36, and 38 of the present application. No new matter has been added. These amendments are made without prejudice or disclaimer.

After amending the claims as set forth above, claims 1-4, 7-14, and 16-30 remain pending in this application for examination. Applicant respectfully requests favorable reconsideration of these claims.

Claim Rejections Under 35 U.S.C. § 103

On page 2 of the Office Action, the Examiner rejected claims 1-14, 16-17, and 20-30 under 35 U.S.C. § 103 based on U.S. Patent No. 5,492,517 (“Bostic”) in view of U.S. Patent No. 3,642,279 (“Cutter”) and U.S. Patent No. 5,538,489 (“Magid”). On page 8 of the Office Action, the Examiner rejected claim 15 under 35 U.S.C. § 103 based on Bostic in view of Cutter and Magid as applied to claim 12 above, and further in view of U.S. Patent No. 2,512,911 (“Benice”). On page 8 of the Office Action, the Examiner rejected claims 18-19 under 35 U.S.C. § 103 based on Bostic in view of Cutter and Magid as applied to claim 12 above, and further in view of U.S. Patent No. 4,334,676 (“Schonenberger”). These rejections and the combinations of references on which the rejections are based are respectfully traversed.

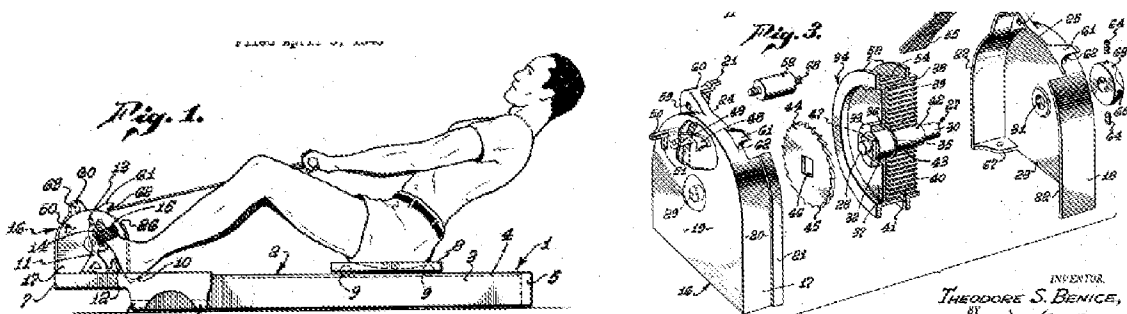
Without acquiescing to the rejections, Applicant has amended independent claim 1 to recite, in part:

wherein the safety device includes a first safety race element and a second safety race element, wherein at least one of the first and second safety race elements is adapted for rotation relative to the frame, and wherein one of the first and second safety race elements substantially surrounds the other of the one of the first and second safety race elements

Applicant has made similar amendments with respect to independent claims 12, 21, and 24. Applicant respectfully submits that the cited references do not disclose, teach, or suggest at this feature of amended independent claims 1, 12, 21, and 24.

Applicant has amended independent claims 1, 12, 21, and 24 to recite subject matter of currently cancelled claim 15 and additional subject matter. In the Office Action, the Examiner cited Benice as disclosing the subject matter of currently cancelled claim 15. Applicant respectfully submits that Benice does not disclose, teach, or suggest at least the above-quoted subject matter of amended independent claim 1 (and also amended independent claims 12, 21, and 24).

Benice relates to an exerciser. The exerciser includes a ratchet wheel 44 and a pawl 48. (See Figures 1 and 3 below).



In the Office Action, the Examiner analogizes the ratchet wheel 44 to the “first safety element” and the pawl 48 and associated housing to the “second safety element” from currently cancelled claim 15. (See Office Action, p. 8). Even for the sake of argument accepting this

analogy, the ratchet and pawl of Benice do not disclose, teach, or suggest “a first safety race element and a second safety race element” (emphasis added) let alone that “at least one of the first and second safety race elements is adapted for rotation relative to the frame, and wherein one of the first and second safety race elements substantially surrounds the other of the one of the first and second safety race elements” as in amended independent claim 1, and similarly recited in amended independent claims 12, 21, and 24.

For at least this reason, amended independent claims 1, 12, 21, and 24 are patentable over Benice. None of the other cited references cure the aforementioned deficiencies of Benice. In this regard, none of the other references are cited as disclosing the subject matter of claim 15 and, indeed, do not disclose the subject matter of claim 15 plus the additional subject matter recited in amended independent claims 1, 12, 21, and 24.

Therefore, amended independent claims 1, 12, 21, and 24 are patentable over the cited references. Claims 2-4, 7-11, 13, 14, 16-20, 22, 23, and 25-30 depend variously from independent claims 1, 12, 21, and 24. All of these claims are patentable for similar reasons. *See* 35 U.S.C. § 112.

Accordingly, Applicant respectfully submits that the claim rejections under Section 103 are overcome. Withdrawal of same is respectfully requested.

Double Patenting

On page 10 of the Office Action, claims 1-30 were rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-52 of U.S. Patent No. 10,561,883. Also on page 10 of the Office Action, claims 1-30 were provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-30 of copending Application No. 16/792,444.

Without acquiescing to the rejections, Applicant is submitting a terminal disclaimer herewith to overcome the nonstatutory double patenting rejections. Withdrawal of same is respectfully requested.

Concluding Remarks

It is submitted that each outstanding objection and rejection to the present application has been overcome, and that the present application is in condition for allowance. Applicant requests consideration and allowance of all pending claims.

It should also be noted that although Applicant has only addressed certain claims or claimed features herein, other claims, features, or combinations of features may also be patentable for additional reasons. Further, the failure to address any statement by the Examiner should not be interpreted as acquiescence or agreement with such statement. Applicant expressly reserves the right to rebut any statement presented by the Examiner and to set forth additional and/or alternative reasons for patentability during prosecution of the present application or in any other future proceeding.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance prosecution.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application, or credit any overpayment, to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date /8-24-2020/

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By /Alexander J. Neuworth/

Attorneys for Applicant

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Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A treadmill, comprising:
 - a frame;
 - a front running belt pulley coupled to the frame;
 - a rear running belt pulley coupled to the frame and spaced a distance from the front running belt pulley;
 - a plurality of bearings coupled to the frame;
 - a running belt at least partially supported by at least one of the front running belt pulley and the rear running belt pulley, wherein the running belt includes a running surface, at least a portion of which is curved;
 - a support element coupled to the frame; and
 - a safety device coupled to the running belt, the safety device at least partially supported by the support element, wherein the safety device includes a first safety race element and a second safety race element, wherein at least one of the first and second safety race elements is adapted for rotation relative to the frame, and wherein one of the first and second safety race elements substantially surrounds the other of the one of the first and second safety race elements;
 - wherein one of the first and second safety race elements and the running belt freely rotates in a first direction of rotation relative to the frame, however, in a second direction of rotation, opposite the first direction of rotation, the one of the first and second safety race elements is substantially prevented from rotation relative to the frame to engagement between the support element and at least a portion of the safety device substantially prevent[[s]] rotation of the running belt relative to the frame.

