

UNITED STATES DISTRICT COURT  
 EASTERN DISTRICT OF MICHIGAN

CHOON'S DESIGN INC.,  
 a Michigan corporation,

Plaintiff(s),

Case No. 2:14-cv-11102-RHC-MJH

v.

Judge Robert H. Cleland

QUALITY INNOVATIONS INC.,  
 a California corporation,

Magistrate Judge Michael Hluchaniuk

Defendant(s).

**REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK**

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court, Eastern District of Michigan, on the following  Patents or  Trademarks

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	8,485,565	7/6/2013	Choon's Design, LLC
2	8,622,441	1/7/2014	Choon's Design, LLC
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To list additional patent/trademark numbers, please attach another page with the number, date and holder.

Date: March 14, 2014

/s/ Brian S. Tobin

P67621  
 Carlson, Gaskey & Olds, P.C.  
 400 W. Maple Rd.  
 Suite 350  
 Birmingham, MI 48009  
 (248) 988-8360  
 btobin@cgolaw.com

AO 120 (Rev. 08/10)

TO: <b>Mail Stop 8</b> <b>Director of the U.S. Patent and Trademark Office</b> P.O. Box 1450 Alexandria, VA 22313-1450	<b>REPORT ON THE                  FILING OR DETERMINATION OF AN                  ACTION REGARDING A PATENT OR                  TRADEMARK</b>
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Michigan on the following

Trademarks or  Patents. (  the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 14-10847	DATE FILED 2/24/2014	U.S. DISTRICT COURT Eastern District of Michigan
PLAINTIFF Choon's Design LLC		DEFENDANT NGS iCommerce Enterprises Corporation
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 see attached		see attached
2		
3		
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY	<input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT Stipulated Dismissal
--

CLERK David J Weaver	(BY) DEPUTY CLERK S. Schoenherr	DATE 11/21/2014
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Copy 1—Upon initiation of action, mail this copy to Director    Copy 3—Upon termination of action, mail this copy to Director  
 Copy 2—Upon filing document adding patent(s), mail this copy to Director    Copy 4—Case file copy

UNITED STATES DISTRICT COURT  
 EASTERN DISTRICT OF MICHIGAN

CHOON'S DESIGN LLC,  
 a Michigan limited liability company,

Plaintiff(s),

Case No. 2:14-cv-10847-SJM-MAR

v.

Judge Stephen J. Murphy, III

NGS ICOMMERCE ENTERPRISES  
 CORPORATION, a Florida corporation,

Magistrate Judge Mark A. Randon

Defendant(s).

**REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK**

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court, Eastern District of Michigan, on the following  Patents or  Trademarks

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	8,485,565	7/16/2013	Choon's Design, LLC
2	8,622,441	1/7/2014	Choon's Desgin, LLC
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To list additional patent/trademark numbers, please attach another page with the number, date and holder.

Date: February 24, 2014

/s/ Brian S. Tobin

P67621  
 Carlson, Gaskey & Olds, P.C.  
 400 W. Maple Rd.  
 Suite 350  
 Birmingham, MI 48009  
 (248) 988-8360  
 btobin@cgolaw.com

UNITED STATES DISTRICT COURT  
 EASTERN DISTRICT OF MICHIGAN

CHOON'S DESIGN INC.,  
 a Michigan corporation,

Plaintiff(s),

Case No. 2:14-cv-13242-LVP-MKM

v.

Judge Linda V. Parker

OPTARI LLC,  
 a Tennessee limited liability company,

Magistrate Judge Mona K. Majzoub

Defendant(s).

**REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK**

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court, Eastern District of Michigan, on the following  Patents or  Trademarks

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	8,622,441	01/07/2014	Choon's Design Inc.
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To list additional patent/trademark numbers, please attach another page with the number, date and holder.

Date: August 21, 2014

/s/ Timothy J. Murphy  
 P77041  
 CARLSON, GASKEY & OLDS, P.C.  
 400 W. Maple, Suite 350  
 Birmingham, Michigan 48009  
 (248) 988-8360  
 tmurphy@cgolaw.com

AO 120 (Rev. 08/10)		
TO:	<p align="center"><b>Mail Stop 8</b>  <b>Director of the U.S. Patent and Trademark Office</b>  <b>P.O. Box 1450</b>  <b>Alexandria, VA 22313-1450</b></p>	<p align="center"><b>REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK</b></p>
<p align="center">In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the District of New Jersey on the following:          ___ Trademarks or <input checked="" type="checkbox"/> Patents. ( ___ the patent action involves 35 U.S.C. § 292.)</p>		
DOCKET NO. 2:14-cv-03218-WHW-CLW	DATE FILED 5/19/2014	U.S. DISTRICT COURT NEWARK, NJ
PLAINTIFF TRISTAR PRODUCTS, INC.		DEFENDANT CHOON'S DESIGN INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 8,684,420 B2	APR. 1, 2014	Assignee: Choon's Design LLC
2 US 8,485,565 B2	JUL. 16, 2013	Inventor: Cheong Choon Ng
3 US 8,622,441 B1	JAN. 7, 2014	Inventor: Cheong Choon Ng
4		
5		

In the above--entitled case, the following patent(s)/ trademark(s) have been included:		
DATE INCLUDED	INCLUDED BY ___ Amendment ___ Answer ___ Cross Bill ___ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
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In the above--entitled case, the following decision has been rendered or judgement issued:	
DECISION/JUDGEMENT	

CLERK William T. Walsh	(BY) DEPUTY CLERK s/ Dianne C. Richards	DATE 5/19/2014
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director  
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF MICHIGAN

CHOON'S DESIGN INC.,  
a Michigan corporation,

Plaintiff(s),

Case No. 2:14-cv-11102-RHC-MJH

v.

Judge Robert H. Cleland

QUALITY INNOVATIONS INC.,  
a California corporation,

Magistrate Judge Michael Hluchaniuk

Defendant(s).

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Date: March 14, 2014

/s/ Brian S. Tobin

P67621

Carlson, Gaskey & Olds, P.C.

400 W. Maple Rd.

Suite 350

Birmingham, MI 48009

(248) 988-8360

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UNITED STATES DISTRICT COURT  
 EASTERN DISTRICT OF MICHIGAN

CHOON'S DESIGN LLC,  
 a Michigan limited liability company,

Plaintiff(s),

Case No. 2:14-cv-10847-SJM-MAR

v.

Judge Stephen J. Murphy, III

NGS ICOMMERCE ENTERPRISES  
 CORPORATION, a Florida corporation,

Magistrate Judge Mark A. Randon

Defendant(s).

**REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK**

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To list additional patent/trademark numbers, please attach another page with the number, date and holder.

Date: February 24, 2014

/s/ Brian S. Tobin

P67621  
 Carlson, Gaskey & Olds, P.C.  
 400 W. Maple Rd.  
 Suite 350  
 Birmingham, MI 48009  
 (248) 988-8360  
 btobin@cgolaw.com



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
14/018,542	09/05/2013	Cheong Choon Ng	67467-009 PUS2

**CONFIRMATION NO. 5921**

**IMPROPER CFR REQUEST**

26096  
CARLSON, GASKEY & OLDS, P.C.  
400 WEST MAPLE ROAD  
SUITE 350  
BIRMINGHAM, MI 48009



Date Mailed: 01/07/2014

**RESPONSE TO REQUEST FOR CORRECTED FILING RECEIPT**

***Power of Attorney, Claims, Fees, System Limitations, and Miscellaneous***

In response to your request for a corrected Filing Receipt, the Office is unable to comply with your request because:

- Any request to correct or update the name of the applicant must include an application data sheet (ADS) in compliance with 37 CFR 1.76 specifying the correct or updated name of the applicant in the applicant information section. Any request to change the applicant after an original applicant has been specified under 37 CFR 1.46(b) must include a new ADS in compliance with 37 CFR 1.76 specifying the applicant in the applicant information section and comply with 37 CFR 3.71 and 3.73. See 37 CFR 1.46(c).

/rmohamed/

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





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
14/018,542	09/05/2013	Cheong Choon Ng	67467-009 PUS2

**CONFIRMATION NO. 5921  
IMPROPER CPOA LETTER**

26096  
CARLSON, GASKEY & OLDS, P.C.  
400 WEST MAPLE ROAD  
SUITE 350  
BIRMINGHAM, MI 48009



Date Mailed: 01/07/2014

**NOTICE REGARDING POWER OF ATTORNEY**

This is in response to the power of attorney filed 12/27/2013. The power of attorney in this application is not accepted for the reason(s) listed below:

- The power of attorney has not been accepted because the party who is giving power has not been identified. Power of attorney may only be signed by the applicant for patent (37 CFR 1.42) or the patent owner. A party who is not the applicant must become the applicant in accordance with 37 CFR 1.46(c) and appoint any power of attorney in compliance with 37 CFR 3.71 and 3.73. For a reissue application, reexamination proceeding, or supplemental examination proceeding, a patent owner who was not the applicant under 37 CFR 1.46 must appoint any power of attorney in compliance with 37 CFR 3.71 and 3.73. See 37 CFR 1.32(b)(4).

/rmohamed/

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

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:

26096

**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:

26096

**OR**


<input type="checkbox"/>	Firm or Individual Name			
	Address			
	City	State	Zip	
	Country			
	Telephone	Email		

Assignee Name and Address: Choon's Design LLC  
48813 West Road  
Wixom, MI 48393

**A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/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		Date	11/3/2013
Name	Cheong Choon Ng	Telephone	(248) 231-6158
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.

**STATEMENT UNDER 37 CFR 3.73(c)**

Applicant/Patent Owner: Cheong Choon Ng  
Application No./Patent No.: 14/018542 Filed/Issue Date: 09/05/2013  
Titled: BRUNNIAN LINK MAKING DEVICE AND KIT  
Choon's Design LLC, a limited liability company  
(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 031741, Frame 0452, 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.

/John M. Siragusa/

Signature

John M. Siragusa

Printed or Typed Name

December 27, 2013

Date

46174 - Attorney of Record

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.

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	17764986
<b>Application Number:</b>	14018542
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	5921
<b>Title of Invention:</b>	HAND HELD LINK MAKING DEVICE AND KIT
<b>First Named Inventor/Applicant Name:</b>	Cheong Choon Ng
<b>Customer Number:</b>	26096
<b>Filer:</b>	John M. Siragusa/Amy Spaulding
<b>Filer Authorized By:</b>	John M. Siragusa
<b>Attorney Docket Number:</b>	67467-009 PUS2
<b>Receipt Date:</b>	27-DEC-2013
<b>Filing Date:</b>	05-SEP-2013
<b>Time Stamp:</b>	10:31:50
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	Executed_POA.pdf	2096521 <small>5de76206743d2e561b95229b97c9a97cda7a5ae</small>	no	1

### Warnings:

### Information:

2	Assignee showing of ownership per 37 CFR 3.73.	StatementUnder373c.pdf	117947 <small>0b325f1353fe54187038d7a9cc051048f24c9efb</small>	no	3
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>				2214468	
<p><b>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.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  <b>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.</b></p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  <b>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.</b></p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  <b>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.</b></p>					



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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Table with 5 columns: APPLICATION NO., ISSUE DATE, PATENT NO., ATTORNEY DOCKET NO., CONFIRMATION NO.
14/018,542 01/07/2014 8622441 67467-009 PUS2 5921

26096 7590 12/18/2013
CARLSON, GASKEY & OLDS, P.C.
400 WEST MAPLE ROAD
SUITE 350
BIRMINGHAM, MI 48009

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

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

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

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

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

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

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

Cheong Choon Ng, Novi, MI;

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



Receipt date: 09/05/2013

14018542 - GAU: 3765

Doc code: IDS

PTO/SB/08a (01-10)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Cheong Choon Ng	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	67467-009 PUS2	

U.S. PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
/SRH/	1	0254258		1882-02-28	Barbour	
/SRH/	2	0254288		<del>1992-02-28</del> February 28, 1882	Dimmick	
/M.A./ 12/4/2013 /SRH/	3	0782657		1905-02-14	Hubert	
/SRH/	4	0843495		1907-02-05	Sander	
/SRH/	5	1073226		1913-09-16	Freeman	
/SRH/	6	1366212		1921-01-18	Pollard	
/SRH/	7	1375119		1921-04-19	Stephen	
/SRH/	8	1424458		1922-08-01	Fleisher	

**PART B - FEE(S) TRANSMITTAL**

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450**  
or **Fax** **(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)

26096 7590 11/27/2013  
**CARLSON, GASKEY & OLDS, P.C.**  
 400 WEST MAPLE ROAD  
 SUITE 350  
 BIRMINGHAM, MI 48009

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

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

<b>Amy M. Spaulding</b>	(Depositor's name)
<b>/Amy M. Spaulding/</b>	(Signature)
<b>December 2, 2013</b>	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/018,542	09/05/2013	Cheong Choon Ng	67467-009 PUS2	5921

TITLE OF INVENTION: HAND HELD LINK MAKING DEVICE AND KIT

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$890	\$0	\$0	\$890	02/27/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
HURLEY, SHAUN R	3765	289-001500

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). <input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. <input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. <b>Use of a Customer Number is required.</b>	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.	<u>Carlson, Gaskey &amp; Olds, P.C.</u> 2 _____ 3 _____
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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 has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE **Choon's Design LLC** (B) RESIDENCE: (CITY and STATE OR COUNTRY) **Wixom, MI**

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

4a. The following fee(s) are submitted: <input checked="" type="checkbox"/> Issue Fee <input type="checkbox"/> Publication Fee (No small entity discount permitted) <input type="checkbox"/> Advance Order - # of Copies _____	4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above) <input type="checkbox"/> A check is enclosed. <input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached. <input checked="" type="checkbox"/> The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number <u>50-1482</u> (enclose an extra copy of this form).
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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 form 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.

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NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

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Authorized Signature /John M. Siragusa/

Date December 2, 2013

Typed or printed name John M. Siragusa

Registration No. 46174

---

This collection of information 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 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, 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.

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## Electronic Patent Application Fee Transmittal

<b>Application Number:</b>	14018542
<b>Filing Date:</b>	05-Sep-2013
<b>Title of Invention:</b>	HAND HELD LINK MAKING DEVICE AND KIT
<b>First Named Inventor/Applicant Name:</b>	Cheong Choon Ng
<b>Filer:</b>	John M. Siragusa/Amy Spaulding
<b>Attorney Docket Number:</b>	67467-009 PUS2

Filed as Small Entity

### Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
Utility Appl Issue Fee	2501	1	890	890

**Extension-of-Time:**

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>890</b>

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	17538779
<b>Application Number:</b>	14018542
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	5921
<b>Title of Invention:</b>	HAND HELD LINK MAKING DEVICE AND KIT
<b>First Named Inventor/Applicant Name:</b>	Cheong Choon Ng
<b>Customer Number:</b>	26096
<b>Filer:</b>	John M. Siragusa/Amy Spaulding
<b>Filer Authorized By:</b>	John M. Siragusa
<b>Attorney Docket Number:</b>	67467-009 PUS2
<b>Receipt Date:</b>	02-DEC-2013
<b>Filing Date:</b>	05-SEP-2013
<b>Time Stamp:</b>	14:52:45
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

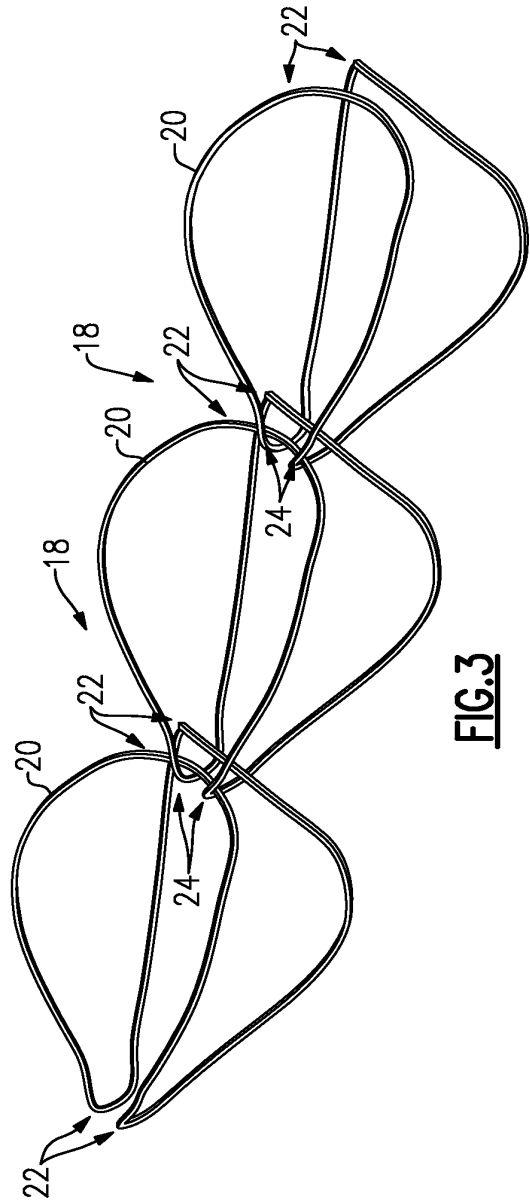
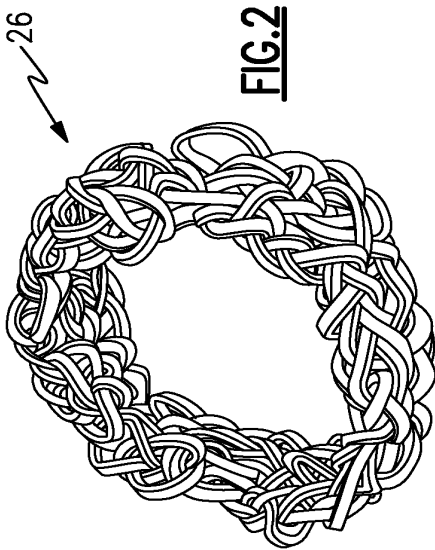
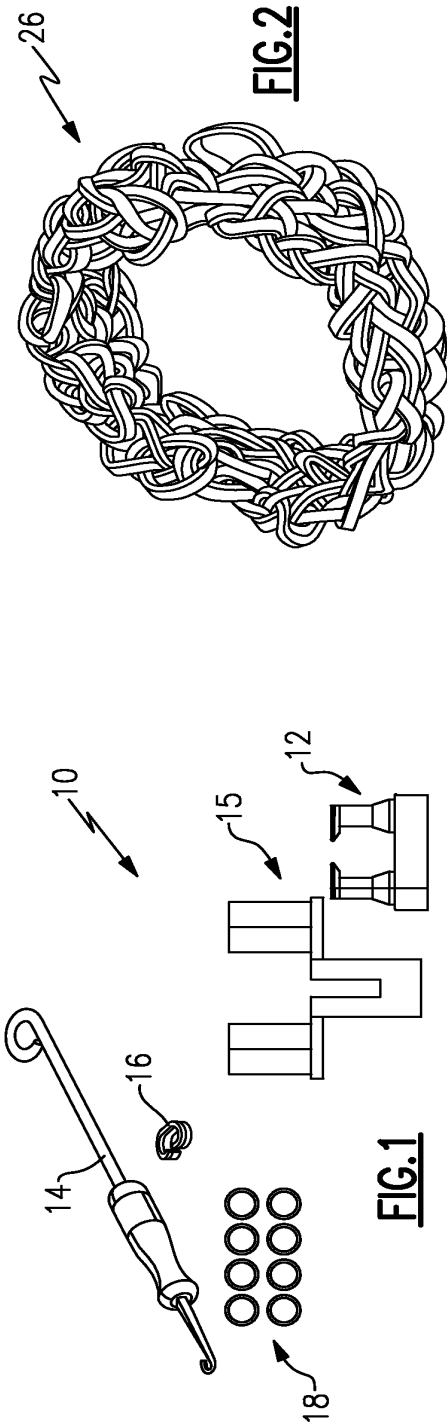
Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$890
RAM confirmation Number	1324
Deposit Account	501482
Authorized User	

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

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

<b>File Listing:</b>					
<b>Document Number</b>	<b>Document Description</b>	<b>File Name</b>	<b>File Size(Bytes)/ Message Digest</b>	<b>Multi Part /.zip</b>	<b>Pages (if appl.)</b>
1	Issue Fee Payment (PTO-85B)	12-2-13_IssueFeeTransmittal_67467-009PUS2.pdf	223657 bfa9328a13b13323fb49f8626ffa106cc8c85	no	2
<b>Warnings:</b>					
<b>Information:</b>					
2	Fee Worksheet (SB06)	fee-info.pdf	30220 b099663e63bb433d422ed0eff4a76e47232ab5da	no	2
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			253877		
<p><b>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.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  <b>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.</b></p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  <b>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.</b></p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  <b>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.</b></p>					





## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	17539422
<b>Application Number:</b>	14018542
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	5921
<b>Title of Invention:</b>	HAND HELD LINK MAKING DEVICE AND KIT
<b>First Named Inventor/Applicant Name:</b>	Cheong Choon Ng
<b>Customer Number:</b>	26096
<b>Filer:</b>	John M. Siragusa/Amy Spaulding
<b>Filer Authorized By:</b>	John M. Siragusa
<b>Attorney Docket Number:</b>	67467-009 PUS2
<b>Receipt Date:</b>	02-DEC-2013
<b>Filing Date:</b>	05-SEP-2013
<b>Time Stamp:</b>	15:15:28
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Drawings-only black and white line drawings	Replacement_Sheet.pdf	143784 cb02eebbaa5374d2b106c6c61683fb443856fac	no	1

### Warnings:

### Information:

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

**New Applications Under 35 U.S.C. 111**

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

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

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

**New International Application Filed with the USPTO as a Receiving Office**

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



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NOTICE OF ALLOWANCE AND FEE(S) DUE

26096 7590 11/27/2013
CARLSON, GASKEY & OLDS, P.C.
400 WEST MAPLE ROAD
SUITE 350
BIRMINGHAM, MI 48009

EXAMINER

HURLEY, SHAUN R

ART UNIT PAPER NUMBER

3765

DATE MAILED: 11/27/2013

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

14/018,542 09/05/2013 Cheong Choon Ng 67467-009 PUS2 5921

TITLE OF INVENTION: HAND HELD LINK MAKING DEVICE AND KIT

Table with 7 columns: APPLN. TYPE, ENTITY STATUS, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

nonprovisional SMALL \$890 \$0 \$0 \$890 02/27/2014

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: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

**PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE  
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 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 or Fax (571)-273-2885**

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

26096                      7590                      11/27/2013  
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_____ (Depositor's name)
_____ (Signature)
_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/018,542	09/05/2013	Cheong Choon Ng	67467-009 PUS2	5921

TITLE OF INVENTION: HAND HELD LINK MAKING DEVICE AND KIT

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$890	\$0	\$0	\$890	02/27/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
HURLEY, SHAUN R	3765	289-001500

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. <b>Use of a Customer Number is required.</b></p>	<p>2. For printing on the patent front page, list</p> <p>(1) the names of up to 3 registered patent attorneys or agents OR, alternatively, _____ 1</p> <p>(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</p> <p>_____ 3</p>
---	---

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 has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(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

<p>4a. The following fee(s) are submitted:</p> <p><input type="checkbox"/> Issue Fee</p> <p><input type="checkbox"/> Publication Fee (No small entity discount permitted)</p> <p><input type="checkbox"/> Advance Order - # of Copies _____</p>	<p>4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)</p> <p><input type="checkbox"/> A check is enclosed.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input type="checkbox"/> The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).</p>
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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 form 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.

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NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

---

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

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This collection of information 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 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, 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.

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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

26096 7590 11/27/2013
CARLSON, GASKEY & OLDS, P.C.
400 WEST MAPLE ROAD
SUITE 350
BIRMINGHAM, MI 48009

EXAMINER

HURLEY, SHAUN R

ART UNIT PAPER NUMBER

3765

DATE MAILED: 11/27/2013

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

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

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

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

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

## 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.

**Notices of Allowance and Fee(s) Due mailed between October 1, 2013 and  
December 31, 2013**

(Addendum to PTOL-85)

If the "Notice of Allowance and Fee(s) Due" has a mailing date on or after October 1, 2013 and before January 1, 2014, the following information is applicable to this application.

If the issue fee is being timely paid on or after January 1, 2014, the amount due is the issue fee and publication fee in effect January 1, 2014. On January 1, 2014, the issue fees set forth in 37 CFR 1.18 decrease significantly and the publication fee set forth in 37 CFR 1.18(d)(1) decreases to \$0.

If an issue fee or publication fee has been previously paid in this application, applicant is not entitled to a refund of the difference between the amount paid and the amount in effect on January 1, 2014.



<b>Notice of Allowability</b>	<b>Application No.</b> 14/018,542	<b>Applicant(s)</b> NG, CHEONG CHOON	
	<b>Examiner</b> Shaun R. Hurley	<b>Art Unit</b> 3765	<b>AIA (First Inventor to File) Status</b> 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 Application filed 05 September 2013.  
 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 and 6-17. 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](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto: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)**

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date <u>09/05/13, 10/09/13</u></li> <li>3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material</li> <li>4. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date <u>11/14/13</u>.</li> </ol> | <ol style="list-style-type: none"> <li>5. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>6. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>7. <input type="checkbox"/> Other _____.</li> </ol> |
|---|---|

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*Notice of Pre-AIA or AIA Status*

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

**EXAMINER'S AMENDMENT**

2. An Examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this Examiner's Amendment was given in a telephone interview with Mr. John M. Siragusa on 14 November 2013. The application has been amended as follows:

**In the Claims:**

Claim 1, line 4: After the phrase "...slot disposed therebetween"

**INSERTED:** --, wherein each of the first arm and the second arm include upper and lower tabs for holding the links on the corresponding first arm and second arm--

Claim 5:

**DELETED** in its entirety

Claim 6, line 1:

**DELETED:** "claim 5"

**INSERTED:** --claim 1--

Claim 13, line 1:

**DELETED:** "The device"

**INSERTED:** --The kit--

Claim 14, line 1:

**DELETED:** “The device”

**INSERTED:** --The kit--

Claim 15, line 1:

**DELETED:** “The device”

**INSERTED:** --The kit--

Claim 16, line 1:

**DELETED:** “The device”

**INSERTED:** --The kit--

Claim 17, line 1:

**DELETED:** “The device”

**INSERTED:** --The kit--

**In the Drawings:**

The following changes to the drawings have been approved by the Examiner and agreed upon by Applicant:

Detail 26 added to Figure 2.

In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

**DETAILED ACTION**

***Allowable Subject Matter***

3. Claims 1-4 and 6-17 are allowed.

***Reasons for Allowance***

4. The following is an Examiner's Statement of Reasons for Allowance:

Claims 1, 7, and 12, as well as their respective dependent claims, are found to be allowable because the prior art of record neither teaches nor reasonably suggests the recitations found therein, including tabs on the upper and lower parts of both arms, the method of linking elastic bands, and the inclusion of a clip.

The tabs as claimed provide a means by which to stop the bands from slipping, but would render the prior art of record inoperable. The closest prior art of record, Newcomb (0222937) and Stewart (0289578), both teach a similar structure to claim 1, but as stated, the provision of tabs would not be obvious.

The method as claimed is allowable because the prior art of record is drawn to knitting, which would not utilize elastic bands.

The inclusion of a clip is not taught or reasonable to suggest as no structure in the prior art would require the use without hindsight.

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***

5. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. See of Record.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shaun R. Hurley whose telephone number is (571)272-4986. The examiner can normally be reached on Mon - Fri, 8:00 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Clinton T. Ostrup can be reached on (571) 272-5559. 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 <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). 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.

Shaun R Hurley  
Primary Examiner  
Art Unit 3765

SRH  
14 November 2013

/Shaun R Hurley/  
Primary Examiner, Art Unit 3765

<b>Examiner-Initiated Interview Summary</b>	<b>Application No.</b> 14/018,542	<b>Applicant(s)</b> NG, CHEONG CHOON	
	<b>Examiner</b> Shaun R. Hurley	<b>Art Unit</b> 3765	

All participants (applicant, applicant's representative, PTO personnel):

(1) Shaun R. Hurley. (3)\_\_\_\_\_.

(2) John M. Siragusa. (4)\_\_\_\_\_.

Date of Interview: 14 November 2013.

Type:  Telephonic  Video Conference  
 Personal [copy given to:  applicant  applicant's representative]

Exhibit shown or demonstration conducted:  Yes  No.  
If Yes, brief description: \_\_\_\_\_.

Issues Discussed 101 112 102 103 Others  
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 1-17.

Identification of prior art discussed: Newcomb (0222937), Stewart (0289578).

Substance of Interview  
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Upon examining the claims as filed, Examiner contacted Applicant to discuss the possible rejections to be made, namely anticipation rejections concerning Newcomb and Stewart as cited above. Examiner explained his position, suggested amendments, and without agreeing the changes were necessary for patentability, Applicant agreed to allow Examiner to make the amendments so as to place the application in condition for allowance.

**Applicant recordation instructions:** It is not necessary for applicant to provide a separate record of the substance of interview.

