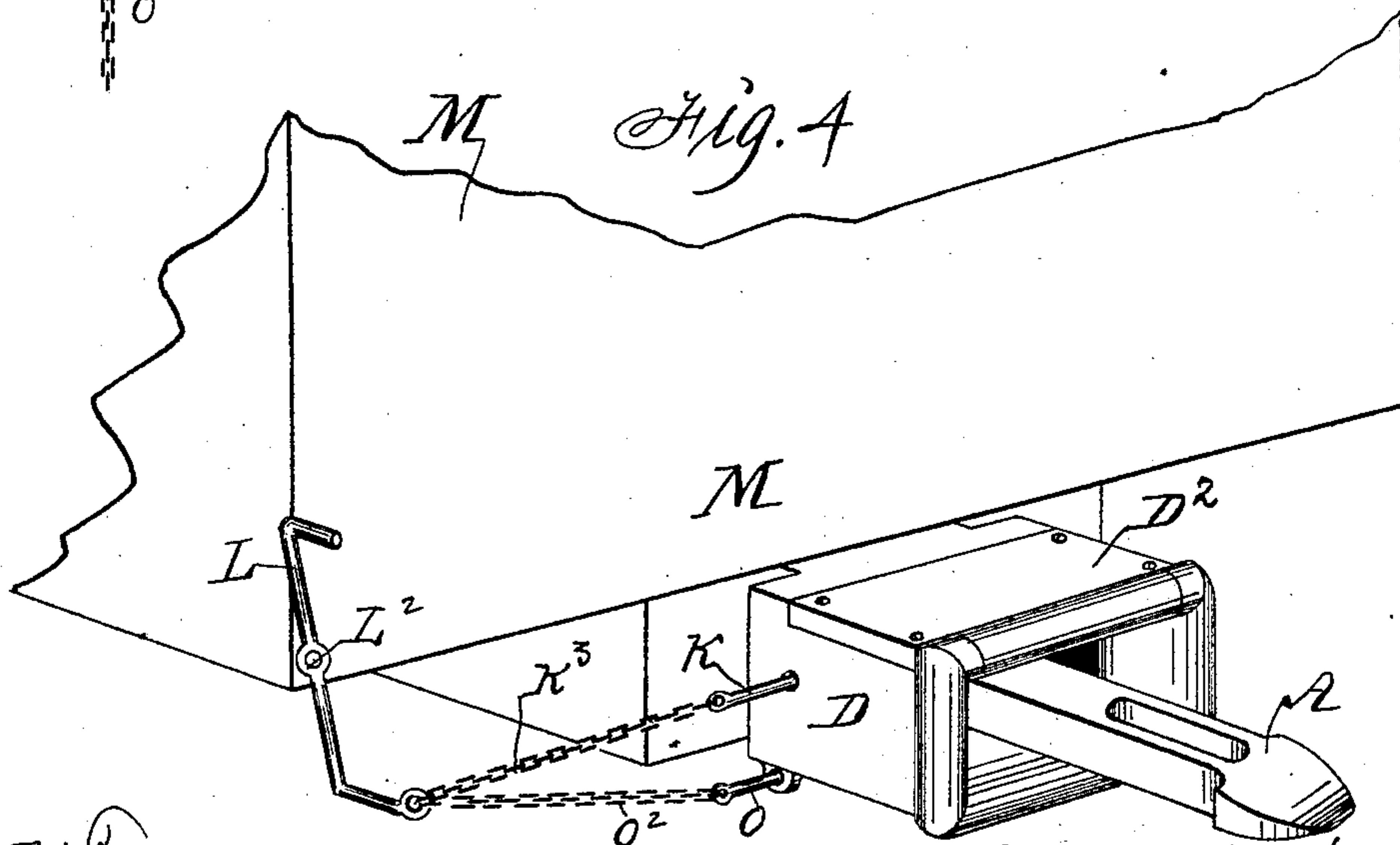
