

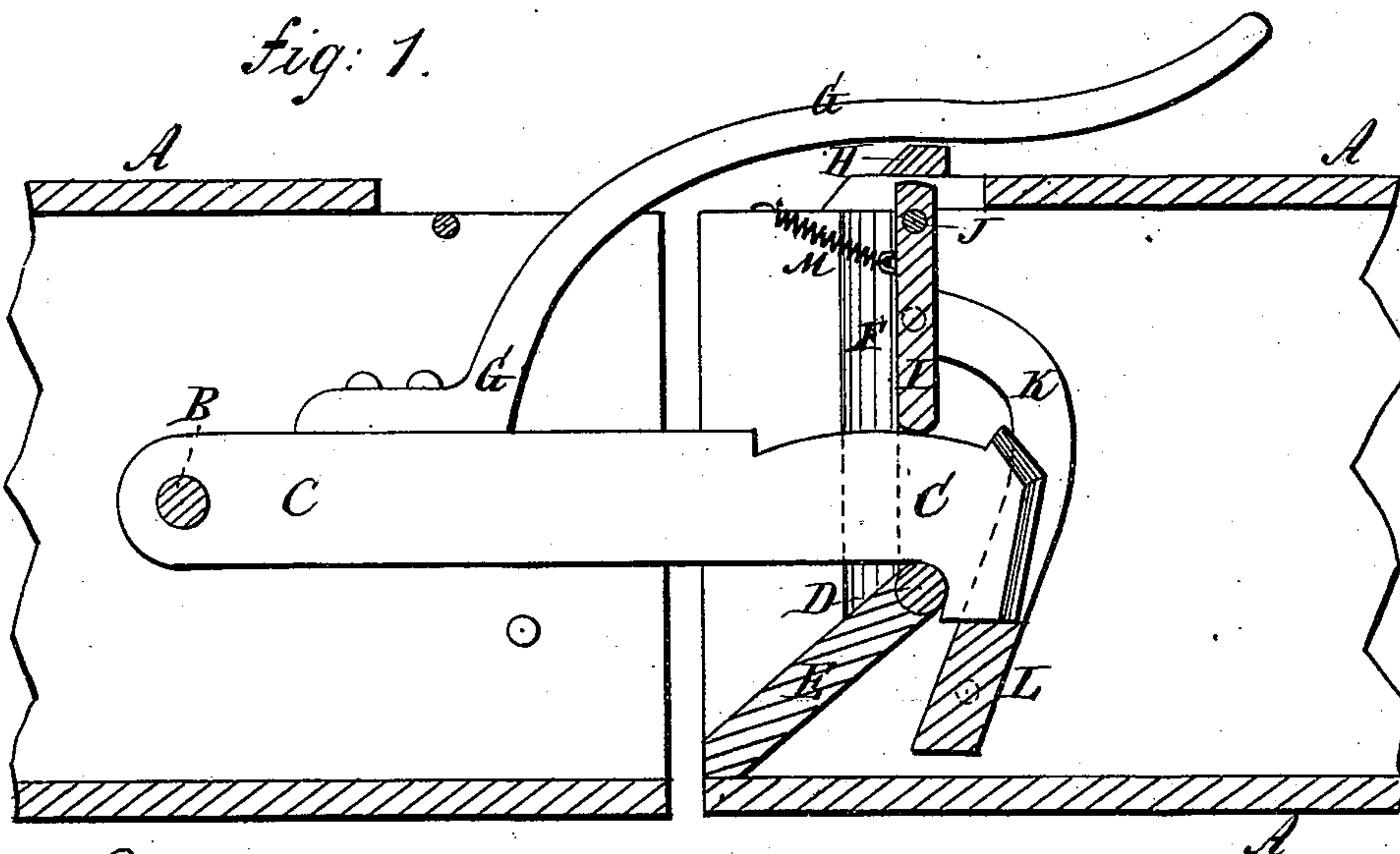
(Model.)

