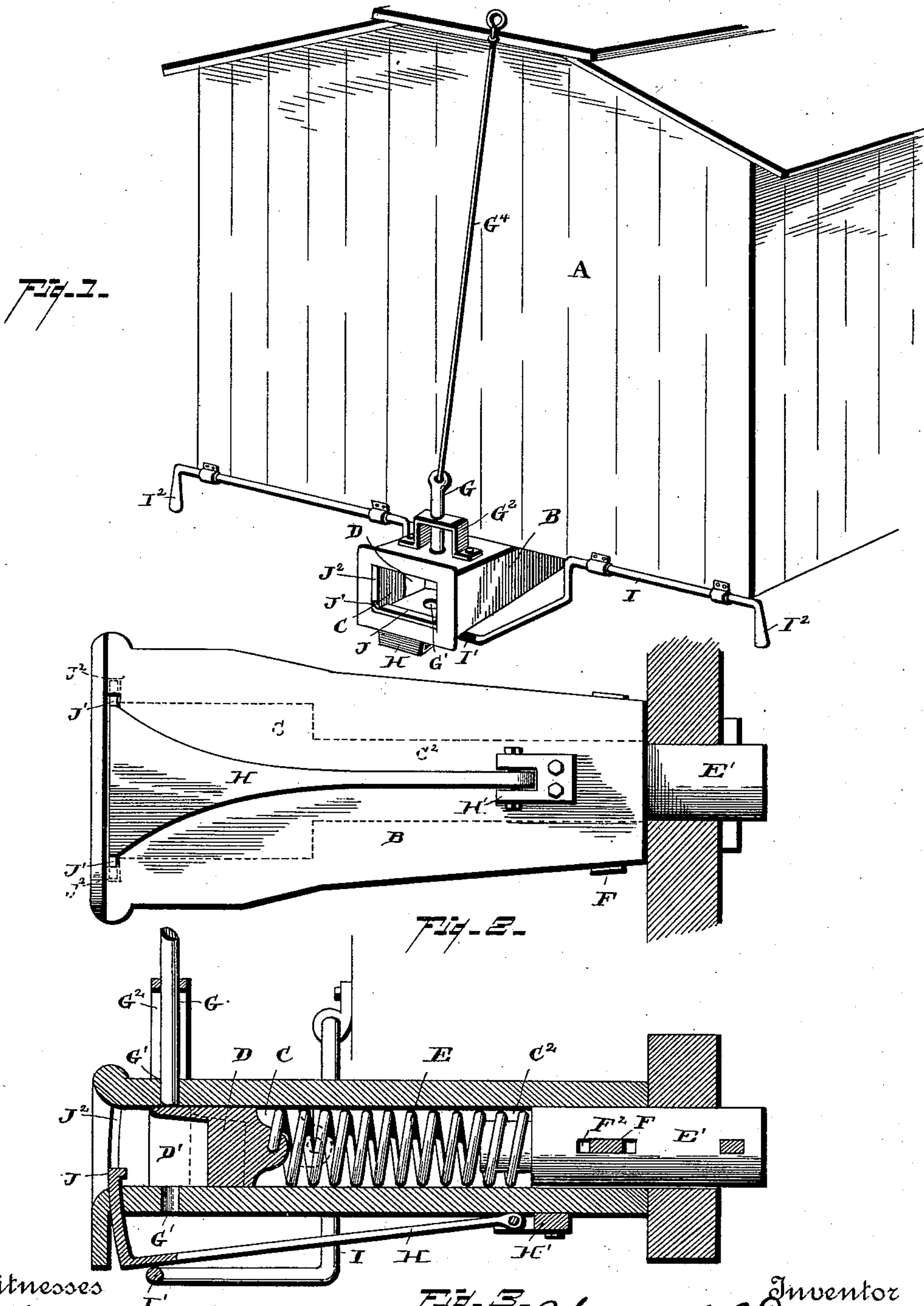


(No Model.)

H. F. DAVIS.  
CAR COUPLING.

No. 431,688.

Patented July 8, 1890.



Witnesses  
*Albert Speiden.*  
*W. G. Stone.*

FIG. 3. Inventor  
*Herbert F. Davis*  
By *Franklin H. Hough* Attorney



# UNITED STATES PATENT OFFICE.

HERBERT F. DAVIS, OF ROME, GEORGIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 431,688, dated July 8, 1890.

Application filed May 16, 1890. Serial No. 352,051. (No model.)

*To all whom it may concern:*

Be it known that I, HERBERT F. DAVIS, a citizen of the United States, residing at Rome, in the county of Floyd and State of Georgia, have invented certain new and useful Improvements in Car-Couplings; and I do declare the following to be a full, clear, and exact description of the invention, such as 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 a part of this specification.