2. (Original) The treadmill of claim 1, wherein at least a portion of the support element defines a keyway.

3. (Currently Amended) The treadmill of claim 2, wherein the keyway is configured to receive a key such that the key engages with the support element and ~~the portion of the safety device~~, the interaction between the key and keyway contributing to ~~[[the]]~~ an engagement between the support element and at least a portion of the safety device.

4. (Currently Amended) The treadmill of claim 1, wherein the first and second safety race elements of the safety device at least partly form ~~comprises~~ a one-way bearing.

5. (Cancelled)

6. (Cancelled)

7. (Original) The treadmill of claim 1, further comprising a braking system coupled to the frame and configured to selectively resist rotation of the running belt.

8. (Original) The treadmill of claim 7, wherein the braking system utilizes friction to apply a variable amount of force to resist the rotation of the running belt in the first direction of rotation.

9. (Original) The treadmill of claim 1, wherein the treadmill is a manually powered, non-motorized treadmill.

10. (Original) The treadmill of claim 1, further comprising at least one support foot coupled to the frame, wherein the at least one support foot is adjustable to adjust a relative vertical incline of at least a portion of the treadmill relative to a surface supporting the treadmill.

11. (Original) The treadmill of claim 1, wherein the frame comprises a left side member, a right side member, and at least one cross-member extending between the left side member and the right side member.

12. (Currently Amended) A treadmill, comprising:
- a frame;
 - a rotatable element coupled to the frame;
 - a running belt at least partially supported by the rotatable element, wherein the running belt includes a running surface, at least a portion of which is curved; and
 - a first safety race element and a second safety race element, both of which are coupled to the running belt, wherein at least one of the first and second safety race elements is adapted for rotation relative to the frame, and wherein one of the first and second safety race elements substantially surrounds the other of the one of the first and second safety race elements;
- wherein one of the first and second safety race elements and the running belt freely rotate in a first direction of rotation relative to the frame, however, in a second direction of rotation, opposite the first direction of rotation, engagement between the one of the first and second safety race elements is substantially prevented from rotation relative to the frame to and the second safety element substantially prevent[[s]] rotation of the running belt relative to the frame.
13. (Original) The treadmill of claim 12, wherein the treadmill is a manually powered, non-motorized treadmill.
14. (Currently Amended) The treadmill of claim 12, wherein the first and second safety race elements of the safety device at least partly form a one-way bearing.
15. (Cancelled)
16. (Original) The treadmill of claim 12, further comprising a braking system coupled to the frame and configured to selectively resist rotation of the running belt in the first direction of rotation.
17. (Original) The treadmill of claim 12, wherein the rotatable element comprises a running belt pulley coupled to the frame.
18. (Original) The treadmill of claim 12, wherein the running belt comprises a plurality of slats, and wherein at least one slat in the plurality of slats comprises a roller.

19. (Original) The treadmill of claim 18, wherein the at least one slat includes a top surface and wherein the roller is coupled to a member extending away from the top surface of the at least one slat.

20. (Original) The treadmill of claim 12, wherein the rotatable element comprises a plurality of bearings coupled to the frame, the plurality of bearings at least partially supporting the running belt.

21. (Currently Amended) A method, comprising:
providing a treadmill having a frame with a front end and a rear end;
providing a plurality of bearings coupled to the frame, wherein the plurality of bearings define at least a portion of a curved top profile;
disposing a running belt on the plurality of bearings such that the curved top profile of the plurality of bearings define at least a portion of a curved running surface of the running belt;
providing a first safety race element coupled to the frame and to the running belt and a second safety race element coupled to the frame, wherein at least one of the first and second safety elements is adapted for rotation relative to the frame, and wherein one of the first and second safety race elements substantially surrounds the other of the one of the first and second safety race elements;
permitting rotation of one of the first and second safety race elements and the running belt in a first direction of rotation; and
substantially preventing rotation of ~~one of the first and second safety elements~~ and the running belt in a second direction, opposite the first direction, by at least in part, engagement between the one of the first and second safety race elements and the second safety element.

22. (Original) The method of claim 21, further comprising providing for a selective application of a braking force to resist rotation of the running belt in the first direction.

23. (Original) The method of claim 21, wherein the treadmill is a manually powered, non-motorized treadmill.

24. (Currently Amended) A treadmill, comprising:
- a frame;
 - a rotatable element coupled to the frame;
 - a running belt at least partially supported by the rotatable element, wherein the running belt includes a running surface, at least a portion of which is curved;
 - a support element coupled to the frame; and
 - a safety device coupled to the running belt, the safety device at least partially supported by the support element, wherein the safety device includes a first safety race element and a second safety race element, wherein at least one of the first and second safety race elements is adapted for rotation relative to the frame, and wherein one of the first and second safety race elements substantially surrounds the other of the one of the first and second safety race elements;
wherein one of the first and second safety race elements and the running belt freely rotates in a first direction of rotation relative to the frame, however, in a second direction of rotation, opposite the first direction of rotation, the one of the first and safety race elements is substantially prevented from rotation relative to the frame to ~~engagement between the support element and a portion of the safety device~~ substantially prevent[[s]] rotation of the running belt.
25. (Original) The treadmill of claim 24, wherein the rotatable element comprises at least one of a front running belt pulley coupled to the frame and a rear running belt pulley coupled to the frame and spaced apart from the front running belt pulley.
26. (Original) The treadmill of claim 24, wherein the rotatable element comprises at least one of a front rotatable shaft coupled to the frame and a rear rotatable shaft coupled to the frame and spaced apart from the front rotatable shaft.
27. (Original) The treadmill of claim 24, wherein the rotatable element comprises a running belt pulley coupled to the frame..
28. (Currently Amended) The treadmill of claim 24, wherein the first and second safety race elements of the safety device comprises at least partly form a one-way bearing.

29. (Original) The treadmill of claim 24, wherein the support element comprises a rod.

