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(54) **HAND BEADING LOOM AND METHOD OF USE**

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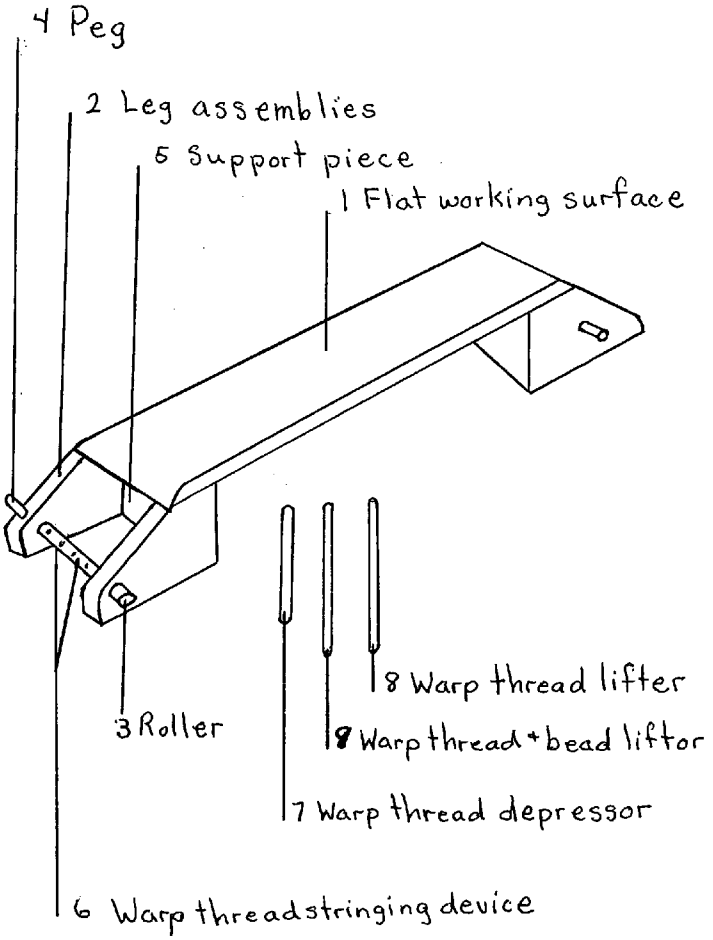
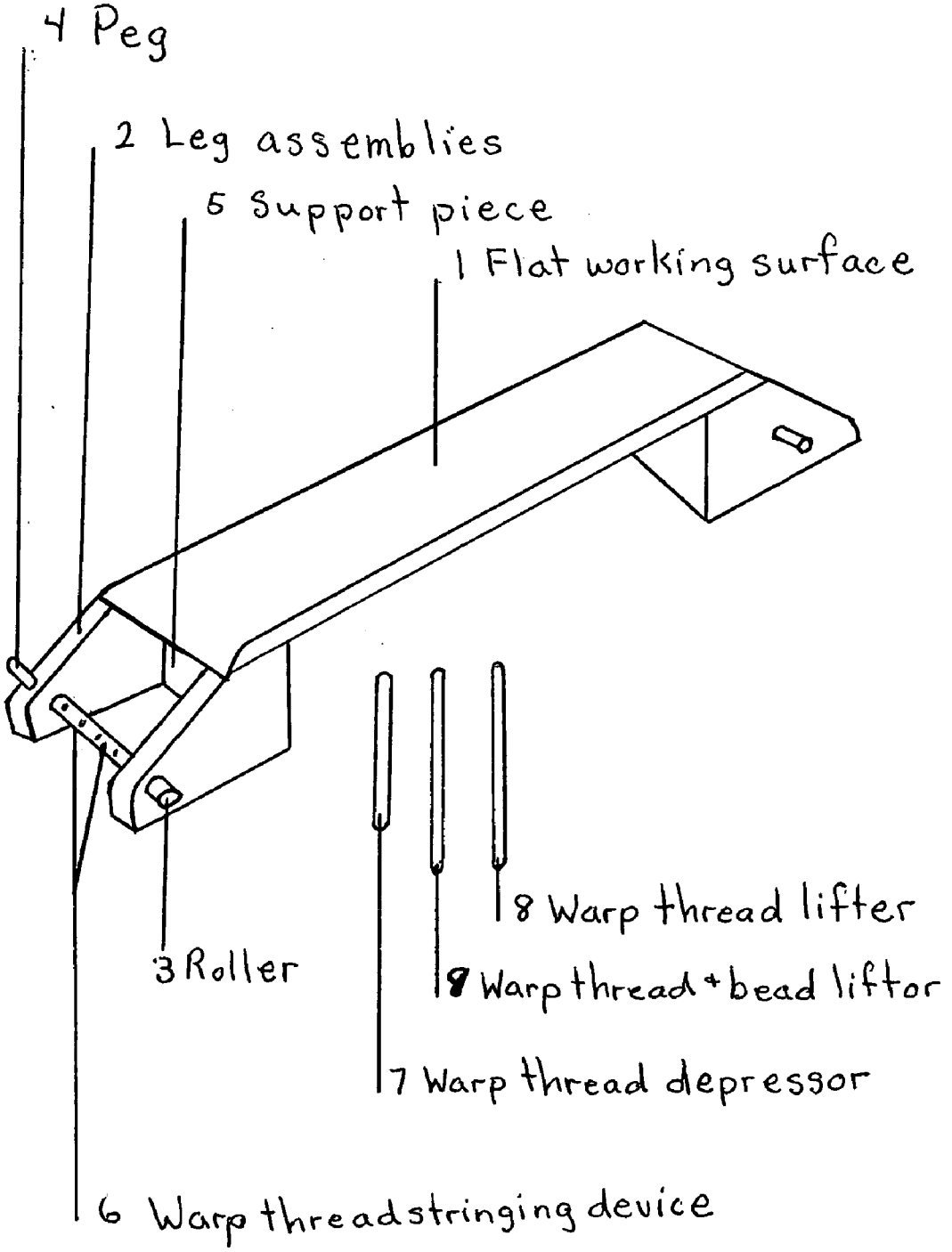
(57) **ABSTRACT**

