

(No Model.)

H. A. CHURCH.

ROLLER CHAIN.

No. 296,925.

Patented Apr. 15, 1884.

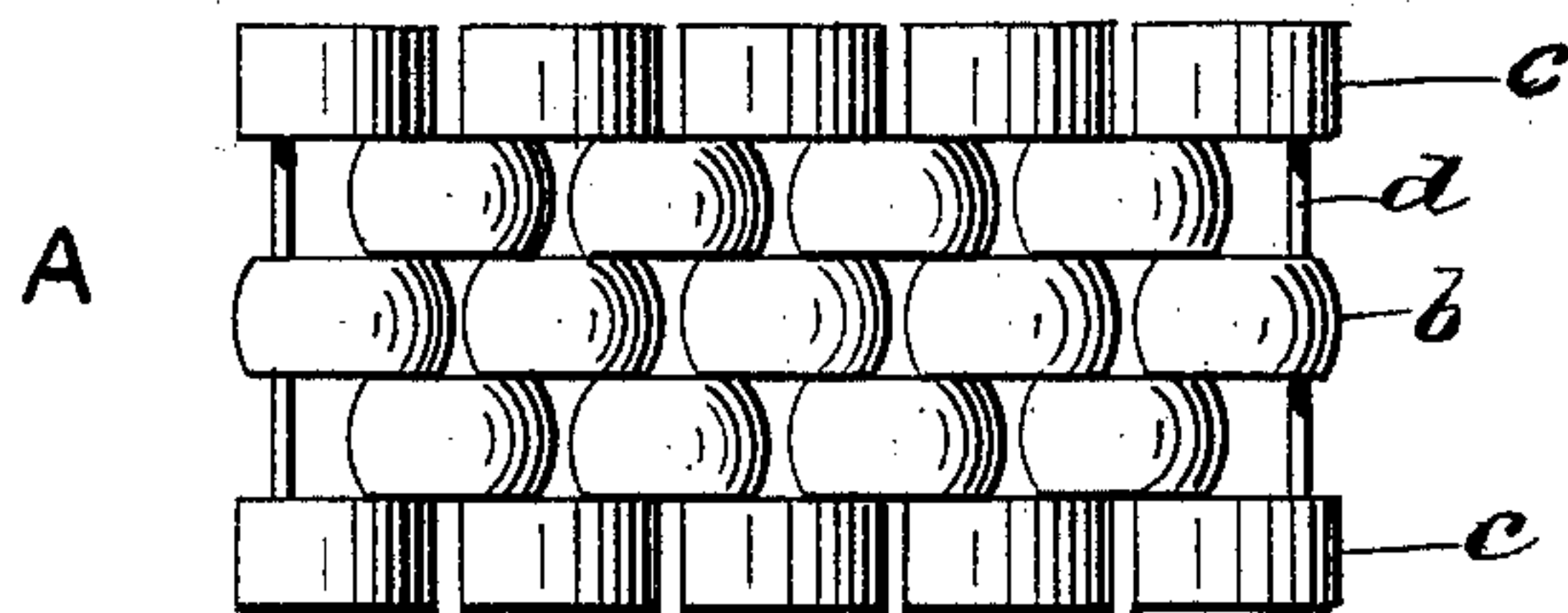


FIG. 1.

