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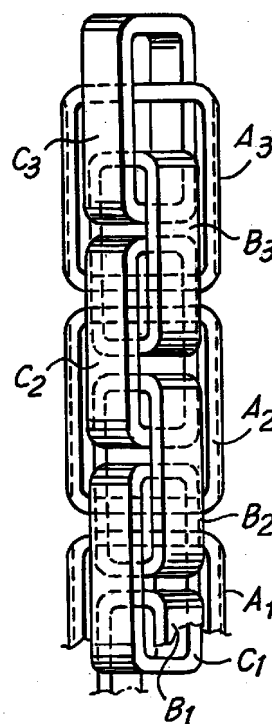
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(54) **Decorative chain with angularly offset links**

(57) The links are joined in a manner similar to that used in so-called Venetian chains, but each link: is rectangular, with the width of the thin strip smaller than the short side of the strip forming the link; is joined to two links lying one after the other on either side of the concatenation; and in the concatenation the links are angularly orientated - about the axis of the extended chain - at angles of approximately 60° relative to one another.

Fig. 2



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Description

[0001] Decorative chains known as "Venetian chains" or box chains are known which consist of a series of essentially rectangular links - i.e. with an approximately cubic shape in 3D - which are joined one to the next in a squared configuration so that the chain is made up of a series of links lying alternately in one or other of two longitudinal alignments; each of the links essentially consists of a relatively flat metal strip, each link in practice having a roughly cubic shape in 3D. In terms of esthetics and structure, the configuration of these chains is always of a rigidly particular type. There are machines which produce these chains automatically, the links being formed from flat ribbon bent to shape, with the ends of the lengths forming each link being soldered together using processes involving melting solder powders in a manner known per se.

[0002] The decorative chain in question is made of links produced from thin strips which are bent to form rings having a structure similar to that of Venetian chains but, in contrast to the latter, (in which the links are approximately square, with a roughly cubic shape in 3D): each link is rectangular, with the width of the thin strip smaller than the short side of the strip forming the link; each link is joined to at least two consecutive links on either side of the concatenation; and the adjacent links - in the concatenation - are angularly orientated about the axis of the extended chain at equal angles to each other.

[0003] In one possible advantageous solution, the adjacent links are angularly orientated - about the axis of the extended chain - at angles of approximately 60° relative to one another.

[0004] The width of the strip forming each link is sufficiently small - relative to the rectangular dimensions of the link itself - for the concatenated links to have a limited degree of angular play relative to each other, and for their outer long sides to remain approximately longitudinally aligned along six alignments during production. Eight alignments are also possible.

[0005] The longitudinal outer surfaces of the adjacent links can be decorated - with relief or recessed work, by diamond-cutting or some other surface treatment - in repeating patterns along the chain, in order to achieve additional decorative effects. This decoration can be produced on the starting material or - advantageously - can be produced once the chain has been formed.

[0006] The chain can be left with the rows of links in an aligned arrangement, or it can be twisted so that the rows of links are in a slightly helical arrangement.

[0007] A better understanding of the invention will be gained by following the description and the attached drawing, which shows a practical and non-limiting embodiment of said invention. In the drawing:

Fig. 1 shows an example of a length of chain pro-

duced according to the invention, with the dimensions of the links slightly altered for the sake of clarity of the drawing, and with one of the links shown in section at the bottom;

Fig. 2 shows a view on the plane II-II of Fig. 1;

Fig. 3 shows a perspective view of a set of three adjacent links, one of which is shown in section and finished off in chain tines;

Figs 4 and 5 show two cross sections on the planes IV-IV and V-V in Fig. 1, the dimensions being closer to those of a practical embodiment;

Figs 6, 7 and 8 show, in isolation, one of the links having dimensions similar to those of Figs 4 and 5, in a front view and in two partially sectioned side views on the planes VII-VII and VIII-VIII in Fig. 6; and

Figs 9 and 10 show an overall view of a length of twisted and non-twisted chain, respectively.

