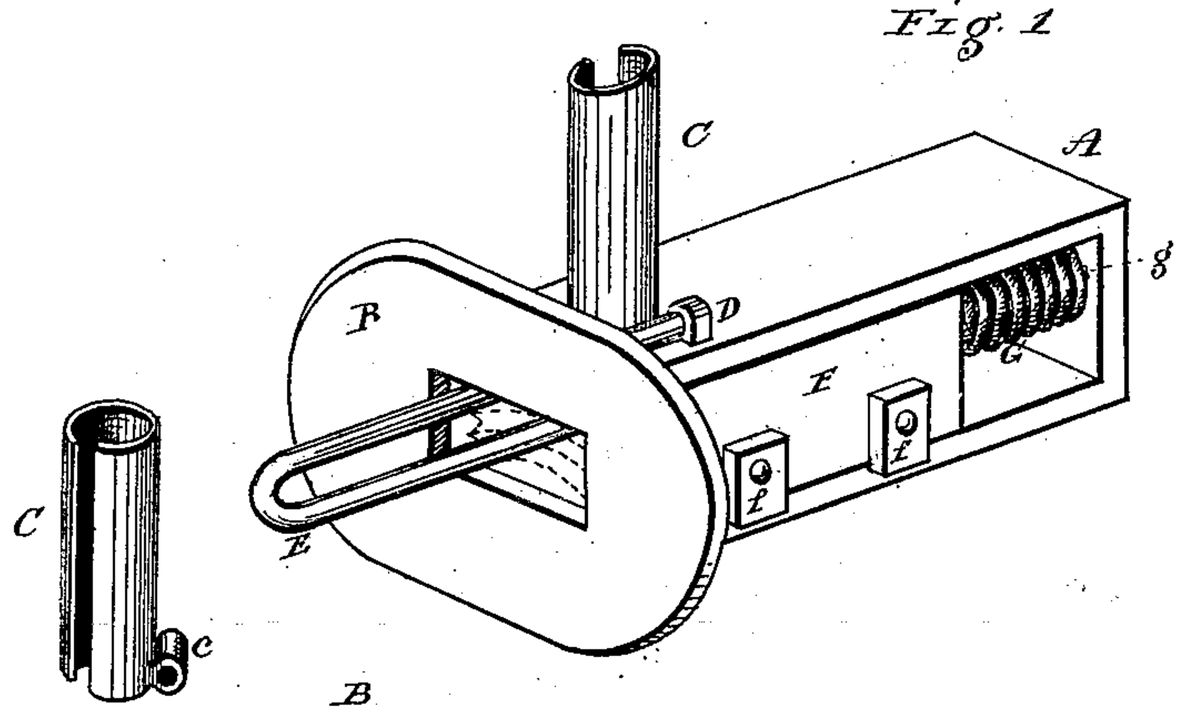
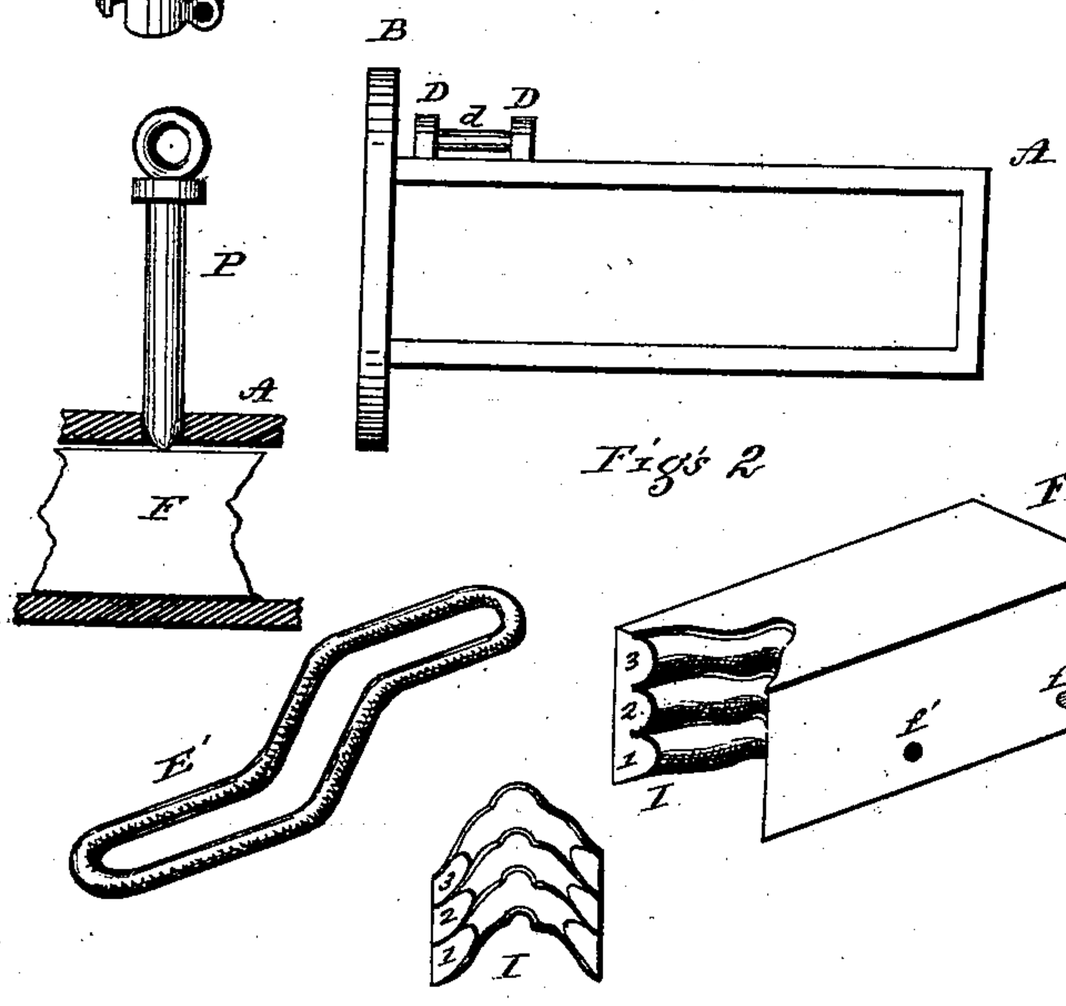
L. M. DICE.

