

(No Model.)

G. A. CLINE.
CAR COUPLING.

No. 270,390.

Patented Jan. 9, 1883.

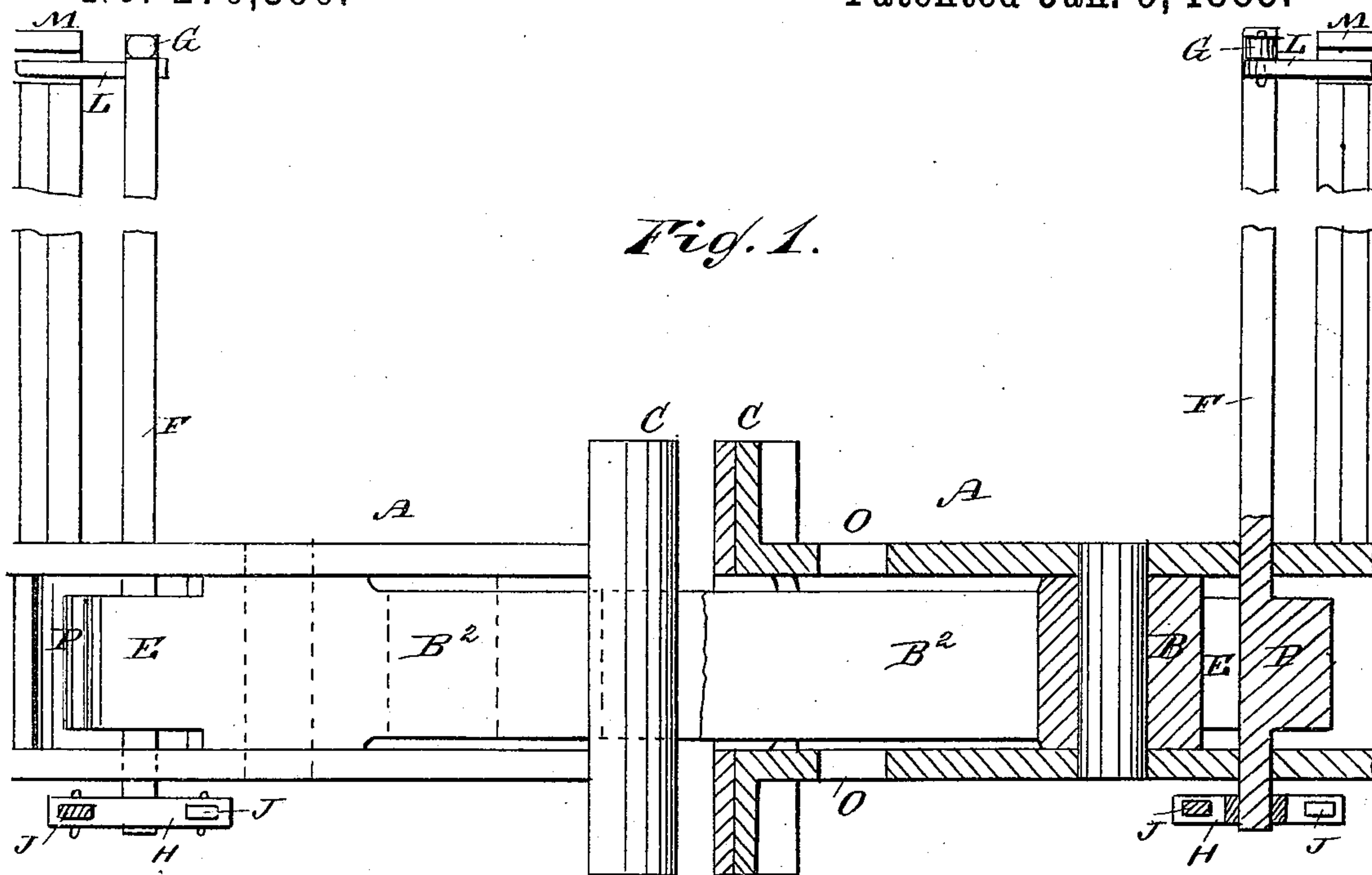


Fig. 1.

