Nov. 18, 1941. C. H. KESTENMAN 2,263,338

JEWELRY CHAIN OR LINKAGE

Filed Nov. 8, 1939

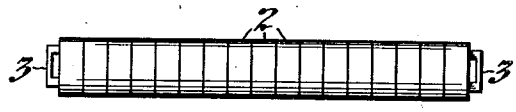


Fig. 1.

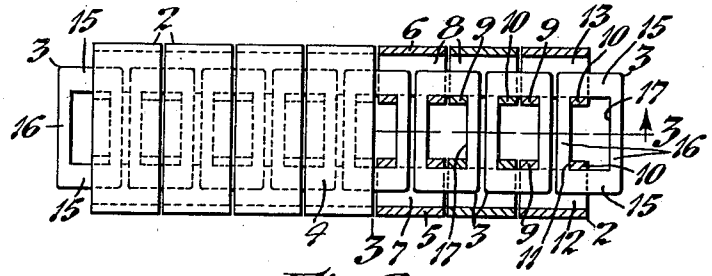


Fig. 2.

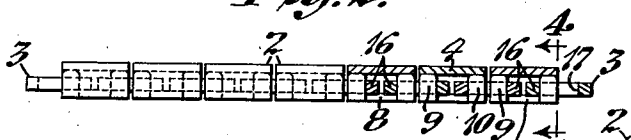


Fig. 3.



Fig. 4.

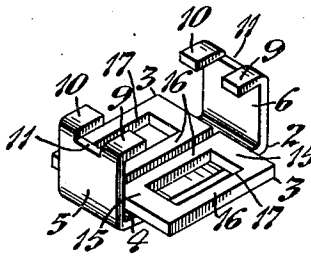


Fig. 5.

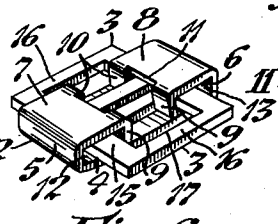


Fig. 6.

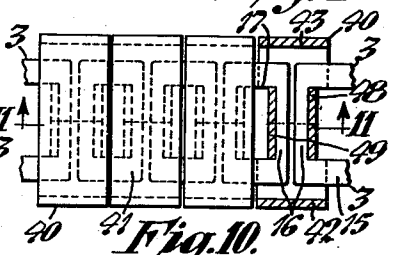


Fig. 10.



Fig. 11.

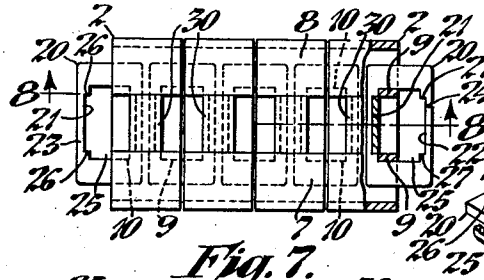


Fig. 7.

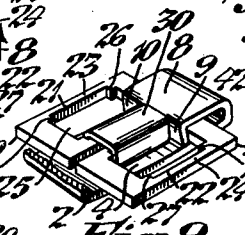


Fig. 9.

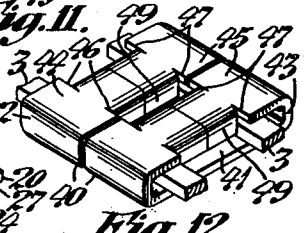


Fig. 12.

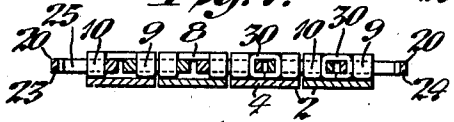


Fig. 8.

Inventor:
Charles H. Kestenman
By Fennemore Craig Von Ammon & Udall
Attorneys.

