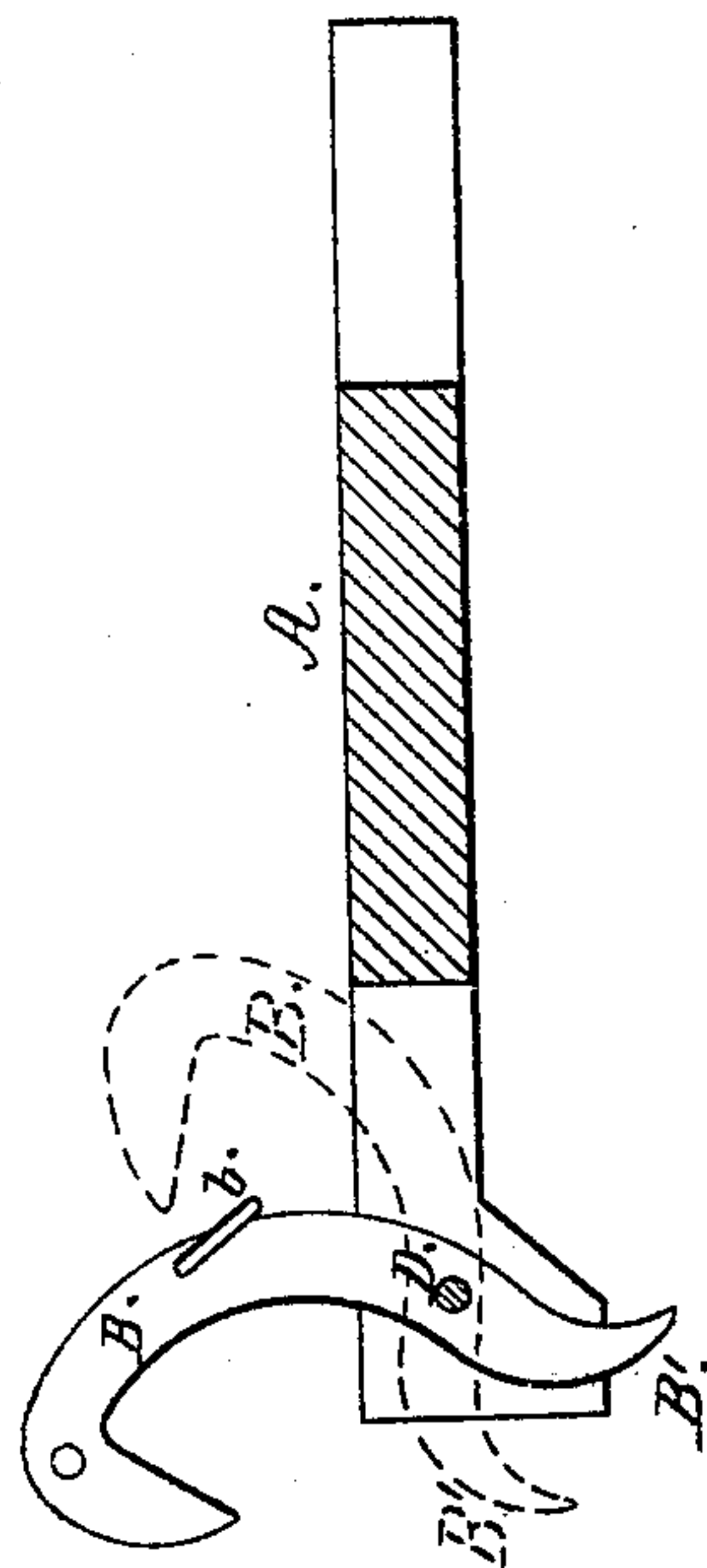
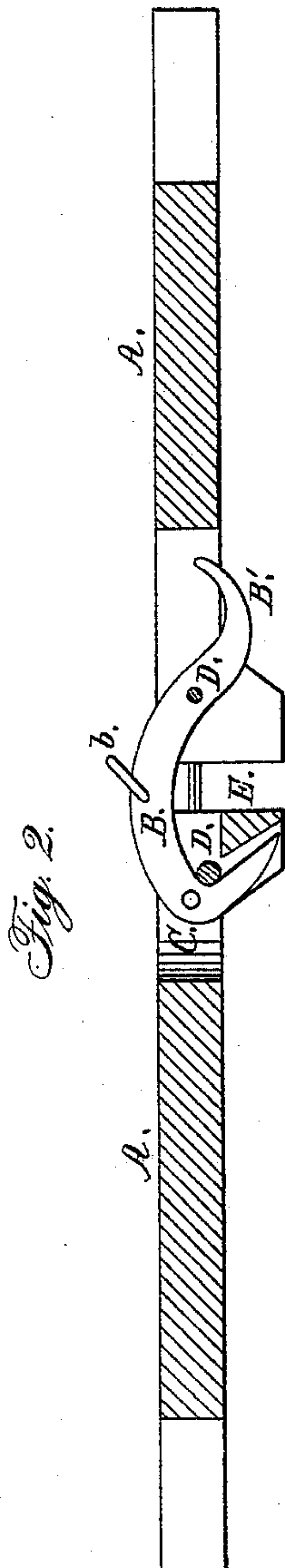
