

J. L. POPE.
Detachable Drive Chain.
No. 237,593. Patented Feb. 8, 1881.

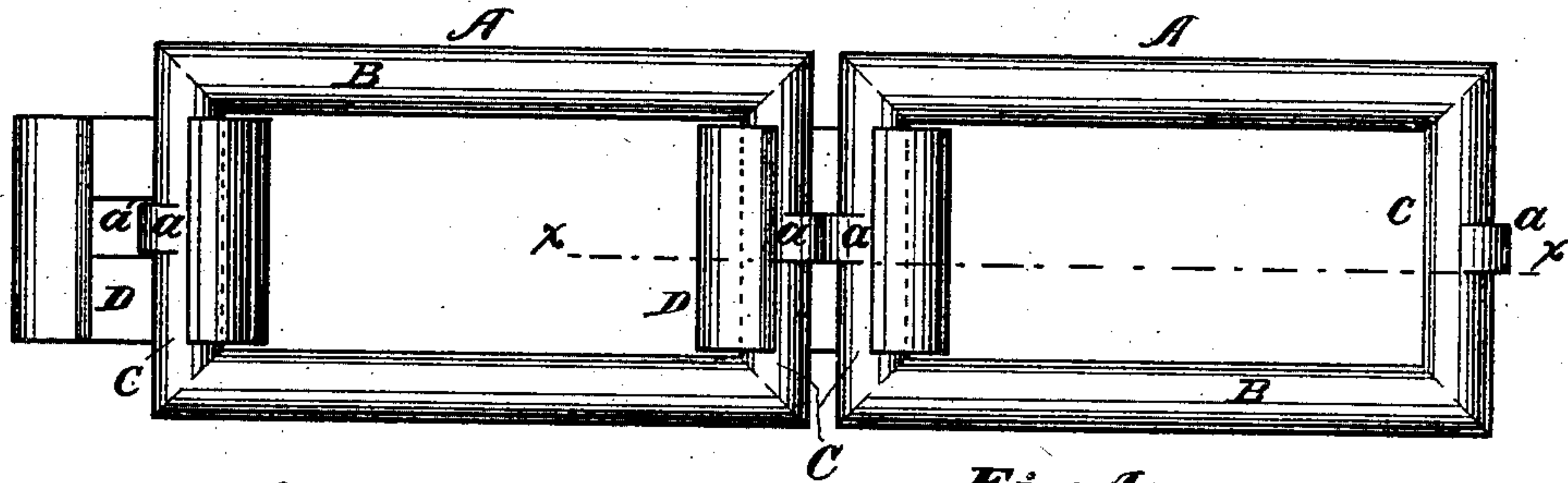


Fig. 1

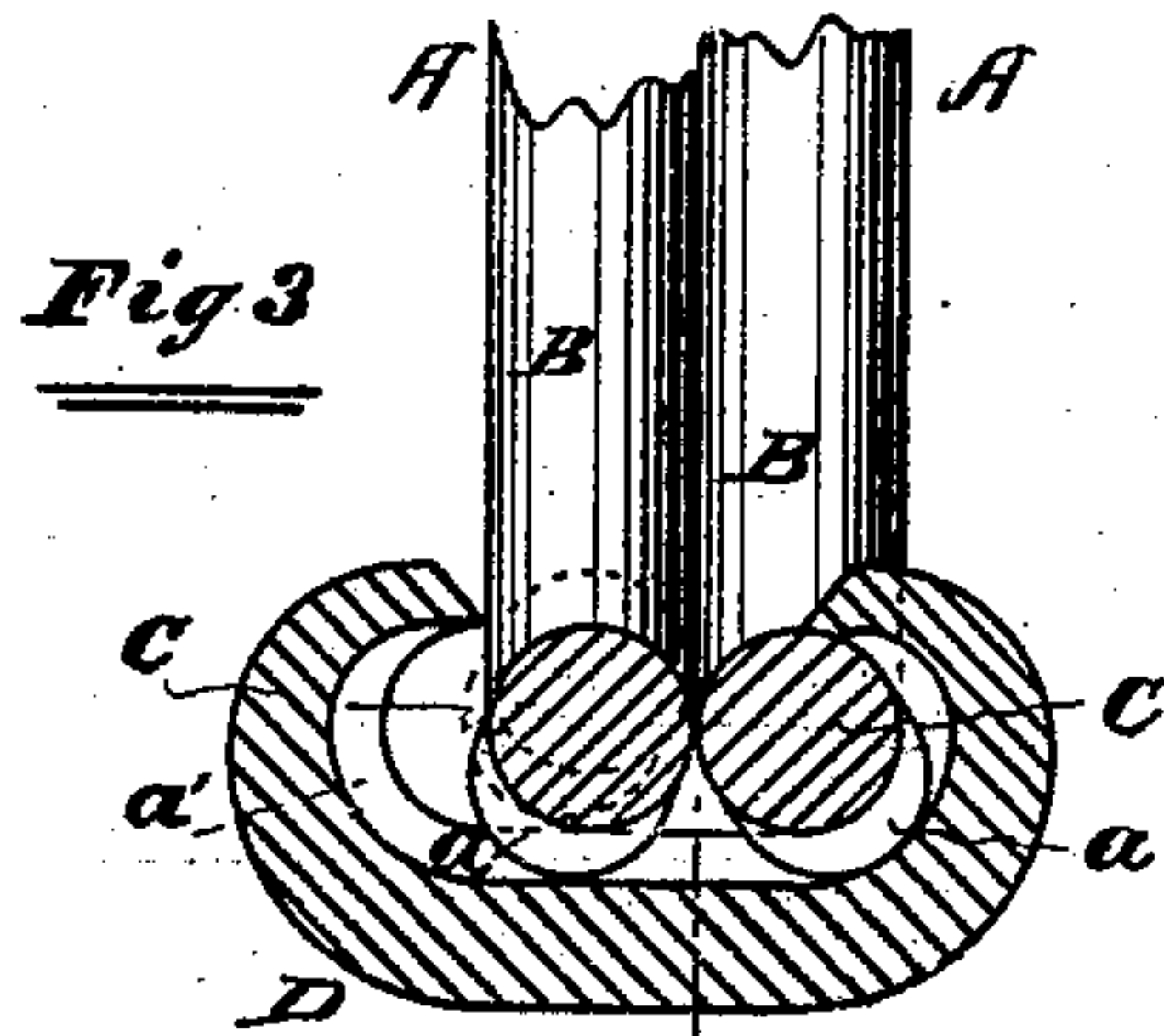


Fig. 3

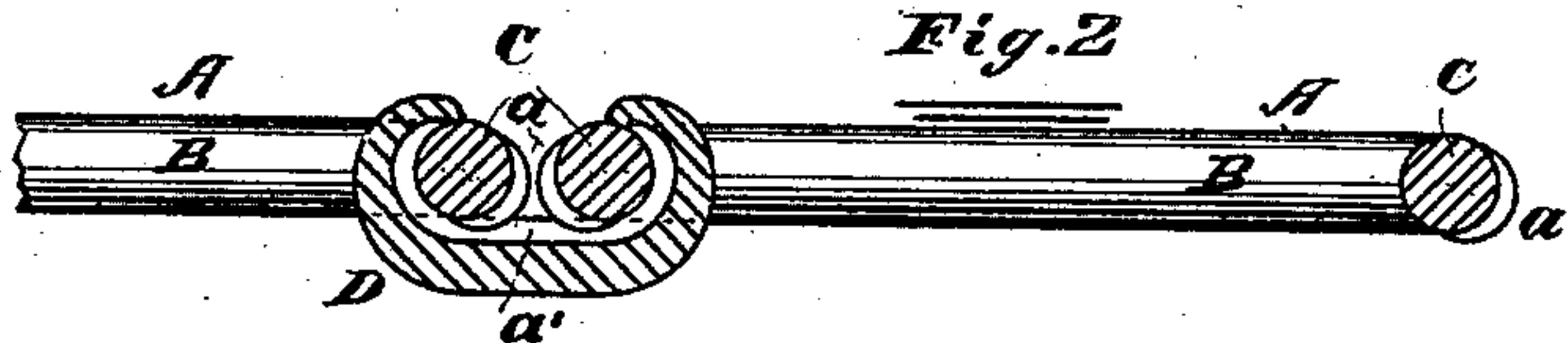


Fig. 2

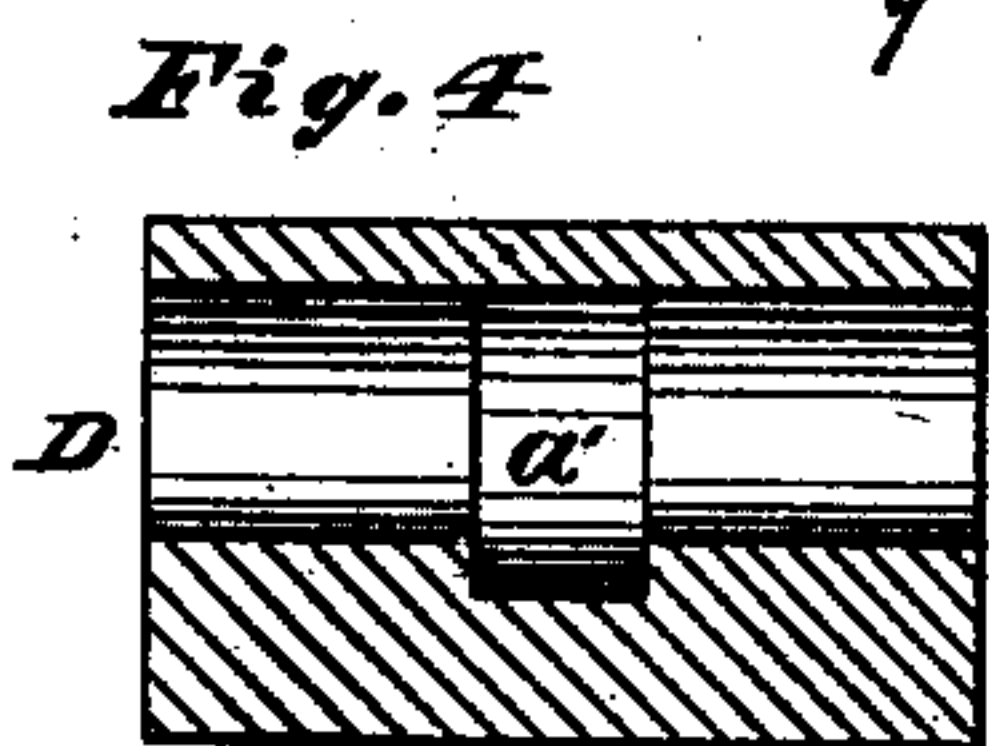


Fig. 4

