(No Model.) 3 Sheets—Sheet 1.

J. A. DICKINSON & W. H. MARTIN.

CAR COUPLING.

No. 262,936. Patented Aug. 22, 1882.

Fig. 1

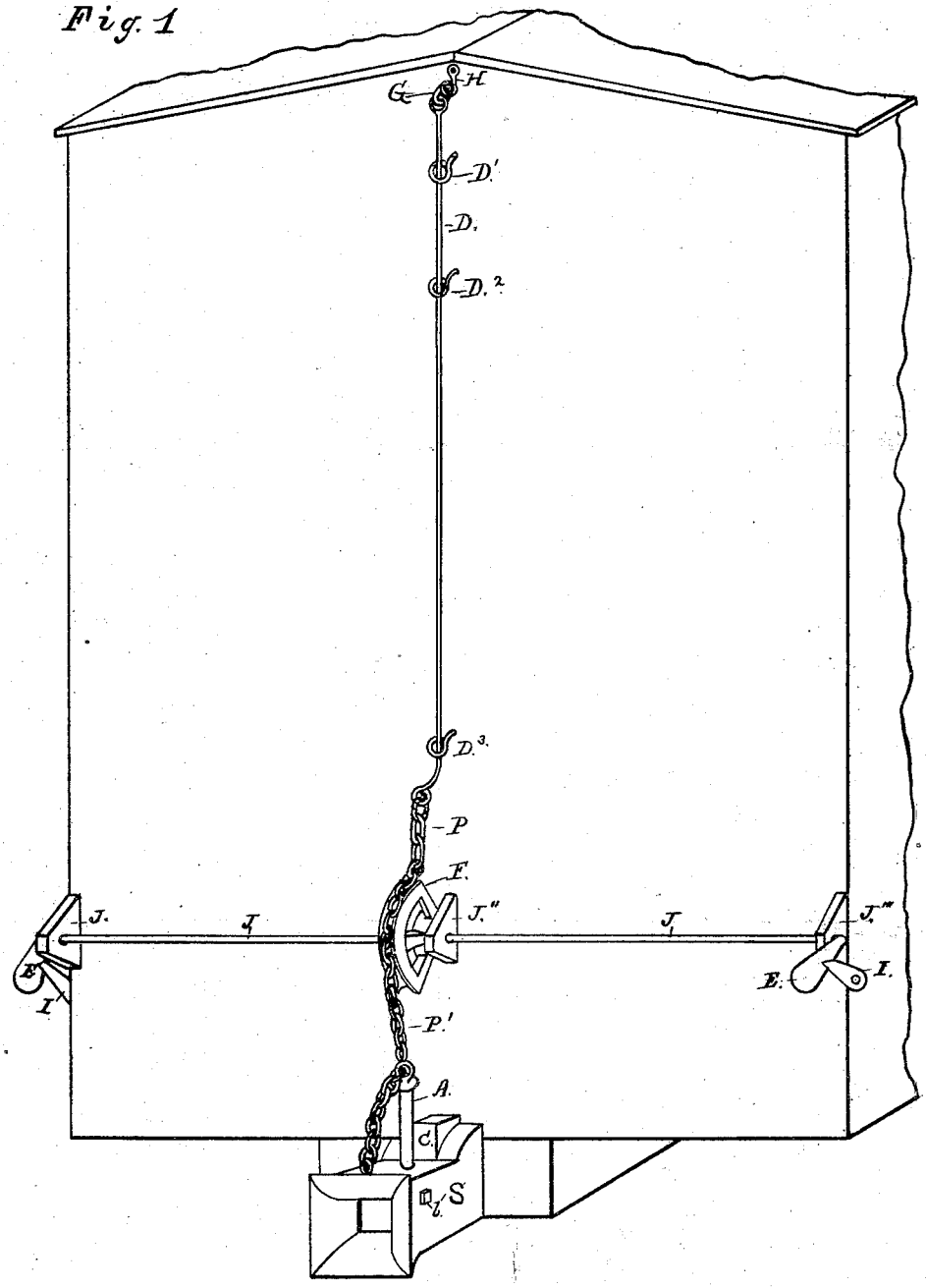

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Fig. 2.

