

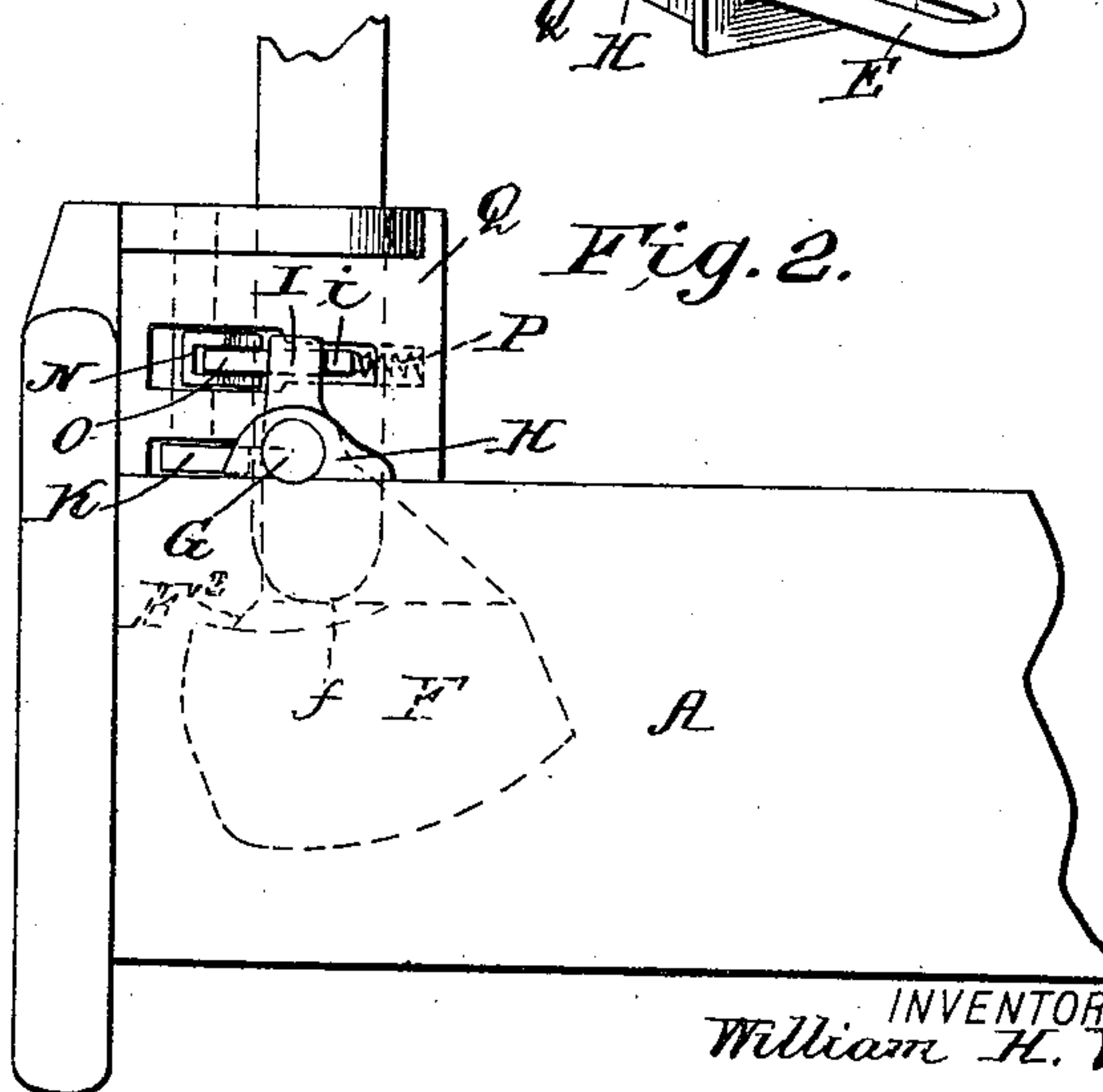
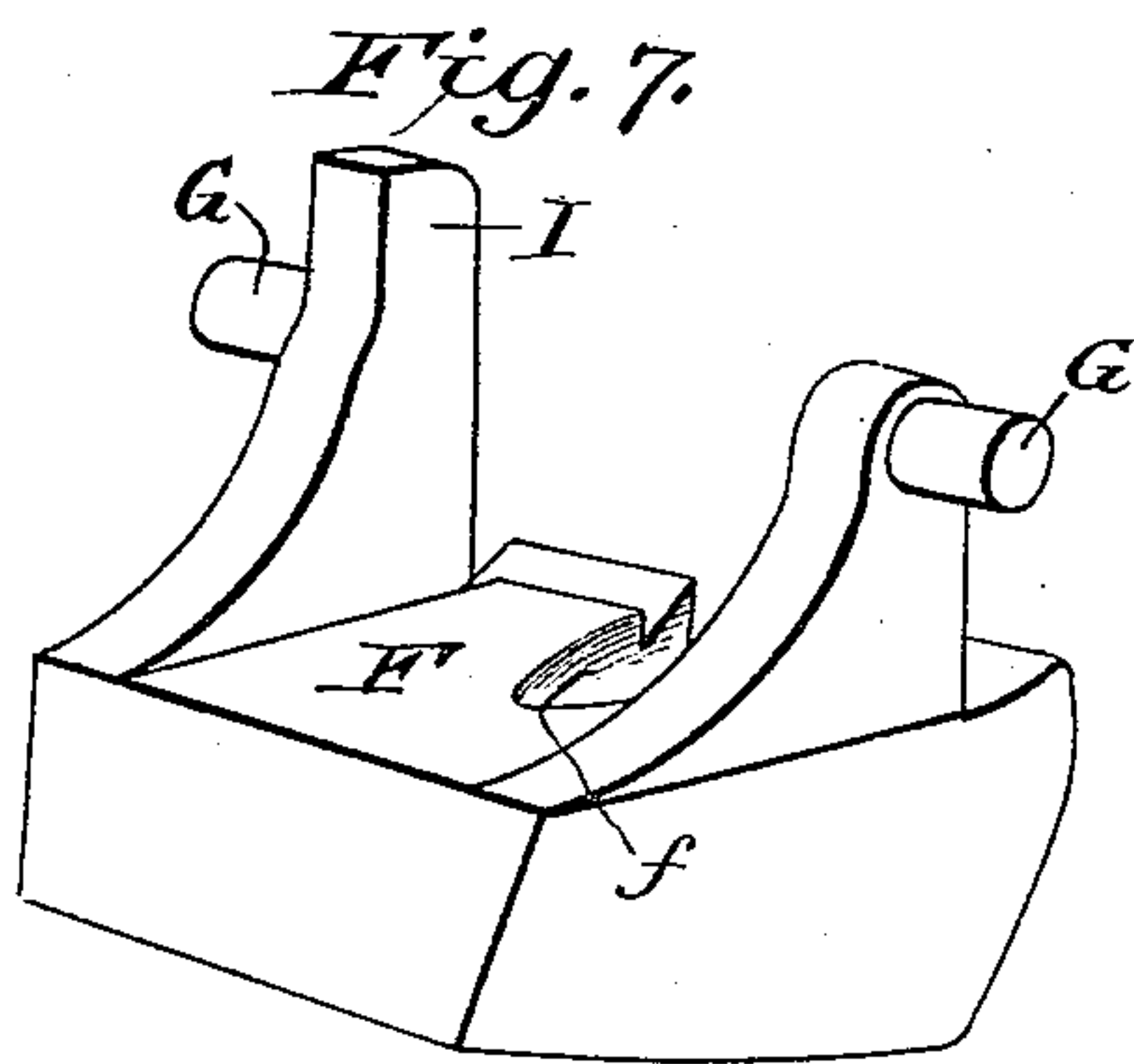
