(No Model.)

A. M. TRUDE & W. GRAY.

CAR COUPLING.

No. 266,558. Patented Oct. 24, 1882.

Fig. 1.

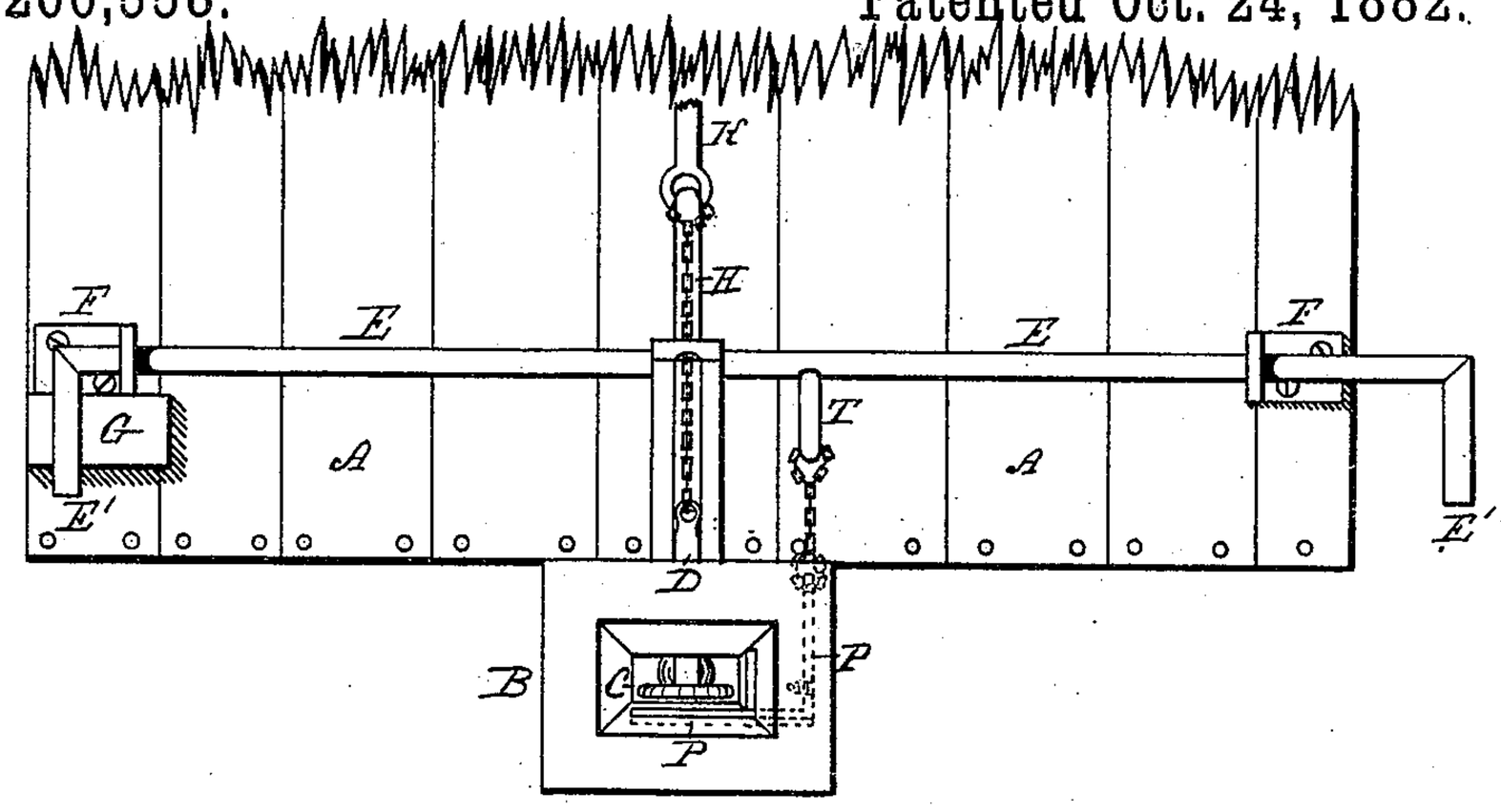


Fig. 2.

