

P. M. BRACELIN.  
Car-Coupling.

No. 217,726.

Patented July 22, 1879.

Fig: 1.

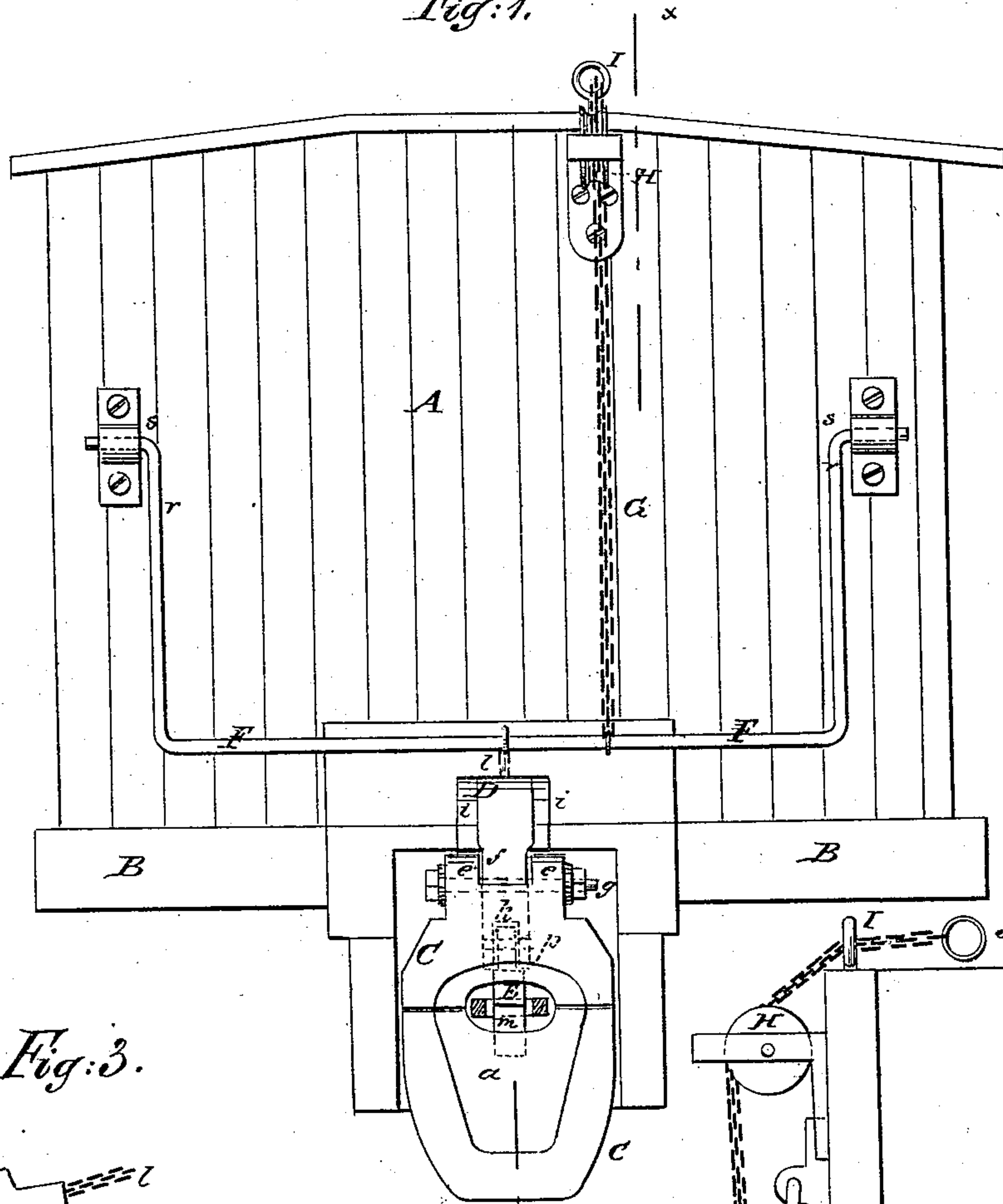


Fig: 3.