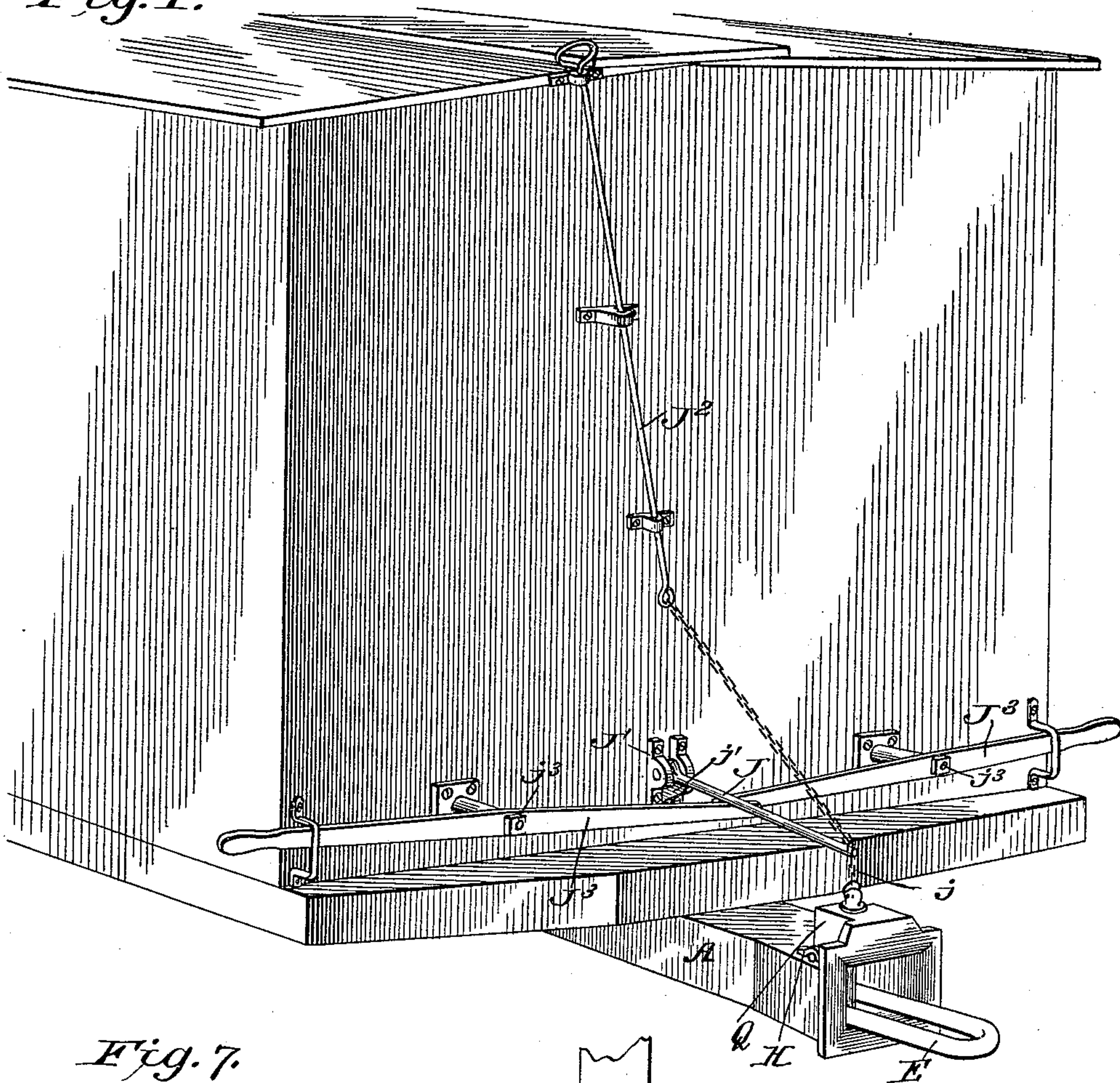
(No Model.)