A new design of beading loom which has a solid flat beading surface. This flat surface beading loom provides a stable support for the warp threads and beads. Unlike conventional beading looms the warp threads are not attached to an open frame and suspended in air. The beads are supported between the warp threads and the warp threads and therefore the lower weft thread are held down by a warp thread depressor while the beading needle and upper weft thread are passed back through the beads. The number of beads that can be passed through with one pass is only limited by the length of the beading needle. Preferably a 7 inch lacing needle which will pass threaded several times through a size 11 Delica bead. This loom is easily used by children and is helpful in alleviating stress on the muscles, tendons and joints of the upper body.




4 Peg
2 Leg assemblies
5 Support piece
1 Flat working surface
8 Warp thread lifter
3 Roller
8 Warp thread + bead liftor
7 Warp thread depressor
6 Warp threadstringing device

HAND BEADING LOOM AND METHOD OF USE

FIELD OF INVENTION

[0001] The invention described relates to beading looms and devices, more particularly to a new beading loom design and it's method for producing beaded articles, including but not limited to beaded strips, jewelry and beaded pictures. The invention is believed to be novel in both design and method of use. The invention has been proven to be useful. The invention as been sold to the public since August 2004 under a Patent Pending status, application No. 60/567,505, dated May 4, 2004. Sales have increased steadily and testimonials have been forth coming.

DESCRIPTION OF PRIOR ART

[0002] The use of beading looms is known as a historical art form used around the world. While these looms fulfill their objectives and requirements there is not any known beading loom or method of use presently in existence as described in this invention. Beading looms are typically a four sided frame. The warp threads are attached to the frame on opposite ends sometimes with rollers being used to take up and release threads. The warp threads are sometimes passed over springs attached to the flame separating and suspending the warp threads. Beads strung on a weft thread are placed and held under and between the warp threads with the user's finger while passing the beading needle and weft thread back through the beads and over the warp threads. The number of beads that can be passed through at one time is limited to the length or width of whatever is holding the beads up between the warp threads, whether this be a finger or some other device. While this method produces the desired effect it requires a considerable amount of dexterity. Beads can be easily dropped from position and/or warp threads pierced by the needle and weft thread. This method disadvantages many people, especially children and adults with disabilities such as arthritis in their arms and hands, from producing works in this art form.

[0003] It must be noted that although a patent search, made at the time of application of a provisional patent filed on May 4, 2004 and relating to this nonprovisional patent, no other loom of this type was found. However, upon preforming a patent search for this nonprovisional patent, a U.S. Pat. No. 6,719,013 was found. Although this patented looming device has some of the same ideas for solving certain problematic areas of looming, it appears from the description and the drawings that is only allows for the weaving of the amount of beads that will fit on the specially designed needle also included in the invention. The user's project width would be confined to the width of the length of the needle provided. It is unclear to this beading inventor as to how the grooves holding the beads in place are adjusted to different size beads. The baseplate described and drawn does not appear to support the whole beaded project thus allowing the unsupported area to pull down on the warp threads and possibly causing them to stretch considerably depending on the type of thread used as a warp thread. The most common beading thread used in bead looming is Nymo and it will stretch.

