A. H. CLARK.
Car-Coupling.

No. 203,118. Patented April 30, 1878.

Fig. 1.

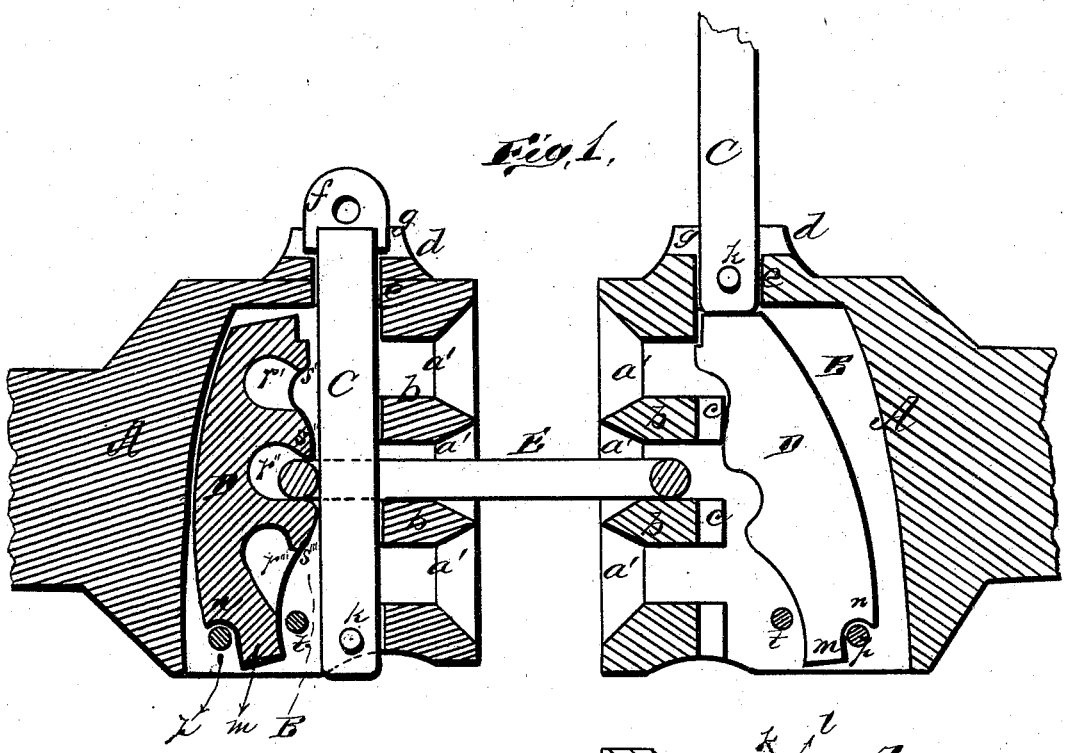


Fig. 3.

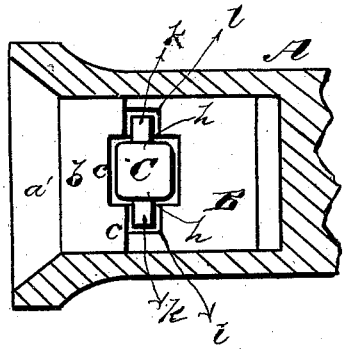
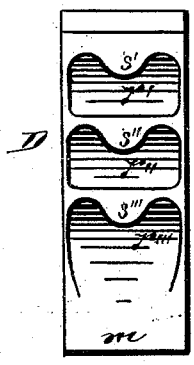


Fig. 2.



WITNESSES
F. H. Bates
F. J. Masi.

INVENTOR
Alexander H. Clark,
by E. W. Anderson,
ATTORNEY

UNITED STATES PATENT OFFICE.

ALEXANDER H. CLARK, OF FOND DU LAC, WISCONSIN.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **203,118**, dated April 30, 1878; application filed March 23, 1878.

To all whom it may concern:

Be it known that I, ALEXANDER H. CLARK, of Fond du Lac, in the State of Wisconsin, have invented a new and valuable Improvement in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal section of my improved car-coupling. Fig. 2 is a face view of the rest; and Fig. 3 is a horizontal section of the draw-bar, looking upward.