This invention relates to certain new and useful improvements in car-couplings, and it has more especial reference to that class of coupling devices in which provision is had whereby the cars may be automatically coupled, and in which they may be readily uncoupled without necessitating the going between the cars.

The invention has for its object to simplify and cheapen the construction and to render more efficient in operation this class of devices.

To these ends and to such others as the invention may pertain the same consists in the peculiar construction and in the novel combination, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the accompanying drawings, and then specifically defined in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, like letters of reference indicating like parts throughout the several views, and in which drawings—

Figure 1 is a perspective view of one end of a railway-car showing my improved form of coupling device in actual use. Fig. 2 is a bottom plan view of the draw-head. Fig. 3 is a central longitudinal section of the draw-head, showing the parts in the position they occupy when in readiness for coupling.

Reference now being had to the details of the drawings by letter, A designates the end of the car, and B the draw-head, which in general form and construction, excepting as hereinafter specified, is similar to the draw-heads which are in common use upon rail-

way-cars, and is attached to the car in the usual manner.

C is an enlarged chamber at the front end of the draw-head, and C' is a central longitudinal recess extending from the rear end of the chamber C to the extreme rear end of the draw-head.

D is a block of metal fitted loosely within the chamber C, said block being concaved at its forward end, as shown at D', to receive the end of the coupling-link, and at the rear end of the block is secured the front end of the spiral spring E, which spring is placed within the recess C<sup>2</sup> and has its rear end attached to the front end of the shaft E', said shaft being fitted loosely within the rear end of the recess C<sup>2</sup>.

F is a metallic strip or bar which is passed through a suitable opening formed for the purpose in the side walls of the draw-head near its rear end and is extended through a longitudinal slot F<sup>2</sup> in the shaft E', thus providing a means whereby the shaft E' may be moved longitudinally, the distance being limited by the width of the said slot, as will be readily understood.

The coupling-pin G is passed vertically through a suitable opening G' provided for its reception near the front end of the draw-head, and a metallic bracket G<sup>2</sup>, rising from the upper face of the draw-head, serves as a guide for the pin in its movements. A suitable rod G<sup>4</sup> or its equivalent connects the upper end of the pin with some accessible point upon the roof of the car, where a handle or lever attachment may be provided for operating or raising the pin.

H is a lever, which is pivoted at its rear end between the ears H' which depend from the lower face of the draw-head near its rear end. Said lever H rests upon the horizontal portion I' of the rock-shaft I, which shaft is journaled within suitable bearings upon the end of the car and extends to the sides of the car, where the operating cranks or handles I<sup>2</sup> are provided, by the movement of which handles the shaft may be rotated and the horizontal central portion I' raised or lowered, thus raising or lowering the front end of the lever H. The front end of the latch or lever H is bent upward at right angles to the body of the lever, and this vertical portion of the



lever is made in the form of a plate J, the outer side edges of which plate are inclined outwardly as they approach the upper end of the plate, and the upper ends of said outwardly-extended portions J' are fitted within the vertical slots or guides J<sup>2</sup> formed within the inner side walls of the chamber C of the draw-head.

From the foregoing description of the construction of the coupler its operation will be readily understood. When the coupling-link has been withdrawn from the recess in the draw-head, the block D will be forced forward by the spring E and will form a support for the coupling-pin, and when the coupling-link enters the draw-head it will contact with the front end of the block, forcing the same back within the recess in the draw-head and allowing the pin to fall into place.

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

1. In a car-coupling device, the combination, with the draw-head and the coupling attachments connected therewith, of a lever pivoted at one of its ends to the lower face of the draw-head, and having its opposite end bent at right angles to the body of the lever and adapted to move vertically within suitable guides formed in the draw-head and

serve as a support for the coupling-link, and means, substantially as described, for operating said lever.

2. The herein-described improvement in coupling devices for railway-cars, the same comprising, in combination, a draw-head provided at its front end with a chamber, and having a recess extending from said chamber to the rear end of the draw-head, the block D within the chamber, the spring E, connected at one of its ends to the rear end of said block and at its opposite end connected with the shaft E', said shaft E' being fitted within the rear end of the recess in the draw-head and having a limited movement therein in the direction of the length of the recess, the coupling-pin, the support and guide for the pin, the latch or lever pivoted to the lower face of the draw-head and serving as a support for the coupling-link, and mechanism, substantially as described, for operating said pin and latch, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

HERBERT F. DAVIS.

Witnesses:

H. B. LUMPKIN,  
L. MEYERHARDT.