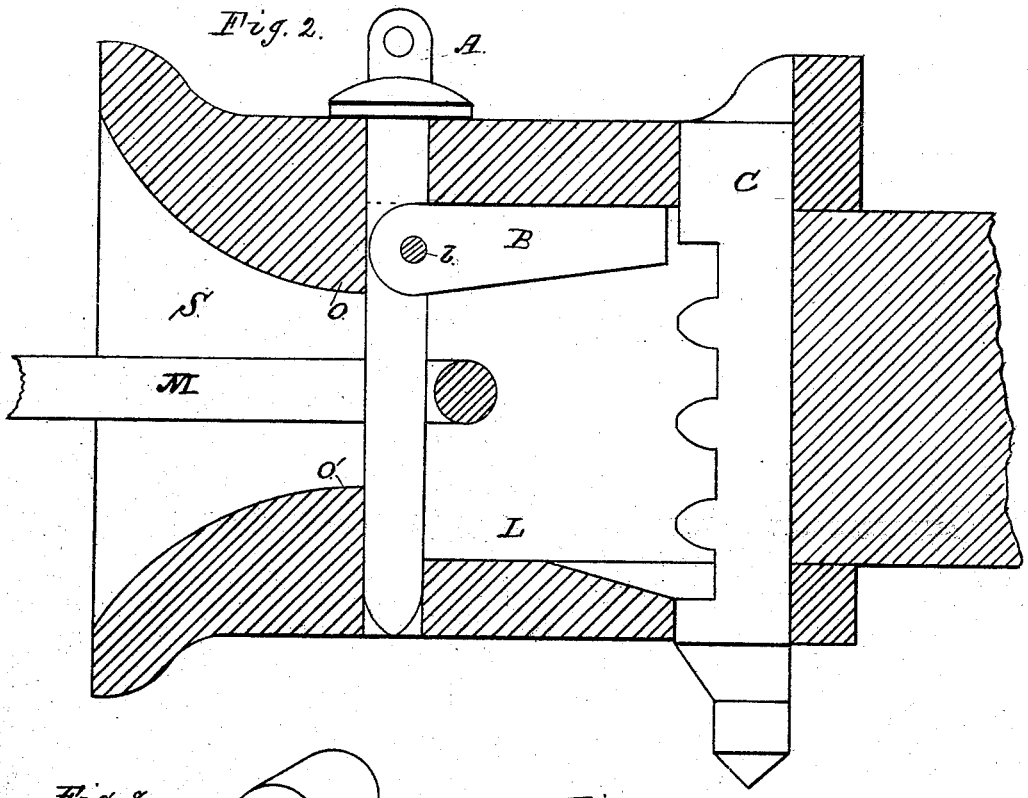


Fig. 8

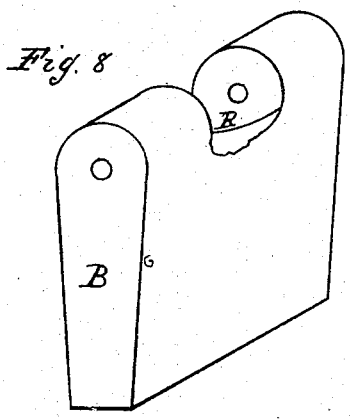


Fig. 6

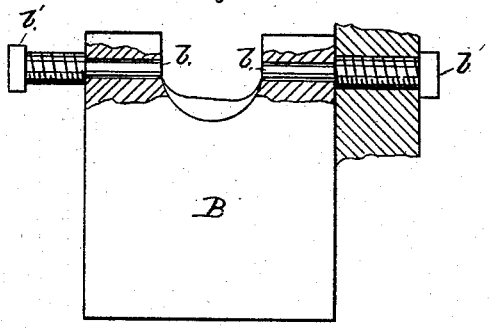
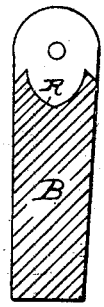


Fig. 7.



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(No Model.) 3 Sheets—Sheet 3.

J. A. DICKINSON & W. H. MARTIN.

CAR COUPLING.

No. 262,936. Patented Aug. 22, 1882.

Fig. 5.

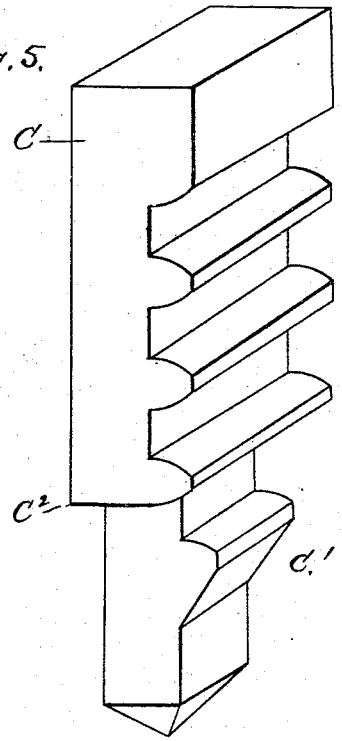


Fig. 4.

