

No. 774,768.

PATENTED NOV. 15, 1904.

C. A. MANN.
CHAIN.

APPLICATION FILED MAY 22, 1903

NO MODEL.

Fig. 1.

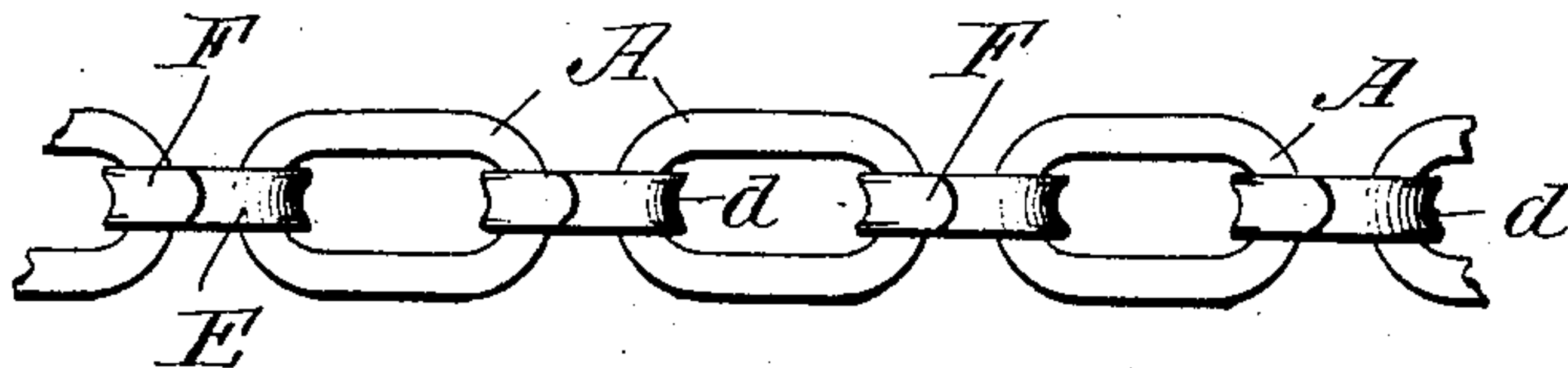


Fig. 2.

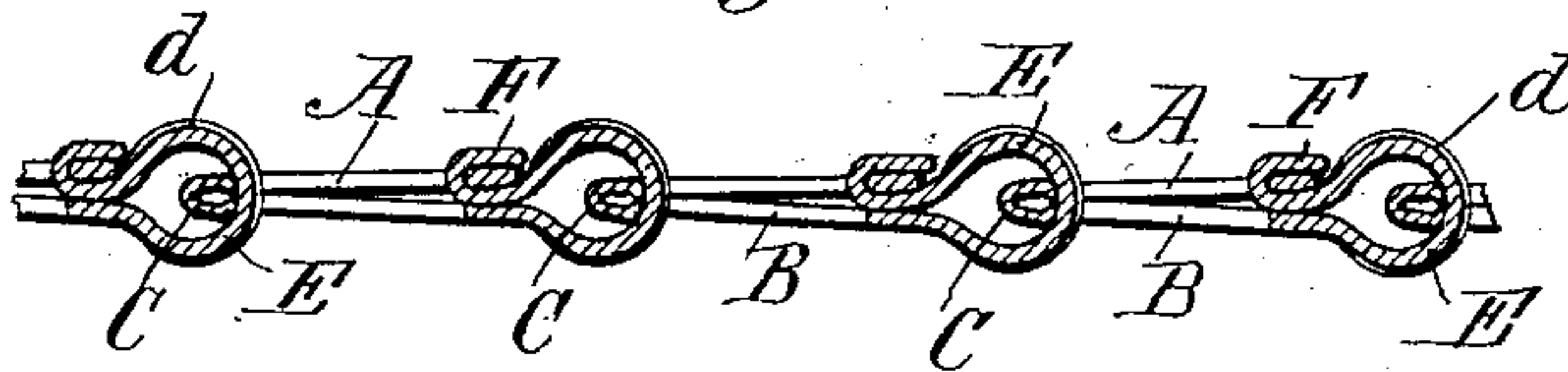


Fig. 3.

