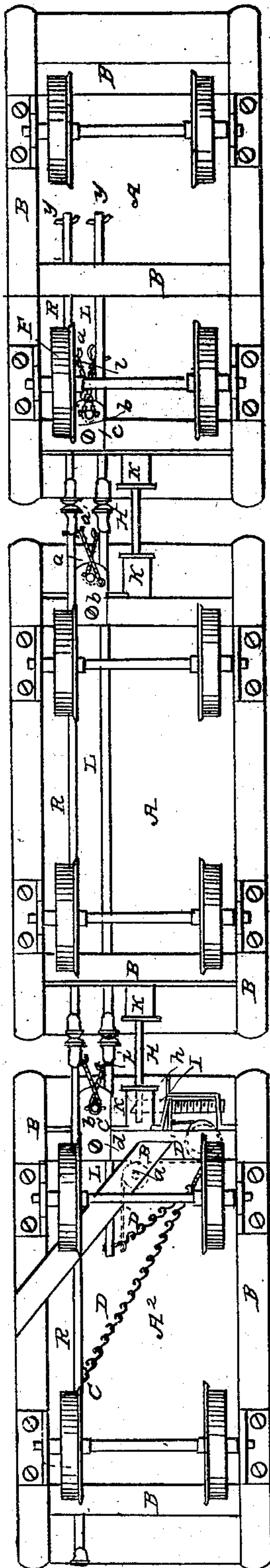
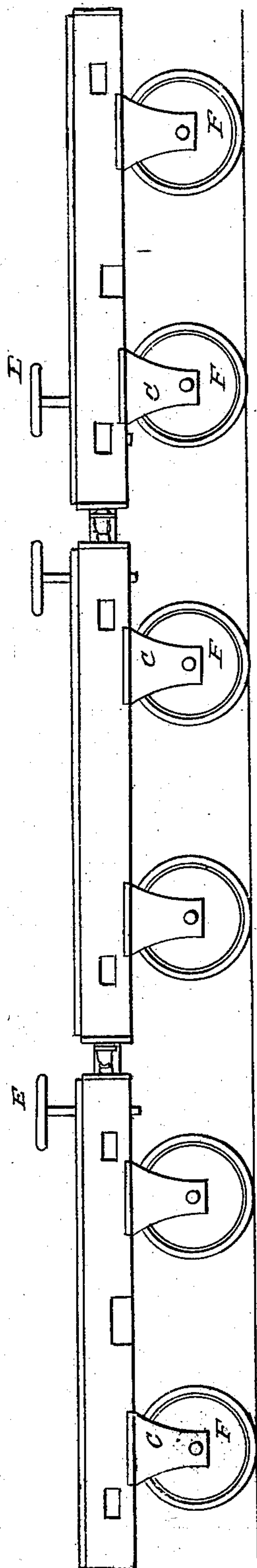


W. O. GEORGE.
Car Coupling.

No. 15,839.

Patented Oct. 7, 1856.



UNITED STATES PATENT OFFICE.

WILLIAM O. GEORGE, OF RICHMOND, VIRGINIA.

BUMPER ARRANGEMENT FOR UNCOUPLING RAILROAD-CARS.

Specification of Letters Patent No. 15,839, dated October 7, 1856.

To all whom it may concern:

Be it known that I, WILLIAM O. GEORGE, of Richmond, in the county of Henrico and State of Virginia, have invented certain
5 new and useful Improvements in Car-Couplings, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings of the same, in which—

10 Figure 1 represents a side elevation of the platform of a locomotive, tender, and car having my improvements applied thereto, and Fig. 2 a plan of the under side of the same.

15 In many if not all cases of railroad accidents, which have resulted in the loss of so many valuable lives, and destruction of property to an enormous amount, it is a well
20 ascertained fact that if suitable means for detaching one car from another when in rapid motion had been provided, the catastrophe would have been to a considerable extent prevented. These accidents arise from
25 various causes, of which not a few are occasioned by the breaking of a wheel, or by the engine being thrown from the track, by coming in contact with cattle crossing the rails
30 or other obstructions upon them, dragging the train after it, and rendering the whole one vast wreck. Whereas had the proper
35 facilities been attached to the cars, they could have been instantly detached from the tender; and have passed along the road without further accident. But as the obstruction
40 may not have been entirely removed from the track when struck by the engine but only partially so, the probability is that it would be, when again struck by the forward
45 car, which in all likelihood would also be thrown from the track, involving the necessity of the succeeding car being instantaneously detached from it, to prevent it from
50 dragging the others with it, and so on with all the others in succession, so as to give some one of them a chance to be saved from inevitable destruction. From these facts it will be apparent that it is of vital importance so to construct the couplings that every car in the rear of any particular one
55 may be made capable of being simultaneously detached from each other by the simple act of uncoupling that one.

To provide such means is the object of my invention, which consists in so arranging
55 and supporting a rod under and running lengthwise of each car, that the hinder end

of every one shall when operated strike against the forward end of the rod in the succeeding car, causing it to withdraw the bolt that connects the cars together. By this
60 means the engineer may in the event of danger uncouple every car in the train from each other, thus presenting a chance to some if not to all the cars to pass along the road uninjured, should the engine happen to be
65 thrown from the track. The same effect being produced upon all the cars in the rear of any particular one which should happen to be operated upon in that manner.

To enable others skilled in the art to make,
70 construct and use my invention I will now proceed to describe its parts more particularly.