**Examiner recordation instructions:** Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Attachment

/Shaun R Hurley/  
Primary Examiner, Art Unit 3765

<b>Notice of References Cited</b>	Application/Control No. 14/018,542	Applicant(s)/Patent Under Reexamination NG, CHEONG CHOON	
	Examiner Shaun R. Hurley	Art Unit 3765	Page 1 of 2

**U.S. PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-222,937 A	12-1879	Newcomb	66/4
*	B US-246,648 A	09-1881	Wilcox	66/4
*	C US-289,578 A	12-1883	Stewart	66/4
*	D US-1,318,465 A	10-1919	Seifarth	66/4
*	E US-1,318,604 A	10-1919	Schneider	66/4
*	F US-1,500,383 A	07-1924	GOURIE WILLIAM J	66/4
*	G US-2,318,018 A	05-1943	Semonsen	66/4
*	H US-2,457,064 A	12-1948	ANTHONY PARISL	66/4
*	I US-2,658,364 A	11-1953	CARLSON GUSTAV A	66/4
*	J US-2,687,630 A	08-1954	CARLSON GUSTAV A	66/117
*	K US-3,648,484 A	03-1972	Gordon, Eileen	66/4
*	L US-4,416,040 A	11-1983	Towsley, John A.	28/152
*	M US-2008/0156043 A1	07-2008	Gustin, Clella	66/4

**FOREIGN PATENT DOCUMENTS**

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

**NON-PATENT DOCUMENTS**

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

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

<b>Notice of References Cited</b>	Application/Control No. 14/018,542	Applicant(s)/Patent Under Reexamination NG, CHEONG CHOON	
	Examiner Shaun R. Hurley	Art Unit 3765	Page 2 of 2

**U.S. PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-2008/0223083 A1	09-2008	Gustin, Clella	66/1.A
*	B US-2012/0047960 A1	03-2012	SASUR, David	66/1.A
*	C US-2012/0112457 A1	05-2012	Ng, Cheong Choon	289/1.5
*	D US-2013/0020802 A1	01-2013	Ng, Cheong Choon	289/1.5
*	E US-8,402,794 B2	03-2013	Sasur, David	66/3
*	F US-8,485,565 B2	07-2013	Ng, Cheong Choon	289/17
*	G US-2013/0300114 A1	11-2013	Ng, Cheong Choon	289/1.5
	H US-			
	I US-			
	J US-			
	K US-			
	L US-			
	M US-			

**FOREIGN PATENT DOCUMENTS**


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

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

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




<b>Issue Classification</b>  	<b>Application/Control No.</b> 14018542	<b>Applicant(s)/Patent Under Reexamination</b> NG, CHEONG CHOON
	<b>Examiner</b> SHAUN R HURLEY	<b>Art Unit</b> 3765

CPC			Type	Version
Symbol				


CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

NONE		<b>Total Claims Allowed:</b>	
		16	
(Assistant Examiner)	(Date)	O.G. Print Claim(s)	O.G. Print Figure
/SHAUN R HURLEY/ Primary Examiner. Art Unit 3765	11/14/2013	1	1
(Primary Examiner)	(Date)		

<b>Issue Classification</b> 	<b>Application/Control No.</b> 14018542	<b>Applicant(s)/Patent Under Reexamination</b> NG, CHEONG CHOON
	<b>Examiner</b> SHAUN R HURLEY	<b>Art Unit</b> 3765


US ORIGINAL CLASSIFICATION					INTERNATIONAL CLASSIFICATION									
CLASS		SUBCLASS			CLAIMED				NON-CLAIMED					
289		17			D	0	3	J	3 / 00 (2006.0)					
<b>CROSS REFERENCE(S)</b>														
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)													

NONE		<b>Total Claims Allowed:</b>	
(Assistant Examiner)		16	
(Date)			
/SHAUN R HURLEY/	11/14/2013	O.G. Print Claim(s)	O.G. Print Figure
Primary Examiner. Art Unit 3765		1	1
(Primary Examiner)	(Date)		

<b>Issue Classification</b>  	<b>Application/Control No.</b> 14018542	<b>Applicant(s)/Patent Under Reexamination</b> NG, CHEONG CHOON
	<b>Examiner</b> SHAUN R HURLEY	<b>Art Unit</b> 3765

<input checked="checked" type="checkbox"/> <b>Claims renumbered in the same order as presented by applicant</b> <input type="checkbox"/> <b>CPA</b> <input type="checkbox"/> <b>T.D.</b> <input type="checkbox"/> <b>R.1.47</b>															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original

NONE		<b>Total Claims Allowed:</b>	
(Assistant Examiner)	(Date)	16	
/SHAUN R HURLEY/ Primary Examiner. Art Unit 3765	11/14/2013	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

<b>Search Notes</b>  	<b>Application/Control No.</b>  14018542	<b>Applicant(s)/Patent Under Reexamination</b>  NG, CHEONG CHOON
	<b>Examiner</b>  SHAUN R HURLEY	<b>Art Unit</b>  3765

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
289	2, 16.5, 17, 18.1	11/14/13	SRH
D21	334		
273	281, 288, 309		
66	4		

SEARCH NOTES		
Search Notes	Date	Examiner
See Search History	11/14/13	SRH

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
EAST	Claim Search	11/14/13	SRH

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BIB DATA SHEET

CONFIRMATION NO. 5921

<b>SERIAL NUMBER</b> 14/018,542	<b>FILING or 371(c) DATE</b> 09/05/2013 <b>RULE</b>	<b>CLASS</b> 289	<b>GROUP ART UNIT</b> 3765	<b>ATTORNEY DOCKET NO.</b> 67467-009 PUS2		
<b>APPLICANTS</b>						
<b>INVENTORS</b> Cheong Choon Ng, Novi, MI;						
<b>** CONTINUING DATA *****</b> This appln claims benefit of 61/846,270 07/15/2013 and is a CON of 13/626,057 09/25/2012						
<b>** FOREIGN APPLICATIONS *****</b>						
<b>** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** ** SMALL ENTITY **</b> 09/18/2013						
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Met after Allowance Initials	<b>STATE OR COUNTRY</b> MI	<b>SHEETS DRAWINGS</b> 5	<b>TOTAL CLAIMS</b> 16 <del>17</del>	<b>INDEPENDENT CLAIMS</b> 3
<b>ADDRESS</b> CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009 UNITED STATES						
<b>TITLE</b> HAND HELD LINK MAKING DEVICE AND KIT						
<b>FILING FEE RECEIVED</b> 1030	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit			

Receipt date: 10/09/2013

14018542 - GAU: 3765

Doc code: IDS

PTO/SB/08a (01-10)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		14018542
	Filing Date		2013-09-05
	First Named Inventor	Cheong Choon Ng	
	Art Unit		
	Examiner Name		
	Attorney Docket Number		67467-009 PUS2

U.S. PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
/SRH/	1	2270619		1942-01-20	A.G. Bowyer	
/SRH/	2	2545409		1951-03-13	J.D. McCall	
/SRH/	3	3377674		1968-04-16	R.F. Brassaw et al.	
/SRH/	4	2134066		1938-10-25	E. Van Ness	
/SRH/	5	1776561		1927-12-03	C. LA Croix	
/SRH/	6	4629100		1986-12-16	Owens	
/SRH/	7	3678709		1972-07-25	Nowicki et al.	
If you wish to add additional U.S. Patent citation information please click the Add button.						Add
<b>U.S. PATENT APPLICATION PUBLICATIONS</b>						Remove

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		14018542	14018542 - GAU: 3765	
	Filing Date		2013-09-05		
	First Named Inventor	Cheong Choon Ng			
	Art Unit				
	Examiner Name				
	Attorney Docket Number		67467-009 PUS2		

Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1					

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**FOREIGN PATENT DOCUMENTS** Remove

Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup> j	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1							<input type="checkbox"/>

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**NON-PATENT LITERATURE DOCUMENTS** Remove

Examiner Initials*	Cite No	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, pages(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>
	1		<input type="checkbox"/>

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**EXAMINER SIGNATURE**

Examiner Signature	/Shaun Hurley/	Date Considered	11/12/2013
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Receipt date: 09/05/2013

14018542 - GAU: 3765

Doc code: IDS

PTO/SB/08a (01-10)

Doc description: Information Disclosure Statement (IDS) Filed

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Cheong Choon Ng	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	67467-009 PUS2	

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Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
/SRH/	1	0254258		1882-02-28	Barbour	
/SRH/	2	0254288		1992-02-28	Dimmick	
/SRH/	3	0782657		1905-02-14	Hubert	
/SRH/	4	0843495		1907-02-05	Sander	
/SRH/	5	1073226		1913-09-16	Freeman	
/SRH/	6	1366212		1921-01-18	Pollard	
/SRH/	7	1375119		1921-04-19	Stephen	
/SRH/	8	1424458		1922-08-01	Fleisher	



<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Receipt date: 09/05/2013		Application Number	14018542 - GAU: 3765		
			Filing Date			
			First Named Inventor	Cheong Choon Ng		
			Art Unit			
			Examiner Name			
			Attorney Docket Number	67467-009 PUS2		

/SRH/	9	1599040		1926-09-07	Clisby	
/SRH/	10	1994659		1935-03-19	Mascarenhas	
/SRH/	11	2108424		1938-02-15	Bakely	
/SRH/	12	2360416		1944-10-17	Gray	
/SRH/	13	2703482		1955-03-08	Auran	
/SRH/	14	3069739		1962-12-25	Jorgenson et al.	
/SRH/	15	3438098		1969-04-15	Grabner	
/SRH/	16	3476423		1969-11-04	Kentfield	
/SRH/	17	3636987		1972-01-25	Forby	
/SRH/	18	3672679		1972-06-27	Burns	
/SRH/	19	3688357		1972-09-05	Nielsen et al.	

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Receipt date: 09/05/2013		Application Number	14018542 - GAU: 3765	
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			Attorney Docket Number	67467-009 PUS2	

/SRH/	20	3728762		1973-04-24	Hogg	
/SRH/	21	3748706		1973-07-31	Doyel	
/SRH/	22	3805345		1974-04-23	Antos	
/SRH/	23	4032179		1977-06-28	Goss	
/SRH/	24	4114892		1978-09-19	Csoka	
/SRH/	25	4179129		1979-12-18	Loomis	
/SRH/	26	4569108		1986-02-11	Schwab	
/SRH/	27	4667965		1987-05-26	Helms, Jr.	
/SRH/	28	5163946		1992-11-17	Li	
/SRH/	29	5295280		1994-03-22	Hudson et al.	
/SRH/	30	5328374		1994-07-12	Stevens	

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			Attorney Docket Number	67467-009 PUS2		

/SRH/	31	5437459		1995-08-01	Kirby	
/SRH/	32	5459905		1995-10-24	Voyre	
/SRH/	33	5577299		1996-11-26	Thompson et al.	
/SRH/	34	5639090		1997-06-17	Stevens	
/SRH/	35	5713094		1998-02-03	Markey et al.	
/SRH/	36	5927764		1999-07-27	Harriman	
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/SRH/	38	6122859		2000-09-26	Lazar	
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/SRH/	40	6146144		2000-11-14	Fowler et al.	
/SRH/	41	6171317		2001-01-09	Jackson et al.	

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/SRH/	42	6880364		2005-04-19	Vidolin et al.	
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/SRH/	45	7578146		2009-08-25	Gustin	
/SRH/	46	7909609		2011-03-22	Molin	
/SRH/	47	D330668		1992-11-03	Nagamatsu	
/SRH/	48	D570923		2008-06-10	Vazquez Gastellu	
/SRH/	49	8316894		2012-11-27	Schaub	
/SRH/	50	5231742		1993-08-03	Macbain	
/SRH/	51	3665971		1972-05-30	Ileks	
/SRH/	52	5687775		1997-11-18	Thompson et al.	

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/SRH/	1	20090215013		2009-08-27	Molin		
/SRH/	2	20100019495		2010-01-28	Oliveto		
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/SRH/	3	10-2001-0012609	KR		2001-02-15	Citizen Holdings Co., Ltd.		<input type="checkbox"/>

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	Filing Date			
	First Named Inventor	Cheong Choon Ng		
	Art Unit			
	Examiner Name			
	Attorney Docket Number		67467-009 PUS2	

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/SRH/	1	International Search Report and Written Opinion for PCT Application No. PCT/US2011/041553 mailed on February 23, 2012.	<input type="checkbox"/>
/SRH/	2	International Preliminary Report on Patentability for PCT Application No. PCT/US2011/041553 mailed May 16, 2013.	<input type="checkbox"/>

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## EAST Search History

## EAST Search History (Prior Art)

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		2658364-\$ or US-1318465-\$ or US-0222937-\$ or US-2687630-\$ or US-2134066-\$ or US-1500383-\$ or US-0289578-\$ or US-0246648-\$).did.				
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S29	32	S28 not S27	US- PGPUB; USPAT	OR	ON	2013/10/09 10:59
S30	7	("1776561"   "2134066"   "2270619"   "2545409"   "3377674"   "3678709"   "4629100").PN.	US- PGPUB; USPAT	OR	ON	2013/10/09 16:23
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S32	58	(US-20100019495-\$ or US-20110152946-\$ or US-20090215013-\$ or US-20120047960-\$ or US-20080223083-\$ or US-20080156043-\$ ).did. or (US-6171317-\$ or US-6146144-\$ or US-5927764-\$ or US-5577299-\$ or US- 5163946-\$ or US-4032179-\$ or US-3688357-\$ or US-2360416-\$ or US-2108424-\$ or US- 0843495-\$ or US-0254288-\$ or US-0254258-\$ or US-D330668-\$ or US-3805345-\$ or US- 3748706-\$ or US-3728762-\$ or US-3636987-\$ or US-3438098-\$ or US-3069739-\$ or US- 2703482-\$ or US-1599040-\$ or US-1375119-\$ or US-1073226-\$ or US-0782657-\$ or US- 1366212-\$ or US-5639090-\$).did. or (US- 5437459-\$ or US-4179129-\$ or US-4114892-\$ or US-7909609-\$ or US-D570923-\$ or US- 6129551-\$ or US-6065968-\$ or US-5328374-\$ or US-3672679-\$ or US-4667965-\$ or US- 3476423-\$ or US-1994659-\$ or US-1424458-\$ or US-6923026-\$ or US-5295280-\$ or US- 4569108-\$ or US-6122859-\$ or US-5713094-\$ or US-5459905-\$ or US-8316894-\$ or US- 8485565-\$ or US-8402794-\$ or US-7506524-\$ or US-4416040-\$ or US-3678709-\$ or US- 2457064-\$).did.	US- PGPUB; USPAT	OR	ON	2013/10/09 16:25
S33	7	S32 not S31	US- PGPUB; USPAT	OR	ON	2013/10/09 16:26
S34	62	("0254288"   "1424458"   "2108424"   "3805345"   "5927764"   "D570923"   "2134066"   "20090215013"   "3476423"   "3688357"   "3728762"   "5459905"   "5577299"   "6065968"   "3678709"   "1366212"   "2360416"   "2703482"   "6129551"   "7909609"   "5231742"   "5687775"   "0254258"   "0843495"   "3069739"   "3672679"   "4667965"   "5437459"   "6146144"   "3377674"   "4629100"   "1375119"   "1599040"   "4179129"   "5328374"   "5639090"   "5713094"   "6171317"   "6880364"   "6923026"   "D330668"   "2270619"   "2545409"   "1073226"   "4032179"	US- PGPUB; USPAT	OR	ON	2013/10/11 12:37

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S35	58	(US-20100019495-\$ or US-20110152946-\$ or US-20090215013-\$ or US-20120047960-\$ or US-20080223083-\$ or US-20080156043-\$).did. or (US-6171317-\$ or US-6146144-\$ or US-5927764-\$ or US-5577299-\$ or US-5163946-\$ or US-4032179-\$ or US-3688357-\$ or US-2360416-\$ or US-2108424-\$ or US-0843495-\$ or US-0254288-\$ or US-0254258-\$ or US-D330668-\$ or US-3805345-\$ or US-3748706-\$ or US-3728762-\$ or US-3636987-\$ or US-3438098-\$ or US-3069739-\$ or US-2703482-\$ or US-1599040-\$ or US-1375119-\$ or US-1073226-\$ or US-0782657-\$ or US-1366212-\$ or US-5639090-\$).did. or (US-5437459-\$ or US-4179129-\$ or US-4114892-\$ or US-7909609-\$ or US-D570923-\$ or US-6129551-\$ or US-6065968-\$ or US-5328374-\$ or US-3672679-\$ or US-4667965-\$ or US-3476423-\$ or US-1994659-\$ or US-1424458-\$ or US-6923026-\$ or US-5295280-\$ or US-4569108-\$ or US-6122859-\$ or US-5713094-\$ or US-5459905-\$ or US-8316894-\$ or US-8485565-\$ or US-8402794-\$ or US-7506524-\$ or US-4416040-\$ or US-3678709-\$ or US-2457064-\$).did.	US-PGPUB; USPAT	OR	ON	2013/10/11 12:37
S36	7	S35 not S34	US-PGPUB; USPAT	OR	ON	2013/10/11 12:38
S37	12	ng-cheong\$.in.	US-PGPUB; USPAT	OR	ON	2013/10/11 12:38
S38	7	("2457064").URPN.	USPAT	OR	ON	2013/11/12 13:30
S39	62	("0254288"   "1424458"   "2108424"   "3805345"   "5927764"   "D570923"   "2134066"   "20090215013"   "3476423"   "3688357"   "3728762"   "5459905"   "5577299"   "6065968"   "3678709"   "1366212"   "2360416"   "2703482"   "6129551"   "7909609"   "5231742"   "5687775"   "0254258"   "0843495"   "3069739"   "3672679"   "4667965"   "5437459"   "6146144"   "3377674"   "4629100"   "1375119"   "1599040"   "4179129"   "5328374"   "5639090"   "5713094"   "6171317"   "6880364"   "6923026"   "D330668"   "2270619"   "2545409"   "1073226"   "4032179"   "5163946"   "7578146"   "1776561"   "0782657"   "20110152946"   "3636987"   "3665971"   "1994659"   "20100019495"   "3438098"   "3748706"   "4114892"   "4569108"   "5295280"   "6122859"   "7506524"   "8316894").PN.	US-PGPUB; USPAT	OR	ON	2013/11/12 13:31
S40	42	("1318604"   "1500383"   "1694849"   "1705860"   "1776561"   "20080156043"	US-PGPUB;	OR	ON	2013/11/12 13:33

EAST Search History


		"20080223083"   "20120047960"   "2072668"   "2237733"   "2270619"   "2318018"   "2457064"   "3678709"   "3967467"   "4158296"   "4193273"   "4246768"   "4248063"   "4393668"   "4729229"   "5125245"   "5231742"   "5413150"   "5542268"   "5577400"   "6810697"   "7506524"   "7578146").PN. OR ("7506524"   "8402794").URPN.	USPAT; USOCR			
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S43	9	("0222937"   "1318465"   "1318604"   "2658364").PN. OR ("1318465"   "222937"   "2658364"   "3648484").URPN.	US- PGPUB; USPAT; USOCR	OR	ON	2013/11/12 13:37
S44	59	66/4.ccls.	US- PGPUB; USPAT	OR	ON	2013/11/12 13:37

**EAST Search History (Interference)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S25	5	(link and base and pin and bar and flar\$3).clm.	US-PGPUB; USPAT; UPAD	OR	ON	2013/06/06 14:21

11/ 14/ 2013 12:35:04 PM

C:\Users\shurley\Documents\EAST\Workspaces\14-018542.wsp

<b><i>Index of Claims</i></b> 	<b>Application/Control No.</b> 14018542	<b>Applicant(s)/Patent Under Reexamination</b> NG, CHEONG CHOON
	<b>Examiner</b> SHAUN R HURLEY	<b>Art Unit</b> 3765

✓	<b>Rejected</b>	-	<b>Cancelled</b>	N	<b>Non-Elected</b>	A	<b>Appeal</b>
=	<b>Allowed</b>	÷	<b>Restricted</b>	I	<b>Interference</b>	O	<b>Objected</b>

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

CLAIM		DATE							
Final	Original	11/14/2013							
	1	=							
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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

14/018,542 09/05/2013 Cheong Choon Ng 67467-009 PUS2 5921

26096 7590 11/14/2013
CARLSON, GASKEY & OLDS, P.C.
400 WEST MAPLE ROAD
SUITE 350
BIRMINGHAM, MI 48009

Table with 1 column: EXAMINER

HURLEY, SHAUN R

Table with 2 columns: ART UNIT, PAPER NUMBER

3765

Table with 2 columns: NOTIFICATION DATE, DELIVERY MODE

11/14/2013 ELECTRONICELECTRONIC

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

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

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

ptodocket@cgolaw.com
cgolaw@yahoo.com





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<b>APPLICATION NO./ CONTROL NO.</b>	<b>FILING DATE</b>	<b>FIRST NAMED INVENTOR / PATENT IN REEXAMINATION</b>	<b>ATTORNEY DOCKET NO.</b>
14/018,542	05 September, 2013	NG, CHEONG CHOON	67467-009 PUS2

CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009	<b>EXAMINER</b>	
	ANTHONY LOVER	
	<b>ART UNIT</b>	<b>PAPER</b>
	OPIM	20131107

DATE MAILED:

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

**Commissioner for Patents**

Attached is a communication to applicant explaining that the instant application is being identified as a pre-AIA application despite applicant's statement under 37 CFR 1.55 or 1.78 made in the instant application, either on the Application Data Sheet (ADS) or in an otherwise filed paper.

**Application Identified as a Pre-AIA Application  
Despite the 37 CFR 1.55 or 1.78 Statement of Record**

The statement under 37 CFR 1.55 or 1.78 (“the 1.55/1.78 statement”) and the domestic benefit/national stage information in this application conflict as to whether this application is to be examined under the AIA (First Inventor to File) or pre-AIA (First to Invent) law.

This application, with a filing date on or after March 16, 2013, contains the 1.55/1.78 statement indicating that this application should be examined under the AIA (First Inventor to File). This statement was either (1) on the Application Data Sheet (ADS) by virtue of the 1.55/1.78 statement for AIA (First Inventor to File) Transition Applications check box being selected or (2) in an otherwise filed paper. The 1.55/1.78 statement provided:

This application \* \* \* contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

However, this application is separately identified in the Domestic Benefit/National Stage Information section of the ADS as a continuation (CON) or divisional (DIV) of an application filed before March 16, 2013, indicating that this application should be examined under pre-AIA (First to Invent) law because it does not contain, or did not contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. DUE TO THIS APPLICATION BEING IDENTIFIED AS A CONTINUATION OR DIVISIONAL OF AN APPLICATION FILED BEFORE MARCH 16, 2013, THIS APPLICATION IS BEING IDENTIFIED AS A PRE-AIA (FIRST TO INVENT) APPLICATION DESPITE THE 1.55/1.78 STATEMENT OF RECORD.

Accordingly, this application is/will be examined under pre-AIA (First to Invent) law; all forthcoming Office actions on the merits will be labeled “**AIA (First Inventor to File) Status: No**” (see upper right box on form PTOL-37/37D and/or PTOL-326/326AE).

Moreover, if applicant has received any Office action on the merits, which identified the instant application as “**AIA (First Inventor to File) Status: Yes,**” said Status information was in error and is hereby corrected to “**No**” to indicate that that the present application is a pre-AIA (First to Invent) application.

NO RESPONSE TO THIS COMMUNICATION IS REQUIRED UNLESS APPLICANT BELIEVES THAT THE APPLICATION CONTAINS, OR EVER CONTAINED A CLAIM TO A CLAIMED INVENTION HAVING AN EFFECTIVE FILING DATE ON OR AFTER MARCH 16, 2013 AND IS AN AIA (FIRST INVENTOR TO FILE) APPLICATION.

If applicant believes that the application is an AIA (First Inventor to File) application, applicant must file a corrected ADS (with appropriate markings as set forth in 37 CFR 1.76(c)(2)) identifying the instant application as a **continuation-in-part (CIP)** application in the Domestic Benefit/National Stage Information section of the ADS and request in writing that the application

be examined under the AIA (First Inventor to File) because the identification of the application as a CON/DIV application on filing was an error. IN THIS SITUATION, APPLICANT'S RESPONSE IS DUE WITHIN TWO MONTHS OF THE MAILING DATE OF THIS COMMUNICATION; THE RESPONSE PERIOD IS NOT EXTENDABLE UNDER 37 CFR 1.136.

Questions regarding this communication may be directed to a TC AIA Specialist as appropriate.

<b>Technology Center</b>	<b>TC AIA Specialist</b>	<b>Contact Information</b>
1600, 1700, 2900	Kathleen Bragdon	(571) 272-0931
2100, 2400	Christopher Grant	(571) 272-7294
2600, 2800	Cassandra Spyrou	(571) 272-1624
3600, 3700	Tom Hughes	(571) 272-4357

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)

Approved for use through 07/31/2012. OMB 0651-0031

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		14018542
	Filing Date		2013-09-05
	First Named Inventor	Cheong Choon Ng	
	Art Unit		
	Examiner Name		
	Attorney Docket Number		67467-009 PUS2

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	2270619		1942-01-20	A.G. Bowyer	
	2	2545409		1951-03-13	J.D. McCall	
	3	3377674		1968-04-16	R.F. Brassaw et al.	
	4	2134066		1938-10-25	E. Van Ness	
	5	1776561		1927-12-03	C. LA Croix	
	6	4629100		1986-12-16	Owens	
	7	3678709		1972-07-25	Nowicki et al.	
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number	14018542
	Filing Date	2013-09-05
	First Named Inventor	Cheong Choon Ng
	Art Unit	
	Examiner Name	
	Attorney Docket Number	67467-009 PUS2

Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
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Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup> j	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1							<input type="checkbox"/>

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	1		<input type="checkbox"/>

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**EXAMINER SIGNATURE**

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number	14018542
	Filing Date	2013-09-05
	First Named Inventor	Cheong Choon Ng
	Art Unit	
	Examiner Name	
	Attorney Docket Number	67467-009 PUS2

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/John M. Siragusa/	Date (YYYY-MM-DD)	2013-10-09
Name/Print	John M. Siragusa	Registration Number	46174

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour 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.**

## 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.
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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.

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	17082765
<b>Application Number:</b>	14018542
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	5921
<b>Title of Invention:</b>	HAND HELD LINK MAKING DEVICE AND KIT
<b>First Named Inventor/Applicant Name:</b>	Cheong Choon Ng
<b>Customer Number:</b>	26096
<b>Filer:</b>	John M. Siragusa/Donna Durant
<b>Filer Authorized By:</b>	John M. Siragusa
<b>Attorney Docket Number:</b>	67467-009 PUS2
<b>Receipt Date:</b>	09-OCT-2013
<b>Filing Date:</b>	05-SEP-2013
<b>Time Stamp:</b>	15:13:26
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
------------------------	----

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	009PUS2_IDS_10_09_2013.pdf	612242 cf9d3b35fa6ddd3ce7367551d0732c8a0f20b6c2	no	4

### Warnings:

### Information:



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

**New Applications Under 35 U.S.C. 111**

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

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

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

**New International Application Filed with the USPTO as a Receiving Office**

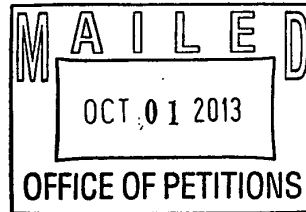
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will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



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
www.uspto.gov

CARLSON, GASKEY & OLDS, P.C.  
400 WEST MAPLE ROAD  
SUITE 350  
BIRMINGHAM MI 48009



<b>Decision Granting Request for Prioritized Examination (Track I or After RCE)</b>	Application No.:14/018,542
<p>1. THE REQUEST FILED <u>September 5, 2013</u> IS <b>GRANTED</b>.</p> <p>The above-identified application has met the requirements for prioritized examination</p> <p>A. <input checked="" type="checkbox"/> for an original nonprovisional application (Track I).  B. <input type="checkbox"/> for an application undergoing continued examination (RCE).</p> <p>2. <b>The above-identified application will undergo prioritized examination.</b> The application will be accorded special status throughout its entire course of prosecution until one of the following occurs:</p> <p>A. filing a <b><u>petition for extension of time</u></b> to extend the time period for filing a reply;  B. filing an <b><u>amendment to amend the application to contain more than four independent claims, more than thirty total claims</u></b>, or a multiple dependent claim;  C. filing a <b><u>request for continued examination</u></b>;  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.</p> <p>Telephone inquiries with regard to this decision should be directed to Kimberly Inabinet at 571-272-4618.</p> <p>/ Kimberly Inabinet/ <span style="float: right;">Paralegal Specialist, Office of Petitions</span></p>	



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

Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 14/018,542, 09/05/2013, 2833, 1030, 67467-009 PUS2, 17, 3

CONFIRMATION NO. 5921

FILING RECEIPT



26096
CARLSON, GASKEY & OLDS, P.C.
400 WEST MAPLE ROAD
SUITE 350
BIRMINGHAM, MI 48009

Date Mailed: 09/23/2013

Receipt is acknowledged of this non-provisional 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 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) Cheong Choon Ng, Novi, MI;
Applicant(s) Cheong Choon Ng, Novi, MI;

Power of Attorney: None

Domestic Priority data as claimed by applicant
This appln claims benefit of 61/846,270 07/15/2013
and is a CON of 13/626,057 09/25/2012

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 - A proper Authorization to Permit Access to Application by Participating Offices (PTO/SB/39 or its equivalent) has been received by the USPTO.

If Required, Foreign Filing License Granted: 09/18/2013
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 14/018,542
Projected Publication Date: 03/27/2014
Non-Publication Request: No
Early Publication Request: No
\*\* SMALL ENTITY \*\*

**Title**

HAND HELD LINK MAKING DEVICE AND KIT

**Preliminary Class**

200

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

**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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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875	Application or Docket Number 14/018,542
---	--

APPLICATION AS FILED - PART I			SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
	(Column 1)	(Column 2)					
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A	70		N/A	
SEARCH FEE <small>(37 CFR 1.16(k), (j), or (m))</small>	N/A	N/A	N/A	300		N/A	
EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A	360		N/A	
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	17	minus 20 = *	x 40 =	0.00	OR		
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	3	minus 3 = *	x 210 =	0.00			
APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	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 <small>(37 CFR 1.16(j))</small>				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	730		TOTAL	

APPLICATION AS AMENDED - PART II					SMALL ENTITY		OR	OTHER THAN SMALL ENTITY		
	(Column 1)	(Column 2)	(Column 3)							
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)	
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	x	=	OR	x	=	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	x	=	OR	x	=	
	Application Size Fee <small>(37 CFR 1.16(s))</small>							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)	
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	x	=	OR	x	=	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	x	=	OR	x	=	
	Application Size Fee <small>(37 CFR 1.16(s))</small>							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		
<p>* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p>** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p>*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p>The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.</p>										

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

First Named Inventor:	Cheong Choon Ng	Nonprovisional Application Number (if known):	
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Title of Invention:	HAND HELD LINK MAKING DEVICE AND KIT
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**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), the prioritized examination fee set forth in 37 CFR 1.17(c), and if not already paid, the publication fee set forth in 37 CFR 1.18(d) have been filed with the request. The basic filing fee, search fee, examination fee, and any required excess claims and application size fees are filed with the request or have been already been paid.
2. The application contains or is amended to contain no more than four independent claims and no more than thirty total claims, and no multiple dependent claims.
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. The executed inventor's oath or declaration is filed with the application. (37 CFR 1.63 and 1.64)

**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 /John M. Siragusa/	Date 09-05-2013
Name (Print/Typed) John M. Siragusa	Practitioner Registration Number 44130

**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, see below\*.

\*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.



Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Cheong Choon Ng	
	Art Unit		
	Examiner Name		
	Attorney Docket Number		67467-009 PUS2

U.S. PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	0254258		1882-02-28	Barbour	
	2	0254288		1992-02-28	Dimmick	
	3	0782657		1905-02-14	Hubert	
	4	0843495		1907-02-05	Sander	
	5	1073226		1913-09-16	Freeman	
	6	1366212		1921-01-18	Pollard	
	7	1375119		1921-04-19	Stephen	
	8	1424458		1922-08-01	Fleisher	

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		
First Named Inventor	Cheong Choon Ng	
Art Unit		
Examiner Name		
Attorney Docket Number	67467-009 PUS2	

9	1599040		1926-09-07	Clisby	
10	1994659		1935-03-19	Mascarenhas	
11	2108424		1938-02-15	Bakely	
12	2360416		1944-10-17	Gray	
13	2703482		1955-03-08	Auran	
14	3069739		1962-12-25	Jorgenson et al.	
15	3438098		1969-04-15	Grabner	
16	3476423		1969-11-04	Kentfield	
17	3636987		1972-01-25	Forby	
18	3672679		1972-06-27	Burns	
19	3688357		1972-09-05	Nielsen et al.	

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Cheong Choon Ng	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	67467-009 PUS2	

	20	3728762		1973-04-24	Hogg	
	21	3748706		1973-07-31	Doyel	
	22	3805345		1974-04-23	Antos	
	23	4032179		1977-06-28	Goss	
	24	4114892		1978-09-19	Csoka	
	25	4179129		1979-12-18	Loomis	
	26	4569108		1986-02-11	Schwab	
	27	4667965		1987-05-26	Helms, Jr.	
	28	5163946		1992-11-17	Li	
	29	5295280		1994-03-22	Hudson et al.	
	30	5328374		1994-07-12	Stevens	

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		
First Named Inventor	Cheong Choon Ng	
Art Unit		
Examiner Name		
Attorney Docket Number	67467-009 PUS2	

	31	5437459		1995-08-01	Kirby	
	32	5459905		1995-10-24	Voyre	
	33	5577299		1996-11-26	Thompson et al.	
	34	5639090		1997-06-17	Stevens	
	35	5713094		1998-02-03	Markey et al.	
	36	5927764		1999-07-27	Harriman	
	37	6065968		2000-05-23	Corliss	
	38	6122859		2000-09-26	Lazar	
	39	6129551		2000-10-10	Martin	
	40	6146144		2000-11-14	Fowler et al.	
	41	6171317		2001-01-09	Jackson et al.	