[0004] It is important that the tension of the warp threads kept taunt. More over, this loom cannot be easily built to the individual specification of the user or with materials that can be easily obtained by the user. It is believed that even though this loom, needle and storage bin patent fulfills it's objectives and requirements it is yet very different from the loom that is describe in this patent application before you.

BRIEF SUMMARY OF THE INVENTION

[0005] This loom and method of use minimizes and/or negates the disadvantages of conventional looms and method of use while decreasing the time spent to produce a beaded project. This loom was originally created with children in mind. To allow children to create loomed beaded art taking into consideration the of amount of dexterity and limited attention span of children. This loom was first used and tested by two nine old girls. It was also created with the intention of limiting the amount of stress put on the muscles, tendons and joints of the back, arms, hands and wrists of the user. This loom was designed to be uncomplicated to both make and use.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] Reference #1 Flat working surface, use to support the warp threads and beads during the beading process.

[0007] 2 Leg assemblies used to support the flat working surface and to support the roller system.

[0008] 3 Roller use to secure and hold the warp threads and to adjust of tension of the warp threads.

[0009] 4 Peg used to secure the roller in place and to adjust the tension of the warp threads.

[0010] 5 Support piece used to support the flat surface and to attach the legs to the flat surface.

[0011] 6 Warp thread stringing device use to attach the warp threads securely to the roller.

[0012] 7 Warp thread depressor used to hold the warp threads down to the flat working surface.

[0013] 8 Warp thread lifter used to lift the warp threads while passing the needle and weft thread with strung beads under the warp threads.

[0014] 9 Warp thread and bead lifter

DETAILED DESCRIPTION OF THE INVENTION

[0015] This loom can be constructed from wood, metal, plastic or any other suitable material. This loom can be constructed any size or dimensions desired. The loom is comprised of a body with a flat working surface with smooth curved ends attached to legs. Attached in the leg supports are roller devices and peg holes. Support pieces are attached to the legs and the body and behind the rollers. Attached to the rollers are warp thread stringing devices. At one end of the rollers where the rollers sit inside the support legs are peg holes, spaced at intervals around the circumference of the rollers. A second component of the loom and essential to the method of use is and elongated unattached part which will be referred to as the warp thread lifter. The preferred dimensions of the warp thread lifter are approximately ½ inch in width and ⅛ inch thick. The length is determined by the width of the flat working surface of the loom. The edges of the warp thread lifter where it makes contact with the warp threads are smooth and rounded. A third component of

the loom and essential to the method of use is another elongated unattached part which will be referred to as the warp thread depressor. The preferred dimensions of the warp thread depressor are approximately 1 inch in width, ⅛ to ¼ inch thick, and 5-6 inches long. The edges of the warp thread depressor where is makes contact with the warp threads are smooth and rounded. A fourth component and not essential but helpful to the method of use is another elongated unattached part which will be referred to as the weft thread and bead lifter. The edges of weft thread and bead lifter are smooth and rounded. The body and components of the beading loom can be constructed from any rigid durable material. It is preferred that it be made from lightweight wood or plastic type materials. The body of the loom, other than the moving parts, could be formed in one piece using plastic or other moldable material.

[0016] This section will refer to the making and method of use of the present invention. This section will refer to the drawings as an added reference point only. In making the loom, a flat surface **(1)** is attached to two leg assemblies **(2)** one attached to each end of the flat surface. The legs extend out from the flat surface at approximately a 45 degree angle. The legs are cut in a triangular shape. Holes are drilled in the side of the legs to allow a roller **(3)** to be inserted and held in position between the two legs of each leg assembly. This hole must be placed so that when the roller is in place it is free to turn and has at least a **1** inch clearance from the flat working surface. A smaller hole is placed in one of the legs of each leg assembly, one on each end of the loom, at the top edge or the hypotenuse of the triangle, to allow for the insertion of a small peg **(4)**. A support piece is attached to two legs, one with a peg hole and one without, at the rise of the triangle. The support piece **(5)** is cut to fit the width of the flat working surface and the rise of the legs. The roller is then cut to a length that is the width of the flat working surface plus approximately ½ inch. Small holes, the number depends on the diameter of the roller, are drilled at intervals around the circumference of the roller where they can be aligned with the peg hole in the leg. The roller is then placed in the holes in both legs. Warp thread stringing devices **(6)** are attached to the roller. These devices must have a narrow body with a larger protruding top. A simple screw works well. The leg assemblies are then attached to the flat working surface. The working surface should have smooth, curved edges on each end where the warp threads come in contact with the surface.