30. (Currently Amended) The treadmill of claim 29, wherein at least a portion of the rod defines a keyway, wherein the keyway is configured to receive a key such that the key engages with the rod and ~~the portion of~~ the safety device.

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.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 16/792,426		Filing Date 02/17/2020		☐ To be Mailed	
ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO									
APPLICATION AS FILED - PART I									
		(Column 1)	(Column 2)						
FOR		NUMBER FILED	NUMBER EXTRA		RATE (\$)		FEE (\$)		
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A	N/A		N/A				
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A	N/A		N/A				
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A	N/A		N/A				
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 = *		x \$50 =					
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 = *		x \$230 =					
☐ 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).							
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))									
* If the difference in column 1 is less than zero, enter "0" in column 2.					TOTAL				
APPLICATION AS AMENDED - PART II									
		(Column 1)		(Column 2)	(Column 3)				
AMENDMENT	08/24/2020	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 27	Minus	** 30	= 0	x \$50 =		0	
	Independent (37 CFR 1.16(h))	* 4	Minus	*** 4	= 0	x \$230 =		0	
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE		0	
		(Column 1)		(Column 2)	(Column 3)				
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=	x \$0 =			
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x \$0 =			
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.						LIE			
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".						/DAWN BREWER/			
*** 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 number found in the appropriate box in column 1.									

This collection of information is required by 37 CFR 1.16. 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 12 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.

Application Number * 16/792,426 *	Application/Control No. 16/792,426	Applicant(s)/Patent under Reexamination Bayerlein et al.	
	Examiner ROBERTSON, JENNIFER MARY DEICHL	Art Unit 3784	
Document Code - DISQ		Internal Document - DO NOT MAIL	

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
Date Filed: <u>24 August 2020</u>	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:
/CHARRISSA S BROWN/ Technology Center: <u>PLRC</u> Telephone: <u>(571)272-1558</u> <u>2 TD'S Approved</u>



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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/792,426	02/17/2020	Douglas G. Bayerlein	097208-0296

26371
FOLEY & LARDNER LLP
3000 K STREET N.W.
SUITE 600
WASHINGTON, DC 20007-5109

CONFIRMATION NO. 1040
POA ACCEPTANCE LETTER



Date Mailed: 08/27/2020

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 08/24/2020.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/mnnguyen/



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www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

26371 7590 08/28/2020
FOLEY & LARDNER LLP
3000 K STREET N.W.
SUITE 600
WASHINGTON, DC 20007-5109

EXAMINER	
ROBERTSON, JENNIFER MARY DEICHL	
ART UNIT	PAPER NUMBER
3784	

DATE MAILED: 08/28/2020

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/792,426	02/17/2020	Douglas G. Bayerlein	097208-0296	1040

TITLE OF INVENTION: MANUAL TREADMILL AND METHODS OF OPERATING THE SAME

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$500	\$0.00	\$0.00	\$500	11/30/2020

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)

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.

26371 7590 08/28/2020
FOLEY & LARDNER LLP
3000 K STREET N.W.
SUITE 600
WASHINGTON, DC 20007-5109

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.
16/792,426	02/17/2020	Douglas G. Bayerlein	097208-0296	1040

TITLE OF INVENTION: MANUAL TREADMILL AND METHODS OF OPERATING THE SAME

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$500	\$0.00	\$0.00	\$500	11/30/2020

EXAMINER	ART UNIT	CLASS-SUBCLASS
ROBERTSON, JENNIFER MARY DEICHL	3784	482-054000

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,

1 _____

(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.

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. _____



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/792,426	02/17/2020	Douglas G. Bayerlein	097208-0296	1040
26371	7590	08/28/2020	EXAMINER	
FOLEY & LARDNER LLP 3000 K STREET N.W. SUITE 600 WASHINGTON, DC 20007-5109			ROBERTSON, JENNIFER MARY DEICHL	
			ART UNIT	PAPER NUMBER
			3784	

DATE MAILED: 08/28/2020

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. 16/792,426	Applicant(s) Bayerlein et al.	
	Examiner JENNIFER ROBERTSON	Art Unit 3784	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 the amendment filed 08/24/2020.
☐ 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 1-4,7-14 and 16-30. 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)	5. ☐ Examiner's Amendment/Comment
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.	6. ☒ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.	7. ☐ Other _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.	

/JENNIFER ROBERTSON/ Primary Examiner, Art Unit 3784	
---	--

Reasons for Allowance

The following is an examiner's statement of reasons for allowance: The prior art of record fails to teach or make obvious the combinations of limitations required by independent claims 1, 12, 21, and 24. In particular, the cited references do not disclose a treadmill as claimed, and in particular having the newly added limitations of a safety device having first and second race elements, one of which surrounds the other, the safety device permitting rotation in a first direction and preventing rotation in a second direction.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER ROBERTSON whose telephone number is (571)272-5001. The examiner can normally be reached on Monday-Friday, 8:30 am to 6:00 pm PST.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LoAn Jimenez can be reached on 571-272-4966. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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

Art Unit: 3784

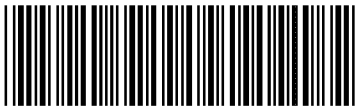
through Private PAIR only. For more information about the PAIR system, see <https://ppair-my.uspto.gov/pair/PrivatePair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JENNIFER ROBERTSON

Primary Examiner

Art Unit 3784

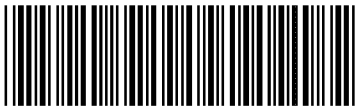
/JENNIFER ROBERTSON/
Primary Examiner, Art Unit 3784

Issue Classification 	Application/Control No. 16/792,426	Applicant(s)/Patent Under Reexamination Bayerlein et al.	
	Examiner JENNIFER ROBERTSON	Art Unit 3784	

CPC						
Symbol					Type	Version
A63B	/	21	/	0053	F	2013-01-01
A63B	/	22	/	0023	I	2013-01-01
A63B	/	21	/	157	I	2013-01-01
A63B	/	22	/	0285	I	2013-01-01
A63B	/	21	/	0054	I	2015-10-01
A63B	/	22	/	0017	I	2015-10-01
A63B	/	21	/	0055	I	2015-10-01
A63B	/	22	/	02	I	2013-01-01
A63B	/	22	/	0235	I	2013-01-01
A63B	/	23	/	04	I	2013-01-01
A63B	/	2230	/	06	A	2013-01-01
A63B	/	2230	/	75	A	2013-01-01

CPC Combination Sets					
Symbol				Type	Set
	/		/		

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 27	
/JENNIFER ROBERTSON/ Primary Examiner, Art Unit 3784 (Primary Examiner) _____ (Date) 25 August 2020		O.G. Print Claim(s) 1	O.G. Print Figure 38