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		
First Named Inventor	Cheong Choon Ng	
Art Unit		
Examiner Name		
Attorney Docket Number	67467-009 PUS2	

	42	6880364		2005-04-19	Vidolin et al.	
	43	6923026		2005-08-02	Clarke	
	44	7506524		2009-03-24	Gustin	
	45	7578146		2009-08-25	Gustin	
	46	7909609		2011-03-22	Molin	
	47	D330668		1992-11-03	Nagamatsu	
	48	D570923		2008-06-10	Vazquez Gastellu	
	49	8316894		2012-11-27	Schaub	
	50	5231742		1993-08-03	Macbain	
	51	3665971		1972-05-30	Ileks	
	52	5687775		1997-11-18	Thompson et al.	

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Cheong Choon Ng	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	67467-009 PUS2	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS						Remove
Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20090215013		2009-08-27	Molin	
	2	20100019495		2010-01-28	Oliveto	
	3	20110152946		2011-06-23	Frigg et al.	
	4	20110152946		2011-06-23	Frigg et al.	

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

FOREIGN PATENT DOCUMENTS								Remove
Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup> j	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1	2003-520083	JP		2003-07-02	D'Orica S.R.L.		<input type="checkbox"/>
	2	2004-520910	JP		2004-07-15	Louis Vuitton Malletier		<input type="checkbox"/>
	3	10-2001-0012609	KR		2001-02-15	Citizen Holdings Co., Ltd.		<input type="checkbox"/>

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number			
	Filing Date			
	First Named Inventor	Cheong Choon Ng		
	Art Unit			
	Examiner Name			
	Attorney Docket Number		67467-009 PUS2	

	4	10-2006-0042108	KR		2006-05-12	Montres Rado S.A.	<input type="checkbox"/>
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If you wish to add additional Foreign Patent Document citation information please click the Add button **Add**

**NON-PATENT LITERATURE DOCUMENTS** Remove

Examiner Initials*	Cite No	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, pages(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>
	1	International Search Report and Written Opinion for PCT Application No. PCT/US2011/041553 mailed on February 23, 2012.	<input type="checkbox"/>
	2	International Preliminary Report on Patentability for PCT Application No. PCT/US2011/041553 mailed May 16, 2013.	<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button **Add**

**EXAMINER SIGNATURE**

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Cheong Choon Ng	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	67467-009 PUS2	

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/John M. Siragusa/	Date (YYYY-MM-DD)	2013-09-05
Name/Print	John M. Siragusa	Registration Number	46174

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour 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.**



## Privacy Act Statement

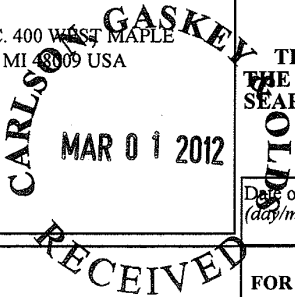
The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection 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.

## PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY


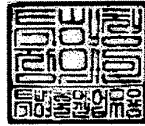
To: SIRAGUSA JOHN M. ✓ CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD, SUITE 350 BIRMINGHAM MI 35209 USA		<b>PCT</b>  NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION  (PCT Rule 44.1)
		
Applicant's or agent's file reference 67467-001PCT		Date of mailing (day/month/year) 23 FEBRUARY 2012 (23.02.2012)
International application No. <b>PCT/US2011/041553</b> ✓		International filing date (day/month/year) <b>23 JUNE 2011 (23.06.2011)</b> ✓
Applicant <b>NG, CHEONG CHOON</b>		

1.  The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.  
**Filing of amendments and statement under Article 19:**  
The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):  
**When?** The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.  
**Where?** Directly to the International Bureau of WIPO, 34 chemin des Colombettes  
1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70  
**For more detailed instructions, see PCT Applicant's Guide, International Phase, paragraphs 9.004 - 9.011.**

2.  The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3.  **With regard to any protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:  
 the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.  
 no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**  
The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.  
Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau before the completion of the technical preparations for international publication (Rules 90bis.1 and 90bis.3).  
Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.  
In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.  
For details about the applicable time limits, Office by Office, see [www.wipo.int/pct/en/texts/time\\_limits.html](http://www.wipo.int/pct/en/texts/time_limits.html) and the PCT Applicant's Guide, National Chapters.

Name and mailing address of the ISA/KR  Korean Intellectual Property Office Government Complex-Daejeon, 189 Cheongsa-ro, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer  COMMISSIONER  Telephone No. 82-42-481-8755	
---	--	---

Form PCT/ISA/220 (July 2010)

\* Attention

Copies of the documents cited in the international search report can be searched in the following Korean Intellectual Property Office English website for three months from the date of mailing of the international search report.

<http://www.kipo.go.kr/en/> => PCT Services => PCT Services

ID : PCT international application number

PW : **NMFD6U3V**

Inquiries related to PCT International Search Report or Written Opinion prepared by KIPO as an International Searching Authority can be answered not only by KIPO but also through IPKC (Intellectual Property Korea Center), located in Vienna, VA, which functions as a PCT Help Desk for PCT applicants.

Homepage: <http://www.ipkcenter.com>

Email: [ipkc@ipkcenter.com](mailto:ipkc@ipkcenter.com)

Phone: +1 703 388 1066

Fax: +1 703 388 1084

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 67467-001PCT	<b>FOR FURTHER ACTION</b>	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. <b>PCT/US2011/041553</b>	International filing date ( <i>day/month/year</i> ) <b>23 JUNE 2011 (23.06.2011)</b>	(Earliest) Priority Date ( <i>day/month/year</i> ) 05 NOVEMBER 2010 (05.11.2010)
Applicant <b>NG, CHEONG CHOON</b>		

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of:

the international application in the language in which it was filed

a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b.  This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c.  With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2.  **Certain claims were found unsearchable** (See Box No. II)

3.  **Unity of invention is lacking** (See Box No. III)

4. With regard to the title,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the abstract,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 1

as suggested by the applicant.



as selected by this Authority, because the applicant failed to suggest a figure.

as selected by this Authority, because this figure better characterizes the invention.

b.  none of the figure is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2011/041553

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>		
<i>A44C 5/02(2006.01)i, A44C 5/00(2006.01)i, A44C 25/00(2006.01)i, A44C 27/00(2006.01)i</i>		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols) A44C 5/02; A44C 5/10; A44C 25/00; A44C 5/00; A44C 27/00		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean utility models and applications for utility models Japanese utility models and applications for utility models		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) eKOMPASS(KIPO internal) & Keywords: a brunnian link assembly, a closed loop, a chain, a pin bar, a link orientation, a elastic band, a top flared portion, a mating structure, a linked wearable articles, a chain		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2003-520083 A (D'ORICA S.R.L.) 02 July 2003 See abstract, claims 1-10, figures 1-4	1-18
A	US 6880364 B1 (MICHAEL F. VIDOLIN et al.) 19 April 2005 See abstract, claims 1-16, figures 1-3	1-18
A	KR 10-2001-0012609 A (CITIZEN HOLDINGS CO., LTD) 15 February 2001 See abstract, claims 1-8, figures 1,5,	1-18
A	KR 10-2006-0042108 A (MONTRES RADO S.A.) 12 May 2006 See abstract, claims, figures 1b,2b	1-18
A	JP 2004-520910 A (LOUIS VUITTON MALLETIER) 15 July 2004 See abstract, claims 1-13, figure 1	1-18
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 22 FEBRUARY 2012 (22.02.2012)		Date of mailing of the international search report <b>23 FEBRUARY 2012 (23.02.2012)</b>
Name and mailing address of the ISA/KR  Korean Intellectual Property Office Government Complex-Daejeon, 189 Cheongs-a-ro, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140		Authorized officer PARK, Se Young Telephone No. 82-42-481-8653 

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2011/041553

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 2003-520083 A	02.07.2003	AT 254413 T AU 2000-31857 A1 DE 60006657 D1 EP 1168939 A1 EP 1168939 B1 IT V120000014A1 IT 1315172 B1 JP 2003-520083 T TR200102640T1 WO 01-52683 A1	15.12.2003 31.07.2001 24.12.2003 09.01.2002 19.11.2003 19.07.2001 03.02.2003 02.07.2003 22.04.2002 26.07.2001
US 6880364 B1	19.04.2005	None	
KR 10-2001-0012609 A	15.02.2001	CN 1258204 A0 EP 1018308 A1 EP 1018308 A4 JP 11-262403 A TW 425272 A WO 99-47016 A1	28.06.2000 12.07.2000 13.06.2001 28.09.1999 11.03.2001 23.09.1999
KR 10-2006-0042108 A	12.05.2006	EP 1566110 A1 EP 1566111 A2 EP 1566111 A3 JP 04-571874 B2 JP 2005-230556 A JP 4571874 B2 US 2005-0183412 A1 US 7021041 B2	24.08.2005 24.08.2005 13.06.2007 20.08.2010 02.09.2005 27.10.2010 25.08.2005 04.04.2006
JP 2004-520910 A	15.07.2004	AT 332092 T DE 60213013 D1 EP 1367917 A1 EP 1584255 A1 EP 1584255 B1 FR 2821724 A1 FR 2821724 B1 HK 1074980 A1 JP 2004-520910 T US 2004-0079109 A1 US 7055343 B2 WO 02-071885 A1	15.07.2006 17.08.2006 10.12.2003 12.10.2005 05.07.2006 13.09.2002 13.06.2003 25.08.2006 15.07.2004 29.04.2004 06.06.2006 19.09.2002

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:  
SIRAGUSA JOHN M.

CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE  
ROAD, SUITE 350 BIRMINGHAM MI 48009 USA

# PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing  
(day/month/year) **23 FEBRUARY 2012 (23.02.2012)**

Applicant's or agent's file reference  
67467-001PCT

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.

**PCT/US2011/041553**

International filing date (day/month/year)

**23 JUNE 2011 (23.06.2011)**

Priority date(day/month/year)

05 NOVEMBER 2010 (05.11.2010)

International Patent Classification (IPC) or both national classification and IPC

*A44C 5/02(2006.01)i, A44C 5/00(2006.01)i, A44C 25/00(2006.01)i, A44C 27/00(2006.01)i*

Applicant

**NG, CHEONG CHOON**

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/KR  
Korean Intellectual Property Office  
Government Complex-Daejeon, 189  
Cheongsa-ro, Seo-gu, Daejeon 302-  
701, Republic of Korea  
Facsimile No. 82-42-472-7140



Date of completion of this opinion

22 FEBRUARY 2012 (22.02.2012)

Authorized officer

PARK, Se Young

Telephone No.82-42-481-8653



WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2011/041553

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of :
  - the international application in the language in which it was filed
  - a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
2.  This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:
  - a. a sequence listing filed or furnished
    - on paper
    - in electronic form
  - b. time of filing or furnishing
    - contained in the international application as filed.
    - filed together with the international application in electronic form.
    - furnished subsequently to this Authority for the purposes of search.
4.  In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No. <b>PCT/US2011/041553</b>
---

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims	1-18	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-18	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-18	YES
	Claims	NONE	NO

**2. Citations and explanations :**

Reference is made to the following documents:

- D1: JP 2003-520083 A (D'ORICA S.R.L) 02 July 2003
- D2: US 6880364 B1 (MICHAEL F. VIDOLIN et al.) 19 April 2005
- D3: KR 10-2001-0012609 A (CITIZEN HOLDINGS CO.,LTD) 15 February 2001
- D4: KR 10-2006-0042108 A (MONTRES RADO S.A.) 12 May 2006
- D5: JP 2004-520910 A (LOUIS VUITTON MALLETIER) 15 July 2004

Reasoned statement with regard to novelty, inventive step and industrial applicability :

**1. Novelty and Inventive Step**

**1-1. Claims 1 and 12**

The subject matter of claim 1 differ from these prior art documents in that a kit for creating an item consisting of a series of links, the device comprising a base and at least one pin bar including a plurality of pins each including a top flared portion for holding a link in a desired orientation and an opening on a front side of each of the plurality of pins. And it is not obvious to a skilled person in the art by the documents, take alone or in combination.

The subject matter of claim 12 differ from these prior art documents in that a method of creating a linked item comprising the steps of supporting at least one pin bar to a base, assembling at least two elastic bands across adjacent pins, capturing one end of an elastic band and pulling the end over until a desired link length and configuration. And it is not obvious to a skilled person in the art by the documents, take alone or in combination.

Therefore, claims 1 and 12 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

**1-2. Claims 2-11 and 13-18**

Dependent claims 2-11 and 13-18 also meet the requirements of PCT Article 33(2) and (3).

Continued on Supplemental Box

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

**PCT/US2011/041553**

**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.  
Continuation of:

Box V

**2. Industrial Applicability**

Claims 1-18 are industrially applicable under PCT Article 33(4).

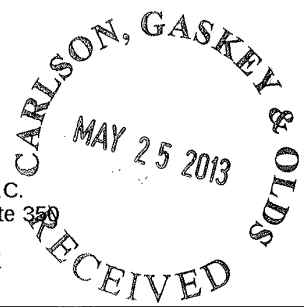
PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

**PCT**

NOTIFICATION CONCERNING  
TRANSMITTAL OF COPY OF INTERNATIONAL  
PRELIMINARY REPORT ON PATENTABILITY  
(CHAPTER I OF THE PATENT COOPERATION  
TREATY)  
(PCT Rule 44bis.1(c))

To:



SIRAGUSA, John, M.  
Carlson, Gaskey & Olds, P.C.  
400 West Maple Road, Suite 350  
Birmingham, MI 48009  
ETATS-UNIS D'AMERIQUE

Date of mailing (*day/month/year*)  
16 May 2013 (16.05.2013)

Applicant's or agent's file reference  
67467-001PCT

**IMPORTANT NOTICE**

International application No.  
✓ PCT/US2011/041553

International filing date (*day/month/year*)  
✓ 23 June 2011 (23.06.2011)

Priority date (*day/month/year*)  
05 November 2010 (05.11.2010)

Applicant  
NG, Cheong Choon

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No. +41 22 338 82 70

Authorized officer  
Yukari Nakamura

e-mail: pt07.pct@wipo.int

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference <b>67467-001PCT</b>	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. <b>PCT/US2011/041553</b>	International filing date ( <i>day/month/year</i> ) <b>23 June 2011 (23.06.2011)</b>	Priority date ( <i>day/month/year</i> ) <b>05 November 2010 (05.11.2010)</b>	
International Patent Classification (8th edition unless older edition indicated) <b>See relevant information in Form PCT/ISA/237</b>			
Applicant <b>NG, Cheong Choon</b>			

<p>1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</p>																								
<p>3. This report contains indications relating to the following items:</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> <p>4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).</p>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
<input checked="" type="checkbox"/>	Box No. I	Basis of the report																						
<input type="checkbox"/>	Box No. II	Priority																						
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability																						
<input type="checkbox"/>	Box No. IV	Lack of unity of invention																						
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																						
<input type="checkbox"/>	Box No. VI	Certain documents cited																						
<input type="checkbox"/>	Box No. VII	Certain defects in the international application																						
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application																						

	Date of issuance of this report <b>07 May 2013 (07.05.2013)</b>
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer  <b>Yukari Nakamura</b>
Facsimile No. +41 22 338 82 70	e-mail: pt07.pct@wipo.int

Form PCT/IB/373 (January 2004)

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

SIRAGUSA JOHN M.

CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE  
ROAD, SUITE 350 BIRMINGHAM MI 48009 USA

**PCT**

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

Date of mailing  
(day/month/year) **23 FEBRUARY 2012 (23.02.2012)**

Applicant's or agent's file reference

67467-001PCT

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.

**PCT/US2011/041553**

International filing date (day/month/year)

**23 JUNE 2011 (23.06.2011)**

Priority date(day/month/year)

05 NOVEMBER 2010 (05.11.2010)

International Patent Classification (IPC) or both national classification and IPC

*A44C 5/02(2006.01)i, A44C 5/00(2006.01)i, A44C 25/00(2006.01)i, A44C 27/00(2006.01)i*

Applicant

**NG, CHEONG CHOON**

1. This opinion contains indications relating to the following items:


- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

<p>Name and mailing address of the ISA/KR Korean Intellectual Property Office Government Complex-Daejeon, 189 Cheongsa-ro, Seo-gu, Daejeon 302- 701, Republic of Korea Facsimile No. 82-42-472-7140</p>	<p>Date of completion of this opinion 22 FEBRUARY 2012 (22.02.2012)</p>	<p>Authorized officer PARK, Se Young Telephone No.82-42-481-8653</p> 
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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2011/041553

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of :

- the international application in the language in which it was filed
- a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

2.  This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:

a. a sequence listing filed or furnished

- on paper
- in electronic form

b. time of filing or furnishing

- contained in the international application as filed.
- filed together with the international application in electronic form.
- furnished subsequently to this Authority for the purposes of search.

4.  In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

**PCT/US2011/041553**

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	<u>1-18</u>	YES
	Claims	<u>NONE</u>	NO
Inventive step (IS)	Claims	<u>1-18</u>	YES
	Claims	<u>NONE</u>	NO
Industrial applicability (IA)	Claims	<u>1-18</u>	YES
	Claims	<u>NONE</u>	NO

2. Citations and explanations :

Reference is made to the following documents:

D1: JP 2003-520083 A (D`ORICA S.R.L) 02 July 2003  
D2: US 6880364 B1 (MICHAEL F. VIDOLIN et al.) 19 April 2005  
D3: KR 10-2001-0012609 A (CITIZEN HOLDINGS CO.,LTD) 15 February 2001  
D4: KR 10-2006-0042108 A (MONTRES RADO S.A.) 12 May 2006  
D5: JP 2004-520910 A (LOUIS VUITTON MALLETIER) 15 July 2004

Reasoned statement with regard to novelty, inventive step and industrial applicability :

1. Novelty and Inventive Step

1-1. Claims 1 and 12

The subject matter of claim 1 differ from these prior art documents in that a kit for creating an item consisting of a series of links, the device comprising a base and at least one pin bar including a plurality of pins each including a top flared portion for holding a link in a desired orientation and an opening on a front side of each of the plurality of pins. And it is not obvious to a skilled person in the art by the documents, take alone or in combination.

The subject matter of claim 12 differ from these prior art documents in that a method of creating a linked item comprising the steps of supporting at least one pin bar to a base, assembling at least two elastic bands across adjacent pins, capturing one end of an elastic band and pulling the end over until a desired link length and configuration. And it is not obvious to a skilled person in the art by the documents, take alone or in combination.

Therefore, claims 1 and 12 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

1-2. Claims 2-11 and 13-18

Dependent claims 2-11 and 13-18 also meet the requirements of PCT Article 33(2) and (3).

Continued on Supplemental Box

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

**PCT/US2011/041553**

**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

Continuation of :

Box V

**2. Industrial Applicability**

Claims 1-18 are industrially applicable under PCT Article 33(4).



(19)대한민국특허청(KR)  
(12) 공개특허공보(A)

(51) Int. Cl.

A44C 5/02 (2006.01)

A44C 5/00 (2006.01)

(11) 공개번호

10-2006-0042108

(43) 공개일자

2006년05월12일

(21) 출원번호 10-2005-0013830

(22) 출원일자 2005년02월19일

(30) 우선권주장 04003856.4 2004년02월20일 유럽특허청(EPO)(EP)

(71) 출원인 몬트레스 라도 쏘시에페 아노님  
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스위스, 2500 비엘, 테센버그스트라체 67

(74) 대리인 강명구

심사청구 : 없음

(54) 가요성 코어상의 강제물질로 이루어진 링크를 가진 팔찌

요약

팔찌(1)는 강제 물질로 이루어진 복수의 병치된 링크(2)와 링크가 맞물리는 가요성 코어(3)로 형성된다. 가요성 코어(3)는 차례로 제거가능하게 조립된 가요성 요소(4)의 길이의 부분위로 형성된다. 각 가요성 요소는 두 대향측면상에 제 1 조립부분(7)과 이에 보완적인 제 2 조립부분(6)을 포함한다. 상기 요소들은 가요성 스트립을 형성하기위해 함께 제 1 및 제 2 조립부분을 끼움으로써 차례로 조립될 수 있다. 링크(2)는 이들의 조립된 위치내에 가요성 요소를 고정하기위해 가요성 코어상에 위치된다.

대표도

도 1a

색인어

팔찌, 형상기억

명세서

도면의 간단한 설명

도 1a 및 1b는 평면도 및 본 발명에 따라 조립된 팔찌의 부분의 제 1 실시예의 도 1a의 선 I-I 을 따른 단면도를 도시한다.

도 2a 및 2b는 평면도 및 팔찌의 크기가 조정되는 방법을 설명하는 본 발명에 따른 팔찌의 부분의 제 1 실시예의 도 2a의 선 II-II를 따른 단면도를 도시한다.

도 3a-3c는 본 발명에 따른 팔찌의 링크가 변화하는 크게 만곡된 위치 및 작게 만곡된 위치에서 직사각형 위치내의 팔찌의 부분의 세로 평면도이다.

도 4a 및 4b는 평면도 및 팔찌의 크기가 조정되는 방법을 설명하는 본 발명에 따른 팔찌의 부분의 제 2 실시예의 도 4a의 선 III-III를 따른 단면도를 도시한다.

\* 부호설명

- 1: 팔찌 2: 강제물질
- 3: 가요성 코어 4: 가요성 요소
- 4': 제 1 가요성 부분 5: 단부 피스
- 6: 제 1 조립 부분 7: 제 2 조립 부분
- 8: 개구부 9: 블라인드 홀
- 10: 스템

발명의 상세한 설명

발명의 목적

발명이 속하는 기술 및 그 분야의 종래기술

본 발명은 가요성 코어상의 강제 물질로 이루어진 링크를 가진 팔찌에 관한 것이다.

상기 팔찌는 강제물질로 이루어진 몇몇 병치된 링크 형태를 이루며 팔찌가 구부러질수 있도록 가요성 코어로 맞물리게 된다. 상기 팔찌는 예를들어 하나 또는 두 부분을 가진 손목시계 밴드 또는 하나의 부분과 팔찌 부분의 단부중 하나에 각각 배치된 한 부분과 걸쇠 부분을 가지는 종래의 팔찌일 수 있다. 강제 물질로 만들어진 링크는 강제 장식 부분으로 사용되거나 팔찌를 더욱 견고하고 단단하게 하는데도 사용된다. 따라서 사용되는 강제 물질은 피부에 과민반응을 일으키지 않는형태 및 내마모성이 큰 형태로 선택되어야 한다.

분절부분이 형성된 중심코어에 장착되는 강제 링크를 포함하는 팔찌는 종래기술의 몇가지 문헌에서 이미 공지된 바 있다.

유럽특허 제 0 030 705호는 힌지가 형성된 팔찌를 공개하고 있다. 이 팔찌는 각각 두 대향면에 이루어진 두 가로 돌출 부분을 각각 가지는 평행육면체 형상의 강제요소의 체인으로 형성된다. 각 요소의 상기 돌출 부분은 체인을 형성하기 위하여 요소가 타측뒤에 하나가 고정되도록 각면에 다른 경사를 가지는 직립 L자형의 섹션을 가진다. 강제 요소는 강제 요소가 조립되어 유지하도록 프레임형상내에 강제 링크로 덮여진다. 상기 팔찌는 강제 요소의 돌출부분으로 결합된다.

상기 유럽특허 제 0 030 705호에 공지된 힌지형성 팔찌의 한가지 결점은 강제 내부요소로 형성된다는 점이다. 이것은 팔찌가 결합되도록 하기 위해 돌출부분을 가진 요소가 특정한 형태를 가져야 한다. 결과적으로, 요소의 체인을 형성하고 팔찌가 결합될 수 있도록 하기 위해 돌출부분을 가진 비교적 두꺼운 내부 요소로 인해 팔찌의 두께가 매우커지고 커진다.

스위스 특허 제 365 242호는 결합된 요소를 가지는 팔찌를 공개하고 있다. 이러한 팔찌는 둥근 대향 변부를 가진 일련의 차례로 나란히 고정된 강체 플레이트와 일련의 고리가 형성된 플레이트에 결합된 강체 링으로 형성된다. 상기 링은 플레이트가 팔찌가 플레이트의 둥근 변부에서 결합되도록 하는 동안 걸려 유지된다.

상기와 같이 스위스 특허 제 365 242호에 공개된 상기 팔찌의 결점은 결합된 팔찌를 만들기 위해 강체 내부 플레이트의 두께가 커진다는 것이다.

독일 특허 제 1 081 260호는 차례로 조립된 혹은 요소로 형성된 코어에 배치된 링크를 형성하고 관형 요소로 형성된 결합된 팔찌를 공개하고 있다.

상기 팔찌의 길이는 몇몇 후크요소들을 해제시켜 이들을 커버하는 링크를 제거함으로써 조절될 수 있다. 그러나, 차례로 걸려 고정될 수 있도록 하기 위해 강체 요소로 된 후크요소를 위한 부분 또는 핀이 이들을 커버하는 각 링크의 내부쪽의 공간을 마감하도록 각 걸리는 부분에 형성되어야 한다.

심지어 팔찌가 상술한 공지기술에서보다 작은 두께를 가질 수 있을지라도 이들을 고정하기위해 이들을 커버하는 링크내부에 조립된 각 강체 후크 요소를 마감하기위한 부분이 추가되어야 한다. 이러한 사실은 상당한 결점으로 작용하는데 팔찌의 길이가 쉽게 조절될 수 없기 때문에 주어진 몇부분이 후크 요소와 결합하여 위치하게 되어야 한다는 것이다.결합된 요소없이 팔찌가 적절한 가요성을 가지도록 하는 한편 팔찌의 두께를 줄이기 위하여 프랑스 특허 제 2 625 879호는 가요성 코어를 가지는 팔찌를 공개하고 있다. 상기 가요성 코어는 강체물질의 링이 위치하는 스트립의 형태로 이루어진다. 그러나, 가요성 코어를 가지는 팔찌의 한가지 결점은 착용하는 사람의 손목의 팔찌의 크기를 맞추기가 어렵고 크기조정시 하나 또는 몇몇 링이 제거되어야하고 가요성 코어가 다른 단부 피스에 연결되기 때문에 전문상점에 가야한다는 것이다. 가요성 코어를 가진 팔찌의 또 다른 결점은 한번 가요성 코어가 착용하는 사람의 손목에 맞게 커팅되면 다른 사람이 착용할때를 위해 더이상 크기를 확대할 수 없다는 점이다.

#### 발명이 이루고자 하는 기술적 과제

따라서, 본 발명의 목적은 가요성 코어에 강체 물질로 이루어진 링크를 포함하는 얇은 두께의 팔찌를 제공하고 팔찌의 크기라 쉽게 조절될 수 있도록 함으로써 상술한 종래의 결점을 극복하기 위한 것이다.

따라서, 본 발명은 상술한 팔찌에 관한 것으로 가요성 코어가 조립되는 가요성 요소의 길이부분이상으로 형성되어 이들이 각각 제거될 수 있고 각 가요성코어의 길이방향의 가요성 요소가 두 대향측면상에 제 1 조립부분과 이를 보완하는 제 2 조립부분을 포함하여 상기 제 1 및 제 2 조립부분을 끼움으로써 요소가 차례로 조립되도록 하고 가요성 코어상에 위치하는 링크가 끼워진부분을 커버함으로써 조립된 부분내의 가요성 요소를 유지하도록 하는 것을 특징으로 한다.

본 발명에 따른 팔찌의 장점은 하나 또는 몇몇 링크와 마찬가지로 가요성 코어로부터 하나이상의 가요성 요소를 제거 또는 추가함으로써 팔찌의 크기를 쉽게 조절한다는 것이다. 팔찌의 한 단부로부터 시작하여 팔찌의 크기를 줄이기 위해 최종 가요성 요소와 맞물린 단부 피스가 먼저 제거되어야 한다. 그후 최종 링크가 그 자유단부로부터 가요성 코어위로 슬라이딩됨으로써 제거된다.

두 인접 가요성 요소의 조립된 부분을 커버하는 상기 최종 링크를 제거함으로써 상기 최종요소는 이것이 부착되는 요소로부터 제거될 수 있다. 상기 작동은 팔찌의 크기가 사용자의 손목에 맞추어질 때까지 몇몇 링크와 가요성 요소를 제거하기 위해 동시에 또는 연속하여 수행될 수 있다.

각 가요성 요소는 한 측면에 제 1 조립 부분 그리고 대향측면에 이를 보완하는 제 2 조립 부분을 포함하는 것이 바람직하다.이와같이 상기 요소들은 이들의 보완적인 조립부분과 함께 끼워짐으로써 차례로 조립된다.한번 가요성 코어의 가요성 요소들이 조립되면 가요성 코어는 그 전체 길이에 걸쳐 균이한 두께의 가요성 스트립을 형성한다. 물론, 팔찌 크기의 조정이 팔찌의 전체 길이에 걸쳐 일어나는 것은 아니기 때문에,가요성 코어의 오직 한 부분이 동일한 크기의 가요성 요소로 형성될 수 있다. 각 가요성 요소의 제 1 조립 부분이 T자 형상 또는 도브테일 형상을 가지는 한편, 제 2 조립 부분은 제 1 조립 부분에 보완적인 T 형상 또는 도브테일 형상의 구멍을 가지는 것이 바람직하다.

가요성 코어는 그 수피 탄성 특질을 위한 형상 기억 물질로 만들어지는 것이 바람직하다. 상기 형상 기억물질은 티타늄 및 니켈로 형성된 금속 합금 또는 복합 플라스틱 물질일 수 있다. 가요성 코어의 두께는 1mm 이하 예를들어 0.4mm에 근접하나 0.2mm인 것이 바람직하다.

상기 물질로 만들어진 코어는 팔찌에 적절한 가요성이 주어지는 동안 파손없이 견인 또는 비틀림에 저항할 수 있다. 상기 가요성 코어의 수피 탄성 형상 기억 물질로 인해 열처리를 통해 손목의 형태에 맞는 코어형상을 가질 수 있다. 또한, 상기 수피 탄성 물질을 가짐에 따라 탄성은 강철 스프링보다 4배 더 클 수 있다.

강체 물질의 링크는 3mm이하 바람직하게는 2mm정도의 두께를 가지는 세라믹 물질, 서밋(cermit) 또는 강성 금속으로 이루어질 수 있다. 이와같이, 팔찌는 높은수준의 파손저항성 및 안전성을 가지면서 작은 두께로 이루어질 수 있다. 팔찌는 다양한 부분으로 형성되기 때문에, 만들기가 쉽고 크기가 쉽게 조절되며 제조비용이 감소한다.

가요성 코어상의 강체 링크를 가진 팔찌의 목적, 장점 및 특성은 도면을 참조하여 본 발명의 비제한적인 실시예로 하기에 더욱 상세히 설명된다.

발명의 구성 및 작용

도 1a 및 1b는 조립된 위치에서 팔찌(1)의 한 분기 부분을 간단한 방법으로 도시한다. 팔찌(1)는 강체물질(2)로 이루어진 몇개의 링크로 맞물리는 가요성 코어(3)와 가요성 코어의 한 단부에 고정되는 단부 피스(3)를 포함한다. 단부 피스(5)는 도시된 바와 같이 결쇠의 부분 또는 도시되지 않은 시계 케이스의 연결부분일 수 있다.

도시되지 않은 가요성 코어의 다른 단부는 종래의 방법으로 시계 케이스에 고정되거나 단부 피스(5)에 보완부분과같이 작용하는 다른 단부피스에 고정될 수 있다. 가요성 코어(3)는 제 1 가요성 부분(4')과 가요성 스트립을 형성하도록 가요성 부분으로부터 차례로 조립되는 몇몇 가요성 요소(4)로 형성될 수 있다.

가요성 요소(4)는 이들을 커버하는 링크(2)의 작용에 따라 동일하거나 다른 크기를 가진다. 각 가요성 요소(4)는 팔찌의 길이방향에서보아 제 1 조립 부분(6)을 가진 제 1 측면과 제 1 조립부분에 보완적인 제 2 조립부분(7)을 가진 제 2 측면을 포함한다. 이와같이 가요성 요소(4)는 상응하는 조립부분과함께 끼워짐으로써 서로 제거가능한 방법으로 조립될 수 있다. 상기 조립 부분들은 보완적인 부분들이 차례로 끼워질 때 마찰에 의해 일시적으로 접촉하는 부분을 고정하도록 형성될 수 있다.

