A. K. HARNLY.

INTERLOCKING CHAIN LINK.

APPLICATION FILED APR. 19, 1915.

1,171,947.

Patented Feb. 15, 1916.

Fig. 2.

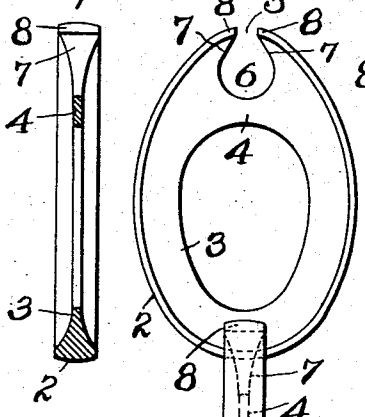


Fig. 4.

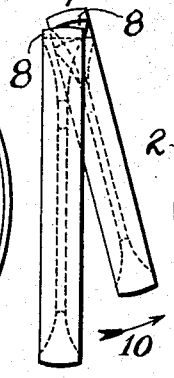


Fig. 3.

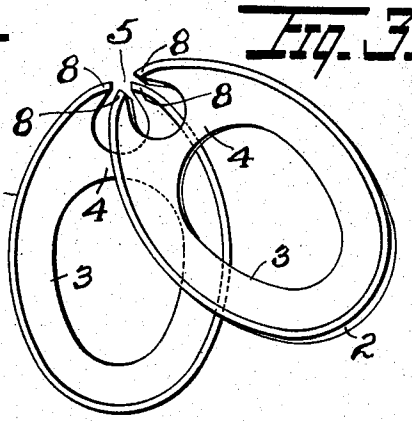


Fig. 1.

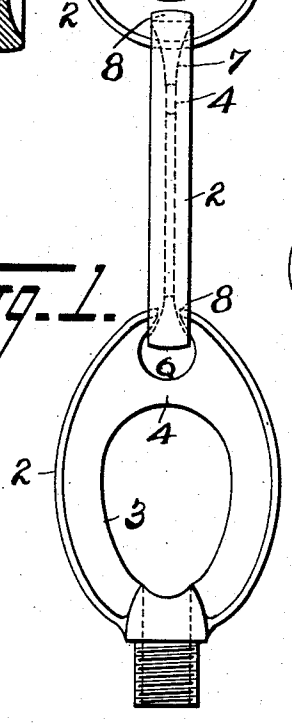
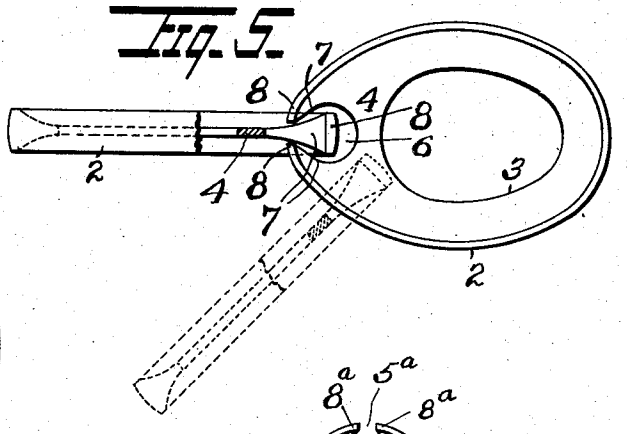


Fig. 5.



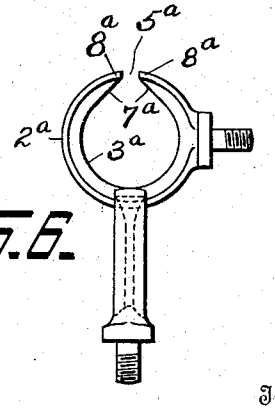


Fig. 6.

Inventor

Albert K. Harnly,

By W. G. D. Stewart

his Attorneys

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ALBERT K. HARNLY, OF READING, PENNSYLVANIA.

INTERLOCKING CHAIN-LINK.

1,171,947. Specification of Letters Patent. Patented Feb. 15, 1916.

Application filed April 19, 1915. Serial No. 22,236.

To all whom it may concern:

Be it known that I, ALBERT K. HARNLY, a citizen of the United States, residing at Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Interlocking Chain-Links, of which the following is a specification.

My invention relates to interlocking links adapted to be strung together to form a chain and my object is to provide a link of simple and cheap construction that may be quickly and easily strung upon an adjoining link and be securely retained thereon.

The invention is fully described in connection with the accompanying drawings, and the novel features are specifically pointed out in the subjoined claims.

Figure 1 shows several links embodying my invention strung together to form a chain. Fig. 2 is a longitudinal section of one of the links. Fig. 3 indicates the position of two links about to be interlocked and Fig. 4 is a side view of the same. Fig. 5 shows two links interlocked, the jaw end of one link being shown in section, and the dotted lines indicating one link as passing the bridge portion of the other link. Fig. 6 indicates a modified construction.

