

(No Model.)

L. P. BAYLIFF, W. HARROD & J. COUP.  
CAR COUPLING.

No. 246,131.

Patented Aug. 23, 1881.

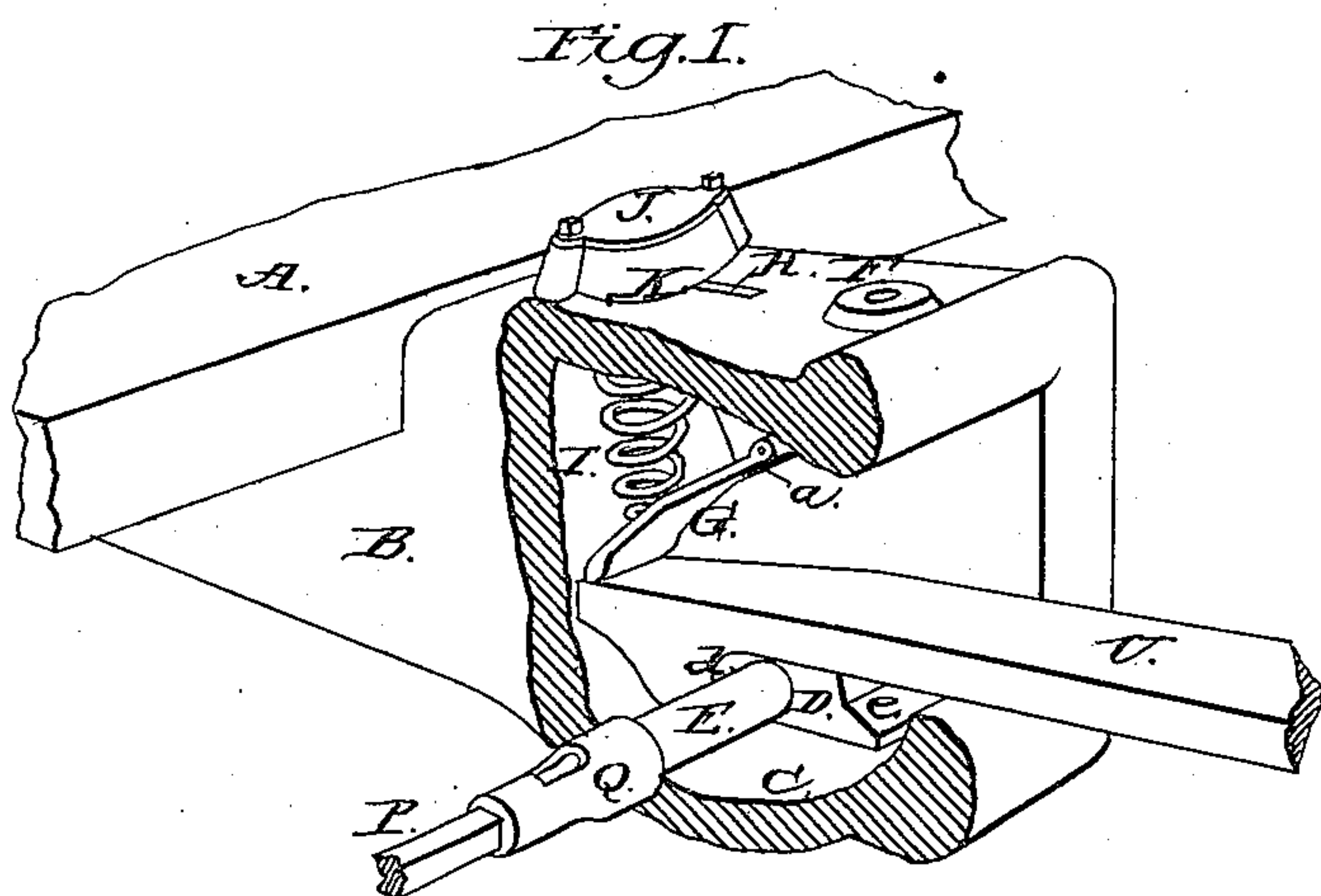