[0017] Two additional parts are needed to accomplish the method of use. They are the warp thread depressor **(7)** and the warp thread lifter **(8)**. They can be made from any material that is strong and durable. The edges of both must be smooth and not sharp so as to not damage the warp threads when they come in contact. A third additional part, though not essential to the method can be used in beading process that is a warp thread and bead lifter **(9)**. It can be made from any material that is strong and durable. It's edges are smooth and round so as not damage the warp threads. This additional part allows for a partial row of beads to be lifted up to reinsert the beading needle and continue across a wide row of beads. The dimensions of all the parts of the loom are determined by the desires of the user or manufacturer.

[0018] The loom may be used in any position the user desires, horizontally or vertically. It can be placed across the lap or on a table or leaning against any surface. Warp threads are attached to the warp thread stringing devices and strung from the roller on one end across the beading surface and attached to the stringing devices on the roller on the opposite end of the loom. If the beaded art piece to be made is longer than the flat working surface, extra warp thread length can be added to the first roller by removing the peg and turning the roller, thus wrapping the threads around the roller and replacing the peg to hold the roller from turning further. Then continue stringing the loom as stated. By adjusting the rollers and pegs the tension of the warp threads can be easily adjusted throughout the beading process. If the beading project is longer than the flat working surface of the loom the pegs can be removed from both legs and the rollers allow the beaded area to be taken up by one roller and additional thread being released from the opposite roller.

[0019] The warp threads are now lying on the flat working surface. This surface has smooth, curved ends which allows the warp threads to be advanced and positioned without damaging the threads. The warp thread lifter is placed under the warp threads. It is rotated onto it's edge to lift the warp threads allowing the beading needle and lower weft thread with strung beads to be placed under the warp threads and the beads to be easily positioned between the warp threads. The warp thread lifter is returned to it's original flat position and moved slightly away from the row of beads. This allows the warp threads to return to the working surface. The flat working surface holds the warp threads and beads securely in place, unlike old looms on which the warp threads are suspended in air between the frame of the loom and the beads are being pulled down by gravity and away from the spaces between the warp threads. Also unlike the old looms the beads that the needle is passing through are held by the flat surface across the whole width of the beading loom rather than by a human finger. The warp thread depressor is then positioned on it's edge close to the row of beads and used to hold the warp threads tightly down to the working surface and in turn the warp threads hold the lower weft thread down to the bottom inside of the bead hole while the beading needle and upper weft thread is passed back through the top inside of the bead hole thus securing the beads to the woven threads. Using this method, beads cannot be inadvertently dropped from position thus allowing the upper weft thread to pass through the beads and the lower weft thread is much less likely to be pierced by the needle and the upper weft thread. When a project is wider than the length of the needle it is easier to use the warp thread and bead lifter for inserting the needle into the beads.

[0020] The needle can be passed through as many beads as possible, be brought out of the bead row and easily be inserted back into the next section of beads by placing the lifter under the row of beads lifting them and exposing the hole of the next section of beads. The distance between the warp threads is adjusted by the size of the beads being used in the project. A spring can be used to space the warp threads or by using a simple row of beads the same size as the beads being used in the project.

[0021] This loom provides a completely solid working surface and still allows for any loom beading technique found and attempted by the inventor. This includes but is not limited to making beaded articles with negative space, increasing and decreasing of beads, etc. Large pictures as well as small items are much quicker to produce and the

tension of the warp threads is much easier to maintain. The flat and solid working surface negates the use of human fingers trying to keep beads in the proper spaces. The flat surface allows for the beading project to be set aside at any time without losing the positioning of the beads between the warp threads. The arms, hands and wrists of the user do not have to twist under the warp threads in order to hold the beads. Small fingers do not have to hold a small amount of beads while gravity pulls on the remaining unsecured beads on the weft thread; they are held by the working surface.

Claimed is:

1. A beading device or loom with a flat, solid, durable beading surface which completely supports the warp threads and threaded beads across the whole width of the beaded project during the beading process thus eliminating the use of human fingers to hold the beads, a few at a time, between the warp threads while passing the needle and upper weft thread back through the beads and over the top of the warp threads and the lower weft thread inside the beads.

2. A method for using the beading loom named in claim 1 that eliminates the use of human fingers to hold the beads between the warp threads while passing the needle and upper weft thread back through the beads and over the top of the warp threads and lower weft thread inside the bead and for the arms, hands and wrists to be relieved from the twisted position involved in holding these beads in place.

3. A method of use which uses the loom named in claim 1, the unattached parts named in claim 2, and the method in claim **5** which increases the number of beads being secured with one pass of the needle and upper weft thus decreasing the time it takes to secure a row of beads.

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