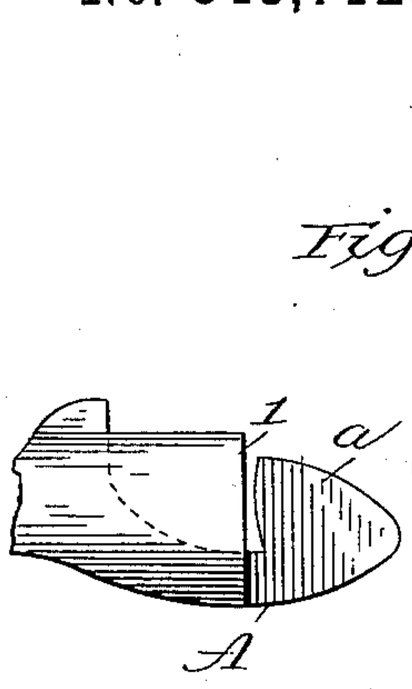
(No Model.)

H. W. JOHNSTONE.

CAR COUPLING.

No. 343,712. Patented June 15, 1886.

Fig. 1.



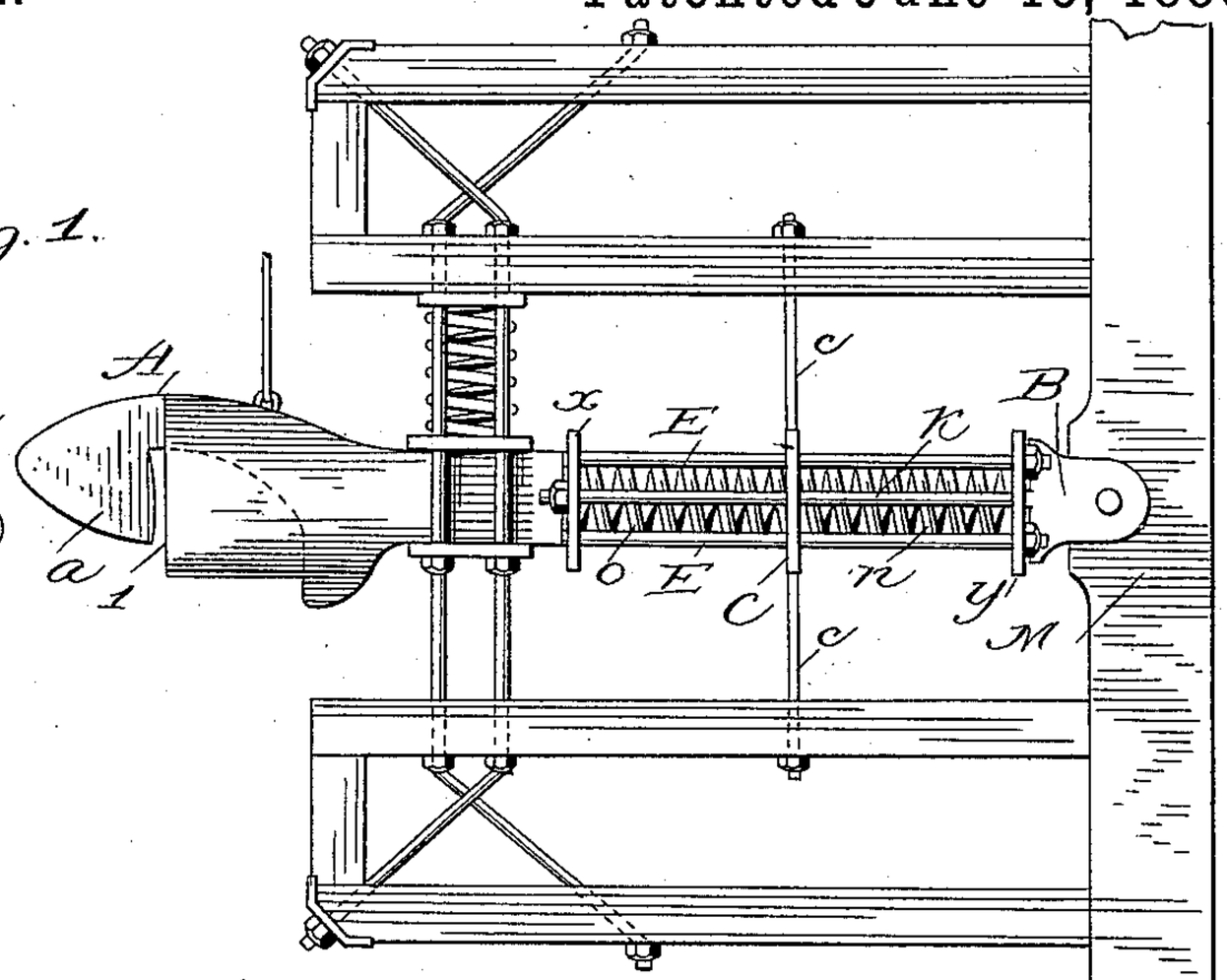
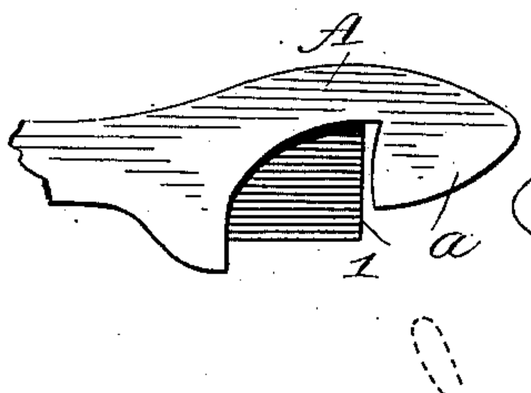


