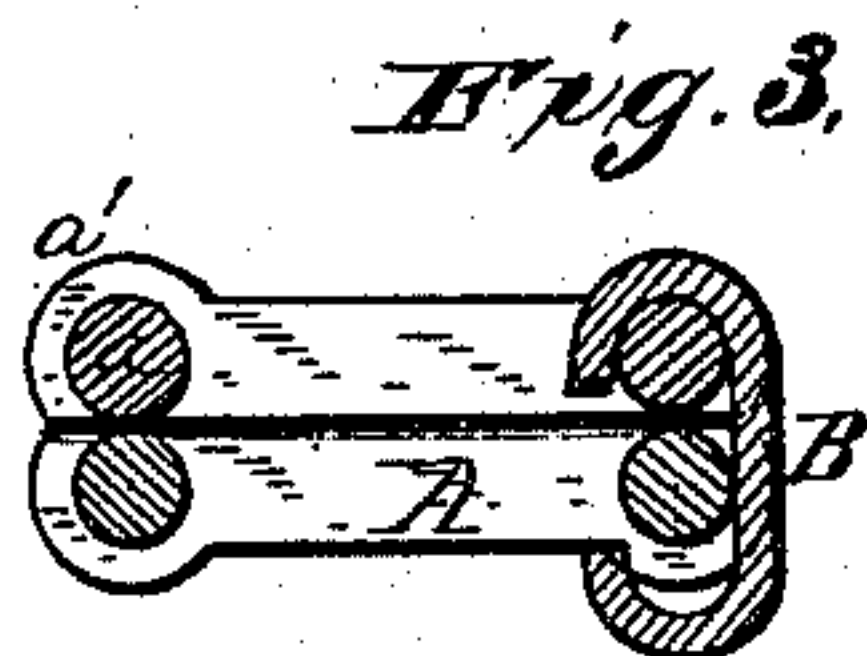
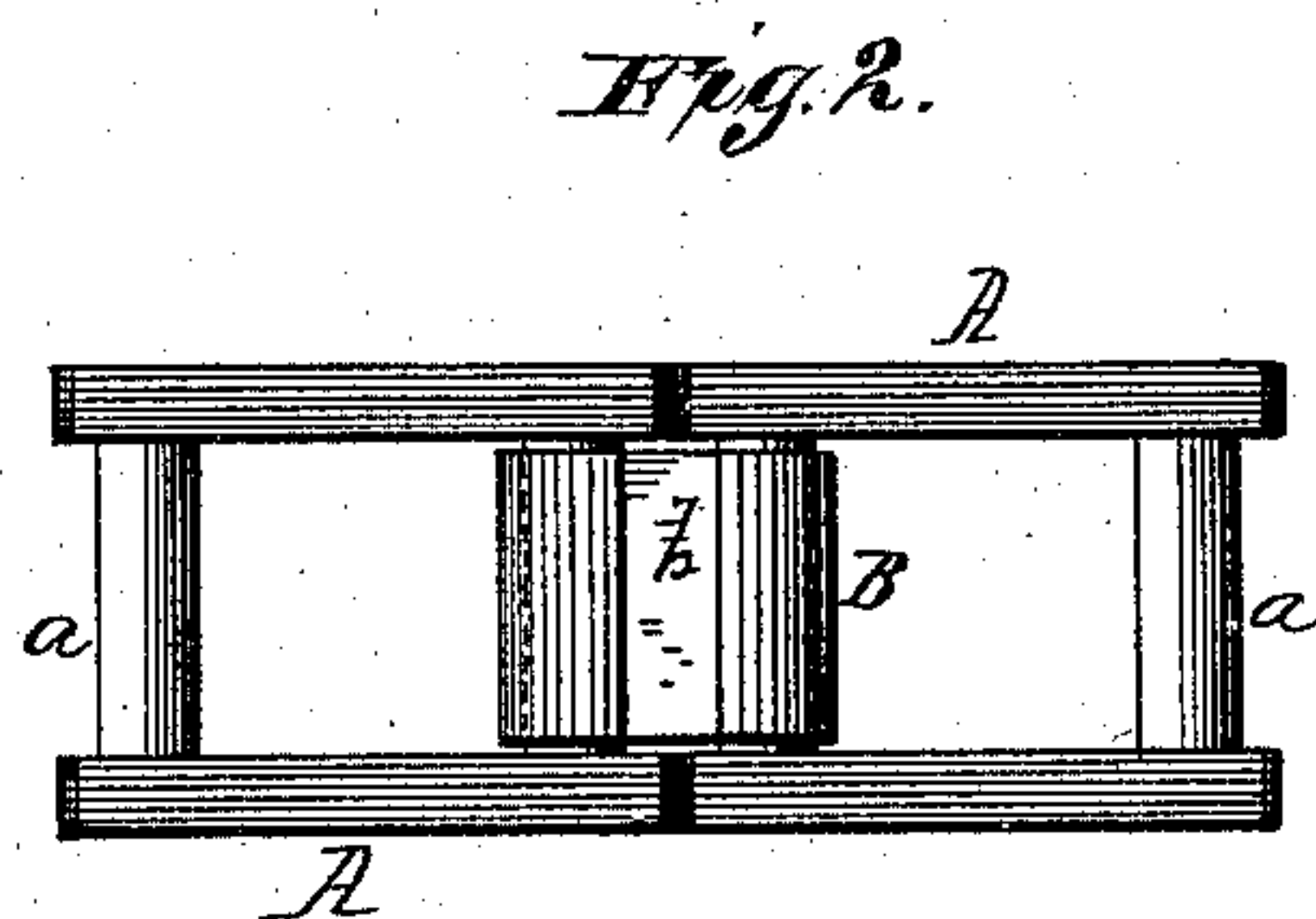
