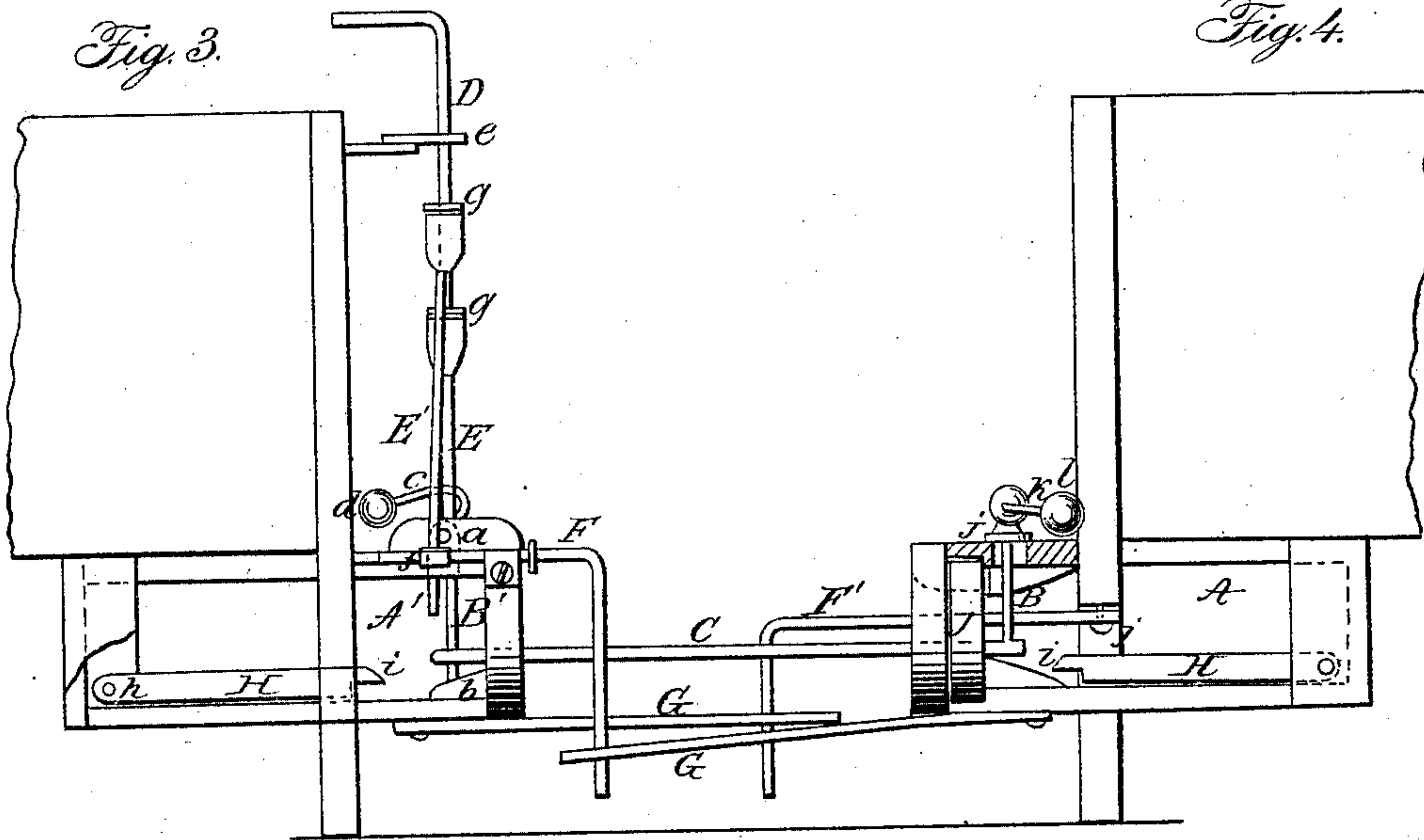
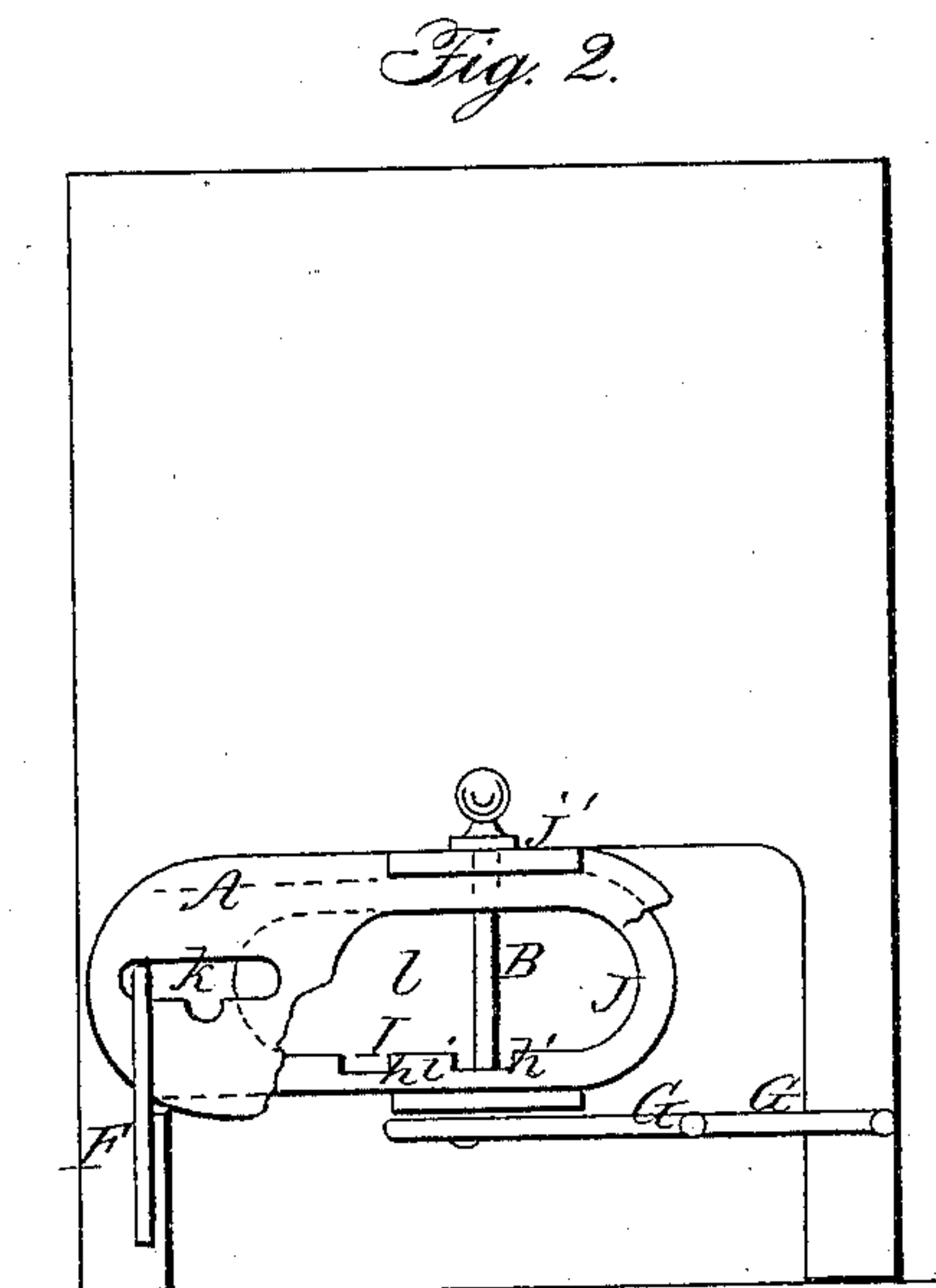
