

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO	
RAD: 14-107178- -2	FECHA: 2015-07-28 13:50:37
DEP: 2020 DIRECCION DE NUEVAS CREACIONES	EVE: 1 REGISTRO/DEPOSITO/CONCESION/DEPOSITO
TRA: 2 PATENTES DE INVENCION	FOLIOS: 4
ACT: 519 TRASLADOINFORME	

DIRECCIÓN DE NUEVAS CREACIONES

2020
Bogotá, D.C.,

Abogado(a)/Señor(a)
SILVANA MARÍA LÓPEZ DÍAZ

Asunto: Radicación: 14-107178- -2
 Trámite: 2
 Evento: 1
 Actuación: 519
 Oficio: 8910
 Folios: 4

Patente de Invención	X			Patente de Modelo de Utilidad	
Vía Nacional	X				
Vía PCT (Fase Nacional)		Capítulo I		Capítulo II	
No. Solicitud Internacional					
Fecha de Presentación Internacional					

Como resultado del examen de fondo realizado, con fundamento en el Artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se comunica:

1. Documentos estudiados

Descripción:	Rad. N° 14-107178-00000-0000	19/Mayo/2014
Reivindicaciones:	Rad. N° 14-107178-00000-0000	19/Mayo/2014
Dibujos:	Rad. N° 14-107178-00000-0000	19/Mayo/2014

2. Análisis de la Prioridad

Se acepta la reivindicación de prioridad porque ésta solicitud fue presentada dentro del plazo establecido (Art. 9 D 486) y su contenido técnico corresponde con el de la prioridad reivindicada.

3. Objeto de la invención

De acuerdo con lo establecido en el numeral 1.2.2.2 del Capítulo Primero del Título X de la Circular Única para efectos del examen de patentabilidad, se tendrá en cuenta la tasa pagada por el solicitante al momento de comenzar el examen para las reivindicaciones adicionales; esto es que cuando la solicitud contenga más de diez (10) reivindicaciones y no se haya pagado la tasa complementaria, sólo se estudiarán las cubiertas por la tasa pagada. Por lo tanto, se estudiarán las reivindicaciones 1 a 5.

Título de la solicitud: “Dispositivo exoesquelético de rehabilitación para los dedos de la mano” (ver página 1 del radicado N° 14-170178-00000-0000).

El problema planteado en esta solicitud consiste en la necesidad de suministrar un dispositivo exoesquelético para realizar terapias de rehabilitación para el dedo índice de la mano que realice los movimientos de extensión y flexión, de construcción sencilla y bajos costos.

Para resolver este problema técnico, la solicitud en estudio proporciona un dispositivo exoesquelético de rehabilitación para el dedo índice que comprende un cuerpo conformado por una manopla y un sistema de barras o falanges que comprende las falanges proximal, media y distal, las cuales se impulsan por medio de motores independientemente controlados a través de un sistema electrónico de control; y un método para controlar el movimiento de flexión-extensión a través de un dispositivo exoesquelético para rehabilitación del dedo índice.

El objeto de la presente solicitud se relaciona con la Clasificación Internacional de Patentes (CIP): A61H 1/02.

4 . De la solicitud de patente

Titulo

El título no corresponde con el objeto de la solicitud porque dentro del pliego reivindicatorio se reclama un dispositivo para la rehabilitación solamente del dedo índice, por lo cual se sugiere la solicitante modificarlo por “Dispositivo exoesquelético de rehabilitación para el dedo índice de la mano” o hacer la corrección necesaria.

Reivindicaciones (Art 30 D 486, Art 22 PCT)

Las reivindicaciones 1, 4 y 5 no son claras porque los términos “*sistema electrónico*”, “*medio de regulación de voltaje*”, “*instrucciones*”, son generales, por lo tanto no permiten establecer la diferencia y el aporte realizado por la invención frente al estado de la técnica.

Las reivindicaciones 1 y 2 no son claras porque caracterizan la invención por sus resultados a obtener así, “*cuyo ángulo de apertura máximo se encuentra establecido por la posición de los dos finales de carrera (2g y 2d)*”, “*el cual imprime movimiento a una cremallera externa (3j)*”, “*el movimiento se realiza en torno a un punto de unión (4c)*”, “*para contabilizar un numero de flexiones que se realizan*”, “*que junto con los amplificadores operaciones y los potenciómetros digitales controlan el sentido de giro y la velocidad de los motores*” lo cual no es permitido ya que equivaldría a definir el problema técnico a resolver y el alcance de la reivindicación incluiría no sólo la solución propuesta por la solicitante, sino todas las alternativas presentes o futuras que lleguen a esos resultados. Se sugiere reemplazarlos por las características esenciales estructurales que contribuyen a la obtención de esos efectos.