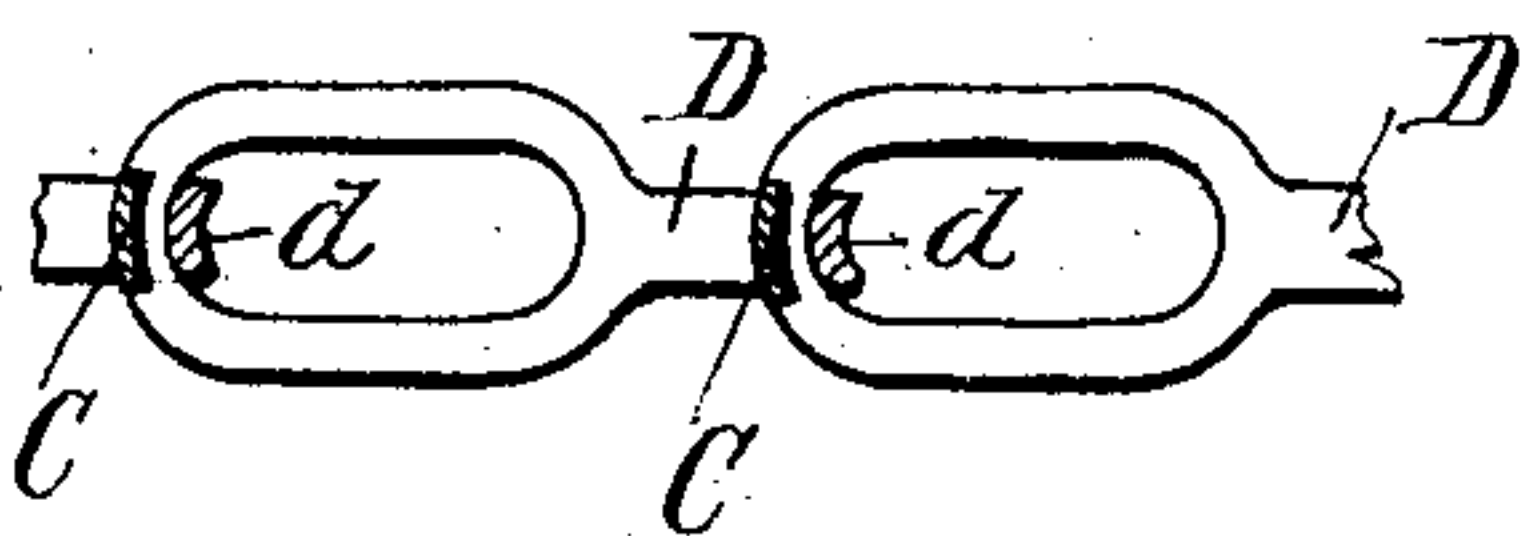


Fig. 4.

