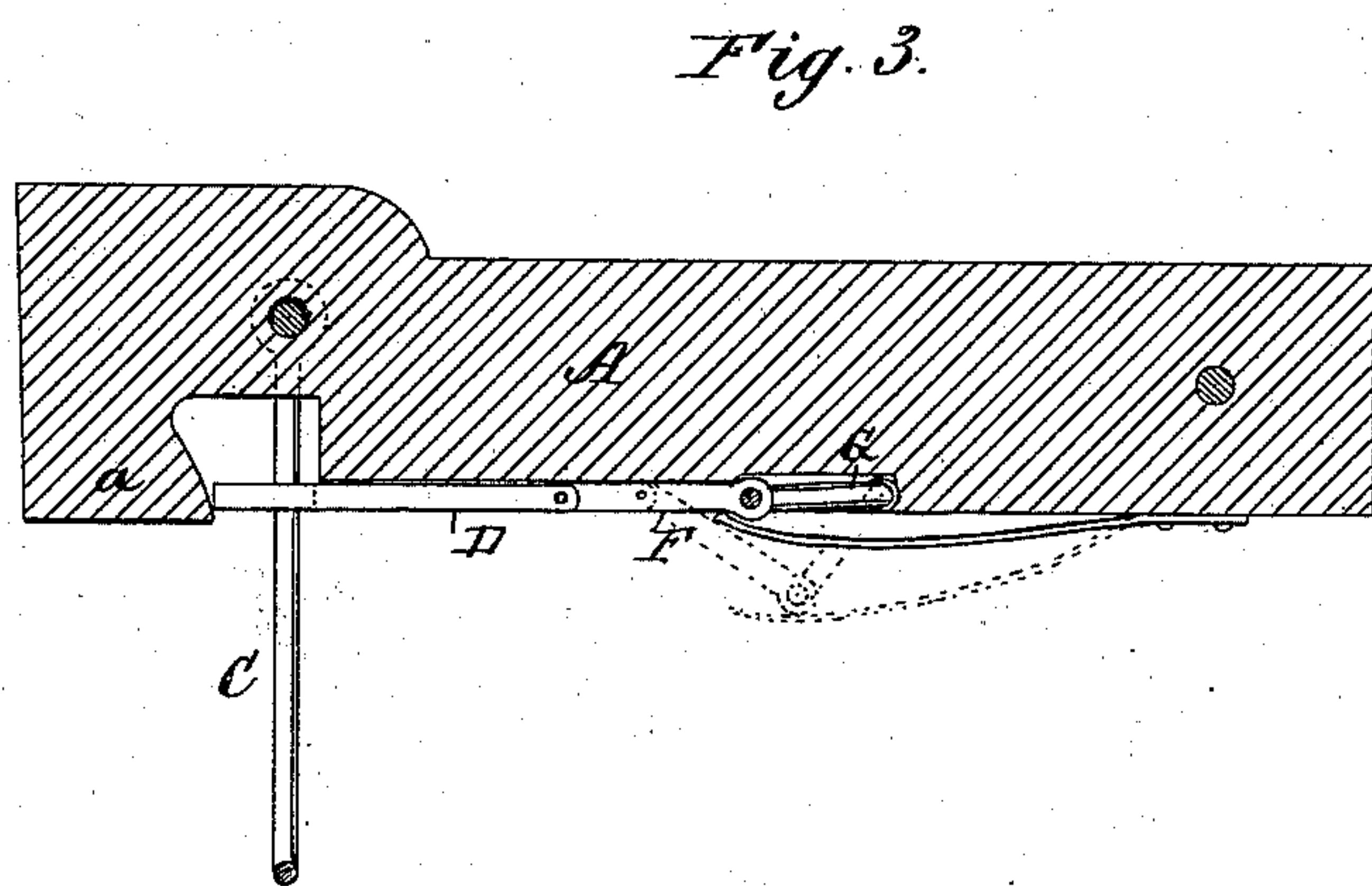
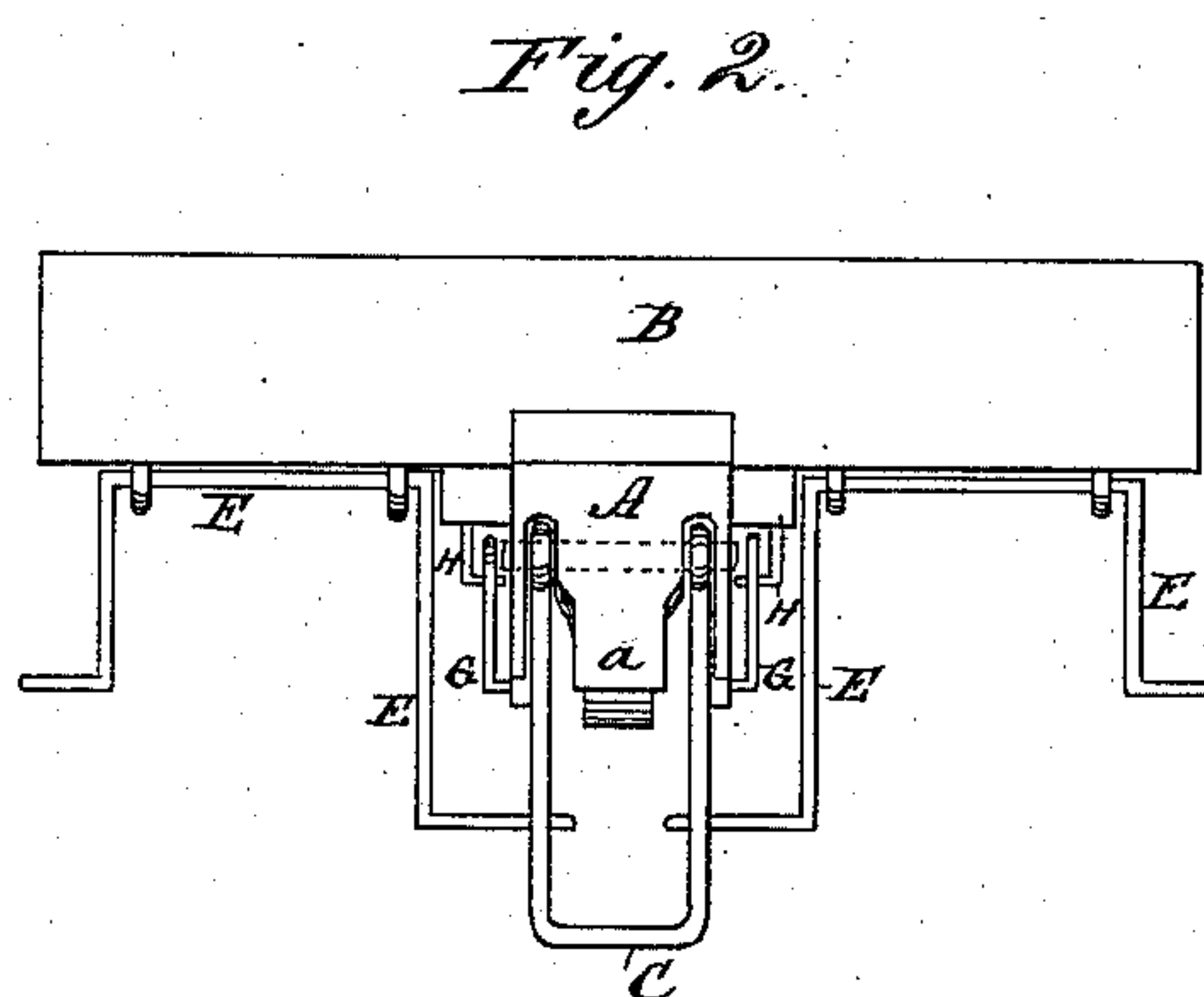