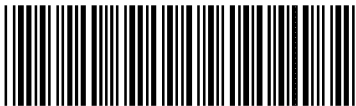
Issue Classification 	Application/Control No. 16/792,426	Applicant(s)/Patent Under Reexamination Bayerlein et al.
	Examiner JENNIFER ROBERTSON	Art Unit 3784

INTERNATIONAL CLASSIFICATION				
CLAIMED				
A63B21/005	/	21	/	005
A63B22/00	/	22	/	00
A63B21/00	/	21	/	00
A63B22/02	/	22	/	02
A63B23/04	/	23	/	04
NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

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

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	27	
/JENNIFER ROBERTSON/ Primary Examiner, Art Unit 3784	25 August 2020	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	38

<i>Issue Classification</i> 	Application/Control No. 16/792,426	Applicant(s)/Patent Under Reexamination Bayerlein et al.
	Examiner JENNIFER ROBERTSON	Art Unit 3784

☒ 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

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 27	
/JENNIFER ROBERTSON/ Primary Examiner, Art Unit 3784 (Primary Examiner) _____ (Date) 25 August 2020		O.G. Print Claim(s) 1	O.G. Print Figure 38

<i>Search Notes</i> 	Application/Control No. 16/792,426	Applicant(s)/Patent Under Reexamination Bayerlein et al.
	Examiner JENNIFER ROBERTSON	Art Unit 3784

CPC - Searched*		
Symbol	Date	Examiner
A63B22/02-0292	05/19/2020	JR

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* 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
EAST text search	05/19/2020	JR
updated	08/25/2020	JR

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	EAST text search	08/25/2020	JR

/JENNIFER ROBERTSON/ Primary Examiner, Art Unit 3784	
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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	40	((("3,870,297") or ("6,334,836") or ("6,468,189") or ("6,616,578") or ("7,115,073") or ("7,608,023") or ("7,837,596") or ("8,007,422") or ("8,496,566") or ("8,512,209") or ("9,694,234") or ("9,914,015") or ("D562,416") or ("D566,209") or ("D672,827") or ("D820,362") or ("D837,312") or ("10,183,191") or ("10,293,204") or ("10,478,666") or ("20030148853") or ("20040241631") or ("20040242631") or ("20050272562") or ("20070027001") or ("20070167289") or ("20070202995") or ("20070225130") or ("20080015094") or ("20080132385") or ("20090105047") or ("20100087298") or ("20110027549") or ("20110275497") or ("20160096064") or ("20180014755") or ("20190083843") or ("20190168067") or ("20200188760") or ("20200188760") or ("20200215391"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/08/25 10:39
L2	396,067	(clutch bearing) with ("one way" direction\$2 unidirectional)	US-PGPUB; USPAT; USOCR	OR	ON	2020/08/25 10:41
L3	3,329	A63B22/02-0292.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/08/25 10:41
L4	6	1 and 2	US-PGPUB; USPAT; USOCR	OR	OFF	2020/08/25 10:41
L5	256	2 and 3	US-PGPUB; USPAT; USOCR	OR	OFF	2020/08/25 10:41
L6	7	1 and ((clutch bearing race) with ("one way" direction\$2 unidirectional))	US-PGPUB; USPAT; USOCR	OR	ON	2020/08/25 10:42
L7	1	6 not 4	US-PGPUB; USPAT; USOCR	OR	ON	2020/08/25 10:42

L8	6	2 and 6	US-PGPUB; USPAT; USOCR	OR	OFF	2020/08/25 10:43
L9	396,067	2 and ((clutch bearing race) with ("one way" direction\$2 unidirectional))	US-PGPUB; USPAT; USOCR	OR	ON	2020/08/25 10:43
L10	263	3 and ((clutch bearing race) with ("one way" direction\$2 unidirectional))	US-PGPUB; USPAT; USOCR	OR	ON	2020/08/25 10:44
S1	54	("20040018917" "20060287165" "20090170666" "3968543" "4614337" "7717828" "D736866" "20060003871" "5897461" "20090280960" "20120231934" "5887579" "7090620" "8308619" "8690738" "5411455" "20090215589" "5538489" "5709632" "6095952" "20030045403" "6923746" "20120157267" "5470293" "6053848" "6740009" "8734300" "1211765" "20080287266" "20140011642" "0219439" "4334676" "5411279" "6042514" "6146315" "6348025" "6500097" "3642279" "20020147079" "20060003872" "20110266091" "3637206" "5162988" "5577598" "6642279" "8343016" "20120270705" "4635928" "4726581" "5548405" "7560822" "9005085").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/10/23 17:36
S2	2,189	A63B22/02-0292.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/10/23 17:44
S3	27	S2 and height with threaded	US-PGPUB; USPAT; USOCR	OR	OFF	2016/10/23 17:45
S4	8	S2 and (crank same pinion)	US-PGPUB; USPAT; USOCR	OR	OFF	2016/10/23 17:51
S5	11	treadmill and deichl.xa.	US-PGPUB; USPAT	OR	OFF	2017/05/01 20:22
S6	7	("20060052728" "5089960" "5913684" "5980256" "6152854" "7166064" "7980856").PN. OR ("8968161").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/01 20:24

S7	80	("3451526" "3550756" "4868682" "5186270" "5229756" "5238099" "5314391" "5385519" "5490784" "5495576" "5562572" "D340342").PN. OR ("6152854").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/01 20:25
S8	25	("1211765" "20040082890" "2820454" "2842365" "3711090" "4204673" "4509510" "4603851" "5108094" "5383828" "5470293" "5951441" "6071354" "6152854" "6180210" "6455123" "8002674" "8033387" "8162769" "8206801" "8308592" "8439807").PN. OR ("8714346").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/01 20:30
S9	17	("3641601" "3659845" "3689066" "3711090" "4509510" "5018722").PN. OR ("6180210").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/01 20:31
S10	23	(US-0009668-\$ US-0020907-\$ US-0123396-\$ US-0216607-\$ US-2117957-\$ US-2842365-\$ US-20050009668-\$ US-20070123396-\$ US-20080020907-\$ US-20100216607-\$ US-2223685-\$ US-4389047-\$ US-4544152-\$ US-5575740-\$ US-5669856-\$ US-6893382-\$).DID.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/01 20:39
S11	1	("9352188").PN.	US-PGPUB; USPAT	OR	OFF	2017/05/01 20:43
S12	2,319	A63B22/02-0292.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/02 09:42
S13	105	S12 and @pd>="20161015"	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/02 09:42
S14	25	("1211765" "20040082890" "2820454" "2842365" "3711090" "4204673" "4509510" "4603851" "5108094" "5383828" "5470293" "5951441" "6071354" "6152854" "6180210" "6455123" "8002674" "8033387" "8162769" "8206801" "8308592" "8439807").PN. OR ("8714346").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/02 09:46
S15	17	("3641601" "3659845" "3689066" "3711090" "4509510" "5018722").PN. OR ("6180210").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/02 09:47
S16	8	(US-20040077465-\$ US-4659074-\$ US-5290205-\$ US-5431612-\$ US-5856736-\$ US-7179205-\$ US-7618345-\$ US-7789800-\$).DID.	US-PGPUB; USPAT; USOCR	OR	ON	2017/07/11 13:28

