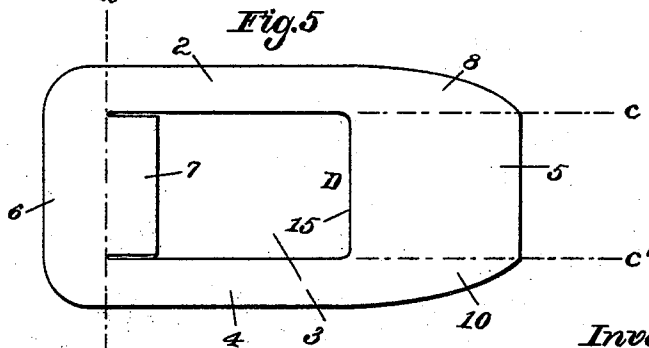
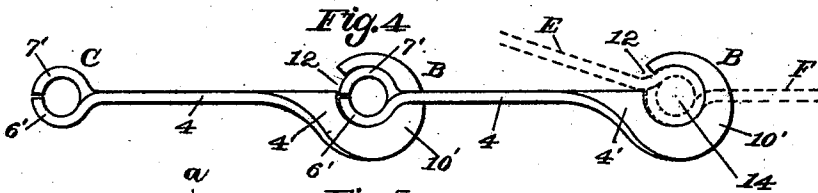
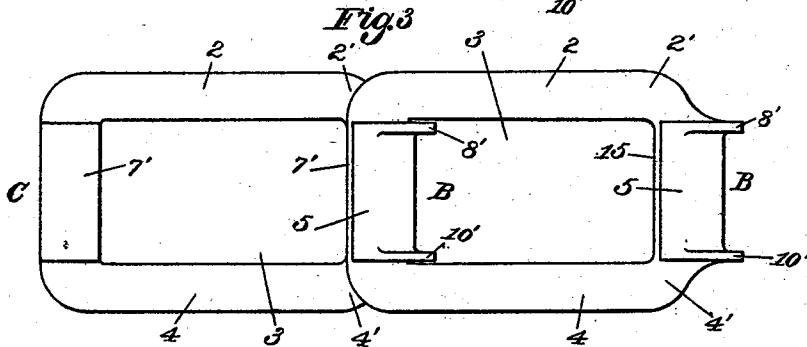
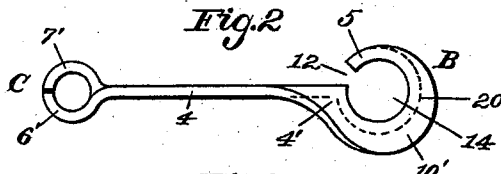
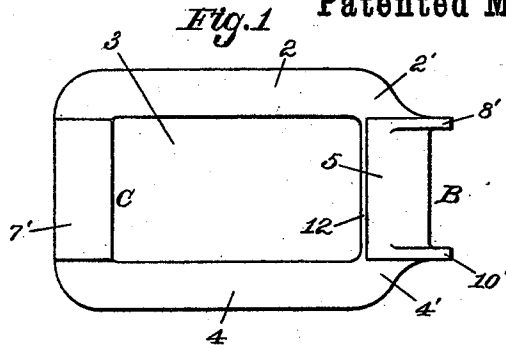


(No Model.)

J. S. CARTER.
DRIVE CHAIN LINK.

No. 498,233.

Patented May 30, 1893.



Witnesses:

Henry L. Rickard.
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Inventor:

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UNITED STATES PATENT OFFICE.

JOSIAH S. CARTER, OF NEW BRITAIN, CONNECTICUT.

DRIVE-CHAIN LINK.

SPECIFICATION forming part of Letters Patent No. 498,233, dated May 30, 1893.

Application filed January 9, 1892. Serial No. 417,453. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH S. CARTER, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Drive-Chain Links, of which the following is a specification.

This invention relates to that class of drive-chains which are made of sheet metal; the object being to provide an improved drive-chain link having great strength, and adapted to be manufactured of a single thickness of sheet-metal.

The invention consists in the improved construction of the chain-link, and in the method of, and blank for, the manufacture of the link.

