(No Model.)

D. P. PRESCOTT.

CAR COUPLING.

No. 310,082. Patented Dec. 30, 1884.

Fig 1

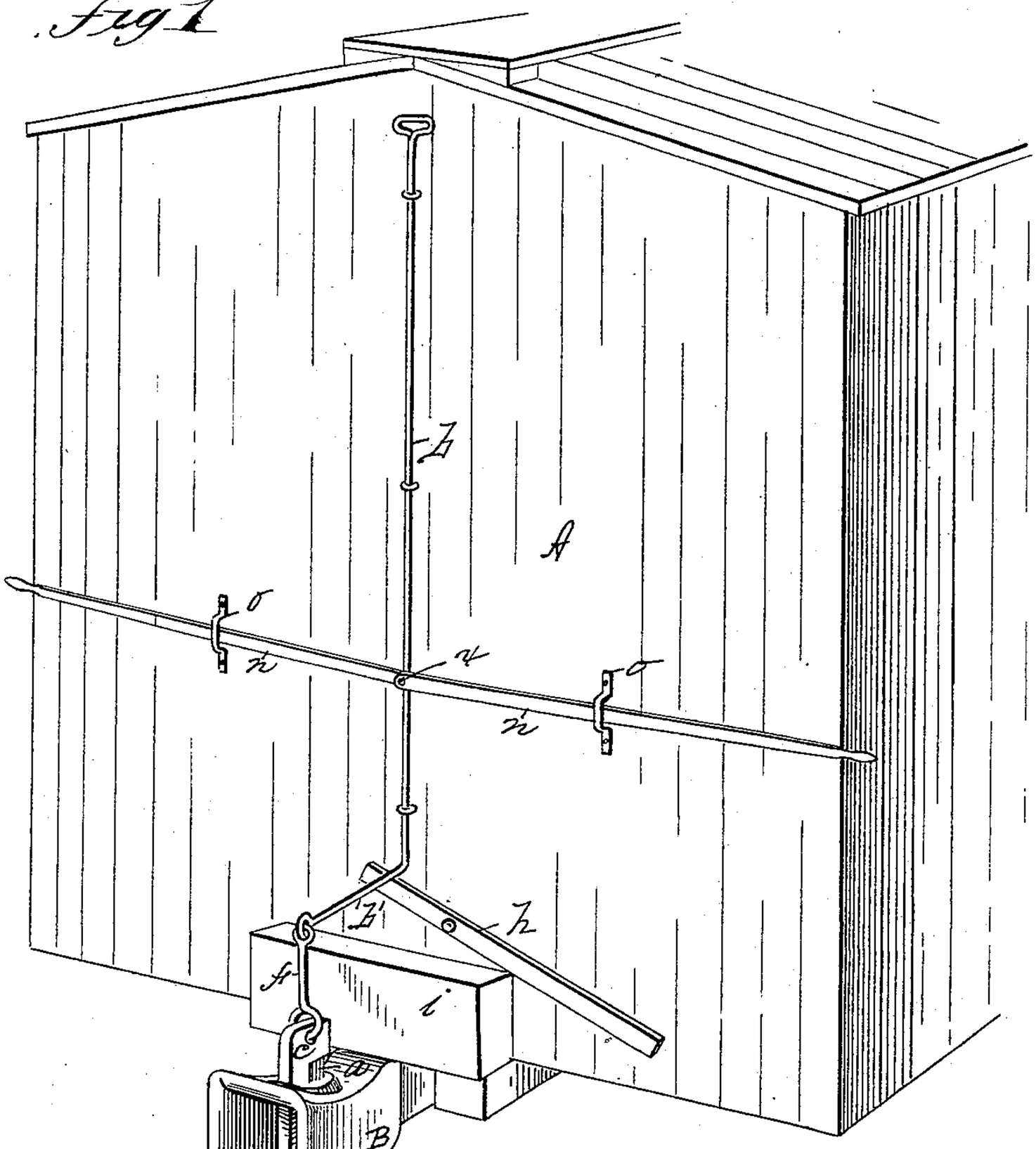


Fig 2

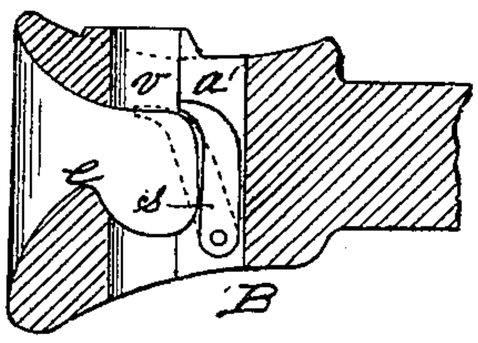


Fig 4

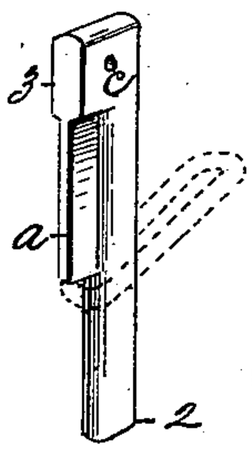


Fig 5

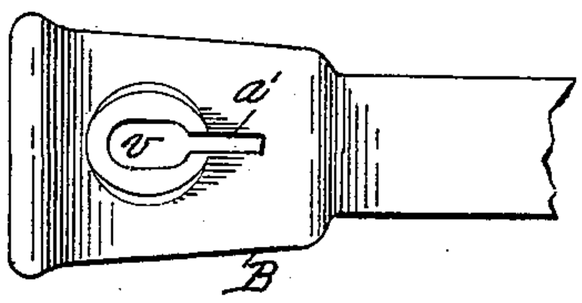
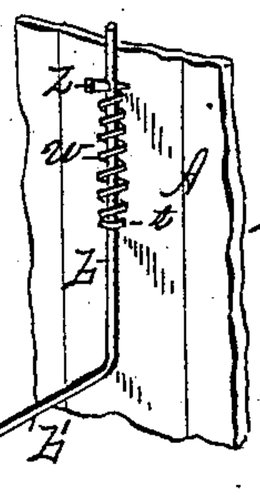


Fig 3



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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 310,082, dated December 30, 1884.

Application filed May 9, 1884. (No model.)

To all whom it may concern:

Be it known that I, DANIEL P. PRESCOTT, a citizen of the United States, residing at Vernon, in the county of Windham and State of Vermont, have invented new and useful Improvements in Car-Couplings, of which the following is a specification.

This invention relates to improvements in car-couplings, the object being to provide, in combination with a draw-bar having a link-fulcrum in its mouth, such as is shown in my patent of January 11, 1881, an improved link-pin and draw-bar to receive it, and means for raising and lowering the outer end of the link through the vertical movement of the pin operated by devices from the sides or top of the car, and to provide, in combination with said improved pin, means for holding it in an elevated position for dropping it automatically and for suspending it in the draw-bar to have its bearing-shoulder when the cars are coupled held clear of the vertical vibrations of the link due to the motion of the cars.

