

(No Model.)

G. W. BUTLER.

CAR COUPLING.

No. 291,290.

Patented Jan. 1, 1884.

Fig. 2.

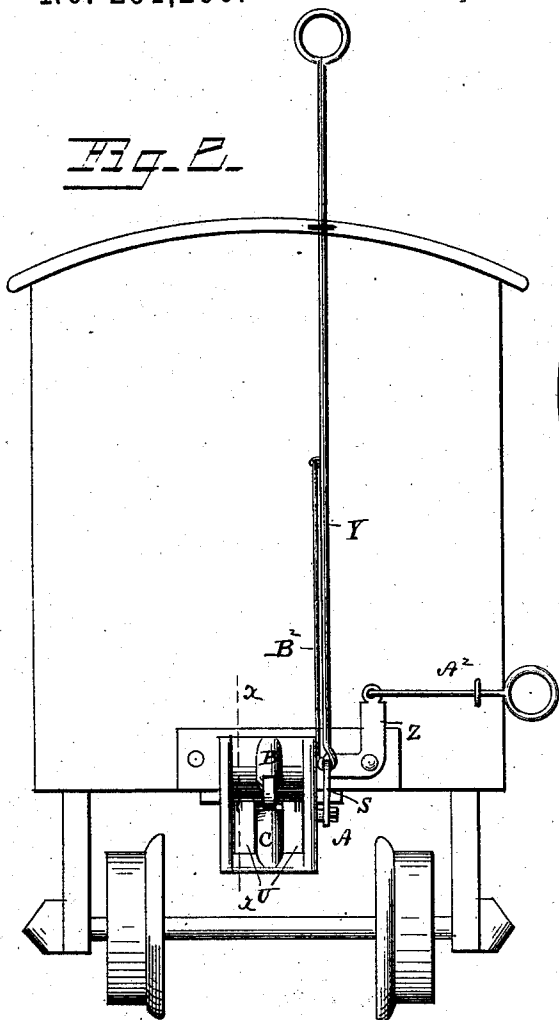


Fig. 1.

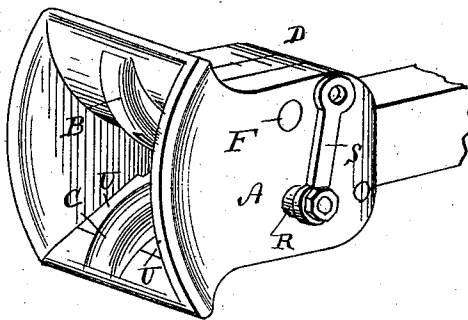


Fig. 3.

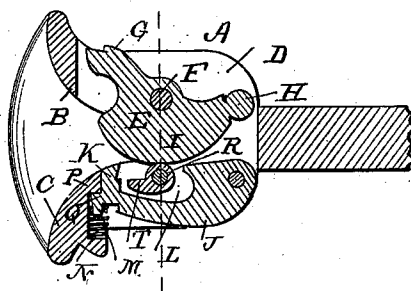


Fig. 4.

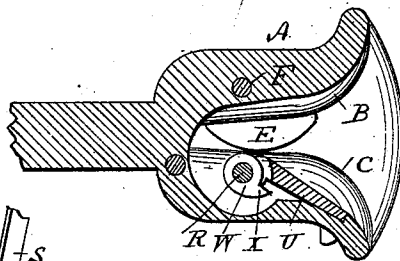
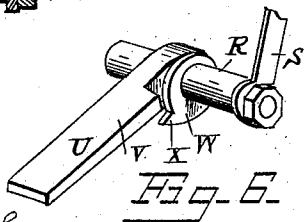
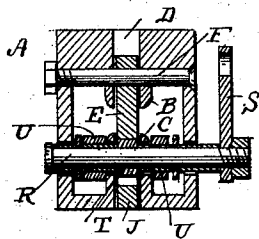


Fig. 5.



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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 291,280, dated January 1, 1884.

Application filed October 31, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. BUTLER, a citizen of the United States, residing at Knoxville, in the county of Knox and State of Tennessee, have invented a new and useful Car-Coupling, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to car-couplings; and it has for its object to produce an improved coupling which shall possess superior advantages in point of simplicity, durability, and general efficiency.

To this end it consists in certain improvements in the construction of the same, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a perspective view of my improved car-coupling. Fig. 2 is a front view of the same. Fig. 3 is a central longitudinal sectional view. Fig. 4 is a longitudinal vertical sectional view on the line *xx* in Fig. 2. Fig. 5 is a transverse vertical sectional view, and Fig. 6 is a detail view.

The same letters refer to the same parts in all the figures.

In the drawings, A designates the draw-head, the top and bottom of which are provided with interiorly-located central longitudinal ribs or flanges, B C. A slot, D, extends longitudinally through the draw-head, and through the flanges B C, as shown.

