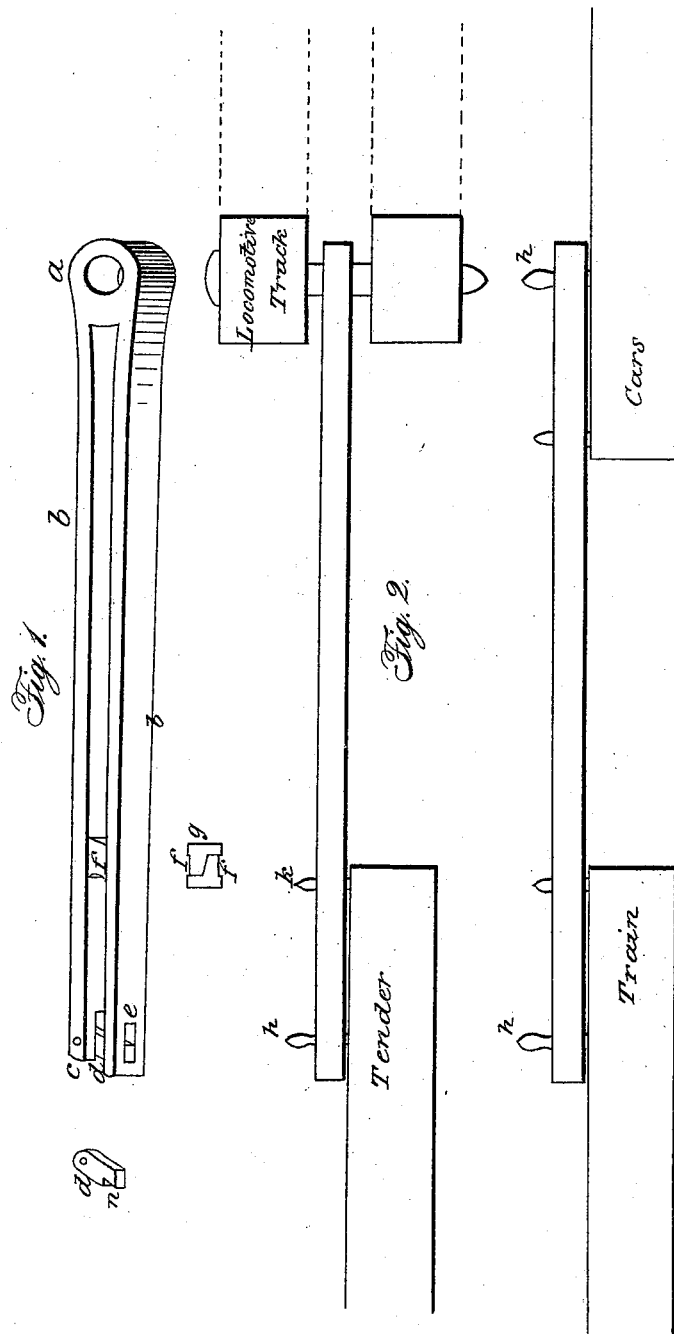


J. STIMPSON.
Car Coupling.

No. 1,885.

Patented Dec. 10, 1840.



UNITED STATES PATENT OFFICE.

JAMES STIMPSON, OF BALTIMORE, MARYLAND.

MODE OF CONNECTING AND DISCONNECTING RAILROAD-CARRIAGES OF ALL KINDS.

Specification of Letters Patent No. 1,885, dated December 10, 1840.

To all whom it may concern:

Be it known that I, JAMES STIMPSON, of the city of Baltimore and State of Maryland, have invented a new and useful improvement in the mode of connecting a locomotive-engine to its tender, the tender to the train, and each of the cars of the train to one another, and of disconnecting the same, which invention for the sake of brevity I will name the "self-disconnecting tie."

The object of this tie is, that when an engine, or any car in a train, is by accident turned off the road track, the lateral angle the car so turned off, must make with the car which it is connected to behind, shall of itself inevitably disconnect said car that is turned off, from the others, without damage or injury to the tie.

