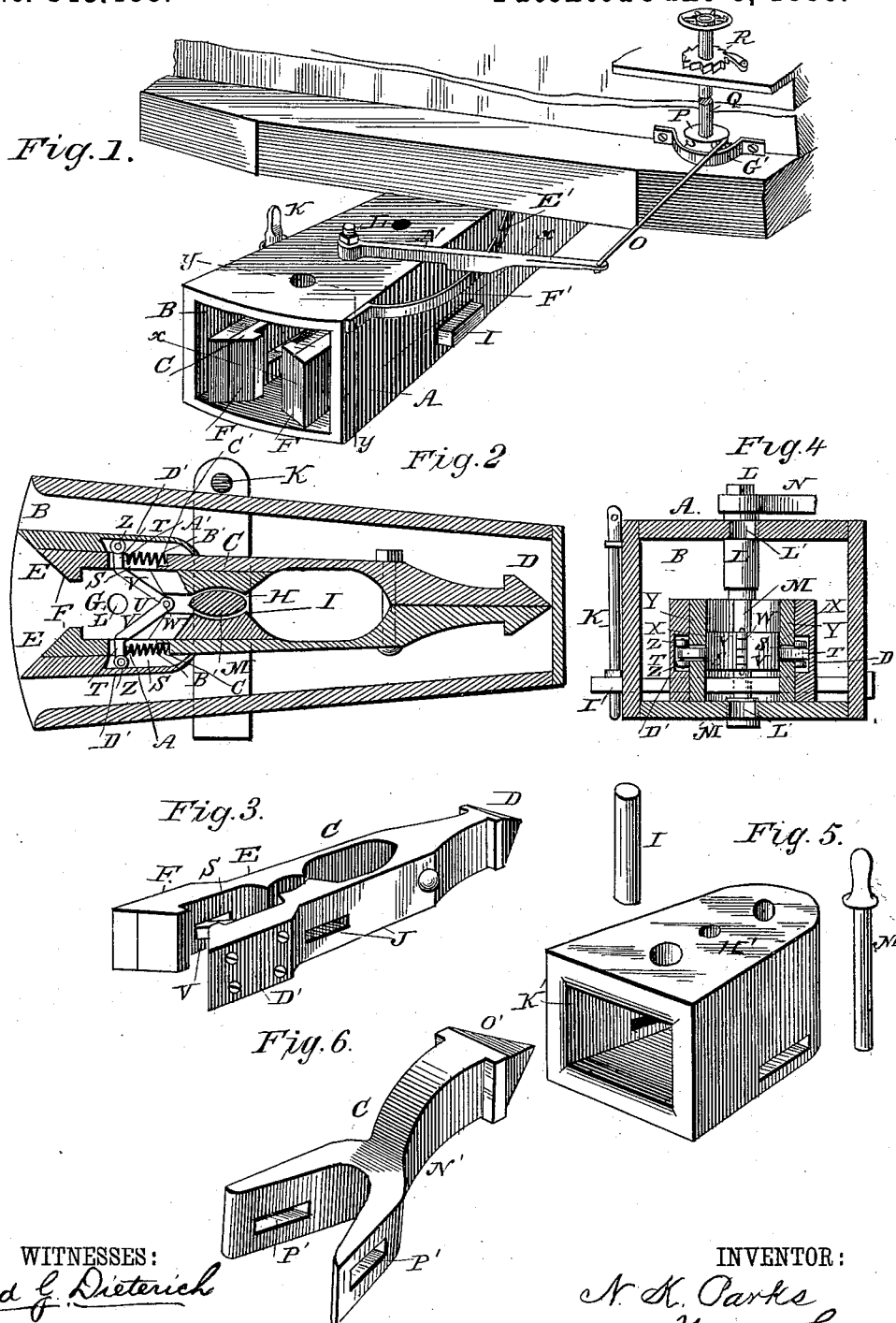


(No Model.)

N. K. PARKS.
CAR COUPLING.

No. 343,488.

Patented June 8, 1886.



WITNESSES:
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UNITED STATES PATENT OFFICE.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 343,488, dated June 8, 1886.

Application filed April 27, 1886. Serial No. 200,380. (No model.)

