E. P. WHEELER.

Improvement in Car-Couplings.

No. 130,262. Patented Aug. 6, 1872.

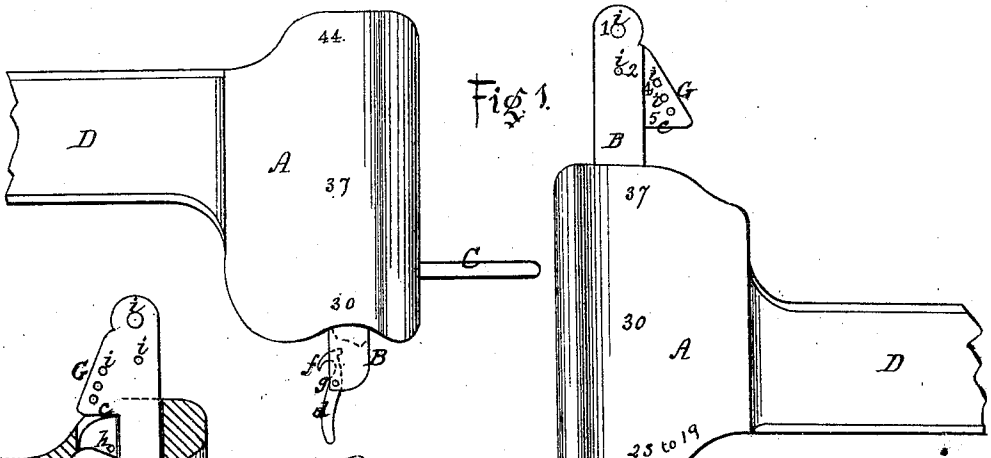

Fig. 1.

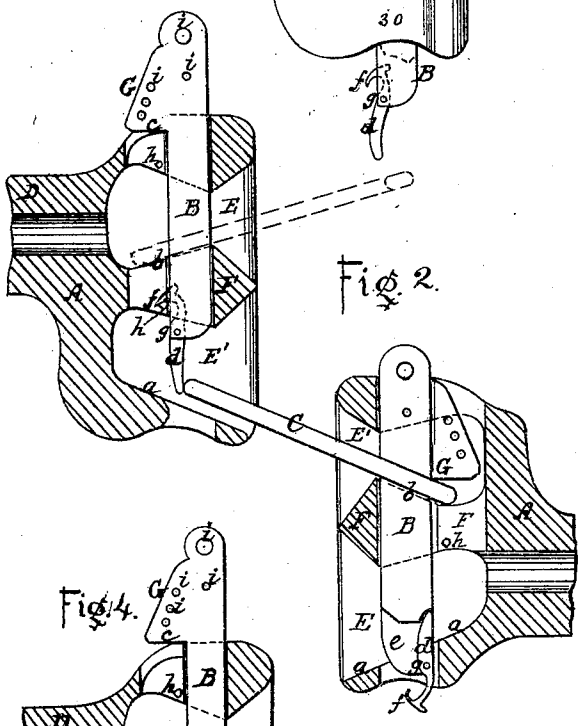

Fig. 2.

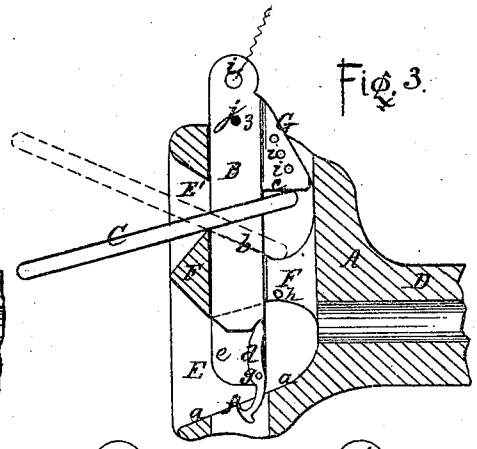

Fig. 3.

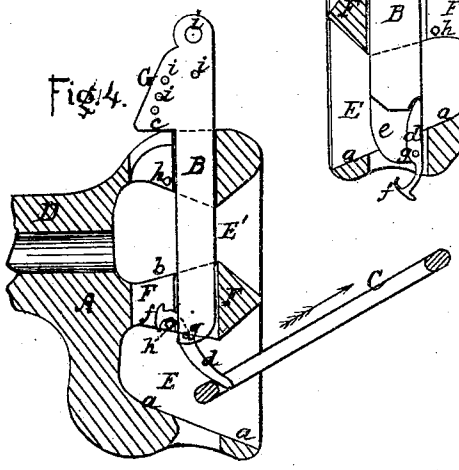

Fig. 4.