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UNITED STATES PATENT OFFICE

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JEWELRY CHAIN OR LINKAGE

Charles H. Kestenman, Providence, R. I., assignor to Kestenman Bros. Mfg. Co., Providence, R. I., a corporation of Rhode Island

Application November 8, 1939, Serial No. 303,390

1 Claim. (Cl. 59—80)

The present invention relates to jewelry chains, bands or linkages and more particularly to improvements in the structure of box-like links or sections for use in watch bracelets and for other purposes.

One of the objects of present invention is to provide a chain or linkage of the type indicated embodying hollow articulated sections of one piece construction.

Another object of the invention is to provide a chain or linkage having sections of the type indicated constructed from blanks folded to provide a face-plate, end walls and rear portions having spaced lugs projecting toward the rear of the face-plate adjacent the opposite ends of the sections.

Another object of the invention is to provide a chain or linkage having articulated sections of the type indicated arranged in closely adjacent side by side relationship with their spaced lugs at each end hooked into opposite looped connecting links extending into their open sides to join the sections.

Still another object of the invention is to provide a chain or linkage of the type indicated which is of simple and compact construction, light in weight to save stock and one which is of symmetrical shape and ornamental in appearance.

Further objects of the improvement are set forth in the following specification which describes, by way of example, three forms of jewelry chains or linkages incorporating the novel features of the present invention as illustrated by the accompanying drawing. In the drawing:

Fig. 1 is a plan view of a linkage embodying a series of the present improved chain-sections connected in closely adjacent side by side relationship;

Fig. 2 is an enlarged plan view of a portion of the chain shown in Fig. 1 with several of the chain-sections illustrated partly in section to show the manner in which they are joined by the looped connecting links;

Fig. 3 is a side view of the linkage shown part-sectional on line 3—3 of Fig. 2 to illustrate the pairs of upstanding spaced lugs on each chain-section hooked into the openings between the side bars of adjacent connecting links;

Fig. 4 is an end view partly in section taken on line 4—4 of Fig. 3 showing the looped end portions of the chain-section and the upstanding lugs at each end thereof hooked into the opening in one of the connecting links;

Fig. 5 is a perspective view of one of the chain-sections and a pair of adjacent connecting links shown in disassembled relationship and inverted position with the chain-section partly formed prior to being connected in a linkage;

Fig. 6 is a view similar to Fig. 5 showing the end portions of the chain-section folded toward its face-plate to hook the opposite pairs of lugs on the end portions into the connecting links;

Fig. 7 is a bottom plan view partly in section of a linkage of modified construction showing recesses in the bars of the connecting links with sleeves enclosing the bars of adjacent links;

Fig. 8 is a sectional side view taken on line 8—8 of Fig. 7 showing the sleeves embracing the opposite bars of pairs of connecting links and the lugs on the chain-sections hooked into the openings of said connecting links;

Fig. 9 is a perspective view of one of the chain-sections, partly broken away, and a pair of connecting links showing the sleeve closely fitting the recesses in the bars of the connecting links and the folded end portions of the section cooperating with the sleeve to provide a finished surface;

Fig. 10 is a plan view partly in section of a linkage of further modified construction having chain-sections with lugs folded from the sides instead of the ends of their rear portions and hooked into the adjacent connecting links;

Fig. 11 is a sectional view taken on line 11—11 of Fig. 10 showing the upstanding lugs on the chain-sections extending at right-angles to the plane of the end walls and hooked into the connecting links; and

Fig. 12 is a perspective view showing the bottom of two adjacent chain-sections with the ends of their folded portions disposed in abutting engagement to provide a closed loop at the rear or bottom of the chain-sections.

Figs. 1 to 6 of the drawing illustrate the parts of a bracelet chain or linkage comprising a series of articulated chain-sections 2 of the present improved construction arranged in closely adjacent side by side relationship and joined together by looped connecting links 3. Each chain-section 2 comprises a front or top face-plate 4 of any desired form or shape, end walls 5 and 6 and rearward or bottom portions 7 and 8 projecting inwardly toward each other from the end walls 5 and 6 in spaced relation to the face-plate, see Fig. 4. The rearward portions 7 and 8 are each provided with a pair of upstanding lugs 9 and 10 arranged in spaced relationship to form openings 11 therebetween. Thus the chain-sections 2 have open sides and when arranged in contigu-

ous side by side relationship provide continuous hollow channels or openings 12 and 13 at their ends with lateral openings 11 inwardly thereof.

