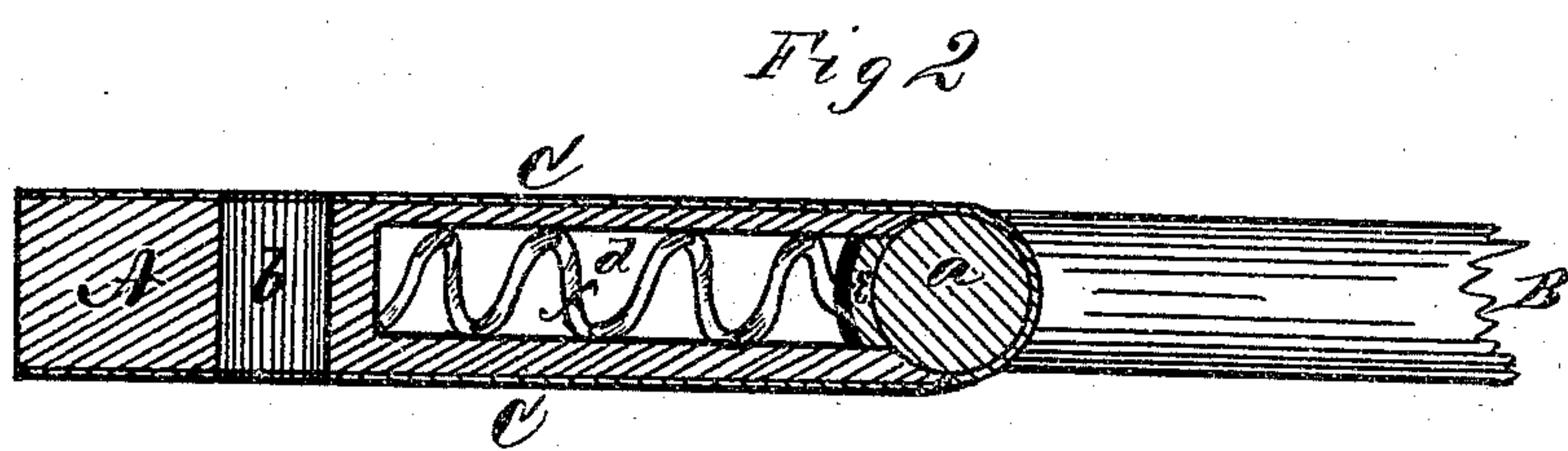
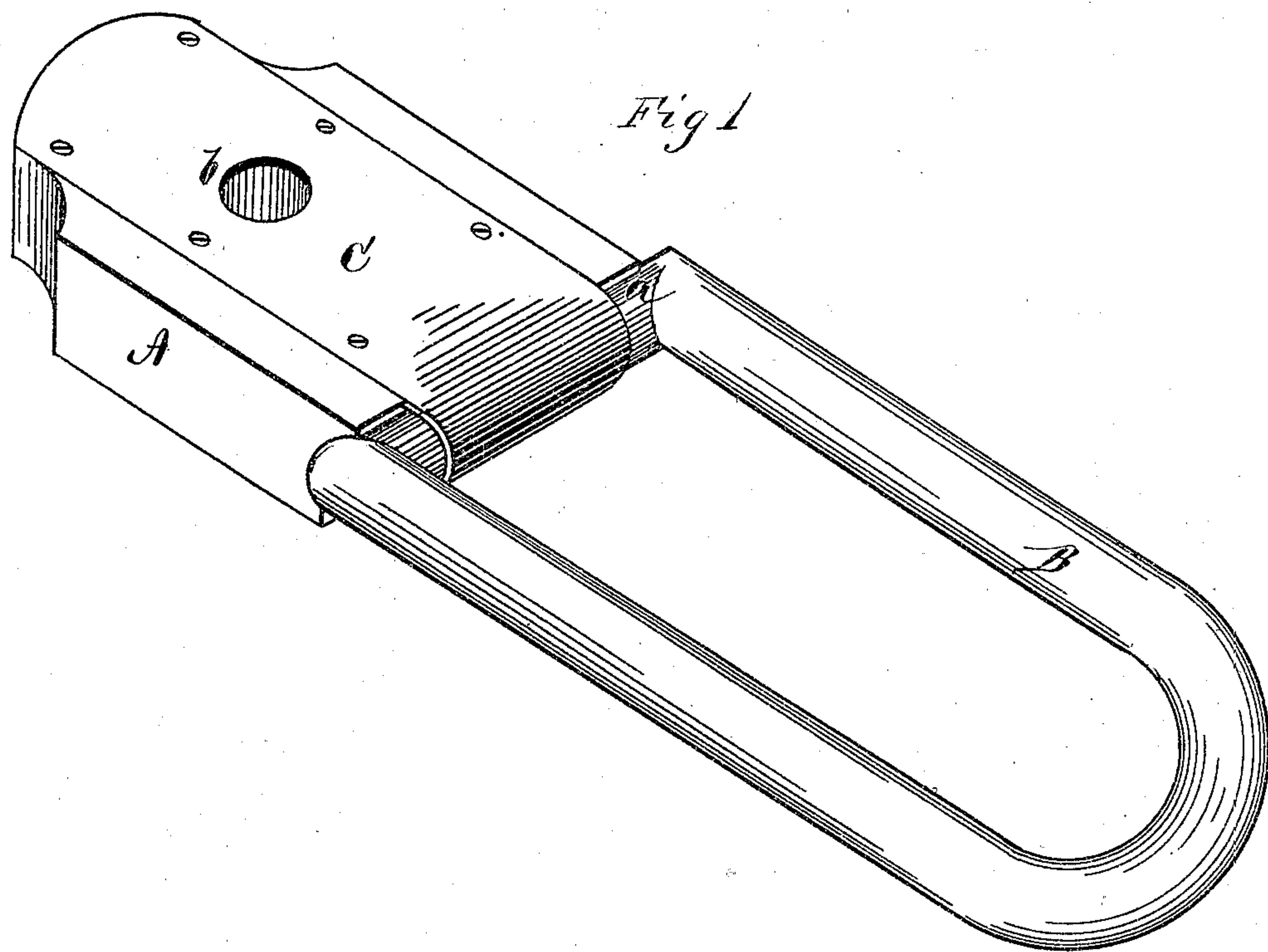