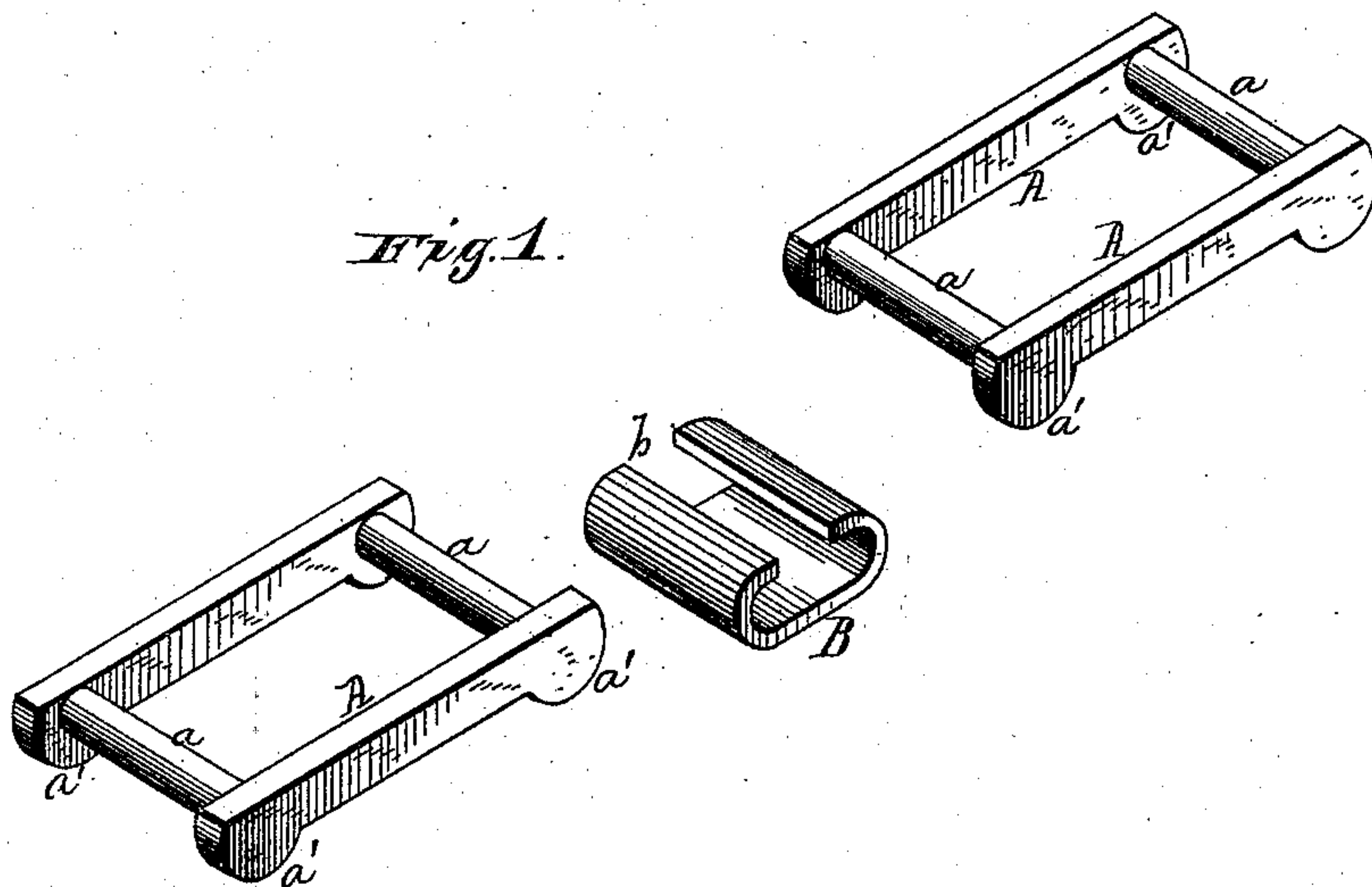