Se recuerda al solicitante que las reivindicaciones son las características técnicas esenciales de una invención para las cuales se reclama la protección legal mediante la solicitud de patente. Para el caso de producto, estas deben contener todas las características técnicas de carácter tangible (partes mecánicas, eléctricas, electrónicas y su relación o conexión), las cuales le permitan obtener los usos, resultados o funcionamiento deseado, pueden contener si es necesario referencias de los dibujos para ser más claras, se permite la presencia de signos de referencia entre paréntesis después de la característica mencionada en la reivindicación; para un procedimiento,

estas deben divulgar los pasos necesarios para obtener un producto y/o una transformación de un estado inicial, en el caso de invenciones implementadas por computador, los pasos deben estar vinculados con una materia técnica tangible, la cual debe ser específica para el desarrollo de dicho procedimiento, y que resuelva el problema técnico propuesto por la solicitud.

Por lo anterior, el capítulo reivindicatorio de la solicitud en estudio no cumple con el requisito de claridad acuerdo con el artículo 30 de la Decisión 486. En consecuencia, el solicitante deberá presentar un nuevo capítulo reivindicatorio, donde se hayan modificado las objeciones anteriormente citadas; dichas modificaciones no deben ampliar el objeto inicialmente presentado por la presente solicitud.

5. Determinación del Estado de la Técnica

El estado de la técnica se determinó con base en la fecha de presentación de la solicitud de patente nacional: mayo 19 de 2014, consultadas las fuentes de información con que se cuenta, no se encontraron documentos que anticipen el objeto de esta solicitud.

6. Conclusión

Las características técnicas tangibles del dispositivo exoesquelético y los pasos del método de control incluidos en el pliego reivindicatorio no se encuentran divulgadas en el estado de la técnica, por lo tanto la solicitud cumple con el requisito de los artículos 16 y 18 de la Decisión 486. Sin embargo, es necesario que el solicitante realice las correcciones y/o aclaraciones a las objeciones de claridad en el capítulo reivindicatorio.

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de sesenta (60) días contados a partir del día siguiente de la fecha de notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Se invita al solicitante se sirva indicar, si así lo considera, su renuncia al término faltante de sesenta (60) días para dar respuesta a este requerimiento y presentarla por escrito.

Finalmente, se le recuerda al solicitante que si como respuesta a este requerimiento llegara a modificar el capítulo reivindicatorio y éste contenga más de diez (10) reivindicaciones, no pagará la tasa de modificación voluntaria pero sí la correspondiente al pago por reivindicación adicional.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la Circular Única No. 10 de 2001.



JOSÉ LUIS SALAZAR LÓPEZ
Director de Nuevas Creaciones (c)

El anterior requerimiento fue notificado por fijación en lista, de fecha 2015-08-04

Elaboró: Diego Gonzalez Castillo
Revisó: Francisco Javier Gonzalez Paez

Diego Gonzalez

Title: FACILITATING MOBILE DEVICE PAYMENTS USING PRODUCT CODE SCANNING

Abstract: Source: US2012006891A Provided are computer implemented methods and systems for facilitating mobile device payments using barcodes displayed on mobile devices and scanned by merchants at checkout counters. When a customer is ready to tender a payment to a merchant, instead of using a credit card, cash, or check, the customer activates an application on his mobile device. The mobile device includes or obtains information about the payment system of this merchant. Furthermore, the mobile device includes or obtains information about the customer/mobile device user and then uses these two pieces of information to generate and display a barcode that encodes customer payment information specific to this merchant. The barcode is scanned at the checkout counter and processed to retrieve customer records from a database of the payment processing system. These records are then used to transfer funds between the merchant and customer, obtain discounts, and/or perform other retail transactions.

