

Provisional Application for Patent Cover Sheet

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c)

Inventor(s)

Inventor 1

Remove

Given Name

Middle Name

Family Name

City

State

Country i

Aaron

DeJule

River Forest

IL

US

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

Add

Title of Invention

SELF ADJUSTING TENSION CONTROL

Attorney Docket Number (if applicable)

DEJ10730P00070US

Correspondence Address

Direct all correspondence to (select one):

☒ The address corresponding to Customer Number

☐ Firm or Individual Name

Customer Number

32116

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

☒ No.

☐ Yes, the invention was made by an agency of the United States Government. The U.S. Government agency name is:

☐ Yes, the invention was under a contract with an agency of the United States Government. The name of the U.S. Government agency and Government contract number are:

Entity Status

Applicant asserts small entity status under 37 CFR 1.27 or applicant certifies micro entity status under 37 CFR 1.29

- ☒ Applicant asserts small entity status under 37 CFR 1.27
- ☐ Applicant certifies micro entity status under 37 CFR 1.29. Applicant must attach form PTO/SB/15A or B or equivalent.
- ☐ No

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Signature

Please see 37 CFR 1.4(d) for the form of the signature.

Signature	/John S. Mortimer/			Date (YYYY-MM-DD)	2015-02-11
First Name	John S.	Last Name	Mortimer	Registration Number (If appropriate)	30,40

This collection of information is required by 37 CFR 1.51. 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 8 hours 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. **This form can only be used when in conjunction with EFS-Web. If this form is mailed to the USPTO, it may cause delays in handling the provisional application.**

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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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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.

Self Adjusting Tension Control

INVENTION: The invention is a mechanism that can be used in any application where variable tension control is needed. For example, it can be used in furniture, chairs, tables, etc.

For example, in a chair (below), as an individual sits down, the position on the leaf spring self-adjusts thereby adjusting the tension of the chair's kinematic control.

