

G. W. WILSON.
CAR-COUPLING.

No. 176,111.

Patented April 11, 1876.

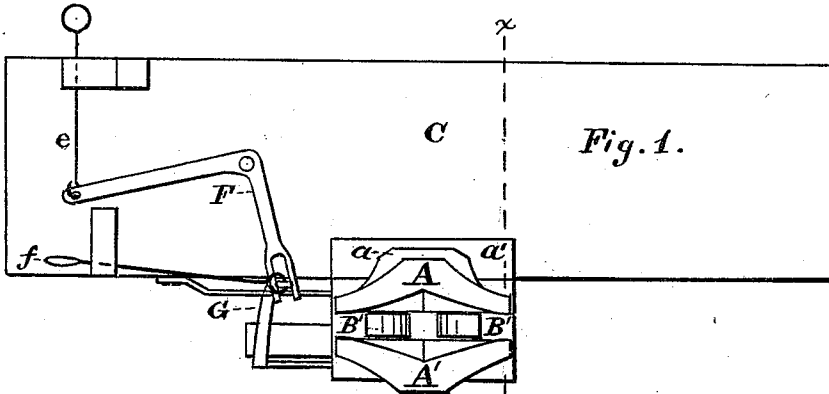


Fig. 2.

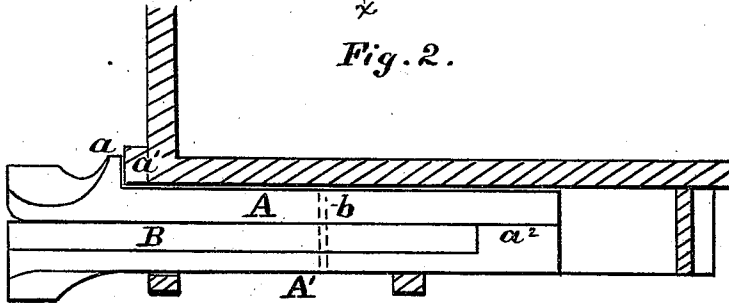
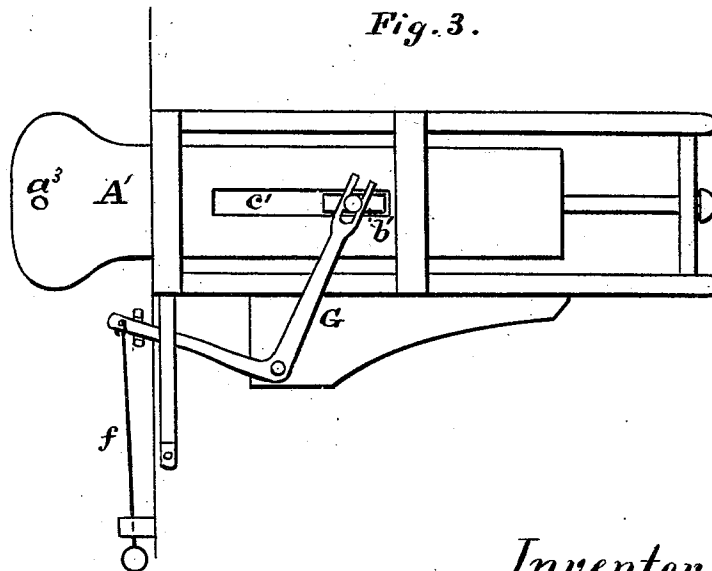


Fig. 3.



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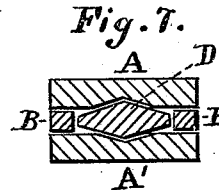
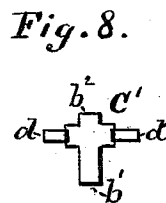
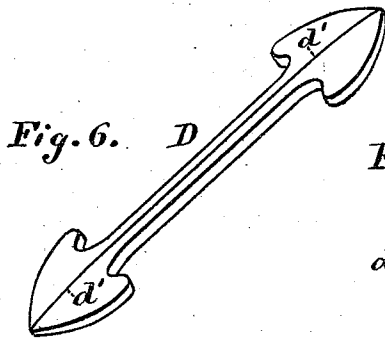
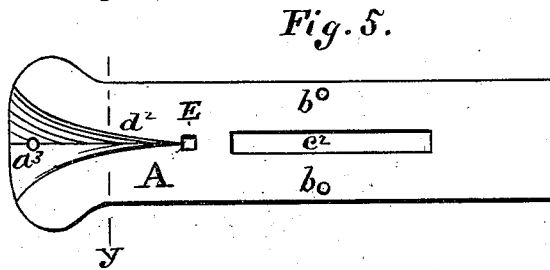
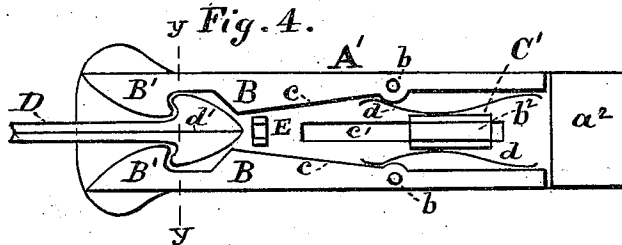
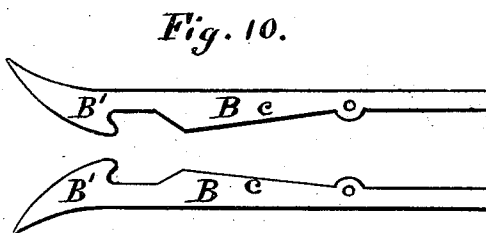
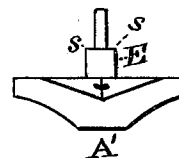


Fig. 9.



