

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
21 August 2008 (21.08.2008)

PCT

(10) International Publication Number  
**WO 2008/100694 A1**

(51) International Patent Classification:  
A01D 59/04 (2006.01)

(21) International Application Number:  
PCT/US2008/052147

(22) International Filing Date: 28 January 2008 (28.01.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/889,974 15 February 2007 (15.02.2007) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:  
— with international search report

(54) Title: KNOT TYING DEVICE AND METHOD

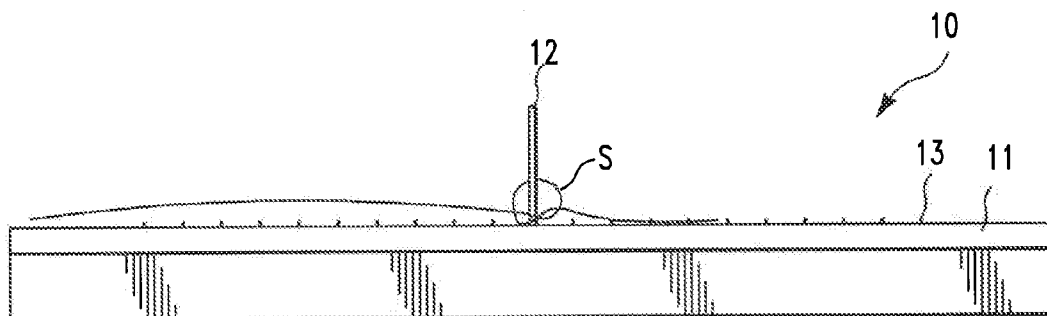


FIG. 1

(57) Abstract: A device for precisely spacing knots in a string that includes: a generally flat, rectangular board; a centered post projecting outwardly of and generally perpendicular to the board and for enabling tying the free end of the string about the post and enabling forming knots in the string upon tightening of same; and, a plurality of selectable measurement points on the board, aligned longitudinally, transversely of the board and extending outwardly from the post in equi-distantly spaced relation and for enabling positioning a predetermined point along the string at one of the selectable measurement points, the spacing between the string predetermined point and a knot formed at the post being determined by the spacing between the post and the selected measurement point. In use, a pre-determined point along the string is placed on the board at one of the selectable measurement points. The free end of the string is tied about the post. The free end of the string is pulled tightly to form a knot at the post. The spacing between the string predetermined point and the knot formed at the post is determined by the spacing between the post and the selected measurement point. The method is used in forming jewelry by interspersing beads between knots whose positions have been pre-selected, using the device and technique previously set forth.

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## KNOT TYING DEVICE AND METHOD

### CROSS-REFERENCE TO RELATED APPLICATION

**[0001]** The present application is related to Provisional Application Serial No.60/889,974 filed 15 February 2007. This prior application is incorporated herein by this reference and the benefit of its filing date is claimed herein as well.

### BACKGROUND OF THE INVENTION

#### **Field of the Invention**

**[0002]** This invention relates to making jewelry such as necklaces, bracelets and the like and, in particular, to a knot tying device and method useful in the making of jewelry

#### **Description of the Prior Art**

**[0003]** In making jewelry such as necklaces, bracelets and anklets, frequently beads are spaced at predetermined intervals along a string, with the string being knotted on both sides of the bead to provide and maintain bead spacing. In most instances the spacing is at equal intervals.

**[0004]** However, in the past, the spacing of the beads along the string has been completely manual, without the use of any tools and somewhat inaccurate at best.

**[0005]** For example, first a knot is placed in the string, then a bead is positioned next to the knot and glued, possibly, followed by another knot. A distance to the next knot is chosen, by laying down a string on a guide, pinching the string with one hand where the next knot is wanted, trade the pinch with the other hand, pinch again, loop the string at the pinch point and tighten to form the second knot.

**[0006]** The process is tedious, not completely accurate, hand intensive, and represents a major portion of the labor time in the making of the jewelry.

**[0007]** It is towards the solution of this problem that the present invention is directed.

### SUMMARY

**[0008]** An object of the invention is to reduce the time and difficulty in making jewelry involving the placement and spacing of beads along a string.