2 Sheets—Sheet 1.

W. H. VIOLETT.
CAR COUPLING.

No. 461,299.
Fig. 1.

Patented Oct. 13, 1891.



WITNESSES:

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INVENTOR:

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William H. Violett.

BY

Miss L

ATTORNEYS

(No Model.)

2 Sheets—Sheet 2.

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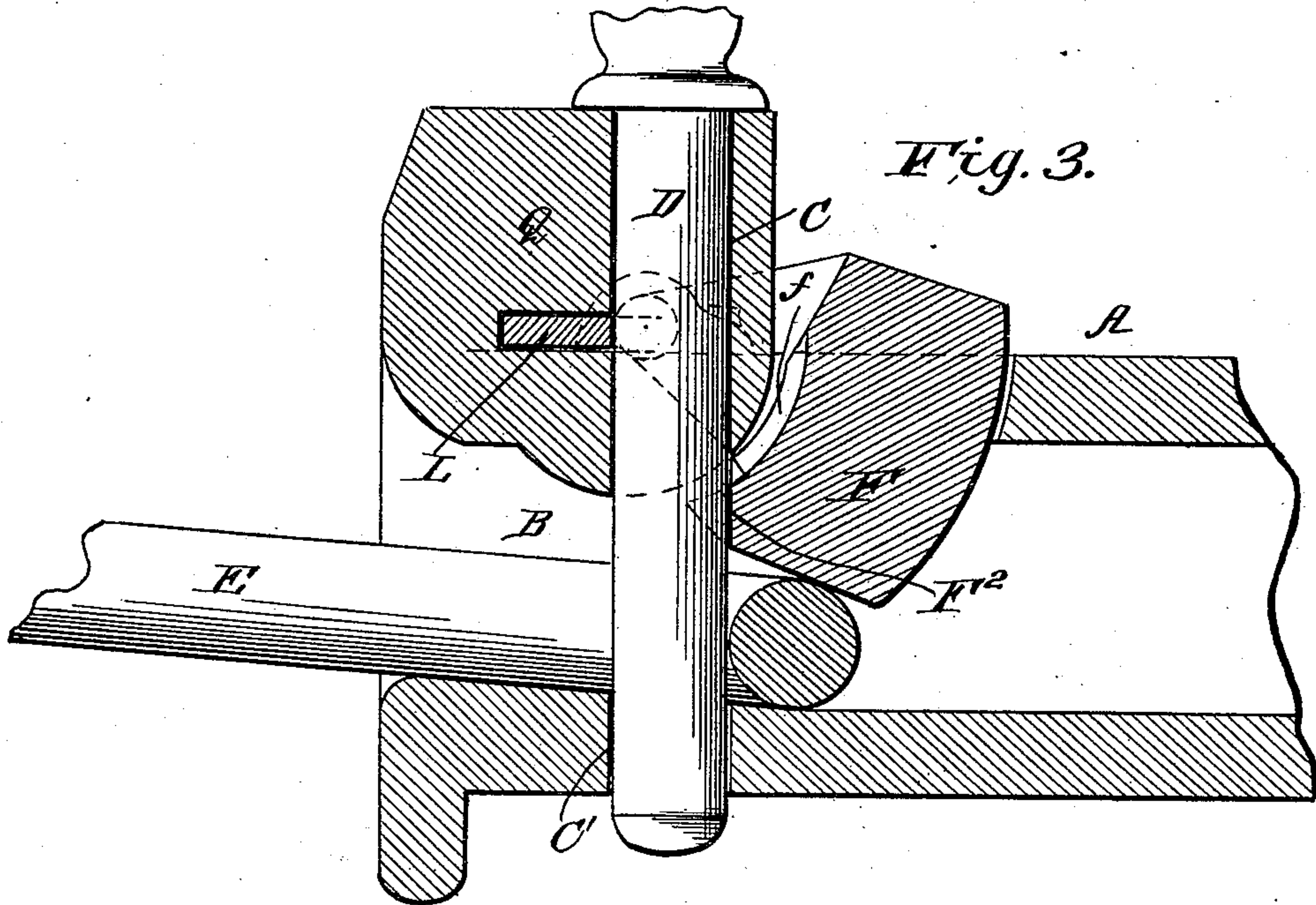


