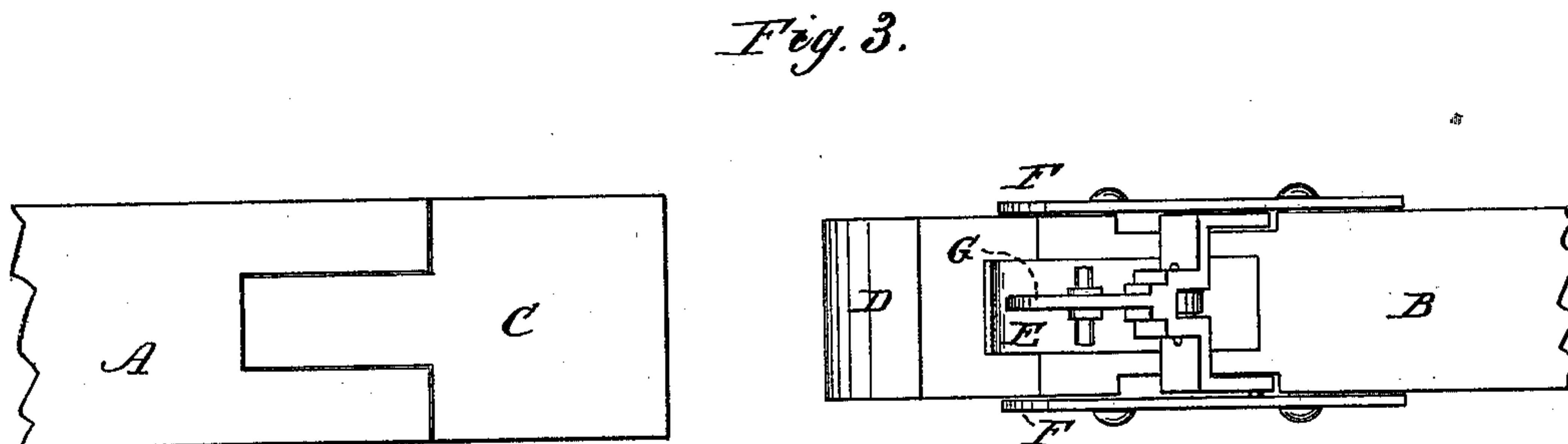
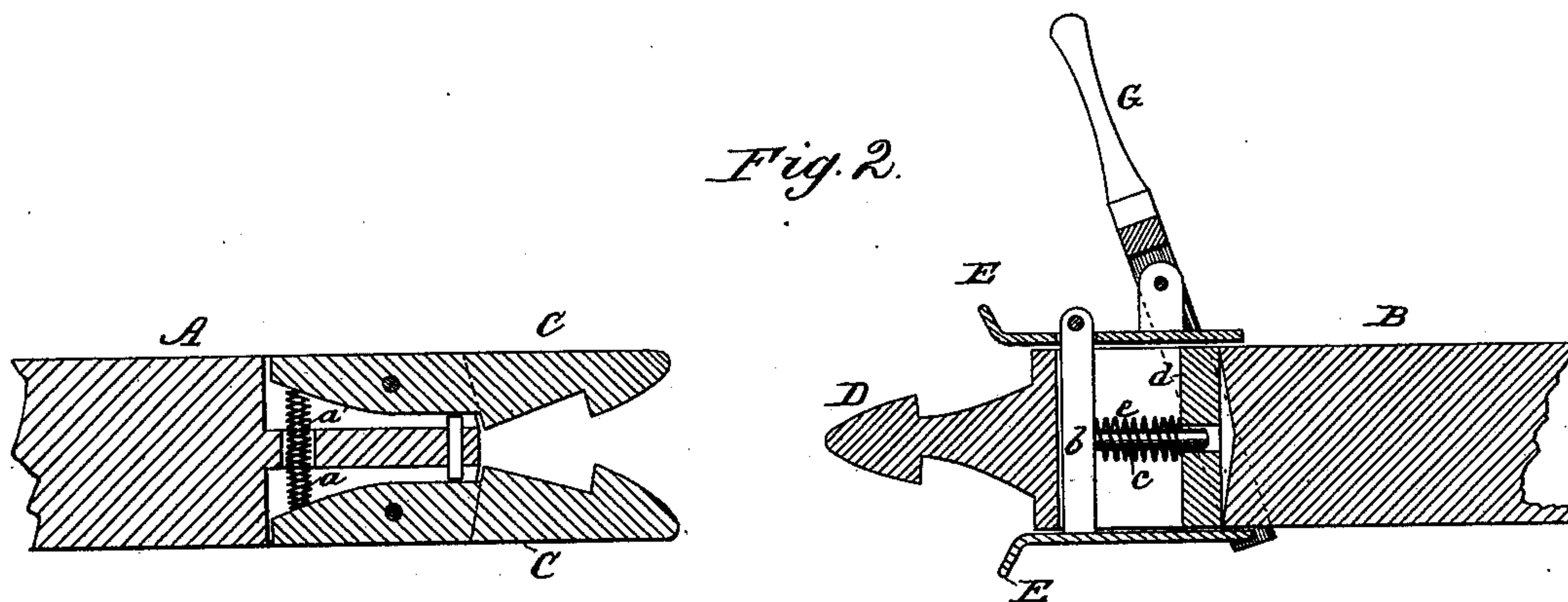