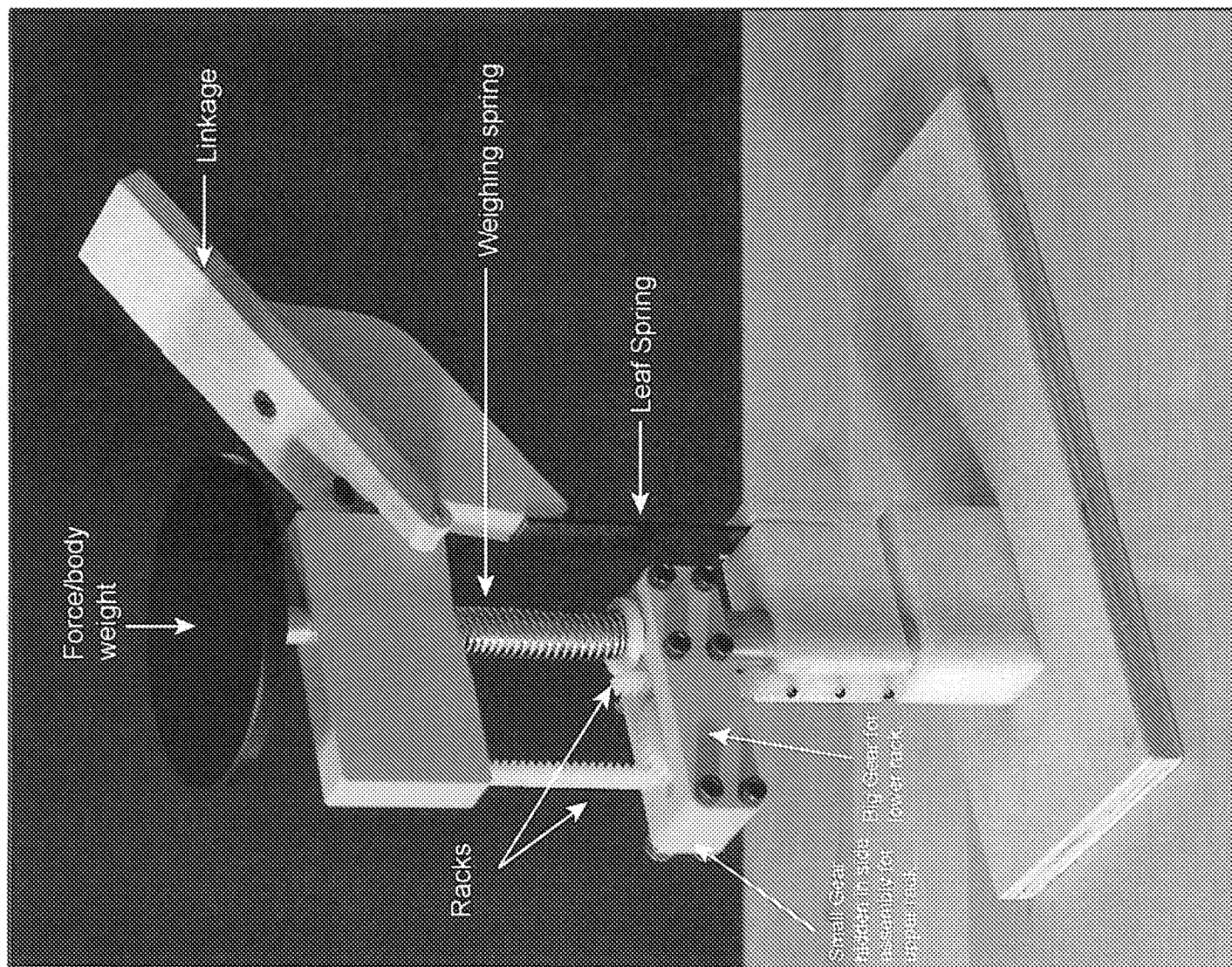
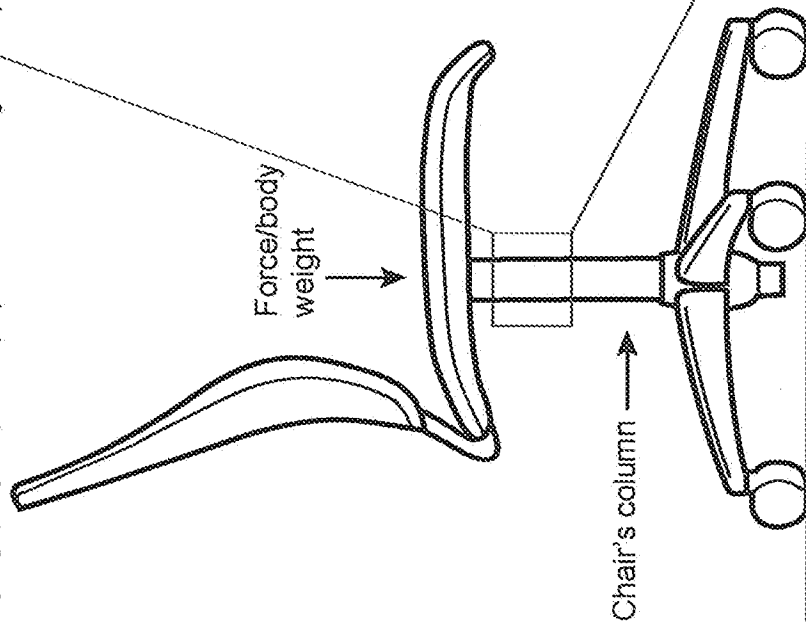
In essence, the chair could automatically adjust from 60 lbs. To 375 lbs. of the individual's weight without having to adjust a knob as typically seen on currently available chairs.

The vertical position of the leaf spring facilitates the motion and compactness of design. And could also be hidden in-line with the gas cylinder/height adjustment on currently available chairs.

Note: The leaf spring and mechanism could be horizontal or at any angle.

This design greatly reduces the chair's footprint compared to currently available chairs that typically have big bulky boxes to house the controls.

The weighing spring compresses proportional to the weight of the person sitting.



Self Adjusting Tension Control

The invention's racks and gears changes the working length of the leaf spring.

In the prototype shown below, the Disk/seat moves 0.25 while the working length of the leaf spring moves 0.75.

The weight/force ratio is variable. Three different weights are shown below.

Hydraulics, electric, servo controlled, could substitute the rack and gear mechanism.