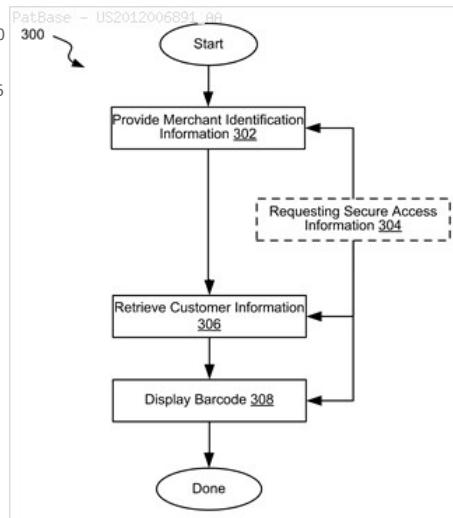
Classifications:

International (IPC 8-9): A61B5/00 A61B5/02 A61B5/08 B25J9/00 B25J9/16 B64C19/00 B64C27/10 B64C27/20 B64D1/08 B64D17/00 G01C21/00 G02B27/01 G06F1/16 G06F15/16 G06F3/041 G06F3/042 G06F3/0482 G06F3/0484 G06F3/0488 G06K5/00 G06K7/00 G06K7/08 G06K7/10 G06K9/00 G06K9/20 G06Q20/00 G06Q20/10 G06Q20/16 G06Q20/20 G06Q20/32 G06Q20/34 G06Q20/38 G06Q20/40 G06Q30/02 G06Q30/06 G06Q40/00 G06Q40/02 G06T19/00 G08B21/06 H04B7/00 H04L12/14 H04M1/725 (Advanced/Invention)

CPC: G06Q20/355 G06Q20/105 G06Q20/367 G06T19/006 G06F3/0426 G08B21/06 G06Q30/0641 G01C21/00 G06Q20/425 G06Q20/20 G06Q30/0267 G06Q40/025 G06Q30/0226 G06Q30/0215 G06Q20/3821 G06Q20/385 B64D1/08 B25J9/0006 B64C27/10 B64C27/20 B64C19/00 B64D17/00 B25J9/16 B25J9/1697 G06K9/00013 G06F3/041 G06Q20/3829 G06Q20/327 G06Q20/209 Y105901/01 G06Q20/204 G06Q20/363 G06Q20/322 G06Q30/06 G07G1/0081 G02B2027/0134 G04G21/04 G02B27/017 G06Q20/4014 G06Q2220/00 G06Q20/405 G06Q20/351 H04L12/146 G06Q20/16 G06Q20/401 G06Q20/36 G06Q20/3224 G06Q20/208 H04M1/72522 H04M1/72555 G06K7/10891 G06Q20/06 G06Q20/10 G06F15/0216 A63F13/00 G06Q20/3823 G06F3/0488 G06F3/0346 G06F3/0304 A63F13/211 A63F13/212 A63F13/332 G06Q20/3274 G06F1/1652 G06Q20/00 G06Q20/40145 H04M1/2755 H04M1/72519 G06F1/1677 H04M17/02 H04M17/10 G02B2027/0138 G02B2027/014 G02B2027/0178 G06F1/163 G06F3/012 G06F3/013 G06F3/017 G06Q20/3276 B64C39/024

European: G06Q20/3274

US: 235/379 235/380 235/380P 235/381 235/435 235/439 235/449 235/451 235/462.43 235/462.44 244/17.23 244/194 244/23A 244/4A 258/1.2 340/425.5 345/156 345/173 345/175 345/8 382/124 455/41.3 455/466 455/66.1 701/2 701/28 701/412 701/428 705/14.17 705/14.23 705/14.4 705/16 705/24 705/26.1 705/26.6 705/26.7 705/26.8 705/26.9 705/38 705/39 705/41 705/44 705/71 715/844 901/1

**Family:**

Publication number	Publication date	Application number	Application date
EP2896001 A1	20150722	EP20130836625	20130830
EP2896011 A1	20150722	EP20130837987	20130830
US2012006891 AA	20120112	US20110185491	20110718
US2013018715 AA	20130117	US20120623944	20120921
US2013018782 AA	20130117	US20120620775	20120915
US2013026232 AA	20130131	US20120646706	20121007
US2013043305 AA	20130221	US20120661207	20121026
US2013141313 AA	20130606	US20130753855	20130130
US2013146659 AA	20130613	US20130760214	20130206
US2013240622 AA	20130919	US20130875311	20130502
US2013346168 AA	20131226	US20130973146	20130822
US2014129422 AA	20140508	US20140154446	20140114
US2014143037 AA	20140522	US20140165826	20140128
US2014239065 AA	20140828	US20140272939	20140508
US2014254896 AA	20140911	US20140285659	20140523
US2014330656 AA	20141106	US20140334992	20140718
US2014349692 AA	20141127	US20140458791	20140813
US2015026072 AA	20150122	US20140509027	20141007
US8851372 BB	20141007	US20140272939	20140508
US9016565 BB	20150428	US20130760214	20130206
US9047600 BB	20150602	US20140334992	20140718
WO14041456 A1	20140320	WO20131B58157	20130830
WO14041458 A1	20140320	WO20131B58164	20130830
WO14045145 A1	20140327	WO20131B58161	20130830
WO14053924 A1	20140410	WO20131B58170	20130830
WO14064549 A1	20140501	WO20131B58171	20130830
WO14118703 A1	20140807	WO20141B58616	20140128
WO14122558 A1	20140814	WO20141B58614	20140128
WO14132192 A1	20140904	WO20141B59251	20140226
WO15025251 A1	20150226	WO20141B63914	20140814

