

W. COULTER.
Car-Couplings.

No. 153,051.

Patented July 14, 1874.

Fig. 1.

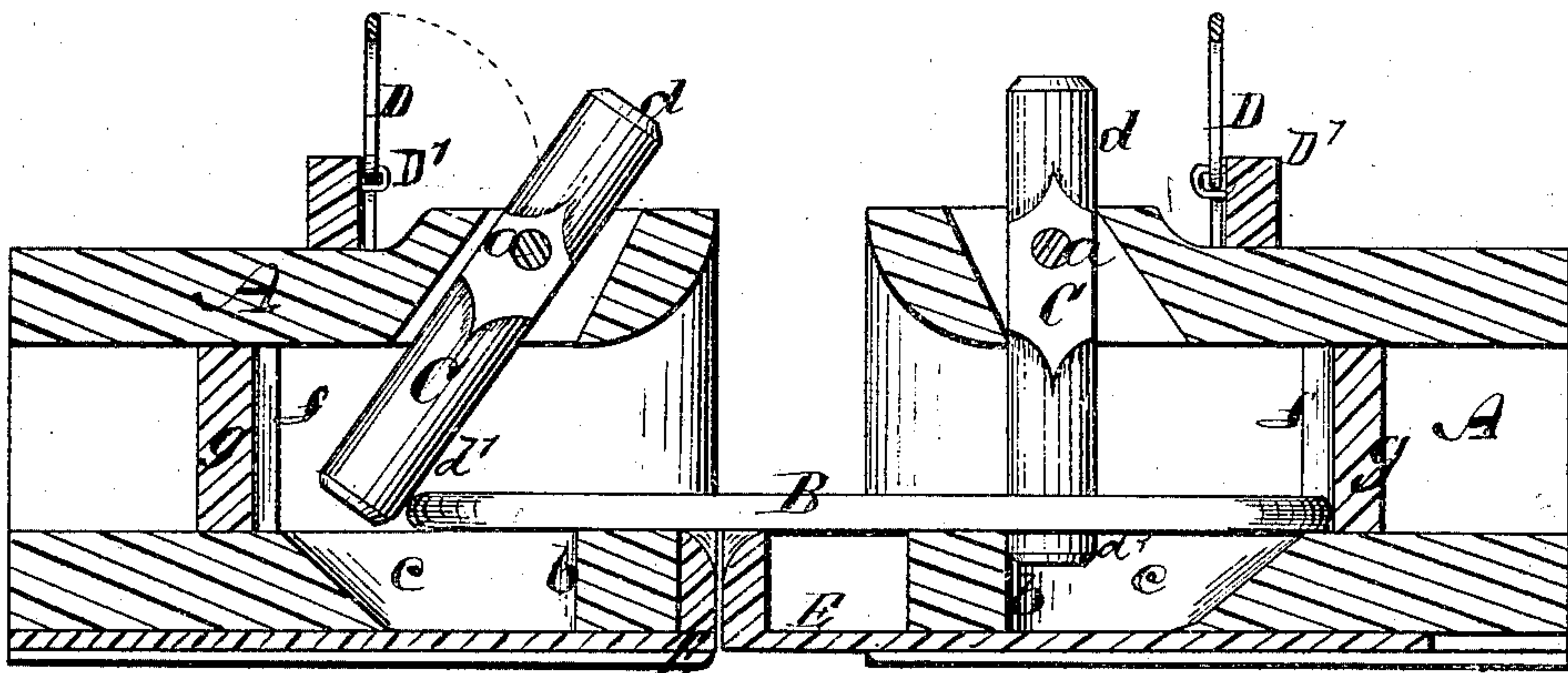
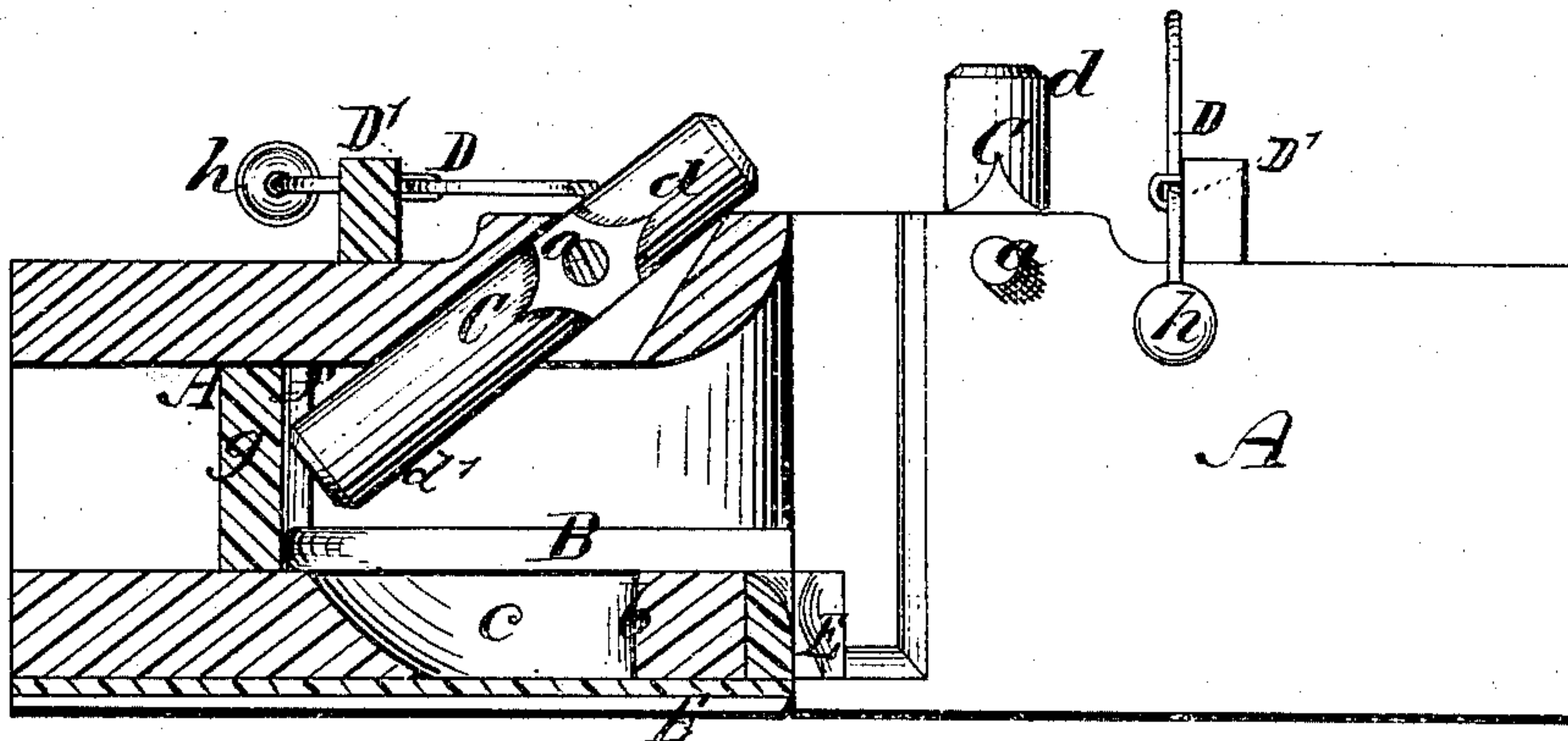


