

(No Model.)

H. L. FERRIS.  
LINK FOR METAL CHAINS.

No. 568,245.

Patented Sept. 22, 1896.

Fig. 1



Fig. 2

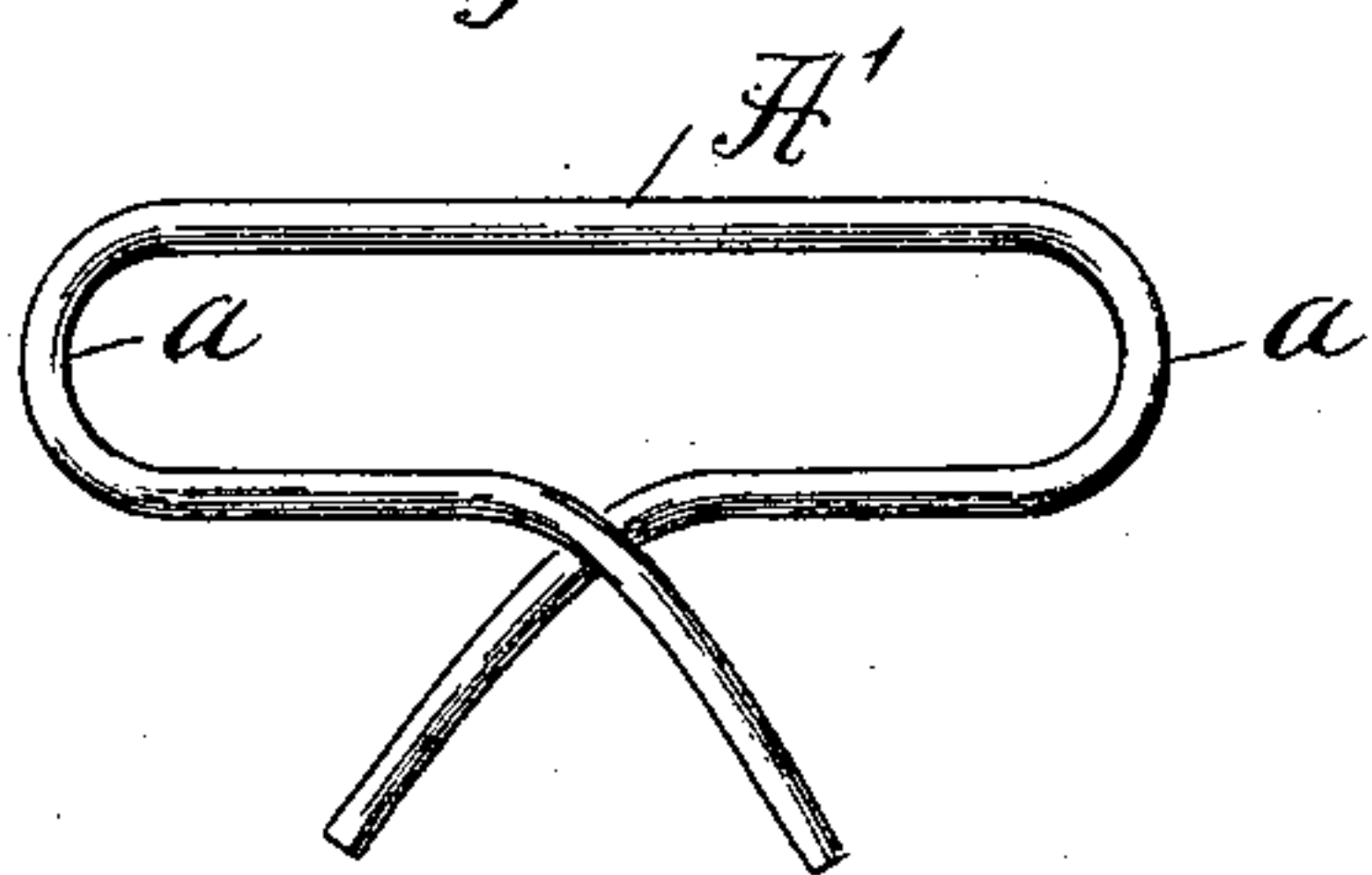


Fig. 3