S17	8	((("20040077465") or ("4,659,074") or ("5,290,205") or ("5,431,612") or ("5,856,736") or ("7,179,205") or ("7,618,345") or ("7,789,800"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/08/03 12:54
S18	21	((("20050209059~") or ("20140087922") or ("20160263429") or ("20170182356") or ("4,886,266") or ("4,938,469") or ("5,242,339") or ("5,368,532") or ("5,643,144") or ("5,683,332") or ("6,152,854") or ("6,334,839") or ("6,824,502") or ("6,837,830") or ("7,410,449") or ("7,780,573") or ("7,806,805") or ("8,241,187") or ("8,864,627") or ("8,920,347") or ("9,429,511"))).PN. or (2006/0122035).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/12/08 11:01
S19	2	((("8308619") or ("8343016"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/05/03 10:07
S20	35	("1211765" "20120010048" "20120010053" "20120157267" "3489408" "3637206" "3642279" "3669238" "4614337" "5470293" "5577598" "5709632" "6053848" "6146315" "6348025").PN. OR ("8343016").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2018/05/03 10:11
S21	5	("3489408").URPN.	USPAT	OR	ON	2018/05/03 10:32
S22	13	("0219439" "1895285" "3489408" "3536324" "4423864" "5387159").PN. OR ("7513832").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2018/05/03 10:32
S23	3	((("20030186787") or ("20120019973") or ("20140080679"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/05/03 10:36
S24	12	((("5,031,901") or ("5,094,447") or ("5,145,480") or ("5,310,392") or ("7,862,483") or ("8,585,561") or ("8,876,668") or ("9,044,635") or ("9,233,272") or ("9,254,409") or ("9,314,667") or ("9,974,997"))).PN. or ((2007/0021278) or (2007/0298935) or (2008/0119332) or (2009/0156363) or (2012/0264569) or (2014/0171272) or (2015/0119202) or (2017/0113093)).CCLS.	USPAT; USOCR	OR	OFF	2018/07/06 13:17
S25	108	(US-20160150084-\$ US-0003871-\$ US-0003872-\$ US-0007886-\$ US-0009668-\$ US-0011642-\$ US-0018917-\$ US-0019973-\$ US-	USPAT	OR	OFF	2018/07/06 13:19

	0020907-\$ US-0023039-\$ US-			
	0077465-\$ US-0080679-\$ US-			
	0087922-\$ US-0096064-\$ US-			
	0122035-\$ US-0123396-\$ US-			
	0147079-\$ US-0150084-\$ US-			
	0157267-\$ US-0166877-\$ US-			
	0170666-\$ US-0182356-\$ US-			
	0186787-\$ US-0209059-\$ US-			
	0215589-\$ US-0216607-\$ US-			
	0231934-\$ US-0263429-\$ US-			
	0266091-\$ US-0270705-\$ US-			
	0280960-\$ US-0287165-\$ US-			
	0287266-\$ US-0296789-\$ US-			
	0306456-\$ US-0367175-\$ US-			
	0367851-\$ US-1211765-\$ US-			
	2117957-\$ US-2842365-\$ US-			
	20020147079-\$ US-20030186787-\$			
	US-20040018917-\$ US-20040077465-			
	\$ US-20050009668-\$ US-			
	20050209059-\$ US-20060003871-\$			
	US-20060003872-\$ US-20060122035-			
	\$ US-20060287165-\$ US-			
	20070123396-\$ US-20080020907-\$			
	US-20080287266-\$ US-20090170666-			
	\$ US-20090215589-\$ US-			
	20090280960-\$ US-20100216607-\$			
	US-20110266091-\$ US-20120019973-			
	\$ US-20120157267-\$ US-			
	20120231934-\$ US-20120270705-\$			
	US-20140011642-\$ US-20140080679-			
	\$ US-20140087922-\$ US-			
	20150306456-\$ US-20150367175-\$			
	US-20160023039-\$ US-20160096064-			
	\$ US-20160166877-\$ US-			
	20160263429-\$ US-20160296789-\$			
	US-20160367851-\$ US-20170007886-			
	\$ US-20170182356-\$ US-2860541-\$			
	US-3637206-\$ US-3642279-\$ US-			
	3968543-\$ US-3148743-\$ US-			
	3201120-\$ US-4334676-\$ US-			
	4389047-\$ US-4544152-\$ US-			
	4548405-\$ US-4576352-\$ US-			
	4614337-\$ US-4635928-\$ US-			
	4659074-\$ US-4726581-\$ US-			
	4886266-\$ US-4938469-\$ US-			
	5162988-\$ US-5242339-\$ US-			
	5290205-\$ US-5368532-\$ US-			
	5411279-\$ US-5411455-\$ US-			
	5431612-\$ US-5470293-\$ US-			
	5538489-\$ US-5575740-\$ US-			
	5577598-\$ US-5643144-\$ US-			
	5669856-\$ US-5683332-\$ US-			
	5709632-\$ US-5856736-\$ US-			