D. KUNKEL, Sr.  
Car Coupling.

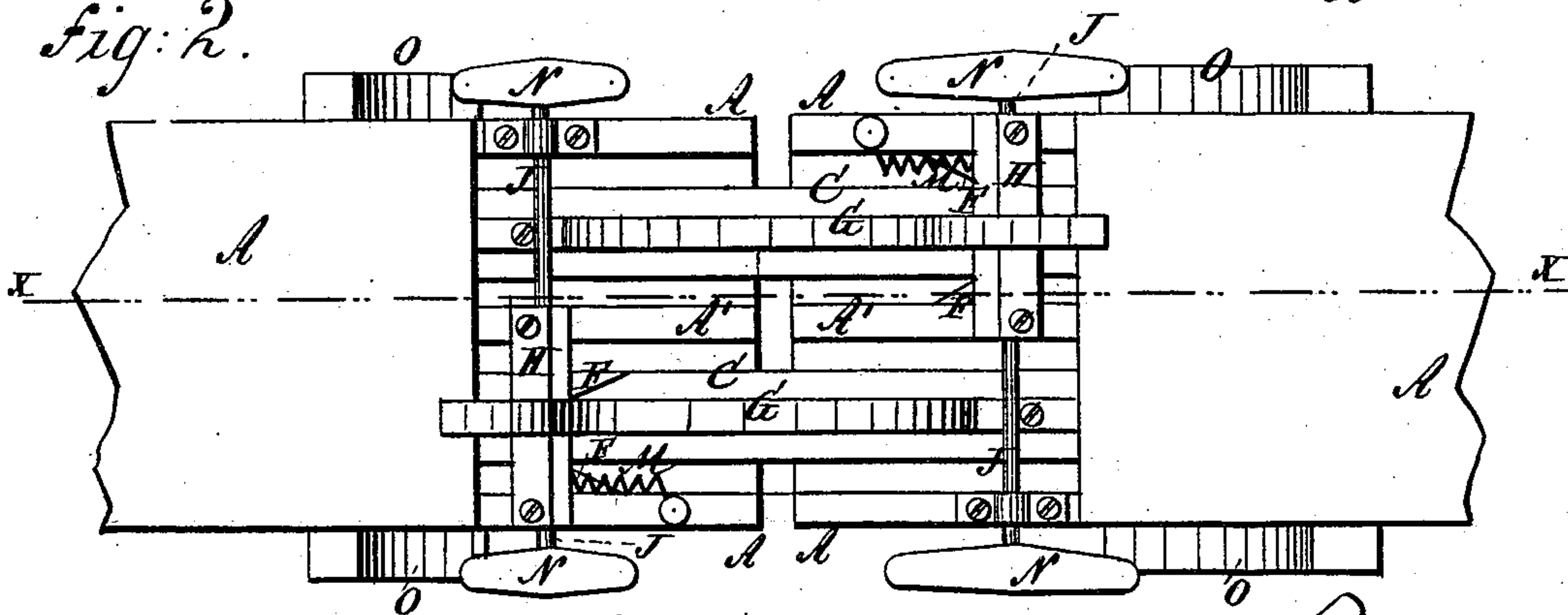
No. 234,990.

Patented Nov. 30, 1880.