To all whom it may concern:

Be it known that I, NOBLE KIRK PARKS, of Pilot Grove, in the county of Newton and State of Indiana, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

My invention consists in the improved construction and arrangement of parts of a car-coupling, in which the reversible coupling-bar is formed at one end with the spring clamping-jaws and at its other end with an arrow-shaped head to adapt it to be reversed in the draw-head, so as to present either the clamping-jaws or the arrow-head at the forward open end of the draw-head, as may be required, all as will be hereinafter fully described, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a perspective view of my improved car-coupling, part of the casing of the draw-head being broken away to better illustrate the arrangement of the several parts. Fig. 2 is a longitudinal horizontal sectional view taken on the plane indicated by line *x x*. Fig. 3 is a perspective detail view of the reversible coupling-bar. Fig. 4 is a sectional view taken on line *y y*, Fig. 1. Fig. 5 is a perspective view of the guide-block, which is employed as hereinafter specified; and Fig. 6 is a perspective detail view of the coupling-bar which is employed in coupling cars having draw-heads of unequal heights.

The same letters of reference indicate corresponding parts in all the figures.

Referring to the several parts by letter, A indicates the draw-head, which is secured at the ends of the car in the usual position, the opening B in the draw-head tapering in size from the forward end or mouth of the draw-head toward the rear closed end of the same, and being of sufficient length to receive within it the reversible coupling-bar C.

C represents the reversible coupling-bar, which may be cast in either one or two pieces, as desired, one end of this bar being formed with the arrow-head D, formed as shown in the drawings, while its other end is formed with the spring-jaws E, having at their free ends the inwardly-inclined hooks F, forming the opening G, in which the head of the coupling-bar is received, while to the rear of this

opening G is formed the opening H, approximately oval in cross-section. When placed in the draw-head with the clamping-jaws outward, the headed end of the coupling-bar will bear against the rear closed end of the opening B of the draw-head, and the coupling-bar is held in this position by means of a removable key, I, passing transversely through the draw-head and through transverse slots J in the spring-jaws E, the key being held in position by a pin, K, passing transversely through its reduced end.

L indicates a vertical lever, turning in bearings in the bottom and top of the draw-head, and having the central oval portion, M, oval in cross-section, which fits within the approximately oval opening H between the spring-arms. The upper end of this vertical lever is provided with an operating-handle, N, which extends out beyond the side of the car, so that the lever may be operated without going between the cars, the outer end of the lever being also connected by a chain, O, to a grooved wheel, P, on the lower portion of a vertical shaft, Q, the upper end of which extends up to the top of the car, and may be there operated by the brakeman, having a pawl and ratchet, R, like the usual brake-rod.

That portion of the spring-jaws E to the rear of the hooks F is formed with the longitudinal slots S, and through these slots extend and play the reduced portions T of the spring-actuated follower or buffer U, which consists of the two halves or sections V, hinged together at their inner ends, at W, and formed with the guide-shoulders X X, which slide upon the inner faces of the slotted portions Y of the spring-jaws E, the reduced outer portions, T, of these sections extending through the slots S, and having preferably journaled to their outer ends the anti-friction rollers Z Z, which slide upon the outer surface of the spring-jaws, while near the extremities of the said reduced portions are formed the rearwardly-inclined projections A', which engage with the forward ends of the coiled springs B', which are seated in recesses C' in the outer surface of the spring-jaws, the said springs and rollers on the ends of the buffers being shielded and covered by the recessed plates D'.

When two cars are to be coupled, the head

D, projecting from the draw-head of one car, will enter between the spring-jaws E of the other draw-head into the opening G, where it will be held by the hooks F of the draw-head, and the pointed head of the arrow fitting into the V-shaped follower U will be held in line and prevented from catching upon either side when the cars are being uncoupled on curves or on an uneven track, while the springs B', yielding, will prevent the buffer from being broken, especially when a coupling is made while the jaws are held open. In order to release the head from the spring-jaws, in order to uncouple the cars, it is only necessary to draw the free end of the lever-handle N back toward the car, thereby turning the oval central portion of the vertical lever L so that its edges come in contact with the sides of the oval opening in which it works, thereby forcing the spring-jaws apart and enabling the head D to be withdrawn from the spring-jaws E E, and in order to prevent the cars from coupling when "butting" cars on a side track it is only necessary to draw the lever-handle toward the car until it catches in the notch E' of the curved rail F'.

