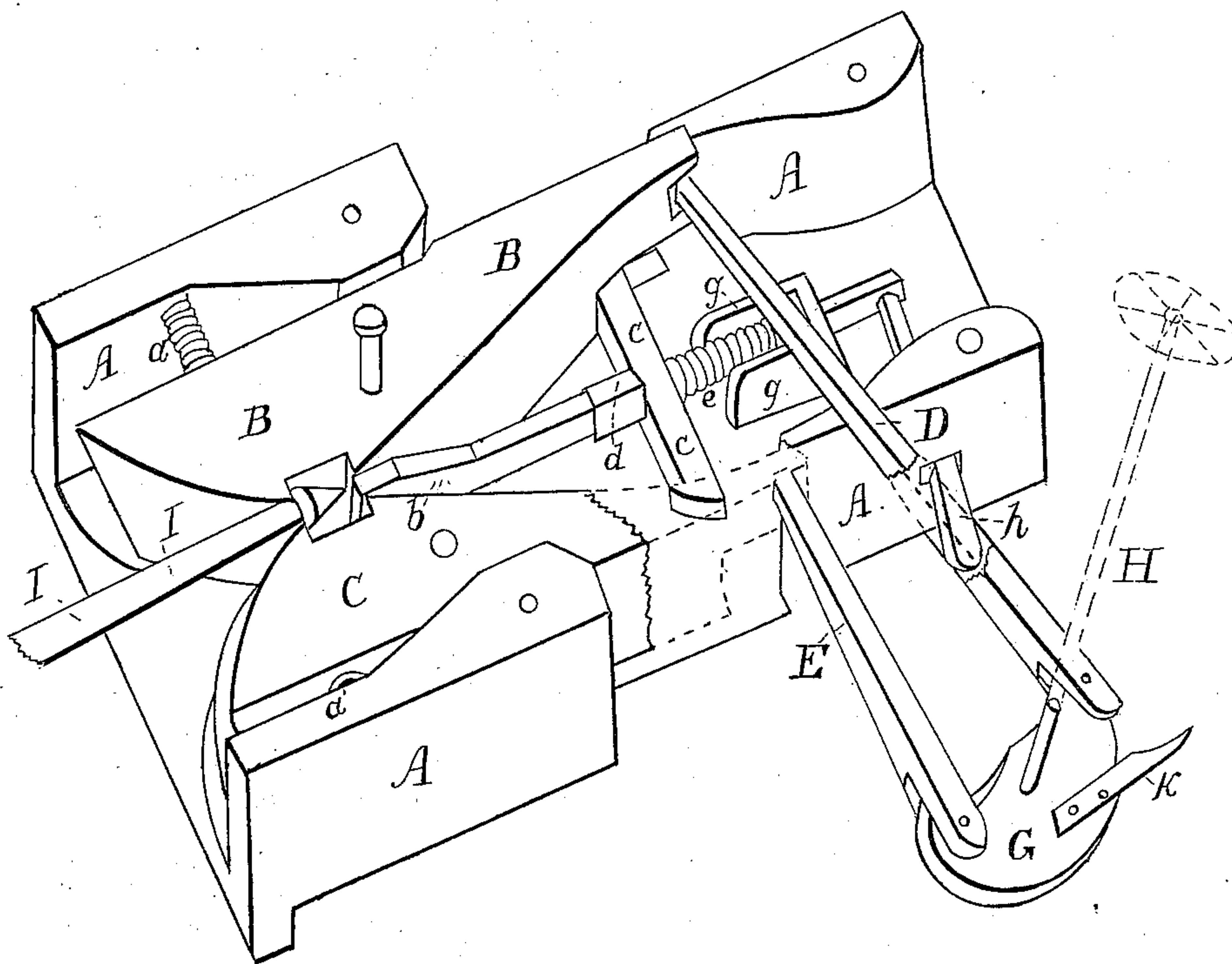


W. R. PATTON.

Car Coupling.

No. 106,399.

Patented Aug. 16, 1870.



Witnesses

E. B. Keanner
W. M. Phillips

Inventor

William R. Patton
Thomas J. Orwig
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM R. PATTON, OF DES MOINES, IOWA, ASSIGNOR FOR ONE-HALF HIS RIGHT TO DENISON TISDALE, OF SAME PLACE.

IMPROVEMENT IN CAR-COUPLING.

Specification forming part of Letters Patent No. **106,399**, dated August 16, 1870.

