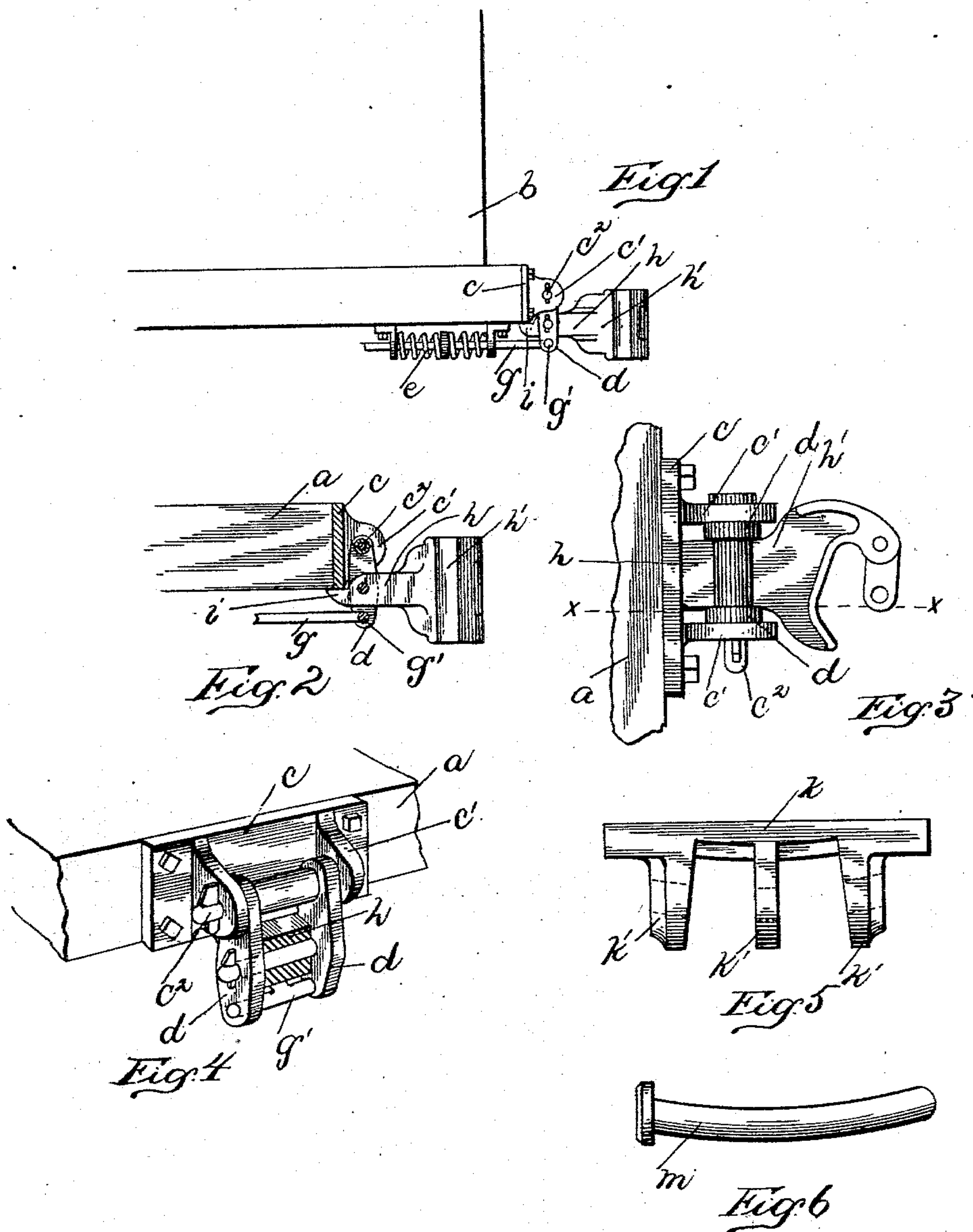


(No Model.)

E. GRAFSTROM.
MEANS FOR ATTACHING COUPLINGS TO CARS.

No. 561,784.

Patented June 9, 1896.



WITNESSES:

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MEANS FOR ATTACHING COUPLINGS TO CARS.

SPECIFICATION forming part of Letters Patent No. 561,784, dated June 9, 1896.

Application filed November 21, 1895. Serial No. 569,650. (No model.)

To all whom it may concern:

Be it known that I, EDWARD GRAFSTROM, a citizen of Sweden, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Means for Attaching Couplers to Cars, of which the following is a specification.

