METHOD AND MEANS OF STRINGING BEADS

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ABSTRACT OF THE DISCLOSURE

A method and means of restringing a row of beads supported on a thread by replacing the thread with a selected stringing element, such as a wire. The original thread supporting the beads is held in taut condition to maintain the apertured portions thereof in longitudinal alignment and provide a through passageway, the thread being positioned on one side of the passageway, thereby leaving the rest of the passageway unobstructed and thus providing a clear path for the insertion of the wire. The means for employing the method comprises anchors for gripping the ends of the thread and holding it in tension, and means for holding the thread in engagement with longitudinally aligned internal wall portions of the bead's apertures to provide the said clear path.

BACKGROUND OF THE INVENTION

The field of the invention

This invention relates to the stringing of beads, and is particularly, though not exclusively, directed to a method and means for restringing a row of beads supported on a limp thread by the replacement of the thread with a selected stringing element, preferably a semistiff, bendable, and deformable wire whereby the restrung array of beads can be shaped into a self-supporting structure of a selected configuration adapted for ornamental or other use.

The known art

The stringing of beads is an old art, and has been accomplished either manually or by the use of special machines, both methods generally employing a thread-carrying needle or similar tool directed through the bead apertures. A problem common to both the manual and machine methods has been the alignment of a row of beads such that their apertures are in longitudinal registry. The known apparatus for accomplishing this objective are inherently complex, and generally too expensive for small-scale operations. The manual methods are slow and tedious, and require considerable manipulative dexterity. And when it is desired to perform the restringing of beads by the replacement of the thin thread with a heavier gauge wire, for the purpose above described, there is the added difficulty of keeping the wire from becoming entangled with the thread if the wire-threading step is performed while the thread is still in place.

Objectives of the invention

The objective of this invention is to perform the aforementioned bead threading operations without the above-described difficulties. More specifically, among the features and advantage of my invention are the following: the employment of a sequence of steps for quickly bringing a row of beads into alignment, with their apertured portions in substantial registry, and yieldably maintaining the beads in such position, thereby forming a passageway for receiving therethrough the wire; effecting the said operative positioning of the beads by the use of the thread originally supplied with the beads; keeping said thread in an unobstructing position within said passageway, whereby the operative insertion of said wire will be accomplished without interference; enabling the performance of the said steps without the use of any special manipulative skills, and providing relatively simple and inexpensive means for enabling the method of this invention to be carried out.

Other objects, features and advantages will appear from the drawings and the description hereinafter given.

SUMMARY OF THE INVENTION

The preferred method of this invention comprises the steps of supplying a semistiff, bendable and deformable wire and a string of beads having a thread extending therethrough, maintaining the thread in taut condition while holding it in engagement with longitudinally aligned internal wall sections of the respective apertured portions of the beads. The beads thus present a continuous longitudinal passageway with the thread maintained on one side thereof, leaving the rest of the passageway unobstructed for performing the step of passing the said wire through said passageway, whereby said thread is operatively removed.

One preferred device for enabling the method of this invention to be practiced comprises a support member having a wall with an upper horizontal planar surface for supporting the string of beads thereon, the opposite ends of said thread being anchored to the longitudinally opposite ends of said wall, whereby the thread is maintained in taut condition and caused to bear down against the lower internal wall sections of the longitudinally aligned apertured portions of the row of beads. The position and tensioned condition of the thread serves both to yieldably hold the beads against said planar surface, and to align the beads' apertured portions so as to form a passageway for said wire, the thread being disposed at the bottom of the passageway leaving a clear path thereabove for the wire. In another preferred embodiment, suspension supporting means for the opposite ends of the said thread are arranged to hold and maintain the thread horizontally in taut condition, the beads thus gravitationally hanging from the thread. The arrangement is such that the thread is in engagement with the upper internal wall sections of the beads' longitudinally aligned apertures; and since the thread is disposed at the top of the passageway formed by said apertured portions, a clear path is provided therebelow for the threading of the wire, all in accordance with the method of this invention.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a string of beads before the restringing thereof by the method and means of this invention.

FIG. 2 is a perspective view of a wire to be employed in the restringing operation.

FIG. 3 is a perspective view of a restringing device according to one form of this invention, showing the string of beads of FIG. 1 operatively in place preparatory for the restringing operation, the wire of FIG. 2 being shown in position prior to the operative threading therefrom.

FIG. 4 is an enlarged fragmentary vertical longitudinal section of FIG. 2 taken along the medial portion of the support, the wire of FIG. 2 being shown threaded through the beads.

FIG. 5 is a fragmentary sectional plan view of FIG. 4 taken along line 5—5, showing the position of the row of beads and their displacement at the region of a kink in the wire.