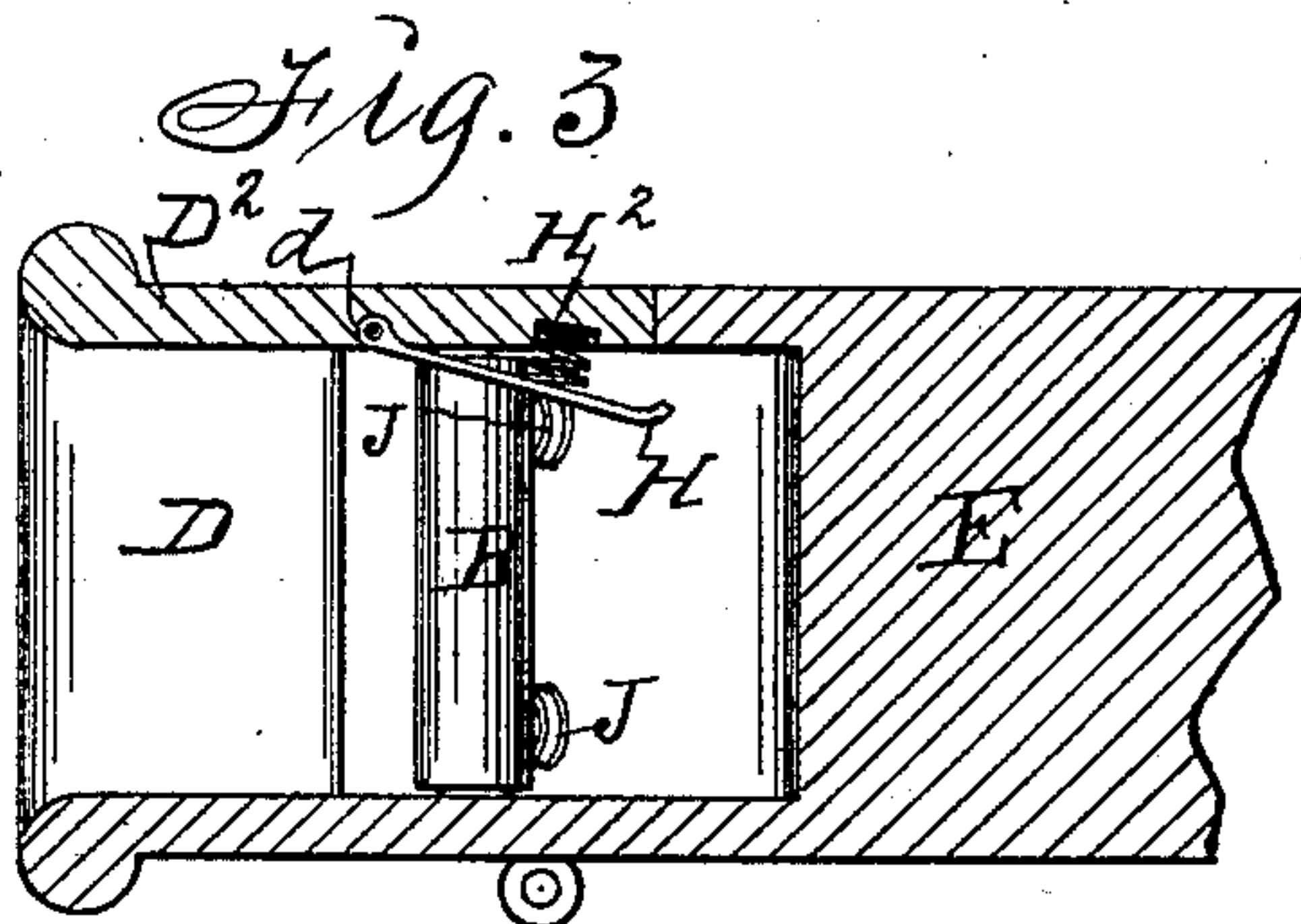
