

(No Model.)

F. BETTS.
CAR COUPLING.

No. 355,913.

Patented Jan. 11, 1887.

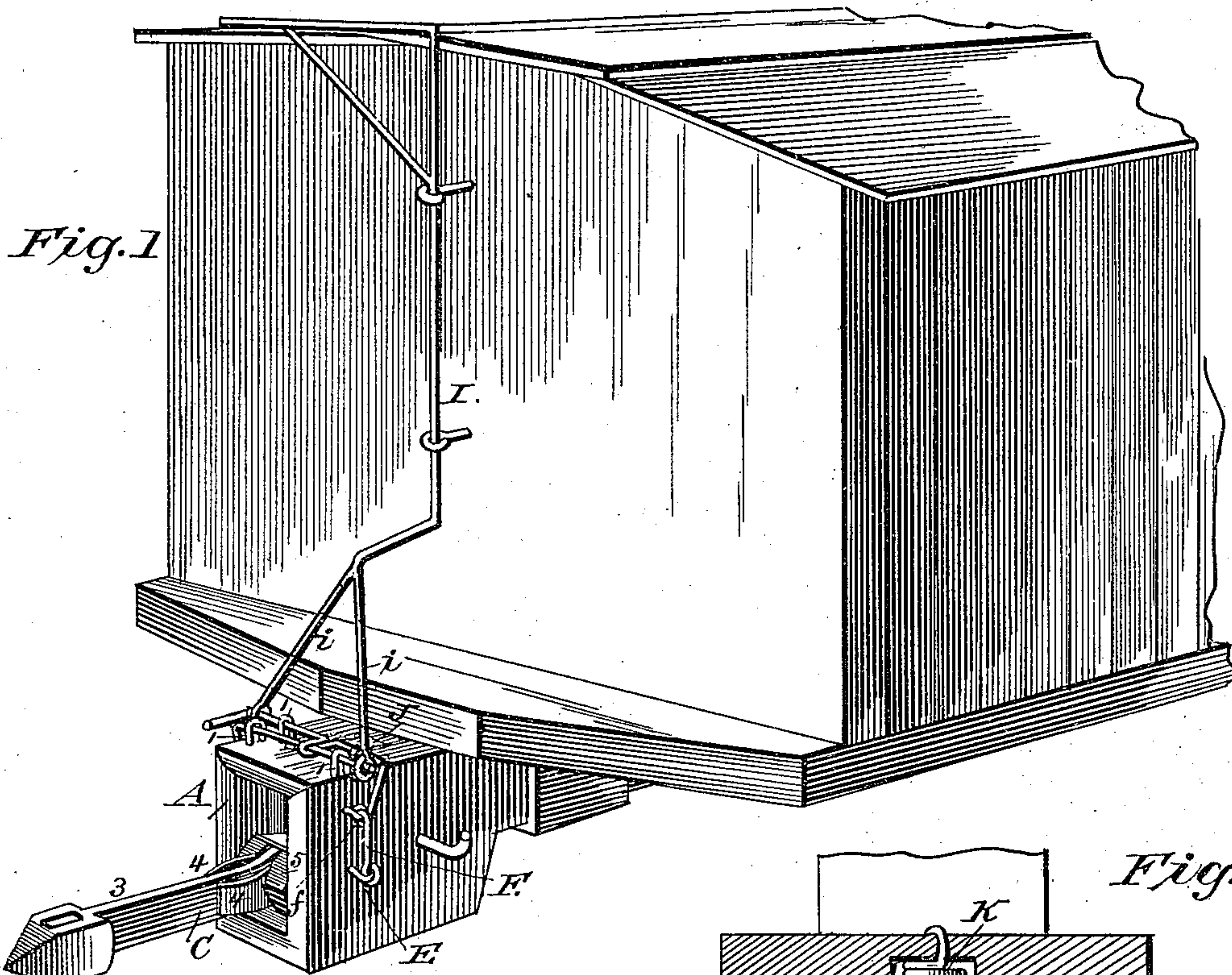


Fig. 1

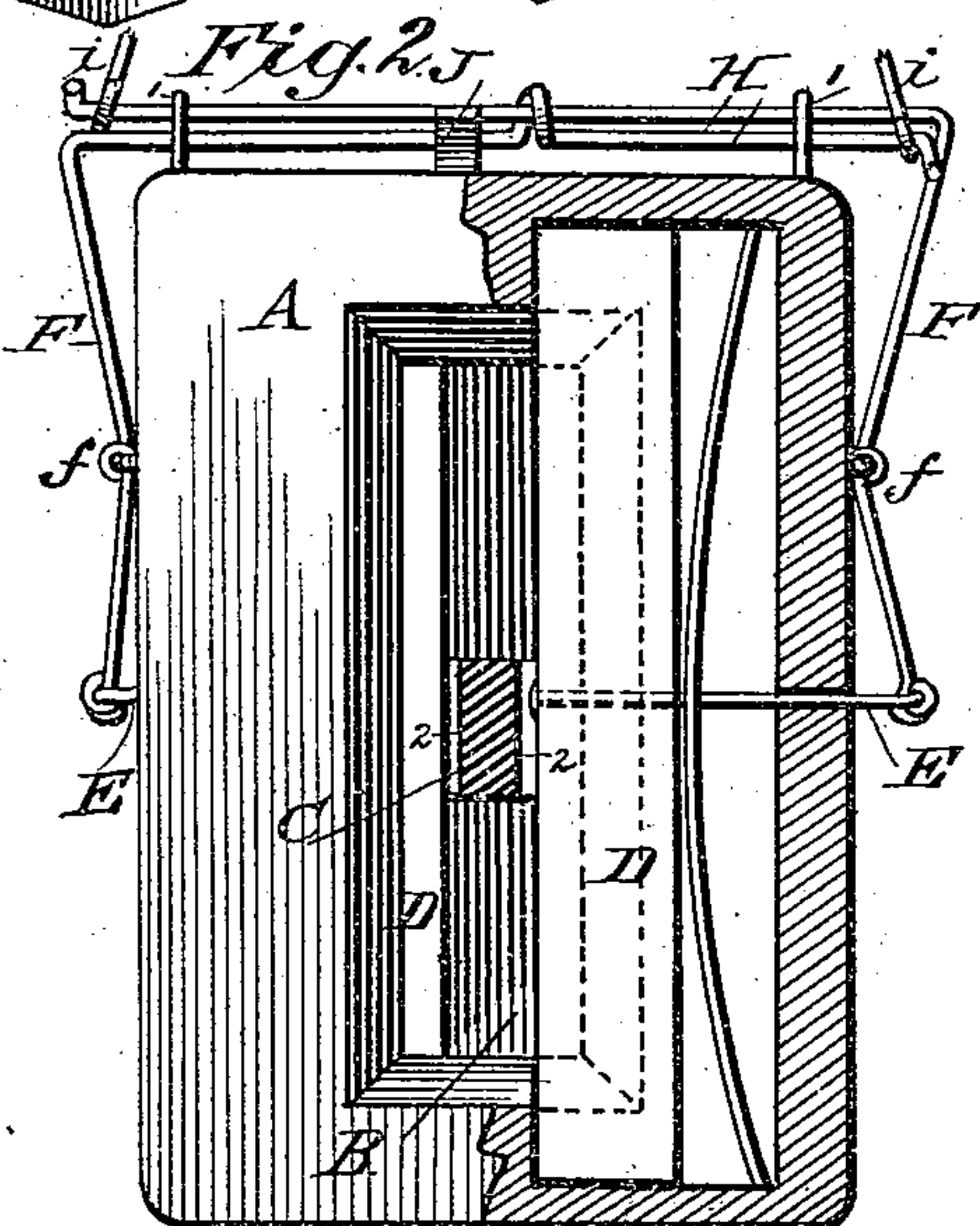


Fig. 25.

