My invention is a chain bracelet, in which each link is a complete unit, carrying at one end a cross-bar; and at the other end a tongue, the bar serving to cooperate with the tongue of an adjacent link and the tongue serving to cooperate with the bar of an adjacent link.

My invention also includes a novel locking mechanism to connect the ends of the chain or bracelet in such a fashion that accidental unlocking is almost impossible, while intentional unlocking is extremely easy. It will be obvious that this part of my invention may also be advantageously applied to connecting the ends of necklaces and the like.

In the drawings:
Figure 1 is a plan-view of the blank from which the unit link is formed;
Figure 2 is an end view of Figure 1;
Figure 3 is an elevation of the blank after the first shaping bend;
Figure 4 is a similar view after the second shaping bend;
Figure 5 is a similar view after the third shaping bend; showing the tongue engaged with the bar of an adjacent link;
Figure 6 shows in elevation a completed link engaged with an adjacent link;
Figure 7 is a plan view of the hook-clasp member;
Figure 8 is a sectional plan view, on line 8-8 of Figure 9, of the hook-clasp member and the detent-clasp member, in engagement;
Figure 9 is a side elevation of the two clasp members;
Figure 10 is a detail view on an enlarged scale of the detent spring;
Figure 11 is a detail view on an enlarged scale of the detent;
Figure 12 is a plan view of the upper or outer surface of a part of bracelet or the like;
Figure 13 is a view of the right-hand end of the link of Figures 4, 5, 7, 8 or 9; and
Figures 14 and 15 are views of a modified form of the hinge connection.

It is an object of my invention to produce, from sheet metal, usually precious metal, by one stamping operation, a blank which will carry two cooperating parts for joining adjacent links, each link being thus a complete unit, so far as connecting means are concerned, the said blank, by the single operation being pierced or otherwise ornamented at one part and cut into a frame or skeleton form at another part and being suitably shaped and designed to fold into box form, with one of each pair of connecting means at each end of the box, the outer surface of the folded box link, being the pierced or ornamented surface and the inner part of the box link, being the skeleton formation, the object being to give an appearance of thickness, weight and solidity with the use of the minimum amount of metal and to provide a unit which can be connected to other similar units to form a chain of any desired length.

It will be obvious that such a link-unit is of elementary simplicity in formation, one operation providing a link and complete connecting means and also the ornamental surface desirable for a bracelet link, without separate pintsles or pintle lugs. It will be further obvious that the complete link-forming operation, comprising one stamping and the successive folding operations are of the simplest, and capable of being carried out by unskilled labor, conducing to economy of manufacture and assembly.

I have shown in Figure 1 of the drawings a plan view of a link blank. The ornamental (or outer) part of the link is indicated at 1, and at the free end of 1 is shown a tongue 2. The piercing or ornamental work is indicated in the drawing. It is obvious of course that instead of piercing the sheet metal it might be embossed or otherwise shaped. Part 1 is connected at the end opposite to the tongue 2 to the end of the rear or frame member 3, the material between the two members, 1 and 3 being slotted at 4 to segregate a bar 5. The bar 5, in the stamping operation, is pressed outward, for easy engagement, as indicated in the various figures.

The cross member 7 at the free end of 3 is preferably slightly indented at 8, on the under side, as indicated in Figure 2.

The successive bending operations, by means of which the flat blank is formed into a box shape are indicated in the drawings. Figure 3 shows the first fold, Figures 4 the second fold, Figure 5 shows the tongue 2 bent and passed through the slot 4 behind the bar 5 of an adjacent link, and Figure 6 shows the tongue 2 again bent or folded back against the under surface of the member 7, and laid in the depression 8 of the
link of which the hook is a part, to give a smooth under surface.

A chain or bracelet of any desired length may be formed by connecting in this manner several units, and the completed chain will show upon its outer surface the ornamental side of the link, the connecting means being substantially invisible. The completed chain will require the minimum amount of metal and calls for no separate connecting links or pintles, each link being a self-contained unit.