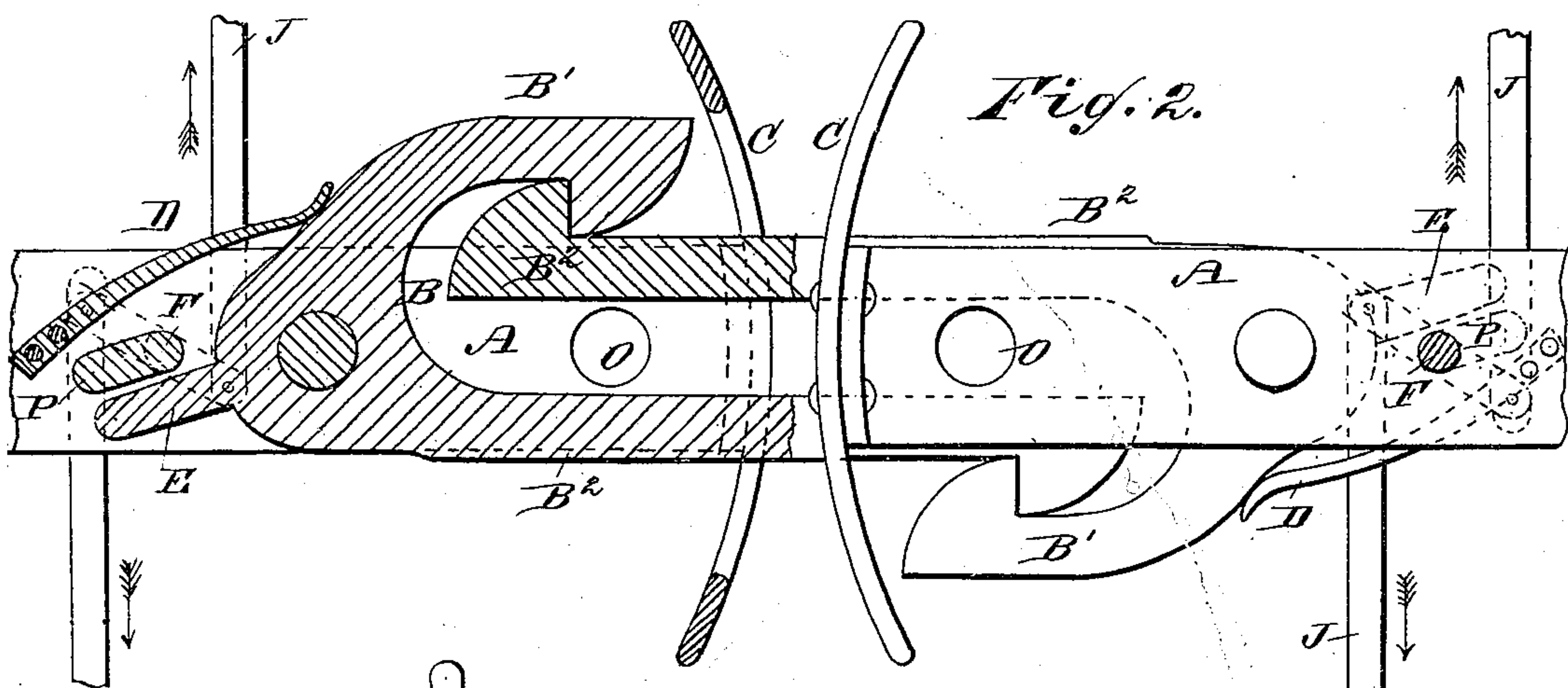


Fig. 2.

