D. P. CUBBERLEY.

CAR-COUPLING.

No. 181,916. Patented Sept. 5, 1876.

Fig. 1

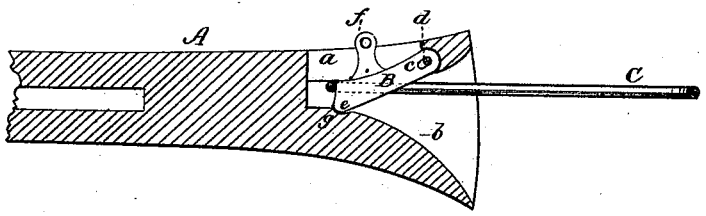
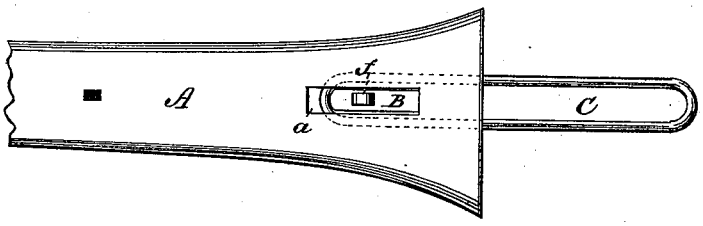


Fig. 2



WITNESSES:

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UNITED STATES PATENT OFFICE.

DAVID P. CUBBERLEY, OF MARION, INDIANA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **181,916**, dated September 5, 1876; application filed August 9, 1876.

To all whom it may concern:

Be it known that I, DAVID P. CUBBERLEY, of Marion, in the county of Grant and State of Indiana, have invented a new and Improved Car-Coupling; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a vertical longitudinal section. Fig. 2 is a plan view.

My invention relates to certain improvements in automatic car-couplings of that class in which a slotted latch is pivoted to a cross-pin, so as to allow the draft-strain to be exerted through the end of the latch, as an abutment directly against the draw-bar instead of against the cross-pin.

My improvements consist in making the latch in the form of a bar of a comparatively small transverse dimension, and inclining its rear end, against which the link bears, upwardly and to the front, so as to cause the link to rise when the draft is exerted, and occupy a position more in alignment with the greatest strength of the latch-bar, whereby a much lighter latch may be employed, and the manipulation in disengaging the link consequently rendered easier, and whereby also the draft-strain is made to assist in holding the latch down, the relative arrangement of the latch to the draw-bar serving also to facilitate the entrance and disengagement of the link, as hereinafter more fully described.

In the accompanying drawing, A represents the draw-bar, B the latch, and C the link. The draw-bar is made of metal, slotted at *a*, for the movement of the latch, and tapered at *b*, for the entrance of the link, which latter is of the prolonged type. The latch B consists of a strong metal bar of comparatively small transverse dimensions slotted at *c*, and loosely pivoted upon the cross-pin *d*, so as to move freely thereon, and be held in place thereby, but permitted by reason of the slot to abut with its rounded end against a corresponding curved seat in the draw-bar, whenever the draft is applied, so as to transfer the draft-strain from the cross-pin to the draw-bar by the abutment of its rounded end against the latter. The rear end of the latch-bar is inclined upwardly and to the front, so that the traction of the train compels the link to rise and occupy a position more in alignment with the line of greatest strength of the latch-bar. This permits the latch-bar to be made lighter, which is desirable, as facilitating the disengagement of the link, and utilizes the draft also to hold the latch-bar down, and prevent its uprising, and the possible accidental disconnection of the train.

The upper portion of the latch-bar is provided with an eye, *f*, formed therewith, and extending upward through the slot *a* in the draw-bar to a convenient position for the uncoupling of the devices.

To permit the easy elevation of said latch-bar its lower rear end is slightly rounded at *e*, so as to pass over the link when elevated without jamming, and in order to prevent the link from accidentally forcing its way beneath this rounded end of the latch, the draw-bar is recessed at *g*, with a depression corresponding to the rounded end of the latch, in which depression the said rounded end rests, and is thus removed and protected from the disengaging tendency of the link.

The nearly horizontal arrangement of the latch, it will be seen, not only permits the same to be lighter, and still maintain a sufficient degree of strength, but it also makes a more gradually tapering throat to the draw-bar, which renders the entrance of the link easier, and consequently reduces the wear and tear involved in the battering of the link against a more nearly vertical face of the latch.

In defining the limits of my invention, I would have it understood that I am aware of the fact that the broad features of a pivoted slotted latch accompanying my invention are not new, and that a latch-bar of the same general shape as mine is shown in the Patent No. 132,619; but the said latch-bar is not slotted, and the rear upper portion of the same is extended so as to form a curve or concavity in which the link rests. This extension prevents the rising of the link beyond a given point, and consequently prevents the wedging or jamming action of the link between the rear end of the latch and the upper part of the draw-bar, which wedging action is essential

with so light a form of latch as mine, in order to hold the same down, and prevent its accidental uprising.

In the patent referred to, moreover, a downwardly-projecting lug is employed for distributing the draft strain, which both obstructs the entrance of the link and the disengagement of the same. I therefore fully disclaim the construction referred to, and confine my invention to my limited construction, in which the rear end of the light pivoted latch is inclined upwardly and forwardly, and in a straight line, to its upper edge, so as to produce the wedging effect which is necessary with the light form of latch that I employ.

Having thus described my invention, what I claim as new is—

An improvement in car-couplings, consisting of the latch-bar B, having an eye, *f*, slot *b*, and a rear end, inclined upwardly and forwardly in a straight line to its upper edge, in combination with the link C, and the draw-bar A, having cross-pin *d*, slot *a*, and depression *g*, substantially as and for the purpose described.

The above specification of my invention signed by me this 7th day of August, 1876.

D. P. CUBBERLEY.

Witnesses:
AMOS W. HART,
SOLON C. KEMON.