Fig. 5

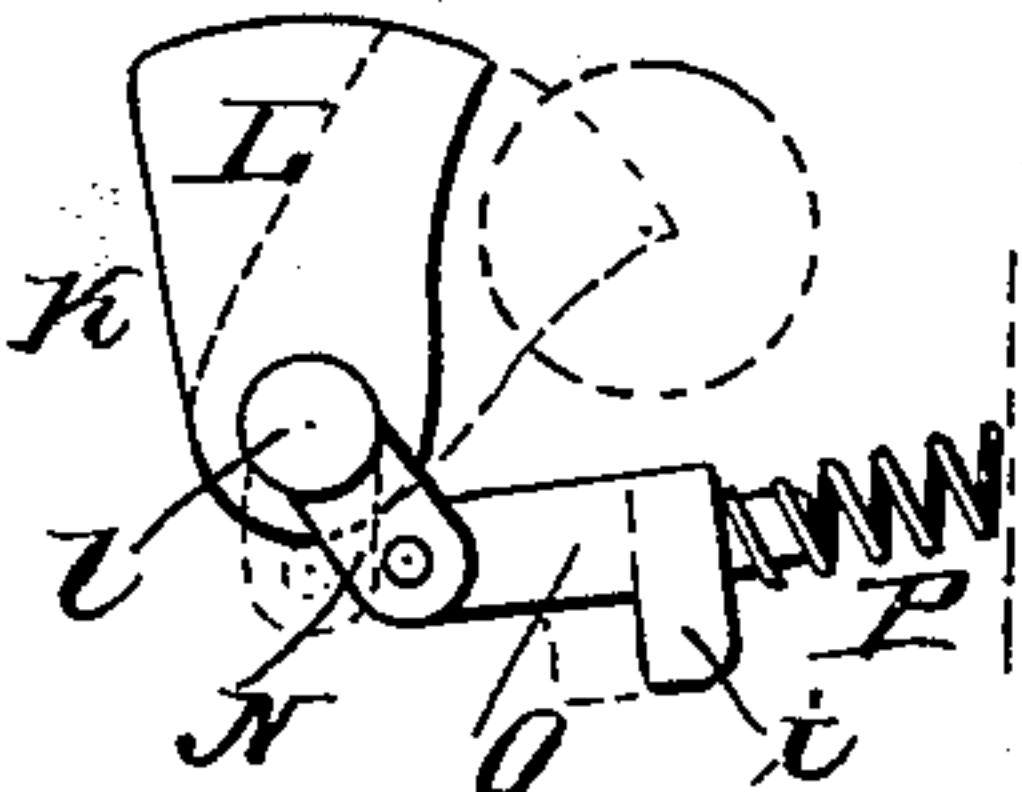


Fig. 6.

