

(No Model.)

R. CLARK.
CAR COUPLING.

No. 360,657.

Patented Apr. 5, 1887.

Fig. 1.

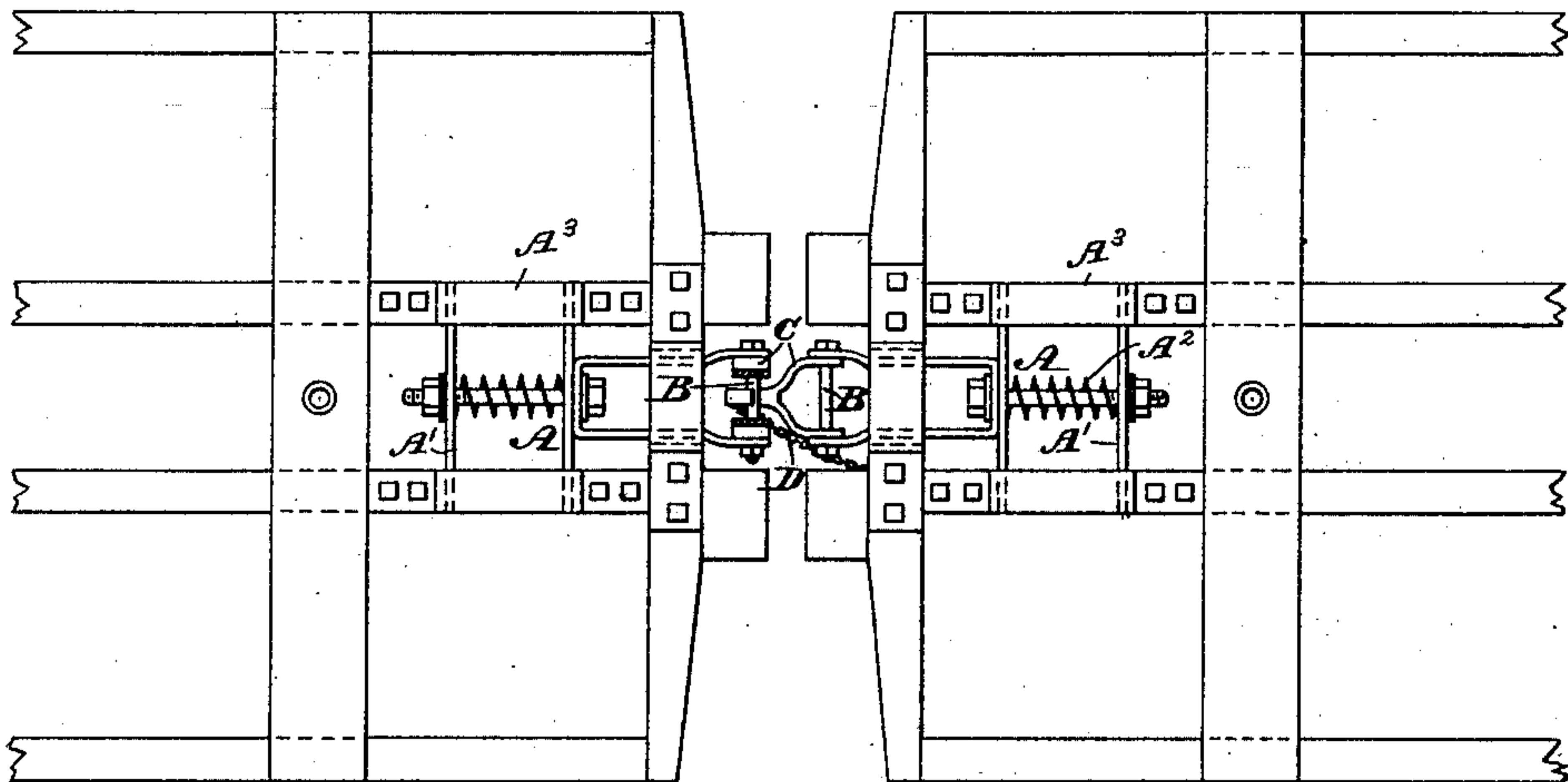


Fig. 2.