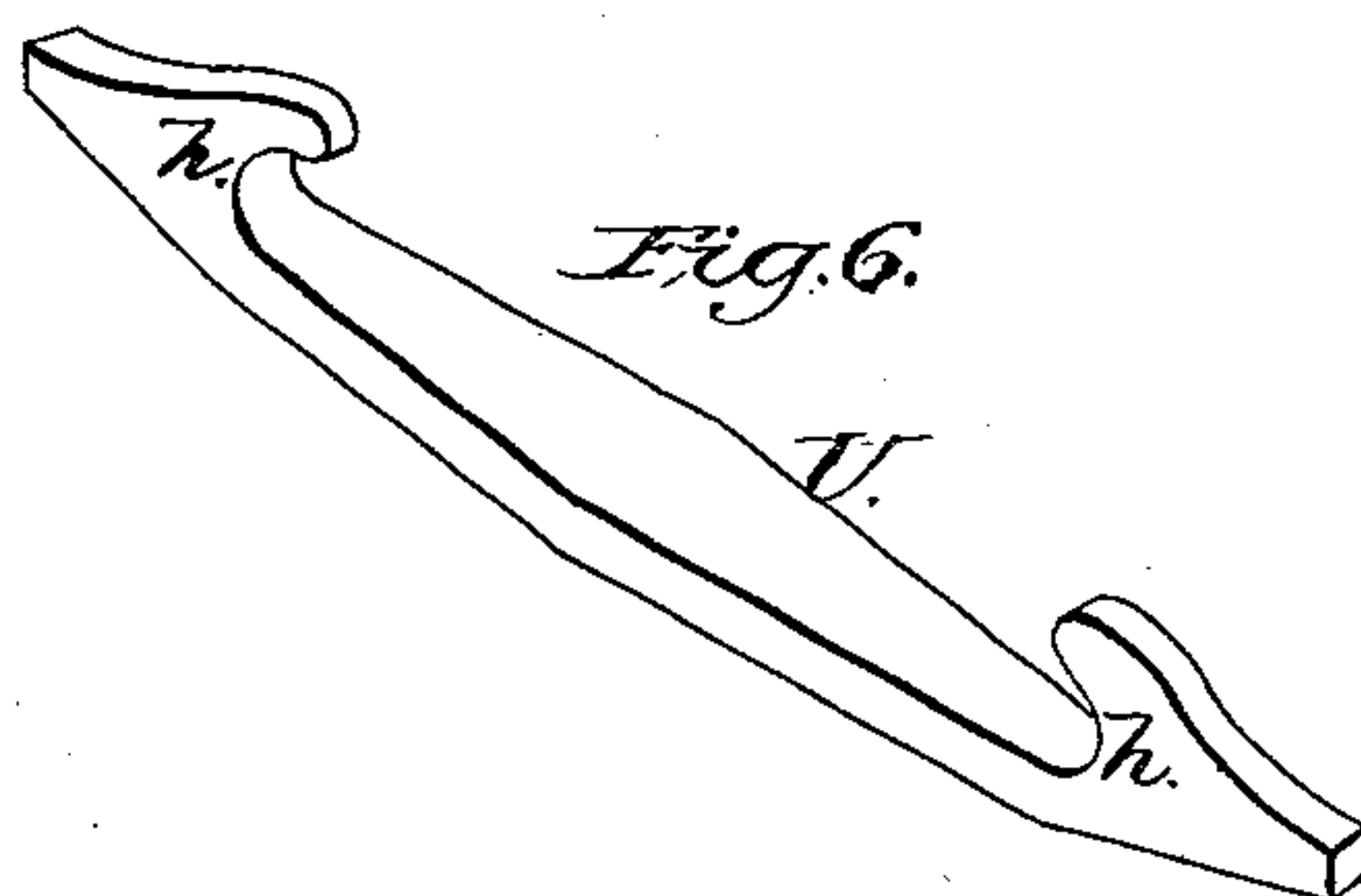
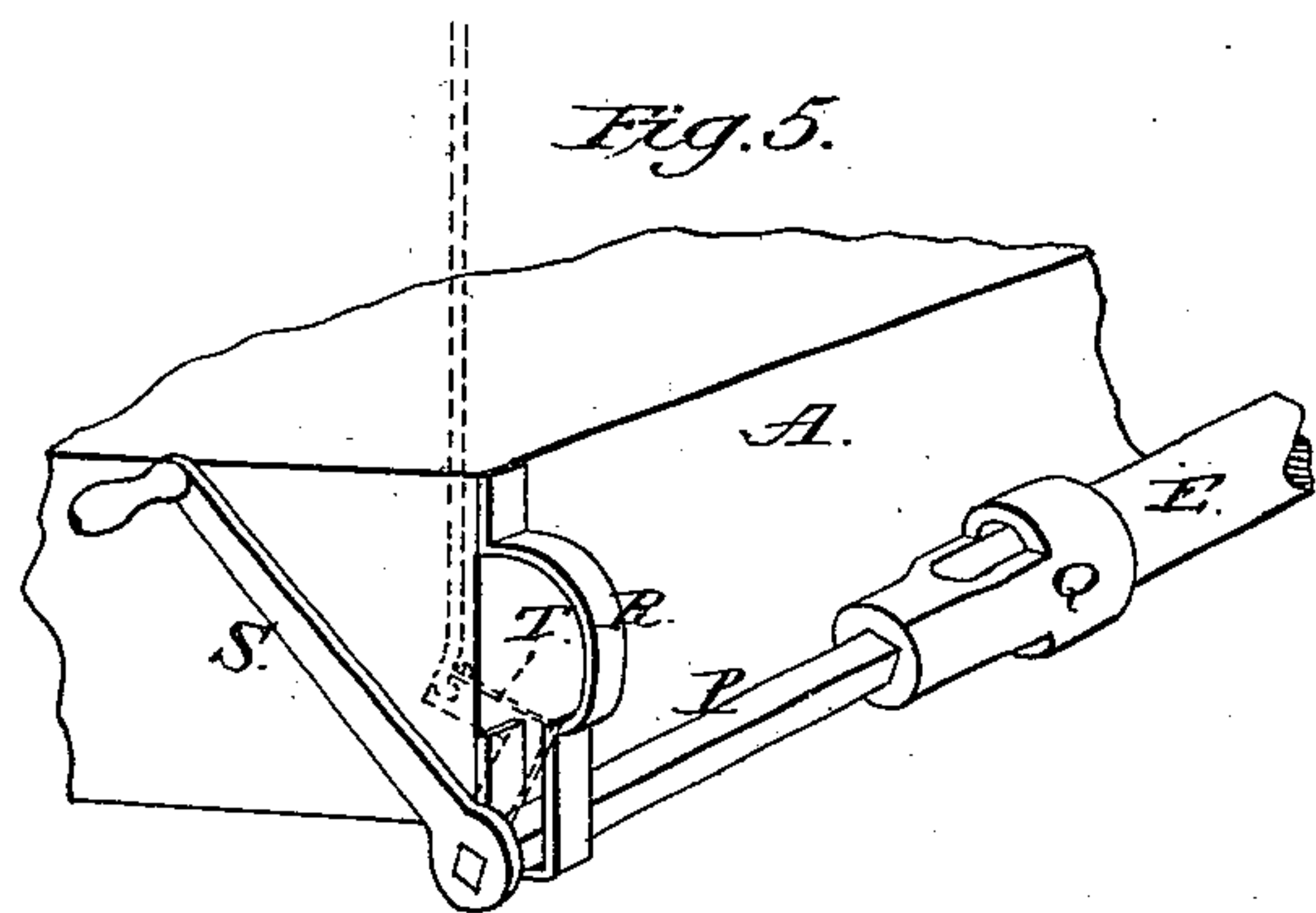