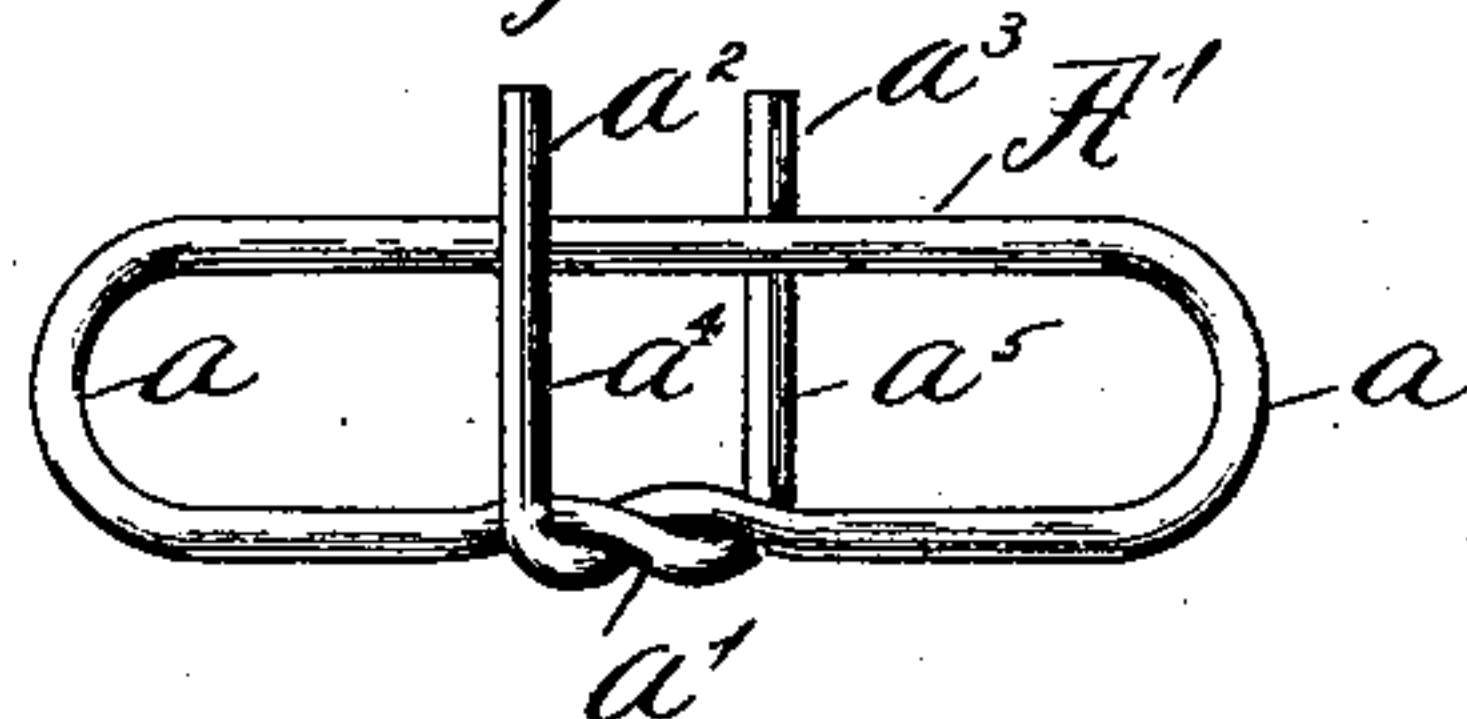


Fig. 4

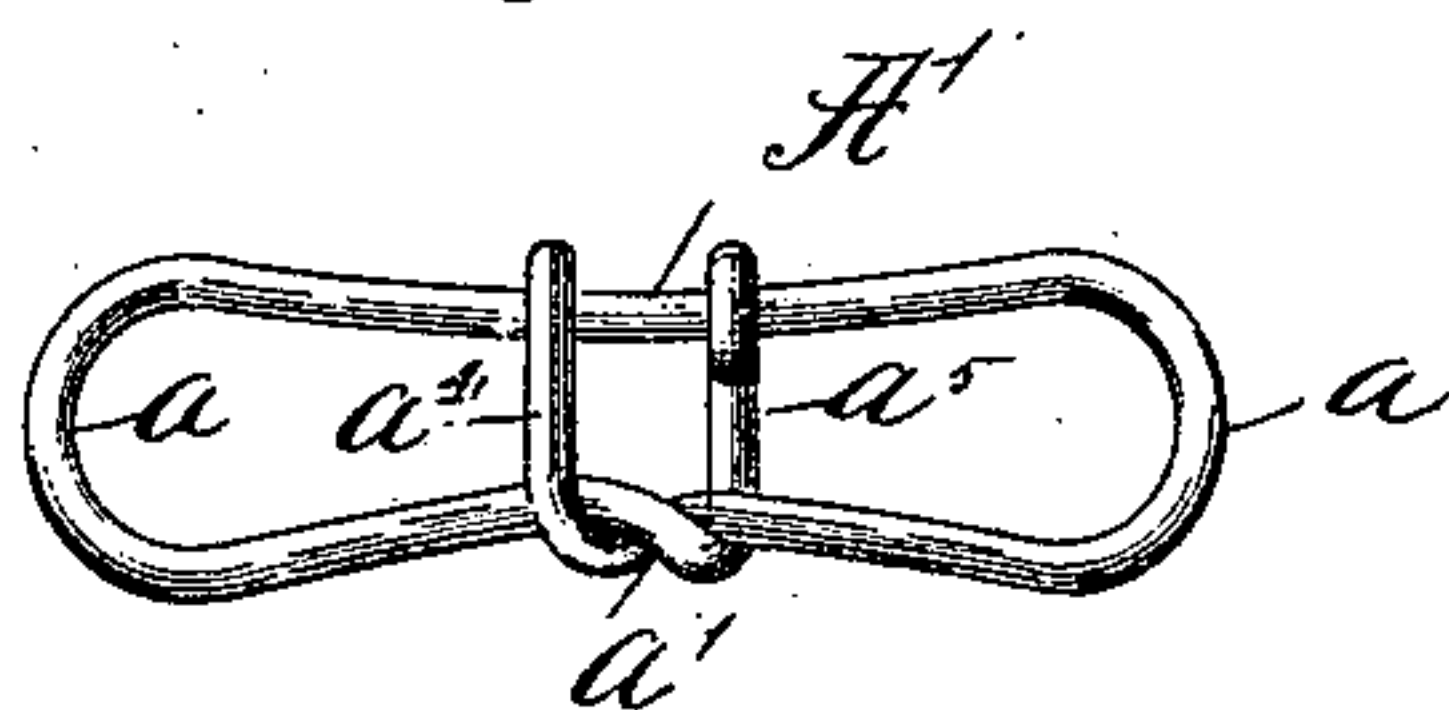


Fig. 5

