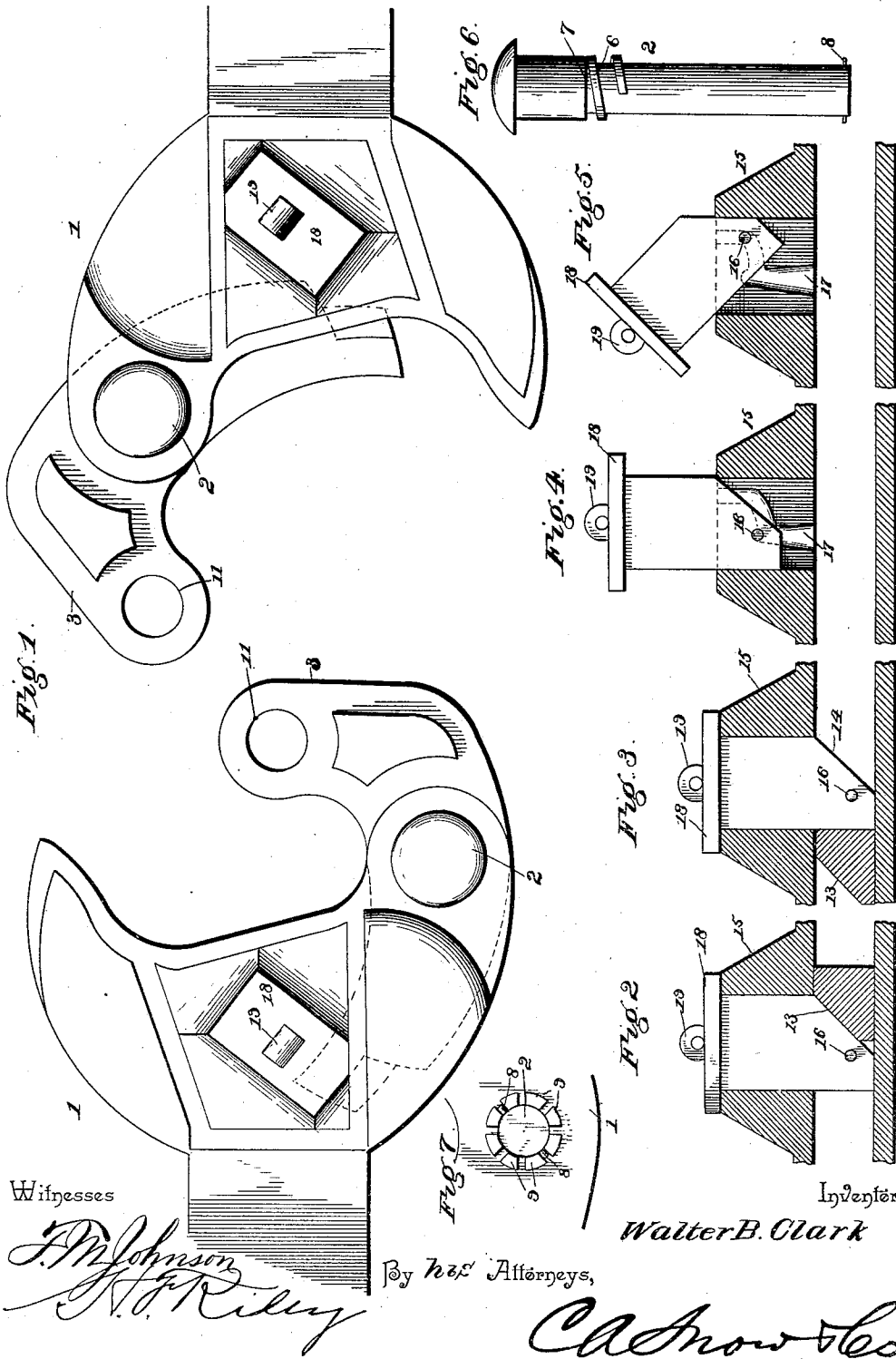


(No Model.)

W. B. CLARK.
CAR COUPLING.

No. 481,325.

Patented Aug. 23, 1892.



UNITED STATES PATENT OFFICE.

WALTER B. CLARK, OF WOODLAWN PARK, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 481,325, dated August 23, 1892.

Application filed April 7, 1892. Serial No. 428,145. (No model.)