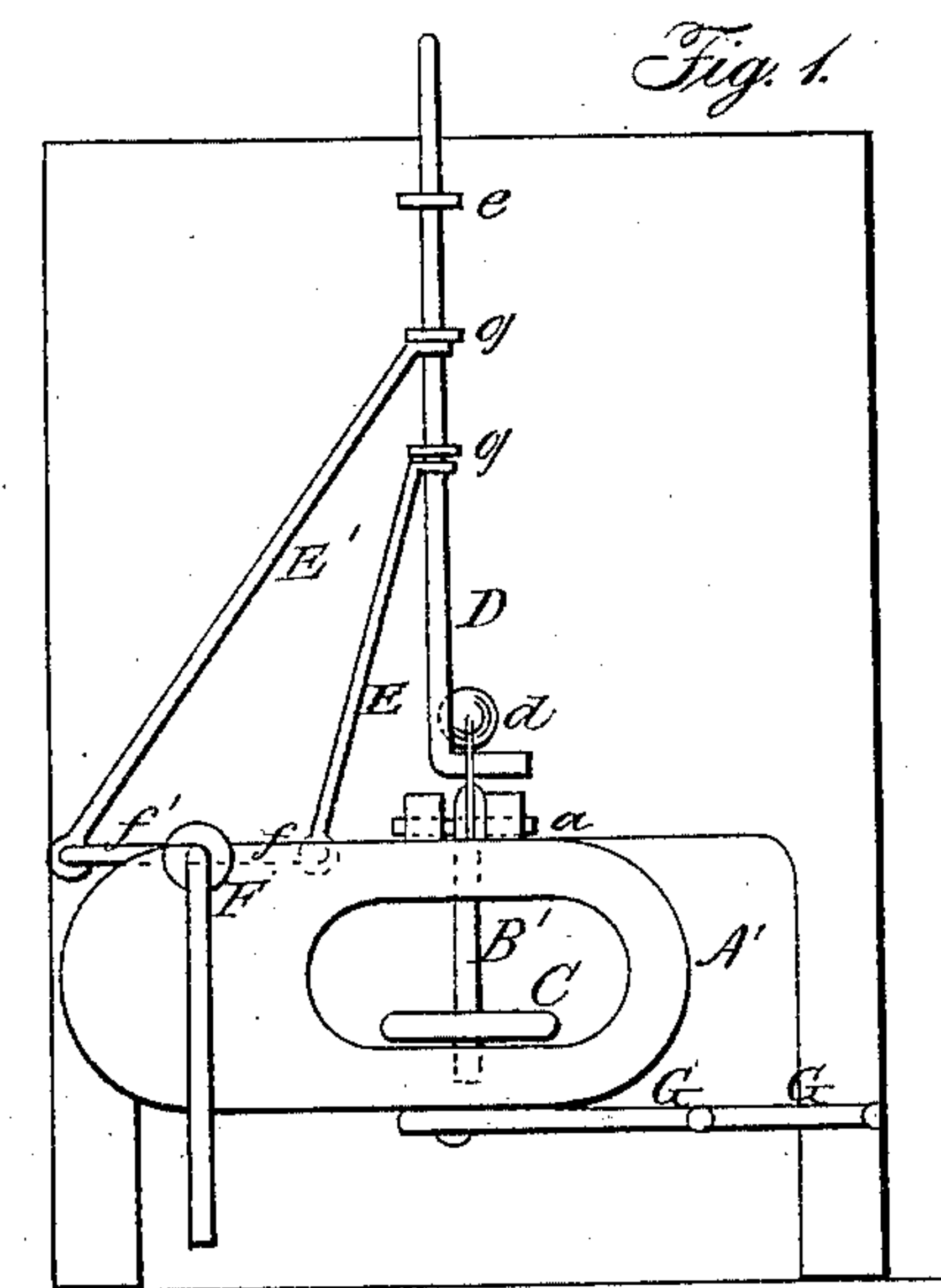


