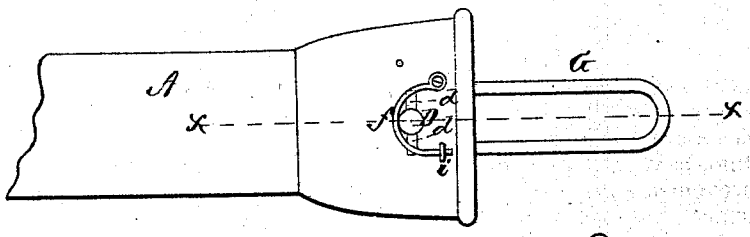
L. SMITH.

Car-Couplings.

No. 146,718. Patented Jan. 20, 1874.

Fig. 1.



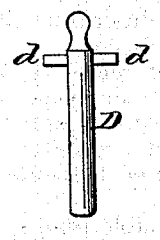


Fig. 2.

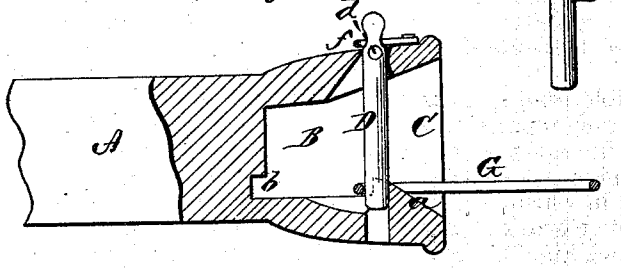
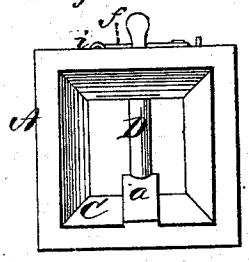


Fig. 3.



WITNESSES.

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A.M. PHOTO-LITHOGRAPHIC Co. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

LEVI SMITH, OF HIGHLAND, OHIO.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **146,718**, dated January 20, 1874; application filed November 7, 1873.

To all whom it may concern:

Be it known that I, LEVI SMITH, of Highland, in the county of Highland, and in the State of Ohio, have invented certain new and useful Improvements in Car-Coupling; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a self car-coupling, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation, Fig. 2 a longitudinal section, and Fig. 3 a front view, of a draw-head with my improved car-coupling.

A represents a draw-head for a railroad-car, provided with a chamber, B, and mouth C. In the lower part of the mouth C of the draw-head is an inclined block, *a*, cast solid with the head, so as to guide the link, and also forming a substantial hold for the lower end of the coupling-pin. In the rear end of the chamber B is a mortise or recess, *b*, to receive the link, for the purpose of holding the same level. When the link is pushed into this mortise or recess it remains level, and will also play up or sidewise, and will enter the opposite draw-head. D represents the coupling-pin, provided near its upper end with side arms *d d*, forming a cross. The pin D is inserted through the usual holes for that purpose, and is supported by the arms *d d*, resting in recesses made to receive them in the top of the draw-head, said recesses being made transversely across, so that the pin can play back and forth. The hole in the top of the draw-head for the pin D is cut out on the under side backward, as shown in Fig. 2, to allow the pin to swing backward. The lower end of the pin D bears against the back of the inclined block *a*. On top of the draw-head A is pivoted a circular hook, *f*, which may be turned over the arms *d d* of the coupling-pin, the loose end entering a staple, *i*, for the purpose of holding the pin, and preventing it from jarring out. By turning the hook back, the pin can be removed the same as any other pin. When desired to couple a train, the link G is placed in the recess *b* at the rear end of the draw-head, and the car coming up will never fail to couple itself. The link is guided to its place by the block *a*, the link pushing the pin back, passing under the same, when the pin immediately assumes its former position, falling against the block.

The whole forms a substantial self car-coupler, which is cheap and secure, and avoids all danger and trouble.

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

The combination of the draw-head A, having inclined block *a* and recess *b*, the link D, having cross-arms *d*, semicircular pivoted bail *f*, and staple *i*, all constructed substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 25th day of July, 1873.

LEVI SMITH.

Witnesses:
JAMES O. ACKOR,
LE ROY KELLY.