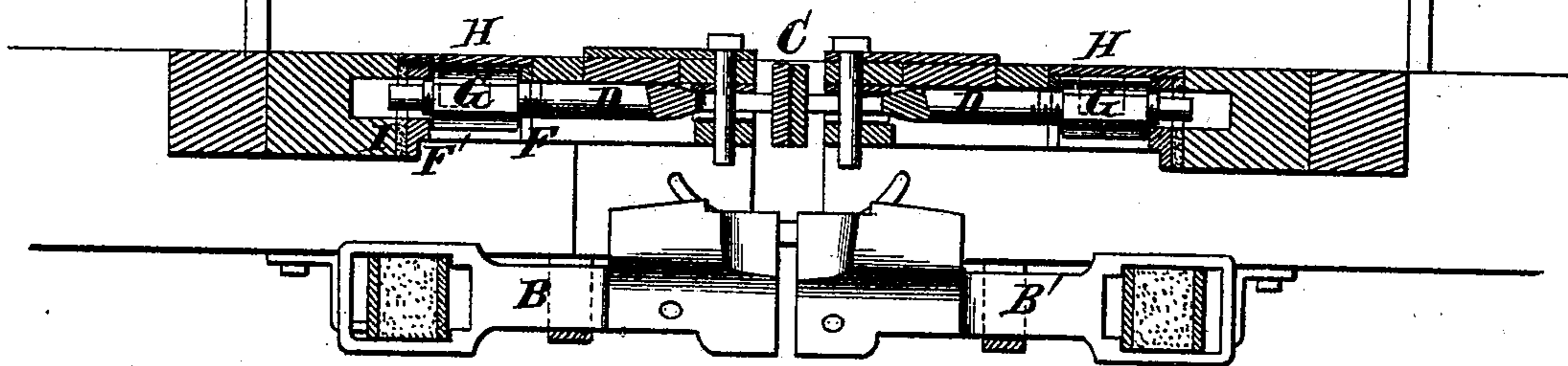
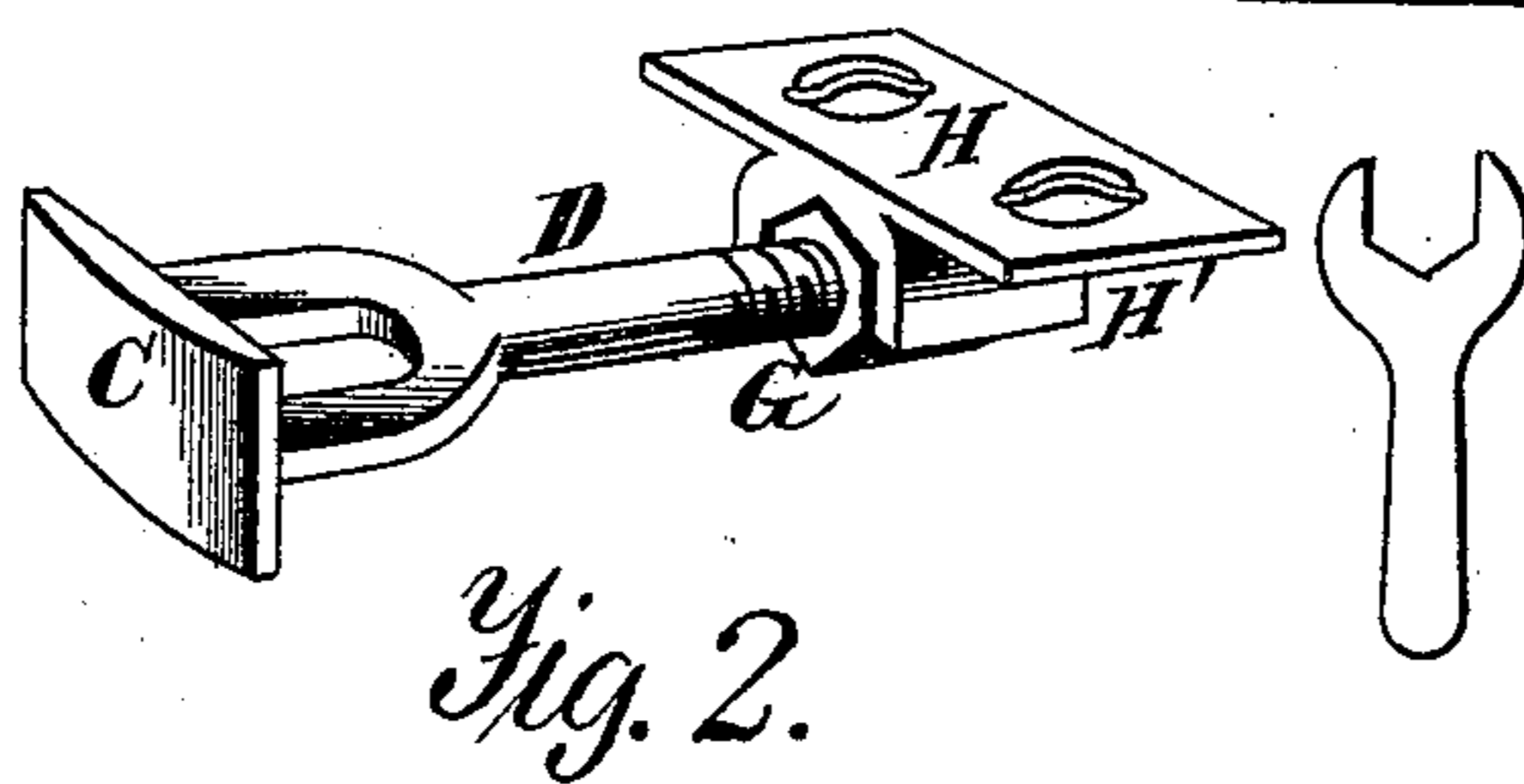