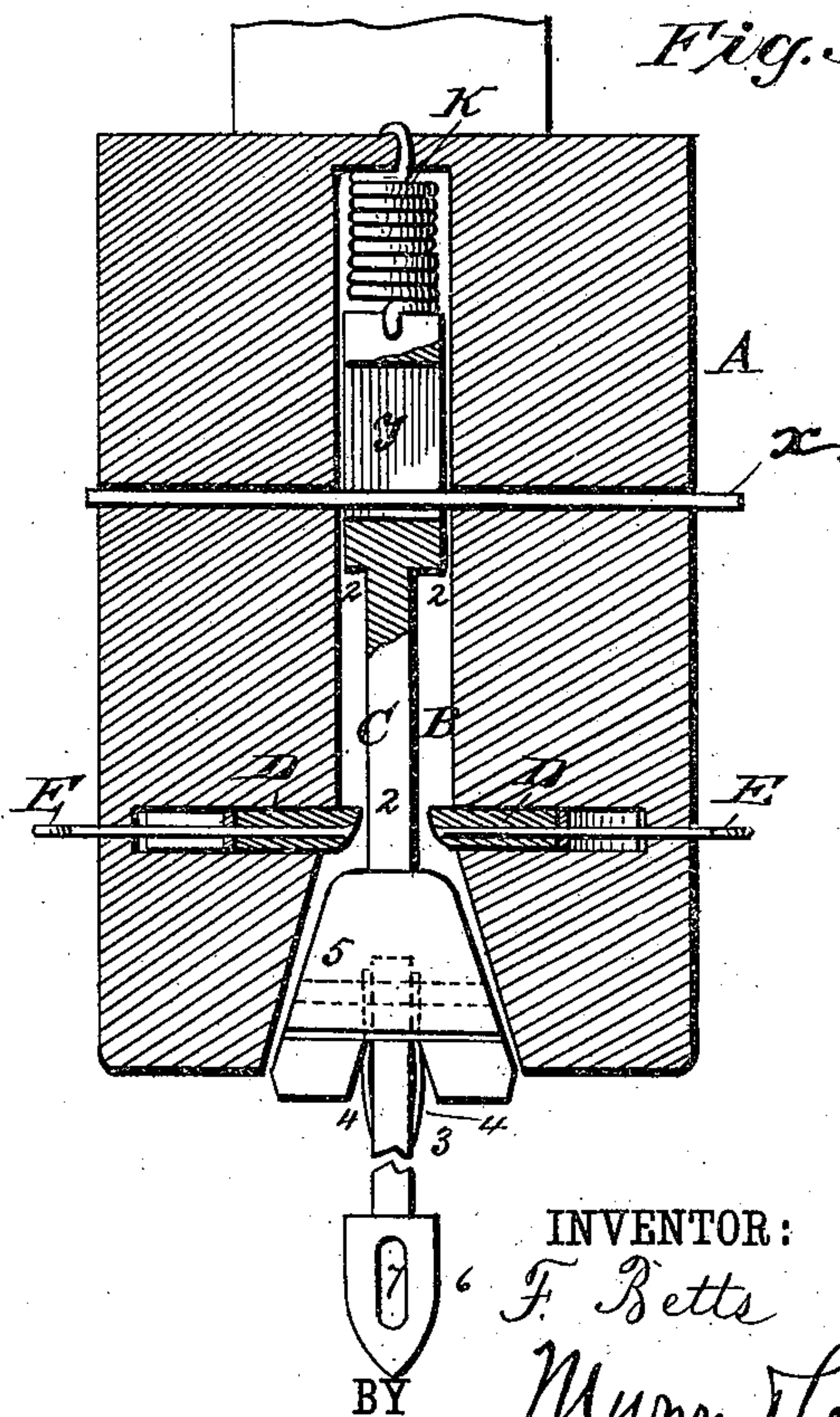


Fig. 3.

WITNESSES:

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FRANK BETTS, OF IRWIN, COLORADO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 355,913, dated January 11, 1887.

Application filed September 10, 1886. Serial No. 213,253. (No model.)

To all whom it may concern:

Be it known that I, FRANK BETTS, of Irwin, in the county of Gunnison and State of Colorado, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

This invention is an improved car-coupling; and it consists in certain features of construction and novel combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my improvement in place. Fig. 2 is a front view of the coupling, parts being broken away to show the spring-support for the securing-plates. Fig. 3 is a horizontal longitudinal section of the draw-head drawn above the coupling-hook.

The draw-head A may be fixed to the car in any suitable manner, and has a mortise or opening, B, for the coupling bar or link C. The outer ends of the mortise may be flaring, as shown. At the inner end of this flaring portion I arrange the securing-plates D D, which are secured in the draw-head in such manner that they may be moved in a plane at right angles to the length of the draw-head and into the mortise thereof. These plates are actuated inward by springs, so their inner or adjacent edges are forced toward each other.

Connections E are joined to the securing-plates and extend outward and through the draw-head, and are connected to levers F. These levers are pivoted at *x* alongside the draw-head, and have arms H at their upper ends, which arms extend across the top of the draw-head, and are joined together by a sliding connection at about their middle portions. This connection is preferably effected by providing one of the arms H with an eye, through which the other arm is passed.

At their ends the arms H have hand-holds, and by manipulating either lever they both may be operated to draw the securing-plates out and release the coupling-bar that may be secured in the draw-head.

The arms H, it will be seen, are secured in guides 1, mounted on the draw-head.