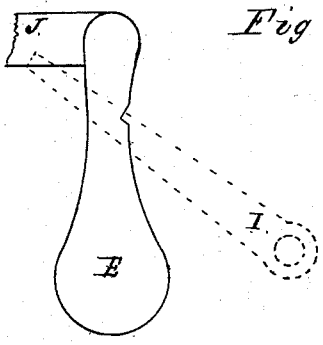
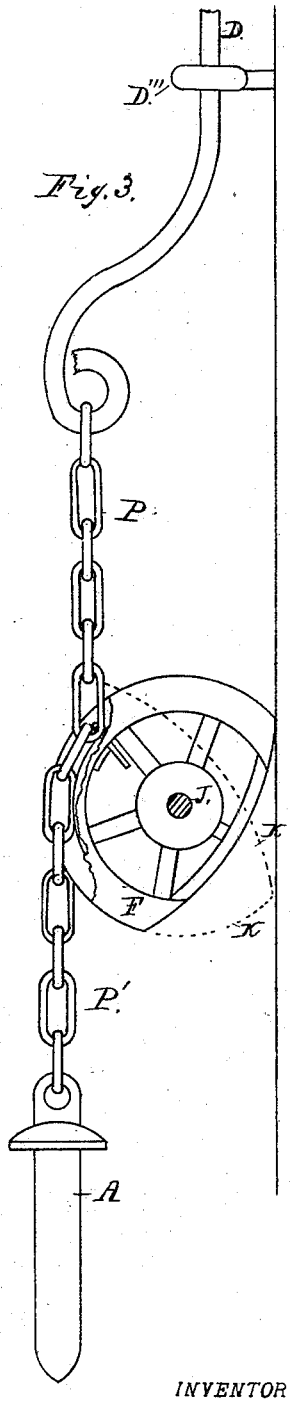


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN A. DICKINSON AND WILLIAM H. MARTIN, OF MOBILE, ALABAMA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 262,936, dated August 22, 1882.

Application filed June 12, 1882. (No model.)

To all whom it may concern:

Be it known that we, JOHN A. DICKINSON and WILLIAM H. MARTIN, citizens of the United States of America, residing at Mobile, in the county of Mobile and State of Alabama, have invented certain new and useful Improvements in Car-Couplings; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in self-acting car-couplers, and more particularly in the car-coupler for which Letters Patent were granted to John A. Dickinson, No. 231,216, dated August 17, 1880.

The object of this invention is to enable cars of different heights to be coupled and uncoupled with the greatest facility, and also to obviate the danger of accident and loss of life to persons employed in this kind of work.

Figure 1 shows an end view of a car provided with our coupling. The coupling-pin A is raised so as to receive the link, and the tumbler B has fallen in position to support the coupling-pin. Fig. 2 is a section of the coupling, showing the pin in position and the tumbler as thrown back by the entering link, (which may be of the ordinary form in general use at this time,) and showing the block C in position. Fig. 3 is a side view of the chain and grooved segment of wheel F so arranged as to lift the coupling-pin from the top or from the side of the car. Fig. 4 is a detailed view of the crank-handle E and position of the rod used for lifting the coupling-pin from the side of the car and the pawl or catch I (in dotted lines) which is used to support the handle and keep it raised, and thus suspend the coupling-pin when it is desired not to couple the cars. Fig. 5 is a view of the block C in rear of the coupling-pin, Figs. 2 and 3, for setting the link at various heights. Fig. 6 is a side view of the tumbler, showing the arrangement of the pivot. Fig. 7 is a vertical transverse section of the tumbler, showing the socket in which the coupling-pin rests. Fig. 8 is a perspective view of the tumbler.