따라서, 제 1 가요성 부분은 역시 한단부에서 가요성 요소(4)가 스트립을 형성하기위해 조립되는 조립 부분을 가져야 한다. 가요성 요소를 조립하는 상기 방법으로 상기 스트립은 가요성 코어(3)의 길이 전체에 걸쳐 균일한 두께를 가지는 것이 바람직하다. 상기 가요성 코어의 두께는 1mm이하 바람직하게는 0.2mm정도이다.

각 가요성 요소(4)의 제 1 조립 부분(7)은 T자형상으로 이루어질 수 있는 반면, 제 2 조립 부분(6)은 여기에 보완적인 T자형상의 개구부이다. 가요성 요소(4)의 제 1 조립부분(7)은 따라서 인접 가요성 요소의 제 2 조립 부분(6)으로 끼워질 수 있다. 몇몇 다른 요소들과 함께 상기 작동을 반복함에 따라 가요성 코어를 형성하는 가요성 스트립이 달성된다.

물론, 조립부분은 다른 형상 특히 각 가요성 요소의 중심 부분에 헤드가 연결된 암과 하나이상의 헤드를 포함하는 조립 부분중 하나로 이루어질 수 있다. 헤드의 폭은 물론 세로로 각 조립된 요소를 고정하기 위해 암의 폭보다 크다.

상기 헤드는 각 요소의 중심부분에 이를 연결하는 암의 폭보다 큰 직경의 원부분을 나타낼 수 있다. 다른 조립 부분은 따라서 가요성 요소내의 보완적인 원형 개구부이어야 한다.

가요성 코어를 만드는데 사용되는 물질은 금속과같은 탄성물질이나 형상 기억물질과 같은 수피 탄성 유리가 될 수 있다. 상기 형상 기억물질은 티타늄 및 니켈로 이루어진 금속 합금 또는 복합 플라스틱 물질일 수 있다. 상기 물질은 쉽게 구부러질 수 있도록 필요한 가요성을 가지는 팔찌를 제공하는 한편 알레르기를 일으키지 않고 생물학적 적합성이 있어야 한다. 따라서, 상기 물질의 시트 또는 몇몇 플레이트를 스탬핑함으로써 특히 몇몇 가요성 요소를 제조하기 쉽다. 조립된 위치로 가요성 요소(4)를 유지하기 위해 이들은 실질적으로 평행 육면체의 일반형상을 가지는 강체 물질로 이루어진 링크(2)에 의해 덮여진다. 상기 링크(2)는 이것이 가요성 코어위로 슬라이드되고 맞물려지도록 충분한 크기의 세로 개구부(12)를 가진 링을 형성한다. 상기 세로 개구부(12)는 팔찌가 구부러질때, 가요성 요소의 수직 진행을 허용하도록 약간 만곡된 표면을 가진다.

또한, 상기 링크의 하부는 가요성 코어를 구부림으로써 팔찌를 구부릴 수 있도록 잘린 피라미드 형상을 가진다. 세라믹 물질, 서밋, 강성금속 또는 나무로 이루어지며 3mm이하 바람직하게는 2mm 두께를 가진다.

링크(2)는 한번 가요성 요소가 조립되거나 점차적으로 요소들이 연속하여 조립됨에 따라 상기 코어의 제 1 단부로부터 가요성 코어의 다른 단부로 연속하여 가요성 코어로 맞물릴 수 있다. 각 링크의 세로 개구부(12)의 폭은 각 가요성 요소의 최대폭보다 약간 크고 이들의 높이는 각 가요성 요소(4)의 두께의 두배보다 작다. 상기 개구부의 최소높이는 각 가요성 요소(4)의 두께보다 약간 큰 것이 바람직하다. 이와같이 상기 링크는 가요성 코어위로 쉽게 슬라이드될 수 있다.

한번 링크(20가 가요성 코어(3)의 각 단부사이에서 가요성 코어(3)상에 장착되면, 조립된 요소의 조립부분의 각 영역은 링크 중 하나에 의해 완전히 덮여지도록 위치한다. 결과적으로, 이것은 가요성 코어의 가요성 요소전부가 조립된 위치로 유지되도록 할 수 있다. 한번 상기 단부 피스(50가 최종요소(4) 또는 제 1 가요성 부분(4')의 최종 조립부분에 고정되면 링크(2)는 가요성 코어(3)에 단부 피스(5)에 의해 위치될 수 있다.

도 1a 및 1b의 제 1 실시예에 따라 단부 피스(50를 고정하기 위해, 각 요소(4) 및 제 1 부분(4')의 제 1 조립 부분(7)은 하나 또는 두 개구부(8)를 포함한다. 단부피스(5)는 팔찌의 길이에 수직한 방향으로 배치되는 하나 또는 두 블라인드 홀(9)을 포함한다. 하나 또는 두 스템(10)은 최종 가요성 요소(40 또는 제 1 가요성 부분(4')의 개구부 또는 개구부들(8)을 통과하는 각 블라인드홀(9)내에 장착된다.

블라인드 홀(9)은 나사산이 형성될 수 있고 두 스템(10)은 홀(9)중 하나에 각각 나사결합되는 스크류일 수 있다. 물론, 단부 피스의 고정 스크류는 이들을 감추기 위해 팔찌를 끼는 사람의 손목과 접촉하는 팔찌의 측면에 위치된다.

팔찌의 제 1 실시예와 관련된 도 2a 및 2b는 팔찌(1)의 크기가 어떻게 조절되는 가를 설명한다. 모든 팔찌의 동일한 요소는 도 1a 및 1b와 동일한 참조번호를 사용한다. 따라서 상기 요소들의 설명을 반복하지 않는다.

팔찌의 크기의 조절에 대한 설명을 간단히 하기 위해, 한 가요성 요소(4)와 산 상응하는 링크(2)의 추가 및 삭제만을 설명한다. 물론 균등한 몇몇 요소와 링크의 제거 또는 추가는 동일한 방법으로 이루어진다.

팔찌의 크기를 확대하기 위해, 최종 가요성 요소(4)의 제 1 조립부분(7)의 단부 피스(5)가 먼저 제거된다. 그후, 단계 a1에서, 부가적인 가요성 요소(4)의 제 2 조립부분이 가요성 코어(3)의 최종 요소의 제 1 조립부분(7)에 끼워진다.

상기 새로운 가요성 요소(4)가 조립된 후 새로운 링크(2)는 단계 a2에서 팔찌(1)의 최종 선행링크와 접촉할때까지 코어에 맞물린다. 한번 새로운 링크(2)가 가요성 코어상에 위치하면 부가적인 요소의 제 1 조립부분은 단계 a3에서 단부피스가 맞물리게 하기 위하여 노출되어 남아있게된다. 단부 피스(5)가 부가적인 요소(4)의 제 1 조립부분상의 가요성 코어의 단부에 위치하자마자 고정 스크류(100가 단계 a4에서 두 개구부(8)를 통과하는 나사산이 형성된 홀(9)에 나사결합된다. 따라서, 팔찌의 크기는 한 부가적인 요소와 링크로 조절된다.

팔찌의 크기를 줄이기 위하여, 고정 스크류(10)는 먼저 풀려지고 단계 b1에서 블라인드 홀(9)에서 제거된다. 그후 단부피스(5)가 단계 b2에서 가요성 코어로부터 제거된다. 그후 최종 링크(2)는 단계 b3에서 가요성 코어로부터 이를 제거하기 위해 슬라이드되어야 한다. 결국, 최종 가요성 요소(4)는 단계 b4에서 인접요소의 제 1 조립 부분(7)으로부터 제 2 조립부분(6)을 해제함으로써 제거될 수 있다.

한번 한 요소와 한 링크가 팔찌로부터 제거되면, 단부 피스(5)는 가요성 코어의 최종 요소의 제 1 조립 부분에 고정된다.

상술한 다양한 단계로부터 상기 목적을 위해 특성화된 상점에 갈 필요없이 상기 팔찌를 착용한 사람의 손목에 팔찌의 크기를 쉽게 조절할 수 있게된다는 것을 이해할 수 있다.

강체물질로 이루어진 몇몇 링크와 가요성 코어로 형성된 팔찌의 가요성을 설명하기 위해 직사각형 위치, 약간 구부러진 위치 및 팔찌의 최대 구부러진 위치가 될 수 있는 구부러진 위치에서 팔찌의 부분을 도시하는 도 3a-3c를 참조한다. 상술한 바와 같이, 동일한 요소는 동일한 참조번호로 나타난다.

도 3a-3c에 도시된 링크의 형상은 특히 상부부분에서 도 1a 및 1b에 도시된것과 약간 다르다. 각 링크는 제 2 대향 면상의 제 2 둥근 오목부분(23)과 제 1 면상의 상부부분내의 제 1 둥근 볼록 부분(22)을 가진다는 것을 주목해야 한다. 따라서, 가요성 코어(3)상의 병치된 링크(2)에 의해 한 링크의 제 1 볼록 부분(22)은 인접 링크의 제 2 오목 부분내부로 오게된다.

도 3a 및 3b에 도시된 팔찌(1)를 구부림으로써 세로 개구부(12)로 수직으로 움직일 수 있는 가요성 코어의 가요성 요소(4)의 굴곡이 나타난다. 관절 핀을 사용하지 않고 가요성 코(3)로 인해 도 3c에 도시된 최대위치로 상기 팔찌를 쉽게 구부릴 수 있다.

팔찌의 제 2 실시예에 관한 도 4a 및 4b는 팔찌(1)의 크기를 줄이는 방법을 설명한다. 모든 팔찌의 동일한 요소는 상술한 것과 다른 조립부분을 제외하고 도 1a 및 1b와 동일한 참조번호를 사용한다. 따라서 상기 요소들의 설명을 반복하지 않는다.

팔찌의 크기의 조절에 대한 설명을 간단히 하기 위해, 도 2a 및 2b의 제 1 실시예에 관한 한 가요성 요소(4)와 산 상응하는 링크(2)의 추가 및 삭제만을 설명한다. 물론 균등한 몇몇 요소와 링크의 제거 또는 추가는 동일한 방법으로 이루어진다.

제 1 조립부분(27)은 상기와 같은 도브테일 또는 사다리꼴 형상이며 제 2 조립부분(26)은 제 1 부분에 보완적인 도브테일 또는 사다리꼴 형성의 개구부이다. 개구부(28)는 역시 굽은 팔찌의 복귀력을 조절할 수 있기 위해 특정 요소의 중심부분내에 만들어진다. 그러나, 가요성 코어의 일반적 두께가 이미 크게 감소했기 때문에 단점이 될 수 있는 각 가요성 요소의 두께의 감소를 보일 수 있다.

상기 제 2 실시예에서, 단부 피스(5)가 제 1 부분(5a)와 제 2 부분(5b)에 고정되고 각각 제 1 부분(5a)의 상응하는 나사산(18)으로 나사결합된다.

한번 제 2 부분(5b)이 제 1 부분(5a)에 고정되면, 단부 피스(5)는 가요성 요소의 제 1 조립부분(27)에 보완적인 형상의 요홈(25)을 포함한다. 결과적으로 단부 피스의 요홈(25)내에 제 1 조립 부분(27)이 수용되기 때문에 가요성 코어의 제 1 가요성 부분(4')내와 각 요소내에 고정구멍이 형성될 필요가 없다.

팔찌의 크기를 확대하기 위해, 최종 가요성 요소(4)의 제 1 조립부분(27)의 단부 피스(5)가 먼저 제거된다. 그후, 단계 a1에서, 추가적인 가요성 요소(4)의 제 2 조립부분(26)이 가요성 코어(3)의 최종 요소의 제 1 조립부분(27)에 끼워진다.

상기 새로운 가요성 요소(4)가 조립된 후 새로운 링크(2)는 단계 a2에서 팔찌(1)의 최종 선행링크와 접촉할때까지 코어에 맞물린다. 한번 새로운 링크(2)가 가요성 코어상에 위치하면 추가적인 요소의 제 1 조립부분(27)은 단계 a3에서 단부피스의 제 1부분(5a)의 요홈(25)내에 이를 수용할 수 있게 하기 위하여 노출되어 남아있게된다. 단부 피스(5)의 제 1부분(5a)이 추가적인 요소(4)의 제 1 조립부분상의 가요성 코어의 단부에 위치하자마자 제 2부분(5b)이 단계 a4에서 제 1부분(5a)에 대해 적용되고 마지막으로, 고정 스크류(20)가 단계 a5에서, 나사산이 형성된 홀(9)에 나사결합된다. 따라서, 팔찌의 크기는 한 추가적인 요소와 링크로 조절된다.

팔찌의 크기를 줄이기 위하여, 고정 스크류(20)는 먼저 풀려지고 단계 b1에서 블라인드 홀(9)에서 제거된다. 그후 단부 피스(5)의 제 2부분(5b)이 단계 b2에서 가요성 코어로부터 제거된다. 그후 단계 b3에서 단부 피스의 제 1부분(5a)은 최종 요소(4)의 제 1 조립부분으로부터 제거된다. 최종 링크(2)는 단계 b4에서 가요성 코어로부터 슬라이드되어 제거된다. 마지막으로, 최종 가요성 요소(4)는 단계 b5에서 인접요소의 제 1 조립 부분(27)으로부터 제 2 조립부분(26)을 해제함으로써 제거될 수 있다.

한번 한 요소와 한 링크가 팔찌로부터 제거되면, 단부 피스(5)는 가요성 코어의 최종 요소의 제 1 조립 부분에 고정된다.

단부 피스(5)는 제 2 부분(5b)에 도시되지 않은 힌지를 사용하여 힌지결합된 제 1 부분(5a)과 제 1 부분(5a)에 제 2 부분(5b)를 고정하는 다른 수단을 가질 수 있다는 것을 주목하여야 한다.

#### 발명의 효과

상술한 바로부터, 당업자는 청구범위로 한정된 본 발명의 범위를 벗어나지 않고 팔찌의 다양한 변형예를 구성할 수 있다. 각 링크는 C자형태로 구부러진 C자 형상으로 이루어질 수 있어서 링크가 가요성 코어위로 슬라이드되고 요소가 조립되어 유지될 수 있도록 한다. 친공된 부분들이 팔찌의 가로 가요성을 증가하기 위해 가요성 요소의 측면에 형성될 수 있다. 단부 피스는 상술한 제 1 조립부분에 고정되는 특성을 가질 수 있거나 요소의 제 2 조립부분에 고정되는 특성을 가질 수 있다.

마지막으로, 숨겨지는 조립된 요소의 멈춤수단에 대해 각링크가 인접하도록 위치시키기 위하여 가요성 요소의 측면과 각 링크의 개구부내에 멈춤수단이 형성될 수 있다.

(57) 청구의 범위

**청구항 1.**

링크가 맞물리는 가요성 코어와 강제 물질로 이루어진 복수의 병치된 링크(2)로 형성된 팔찌(1)에 있어서,

차레로 제거가능하게 조립된 가요성 요소(4)의 길이의 한부분위로 형성되고, 각 가요성 코어(3)의 길이방향의 가요성 요소(4)가 두 대향 측면상에 제 1 조립부분(7, 27)과 제 1 조립부분에 보완적인 제 2 조립부분(6, 26)을 포함하여 상기 제 1 및 제 2 조립부분을 끼움으로써 상기 요소를 차레로 조립하도록 하고 링크가 함께 끼워진 부분을 커버함으로써 조립된 위치 내의 가요성 요소를 고정하기 위해 가요성 코어상에 위치하는 것을 특징으로 하는 팔찌.

**청구항 2.**

제 1항에 있어서, 차레로 조립된 요소(4)를 가진 상기 가요성 코어(3)가 코어의길이 전체에 걸쳐 균일한 두께의 가요성 스트립들을 을 서로 형성하는 것을 특징으로 하는 팔찌.

**청구항 3.**

제 2항에 있어서, 가요성 요소의 조립 부분(7, 27)중하나가 T자 형상 또는 도브테일 또는 사다리꼴로 이루어져 서로 인접한 가요성 요소의 보완적 조립부분(6, 26)중 하나에 끼워질 수 있도록 하는 것을 특징으로 하는 팔찌.

**청구항 4.**

제 1항 내지 3항에 있어서, 강제 물질로 이루어진 링크가 가요성 요소(4)의 폭과 균드한 두께의 세로 개구부(120)를 가진 관형상이고 그 높이는 가요성 요소의 두께의 두배보다 작으며, 링크가 가요성코어(3)상에 위치하여 두 인접 가요성 요소의 서로 끼워진 부분(6, 7;26,27)이 조립된 위치내에 상기 요소들을 고정하기위해 링크중 하나로 완전히 덮이는 것을 특징으로 하는 팔찌.

**청구항 5.**

전항중 어느 한 항에 있어서, 스트립형태의 가요성 코어(3)가 1mm 이하 바람직하게는 0.2mm범위의 폭을 가지는 형상 기억 물질과 같은 탄성 또는 수퍼 탄성 물질로 형성되는 것을 특징으로 하는 팔찌.

**청구항 6.**

제 5항에 있어서, 상기 형상 기억 물질이 티타늄 및 니켈로 형성된 금속 합금 또는 복합 플라스틱 물질인 것을 특징으로 하는 팔찌.

**청구항 7.**

제 5항에 있어서, 상기 탄성 물질이 금속성 유리 물질인 것을 특징으로 하는 팔찌.

**청구항 8.**

전향중 어느 한 향에 있어서, 상기 링크(20)가 세라믹 물질, 서밋 또는 강성 금속으로 이루어지고 링크의 두께가 3mm이하, 바람직하게는 2mm 범위인 것을 특징으로 하는 팔찌.

**청구항 9.**

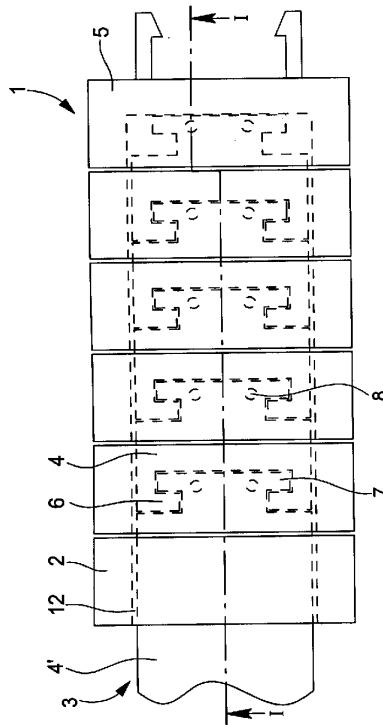
제 1항에 있어서, 조립부분(7, 27)중 하나이상을 통해 가요성 요소(4)가 코어의 한 단부에서 최종 가요성 요소의 개구부를 통해 최종링크에 상응하는 단부 피스(5)의 고정 스템(9)의 통과를 허용하도록 하나이상의 개구부(8)를 포함하고, 상기 단부 피스가 가요성 코어상의 팔찌 링크를 위치설정하는 최종 가요성 요소에 고정되는 것을 특징으로 하는 팔찌.

**청구항 10.**

제 1항에 있어서, 팔찌의 단부중 하나의 최종 링크에 상응하는 한 단부 피스(5)가 최종 가요성 요소(4)의 자유 조립 부분(7, 27)중 하나에 고정되고 상기 자유 조립부분이 단부 피스의 보완적인 형상의 요홈(25)내에 고정되는 것을 특징으로 하는 팔찌.

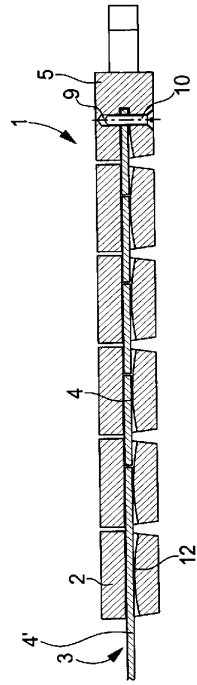
도면

도면 1a

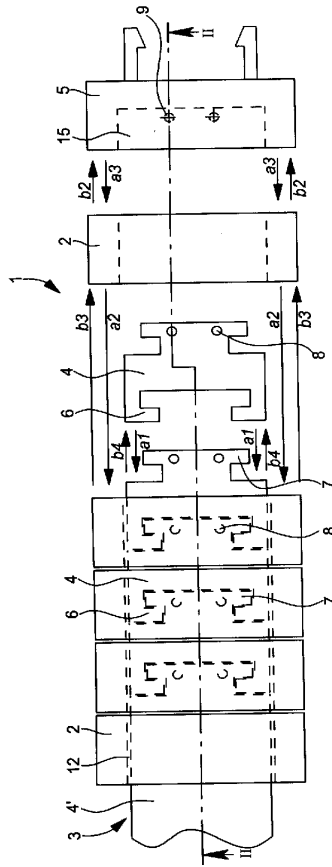




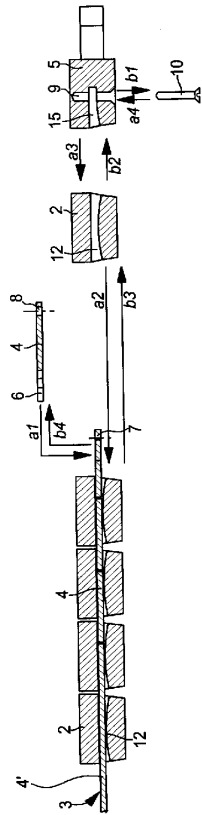
도면 15



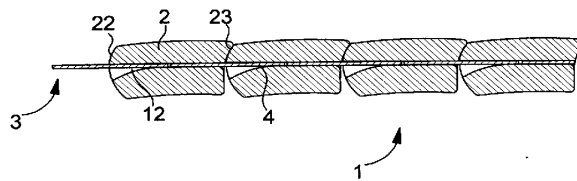
도면 2a



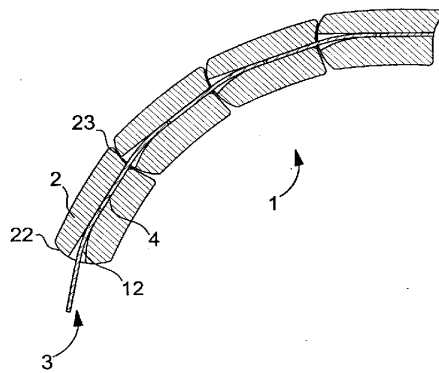
도면25



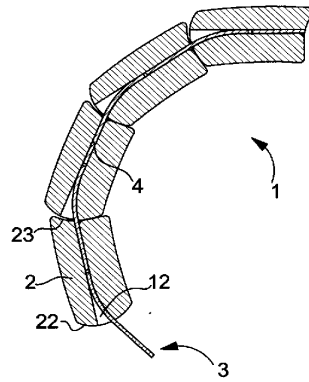
도면3a



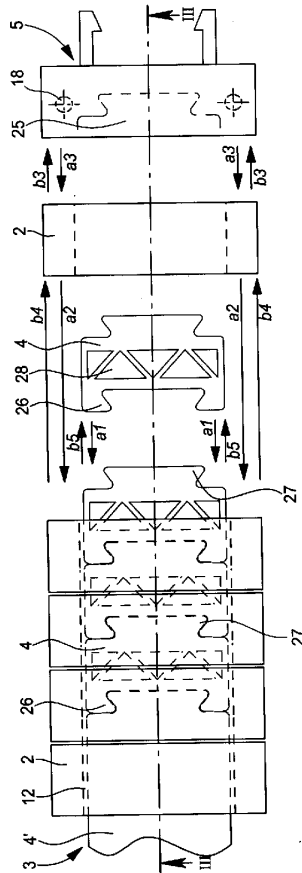
도면3b



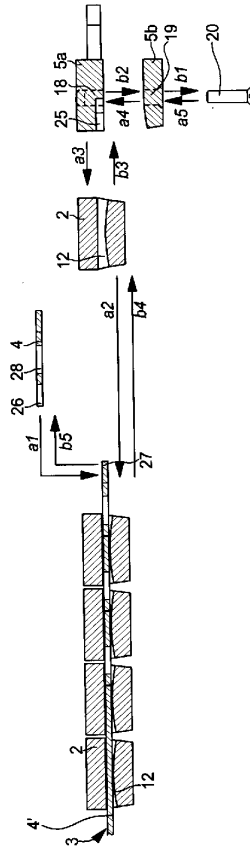
도면3c



도면4a



도면



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(54) 밴드 링크 연결 구조체 및 장신구 밴드

요약

본 발명에 따라서, 제1 구멍(14)이 있는 중앙 연결부(13)와 상기 제1 구멍보다 큰 직경의 제2 구멍이 있는 한 쌍의 외측 연결부(11)가 마련된 링크(10)와, 한 쌍의 핀(20)이 제공된다. 상기 각 핀에는 상기 제1 구멍과 제2 구멍에 삽입되는 축(24)과, 상기 제2 구멍 및 제3 구멍에 억지 끼워맞춤되고 상기 축의 직경보다 큰 직경의 억지 끼워맞춤부(25)와, 상기 축과 억지 끼워맞춤부 사이에 테이퍼 형태로 형성된 목부가 포함되어 있다. 상기 축을 상기 제1 구멍에 삽입하고 상기 억지 끼워맞춤부를 상기 제3 구멍에 억지 끼워맞춤으로써, 인접하는 링크와 링크가 연결된다.

이해도

도 1

도 2

기술분야

본 발명은 밴드의 링크(link)와 핀을 연결하는 연결 구조체 및 장신구(裝身具) 밴드에 관한 것으로서, 특히 핀과 링크의 연결부에 특징이 있는 연결 구조체에 관한 것이다.

배경기술

종래에, 링크와 링크를 핀으로 연결하여 손목 시계줄(watch band, 이하 '시계줄'이라 한다)을 제작하는 기술이 공지되어 있다.

도 15에는 종래의 시계줄의 일부가 도시되어 있다. 핀(53)의 양단부에는 널링 가공된 부분(knurl, 이하 '널링부'라 한다.) (54)이 있다. 상기 핀(53)은 중간 링크(51a)의 구멍 및 연결 링크(51b)의 구멍에 회전 가능하게 삽입되어 있고, 상기 널링부(54)는 각 측면 링크(51)의 구멍(52)에 억지 끼워맞춤(force fit)되어 있다. 이처럼, 링크를 핀으로 연결함으로써, 시계줄이 형성된다.

그러나, 널링부(54)는 마모되므로, 구멍(52)에 억지 끼워맞춤 상태가 느슨하게 된다. 따라서, 핀(53)이 구멍(52)으로부터 이탈되는 문제가 있다.

도 16에 도시된 시계줄에 있어서는, 한 쌍의 핀(61)이 중간 링크(62b)의 구멍 및 연결 링크(63)의 구멍에 삽입되어 있고, 각 핀(61)의 널링부(61a)는 측면 링크(62a, 62c)의 구멍에 억지 끼워맞춤되어 있다. 장식판(64)이 나사(65)에 의해 상기 측면 링크(62a)의 외면에 고정되어 있다.

그러나, 널링부(61a)가 마모되므로, 상기 측면 링크의 구멍에 억지 끼워맞춤 상태가 느슨하게 된다. 따라서, 핀(61)이 상기 구멍으로부터 이탈하여 시계줄이 분리되는 문제가 있다.

상기 종래 기술에 있어서는, 핀이 측면 링크로부터 이탈되는 문제를 해결할 수가 없다.

또한, 링크와 핀을 정확히 가공할 필요가 있고, 부품의 수가 증가되는 문제가 있다.

본 발명의 목적은 링크와 핀의 연결 강도를 증대시킨 링크와 핀의 연결 구조체를 제공하는 것이다.

본 발명의 다른 목적은 적은 수의 부품으로 링크와 핀의 연결 강도를 증대시킨 장신구 밴드를 제공하는 것이다.

#### 제1 실시예

본 발명에 따른 밴드 링크 연결 구조체는,

링크의 한 측면의 중앙부로부터 상기 밴드 링크 연결 구조체의 길이 방향으로 돌출되는 중앙 연결부와, 링크의 다른 측면으로부터 상기 길이 방향과 반대 방향으로 돌출되는 한 쌍의 외측 연결부가 마련된 링크와;

상기 중앙 연결부에 형성된 한 쌍의 제1 구멍과;

상기 외측 연결부의 내측으로 개방된 상태로 이 외측 연결부 각각에 형성되고, 상기 제1 구멍과 직경이 같은 제2 구멍과;

상기 외측 연결부의 외측으로 개방된 상태로 이 외측 연결부에 형성되고, 상기 제2 구멍과 동축이며 제2 구멍보다 직경이 큰 제3 구멍과;

인접하는 링크와 링크를 연결하는 한 쌍의 핀으로서, 각각의 핀은 상기 제1 구멍과 제2 구멍에 삽입되는 축과, 상기 제2 구멍 및 제3 구멍에 억지 끼워맞춤되고 상기 축의 직경보다 큰 직경의 억지 끼워맞춤부와, 상기 축과 억지 끼워맞춤부 사이에 테이퍼 형태로 형성된 목부(neck portion)를 포함하는 한 쌍의 핀

을 포함하며,

상기 축을 상기 제1 구멍에 삽입하고 상기 억지 끼워맞춤부를 상기 제3 구멍에 억지 끼워맞춤으로써, 상기 인접하는 링크와 링크가 연결되는 것을 특징으로 한다.

상기 목부는 상기 억지 끼워맞춤부를 향해 테이퍼진다.

상기 목부는 상기 축을 향해 테이퍼질 수도 있다.

본 발명의 다른 실시예에 따른 밴드 링크 연결 구조체는

내측 링크와;

상기 내측 링크 양측의 한 쌍의 외측 링크와;

상기 내측 링크를 관통하여 형성된 제1 구멍과;

상기 외측 링크의 내측으로 개방된 상태로 이 외측 링크 각각에 형성되고, 상기 제1 구멍의 직경과 동일한 직경의 제2 구멍과;

상기 제2 구멍과 동축으로 상기 외측 링크에 형성되고, 상기 제2 구멍보다 작은 직경의 제3 구멍과;

상기 제3 구멍에 삽입되는 축과, 상기 제2 구멍에 억지 끼워맞춤되고 상기 축의 직경보다 큰 직경의 억지 끼워맞춤부와, 상기 축과 억지 끼워맞춤부 사이에 테이퍼 형태로 형성된 목부를 포함하며, 상기 내측 링크와 외측 링크를 연결하는 핀

을 포함하며,

상기 축을 상기 제3 구멍에 삽입하고 상기 끼워맞춤부를 상기 제2 구멍에 억지 끼워맞춤으로써, 상기 내측 링크와 외측 링크가 연결되는 것을 특징으로 한다.

#### 제2 실시예

도 1은 본 발명의 제1 실시예에 따른 시계줄의 일부를 링크의 일부가 절취된 상태로 도시하는 평면도이다.

도 2는 핀의 평면도이다.

도 3은 다른 핀의 평면도이다.

도 4는 제2 실시예의 링크의 단면도이다.

도 5는 제3 실시예의 단면도이다.

도 6은 제3 실시예의 핀의 평면도이다.

도 7은 링크와 핀의 연결부를 도시하는 평면도이다.

도 8은 한 쌍의 링크와 핀 사이의 연결부를 도시하는 평면도이다.

도 9는 제1 벽을 도시하는 도면이다.

도 10은 다른 실시예를 도시하는 단면도이다.

도 11은 제4 실시예의 핀의 평면도이다.

도 12 내지 도 14는 시계줄의 평면도이다.

도 15와 도 16은 종래의 시계줄의 단면도이다.