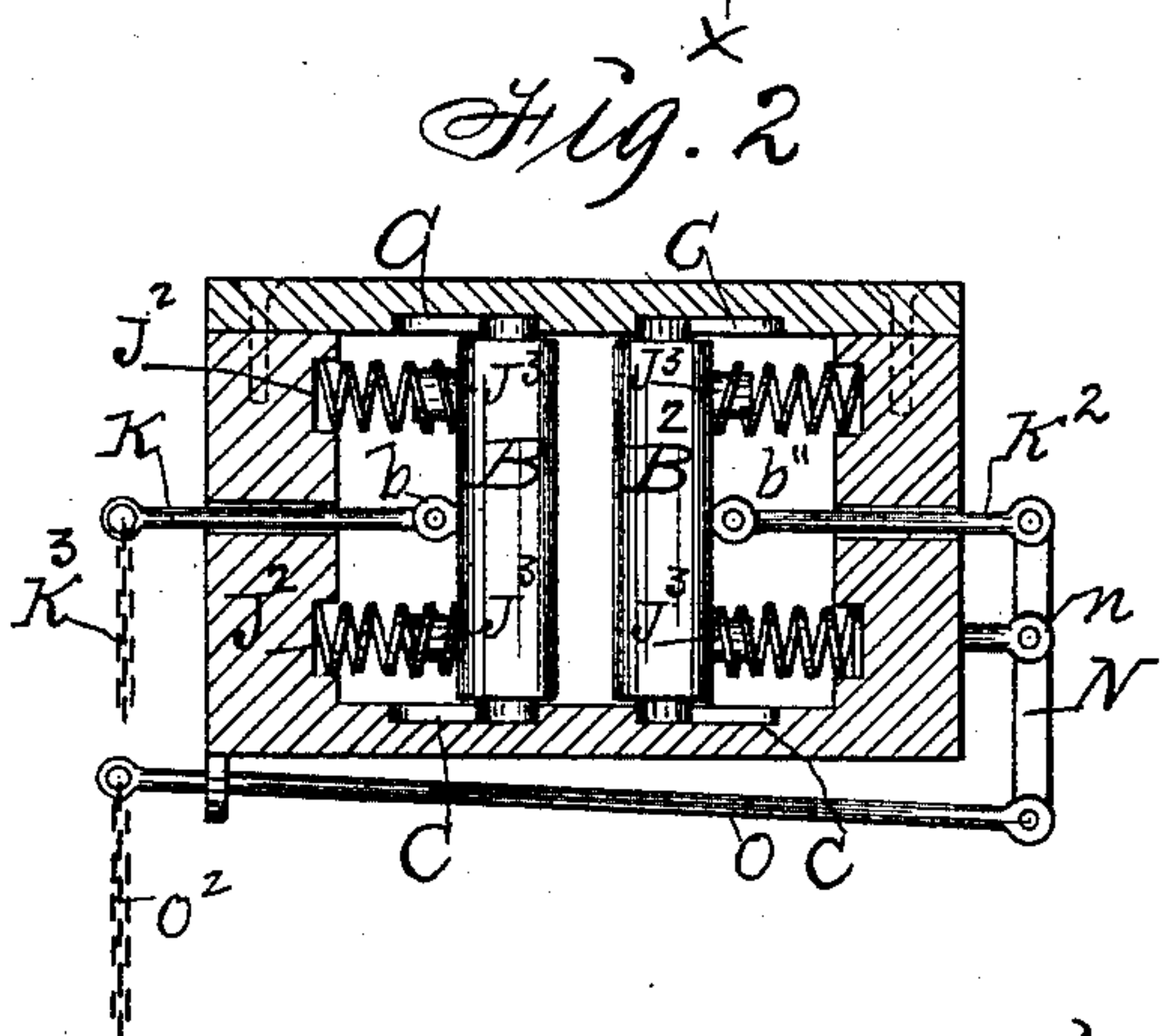
