A. E. BRADBURY & V. B. BARSTOW.

Car-Coupling.

No. 207,341. Patented Aug. 27, 1878.

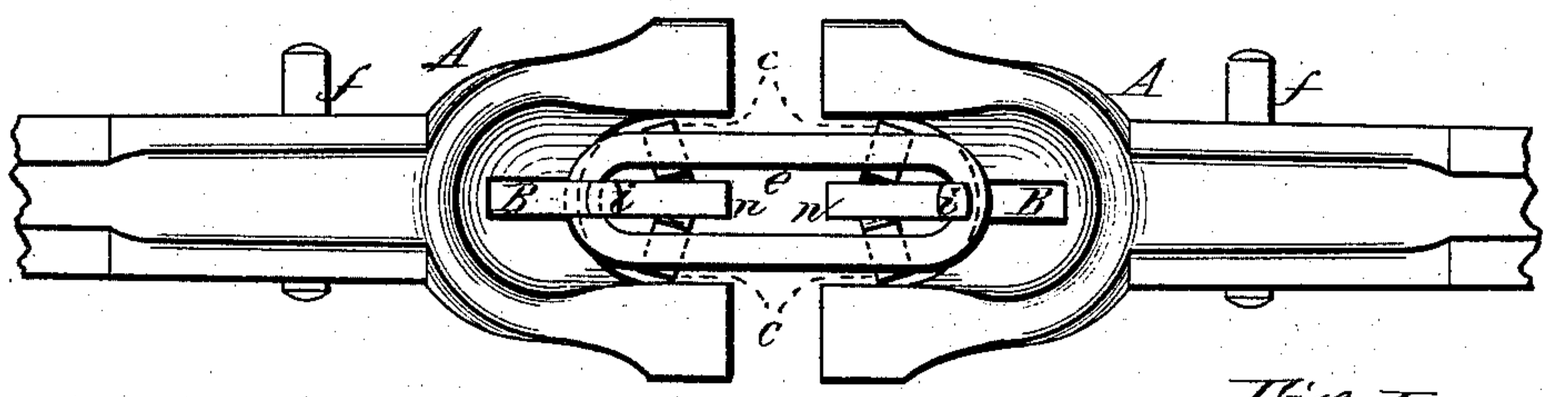

Fig. I

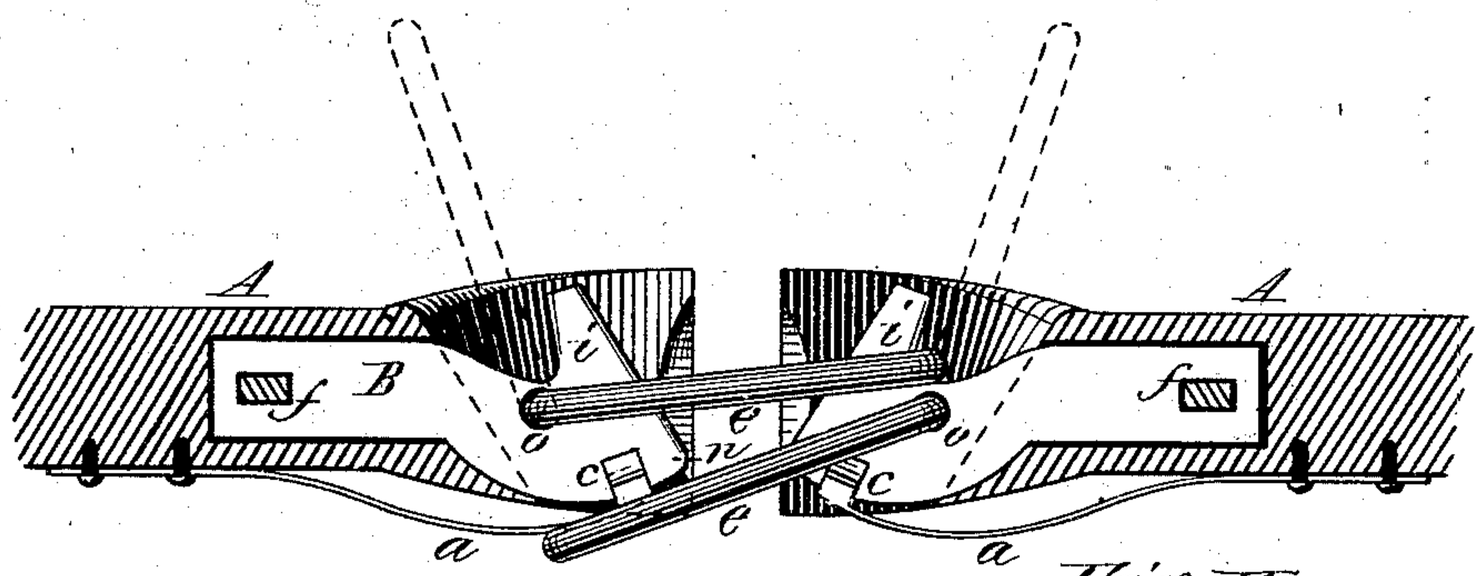

Fig. II

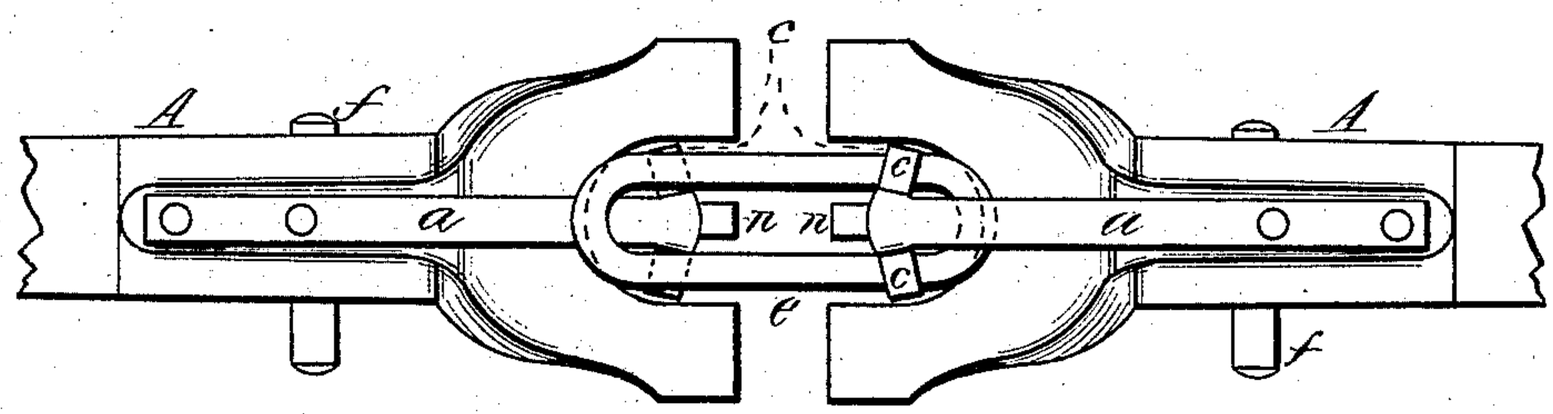

Fig. III

Witnesses

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UNITED STATES PATENT OFFICE.

ALPHONSO E. BRADBURY, OF WEST SPRINGFIELD, AND VINAL B. BARSTOW, OF WESTFIELD, MASSACHUSETTS, ASSIGNORS TO THEMSELVES AND H. M. SMITH—ONE-THIRD TO EACH.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **207,341,** dated August 27, 1878; application filed April 4, 1878.

To all whom it may concern:

Be it known that we, ALPHONSO E. BRADBURY, of West Springfield, in the State of Massachusetts, and VINAL B. BARSTOW, of Westfield, in the State of Massachusetts, have invented a new and useful Improvement in Car-Couplings; and that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, and to the letters of reference marked thereon.

Our invention relates to the class of couplings which operate automatically in coupling the cars together, the object being to avoid the danger of standing between the cars when they are run together to be "shackled" or coupled.

To this end our invention consists of a bar inserted into the outer end of the bunter and secured, said bar having its forward end inclined upward and inward, with a catch or hook on the top, also inclining inward, said bar having an ordinary link secured therein, which is free to swing in a vertical direction, with a spring secured to the bunter, and extending forward to a point beneath the forward end of the bar, with side projections on its forward end, upon which the link may rest when not in use, and which holds the link up, so that its outer end may strike against the inclined forward end of the bar in the opposite car and be guided upward to pass over the hook or catch when two cars are brought together, all of which will be more fully hereinafter described.

Figure I is a plan view of both parts of a coupling made according to our invention, showing them coupled together. Fig. II is a vertical longitudinal section of the same at the axis of the bunter; and Fig. III is a reverse plan view of the same.

In the drawings, A represents the bunter, made much in the ordinary form as to its outward shape, with a vertical opening or recess, D, in the outer end, and having a hole extending in from the outer end, into which is inserted the bar B, which is secured in place by a key, *f*. The forward end of this bar inclines upward and inward from the point *n*, and has a hook or catch, *i*, on top, also inclining inward, as shown clearly in Fig. II, and a hole, *o*, is made through the bar, in which is secured an ordinary link, *e*, so that it may have a vertical swinging movement substantially from the position shown at *h* in dotted lines to the position of the lower link *e* in Fig. II.