C. WHEELER, Jr.  
Driving-Chains.

No. 214,735.

Patented April 22, 1879.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

CYRENUS WHEELER, JR., OF AUBURN, NEW YORK.

## IMPROVEMENT IN DRIVING-CHAINS.

Specification forming part of Letters Patent No. **214,735**, dated April 22, 1879; application filed March 7, 1879.

*To all whom it may concern:*

Be it known that I, CYRENUS WHEELER, Jr., of Auburn, county of Cayuga, State of New York, have invented certain new and useful Improvements in Driving-Chains, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view, showing two of the links and the connecting-hook detached. Fig. 2 is a plan view of the same parts united to form the chain, and Fig. 3 represents a longitudinal section of the same parts folded into proper position for either uniting them or effecting their separation.

Similar letters of reference denote corresponding parts in all the figures.

The invention relates to a novel construction of the links and open connecting-hooks of a driving-chain, adapting them to be readily connected and disconnected, for adding to or diminishing the length of the chain, as desired, while at the same time obviating all danger of the cramping or kinking of the chain, and preventing accidental displacement of the links under any position they can assume when the chain is in operation, as hereinafter explained.

In the drawings two of the open links of a driving-chain and double hook for connecting the same are represented. The links are rectangular in form, with round end bars, *a*, adapting them to turn freely in bearings in the hook B, the side bars, A, being made in the rectangular form shown; or they, also, may be rounded, being made of a diameter about equal to that of the end bars. These side bars are made to project slightly beyond the end bars, and have their ends expanded in width or enlarged, forming hubs *a'*, concentric with the side bars, except on one side, where they terminate in the plane of one side of the side bar, A, which is also in or about in the same plane with the same side of the end bar, *a*, as shown.

The connecting-hooks B are short double hooks, of a width conforming to the distance between the side bars, A A, so as to fit snugly between them, with an opening, *b*, between the hooks of sufficient width to permit the ready insertion or withdrawal of the end bars, *a*, of the links A.

The distance between the bearing parts of the two hooks is about equal to the combined

diameters of the two hubs *a' a'* on the adjacent ends of the two links, so that said hubs shall roll in contact, or nearly in contact, with each other, as shown in Fig. 2.

By this arrangement it will be seen that the end bars can be inserted into or withdrawn from the hook only when the flat sides of the side bars, or those sides on which the hubs are cut away, are brought together, as shown in Fig. 3—a position which they cannot assume when the chain is under tension or in operation.

In this position, with one of the end bars, *a*, under its hook, the end bar of the adjacent link can be inserted or withdrawn at pleasure; but when the links are separated, bringing the hubs *a'* into action, the end bars are drawn under their respective hooks, and accidental displacement is effectually prevented.

The hook-piece B is made of uniform width, just sufficient to fill in and work easily between the side bars, and being of a length just sufficient to cause the hubs or expanded ends *a* of the side bars, A, to roll easily upon each other, as explained, and being held in that relation by the hooks, cramping or kinking of the links is effectually obviated.

The parts of the link may be struck up in dies, the form of the parts, and especially that of the hook, being such as to specially adapt them to be formed by this process; but they can be cast with equal facility, if preferred.

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

1. The links of a driving-chain, provided with hub-shaped enlargements on the ends, adapted to act as cams for retaining the end bars in the open hooks, substantially as described.
2. The links provided with hub-shaped enlargements or cams projecting at the ends and on one side only, to permit the insertion of the end bars into and their withdrawal from the open hooks, as described.
3. The combination of the links, having the hubs or cam-shaped enlargements at the ends or angles, with open double hooks, substantially as and for the purpose described.

C. WHEELER, JR.

Witnesses:

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