Priority:

US20110185491 20110718	US20110287279 20111102	US20120620775 20120915
US20120623944 20120921	US20120646706 20121007	US20120343044 20120104
US20130753855 20130130	US20130760214 20130206	US20130875311 20130502
US20120661207 20121026	US20130973146 20130822	US20130776852 20130226
US20130857308 20130405	WO20131B58164 20130830	US20140154446 20140114
US20140165826 20140128	US20140272939 20140508	US20140285659 20140523
US20140334992 20140718	US20140198683 20140306	US20140458791 20140813
US20140509027 20141007	WO20131B58157 20130830	

Probable Assignee: ZHOU ANDREW H B

Assignee(s): (std): ZHOU DYLAN ; ZHOU DYLAN T X ; ZHOU TIGER T G ; ZHOU ANDREW ; ZHOU ANDREW H B ; ZHOU TIGER

Assignee(s): ZHOU ANDREW HB ; ZHOU TIGER TG ; ZHOU DYLAN TX

Inventor(s): (std): ZHOU ANDREW ; ZHOU ANDREW H B ; ZHOU DYLAN ; ZHOU DYLAN T X ; ZHOU TIGER ; ZHOU TIGER T G

Inventor(s): ZHOU TIGER TG ; ZHOU DYLAN TX ; ZHOU ANDREW HB

Agent(s): TEALL CHARLOTTE; PATENT JURIST; GEORGIY L

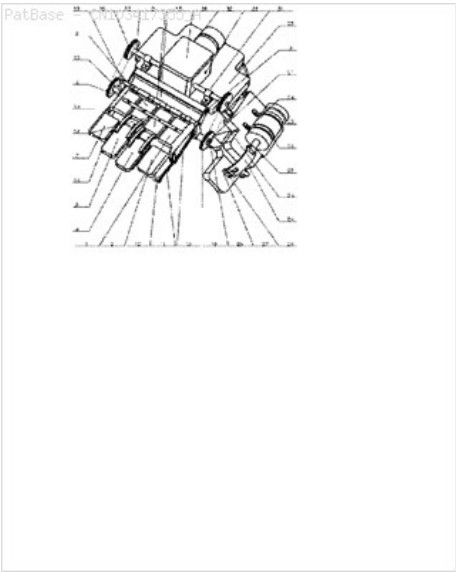
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Title: WEARABLE EXOSKELETON HAND FUNCTION REHABILITATION TRAINER

Abstract: Source: CN103417355A The invention relates to a wearable exoskeleton hand function rehabilitation trainer and belongs to the technical field of rehabilitation engineering. The wearable exoskeleton hand function rehabilitation trainer comprises a four-finger drive mechanism, a thumb drive mechanism, a back supporting plate and finger mechanisms. The hand back supporting plate is fixedly connected with the four-finger drive mechanism, a motor is connected with the index finger through gear movement and drives the index finger to move, four fingers are connected through connecting parts at the near ends of the four fingers, and movements of other fingers are driven by the movement of the index finger. One side of the back supporting plate is connected with the thumb drive mechanism. The wearable exoskeleton hand function rehabilitation trainer can finish opposite movement of the thumb and the index finger, the movement speed of an index finger mechanism can be set according to the rehabilitation situation of a patient. In addition, a wearable function of the trainer can be achieved through connection of worn gloves and the hand. The wearable exoskeleton hand function rehabilitation trainer is simple in structure, light and convenient to operate and can be used for rehabilitation training of the patient in a community and at home by himself/herself.