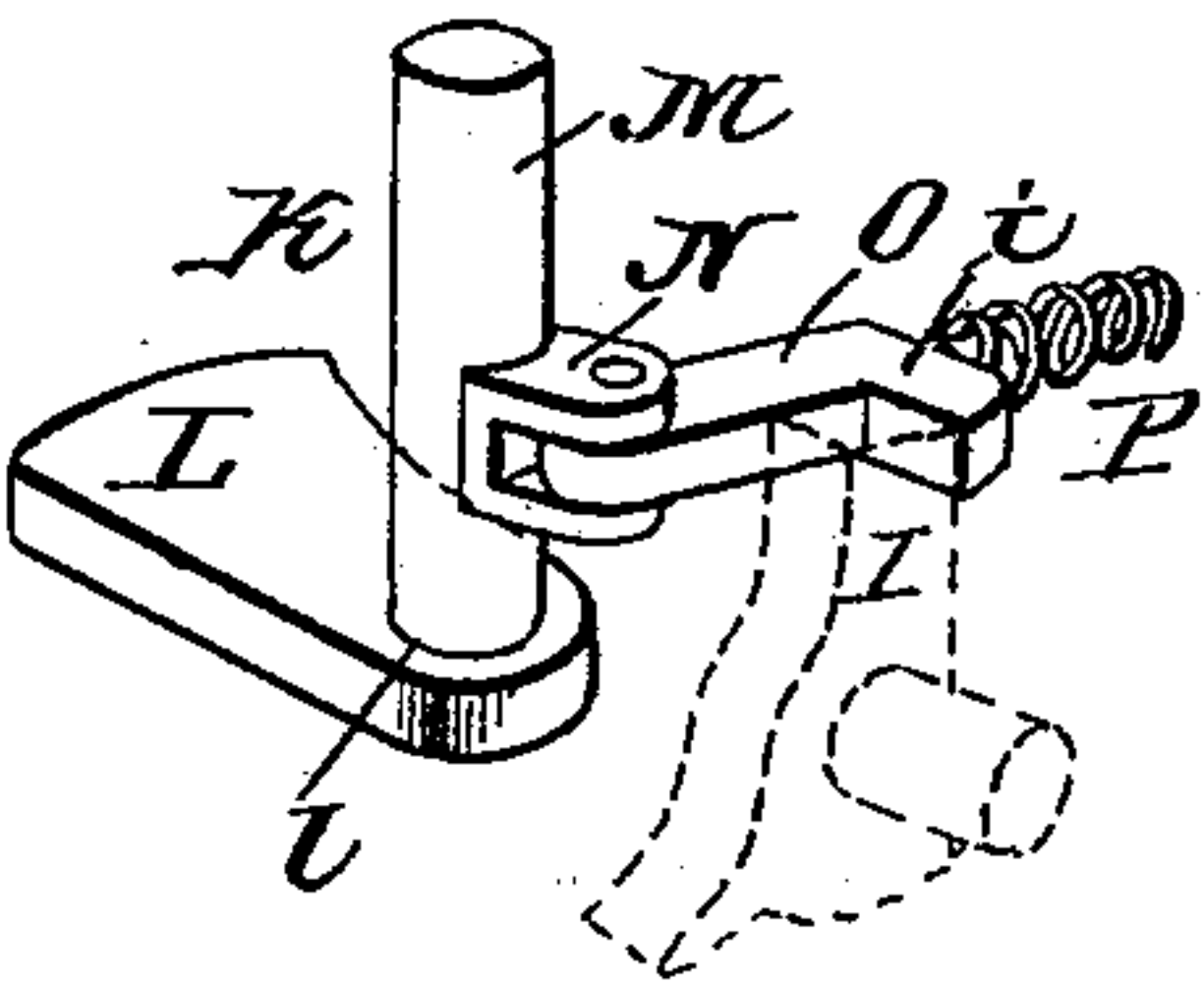