The connecting links 3 may be of rectangular shape as illustrated in the present drawing or of any other appropriate contour with end bars 15 extending along the channels or openings 12 and 13 in adjacent chain-sections 2 and side bars 16 held in the lateral openings 11 in the sections. The upstanding lugs 9 on the opposite rearward portions 7 and 8 of one chain-section 2 and the corresponding upstanding lugs 10 on the rearward portions of the adjacent chain-section project into the opening 17 of each of the connected links 3 to join the adjacent chain-sections together in a linkage, see Figs. 2 and 3. The lugs 9 and 10 have a combined width slightly less than the width of the opening 17 in the connecting links 3 to permit slight relative movement of the sections 2 to adapt the band or bracelet to flex to the contour of the wrist or other part on which it is worn. The corresponding lugs 9 and 10 on the rearward portions 6 and 7 of the chain-sections 2 are spaced from each other a distance equal to the length of the opening 17 in the connecting links 3 and engage the end bars 15 to hold the sections against movement laterally of the linkage.

Preferably, each chain-section 2 is constructed from a strip of sheet-metal and blanked out to form the spaced lugs 9 and 10 at its opposite ends. The flat blank may be stamped to provide the face-plate 4 of any desired contour and if desired may be ornamented by embossing, engraving, etching or otherwise. Either simultaneously with the stamping operation, or by separate operations, the lugs 9 and 10 are folded at right-angles to the blank and the end portions 5 and 6 of the blank folded at right-angles to the face-plate 4 to provide a partly formed chain-section as illustrated in Fig. 5. A pair of looped connecting links 3 are then placed on the rear of the face-plate 4 and the end portions 5 and 6 again folded to the position illustrated in Fig. 6 to produce a finished chain-section, the folding of the end portions acting to hook the corresponding lugs 9 and 10 into the adjacent connecting links 3 to join the parts in a linkage. It will be understood that the operation of folding the end portions of the chain-sections 2 may be performed in suitable tools or dies and the connecting links 3 added continuously to produce an articulated bracelet chain or linkage of any desired length. By varying the width of the side bars 16 of the connecting links 3, the width of the lugs 9 and 10 or the spacing between the lugs, the relative movement between the sections 3 and thus the flexibility of the bracelet chain may be controlled. Preferably, connecting links 3 are provided at the end of the bracelet chain as illustrated in Fig. 3 to adapt it for connection with the bails of a wristwatch or suitable adapters not herein shown.

In the embodiment of the invention illustrated in Figs. 7 to 9 the chain-sections 2 are identical in construction with those illustrated in Figs. 1 to 5. The connecting links 20, however, are of slightly modified form having recesses 21 and 22 on the inside edges of their bars 23 and 24 adjacent the opening 25. The recesses 21 and 22 extend a distance slightly less than the length of the opening 25 to provide shoulders 26 and 27 in substantial alinement with the inner faces of the upstanding lugs 9 and 10 of the chain-sections 2. The chain-sections 2 are joined by the connecting links 20 in the same manner as explained above with respect to the preferred form of bracelet chain illustrated in Figs. 1 to 5.