FIG. 6 is a representation of the beads restrung with the wire of FIG. 2 by the method of this invention, the restrung beads being shown formed into a structure of selected configuration.
FIG. 7 is a side elevational view of a string of beads held in operative position by another embodiment of supporting means, the wire of FIG. 2 being shown operatively extending through the beads.

DESCRIPTION OF METHOD AND PREFERRED EMBODIMENTS

The string of beads 10 illustrated in FIG. 1 comprises the thin thread 11 of limp material threaded through the row of apertured beads 12. Each individual bead element is apertured substantially at the central portion thereof, the respective apertured portions of the entire array of beads 12 being so positioned as to be in substantial longitudinal alignment, but not necessarily in perfect registry nor of identical proportions. The selected stringing element 13 shown in FIG. 2—such as a wire element—is proportioned for threading through the said row of beads 12 in replacement of said thread 11 according to the method of this invention, said wire element being preferably, although not necessarily, of semistiff, bendable and deformable material.

A device for use with the method of my invention is illustrated in FIGS. 3 to 5, said device comprising a support member generally referred to by the reference number 14. In this particular embodiment the support member comprises a channel-shaped body portion 15 with legs 16 and 17 and connecting wall 18, the legs being adapted for resting upon a suitable horizontal support, the wall 18 being preferably in a horizontal plane when the member 14 is in operative position. It is also preferred that the wall 18 be of generally flat configuration presenting an upper planar surface 19 of smooth texture for operatively engaging and supporting the row of beads 12, in the manner hereinbelow described. At opposite ends of said wall 18 are the gripping anchors 20 and 21 for releasably engaging the thread 11, as will more clearly hereinafter appear, said anchors being illustrated as extensions of said wall 18 and having therein V-shaped notches 22 and 23, respectively, leading to the respective inwardly extending slitted portions 24 and 25. The upper surfaces 26 and 27 of the respective anchors 20 and 21 are preferably at the same level as the said upper surface 19 of wall 18 and, in this particular embodiment of my invention, should not be above the said surface 19.

In the practice of this invention by the use of the said support member 14, the said string of beads 10 comprising the thread member 11 and the beads 12 is placed upon the said surface 19 with the beads in longitudinal array, the thread being drawn taut, the opposite end portions 28 and 29 being directed downwardly with the respective terminal portions 30 and 31 pulled downwardly and inwardly through the respective notches 22 and 23 and the respective corresponding slits 24 and 25, and then wrapped around a portion of the respective anchors 20 and 21 in the manner shown in the drawings, thereby maintaining the thread 11 in taut condition.

As clearly shown in FIG. 4, with the thread 11 operatively anchored to the support member 14 in the manner aforesaid, the said opposite end portions 28 and 29 of the string overlapping the operative end portions 32 and 33 of the wall 18 are inclined outwardly and downwardly from the respective opposite end bead elements 34 and 35. Since said thread 11 is in taut condition, as aforesaid, there is a downward force component urging the entire section of thread 11 between said end portions 28 and 29 downwardly towards said wall 18, whereby the bottoms of all the beads 12 are operatively brought into engagement with the planar surface 19. More specifically, the string of beads 10 is moved to and at the terminal point of the string to bear downwardly upon the inner bottom wall sections 36 of the bead's apertured portions 37 with which the string is brought into engagement. The bead elements are thus maintained in yieldable engagement with said planar surface 19, whereby the apertured portions 37 of the beads are in substantial longitudinal alignment.

Even if the beads are somewhat irregular in shape and not absolutely identical in size, there is nevertheless formed a continuous unobstructed through passageway 38 above the thread 11. And it is particularly noteworthy that since the thread 11 is positioned at the inner bottom regions of the respective apertured portions 37 of the row of beads 12—being urged downwardly as aforesaid—there is a relatively large space in each of said apertured portions above said string, resulting in a continuous passageway throughout said portions.

The string of beads 10, disposed in the manner aforesaid, is now ready to receive the wire member 13. All that need be done is to insert said wire member through one of the end beads—the drawing showing the wire as having entered end bead 35—and then keep pushing it forwardly—in the direction of arrow A through said passageway 38 until it emerges from the opposite end bead element 34, as indicated in FIG. 4. It is obvious that the step of stringing the wire 13 through the passageway in the beads is an exceedingly simple and rapid operation, requiring no special manipulative skills. Inasmuch as the bead 11 is positioned at the bottom of said passageway 38, there is a clear and unobstructed path for the wire member 13, without any danger of the wire becoming entangled with the thread.

The thread 11 is then removed from the anchors 20 and 21, and wire 13 from the line of beads 12, leaving the wire member 13 operatively strung through the beads. This completes the entire restringing operation in accordance with the stated objectives of this invention.

