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(54) **ELONGATED FLEXIBLE FASTENING KEY**

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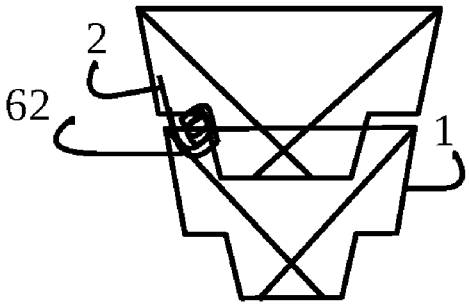
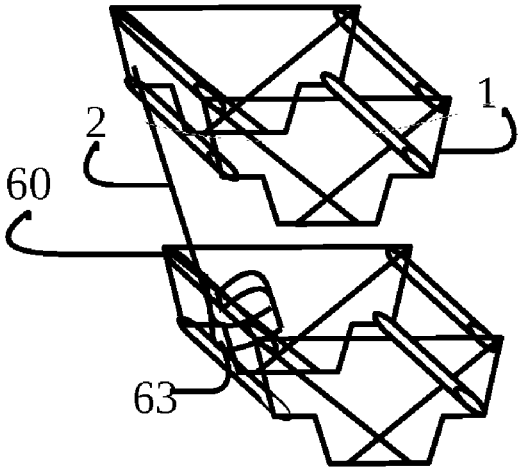
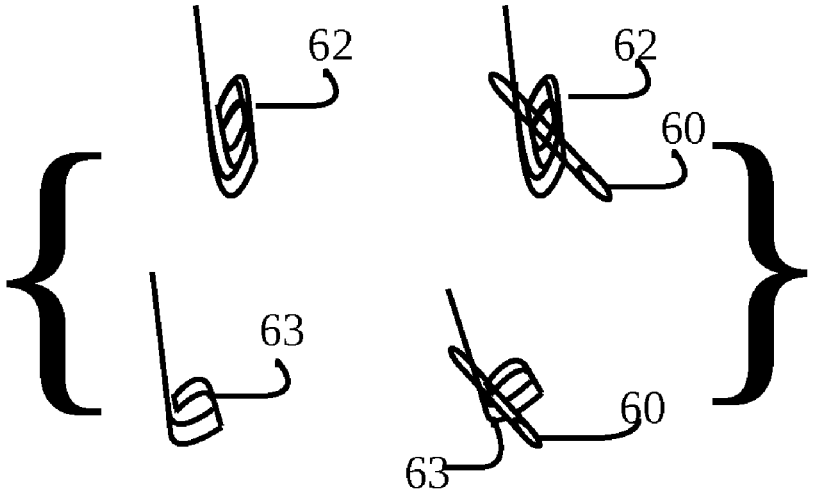
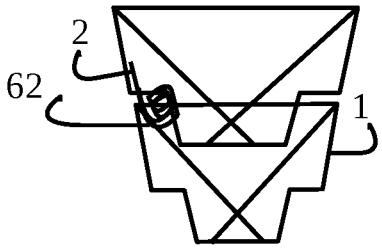
(57) **ABSTRACT**

A mechanical utility fastening device created as an alternative rigidity mechanism to the expandable sustainable member beam recited in the parent application U.S. Ser. No. 15/703,993; which connects two items when flexibility and movement between the two connected items is necessary. The flexible fastening key allows for connection of segments of the member beam from the parent application wherein flexibility is needed between the segments and the rigidity key for the member beam to perform the utility of curvature.









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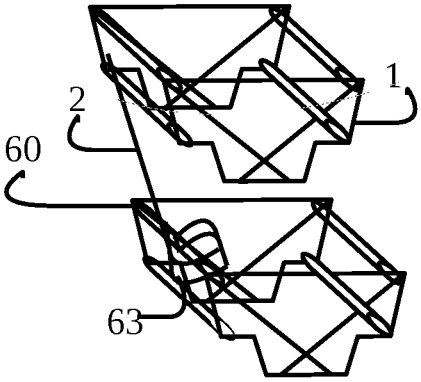