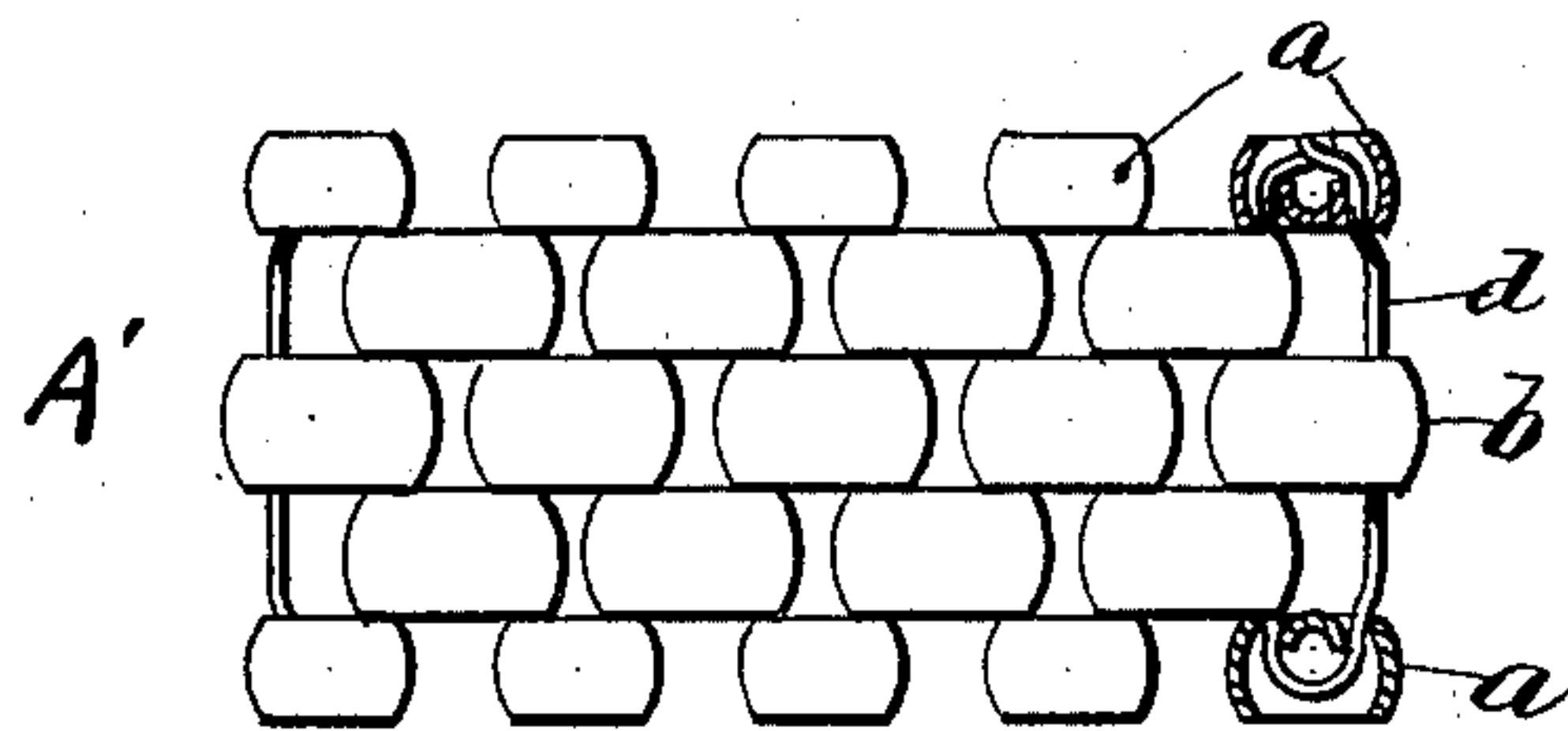


FIG. 2.

