

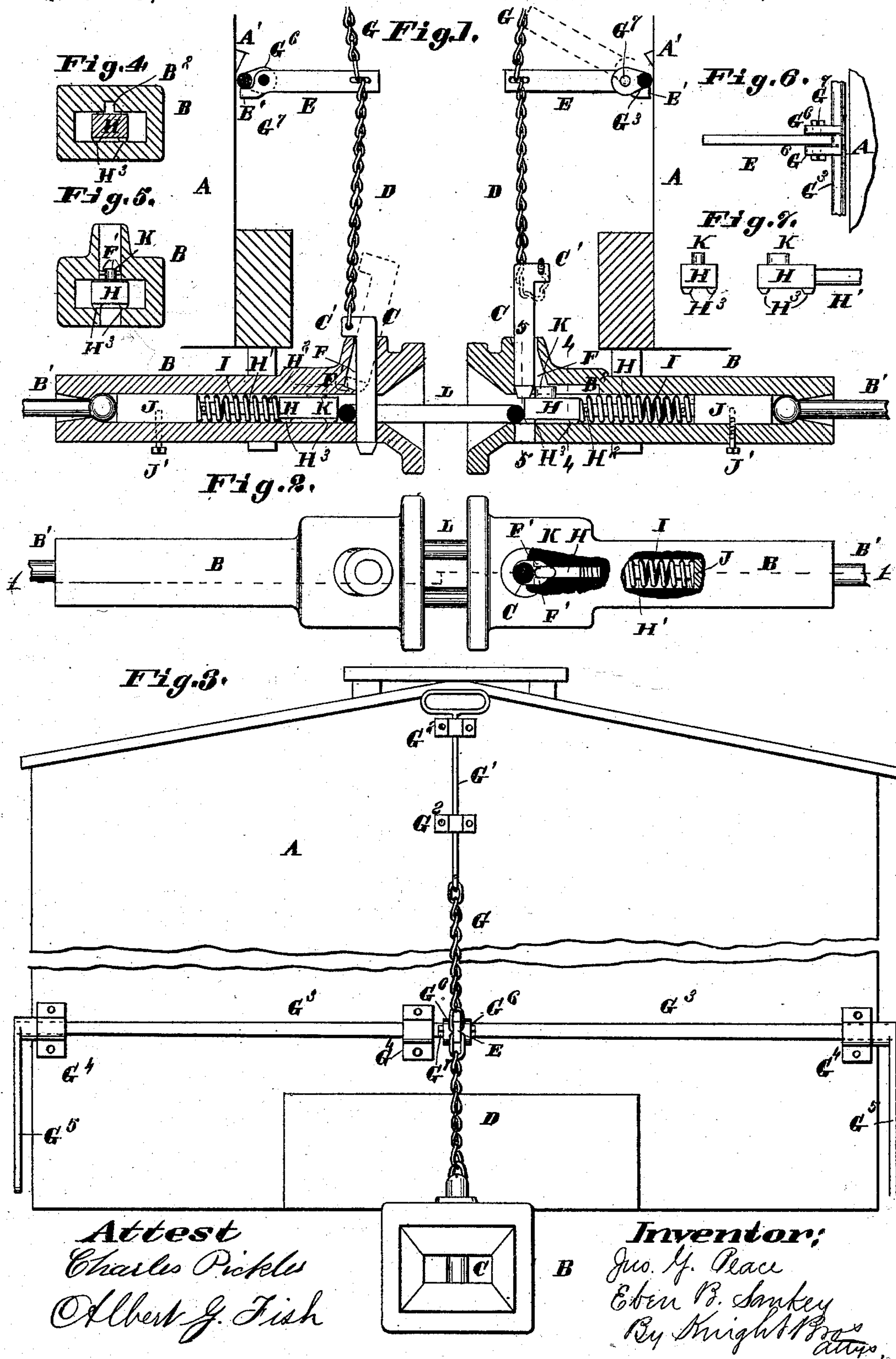
(No Model.)

J. G. PEACE & E. B. SANKEY.

CAR COUPLING.

No. 269,106.

Patented Dec. 12, 1882.



UNITED STATES PATENT OFFICE.

JOHN G. PEACE AND EBEN B. SANKEY, OF SALEM, MISSOURI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 269,106, dated December 12, 1882.

Application filed August 28, 1882. (No model.)

