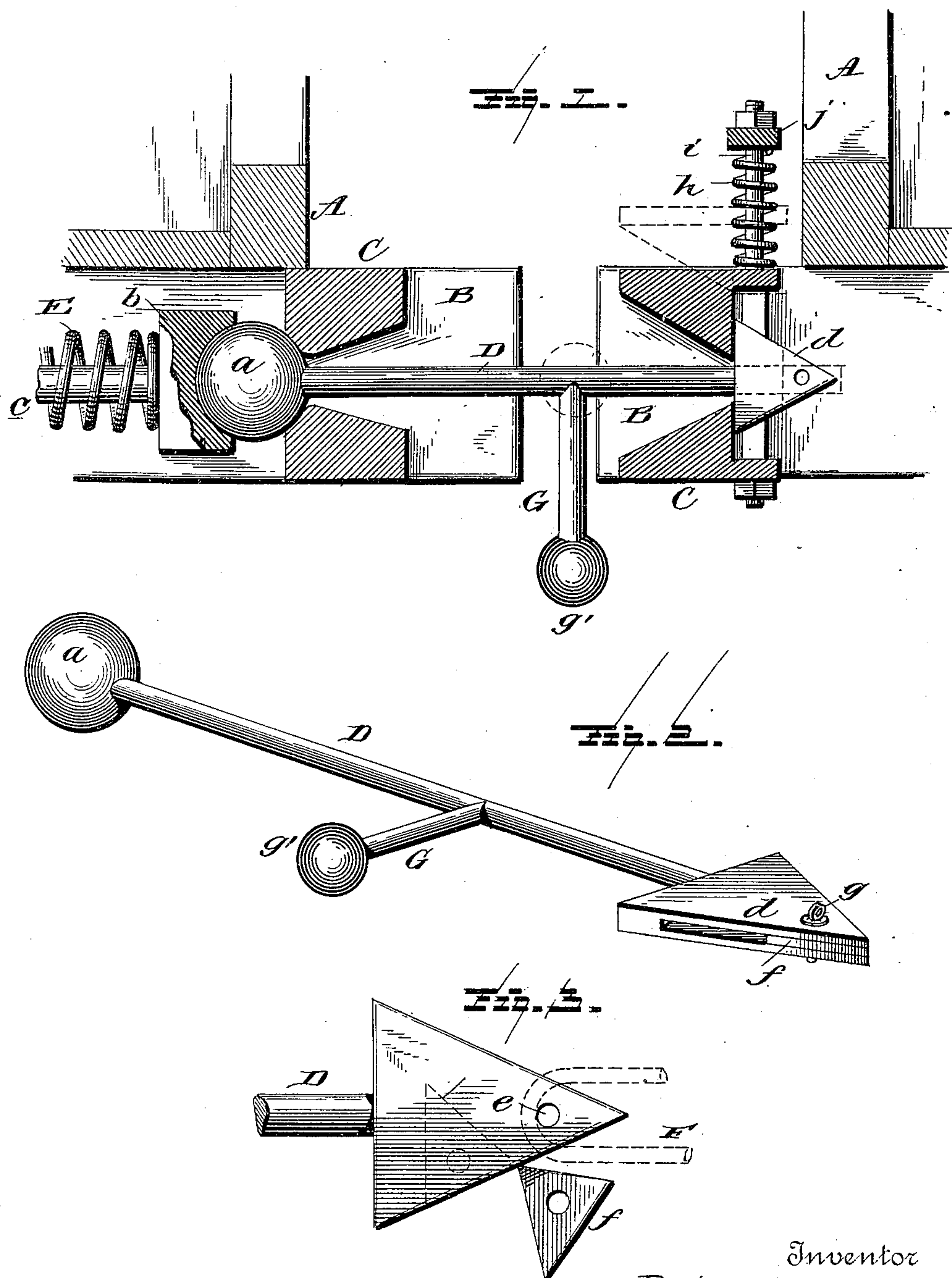


(No Model.)

P. DEVNEY.
CAR COUPLING.

No. 448,942.

Patented Mar. 24, 1891.



Witnesses
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UNITED STATES PATENT OFFICE.

PETER DEYNEY, OF BOSTON, MASSACHUSETTS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 448,942, dated March 24, 1891.

Application filed December 1, 1890. Serial No. 373,132. (No model.)

