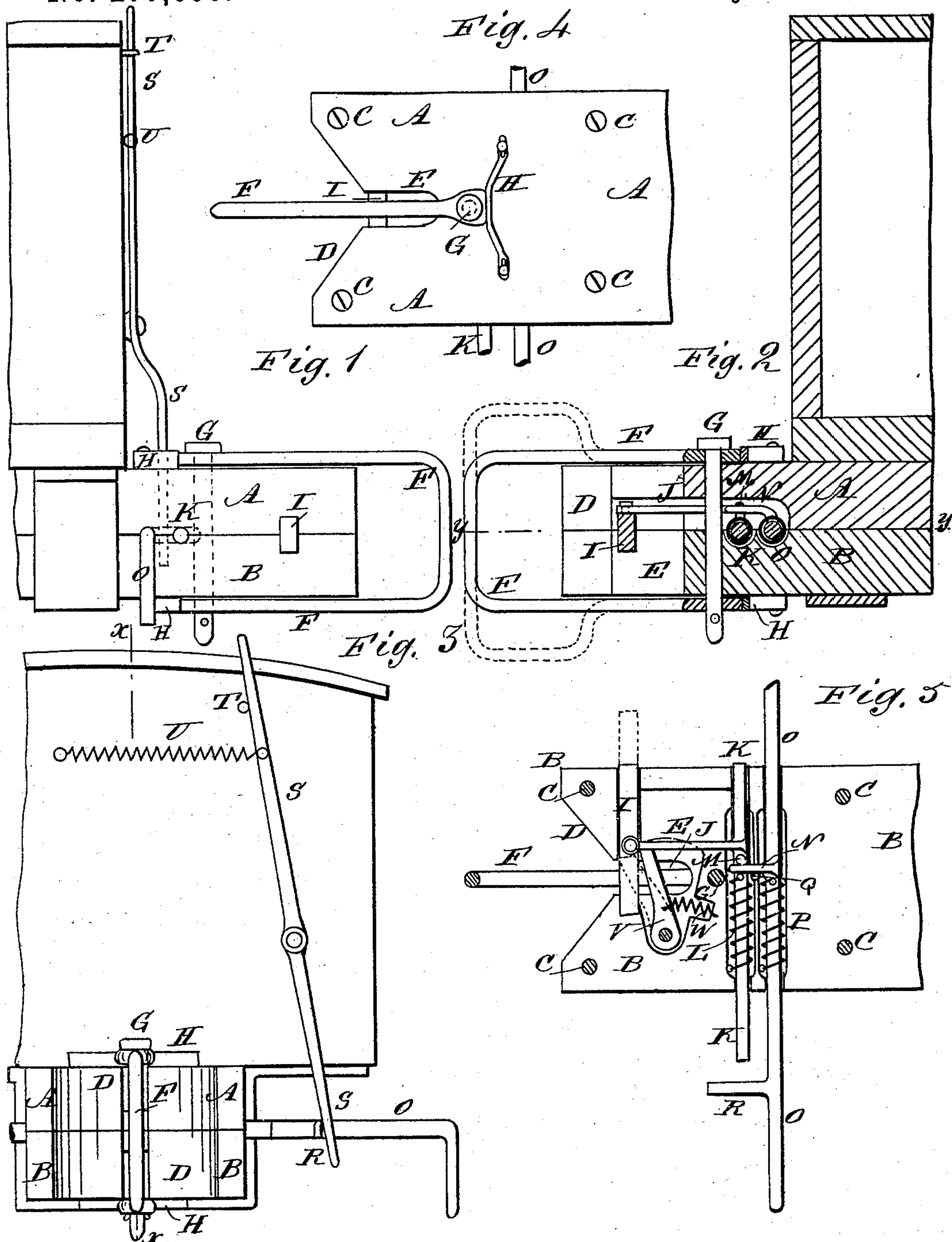


(No Model.)

W. E. DREW.
CAR COUPLING.

No. 277,690.

Patented May 15, 1883.



WITNESSES:

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WILLIAM E. DREW, OF RICHMOND, VIRGINIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 277,690, dated May 15, 1883.

Application filed October 6, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ELIAS DREW, of Richmond, in the county of Henrico and State of Virginia, have invented a new and useful Improvement in Car-Couplings, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a part of my improved car-coupling. Fig. 2 is a sectional side elevation of the same, taken through the line *xx*, Fig. 3. Fig. 3 is a front elevation of the same, part being broken away. Fig. 4 is a plan view of the same. Fig. 5 is a plan view of lower part of the same, the fastening-bolts being shown in section.

The object of this invention is to promote security in the use of car-couplings, and also to promote convenience and safety in operating the said car-couplings.