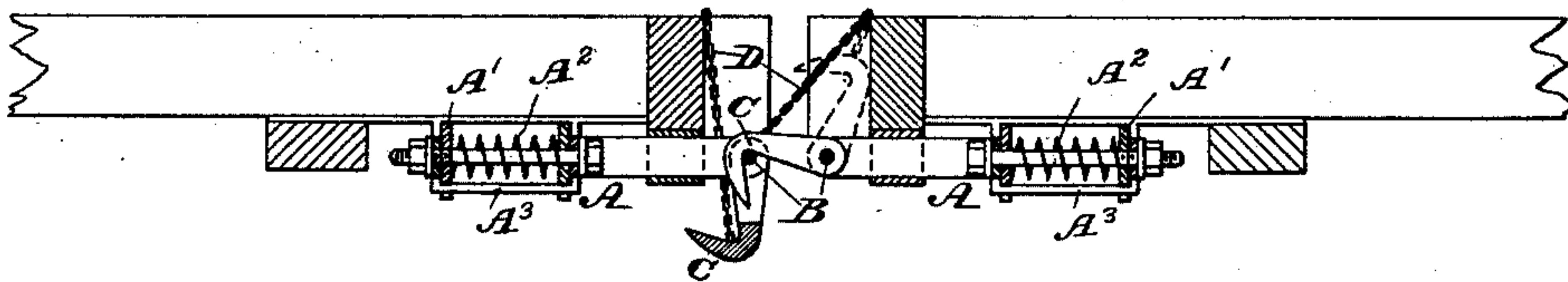
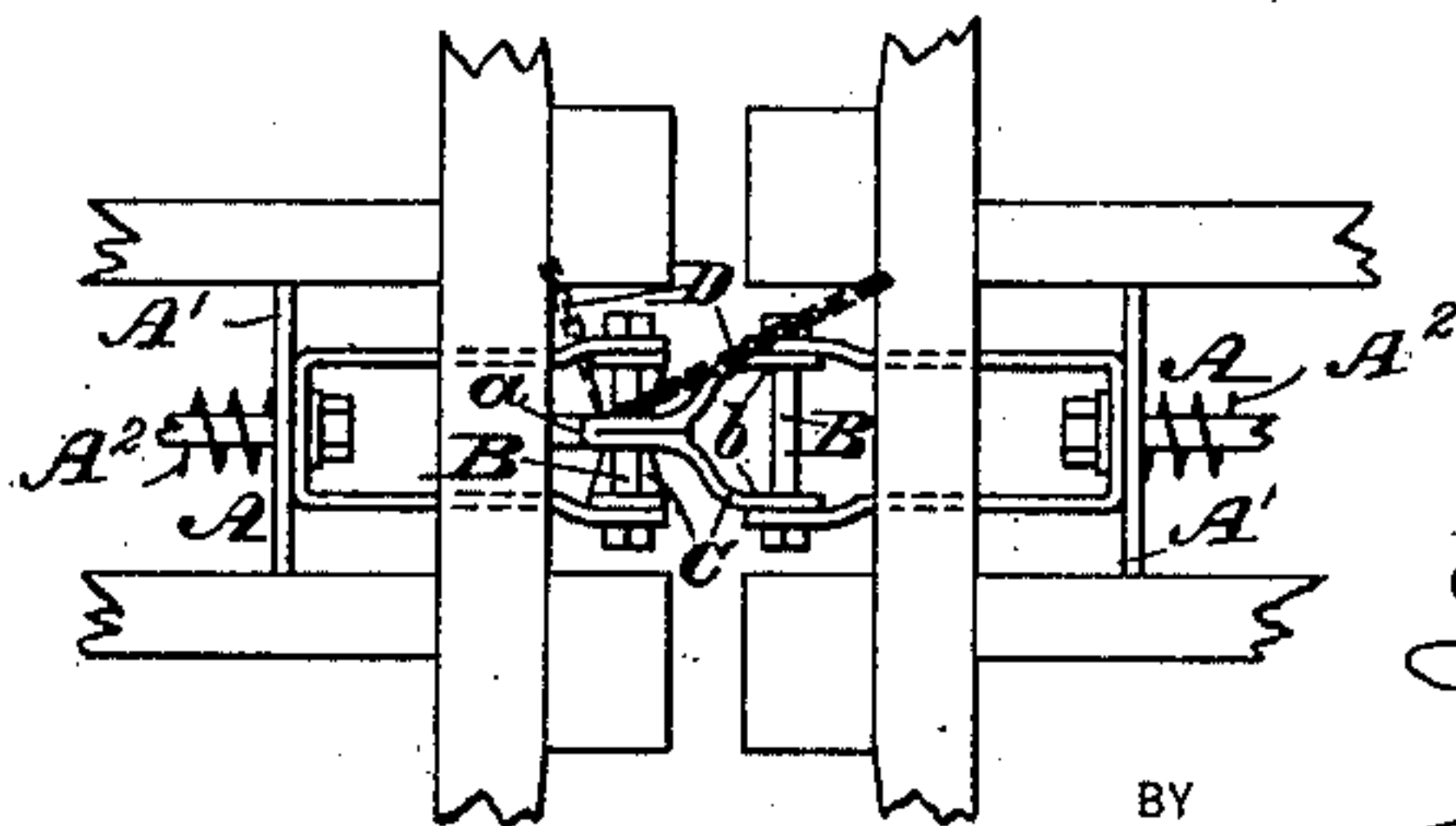


Fig. 3.