G. E. KNOX.
Car-Couplings.

No. 143,165.

Patented September 23, 1873.



Witnesses.
Frank L. Durand
C. L. Everts

Inventor.
George E. Knox
per Alexander Mann

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UNITED STATES PATENT OFFICE.

GEORGE E. KNOX, OF BALLSTON SPA, NEW YORK.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **143,165**, dated September 23, 1873; application filed March 25, 1873.

To all whom it may concern:

Be it known that I, GEO. E. KNOX, of Ballston Spa, in the county of Saratoga and in the State of New York, have invented certain new and useful Improvements in Link for Coupling Cars; and I 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 coupling-link for railroad-cars, 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 perspective view, and Fig. 2 a longitudinal section, of my coupling-link.

My coupling-link is made in two parts—a flat heel, A, and a link, B. The link B is made in the shape of the ordinary coupling-link, except that one end is not curved, but has a bar, *a*, at right angles with the side bars of the link. The link B is hinged to the heel A by means of a metal band, C, which passes around the bar *a* of the link, and is fastened to both the upper and lower sides of the heel A, the front end of said heel being made concave for the bar *a* to rest in. *b* is the pin-hole in the heel A. In the heel A is a longitudinal hole, *d*, in the center from the front end toward the rear for a suitable distance, and in the same is placed a spiral spring, *f*, one end of which bears against the bottom or inner end of the hole or chamber *d*, and the front end of the spring forces a rubber or metal

plate, *e*, against the bar *a* of the link B. To use this coupling-link, the heel A is to be inserted in the bumper of the car standing still, and the coupling-pin put in. Then, while the other car is approaching, the brakeman will judge of the elevation or depression of the bumper of the approaching car, and set the link to meet it, and then step out of the way while the cars come together. The pin of the approaching bumper, being properly set in the usual way, will almost invariably drop to its place, and thus complete the connection. The spring *f* holds the joint or hinge and link in any position in which it may be placed to enter the approaching bumper. I do not confine myself for this purpose to the spiral spring *f*, as any other spring or springs or other device may be used to hold the link at any desired angle.

I am aware that it is not new to form a coupling-link in two parts hinged together, and hence I do not claim such, broadly, as my invention.

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

The combination of the link B with square end *a*, the block A with concaved end, opening *d*, spring *f*, and plate *e*, and the metallic strap C secured to the block and around the end of the link, all substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of March, 1873.

GEO. E. KNOX.

Witnesses:

J. S. L'AMOREAUX,
NIEL GILMOUR.