The restring array of beads consisting of the semi-stiff deformable wire member 13 and the row of beads 12 can now be shaped into any desired configuration, such as that shown in FIG. 6, for use as a self-supporting structural element adapted for employment as an ornamental component of beaded wire flower designs, or for other ornamental or functional purposes.

It is further noteworthy that the above-described device permits the lateral displacement of the operatively supported string of beads while the wire member 13 is being moved through the said continuous passageway 38. FIG. 5 shows such a displacement at region B of the wall surface 19 due to a kink or bend in the semi-stiff wire 13. The flat and smooth surface 19, as above-described, permits a lateral sliding movement of the beads while the thread 11 operatively maintains the beads in engagement with surface 19.

FIG. 7 illustrates another embodiment of a device for use with the method of my invention. Here the string of beads 10, instead of being supported on an underlying surface to form a through passageway above the thread 11, is suspended in taut condition so as to form a through passageway below the thread 11. As illustrated, the taut thread 11 is supported at its opposite ends by the two anchor hooks 39 and 40, so that said thread is in engagement with the respective upper inner wall sections 41 of the apertured portions 42 of the beads 12. The beads, suspended gravitationally from the horizontally disposed taut thread 11, are thus maintained in longitudinal alignment, forming below said thread the continuous passageway 43 through which the wire member 13 is passed in the direction of arrow C. As in the device first above described, the operative removal of the thread 11 will leave the beads 12 strung on the wire member 13 to form a restring beaded structure like that shown in FIG. 6.

In the above description, the invention has been disclosed merely by way of example and in preferred manner; but obviously many variations and modifications may be made within the spirit of the invention, therefore, that the invention is not limited to any form or manner of practicing same, except insofar as such limitations are specified in the appended claims.

What is claimed is:

1. In a method of threading a string of apertured beads supported by a thread, the steps of providing a selected
stringing element of semistiff bendable and deformable wire, holding said beads and their respective apertured portions in horizontal longitudinal alignment to form a passageway through the line of beads, providing a straight planar surface substantially horizontal and parallel to the longitudinal extent of said thread, holding said thread in tension in engagement with longitudinally aligned internal wall sections of the apertured portions of the line of beads and pressing the thread downwardly against the wall sections and applying said beads against said planar surface, whereby the thread is positioned on one side of said passageway and the rest of the passageway is unobstructed by the thread while the resulting taut and straight thread will urge the beads into pressing engagement against the planar surface and also help maintain said beads in straight longitudinal alignment, inserting said selected stringing element through said unobstructed portion of said passageway and removing the thread from the beads whereby the beads as threaded with said element are adapted for being shaped into a self-supporting element of desired configuration.

2. In combination, a plurality of apertured beads with a supporting thread extending therethrough and having opposite end portions extending beyond the beads, a semistiff bendable and deformable stringing element, and a device for threading the beads with said stringing element, said device comprising means for operatively supporting said beads in substantially horizontal longitudinal alignment during the threading thereof, said means comprising a wall having an upper straight planar surface, supporting means for said wall proportioned to said surface in a substantially horizontal plane, said surface being proportional and positioned for underlying engagement with said row of beads, two thread-gripping anchors at the longitudinally opposite ends of said wall, said end portions of said thread being operatively held by said anchors, said thread being in tension and positioned with a taut and straight portion thereof substantially horizontal and in engagement with longitudinally aligned internal bottom wall sections of the apertured portions of said row of beads, whereby an unobstructed passageway is formed through said beads along a path longitudinally adjacent and above said thread for accommodating said stringing element when operatively inserted within said passageway, said anchors being disposed at a level below that of the said portion of the thread in engagement with said internal wall sections, and at a level no higher than said planar surface, said end portions of said thread being inclined from the respective opposite ends of said row of beads downwardly towards said respective anchors and said planar surface, thereby to press the thread downwardly against said wall sections of the beads and hold the beads in yieldable pressing engagement with said planar surface while helping to maintain the beads in straight longitudinal alignment, the thread being on one side of said passageway while the rest of the passageway is unobstructed by the thread, said planar surface being of sufficiently greater transverse width than the transverse width of said beads to permit them to be operatively slidably displaced laterally during the operative threading thereof with said stringing element, said thread being removably secured to said anchors to permit the removal of the thread from the row of beads after insertion of the stringing element into said passageway whereby the threads are threaded on said stringing element and the resulting assembly is adapted for being shaped into a self-supporting element of desired configuration.

3. A bead threading device according to claim 2, said anchors having slit portions at the respective opposite ends of said planar surface for frictionally engaging said respective thread end portions.

4. A bead threading device according to claim 2, said anchors comprising extensions of the longitudinally opposite end portion of said planar surface, the upper surface of said extensions being substantially at the level of said upper planar surface.

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