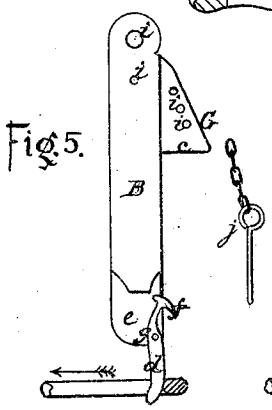

Fig. 5.

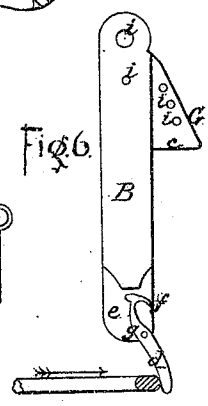

Fig. 6.

Witnesses:

J. Holt Wagner.

Augustus H. Girard.

Inventor:

Edward P. Wheeler,

By Johnson, Klauske & Co.

his Attorneys

UNITED STATES PATENT OFFICE.

EDWARD P. WHEELER, OF CORINTH, MISSISSIPPI.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **130,262**, dated August 6, 1872.

To all whom it may concern:

Be it known that I, EDWARD P. WHEELER, of Corinth, in the county of Alcorn and State of Mississippi, have invented certain new and useful Improvements in Couplings for Railroad Cars, of which the following is a specification:

The object of my invention is to obtain a coupling which may be readily adapted to automatically couple cars of different heights with a straight link; and the improvements which form the subject of this application consist in the construction of a pair of draw-heads with inclined seats for the link, the said seats having opposite inclinations for the purpose of maintaining the different inclined positions of the link to couple cars of different heights, the seat in the highest draw-head holding the coupling-link in a downwardly-inclined position by means of the shouldered coupling-pin, and the seat in the lower draw-head causing the link to project therefrom upwardly by the same means. My improvement also consists in constructing the coupling-pin with a fin or rib, forming an integral part thereof, so as to add strength to the pin, and to serve both as a support thereof upon the link to hold the latter, so that any adjustment in the height of the said rib will correspondingly change the angle of the coupling-link; and in this way the latter may be suited to couple with cars of different heights by having certain fixed adjustments in height for the pin; also, an adjustable coupling-pin having a fin and shoulder and graduated holes, whereby the adjustment of said pin will automatically effect the adjustment of the link to suit the difference which may exist in the height of the chambers of different draw-heads. I have also made an improved construction and arrangement of tripping-catch, formed of a single piece, for holding the coupling-pin in position to couple, which consists in pivoting the said tripper below its catch or hook, whereby the advantage is obtained of readily withdrawing the link without tripping the pin; the construction and operation of which several improvements will be hereinafter more fully described.

In the accompanying drawing, Figure 1 represents an elevation of a pair of draw-heads embracing my improvements, arranged to couple a high and low car. Fig. 2 represents a vertical section of the same, showing the draw-heads in position to couple by an upwardly-inclined link. Fig. 3 represents a similar view, showing one draw-head with the coupling-pin and link suspended by an adjustable key to vary the angle of the link. Fig. 4 represents a section of one of the draw-heads, showing the coupling-link in a position to be withdrawn without tripping the pin. Fig. 5 represents an elevation of the coupling-pin with the link in position to be drawn out from its catch; and Fig. 6, a similar view, showing the link in the position to strike the catch in coupling.

The draw-head A is constructed to receive an automatic tripping coupling-pin, B, to operate in connection with an open link, C. The draw-head is not formed equally above and below its draw-bar D, but is extended, when more than one chamber, E, is used, either above or below the said bar D, so as to have one chamber, E, either above or below a central line through the bar D for the purpose of more effectually adapting the coupling-link C to cars of different heights. These chambers E are formed by a division, F, and the coupling-pin C can be tripped and the coupling made from either one. The two draw-heads A, thus constructed, will bring one chamber, E′, on a low car, above, and one, E, on a high car, below the draw-bar D, and two opposite each other, so that they will couple with a straight link in cars of different heights. The seat *a* of the draw-head in a high car is inclined downward, and the seat *b* of the low car is inclined upward, as shown in Figs. 2, 3, and 4, so that either seat will hold the link by the weight of the coupling-pin in an angle to be received and held upon the seat of the other draw-head, and in this way couple cars when one chamber is either above or below the other, as shown in the drawing. In this arrangement the upper chamber of one draw-head occupies an alternate position with the lower chamber of the other draw-head where cars of different heights are used. The coupling-pin B is a flat-sided bar, provided at its upper end with a rib or fin, G, on its rear side with a square shoulder, *c*, and forming an integral part thereof, to give strength to the pin B and serve to hold the link in whatever position it may be adjusted. The coupling-pin passes through an oblong opening in the