### 실시예

도면을 참고하여, 본 발명의 실시예를 설명한다.

도 1 내지 도 3에는 본 발명의 제1 실시예에 따른 시계줄이 도시되어 있다. 상기 시계줄에는 링크(10)와 핀(20)이 포함되어 있다. 도 1에 도시한 바와 같이, 상기 링크(10)는 Y자 모양이며, 시계줄의 길이 방향 중 한 방향으로 돌출되는 한 쌍의 외측 연결부(11)와, 상기 링크의 중앙부로부터 상기 방향과 반대 방향으로 돌출되는 중앙 연결부(13)를 포함한다. 상기 중앙 연결부(13)는 인접하는 링크(10)의 외측 연결부(11) 사이에 형성된 홈(recess)에 삽입되고, 인접하는 링크와 링크는 핀(20)에 의해 연결된다.

상기 각 외측 연결부(11)의 내측에는 제1 구멍(14)이 형성되어 있고, 이 제1 구멍(14)보다 큰 직경의 제2 구멍(15)이 상기 제1 구멍의 외측부에 형성되어 있다. 상기 중앙 연결부(13)의 양측에는 제1 구멍(14)과 동일 직경의 한 쌍의 구멍(12)이 형성되어 상기 인접하는 링크의 홈에 삽입되었을 때 상기 제1 구멍(14)과 대향된다.

도 2에 도시된 바와 같이, 상기 핀(20)에는 축(24)과, 이 축(24)보다 큰 직경의 억지 끼워맞춤부(25)와, 상기 축(24)과 억지 끼워맞춤부(25) 사이에 목부(21)가 포함되어 있다. 상기 목부(21)는 억지 끼워맞춤부(25)를 향해 테이퍼진 형태로 되어 있다. 상기 축(24)의 외측 단부에는 경사부(26)가 형성되어 있어, 축을 구멍(12)에 쉽게 삽입할 수 있다. 상기 축(24)의 내측 단부에는 대경부(大徑部)(24c)가 있다. 상기 목부(21)의 테이퍼 단부는 상기 축(24)의 직경보다 작은 직경으로 형성되어 있다. 상기 축(24)은 상기 구멍(12)에 회전 가능하게 삽입될 수 있도록 형성되어 있고, 상기 억지 끼워맞춤부(25)는 상기 구멍(15)에 억지 끼워맞춰지게 형성되어 있다.

상기 핀(20)은 상기 링크(10)보다 경질(硬質)의 재료로 제작하는 것이 좋다.

상기 핀(20)은, 예컨대 도 3에 도시한 규격대로 형성된다. 억지 끼워맞춤부(25)는 그 길이가 2.0 mm, 직경이 1.1 mm이고, 대경부(24c)의 직경은 1.0 mm이며, 상기 축(24)의 직경은 0.8 mm이다. 상기 목부(21)는 좀 더 작은 단부에서 그 직경이 0.7 mm이며, 30°의 각도로 경사져 있다. 상기 목부(21)와 대경부(24c)의 길이는 0.7 mm이다.

인접하는 링크와 링크를 연결하기 위하여, 상기 링크들 중 한 링크의 중앙 연결부(13)를 상기 다른 링크의 외측 연결부(11) 사이의 홈에 삽입하고, 각 핀(20)의 축(24)을 상기 구멍(12, 14)에 삽입하며, 상기 억지 끼워맞춤부(25)를 상기 구멍(15)에 억지 끼워맞춘다. 이 억지 끼워맞춤부(25)는 상기 구멍(15)의 쇼울더(shoulder)에 접하여 멈춰진다. 그러나, 상기 억지 끼워맞춤부(25)를 더 눌러 넣으면, 축방향으로 뚫개진다. 그 결과, 그 억지 끼워맞춤부의 직경이 확장되어, 억지 끼워맞춤부와 구멍(15) 내벽 사이의 접촉 압력이 상당히 증가된다.

상기 축(24)과 억지 끼워맞춤부(25) 사이에 목부(21)가 형성되어 있기 때문에, 상기 제1 구멍(14)의 내벽 일부는 상기 억지 끼워맞춤부(25)가 구멍(14)에 억지 끼워질 때 그 내벽 일부가 변형됨으로써 상기 목부(21)의 홈으로 들어가게 된다. 그 결과, 도 1에 도시한 바와 같이, 단면이 쐐기(wedge) 형태의 쐐기부(17)가 상기 홈에 형성된다. 상기 쐐기부(17)는 핀(20)이 링크로부터 이탈되는 것을 방지해 준다.

도 4에 도시한 링크(10)는 도 1에 도시한 링크(10)와 그 형태가 다르다. 도 1의 링크들은 형태가 동일하지만, 도 4의 인접하는 링크들은 형태가 다르다.

상기 제1 구멍(14)의 직경은 1.0 mm이고, 상기 제2 구멍(15)의 직경은 상기 핀(20)의 억지 끼워맞춤부(25)의 직경과 동일한 1.1 mm이다.

도 5 내지 도 9에는 본 발명의 제3 실시예가 도시되어 있다. 이전의 실시예와 동일한 부분에 대해서는 도 1 내지 도 4의 도면 부호와 동일한 도면 부호로 나타내었고, 그 부분에 대한 상세한 설명은 생략한다.

본 실시예의 시계줄에는 한 쌍의 외측 링크(10a)와, 한 쌍의 내측 링크(18) 및 한 쌍의 핀(20a)이 포함되어 있다. 상기 제1 구멍과 제2 구멍은 상기 외측 링크(10a)에 형성되어 있고, 구멍(12)은 내측 링크(18)에 형성되어 있다.

상기 핀(20a)의 양단부에는 축(24a)이 형성되어 있다. 핀(20a)의 중앙부에는 억지 끼워맞춤부(25a)가 형성되어 있다. 상기 축(24a)과 억지 끼워맞춤부(25a) 사이에는 목부(21a)가 형성되어 있다.

도 6을 참조하면, 상기 축(24a)의 직경은 1.1 mm이고, 억지 끼워맞춤부(25a)의 직경은 1.22 mm이며, 목부(21a)의 직경은 0.7 mm이다.

상기 억지 끼워맞춤부(25a)는 상기 제2 구멍(15)에 억지 끼워맞춰져서, 제2 구멍(15)의 쇼울더부는 도 9에서 파선으로 도시한 것처럼 뚫개진다. 따라서, 도 5에 도시한 것과 같은 쐐기부가 형성되어, 상기 핀(20a)은 제1 실시예에서와 동일한 방식으로 링크(10a)로부터 이탈되는 것이 방지된다.

도 10에는 외측 링크(10a)의 다른 실시예가 도시되어 있다. 이 실시예에서, 상기 제1 구멍(14)의 단부는 원뿔 형태로 형성되어 있다.

도 11에는 본 발명의 제4 실시예가 도시되어 있다. 전술한 실시예에서는 목부(21)가 억지 끼워맞춤부를 향해 테이퍼진 형태로 되어 있지만, 제4 실시예의 목부(21b)는 축(24a)을 향해 테이퍼진 형태로 되어 있다.

전술한 실시예에서는 목부(21)가 맞물림 해제 방향으로 테이퍼진 형태로 되어 있기 때문에, 강한 힘이 링크에 인가되면 핀이 링크로부터 이탈될 수 있다.

제4 실시예에서는, 목부(21b)가 맞물림 해제를 방지하는 방향으로 경사져 있기 때문에, 핀은 이탈되지 않



는다.

도 12 내지 도 14에는 링크의 여러 형태가 도시되어 있다.

### 신입성이용기술

본 발명에 따르면, 썬기형 단면이 목부에 형성되므로, 핀이 링크로부터 이탈되는 것이 방지된다. 따라서, 핀에 널링 가공을 할 필요가 없고, 간단한 구조로 된 핀에 의해 링크와 링크를 확실히 연결할 수 있다.

### (S7) 청구의 범위

#### 청구항 1

밴드 링크 연결 구조체로서,

링크의 한 측면의 중앙부로부터 상기 밴드 링크 연결 구조체의 길이 방향으로 돌출되는 중앙 연결부와, 링크의 다른 측면으로부터 상기 길이 방향과 반대 방향으로 돌출되는 한 쌍의 외측 연결부가 마련된 링크와;

상기 중앙 연결부에 형성된 한 쌍의 제1 구멍과;

상기 외측 연결부의 내측으로 개방된 상태로 이 외측 연결부 각각에 형성되고, 상기 제1 구멍과 직경이 같은 제2 구멍과;

상기 외측 연결부의 외측으로 개방된 상태로 이 외측 연결부에 형성되고, 상기 제2 구멍과 동축이며 제2 구멍보다 직경이 큰 제3 구멍과;

인접하는 상기 링크와 링크를 연결하는 한 쌍의 핀으로서, 각각의 핀은 상기 제1 구멍과 제2 구멍에 삽입되는 축과, 상기 제2 구멍 및 제3 구멍에 억지 끼워맞춤되고 상기 축의 직경보다 큰 직경의 억지 끼워맞춤부와, 상기 축과 억지 끼워맞춤부 사이에서 상기 제2 구멍과 인접한 부분이 테이퍼 형태로 형성된 목부(neck portion)를 포함하는 한 쌍의 핀

을 포함하며,

상기 축을 상기 제1 구멍에 삽입하고 상기 억지 끼워맞춤부를 상기 제3 구멍에 억지 끼워맞춤으로써, 상기 인접하는 링크와 링크가 연결되는 것을 특징으로 하는 밴드 링크 연결 구조체.

#### 청구항 2

제1항에 있어서, 상기 목부는 상기 억지 끼워맞춤부를 향해 테이퍼지는 것을 특징으로 하는 밴드 링크 연결 구조체.

#### 청구항 3

제1항에 있어서, 상기 목부는 상기 축을 향해 테이퍼지는 것을 특징으로 하는 밴드 링크 연결 구조체.

#### 청구항 4

장신구 밴드로서,

링크의 한 측면의 중앙부로부터 상기 장신구 밴드의 길이 방향으로 돌출되는 중앙 연결부와, 링크의 다른 측면으로부터 상기 길이 방향과 반대 방향으로 돌출되는 한 쌍의 외측 연결부가 마련된 링크와;

상기 중앙 연결부에 형성된 한 쌍의 제1 구멍과;

상기 외측 연결부의 내측으로 개방된 상태로 이 외측 연결부 각각에 형성되고, 상기 제1 구멍과 직경이 같은 제2 구멍과;

상기 외측 연결부의 외측으로 개방된 상태로 이 외측 연결부에 형성되고, 상기 제2 구멍과 동축이며 제2 구멍보다 직경이 큰 제3 구멍과;

인접하는 상기 링크와 링크를 연결하는 한 쌍의 핀으로서, 각각의 핀은 상기 제1 구멍과 제2 구멍에 삽입되는 축과, 상기 제2 구멍 및 제3 구멍에 억지 끼워맞춤되고 상기 축의 직경보다 큰 직경의 억지 끼워맞춤부와, 상기 축과 억지 끼워맞춤부 사이에서 상기 제2 구멍과 인접한 부분이 테이퍼 형태로 형성된 목부를 포함하는 한 쌍의 핀

을 포함하며,

상기 축을 상기 제1 구멍에 삽입하고 상기 억지 끼워맞춤부를 상기 제3 구멍에 억지 끼워맞춤으로써, 상기 인접하는 링크와 링크가 연결되는 것을 특징으로 하는 장신구 밴드.

#### 청구항 5

내측 링크와;

상기 내측 링크 양측의 한 쌍의 외측 링크와;

상기 내측 링크를 관통하여 형성된 제1 구멍과;

상기 외측 링크의 내측으로 개방된 상태로 이 외측 링크 각각에 형성되고, 상기 제1 구멍의 직경과 동일

한 직경의 제2 구멍과;

상기 제2 구멍과 동축으로 상기 외측 링크에 형성되고, 상기 제2 구멍보다 작은 직경의 제3 구멍과;

상기 제3 구멍에 삽입되는 축과, 상기 제2 구멍에 억지 끼워맞춤되고 상기 축의 직경보다 큰 직경의 억지 끼워맞춤부와, 상기 축과 억지 끼워맞춤부 사이에서 상기 제3 구멍에 인접한 부분이 테이퍼 형태로 형성된 목부를 포함하며, 상기 내측 링크와 외측 링크를 연결하는 핀

을 포함하며,

상기 축을 상기 제3 구멍에 삽입하고 상기 억지 끼워맞춤부를 상기 제2 구멍에 억지 끼워맞춤으로써, 상기 내측 링크와 외측 링크가 연결되는 것을 특징으로 하는 밴드 링크 연결 구조체.

#### 청구항 6

제5항에 있어서, 상기 목부는 상기 축을 향해 테이퍼지는 것을 특징으로 하는 밴드 링크 연결 구조체.

#### 청구항 7

제5항에 있어서, 상기 목부는 상기 억지 끼워맞춤부를 향해 테이퍼지는 것을 특징으로 하는 밴드 링크 연결 구조체.

#### 청구항 8

내측 링크와;

상기 내측 링크 양측의 한 쌍의 외측 링크와;

상기 내측 링크를 관통하여 형성된 제1 구멍과;

상기 외측 링크의 내측으로 개방된 상태로 이 외측 링크 각각에 형성되고, 상기 제1 구멍의 직경과 동일한 직경의 제2 구멍과;

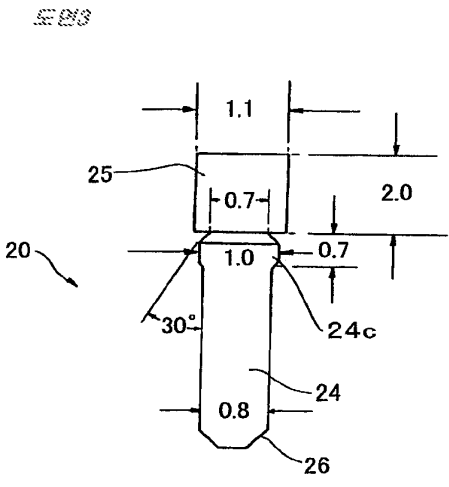
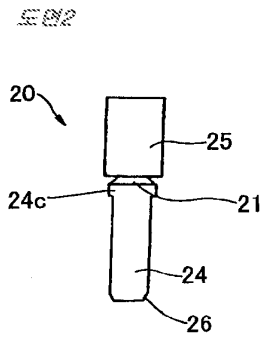
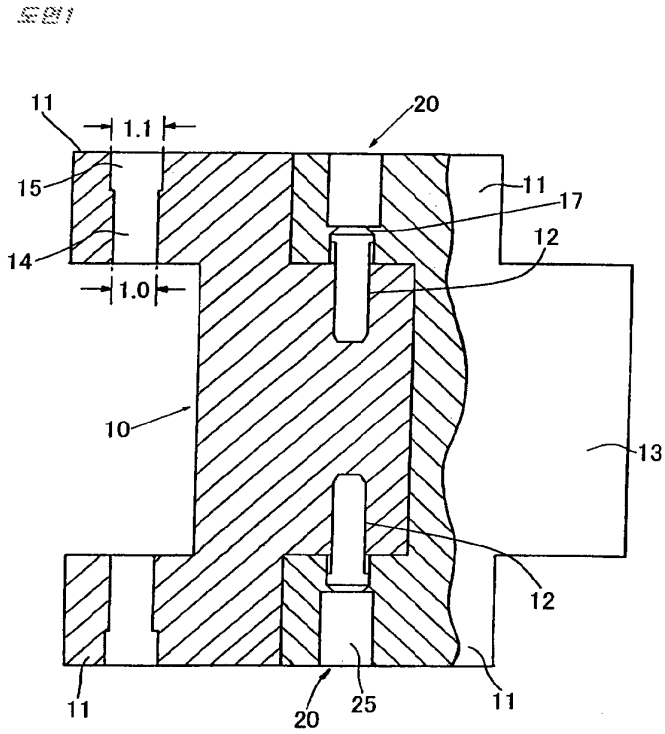
상기 제2 구멍과 동축으로 상기 외측 링크에 형성되고, 상기 제2 구멍보다 작은 직경의 제3 구멍과;

상기 제3 구멍에 삽입되는 축과, 상기 제2 구멍에 억지 끼워맞춤되고 상기 축의 직경보다 큰 직경의 억지 끼워맞춤부와, 상기 축과 끼워맞춤부 사이에서 상기 제3 구멍과 인접한 부분이 테이퍼 형태로 형성된 목부를 포함하며, 상기 내측 링크와 외측 링크를 연결하는 핀

을 포함하며,

상기 축을 상기 제3 구멍에 삽입하고 상기 억지 끼워맞춤부를 상기 제2 구멍에 억지 끼워맞춤으로써, 상기 내측 링크와 외측 링크가 연결되는 것을 특징으로 하는 장신구 밴드.

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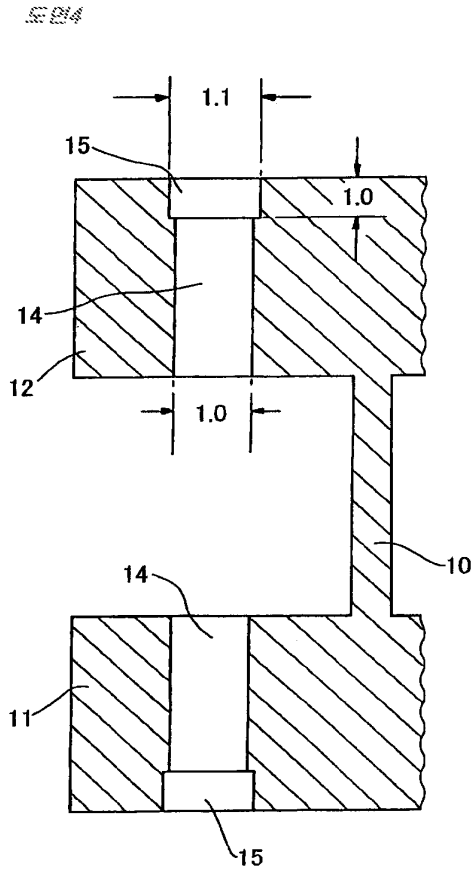


FIG 5

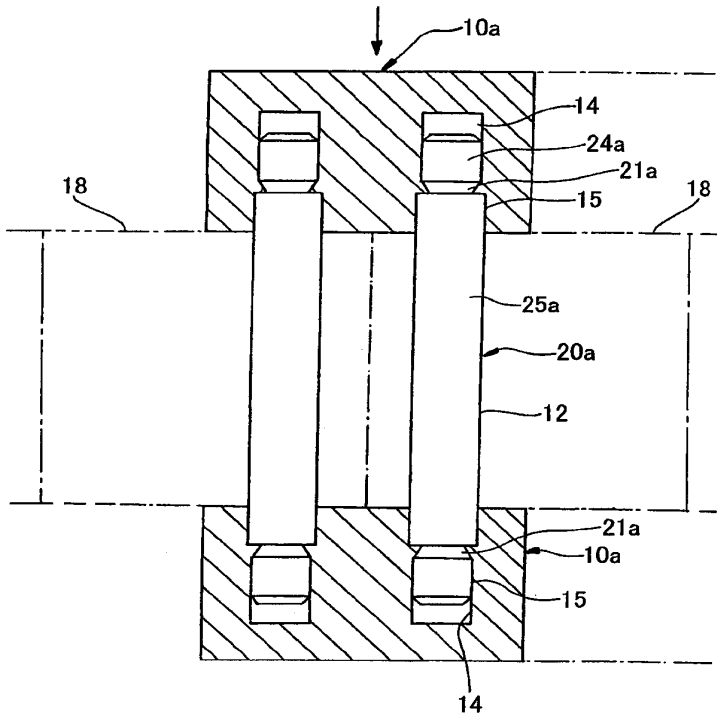


FIG 6

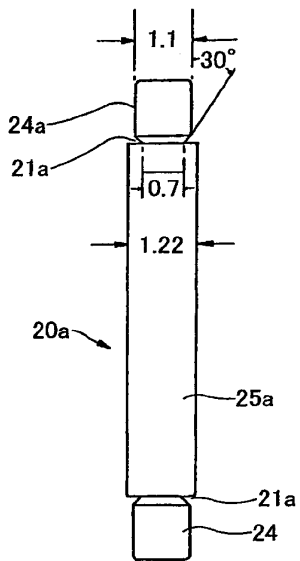


FIG 7

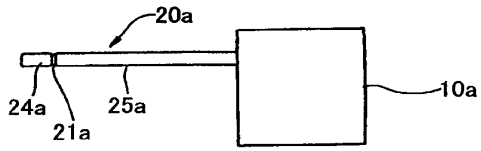


FIG 8

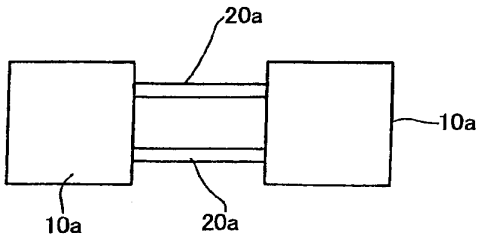


FIG 9

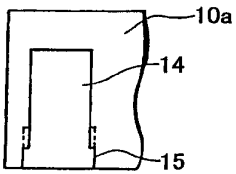


FIG 10

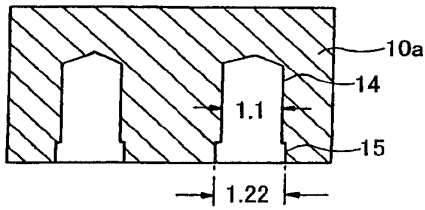


FIG 11

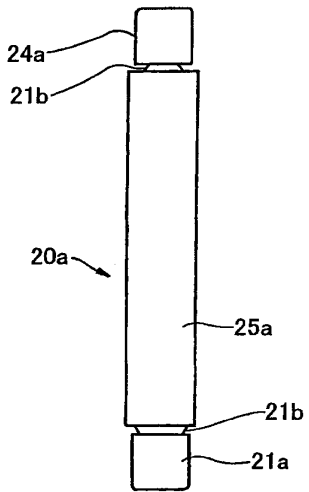


FIG 12

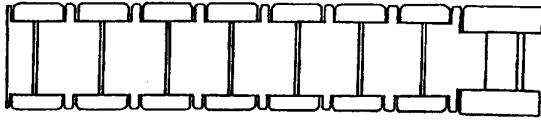


FIG 13

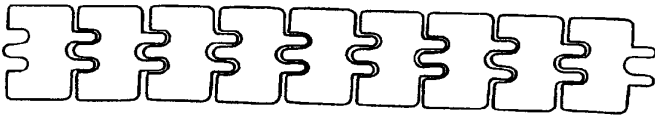


FIG 14

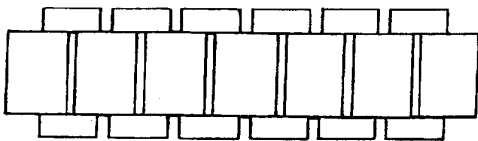


FIG. 5

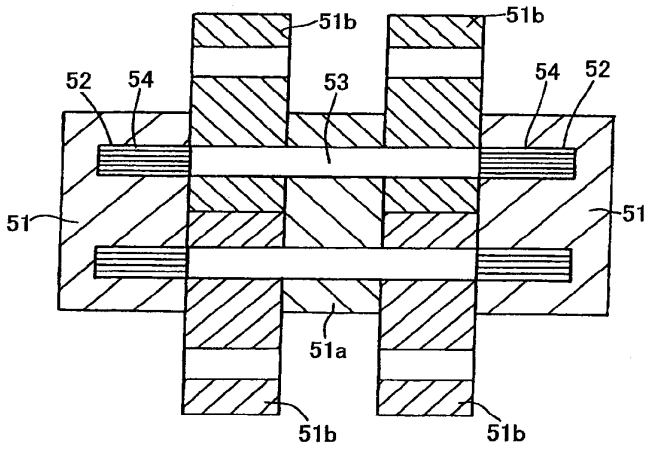
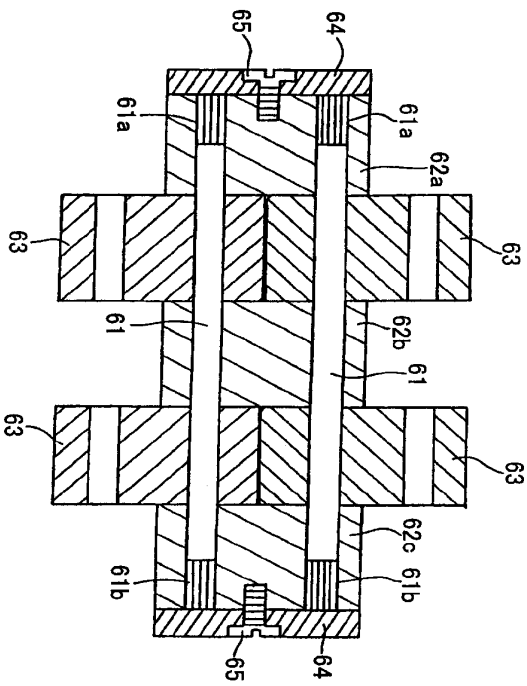


FIG. 6







Espacenet

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## JEWELRY CHAIN

**Inventor(s):****Applicant(s):**

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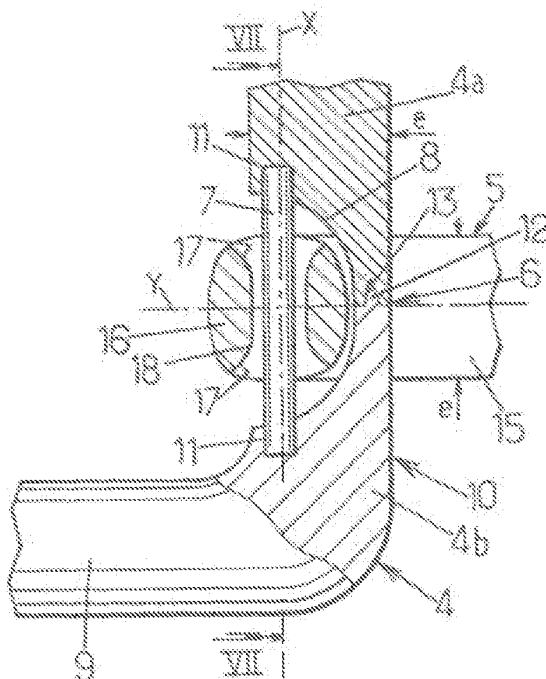
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A jewelry chain comprising links (4, 5) which are articulated in twos. Said chain consists of first links (4) each comprising two semi-links (4a, 4b) which are interassembled by means of welding and/or soldering, said first links (4) each extending essentially according to a plane (X, Y) and being pivotably linked to adjacent links (5) by means of pivots (7) all of which are parallel to the respective planes (X, Y) of the first links. The chain also comprises second links (5) which are alternately disposed with the first links, each of said second links forming a continuous ring extending essentially according to a plane which is perpendicular to the adjacent first links.



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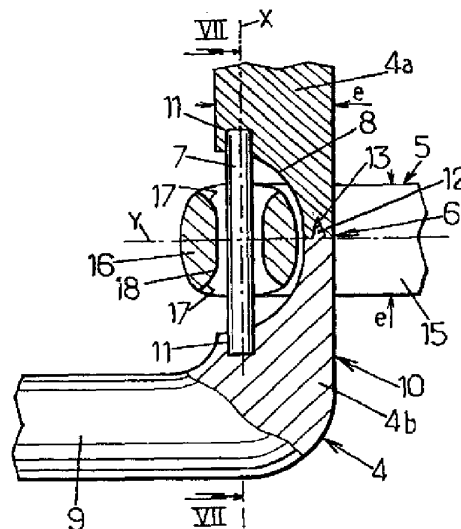
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(54) 【発明の名称】 装身具チェーン

(57) 【要約】

装身具チェーンがリンク4、5を含み、該リンクが、2個づつ連結されている。前記チェーンは、溶接及び/又は鑢付けにより互いに組立てられた2個のリンク半体4a、4bをそれぞれ含む複数第1リンク4で構成されている。該第1リンク4は、それぞれ実質的に1平面X、Y内に延在し、かつピン7により隣接リンク5に回転可能に結合され、該ピンのすべてが、第1リンクの各平面X、Yと平行である。装身具チェーンは、また第2リンク5を含み、該第2リンクは第1リンクと交互に結合され、実質的に、各々が隣接第1リンクに対し直角の平面内に延在している。



## 【特許請求の範囲】

## 【請求項1】

2個づつ連結されたリンク(4, 5)を含む装身具チェーンであって、該装身具チェーンが、互いに組立てられる2個のリンク半体(4a, 4b)を各々有する複数の第1リンク(4)を含み、各第1リンク(4)が、実質的に平面(X, Y)内に延在し、かつ回転軸(7)を介して隣接するリンク(5)に旋回可能に連結されており、該回転軸(7)が、すべて前記第1リンクの各平面(X, Y)と平行である装身具チェーンにおいて、前記装身具チェーンが、第2リンク(5)をも含み、該第2リンク(5)が前記第1リンク(4)とは異なっており、かつ前記第1リンク(4)と交互に配置され、前記第2リンク(5)の各々が連続的なリング形状をなし、かつ実質的に平面(Y, Z)内に延在し、前記第2リンク(5)の各平面(Y, Z)が、隣接する前記第1リンク(4)の平面(X, Y)に対し実質的に直角であり、前記各第1リンクのリンク半体(4a, 4b)が、溶接及び／又は鐙付けにより互いに組立てられており、それによって、材料の連続したリング形状が形成されていることを特徴とする装身具チェーン。

## 【請求項2】

前記第2リンク(5)が、それぞれ、前記第2リンクの平面(Y, Z)に対し直角に開けられた2つの貫通穴(18)を含み、前記第1リンク(4)が、それぞれ、前記回転軸を形成する2個のピン(7)を含み、該ピンが、互いに平行で、かつ前記第1リンクの平面と平行であり、前記第1と第2のリンクが、前記第2リンクの貫通穴(18)に前記第1リンクのピン(7)を嵌め込むことにより、2個づつ連結されている請求項1に記載された装身具チェーン。

## 【請求項3】

前記第1リンクの内側へ向かって開いており、かつ前記第1リンクを形成する2個の前記リンク半体(4a, 4b)の各々に形成されている2個の盲穴(11)へ、前記各第1リンク(4)のピン(7)が、それぞれ、挿入されている請求項2に記載された装身具チェーン。

## 【請求項4】

前記第1リンク(4)の各ピン(7)が、前記第1リンクを形成する2個の前記リンク半体(4a, 4b)に、溶接又は鐙付けによって固定されている請求項2又は請求項3に記載された装身具チェーン。

## 【請求項5】

前記各第1リンク(4)が2つの切欠き部(8)を含み、該切欠き部が前記第1リンク(4)の内側へ開いており、かつ前記第1リンクのピン(7)の1個が前記各切欠き部を横断しており、前記切欠き部の各々が、一部は、前記第1リンクを形成する前記リンク半体の一方(4a)に、一部は、前記第1リンクを形成する他方の前記リンク半体(4b)に形成されている請求項2から請求項4までのいずれか1項に記載された装身具チェーン。

## 【請求項6】

前記各第1リンクを形成するリンク半体(4a, 4b)が、前記第1リンクの2つの切欠き部の各々で、両端面(6a, 6b)を介して相互接触することにより、前記各第1リンク(4)に、隣接する前記第2リンク(5)の内側を貫通する部分(10)が形成されている請求項5に記載された装身具チェーン。