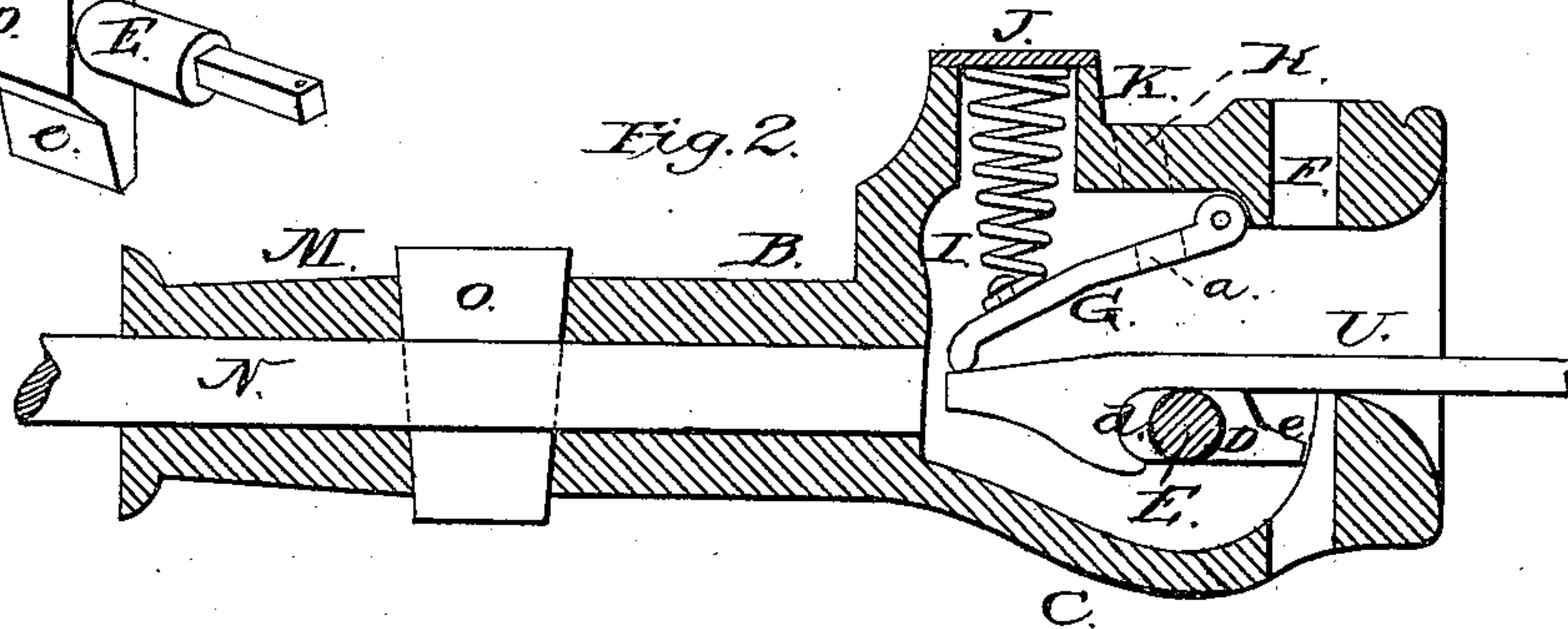