upper part of the draw-head, which prevents it from turning. It is also provided at its lower end with a tripping-catch, *d*, being cut out at its side at *e* for that purpose. This tripping-catch has a hook, *f*, at its upper end, and is connected to the pin B by a pivot-joint, *g*, below said hook, which latter is formed upon the rear side of the tripper, which is free to be turned backward and forward upon its pivot *g*, for a purpose to be presently described. The tripper *d* is suspended by its hook *f* upon a pin, *h*, on the interior of the draw-head, arranged in a line to catch the said hook *f* upon the descent of the pin B, and thus hold the latter in a position to be tripped by the contact of the link in coupling against the lower end of the tripper. In order that this effect may take place in coupling from either chamber, the suspending-pins *h* are arranged one from the upper portion of the draw-head at the top of the upper chamber, and the other within the space of the division-bar F, through which the pin B passes, at the upper side of the lower chamber, and by this means the pin B can be tripped from either the upper or lower chamber by the entrance of the link therein, and the link drawn out without tripping the pin B, which is a very material advantage in chambered draw-heads coupling high and low cars. It will be seen that the pivoting of the tripper *d* below its hook *f* allows its lower end to be moved inward by the link to release it from the suspending-pin *h* to effect the coupling, and to be moved outward by the act of withdrawing the link, when desired, without throwing the pin B, as the hook *f*, by this last movement, will move over and upon the suspending-pin *h* in the arc of a circle, as shown in Fig. 4, and thus hold the coupling-pin B in a position to be coupled upon the entrance of the link again, the weight of the coupling-pin bringing the tripper *d* back into its proper position to be struck by the link; thus the tripper, when moved one way, will throw the coupling-pin, but will hold itself upon its suspending-point *h* when moved the other way. In coupling cars it is frequently desirable to change the angle of the link C, and for this purpose I make a series of holes, *i*, (or notches,) through the pin B or its fin G, into which a key, *j*, or catch is inserted, when the coupling-pin is raised so as to relieve its weight from the link, when the latter will, by the weight of its outer end, fall, and its inner end will correspondingly be raised and simply rest against the shoulder *c* of the fin G, thereby changing the angle of the link to the height of the chamber of the opposite draw-head, as shown in Fig. 3.

In coupling cars of different heights the first thing desired is to know whether the link is in proper position to couple. This can only be done by trial or by measurement. This difficulty I overcome, and present at once to the eye of the attendant a number or mark upon the draw-head of each car, which indicates the relative height of each chamber that will couple with each other. These numbers or characters are marked upon the sides or tops of the draw-heads, so as to indicate the capacity of the chambers to couple, as shown in Fig. 1; for example, supposing, now, the lowest draw-head to have a capacity to couple from 23 to 37, and the highest one from 30 to 44, the intermediate number of the first will be 30, and that of the other 37, which will show that the upper chamber of one and the lower chamber of the other will match perfectly, and the attendant at once adjusts the link C and pin B in the corresponding chamber. The coupling-pin being also capable of a fixed adjustment to hold the link at different angles by means of the holes *i* in the pin, as described, I also number these holes *i* with figures or characters to indicate the inclination of the link; for, in proportion as the coupling-pin is adjusted higher or lower, so will the link be more or less inclined up or down. In case, therefore, the chambers should be found to hold the link so as not to couple, then the vertical adjustment of the coupling-pin, by its numbers, will throw the link higher or lower, to suit the chamber of the car being coupled.

It is obvious that my improvements can be applied to draw-heads having single chambers.

Having described my invention, I claim—

1. In a pair of coupling draw-heads, the combination of the oppositely-inclined seats *a b* with the coupling-pin B, having a shoulder, *c*, to hold the coupling-link in either an upward or downward inclined position, essentially as described.

2. The coupling-pin B having a fin, G, and graduated holes *i i*, substantially as described, and for the purpose set forth.

3. The tripping-catch, formed of a single piece, *d*, and pivoted below its hook *f* to allow the latter to turn on the suspending-pin *h* as a fulcrum in the withdrawing of the link, as shown and described.

EDWARD P. WHEELER.

Witnesses:
A. E. H. JOHNSON,
J. W. HAMILTON JOHNSON.