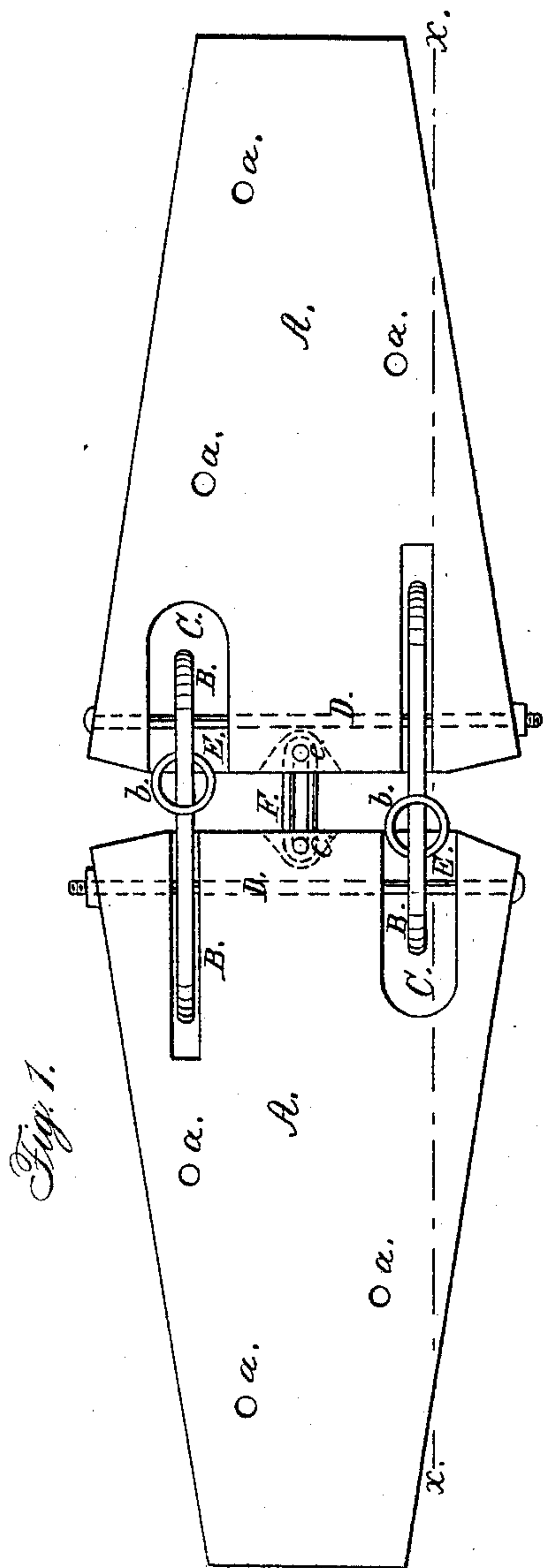