		5887579-\$ US-5897461-\$ US-6042514-\$ US-6053848-\$ US-6095952-\$ US-6146315-\$ US-6152854-\$ US-6180210-\$ US-6334839-\$ US-6348025-\$ US-6500097-\$ US-6740009-\$ US-6824502-\$ US-6837830-\$ US-6893382-\$ US-6923746-\$ US-7090620-\$ US-7179205-\$ US-7410449-\$ US-7560822-\$ US-7618345-\$ US-7717828-\$ US-7780573-\$ US-7789800-\$ US-7806805-\$ US-8241187-\$ US-8308619-\$ US-8343016-\$ US-8690738-\$ US-8734300-\$ US-8864627-\$ US-8920347-\$ US-9005085-\$ US-9352188-\$ US-9429511-\$ US-D736866-\$).DID.				
S26	1	("3642279").PN.	USPAT; USOCR	OR	OFF	2018/07/06 13:30
S27	0	("20060278165").PN.	USPAT; USOCR	OR	OFF	2018/07/06 13:31
S28	0	("20060287165").PN.	USPAT; USOCR	OR	OFF	2018/07/06 13:32
S29	0	("200600287165").PN.	USPAT; USOCR	OR	OFF	2018/07/06 13:32
S30	1	("20060287165").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/06 13:33
S31	1	("6095952").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/06 13:35
S32	33	(US-20140011642-\$ or US-20120270705-\$ or US-20080287266-\$ or US-20060287165-\$ or US-20100216607-\$ or US-20170182356-\$).did. or (US-8343016-\$ or US-8308619-\$ or US-6053848-\$ or US-5709632-\$ or US-3637206-\$ or US-1211765-\$ or US-5833577-\$ or US-4406451-\$ or US-4635928-\$ or US-5897461-\$ or US-5538489-\$ or US-5411455-\$ or US-8968161-\$ or US-6152854-\$ or US-8714346-\$ or US-9352188-\$ or US-6180210-\$ or US-3669238-\$ or US-3642279-\$ or US-7513832-\$ or US-9486681-\$ or US-0219439-\$ or US-9005085-\$ or US-8864627-\$ or US-6923746-\$ or US-	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/06 13:36

		5577598-\$.did. or (US-3489408-\$.did.				
S33	19	S32 and (resistance brak\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 13:36
S34	2,765	A63B22/02-0292.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/06 13:39
S35	644	S34 and manual	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/06 13:39
S36	451	S35 and (resistance brak\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 13:39
S37	1,956	A63B22/02-0228.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/06 13:45
S38	324	S37 and manual and (resistance brak\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 13:46
S39	888	S37 not motor	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 13:46
S40	383	S37 and resistance not motor	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 13:46
S41	264	S37 and "one way"	US-PGPUB; USPAT; USOCR;	OR	OFF	2018/07/06 13:54

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S42	40	S37 and slat	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 13:56
S43	43	(US-20140011642-\$ or US-20120270705-\$ or US-20080287266-\$ or US-20060287165-\$ or US-20100216607-\$ or US-20170182356-\$ or US-20160263429-\$).did. or (US-8343016-\$ or US-8308619-\$ or US-6053848-\$ or US-5709632-\$ or US-3637206-\$ or US-1211765-\$ or US-5833577-\$ or US-4406451-\$ or US-4635928-\$ or US-5897461-\$ or US-5538489-\$ or US-5411455-\$ or US-8968161-\$ or US-6152854-\$ or US-8714346-\$ or US-9352188-\$ or US-6180210-\$ or US-3669238-\$ or US-3642279-\$ or US-7513832-\$ or US-9486681-\$ or US-0219439-\$ or US-9005085-\$ or US-8864627-\$ or US-6923746-\$ or US-5577598-\$).did. or (US-5104120-\$ or US-3554541-\$ or US-4363480-\$ or US-4625962-\$ or US-5110117-\$ or US-5492517-\$ or US-5429563-\$ or US-4334676-\$).did. or (US-3489408-\$ or US-3332683-\$).did.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/06 13:59
S44	12	S43 and plastic	USPAT	OR	OFF	2018/07/06 14:00
S45	119	S37 and resistance with rear	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 14:02
S46	34	S37 and resistance with rear with (pulley roller)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 14:02

S47	21	S37 and resistance same (flywheel friction\$4) with rear with (pulley roller)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 14:03
S48	54	S37 and flywheel with rear	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2018/07/06 14:09
S49	68	("1211765" "3554541" "3642279" "4389047" "4616822" "4938473" "5100127" "5125361" "5391129" "5431612" "5575740").PN. OR ("5709632").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/06 14:17
S50	38	("1211765" "20120010048" "20120010053" "20120157267" "3489408" "3637206" "3642279" "3669238" "4614337" "5470293" "5577598" "5709632" "6053848" "6146315" "6348025").PN. OR ("8343016").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/06 14:24
S51	11	S43 and height with adjust\$4	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/06 14:29
S52	1	("4023795").PN.	USPAT; USOCR	OR	OFF	2018/07/07 15:24
S53	4	((("5709632") or ("5538489") or ("2399915"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/14 10:53
S54	3	((("5378213") or ("20050202936") or ("20180001134"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/12/19 10:06
S55	2	((("6652424") or ("20120010048"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/12/19 10:07
S56	0	(S54 S55) and clutch	US-PGPUB; USPAT; USOCR	OR	ON	2019/12/19 10:08
S57	44	(US-20140011642-\$ or US-20120270705-\$ or US-20080287266-\$ or US-20060287165-\$ or US-20100216607-\$ or US-20170182356-\$ or US-20160263429-\$).did. or (US-	US-PGPUB; USPAT; USOCR	OR	ON	2019/12/19 10:08

		8343016-\$ or US-8308619-\$ or US-6053848-\$ or US-5709632-\$ or US-3637206-\$ or US-1211765-\$ or US-5833577-\$ or US-4406451-\$ or US-4635928-\$ or US-5897461-\$ or US-5538489-\$ or US-5411455-\$ or US-8968161-\$ or US-6152854-\$ or US-8714346-\$ or US-9352188-\$ or US-6180210-\$ or US-3669238-\$ or US-3642279-\$ or US-7513832-\$ or US-9486681-\$ or US-0219439-\$ or US-9005085-\$ or US-8864627-\$ or US-6923746-\$ or US-5577598-\$).did. or (US-5104120-\$ or US-3554541-\$ or US-4363480-\$ or US-4625962-\$ or US-5110117-\$ or US-5492517-\$ or US-5429563-\$ or US-4334676-\$ or US-5688209-\$).did. or (US-3489408-\$ or US-3332683-\$).did.				
S59	4	S57 and clutch	US-PGPUB; USPAT; USOCR	OR	ON	2019/12/19 10:09
S60	1	("4023795").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/12/19 10:09
S61	4	((("20110281649") or ("0604472") or ("20180104564")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/12/19 12:54
S62	3	((("20110281649") or ("6044772") or ("20180104564")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/12/19 13:07
S63	0	(manual\$2 and treadmill and frame and safety and housing and rotate and interference).clm.	US-PGPUB; USPAT; USOCR	OR	ON	2019/12/19 14:38
S69	5	("10561883" "3642279" "4334676" "5492517" "5538489").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 09:47
S70	158	("0000001" "0061280" "0219439" "0411986" "0641424" "0759296" "0767221" "0783769" "0931394" "10010748" "10561883" "1211765" "20020147079" "20030186787" "20040018917" "20040077465" "20040097341" "20050009668" "20050202936" "20050209059" "20060003871" "20060003872" "20060122035" "20060287165" "20070021278" "20070123396" "20070298935" "20080020907" "20080119332" "20080287266"	US-PGPUB; USPAT	OR	ON	2020/05/13 10:07