D. LIPPY.  
Car Coupling.

No. 57,931.

Patented Sept. 11, 1866.



Witnesses:

*Wm Dean Overell*  
*Wm Trewin*

Inventor:

*David Lippy*  
*per* *Mumford*  
*Attorney*

# UNITED STATES PATENT OFFICE.

DAVID LIPPY, OF MANSFIELD, OHIO.

## IMPROVED CAR-COUPLING.

Specification forming part of Letters Patent No. 57,931, dated September 11, 1866.

*To all whom it may concern:*

Be it known that I, DAVID LIPPY, of Mansfield, Richland county, State of Ohio, have invented a new and Improved Car-Coupling; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figures 1 and 2 are front views of my invention, Fig. 2 being partly in section. Figs. 3 and 4 are side views of the same, partly in section.

Similar letters of reference indicate like parts.

This invention relates to a new and improved self-acting car-coupling, one which will connect itself when the cars come in contact, and which will disengage itself in case of a car being thrown from the track.

The invention is applicable to either passenger or freight cars.

A A' represent the draw-heads of two adjoining cars, the draw-head A being applied to a freight-car. B represents the draw-pin of the draw-head A, and B' the draw-pin of the draw-head A'. The pin B' works on a rod, *a*, in the upper part of the draw-head, the lower end of said pin bearing against a ledge, *b*, in the lower part of the front of the draw-head when the link or shackle C is pulling upon it. The upper end of the pin B' has an arm, *c*, extending back from it, with a weight, *d*, on its outer end, said weight having a tendency to keep the lower end of the pin B' in contact with the ledge *b*. (See Fig. 3.)