I, WILLIAM R. PATTON, of Des Moines, in the county of Polk and State of Iowa, have invented certain Improvements in Car-Couplings, of which the following is a specification:

My invention is an automatic car-coupling that may be readily uncoupled by a person at the outside of the car, or on the platform, or on the top of the car; and consists in a peculiar combination of springs and catches and levers, as hereinafter described.

The drawing is a perspective view of my coupling with the top plate removed, showing every part of the mechanism employed.

A A A A is the body of the coupling-box, made of cast or wrought metal. The enlargements of the sides are made to add strength and to form suitable places to receive the bolts by which the top plate is secured, to cover and keep in place and protect the mechanism within the box.

B B is the right coupling-jaw. C is the left coupling-jaw, with the rear end removed. (The dotted lines, however, indicate its proportions and connections.) Both of these coupling-jaws are pivoted in their respective places by bolts passing through them, and also through the coupling-box and its cover, in such manner as to allow them lateral motion. Their front ends are shaped to correspond with the funnel-shaped mouth of the box, for the purpose of receiving and guiding the barbed coupling-link to the recesses where the barb or head of the link is held. The recesses are formed in the coupling-jaws, and are nearly square, extending from the top to the bottom.

D is the right lever or arm, pivoted in the rear end of the right coupling-jaw. E is the left arm, pivoted in the rear end of the left coupling-jaw. These arms extend outside of the coupling-box, and are connected on the outside by an eccentric. G is the eccentric, forming an elbow-joint with each arm. H is a solid shaft, permanently attached to the eccentric near its center. This shaft is secured to the car with journal-boxes or equivalents, and may extend to the top of the car, with a hand-wheel at its top. By turning on this wheel the eccentric is made to pull outward the right arm, D, and press inward the left arm, E. This action works the coupling-

jaws on their pivots and opens the recess and relieves the head of the link.

I I is one-half of the barbed coupling-link. Both ends are of uniform size and shape, but the link may vary in form. *a a* represent the coil-springs, placed in position to constantly press the right and left coupling-jaws together. *b* is a spring-bolt, with an enlarged end, that enters the recess formed in the coupling-jaws, and passes backward through a hollow projection, which may be cast upon or bolted upon the bottom of the box. *c c* is a cross-bar, permanently attached to the spring-bolt, and has catches formed on its ends. The coupling-jaws have notches on their lower sides corresponding with the catches on the cross-bars.

d is a hollow projection, through which the spring-bolt passes. *e* is a coil-spring that presses the spring-bolt forward into the recess. *g g* is a chamber formed upon the bottom of the box, which serves as a guide for the spring-bolt and a chamber for the coil-spring. *h* is a lever, pivoted in the side of the box and connected with the rear end of the spring-bolt. By pressing forward upon this lever *h* the spring-bolt is drawn back, and the catches on the cross-bar are freed from the notches in the coupling-jaws.

The object of the spring-bolt with its cross-bar and catches is to hold the recess open, so that the head of the coupling-link can escape therefrom. After the head of the link has escaped the recess can be closed by pressing forward upon the lever *h*. This device may be used, if desired, but may not be required. The head of the link, entering the recess and pressing upon the spring-bolt, performs the same service, and frees the coupling-jaws, so that they will close upon the head of the coupling-link.

k is a handle attached to the eccentric, and may be conveniently used for uncoupling by a person standing at the side of the car.

Every part of my coupling is made of metal, strong and durable. One of my couplings can be placed on each end of each car, and a coupling-link may be placed in each one. Upon the meeting of the cars each link enters the recess of the other, and the coupling is formed with two links. One link is all that is required;

but if a link should be in each recess it will not prevent the coupling from being completed, and is therefore advantageous.

The recess and the mouth on the coupling-jaws leading to it, together with the neck and head of the coupling-link, form a connection similar to a swivel, and admit of the turning and twisting of the link. The pivoting of the coupling-jaws, together with the coil-springs, provides sufficient elasticity, so that the coupling-links are not held rigidly, and are therefore free from the danger of being broken by the oscillating motion of the cars.

I am aware that there is no new mechanism in my coupling, excepting the peculiar manner in which the different parts are formed, combined, and operated.

Claim.

I claim as my invention—

The coupling-box A A A A, the coupling-jaws B B and C, the arms D and E, the eccentric G, the shaft H, the coupling-bolt I I, the springs *a a*, the spring-bolt *b*, the cross-bar *c*, the hollow projection *d*, the chamber *g g*, the lever *h*, and the handle *k*, all made, combined, and operated substantially as described, and for the purposes specified.

WILLIAM R. PATTON.

Witnesses:

G. B. HAMMER,
W. W. PHILLIPS.