In the drawings forming part of this specification, Figure 1 is a view of one end of a car-body having applied thereto a car-coupling embodying my improvements. Fig. 2 is a longitudinal section, and Fig. 3 is a plan view, of the outer end of the draw-bar. Fig. 4 is a view of the coupling-pin, showing the working position of the link thereon. Fig. 5 illustrates modified means of holding up rod *b*, which may be substituted for lever *h* in Fig. 1.

In the drawings, A indicates the end of a car, provided with the usual "dead-wood," *i*, and having the draw-bar B connected therewith in the usual manner. The draw-bar B has on the lower side of its mouth a fulcrum-block, *e*, substantially like that shown in my said patent, and has an oval-shaped pin-hole, *v*, through it, instead of the usual round one, which pin-hole communicates with a narrow vertical chamber, *a'*, directly in the rear of said pin-hole. A pin-supporting latch, *s*, is pivoted in said chamber *a'*, on one side thereof, and out of the way of the web *a* on the pin *c*. The body of the coupling-pin *c* is of oval form in cross-section, and is adapted to fairly fill the pin-hole *v* in the draw-bar B, and when placed in the latter as in Fig. 1 the strain of the link is against one of its narrow edges and in a direction through its widest part below the web *a*, the working position of the link *d* on the pin being shown by the dotted lines in Fig. 4.