To enable others skilled in such things to make the self disconnecting tie, I will describe the mode or form of construction and application.

The usual tie, is a piece of flat bar-iron, with pin holes in each end, or, instead of iron, a piece of wood made in the same way; or two or three links of a chain, which are connected to the cars by pins or bolts, sufficiently strong to drag the whole train; and in case the engine is thrown from the track, these ties must be either wrenched from the car, or broken; or the succeeding cars must also follow the engine. Now my tie, (see Figure 1,) has a pin hole as usual at the fore end, (see letter *a*,) and from thence, its whole length, it is made in two parts, of greater width vertically than horizontally, which two parts *b*, *b*, I will call the legs of the tie; and if they are made of iron, they should be slightly hammer-hardened, so as to give them somewhat of a spring temper. In the end of one of the legs, I make a horizontal slit or mortise as at *c*, open at the end, in which is fixed a movable forelock see *d*, by a pin's passing vertically through said forelock and the two parts of the slot mortise. This pin is riveted fast to the two sides of the mortise, but the forelock is loose upon it; so that it can turn around horizontally, in a line with the legs of the tie. I also make a mortise through the other leg of the tie opposite to the first, at a little distance from the end see *e*, the part of which mortise that is nearest the end is made slightly beveling outward for the forelock to rest against, and the part of the

forelock which will be in contact with said beveled mortise is also to be beveled in a like manner to fit it, see *n*, in order that when the forelock is pulled against it, it will incline the leg to the forelock; and this beveled part of the mortise may be rather thin laterally so that the end of the forelock resting in it, may be disengaged by as little lateral movement as need be. To each leg of the tie, six to twelve inches from said mortise, (varying according to the whole length of the tie) I fix studs, see *f*, projecting inward from each leg, over and under each other; said studs should be about the width laterally of the size of the pins which they draw by and a little more as there should be a little loose play in order that the curves upon the road shall not cause a movement of the forelock unnecessarily. One stud is fast to one leg and the other to the other and each stud occupies half the vertical width of the leg of the tie as at *g*. The parts of the studs next to the forelock should be made concave, that the pin when the engine is backing should securely rest in the concave part of said studs, and they being attached to each leg of the tie, the stress will be equal upon both legs. Now there should be two pins or stud-bolts projecting upward from the rail in the center of the truck or from the car body—which ever it is desired they should connect by—and these two pins should be as far apart, out to out, as nearly the whole space between the forelock and the studs see Fig. 2 *h*, *k*. And it will be seen that should one car be thrown out of place and the other remain in the usual line, this tie by the lateral action at either end, owing to the distance the pins are apart, will inevitably separate the legs of the tie accordingly and if the angle is enough to disengage the forelock it will then fly around back, thus freeing entirely the cars from each other. And if one car is off the track and the other in place upon it, that quantity or measure of movement must be sufficient to disengage the tie.

The pins, which the tie draws by, should be placed perpendicularly, but the pin next to the center of the car, that is, the one the forelock acts upon, should be swelled a little near its top see *h*, *h*, *h*, the lower part of the swell, commencing a little higher than the whole height of the tie, so as to afford a suitable loose action up and down; but the

thin part of the pin should not quite fill the space between the legs of the tie laterally, to allow for curves, &c. The pin should be pointed a little above the swell and the
5 swelled or thick part of the pin should be a little less, than what would open the legs of the tie sufficient to disengage the forelock and this swell in the pin will be sufficient to prevent the tie from jumping off the pin
10 under any common jolt of the cars. Now this tie cannot be injured by disengaging

itself, hence it is always ready to be reapplied after an accident.

What I claim as my invention and desire to secure by Letters Patents, is—

The combination of the spring jaws *b, b*, forelock *d*, studs *f, f*, and pins *h, h*, for the purpose and in the manner specified above.

JAMES STIMPSON.

Witnesses:

JAMES H. STIMPSON,

JULIA M. STIMPSON.