[0008] As illustrated in the attached drawing, a chain according to the example is formed from three rows of longitudinally aligned links, the links in the various rows being concatenated. The shape of each link is shown in particular in Figs 6, 7 and 8. These figures show how the links used to form the chain according to the example consist of a metal strip which is bent to form a rectangular link having two long sides 1 and two short sides 3, one of which - in the particular case illustrated - has a soldered joint 5 in an intermediate position. The links are made from a metal strip which can be smooth or decorated in a particular way. The metal strip used to form the links is similar to that used for the links in Venetian chains and is worked using machines similar to those used and known for making Venetian chains, but undergoes relative movements of 60° (in the case of three rows of links) rather than 90°.

[0009] In contrast to the links used in conventional Venetian chains, the links used to make a chain according to the example illustrated have dimensions x, y and z (see Figs 5 to 7), the proportions of which roughly correspond to those indicated below:

$$x : y : z = 4.1 : 1.2 : 3.2$$

The thickness S of the chain can be about 0.55 mm.

[0010] The links as defined above with reference to Figs 6, 7 and 8 and in relation to the example illustrated, are concatenated together in three longitudinal alignments, with the links of a first alignment denoted AN, the links of a second alignment denoted BN and the links of the third alignment denoted CN, and with N being consecutive numbers of the links in the same row.

[0011] The concatenation between the various links

is obtained by joining the link of one alignment to the adjacent links of both the other alignments. More specifically, examining Figs 1 and 2 in particular, it may be noted that: link A1 is joined to link C0, link C1, link B1 and link B2; link B2 is joined to link A1, link A2, link C1 and link C2; link A2 is joined to link C1, link C2, link B2 and link B3; link C2 is joined to link B2, link B3, link A2 and link A3; link A3 is joined to link C2, link C3, link B3 and link B4; link C3 is joined to link B3, link B4, link A4 and so on.

[0012] The arrangement of the three rows of links AN, BN and CN is such that the median plane of the links of each row is inclined by approximately 60° relative to each of the median planes of the other two rows. This is achieved as a result of the dimensions of the various links as specified above, with a limited degree of play between the adjacent links of the three concatenated alignments.

[0013] A chain such as the one which forms the subject of the invention and such as the one illustrated, can be produced using machines that are in all respects similar to those used to produce so-called Venetian chains. Advantageously, a single feed line is provided, with the chain being formed moving progressively through 60° angles, and with the support for the chain being able to follow the intermittent angular movements of the unit. A relative movement of a different type is not, however, excluded.

[0014] The links of a single row can all be decorated in the same way, while those of one row can be decorated differently to those of the other rows. This decoration - formed by means of diamond-cutting, polishing or other means - is produced using separate passes which can be carried out once the chain has been formed rather than on the starting material. The drawing shows a type of decoration consisting of longitudinal grooves formed on the material forming the links in the alignment AN.

[0015] Once formed, the chains undergo a conventional soldering process to solder the links together; more specifically, the soldering operation involves placing a fusible powder in the gap 5 between the ends of each length of strip forming a link, as indicated in Fig. 6.

[0016] The chain can also undergo other treatments, for example it can be twisted. Fig. 9 illustrates a chain which has been twisted; Fig. 10, on the other hand, illustrates a chain that has not been twisted.

[0017] It should be understood that the drawing shows only one example which has been given solely by way of practical demonstration of the invention and that the latter may vary in its forms and arrangements without thereby departing from the scope of the fundamental concept of said invention. For example, the possibility of making a chain according to the invention which has a number of alignments greater than six - i.e. with more than three rows of links - is not excluded.

Claims

1. A decorative chain made of links produced from thin strips which are bent to form rings having a structure similar to the approximately square structure of those links which are joined together one after the other to form so-called Venetian chains (or box chains), characterized in that:
 - each link is rectangular, with the width of the thin strip smaller than the short side of the strip forming the link;
 - each link is joined to at least two links lying on one side and at least two links lying on the other side of the concatenation; and
 - the adjacent links - in the concatenation - are angularly orientated about the axis of the extended chain at approximately equal angles to each other.
2. Decorative chain according to claim 1, characterized in that the adjacent links are angularly orientated - about the axis of the extended chain - at angles of approximately 60° relative to one another.
3. Decorative chain according to claim 1 or 2, characterized in that the width of the strip forming each link is such that the concatenated links have a limited degree of angular play relative to each other, and their outer long sides remain approximately longitudinally aligned along six alignments.
4. Decorative chain according to at least one of the preceding claims, characterized in that the longitudinal outer surfaces of the links are decorated - with relief and/or recessed work, by diamond-cutting, surface treatments or some other means - in repeating patterns along each alignment of the links of the chain.
5. Decorative chain according to at least one of the preceding claims, characterized in that the chain is twisted so that each alignment assumes a helical configuration of long pitch.
6. Decorative chain according to at least one of claims 1 to 4 and if appropriate 5, characterized in that the outer surfaces of the links in a single alignment are decorated, once the chain has been formed, using successive passes so as to decorate each alignment, which decoration can be different for each alignment; said successive passes being carried out prior to any twisting operation.
7. Decorative chain with angularly offset links; all as described and illustrated.