## 【請求項7】

前記端面(6a, 6b)が相互嵌め合いにより互いに協働している請求項6に記載された装身具チェーン。

## 【請求項8】

前記端面(6a, 6b)が互いに溶接されている請求項6又は請求項7に記載された装身

具チェーン。

【請求項9】

前記各第2リンク(5)の貫通穴(18)が未広がり端部を有する請求項2から請求項8までのいずれか1項に記載された装身具チェーン。

【請求項10】

前記各第2リンク(5)の貫通穴(18)の前記未広がり端部が、前記第2リンクに形成された溝部(17)にそれぞれ開いており、該溝部が、前記第2リンクの該溝部の形成されている部分(16)に対し、実質的に直角方向(Y)に延在している請求項9に記載された装身具チェーン。

【請求項11】

前記リンク(4, 5)が、2軸線づつ直角である3軸線(X, Y, Z)に沿って、隣接するリンクに対し前記各リンクが5~30度の隙間角が可能になるように十分な遊びをもって互いに連結されている請求項1から請求項10までのいずれか1項に記載された装身具チェーン。

【請求項12】

前記隙間角が10~20度である請求項11に記載された装身具チェーン。

【請求項13】

前記第1と第2のリンク(4, 5)が、すべて環形状を有しており、前記各リンクが内側空間を含み、該空間が、前記リンクの平面に属する直交する2方向で測定すると、1個のリンク厚さ(e)の2倍の大きさの寸法(1)を有し、前記リンクが、それぞれ隣接するリンクの内側空間を貫通している請求項1から請求項12までのいずれか1項に記載された装身具チェーン。

【発明の詳細な説明】

【技術分野】

【0001】

本発明は、装身具チェーンに関するものである。

より詳しく言えば、本発明は、2個づつ連結されたリンクを含む装身具チェーンに係わり、該チェーンが、相互に組立てられる2つのリンク半体を各々含む第1リンクを含み、第1リンクが、各々、実質的に一平面内に延在し、かつ隣接リンクに旋回軸を介して旋回可能に連結されており、該旋回軸が、すべて第1リンクの各平面と平行である装身具チェーンに関するものである。

【背景技術】

【0002】

EP-A-0313711号には、この形式の装身具チェーンの一例が開示されている。この装身具チェーンは第1リンクのみを含み、これら各第1リンクの2つのリンク半体は、リンク半体にそれぞれ形成された2つの溝部の簡単な相互係合によって相互組立てられ、リンク半体は、ピンに遊びを持たずに取り付けられることにより、互いに解離が防止される。ピンは、すべて平行であり、かつリンクを互いに連結させる。

この取付け形式は、ある場合には望ましいチェーン形式、すなわち隣接リンクが互いに直角であるチェーン形式には適用できない欠点を有する。

【0003】

更に、チェーンが、リンク半体に遊びを持たずにピンによる連結だけで相互連結されるので、前記の取付けは、時として弱いものとなる。

最後に、先行技術のこのチェーンは、互いに完全に平行なピンを中心として回転する以外に、リンク間の相対運動が不可能であるが、実際には、ある程度の運動の自由が望ましい場合がある。

【特許文献1】EP-A-0313711号公報

【発明の開示】

【発明が解決しようとする課題】

【0004】

したがって、本発明の目的は、とりわけ、前記欠点を除去し、以下の装身具チェーンを提供することにある。

隣接するリンクが、適当であれば、相互に直角をなし、好ましくは互いに連結される一方、各リンクの中心に空の空間が残された実質的に等寸法のリング形状である。

好ましくは、前記の先行技術によるチェーンより大きな機械的強度を有する。

適当であれば、隣接リンク間で、多数の回転軸を中心として一定自由度の運動が可能である。

【課題を解決するための手段】

【0005】

この目的を達成するために、本発明による当該装身具チェーンは、以下の特徴を有する。すなわち、該装身具チェーンは、第2リンクをも含み、該第2リンクが、第1リンクと異なっており、かつ第1リンクと交互に配置され、第2リンクの各々が、連続的な1つのリング形状をなし（この連続は、適当であれば、数片を互いに溶接又は銲付けすることで達成できる）、かつ実質的に一平面内に延在しており、これらの第2リンクの各平面は、隣接する第1リンクの平面と実質的に直角であり、各第1リンクのリンク半体が、溶接及び／又は銲付けにより互いに組立てられ、それによって材料の連続するリング形状をなしている。

【0006】

これらの構成により、以下の装身具チェーンが得られる。

リンクが2個づつ実質的に直角に保持され、リンクが、適当であれば、すべて実質的に等しく、かつ互いに連結される一方、前記リンクの中央には自由空間が残されている。

第1と第2のリンクが、それぞれ、材料の連続したリング形状をなすため、大きい強度を有する。

適当であれば、旋回軸を中心として単純な旋回の外にリンク間に遊びが存在し、それによりチェーンが、より大きなたわみ性を有する。

【0007】

本発明の好適実施例の場合、適当であれば、更に以下の構成の1つの及び／又は他の構成を用いることができる：

第2リンクが、それぞれ、第2リンクの平面に対して直角に開けられた2つの貫通穴を含み、かつ第1リンクが、それぞれ、2個のピンを含み、該ピンが互いに平行かつ第1リンクの平面と平行であり、第1リンクのピンが第2リンクの貫通穴に係合することで、第1と第2のリンクが、それぞれ連結される。

盲穴が、第1リンクの内側へ向かって開き、かつ第1リンクを形成する2つのリンク半体の各々に形成されており、各第1リンクのピンが、各々、2つの盲穴に嵌め込まれる。

【0008】

第1リンクの各ピンが第1リンクを形成する2個のリンク半体に溶接又は銲付けで固定される。

各第1リンクが2つの切欠き部を含み、該切欠き部が、第1リンクの内側へ向かって開き、かつ第1リンクのピンの1つにより横断され、切欠き部の各々が、一部は、第1リンクを形成するリンク半体の一方に形成され、一部は、第1リンクを形成する他方のリンク半体に形成される。

各第1リンクを形成するリンク半体が、第1リンクの2つの切欠き部の各々の2つの端面を介して相互接触している。

【0009】

各第1リンクが隣接する第2リンクの内側を貫通する部分を含むように、前記端面が相互嵌め合いにより協働する。

前記端面が互いに溶接される。

各第2リンクの貫通穴が未広がり状に端部に向かって広がっている。

各第2リンクの貫通穴の未広がりになった端部が、それぞれ、前記第2リンクに形成された溝部に開いており、これらの溝部が、第2リンクの溝部の形成された部分に対し実質的

に直角方向に延在する。

前記リンクが、2軸づつが直角をなす3軸線に沿って、隣接するリンクに対し各リンクが、5～30度の隙間角を有するの十分な遊びをもって互いに連結される。

【0010】

前記隙間角が10～20度である。

前記第1と第2のリンクが環形状を有し、各リンクが空の内側空間を含み、該空間が、リンクの平面に属する2直角方向で測定して、1個のリンク厚さの2倍の大きさの寸法を有し、前記リンクが、それぞれ隣接するリンクの内側空間を貫通する。

本発明のこの他の特徴及び利点は、添付図面を参照して、実施例の1つを以下に説明することにより明らかになるが、該実施例は、本発明を限定するものではない。

【実施例】

【0011】

図面では、同じ部材又は類似部材には同じ符号が付されている。

図1は、本発明の1実施例によるチェーン2を含むプレスレット1を示し、チェーン2には、図に示す実施例では、飾り3が保持されている。

図2に示すように、チェーン2は、第1および第2の金属製環状リンク4、5を交互に連結して形成され、該リンクは、2個づつ連結され、2個づつが実質的に直交する。これらのリンク4、5は、この場合、すべて概ね形状が同じであり、すなわち実質的に方形で角隅部に丸みが付与されており、互いに貫通する一方、各リンクの中央部は自由空間となっている。この自由空間は、リンクの太さよりも大きな寸法であることが好ましい。より一般的に言えば、各リンク4、5の中央の空間は、該リンクの平面に含まれる互いに直角の2方向において、リンクの厚さeより大きい寸法1（エル）を有する。図に示す実施例では、空の空間の寸法1（エル）は、当該リンク4、5の2方向X、Y又はY、Zで等しいが（図3及び図5）、適当であれば、この状況は変更してよい。同じように、各リンク4、5の厚さは、この場合、前記リンクの平面内で測定しても、該平面に対し直角方向で測定しても、等しいが、適当であれば、この状況は変更してもよい。

【0012】

図3に、第1リンク4のうちの1個が示される。第1リンク4は、2個のリンク半体4a、4bから成り、リンク半体の各々が平面X、Y内に延在し、該平面内のX、Yは、リンク4の側部9、10とそれぞれ平行な2つの直交する軸線である。

2個のリンク半体4a、4b間の結合部6では、リンク4の対向する両側部10に、リンクの内側へ向いて開いた切欠き部8が形成されている。これらの切欠き部8の各々を、金属製のピン7が横切っており、該ピンは、リンクの対応する側部10の長手方向軸線Xと平行であり、リンク4、5間の旋回軸となる。

図4に詳細に示すように、2個のリンク半体4a、4bの各々は、リンク4の完全な対向する両側部9と、対向両側部半体、すなわちリンク半体4aの場合は側部半体10a、リンク半体4bの場合は側部半体10bとで形成される。

【0013】

リンク半体の側部半体10a、10bは、それぞれ、各切欠き部8の2つの半体8a、8bを形成し、リンク半体の組立て時に結合部6を形成する対向端面6a、6bまで、互いの方へ延在している。

更に、リンク半体4a、4bの各々は、2つの盲穴11を含み、該盲穴は、リンクの内側へ向かって開いており、該盲穴内へは、ピン7の端部7a、7bが嵌め込まれる。

各ピン7の端部の一方の端部は、リンク4の取付け前に、2個のリンク半体4a、4bの一方の対応する盲穴11に嵌め込み、溶接される一方、各ピンの反対側の端部には、鑲滴14が溶融状態で被着され、凝固せしめられる（図4に示した実施例では、各リンク半体4a、4bがそれぞれ対応するリンクのピンの1個に取付けられるが、もちろん2個のピン7を、始めに片方のリンク半体に取付けてもよい）。

【0014】

次に、チェーン2を形成する場合、後述するように、ピン7が第2リンク5に嵌め込まれ

、鑄滴14の付着したピン端部が対応する盲穴11に嵌め込まれる（好ましくは強制的に）ことにより、リンク4のリンク半体4a, 4bが組立てられる。

このように作られたチェーン2は、次に、鑄滴14の融点を超えて加熱され、鑄滴が溶融される。このようにして、冷却後、第1リンク4を形成するリンク半体4a, 4bが、溶接及び鑄付けにより組立てられ（適当であれば、ピン7の両端を鑄付けして組立てることもできる）、これにより、第1リンク4は、それぞれ、材料が連続する1個のリング形状となり、すぐれた機械的強度を有する。

【0015】

好ましくは、側部半体10a, 10bの端面6a, 6bの一方にスパイク12を備え、他方の端面にはスパイク12を受容する盲穴13を備え、リンク半体4a, 4bの組立て時に嵌め合わせてもよい。この嵌め合わせは、一方では、リンク半体の適切な位置決めをする効果を有し、他方では、リンク4の機械的強度を更に増強するのに役立つ。

適当であれば、リンク半体の組立て後に、端面6a, 6bを溶接することもできる。適当であれば、この溶接は、ピン7の端部の溶接及び／又は鑄付けに代えることもできる。

【0016】

更に、図5に示すように、チェーン2の各第2リンク5は、実質的に平面Y, Z内に延在し（Zは前記の軸線XとYに対し直角の軸線である）、第1リンク4の側部9と平行な軸線Yに沿って延在する対向する両側部15と、第1リンクの側部10の長手方向軸線Xに対し実質的に直角の軸線Zに沿って延在する対向する両側部16とを有する。

第2リンク5の側部16の各々は、実質的にその中央に、軸線Yと実質的に平行な溝形状の2つの補強部17を有し、各側部16の溝部17は、第2リンク5の中央平面Y, Zに対し実質的に対称的に配置される。これらの溝部の各々の中心には、軸線Xと平行に貫通穴18が形成される。

【0017】

図6と図7に詳細に示すように、各貫通穴18は、遊びをもって、隣接第1リンク4のピン7の1個を受容している。更に、貫通穴18は、好ましくは、両端が未広がり形状を有し、貫通穴18の中央部から、溝部17に開いている端部にかけて未広がりになっている。最後に、第2リンク5の各側部16は、遊びをもって、対応する第1リンク4の対応する切欠き部8内に受容される。

これらの構成により、各第2リンク5は、嵌め込まれている各ピン7の軸線Xを中心として旋回できるだけでなく、制限された隙間（例えば30度、好ましくは10～20度）をもって、隣接第1リンク4に対し軸線Y, Zを中心として旋回できる。

【図面の簡単な説明】

【0018】

【図1】本発明の1実施例によるチェーンを含むプレスレットの略図。

【図2】図1のプレスレットに属するチェーンの拡大斜視図。

【図3】図2のチェーンの第1リンクの詳細図。

【図4】図3の第1リンクを製造する手順を示す図。

【図5】図2のチェーンの第2リンクの詳細図。

【図6】図5のV I - V I 線に沿って裁断した図2のチェーンの部分断面図。

【図7】図6のV I I - V I I 線に沿って裁断した部分断面図。

【符号の説明】

【0019】

- 1 プレスレット
- 2 チェーン
- 3 飾り
- 4 第1リンク
- 4a, 4b リンク半体
- 5 第2リンク
- 6 結合部



- 6 a, 6 b 対向端面
  - 7 ピン
  - 7 a, 7 b ピンの端部
  - 8 切欠き部
  - 8 a, 8 b 切欠き半体
  - 9, 10 第1リンクの側部
  - 10 a, 10 b リンク半体の側部半体
  - 11 盲穴
  - 12 スパイク
  - 13 盲穴
  - 14 鐵滴
  - 15, 16 第2リンク側部
  - 17 溝部
  - 18 貫通穴
- 【国際公開パンフレット】

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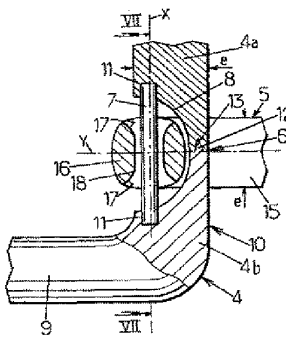
[Suite sur la page suivante]

(54) Titre: JEWELRY CHAIN

(54) Titre : CHAÎNE DE BIJOUTERIE



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(57) Abstract: A jewelry chain comprising links (4, 5) which are articulated in two. Said chain consists of first links (4) each comprising two semi-links (4a, 4b) which are intermeshed by means of wedging and/or sliding, said first links (4) each extending essentially according to a plane (X, Y) and being proximately linked to adjacent links (5) by means of pivots (7) all of which are juxtaposed to the respective planes (X, Y) of the first links. The chain also comprises second links (5) which are alternately disposed with the first links, each of said second links forming a continuous ring extending essentially according to a plane which is perpendicular to the adjacent first links.

(57) Abrégé : Chaîne de bijouterie comportant des maillons (4, 5) articulés deux à deux, cette chaîne comportant des premiers maillons (4) qui comprennent chacun deux demi-maillons (4a, 4b) assemblés entre eux par soudure étanche ou par frottement, ces premiers maillons (4) s'articulant chacun essentiellement selon un plan (X, Y) et étant reliés de façon proximale aux maillons adjacents (5) par des pivots (7) tous maillés aux plans respectifs (X, Y) desdits premiers maillons. La chaîne comporte en outre des seconds maillons (5) disposés en alternance avec les premiers maillons, chacun des seconds maillons formant un anneau continu et s'étendant essentiellement selon un plan perpendiculaire aux premiers maillons adjacents.

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**Déclaration en vertu de la règle 4.17 :** *En ce qui concerne les codes à deux lettres et autres abréviations, se référer aux "Notes explicatives relatives aux codes et abréviations" figurant au début de chaque numéro ordonné de la Gazette du PCT.*

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Chaîne de bijouterie.

La présente invention est relative aux chaînes de bijouterie.

5 Plus particulièrement, l'invention concerne une chaîne de bijouterie comportant des maillons articulés deux à deux, cette chaîne comportant des premiers maillons qui comprennent chacun deux demi-maillons assemblés entre eux, ces premiers maillons s'étendant chacun sensiblement selon  
10 un plan et étant reliés de façon pivotante aux maillons adjacents, par des pivots tous parallèles aux plans respectifs desdits premiers maillons.

Le document EP-A-0 313 711 décrit un exemple d'une telle chaîne de bijouterie, comportant uniquement des  
15 premiers maillons. Les deux demi-maillons de chacun de ces premiers maillons sont assemblés entre eux par simple emboîtement mutuel de deux rainures ménagées respectivement dans ces demi-maillons, les demi-maillons étant empêchés de se déboîter grâce à leur montage sans jeu sur des broches  
20 toutes parallèles qui relient entre eux les maillons.

Ce type de montage présente l'inconvénient d'être incompatible avec une chaîne dont les maillons adjacents seraient perpendiculaires deux à deux, ce qui est souhaitable dans certains cas.

25 De plus, le montage en question peut parfois manquer de résistance, dans la mesure où la chaîne ne tient que grâce à l'engagement sans jeu des broches dans les demi-maillons.

Enfin, cette chaîne de l'art antérieur ne permet  
30 pas d'autoriser un mouvement relatif entre les maillons autre que le pivotement autour des broches toutes parallèles entre elles : or, une certaine liberté de mouvement peut parfois s'avérer souhaitable.

La présente invention a donc notamment pour but de  
35 pallier ces inconvénients, et de proposer une chaîne de

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bijouterie :

- dont les maillons adjacents puissent être le cas échéant perpendiculaires deux à deux, avantageusement en formant des anneaux de tailles sensiblement identiques
- 5 engagés les uns dans les autres en laissant un espace vide au centre de chaque anneau,
- qui présente de préférence une meilleure résistance mécanique que les chaînes susmentionnées de l'art antérieur,
- 10 - et qui puisse le cas échéant présenter une certaine liberté de mouvement selon plusieurs axes de rotation entre maillons adjacents.

A cet effet, selon l'invention, une chaîne de bijouterie du genre en question est caractérisée en ce

15 qu'elle comporte en outre des deuxièmes maillons différents des premiers maillons et disposés en alternance avec lesdits premiers maillons, chacun des deuxièmes maillons formant un anneau continu (cette continuité pouvant le cas échéant être obtenue par soudure ou brasage de plusieurs

20 pièces entre elles) et s'étendant sensiblement selon un plan, les plans respectifs de ces deuxièmes maillons étant sensiblement perpendiculaires aux plans des premiers maillons adjacents, et les demi-maillons de chaque premier maillon étant assemblés entre eux par soudure et/ou brasure

25 en formant ainsi un anneau continu de matière.

Grâce à ces dispositions, on obtient une chaîne de bijouterie :

- dont les maillons sont maintenus sensiblement perpendiculaires deux à deux, ces maillons pouvant le cas
- 30 échéant être tous sensiblement identiques et engagés les uns dans les autres en laissant un espace libre au centre desdits maillons,
- qui présente une grande résistance compte tenu du fait que les premiers et deuxièmes maillons forment
- 35 chacun un anneau continu de matière,

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- et qui autorise le cas échéant un jeu entre les maillons en dehors du simple pivotement autour des pivots, ce qui permet alors d'obtenir une plus grande souplesse de la chaîne.

5 Dans des modes de réalisation préférés de l'invention, on peut éventuellement avoir recours en outre à l'une et/ou à l'autre des dispositions suivantes :

- les deuxièmes maillons comportent chacun deux trous traversants percés perpendiculairement aux plans  
10 desdits deuxièmes maillons, et les premiers maillons comportent chacun deux goupilles parallèles entre elles et parallèles aux plans desdits premiers maillons, les premiers et deuxièmes maillons étant articulés deux à deux par engagement des goupilles des premiers maillons dans les  
15 trous traversants des deuxièmes maillons ;

- les goupilles de chaque premier maillon sont emboîtées chacune dans deux trous borgnes débouchant vers l'intérieur dudit premier maillon et ménagés respectivement dans chacun des deux demi-maillons constituant ledit  
20 premier maillon ;

- chaque goupille d'un premier maillon est solidarisée par soudage ou brasage avec les deux demi-maillons constituant ledit premier maillon ;

- chaque premier maillon comporte deux échancrures  
25 ouvertes vers l'intérieur du premier maillon et traversées chacune par l'une des goupilles dudit premier maillon, chacune de ces échancrures étant ménagée pour partie dans l'un des demi-maillon constituant ledit premier maillon et pour partie dans l'autre demi-maillon constituant ledit  
30 premier maillon ;

- les demi-maillons constituant chaque premier maillon sont en contact mutuel par deux faces d'extrémité, au niveau de chacune des deux échancrures dudit premier maillon ;

35 - lesdites faces d'extrémités coopèrent par

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emboîtement mutuel, de sorte que chaque premier maillon comporte une portion passant à l'intérieur d'un deuxième maillon adjacent ;

- lesdites faces d'extrémités sont soudées entre elles ;
- les trous traversants de chaque deuxième maillon présentent des extrémités évasées ;
- les extrémités évasées des trous traversants de chaque deuxième maillon débouchent respectivement dans des gorges ménagées dans lesdits deuxième maillons, ces gorges s'étendant dans une direction sensiblement perpendiculaire à une portion dudit deuxième maillon dans laquelle elles sont ménagées ;
- les maillons sont articulés les uns aux autres avec un jeu suffisant pour autoriser des débattements angulaires compris entre 5 et 30 degrés de chaque maillon par rapport à un maillon adjacent, selon trois axes perpendiculaires deux à deux ;

- lesdits débattements angulaires sont compris entre 10 et 20 degrés ;
- les premiers et deuxième maillons ont tous des formes annulaires, chaque maillon comportant un espace intérieur creux qui présente des dimensions, mesurées selon deux directions perpendiculaires appartenant au plan dudit maillon, qui sont supérieures à deux fois une épaisseur d'un maillon, lesdits maillons pénétrant respectivement dans les espaces intérieurs creux des maillons adjacents.

D'autres caractéristiques et avantages de l'invention apparaîtront au cours de la description suivante d'une de ses formes de réalisation, donnée à titre d'exemple non limitatif, en regard des dessins joints.

Sur les dessins :

- la figure 1 est une vue schématique d'un bracelet comportant une chaîne selon une forme de réalisation de l'invention,

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- la figure 2 est une vue agrandie en perspective de la chaîne appartenant au bracelet de la figure 1,
- la figure 3 est une vue de détail d'un premier maillon de la chaîne de la figure 2,
- 5 - la figure 4 est une vue illustrant le mode de fabrication du premier maillon de la figure 3,
- la figure 5 est une vue de détail d'un deuxième maillon de la chaîne de la figure 2,
- la figure 6 est une vue partielle en coupe de la
- 10 chaîne de la figure 2, la coupe étant prise selon la ligne VI - VI de la figure 5,
- et la figure 7 est une vue partielle en coupe selon la ligne VII - VII de la figure 6.

Sur les différentes figures, les mêmes références

15 désignent des éléments identiques ou similaires.

La figure 1 représente un bracelet 1 comprenant une chaîne 2 selon une forme de réalisation de l'invention qui, dans l'exemple représenté, porte des breloques 3.

- Comme représenté sur la figure 2, la chaîne 2 est
- 20 formée par une alternance de premiers et deuxièmes maillons métalliques 4, 5 en forme d'anneaux qui sont articulés deux à deux et sensiblement perpendiculaires deux à deux. Ces maillons 4, 5 sont ici tous de forme générale identique, sensiblement carrée à coins arrondis et ils pénètrent les
- 25 uns dans les autres en laissant un espace libre au centre de chaque maillon. Cet espace libre présente de préférence une dimension supérieure à l'épaisseur des maillons. Plus généralement, l'espace creux au centre de chaque maillon 4, 5 présente des dimensions 1 supérieures à une épaisseur e
- 30 d'un maillon, selon deux directions perpendiculaires entre elles comprises dans le plan dudit maillon. Dans l'exemple représenté sur les dessins, les dimensions 1 de l'espace creux sont identiques selon les deux directions X, Y ou Y, Z du maillon 4, 5 considéré (voir figures 3 et 5), mais il
- 35 pourrait éventuellement en aller autrement. De même,



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L'épaisseur  $e$  de chaque maillon 4, 5 est ici identique qu'elle soit mesurée dans le plan dudit maillon ou perpendiculairement à ce plan, mais il pourrait également en aller autrement, le cas échéant.

5 Les premiers maillons 4, dont l'un est représenté sur la figure 3, sont constitués de deux demi-maillons 4a, 4b s'étendant chacun selon un plan X, Y où X et Y sont deux axes perpendiculaires qui sont parallèles respectivement aux côtés 9, 10 du maillon 4.

10 Au niveau des jonctions 6 entre les deux demi-maillons 4a, 4b, sur deux côtés opposés 10 du maillon 4, ce maillon forme des échancrures 8 ouvertes vers l'intérieur dudit maillon. Chacune de ces échancrures 8 est traversée par une goupille métallique 7 qui est parallèle à l'axe longitudinal X du côté correspondant 10 du maillon, et qui sert d'axe de rotation entre les maillons 4, 5.

15 Comme on peut le voir plus en détail sur la figure 4, chacun des deux demi-maillons 4a, 4b forme donc deux côtés opposés 9 complets du maillon 4 et deux demi-côtés opposés, respectivement 10a pour le demi-maillon 4a et 10b pour le demi-maillon 4b.

20 Les demi-côtés 10a, 10b des demi-maillons forment respectivement deux moitiés 8a, 8b, de chacune des échancrures 8 et s'étendent l'un vers l'autre jusqu'à des faces d'extrémité en regard 6a, 6b qui forment les jonctions 6 susmentionnées lorsque les demi-maillons sont assemblés.

25 De plus, chacun des demi-maillons 4a, 4b comporte deux trous borgnes 11 ouverts vers l'intérieur du maillon et dans lesquels sont emboîtées les extrémités 7a, 7b des goupilles 7.

30 Avant le montage des maillons 4, l'une des extrémités de chaque goupille 7 est emboîtée et soudée dans le trou borgne 11 correspondant d'un des deux demi-maillons 35 4a, 4b, tandis qu'une goutte de brasure 14 est déposée à

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l'état fondu puis solidifiée à l'extrémité opposée de chaque goupille (dans l'exemple représenté sur la figure 4, chaque demi-maillon 4a, 4b est ainsi assemblé à l'une des goupilles 7 du maillon correspondant, mais bien entendu, les deux goupilles 7 pourraient ainsi être assemblées à l'avance au même demi-maillon).

Par la suite, lors du montage de la chaîne 2, les demi-maillons 4a, 4b des maillons 4 sont assemblés par emboîtement (de préférence à force) des extrémités des goupilles 7 dotées des gouttes de brasura 14 dans les trous borgnes 11 correspondants, tout en engageant lesdites goupilles 7 dans les deuxièmes maillons 5, comme il sera expliqué ci-après.

Puis on chauffe la chaîne 2 ainsi réalisée au-dessus du point de fusion des gouttes de brasura 14, qui fondent alors. Ainsi, après refroidissement, les demi-maillons 4a, 4b formant les premiers maillons 4 sont assemblés entre eux par soudage et brasage (le cas échéant, l'assemblage pourrait être réalisé par brasage aux deux extrémités des goupilles 7), de sorte que les premiers maillons 4 forment chacun un anneau de matière continue et présentent une excellente résistance mécanique.

Avantageusement, les faces d'extrémité 6a, 6b des demi-côtés 10a, 10b, peuvent être dotées les unes, de picots 12 et les autres, de trous borgnes 13 recevant les picots 12 par emboîtement lors de l'assemblage des demi-maillons 4a, 4b. Cet emboîtement a pour effet, d'une part, de favoriser le bon positionnement des demi-maillons et, d'autre part, d'augmenter encore la résistance mécanique du maillon 4.

Eventuellement, il serait également possible de souder les faces d'extrémité 6a, 6b après assemblage des demi-maillons. Ce soudage pourrait même, le cas échéant, se substituer au soudage et/ou au brasage des extrémités des goupilles 7.

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Par ailleurs, comme représenté sur la figure 5, chaque deuxième maillon 5 de la chaîne 2 s'étend sensiblement selon un plan Y, Z (Z étant un axe perpendiculaire aux axes X et Y susmentionnés) et présente deux côtés opposés 15 s'étendant selon l'axe Y parallèlement aux côtés 9 des premiers maillons 4, et deux côtés opposés 16 s'étendant selon l'axe Z sensiblement perpendiculairement à l'axe longitudinal X des côtés 10 des premiers maillons.

10 Chacun des côtés 16 des deuxièmes maillons 5 comporte, sensiblement en son centre, deux renforcements 17 en forme de gorges sensiblement parallèles à l'axe Y, les gorges 17 de chaque côté 16 étant disposées de façon sensiblement symétrique par rapport au plan moyen Y, Z du  
15 deuxième maillon 5. Au centre de chacune de ces gorges est ménagé un trou traversant 18, parallèle à l'axe X.

Comme on peut le voir plus en détail sur les figures 6 et 7, chaque trou 18 reçoit avec jeu l'une des goupilles 7 d'un premier maillon 4 adjacent. De plus, le  
20 trou 18 présente avantageusement une double forme divergente, s'évasant depuis la partie médiane du trou 18 jusqu'aux extrémités de ce trou, qui débouchent dans les gorges 17. Enfin, chaque côté 16 des deuxièmes maillons 5 est reçu avec jeu dans l'échancrure correspondante 8 du  
25 premier maillon correspondant 4.

Grâce à ces dispositions, chaque deuxième maillon 5 peut non seulement pivoter autour de l'axe X de chaque goupille 7 sur laquelle il est engagé, mais également pivoter avec un débattement limité (par exemple, 5 à 30°,  
30 avantageusement 10 à 20°) autour des axes Y et Z par rapport aux premiers maillons 4 adjacents.

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REVENDICATIONS

1. Chaîne de bijouterie comportant des maillons (4,5) articulés deux à deux, cette chaîne comportant des premiers maillons (4) qui comprennent chacun deux demi-maillons (4a,4b) assemblés entre eux, ces premiers maillons (4) s'étendant chacun sensiblement selon un plan (X,Y) et étant reliés de façon pivotante aux maillons adjacents (5) par des pivots (7) tous parallèles aux plans respectifs (X,Y) desdits premiers maillons.
- 10 caractérisée en ce qu'elle comporte en outre des deuxièmes maillons (5) différents des premiers maillons (4) et disposés en alternance avec lesdits premiers maillons, chacun des deuxièmes maillons (5) formant un anneau continu et s'étendant sensiblement selon un plan (Y,Z), les plans respectifs (Y,Z) de ces deuxièmes maillons (5) étant sensiblement perpendiculaires aux plans (X,Y) des premiers maillons (4) adjacents, et les demi-maillons (4a,4b) de chaque premier maillon étant assemblés entre eux par soudure et/ou brasure en formant ainsi un anneau continu de matière.
- 20 2. Chaîne selon la revendication 1, dans laquelle les deuxièmes maillons (5) comportent chacun deux trous traversants (18) percés perpendiculairement aux plans (Y,Z) desdits deuxièmes maillons, et les premiers maillons (4) comportent chacun deux goupilles (7) formant lesdits pivots, qui sont parallèles entre elles et parallèles aux plans desdits premiers maillons, les premiers et deuxièmes maillons étant articulés deux à deux par engagement des goupilles (7) des premiers maillons dans les trous traversants (18) des deuxièmes maillons.
- 30 3. Chaîne selon la revendication 2, dans laquelle les goupilles (7) de chaque premier maillon (4) sont emboîtées chacune dans deux trous borgnes (11) débouchant vers l'intérieur dudit premier maillon et ménagés
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respectivement dans chacun des deux demi-maillons (4a,4b) constituant ledit premier maillon.

4. Chaîne selon la revendication 2 ou la revendication 3, dans laquelle chaque goupille (7) d'un premier maillon (4) est solidarisée par soudage ou brasage avec les deux demi-maillons (4a,4b) constituant ledit premier maillon.