		"20090156363" "20090170666" "20090215589" "20090280960" "20100216607" "20100222182" "20110266091" "20120010048" "20120019973" "20120157267" "20120231934" "20120264569" "20120270705" "20140011642" "20140080679" "20140087922" "20140171272" "20150119202" "20150157895" "20150306456" "20160023039" "20160096064" "20160166877" "20160263429" "20160296789" "20160367851" "20170007886" "20170113093" "20170182356" "20170274248" "20170312582" "20180001134" "20180111023" "20180229065" "20190054344" "2117957" "2399915" "2842365" "3637206" "3968543" "4389047" "4406451" "4544152" "4548405" "4576352" "4614337" "4635928" "4659074" "4726581" "4886266" "4938469" "5031901" "5094447" "5145480" "5162988" "5242339" "5290205" "5310392" "5318487" "5368532" "5378213" "5411279" "5411455" "5431612" "5470293" "5575740" "5577598" "5643144" "5669856" "5683332" "5688209" "5709632" "5856736" "5887579" "5897461" "6053848" "6095952" "6146315" "6152854" "6180210" "6328676" "6334839" "6348025" "6454679" "6500097" "6652424" "6740009" "6824502" "6837830" "6893382" "6923746" "7090620" "7179205" "7410449" "7560822" "7618345" "7717828" "7780573" "7789800" "7806805" "7862483" "8075450" "8206269" "8241187" "8308619" "8343016" "8585561" "8676170" "8690738" "8734300" "8864627" "8876668" "8920347" "9005085" "9044635" "9192810" "9233272" "9254409" "9305141" "9314667" "9352188" "9429511" "9974997" "D682372" "D736866" "D751156" "D788792" "D827058").PN.				
S71	72	S70 and (clutch "one way" bearing)	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:08

S72	43	S70 and (clutch "one way")	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:08
S73	44	("3967720" "4650067" "4743008" "4757987" "5080383").PN. OR ("5411279").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:11
S74	22	S73 and (clutch "one way")	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:11
S75	3,251	A63B22/02-0292.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/05/13 10:37
S76	3,251	S75	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:37
S77	32	S75 and ratchet with pawl	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:37
S78	33	("4204673" "5411279" "5538489").PN. OR ("5607376").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:39
S79	1,156	S75 and (clutch "one way" bearing)	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:42
S80	487	S75 and (clutch "one way")	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:42
S81	379	S75 and ("one way")	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:42
S82	14,279	ratchet with clutch	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:48
S83	7,295	ratchet near3 clutch	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:48
S84	23	S82 and treadmill	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:49
S85	49	S75 and pawl	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:54
S86	65	A63B\$.cpc. and ratchet with pawl with housing	US-PGPUB; USPAT; USOCR	OR	ON	2020/05/13 10:56

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L11	0	(treadmill and safety and race and rotation).clm.	US-PGPUB; USPAT	OR	ON	2020/08/25 11:02
S64	0	(manual\$2 and treadmill and frame and safety and housing and rotate and interference).clm.	US-PGPUB; USPAT	OR	ON	2019/12/19 14:39
S65	0	(manual\$2 and treadmill and frame and bearing and rotate and interference).clm.	US-PGPUB; USPAT	OR	ON	2019/12/19 14:39
S66	0	(manual\$2 and treadmill and frame and bearing and rotation and interference).clm.	US-PGPUB; USPAT	OR	ON	2019/12/19 14:39
S67	0	(manual\$2 and treadmill and frame and safety and rotate and interference).clm.	US-PGPUB; USPAT	OR	ON	2019/12/19 14:46
S68	0	(manual\$2 and treadmill and frame and safety and rotation and interference).clm.	US-PGPUB; USPAT	OR	ON	2019/12/19 14:46

8/25/2020 11:02:22 AM

C:\Users\jdeichl\Documents\EAST\Workspaces\16792426.wsp

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT Date Submitted: August 24, 2020 <i>(use as many sheets as necessary)</i>		Complete if Known	
		Application Number	16/792,426
		Filing Date	2/17/2020
		First Named Inventor	Douglas G. Bayerlein
		Art Unit	3784
Examiner Name	ROBERTSON, JENNIFER MARY DEICHL		
Attorney Docket Number	097208-0296		
Sheet	1	of	1

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	B1	3,870,297	03-11-1975	ELDER, BOYD B.	
	B2	6,334,836	01-01-2002	SEGASBY, MARK	
	B3	6,468,189	10-22-2002	ALESSANDRI, NERIO	
	B4	6,616,578	09-09-2003	ALESSANDRI, NERIO	
	B5	7,115,073	10-03-2006	NIZAMUDDIN, NASH	
	B6	7,608,023	10-27-2009	CASAGRANDE, SIMONE	
	B7	7,837,596-B2	11-23-2010	ASTILEAN, AUREL A.	
	B8	8,007,422	08-30-2011	ZACCHERINI, LEO	
	B9	8,496,566	07-30-2013	CASADEI, MARCO	
	B10	8,512,209	08-20-2013	GUIDI ET AL.	
	B11	9,694,234	07-04-2017	DALEBOUT ET AL.	
	B12	9,914,015-B2	03-13-2018	ASTILEAN ET AL.	
	B13	D 562,416	02-19-2008	FEDRIGA ET AL.	
	B14	D 566,209	04-08-2008	ALESSANDRI ET AL.	
	B15	D 672,827	12-18-2012	ALESSANDRI ET AL.	
	B16	D 820,362	06-12-2018	CITTERIO, ANTONIO	
	B17	D 837,312	01-01-2019	LISI ET AL.	
	B18	10,183,191-B2	01-22-2019	ASTILEAN ET AL.	
	B19	10,293,204	05-21-2019	ASTILEAN ET AL.	
	B20	10,478,666	11-19-2019	YOO, SEON KYUNG	
	B21	2003/0148853	08-07-2003	ALESSANDRI ET AL.	
	B22	2004/0241631	12-02-2004	NIZAMUDDIN, NASH	
	B23	2004/0242631	12-02-2004	GARLICH ET AL.	
	B24	2005/0272562	12-08-2005	ALESSANDRI ET AL.	
	B25	2007/0027001	02-01-2007	ALESSANDRI ET AL.	
	B26	2007/0167289	07-19-2007	ALESSANDRI ET AL.	
	B27	2007/0202995	08-30-2007	ROMAN ET AL.	
	B28	2007/0225130	09-27-2007	MAFFEI ET AL.	
	B29	2008/0015094	01-17-2008	CASAGRANDE, SIMONE	
	B30	2008/0132385	06-05-2008	ALESSANDRI ET AL.	
	B31	2009/0105047	04-23-2009	GUIDI ET AL.	
	B32	2010/0087298	04-08-2010	ZACCHERINI, LEO	
	B33	2011/0027549	02-03-2011	BOUTAGHOU, ZINE- EDDINE	
	B34	2011/0275497	11-10-2011	LORUSSO, MARCO	
	B35	2016/0096064-A1	04-07-2016	GATTI, DAVIDE	
	B36	2018/0014755	01-18-2018	ALESSANDRI ET AL.	
	B37	2019/0083843-A1	03-21-2019	DEL MONACO ET AL.	
	B38	2019/0168067	06-06-2019	BATES ET AL.	
	B39	2020/0188760-A1	06-18-2020	BANDINI ET AL.	
	B40	2020/0188760	06-18-2020	BANDINI ET AL.	
	B41	2020/0215391	07-09-2020	PAGANELLI ET AL.	

