(No Model.)

S. B. DOVER.

CAR COUPLING.

No. 459,960. Patented Sept. 22, 1891.

FIG. 1.

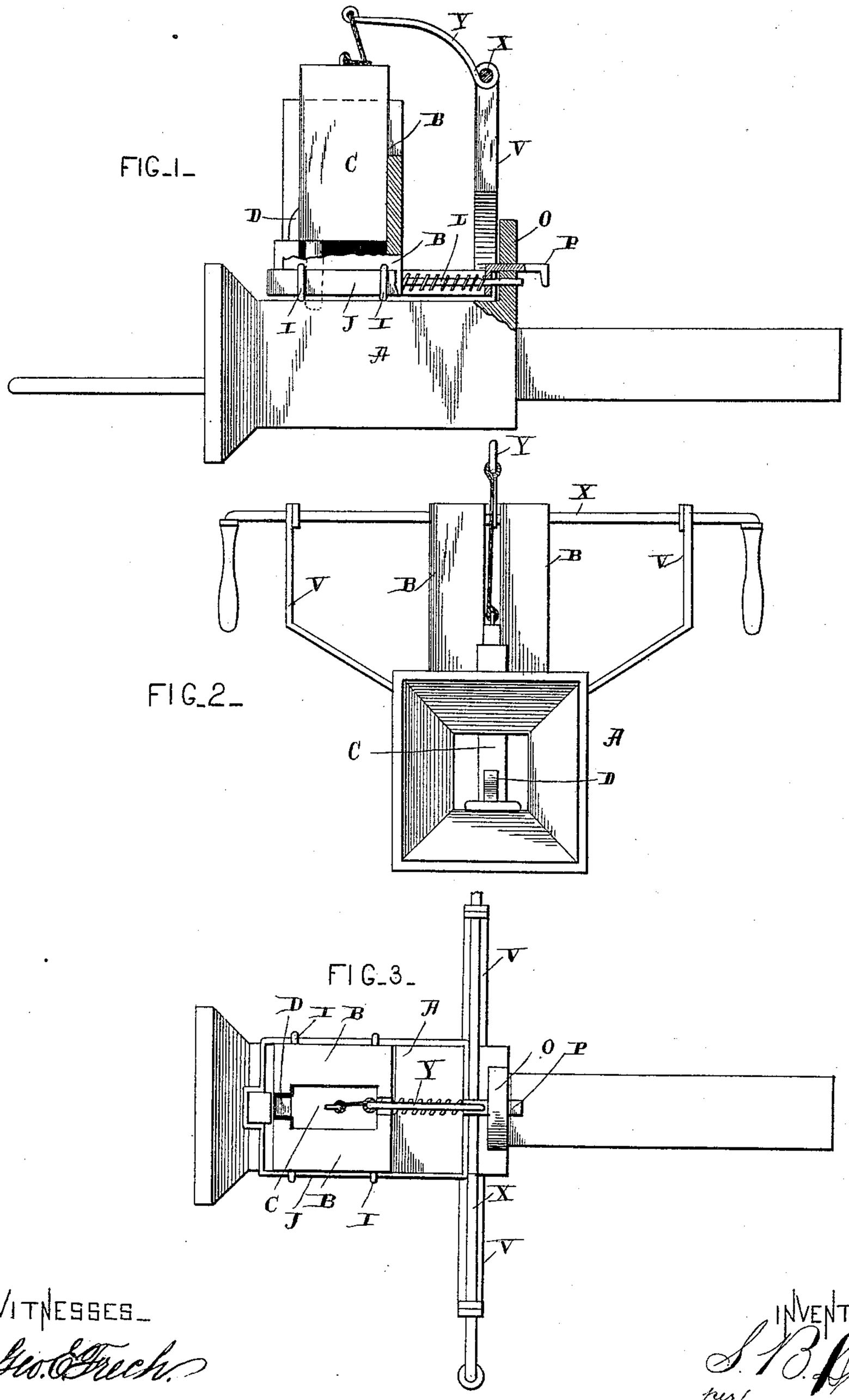

FIG. 2.

FIG. 3.

WITNESSES.

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SAMUEL B. DOVER, OF ADAIRSVILLE, GEORGIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 459,960, dated September 22, 1891.

Application filed May 16, 1891. Serial No. 393,025. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL B. DOVER, of Adairsville, in the county of Barton and State of Georgia, have invented certain new and useful Improvements in Automatic 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in automatic car-couplings; and it consists in the draw-head having a suitable slotted guide or guides formed upon its top, combined with a coupling-pin having an enlarged flattened upper portion, which is provided with a flange, and a spring-actuated catch or support for the pin that is operated by the movement of the draw-head when the cars run together, as will be more fully described hereinafter.