My invention relates to means for connecting car-couplers to cars; and the objects of my invention are to provide improved means for producing such connection of a coupler with the tender or other comparatively low car as to elevate said coupler to the desired height above the track and at the same time admit of said coupler being used in conjunction with any of the ordinary or desirable forms of resilient draft-rigging and to produce other improvements in details of construction which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a portion of one end of a car, showing my improved coupler connection. Fig. 2 is a sectional view on line *x x* of Fig. 3. Fig. 3 is a plan view of said coupler connection. Fig. 4 is a detail view in perspective of said connection, showing the shank of the coupler broken away. Fig. 5 is a plan view of a modified form of bracket which I may employ, and Fig. 6 is a similar view of a modified form of pin.

Similar letters refer to similar parts throughout the several views.

It is well known that in the construction of tenders and in the construction of some other cars employed in railway-service the bodies of such cars are supported at such heights from the track as not to admit of the connection of the coupler with the usual form of spring-actuated draft-rigging beneath the car-body, and thereby support said coupler at the proper height standard. In cases of this kind it has been customary to produce a substantially rigid connection of the shank of the coupler with the end sill of the car, and thus deprive the coupler of the resiliency which the spring draft-rigging ordinarily affords. By my invention I am enabled to produce the connection between the car and coupler at the desired elevation and

at the same time afford a resilient backing for said coupler.

In carrying out my invention I secure to the end sill *a* of a tender or car *b* a bracket-plate *c*, from which projects, as shown, parallel bracket-lugs *c'*. The outwardly-projecting portions of these bracket-lugs are connected by a transverse pin *c²*, and on opposite sides of the center of this pin are fulcrumed the upper ends of depending lever arms or bars *d*.

e represents a suitable form of spring-actuated draft-rigging which is supported in the usual or desirable manner on the under side of the car-frame and which is provided with the usual spring-actuated plunger *g*. The outwardly-projecting end portion of this plunger I form with a transverse end rod *g'*, the ends of which are respectively journaled in the lower ends of the lever-arms *d*.

Between the arms *d* and between the pins *c²* and *g'* is pivoted the shank *h* of a suitable coupler or draw-bar *h'*. Although this draw-bar or coupler may be of any of the ordinary or desirable forms, I form with the lower portion of the rear end of the shank an end extension or shoulder *i*, the latter being adapted to engage with the under side of the bracket-plate *c*, and thus retain said coupler in a desirable coupling position.

By the connection which I have herein described it will be seen that any jar or pressure to which the coupler may be subjected will be taken up to a desirable extent by the springs of the draft-rigging, inasmuch as any inward pressure of the coupler must result in a rearward or inward swinging of the levers and in a consequent backward movement of the spring-actuated plunger.

By my connection it is obvious that comparatively low cars may be provided with resilient couplers in a comparatively simple and inexpensive manner, and said coupler may at the same time be supported at the standard height.

In Fig. 5 of the drawings I have shown in plan, as indicated at *k*, a modification in the form of bracket *c*, said bracket being shown with three projecting lugs *k'* instead of the two lugs *c'* hereinbefore described. In case this modified form of bracket is employed the pin-openings therethrough would, as in-

indicated in dotted lines in the drawings, be preferably arranged in the arc of a circle or curved to receive a curved pin *m*, as indicated in Fig. 6 of the drawings, said pin being adapted in said modified form of bracket to perform the office of the pin *c*². (Shown in the remaining figures.) By the employment of this curved pin the lever-arms *d*, which would be journaled thereon, might be permitted such lateral play or movement as may be required without a tendency of said arms to bind on the pin.

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

1. In a means for connecting couplers with cars the combination with a car-frame and a bracket projecting from the end thereof, and a spring-actuated draft-rigging beneath said car, levers jointedly connecting the plunger-

rod of said draft-rigging with said bracket and a draw-bar or coupler having its shank connecting with said levers, substantially as and for the purpose specified.

2. In a means for connecting a coupler with a car the combination with a bracket projecting from and secured to the end of said car, a spring draft-rigging beneath said car and a spring-actuated plunger therefor, of levers jointedly connecting said bracket and plunger and a draw-bar or coupler having its shank fulcrumed to said levers between said bracket and plunger and a bearing-shoulder on the rear end of said coupler-shank adapted to engage with the underside of said bracket, substantially as and for the purpose specified.

EDWARD GRAFSTROM.

In presence of—

A. W. SHIELDS,

C. C. SHEPHERD.