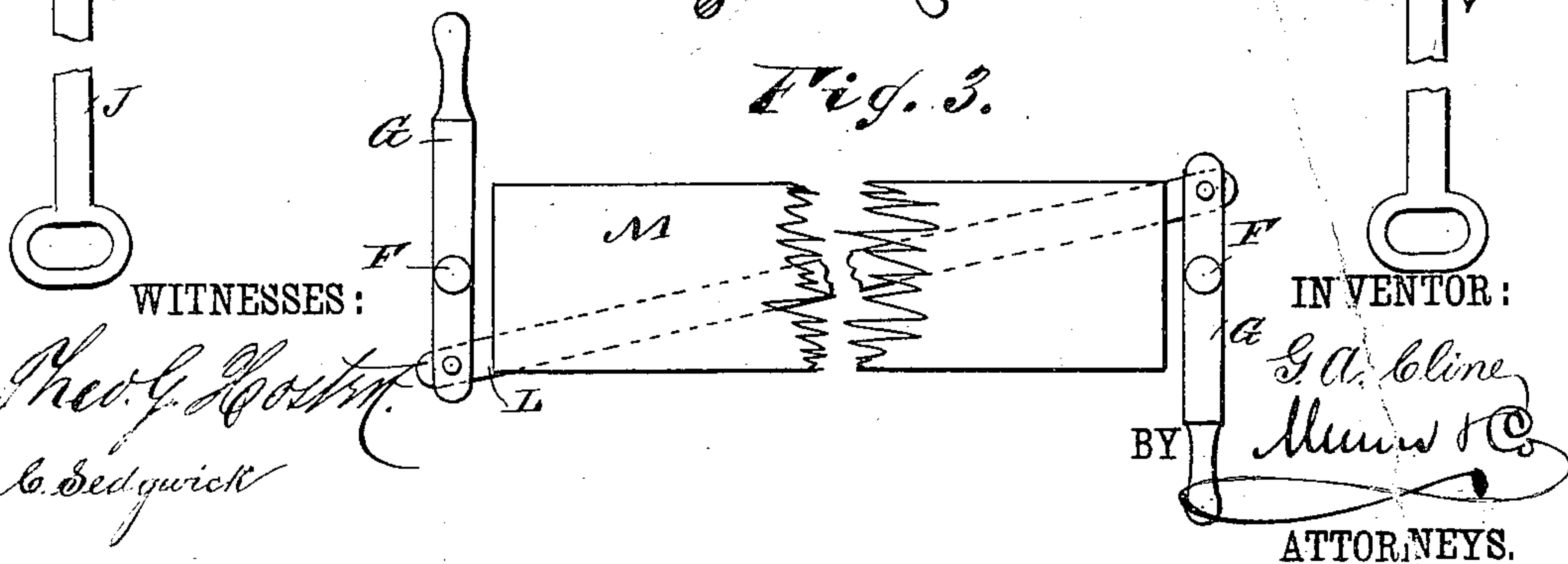


Fig. 3.

WITNESSES:

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GEORGE A. CLINE, OF PHILADELPHIA, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 270,390, dated January 9, 1883.

Application filed November 28, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. CLINE, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

The invention consists in a draw-head in which is pivoted a U-shaped piece having a long and a short shank, which have hooks at the ends, which U-shaped piece is pressed in the direction in which the hooks project by a spring acting on its rear end, whereby when two draw-heads strike together the hooks will catch on each other and couple the cars automatically. If the cars are to be uncoupled, the hooks of the U-shaped piece are moved from each other by turning shafts which are provided with cam-lugs which act on wings at the rear ends of the pivoted U-shaped pieces, and thus press the said U-shaped pieces in the inverse direction of that in which they are pressed by the springs and permit the U-shaped pieces to be disengaged.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 shows a longitudinal elevation of one draw-head and a longitudinal sectional elevation of another, the two draw-heads being coupled. Fig. 2 is a plan view of the same, one draw-head being shown in horizontal section. Fig. 3 is a plan view of the handle-levers at the ends of the car, parts being broken out.