The bolts forming the pivots *b b'* of the tumbler are of peculiar construction. That part next the head is threaded, and about one-third or one-half or the remainder is left smooth to form a bearing for the tumbler to turn upon. The tumbler is of different shape from the original one in Jno. A. Dickinson's patent above mentioned, and its simplicity makes the working perfect, unfailing, and easy for casting. The ratch-block in the rear of the draw-head is longer and rests on a shoulder on the inside, and extends through the draw-head and to a short point below it. The means employed to lift the coupling-pin is also different from that in the patent of Dickinson, and consists in a shaft, J, extending across the end of the car, and provided at each end with a crank or handle, E, and supporting pawls or catches I. Attached to the shaft J is a grooved segment, F, over which a chain is suspended and attached to a point that raises the coupling-pin always vertically. The shape of this segment is such that only one-fourth revolution can be given to it, its top and bottom striking the end of the car, which regulates the elevation which can be given to the pin. The handles I, attached to shaft J, hang perpendicularly. When the coupling-pin is to be raised a motion of the hand on the handle from either side of the car turns the segment up and raises the chain attached to it, together with the coupling-pin A. The link, then withdrawn, permits the tumbler to fall, and the pin at once rests on top of the tumbler in groove B. As soon as the hand is removed from the handle I the weight of the chain, the handles E, and of the segment F brings the handles down to the original position and leaves the pin ready to drop and connect as soon as the link is pushed in from the approaching car. On the end of the car, and near the top, is placed a hook, H. The rod D extends from the top of the car through suitable guides, $D' D^2 D^3$, and at its lower end it is attached to a chain, P, and at its upper end the rod D is provided with a loop, G, arranged to be held by the hook H whenever it is desired to suspend the rod D at that point, as shown in Fig. 1. The bar J is held in bearings $J' J'' J'''$. On the top and bottom of the draw-head, in front of the coupling-pin and tumbler, there are shoulders O O', which serve

to guide the coupling-link M and to hold it at the proper angle or position in coupling cars.

The coupling is operated as follows: Suppose the person is on top of the car and wishes to uncouple. He pulls up the rod D, Figs. 1 and 3, which raises the coupling-pin A and allows the link to slip out. The tumbler B then drops into place under the coupling-pin A, which, when the rod is let go, falls into the socket R of tumbler B. Then the coupling is ready to receive another link, which would, on entering the draw-head, throw the lower part of the tumbler back and allow the pin A to drop into the link M. If the person is on the ground and desires to uncouple, it is done by raising the handle E on the side of the car on which he stands, which turns the wheel-segment F and raises the coupling-pin, as described.

If it is desired to push cars around, coupling may be prevented, if the person is on top, by hooking the link G on rod D to the hook H. Thus the pin is suspended, and if a link strikes the tumbler it will rise, but will fall to place on the link being removed. If the person is on the ground, he raises the handle E and catches the trigger or pawl I, in the notch under the handle E, as shown by dotted lines in Fig. 4. Thus the pin A is suspended, as described. If, after fastening the coupling-pin A below, the person is on top of the car and wishes to let the pin down, he pulls rod D, which raises handle E a trifle and allows the trigger I to drop. The rod J is then set free and the coupling-pin A drops into the socket R of the tumbler B. If the person is on the other side of the car and wishes to loosen it and let the pin drop, he raises the handle on his side, which, being attached by the iron rod J, raises the other handle and allows the trigger to drop.

The block C is for setting the link M at any desired height by putting the link M in any of the different notches. If the cars come together suddenly, the breaking of the link is prevented by the block C being made loose, so as to rise if necessary, and being square and heavy and of sufficient length and beveled at the lower end, it will right itself on being released.

Figs. 6, 7, and 8 show the tumbler B in various positions, the socket R being in the center and extending below the pivots b' b'. When the pin is lowered its weight is in the center and below the pivot, so that no amount of jolting can displace the coupling-pin. When the tumbler is thrown back from below the coupling-pin A is released and falls.

The dotted lines K, Fig. 3, show the position of the segment when the coupling-pin A is down.

The space L in Fig. 2 shows the recess in which the end of the link M plays when the cars are in motion.

We claim—

1. In a car-coupling, the draw-head S, having shoulders O O′, and an open space, L, in combination, with the tumbler B, swung upon bolts b' b', having a screw-thread cut upon their ends next the bolt-heads, and the remainder left round and smooth to form pivots upon which it swings, substantially as described, and for the purposes set forth.

2. In a car-coupling, the draw-head S, having an opening in the bottom, through which a ratch-block, C, having its lower end reduced in size, so as to leave shoulders C′ C², (to prevent its dropping through,) protrudes, substantially as described, and for the purposes set forth.

3. In a car-coupling, the rod D, in combination with loop G and hook H, chain P, segment F, and coupling-pin A, substantially as shown and described, and for the purposes set forth.

4. In a car-coupling, the combination of segment F and rod J, having handles E at each end, and the pawls I, substantially as described, and for the purposes set forth.

5. In a car-coupling, the grooved segment F, in combination with rod J, handles E, pawls I, chain P, and coupling-pin A, substantially as shown, and for the purposes set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN A. DICKINSON.
W. H. MARTIN.

Witnesses:
J. B. CALEF, Jr.,
CY. INGATE.