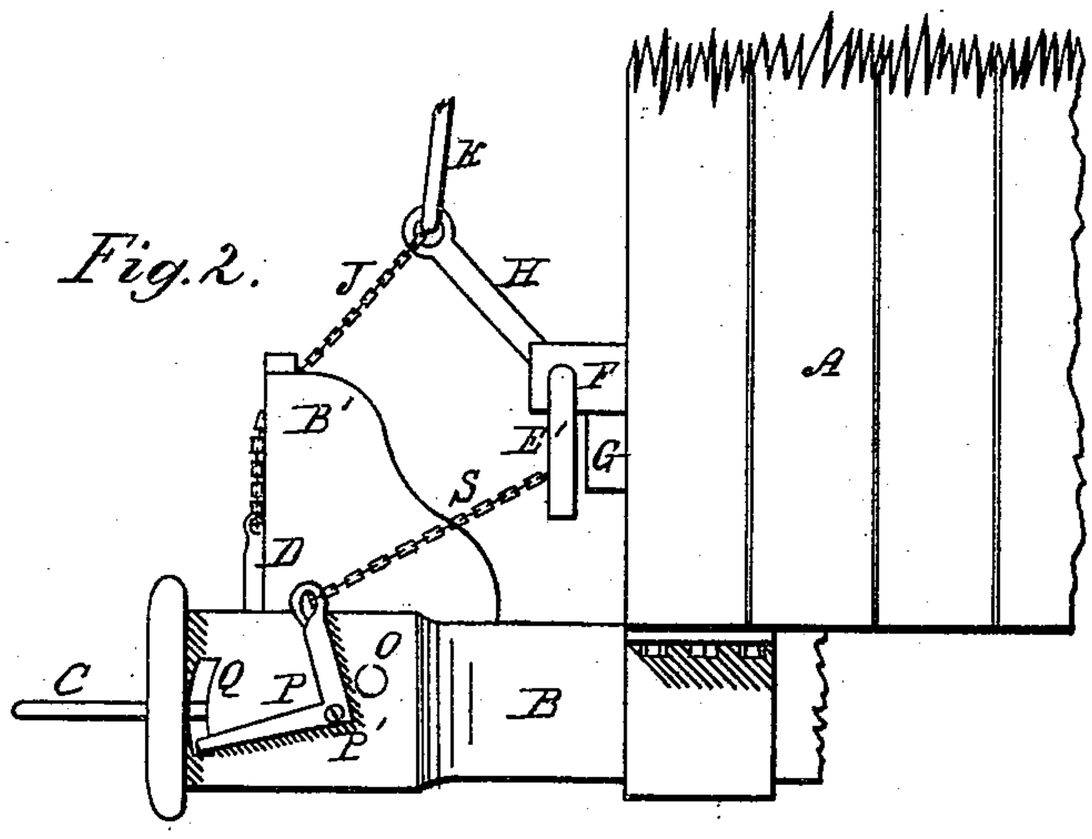
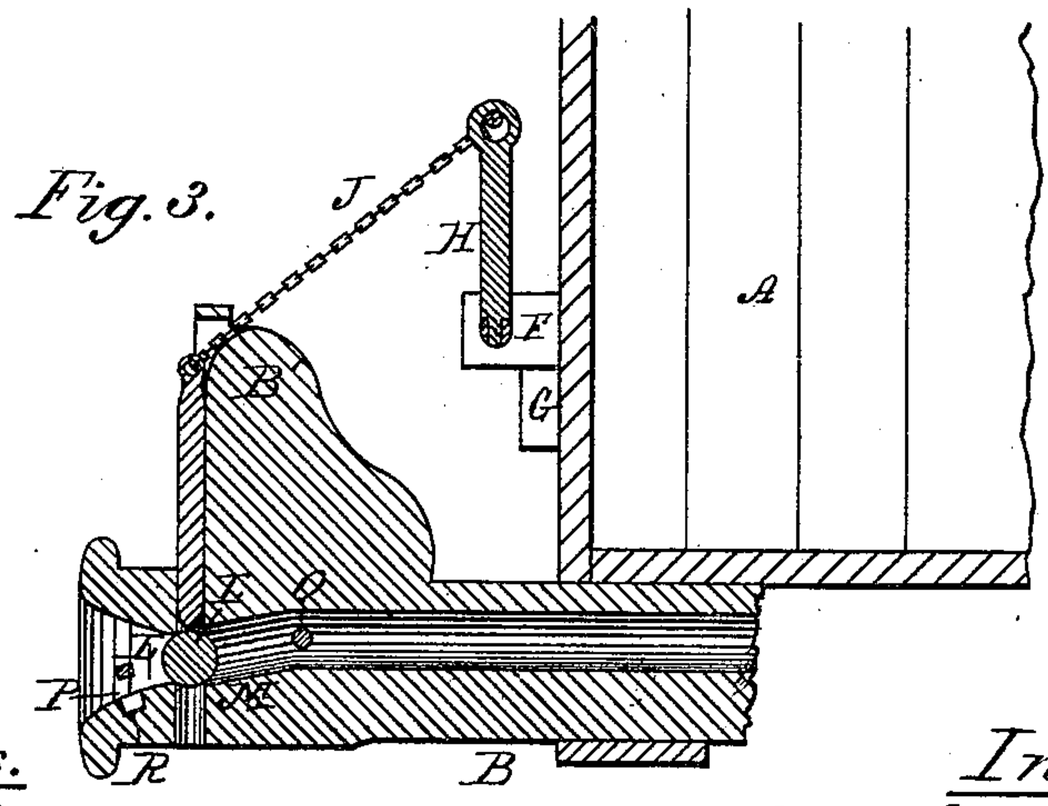


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

ARTHUR M. TRUDE AND WILLIAM GRAY, OF HARTFORD, CONN., ASSIGNORS OF ONE-THIRD TO CHARLES H. COOLEY, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 266,558, dated October 24, 1882.