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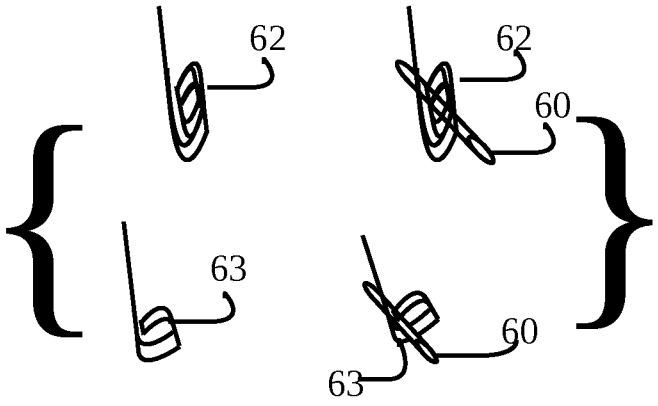

ELONGATED FLEXIBLE FASTENING KEY

BACKGROUND OF INVENTION

[0001] This invention was created in the interest of the construction industry for connecting segments of the expandable sustainable member beam as recited in the parent application U.S. Ser. No. 15/703,993. There are many times when it is necessary to fasten segments telescopic in nature together where the items being fastened need to be loosely connected and capable of flexing and movement. Often times it is necessary to fasten items together temporarily while fastening it to another item. Additionally, the elongated length allows for the connection to bend while the segments move in relation to one another while maintaining their connection. The flexible fastening key makes it possible to fasten items together securely and still have flexibility of movement between the segments or objects.

[0002] A prior art approach is referenced in U.S. Pat. No. 10,258,183 B2, which depicts a free standing telescopic curtain retrieval arm movable in relation to one another. This invention is for curtain retrieval and has a substantially different use and shape than the instant. However, it is one of the most similar connection devices found, in that it is flexible and the connecting parts are movable in relation to one another. Yet, another prior art exists in U.S. Pat. No. 10,259,627, depicts a fastening system with which is also flexible, but for substantially light duty as it appears to be a type of zip tie. Although, the connection itself is flexible, it is not designed to allow movement between the two connected items while maintaining their connection. In this depiction the use appears similar at first glance. However, upon further review, the utility is intended for mostly light duty strapping of pipes. Yet another connector device is referenced in U.S. patent application Ser. No. 15/240,918, this prior art is a clamp and rod design and is substantially different in shape and teach uses different than that of the instant application. Additionally, of the similar search results found, none possessed the flexible of connection created with this invention, that of a connection system capable of flexing the items connected by the fastening device. Additionally, the connection allows smaller segments, from the member beam of the parent application, to pass through larger segments uninhibited while preventing reverse motion of subsequent segments.

BRIEF SUMMARY OF INVENTION

[0003] A mechanical utility fastening key for the purpose of fastening two segments or member beam together that require flexibility in relation to one another. The elongated double hook allows for the two segments to be connected while still having freedom of movement between them. Furthermore, the double hook allows for the beams to be disconnected from each other while maintaining the integrity of the beams and the fastening key making it largely sustainable.

BRIEF DESCRIPTION OF DRAWINGS

[0004] FIG. **1**A shows a front view of two expanded segments **1**, and a rigidity key **2**.

[0005] FIG. **1**B shows a transparent 3 dimensional (3D) enlarged front view of two expanded segments **1**, a rigidity key **2**, and the catching rods **60**, a flexible hook in the elongated position as a single curl **63**. And in brackets, a flexible hook with a double curl **62**, catching rod **60**, a flexible hook with a single curl **63**.

DETAILED DESCRIPTION OF INVENTION

[0006] FIG. **1**A shows two segments **1** having a rigidity key **2** having a double curl **62**.

[0007] FIG. **1**B shows two expanded segments **1** having a rigidity key **2**, wherein the hook is transformed by the pressure of the passing segment into the elongated position having a single curl **63**, wherein allowing space to receive the catching rod **60**. And in brackets, from left to right; shows a hook having a double curl **62**, to the right showing a catching rod **60** entrapped in the double curl **62** hook after it has recoiled. And at bottom left, an elongated hook as single curl **63**. On the right showing a catching rod **60** entrapped in a single curl **63** prior to recoiling.

1. A flexible fastening key and rod for which to attach segments of the expandable sustainable member beam recited in the parent application U.S. Ser. No. 15/703,993, comprising:

catching rods attaching to the first of two items to be connected;

a flexible material comprising:

two hooks attaching to the second item to be connected; the rods slide down the flexible hooks which become elongated by the pressure of the passing rods until the rods are entrapped inside the single hook; when the downward motion is complete and the pressure is released, the flexible hook recoils to the double curl position around the rod, entrapping it inside the double curl hook.

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