In accordance with the modified construction illustrated in Figs. 7 to 9 the intermediate portions of the side bars 23 and 24 of adjacent connecting links 20 between the opposite lugs 9 and 10 of the chain-sections 2 are enclosed by rectangular sleeves 30 which, in effect, form continuations of the rearward or bottom portions 7 and 8 of the chain-sections. The sleeves 30 completely embrace the side bars 23 and 24 of the adjacent connecting links 20, see Fig. 8, and are of such length and thickness as to closely fit in the recesses 21 and 22. Thus, the ends of the sleeves 30 form joints with the inside edges of the lugs 9 and 10 on the chain-sections 2 and cooperate with the end portions of the sections to conceal the connecting links 20 to present a more finished appearance on the bottom of the linkage. It will be understood that the sleeves 30 are made of the same material as the sections 2 to provide the proper finish to the bottom or rearward faces of the chain. The presence of the recesses 21 and 22 reduces the amount of stock required to form the links, and also that required to form the sleeves, in addition to providing greater space for the manipulation of tools or the like to clamp the sleeves in position. It is also pointed out that the sleeves 30 may be considered as added links for joining the connecting links 20 to form a chain on which the ornamental chain-sections 2 are superimposed and connected thereto by the engagement of the lugs 9 and 10 with the adjacent side bars 23 and 24 of the connecting links. The sleeves 30 may be applied first to form a continuous chain and the chain-sections 2 thereafter mounted thereon, the sides of the sleeves being seated in the recesses 21 and 22 to permit the lugs 9 and 10 to be folded into position at the ends of the sleeves.

The modified form of chain or linkage illustrated in Figs. 10 and 12 has connecting links 3 identical in form with those illustrated in Figs. 1 to 5. The ornamental chain-sections 40, however, are of modified construction having a face-plate 41, end walls 42 and 43 and folded rearward or bottom portions 44 and 45 of such length as to cause their ends to abut and provide a continuous bottom wall. The bottom portions 44 and 45 are formed with traverse slits 46 and 47, intermediate their ends, as illustrated in Fig. 12, and the portions between the slits are folded at right-angles to the main portions to provide upstanding lugs 48 and 49 extending toward the face-plate 41 at right-angles to the plane of the end walls 42 and 43. The alined upstanding lugs 48 and 49 on each of the bottom portions 44 and 45 cooperate to provide continuous flanges which are adapted to engage the inside faces of the side bars 16 of the connecting links 3. Thus, in the modified form of construction illustrated in Figs. 10 to 12 the abutting rearward or bottom portions 44 and 45 of the chain-sections 40 cooperate to provide a finished surface on the under side of the linkage and the upstanding lugs 48 and 49 extend in planes at right-angles to the depending end walls 42 and 43 instead of parallel thereto as in the embodiments illustrated in Figs. 1 to 5.

It will be observed from the foregoing specification that the present invention provides sev-

eral novel forms of chain or linkage sections of one piece construction having upstanding lugs for joining them to adjacent connecting links. It will be observed further that the present invention provides an improved chain or linkage which is of simple and compact construction, light in weight, ornamental in appearance and requiring less of the expensive material from which such linkages are made than those now commonly used.

While several embodiments of the invention are herein described and illustrated it will be understood that other modifications may be made in the structure and arrangement of the parts of the linkage without departing from the spirit or scope of the invention. Therefore, without limiting myself in this respect, I claim:

A chain or linkage of the type set forth, including a plurality of rectangular sections disposed with their sides in close relation, plate-like links connecting adjacent sections, each section having an upper member, parallel end walls extended downwardly from the upper face of the member, and bottom portions extending inwardly toward each other, a pair of lugs spaced from each other and located at the inner end of each bottom portion and having inner ends which confront the under face of the upper member, the lugs of adjacent sections being aligned and disposed in substantial parallelism to the end walls of the adjacent sections and received in the interiors of the links, the lugs being disposed adjacent to the end bars of the links and the combined widths of the lugs being substantially equal to the width of the interiors of the links, and said pairs of lugs of adjacent sections being spaced from each other longitudinally of the sections a distance substantially equal to the length of the interiors of the links, the links having the inner faces of their side bars recessed, and sheet metal sleeves folded around the adjacent side bars of adjacent links and closely fitted in the recesses, the ends of the sleeves forming joints with the adjacent lugs.

CHARLES H. KESTENMAN.