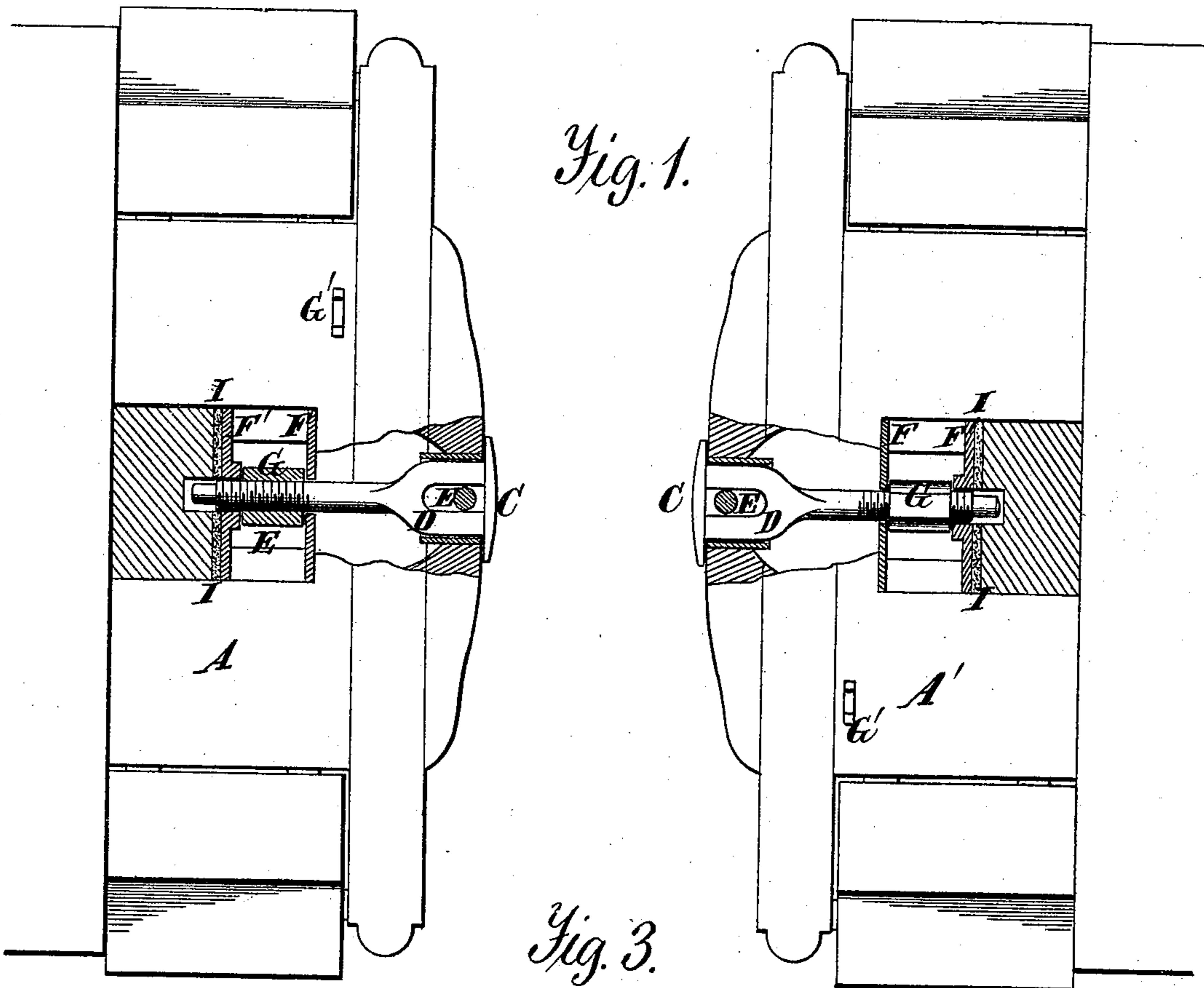