Fig. 2.



Witnesses,
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UNITED STATES PATENT OFFICE.

WILLIAM COULTER, OF XENIA, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT
TO GEORGE D. THORNHILL, OF SAME PLACE.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **153,051**, dated July 14, 1874; application filed
September 17, 1873.

To all whom it may concern:

Be it known that I, WILLIAM COULTER, of Xenia, in the county of Greene and State of Ohio, have invented certain Improvements in Means for Coupling and Uncoupling Railroad-Cars, of which the following is a specification:

My invention relates to a peculiar device for coupling and uncoupling cars, whereby the danger of going between them is avoided. My invention relates further to a device for supporting the coupling-link, and carrying the same in a horizontal position, in such manner as to cause the link to enter the mouth of the coupling device on the adjacent car without the assistance of an attendant.

But that my invention may be fully understood, I will proceed to describe the same in detail by aid of the accompanying drawings.

Figure 1 is a longitudinal vertical section of the adjacent bumper-heads of two cars constructed according to my invention, and in position to effect the coupling; and Fig. 2 is a side elevation of one bumper-head and a longitudinal section of the adjacent bumper-head of two cars in position to uncouple.

A is the bumper-head, having a recess, *c*, formed in its lower part. This recess *c* has its front side vertical, thus forming a shoulder, *b*, against which the pivoted coupling-pin C is held. The recess *c* describes an arc of a circle toward the rear, in order to allow the pivoted pin C to swing backward and forward, and is made deep, so that its front vertical side forms a strong bearing for the lower end *d'* of the coupling-pin C. This coupling-pin C is pivoted at *a*, and such pin C has an extension, *d*, projecting sufficiently above the bumper-head for the action of the treadle D, hereafter more fully explained, and is pivoted in such a manner as to swing into position automatically whenever the action on such pin C by the treadle D ceases. The lateral sides *f* of the mouth of the bumper-head are curved, and gradually narrowing toward the rear end of the mouth, so as to guide the coupling-link centrally. The rear end of the bumper-head is provided with a stop-block, *g*, which prevents the coupling-link from entering too far into the bumper-head A. On the under side of the bumper-head A a sliding bar, E, is af-

fixed. This sliding bar E is provided with a sunk head or knob, by means of which it is drawn out, and this sliding bar E forms the support for the coupling-link B, and when two cars are to be coupled together and approach each other the bumper-head of the adjacent car strikes against the head of the sliding bar E, and causes such sliding bar E to slide back automatically under such bumper-head A out of the way, and when in that position the head of the sliding bar E forms part of the bumper-head A, the front part of such bumper-head A being provided with a recess for the reception of the head of the sliding bar E. D is a treadle, pivoted at D' in uprights affixed to the sides of the bumper-head A. This treadle D has vertical extensions or arms projecting sufficiently on each side of bumper-head A to enable the attendant to reach them without going between the cars. These vertical arms or extensions are provided with weighted extremities *h*, so as to swing back into position automatically, and when it is desired to uncouple cars all that is necessary is to seize the weighted vertical arm and swing it back, causing the horizontal arm to swing forward against the upper part of the coupling-pin, causing this upper part *d* of the pivoted coupling-pin C also to swing forward, and consequently the lower part backward out of the link B; and when cars are in motion and it is desired to uncouple the same from the platform, the attendant simply bears with his foot against the horizontal arm of the treadle D, and this arm, pressing against the upper projection of the pivoted coupling-pin C, uncouples the cars, as above explained, and so soon as the action on the treadle D ceases, its weighted vertical arms cause the same to swing back into its normal position, and the coupling-pin C will also swing forward in a vertical position ready for coupling.

This coupling device has the further advantage of its adaptability to any railroad-car, as well as of cars of different height, avoiding the expense of separate coupling attachments.

By the peculiar arrangement of the parts and the great simplicity in their construction, the main object in devices of this character is obtained—viz., strength, durability, and cheapness.

Another great advantage presented by my improved car coupling and uncoupling device is, the immunity from all danger to attendants in coupling such cars, as when the coupling-link support or sliding bar E is once drawn out into position the cars will couple automatically without any further attention, and all danger of accidents in uncoupling cars, either from the ground or from the platform, is also avoided, owing to the use of the treadle D and its weighted arms, whereby the necessity of going between the cars when the attendant is on the ground, or his stooping down to uncouple by hand when on the platform, is dispensed with.

I am aware that pivoted or swinging coupling-pins have been used before, and I do not lay claim, broadly, to such; but

What I do claim is—

1. The combination of the pivoted treadle D, provided with weighted arms *h*, with the swinging coupling-pin C and a bumper-head, A, constructed to operate substantially as and for the purposes specified.

2. The link-support E, to slide directly back and be shielded by the bumper-head A, and to be drawn simply forward to support the coupling-link, in combination with the bumper-head A and coupling-link B, substantially as and for the purposes specified.

Specification signed by me this 1st day of July, 1873.

WILLIAM COULTER.

Witnesses:

JOHN LITTLE,

A. E. SHEARER.