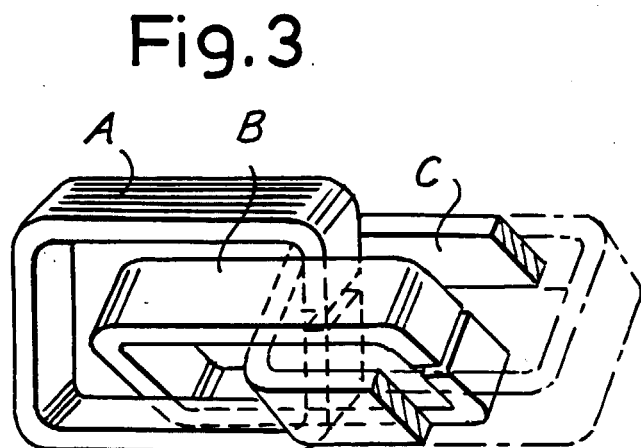
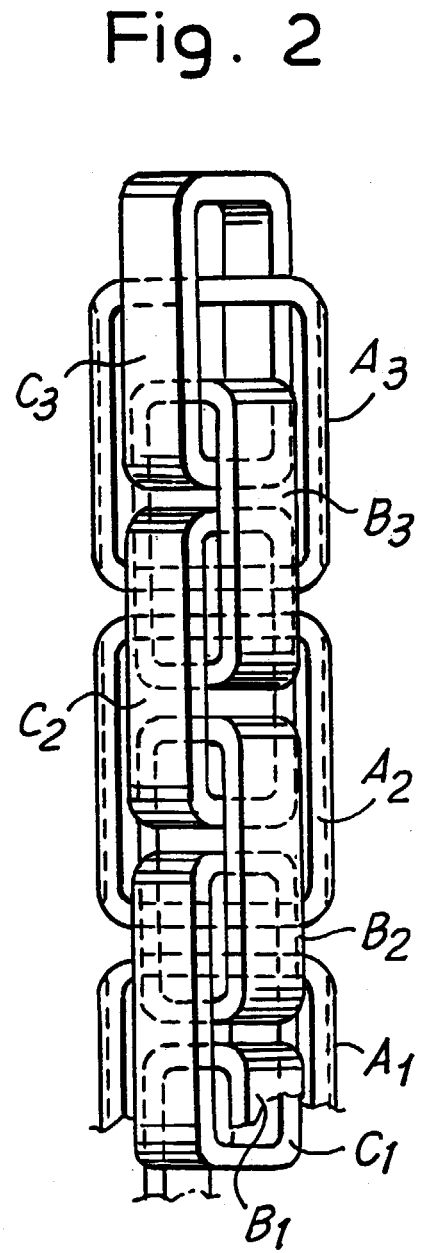