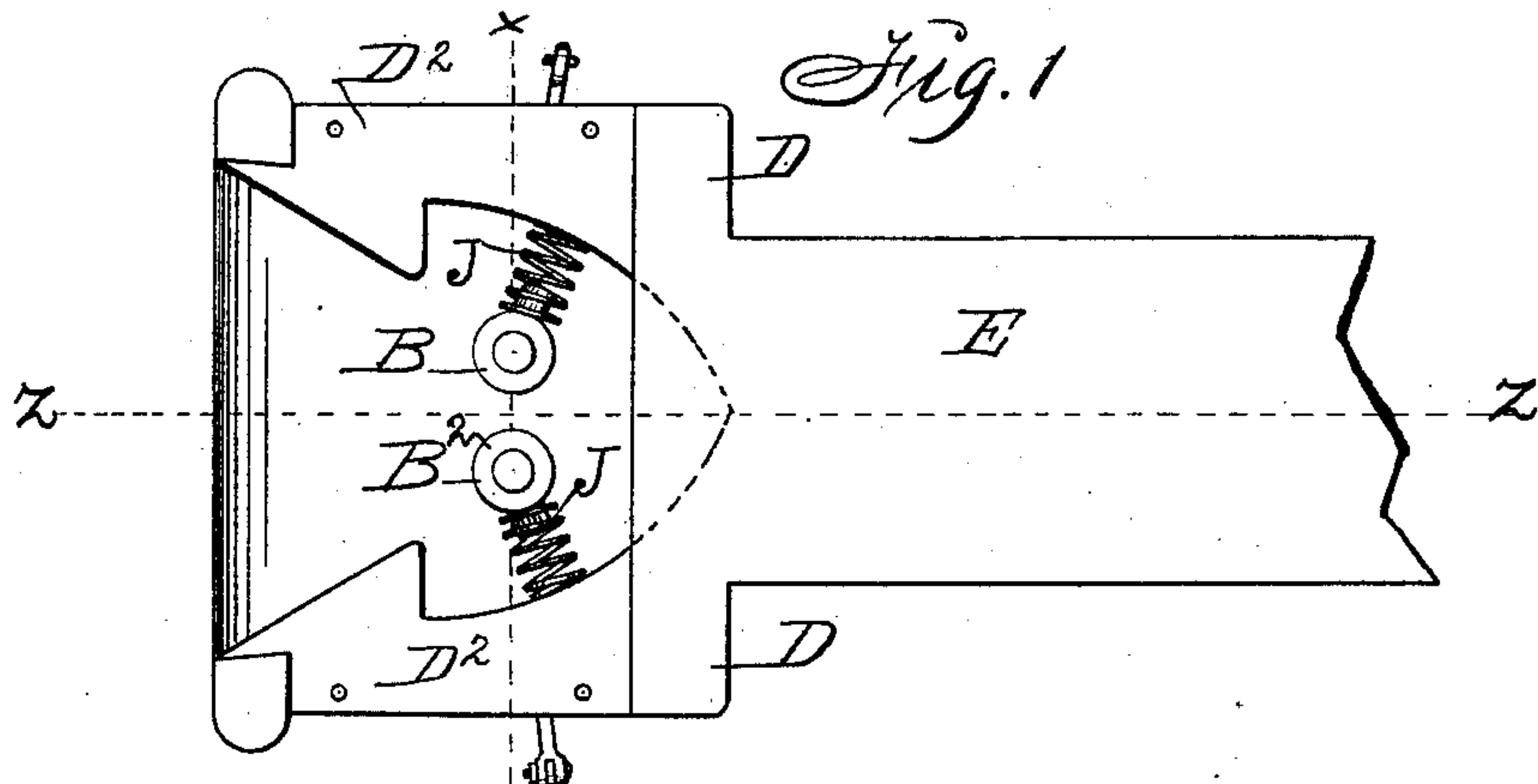