Classifications:

International (IPC 8-9): A61H1/00 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN103417355 A	20131204	CN201210509107	20121202
CN103417355 B	20150311	CN201210509107	20121202

Priority:

CN201210509107 20121202

Probable Assignee: UNIV SHANGHAI SCIENCE AND TECH

Assignee(s): (std): OF SHANGHAI FOR SCIENCE AND TECHNOLOGY UNIV ; UNIV SHANGHAI SCIENCE AND TECH

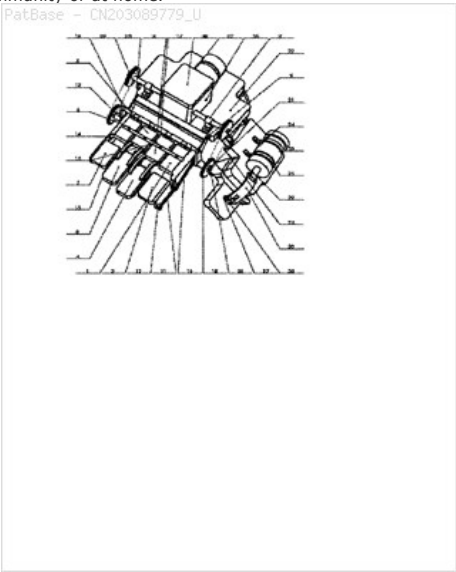
Inventor(s): (std): ZHANG YING ; YU HONGLIU ; SU PENGFEI ; LI XIUZHI ; LI JICAI ; HU XIN ; CHEN NA

Title: WEARABLE EXOSKELETON HAND FUNCTIONAL REHABILITATION TRAINING DEVICE

Abstract: Source: CN203089779U The utility model relates to a wearable exoskeleton hand functional rehabilitation training device which belongs to the technical field of rehabilitation engineering. The wearable exoskeleton hand functional rehabilitation training device comprises a four-finger driving mechanism, a thumb driving mechanism, a back supporting plate and a finger mechanism. The hand back supporting plate is fixedly connected with the four-finger driving mechanism; a motor driver is connected with the forefinger through the movement of a gear, so as to drive the movement of the forefinger; four fingers are connected through connecting pieces on the near ends of the four fingers; and the movement of the forefinger drives the movement of other fingers. One side of the back supporting plate is connected with the thumb driving mechanism. According to the wearable exoskeleton hand functional rehabilitation training device, the opposite movement of the thumb and the finger can be completed, and the moving speed of a forefinger mechanism can be set according to the rehabilitation of a patient. Meanwhile, the wearable function of the mechanism can be realized through the connection between wearable gloves and hands. The structure is simple, the weight is light, the operation is convenient, and the wearable exoskeleton hand functional rehabilitation training device can be used for the rehabilitation of the patient in a community or at home.

Classifications:

International (IPC 8-9): A61H1/02 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN203089779 U	20130731	CN201220655225U	20121202

Priority:

CN201220655225U 20121202

Probable Assignee: UNIV SHANGHAI SCIENCE AND TECH

Assignee(s): (std): OF SHANGHAI FOR SCIENCE AND TECHNOLOGY UNIV ; UNIV SHANGHAI SCIENCE AND TECH

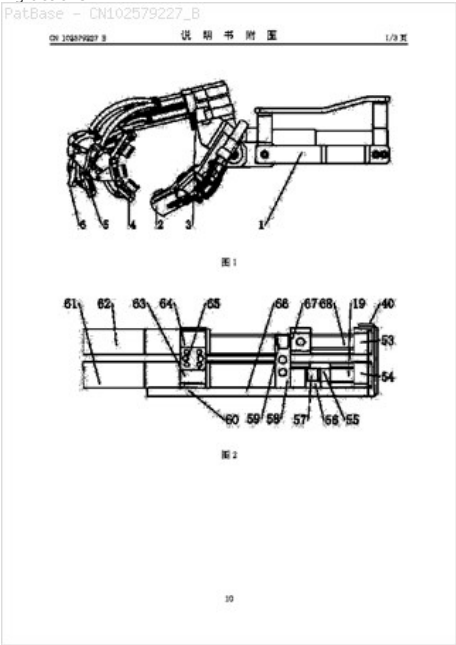
Inventor(s): (std): ZHANG YING ; YU HONGLIU ; SU PENGFEI ; LI XIUZHI ; LI JICAI ; HU XIN ; CHEN NA

Title: **HAND** AND WRIST **EXOSKELETON REHABILITATION** TRAINING DEVICE

Abstract: Source: CN102579227A The invention discloses a **hand** and wrist **exoskeleton rehabilitation** training device, comprising a wrist, a thumb, a power source, an index **finger**, a middle **finger** and a ring **finger**, wherein the power source is fixed on the wrist, and the thumb, the index **finger**, the middle **finger** and the ring **finger** are respectively connected with the power source. A **motor** drives a feed screw nut, so that the **rehabilitation** training device obtains power; the **rehabilitation** training device is simple in structure and easy to implement; weight of **hand exoskeleton** is born by a support part, so that a patient has no burden; and the **rehabilitation** training device realizes movements with more degrees of freedom, and can complete more and more skillful **rehabilitation** training actions.