Application filed July 28, 1882. (No model.)

To all whom it may concern:

Be it known that we, ARTHUR M. TRUDE and WILLIAM GRAY, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Car-Couplings; and we do hereby declare that the following is a full, clear, and exact description of thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

Our improvements relate to the couplings by which railway-cars are attached together to form a train.

The object of our invention is to provide a coupling which will serve the required purpose in a better manner than those heretofore in use, and at the same time be adapted to couple with the ordinary draw-bar and link now in almost universal use.

In the accompanying drawings, illustrating our invention, Figure 1 is a front view of the lower part of the end of a freight-car provided with our improved coupling. Fig. 2 is a side view of the same. Fig. 3 is a longitudinal vertical section through the middle of the draw-bar.

In Figs. 1 and 2 the parts are in the position required for holding the link after it has been inserted, and in Fig. 3 they are shown in position with the link removed.

A is the end of the car.

B is the draw-bar, attached to the car in the customary manner. It is furnished with the projection B′, to serve as a guide and support for the pin, as will be described.

C is the link. This is intended to be of the ordinary shape and size.

D is the pin, which passes through the link to hold it in the draw-bar, and by the withdrawal of which the link is released.

E is a horizontal bar, extending across the end of the car. It is supported in bearings F, in which it can be rotated, and in which it has a small movement endwise. The bar E is provided with crank-handles E′ at each side of the car.

G is a block or stop, which prevents the turning of the bar E in one direction when the handle is pushed inward in the position shown in Fig. 1. When the bar is moved to the left, so that the handle is free from the side of the car, the bar can be turned in either direction.

H is an arm extending from the bar E, which is connected by the chain J to the pin D. This is for the purpose of drawing up the pin when the bar is turned.

K is a rod reaching to the top of the car from the end of the arm J, by which the bar E can be operated to turn it in the same way as by the handles on the sides.

L is a metallic ball, which moves in an inclined guiding-channel, M, in the draw-bar B. This ball is inserted from the rear end of the draw-bar, and is held in the inclined channel by a pin, O, which is passed through the draw-bar behind it after it is inserted. The forward end of the channel M, where the link enters, is contracted, so that the ball cannot pass out. The ball is held by this contraction so that it rests exactly under the end of the pin D when it is raised.

P is a bent lever, pivoted to the side of the draw-bar at P′, and having an arm extending through the slot Q, so as to lie in a groove, R, in the bottom of the mouth of the draw-bar.

S is a chain connecting the lever P with the arm T on the bar E. The lever P is for the purpose of raising the outer end of the link C when it is in the coupling, so that it will be in the proper direction to enter another corresponding coupling upon the end of another car.

The operation of our invention is as follows: When the parts are in the position shown in Figs. 1 and 2, and it is desired to uncouple the car by releasing the link, the arm H is turned backward toward the end of the car by the handle E′ or the rod K. This raises the pin D and releases the link. As the link passes out of the ball L follows it and rests under the end of the pin, thus supporting it in its raised position, as shown in Fig. 3. When it is desired to again couple the cars the link passes into the draw-bar and pushes the ball L back up the inclined channel M and allows the pin D to fall down through the link. If it is not wished to have the cars couple when run together, the pin D is held up by the arm H, as shown in Fig. 3. If it is wished to have

them couple, the arm H is turned forward before the cars are run together. It is supposed above that the link is in the opposite coupling, similar to the one shown in the drawings. If the link is in the coupling, and it is desired to make it truly enter the other one upon the adjacent car, the bar E is moved endwise so as to release it from the block G, against which one of the handles rests. The bar E can then be turned in the opposite direction, so as to operate the arm T and the bent lever P. The arm T is turned back toward the end of the car, which raises the forward end of the lever P, lying in the mouth of the draw-bar. This acts upward against the link and raises its outer end, so as to move directly into the opening of the opposite coupling.

By means of our improvements it will be observed that all the operations required for coupling and uncoupling the cars can be performed either from the top or sides of the car, that the cars can be coupled or not, as desired, and that any car having the ordinary link and draw-bar can be connected with our improved coupling.

What we claim as our invention is—

1. The guide and projection B′ on the bar B, in combination with said bar, the pin D, the chain J, the arm H, the bar E, having the handles E′, and the rod K, substantially as described.

2. In a car-coupling, the combination of the pin D and its lifting mechanisn, and the lever P and its lifting mechanism, with the longitudinaliy-shifting bar E and block G, whereby the pin D and the lever P can be operated separately by the same handle and crank, substantially as described.

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Witnesses:
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