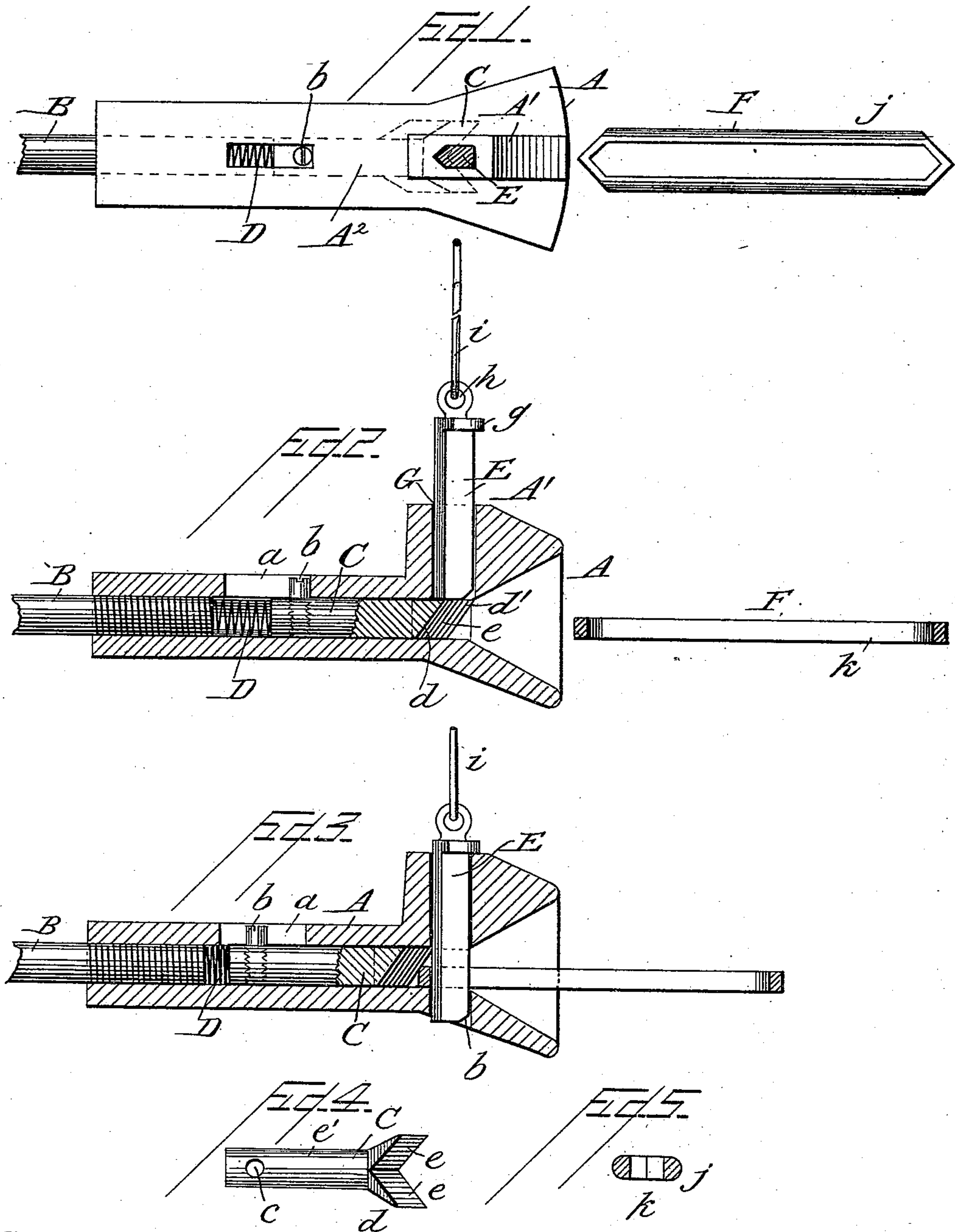


(No Model.)

G. W. WELLER.
CAR COUPLING.

No. 446,240.

Patented Feb. 10, 1891.



Attest:

H. H. Schott
Wm. L. Joyden

Inventor

Giles Walting Weller
per John L. Parker
Atty.

UNITED STATES PATENT OFFICE.

GILES WALTING WELLER, OF BAKER CITY, OREGON.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 446,240, dated February 10, 1891.

Application filed July 14, 1890. Serial No. 358,607. (No model.)

To all whom it may concern:

Be it known that I, GILES WALTING WELLER, a citizen of the United States, residing at Baker City, in the county of Baker and State of Oregon, have invented certain new and useful Improvements in Car-Couplings; and I do hereby 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.

This invention has reference to an improvement in car-couplers, and particularly to that class of car-couplers which operate automatically, the invention having for its object to provide a simple, cheap, and efficient device which will automatically couple the cars, thus dispensing with the time and labor of coupling by hand and greatly obviating the danger incident thereto, saving many lives which would otherwise be lost through the employment of the common form of coupler now in general use; and the invention further consists in certain peculiarities in the construction, arrangement, and combination of the several parts, substantially as will be hereinafter described, and then particularly pointed out in the appended claims.

In the accompanying drawings, illustrating my invention, Figure 1 is a top plan view of my improved car-coupler, showing the parts in position to be coupled. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a longitudinal vertical section showing the parts after the coupling has been effected. Fig. 4 is an inverted plan view of the plunger or pin-support. Fig. 5 is a vertical cross-section of the link which I use with my improved coupler.

Like letters of reference designate corresponding parts throughout all the different figures of the drawings.