Examiner Signature	/JENNIFER ROBERTSON /	Date Considered	08/26/2020
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To: ipdocketing@foley.com,,
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Application	Document	Mailroom Date	Attorney Docket No.
16792426	N570	08/27/2020	097208-0296

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Application	Document	Mailroom Date	Attorney Docket No.
16792426	NOA	08/28/2020	097208-0296
	1449	08/28/2020	097208-0296

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor Name: Douglas G. Bayerlein
Title: MANUAL TREADMILL AND METHODS OF OPERATING
THE SAME
Appl. No.: 16/792,426
Filing Date: 2/17/2020
Examiner: ROBERTSON, JENNIFER MARY DEICHL
Art Unit: 3784
Confirmation Number: 1040

ISSUE FEE TRANSMITTAL

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

Enclosed herewith please find Issue Fee Transmittal Form PTOL-85(B).

Fees in the amount of \$500.00 for payment of the Issue Fee are being paid by credit card via EFS-Web.

The Commissioner is hereby authorized to charge any additional fees which may be required for this application to Deposit Account No. 19-0741.

COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

While Applicant agrees that the allowed claims include a combination of subject matter that is patentable over the cited references, Applicant does not necessarily agree with or acquiesce in the reasoning of the Examiner. Moreover, Applicant notes that various other subject matter and/or combinations of subject matter may be patentable for other reasons than those given by the Examiner. Applicant expressly reserves the right to set forth additional and/or alternative

reasons for patentability and/or allowance in connection with the present Application or any future proceeding. These comments on Statement of Reasons for Allowance under 37 C.F.R. § 1.104 are intended to be responsive to the Notice of Allowance dated August 28, 2020.

Respectfully submitted,

Date /8-28-2020/

By /Alexander J. Neuworth/

FOLEY & LARDNER LLP
Customer Number: 26371
Telephone: (414) 319-7029
Facsimile: (414) 297-4900

Alexander J. Neuworth
Attorney for Applicant
Registration No. 72,021

PART B - FEE(S) TRANSMITTAL

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

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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.

26371 7590 08/28/2020
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(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/792,426	02/17/2020	Douglas G. Bayerlein	097208-0296	1040

TITLE OF INVENTION: MANUAL TREADMILL AND METHODS OF OPERATING THE SAME

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$500	\$0.00	\$0.00	\$500	11/30/2020

EXAMINER	ART UNIT	CLASS-SUBCLASS
ROBERTSON, JENNIFER MARY DEICHL	3784	482-054000

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 Foley & Lardner LLP

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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)

Woodway USA, Inc.

Waukesha, Wisconsin

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 _____

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☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

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Authorized Signature /Alexander J. Neuworth/

Date /8-28-2020/

Typed or printed name Alexander J. Neuworth

Registration No. 72,021

Electronic Patent Application Fee Transmittal				
Application Number:		16792426		
Filing Date:		17-Feb-2020		
Title of Invention:		MANUAL TREADMILL AND METHODS OF OPERATING THE SAME		
First Named Inventor/Applicant Name:		Douglas G. Bayerlein		
Filer:		Alexander J. Neuworth/Laura Buhs		
Attorney Docket Number:		097208-0296		
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:				
UTILITY APPL ISSUE FEE	2501	1	500	500

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				500

Electronic Acknowledgement Receipt

EFS ID:	40414674
Application Number:	16792426
International Application Number:	
Confirmation Number:	1040
Title of Invention:	MANUAL TREADMILL AND METHODS OF OPERATING THE SAME
First Named Inventor/Applicant Name:	Douglas G. Bayerlein
Customer Number:	26371
Filer:	Alexander J. Neuworth/Laura Buhs
Filer Authorized By:	Alexander J. Neuworth
Attorney Docket Number:	097208-0296
Receipt Date:	28-AUG-2020
Filing Date:	17-FEB-2020
Time Stamp:	15:44:27
Application Type:	Utility under 35 USC 111(a)

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Submitted with Payment	yes
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RAM confirmation Number	E20208RF44417034
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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	097208-0296_Transmittal.pdf	114320	no	2
			8192a1b6acf8942c3ed1e935d9d7982ccb37fa97		
Warnings:					
Information:					
2	Issue Fee Payment (PTO-85B)	097208-0296_PTOL85.pdf	137947	no	1
			3aadb6dac3fa92a499fc4c3188c1e1cf071e28fb		
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30505	no	2
			a92a7caf70e0f51906314f8c12984e81b557077e		
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/792,426	10/13/2020	10799745	097208-0296	1040

26371 7590 09/23/2020
FOLEY & LARDNER LLP
3000 K STREET N.W.
SUITE 600
WASHINGTON, DC 20007-5109

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.

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

Douglas G. Bayerlein, Oconomowoc, WI;
Woodway USA, Inc., Waukesha, WI;
Vance E. Emons, Hartland, WI;
Nicholas A. Oblamski, Waukesha, WI;
Scott D. Hoerig, Brookfield, WI;
Matthew J. Zank, Milwaukee, WI;
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Sep 24, 2020 04:18:25 AM

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