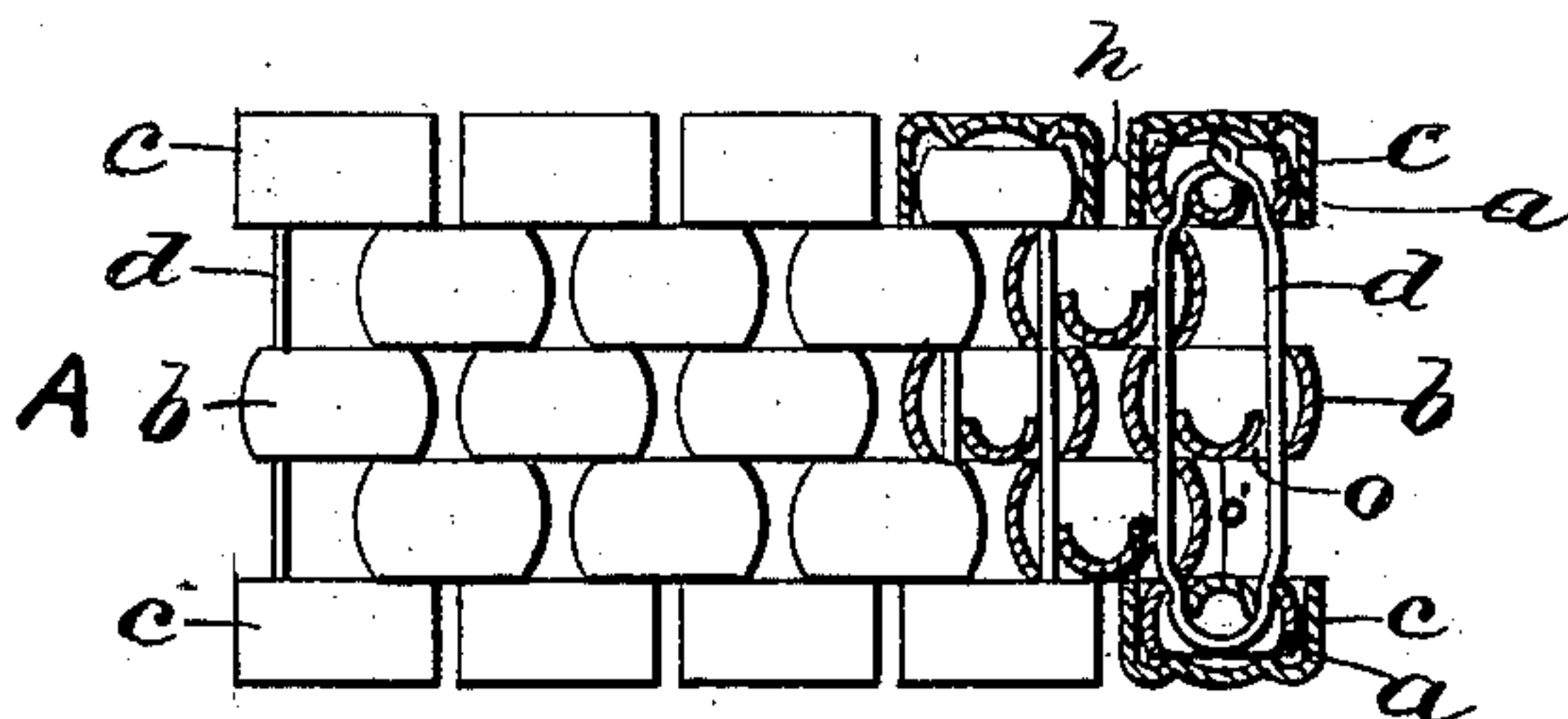


FIG. 3.



FIG. 4.

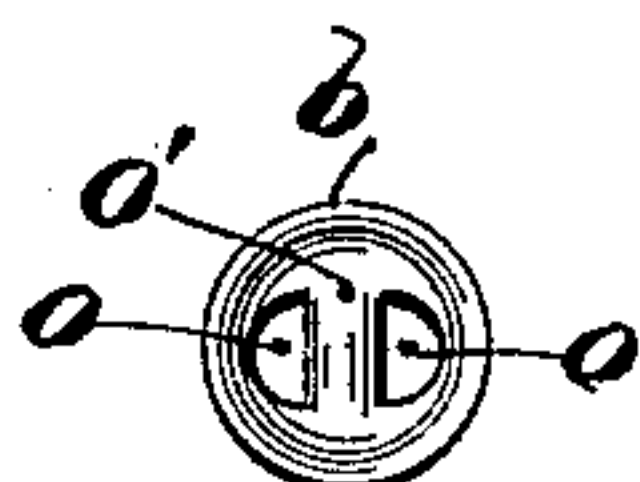


FIG. 5.