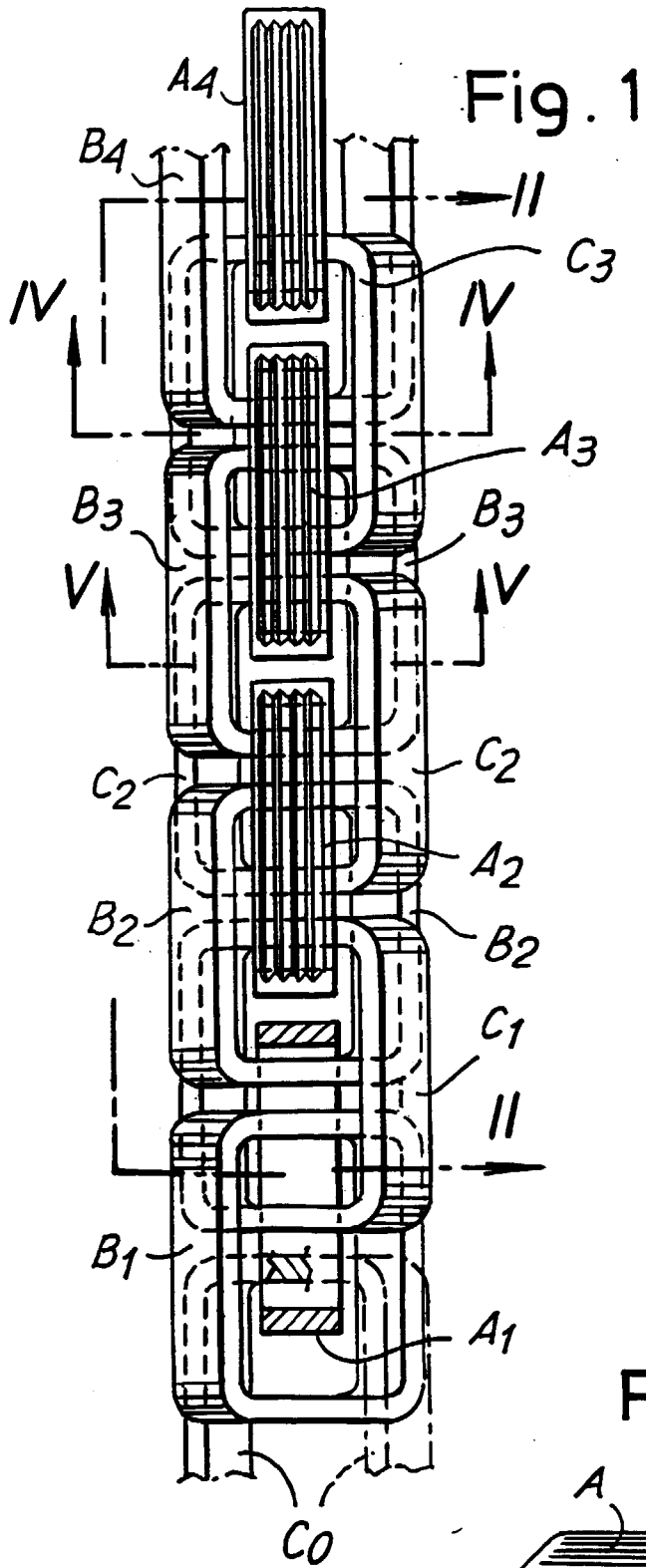