(No Model.)

G. W. SIMMONS.  
CAR COUPLING.

No. 428,640.

Patented May 27, 1890.



Witnesses:

W. P. Smith.

R. H. Drwig.

Inventor: George W. Simmons,

By Thomas G. Drwig, Atty.



# UNITED STATES PATENT OFFICE.

GEORGE W. SIMMONS, OF OAK GROVE, IOWA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 428,640, dated May 27, 1890.

Application filed March 17, 1890. Serial No. 344,124. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. SIMMONS, a citizen of the United States, and a resident of Oak Grove, in the county of Poweshiek and State of Iowa, have invented a new and useful Automatic Car-Coupling, of which the following is a specification.

My object is to provide a coupling which will readily and easily permit the entrance of the coupling-bar into the draw-head, which bar will be grasped automatically and firmly held within the draw-head in such a position as to enter the draw-head of an adjacent car without the intervention of the train-men, and means by which the grasp upon the coupling-bar may be released by a train or yard man from a point out of danger and an uncoupling effected.

My invention consists, primarily, in an arrow or point headed coupling-bar, a draw-head, within which is pivoted grasping-jaws, springs connected to said jaws and to the interior of the draw-head, together with rods and levers connected, respectively, to the jaws for releasing their grasp.

My invention consists, further, in certain details of construction and arrangement of parts hereinafter more fully described, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of the upper side of a draw-head embodying my invention, the cover being removed. Fig. 2 is a sectional view on the line  $x x$ , Fig. 1. Fig. 3 is a sectional view on the line  $z z$ , Fig. 1. Fig. 4 is a perspective view of a draw-head embodying my invention shown attached to the end of a car, a coupling to one end of the bar having been effected.

A is an arrow or point headed coupling-bar provided with slots for the admission of a coupling-pin, so that it can be used like an open link.

B B<sup>2</sup> are circular jaws traveling within transverse slots C C in the top and bottom of a draw-head D.

E is a draw-bar connected to the draw-head D, the upper portion of which latter is formed with a cover D<sup>2</sup>, to the under side of which is hinged at  $d$  a latch H, and to the upper side of which cover is fixed a spiral spring H<sup>2</sup>, being disposed between the upper side and outer

edge of the latch H and the under side of the cover D, and is thus adapted to engage the coupling-pin upon its entry into the draw-head.

I interpose spiral springs J J between the sides of the draw-head D and the jaws B B, the outer ends of which rest within recesses J<sup>2</sup> in the sides of said head D, their other and remaining ends being coiled about lugs J<sup>3</sup> J<sup>3</sup> and impinging, respectively, against the said jaws B B<sup>2</sup>.

Pivoted to eyes  $b b$  on the jaws B B<sup>2</sup> are rods or arms K K<sup>2</sup>, which, extending at right angles to said jaws, pass through perforations in the sides of draw-head D, the rod K being then connected by a chain K<sup>3</sup> to the hand-lever L, pivoted at L<sup>2</sup> to the end of the car M. The rod K<sup>2</sup> is pivoted at its outer end to a connecting-lever N, fulcrumed at  $n$ , the lower end of the latter in turn being pivoted to one end of a rod O, the other end of which is attached to a chain O<sup>2</sup>, which latter is extended and secured to the hand-lever L.

The operation of my device is as follows: One end of the coupling-bar being within a draw-head on a car embodying my improvement, or held within a draw-head by a pin through the coupling-bar in the usual way, approaching a car having upon it my coupling, the arrow-head of the coupling-bar enters the draw-head and impinges against the two jaws, forcing them apart against the resiliency of their lateral springs, and in passing beyond the said jaws impinges against the downwardly-extending latch, the spring of which causes said latch to press downward upon the end of the coupling-bar, the latter thus assuming a position which will adapt it to enter the draw-head of an adjacent car without the necessity of intervention on the part of the train-man. It will be seen that when the slack is taken up the flanges of the arrow-headed coupling-bar are held by the jaws and their lateral springs.

When it is desired to uncouple, the train-man seizes the hand-lever L and laterally withdraws the jaws from engagement with the coupling-bar, uncoupling the cars without going between them, when the jaws are caused to resume their normal position by their springs in readiness to again receive a coupling-bar. It will also be seen that by



reason of the position of the springs against the jaws and the circular confirmation of the latter an uncoupling may readily be effected.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent of the United States, is—

1. The combination, in a car-coupler, of an arrow-headed coupling-bar, circularly-formed jaws, their upper and lower ends traveling within transverse slots formed on the inner portion of the top and bottom sides of the draw-head, a plurality of spiral springs on each side of the said jaws extending at right angles thereto, a spring-actuated latch adapted to bear upon one end of the coupling-bar, rods extending at right angles to the jaws and connected thereto, a pivoted connecting-lever secured at its upper end to one of said rods secured to one of the jaws and at its lower end secured to a connecting-rod, and chains attached to the connecting-rod and the remaining rod secured to the other one of

the jaws, said chains being also secured to a hand-actuated lever, as and for the purposes set forth.

2. In a car-coupling, the combination of the spring-actuated jaws having a transverse movement relatively to and within the draw-head, a rod and flexible connection attached to one of the jaws at one end and at the other directly to a hand-actuated lever, a rod connecting the remaining jaw with a vertical lever pivoted to the side of the draw-head, and a rod and flexible connection between the said lever and the aforesaid hand-actuated lever, by which latter the jaws may be moved in opposite directions to one another by a single movement of said actuated lever, as and for the purpose set forth.

GEORGE W. SIMMONS.

Witnesses:

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