

[54] LINK STRAP

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[30] Foreign Application Priority Data

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[52] U.S. Cl. ....59/80, 63/4

[51] Int. Cl. ....F16g 15/12

[58] Field of Search .....59/78, 80, 82, 90; 63/4; 224/4 D, 4 H

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Primary Examiner—Charles W. Lanham

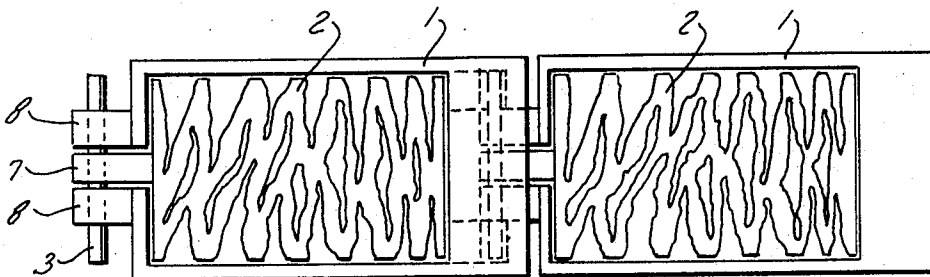
Assistant Examiner—Gene P. Crosby

Attorney—Michael S. Striker

[57] ABSTRACT

Each link comprises a frame and an insert detachably mounted in said frame. Each frame comprises first and second hinge portions at opposite ends thereof. The second hinge portions are formed with pockets. Each insert is formed adjacent to the second hinge portion of the frame of the same link with end noses received by the pockets of the frame of the same link. Each insert is formed adjacent to the first hinge portion of the frame of the same link with extensions. Hinge pins are provided, each of which extends through the extensions of the insert of one of said links and in said first hinge portion of the frame of the same link and in said second hinge portion of the frame of an adjacent link.

12 Claims, 21 Drawing Figures



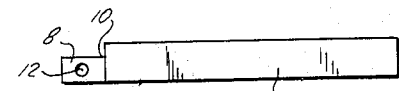
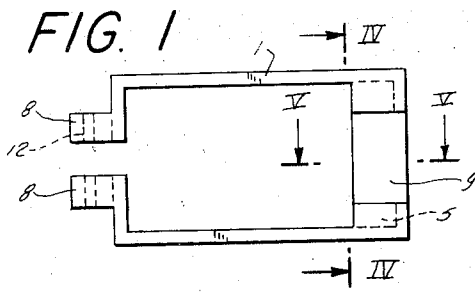


FIG. 2

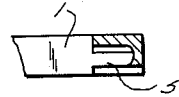
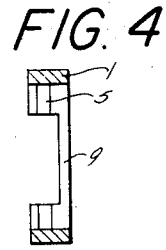
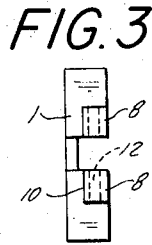