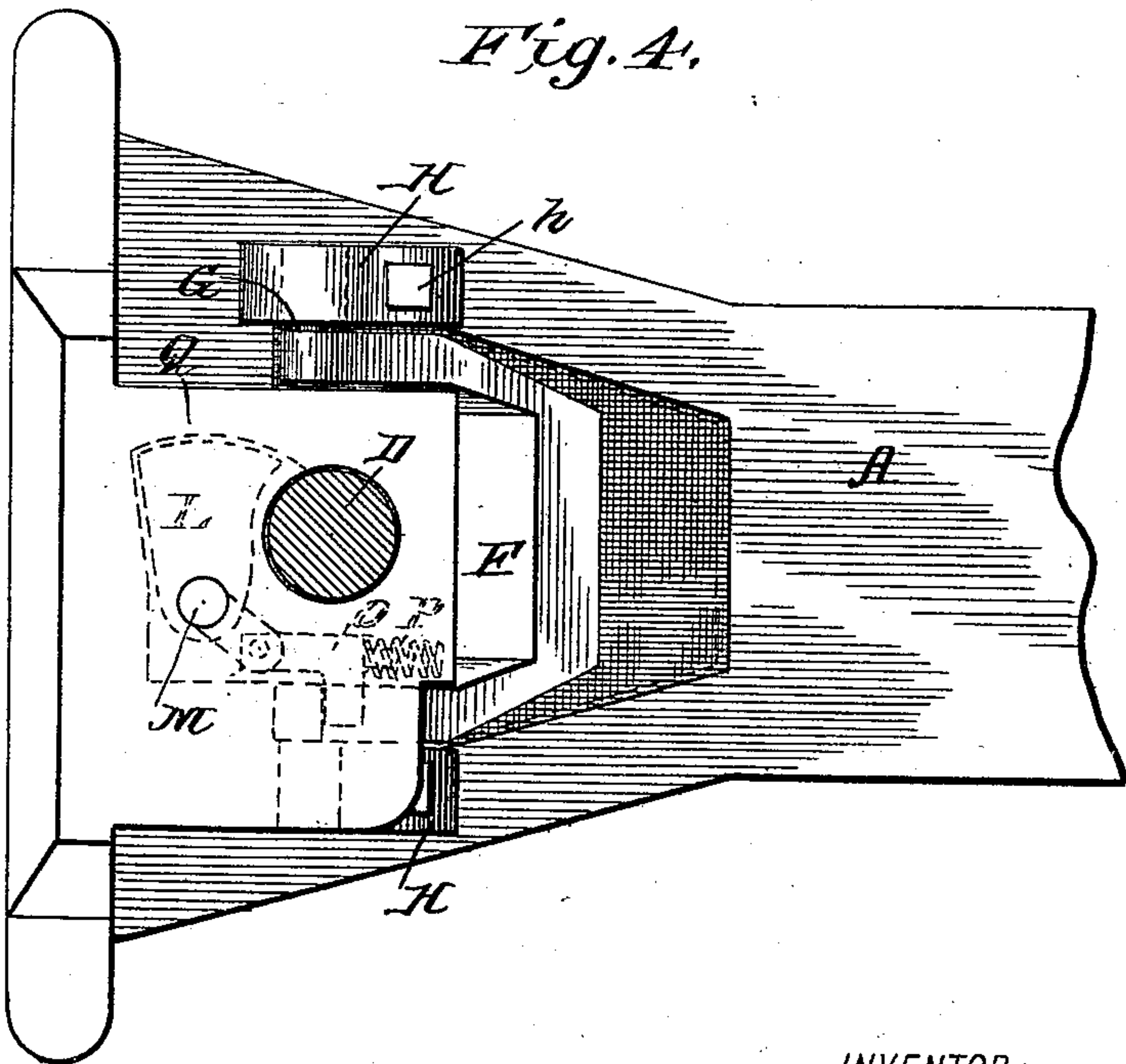