5. Chaîne selon l'une quelconque des revendications 2 à 4, dans laquelle chaque premier maillon (4) comporte deux échancrures (8) ouvertes vers l'intérieur du premier maillon et traversées chacune par l'une des goupilles (7) dudit premier maillon, chacune de ces échancrures étant ménagée pour partie dans l'un (4a) des demi-maillon constituant ledit premier maillon et pour partie dans l'autre demi-maillon (4b) constituant ledit premier maillons.

6. Chaîne selon la revendication 5, dans laquelle les demi-maillons (4a,4b) constituant chaque premier maillon sont en contact mutuel par deux faces d'extrémité (6a,6b), au niveau de chacune des deux échancrures dudit premier maillon, de sorte que chaque premier maillon (4) comporte une portion (10) passant à l'intérieur d'un deuxième maillon (5) adjacent.

7. Chaîne selon la revendication 6, dans laquelle lesdites faces d'extrémités (6a,6b) coopèrent par emboîtement mutuel.

8. Chaîne selon la revendication 6 ou la revendication 7, dans laquelle lesdites faces d'extrémités (6a,6b) sont soudées entre elles.

9. Chaîne selon l'une quelconque des revendications 2 à 8, dans laquelle les trous traversants (18) de chaque deuxième maillon (5) présentent des extrémités évasées.

10. Chaîne selon la revendication 9, dans laquelle les extrémités évasées des trous traversants (18) de chaque deuxième maillon (5) débouchent respectivement dans des

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gorges (17) ménagées dans lesdits deuxièmes maillons, ces gorges s'étendant dans une direction (Y) sensiblement perpendiculaire à la portion (16) dudit deuxième maillon dans laquelle elles sont ménagées.

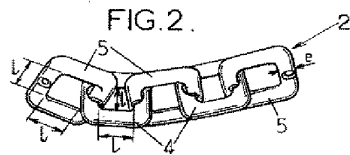
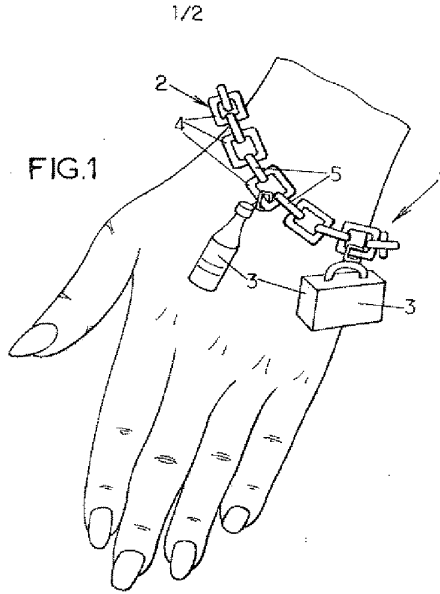
5 11. Chaîne selon l'une quelconque des revendications précédentes, dans laquelle les maillons (4,5) sont articulés les uns aux autres avec un jeu suffisant pour autoriser des débattements angulaires compris entre 5 et 30 degrés de chaque maillon par rapport  
10 à un maillon adjacent, selon trois axes (X,Y,Z) perpendiculaires deux à deux.

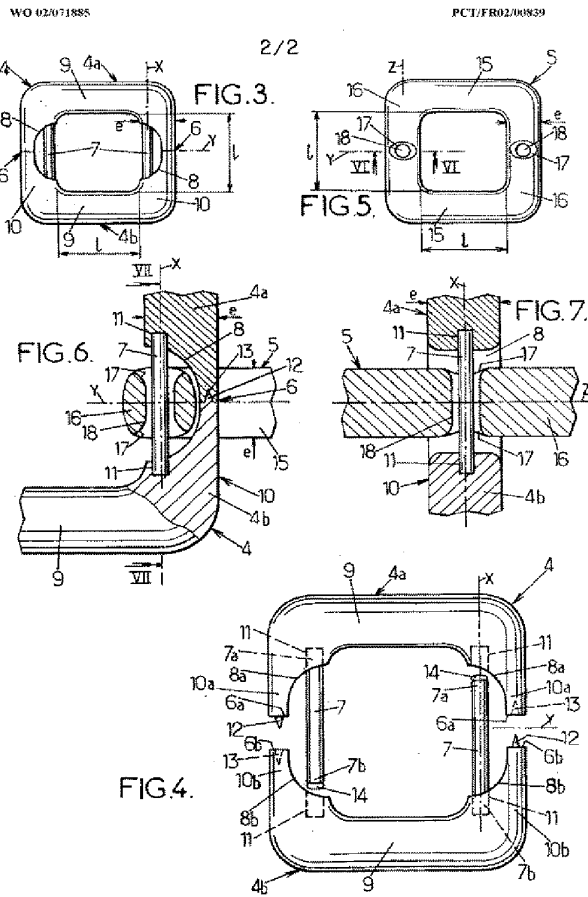
12. Chaîne selon la revendication 11, dans laquelle lesdits débattements angulaires sont compris entre 10 et 20 degrés.

15 13. Chaîne selon l'une quelconque des revendications précédentes, dans laquelle les premiers et deuxièmes maillons (4,5) ont tous des formes annulaires, chaque maillon comportant un espace intérieur creux qui présente des dimensions (l), mesurées selon deux directions  
20 perpendiculaires appartenant au plan dudit maillon, qui sont supérieures à deux fois une épaisseur (e) d'un maillon, lesdits maillons pénétrant respectivement dans les espaces intérieurs creux des maillons adjacents.

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INTERNATIONAL SEARCH REPORT		Intern. Appl. No. PCT/EP 02/00839
<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 7 A44C11/00		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Mandatory documents searched (classification system followed by classification symbols) IPC 7 A44C		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, PAJ		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FR 2 640 124 A (BAUWÉDE MAXENCE V D) 15 June 1990 (1990-06-15) page 1, line 21 - line 26 page 3, line 18 - page 4, line 6; figure 1	1, 2, 5-8
A	DE 87 10 625 U (HAUDA) 17 September 1987 (1987-09-17) page 7, line 10 - line 19; claims 1, 2; figure 1	1-4
A	WD 97 22275 A (BENZ KARL JOSEF) 26 June 1997 (1997-06-26) page 2, line 7 - page 3, line 5; figure 2	1, 2
A	DE 94 16 952 U (WELLENDORFF ALEX DR FA) 12 January 1995 (1995-01-12) page 1, paragraph 3 page 3, paragraph 2; figure	1, 11
-/-		
<input checked="" type="checkbox"/>	Further documents are cited in the continuation of box C.	<input checked="" type="checkbox"/> Patent family members are listed in series.
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Date of the actual completion of the international search	Date of mailing of the international search report	
9 July 2002	17/07/2002	
Name and mailing address of the ISA European Patent Office, P.O. Box 16 Patentstr. 2 NL - 2000 PH The Hague Tel. (+31-70) 340-2040, Tx. 31 651 630 NL Fax. (+31-70) 340-2040	Authorized officer Moulié, E	

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INTERNATIONAL SEARCH REPORT		Item: # Application No. PCT/KR 02/00839
C.(Continued) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Description of document, with indicator, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 22 03 277 A (LUDWIG ELSKAMP FA) 2 August 1973 (1973-08-02) page 4, paragraph 1; figures	1

Form PCT/IS/212 (10/19/03) of 2003.04.01 (L) by 1992

INTERNATIONAL SEARCH REPORT				Form: Application No.	
reference to patent family members				PCT/FR 02/00839	
Patent document cited in search report	Publication date	Patent family member(s)	Publication date		
FR 2640124	A	15-06-1990	FR 2640124 A1	15-06-1990	
DE 8710625	U	17-09-1987	DE 8710625 U1	17-09-1987	
WO 9722275	A	26-06-1997	JP 2691211 B2	17-12-1997	
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			AU 7339196 A	14-07-1997	
			EP 0809452 A1	03-12-1997	
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DE 2203277	A	02-08-1973	DE 2203277 A1	02-08-1973	

Form PCT/ISA210E (patent family) July 1992

RAPPORT DE RECHERCHE INTERNATIONALE		Dom. internationale No PCT/FR 02/00839
A. CLASSEMENT DE L'OBJET DE LA DEMANDE CIB 7 A44C11/00		
Selon la classification internationale des brevets (CIB) ou à la fois selon la classification nationale et le CIB		
B. DOMAINES SUR LESQUELS LA RECHERCHE A PORTÉ Documentation minimale consultée (système de classification ou autres symboles de classement) CIB 7 A44C		
Documentation consultée autre que la documentation minimale dans le cadre, ou des documents relatifs aux dépensés d'attribution à partir de recherches		
Base de données électronique consultée au cours de la recherche internationale (nom de la base de données, et si révélateur, forme de recherche utilisée) EPO-Internal, PAJ		
C. DOCUMENTS CONSIDÉRÉS COMME PERTINENTS		
Classe	Intitulés des documents cités, avec, le cas échéant, l'indication des passages pertinents	no. des revendications visées
A	FR 2 640 124 A (BAUWEDE MAXENCE V D) 15 Juin 1990 (1990-06-15) page 1, ligne 22 - ligne 26 page 3, ligne 18 - page 4, ligne 6; figure 1 ---	1, 2, 5-8
A	DE 87 10 625 U (HAUDA) 17 septembre 1987 (1987-09-17) page 7, ligne 10 - ligne 19; revendications 1, 2; figure 1 ---	1-4
A	NO 97 22275 A (BENZ KARL JOSEF) 26 Juin 1997 (1997-06-26) page 2, ligne 7 - page 3, ligne 5; figure 2 ---	1, 2
<input checked="" type="checkbox"/> Voir la suite du cadre C pour le fin de la liste des documents <input checked="" type="checkbox"/> Les documents de famille de brevets sont indiqués en annexe		
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C (suite) DOCUMENTS CONSIDERES COMME PERTINENTS		
Catégorie	Identification des documents cités, avec, le cas échéant, l'indication des passages pertinents	N. des revendications visées
A	DE 94 16 952 U (WELLENDORFF ALEX DR FA) 12 janvier 1995 (1995-01-12) page 1, alinéa 3 page 3, alinéa 2; figure -----	1, 11
A	DE 22 03 277 A (LUDWIG ELSKAMP FA) 2 août 1973 (1973-08-02) page 4, alinéa 1; figures -----	1

Formulaires PCT/ISA/210 (partie de la classe) (autre) (juin 1995)

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Renseignements relatifs aux familles de brevets					
Document breveté ou rapport de recherche		Date de publication	Membre(s) de la famille de brevets		Date de publication
FR 2640124	A	15-06-1990	FR 2640124 A1		15-06-1990
DE 8710625	U	17-09-1987	DE 8710625 U1		17-09-1987
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			JP 9173116 A		08-07-1997
			AU 7339196 A		14-07-1997
			EP 0809452 A1		03-12-1997
			WO 9722275 A1		26-06-1997
DE 9416952	U	12-01-1995	DE 9416952 U1		12-01-1995
DE 2203277	A	02-08-1973	DE 2203277 A1		02-08-1973

Formulaire PCT/ISA/CIC (pour une famille de brevets) (page 1/10)

(81)指定国 AP(GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), EA(AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), EP(AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OA(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG), AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW

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**Bibliographic data: JP2003520083 (A) — 2003-07-02**

**METHOD OF MANUFACTURING JEWELRY NETWORK STRUCTURES AND NETWORK STRUCTURES OBTAINED WITH SUCH METHOD**

**Inventor(s):**

**Applicant(s):**

**Classification:**

- **international:** **A44C11/00; A44C25/00; A44C27/00;** (IPC1-7): A44C25/00; A44C27/00
- **European:** A44C11/00B

**Application number:** JP20010552742T 20000321

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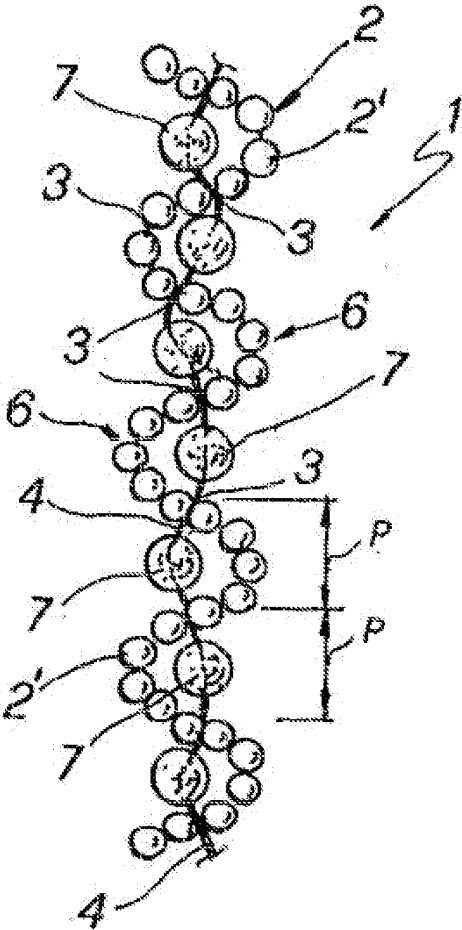
Abstract not available for JP2003520083 (A)

Abstract of corresponding document: WO0152683 (A1)

Method of manufacturing of goldsmith network structure including the steps of providing a longitudinal warp member (2) constituted by a chain formed by one or more lines of links or modular elements and provided with interstices (3) between the links or modular elements, providing a weft member (4) constituted by a flexible threadlike core, inserting the weft member (4) in the warp member (2) along a direction substantially perpendicular to the longitudinal extension of the latter, at locations at predetermined distance (P, P', P'') from each other. The goldsmith network structure includes a longitudinal warp member (2) comprising a chain formed by one or more lines provided with interstices (3) between adjacent links or modular elements, and a weft member (4) comprising a flexible thread-like core inserted in the warp member (2) in a direction substantially perpendicular to the longitudinal direction of the latter at positions at predetermined distances (P, P', P'') from each other to define adjacent bights (6, 6') of the network structure.

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(19)日本国特許庁 (J P)

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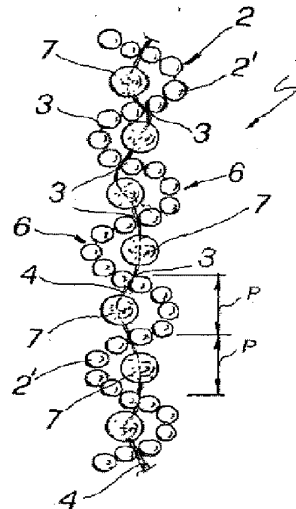
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最終頁に続く

(54)【発明の名称】 装身用網目構造物を製造する方法と該方法によって得られる網目構造物

(57)【要約】

装身用網目構造物を製造する方法であって、a) リンクまたはモジュール要素から成る一本以上の線によって形成され、前記リンクまたはモジュール要素の間に間隙(3)を有する鎖から構成される、縦方向のたて糸部材(2)を作り、b) 柔軟な糸状芯によって構成されるよこ糸部材(4)を作り、c) 前記よこ糸部材(4)を、前記たて糸部材(2)の長さ方向に実質的に直交する方向に沿って、互いに所定の距離(P、P'、P'')だけ離れた位置において、前記たて糸部材を貫通させる、各ステップから成ることを特徴とする方法。装身用網目構造物であって、隣り合うリンクまたはモジュール要素の間に間隙(3)を備えた一本以上の線によって形成される鎖から成る、縦方向のたて糸部材(2)、および前記たて糸部材(2)の長さ方向に実質的に直交する方向に、互いに所定の距離(P、P'、P'')だけ離れた位置において、前記たて糸部材を貫通して、前記網目構造物の隣り合う湾曲部(6、6')を定める、柔軟な糸状芯から成るよこ糸部材(4)、から成ることを特徴とする装身用網目構造物。



【特許請求の範囲】

【請求項1】装身用網目構造物を製造する方法であって、

- a) リンクまたはモジュール要素から成る一本以上の線によって形成される鎖から構成される、縦方向に延びるたて糸部材(2)であって、前記鎖が前記リンクまたはモジュール要素(2')の間に間隙(3)を有するたて糸部材を作り、
- b) 柔軟な糸状芯によって構成される少なくとも一本のよこ糸部材(4)を作り、
- c) 前記少なくとも一本のよこ糸部材(4)を、前記たて糸部材(2)の長さ方向に実質的に直交する方向に沿って、互いに所定の距離(P、P'、P'')だけ離れた位置において、前記たて糸部材の間隙を貫通させ、網目構造物を構成する隣り合う湾曲部(6、6')を形成させる、各ステップから成ることを特徴とする方法。

【請求項2】貫通位置の間の距離(P)が一定であることを特徴とする請求項1に記載の方法。

【請求項3】貫通位置の間の距離(P'、P'')が一定でないことを特徴とする請求項1に記載の方法。

【請求項4】複数の装身用要素(7、8)が、前記たて糸部材の隣り合う湾曲部に挿入されることを特徴とする請求項1に記載の方法。

【請求項5】前記装身用要素(7、8)が、玉(7)または貴石および半貴石から成ることを特徴とする請求項4に記載の方法。

【請求項6】前記装身用要素が、貴物質または半貴物質の管状スリーブ(8)から成ることを特徴とする請求項4に記載の方法。

【請求項7】前記たて糸部材(2)が、並んだ2本の線または“双対”線から成る二重鎖であることを特徴とする請求項1に記載の方法。

【請求項8】前記たて糸部材が、環状リンクを有する鎖であることを特徴とする請求項1に記載の方法。

【請求項9】よこ糸部材(4)を構成する前記芯が、“ロロ”プレスタイプの鎖であることを特徴とする請求項1に記載の方法。

【請求項10】装身用網目構造物であって、

!(3) 003-520083 (P2003-520083A)

隣り合うリンクまたはモジュール要素の間に間隙(3)を備えた一本以上の線によって形成される鎖から成る、縦方向に延びるたて糸部材(2)、および

前記たて糸部材(2)の長さ方向に実質的に直交する方向に、互いに所定の距離(P、P'、P'')だけ離れた位置において、前記たて糸部材を貫通して、前記網目構造物の隣り合う湾曲部(6、6')を定める、柔軟な糸状芯から成るよこ糸部材(4)、

から成ることを特徴とする装身用網目構造物。

【発明の詳細な説明】

【0001】

本発明は、装身用網目構造物を製造する方法および該方法によって得られる装身用網目構造物に関する。

【0002】

現在、金ならびに他の貴金属および半貴金属の装身具は、いろいろな形と長さの複数のネックレス線を連結し、また編むことにより、金細工技術によって製造されている。

【0003】

現在使用されている製造方法によれば、連結は、実質的に平行なように複数のネックレスを配置し、随意に、これらを、開閉具が取り付けられる端、またはロケットが配置される中央部分で、結合することによつて、実現される。

【0004】

EP-A-0 495 100号明細書には、多数の金属線が互いに不規則に交差するように配列された、装身具のための金属メッシュが開示されている。GB-A-2 294 863号明細書には、一つの装身具が開示されており、該装身具は、装身具用の枠網目とメッシュ部材、および該枠に支持される、真珠のつらなりによって形成される網目構造物から成る。

【0005】

しかし、これまでのところ、ネックレス線を、互いにまたは他の線状部材と、実質的に直交する方向に結合して、非常に好ましい各種の美しい外観を有するよこ糸を与えるようにした設計をしたものはいない。

【0006】

本発明の目的は、単一または複数の線の形に配置された簡単な鎖から出発して、構造物全体に新しい各種の外観を与え、また同時に該構造物が著しく軽量で優雅なものになるようなやり方で、装身用網目構造物を製造する方法を案出することである。

【0007】

本発明の一つの好ましい側面によれば、請求項1に示すように、

装身用網目構造物を製造する方法であって、

- a) リンクまたはモジュール要素から成る一本以上の線によって形成される鎖から構成される、縦方向に延びるたて糸部材であって、前記鎖が前記リンクまたはモジュール要素の間に間隙を有するたて糸部材を作り、
- b) 柔軟な糸状芯によって構成される少なくとも一本のよこ糸部材を作り、
- c) 前記少なくとも一本のよこ糸部材を、前記たて糸部材の長さ方向に実質的に直交する方向に沿って、互いに所定の距離だけ離れた位置において、前記たて糸部材の間隙を貫通させ、網目構造物を構成する隣り合う湾曲部を形成させる、各ステップから成ることを特徴とする方法、が提供される。

【 0 0 0 8 】

本発明のさらなる側面によれば、請求項 10 に示すように、  
装身用網目構造物であって、

隣り合うリンクまたはモジュール要素の間に間隙を備えた一本以上の線によって形成される鎖から成る、縦方向に延びるたて糸部材、および

前記たて糸部材の長さ方向に実質的に直交する方向に、互いに所定の距離だけ離れた位置において、前記たて糸部材を貫通して、前記網目構造物の隣り合う湾曲部を定める、柔軟な糸状芯から成るよこ糸部材、  
から成ることを特徴とする装身用網目構造物、が提供される。

【 0 0 0 9 】

本発明のさらなる特徴と利点は、本発明の方法によって得られる装身用網目構造物の好ましい非限定実施形態に関する以下の説明によって、さらにはっきりするであろう。この説明は、添付の図面を参照しつつ、非限定実施例に関して行う。

【 0 0 1 0 】

これらの図面において、全体を参照番号 1 で示す本発明の装身用網目構造物は、部材 2 を有する。この部材を以下では“たて糸”部材と呼ぶ。部材 2 は、実質的に、それぞれ縦方向の広がりとは大体正弦曲線形の形状とを有する、単一、二つもしくは“双対”、または複数配置の一本以上の鎖線によって構成されている。

【 0 0 1 1 】

たて糸鎖部材 2 は、リンクまたはモジュール要素 2' から成る一本以上の線によって形成されている。要素 2' は、長さ方向に沿って、これらの要素間に、たとえば、環状リンクまたはモジュール要素 2' の間の結合点に一致する、複数の間隙または空隙 3 を定めるように相互に連結されている。

【 0 0 1 2 】

本発明においては、部材 4 が備えられる。部材 4 を以下では、“よこ糸”部材と呼ぶ。この部材は、実質的に、柔軟な非常に細い糸状芯、たとえばプレスまたは槌打ちした“ロロ ( r o l l e d )”金糸から成り、この部材は、一端において、針 5 または類似の工具たとえば金細工用の結合線 ( s o l d e r i n g w i r e ) に取り付けられる。

【 0 0 1 3 】

工具 5 の使用により、よこ糸状部材 4 は、たて糸部材 2 の長さ方向に実質的に直交する方向にたて糸部材 2 の間隙 3 を貫通させられて、網目が形成され、したがって隣り合う湾曲部またはループを有する装身用網目構造物が形成される。

【 0 0 1 4 】

好ましくは、よこ糸部材 4 の糸状芯は、鎖たて糸部材 2 と、一定値 P または非一定値 P'、P'' の所定距離だけ離れた部材 2 上の位置で交差して、必要に応じて等間隔 6 または非等間隔 6' の湾曲部が形成されるように配置する。

【 0 0 1 5 】

さらに、糸状部材 4 は、図には示さないが、たとえば花状または類似の形態をかたどるようなやり方でいろいろな植物の形を有するようにすることができる。

【 0 0 1 6 】

随意であるが、網目構造物の湾曲部の内部に、たとえば玉 7、管状スリーブ 8、または貴石もしくは半貴石 ( 図示せず ) から成る装身用要素を挿入することができる。

【 0 0 1 7 】

さらに、前述のように、たて糸鎖部材 2 は、複数の互いに平行な線から成るようにして、鎖の同心円弧が定められるようにすることができる。

【 0 0 1 8 】

よこ糸状芯部材4を、たて糸鎖部材2の空隙 ( r e c e s s ) を貫通させたあと、端部材 ( 図示せず ) を挿入して、二つの部材2、4の相互固定を行い、構造物全体を安定させることができる。

【 0 0 1 9 】

前記の製造方法で得られる網目構造物1は、たて糸部材2とよこ糸部材4との組合せから成る。たて糸部材2は、単一線または複数線の鎖から成り、この鎖は、複数の隣り合うリンクまたはモジュール要素2' によって形成され、要素2' は、相互に連結され、隣り合うリンクまたはモジュール要素2' の間に空隙が備えられる。また、よこ糸部材4は、たて糸部材2の長さ方向に実質的に直交する方向に、所定の相互距離だけ離れた位置で、たて糸部材2の空隙を貫通して、隣り合う湾曲部を有する網目構造を形成する、柔軟な糸状芯から成る。

【 0 0 2 0 】

以上、本発明の製造方法と網目構造物を、添付の図面を参照しつつ説明したが、これらには、特許請求の範囲に定める本発明の概念の範囲内にある多くの変更と変形を加えることができる。

【 0 0 2 1 】

すべての要素は、他の同等物で置き換えることができ、また事情に応じて、材料は別のものとすることができる。

【 0 0 2 2 】

本出願は、イタリア特許出願 V I 2 0 0 0 A 0 0 0 0 1 4 号 ( 2 0 0 0 年 1 月 1 9 日 提 出 ) に 基 づく 物 であり、該出願の開示事項は該出願を参照することにより、本明細書に明確に含まれており、また本明細書においては該出願の優先権を主張する。

【 図面の簡単な説明】

【 図 1 】

本発明による装身用網目構造物の第一の実施形態の側面図である。

【 図 2 】

図1の装身用網目構造物の正面図である。

【 図 3 】



本発明による装身用網目構造物の第二の実施形態の側面図である。

【図4】

図3の装身用網目構造物の正面図である。

【図5】

図1に示す構造物の製造法の第一ステップを示す図である。

【図6】

図1に示す構造物の製造法の第二ステップを示す図である。

【図7】

図1に示す構造物の製造法の第三ステップを示す図である。

【符号の説明】

- 1 装身用網目構造物
- 2 たて糸部材
- 2' リンクまたはモジュール要素
- 3 間隙
- 4 よこ糸部材
- 6、6' 湾曲部
- 7 装身用要素（玉）
- 8 装身用要素（管状スリーブ）
- P、P'、P'' 所定距離

【 図 1 】

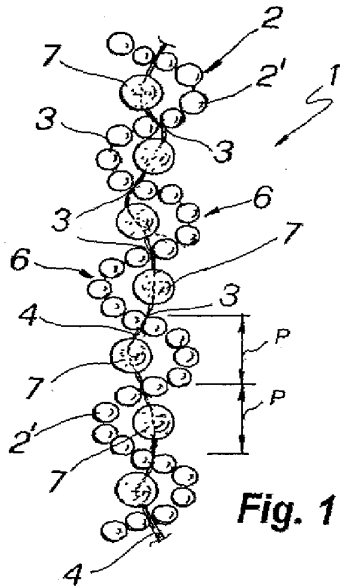


Fig. 1

【 図 2 】

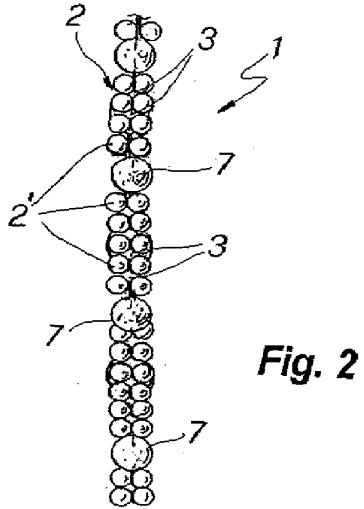
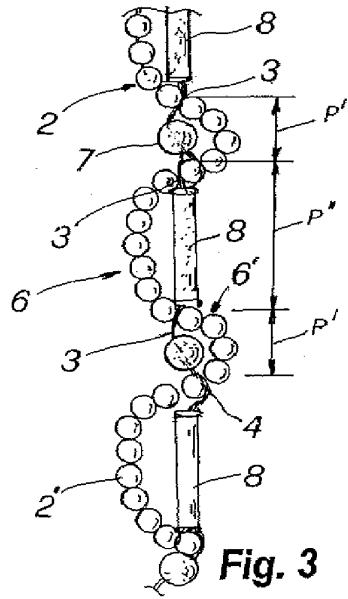
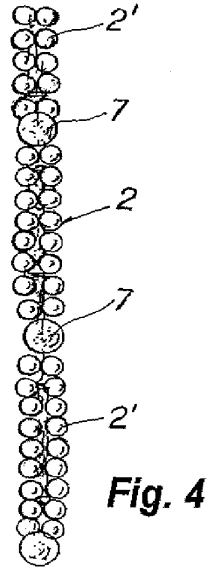


Fig. 2

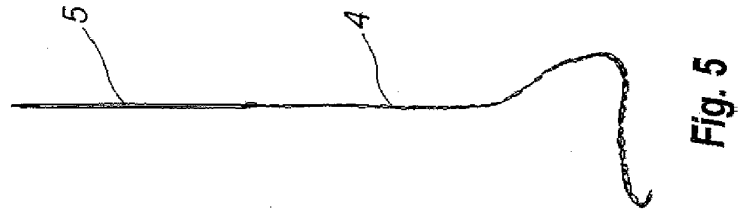
【 図 3 】



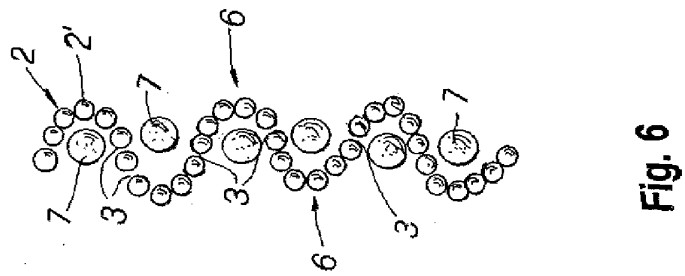
【 図 4 】



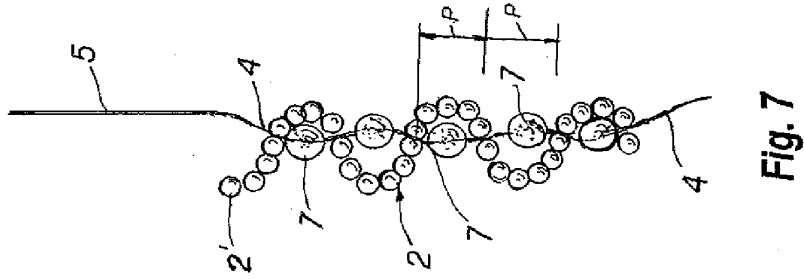
【圖5】



【圖6】



【圖7】



## 【 国际調查報告 】

## INTERNATIONAL SEARCH REPORT

		International Application No. PCT/IB 00/00322
A. CLASSIFICATION OF SUBJECT MATTER IPC 7 A44C11/00		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 A44C		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 742 730 A (POWELL E) 3 July 1973 (1973-07-03) column 2, line 55 -column 3, line 39; figure 3	1,10
A	FR 689 745 A (ESCALES) 2 October 1930 (1930-10-02) the whole document	1,10
A	US 1 499 769 A (GODEFROY M) 1 July 1924 (1924-07-01) the whole document	1,10
<input type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
* Special categories of cited documents : "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" documents published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family		
Date of the actual completion of the international search 25 August 2000		Date of mailing of the international search report 04/09/2000
Name and mailing address of the ISA European Patent Office, P.O. Box 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 540-2040, Tx. 31 651 epo nl, Fax: (+31-70) 540-3016		Authorized officer Kock, S

Form PCT/ISA210 (second sheet) (July 1992)

**INTERNATIONAL SEARCH REPORT**

information on patent family members

International Application No  
PCT/IB 00/00322

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3742730 A	03-07-1973	US 3650010 A	21-03-1972
FR 689745 A	02-10-1930	NONE	
US 1499769 A	01-07-1924	NONE	

Form PCT/ISA/210 (patent family annex) (July 1992)