**[0009]** Another object is the making of jewelry that involves the placement and spacing of beads along a string where only one device is required. These and other objects, features and advantages are accomplished in accordance with the teachings of the present invention, one illustrative embodiment of which comprises a device for precisely spacing knots in a string that includes: a generally flat, rectangular board; a centered post projecting outwardly of and generally perpendicular to the board and for enabling tying the free end of the string about the post and enabling forming knots in the string upon tightening of same; and, a plurality of selectable measurement points on the board, aligned longitudinally, transversely of the board and extending outwardly from the post in equi-distantly spaced relation and for enabling positioning a predetermined point along the string at one of the selectable measurement points, the spacing between the string predetermined point and a knot formed at the post being determined by the spacing between the post and the selected measurement point.

**[0010]** In use, a pre-determined point along the string is placed on the board at one of the selectable measurement points. The free end of the string is tied about the post. The free end of the string is pulled tightly to form a knot at the post. The spacing between the string predetermined point and the knot formed at the post is determined by the spacing between the post and the selected measurement point. The method is used in forming jewelry by interspersing beads between knots whose positions have been pre-selected, using the device and technique previously set forth.

### BRIEF DESCRIPTION OF THE DRAWING

**[0011]** Other objects, features and advantages of the present invention will be apparent from the following detailed description and accompany drawing, wherein:

**[0012]** Fig. 1 is a side view of the device of the present invention;

**[0013]** Fig 1A is a top view of the device of Fig. 1;and,

**[0014]** Figs. 2-4 are successive top views of the device showing beaded jewelry being formed according to the method of the present invention.

### DETAILED DESCRIPTION

**[0015]** Referring now to the drawing, the device 10 is seen as including a generally flat board 11, with a post 12 projecting outwardly and generally perpendicular to the board. The post enables forming knots in a string at the post upon tightening of same. The string may be of wax line, silk cord, yarn, thin leather and the like.

**[0016]** A plurality of selectable measurement points 13 is placed on the board, extending outwardly from the post 12.

**[0017]** The board 11 is made of some type of hardwood, generally rectangular in shape, say, six inches across by four inches wide, although other materials may be used. A felt matting (not shown) may be placed on the bottom to protect the surface on which the user is working.

**[0018]** The post 12 is centrally positioned and perpendicular to the board 11, made of metal and extends approximately one inch in length above the board. Some form of protective cover can be placed over the post when the device 10 is not in use.

**[0019]** The measurements 13 typically are aligned on either side of the post (one side for a right handed user, the other for a left handed user) and spaced at fixed intervals, usually equal, outwardly of the post, say every one quarter inch. One would want to have measurements at the intervals where knots for the beads would be positioned.

**[0020]** The device 10 is intended for making jewelry such as necklaces and bracelets where one would want to be spacing beads B at predetermined intervals along the jewelry's string S.

**[0021]** Starting at a pre-selected point along the string, the string may be tied around the post (Fig. 1A) and tightened by pulling on the free end to form a knot K. The knot is

lifted off the post. A first bead is then placed on the string next to this first knot. The string is then tied around the post, tightened by pulling on the free end of the string to form a second knot, but on the opposite side of the bead. The knot is lifted off the post.

**[0022]** The first bead is then placed on the board at one of the selectable measurement points. The measurement point selected is determined by the user and is dependent on the spacing desired between adjacent beads. So, for example, a knot adjacent the first bead may be placed at the one inch measurement because the user wants one inch spacing between the beads (Fig. 1B).

**[0023]** With this first bead in place at the selected measurement point, being held there by the user, the free end of the string is then tied around the post (Fig. 2) and tightened to form a third knot. This third knot is then lifted off the post, followed by a repetition in the process where a second bead is placed on the string, a fourth knot is formed on the string on the opposite side of the second bead, the knot for the second bead is placed at a selected measurement point (Fig. 3) and the free end of the string is again tied around the post (Fig. 4) and tightened to form a fifth knot and so forth.

**[0024]** This process continues until the user has placed all the beads on the string at the desired positions to form the necklace or bracelet.

**[0025]** Previous methods of placing the beads on the string were time consuming, thus raising the cost of manufacture of same and it was difficult to precisely locate the knots.

**[0026]** It should be obvious that changes, additions and omissions may be made in the details and arrangement of parts without departing from the spirit and scope of the invention as hereinafter claimed.