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM H. VIOLETT, OF GRAND JUNCTION, COLORADO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 461,299, dated October 13, 1891.

Application filed February 18, 1891. Serial No. 381,992. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. VIOLETT, of Grand Junction, in the county of Mesa and State of Colorado, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

My invention is an improved car-coupling; and it consists in certain novel constructions and combinations of parts, as will be herein-
after described, and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of one end of a car provided with my improvements. Fig. 2 is a side view of the draw-head provided with the improvements. Fig. 3 is a vertical longitudinal section. Fig. 4 is a top plan view thereof; and Figs. 5, 6, and 7 are detail views.

The draw-head A may in general respects be of ordinary form, having the link-mortise B and the upper and lower pin-holes C C', the pin D being arranged to operate in the holes C C' and adapted to secure the link E. A swinging pin-support F is pivoted by trunnions G at its upper end to the draw-head and swings in the link-mortise in position for engagement by the link as the latter enters the draw-head and to rest upon the inner end of such link, when held in the draw-head, to hold the opposite or outer end of the link in position to enter the meeting draw-head. The trunnions G are held in their bearings by the plates H, secured by set-screws h. An extension I projects above one of the trunnions and serves to operate the auxiliary pin-supporting devices hereinafter described. The swinging pin-support F is adapted at f to serve as a rest for the pin when such support is in its normal position, and when pushed back by the entering link the support F is moved free of the pin and the latter falls through the link. The support F then rests upon the inner end of the link and serves to hold the outer end elevated, the bottom wall of the link-mortise B being provided at its front end with a ledge or elevation forming a fulcrum for the link. This bearing of the pin-support upon the inner end of the link does not prevent the lateral play of the link, as will be readily understood.

The operation of the parts above described is as follows: If the pin be raised, the link being out of the draw-head, the support F

will swing by gravity forward under the pin and the latter will rest upon the support. Then the link entering the draw-head will strike the support, push it back, and the pin will fall through the link and secure it.

To enable the uncoupling to be effected from either side or top of the car, I provide a lever J, pivoted at one end in bearings J' to the car and having its outer end connected by a chain j with the pin, so that the lifting of such lever will also lift the pin. An abutment j', connected with the bearing J' and projecting below the lever J, serves to limit the downward movement of the lever. A connection J², consisting, as shown, of a rod and chain, extends from the lever J through suitable guides to the top of the car, so that the said lever J may be lifted from such point. Levers J³ pivot at j³ to the end of the car and project at their outer ends to the sides of the car and at their inner ends below the lever J, the said inner ends of the levers J³ being heavier than the outer ends, so that they will not operate the lever J by their gravity. Thus the cars may be uncoupled without requiring the brakeman to go between them, and they may be automatically coupled, as before described.

Now it is often desirable to so adjust the coupling pin or pins of a train when the cars are bumped or pushed together that the cars will uncouple when the engine pulls out. To this end I provide what, for convenience of reference, I term the "auxiliary pin-support," which, when the pin is lifted without withdrawing the link, adjusts below said pin and holds it elevated, so that when the cars are drawn out the link may escape. The swinging pin-support is arranged and adapted to operate the auxiliary pin-support, so that when the swinging support swings forward when the link is withdrawn the swinging or main pin-support will adjust the auxiliary pin-support out of position to support the pin. Thus it will be seen that the auxiliary pin-support does not operate to support the pin, except when the pin is raised, without withdrawing the link, so that the main or swinging pin-support is held by the said link in its rearmost or pushed-back position in the draw-head.