Fig. 2.



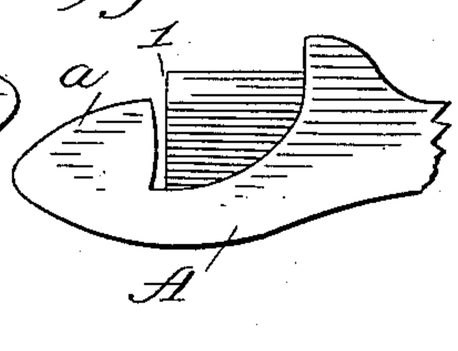


Fig. 3.

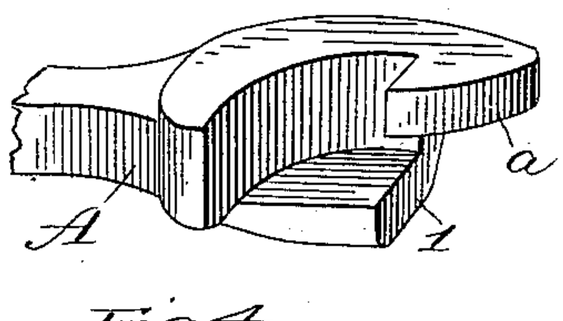


Fig. 4.

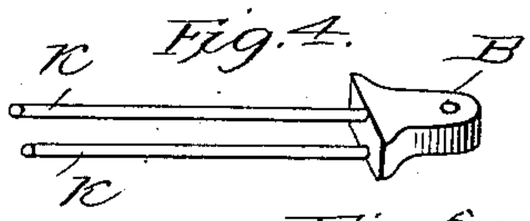


Fig. 5.

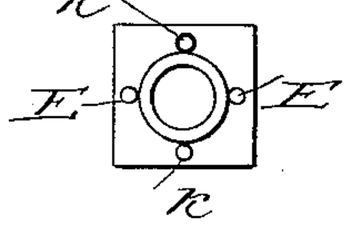


Fig. 6.

Attest:
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Huger W. Johnstone
by Joyce & Spear
Atty's.

UNITED STATES PATENT OFFICE.

HUGER W. JOHNSTONE, OF IDLEWILD, GEORGIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 343,712, dated June 15, 1886.

Application filed October 23, 1885. Serial No. 180,755. (No model.)

To all whom it may concern:

Be it known that I, HUGER W. JOHNSTONE, of Idlewild, in the county of Gordon and State of Georgia, have invented a new and useful Improvement in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to car-couplings of that class in which the coupling and uncoupling are effected by lateral movement of the head; but parts of my invention relating to the draw-bar, frame, and buffer, to which the head is attached, are applicable to other forms of coupling-heads.

In some respects the invention is an improvement upon the car-coupling shown in Letters Patent granted to me on the 11th day of November, 1884, and numbered 307,955.

My invention consists, first, of an improved form of coupling-head; secondly, an improvement in the connection with the coupling-head to the car-body; and, thirdly, in an improvement in the mechanism for moving and locking the draw-bar.