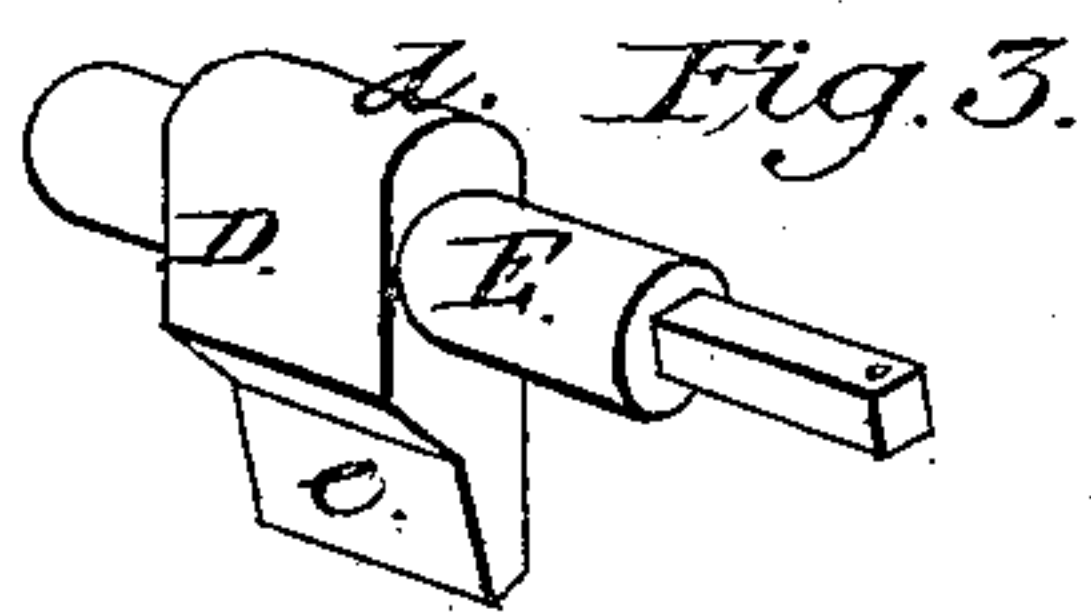
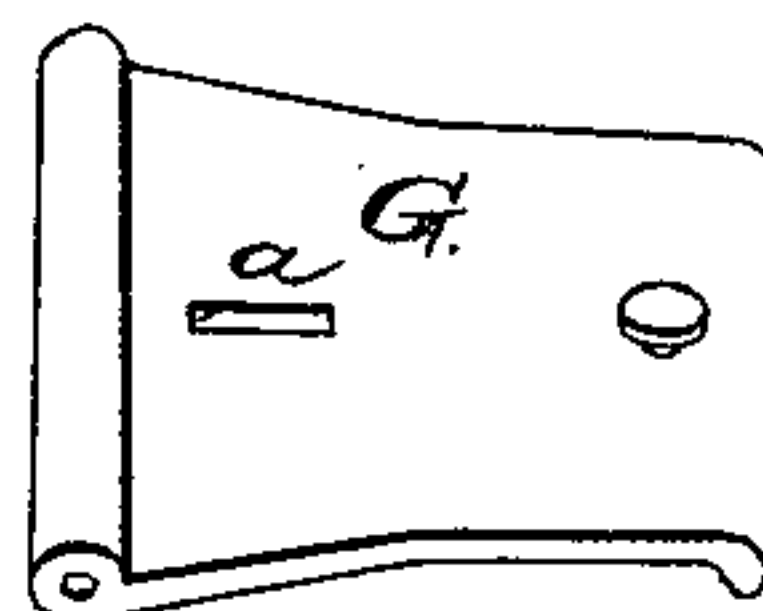