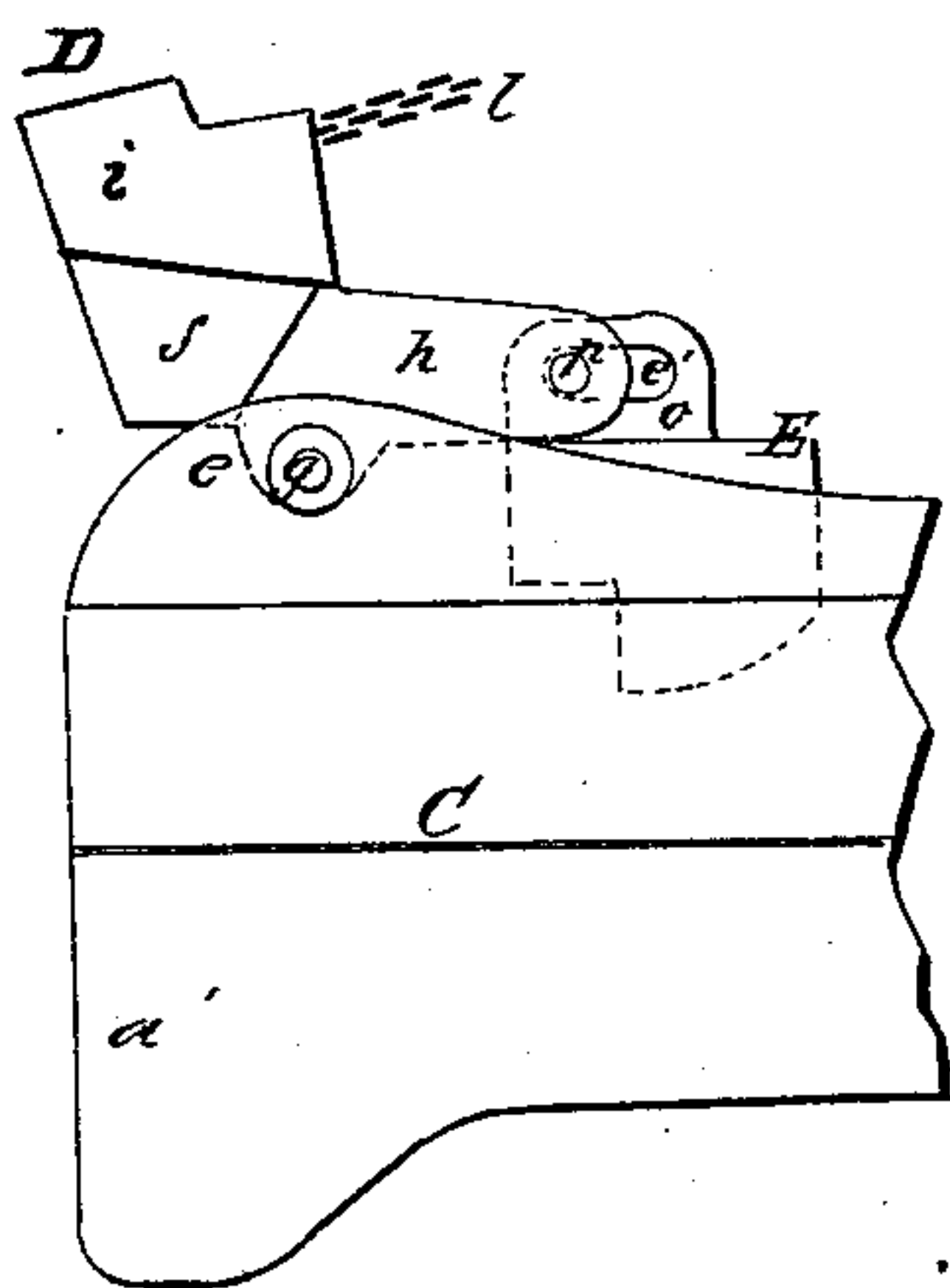
