(No Model.)

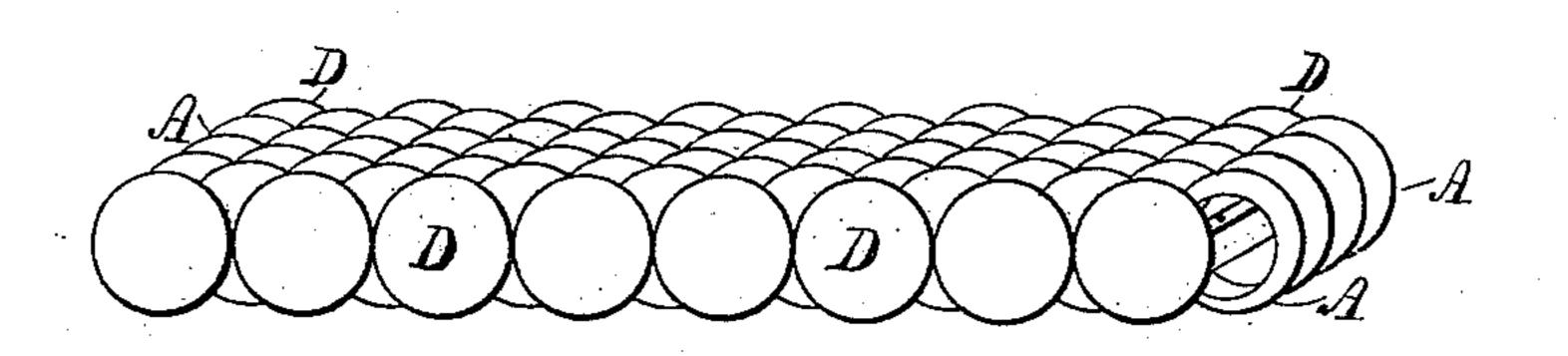
W. BALLOU.

ROLLER CHAIN.

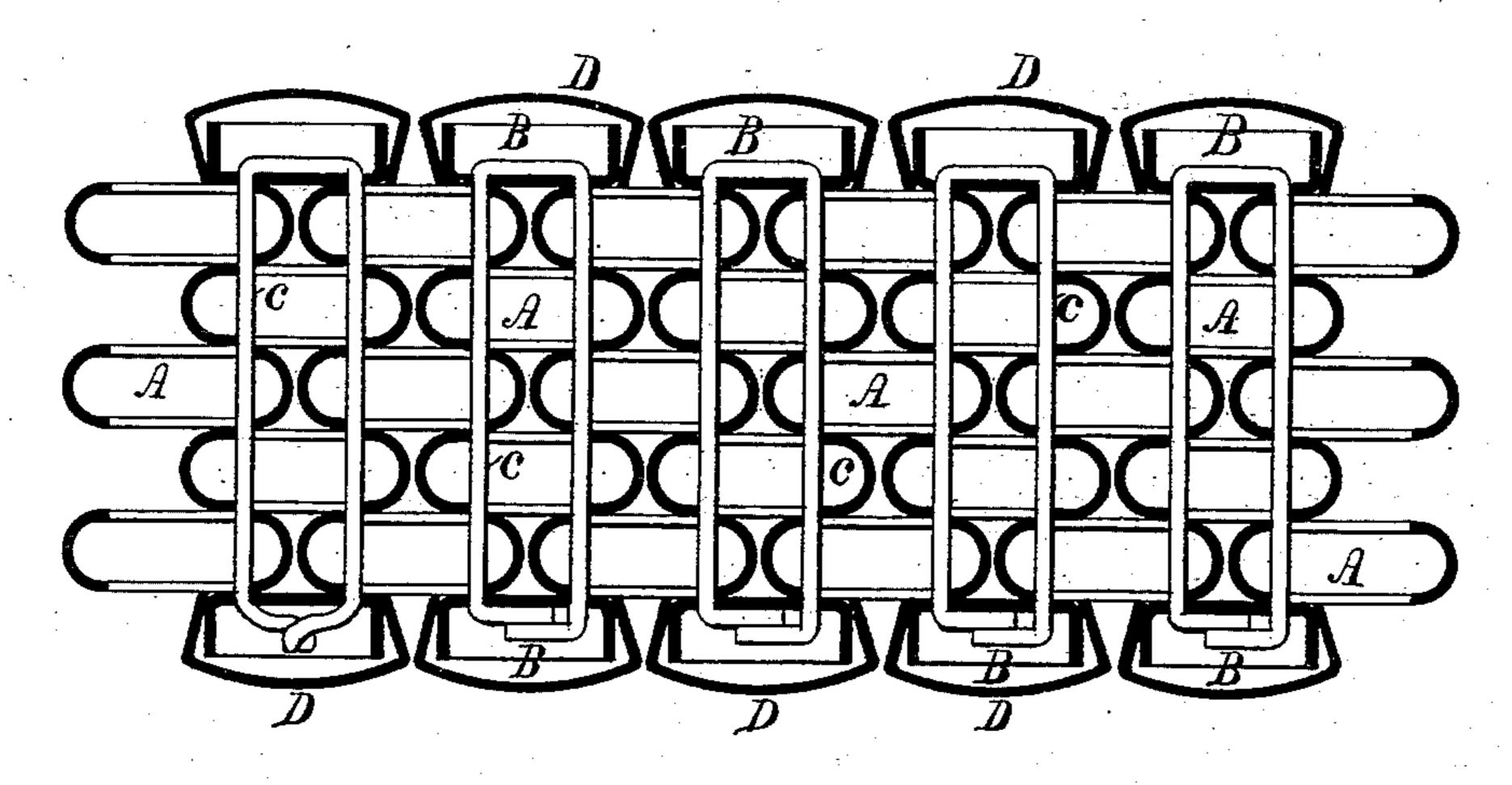
No. 277,194.