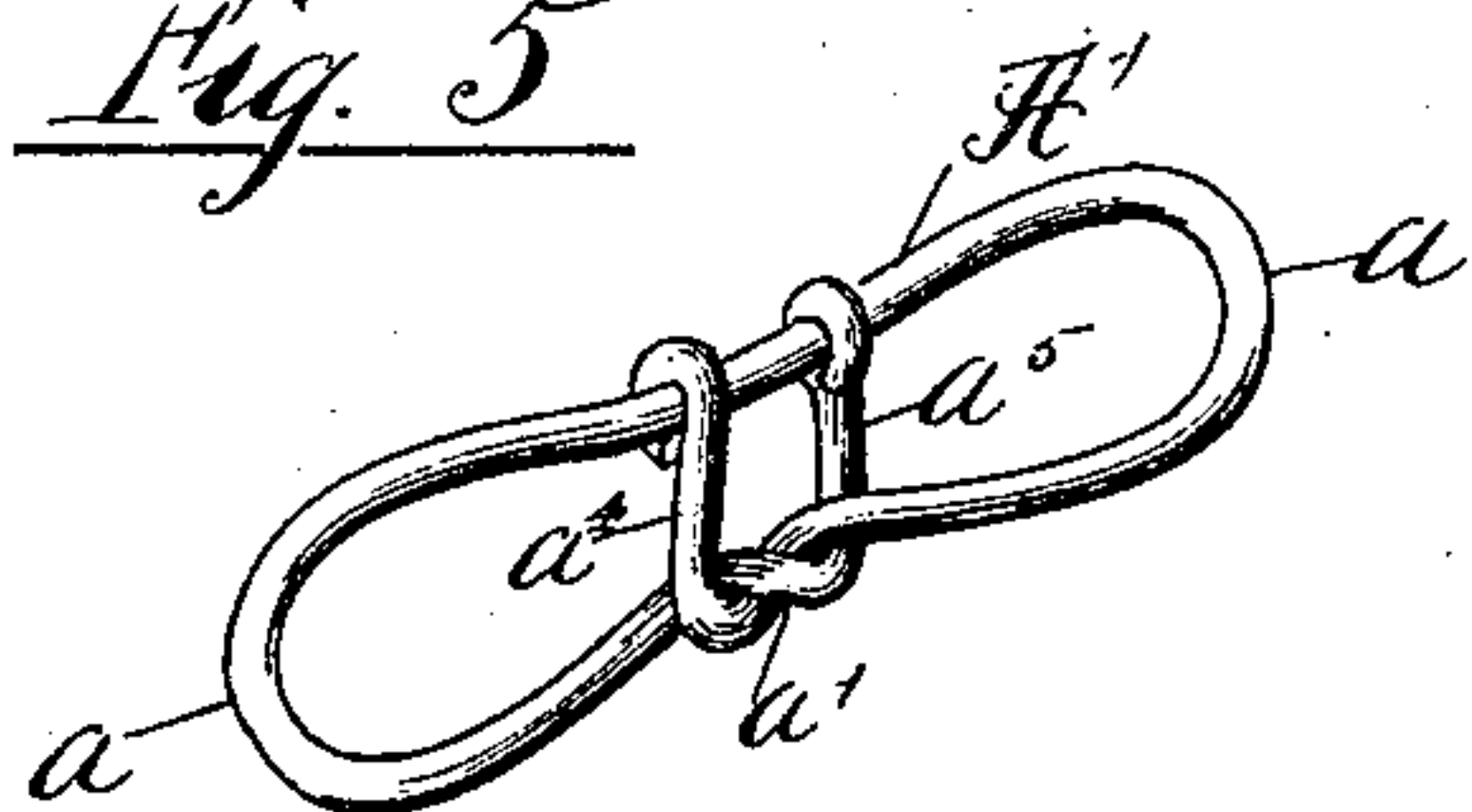
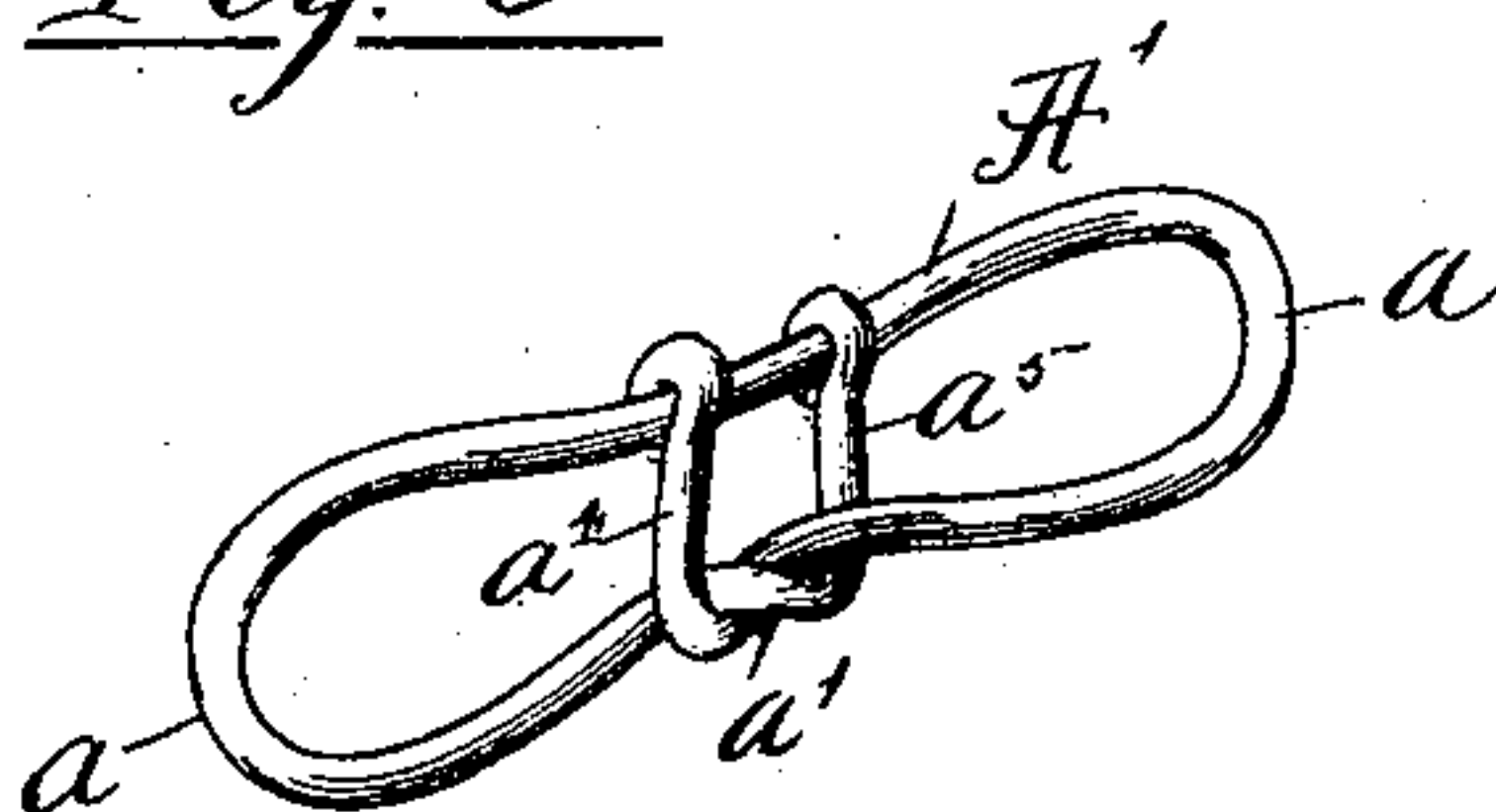