FIG. 5

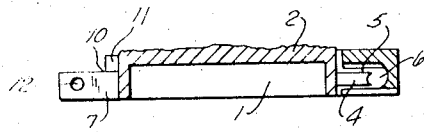


FIG. 6

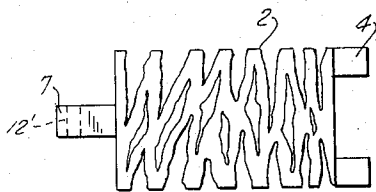


FIG. 7

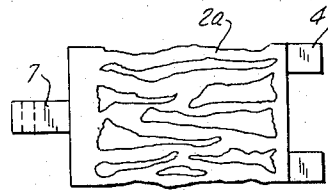


FIG. 9



FIG. 8

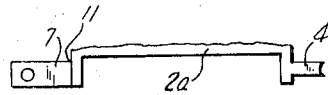


FIG. 10

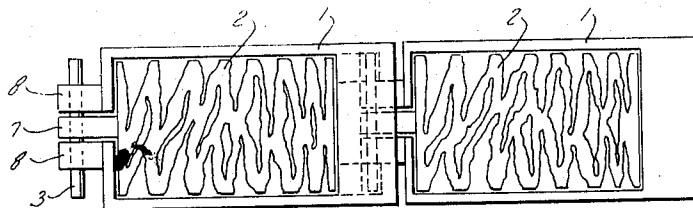


FIG. 11

FIG. 12

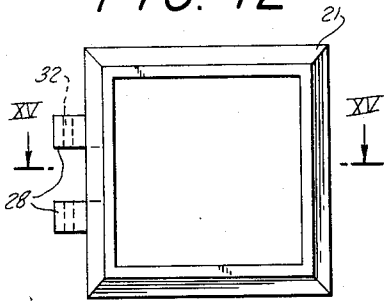


FIG. 14

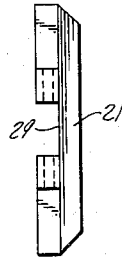


FIG. 16

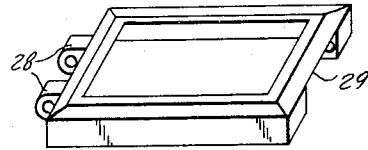


FIG. 13



FIG. 17

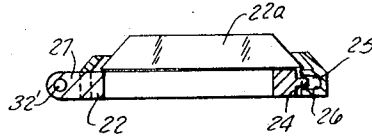


FIG. 18

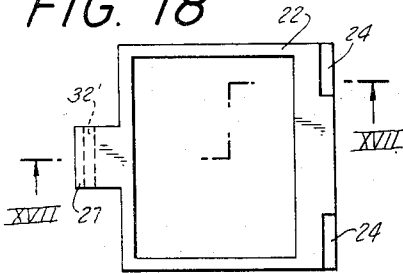


FIG. 20

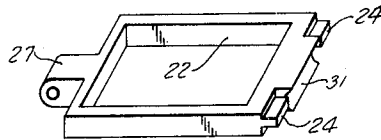


FIG. 19

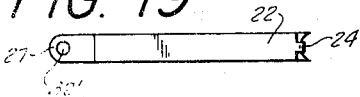


FIG. 15

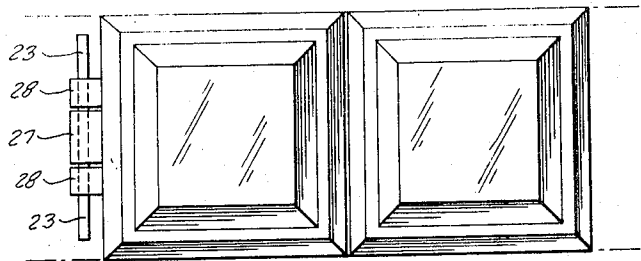
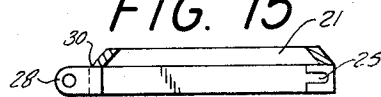


FIG. 21

## LINK STRAP

This invention relates to a link strap, particularly a bracelet, which consists of links that can be movably interconnected.

Link straps, particularly bracelets, are known which consist of articulated links and in which the links consist of link frames having detachable inserts, which may be ornamental. The individual links of such straps may be made by machine and can subsequently be provided with ornament. The link straps may then be used as ornamental bracelets or attached to watches.

The present invention enables the provision of special variations of ornament in a simple manner and improves the economy with which the strap can be manufactured.

To accomplish these objects, the link strap or bracelet is characterized according to the invention in that the inserts are provided at one end with end noses, are received by pockets at the hinge portions of the link frames and are provided at the other end with extensions, by which they are held at the hinge portions by pins for connection to the adjacent link. This design enables an economical manufacture of different ornamental elements, e.g., in a casting process, and these elements may then be selectively combined in individually styled bracelets so that the same give the impression of individually made items although they have actually been made by duplicating methods. The strap can be assembled in a simple manner, without need for soldering work, and can also be reduced or increased in length in a simple manner. For this purpose the inserts received by the pockets at the hinge portions of the link frames expose transverse bores for receiving the hinge pins of the adjacent links and the extensions of the inserts are held by the hinge pins at the hinge portions between extensions of the link frames. The link frames are formed at one end on the underside of their crosspiece with recesses, which receive the extensions which extend from the other end of the adjacent frame and these extensions are provided with a transverse through bore for connection to the pin. The ornamental inserts provided at one end with edge noses and at the other end with extensions are preferably made by injection molding.

The link frame may be provided with a retaining lip for receiving ornamental stones or the like and the inserts provided with the end noses and extensions may form bottom members, which are preferably apertured like a frame.

Embodiments of link straps, particularly bracelets, according to the invention are shown by way of example in the drawing, in which

FIGS. 1 to 3 are an underside view and side elevations showing a first link frame.

FIGS. 4 and 5 are sectional views taken on lines IV—IV and V—V, respectively, of FIG. 1.

FIG. 6 is a central sectional view taken through a composite bracelet link according to the invention.

FIGS. 7 and 8 are a top plan view and a side elevation, respectively, showing an associated ornamental insert.

FIGS. 9 and 10 are a top plan view and a side elevation showing another ornamental insert.

FIG. 11 is a top plan view showing a portion of a strap according to the invention.

FIGS. 12 to 14 are top plan views and side elevations showing another frame member.

FIG. 15 is a sectional view taken on line XV—XV of FIG. 12.

FIG. 16 is a perspective view showing the link frame of FIG. 12.

FIG. 17 is a sectional view taken on line XVII—XVII of FIG. 18 but through a complete strap link.

FIGS. 18 and 19 are a top plan view and a side elevation showing a bottom insert for the strap link.

FIG. 20 is a perspective view showing a framelike bottom member as shown in FIG. 18 and

FIG. 21 is a top plan view showing two strap links hooked together in accordance with the showing of FIG. 11.

