

(No Model.)

E. M. BATES.  
CAR COUPLING.

No. 298,272.

Patented May 6, 1884.

Fig 2

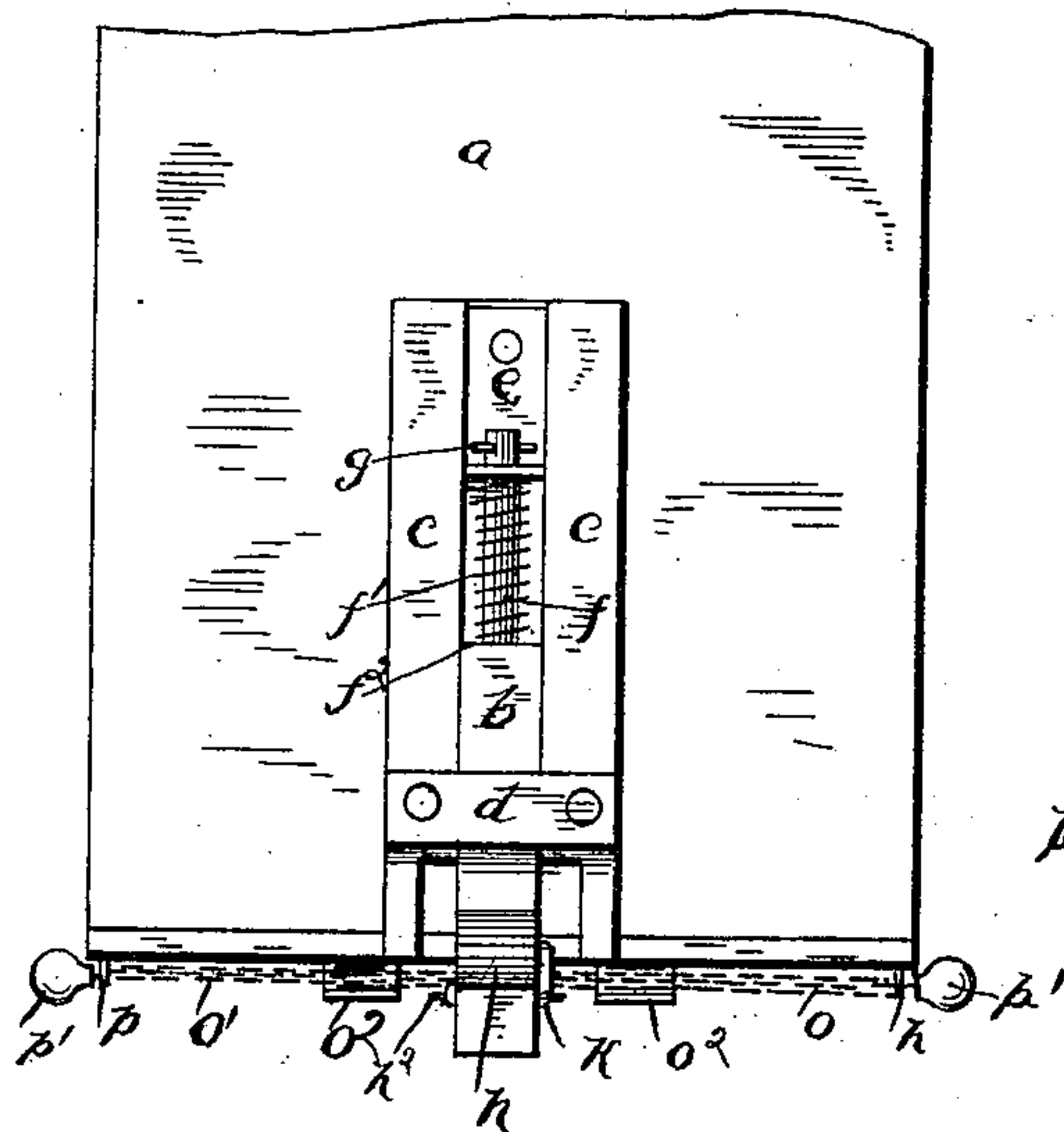


Fig 1

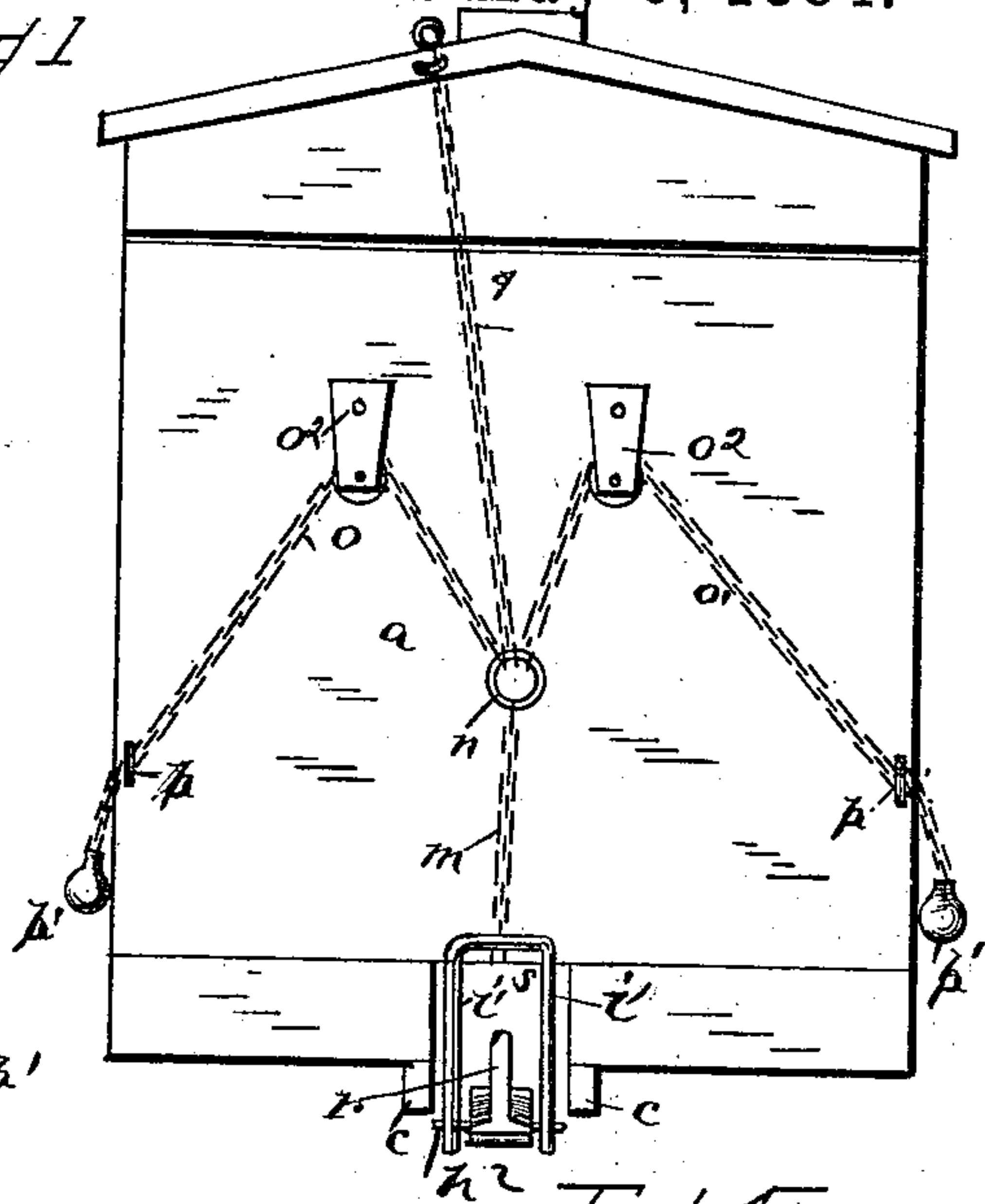


Fig 3

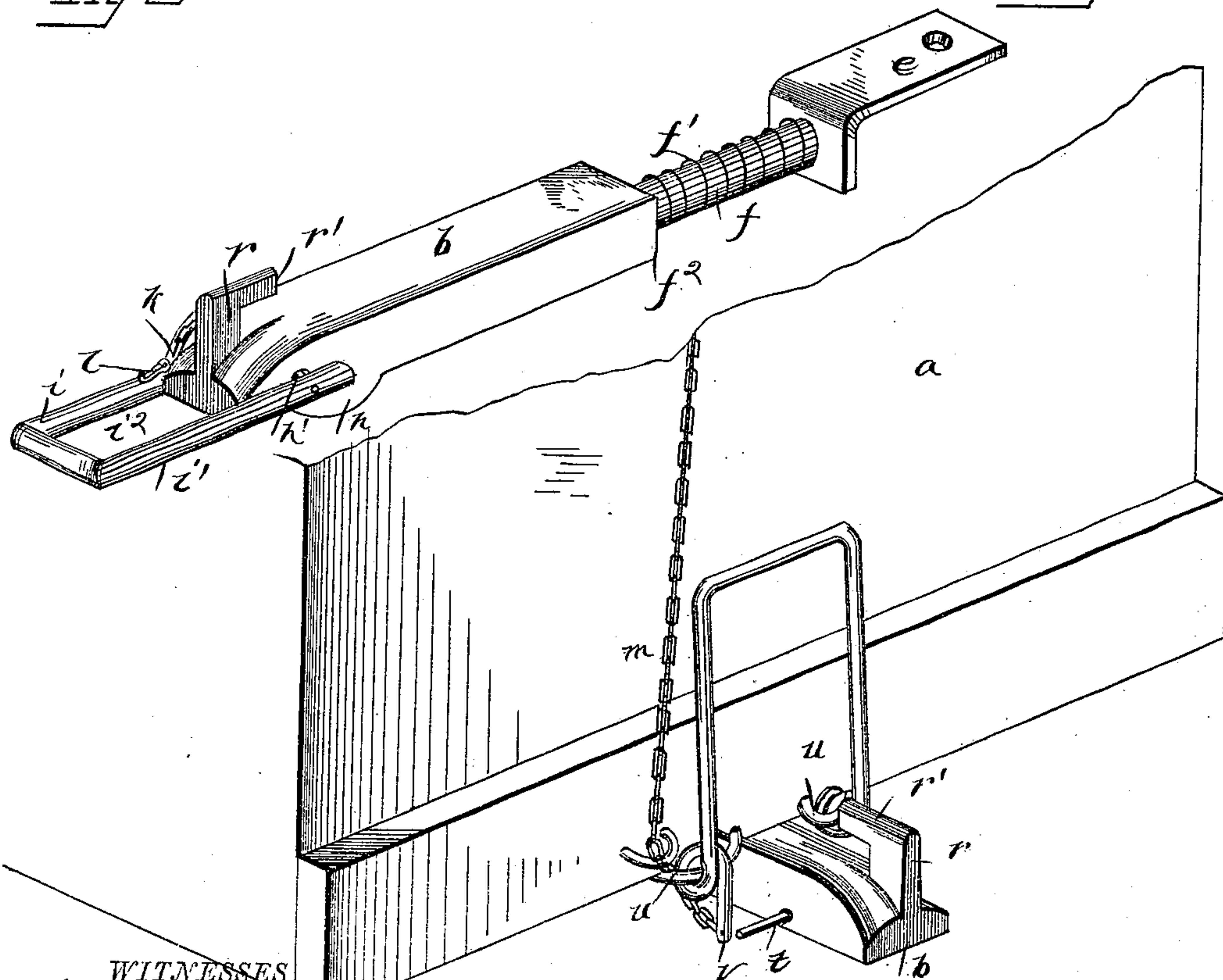


Fig 4

WITNESSES  
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# UNITED STATES PATENT OFFICE.

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## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 298,272, dated May 6, 1884.

Application filed March 3, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN M. BATES, a citizen of the United States, residing at Springfield, in the county of Sangamon and State of Illinois, have invented a new and useful Car-Coupling, of which the following is a specification, reference being had to the accompanying drawings.

This invention has relation to car-couplings; and it consists in the construction and novel arrangement of parts, as will be hereinafter fully described, and particularly pointed out in the claims appended.

Figure 1 is a front elevation of a car having my improved coupling attached. Fig. 2 is a view of a portion of a car, showing a bottom view of the coupling-head, its guides, and bearings. Fig. 3 is a perspective view of the coupling-head and link detached from the car; and Fig. 4 is a perspective view of a modification of the coupling-head and coupling-link.