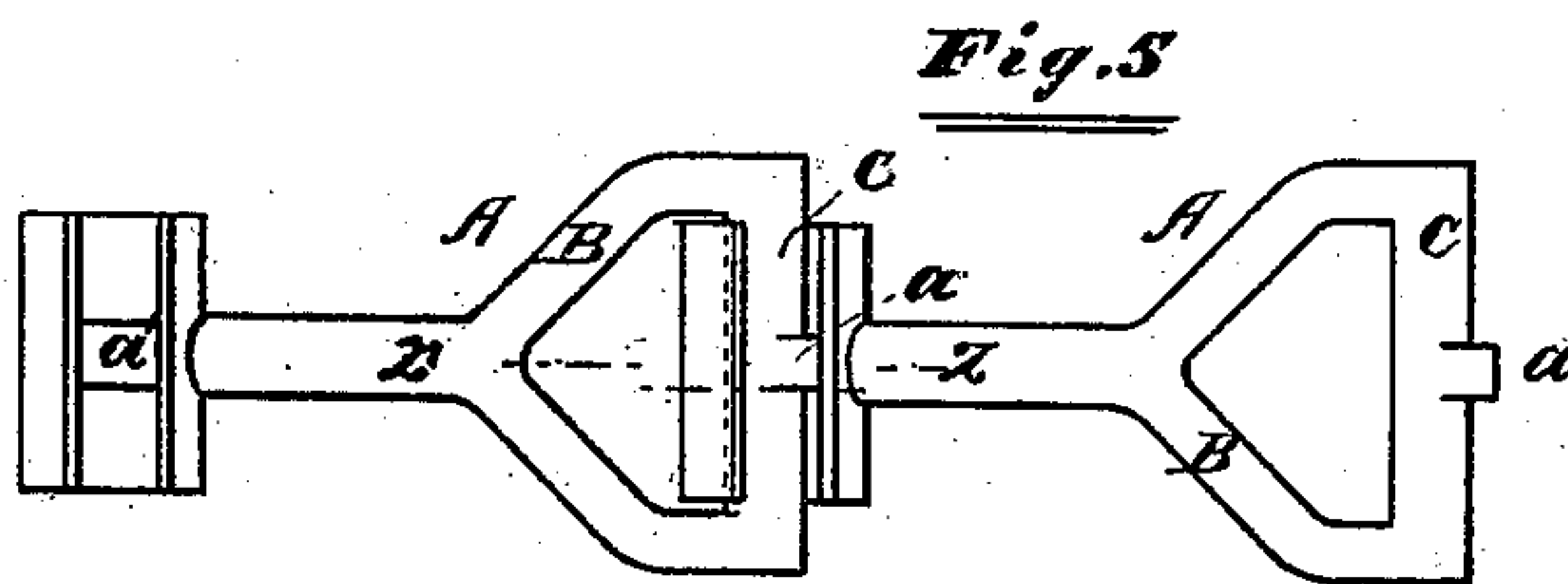


Fig. 5

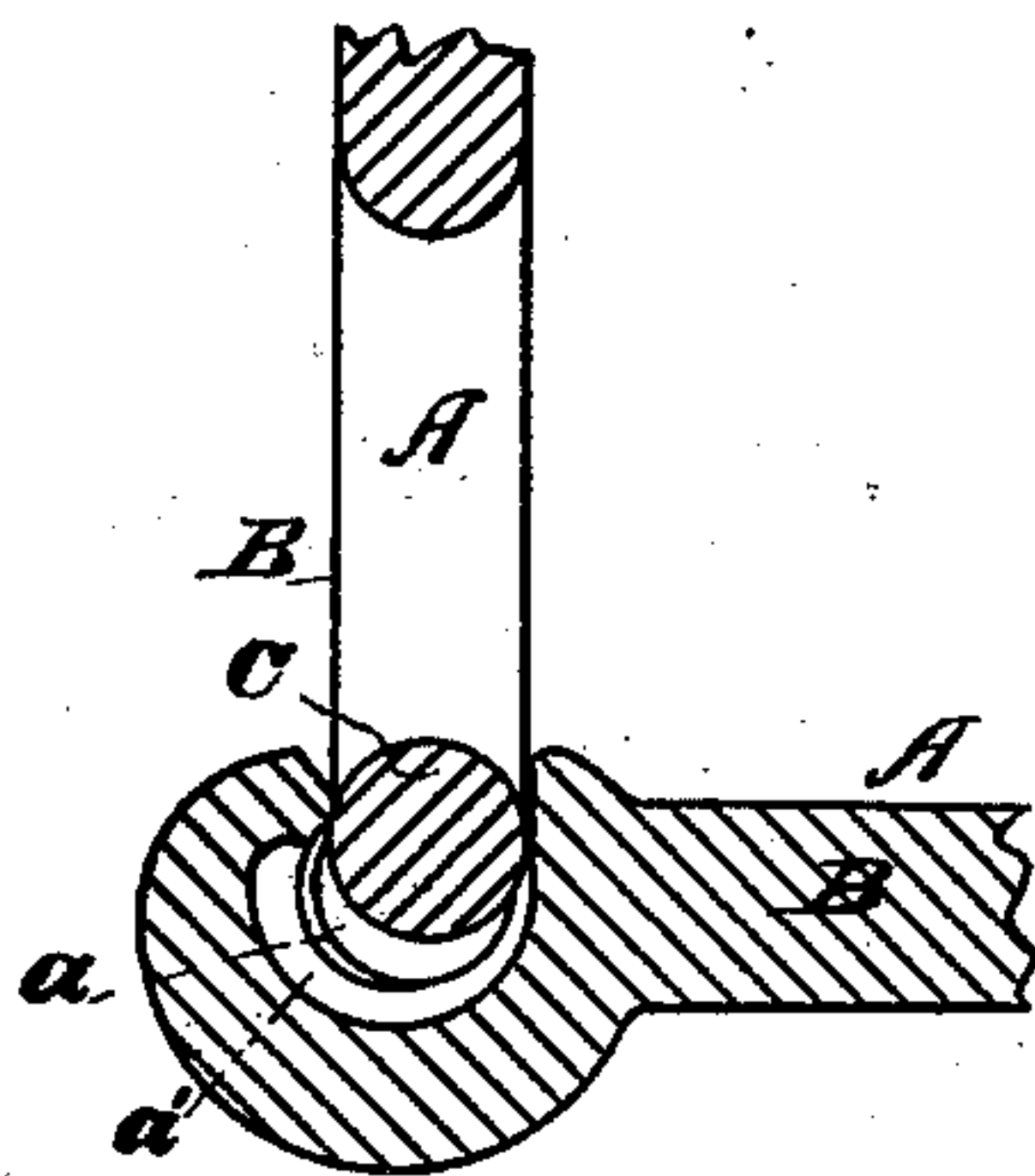


Fig. 7

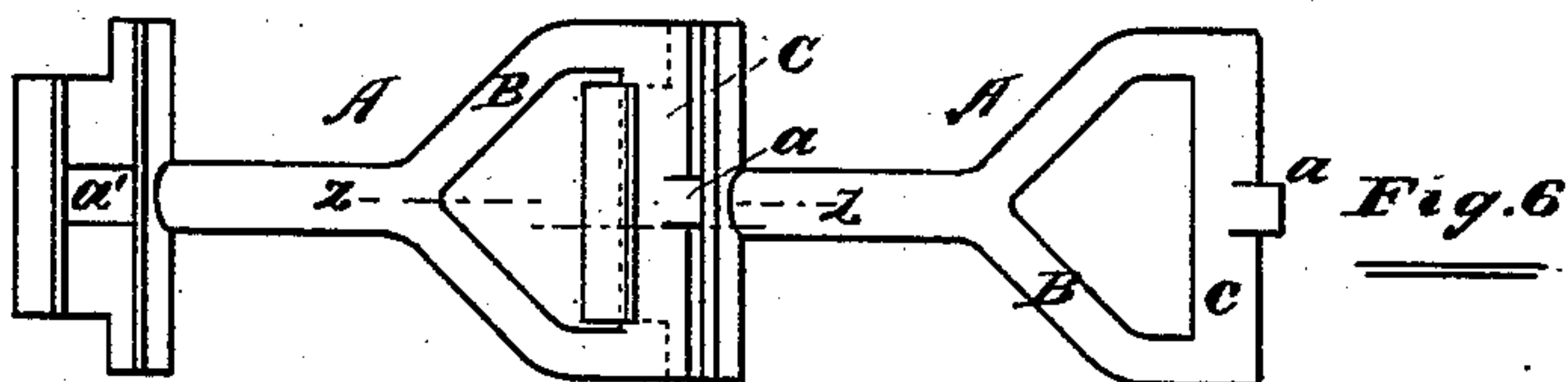


Fig. 6

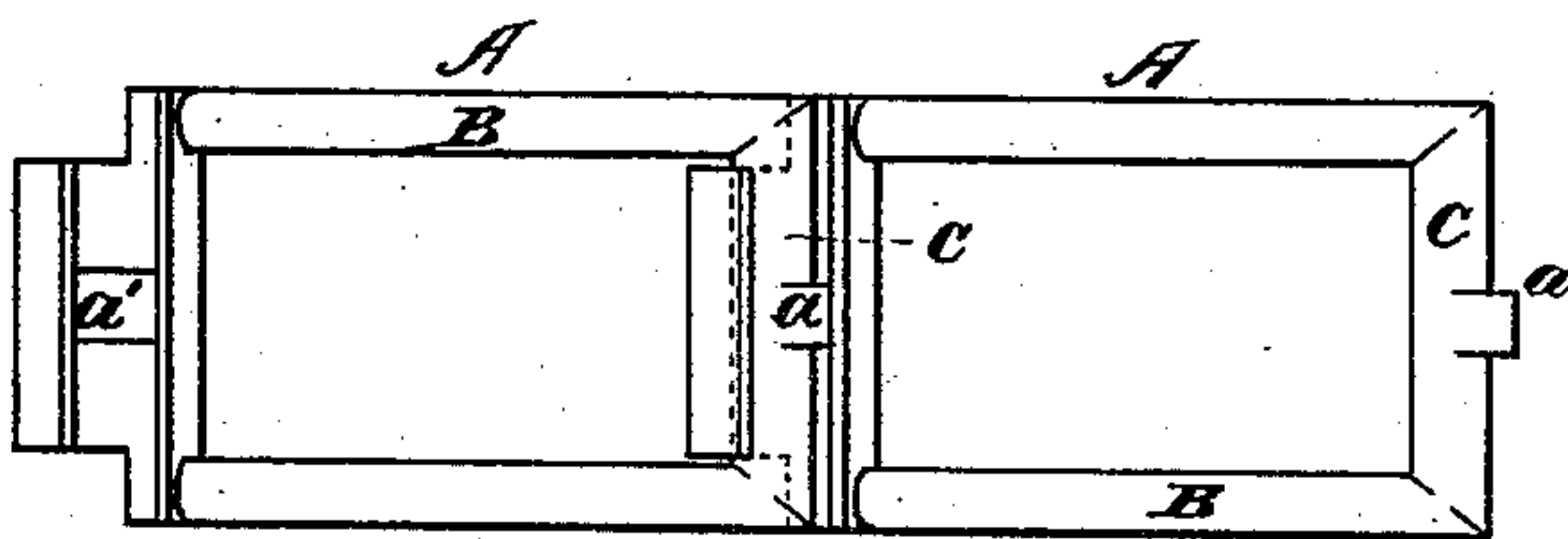


Fig. 8

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UNITED STATES PATENT OFFICE.

JOHN L. POPE, OF CLEVELAND, OHIO.

DETACHABLE DRIVE-CHAIN.

SPECIFICATION forming part of Letters Patent No. 237,593, dated February 8, 1881.

Application filed May 16, 1879.

To all whom it may concern:

Be it known that I, JOHN L. POPE, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful
5 Improvements in Drive-Chains, of which the following, in connection with the accompanying drawings, is a specification.

Figure 1 is a plan view of a portion of a drive-chain embodying my invention; Fig. 2,
10 a section in the plane of the line xx of Fig. 1; Fig. 3, a like view enlarged, showing the links arranged in contact with each other longitudinally; Fig. 4, a section of the coupler, taken at y of Fig. 3; Figs. 5, 6, and 8 are plan
15 views representing modifications in the form of the links and couplers, and Fig. 7 is a section taken in the plane of line zz of Figs. 5 and 6.

Like letters of reference indicate like parts.

20 The object of my invention is to improve the construction and operation of detachable drive-chains; and to that end it consists in certain novel features relating to the means employed for coupling the links detachably, substantially as hereinafter set forth.

