(No Model.)

E. E. FRANTZ.

CAR COUPLING.

No. 262,659. Patented Aug. 15, 1882.

Fig. 1

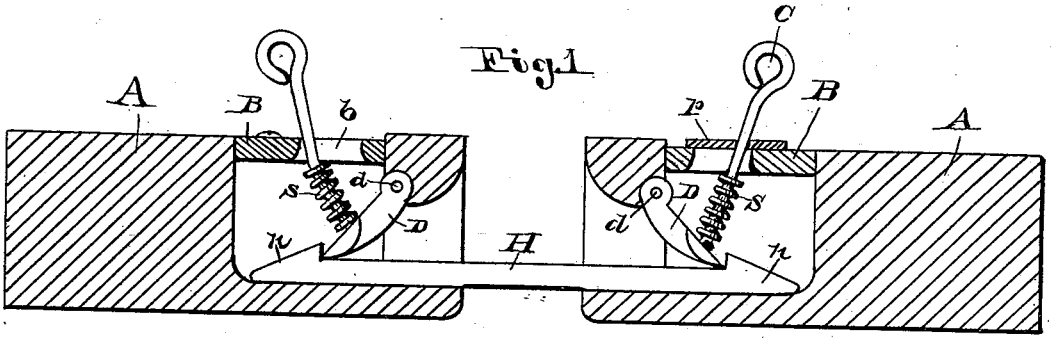


Fig. 2

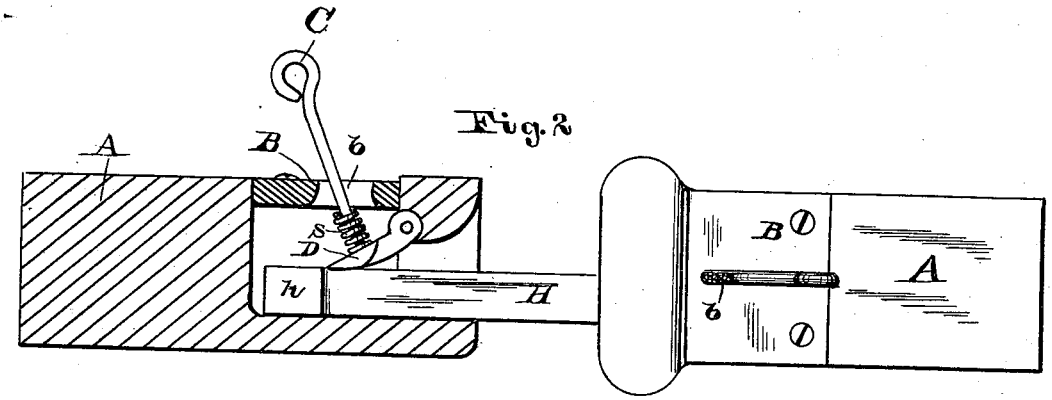


Fig. 3

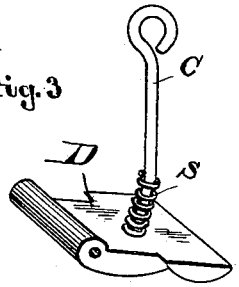
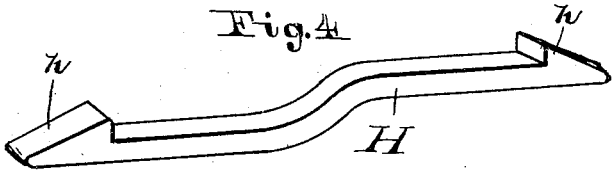


Fig. 4



Attest

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EZRA E. FRANTZ, OF NORTH MANCHESTER, INDIANA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 262,659, dated August 15, 1882.

Application filed March 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, EZRA E. FRANTZ, a citizen of the United States of America, residing at North Manchester, in the county of Wabash and State of Indiana, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification.