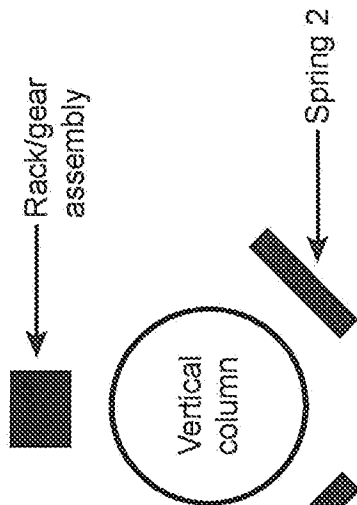
The linkage connects to the chairs recline/tilt control.

2 Spring Configuration

Section view

The springs moves with the rack gear assembly. Could more than 1 spring.

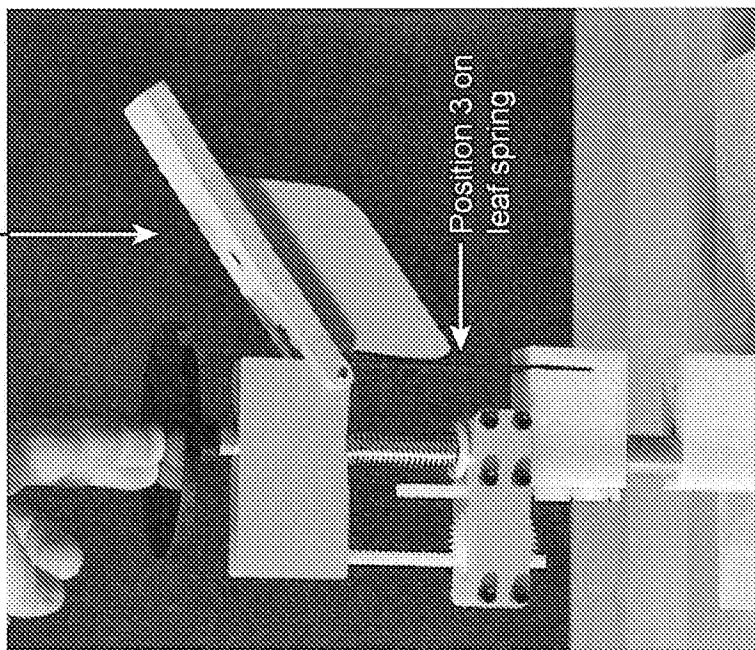
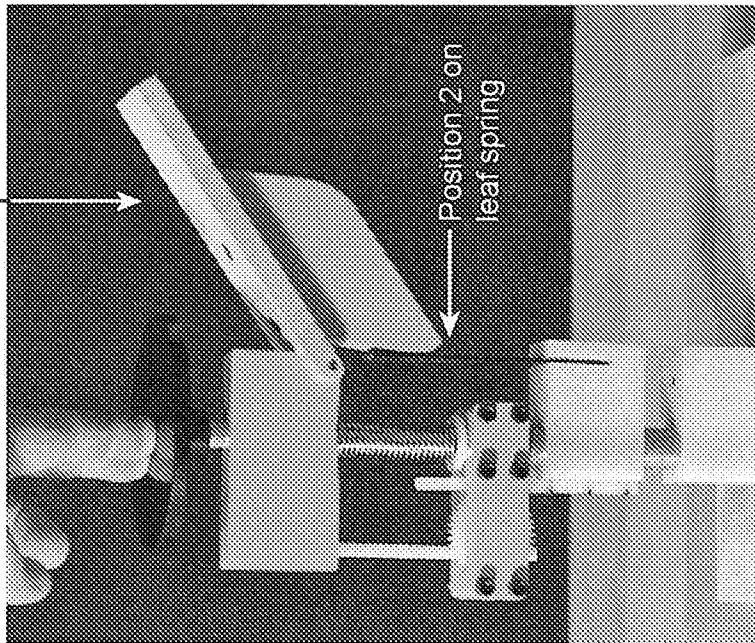
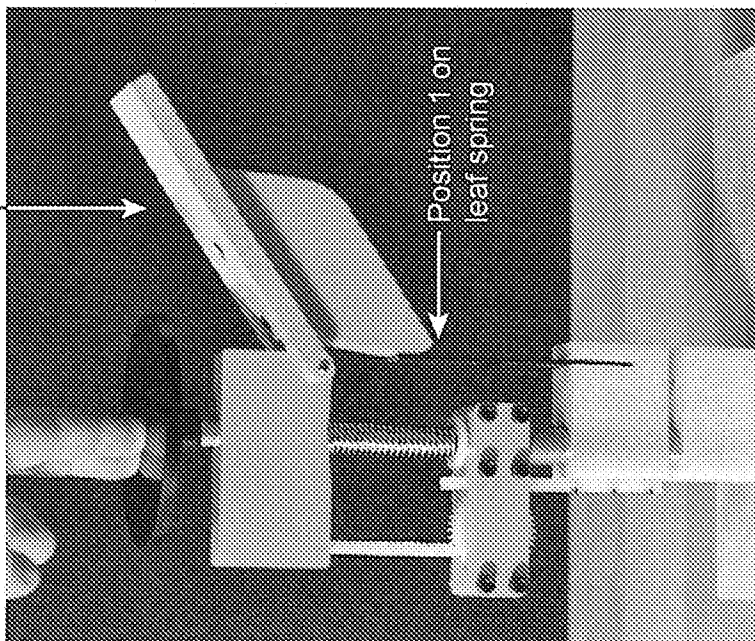
Housing not shown could be circular, triangular, etc