J. ELDER.
CAR-BUMPER.

No. 174,667.

Patented March 14, 1876.



Witnesses.
A. Ruppert.
A. C. Caspell.

J. Elder
Inventor.
D. P. Holloway & Co.
Attys

UNITED STATES PATENT OFFICE

JOSEPH ELDER, OF BEARDSTOWN, ILLINOIS.

IMPROVEMENT IN CAR-BUMPERS.

Specification forming part of Letters Patent No. **174,667**, dated March 14, 1876; application filed December 23, 1875.

To all whom it may concern:

Be it known that I, JOSEPH ELDER, of Beardstown, in the county of Cass and State of Illinois, have invented an Improvement in Friction-Plates for Use on Passenger Railway Cars, of which the following is a specification.

My invention relates to an adjustable friction-plate for forcing railway-cars apart, so as to maintain them in a fixed relation to one another, and prevent the shock incident to starting and stopping loosely-coupled trains.

My improvement consists in attaching to the friction-plate a stem, which, passing through the timbers of the platform, has a spiral thread formed on it to receive a nut placed between two of the cross-timbers of the platform, and may be turned to project or retract the friction-plate; and also in combining with the said nut a plate which fills up the opening in the platform, and at the same time engages the nut so as to lock it.

In the annexed drawings, making a part of this specification, Figure 1 shows a plan of the platform of two cars, cut away to reveal the friction-plate and the operative mechanism. Fig. 2 is a vertical longitudinal section, and Fig. 3 is a perspective view of the friction-plate and its operative parts.

The same letters are employed in the several figures in the indication of identical parts.

I have shown that my invention is connected with the automatic coupling of Hein and Kock's patent, No. 165,826, but the latter forms no part of my present case, which is not limited to any particular coupling.

In the annexed drawings, A A' are the platforms of two passenger-cars, and B B' are the draw-bars by which they are coupled. C C are the friction-plates carried upon the bifurcated bar D, which passes through the front timbers of the platform, embracing the pin E, which will not interfere with the movement of the plate. The stem D passes also through two plates, F F, attached to or supported by the wooden frame of the platform, so as to enable the friction-plate and its stem to support the momentum of the car and keep the train separated.

The bar D is threaded, and carries the hexagonal nut, G, which, when turned by a wrench, G', forces the plate C away from the platform or retracts it, as it is termed, one way or the other. The wrench, when not in use, may be carried by dropping the handle through a hole in the platform. The rear plate F may be supported against an elastic sheet of india-rubber, I, to impart to the action of the friction-plate a slight amount of elasticity.

A plate, H, is used to close the opening formed in the platform to give access to the nut G. In order that it may also perform the function of a nut-lock, a lug, H', formed to fit the polygonal nut, is fastened to the under side of plate H, in such position that when the plate is in position the lug will embrace the nut and prevent its turning.

The operation is readily understood: When the cars are coupled the plates H are removed and the nut G on each platform turned until the hardened faces of the friction-plates C are forced into close contact, compressing the spring I, which causes them to fit snugly together and force the cars apart, so that in starting or stopping there is little or no check. The plates H are then replaced and the nuts locked by the lug H'.

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

1. In combination with the platforms of railway-cars, the friction-plate C, projected after the cars are coupled by the nut G to take up the slack of the coupling, substantially as set forth.

2. In combination with the friction-plate C, actuated by a nut, G, on its stem D, the plate H H', performing the double function of a cam and nut-lock, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH ELDER.

Witnesses:

PHIL. HIEN,

THOS. H. CARTER.