The object of my invention is to provide an automatic car-coupling in which the vertically-moving pin is tripped when the cars run together by the backward movement of the draw-head, and thus prevent all necessity for the brakeman having to venture between the cars for the purpose of coupling them, and thus risking both life and limb.

Figure 1 is a side elevation of a draw-head which embodies my invention, a portion of the guide being removed for the purpose of showing the flange upon the pin. Fig. 2 is a front elevation of the same. Fig. 3 is a plan view of the coupling complete.

A represents the draw-head, which has a slot made through its top sufficiently large for the coupling-pin to play freely through, and rising from the top of this draw-head are the two guides B, between which the coupling-pin C moves. These guides will be cast as a part of the draw-head or may be secured thereto in any suitable manner. Through their front side is formed a slot, so as to allow the flange D upon the pin C to freely move therein as the pin is being raised and lowered for the purpose of coupling and uncoupling the cars. This pin C consists of the ordinary pin which passes through the link and which has a wide flat head which fits in or between the guide, and which flat head both serves as a weight to cause the pin to act more quickly and at the same time to make the pin move straight when it is tripped. If an ordinary coupling-pin were used, it could not be so readily guided in its movements, and therefore I prefer to use an enlarged head upon the pin, so that it can be guided and made to always move accurately. Formed upon the lower front corner of this flat head is a flange D, which projects forward through the slot in the front of the guide, so as to catch upon a spring-catch or support that is provided for this purpose.

Projecting from opposite sides of the guide or guides B are staples I, which serve as guides through which the frame J passes, and which frame has formed upon its front end a catch or support for the pin. This catch or support extends into the larger portion of the slot, so that whenever the pin is raised sufficiently to bring the flange above the top of the catch the flange catches thereon and holds the pin in a raised position.

Placed between the rear side of the guide or guides and the inner side of the rear end of the frame J is a pin L, which serves to keep the front end of the frame J forced backward, so that the catch or support, when left free to move, will always enter the slot and be ready for the flange upon the pin to catch upon it.

Extending from the rear end of the frame J and through a suitable guide O, that is cast with or secured to the rear end of the draw-head, is a push-rod P, which, when the coupling-head is forced backward when the cars run together, forces the frame J forward, so as to withdraw the catch or support from under the flange upon the pin, and then the pin drops from its own gravity.

Secured to the rear end of the draw-head in any suitable manner is the support V, which has its ends turned outward and upward, and through which is passed the operating-rod or lever X, having an arm Y secured to its center. The ends of the lever are turned downward, so as to form handles which can be operated by the brakeman while standing upon the ground upon either side of the car, and thus cause the arm to raise the

pin. To the arm may be attached a cord, wire, or chain, which extends to the top of the car and by means of which the pin can be raised from its point, if so desired. By means of this lever the pin can be raised whenever desired and without the brakeman having to venture between the cars to couple or uncouple them. When the cars run together, the force of the concussion always forces the draw-heads backward to a greater or less distance, and as the draw-head is forced backward the push-pin prevents the frame J from moving back with it, and hence the support or catch is moved from under the flange, and then the pin drops through the link of the adjoining car. Should it not be desired that the cars should couple, the pin is dropped, and then the link of the adjoining car strikes against its front edge. The pin being wide and flat at the point where the link strikes, it will not be injured thereby.

Having thus described my invention, I claim—

1. In a car-coupling, a guide having a slotted front face, a pin having a vertical rib which travels in said slot, stop D, extending outward from the rib, a horizontally-moving frame surrounding the guide, a projection on the front of the said frame which engages the stop D, and the extension P on the rear end of the frame, the parts being combined to operate substantially as shown and described.

2. In a car-coupling, a vertical slotted guide, a flanged pin, a horizontally-moving frame surrounding the guide, a projection on the said frame which engages the flange on the pin, a coiled spring arranged between the said vertical guide and the inner end of the frame, and the projection P, the parts being combined to operate substantially as shown and described.

3. The draw-head having a slotted guide or guides formed upon its top, combined with a flat-headed pin having a flange formed upon its front edge, and which flange projects into the slot in the guide, the endwise-moving spring-actuated frame provided with a catch or support at its front end, a guide formed upon the rear end of the draw-head, a push-rod secured to the frame and passing through the guide, the support secured to the draw-head, and the operating-lever provided with an arm for raising the pin, substantially as specified.

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

SAMUEL B. DOVER.

Witnesses:

G. B. ELROD,

M. L. MORELAND.