**What is claimed is:**

1. A device for precisely spacing knots in a string, comprising:

a generally flat board;

a post projecting outwardly of and generally perpendicular to the board and for enabling tying the free end of the string about the post and enabling forming knots in the string upon tightening of same; and,

a plurality of selectable measurement points on the board, extending outwardly from the post in spaced relation and for enabling positioning a predetermined point along the string at one of the selectable measurement points, the spacing between the string predetermined point and a knot formed at the post being determined by the spacing between the post and the selected measurement point.

2. The device of claim 1 wherein the post is centered on the board.

3. The device of claim 2 wherein the board is rectangular.

4. The device of claim 1 wherein the selectable measurement points are aligned longitudinally of the post transversely of the board.

5. The device of claim 1 wherein the selectable measurement points are equidistantly spaced.

6. The method of precisely spacing knots in a string comprising the steps of:

providing a generally flat board having a post projecting outwardly of and generally perpendicular to the board and a plurality of selectable measurement points on the board, extending outwardly from the post in spaced relation;

placing a pre-determined point along the string at one of the selectable measurement points;

tying a free end of the about the post; and,

pulling the free end of the string tightly to form a knot at the post, the spacing between the string predetermined point and the knot formed at the post being determined by the spacing between the post and the selected measurement point.

7. The method of forming a piece of jewelry that includes beads along a string that includes the steps of:

providing a generally flat board having a post projecting outwardly of and generally perpendicular to the board and a plurality of selectable measurement points on the board, extending outwardly from the post in spaced relation;

tying a free end of the string around the post and tightening to form a first knot;

lifting the first knot off the post and placing a first bead on the string next to the first knot;

tying the free end of the string next to the first bead, about the post and tightening to form a second knot next to but on the opposite side of the bead from the first knot;

placing the first bead on the board at one of the selectable measurement points;

tying the free end of the string about the post and tightening to form a third knot;

lifting the third knot off the post and placing a second bead on the string next to the third knot; and,

tying the free end of the string next to the first bead, about the post and tightening to form a fourth knot next to but on the opposite side of the second bead from the third knot.