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 246,131, dated August 23, 1881.

Application filed May 5, 1881. (No model.)

*To all whom it may concern:*

Be it known that we, LEWIS P. BAYLIFF, WILLIAM HARROD, and JOHN COUP, of Wapakoneta, in the county of Auglaize and State of Ohio, have invented certain new and useful Improvements in Car-Couplings; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a sectional perspective view of a car-coupling embodying our improvements. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a perspective view of the rock-shaft and key for uncoupling the hook. Fig. 4 is a plan view of the hinged inclined plate removed from the draw-head. Fig. 5 is a detail perspective of the support and the mechanism for operating the rock-shaft either from the side or the top of the car; and Fig. 6 is an inverted perspective view of the coupling-hook.

This invention has relation to car-couplings; and it consists in the improved features of construction and combination hereinafter fully described, and particularly pointed out in the claims.

Referring by letter to the accompanying drawings, A designates the dead-wood against which the draw-head abuts. The lower wall, C, of the draw-head B is made concave, as shown, to permit the key D, secured to the rock-shaft E, to be turned down to release the coupling-hook U therefrom when desired. The rock-shaft E traverses the draw-head in rear of a vertical eye or hole, F, intended for the reception of the ordinary coupling-pin, where it becomes necessary to use an ordinary link, and is located below the horizontal middle of the draw-head, and the key D has a rounded top or heel, *d*, and a pointed toe, *e*.

To the upper wall or jaw of the draw-head, and in rear of the eye F, is hinged a plate, G, which is provided near the hinge with a slot, *a*, which receives the lower end of a wedge-shaped stop, H, when the plate G is turned upward. The rear end of the plate G is connected to the lower end of a spiral spring, I, the upper end or portion of which occupies

a recess, K, in the upper rear portion of the draw-head, a cap, J, covering the recess K, and being also connected to the upper end of said spring. This cap J is secured to the top of the walls of the recess K, and the spring I bears the point of the plate G downward, as shown, at all times.

The rear portion, M, of the draw-head has a connecting-rod, N, secured thereto by a wedge or key, O.

A rod, P, provided with a sleeve or key, Q, adapted to fit the end of the rock-shaft E, is supported in a loop or bearing, R, at the end of the dead-wood, and is provided with a crank, S, by which to operate the rock-shaft E at pleasure. An angle-arm, T, may be also employed and connected by a rod with the top of the car, so that the rock-shaft may be operated from the top as well as from the side of the car.

A coupling-hook, U, is employed to connect a pair of draw-heads of this construction, the curves *h* of the hook corresponding in shape to the convexity of the heel of the key D. To couple two cars together the point of the hook is entered into one of the draw-heads, and, striking the plate G, bears it upward, and at the same time, striking the heel of the key D, turns it into the horizontal position shown in Figs. 1 and 2. The spring bearing down upon the plate G presses the hook down and causes that end to engage the heel of the key D in that draw-head. The engagement of the other end of the coupling-hook with the other draw-head is similar, except that the cars are moved to accomplish the engagement.

To uncouple the cars the rock-shaft E is turned by means of the crank at the side, or by means of the rod from the top of the car, to throw the point of the key D down in the concavity in the lower wall of the draw-head, and this turning the heel of the key up will permit the hook to slip off from the heel of the key. The spiral spring always returns the plate G to its normal position after the hook has slipped off the heel of the key.

By this construction of car-coupling the cars may be readily coupled or uncoupled without the necessity of the operator entering the space

between the cars, and thereby endangering life and limb; and, also, the cars may be uncoupled without slacking the engine during motion of the train, by reason of the fact that when  
5 once the cars are in motion leverage sufficient may be obtained by the use of the crank or rod to operate the rock-shaft, and thus lift the hook, and then hold it until the brakeman has retarded the car to be uncoupled, when the  
10 hook will be withdrawn.

What we claim as new, and desire to secure by Letters Patent, is—

1. In a car-coupling, a draw-head having concave lower wall, recessed upper wall, and  
15 transverse rock-shaft E, provided with the key

D, in combination with the hinged plate G, spiral spring I, and mechanism for operating the rock-shaft to release a coupling-hook, substantially as specified.

2. In a car-coupling, the combination, with 20 the rock-shaft E, key D, and the coupling-hook, of the hinged plate G, operated by the spring I, and the stop H, substantially as and for the purposes set forth.

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In presence of—

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