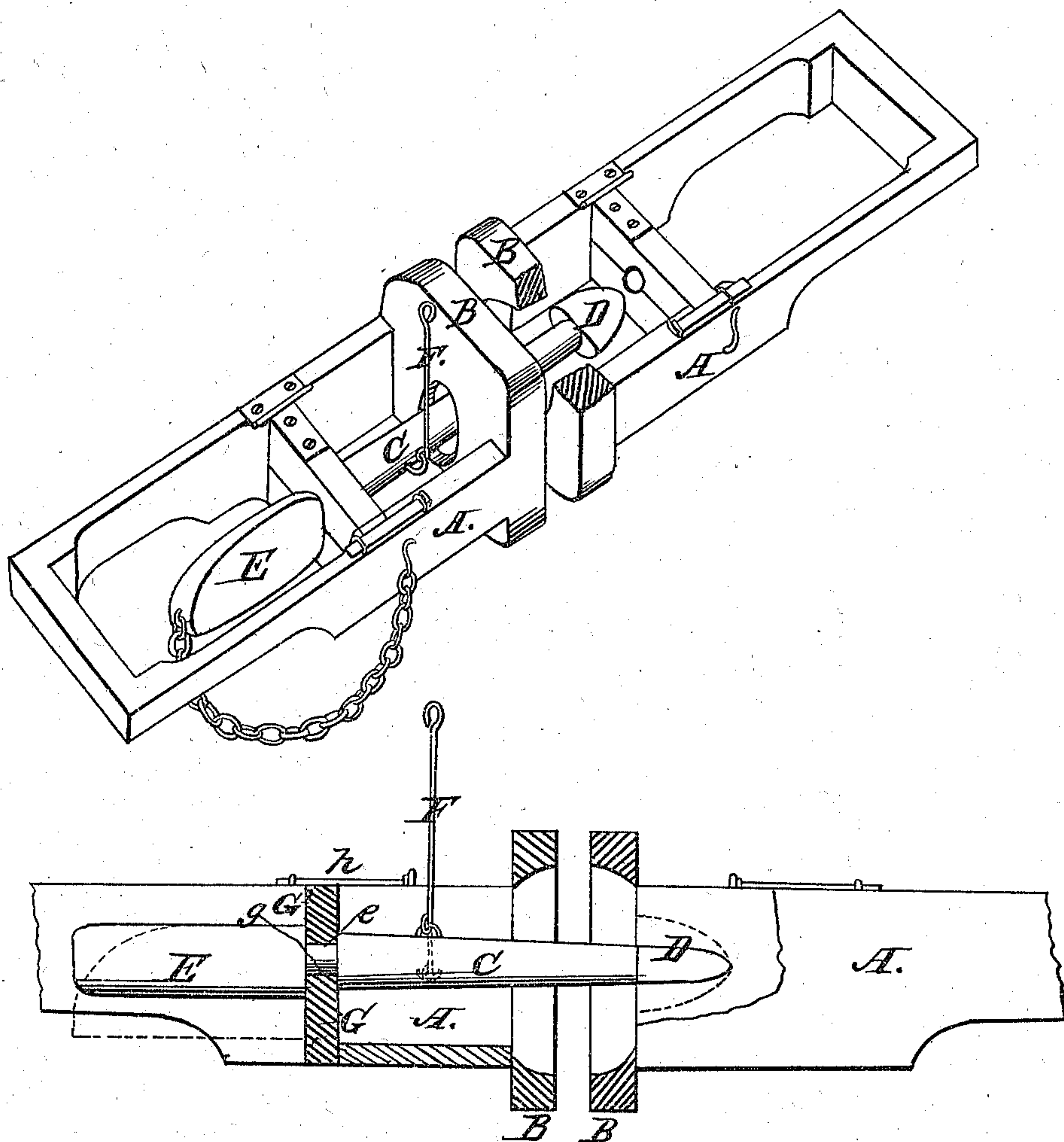


A. L. SPEAR.  
RAILWAY CAR COUPLING.

No. 97,242.

Patented Nov. 23, 1869.



Witnesses  
H. F. Eberts.  
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# United States Patent Office.

A. LEWIS SPEAR, OF FLINT, MICHIGAN, ASSIGNOR TO HIMSELF, JOHN STEPHENS, JR., AND ROYAL L. LEWIS, OF SAME PLACE.

Letters Patent No. 97,242, dated November 23, 1869.

## IMPROVED RAILWAY-CAR COUPLING.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that I, A. LEWIS SPEAR, of Flint, in the county of Genesee, and State of Michigan, have invented a new and useful Improvement in Railway-Car Couplings; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and being a part of this specification

My invention relates to automatic car-couplers, and consists in constructing the coupling-bolt with an arrow-head on its front end, a neck with shoulders on each side, near its centre, and weighted on the under side of its rear end, and in supporting it by its neck in a bearing, with a hinged upper piece for holding it securely in place, and allowing it to be readily removed and placed in the opposite bumper-head, and in enclosing the whole inside of the bumper-frame.

In the drawings—

Figure 1 is a perspective view, with a portion broken away, and

Figure 2 is a longitudinal vertical section.

I construct the frames A of my bumper-heads exactly alike.

The heads B, I make with a vertical oblong opening, and flaring on their outer ends.

Near the centre of the frames A, I place a cross-piece, G, with a semicircular bearing, *g*, on its upper side, and immediately over the cross-piece or bearing G, I hinge, at *g'*, another cross-piece, G', with a corresponding semicircular opening, *c*, on its under side, arranged so as to come immediately over the semicircular bearing G, as clearly shown in fig. 2, and to be locked down over it, as clearly shown in fig. 1, so that when the upper or hinged piece G' is brought down, the semicircular openings *g* and *c* will come together, and form a circular opening or hole.

I construct a coupling-bolt, C, with an arrow-head, D, on its front end, a neck with shoulders on each side or entirely around it, near its centre, and with its rear

end E heavily weighted on its under side, as clearly shown in both figures, the under side of the coupling-bolt being that under the flat side of the arrow-head. This bolt C, I place with its neck in the semicircular bearing or opening of the cross-piece G, and then bring over the hinged piece G', and securely fasten it there.

The coupling-bolt C is made sufficiently long to project far enough beyond the bumper-head to couple with the bumper-head of the opposite frame A, which is done in this manner: As the arrow-head of the coupling-bolt strikes into the flaring oblong opening of the opposite head, it is turned in line with the opening, and passes through, and when through, its weighted end causes it to resume its original position, and the coupling is complete.

It may be uncoupled by means of a rod, F, so attached as to turn it for that purpose.

As both frames A of the opposite bumper-heads are constructed exactly alike, with similar fixed cross-pieces G, and hinged pieces G', it is obvious that the same coupling-bolt may be used at will in either frame or head, and with the same advantage.

It will be noticed that my coupling-bolt is constructed of a single piece, and that it is located wholly within the frame, and is thus completely protected. The whole forms a simple, compact, automatic coupler.

Having thus described my invention,

What I claim, is—

The coupling-bolt C, made of a single piece, with its head arrow-shaped, its rear end heaviest on its under side, and provided with a neck, in combination with the frame A, having a vertical oblong flaring head, a bearing cross-piece, G, with a hinged locking cross-piece, G', all constructed and arranged as herein described.

A. LEWIS SPEAR.

Witnesses:

W. STEVENSON,  
HENRY C. GAY.