The coupling-pin is provided with a head, 3, which projects at right angles to the body 2, and with a web, *a*, united to the under edge of the projecting part of the head 3 and the adjoining rear edge of the pin, and extending about half-way the length of the latter, more or less. The head of the pin is perforated transversely, as shown.

To provide means for lifting the coupling-pin clear from link *d*, and for elevating and depressing the outer end of the link to guide it into an approaching coupling-mouth without going between the cars, as hereinafter described, the pin *c* is connected with the rod *b*, hung on the end of the car and having its lower end bent outward and terminating over the pin, the latter being connected with the part *b'* of said rod by the short link-rod *f*. The pin *c* is suspended in the draw-bar when in working position, as shown in Fig. 1, hanging upon rod *b*, so that it may, when not drawn upon by the link, be free to be moved up or down to work the latter, as above described, and for the purpose of counterbalancing the weight of the pin, rod *b*, and the ends of levers *n n* the lever *h* is pivoted on the car just over the dead-wood *i*, and the lower end thereof rests on the latter, and rod *b* rests on the short arm of lever *h*. The levers *n n* have their inner ends pivoted to the rod *b* at *x*, and extend through the straps *o* just beyond the sides of the car.

In Fig. 5 is shown a portion of the end of the car A and the lower end of the rod *b*, *t* being one of the eyebolts supporting said rod, through which is a pin, *z*. A coil-spring, *w*, is placed on rod *b* between the eyebolt and said pin, which may, if desired, be used in place of the lever *h* to hold the pin *c* and its rod and lever connections suspended, as aforesaid.

The operation of my improvements is as follows: When the draw-bar B is to be self-coupled to another having a link in it, the rod *b* is drawn upward by grasping its upper end or by working one of levers *n n*, and pin *c* is thereby lifted until its lower end is higher than the free end of the latch *s*, when the latter

falls forward and the pin is allowed to rest on the latch. When said moving coupling enters draw-bar B and strikes latch *s*, the latter is pushed from under the pin and the latter drops through the coupling to the position shown in Fig. 1, locking the cars together. If a draw-bar approaches one having a link therein, as in said Fig. 1, the operator by rod *b* or one of levers *n* moves pin *c* up or down, the lower end of web *a* bearing on the end of the link *d*, and the latter having a vibratory movement on the fulcrum-block *e*, and the outer end of the link is properly guided to enter the approaching mouth.

The above-described form of coupling-pin provides one of great strength. Its web *a* extends so far back in chamber *a'* that the coupling cannot push by its edge and disturb its position, and its head and strongest part only is allowed to be exposed to any blow from another car whereby it may be broken, and the pin cannot by any action of the car be made to bound out of the coupling.

What I claim as my invention is—

1. In a car-coupling, a draw-head having a fulcrum-block in its lower mouth-surface in front of the coupling-pin, a vertical coupling-pin provided with a shoulder adapted to bear upon the end of the link upon being depressed, and a connection, substantially as shown and described, from the top of the pin outside of the draw-head to operating-rods upon the end of the car-body and to a counterpoise-lever hinged upon the end of the car, adapting the pin to be depressed manually to have its shoulder bear upon the link, and operating constantly to hold the pin when the cars are in motion with said shoulder removed from contact with the link, as and for the purpose set forth.

2. The coupling-pin *c*, having a body, 2, of oval form in cross-section, and the head 3, projecting at right angles from said body, and the draw-bar B, having the oval pin-hole *v* therein, combined and operating substantially as set forth.

3. The coupling-pin *c*, having a body of oval form in cross-section, a head, 3, projecting at right angles from said body, and the web *a*, connected to said head and the adjoining side of the pin, substantially as set forth.

DANIEL P. PRESCOTT.

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