

(No Model.)

L. T. BACKUS.
CAR COUPLING.

No. 534,310.

Patented Feb. 19, 1895.

Fig. 1

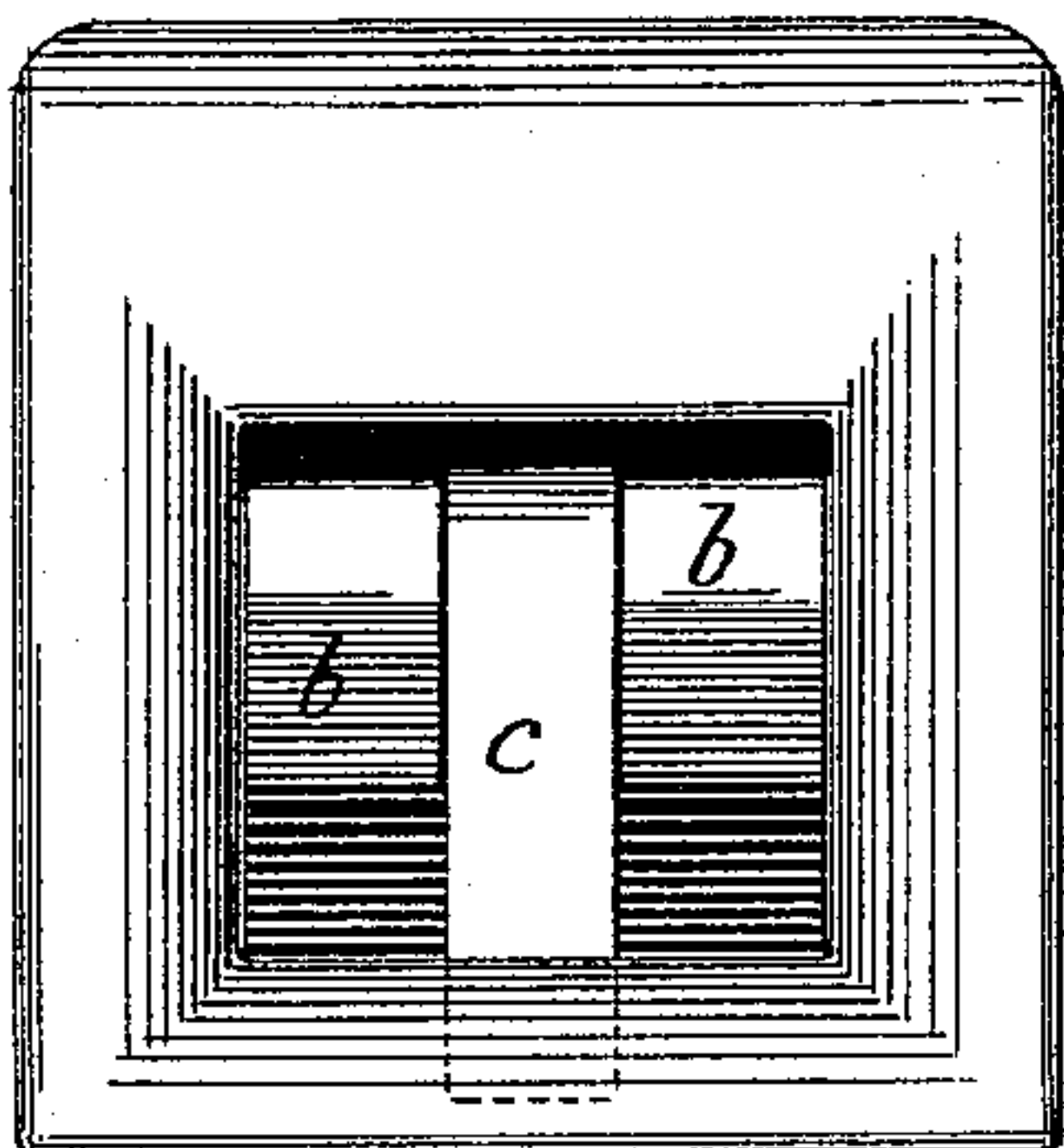


Fig. 2

