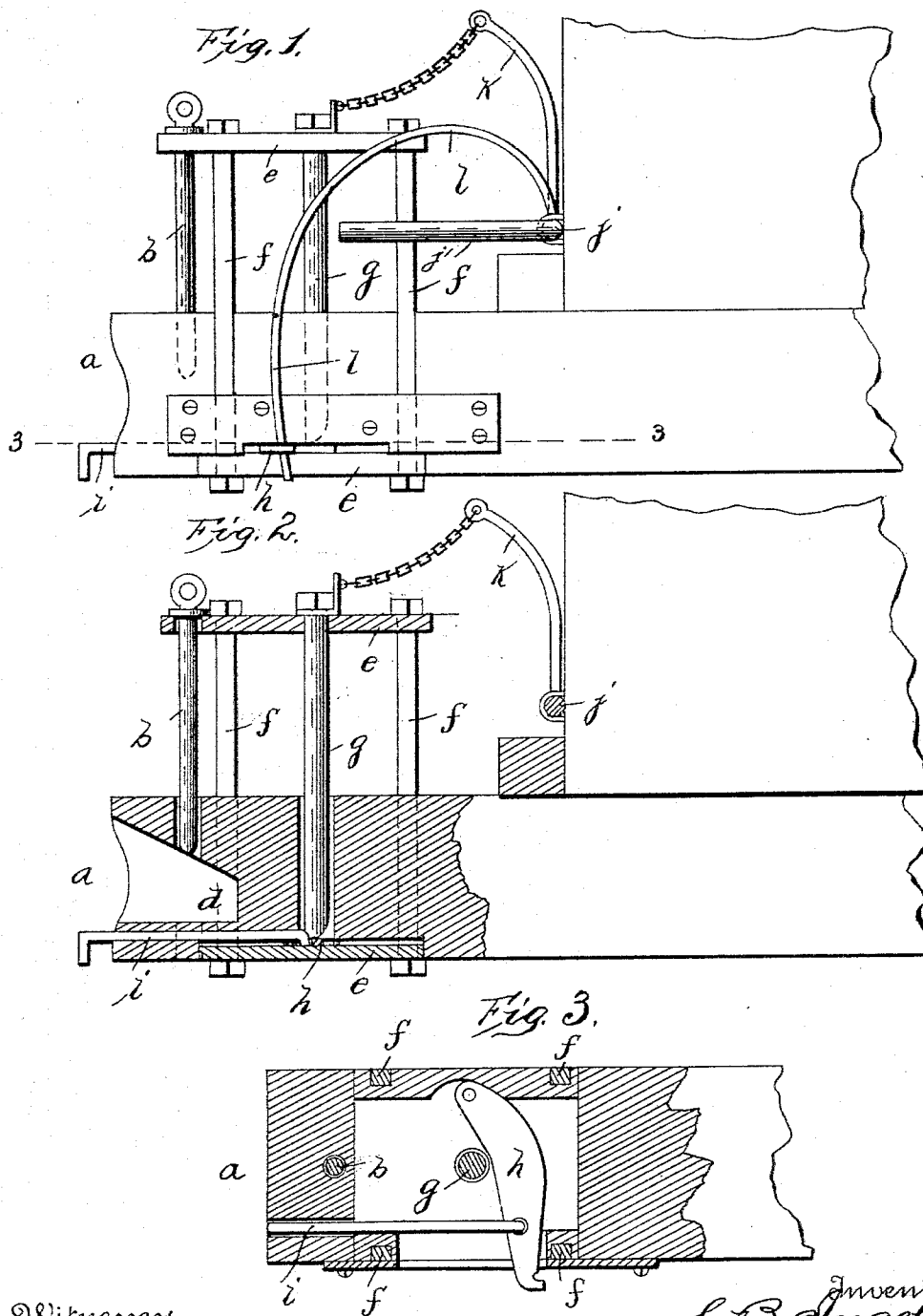


(No Model.)

C. B. INGOLD.
CAR COUPLING.

No. 531,945.

Patented Jan. 1, 1895.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHRISTIAN B. INGOLD, OF PARKERSBURG, WEST VIRGINIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 531,945, dated January 1, 1895.

