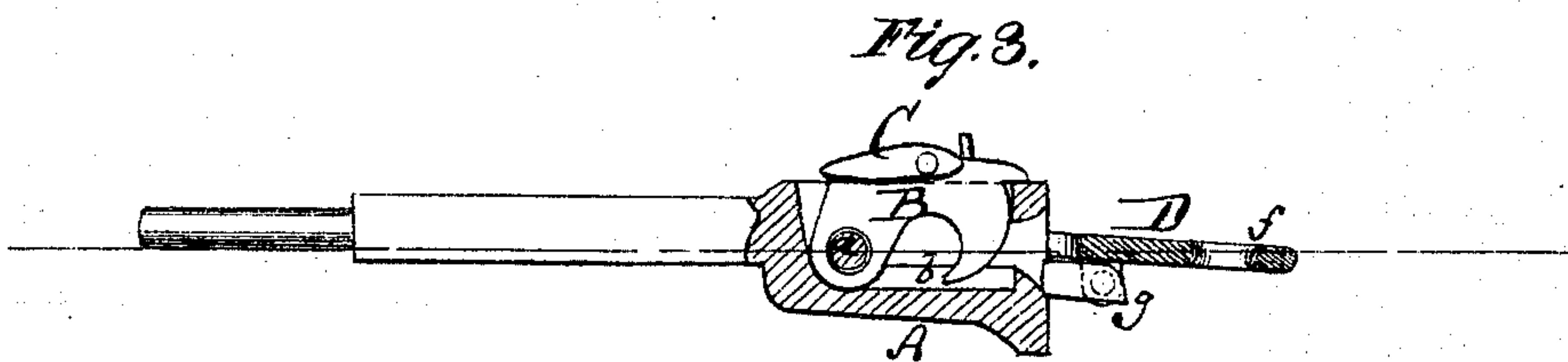
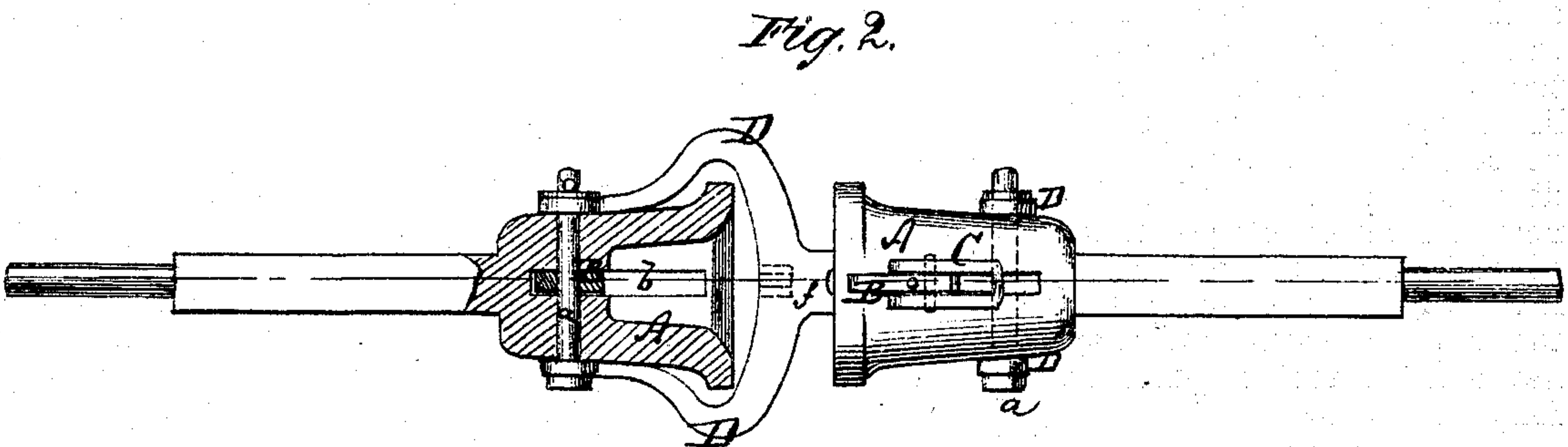