Classifications:

International (IPC 8-9): A61H1/02 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN102579227 A	20120718	CN201210047351	20120228
CN102579227 B	20140129	CN201210047351	20120228

Priority:

CN201210047351 20120228

Probable Assignee: UNIV ZHEJIANG

Assignee(s): (std): UNIV ZHEJIANG ; ZHEJIANG UNIV

Assignee(s): ZHEJIANG UNIVERSITY

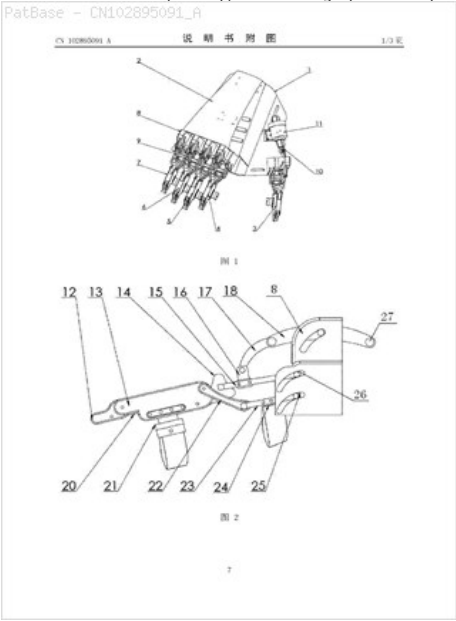
Inventor(s): (std): BI QIAN ; CANJUN YANG ; DENG XUELEI ; JUNCHUAN ZHANG ; QIAN BI ; SHAOYONG ZHANG ; XUELEI DENG ; YANG CANJUN ; ZHANG JUNCHUAN ; ZHANG SHAOYONG

Title: WEARABLE PORTABLE POWER EXOSKELETON HAND FUNCTION REHABILITATION TRAINING DEVICE

Abstract: Source: CN102895091A The invention relates to a wearable portable power exoskeleton hand function rehabilitation training device, which comprises a palm plate, a shell, five fingers, a bionic tendon connecting rod assembly, a driving push rod and a linear push rod motor assembly. The linear push rod motor assembly is fixed on the palm plate, and is respectively connected with the five fingers through the driving push rod and the bionic tendon connecting rod assembly fixed on a finger root fixing seat to form a finger driving mechanism. The device is powered by two linear push rod motors which respectively drive the four fingers and the thumb, a driving mode is greatly simplified, and the number of the used motors is reduced; and the device is simple in structure and easy to use. A hand exoskeleton part well clings to a palm of a patient, a good bionic effect is achieved, and the rehabilitation training of the patient with impaired hand functions can be well carried out by the device. Owing to the design of a position-adjustable finger bandage system, the wearing mode of the device can be flexibly adjusted according to the sizes of the hands of the patient, and the device is not required to be tailor-made specially, and has high practicality.

Classifications:

International (IPC 8-9): A61H1/02 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN102895091 A	20130130	CN201210430290	20121101
CN102895091 B	20140528	CN201210430290	20121101

Priority:

CN201210430290 20121101

Probable Assignee: UNIV SHANGHAI SCIENCE AND TECH

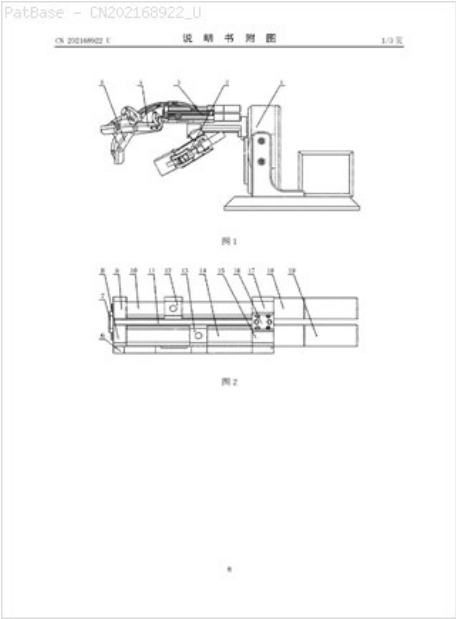
Assignee(s): (std): OF SHANGHAI FOR SCIENCE AND TECHNOLOGY UNIV ; UNIV SHANGHAI SCIENCE AND TECH