Application filed August 30, 1894. Serial No. 521,726. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN B. INGOLD, of Parkersburg, in the county of Wood and State of West Virginia, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in car couplings.

The object of the invention is to provide an automatic link and pin car coupler exceedingly simple in construction and effective in operation and composed of a minimum number of parts so arranged and combined as to produce an easily controlled automatic coupler sure in action and not apt to get out of order or jam.

The invention consists in certain novel features of construction, and in combinations of parts more fully and particularly described hereinafter.

Referring to the accompanying drawings, Figure 1 is a side elevation of a coupling head in position for coupling. Fig. 2 is a vertical longitudinal sectional view. Fig. 3 is a horizontal section on the lines 3—3 Fig. 1.

In the drawings *a*, is the coupling head. The coupling head has the usual front recess to receive the link and the vertical openings into said front opening for the vertical coupling pin *b*. The inner end of the recess in the front end of the coupling head is formed with an overhanging shoulder *d*, to hold down the end of a coupling link entering said recess.

The coupling pin is carried by a vertically movable frame or carrier *e*, consisting of a plate beneath the coupling head, a plate above the coupling head, and the vertical rods *f*, rigidly connecting said plates and confined in ways at the sides of the coupling head so as to slide therein. These rods are of such length that when the carrier is raised to its limit of upward movement, or in uncoupled position, the bottom plate rests in the under side of the coupling head and the coupling pin is raised from the link recess of the head.

When the carrier is at its limit of downward movement, or in coupled position the top plate rests on the top of the coupling head and the pin extends through the coupling head.

The coupling pin extends loosely through the upper plate of the carrier so that it will rise and fall therewith, but so that it can be lifted therefrom if desirable to use the device as an ordinary link and pin coupler.

The pin carrier is held in the raised position by means of the vertical rod *g*, rigid with the top plate and extending down through a vertical opening in the coupling head in rear of the link recess. This rod *g*, ends a short distance above the bottom plate and the opening in which it moves extends completely through the coupling head.

A plate is secured on the under side of the coupling head. A lever *h*, is pivoted at one end to swing horizontally on said plate into and out of the path of said rod *g*. The free end of this lever is extended out beyond one side of the head and is notched. A push rod *i*, is pivoted to said lever and extends forwardly through the head and is provided with an enlarged end at the front of the head to be engaged by the opposing coupler head.

j, is a rock shaft mounted transversely at the car end in suitable bearings. This shaft has the end handles, *j'* and the central forwardly extending arm *k*, loosely connected to the pin carrier. *l*, is a curved arm secured to said rock shaft and extending forwardly therefrom beside the coupling head to engage the outer notched end of the horizontal tripping lever *h*. When the rock shaft is swung to lift the arm *k*, it raises the pin carrier to its limit of upward movement and then the curved arm *l* engages the outer end of lever *h*, and swings said lever outwardly and beneath the rod *g*, so as to support the pin carrier in coupling position. When the opposing coupling head approaches the head thus set, its link enters the coupling head, and engages the push rod *i*, and forces the same inwardly thereby moving the trip lever back from the path of the carrier supporting rod and permitting the pin carrier to drop with the coupling pin, thereby automatically effecting the coupling.

It is evident that various slight changes might be made in the forms, constructions,

and arrangements of the parts described without departing from the spirit and scope of my invention. Hence I do not wish to limit myself to the exact construction herein set forth, but
5 consider myself entitled to all such changes as fall within the spirit and scope of my invention.

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

1. In a car coupler, the combination of a gravity pin carrier on the coupling head, a rock shaft connected to raise the carrier, a trip lever arranged to support the raised carrier, said shaft having a curved arm to throw
15 the lever to supporting position as the carrier is raised, and means to trip the lever, substantially as described.

2. In a car coupler, the combination of the

head having the vertical opening in rear of 20 the link and coupling pin recess, the trip lever mounted in the head to move across said opening and having its free end projecting to the exterior of the head, and the forwardly extending push rod, the vertically movable pin 25 carrier arranged above and below the head, the coupling pin removably carried thereby, the depending rod rigid with the carrier and extending down in said opening and means for raising the carrier and engaging the outer 30 end of the lever and swinging the same.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

CHRISTIAN B. INGOLD.

Witnesses:

O. E. DUFFY,

C. M. WERLE.