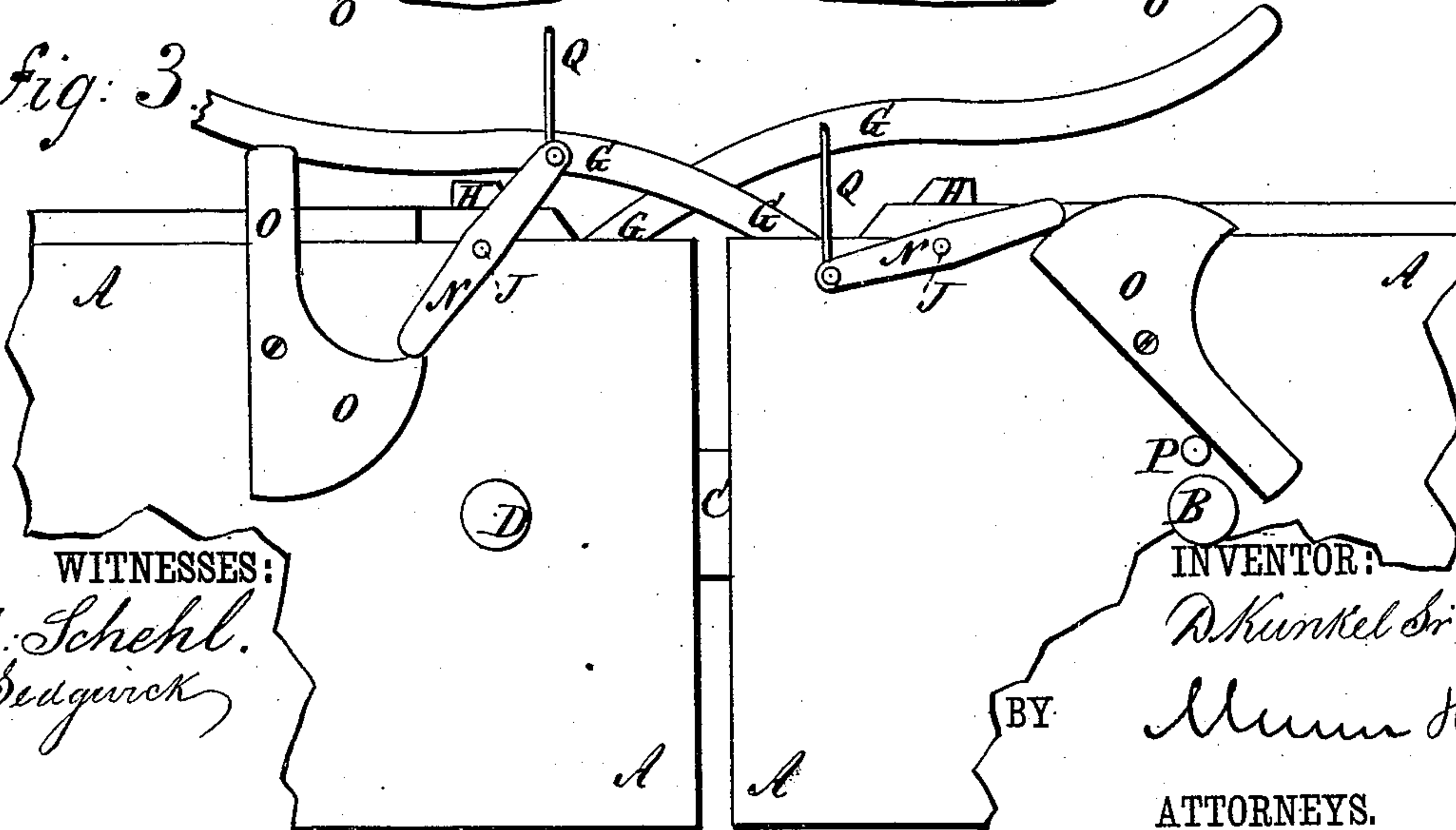
*Fig: 1.*



*Fig: 2.*



*Fig: 3.*



WITNESSES:

*A. Schehl.*  
*C. Sedgwick*

INVENTOR:

*D. Kunkel Sr.*

BY

*Munn & Co.*

ATTORNEYS.



# UNITED STATES PATENT OFFICE.

DANIEL KUNKEL, SR., OF OREGON, MISSOURI.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 234,990, dated November 30, 1880.

Application filed September 21, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, DANIEL KUNKEL, Sr., of Oregon, in the county of Holt and State of Missouri, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

Figure 1 is a sectional side elevation of the improvement, taken through the line *x x*, Fig. 2. Fig. 2 is a plan view. Fig. 3 is a side elevation.

The object of this invention is to furnish car-couplings so constructed that the cars will be coupled automatically as they are run together, also permitting their convenient uncoupling.

A represents the coupling-heads, which are formed upon or connected with the draw-bars in the ordinary manner. The cavity of each head A is divided into two compartments by a vertical partition, A'. In one compartment of each coupling-head A is pivoted, by a horizontal pin or bolt, B, the rear end of a hook, C, the forward end or head of which projects so as to enter the opposite compartment of the coupling-head of an adjacent car and hook upon a horizontal pin or bolt, D, attached to the said coupling-head. In the cavity of the coupling-head A, below and in front of the bolt D, is secured, or in it is formed, an inclined slide, E, so that when the cars are run together the heads of the hooks C may strike and slide up the slides E and drop over the bolts D, coupling the cars. The forward sides of the heads of the hooks C are inclined, as shown in Fig. 1, so that the said hooks will readily pass up the slides E. The forward edges of the sides of the heads of the hooks C are slightly beveled to strike against the upright beveled shoulders F, attached to or formed upon the opposite sides of the compartments of each coupling-head A, that receive the forward ends of the hooks to center the said hooks and cause them to properly engage with the coupling-bolts D. To the rear parts of the upper sides of the hooks C are bolted arms G, curved upward, forward, and upward, so as when the cars are run together to strike against inclines H at the top of the coupling-heads A to raise the forward ends of the hooks C and insure their entering the coupling-heads A, the raising of the hooks

being completed by the forward ends of the said hooks coming in contact with the inclined slides E. This construction is especially advantageous when high and low cars are to be coupled together. The upper sides of the forward parts of the hooks C are convexed for the lower edge of the swinging blocks I to rest against, so that the said blocks will not obstruct the play of the coupling while locking the hooks C upon the coupling-bolts D.