A designates the draw-head or bumper of my improved coupler, which has the integral ridge or projection A' , on which the link is supported when the coupling has been accomplished.

B designates the ordinary draw-bolt, which is secured to the draw-head A in any desired manner.

Within the recess A^2 of the draw-head is located what is termed the "plunger" or "pin-support" C. (Shown in perspective in Fig. 4.)

It consists in part of a round rod c' , horizontally situated in the recess A^2 and provided near one end with the screw-threaded opening or perforation c , which is adapted to receive a screw or pin b , having a head working in the slot a of the draw-head. The other end of the plunger or pin-support has flat upper and lower faces d and d' , respectively, its front face being of the doubly-inclined form $e e$ shown in the drawings. Thus it will be seen from Figs. 2, 3, and 4 that the top face d' projects beyond the lower face d , the intervening faces $e e$ between the two faces d and d' gradually slanting inward, downward, and backward. Fig. 4 shows the detailed construction of this plunger. The purpose of this peculiar construction of the plunger will be hereinafter explained.

Between the inner end of the draw-bolt B and the inner end of the plunger C is located a spiral spring D, which keeps the said plunger C in proper position, as will be hereinafter explained.

The letter E represents the pin which I use with my coupler, and which is also of peculiar construction. Its front face and sides are at right angles to each other, while its rear portion is beveled, as clearly seen in Fig. 1. The lower front end of the pin is made slanting, as shown at f , Fig. 3. The upper part of the pin is provided with the flange or projecting edge g , which supports the pin when the cars are coupled, as shown in Fig. 3. This upper part is also provided with a hook or loop h , to which is attached a handle or other device i , running to the top of the car, and which is used for the purpose of uncoupling when desired. The recess in the draw-head is of course shaped to conform to the peculiar construction of the pin and permit the latter to operate easily within the same.

The link F which I use with my improved coupler has the rounded or half-oval shaped outside face j and the flat inside face k , (see Fig. 5,) while the ends of the link are angular or wedge shaped. This construction of the link enables the same to be held in a perfectly-horizontal position when it is in a coupled state, with the plunger forced against it by means of the spiral spring D, and thus the adjacent car can be coupled without any difficulty.

The operation of my improved coupler is as follows: Suppose the parts to be in the position shown in Fig. 2, with the pin E resting upon the upper flat face d' of the plunger C, which plunger is forced outward by means of the spiral spring. When a car is to be coupled or when it is desired to retain the link within the draw-head, said link will be forced against the doubly-inclined face of the plunger C, which will compress the spring D and allow the pin to drop down into position, with its flange g resting on the top of the part A' . It will thus be seen that the link will be held in a perfectly-horizontal position at all times, as the outward pressure of the spring forces the plunger against the pin and link, the inside wedge-shaped edge of the link bearing against the bevel face of the pin and preventing the former from falling in an inclined direction, in which position it would not automatically couple with the next car. When the pin is withdrawn, the plunger will spring forward into its original position.

From the foregoing description of the construction and operation of my improved car-coupler it will be seen that all the parts are so shaped and arranged as to provide an automatic coupler which will not be liable to get out of order, and one which will obviate the great danger and loss of life incident to the couplers now in general use.

Many of the minor details which I have herein shown and described may be changed to suit the exigencies of different cases and to correct the defects which experience may develop, and I reserve the liberty of varying the same without departing from the general spirit of the invention.

The pin b prevents the plunger from moving too far forward.

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

1. In a car-coupler, the combination, with the draw-head, of a coupling-pin having its front face and part of its sides square in cross-section, the back face and part of its sides beveled and a flange near the top for supporting the pin when coupled, a plunger or other supporting device for supporting the pin, consisting of a rod having at one end a perforation or slot adapted to contain a pin or other device for controlling the horizontal

movement of the plunger and at the other end a doubly-inclined supporting face, said plunger being operated by means of a coiled spring located between the inner end of the draw-bolt and the perforated end of the plunger, together with the connecting-link, substantially as described.

2. In a car-coupler, the combination, with the draw-head, of the coupling-pin having its front face and sides at right angles to each other, the back portion beveled, and a flange near the top for supporting the pin when coupled, the plunger, and connecting-link, substantially as described.

3. A coupling-link for railway-cars, having a rounded or half-oval shaped outside face, a flat inside face, and angular or wedge shaped ends, substantially as described.

4. A coupling-link for railway-cars, having the rounded outside face j , the flat inside face k , and the wedge-shaped ends, substantially as described.

5. In a car-coupler, the combination, with the draw-head A , having the integral upwardly-projecting portion A' , for supporting the pin when coupled, and the slot a , of the plunger located within the draw-head, consisting of the horizontal rod C , having at one end the perforation or slot c , adapted to contain a pin b , working in the slot a , and at the other end the doubly-inclined supporting portion having flat upper face d' and flat lower face d and inclined faces $e e$, and a spiral spring D , located between the inner ends of the draw-bolt and plunger, together with the coupling-pin and connecting-link, all substantially as shown and described.

6. In a car-coupler, the combination, with the draw-head, of the pin E , having its front face and sides at right angles to each other and the back face beveled, as shown, the supporting-flange g , loop or ring h , to which a handle or other suitable device, as i , may be connected, and the cut-away portion b , together with the pin-supporting plunger, spiral spring, and connecting-link, substantially as described.

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

GILES WALTING WELLER.

Witnesses:

GEORGIA SMITH,
WILLIAM SMITH.