Car-Coupling.

No. 202,333. Patented April 16, 1878.

Fig. 1





Figs 2

Witnesses

W. B. Miles

Jacob Stauffer.

By

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UNITED STATES PATENT OFFICE.

LEWIS M. DICE, OF CHAMBERSBURG, PENNSYLVANIA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **202,333**, dated April 16, 1878; application filed November 13, 1876.

To all whom it may concern:

Be it known that I, LEWIS M. DICE, of Chambersburg, in Franklin county, and State of Pennsylvania, have invented certain Improvements in Car-Couplings, of which the following is a specification:

This invention relates to a class of couplings for railroad-cars in which the coupling-bolt, when uncoupled, rests upon a yielding block, made applicable to the ordinary bull-nose casing and links in common use, adjustable to cars of variable height, and so as to hold the link firmly in a horizontal position to facilitate the coupling of the other end by simple contact, without handling or personal risk to the operator.

The accompanying drawings, with the letters of reference marked thereon, and a brief explanation, will enable those skilled in the art to make and use the same, and in which—

Figure 1 is a perspective view of an ordinary case and link with the improvements in place. Fig. 2 shows the several parts disconnected from each other.

The ordinary open case A has bull-nose B and two lugs, D D, on its upper side, with bearings for the pin *d*, to which a tubular shield, C, is hinged. This tube is shown with an open slot on one side, and surrounds the coupling-bolt, and supports it, when uncoupled, in its raised position. When the bolt is down, while coupled, the said tube can be turned down out of the way, if desirable, or for drawing the bolt more readily to uncouple.

The yielding block F is fitted to fill a portion of the space between the top and bottom of the case A, and confined, to prevent lateral motion, by headed guides *f*, or their equivalent. Centrally the rear end of this block F has a check-rod, H, projecting into the coils of a stout spring, G, secured at its other end, *g*, to the rear of the case A. This check-rod limits the sliding motion of the block F and the action of the spring between it and the back of the case. The forward end of this yielding or spring block is rounded out vertically at I, and provided with three rounded horizontal grooves, 1, 2, and 3, to receive the end of the link E or E′—that is, a simple straight link E, or what are termed the "goose-neck links E′," both in common use. Thus, by means of the grooves to clamp and hold one end of the link, three grades are had on each coupling, without change of link, to adapt the coupling to cars differing in height. A greater degree of difference can be readily adjusted in the use of the bent or goose-neck link E′.

The operation is simple and readily understood: One end of the link, being clamped in either of the grooves by the pressure of the spring and support of said groove, will be held in a horizontal position, and, in the forward or back movement of the car, will come in contact with the groove on its level in the other car-coupling, and in which the coupling-bolt P rests on the forward portion of the yielding block F, so as to push said block inward and dislodge the end of the bolt, and cause it to drop through the open end of the link and enter the bottom of the case, automatically coupling the two cars together, as in other cases devised to this end.

The check-rod H gages the limits of the sliding motion to insure the dropping of the bolt, and can be applied at a trifling cost to the cases now in common use. This check also prevents unnecessary strain on the spring, and while it is, as a whole, simple and cheap, it produces a perfectly safe coupling, and by its use prevents numerous serious accidents.

I am aware that there is no novelty in corrugated link-holders, nor in drop pins or bolts, separately considered. Corrugations are shown in Patent No. 83,252, October 20, 1868; but the pin and casing or bull-nose is provided with recesses for shouldered springs—a combination I do not claim.

What I claim as my invention in a car-coupling is—

In combination with an ordinary coupling-pin, P, and the ordinary open-sided case or bull-nose A B, the hinged tube C, the independent corrugated block F, to be inserted and held by side guide-plates *f*, and having a headed check-rod, H, within the coiled spring G when said bolt drops automatically to couple, the whole combined and arranged as and for the purpose specified.

LEWIS M. DICE.

Witnesses:

W. B. WILEY,

JACOB STAUFFER.