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UNITED STATES PATENT OFFICE.

GEORGE WERTER WILSON, OF OSCEOLA, IOWA.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **176,111**, dated April 11, 1876; application filed April 7, 1876.

To all whom it may concern:

Be it known that I, GEORGE WERTER WILSON, of Osceola, in the county of Clarke and State of Iowa, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a front view; Fig. 2, a section on line *x x* of Fig. 1, showing the side of the draw-head. Fig. 3 is a bottom view. Fig. 4 is a view of the upper side of the lower section of the draw-head, showing the position of coupling-tongue, draw hooks and bars, slide-block, and springs. Fig. 5 is a view of the under side of the top section of the draw-head. Fig. 6 is a perspective view of the coupling-tongue. Fig. 7 is a transverse section of the draw-head and coupling-tongue, showing the ridges on the tongue in the depressions in the draw-head. Fig. 8 is an end view of the slide-block and springs detached. Fig. 9 is an end view of the lower section of the draw-head, showing the stop-block. Fig. 10 is a modification of the draw-hooks.

My invention relates to automatic car-couplings; and consists of the construction and combinations of the coupling and uncoupling devices, as hereinafter described.

The draw-head is made of two longitudinal sections, A A', having on the top of the draw-head a buffer, *a*, constructed and adjusted to bump against the buffer-block *a'* on the end of the car C, to protect the timbers of the car, and attached so that when worn or bruised by use it may be readily removed and another block attached in its place. The back end of the lower section A' of the draw-head is thickened at *a''*, to form the space for the bars B of the draw-hooks, which bars are pivoted, by bolts *b b*, between the two sections of the draw-head. The inner sides of the draw-bars B are tapered, as shown at *c* in Fig. 4, to form the tapered space between these bars for the slide-block and springs. C' is the slide-block, having a tongue, *b'*, to slide in slot *c'* of section A', and a tongue, *b''*, to slide in groove *c''* in section A.

This slide block is provided with a recess on each side, to receive and hold the elliptic springs *d*, attached to the block by a bolt, nearer to the forward than to the back ends of the springs, to increase the elasticity and lessen the friction of the back ends of the springs. D is a coupling tongue, having at each end an arrow-head with hooked shoulders, to receive and hold against the draw-hooks, as shown in Fig. 4 of the drawings. These heads are beveled on both sides toward the points, and laterally forming, on each side, an angular ridge, *d'*, to fit an angular depression, *d''*, on the inner face of each section of the draw-head, which recesses taper gradually from the mouth of the draw-head to the stop-block E, as seen in Fig. 5 of the drawings. The lower end of the stop-block E is adjusted in a mortise through the lower section A', the proper distance from the mouth of the draw-head, and is secured in place by a bolt, and the upper end is provided with a tenon to fit a mortise through the upper section A, and is provided with shoulders *s s*, forming bearings for the upper section, to prevent it from pressing upon the draw-hooks, thus allowing the hooks free motion. The length of the coupling-tongue is less than the distance between the stop-blocks E in the two cars when the buffers meet, so that, in coupling, the ends of the tongue will not jam the stop-blocks. F and G are pivoted levers, provided with rods *e* and *f*, for uncoupling the cars. The lower end of lever F is provided with a slot to receive the upper end of lever G, the lower end of which is provided with a slot to receive the bolt or screw in the tongue of the slide block. The bevel *c* on the inner sides of the draw-bars must be of such an angle as to enable the forward ends of the springs to open the hooks wide enough to allow the head of the coupling-tongue to pass readily between them, and the springs must be of such length and shape, and the pivotal bearings of the bars so located, that as the block, with the springs, is moved forward, the back ends of the springs, by moving toward the pivotal bearings, will lose their pressure upon the bars, and as the block and springs are moved backward, the forward ends of the springs will lose their pressure upon the front parts of the bars, and in that

position the back springs hold the hooks in position to receive and securely hold the coupling-tongue. One end of the coupling-tongue being adjusted in the draw-head of one of two cars to be coupled, the coupling is performed automatically as the cars are run together; and, in uncoupling, when the hooks are opened, by drawing upward the rod *e*, or outward the rod *f*, the head of the coupling-tongue, in being withdrawn, is guided out centrally between the hooks by the angular ridges *d'* in the angular depressions *d''*, thus avoiding the liability of being moved to either side, and catching on one of the hooks.

The beveled ends of the draw-hooks may be extended, as shown in Fig. 10 of the drawings, to enlarge the space between them, so that in automatically coupling the cars the point of the coupling-tongue will, with more certainty, strike between the beveled ends of the hooks.

When the cars are coupled, the weight of rod *e*, attached to the lever *F*, tends to hold the slide-block and springs in the back end of the space between the bars, thus aiding to securely hold the hooks on the coupling-tongue.

The draw-head is provided with holes *a''* to receive an ordinary coupling-bolt, to couple with the ordinary link when required.

What I claim as new, and desire to secure by Letters Patent, in car-couplings, is—

1. A draw-head having angular tapering depressions *d''*, in combination with coupling-tongue *D*, having angular ridges *d'*, substantially as and for the purposes described.

2. Draw-bars *B*, having hooks *B'* and tapers *c* on the inner sides of the bars, in combination with slide-block *C'*, carrying springs *d*, adjusted to operate the bars and hooks, substantially as and for the purposes described.

3. The pivoted levers *F* and *G*, having rods *e* *f*, in combination with slide-block *C'*, carrying springs *d*, and adjusted to operate the draw-hooks, substantially as described.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

GEORGE WERTER WILSON.

Witnesses:

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JAMES GREENWOOD, Jr.