D is a vertical rod, which is fitted and works in a guide, *e*, attached to the upper part of the end of the freight-car, said rod passing through the upper ends of the arms E E', the lower ends of the latter being connected to rods *f f'*, which project at right angles from opposite sides of a shaft, F, at the front part of the draw-head, the front part of said shaft being bent down, so as to assume a vertical position in front of the draw-head A, at one side of the opening in the same, through which the link or shackle passes. (See Fig. 1.) On the rod D, above the upper end of each arm E E', there is secured a step, *g*.

G G are two rods attached to the under side of the draw-head, and extending forward of the draw-head A', at one side of the same. These rods G G are common to both draw-heads A A', and the front vertical part of the shaft F of one draw-head fits between the rods G of the other draw-head, as shown in Figs. 3 and 4.

In the rear part of each draw-head there is a bar, H. These bars are connected at their rear ends, by a hinge, *h*, to the draw-heads, and the front ends of the bars H are provided each with a projecting lip, *i*, at its upper edge. These lips *i* serve, in coupling, to hold the links in a horizontal position to admit of them entering the draw-heads.

The pin B of the draw-head is provided with a shoulder, *j*, which rests on the top of said draw-head, and the pin B has, like the pin B', an arm, *k*, extending backward from its upper end, with a weight, *l*, on its end, so that the operation of B is essentially the same as B', so far as the operation of the link or shackle C upon it is concerned in entering the draw-head; for it will be seen that when the link or shackle enters either draw-head the lower part of the pin B or B' will be shoved back, and B or B', when the link or shackle passes their lower ends, will drop into the link or shackle and form the connection.

In the draw-head A' the ledge *b* serves as a step for the pin B', so that the latter will hold the link or shackle, and in order to release the link or shackle the rod D, the lower end of which is curved, so as to pass under the arm *c* of the pin B', must be raised, and this may be effected by drawing up the rod D, which may be done at the top of the car, or by shoving the front vertical part of the shaft F either to the right or left. The first mode is practiced in uncoupling by hand, and the latter performed automatically when one of the cars is thrown from the track, the rods G G, in this contingency, effecting this result by actuating the shaft F, the rods *f f'* of which, and arms E E', in connection with the steps *g g*, raise the rod D and pin B', the rod *f* and arm E raising the rod and pin when the car is thrown from the track in one direction, and the rod *f'* and arm E' raising the rod when a car is thrown from the track in an opposite direction.



In the draw-head A of the passenger-car the arrangement is slightly different. Instead of a fixed ledge, *b*, to hold the lower end of the draw-pin, a sliding ledge, *I*, is employed, having the notches *h h'* in it, with a solid piece, *i*, between, as shown in Fig. 2, and the shaft *F* of this draw-head, which corresponds to or performs the same function as the shaft *F'* of draw-head A, is arranged on the lever principle, and has its inner end pivoted to the end of the car, as shown at *j* in Fig. 4, and said shaft *F'* passes through a sliding plate, *J*, in the front part of the draw-head A, and through an oblong horizontal slot, *k*, in the front plate of said draw-head. The ledge *I* is formed by having an opening, *l*, made in plate *J*, as shown clearly in Fig. 2. The plate *J* is moved by the shaft *F'*, actuated, where a car is thrown from the track, by the rods *G G*, and the notch *h* or *h'*, according to which direction the slide *J* is moved, is brought in line with the pin *B*, so as to admit of the drawing out of the link or shackle, the solid piece, *i*, between the notches *h h'* holding the lower end of the pin *B* when the two draw-heads are connected.

The whole arrangement is extremely simple and efficient, may be constructed and applied at a moderate cost, and will operate with certainty, both as regards the coupling or the engagement of the link or shackle with the draw-pins, and the uncoupling of the same in the event of the car being thrown from the track.

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

A car-coupling composed of a swinging or pendent draw-pin, *B* or *B'*, fitted in a draw-head, *A* or *A'*, in combination with fixed rods *G G*, and a shaft extending down in front of the draw-head, and connected either with the draw-pin or with a sliding ledge, *I*, in the draw-head, and all arranged in such a manner that the link or shackle *C* may, when a car is thrown from the track, be liberated by the movement of the shaft acted upon by the rods *G G*, substantially as shown and described.

DAVID LIPPY.

Witnesses:

WM. SMITH,  
S. V. ESSICK.