To all whom it may concern:

Be it known that we, JOHN G. PEACE and EBEN B. SANKEY, both of Salem, in the county of Dent and State of Missouri, have invented a certain new and useful Improvement in Car-Couplings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section taken on line 1 1, Fig. 2, showing the adjoining ends of two car-bodies in outline. Fig. 2 is a top view of two draw-heads, with parts of one broken away to show the parts inclosed in top view. Fig. 3 is an end view. Fig. 4 is a transverse vertical section taken on line 4 4, Fig. 1; and Fig. 5 is a similar view taken on line 5 5, Fig. 1. Fig. 6 is a detail top view of the rock-shaft and lever for raising the coupling-pins. Fig. 7 shows an end view and a side view of the sliding blocks within the draw-heads.

Our invention relates to a car-coupling which is automatic in its operation; and our invention consists in points of novelty hereinafter fully described and claimed.

A represents the adjoining ends of two cars, and B the draw-heads. The draw-heads are connected to the car-bodies in the ordinary manner, except the connecting-bolts B' securing their inner ends, instead of being rigidly secured to them, connect with a ball-and-socket joint, as shown in Fig. 1, which better allows the vertical movement of their outer ends.

The parts on the respective cars are duplicates, so in describing our invention it will only be necessary to refer to the parts of one of them.

C represents the coupling-pin, to the upper inward-projecting end, C', of which is connected a hoisting-chain, D, the other end of the chain connecting with the outer end of a horizontal arm or lever, E. The inner part of the upper portion of the pin-opening in the draw-head inclines back, forming an enlargement, F, which does not extend quite to the throat of the draw-head, thus forming a projection, F', against which the lower end of the pin rests at certain times, as hereinafter described. It will be seen that when the pin is raised by the chain its lower end will swing into this enlargement F, as shown by dotted lines, Fig. 1, and

rest upon the projection F', because the chain connects with the pin out of its center of gravity by means of the projection C'. The pin can be raised either from the top of the car or from either side, in the former case by means of a chain, G, connecting with the outer end of the arm or lever E by its lower end, and its upper end connecting with the lower end of a pull-rod, G', secured to the end of the car by brackets G² beneath the foot-board, and in the latter case by means of a rock-shaft, G³, secured to the end of the car by journal-brackets G⁴, to which the inner end of the arm E is secured. G⁵ are cranks on the ends of the rock-shaft, by which it can be turned. The arm is connected to the rock-shaft by means of lugs G⁶, projecting outward from the shaft, between which the arm is pivoted by means of a pin, G⁷. On the lower part of the arm is a projection, E', which extends beneath the rock-shaft. Now, it will be seen that when the shaft is turned the outer end of the arm will be raised, but when the arm is raised from the top of the car the shaft remains at rest, so that the unnecessary power required to raise it is avoided. A' is a stop, secured to the end of the car, against which one or both of the lugs G⁶ strike to prevent the arm E being raised too high from the side of the car.

H is a sliding block fitting in the throat of the draw-head, and having on its inner end a stem or reduced portion, H', which receives one end of a spiral spring, I, secured to it by a transverse pin, H², the other end of which is connected in the same manner with the outer end of a stationary block, J, held in place by a set-screw, J', passing through from the outside of the draw-head. The sliding block preferably has feet H³, which support it, and in its upper portion is a hole or mortise, which receives a key, K, inserted through the pin-opening after the block has been placed in the throat. The key projects up from the top of the block and works in a longitudinal groove, B², in the upper part of the throat of the draw-head, passing through the projection F'.

The operation of the coupling is as follows: Supposing the cars to be coupled, as shown on the left-hand side of Fig. 1, the pin is raised, as described, and as soon as its lower end has reached the enlargement F it will assume the

position shown by dotted lines and be supported there. Then when the coupling-link L is withdrawn the sliding block will be forced forward by the spring, the key striking the lower end of the coupling-pin, removing it from the projection F' and causing it to assume a vertical position, in which it is supported by the outer end of the sliding block, as shown on the right-hand side of Fig. 1. Then when the coupling-link enters the mouth of the draw-head as the cars come together to be coupled, it strikes the sliding block and moves it inward from under the pin, which then gravitates, and the coupling takes place.

It will be seen that a car with our automatic coupling applied will connect with another having the old form of coupling as readily as it will with one of its own kind.

If desired, the pin-hole may have a straight back, the top of the hole being considerably larger than the pin.

We claim as our invention—

1. In combination with a draw-head having an enlargement, F, at rear of middle part of upper portion of the pin-hole, forming projection, F', on each side of the key of sliding block, a coupling-pin, C, having projections C', and lifting chain or rope secured to coupling-pin projection, as set forth.

2. In a car-coupling, the pin-raising arm E, connected with lugs G⁶ on the rock-shaft G³ by pin G⁷, and having a projection, E', which engages beneath the rock-shaft, substantially as shown and described, for the purpose set forth.

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Witnesses:

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