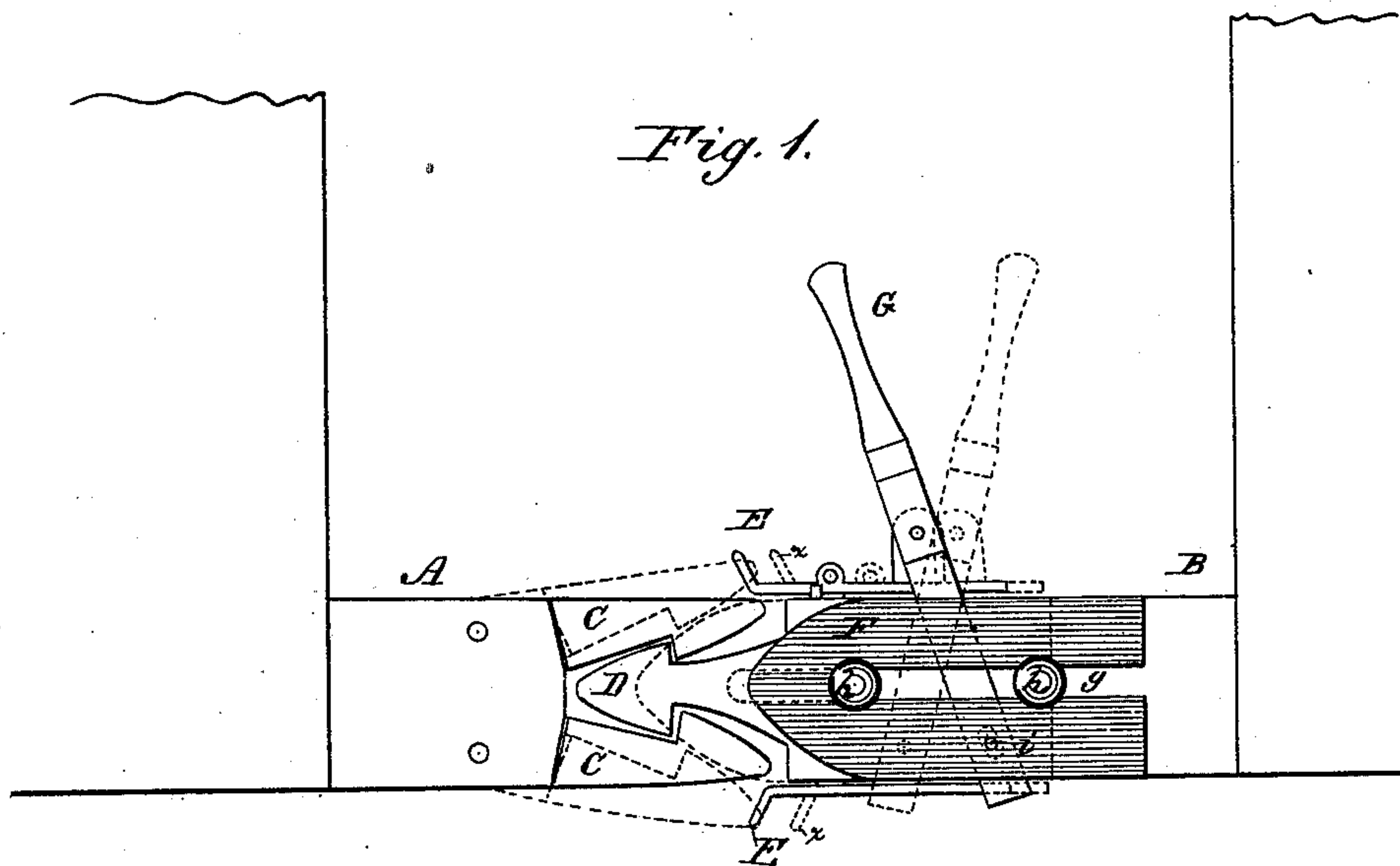