Between the top and bottom plate of each draw-head A a U-shaped piece, B, is pivoted to swing in the horizontal plane, which U-shaped piece is provided with a short shank, B', and a long shank, B², both of which are provided at the free ends with lateral hooks, both projecting in the same direction. The long shank B² projects through an aperture in the end plate, C, of the draw-head; but the short shank is behind the end plate, as shown. A spring, D, secured to the inner end of the draw-head, rests against the inner end of the U-shaped piece B, and presses the same in the direction in which the hooks project. The U-shaped piece B is provided at its rear end with a fixed backwardly-projecting wing, E. A vertical shaft, F, jour-

naled in the draw-head behind the pivot of the U-shaped piece B, extends to the roof of the car, and is provided at its upper end with a transverse handle-bar, G. At its lower end, below the bottom of the draw-head, it is provided with a cross-piece H, to the ends of which are pivoted the bars or rods J, extending to the sides of the car.

Between the top and bottom of the draw-head the shaft F is provided with a cam-lug, P, which is adapted to be pressed against the wing E. The corresponding ends of the handle-bars G of the shafts F at opposite ends of the car are connected by a bar or rod, L, under the gang-plank M, so that both shafts F of a car can be turned together, if desired, and thus the car uncoupled from either end. The draw-head is provided with apertures O for the usual coupling-pins in case a link of the usual kind is to be coupled to my improved draw-head.

The operation is as follows: When the draw-heads come together each long shank B² passes through the opening in the plate C of the opposite draw-head and catches on the hook at the end of the opposite short shank, B', as shown in Fig. 2, whereby the cars will be coupled automatically. The U-pieces are held in this position by the springs D, which press each U-piece in the direction in which its hooks project, and as the hooks on the opposite U-pieces project in opposite directions the U-pieces will be pressed against each other, and thus will remain locked. If the cars are to be uncoupled, the shaft F must be turned either from the top of the car or from the sides by drawing on one of the rods J in the direction of the arrows. By turning the shaft in this manner the free end of the cam-lug P will press against the outer end of the wing E, and will thus swing the U-piece in the inverse direction of that in which the hooks project, whereby the hooks of the U-piece will be released from each other and the spring D will be compressed. It is evident that the space between the short and long shanks of the U-shaped piece B must be large enough to admit the hook on the long shank of the opposite U-piece.

As stated above, the handle-bars G at the upper ends of the shafts F are connected by a rod, L. If the handle-bar G at one end of the car is turned to move the U-piece B at that

end of the car from the U-piece with which it has been engaged, the U-piece at the opposite end of the car will be pressed more firmly against the U-piece with which it is engaged; or, in other words, if a car is uncoupled at one end it will be coupled more firmly at the opposite end.

This lever can also be used to uncouple one end of a car by a person at the other end of the car.

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

1. The combination, with the draw-head A, of the U shaped piece B, having a long and a short shank, which U-shaped piece is pivoted in the draw-head to swing laterally, substantially as herein shown and described, and for the purpose set forth.

2. The combination, with the draw-head A, of the U-shaped piece B, pivoted in the draw-head to swing laterally, and provided with long and short shanks having hooks at the ends, and with a wing, E, at the rear end, and of the shaft F, provided with a cam-lug, P, substantially as herein shown and described, and for the purpose set forth.

3. The combination, with the draw-head A, of the U-shaped piece B, pivoted therein to

swing laterally, and provided with a long and a short shank having hooks at the ends, the spring D, and the shaft F, provided with a cam-lug, P, substantially as herein shown and described, and for the purpose set forth.

4. The combination, with the draw-head A, of the U-shaped piece B, pivoted therein to swing laterally, and provided with a long and a short shank having hooks at the ends, the spring D, the shaft F, provided with a cam-lug, P, the handle-bar G, the cross-piece H, and the bars J, substantially as herein shown and described, and for the purpose set forth.

5. The combination, with the draw-heads A, of the U-shaped piece B, pivoted therein to swing laterally, and provided with a long and a short shank having hooks at the ends, the spring D, the shaft F, provided with the cam-lug P, the handle-bar G, and the rod or bar L, connecting the handle-bars G at the opposite ends of the car, substantially as herein shown and described, and for the purpose set forth.

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Witnesses:

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