A spring, *a*, is secured to the bunter A, the forward end of which has two side projections, *c*, so that when the link *e* is in the position of the lower one in Fig. II it may rest upon these side projections, the forward end of the spring being in a position close to or against the lower side of the forward end of the bar B.

The description above given applies to both parts of the coupling, as the two parts are duplicates.

The operation is as follows: The bunter A being secured to the car in the ordinary manner, the links, when not in use, are always in a position resting upon the outer end of the spring *a*, similar to the position of the lower links in Fig. II. If one of the bunters A is attached to one car, and the other to another car, and the cars are pushed together slowly with the links *e* in a position resting upon the springs *a*, the outer end of one of the links will slide upon the other and up over the inclined end of the bar B, and fall over behind the hook or catch *i*, the outer end of the other link passing beneath its opposite bar B and spring *a*, both being then in the position shown in Fig. II, when the cars are coupled together. To uncouple them the upper link has only to be lifted by a stick or in any convenient way; and if a link should become broken while in use, spare bars B, with links therein, may be carried on the train or kept in convenient places, the key *f* is removed, and the bar with the broken link taken out, and another bar inserted and the key replaced. The side projections *c* on the spring or piece *a* furnish a support for the link, to prevent it from dropping any lower than into such a position as to cause the opposite link to ride up on it; and the piece *a* is made elastic, so that if a car having the ordinary bunter should be run against one having this coupling, and

should strike the end of the link *c*, the piece *a* would yield and be pressed down and prevent the link from being bent.

We are aware that car-couplings have heretofore been made in which a draw-bar, with its outer end inclined upward and inward, and provided with a hook or catch, was used, and we do not claim the same; but we are not aware that such a device combined with an elastic support for the links, or spring to prevent the links from being bent, has ever before been known or used.

Having thus described our invention, what we claim as new is—

The combination of the bunter A, the draw-bar B, having its front end inclined upward and inward, and provided with the catch *i*, and the spring *a*, provided with side projections *c*, all constructed substantially as described, and forming, in duplicate, an improved car-coupling, as set forth.

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Witnesses:
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