J. D. MARTIN.
Car-Coupling.

No. 214,938.

Patented April 29, 1879.



WITNESSES:

W. W. Hollingsworth
E. W. Byrnes

INVENTOR:

James D. Martin
BY *Russell E.*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES D. MARTIN, OF JOHNSON CITY, ASSIGNOR OF ONE-HALF HIS RIGHT
TO JAMES R. MEEK, OF CARTER'S DEPOT, TENNESSEE.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **214,938**, dated April 29, 1879; application filed
March 14, 1879.

To all whom it may concern:

Be it known that I, JAMES D. MARTIN, of Johnson City, in the county of Washington and State of Tennessee, have invented a new and Improved Automatic Car-Coupling; and I 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 side elevation of the two draw-bars, showing in dotted lines the movement of the parts in uncoupling. Fig. 2 is a vertical longitudinal section of the two adjacent draw-bars. Fig. 3 is a plan view of the same.

My invention is an improved car-coupling designed to automatically couple cars without the necessity and its attendant danger of going between the cars, and which shall also permit the cars to be automatically disengaged if one should leave the track or fall down an embankment.

My invention belongs to that class of couplings in which two spring-jaws are arranged upon one draw-bar with their hooked portions turned inwardly, which spring-jaws are adapted to receive and co-operate with an arrow-shaped double hook on the opposite draw-bar.

My improvements consist chiefly in the means for more securely holding the jaws into engagement, and in the means for releasing the same when the cars are to be uncoupled, as hereinafter fully described, and pointed out in the claims.

In the drawings, A represents one of the draw-bars of a car, and B the other. In the forward end of the draw-bar A are pivoted two jaws, C C, whose hooked portions are turned inwardly and are constantly pressed inward by a spiral spring, *a*. This spring passes transversely through a hole, *a'*, in the draw-bar, from the recess in the draw-bar which receives one-jaw to the recess on the other side, which receives the other jaw. Said spring, it will be seen, in passing through the hole in the draw-bar is held in place thereby, so that it bears against the portion of the jaws in the rear of their pivots and transmits to each of said jaws an equal pressure. Upon the for-

ward end of the other draw-bar is formed the arrow-shaped double hook D, which, when projected between the jaws C C by the impact of the cars, forces said jaws apart until the shoulders pass, when the spring *a* causes the hooks of the jaws C C to close about the hooks of the arrow-headed jaw D, to securely connect the two cars.

To prevent the jaws C C from being accidentally disengaged by the oscillation of the cars in vertical direction, I provide two locking-plates, E E, having flaring outer ends. These plates I connect upon top and bottom of the draw-bar B to the projecting ends of a cross-head, *b*, working through a horizontal transverse slot in the draw-bar. Extending to the rear from this cross-head is a pin, *c*, which enters a perforation in the removable block *d*, around which pin and between the block and the cross-head is arranged a spiral spring, *e*. This arrangement, it will be perceived, renders the cross-head and locking-plates E E yielding to pressure. When, therefore, the jaws C C, in engaging with D, pass upon the upper and lower sides of the latter, they strike the flared ends of the locking-plates E, and force them to the rear, as shown at *x* in dotted lines, Fig. 1. Then, after the shoulders of the jaws have passed each other and the jaws clasp together, the plates E E shoot forward upon the outer sides of the jaws C C, and prevent the latter from opening until either disengaged by the means provided or by an accident to the train.

To release the jaws and uncouple the cars at will, I provide upon each side of the draw-bar B the sliding plates F F, whose forward ends are rounded or wedge-shaped, so that when projected forward they pass between the jaws C C of the opposite draw-bar, and they force the same apart. These plates are guided in their longitudinal movement by slots *g*, through which pass the headed screws or pins *h*, and they are operated together by a laterally-projecting lever, G. This lever is forked and its branches extend down both sides of the draw-bar, which latter is recessed at such points to receive and give play to the said branches of the lever. In connecting the lever to the plates

F, the lever ends are slotted, and pins *i* fixed upon the plates enter said slots, to give a loose connection.

In order to withdraw the locking-plates E, so as to permit the jaws C C to be thrown apart by the wedge-shaped plates F, I fulcrum the lever G directly upon one of the locking-plates E. By this means it will be seen that the same movement that projects the plates F to separate jaws C also withdraws the locking-plates E, so as to permit said jaws to be separated.

I do not claim, broadly, a lever and sliding device for forcing apart the jaws of a car-coupling, but only the rounding or tapering plates F, adapted to pass between and force the jaws apart by a direct contact and wedging action.

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

1. The combination, with a draw-head, A, having a pair of spring-jaws, and a draw-head, B, having a double hook, of a pair of movable locking-plates, E, adapted to hold the jaws engaged, substantially as described.

2. The combination, with a draw-head, A, having a pair of spring-jaws, and a draw-head, B, having a double hook, of one or more sliding and wedge-shaped or rounding plates, F, arranged upon the side of the draw-bar, and adapted to pass between and wedge apart the opposing jaws by a direct contact therewith, substantially as described.

3. The combination, with the spring-seated locking-plates E and opening-plates F, of the lever G, fulcrumed to one set of these plates and loosely connected with the other set for simultaneous action, as described.

4. The combination, with the slotted draw-bar B and the locking-plates E, of the attached cross-head *b*, having pin *c*, the block *d*, and spring *e*, all arranged in the slot of the draw-head, substantially as described.

JAMES DOW. MARTIN.

Witnesses:

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C. W. CARR.