My invention relates to improvements in car-couplers; and the objects of my invention are, first, to provide a self-coupler; second, to furnish a car-coupler so constructed and arranged that it will uncouple itself by the turning over of one car down an embankment or otherwise; third, to provide a car-coupler which can be readily uncoupled from the top or otherwise without going between the cars, and can be attached to any car the same as any ordinary coupler. I attain these objects by the construction, arrangement, and combination of the parts as illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view, showing the cars coupled. Fig. 2 is a sectional view, showing the manner of uncoupling in case of overturning. Fig. 3 is a detailed view of the catch. Fig. 4 is a view showing the shape and construction of the coupling-bar.

Similar letters of reference refer to similar parts throughout the several views.

In the drawings, A represents draw-head of a car, made in the ordinary way of a common draw-head, with the exception of being provided with my improvements, as hereinafter described. On the top of the draw-head, back of the bumper, the draw-head is provided with the removable plate or lid B, which is provided with a slot or slit, *b*, in which the lever C has play or moves. B is secured to the draw-head by screws or in any appropriate manner. The inside of the draw-head, back of the bumper, is grooved or cut out so that the catch D can move up and down freely therein; or the inside of the draw-head is made with sufficient space for the same purpose.

D is what I call the "catch," which holds the coupling-pin H fast and keeps the cars coupled together. D is made in the manner as shown in Fig. 3, having its lower inside end face rounded or beveled and hinged at its other end on the journal or rod *d*, so that it will swing up and down freely when not held in position by the spring S. Connected or secured to the top of the catch D is a handle or lever, C, which projects up through the slot or slit *b*, moving backward and forward in said slot when operated upon. A rope, rod, or chain can be attached to the end of C and carried to the top of the car, so that it can be operated by the brakeman on the top of the car; or the rope or chain may be passed over a pulley and run to the side, so that the lever C can be moved by the brakeman at the side of the car, and in either case uncoupling the cars without the brakeman or party going between the cars.

S is a spiral spring around the lever C, and resting on the top surface of the catch D, and bearing against the under surface of the plate or lid B. Having thus a bearing on D and against B, it will keep the catch D pressed down and keep the cars coupled, and being around the lever C, it will keep it pressed back until C is moved by being pulled from top or otherwise, and the car is uncoupled.

H is what I call my coupling "pin" or "bar." It is provided at each end with the beveled head *h*, as shown in Fig. 4, the bevel being from top down to the end, and is essential for the purposes of my invention. H may be straight or bent, as shown in Fig. 4, so as to be suitable for coupling cars having draw-heads of different heights.

On the top of plate B and around the lever C is a loose plate, *p*, for the purpose of covering the slot *b* to keep out the dirt, snow, and rain from the inside of the chamber of the draw-head, thereby insuring the operation of the several parts.

All of the several parts are made of iron, except the spring, which is a spiral spring.

The operation is as follows: The cars being provided with my improvements, when it is desired to couple, the cars being backed together, the coupling-bar H will enter the draw-head, the end or head *h* will push against the catch D, forcing it up until the head *h* passes beyond D, when D will fall against the shank of *h* and the cars will be coupled, the spring S forcing the catch D back to its normal position. To uncouple the cars, the brakeman on the top or at the side pulls on the rope or chain connected to lever C, which will move it for-

ward in the slot *b*, at the same time raising the catch D, and thereby releasing the coupling-bar H and uncoupling the cars.

In case one car should be thrown from the track and turn over or fall down an embankment it will not drag the other car with it, but it will be uncoupled from the other car by its overturning. The construction of the coupling-bar H with its beveled head is such that when the bar is turned the beveled portion presses up against the catch D, it also being beveled, forcing up the catch and thereby uncoupling the cars.

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

The combination of the draw-head A, removable plate B, having slot *b*, the catch D, pivoted within the draw-head, and having an arm or lever, C, provided with coiled spring S, and the coupling-bar H, having beveled heads *h h*, all constructed and arranged as and for the purpose described.

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

EZRA E. FRANTZ.

Witnesses:
B. F. BROWER,
JOSEPH B. HARTER.