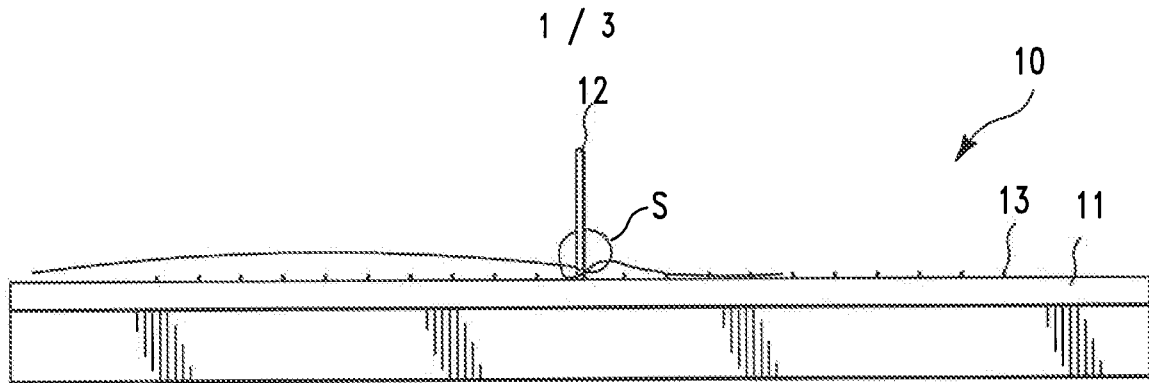


FIG. 1

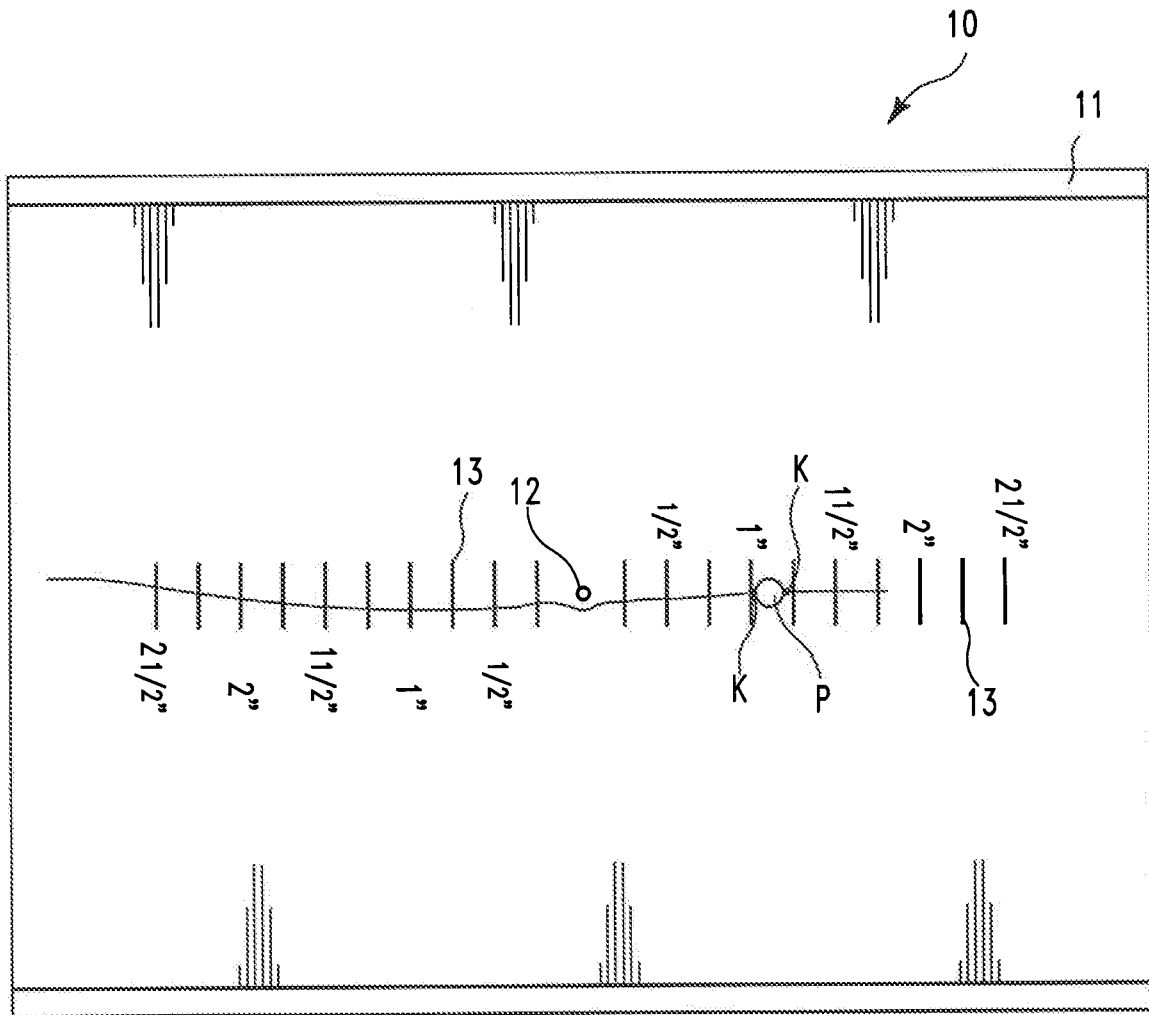