E is the coupling-hook which is pivoted in the slot D in the upper part of the draw-head upon a transverse pin or shaft, F. The said coupling-hook consists of a plate having at its lower end a downwardly-extending curved hook or pin, G. The upper part of the said plate forms a handle, H, and its rear side has a curved bulging extension, I, which overbalances the front part of the plate, so that when the device is uncoupled the curved pin or hook G will occupy a nearly horizontal position, while the bulging part I is exposed toward the front end of the draw-head.

In the slot D in the lower part of the draw-head is pivoted a latch, J, consisting of a plate having at its front end the upwardly-extending latch-pin K, which is adapted to engage the coupling-hook. In rear of the latch K the

plate J is provided with a recess, L, and on its under side, at the front end, is formed a downwardly-projecting pin or stud, M, serving to retain in position a coiled spring, N, the lower end of which rests upon a lug, O, extending from the body of the draw-head. Said spring serves to force the latch J in an upward direction, the upward motion being checked by a lip, P, formed upon the draw-head, and engaging a shoulder, Q, at the front end of the latch.

R is a shaft journaled transversely in the draw-head, projecting beyond one side of the latter, as shown, and provided with a crank, S. Mounted upon the said shaft is a tongue, T, working in the central slot, D, in the lower part of the draw-head, and adapted to bear downwardly against the latch-plate J, in the recess L of which it is accommodated.

Mounted loosely upon the shaft R, adjoining the central rib C in the lower part of the draw-head, is a pair of arms, U U, having laterally-projecting shoulders V.

Fixed securely upon the shaft R, adjoining the arms U, is a pair of disks, W W, having forwardly-extending teeth X, adapted to engage the under sides of the shoulders V of the arms U. It will be seen that by turning the shaft R the arms U U may be raised to a horizontal position.

The shaft R may be operated by means of a rod, Y, extending from the end of the crank S to the top or platform of the car; or it may be operated from the side of the car by means of a bell-crank lever, Z, one arm of which is provided with an operating-rod, A², while its other arm is connected by a pivoted rod, B², with the operating-rod Y.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of my invention will be readily understood. When the link of an adjacent car enters the draw-head, it strikes the bulging portion I of the plate forming the coupling-hook, turning the latter upon its pivot until the pin G engages the latch K. The device is thus securely coupled. To uncouple, it is only necessary to turn the shaft R so as to depress the latch-plate J by means of the tongue T. The rear portion, I, of plate E will then immediately overbalance the front

part of said plate, causing the coupling-hook to turn upon its pivot and release the link.

When coupling is to be effected with a car of greater height than the one to which the coupling is applied, the shaft R may be turned so as to raise the arms U U, which serve to lift the link to the required height, and guide it into the draw-head of the next car.

The construction of my improved car-coupling is simple, and its operation is safe and efficient.

I claim as my invention and desire to secure by Letters Patent of the United States—

1. In a car-coupling, the herein-described draw-head, having interiorly-located central longitudinal ribs on its upper and under sides, and provided with a central longitudinal slot extending through the said ribs, in combination with a coupling-hook pivoted in the said slot in the upper part of the draw-head, and a latch pivoted in the said slot in the lower part of the draw-head, substantially as set forth.

2. The combination of the longitudinally-slotted draw-head, the coupling-hook pivoted in the upper part of the same, and consisting of a plate having a downwardly-extending curved pin or hook, an upwardly-extending handle, and a rearward bulging extension overbalancing the front part of the plate, a latch pivoted in the lower part of the draw-head, adapted to engage the pin or hook of the coupling-plate, and means for operating the said latch, substantially as set forth.

3. The combination of the longitudinally-slotted draw-head, the coupling-plate pivoted

in the upper part of the same, the latch-plate J, having latch K, recess L, and stud M, the spring N, supported upon a lug, O, extending from the draw-head, and the transverse shaft R, having crank S and tongue T, substantially as set forth.

4. In a car-coupling, the combination, with the draw-head, of a transverse shaft having loosely-mounted arms provided with laterally-projecting shoulders and fixedly-secured disks adjoining the said arms, and provided with teeth adapted to engage the under sides of the shoulders of the latter, substantially as and for the purpose set forth.

5. As an improvement in car-couplings, the combination of the draw-head having the interior longitudinal ribs and a central longitudinal slot, the coupling-plate E, pivoted in the upper part of the draw-head, the latch J, pivoted in the lower part of the draw-head, the transverse shaft R, the tongue T, mounted upon the same in the central slot, the arms U, mounted loosely upon shaft R adjoining the central rib, and having laterally-projecting shoulders, disks mounted securely upon shaft R adjoining the arms U, and having teeth engaging the shoulders of the latter, and mechanism for operating the shaft R, substantially as set forth.

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

GEORGE W. BUTLER.

Witnesses:

P. J. SHETTERLY,
M. H. McCORKLE.