In order to provide for releasing the coupling from above the draw-head, as from the top of the car, a bar, I, is movable vertically

in guides on the car, and has its lower end bifurcated or forked, providing sections *i*, which are connected with the arms H, as shown, so that the arms H and the levers of which they form a part may be operated by the movement of the bar I to release the coupling, in the manner previously described. The sections *i*, it will be seen, connect with the free or hand-hold ends of arms H, and such ends of the arms when depressed will operate to throw the lower ends of levers F outward, and so draw the securing-plates out of the path of the coupling-bar. A spring, J, bearing under the arms H at their point of connection forces said arms upward, and serves to relieve the springs which operate the securing-plates of the weight of said levers.

While I prefer to use two securing-plates, as shown, and to duplicate the levers for operating the same, it is manifest that one of said plates might be replaced by a fixed bar or bearing in the draw-head without involving a departure from the broad principles of my invention.

The coupling hook or link C is secured at one end within the draw-head in rear of the securing-plates. By preference I form this connection by means of a spring, K, connected at one end to the inner end of the coupling-bar and at its opposite end to the draw-head. This spring serves to take up the slack of the train, and also allows a vertical play or adjustment of the outer end of the coupling-bar to enable the coupling of draw-heads of different heights. On the bar within the draw-head I form shoulders 2, which face forwardly and engage the securing-plates, relieving the spring K of the draft when the parts are coupled.

The coupling-bar C is formed preferably in sections 2 and 3, pivoted together so the front section, 3, can swing laterally. Springs 4 4 bear on opposite sides of the front section near its junction with the rear one, and serve to keep said front section normally in line with the rear one, and yet permit it to move laterally. The front end of the rear section, 2, is enlarged, forming a head, 5, which is beveled, as shown, to prevent the coupling-bars of two meeting draw-heads from passing alongside of each other. The forward or outer end or head, 6, of the coupling-bar is formed in approximately

an arrow-head form, and is provided with a slot, 7, to receive a pin when the said head is coupled in an ordinary draw-head, for which it may be adapted.

- 5 The coupling-bar is secured within the draw-head by a pin, x , passed through the draw-head and through a slot, y , in the draw-bar. This slot is elongated in the direction of length of the bar, so the latter has a longitudinal as well as a pivotal movement on pin x .

In operation the coupling is effected by the meeting of two couplings constructed according to my invention, the coupling-bar of one coupling entering the draw-head of the other and passing between the securing-plates, which will close on its head 6 and secure it, and the uncoupling may be effected by means of the devices and in the manner before described.

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

1. In a car-coupling, the combination of the draw-head, the securing-plates, the levers F, pivoted at f to the draw-head, connected at their lower ends to the securing-plates, and having at their upper ends arms extended across the upper side of the draw-head, and an operating-bar, I, having sections i connected with such arms, substantially as set forth.

2. The combination of the draw-head, the pin x , the coupling-bar having slot y fitting over pin x , and a spring, as K, for normally retracting said draw-bar, substantially as set forth.

3. In a car-coupling, the draw-head having a securing plate or plates, combined with the coupling-bar having forwardly-facing shoulder 2, and a spring connecting said bar with the draw-head, substantially as set forth.

4. The combination of the draw-head having a mortise, the coupling-bar inserted at one end into said mortise and having an elongated

slot, y , a spring, K, and a pin, x , substantially as set forth.

5. The combination of the draw-head, the securing-plates, the levers pivoted alongside the draw-head, connected with the securing-plates and having arms extended over the draw-head, and a spring bearing under said arms, substantially as set forth.

6. The combination of the draw-head, the spring-actuated securing-plates, the coupling-bar having forwardly-facing shoulders arranged to engage the inner edges of said plates, and a spring-support for said bar, substantially as set forth.

7. The combination of the draw-head, the securing-plates, and the coupling-bar secured at its inner end in rear of said securing-plates, and having a head, as 5, in front of said plates, substantially as set forth.

8. The coupling-bar herein described, consisting of the section 2, having slot y , and provided with a head, 5, the section 3, pivoted in head 5, and springs 4, substantially as set forth.

9. The combination of the draw-head, the coupling-bar having shoulders 2 and a slot, y , the spring K, the pin x , the securing-plates, the levers having arms H, and the operating-rod, substantially as set forth.

10. The herein-described coupling-bar, consisting of the inner section having at its forward end a head, 4, having beveled faces, the outer section pivoted to the inner section and having a head at its forward end, and springs whereby to hold said sections in alignment, substantially as set forth.

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Witnesses:

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