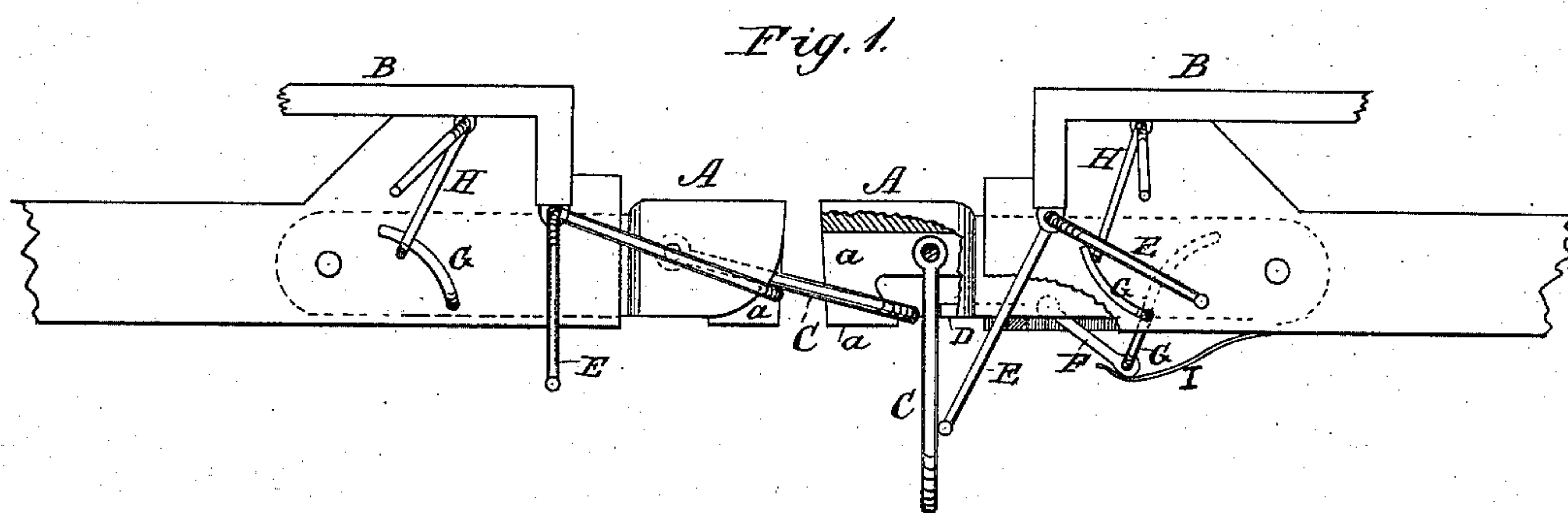