The locking-blocks I are rigidly attached to pins or bolts J, which are pivoted in holes in the upper parts of the coupling-heads A, directly above the coupling-bolts D, so that the blocks I can be swung back to release the hooks C by turning the said bolts J. To the opposite side edges of the locking-blocks I are hinged the upper ends of the connecting-bars K, which are curved rearward and downward, and their lower ends are pivoted to the opposite side edges of the blocks L, which are thus suspended below the heads of the hooks C, the bars K being made of such a length that the blocks L will rest against the lower sides of the hook-heads when the locking-blocks I rest against the upper sides of the said hooks.

With this construction, when the locking-blocks are swung back to release the hooks C the same movement will raise the blocks L to lift the said hooks C above the coupling-bolts D, uncoupling the cars. The locking-blocks I are drawn forward into position to lock the coupling-hooks as soon as the bolts J are released by spiral or other shaped springs M, the lower ends of which are attached to the said locking-blocks and their upper ends are attached to the coupling-heads A. The ends of the bolts J project upon the opposite sides of the coupling-heads A, and to them are attached the centers of cross-bars N, to serve as handles for turning the bolts J in uncoupling the cars. The rear ends of the cross-bars N rest upon lever-cams O, which are pivoted to the sides of the coupling-heads A in such position that by turning the said cams in one direction the locking-blocks I and the lifting-blocks L will be raised and the cars uncoupled, and by turning the said cams in the other direction the said blocks will be lowered into position for coupling the cars when they are run together.



The movement of the cams O in either direction is limited by stop-pins P attached to the sides of the coupling-heads A. The cams O are so formed that the pressure of the cross-bars N will hold them locked in either position.

To the forward arms of the cross-bars N are pivoted the ends of rods Q, which may be extended to the platforms or roofs of the cars, so that the cars can be uncoupled without passing between them.

The tops of the heads of the hooks C are beveled, as shown in Fig. 1, so that they will readily push back and pass the locking-blocks I when the cars are run together.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A car-coupling constructed substantially as herein shown and described, consisting of the coupling-heads A, having vertical partitions A', the hinging-bolts B, the hinged coupling-hooks C, the coupling-bolts D, the inclined slides E, and the curved arms G, for raising the hooks in coupling, the locking-blocks I, held forward by springs M and carrying the swinging bars K, and the lifting-blocks L, for raising the hooks in uncoupling, the bolts J, having cross-bars attached to their ends, and the lever-cams O and stops P, as set forth.

2. In a car-coupling, the combination, with the coupling-heads A and the hinged coupling-hooks C, of the curved arms G and the

inclines H, substantially as herein shown and described, whereby the coupling-hooks C are raised into contact with the slides E when the cars are run together, as set forth.

3. In a car-coupling, the combination, with the coupling-heads A and the hinged coupling-hooks C, of the swinging locking-blocks I, their suspending-bolts J, having cross-bars N, and the springs M, substantially as herein shown and described, whereby the coupling-hooks C are locked against accidental uncoupling, as set forth.

4. In a car-coupling, the combination, with the coupling-heads A, the hinged coupling-hooks C, and the swinging locking-blocks I, of the hinged arms K and the swinging lifting-blocks L, substantially as herein shown and described, whereby the coupling-hooks are raised to uncouple the cars by swinging back the locking-blocks I, as set forth.

5. In a car-coupling, the combination, with the coupling-heads A and the cross-bars N, attached to the bolts J, that suspend and operate the locking-blocks I, of the lever-cams O and their stops P, substantially as herein shown and described, whereby the locking-blocks can be adjusted and locked in either position, as set forth.

DANIEL KUNKEL, SEN.

Witnesses:

W. H. RICHARDS,  
DANIEL ZACHMAN.