Force 1/body weight
Less force to move linkage

Force 2
Medium force to move linkage

Force 3
Greatest force to move linkage



Electronic Patent Application Fee Transmittal

Application Number:				
Filing Date:				
Title of Invention:	Self Adjusting Tension Control			
First Named Inventor/Applicant Name:	Aaron DeJule			
Filer:	John Stirling Mortimer/Karen Sanderson			
Attorney Docket Number:	DEJ10730P00070US			
Filed as Small Entity				
Filing Fees for Provisional				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Provisional Application Filing Fee	2005	1	130	130
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				130

Electronic Acknowledgement Receipt

EFS ID:	21462787
Application Number:	62114706
International Application Number:	
Confirmation Number:	2862
Title of Invention:	Self Adjusting Tension Control
First Named Inventor/Applicant Name:	Aaron DeJule
Customer Number:	32116
Filer:	John Stirling Mortimer/Karen Sanderson
Filer Authorized By:	John Stirling Mortimer
Attorney Docket Number:	DEJ10730P00070US
Receipt Date:	11-FEB-2015
Filing Date:	
Time Stamp:	13:28:34
Application Type:	Provisional

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 130
RAM confirmation Number	9265
Deposit Account	230785
Authorized User	MORTIMER, JOHN S.

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

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Provisional Cover Sheet (SB16)	ProvCoverSheet.PDF	1476997	no	3
			c3e20bcae09d98d9dd6d6d92c5850455c0f3a6d2c5		

Warnings:

Information:

2	Specification	Specification.pdf	841828	no	2
			1496116cb097a3fade678316231c430800488bca		

Warnings:

Information:

3	Fee Worksheet (SB06)	fee-info.pdf	29362	no	2
			f3f1dbdc2c715b560c50c7ee8849a75ae2e197e		

Warnings:

Information:

Total Files Size (in bytes):	2348187
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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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
62/114,706	02/11/2015		130	DEJ10730P00070US		

CONFIRMATION NO. 2862

32116
WOOD, PHILLIPS, KATZ, CLARK & MORTIMER
500 W. MADISON STREET
SUITE 1130
CHICAGO, IL 60661

FILING RECEIPT



OC000000073796585

Date Mailed: 03/09/2015

Receipt is acknowledged of this provisional patent application. It will not be examined for patentability and will become abandoned not later than twelve months after its filing date. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, 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 Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections 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**

Inventor(s)

Aaron DeJule, River Forest, IL;

Applicant(s)

Aaron DeJule, River Forest, IL;

Power of Attorney: None

If Required, Foreign Filing License Granted: 03/06/2015

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 62/114,706**

Projected Publication Date: None, application is not eligible for pre-grant publication

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

SELF ADJUSTING TENSION CONTROL

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

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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