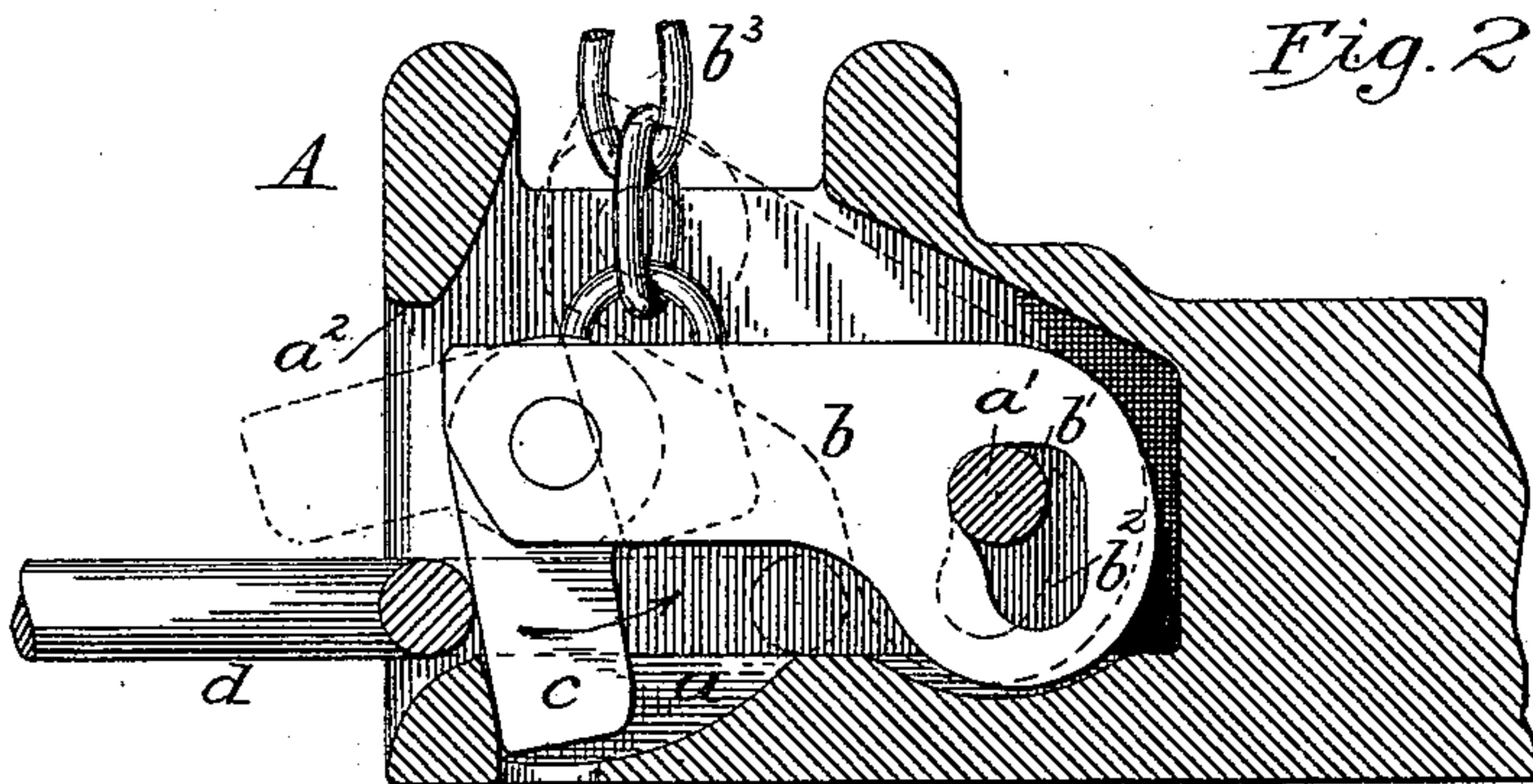
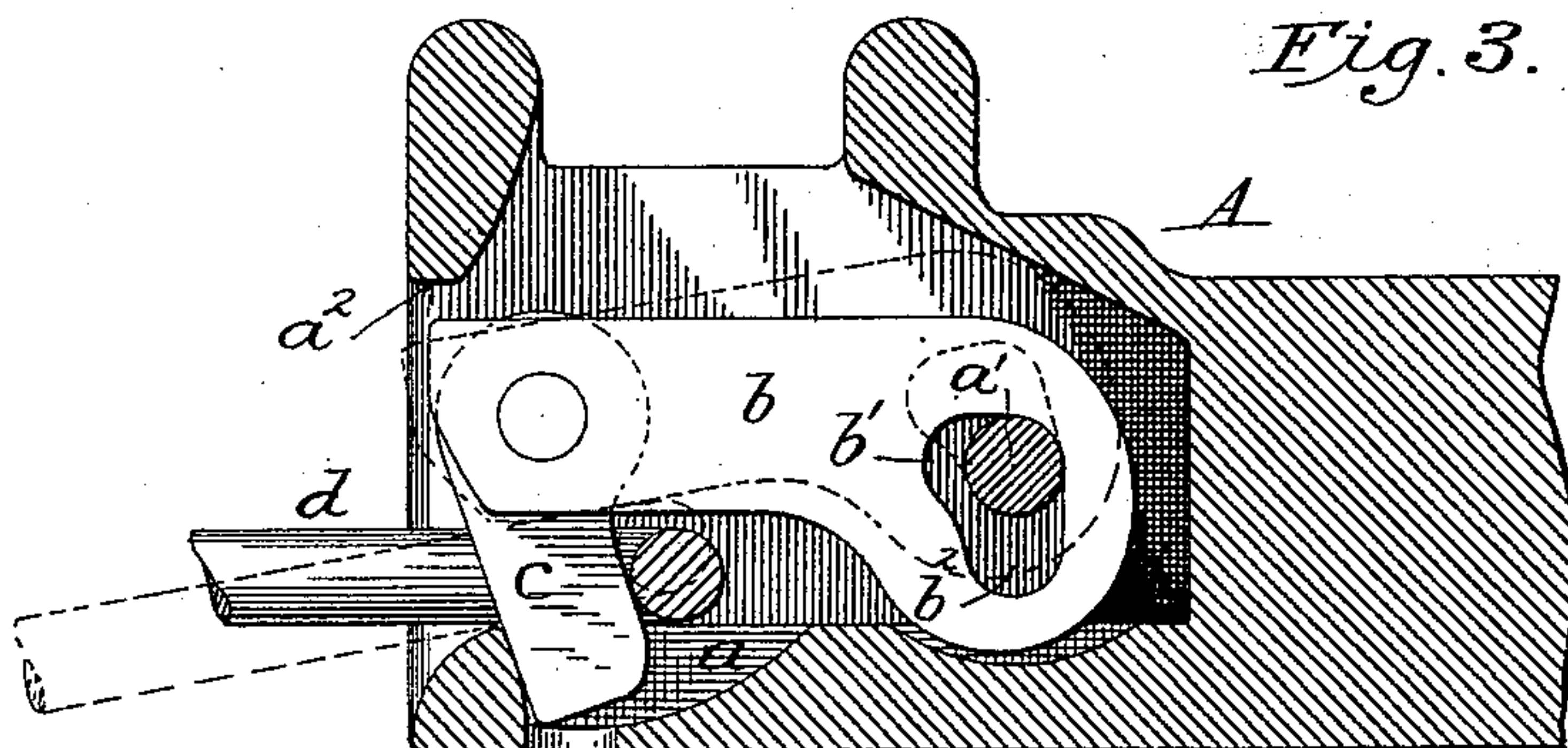