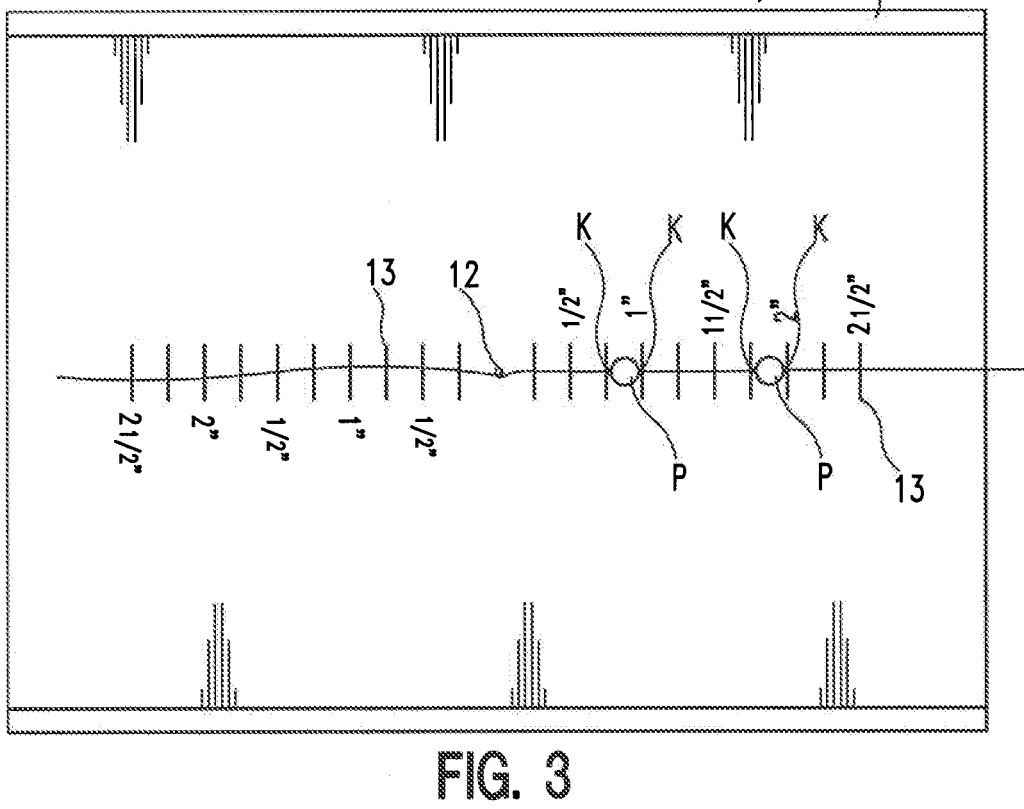
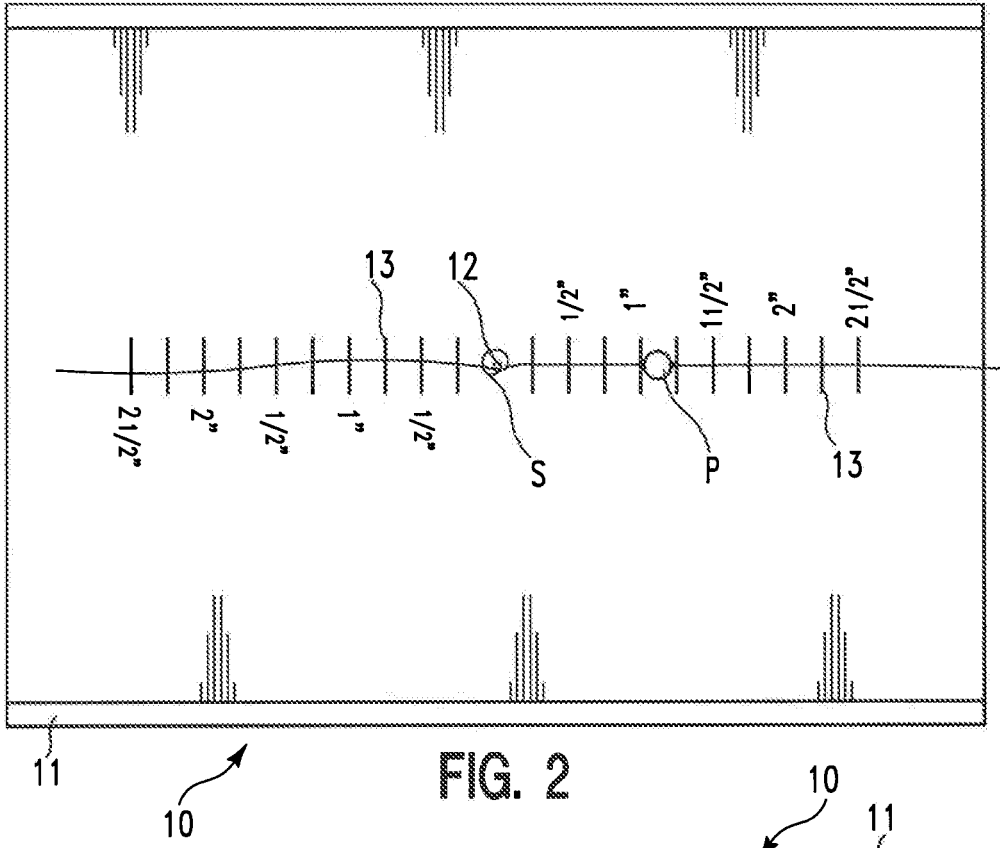