G' indicates a small circular guard-rail, secured immediately beneath the grooved wheel P, and which prevents the chain O from running off of the said wheel, which would be otherwise liable to occur. When the lever-handle is drawn back from the top of the car, by turning the shaft Q the pawl and ratchet R will hold the spring-jaws open when so desired.

If it is found that the adjacent ends of two cars which it is desired to couple have both the spring-jaws of the coupling-bar extending outward, or have both the headed ends of the coupling-bars forward, one of the coupling-bars may be withdrawn from the draw-head by removing its key I and reversed in the draw-head, the rear portion of the opening B in the draw-head being so narrow that when the jaws of the bar are inserted therein they will strike against the sides of the said opening, and the bar will be stopped with the key-slots J registering with the opening in the draw-head, through which the key passes when the key is inserted, and the coupling bar is thus firmly secured in its reversed position.

When a car provided with my improved coupling is removed to a road on which the cars are provided with the common pin-and-link coupling, the coupling-bar and its connections may be removed, and a guide-block, H', (shown in Fig. 5 of the drawings,) inserted in the draw-head, and secured either by the key I or by a pin, I', passing down through vertical apertures J' in the draw-head, the forward end of the guide-block being formed with the recess K', in which the end of the common line is received, while vertical apertures L' are formed in the top and bottom of the draw-head for the coupling-pin M'.

For coupling-cars having draw-heads of un-

equal height, I employ the curved coupling-bar N', having the arrow-head O' at its outer end, and the inner portion of this coupling-bar is made V-shaped, as shown, and provided with the transverse aperture P', through which the key I extends, by means of which the coupling-bar is secured in position in the draw-head, and it will be seen that the coupling-bar may be reversed, so that its head will project either above or below the level of the draw-head in which it is secured, as may be required.

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

1. The combination, with the draw-head having the longitudinal opening tapering toward its rear closed end, of the reversible coupling-bar formed at one end with the coupling-head and at the opposite end with the spring-jaws provided with the retaining-hooks, and having the approximately oval recess formed between the said jaws, and the vertical lever having the projecting operating-handle and formed with the oval central portion, substantially as described.

2. The combination, with the draw-head having the longitudinal opening tapering toward its rear closed end, of the reversible coupling-bar formed at one end with the coupling-head and at the opposite end with the spring-jaws provided with the retaining-hooks, and having the approximately oval recess formed between the said jaws, and the longitudinal slots formed in the jaws, the key passing through the said longitudinal slots and securing the coupling-bar in its adjusted position, and the vertical lever having the projecting operating-handle and formed with the oval central portion, substantially as described.

3. The combination, with the spring jaws of the reversible draw-head, of the follower consisting of the flanged body portions hinged together at their inner ends, having the reduced portions extending through and sliding in the longitudinal slots in that portion of the spring-jaws, and bearing with their outer ends against the ends of coiled springs seated in recesses on the outer sides of the spring-jaws.

4. The combination, with the spring-jaws of the reversible draw-head, of the follower consisting of the flanged body portions hinged together at their inner ends, having the reduced portions extending through and sliding in the longitudinal slots in that portion of the spring-jaws, having journaled to their outer ends the small anti-friction rollers and bearing with their outer ends against the ends of coiled springs seated in recesses on the outer sides of the spring-jaws.

5. The combination, with the projecting lever handle, of the curved guide-bar having the retaining-notch at a suitable point, the vertical shaft supported in bearings at the end of the car and carrying near its lower end the grooved wheel, the chain connecting the said

grooved wheel with the outer end of the lever-handle, and the curved supporting-rail arranged as described beneath the said wheel, substantially as described.

- 5 6. The combination, with the draw-head having the vertical openings in its top and bottom near its forward end, of the guide-block adapted to be secured in the draw-head,

as described, and having the horizontal opening at its forward end and the vertical apertures, substantially as set forth.

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Witnesses:

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