Fig. 4

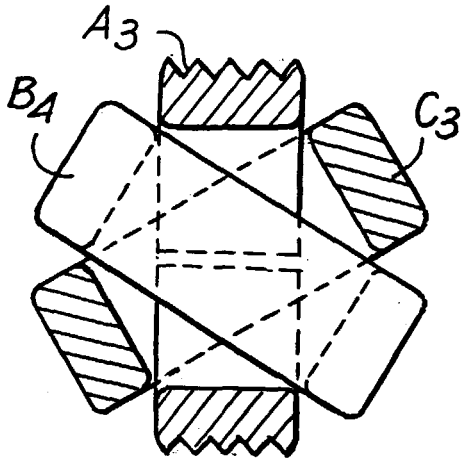


Fig. 5

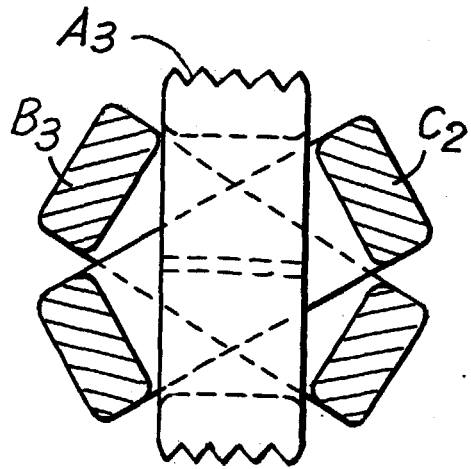


Fig. 6

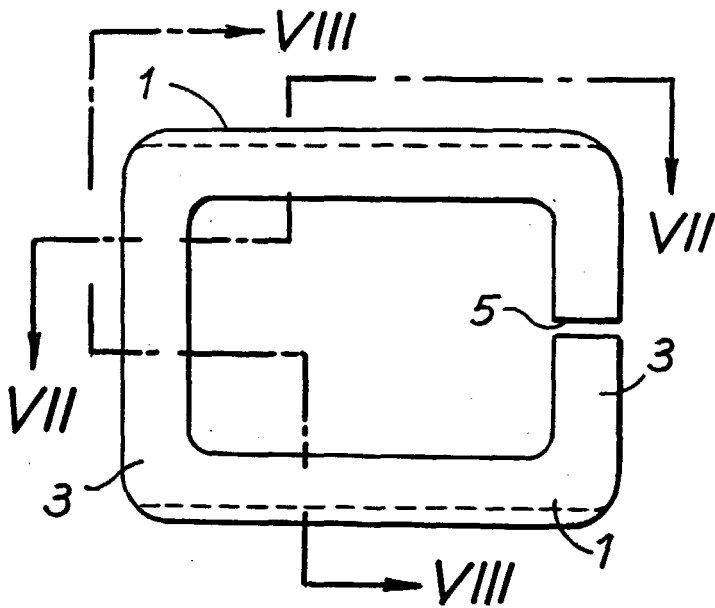


Fig. 8

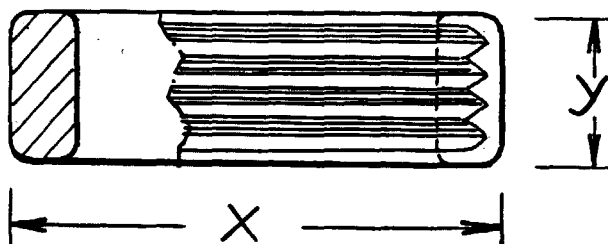
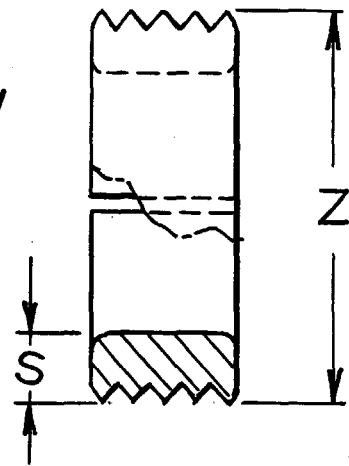


Fig. 7

Fig.9

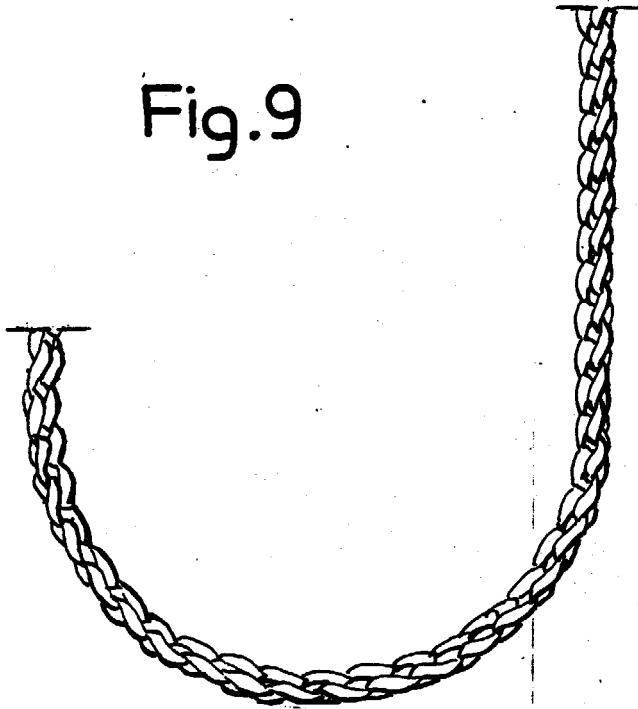


Fig.10