To all whom it may concern:

Be it known that I, WALTER B. CLARK, a citizen of the United States, residing at Woodlawn Park, in the county of Cook and State of Illinois, have invented a new and useful Twin-Jaw Car-Coupling, of which the following is a specification.

The invention relates to improvements in twin-jaw car-couplings.

The object of the present invention is to simplify and improve the construction of twin-jaw car-couplings and to provide one in which when the knuckle is uncoupled it will assume the proper position for coupling—that is, it will open.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a plan view showing two draw-heads, one having its knuckle open and the other the knuckle being closed. Figs. 2 and 3 are detail sectional views of the gravity-catch, the former showing the position of the parts just before the catch is lifted by the knuckle and the latter showing the position of the parts when the knuckle is locked by the catch. Figs. 4 and 5 are similar views illustrating the manner of inserting the gravity-catch into the draw-head. Fig. 6 is a detail view of the knuckle-pin. Fig. 7 is a detail view showing the projections which are engaged by the key for securing the knuckle-pin rigid with the draw-head.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a draw-head having a transverse knuckle-opening, in which is pivoted by a knuckle-pin 2 a knuckle 3, adapted to engage a similar knuckle of a twin-jaw coupling in the usual manner. The knuckle is provided with a knuckle-pin perforation 4, and has a spiral groove in the walls of the same receiving a spiral flange 6, formed integral with the knuckle-pin and arranged near the upper end thereof, whereby when the knuckle is turned it will ride up the incline formed by the spiral flange, so that when cars are uncoupled the knuckle in dropping

by gravity will turn outward and open and be in position preparatory to coupling. The upper end of the pin is enlarged to form a shoulder 7, and the lower end of the pin is provided with a horizontal perforation, in which is arranged a key 8, having its ends arranged in recesses formed by a series of projections 9, located on the lower face of the draw-head. The horizontal key may be arranged between any of the projections, and it holds the knuckle-pin rigid with the draw-head to prevent the knuckle-pin turning with the knuckle, thereby causing the latter to ride when turned inward by cars coming together. The outer end of the knuckle is provided with the usual coupling-pin perforation 11, and has intermediate its ends shoulders 12, arranged to engage the adjacent side of the draw-head to limit the outward swinging or opening of the knuckle. The inner end of the knuckle is beveled at 13, and is adapted in closing when coupling to lift a beveled catch 14 and to move under the same, which thereby locks the knuckle. The catch 14 falls by gravity. It is arranged in a vertical opening of the draw-head and within an enlargement 15, which is provided with a vertical opening, and it is provided on opposite sides with cylindrical lugs 16, arranged in bayonet-grooves 17 of the enlargement, whereby the gravity-catch is allowed to reciprocate vertically and is detachably secured to the enlargement. The upper end of the gravity-catch is provided with a flange 18 and a perforated ear 19, to which may be connected suitable means for lifting the gravity-catch for uncoupling.

It will be seen that the device is adapted to couple automatically, and that when uncoupled the knuckle will automatically assume the proper position for coupling.

In Fig. 2 of the accompanying drawings the knuckle is shown adjacent to the beveled edge of the gravity-catch preparatory to lifting the same and being locked thereby, and Fig. 3 of the drawings illustrates the position of the knuckle when locked by the gravity-catch. In placing the gravity-catch in the draw-head the lugs are inserted in the upper vertical portions of the bayonet-grooves, as illustrated in Fig. 5 of the drawings, and the catch is then turned to bring the lugs to

the lower vertical portions of the bayonet-grooves, these lower vertical portions forming ways in which the lugs work during the operation of the gravity-catch.

5 What I claim is—

1. The combination of a draw-head provided on its lower face with a series of projections, a knuckle arranged in the draw-head and provided in the walls of its knuckle-pin
10 perforation with a spiral groove, a knuckle-pin having a spiral flange arranged to engage the groove, and a key passing through the lower end of the knuckle-pin and arranged between said projections, substantially as de-
15 scribed.

2. The combination of a draw-head, a knuckle arranged therein and having its inner end beveled, an enlargement mounted in the draw-head and provided in opposite walls with bayonet-grooves and a beveled gravity- 20 catch provided on opposite sides with lugs arranged in the bayonet-grooves, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 25 the presence of two witnesses.

WALTER B. CLARK.

Witnesses:

C. B. ELLIS,

O. C. DICKERSON.