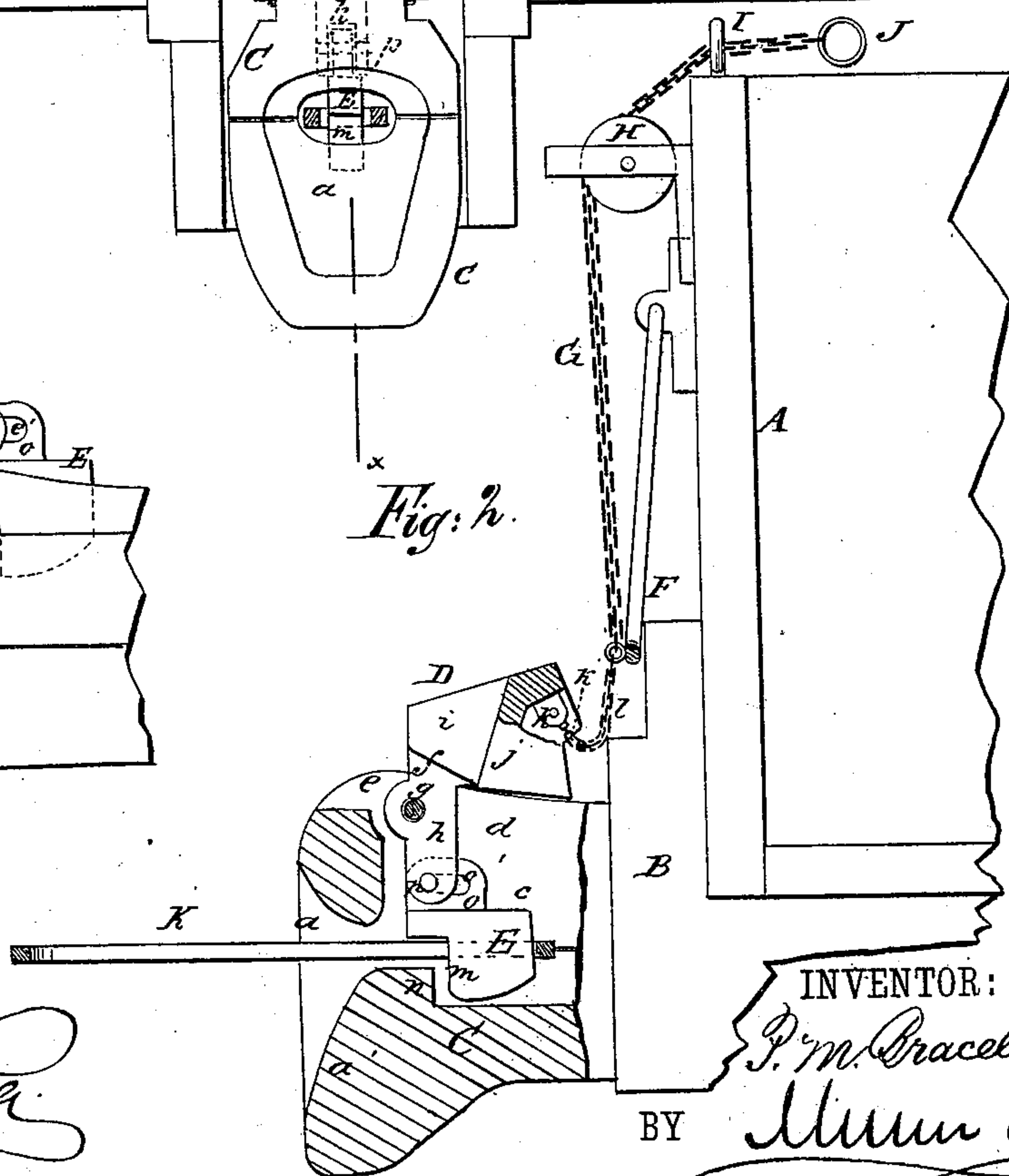