Fig. 3.



Witnesses
Sidney P. Hollingsworth
Percy C. Bowen

Inventor
LAWRENCE T. BACKUS,
by *Arthur W. Harrison*
Attorney

UNITED STATES PATENT OFFICE.

LAWRENCE T. BACKUS, OF ATCHISON, KANSAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 534,310, dated February 19, 1895.

Application filed March 12, 1894. Serial No. 503,350. (No model.)

To all whom it may concern:

Be it known that I, LAWRENCE T. BACKUS, of Atchison, in the county of Atchison and State of Kansas, have invented new and useful Improvements in Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to car couplings, and has particular reference to that class of such devices in which the ordinary link is employed with means for automatically locking or coupling it.

The object of my invention is to produce a coupler of this type which will either hold a link in perfect position to present its other end to the next car, or will take the end of a link presented to it and automatically lock it in coupled position.

To this end, my invention consists in the construction and combination of parts as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a front elevation of my improved coupler. Fig. 2 is a vertical longitudinal section of Fig. 1, showing, in full lines, the positions of the parts when about to receive a link, and the dotted lines indicating the positions when the locking device is lifted by the entering link. Fig. 3 is a section similar to Fig. 2, illustrating the positions when two cars of different platform heights are coupled.

Similar reference-letters indicate like parts in the several views.

A represents the drawhead, of suitable construction, having a front opening, preferably with a beveled entrance thereto, and an opening in the top for the connection of the releasing chain or equivalent device. The interior of the drawhead has a flat horizontal bottom, provided with a recess a having an abrupt front wall and beveled therefrom rearwardly to permit the pin to swing as hereinafter described.

Across the rear of the interior of the drawhead is secured a pin a' , and on this pin is mounted the rear end of the lever b , the slot of the latter through which the pin a' passes being of an inverted L shape. In other words,

the opening in the lever is composed of a short horizontal slot b' communicating at its rear end with a short vertical slot b^2 , the object being to permit the lever to have a slight longitudinal or vertical movement on its fulcrum pin a' for the purposes hereinafter described.

To the front end of the lever b is loosely pivoted so as to hang therefrom, the coupling pin c , and to the upper side of the front end of said lever is secured a chain b^3 , or equivalent device, by means of which the lever and the pin c may be lifted to uncouple.

When the lever is in its most forward position, the rear end of the slot b' engaging the fixed pin a' , the front end of the lever is under a shoulder a^2 of the drawhead, as indicated in full lines in Fig. 3, and the lever and coupling pin, therefore, cannot be lifted; and as long as two cars are coupled and the link exerting a pull on the pin, accidental uncoupling is impossible.

When the end of the link d shown in full lines in Fig. 2 is presented to the coupler, it strikes the pin c and moves it backward and swings it upward, at the same time pushing the lever back on pin a' far enough so that the front end of the lever may clear the shoulder a^2 . The continued insertion of the link, riding along the now inclined front side of pin c , lifts the pin and the lever until the end of said link passes the end of said pin, and then the latter swings back and drops into the link, the lever falling on the link. As soon as a pulling strain is exerted, the lever is pulled forward to the position shown in the full lines in Fig. 1, the lower end of the pin c taking a purchase against the abrupt front wall of the recess a . If now the other end of the link should be left free, the link will remain in a horizontal position, owing to the weight of the lever pressing its locked end down on the flat bottom of the interior of the drawhead, the under side of the lever being parallel with said flat bottom.

The object of the short vertical slot b^2 in the lever is to permit the rear end of said lever to rise slightly, as indicated in dotted lines in Fig. 3, when the coupler of the next car is at a lower level, and thus avoid bending the link or straining the parts of the coupler.

Preferably the direction of pull on the releasing chain b^3 will be slightly rearward so as to shift the lever backward readily to enable its front end to clear the shoulder a^2 .

5 Having now described my invention, what I claim is—

1. In a car coupling, the combination with the drawhead having the recess a , the pin a' and the shoulder a^2 , of the lever b having the
10 angular slot b' , b^2 through which said pin extends, and the coupling pin c loosely pivoted to the free end of the lever, substantially as described.

2. In a car coupling, the combination with
15 the drawhead having a flat interior bottom and the recess a , the pin a' and the shoulder

a^2 , of the lever b having the angular slot b' b^2 through which said pin extends, said lever being free to rest directly on a link inserted there-under, and the coupling pin c loosely
20 pivoted to the free end of the lever, substantially as described, whereby the weight of the lever will normally hold a link in horizontal position but will permit the free end of the link to be forced below said position. 25

In testimony whereof I affix my signature in presence of two subscribing witnesses.

L. T. BACKUS.

Witnesses:

A. W. HARRISON,
CHAS. W. BLACKWOOD.