W. S. BURTON.

Car-Coupling.

No. 164,803. Patented June 22, 1875.

Fig 1.

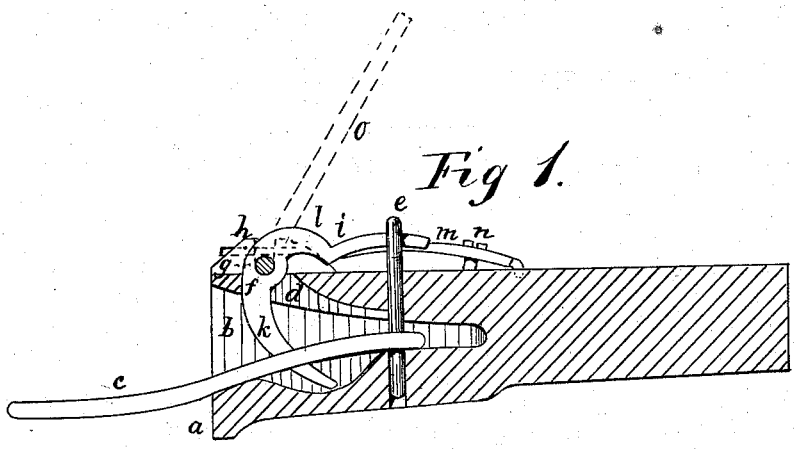
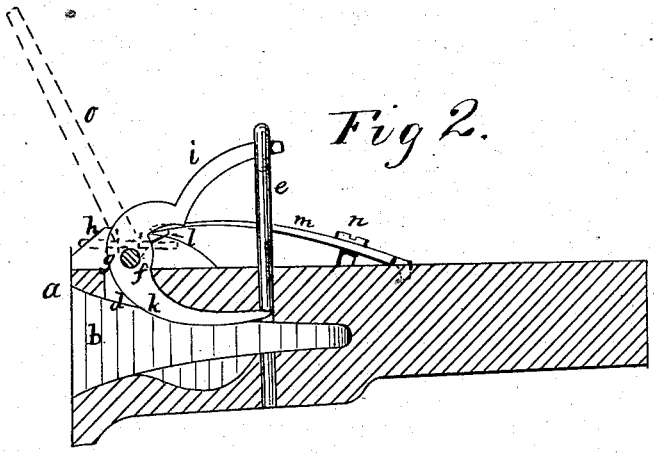



Fig 2.




WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM S. BURTON, OF MARYVILLE, TENNESSEE, ASSIGNOR OF ONE-THIRD HIS RIGHT TO JOHN S. LAWRENCE, OF SAME PLACE.

## IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **164,803**, dated June 22, 1875; application filed May 27, 1875.

*To all whom it may concern:*

Be it known that I, WILLIAM S. BURTON, of Maryville, in the county of Blount and State of Tennessee, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in railroad-car couplers which are self-coupling; and it consists in a cam journaled to the buffer, and having an upper and under arm arranged in connection with the coupling-pin, and a short arm or projection on its shaft or axle, and in a spring, all arranged and operating so that the cars may be readily coupled, and, when coupled, the coupling-pin held firmly in the buffer, and thereby prevent uncoupling by the jolting of the cars when in motion.

In the drawings, which represent my invention, *a* is the buffer or draw-bar, constructed with a flaring mouth, *b*, leading into the receptacle for the link *c*, and with a suitable mortise or opening, *d*, through the top, for the passage of the lower arm of the cam, hereinafter explained. *e* is the coupling-pin, formed with an eye on its upper end, which slides on the upper arm of the cam, and with a length so as to neatly fit between the ends of the upper and lower arms of the cam, as hereinafter explained. *f* is the cam, provided with the axle or shaft *g*, by which it is journaled to the buffer in the lugs *h* on the upper side thereof. It is constructed with the upper and under curved arms *i k*. The under arm *k* curves inwardly, and passes through the opening *d*, its end extending to and resting in a groove in the bottom of the mouth *b*. The upper arm *i* curves backward, and is shaped so as to fit loosely in the eye of the king-bolt. The arms are so arranged with reference to each other that when the cam is raised in the act of uncoupling or coupling the cars the end of the lower arm will be immediately under the lower end of the coupling-pin. *l* is a projection on the shaft *g*, which serves as a lever, on which the spring *m* acts, and holds the cam firmly in the position shown in Fig. 1. The spring *m* is secured to the buffer by any suitable means, with capability of being tightened or loosened by means of the screw *n*. *o* is a lever for raising the cam in uncoupling the cars. It may be connected by suitable rods or bars with the outside or top of the car, so as to enable the operator to raise the cam without going between the cars.

In coupling the cars the link strikes against the arm *k*, and forces the latter up. The curved shape of the arm carries the link past the end of the pin *e*, when the spring *m*, acting on the projection *l*, forces the cam down. The upper arm *i*, on which has been placed the eye of the pin, pushes the latter through the buffer and couples the cars.

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

The combination, with the buffer *a* and pin *e*, of the cam *f*, constructed as described, having the projection *l* on its shaft, and the spring *m*, all arranged and operating substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM S. BURTON.

Witnesses:

ROBT. W. HOOD,

W. D. MCGINLEY.