In the drawings accompanying and forming a part of this specification, Figure 1 is a plan view of a chain-link embodying my present improvements. Fig. 2 is an edge view of the chain-link. Fig. 3 is a plan view of a portion of a drive-chain formed of my improved drive-chain links. Fig. 4 is an edge view of the chain shown in Fig. 3. Fig. 5 is a plan view of the blank for the chain-link.

Similar characters designate like parts in all the figures.

The improved chain-link shown in the drawings consists of the hook, or knuckle designated in a general way by B, the pin or pintle, designated in a general way by C, and two parallel side-bars, 2 and 4, connecting the respective ends of said hook and pintle. Said four portions of the link, B, C, 2 and 4, form a substantially rectangular figure having the interior space 3, Fig. 1.

The blank for making the chain-link (see Fig. 5) consists of a plate of sheet-metal, which is designated in a general way by D, and comprises the hook-forming portion 5, the lower pintle-forming portion 6 joined to said hook-forming portion, by the two side-bars 2 and 4 and having the upper pintle-forming portion 7 extending into the interior space 3 of the link; which space is bounded by the inner edge, 15, of the hook-forming portion 5, the side-bars 2 and 4, and the dotted line *aa*, corresponding to the inner side of the finished pintle.

The method of manufacturing the link is to cut out the blank and form therein the interior space 3, whose side-cuts extend to the

aforsaid line *aa* coinciding with the forward or bearing side of the pintle of the chain-link. The lower pintle-forming portion, 6, is then shaped, by means of suitable dies, to form the lower portion, 6', of the chain-link pintle; while the upper pintle-forming portion, 7, is bent upward and backward to form the upper part, 7', of the finished pintle. By this method of forming the pintle, the forward or bearing side thereof, intermediate between the two side-bars 2 and 4, is of continuous metal, without any longitudinal joint or break to weaken the same or to divide the bearing surface of the pintle. According to this method, also, one-half of the pintle is made of stock cut out to form the space 3, and which would otherwise, as heretofore in the art, be wasted. The upper part 7' of the pintle, which part is formed of the portion 7 cut from the interior space of the link-blank, being bent over to abut against the edge of the opposite side 6' of the pintle, is thereby firmly supported, so that on subjecting the chain to heavy strain, the pintle is not closed, but resists the pressure of the hook B. This utilization of said normal waste-portion of the stock effects an important saving of material, and correspondingly reduces the cost of the chain-links.

The hook-forming portion, 5, of the chain-link blank is bent downward and then upward and backward as indicated by the dotted circle 20, Fig. 2, to form the hook B, whose eye 14 is for receiving the pintle of another link. The edge portions 8 and 10 (outside the dotted lines *c* and *c'*, Fig. 5) of said hook-forming portion are shaped to form the hook-flanges, 8' and 10', respectively, of the finished link, as will be understood by comparison of the several figures of drawings. By constructing the link-hook in this manner, it is strengthened to be equal substantially to the side-bars, while using only a single thickness of metal therefor. The flanges 8' and 10' are formed of the continuations 8 and 10 of the side-bars 2 and 4, respectively, being molded or curved at the points 2' and 4', respectively, from the horizontal plane shown in Fig. 5 to the vertical plane shown in the preceding figures.

In forming the hook of the link, the end, 5, of the link-blank is not brought over against

the side of the link, but a space, 12, is left to pass one of the side-bars of another link when assembling the links into a chain. This operation is readily performed by taking one of the links, putting it in the position shown by dotted lines at E, Fig. 4, sliding the pintle into the eye or space 14,—the side-bar passing through the slot 12,—and then swinging the inserted link over to the position shown by dotted lines at F, Fig. 4.

Having thus described my invention, I claim—

1. The sheet-metal chain-link-blank herein described, consisting of an integral plate having an interior opening and comprising the two parallel side-bars connected at one end by the pintle-forming portion of the blank,

and connected at the other end by the hook-forming portion, and having the side-bar extensions 8 and 10 joining the edges of said hook-forming portion and constituting flange-forming portions, substantially as described.

2. The herein-described sheet-metal drive-chain link having the side-bars and a pintle at one end thereof, and the curved hook at the other end of the link having at the ends thereof flanges around the hook and connecting with the side-bars and formed by bending the flange-forming portions of the blank, substantially as described.

JOSIAH S. CARTER.

Witnesses:

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