Fig: 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

PATRICK M. BRACELIN, OF DAVENPORT, IOWA.

## IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 217,726, dated July 22, 1879; application filed February 4, 1879.

*To all whom it may concern:*

Be it known that I, PATRICK M. BRACELIN, of Davenport, in the county of Scott and State of Iowa, have invented a new and Improved Car-Coupling, of which the following is a specification.

The object of this invention is to provide a coupling for cars that will automatically couple them at all times, whether the latch is up or down, and which is arranged so that the draft at no time falls upon the pin or pivot of the latch, but is borne directly by the draw-head. A further object of the invention is to obviate the necessity of going between the cars either to uncouple or couple them.

The invention will be first described in connection with the drawings, and then specifically pointed out in the claim.

In the accompanying drawings, Figure 1 is a front view of a draw-head applied to a car and provided with my improvements. Fig. 2 is a vertical section of the same on line *x x*, Fig. 1; and Fig. 3 is a side elevation of the same.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the front of a car. B is the platform, underneath which is placed the draw-head C in the usual manner. This draw-head has a bell-mouth, *a*, with an elongation of its under side or lip, *a'*, and this mouth opens into a cavity, *c*, open through the top of the draw-head by a slot, *d*, on either side whereof are ears *e e*.

D represents a tumbler composed of a central piece, *f*, which fits between the ears *e e*, and is connected therewith by a pivot, *g*, so that a slotted arm, *h*, projects into the slot *d*, while the upper portion has two wings, *i i*, with a space, *j*, between said wings when the tumbler is down, resting on the draw-bar, on either side of the slot, while in the space *j* is an ear, *k*, to which the open hook *k'*, on the end of chain *l* is engaged.

E represents the gravitating latch, having in its face a recess, *m*, which, when the latch is down, engages the right-angular shoulder *n* of the draw-head, while on its upper side is a projection, *o*, with a horizontal slot, *o'*,

therein. This projection is placed in the slot in arm *h*, and pivot *p* is passed through a hole therein and the horizontal slot *o'*, thus connecting the two together.

The recess *m* puts the point of contact between the latch and draw-bar so low that it enables the long sloping lip *a'* to be given to the draw-head, and this facilitates coupling with cars having different styles of draw-heads, as will presently be further adverted to.

The chain *l*, as before mentioned, is connected at one end with the tumbler D, and at the other with the lever F, which extends across the front of the car, and has its ends *r r* pivoted to the same, as at *s s*.

A chain, G, is also attached to the lever at one end, and is run thence up over the pulley H, thence through the keeper I, and terminates in a ring, J, for operating the coupler from the top of the car.

The operation of the device is as follows: When the cars are coupled the link K is held by the gravitating latch E, as in Fig. 2, with the recess *m* in the face of the latch in line with the shoulder *n* in the draw-head. Now, when drawing, the horizontal slot in the projection of the latch through which it is connected with the tumbler allows sufficient play for the projection to bear against the rear side of the upper lip and the latch to bear against the shoulder *n*, whereby the connecting-pin is relieved from strain, and thus one source of weakness in this style of coupling is removed.

If the cars are to be uncoupled from the ground the lever F is grasped from a position to one side of the car and lifted. This throws the tumbler up and back, lifting the gravitating latch into the slot *d*, and releases the link, as shown in Fig. 3. By means of the chain G the same operation can be performed from the top of the car, and in either case all danger attending the uncoupling of the cars is avoided.

When the tumbler is thrown up in the position indicated in Fig. 3, and if it remains there when the cars are about to be coupled, the impact of the draw-head of the approaching car against the other gives a jar that throws the tumbler over and causes the latch to engage the link. If, however, it falls back after un-



coupling, the entrance of the link into the draw-head throws the gravitating latch up, and, falling, it catches it.

The bell-mouth of the draw-head guides the link into the cavity without difficulty, and the elongation of the lower lip, *a'*, enables the link in low-set draw-heads to be guided upward, and thus the fact that a car to be coupled has another style of draw-head will not prevent my coupler from acting.

The open link or hook *k'* in the chain *l* is used for the purpose of yielding and releasing the chain and lever in case the draw-head should pull out.

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

The combination of a gravitating latch, *E*, having on its upper side a projection, with the horizontal slot *o'*, with the slotted arm *h* of tumbler, and the pivot *p*, as and for the purpose specified.

PATRICK MICHAEL BRACELIN.

Witnesses: .

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PETER J. SMITH.