LACY & WATKINS.

Car Coupling.

No. 50,010.

Patented Sept. 19. 1865.



Witnesses:

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# UNITED STATES PATENT OFFICE.

JOHN LACEY AND GEORGE WATKINS, OF BRISTOL, WISCONSIN.

## IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **50,010**, dated September 19, 1865; antedated September 10, 1865.

*To all whom it may concern:*

Be it known that we, JOHN LACEY and GEORGE WATKINS, of Bristol, in the county of Kenosha and State of Wisconsin, have invented a new and useful Improvement in Car-Couplings; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and the letters and figures marked thereon, which form part of this specification.

In said drawings, Figure 1 represents a plan or top view of our invention; Fig. 2 is a side view thereof in section at the line *x* in Fig. 1; and Fig. 3 is a similar sectional view of one of the draw-heads, representing the connecting or coupling hook in the different positions.

In the different figures similar letters of reference denote corresponding parts of our invention.

To enable those skilled in the art to understand how to construct and use our invention, we will now proceed to describe the same with particularity, reference being had to the aforesaid drawings.

A A represent the abutting draw-heads of two contiguous cars, each being provided with the holes *a a a*, so that, if desired, the tapering rear ends of said draw-heads may be inserted within the ordinary draw-heads, and firmly bolted therein by passing bolts through the said holes *a a a*, thus enabling our new and improved coupling to be used without the expense of removing the old draw-heads and attaching new ones in their place. At the front end of each of these said draw-heads they are provided with two vertical slots, as shown in the drawings, one of said slots in each draw-head being wider than the other, and arranged alternately, so that the wide slot in one draw-head is opposite the corresponding narrow slot in the other. In each of said narrow slots there is arranged the coupling-hook B, supported upon the iron or steel rod D, so as to have a free vertical movement in said slot about the support D. These hooks B are so constructed and arranged with respect to the draw-heads that when the hooks are thrown back to the position shown by the dotted lines in Fig. 3 the tail of the hook (marked B') projects in front of the draw-head, as therein shown; but when the hook is brought up to

the position shown in the full lines in said Fig. 3 and the tail of the hook is brought down flush with the face of the draw-head, then the center of gravity of the hook is carried forward of the support D, and of its own weight it falls forward to the position shown in Fig. 2 and the cars are securely coupled together.

*b b* are small rings attached to the hooks B B, for the purpose of attaching a chain to the same, which may extend to the top of the cars or elsewhere, to enable the uncoupling to be effected from any desired point and avoid the danger of going between the cars for that purpose.

Having now described the construction of our invention, we will proceed to describe the mode of its operation and some of the advantages of the same.

When it is desired to couple together the cars, the hooks in both draw-heads are drawn back to the position shown by the dotted lines in Fig. 3, when the cars are run together, and the blocks E, extending across the lower part of the slot C, as shown, strike against the projecting tails B' of the hooks and throw the hooks up to the position shown in the full lines in Fig. 3, when they fall forward, in the manner hereinbefore described, and hook upon rods D, and the cars are thus automatically and securely coupled or fastened together, and may be uncoupled by means of the chains aforesaid, so that the whole labor of coupling and uncoupling the cars can be effected without any necessity of going between the cars, and the danger of such a necessity wholly avoided.

It will be observed that the slots C, into which the hooks B fall, are made wide enough to provide for all lateral motions of the cars and to allow them to move freely around curves in the road, while from the free play which the hooks have upon the supports D, and also where the head of the hook rests upon the said rod in the slots C, a free vertical movement is also permitted.

It will further be observed that at the center of the face of each draw-head there are suitable recesses to receive the ordinary coupling-link, F, so that draw-heads of our improved construction may be readily coupled with the ordinary coupling, when required, by employing the link F and the pins *c c*.

By having two hooks arranged upon the op-



posite draw-heads, so that the pressure of the same and their motion in rising up must be in opposite directions, almost perfect security is obtained against accidental uncoupling of the cars.

Having described the construction and operation of our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The hook B, arranged in respect to the draw-head A, and operating substantially as and for the purposes set forth and shown.

2. The employment of two hooks, B B, com-

bined and arranged with the draw-heads A A, substantially as and for the purpose delineated and set forth.

3. The combination and arrangement of the draw-heads A A, the hooks B B, slots C, rods D, and blocks E, as and for the purposes shown and described.

JOHN LACEY.

GEORGE WATKINS.

Witnesses:

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