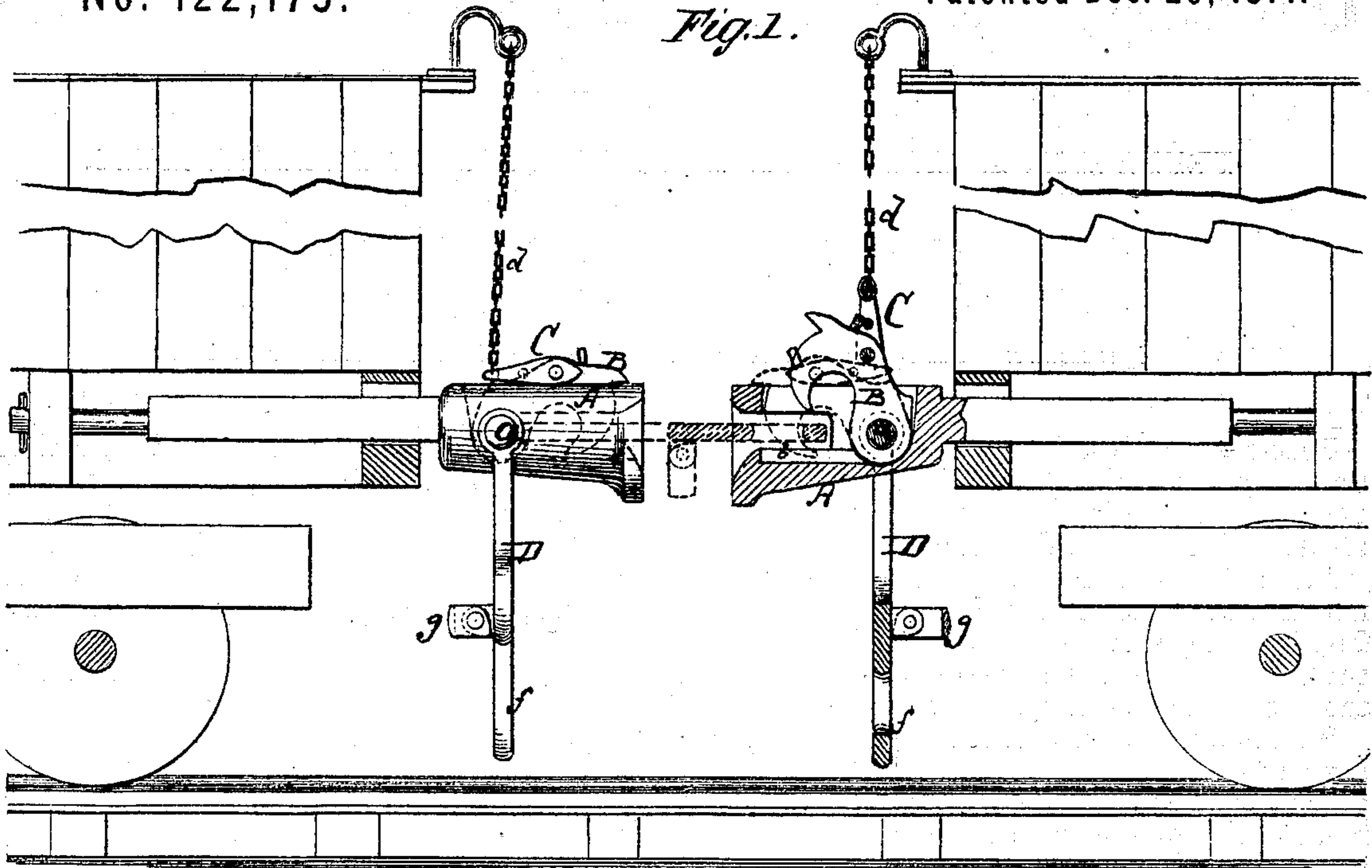