The preferred embodiment of my invention shown in Figs. 1 to 5 of the drawings indicates a link having a substantially T-shaped cross-section the head portion 2 of which forms the periphery of the link and the reduced portion 3 thereof extending inward to form a web. This web 3, adjacent one end as shown, is extended across the link to provide a reinforcing bridge 4 beyond which the link is cut away to form a gap 5. The opening 6 in the web below the gap 5 is enlarged to a size sufficient to permit encircling the head portion 2 of a similar link, and the web is tapered away at 7, 7 toward the gap 5 so as to form jaws 8 adapted to engage the link with an adjoining link when strung upon the latter in the manner hereinafter described. The gap 5 is of less width than the head portion 2 so as to permit engagement of the links at any point in their periphery, and a chain may be made up by stringing together any number of links all of which are of similar construction.

It is important in chains made up of detachable links that each link may be quickly and simply engaged with another, and that when thus engaged they will not unlock excepting as to the end links, and this only when desired. My invention provides for this by permitting the interlocking or detaching of one link from another only when the links are in one position in relation to one another and then only when moved in a certain manner. This interlocking or detaching is accomplished as follows: Two links about to be interlocked are placed one upon the other as shown in Figs. 3 and 4, with a jaw of each link lying in the gap 5 between the jaws of the other link, and then by moving the one link in the direction of the arrow 10, Fig. 4, the jaws will pass through the gaps 5 into the openings 6 between the tapered webs 7, 7. When straightened out the links will assume the position indicated in Fig. 5, the two links being interlocked by the jaws of one link engaging the jaws of the other, as the gaps 5 are of less width than the thickness of the links. The one link may then be moved around the periphery of the other link to assume the position indicated in Fig. 1, the bridge 4 of each link passing through the gap 5 of the interlocked ring as indicated in dotted position Fig. 5. Other links may be added, the chain growing from one end only, and when thus made up they cannot be separated except by a reversal of the interlocking movements.

The bridge 4 adds greatly to the strength of the link, supporting the jaws 8 against the spreading tendency incident to any strain upon the chain, but when light loads only are to be sustained this bridge may be omitted as indicated in Fig. 6, where two hooks are shown interlocked, but obviously might be two links of a chain. The end links of a chain may be made with any suitable connection, for securing it to an object such as a hanging lamp, and the link at the other end may be connected in any manner, as for instance a hook, or bolt passed through the opening 6.

My improved link is of simple and cheap construction, permits in a novel manner for interlocking with other links, insures against accidental detachment, and provides in a rigid one piece structure a detachable link of great strength.

The links may of course be variously shaped and ornamented as called for in

fancy chains, and as indicated in Fig. 6, not used as chain links, where the interlocking feature is desirable.

I do not desire to limit myself to the preferred embodiment shown and described, but

What I claim is:

1. A chain having gapped links of substantially T-shaped cross-section, the gapped portion forming engaging jaws for a like connected link substantially as set forth.

2. A chain having gapped links of substantially T-shaped cross-section the web portion of which extends inward, said web being tapered away toward the gap, and the latter being of less width than the head of the T, thereby forming engaging jaws for a similar connecting piece.

3. A chain made up of gapped links having a reinforcing bridge rearward of the gapped portion, and the latter forming engaging jaws for a similar connecting piece.

4. A chain made up of gapped links having a reinforcing bridge rearward of the gapped portion, and the latter forming engaging jaws, said bridge being of less thickness than the gapped jaws and the latter being adapted to pass over the bridge of a similar connected piece and engage the latter at a point opposite its jaws.

5. A chain having gapped links of substantially T-shaped cross-section the web portion of which extends inward, said web forming a reinforcing bridge rearward of the gap and being tapered away toward the latter to form engaging jaws for a similar connecting piece.

6. A chain having gapped links of substantially T-shaped cross-section the web portion of which extends inward, said web forming a reinforcing bridge rearward of the gap and being tapered away toward the latter to form engaging jaws adapted to pass over the bridge of a similar connecting piece and engage the latter at a point opposite its gap.

7. A chain made up of interlocking links, each link being gapped and of substantially T-shaped cross-section the web portion of which extends inward, said web forming a reinforcing bridge rearward of the gap and being tapered away toward the latter to form engaging jaws adapted to enter the gap and pass over the bridge of an adjoining link and engage the latter at a point opposite its gap.

8. A plurality of interlocking links each having a gap and of substantially T-shaped cross-section the web portion of which extends inward, said web being tapered away toward the gap, and the latter being of less width than the head of the T, thereby forming engaging jaws, the jaws of the respective links being interlockable by a determined relative positioning and movement substantially as set forth.

9. A plurality of interlocking links each of rigid one-piece construction and having a gapped portion forming engaging jaws, the jaws of the respective links being interlockable by a determined relative positioning and movement substantially as set forth.

In testimony whereof I affix my signature.

ALBERT K. HARNLY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."