In the construction shown the auxiliary pin-

support K comprises a plate L, formed and adapted to swing or turn on an axis *l* under the lower end of the pin. A shaft M connects with the plate L in line with axis *l*. To this
 5 shaft M is connected a link N, to which is pivoted a dog O, arranged to be actuated in one direction by spring P to force the plate L below the coupling-pin and adapted at *i*
 10 for engagement by the extension or portion I of the main pin-support. As the main pin-support swings forward to its normal position, its part I operates the auxiliary pin-support in opposition to its spring P and moves
 15 the plate L clear of the coupling-pin. When the main pin-support is swung back, its part I permits the spring P to move the parts O N M to adjust the plate L against the coupling-pin when such pin is lowered and below such pin when it is raised, as will be under-
 20 stood from the drawings.

The draw-head is cast with an upwardly-projecting portion Q, which serves as a protection and shield for the parts L, M, N, O, and I.

25 The main pin-support F is provided on its upper side at *f* with a seat for the coupling-pin, and has an inclined surface F², leading up to said seat, as shown.

Having thus described my invention, what
 30 I claim as new is—

1. A car-coupling, substantially as described, comprising the draw-head, a coupling-pin, a main pin-support arranged and adapted to support the pin when the latter is elevated
 35 and the link withdrawn, an auxiliary pin-support arranged and adapted to support the pin when the latter is elevated and the link not withdrawn, and intermediate mechanism whereby the main pin-support on resuming
 40 its normal position as the link is withdrawn will adjust the auxiliary pin-support out of position to support the pin, substantially as set forth.

2. In a car-coupling, the combination of
 45 the draw-head, the coupling-pin, the main pin-support, the auxiliary pin-support arranged for engagement by an extension or portion of the main pin-support, and a spring-actuated device by which to operate such aux-
 50 iliary pin-support in opposition to the swinging pin-support, all substantially as and for the purposes set forth.

3. In a car-coupling, the combination of
 55 the draw-head, the main pin-support arranged to swing within the link-mortise of the draw-head and having an upwardly-projected extension or portion, the auxiliary pin-supporting plate, a dog connected therewith and arranged for engagement by the extension or

portion of the swinging pin-support, and the
 60 spring engaging such dog, all being arranged to operate substantially as and for the purposes set forth.

4. An improved car-coupling having a draw-head, a coupling-pin, a main pin-support, and
 65 an auxiliary pin-support, the main pin-support being arranged and adapted to adjust the auxiliary support out of position to hold the pin when it (the main pin-support) is in position to serve such purpose, substantially
 70 as set forth.

5. The combination of the draw-head, the auxiliary pin-support and the main pin-support pivoted and having an upwardly-projected extension or portion arranged to oper-
 75 ate such auxiliary pin-support, substantially as and for the purposes set forth.

6. In a car-coupling, the combination of the draw-head, the plate L, the shaft M, connected with plate L, the link N, connected
 80 with the shaft M, the dog O, connected with the link N, the spring engaging said dog, and the main pin-support having an extension or portion arranged to engage the said dog, all substantially as and for the purposes
 85 set forth.

7. The improved car-coupling comprising the draw-head and the pin-support pivoted to swing within the link-mortise, provided on
 90 its upper side with a seat for the coupling-pin, and having a surface F², leading up to the said seat, such surface being inclined with respect to the seat, substantially as shown and described.

8. The improved car-coupling herein de-
 95 scribed, comprising the draw-head, the coupling-pin, the main pin-support, and the auxiliary pin-support, arranged to be actuated in one direction by a spring and in the opposite direction by the main pin-support, all
 100 substantially as and for the purposes set forth.

9. The improved car-coupling herein described, consisting of the draw-head, the coupling-pin support, the auxiliary pin-support,
 105 the spring for operating such auxiliary support in one direction, the lever pivoted at one end to the end of the car and connected at its outer end with the coupling-pin, the connection extending from said lever to the top
 110 of the car, and the side levers bearing at their inner ends under the said lever and extending to the opposite sides of the car, substantially as set forth.

WILLIAM H. VIOLETT.

Witnesses:

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 WALTER L. MULKEY.