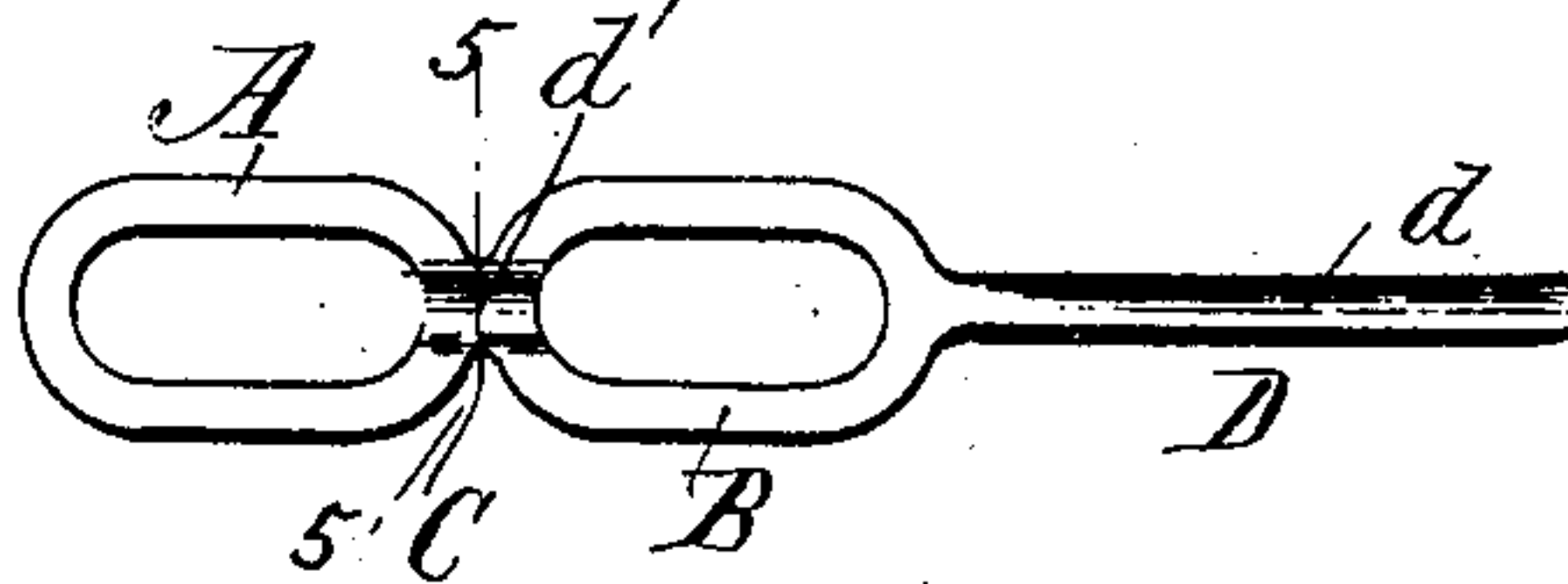
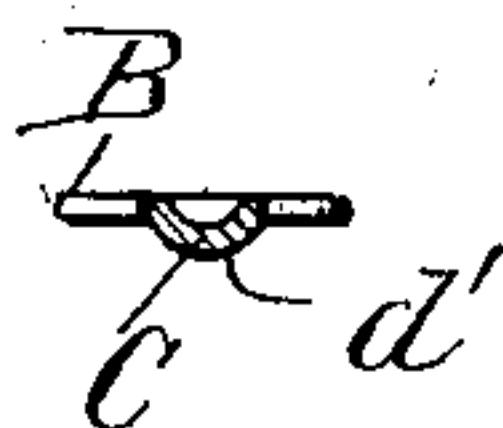


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES A. MANN, OF BUFFALO, NEW YORK.

CHAIN.

SPECIFICATION forming part of Letters Patent No. 774,768, dated November 15, 1904.

Application filed May 22, 1903. Serial No. 158,337. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. MANN, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Chains, of which the following is a specification.

This invention relates more particularly to chains of that character in which each of the links composing the chain is made from sheet metal and formed with two parallel closed eyes or rings and a loop arranged in a plane at right angles to the plane of the eyes and which engages in the two eyes of the adjoining link.

One object of the invention is to provide a strong and inexpensive chain of this character constructed of links which are detachably or separately connected in such manner that a link can be removed from or inserted in the chain at any point in its length without separating other links of the chain, thus making it possible to quickly open or splice the chain.

Another object of the invention is to so form the links that the latter will not collapse or bend under strain and their strength will not be impaired by opening and closing the links when disconnecting and connecting the same.

In the accompanying drawings, Figure 1 is a plan view of a section of chain embodying the invention. Fig. 2 is a longitudinal section thereof. Fig. 3 is a horizontal section thereof. Fig. 4 is a plan view of the sheet-metal blank from which the link is made. Fig. 5 is a transverse section in line 5 5, Fig. 4.