Inventor(s): (std): HU XIN ; LI JICAI ; YI JINHUA ; YU HONGLIU ; ZHANG YING

Title: Fixed exoskeleton rehabilitation training manipulator

Abstract: Source: CN202168922U The utility model discloses a fixed exoskeleton rehabilitation training manipulator which comprises a wrist supporting seat, a thumb, a power source, an index finger, a middle finger and the like, wherein the power source is fixed on the wrist supporting seat, and the thumb, the index finger and the middle finger are respectively connected with the power source. The fixed exoskeleton rehabilitation training manipulator is small in volume, smart, intelligentized and good in operation performance. The manipulator obtains power in the way that a motor drives screw rod nuts, and is simple in structure and easy to realize; an exoskeleton at a hand part bears weight by a supporting part, so that burden on a patient can not be realized; and the fixed exoskeleton rehabilitation training manipulator provides motion of a plurality of freedom degrees, thus being capable of completing more and smarter rehabilitation training actions.

Classifications:
International (IPC 8-9): A61H1/02 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN202168922 U	20120321	CN201120148349U	20110511

Priority:

CN201120148349U 20110511

Probable Assignee: UNIV ZHEJIANG

Assignee(s): (std): UNIV ZHEJIANG ; ZHEJIANG UNIV

Assignee(s): ZHEJIANG UNIVERSITY

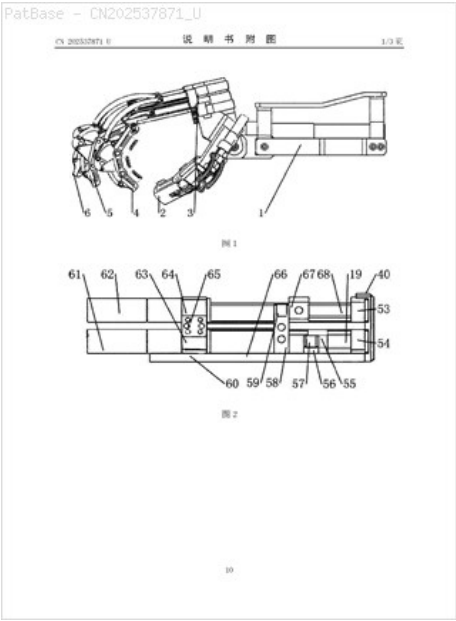
Inventor(s): (std): QIAN BI ; CANJUN YANG

Inventor(s): BI QIAN ; YANG CANJUN

Title: Hand and wrist exoskeleton rehabilitation training device

Abstract: Source: CN202537871U The utility model discloses a hand and wrist exoskeleton rehabilitation training device. The device comprises a wrist, a thumb, a power source, an index finger, a middle finger and a ring finger, wherein the power source is fixed on the wrist; and the thumb, the index finger, the middle finger and the ring finger are connected with the power source. A motor drives a screw rod nut to obtain power, and the device has a simple structure and is easy to implement; hand exoskeleton bears weight through a supporting part, so that burden cannot be brought to a patient; and exercise with multiple degrees of freedom is provided, and a large number of flexible rehabilitation training actions can be finished.

Classifications:
International (IPC 8-9): A61H1/02 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN202537871 U	20121121	CN201220067952U	20120228