In Figures 7, 8 and 9, I show the "click" or latch elements, by means of which the ends of a chain bracelet or necklace may be securely joined without danger of becoming disconnected. The connection of the ends of bracelets and necklaces has hitherto been a weakness, the connecting means being of necessity small and fragile and frequently unable to resist the strains to which they were subjected in use, especially after they were somewhat worn. A common form of click or clasp was a bolt on one end of the chain extending in the direction of the length of the chain, which entered an aperture in the end member of the other end of the chain and was then in some manner engaged. Strain longitudinally of the chain, which is the direction of most strains on bracelets and neck chains, tended to disconnect such clicks or clasp, the engaging means being usually springs engaging the bolt, in some fashion or the bolt might be replaced by a spring member, compressed to enter the cooperating aperture and springing out to engage a shoulder or the like.

In my new clasp or click one end member of the chain is provided with a hook 10 lying crosswise of the chain and preferably parallel with the outer and inner surfaces of the chain, the hook being created by forming a slot 16 in a projecting flat member. The front surface of this hook is provided with a dentet notch 11. The cooperating end piece 12 is provided with open side apertures 12a, 12b, opening 12c receiving the hook. The end wall 12d of the end piece 12 is also slotted at 12e as indicated in Fig. 8, in which the hook 10 fills the slot 12c and the unslotted part of the end wall 12f is shown in section. The end piece 12 is also provided with a pivoted dentet 13, normally pressed forward by a spring 14, the free end 13a of the dentet projecting outside the end piece 12 through opening 12d.

It will be observed that one chain member is provided with a bar 5, through which a tongue 2 of the adjacent link connects, while the dentet clasp member has a tongue 2 which engages the bar 5 of the adjacent link. The two ends, the point of the hook 10 is passed into the open side aperture 12c and pressed in until the dentet 13 drops into the notch 11. The inner end wall 12a of the dentet link is slotted at 12e, as best indicated in Figure 8, so that the forward end 11a of the hook 10 passes inside the end wall of the dentet link (see Figure 8). Longitudinal strains on the chain are taken by the hook 10 and end wall 12d with practically no strain upon the spring dentet, which resists only strains tending to withdraw the hook sidewise from the link, which strains are relatively slight and infrequent. The clasp may be opened by operating the dentet 13 by means of the free end 13b, thus releasing the hook 10 which may be freely withdrawn transversely of the chain.

It will be noted that this clasp is of very few and simple parts and that the greatest and most frequent strains are resisted by the whole strength of the metal connecting the hook to the body of the hook link and the dentet link with which it is engaged, the entire organization being characterized by ample strength and great simplicity.

In the drawings I have shown the link blank (Figure 1) with what will be its inside surface uppermost and in Figures 7, 8 and 9 I have shown the links with the outer ornamented surface downward and, where necessary as in Figure 8, the inner part of the link removed to expose the mechanism. For purposes of clearness, in Figures 7 and 8, I have indicated the ornamentation upon the front panel 1, in dotted lines, to make clear that the ornamentation is seen as through a frame formed by the sides 3, of the back or inner side of the link.

In Figures 14 and 15 I show a slight modification of the cross bar 7, beneath which the tongue 2 is bent and laid in the depression 8. In this modification an additional indentation 71 is formed, designed, when the link is in final form to bring the face of the bar into contact with the inner face of the front panel 1, so as to afford support to that end of the link against pressure perpendicular to the face of the link.

I claim:

In a chain bracelet or the like, a clasp made up of two box members, having front, back and end walls, one box having also a slot in the free end wall of the box and carrying within the box a spring dentet, swinging transversely in the plane of the front and back walls of the box and having a finger piece projecting without the box, the other box member carrying a flat transverse hook at its free end, lying in the plane of the front and back walls, the hook having a dentet notch in its forward side to cooperate with the spring dentet and a hook forming recess at its rear side to receive a portion of the end wall of the other box member.

Signed at North Attleboro, Massachusetts, this 26th day of March, 1925.

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