FIG. 1A



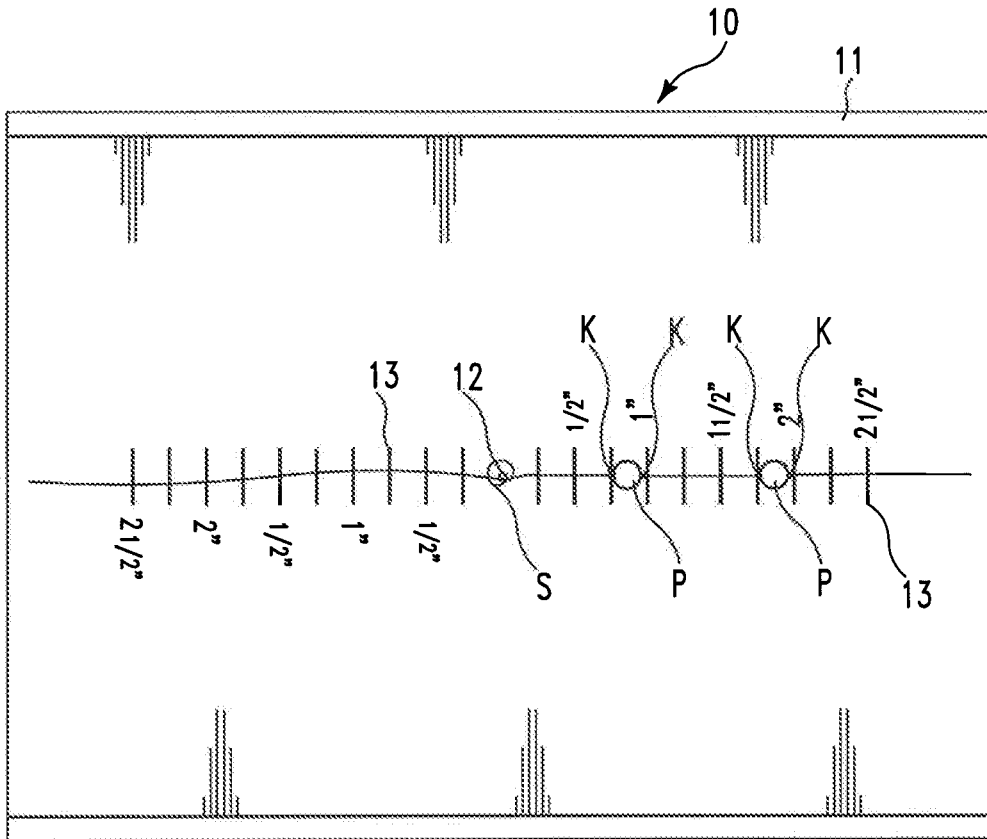


FIG. 4

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 08/52147

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC(8) - A01D 59/04 (2008.04)  
 USPC - 289/2  
 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 A01D 59/04 (2008.04)  
 USPC 289/2

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
 USPC 289/1.5, 2, 17, 18.1; Backward/forward citation searches, Text Search

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 WEST (PGPB, USPT, USOCR EPAB, JPAB); Terms: (jewelry necklace bracelet) with bead\$3 and knot\$4 and board; Google (bead jewelry knot device)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,790,575 A (Tate) 13 Dec 1988 (13.12.1988) figs. 1-9 and col 4, ln 30 ? col 5, ln 5	1-7
Y	US 4,045,061 A (Fierro) 30 Aug 1977 (30.08.1977) figs. 1-6 and col 2, ln 10-55	1-7
A	US 4,525,003 A (Tate) 25 Jun 1985 (25.06.1985) figs. 1-11	1-7

Further documents are listed in the continuation of Box C.

\* 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 another 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 06 May 2008 (06.05.2008)	Date of mailing of the international search report <b>23 MAY 2008</b>
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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Lee W. Young  PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774
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