Fig. 6



Witnesses

L. Clinton Hamlin.  
John W. Adams.

Inventor

Henry L. Ferris  
by Dayton, Pomeroy & Brown  
his Attorneys

# UNITED STATES PATENT OFFICE.

HENRY L. FERRIS, OF HARVARD, ILLINOIS.

## LINK FOR METAL CHAINS.

SPECIFICATION forming part of Letters Patent No. 568,245, dated September 22, 1896.

Application filed March 5, 1896. Serial No. 582,163. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY L. FERRIS, of Harvard, in the county of McHenry and State of Illinois, have invented certain new and useful Improvements in Links for Metal Chains; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in wire link chains, and has for its object to provide a novel form of link especially adapted for certain purposes, and at the same time of an extremely simple, strong, and durable construction.

The invention consists in the matters hereinafter described, and more particularly pointed out in the appended claim, and will be more readily understood by reference to the accompanying drawings, in which—

Figure 1 is a view of any suitable wire blank from which the link is to be formed. Fig. 2 is a view of the blank after the first step in the formation of the link has been performed. Fig. 3 is a view of the blank after the ends have been twisted together at the side of the loop and extended across the link. Fig. 4 is a plan view of the completed link. Fig. 5 is a perspective view of the same. Fig. 6 is a perspective view of a slightly-modified form of link.

Referring to said drawings, A designates as a whole the blank, which may be successively bent or shaped to bring it to the required form as follows: The blank A is bent upon itself at points  $a$ , distant from its ends somewhat more than one-quarter the full length of the blank, so as to form an elongated link, the middle portion of the blank forming one side  $A'$  of the link, and the said end portions being brought past each other at the middle of the other side of the link, as indicated in Fig. 2. The said ends are next crossed and twisted around each other, as indicated at  $a'$ , and thereafter each end bent approximately at right angles to the side of the link and in a direction toward the side  $A'$ , extending across the link, one end  $a^2$  being carried above the other end  $a^3$  below the

opposite side  $A'$ , as indicated in Fig. 3, around which each is coiled, so as to fasten said ends and bind the opposite sides of the link rigidly together.

Great strength and rigidity is given to the link by reason of the fact that two cross-bars are formed by the parts  $a^4 a^5$ , which extend across the link and connect the side  $A'$  with the opposite side near the twisted portion  $a'$ . These cross-bars  $a^4 a^5$  will preferably be shorter than the greatest width of the link, so that the central portion of the latter will be somewhat drawn together, thus giving the link the centrally-contracted appearance shown in the drawings. I have shown but a single twist at  $a'$ , but it is obvious that in some instances two or more coils may be given with advantage.

While I have herein shown the preferred form of link, yet it will be obvious that it may be modified to some extent without departing from the invention. For instance, in Fig. 6 I have shown a link where the ends of the cross-bars  $a^4 a^5$  are each coiled about the side  $A'$  of the link in directions the reverse of those corresponding parts of the previously-described construction. This and similar obvious modifications I claim as being within the scope of my present invention.

I claim as my invention—

As a new article of manufacture, a link chain made from a single piece of malleable metal bent between its ends to form an elongated loop, the side members of which are substantially parallel, the ends being brought together to form one side of the loop by being interlocked or twisted about each other, the twist extending in the direction of the length of the loop, two integral parallel cross members extending across the loop at a distance from each other to the untwisted or straight side member and separately secured thereto, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 19th day of February, A. D. 1896.

HENRY L. FERRIS.

Witnesses:

J. S. KINSON,  
L. E. NORTON.