To all whom it may concern:

Be it known that I, PETER DEVNEY, a citizen of the United States, residing at Boston, in the county of Suffolk, State of Massachusetts, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in car-couplings of that class known as "arrow-head;" and it has for its object, among others, to provide an improved coupler of this character which may be used either with or without the link and pin, and which can be readily operated from the side of the car. I provide the arrow-head with a removable portion adapted to fit between the slotted portion of the arrow-head, 15 to be removed when coupling with a link and pin. Sufficient play is permitted to allow the coupler to work with cars of different heights.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

25 The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

30 Figure 1 is a vertical longitudinal section through portions of two cars coupled by my improved coupler. Fig. 2 is a perspective view of the coupler or connecting-bar removed. Fig. 3 is a plan of the arrow-head, showing its manner of use with a link and pin.

Like letters of reference indicate like parts throughout the several views in which they occur.

40 Referring now to the details of the drawings by letter, A designates the adjacent ends of two cars, B the bumpers, and C the draw-heads, the mouths of which are flaring, as seen in Fig. 1.

45 D is the coupler or connecting rod or bar. It is provided at one end with a ball *a*, which is seated in a circular seat or depression in the front end of the block *b*, which is carried by the rod *c*, which is normally pressed forward by the spring E, which is suitably arranged, having its bearing at its front end

against the rear face of said block, as shown in Fig. 1. The front portion of the ball has a bearing in the circular seats formed in the rear portion of the mouth of the draw-head, 55 the front portion being divergent, as shown in Fig. 1, so as to allow sufficient play of the parts to provide for ready coupling of cars of different heights. The other end of this connecting-rod D is provided with the arrow-head *d*, which is recessed at its front end, as shown in Fig. 2. A hole *e* is formed through the arrow-head near its point, and a removable triangular piece *f* is provided to fit within the recess at the end of the arrow-head, as 65 seen in Fig. 2, when the cars are to be coupled, as shown in Fig. 1; but when the arrow-head is to be used with a link and pin, this triangular portion, which is normally held in place by the pin or bolt *g*, is removed, as seen in 70 Fig. 3, and fitted in the recess, as shown by dotted lines in Fig. 3, the recess at the front end of the arrow-head being thus adapted to receive the link F, as shown by dotted lines in Fig. 3, the pin being designed to be passed 75 through the hole *e* in the arrow-head, as will be readily understood; or the two arrow-heads of adjoining cars may be coupled together by passing the pin through the two arrow-heads, one being overlapped by the 80 other, so that the holes therein will be coincident.

Extending from the connecting-rod D is an arm G, which at its outer end is weighted, as shown at *g'*, so that it will normally hang 85 vertically, as shown in Fig. 1. The draw-head of the opposing car, the one which receives the arrow-head, is formed with a passage for the reception of the arrow-head. This passage is of sufficient length horizontally to readily admit the arrow-head, but 90 narrower vertically, as shown in Fig. 1, so that when the arrow-head is admitted horizontally and then turned vertically it cannot be displaced or withdrawn.

95 In coupling, the weighted arm is turned horizontally, so that the arrow-head will enter its recess in the opposing car horizontally, and as soon as it has thus entered the weighted arm is allowed to fall, when the arrow-head will be turned from a horizontal to a 100 vertical position, as shown in Fig. 1, and the

cars thus securely held. They cannot be uncoupled until the arrow-head is turned horizontally by the weighted arm being raised, which cannot be done accidentally.

5 If desired, one or both halves of the mouth of the draw-head which receives the arrow-head may be made vertically movable and be normally held down into position by the action of a spring *h*, arranged around a rod
10 *i* and confined between a suitable plate or other provision *j* and the top of the movable section or portion, as shown in Fig 1. This permits of uncoupling without turning the arrow-head from a vertical to a horizontal position by simply raising the movable portion;
15 but the former plan is preferred.

What I claim as new is—

1. A coupling-rod having at one end an arrow-head recessed, as and for the purpose
20 specified.

2. A coupling-rod having at one end a recessed head, combined with a removable triangular portion fitted within the recess and provided with a hole, substantially as specified.
25

3. A coupling-rod having at one end a ball, at the other a recessed arrow-head, and between its ends provided with a weighted arm, substantially as specified.

4. The combination, with a draw-head and a spring-actuated block having a curved seat, of a coupling-rod having at one end a ball adapted to said seat, at the other end an arrow-head, and between its ends with a weighted arm, as set forth. 30

5. The combination, with a draw-head and a coupling-rod having at one end a ball-and-socket connection with a movable block and at the other end provided with an arrow-head, of a weighted arm connected to the rod
35 between its ends and adapted to turn the arrow-head from a vertical to a horizontal position, and vice versa, substantially as specified. 40

In testimony whereof I affix my signature in presence of two witnesses.

PETER DEVNEY.

Witnesses

CHAS. HALL ADAMS,
G. W. TROWBRIDGE.