WITNESSES:

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 360,657, dated April 5, 1887.

Application filed December 4, 1886. Serial No. 220,648. (No model.)

To all whom it may concern:

Be it known that I, RICHARD CLARK, a citizen of the United States, residing in the city and county of Camden, State of New Jersey, have invented a new and useful Improvement in Car-Couplings, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a bottom plan view of a car-coupling embodying my invention, one of the hooks thereof being in horizontal section. Fig. 2 represents a longitudinal vertical section thereof. Fig. 3 represents a top view thereof.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of an automatic car-coupling consisting of a draw-head to which is pivoted a coupling-hook, the axis whereof forms means for the engagement of the hook of the opposite car, the said hook being formed as hereinafter fully set forth.

Referring to the drawings, A represents the draw-head of a car, which is formed of a piece of metal bent into U shape, the crown or bend having an opening to receive the bolt by which said draw-head is fastened in position, said bolt being freely connected with a sliding cross-head, A', between the front and rear bars of which a spring, A², is interposed, said bars being supported on a hanger, A³, attached to the truck.

The draw-head A is of such length that it does not project beyond the bumpers, whereby when the cars come together the draw-heads do not strike each other, and they are consequently prevented from being fractured or broken by said action of the cars. It will be seen that, owing to this construction of the draw-head of a piece of bent metal, it possesses strength, combined with lightness, ease of manufacture, and convenience of application and removal.

Firmly secured to the outer end of the draw-head is a cross-bar, B, which extends transversely, and has mounted on it between the arms of the draw-head a swinging hook, C, which is of such length that it may reach the cross-bar of the draw-head of the opposite car and engage therewith. The outer bar of the cross-head yields when there is inward press-

ure or strain on the coupling-hooks, and the inner bar yields when there is draft on the coupling. Connected with the hook is a chain, D, which may be attached to a rotary shaft or lever, or other device, whereby it may be raised for purpose of uncoupling cars and lowered when the cars are to be coupled.

When the cars are uncoupled, the hooks hang freely from the cross-bars B, and when they are to be coupled one of the hooks is raised and its back rested against the front cross-beam of the platform, as shown by the dotted lines, Fig. 2. The cars now approach, and when the bumpers or platforms strike each other the jarring causes the hook to leave its place of rest and drop on the opposite cross-bars, the nose of the hook being in such position that it fully engages with said cross-bar when the cars are started, and thus the coupling is effected, as will be most plainly seen in Fig. 2.

In order to uncouple the cars, the hook is raised so as to clear the cross-bar, when it may be thrown up to the position of the dotted lines, as before stated, or allowed to hang, as desired.

The hook may be coupled with the ordinary coupling-link, the latter being held by the coupling-pin in the opposite draw-head. In this case the nose of the hook engages with the outer bend of said link, and when the cars come close together the hook rides on said bend and lowers between the sides of the link without disengagement, so that as the coupling is again straightened out by the separation of the cars the nose of the hook remains connected with the link.

The coupling-hook may be made of any suitable metal, but for superior strength is formed of a single piece of wrought metal cut into shape and bent at the nose portion *a*, and spread, forming the forks *b* or axial portion, the latter resting close adjacent to the inner sides of the draw-head.

If desired, the hook may be held in elevated position by the chain D or by hand, and lowered so as to drop on and engage with the opposite cross-bar or coupling-link.

I am aware that it is not new to form a car-coupling having a pivoted hook adapted to drop, and thereby secure the cars; but I am

not aware that the said hook has been constructed so as to engage with the bar on which the hook of the other draw-head is pivoted; neither am I aware that the hook employed in the said coupling device has been formed of wrought metal, bent, forming a nose, and spread axially, as herein described, the axial portion being forked and pivoted to said cross-bar within the side limbs of the U-shaped draw-head, thereby reliably securing the said hook in position on said cross-bar.

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

1. A car-coupling having a draw-head formed of a bent piece of metal with a cross-bar attached to the side limbs thereof, and provided with a hook having a forked axial portion pivoted to the cross-bar within said limbs, substantially as described.

2. A car-coupling consisting of a draw-head formed of a bent piece of metal having a cross-

bar attached to the side limbs thereof, and a hook with forked axial portion pivoted to the cross-bar within said limbs, either or both of said hooks being adapted to engage the cross-bar of the opposite draw-head, substantially as described.

3. A car-coupling consisting of a draw-head formed of a bent piece of metal, a spring cross-head, a bolt connected with said cross-head and the crown of the draw-head, a cross-bar secured to the side limbs of the draw-head, and a hook with flaring inner ends hung on the cross-bar between said side limbs, the parts being combined and operating substantially as described.

RICHARD ^{his} X CLARK.
mark

Witnesses:

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