Referring by letter to the accompanying drawings, *a* designates the car-body, and *b* the bumper. *c c* designate the guide-timbers secured to the bottom of the car-body, and *d* and *e* are the guide and stop plates, the former secured to the under faces of the guide-timbers near their forward ends, and the latter secured to the bottom of the car-body in the space between the guide-timbers well to the rear ends of the guide-timbers. The stop-plate *e* is perforated and serves as a guide for the round stem of the coupling-head, which stem *f* is encircled by a coiled spring, *f'*, which bears at one end against the stop-plate *e*, and at its forward end against a shoulder, *f''*, on the coupling-head. The projecting end of the stem *f* is provided with a cross-pin, *g*, which prevents its withdrawal from its seat in the stop-plate *e*. By this construction the coupling-head is given a longitudinal yielding motion in its bearings rearwardly when two coupling-heads come in contact with any considerable force, and when the contact has been broken between them, the coil-spring *f'* forces the head forward. On the front end, or at a point, *h*, near the front end of the coupling-head, is an enlargement, which is bored laterally through to form a bearing, *h'*, for a short lateral shaft, *h''*, pro-

jecting slightly from the ends of the bore; and to these projecting ends the parallel arms *i i'* of the coupling-link *i''* are rigidly secured. Near the junction of the arm *i'* with the short shaft *h''* is provided a grooved sector-shaped projection, *k*, to the outer terminus of which is secured a short pivoted link, *l*, to the outer end of which the lower end of the main operating-chain *m* is secured, and its other end, passing up through a hole in the bumper, is provided with a ring, *n*. This ring *n* is connected with the two side chains, *o o'*, running over pulleys *o'' o''*, secured to the end of the car-body, and out through eyes or staples *p p*, at the sides of the end of the car, and are provided with handles *p' p'*. The middle chain, *q*, runs through an eye at the top of the car-body, and is provided with a hand-piece, and is secured to the top of the car in any suitable manner, so as to be always ready for use.

The upper face of the coupling-head is sloped downward and forward, and is provided with a vertical stud, *r*, having a rearwardly-turned arm, *r'*, at its upper end, which together form the hook over which the coupling-link operates when turned on its bearings by either the side or middle chains. When it is desired to set the link, one of the chains is pulled upon and the link is turned up vertically and a little past a vertical line and rests against the bumper. The bumper has an inclined recess, *s*, in its under face directly over the coupling-head; and when two coupling-heads come together with sufficient force they recede within their guides, and the sector-shaped projection, coming in contact with the rear wall of the recess *s*, forces the coupling-link down forward over the hook, and thus couples the cars. To uncouple them, it is only necessary to pull upon one of the chains and the link will be raised back and set, and all this can be performed without entering between the cars, and thus endangering life and limb. To couple with the ordinary link-and-pin coupling, the link can be guided over the hook.

In the modification, the coupling-head is provided with a laterally-projecting stud, *t*. The coupling-link is pivoted to eyebolts *u u*, screwed into the bumper of the car, and is provided



with a depending arm, *v*, which, when the coupling-head recedes in its guides, is engaged by the laterally-projecting stud *t* and thrown down over the hook on the opposite coupling-head.

5 It will be seen from the foregoing, taken in connection with the drawings, that the coupling can be operated from either side of the car or from the top of the same, either to couple or uncouple the cars.

10 The device is cheap and simple. It is durable, and positive in its operation, and is not liable to get out of order.

Having thus fully described my invention, what I claim as new, and desire to secure by  
15 Letters Patent of the United States, is—

1. In a car-coupling, the combination, with the coupling-head supported in guides, and having a spring and stop mechanism, of the pivoted coupling-link, provided on one of its

arms with a sector-shaped projection, the hook 20 pivoted thereto, and the main and auxiliary chains for setting and coupling the link, substantially as specified.

2. In a car-coupling, the combination, with the coupling-head having the vertical hook at 25 its forward end, of the pivoted coupling-link having the sector-shaped projection and the pivoted hook, and the main chain, the auxiliary chains, and pulleys, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of witnesses.

EDWIN M. BATES.

Witnesses:

THOS. T. BROWN,  
B. H. GIGER,  
JOSEPH M. GROUT.