The draw-head has a V-shaped mouth to receive a clevis-shaped coupling-link and a horizontal coupling-pin held forward by a spring. The draw-head is made in two parts, recessed and grooved in their adjacent faces to receive the operating mechanism. With the horizontal coupling-pin is connected the arm of a spring-drawn sliding rod, whereby the said coupling-pin is held forward. With the spring-drawn sliding rod is connected the arm of a second spring-drawn sliding rod having projecting ends, whereby the coupling-pin can be pushed back to uncouple from the sides of the cars. The spring-actuated uncoupling-rod is provided with a projection, with which engages a lever pivoted to the end of the car and held back by a spring, whereby the cars can be uncoupled from the top of a car. Within a recess in the two-part draw-head is pivoted a spring-pressed arm to engage with the end of the coupling-pin and hold it in an uncoupled position.

The coupling-link is made in clevis shape, is fastened to the draw-head by a pin, and has the ends of its arms squared to rest against springs attached to the draw-head, whereby cars of different heights can be coupled, and

the coupling-link will be held in line with the draw-head, as will be hereinafter fully described.

The draw-head is made in two parts, A B, which are firmly secured to each other by bolts C. The mouth D of the draw-head is made V-shaped, and extends vertically across the end of the said draw-head, as shown in Figs. 2, 3, 4, and 5. The throat E of the draw-head is made in the form of a vertical slot, slightly enlarged toward its inner end, and with its inner end rounded.

F is the coupling-link, which is made in the form of a clevis, and with holes or eyes in the ends of its arms to receive the fastening-pin G, which passes down through a hole in the center of the draw-head A B, the arms of the coupling-link resting against the upper and lower sides of the said draw-head. The outer end or bend of the link F is vertical to enter the mouth and throat of an adjacent car, so that cars of different heights can be coupled with the same facility as cars of the same height. The forward end of the coupling-link F can have an offset upon its upper and lower sides to give the coupling a greater range. The ends of the arms of the coupling-link F are made square to rest against springs H, attached to the draw-head A B, to hold the said coupling-link, when left free, in line with the draw-head, but which will allow the said link to swing to one side when subjected to a lateral pressure—as, for instance, when the cars are passing around curves.

I is the coupling-pin, which is placed in a horizontal position in grooves in the adjacent faces of the parts A B of the draw-head.

To the middle part of the coupling-pin I is attached the forward end of the arm J, the other end of which is formed upon or is rigidly attached to the rod K, which slides in grooves in the adjacent faces of the parts A B of the draw-head. The rod K is held forward, holding the coupling-pin I to its seat by a spring, L, coiled around the said rod, and secured at one end to the part B of the draw-head, and at its other end to the rod K.

To the rod K is attached, or upon it is formed, a pin or other stop, M, against which rests the side of an arm, N, formed upon or attached to

the rod O. The rod O slides in grooves in the adjacent faces of the parts A B of the draw-head, and is held forward to allow the rod K and coupling-pin I to be drawn forward by the spring L by a spring, P, coiled upon the said rod O, and secured at one end to the lower part, B, of the draw-head, and at its other end to the said rod O. The forward movement of the rod O, and consequently of the rod K, is limited by a pin or other stop, Q, attached to or formed upon the lower part, B, of the draw-head. The ends of the rod O project and are bent downwardly, as shown in Fig. 3, to serve as handles to operate the said rod to uncouple the cars.

Upon the side of the rod O, near one end, is formed an arm or projection, R, or in it is formed a hole for the lower end of the lever S to engage with. The lever S is fulcrumed to the end of the car, and its upper end is held back against a pin or other stop, T, attached to the end of the car by a spring, U, secured at one end to the said lever S, and at its other end to the end of the car, so that by moving the upper end of the lever S forward against the tension of the spring U its lower end will be forced against the stop R, and will force the rods O K and the coupling-pin I back, uncoupling the car.

V is an arm placed in a recess formed in the face of the lower part, B, of the draw-head, and pivoted at one end in such a position that it may sweep across the throat of the said draw-head. The arm V is pressed forward by a spring, W, so that its free end will come opposite the inner end of the coupling-pin I and lock the said coupling-pin in an uncoupled position.

When two cars are to be coupled one of the coupling-links F should be removed or turned to one side, so that when the cars come together the remaining link F will enter the throat of the other draw-head and strike and push back the arm V, allowing the coupling-pin I to be drawn forward by the spring L, coupling the cars.

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

1. In a car-coupling, the combination, with the draw-head A B and the horizontal coupling-pin I, of the sliding rod K, having arm J, and the spring L, substantially as herein shown and described, whereby the said coupling-pin is held forward, as set forth.

2. In a car-coupling, the combination, with the draw-head A B, the horizontal coupling-pin I, and the spring-drawn rod K, having arm J, of the sliding rod O, having arm N, engaging with the said sliding rod K, and the spring P, substantially as herein shown and described, whereby the said coupling-pin can be pushed back to uncouple the cars, as set forth.

3. In a car-coupling, the combination, with the draw-head A B and the horizontal coupling-pin I, of the pivoted arm V and the spring W, substantially as herein shown and described, whereby the coupling-pin will be locked in an uncoupled position, as set forth.

WILLIAM ELIAS DREW.

Witnesses:

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