Like letters of reference refer to like parts in the several figures.

The blank from which the link is made is stamped from sheet metal and has two closed eyes or rings A B, which are joined by a short connecting portion C and a long narrow tongue D, which extends from the outer end of one of the eyes. The shape of the eyes may be varied; but they are preferably elongated, having long straight sides and short rounded ends, as shown in Fig. 4. This shape of the blanks enables them to be cut from a sheet of metal with very little waste.

The tongue and portion C, connecting the two eyes, are preferably corrugated or made concavo-convex in cross-section, as indicated at *d d'*, respectively. In practice the corrugations are formed in one operation with the cutting of the blanks by the stamping-dies. The link is formed by bending the blank at the connecting portion between the two eyes, one eye folded or doubled back toward the other and bending the tongue to partially form the loop E and the hook F at the end of the tongue. The partially looped and hooked tongue of one link is then passed through the two eyes of the adjoining link and the hooked end of the tongue passed between the two eyes and engaged with the end of the upper eye of the link on which the tongue is formed, the eyes being pressed together and the hook flattened to complete the connection.

The described manner of joining the links makes a very strong connection, for the hooked end of the tongue is confined between the two eyes of its link and is pinched or clamped between the eyes when the chain is strained, thus making it practically impossible to straighten out the hooks and disengage the links when the chain is under strain. Nevertheless any link can be detached from its adjoining link by opening its hook and removing the loop from the eyes in which it is engaged. The loop E is greatly strengthened and prevented from collapsing under strain by corrugating the same as described. The convexed inner face of the loop, which bears against the rounded ends of the eyes through which it passes, also allows the links to swing freely laterally, thus making the chain much more flexible and desirable. By corrugating the portion of the links connecting the two eyes the chain is not only strengthened in use, but when a link is straightened out to detach it and again bent back to its proper form it is not broken or weakened, as it would be if the connecting portion between the eyes was flat in cross-section.

I claim as my invention—

1. A chain formed of links, each link having two eyes and a loop, said loop extending from one of said eyes and passing through

the adjoining link and being detachably connected with the other of said eyes, substantially as set forth.

2. A chain formed of links, each link having two eyes and a loop, said loop extending from one of said eyes and passing through the adjoining link and having a hooked end detachably connected with the other of said eyes, substantially as set forth.

3. A chain formed of links, each link having two eyes and a loop, said loop extending from one of said eyes and passing through the adjoining link and having a hooked end passing between said eyes and engaging the other of said eyes, substantially as set forth.

4. A chain formed of links, each link having two substantially parallel eyes, one of said eyes being extended to form a loop, said loop passing through the adjoining link and having a hooked end detachably connected with the other of said eyes, substantially as set forth.

5. A chain formed of links, each link having two eyes and a loop, one end of said loop being permanently attached to one of said eyes and the other end detachably connected with the other of said eyes, said loop being detachably connected with the adjoining link, substantially as set forth.

6. A chain formed of links each having two

eyes and a loop, the loop of each link passing through the eyes of the adjoining link and having a hooked end which passes between the eyes and engages one eye of the link on which the loop is formed, substantially as set forth.

7. A chain-link having two eyes and a loop, said loop extending from one of said eyes and being closed and detachably connected with the other of said eyes, substantially as set forth.

8. A chain-link having two eyes and a loop, said eyes being separated at the loop end, said loop being permanently attached to one of said eyes and having a hooked end passing between said eyes and detachably engaging the other of said eyes, substantially as set forth.

9. A chain-link having two substantially parallel eyes, one of said eyes being extended to form a loop, the end of said loop having a hooked portion detachably engaging the other of said eyes, substantially as set forth.

Witness my hand this 20th day of May, 1903.

CHAS. A. MANN.

Witnesses:

JNO. J. BONNER,
C. M. BENTLEY.