Priority:
CN201220067952U 20120228

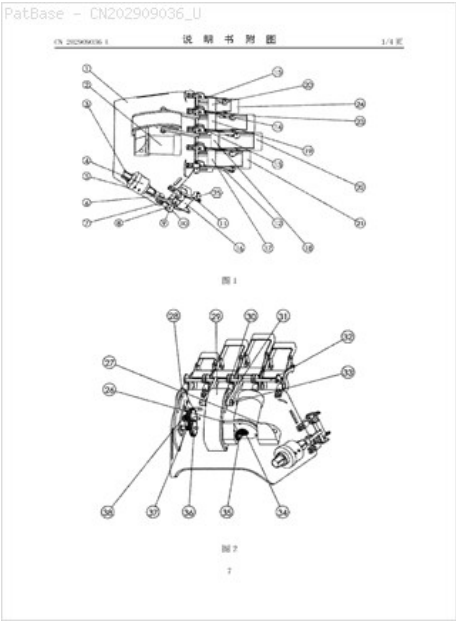
Probable Assignee: UNIV ZHEJIANG
Assignee(s): (std): UNIV ZHEJIANG ; ZHEJIANG UNIV
Assignee(s): ZHEJIANG UNIVERSITY
Inventor(s): (std): JUNCHUAN ZHANG ; QIAN BI ; SHAOYONG ZHANG ; XUELEI DENG ; CANJUN YANG
Inventor(s): DENG XUELEI ; BI QIAN ; YANG CANJUN ; ZHANG JUNCHUAN ; ZHANG SHAOYONG

Title: EXOSKELETAL BIOFEEDBACK HAND FUNCTION TRAINING DEVICE

Abstract: Source: CN202909036U The utility model designs an exoskeletal biofeedback hand function training device based on the fact that the specific and efficient rehabilitation training equipment for hand dysfunction does not exist in the domestic clinical rehabilitation center. The utility model provides an exokeletal biofeedback hand function training device. The hand function training device comprises an opisthenar laminated panel which is worn on the hands of the patients, a five-finger driving mechanism which is connected with the opisthenar laminated panel and a motor transmission mechanism which is connected with the opisthenar laminated panel. The motor transmission mechanism comprises a linear motor transmission mechanism which drives a thumb mechanism and a dime-size current dynamo transmission mechanism which drives other four fingers mechanism.

Classifications:

International (IPC 8-9): A61H1/02 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN202909036 U	20130501	CN201220656504U	20121202

Priority:

CN201220656504U 20121202

Probable Assignee: UNIV SHANGHAI SCIENCE AND TECH

Assignee(s): (std): OF SHANGHAI FOR SCIENCE AND TECHNOLOGY UNIV ; UNIV SHANGHAI SCIENCE AND TECH

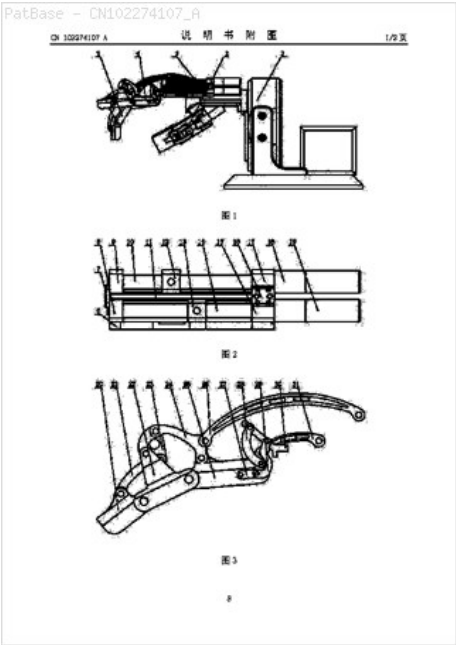
Inventor(s): (std): GUAN LONG ; HU XIN ; LI JICAI ; LI XIUZHI ; SU PENGFEI ; YU HONGLIU ; ZHANG YING

Title: FIXED EXOSKELETON REHABILITATION TRAINING MANIPULATOR

Abstract: Source: CN102274107A The invention discloses a fixed exoskeleton rehabilitation training manipulator, which comprises a wrist support, a thumb, a power source, a forefinger, a middle finger, and so on, wherein the power source is fixed on the wrist support, and the thumb, the forefinger and the middle finger are all connected with the power source. The fixed exoskeleton rehabilitation training manipulator disclosed by the invention has the advantages of small volume, ingenious design, intelligentization and good operating performance. The manipulator is powered by driving a feed screw nut through a motor, has simple structure, and is easy for implementation. The hand exoskeletons bear weight through the support part, so as not to be burdensome on patients. Also, the manipulator provides multi-freedom movement, and can complete more and more skillful rehabilitation training actions.

Classifications:

International (IPC 8-9): A61H1/02 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN102274107 A	20111214	CN201110121085	20110511
CN102274107 B	20130327	CN201110121085	20110511

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CN201110121085 20110511

Probable Assignee: UNIV ZHEJIANG

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Inventor(s): (std): BI QIAN ; YANG CANJUN