In the accompanying drawings, Figure 1 represents a plan view of the car frame and coupling. Fig. 2 shows a bottom plan view of the coupling-heads. Fig. 3 shows a perspective view of the same. Figs. 4 and 5 represent details of construction. Fig. 6 is a front view of the mechanism for moving and locking the draw-bar, which is shown in cross-section.

In these drawings, A represents the draw-bar, the forward end of which is formed with a hook connecting with its mate on the next car by lateral movement, as in my said patent. The hook-head *a* on this draw-bar is provided with a buffer-plate or shoulder, 1, overhanging the space behind the shoulder of the hook. The front end of this buffer-plate or shoulder is a little behind the inner face of the hook, so as to give sufficient play. The front face of the buffer-plate meets, when the car is coupled, with the face of the corresponding coupling-plate on the other part of the coupling on the contiguous car. These buffer-plates are on the upper sides of the couple-hook, and serve to equalize the force of the blow and relieve the point. A suitable rubber or other elastic cushion or spring may be put upon or inserted into or behind the face of the buffer-plates to lessen the shock.

The draw-bar A is provided at its rear end with long bolts E E, one on each side, these bolts being threaded at their rear ends, which are adapted to pass through holes in the following plates. The block B has rods K K centrally arranged on its face, one on the upper and one on the lower edge. These rods are of the same length and size as the rods E, and are screw-threaded on their ends and adapted to form the prolongation of the draw-bar A, the rods E E being in horizontal and the rods K K in vertical plane. Before the rods are put in place I slip onto the rods E the following plate *x*, passing it up to the end of the draw-bar, and upon the rods K, I slip the following plate *y*, passing it up to the face of the block. Then between the rods I place a coil-spring, *o*, and put on the rods E E a plate, C, which has holes for the rods E and K. After the plate C has been slipped onto the rods E, I place upon the rods E, and against the plate C, another coil-spring, *n*, and then insert the block B with its rod K, one above and the other under the springs, through the upper and lower holes in the plate C, the ends of the rods passing through the holes in the upper and lower edges of the plate *x*, while the ends of the rods E pass through corresponding holes in each side of the plate *y*, and the force of the buffing is thus thrown upon the springs and the plate *y*. The draw-bar bears on plates *y* and *c*.

I place transverse rods *c* one above and one under the draw-bar, passing them through and securing them to the longitudinal beams of the frame, to prevent swagging of the draw-bar. The block B is pivoted to the cross beam or frame M, to permit the proper lateral movement of the draw-bar.

The draw-bar (shown in section in Fig. 6) is drawn aside by means of a lever, R, and the interposed rocking plate S. This plate is pivoted at *s*, and upon the cross-beam of the car-frame. It is nearly in the form of a circle with segments removed to leave the plain faces *t t'*, but has a projection, *s'*. It is connected to the draw-bar by a rod, 8, flexibly attached to the disk at 9. Upon the pivot of the disk is journaled the lever R, which is

preferably forked, so as to straddle the disk. The lever bears, when turning the disk, against the shoulder *s'*, and the disk is held in position by a wedge, T, which bears against the shoulder and between it and the face *t'* or *t*. When the cars couple, the draw-bar is pushed aside and (the key being out of place) it turns the disk without moving the lever R, moving the disk into the position shown in dotted lines. The disk may also be moved to this position, drawing the draw-heads with it, by moving the lever R to the position shown in dotted lines. It may be locked to hold the draw-bar in either position. It will therefore be understood that the key will be out of the position shown in the figure when the cars are to be coupled or uncoupled. In one case the disk is moved by the lever through the disk. The spring—such as shown in my aforesaid patent—which closes the draw-bars upon themselves in coupling, operates the disk also.

I claim as my invention—

1. In a car-coupling, the draw-bars having the hooks *a a*, adapted to be connected to each other by lateral movement, combined with the buffer-plates 1 1, overhanging the space behind the shoulder of the hooks, substantially as described.

2. In combination, the draw-bar A, pivoted block B, rods E E, fixed to the draw-bar, rods K K, fixed to the block, and plates *x y*, the springs *n o*, and the plates C, substantially as described.

3. In combination with the draw-bar and its springs, the plate S, having faces *t t'*, the lever R, and the connecting-link 8, together with the key T, the parts being applied to the car substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HUGER W. JOHNSTONE.

Witnesses:

J. B. THOMPSON,

F. L. MIDDLETON.