This invention has relation to improvements in automatic car-couplers, and especially in the automatic car-coupler for which Letters Patent were granted to me on the 29th day of February, 1876; and it consists in the combination, with a triple-mouth draw-head, having its mouths arranged one over the other, of a single vibratory rest, rocking on its fulcrum at its lower end, and having recesses and catches, one above the other, corresponding to the mouths of said draw-head, all as hereinafter shown and described.

In the accompanying drawings, the letter A designates the draw-bar, which is designed to be cast in a single piece; and to facilitate this its chamber B is formed without obstruction at its lower or open end, as shown. The front wall of this draw-bar is divided by transverse partitions *b* into several mouths, *a'*, three being the preferred number, to facilitate coupling with a car of the same height, or with one which is higher or lower, as the necessity for such action presents itself in ordinary use. In front these partitions *b* are beveled above and below, and in rear they are formed with central notches *c*, in order that the position of the coupling-pin may be as far forward as possible, and to guide the same in the central vertical line. Above, there is formed a rise or projection, *d*, on the top of the draw-bar, to insure sufficient thickness at this part to form a guide-passage, *e*, which will direct the coupling-pin in the vertical line of descent. In consequence of this upward rise of the draw-bar, and in order that the head of the coupling-pin C may not protrude too far, it is provided with a shouldered flange, *f*, vertically arranged, which, when the pin is down, is sunk in a median channel, *g*, in said rise. This pin is flattened on its sides, as indicated at *h*, so that it will not turn in the guide-passage *e*, and is provided at its lower end with studs or stops *k*, which, when the pin is raised, are received into lateral grooves *l* on each side of said guide-passage. By this means the pin is prevented from being pulled entirely out of said passage when raised by a cord.

Within the chamber B is applied the metallic rest D, having at its lower end a downwardly-projecting tongue or tang, *m*, and back of this a shoulder, *n*, whereby it rests on a transverse pin, *p*, loosely, so as to have a free vibratory motion forward and backward. This rest or gravitating vibratory catch extends upward in tapering form, its rear being somewhat inclined and its front parallel, or nearly so, with the front wall of the draw-head. It is provided with three recesses, *r r' r''*, one above the other, each having an overhanging lip, *s s' s''*, whereof the lower projects farther forward than the upper as the play of the rest in its vibratory movement diminishes downward. As, in consequence of its length and the small diameter of the coupling-pin, which it supports upon its upper end, when inclined forward its vibratory play is necessarily small, notches *c* are provided in the front wall and partitions of the draw-head to receive the coupling-pin. Therefore the front of the rest is not very much inclined when gravitated forward in its vibration, and its lower lips or catches are but little in rear of the upper ones.

The ordinary coupling-link E, having the usual length, is adapted for use in either mouth of the draw-head, as the length of the portion projecting from the mouth will vary but little in consequence of its position. In front of the tongue *m* of the rest, and flush with the surface of the lower margin of the lowest mouth of the draw-head, is located a transverse bolt or pin, *t*, which bounds the movement of the tongue forward, and serves to keep the lower end of the rest in its proper position. The pins *p* and *t* may both be removed, when necessary, and the rest taken out of its chamber.

The operation of this draw-head is as fol-

lows: The coupling-pin having been raised, the vibratory rest D falls forward, and the pin stands thereon in its guide-passage *e*. The coupling-link is adjusted in the mouth, having the proper height to suit that of the car to be coupled, and is held in the horizontal position by the lip or catch of the rest in rear of said mouth. The impact of the couplers throws back the link and rest, and the pin, guided by its starting-passage and the notches *c*, falls into place.

Without the adjustment for varying height an automatic coupler is frequently at fault; and it is designed to present in this invention a coupler which, under no circumstances, will require manipulation.

I am aware that a draw-head with several mouths, one above the other, is not, broadly, new.

What I claim, and desire to secure by Letters Patent, is—

The combination, with a triple-mouth draw-head, having its mouths arranged one over the other, of the single vibratory rest D, rocking on a fulcrum, *p*, at its lower end, and having recesses *r r' r''* and catches *s s' s''*, one above the other, corresponding to the mouths of said draw-head, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ALEXANDER H. CLARK.

Witnesses:
EDWARD KENT,
O. T. WILLIAMS.