A represents the bottom frame or platform of the engine, A' the tender, and A² a
75 car the latter two of which are connected together by means of my improved coupling, and B the framework of each, to the side beams of which are secured the bearings (C), in which the wheels (F) are mounted,
80 and upon which the cars are supported and run.

Through mortises in the cross beams of the frame of each car are passed a series of rods (R) in a line with each other; com-
85 mencing with one extending from about midway of the engine (A'), backward until its rear end rests against the forward end of the one attached to the tender A', which runs along under its whole length, until its
90 rear end rests against the forward end of the one secured to the car (A²), and that in turn to the rod on the next car, and so on to the end of the train, there being one attached to every car. To the side and near
95 the forward end of the rods (R) are secured a cord or chain (a) to each, by means of a staple or eyebolt (a') the other end of which is attached to a staple (b) secured to the lower end of the crank shaft (c). The latter
100 being supported in bearings (d) secured to the underside of the cross beam of the frame (B). On the upper end of the shaft is mounted a lever or crank wheel (E), by the turning of which, the chain (a) is wound
105 upon its shaft, causing the rods (R) to move in a direction toward the rear of the cars. Toward the rear end, and near the middle of the rods (R) on their inner side are secured eyebolts or hooks (e) to which are
110 connected one end of the chains (D), the other passing around a pulley (D²) and se-

cured to one end of a pin (*f*) on the side of the spring bolt (*I*); the latter passing through a mortise in the coupling box (*K*) and connecting link (*H*), and by which the cars are coupled to each other. Around one end of the bolt (*I*) is wound or coiled a spiral spring (*g*), having its bearing respectively against the side of the bracket (*J*) that supports and guides the bolt, and pin (*f*), for the purpose of projecting the bolt (*I*) to couple the cars, when the retracting force is removed, and also causing the rods to assume the proper position to be again acted upon to withdraw the bolt. The pin (*f*) is caused to pass clear through the bolt (*I*) and also through a mortise or slot in the front side of the bracket (*J*) to form a handle (*h*) by which the bolt may be withdrawn when the cars are stationary, and the person standing on the ground. It will now be perceived that if the crank (*E*) of the engine be turned so as to wind up the chain (*a*), that it will cause the butt end of the rod (*R*) to strike against the head of the corresponding rod of the tender, both of which are enlarged for this purpose. It in turn, as it is pressed back striking against the rod (*R*) of the car, pushing it before it, and dragging with it in its retrograde movement the chain (*D*) to which the spring bolt (*I*) is secured, withdrawing the latter from the mortise in the connecting rod (*H*), thus detaching the car (*A*²) from the tender (*A'*). The rod (*R*) of the car (*A*²) will also when pressed back as described have struck the head of the rod in a line with it in the succeeding car, causing it to detach that car in the same manner as that of car (*A*²); and so on through the whole train of cars leaving the whole detached from one another. But as it is not always desirable to detach every car in a train from each other, I provide other means for uncoupling any desired number of cars, without detaching them from each other as in cases of emergency.

Through mortises in the cross beams of the frame (*B*) and parallel with the rods (*R*) are passed rods (*L*), the mortises serving to support and guide the heads or ends of the rods against each other. To the forward end of these rods is connected a chain (*i*) in a similar manner to the chains of the rods (*R*), the other end of the chains being attached to the end of the crankshaft (*c*) as were those of the chains (*a*). At the rear end of the rod (*L*) of the car (*A*²) and which is so made as not to extend throughout the whole length of the car, is attached one end of a cord or chain (*D'*) the other being attached to the chain (*D*) of the bolt (*I*); or instead of being directly at-

tached to the latter, it may if thought advisable be first passed around a sheave (*n*) as shown in red lines in Fig. 2. So that when the chain *i* is wound upon the shaft (*c*) by the crank or lever wheel (*E*) of the car (*A*²), the rod will be drawn backward, dragging the chain *D'* to which the spring bolt is connected as before described along with it; in this way withdrawing the bolt from the coupling bar (*H*), thus detaching the car from the tender, without uncoupling those in the rear as would have been the case, had the rod (*L*) of each car extended throughout their whole length. Each car being provided with this apparatus will it will readily be perceived, enable the conductor to detach any number of cars from the train, without they themselves being separated from each other.

As it is desirable that the engineer should be able to separate the engine and tender from the cars without being under the necessity of going to the car (*A*²) or waiting for the conductor or brakeman to effect it, the rod *L* of the tender is extended throughout its whole length, so as to bear against the corresponding rod of the car (*A*²) whereby by turning the crank (*E*) of the engine so as to wind up the chain (*i*), the rod (*L*) of the tender will be carried as it is struck by that of the engine to bear against the corresponding rod of the car (*A*²) pushing it backward, whereby the bolt (*I*) is withdrawn from the connecting bar (*H*) and the car detached from the tender.

Through the end of the rods (*R* and *L*) of the engine are passed pins (*y*) to prevent them from moving beyond a certain distance, there being others for the same purpose through both ends of the remaining rods (*R* and *L*) on the inner side of the cross beams.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent is—

The arrangement of sliding rods running longitudinally beneath the platforms of railroad cars so connected with the coupling pins of the different cars that they may be simultaneously detached from each other by simple contact of the sliding rods, at the same time that the engineer or conductor is enabled to disconnect one or more of the cars if desired, substantially in the manner herein set forth.

In testimony whereof I hereunto set my hand, in presence of two subscribing witnesses.

W. O. GEORGE.

Attest:

JNO. G. SUBLETT,
GEO. W. SUBLETT.