S. C. DOYLE.  
Car-Coupling.

No. 221,797.

Patented Nov. 18, 1879.



WITNESSES:

*W. W. Hollingworth*  
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# UNITED STATES PATENT OFFICE

SETH C. DOYLE, OF HARRISONVILLE, MISSOURI.

## IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **221,797**, dated November 18, 1879; application filed July 11, 1879.

*To all whom it may concern:*

Be it known that I, SETH C. DOYLE, of Harrisonville, in the county of Cass and State of Missouri, have invented a new and Improved Car-Coupling; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention is an improvement in the class of couplings in which a swinging link is raised and held in horizontal position for engagement with the draw-head of an opposite car by means of a lever which is attached to the same car as the link.

My invention consists in the construction and arrangement of parts, as hereinafter described and claimed.

In accompanying drawings, forming part of this specification, Figure 1 is a side view of two draw-heads provided with my improved coupling devices, a portion of one of the draw-heads being broken out. Fig. 2 is an end (front) view of one of the draw-heads and part of the car to which it is attached. Fig. 3 is a longitudinal section of one of the draw-heads.

The draw-head A is attached to a car, B, in the usual or any preferred manner. The draw-head has a pendent beak or jaw, *a*, which is formed by cutting away the under portion of the draw-head just in rear of the end thereof.

The ends of the link C are pivoted to the transverse middle of the draw-head A, just in rear of the beak *a*.

When two cars provided with my improved coupling meet, the link C is raised until its free end passes up into the slot or cavity of the opposite draw-head, behind the beak of the same, and is then locked in such engagement by means of the sliding spring-bar D, as will be presently described.

The link is raised by the hand-lever E, which has the form of a crank, and is hinged to the car-body, so that the bent lower end of its longer pendent arm will come in contact with and bear up the link when the handle of the lever is turned down. As the link is raised the spring-catch or locking-bar D of the opposite car must be withdrawn to allow the link to enter the cavity behind the beak *a*. Said bar slides in a lengthwise groove in the under side of the draw-head, and has a link, F, jointed to its rear end. Said link F is in turn jointed to the bend of a crank-shaped lever,

G, which has its bearings in the draw-head, and whose arms stand vertical, or nearly so. For tilting the lever G, I employ a crank-shaped hand-lever, H, which is pivoted to the body of the car, so that its handle and the arm which acts on the arm of the lever D are parallel and pendent.

A plate-spring, I, presses on the rear end of the link F, and thus tends to hold it in horizontal position, which causes it to force the bar D forward against the beak *a*.

It will be seen that when the link C is raised, as before described, the bar D of the opposite car may be drawn back simultaneously by tilting the hand-lever H, and thereby throwing the arms of lever G forward and drawing the link forward and backward against the stress of spring I. This retracted position of the bar D is shown in Fig. 1.

To release the link from the jaw *a*, it is only necessary to retract the locking-bars.

Both levers E and H may be seized and operated from the side of the car. Hence the operator is not required to enter the space between the cars for the purpose of coupling or uncoupling them, and is therefore not exposed to the danger ordinarily incident to the coupling operation.

What I claim is—

1. The combination, with the draw-head having a pendent beak or jaw and the swinging link pivoted to said draw-head, of the angular lever, pivoted as shown and described, so that the link may be raised by tilting the lever, as described.

2. The combination, with the draw-head having the pendent beak *a* and a swinging link adapted to engage with said beak, of the locking-bar sliding in a guideway beneath the draw-head and a spring which acts mediately or directly on the locking-bar for holding it in contact with the beak, substantially as and for the purpose specified.

3. The combination of the pivoted hand-lever H, the lever G, spring-link F, locking-bar D, and beak *a*, substantially as shown and described, for the purpose stated.

SETH C. DOYLE.

Witnesses:

CHAS. F. BURNEY,  
JAMES H. TYSON.