In the drawings, $A A$ represent the links. These links may be either rectangular open links, as shown in Figs. 1 and 8, or they may be of the form indicated in Figs. 5 and 6. B
30 B are the side bars, and $C C$ the end bars. I deem it best, on some accounts, to employ a separable coupler with these links, and D is such a one, and consists of a metallic plate having its ends turned to partly inclose the
35 contiguous end bars of the links as they are arranged together to form the chain, as shown in Figs. 1, 2, and 3, the end bars being cylindrical to produce an easy and smooth articulation, and the couplers being correspondingly
40 formed. The mouth or open part of the coupler is made too narrow or contracted to either receive or release both contiguous end bars at the same time; but both may be either received or released or arranged in or detached from
45 the coupler one after the other, in the manner hereinafter described, the interior of the coupler being large enough to receive both end bars at the same time and to allow them to be quite loose therein, as is clearly represented
50 in Figs. 2 and 3. The mouth or open part of the coupler is sufficiently large, however, to

admit of the links being coupled and uncoupled with facility at will.

To admit of easy uncoupling at will, and also to prevent accidental uncoupling, I make
55 on each end bar an eccentric rib or cam-projection, a , so arranged on the bars that their points of greatest projection will be in contact when the links lie horizontally or in the same plane, as shown in Figs. 1 and 2; and to prevent
60 these eccentrics from causing the bars to become crowded or jammed together in the coupler, and from impeding free articulation, I make in the coupler a groove, a' , to receive
65 the said eccentrics, so that the end bars or links may turn freely in the couplers while the chain is in use.

It will be perceived from reference to Figs. 1, 2, and 3 that the links may be turned to
70 any extent in the couplers without danger of being detached therefrom, except when they assume the position shown in Fig. 3, and that when placed in that position, as they may be when the chain is slack, they may easily be
75 removed from the coupler, one after the other, by being moved laterally therefrom, being first raised sufficiently to free the cams $a a$ from the grooves $a' a'$. As the links are not liable to assume the position shown in Fig. 2, and still
80 less liable to move laterally, if from any unusual cause they should assume that position, it may be regarded as a double security to make the mouth of the couplers sufficiently
85 narrow to prevent the links from passing vertically through the mouth until after one link has been removed laterally.

It will also be perceived that the construction and operation of the links will be substantially the same as now described if the coupler be rigidly attached to one end bar, as indicated in Figs. 5, 6, 7, and 8, in which case
90 one of the cams $a a$ may be omitted, and the couplers serve as such as well as end bars.

It will also be perceived that when the links are turned vertically in the couplers and the
95 cams are released from the grooves the cams stand so inclined as to prevent the links from being raised out of the coupler, but allowing them to be moved out laterally.

I am aware that the end bars of detachable
100 drive-chain links have heretofore been made eccentric; but the eccentric form or construc-

tion, so far as I am aware, has been such as to admit of the separation of the links without a lateral movement of one with relation to the other, and such lateral movement is rendered impossible by the construction of eccentric heretofore in use, and I do not therefore here intend to claim such, my chief object being, by means of the construction and arrangement of parts herein shown and described, to hinder accidental uncoupling by making uncoupling impossible until a combination of movements is made, including a lateral movement, substantially as hereinbefore described.

I am also aware that detachable links for drive-chains have heretofore been so constructed as to be capable of being detached from each other only after being moved laterally one with relation to the other, and such a construction is shown and described in Letters Patent No. 154,594, issued to William Dana Ewart, and dated September 1, 1874, and I do not therefore here intend to claim the construction therein shown and described; neither do I intend to claim, broadly, a drive-chain wherein the links are capable of being moved laterally with relation to each other for uncoupling, except as the means employed to

admit of that result may be within the scope of this invention.

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

The drive-chain links, each having on an end bar thereof the eccentric rib or cam *a*, projecting inclinedly, as shown and described, toward the contiguous link when the links are arranged and coupled for work, in combination with the coupler *D*, having a straight-edged mouth, and having the groove *a'* sunken into the interior face of its body at a point between the edges of the mouth, the said groove being arranged to receive and release the said rib or cam as the links are raised vertically in the couplers, and to admit of the lateral movement of the vertically-arranged links, and the mouth of the coupler being sufficiently contracted to prevent uncoupling, except by such lateral movement, substantially as and for the purposes specified.

JOHN L. POPE.

Witnesses:

OTTO ARNOLD,
D. J. BARNES.