FIG. 6.

WITNESSES,

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# UNITED STATES PATENT OFFICE.

HENRY A. CHURCH, OF PROVIDENCE, RHODE ISLAND.

## ROLLER-CHAIN.

SPECIFICATION forming part of Letters Patent No. 296,925, dated April 15, 1884.

Application filed January 2, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY A. CHURCH, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Roller-Chains; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My present invention relates to "roller-chains," so called; and it consists of an improved method of constructing and arranging the edge units thereof; and it further consists, in combination therewith, of certain caps or covers adapted to be secured thereto, all as will be fully hereinafter set forth.

In the accompanying sheet of drawings, Figure 1 represents in elevation a portion of a roller-chain, each edge unit being covered with a cap. Fig. 2 represents the chain without the caps, showing two of the opposite edge units in central section, and embodying my method of arranging them. Fig. 3 represents a view similar to Fig. 1, but showing a portion of the chain in section. Fig. 4 represents in section a cylindrical cap having a closed end and parallel sides, adapted to be secured to the edge units. Fig. 5 represents an inverted plan view of one of the intermediate units. Fig. 6 represents in central section a cap having a closed convex-shaped end and parallel sides, also adapted to cover the edge units, all the views being enlarged.

The object of my invention is to produce a chain which shall have all its edge units covered and protected by means of caps, thereby preventing dust, &c., from entering the hollow units, and at the same time presenting a more finished and desirable article of ornament.

My present invention is an improvement upon my United States Letters Patent Nos. 230,745 and 289,618, of August 3, 1880, and December 4, 1883, respectively.

The following is a detailed description of my invention:

A represents a portion of a roller-chain, composed of intermediate units, *b*, and binding-wires *d*, as shown in the patents above

referred to. My chain, further, is composed of edge units, *a*, smaller than the intermediates, and caps *c*. (See Figs. 1 and 3.) Said units *a*, however, are each provided with openings *o o*, separated by the bar *o'*, (see Fig. 5,) similar to the intermediate units, *b*.

A', Fig. 2, represents a roller-chain having edge units, *a*, smaller than the intermediate units, but otherwise having the same general appearance. The bottom row of units *a* are placed with their open ends facing outward, as shown, thereby allowing the end of the binding-wires *d* to be fully retained therein. All the other units of the chain are placed opposed to said bottom row, thereby adapting the units of the top row to receive the twisted or clinched ends of the binding-wires *d*, all as fully shown.

*c* represents metallic caps or covers, adapted to be secured to both rows of edge units, *a*, as before described. Said caps have a cylindrical form and a closed end, *h' h''*, with parallel sides *h*.

It is apparent that a roller-chain provided with edge units, *a*, arranged as shown, and covered with caps *c*, forms a very durable chain, and at the same time presents a smooth and finished appearance.

I do not claim, broadly, herewith a roller-chain adapted to have its edge units capped or covered; but

What I do claim, and desire to secure by Letters Patent, is—

1. The roller-chain A, herein described, consisting of the intermediate units, *b*, edge units, *a*, and binding-wires *d*, each of said units being provided with the two openings *o* through the end thereof, in combination with the metallic caps *c*, each having a closed end and parallel sides adapted to receive and be secured to said edge units, the whole arranged substantially as shown and set forth.

2. In a roller-chain, the combination, substantially as shown and set forth, of intermediate units, *b*, binding-wires *d*, edge units, *a*, smaller than the intermediate units, and caps *c*, the latter adapted to be secured to the edge units.

In testimony whereof I have affixed my signature in presence of two witnesses.

HENRY A. CHURCH.

Witnesses:

WILLIAM HALKYARD,  
WM. R. DUTEMPLE.