As is apparent from FIGS. 1 to 11 the first embodiment of the link strap according to the invention, e.g., in the form of a link bracelet, consists of link frames 1 provided with detachable inserts 2 and 2a, which are connected by pins 3. The ornamental inserts 2 are held at one end by end noses 4 received in pockets 5 of the link frames 1 and are provided at the other end with extensions 7, which at the hinge portions of the link frames 1 extend between the extensions 8 thereof and are connected by the hinge pins 3 extending through aligned bores 12 and 12' in the extensions 8 and 7. The end noses 4 leave end short of the closed rear ends of the pockets 5 and define therewith transverse spaces 6 in which end portions of the hinge pins 3 projecting laterally beyond the extension 8 are received and locked (see FIG. 6). To cover the connections, the link frames 1 are provided at one end in their crosspiece on the underside with recesses 9, which receive the extensions 8, which are provided at the adjacent frames 1 and offset at 10. The extensions 7 are correspondingly offset at 11. These pins are in register with and received by the respective spaces 6 to connect the links when the link strap is assembled.

In the second embodiment shown in FIGS. 12 to 21, the link strap, e.g., in the form of a link bracelet, consists also of link frames 21 provided with inserts 22, which in this case form bottom frames 22 and hold ornamental stones 22a in the link frames 21. The links are again connected by hinge pins 23. It is apparent that the link frames 21 are provided with a retaining lip (see FIG. 15) and the bottom inserts 22 just as in the first embodiment are provided at one end with end noses 24, which are received by pockets 25 of the link frames 21, so as to leave transverse spaces 26 exposed, in which opposite end portions of the hinge pin 23 of an adjacent link is received and locked (see FIG. 17). At the other end, the inserts 22 are provided with extensions 27, which at the hinge portions extend between the extensions 28 of the link frames 21 and are extending through aligned bores 32 and 32' in the extensions joined by the pins 23. In this case, all link frames are formed to receive ornamental stones 22a and are provided at their hinge portions at one end on the underside with edge recesses 29 to receive portions of the adjacent frame and at the other end with extensions 28 stepped at 30. The extensions 27 of the bottom inserts 22 are disposed on a suitable level. At the crosspiece of the frame, the inserts are formed with a curved recess 31 between their end noses to form a bearing for the extensions 27, 28 (see FIG. 20). The transverse bore 32 and 32' receives the hinge pin 23, which projects with opposite end portions into the spaces 26 to provide a hinged connection between adjacent links, as in the first embodiment.

What I claim is:

1. A link strap comprising a plurality of links, each of which comprises a frame member; an insert member detachably mounted in said frame member, each of said frame members comprising first and second hinge portions at opposite ends thereof, one of said members being formed adjacent to said second hinge portion with pockets and the other of said members being formed with end noses received in said pockets, each of said insert members having adjacent to said first link portion an extension; and a hinge pin for each link located in said second hinge portion of said frame member of said link and extending through said first hinge portion and said extension of an adjacent link.

2. A link strap as set forth in claim 1 wherein said pockets in each link are formed in said frame member and said end noses on said insert member of said link.

3. A link strap as set forth in claim 1, in which said first hinge portion of each frame member is formed with a transverse bore which receives said hinge pin and wherein said end noses in said pocket of one link end short of the hinge pin in said bore in the adjacent link.

4. A link strap as set forth in claim 1, in which said first hinge portion of each frame member comprises a pair of spaced extension, said extension on said insert member of one link being located between said extensions on the frame member of the same link, said extensions being formed with aligned bores and the hinge pin of the link extending through said bores and projecting with opposite end portions beyond said extensions of said frame member, said opposite end portions of the hinge pin in one link being located in said pockets of the members of the adjacent link and being confined therein by the end noses of the other member of the ad-

acent link.

5. A link strap as set forth in claim 1, in which at least part of said frame members are provided with a lip adapted to hold an ornament and in which said insert members provided with said end noses and extensions form bottom elements extending inwardly from said frame members.

6. A link strap as set forth in claim 1, in which each of said frame members comprises a crosspiece adjacent to its second hinge portion, each of said insert members comprises a bearing portion which extends between said end noses and bears on the crosspiece of the frame member of the same link and on the side adjacent to said crosspiece is formed with a curved recess receiving said extension of the insert member and part of said first hinge portion of the frame member of an adjacent link.

7. A link strap as set forth in claim 1, which is for a bracelet.

8. A link strap as set forth in claim 1, in which said insert member is ornamental.

9. A link strap as set forth in claim 8, in which said inserts provided with said end noses and extensions are injection moldings.

10. A link strap as set forth in claim 1, in which said frame members are formed at said first hinge portion with extensions and said hinge pins extend through said extensions of said frame members.

11. A link strap as set forth in claim 6, in which each of said frame members comprises adjacent to its second hinge portion a crosspiece formed on the underside with a recess receiving said extensions of said first hinge portion of the frame member of an adjacent link.

12. A link strap as set forth in claim 5, in which said insert members have a framelike configuration.

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