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フロントページの続き

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

<b>Title of Invention</b>	<b>HAND HELD LINK MAKING DEVICE AND KIT</b>
---------------------------	---

As the below named inventor, I hereby declare that:

This declaration is directed to:

The attached application, or

United States application or PCT international application number \_\_\_\_\_  
filed on \_\_\_\_\_.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

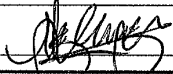
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

**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: Cheong Choon Ng Date (Optional) : \_\_\_\_\_

Signature: 

Note: An application data sheet (PTO/AIA/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional PTO/SB/AIA01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**  
*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*



<b>Electronic Patent Application Fee Transmittal</b>				
<b>Application Number:</b>				
<b>Filing Date:</b>				
<b>Title of Invention:</b>		HAND HELD LINK MAKING DEVICE AND KIT		
<b>First Named Inventor/Applicant Name:</b>		Cheong Choon Ng		
<b>Filer:</b>		John M. Siragusa/Donna Durant		
<b>Attorney Docket Number:</b>		67467-009PUS2		
Filed as Small Entity				
<b>Track I Prioritized Examination - Nonprovisional Application under 35 USC 111(a) Filing Fees</b>				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Basic Filing:</b>				
Utility filing Fee (Electronic filing)	4011	1	70	70
Utility Search Fee	2111	1	300	300
Utility Examination Fee	2311	1	360	360
Request for Prioritized Examination	2817	1	2000	2000
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Publ. Fee- Early, Voluntary, or Normal	1504	1	300	300
OTHER PUBLICATION PROCESSING FEE	1808	1	130	130
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>3160</b>

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	16768607
<b>Application Number:</b>	14018542
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	5921
<b>Title of Invention:</b>	HAND HELD LINK MAKING DEVICE AND KIT
<b>First Named Inventor/Applicant Name:</b>	Cheong Choon Ng
<b>Customer Number:</b>	26096
<b>Filer:</b>	John M. Siragusa/Donna Durant
<b>Filer Authorized By:</b>	John M. Siragusa
<b>Attorney Docket Number:</b>	67467-009PUS2
<b>Receipt Date:</b>	05-SEP-2013
<b>Filing Date:</b>	
<b>Time Stamp:</b>	11:32:51
<b>Application Type:</b>	Utility under 35 USC 111(a)

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Payment Type	Deposit Account
Payment was successfully received in RAM	\$3160
RAM confirmation Number	13157
Deposit Account	501482
Authorized User	

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Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

**File Listing:**

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		67467-009_PUS2_Application.pdf	43935 4aedc23d36bafae8db6cfecb3729b7a3f87610818	yes	9
<b>Multipart Description/PDF files in .zip description</b>					
	<b>Document Description</b>		<b>Start</b>		<b>End</b>
	Specification		1		5
	Claims		6		8
	Abstract		9		9
<b>Warnings:</b>					
<b>Information:</b>					
2	Drawings-only black and white line drawings	67467-009PUS2_FormalDrawings.pdf	132895 a1b2ce237751f1fb3d70ad405ba49c381379b0a7	no	5
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<b>Information:</b>					
3	Application Data Sheet	009PUS2_ADS_FORM.pdf	1503660 1e1afa345b0292cf73042c44aecc6f450622af28	no	6
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4	TrackOne Request	009PUS2_Request_for_Prioritized_Examination.pdf	183109 53d6476b48afc83409e9c378fb252e222ddcf420	no	2
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5	Information Disclosure Statement (IDS) Form (SB08)	009PUS2_IDS_filewithapp.pdf	613956 19fa21e2730f419185a859f98c6cd7d423b18e34	no	9
<b>Warnings:</b>					
<b>Information:</b>					
6	Non Patent Literature	ISRWO_02_23_2012.pdf	448685 432186b3b7a0c5d1581e902f5cc274b15587996	no	9
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<b>Information:</b>					

7	Non Patent Literature	5-16-13_IPRP.pdf	255790 f4cac56ab14280296581ba1f1610c97ddb221082	no	6
<b>Warnings:</b>					
<b>Information:</b>					
8	Foreign Reference	KR1020060042108.pdf	292271 60b419b46c26e35eb331fe55a482123ce0d83a29	no	13
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9	Foreign Reference	KR1020010012609.pdf	155975 e1babfd3ba308b459ab161dc729df45de17c97a	no	11
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11	Foreign Reference	JP2003520083.pdf	349189 decedbc5dc6052e28f80c0e11a32d6a867fabfc6	no	16
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12	Oath or Declaration filed	009PUS2_Declaration_Executed.pdf	77135 7132a19afb2d79c3b9ed51feec0fb3857ae6ce2a	no	1
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<b>Total Files Size (in bytes):</b>			4883738		

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## **HAND HELD LINK MAKING DEVICE AND KIT**

### **CROSS REFERENCE TO RELATED APPLICATION**

**[0001]** This application is a continuation of U.S. Application Serial No. 13/626,057 filed September 25, 2012, and claims priority to U.S. Provisional Application Serial No. 61/846,270 filed on July 15, 2013.

### **BACKGROUND**

**[0002]** This disclosure generally relates to method and device for creating a linked item. More particularly, this disclosure relates to a method and device for creating a linked wearable item from elastic bands.

**[0003]** Kits that include materials for making a uniquely colored bracelet or necklace have always enjoyed some popularity. However such kits usually just include the raw materials such as different colored threads and beads and rely on the individual's skill and talent to construct a usable and desirable item. Accordingly there is a need and desire for a kit that provides not only the materials for creating a unique wearable item, but also that simplifies construction to make it easy for people of many skill and artistic levels to successfully create a desirable and durable wearable item.

### **SUMMARY**

**[0004]** A Brunnian link is a link formed from a closed loop doubled over itself to capture another closed loop to form a chain. Elastic bands can be utilized to form such links in a desired manner. The example kit and device provides for creation of Brunnian and other linked articles. Moreover, the example kit provides for the successful creation of unique wearable articles using Brunnian and other link assembly techniques.

**[0005]** The example kit includes a template for mounting an initial band and a hook utilized for attaching additional bands to the initial bands placed on the template. The template

includes pins that hold the initial band in place while additional bands are linked onto each other. The kit further includes a clip utilized to attach ends once the desired length is formed.

[0006] These and other features disclosed herein can be best understood from the following specification and drawings, the following of which is a brief description.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

- [0007] Figure 1 perspective view of an example kit for creating a linked article.
- [0008] Figure 2 is schematic view of link article.
- [0009] Figure 3 is a schematic view of a series of a series of Brunnian links.
- [0010] Figure 4 is a side view of an example template.
- [0011] Figure 5 is an end view of the example template.
- [0012] Figure 6 is a top view of the example template.
- [0013] Figure 7 is a plan view of an example clip for securing loose ends of a Brunnian linked article.
- [0014] Figure 8 is perspective view illustrating elastic bands secured with the example clip.
- [0015] Figures 9A-9M are views of an example method of creating a linked article using the example template and kit.

### **DETAILED DESCRIPTION**

[0016] Referring to Figures 1 and 2, an example kit is indicated at 10 for creating linked items such as bracelets, necklaces and other wearable or decorative article as generally indicated in Figure 2. The example kit 10 includes a template 12, a clip 16 and a hook 14. The example kit 10 also includes a number of elastic members 18 that are used with the kit 10 to form links for the resulting wearable article. The elastic members 18 are consumed as articles are fabricated, and are replaced and replenished with additional elastic members. Moreover, the example elastic members 18 are of a size corresponding with the example template 12. Further, although a single clip 16 is illustrated, the example kit 10 will include many clips 16 to provide for the fabrication of many articles 26.



**[0017]** Referring to Figure 3, a Brunnian link 20 is formed from a continuous looped structure without forming an actual knot. Several links 20 are formed in a chain to form a circular structure. Ends 22 of each elastic member 18 are secured and a durable wearable article is created. In this example three links 20 are shown forming a single chain. Each link 20 is formed by capturing the ends 22 of one loop structure with a mid portion 24 of another loop structure in series. Each link 20 depends on the previous and subsequent links 20 to maintain the desired shape and integrity. Removing one link 20 results in all of the links becoming loose from each other.

**[0018]** Referring to Figures 4, 5 and 6, the example template 12 includes two posts 28A, 28B spaced a distance 30 apart from each other. Each of the pins 28A, 28B includes a first arm 32a-b and second arm 34a-b supported on a base 36. The arms 32a-b, 34a-b defines an access slot 38 that extends across both of the posts 28A, 28B. The base 36 includes a link opening 40 for completed links of a linked article during fabrication. Each of the first and second arms 32a-b, 34a-b include upper and lower tabs 42 that maintain a linked article within a center section 44.

**[0019]** Referring to Figures 7 and 8, the example clip 16 is generally C-shaped with inwardly facing ends 48. The inwardly facing ends 48 point inwardly to an open space 50 where parts of the elastic members are kept 18. The inwardly facing ends 48 prevent ends 22 from sliding out from the inner area 50 off of the clip 16.

**[0020]** Referring to Figures 9A-M, the example template 12 is utilized for the formation of a linked article. As appreciated, elastic bands 18 can be difficult to manipulate and hold during the construction of a desired article. The example template 12 provides for holding of an initial number of links 20 and subsequent connection of each link in the linked article. The template 12 includes the first and second posts 28A, 28B along with the access slot 38 across both of the posts 28A-B. The specific linked configuration can be a simple Brunnian link, but may also be more complex and intricate link structures such as a fishbone type link structure. The template 12 includes the link opening 40 to facilitate the fishbone link structure where the linked article grows and extends from the template 12 through the link opening 40.

[0021] The Figures illustrate formation of a fishbone linked structure utilizing the example template 12. The initial step illustrated in Figure 9A includes assembling a first elastic band 18A by crossing over itself to form a figure 8 pattern across the posts 28a-b. A second elastic band 18B and third elastic band 18C is then assembled over the first elastic band 18A without crossing over as is shown in Figure 9B. Three elastic bands are therefore supported across the posts 28a-b with the first band 18A on the bottom below the second and third elastic bands 18B, 18C.

[0022] Utilizing the hook tool 14, the bottom, lower most, or first elastic band 18A is pulled off of the posts 28A-B and looped over the second and third elastic bands 18B, 18C as is shown in Figures 9C and 9D. The first elastic band 18A is positioned to loop around each of the second and third elastic bands 18B, 18C and is not supported directly by the posts 28a-b.

[0023] An additional elastic band 18D is then added above the second and third elastic bands 18B, 18C such that the second elastic band 18B is now the lower most elastic band as is shown in Figure 9E. The lower most elastic band 18B is then grasped with the hook tool 14 (Figure 9F) by extending the hook tool 14 into the access slot 38 and grasping ends of the elastic band in sequence, pulling the ends away from the corresponding post (Figure 9G) and looping each end over onto the and around the other links supported between the first and second posts as is shown in Figure 9H.

[0024] An additional link is added above the two remaining links 18C, 18D across the two posts 28a-b as is shown in Figure 9I and the process shown in Figures 9F through 9H is repeated with additional links to grow the length of the linked structure as is shown in Figures 9J and 9K until a desire length or number of links are connected to each other as is illustrated in Figure 9L.

[0025] Once the desired length is achieved, as the example in Figure 9L illustrates a clip 16 is attached to the end elastic link. The remaining links on the posts 28a-b can be removed and attached to the clip 16 to form the completed linked article as is shown in Figure 9M. As appreciated although the ends are connected to form the example linked article. The linked article may have terminal ends that are separately terminated to provide a length of a linked article.

[0026] Accordingly, the example kit and method provide for the creation of many different combinations and configurations of linked structures and articles for the creation of bracelets, necklaces, and other wearable items. Moreover, the example kit is expandable to further create and expand the capabilities of potential linked structures and articles. Further, the example kit provides for the creation of such links and items in an easy manner allowing persons of varying skill levels to be successful in creating unique wearable items.

[0027] Although an example embodiment has been disclosed, a worker of ordinary skill in this art would recognize that certain modifications would come within the scope of this disclosure. For that reason, the following claims should be studied to determine the scope and content of this invention.

## CLAIMS

What is claimed is:

1. A device for creating an item consisting of a series of links, the device comprising:

at least two posts spaced part from each other in a first direction, wherein each of the posts include a first arm and a second arm and an access slot disposed therebetween.

2. The device as recited in claim 1, including a base supporting the at least two posts.

3. The device as recited in claim 1, including a link opening disposed within the base and between the at least two posts providing a space for completed links during fabrication of a linked article.

4. The device as recited in claim 1, wherein the access slot is aligned across the first arm and the second arm.

5. The device as recited in claim 1, wherein each of the first arm and the second arm include upper and lower tabs for holding the links on the corresponding first arm and second arm.

6. The device as recited in claim 5, wherein the tabs are spaced horizontally apart from each other.

7. A method of creating a linked item comprising the steps of:  
assembling a first elastic band across at least two posts of a template;  
assembling at least one additional elastic band across the at least two posts above the first elastic band;  
looping a first and a second end of the first elastic band over the at least one additional elastic band and off of the at least two posts;  
adding at least one additional elastic band;  
looping a first end and a second end of the bottom elastic band over the added elastic band; and  
adding elastic bands and looping corresponding first and second ends of the bottom band over the added elastic band to obtain a desired number of links.

8. The method as recited in claim 7, wherein looping comprises grasping one of the first and second ends of the elastic bands with a hook tool and pulling the end over additional elastic bands.

9. The method as recited in claim 8, including extending the hook tool into a space defined within each of the at least two posts for grasping one of the first and second ends of the elastic bands.

10. The method as recited in claim 7, including extending linked ones of the elastic bands out an opening within a base supporting the at least two posts.

11. The method as recited in claim 8, including securing ends of the linked article with a clip by inserting ends of the elastic bands into a clip to form the linked item.

12. A kit for creating an item consisting of a series of links, the kit comprising:  
a template including at least two posts spaced part from each other in a first direction,  
wherein each of the posts include an access slot defined between a first arm and a second arm;  
and

at least one clip including inward facing ends disposed on each side of an opening for  
securing ends of the series of links together.

13. The device as recited in claim 12, including a base supporting the at least two  
posts.

14. The device as recited in claim 12, including a link opening disposed within the  
base and between the at least two posts providing a space for completed links to during  
fabrication of a linked article.

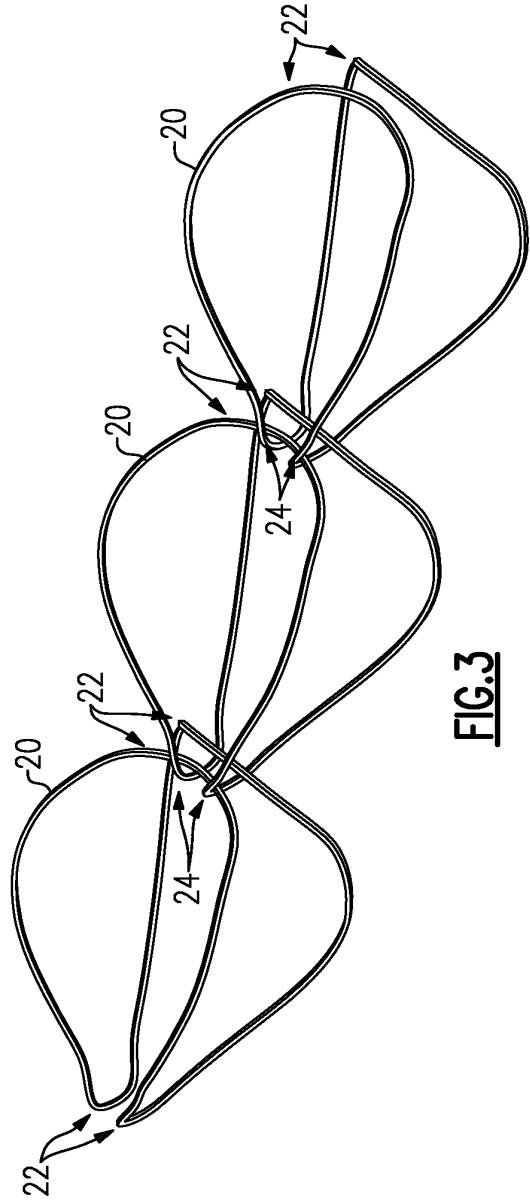
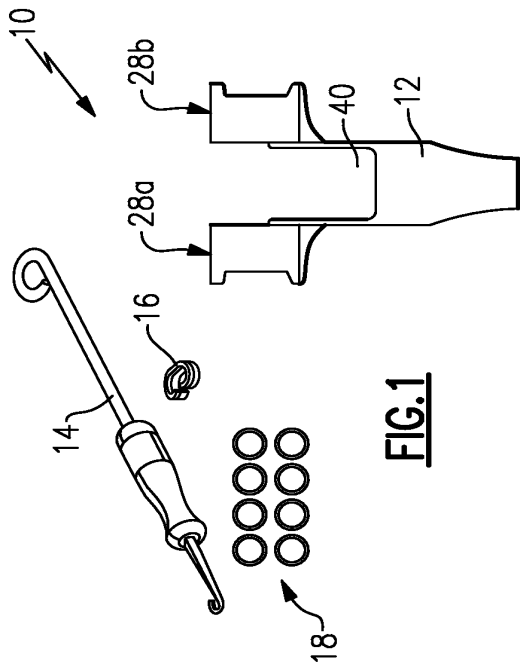
15. The device as recited in claim 12, wherein the clip comprises a C-shape and the  
inward facing ends extend in a direction perpendicular to the opening.

16. The device as recited in claim 12, including a hook for manipulating elastic  
members relative to each other.

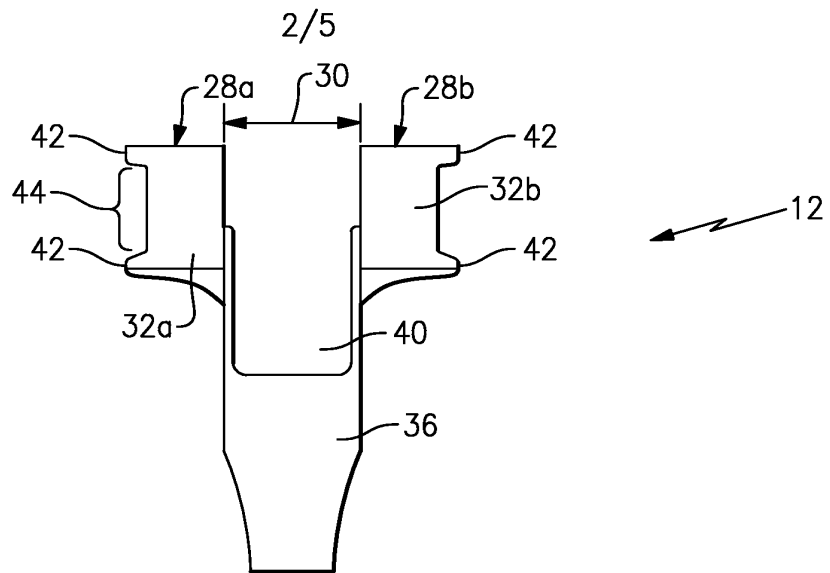
17. The device as recited in claim 12, including a plurality of elastic members for  
forming the series of links.

**ABSTRACT OF THE DISCLOSURE**

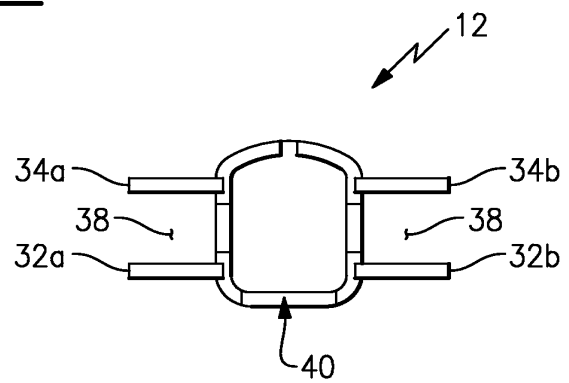
A disclosed device for creating an item consisting of a series of links includes at least two posts spaced part from each other in a first direction with each of the posts including a first arm and a second arm and an access slot.



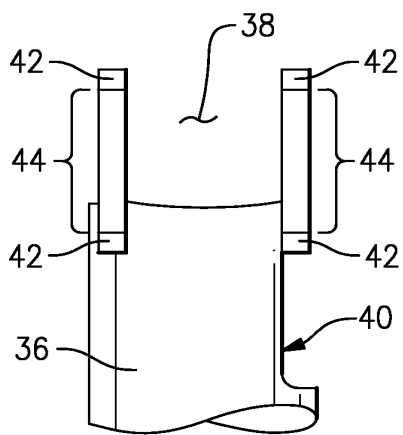




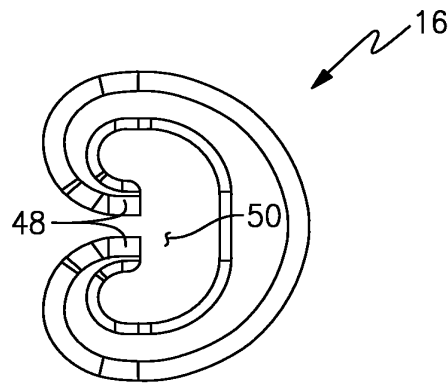
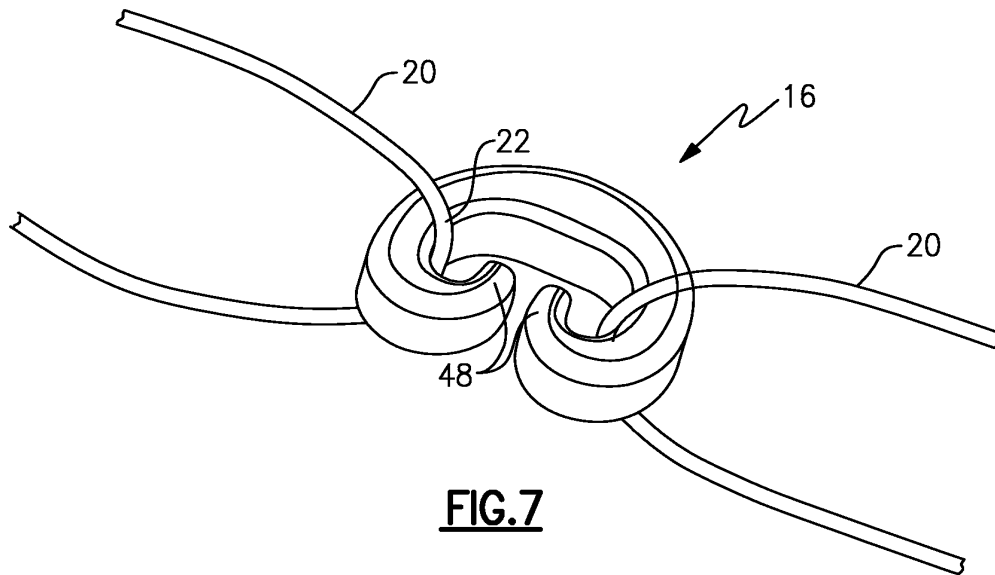
**FIG. 4**

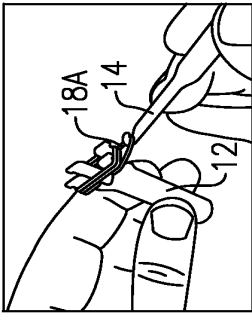


**FIG. 5**

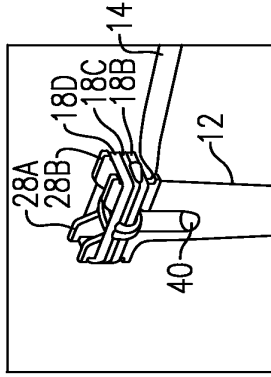


**FIG. 6**

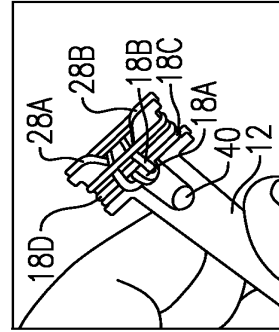




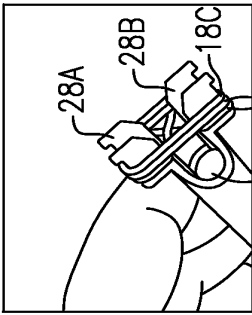
**FIG. 9C**



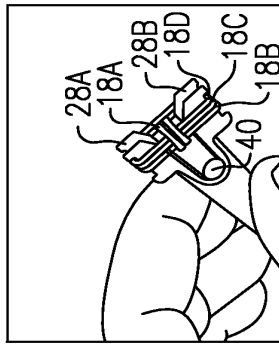
**FIG. 9F**



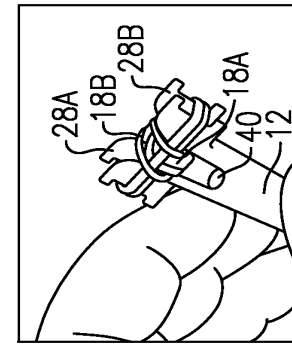
**FIG. 9I**



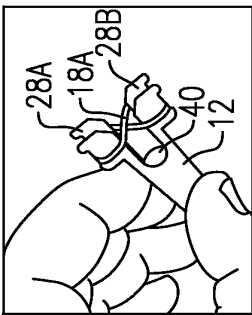
**FIG. 9B**



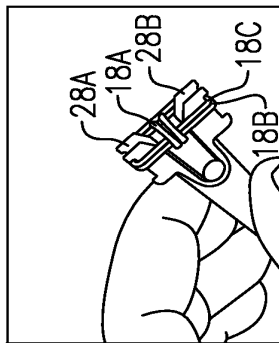
**FIG. 9E**



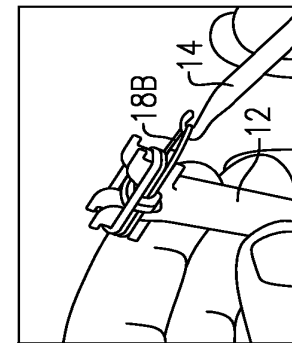
**FIG. 9H**



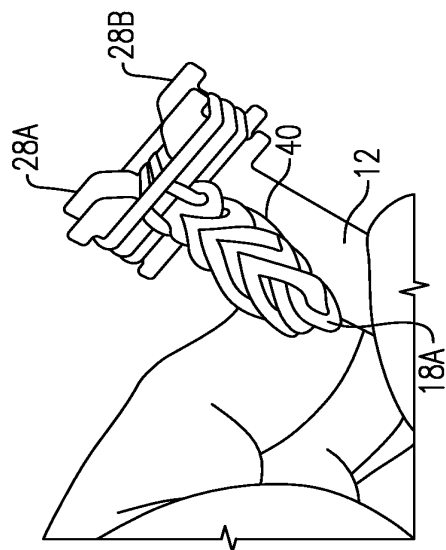
**FIG. 9A**



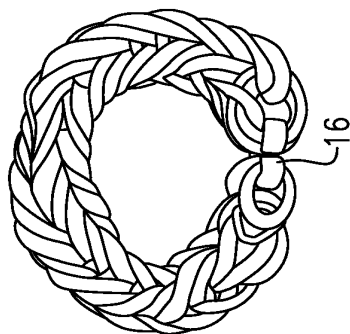
**FIG. 9D**



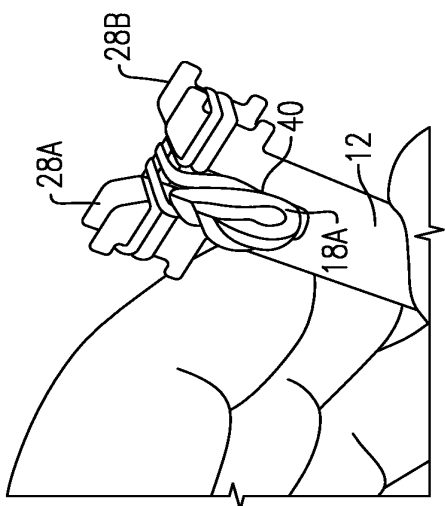
**FIG. 9G**



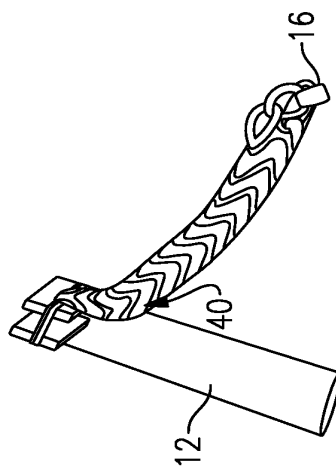
**FIG. 9K**



**FIG. 9M**



**FIG. 9J**



**FIG. 9L**

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<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	67467-009 PUS2
		Application Number	
Title of Invention	HAND HELD LINK MAKING DEVICE AND KIT		
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<b>Title of the Invention</b>	HAND HELD LINK MAKING DEVICE AND KIT		
<b>Attorney Docket Number</b>	67467-009 PUS2	<b>Small Entity Status Claimed</b>	<input checked="" type="checkbox"/>
<b>Application Type</b>	Nonprovisional		
<b>Subject Matter</b>	Utility		
<b>Total Number of Drawing Sheets (if any)</b>	5	<b>Suggested Figure for Publication (if any)</b>	

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<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	67467-009 PUS2
		Application Number	
Title of Invention	HAND HELD LINK MAKING DEVICE AND KIT		

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Customer Number			

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Prior Application Status	Pending	<input type="button" value="Remove"/>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61846270	2013-07-15
Prior Application Status	Pending	<input type="button" value="Remove"/>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	13626057	2012-09-25
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the <b>Add</b> button.			<input type="button" value="Add"/>

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<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	67467-009 PUS2
		Application Number	
Title of Invention	HAND HELD LINK MAKING DEVICE AND KIT		
Application Number	Country <sup>i</sup>	Filing Date (YYYY-MM-DD)	Access Code <sup>j</sup> (if applicable) <input type="button" value="Remove"/>
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## Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

<input checked="" type="checkbox"/> 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.
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<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	67467-009 PUS2
		Application Number	
Title of Invention	HAND HELD LINK MAKING DEVICE AND KIT		

<b>Applicant 1</b>			<input type="button" value="Remove"/>
<p>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.</p>			
<input type="button" value="Clear"/>			
<input checked="" type="radio"/> Assignee	<input type="radio"/> Legal Representative under 35 U.S.C. 117	<input type="radio"/> Joint Inventor	
<input type="radio"/> Person to whom the inventor is obligated to assign.		<input type="radio"/> 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 : <input type="text"/>			
If the Applicant is an Organization check here. <input checked="" type="checkbox"/>			
Organization Name	<input type="text"/>		
<b>Mailing Address Information:</b>			
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Address 2	<input type="text"/>		
City	<input type="text"/>	State/Province	<input type="text"/>
Country <sup>i</sup>	<input type="text"/>	Postal Code	<input type="text"/>
Phone Number	<input type="text"/>	Fax Number	<input type="text"/>
Email Address	<input type="text"/>		
Additional Applicant Data may be generated within this form by selecting the Add button.			<input type="button" value="Add"/>

**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.
<b>Assignee 1</b>
Complete this section only if non-applicant assignee information is desired to be included on the patent application publication in accordance with 37 CFR 1.215(b). Do not include in this section 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), as the patent application publication will include the name of the applicant(s).
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<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	67467-009 PUS2
		Application Number	
Title of Invention	HAND HELD LINK MAKING DEVICE AND KIT		

Prefix	Given Name	Middle Name	Family Name	Suffix

**Mailing Address Information:**

Address 1			
Address 2			
City		State/Province	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

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

**Signature:**

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

<b>Signature</b>	/John M. Siragusa/		Date (YYYY-MM-DD)	2013-09-05	
First Name	John M.	Last Name	Siragusa	Registration Number	44130

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

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