Patented May 8, 1883.

Fig. 1



Fz-2



Tig. 3.

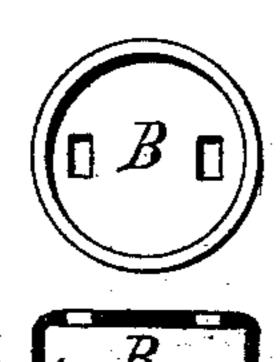
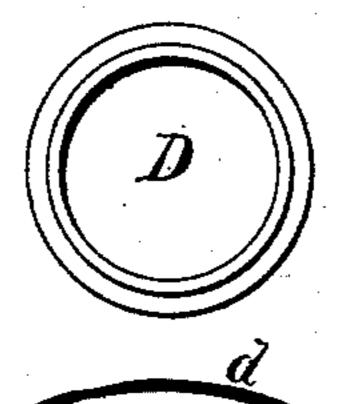


Fig. 4.



 $d^2 \int d$ 

Foreph AMiller Her asky

## United States Patent Office.

WALTER BALLOU, OF NORTH ATTLEBOROUGH, MASSACHUSETTS.

## ROLLER-CHAIN.

SPECIFICATION forming part of Letters Patent No. 277,194, dated May 8, 1883.

Application filed March 15, 1883. (No model.)

To all whom it may concern:

Be it known that I, Walter Ballou, of North Attleborough, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Roller-Chains; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to an improvement in the construction of what are known in the arts as "roller-chains," or chains made up of a large number of units strung together by wires or staples; and it consists in the peculiar and novel manner in which the end units are covered and protected, as will be more fully set forth hereinafter.

Figure 1 is a perspective view of a roller-chain. Fig. 2 is a sectional view of the same, showing the staples by which the units are secured and the caps by which the end units are covered. Fig. 3 is a view and section of one of the end units. Fig. 4 is a view and section of the cap covering the end units.

In the drawings, A A are the center units or collets.

B B are the end units, perforated with two holes, through which the staples C C pass, by which the units are united into a chain.

D D are caps placed over the end units to make the edge finish of the chain and cover the end units, B. These caps D have convex ends d, as shown enlarged in Fig. 4, and inwardly-inclined sides d' d', of such internal diameter that they closely fit the end units, B B, over which they are forced and closed by

the burnisher, so as to firmly secure the same without the use of solder.

I am aware that the end units have heretofore been closed by caps inserted into the same, 40 and also that a cap has been placed over the end disk of such chains. I therefore do not claim such caps, broadly. My construction differs from these, in that the peculiar construction of the caps D D and end units, B B, en- 45 ables me to force the cap over the end units and easily secure the same by a slight pressure of the burnisher or similar tool, whereas in the former construction the end unit had to be closed over the inserted cap and made an un- 50 sightly edge, and when the cap was placed over the end disk the cap had to be spun over the inner part of the disk, which is a difficult operation.

Another advantage resulting from my improved construction consists in that the convex end and inwardly-inclined sides of my improved cap form a defined and elegant margin or edge to the chain, by which the appearance is much improved.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

In a roller-chain, the combination, with the units A A, united by the staples C C, of the open-ended end units, B B, and the caps D D, 65 having the convex closed ends d and inward-ly-tapering sides d' d', as described.

WALTER BALLOU.

Witnesses:

J. C. Bours, J. A. Miller, Jr.