(122.)

F. A. ILLINGWORTH.
Improvement in Car Couplings.

No. 122,175.

Patented Dec. 26, 1871.



Witnesses:

John Becker.
Francis McArdle.

Inventor:

F. A. Illingworth

PER

M. M. L.
Attorneys.

Received July 16th 1872.

122,175

UNITED STATES PATENT OFFICE.

FREDERICK A. ILLINGWORTH, OF WALTHAM, MASSACHUSETTS.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 122,175, dated December 26, 1871.

Specification describing a new and Improved Car-Coupling, invented by FREDERICK A. ILLINGWORTH, of Waltham, in the county of Middlesex and State of Massachusetts.

Figure 1 represents a side view and longitudinal vertical section of my improved car-coupling. Fig. 2 is a top view and horizontal section of the same. Fig. 3 is a longitudinal section of the same, showing the coupling-hook let down.

Similar letters of reference indicate corresponding parts.

This invention relates to an improved arrangement of coupling-hook and shackle on a car-coupling, and has for its object to bring all the parts of a coupling under more perfect control, and, at the same time, insure greater reliability than can be found on the cars now in use. The invention consists, first, in providing the pivoted coupling-hook with a prop or device whereby it can be held up clear of the link or shackle or let down at will. The invention also consists in the new arrangement of a pivoted connecting-shackle, which has also a "prop," whereby it can be held in a horizontal position ready for coupling. Furthermore, the invention consists in the general new arrangement of parts, as hereinafter more fully described.

A in the drawing represents the draw-head, made of cast-iron or equivalent material, of proper form and size, with a flaring mouth or entrance for the coupling-link or shackle. B is the coupling-hook, pivoted, by a horizontal pin, *a*, to the interior of the head A, the pivot *a* being below the line of draft, so that the hook will not swing up when draft is applied. The hook projects into the head A through a slot in the upper part of latter, and does, when swung down to the greatest extent, as in Fig. 3, enter a groove, *b*, in the bottom of the draw-head. To the upper part of the hook B is pivoted a prop, C, which serves, when swung into a vertical position, to sustain the hook elevated, as in Fig. 1, preventing it from

coupling. A chain, rope, or rod, *d*, connected with the prop C, is used to pull the same up; also to raise the hook for uncoupling. When the raised prop C is to be let down the chain, rope, or rod *d* is drawn slightly back, which will cause the prop to swing slightly off the supporting-head A and allow the hook B to drop. D is the coupling-shackle. It is somewhat like a letter Y in shape, its forked back being, by the pin *a*, pivoted to the draw-head A, while its front arm *f* is slotted for the reception of the hook B, as indicated by dotted lines in Fig. 1. This shackle, when not in use, can hang down vertically from the draw-head. It has a pivoted prop, *g*, which can be used to sustain the prop in a horizontal position, as in Fig. 3, the prop bearing on the bottom of the draw-head, as shown.

For coupling, the shackle is thus held up by its own prop. When the cars meet the arm *f* of the shackle will enter the opposite draw-head, raise the hook within the same, and let it drop through the slot in *f*, thus securing automatic connection. The cars can be uncoupled by pulling the chain *d*, which raises the hook clear of the shackle. Ordinary coupling-links can also be used for connecting cars having common draw-heads with such provided with my improved coupling.

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

1. The shackle D, pivoted to a draw-head and provided with a prop, *g*, substantially as and for the purpose herein shown and described.

2. The combination of the draw-head A, pivoted hook B, prop C, and chain, rope, or rod *d* with the pivoted shackle D and prop *g*, all arranged to operate substantially as herein shown and described.

FREDERICK A. ILLINGWORTH.

Witnesses:

ELBRIDGE M. ILLINGWORTH,
WM. ATWOOD.

(122)