(No Model.)

A. F. CHANDLER.

CAR COUPLING.

No. 461,400. Patented Oct. 13, 1891.

Fig. 1.

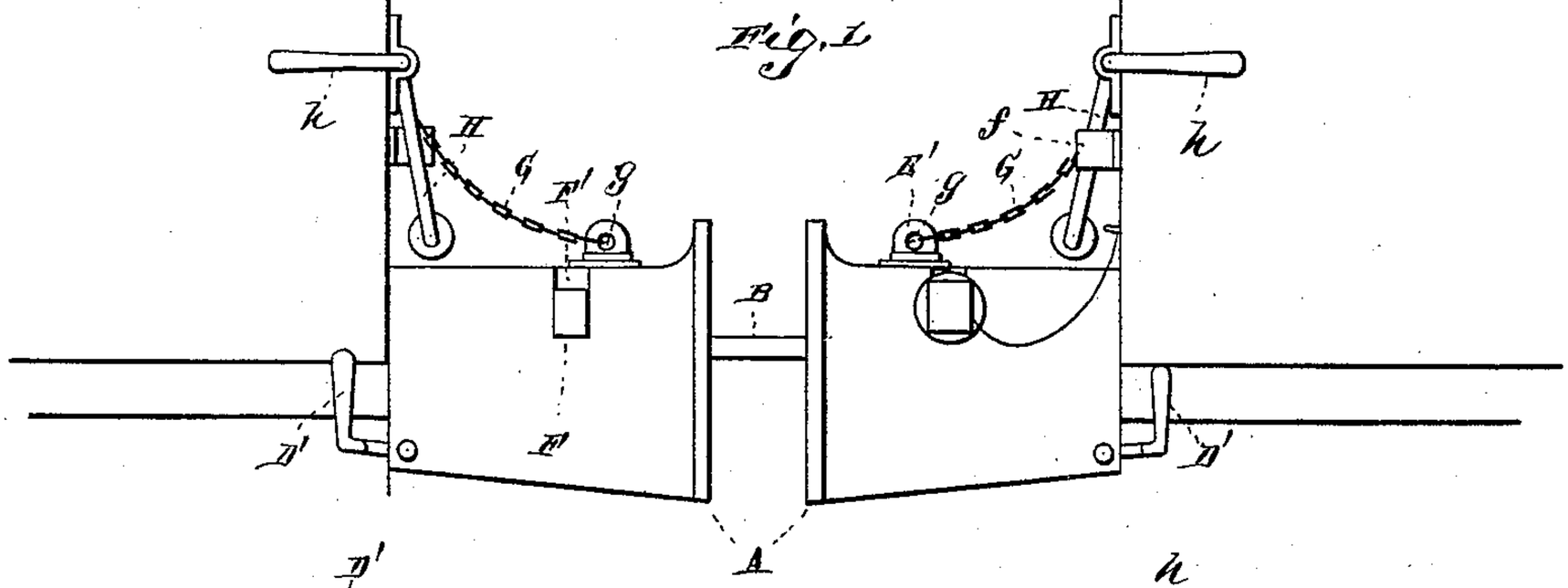


Fig. 2.

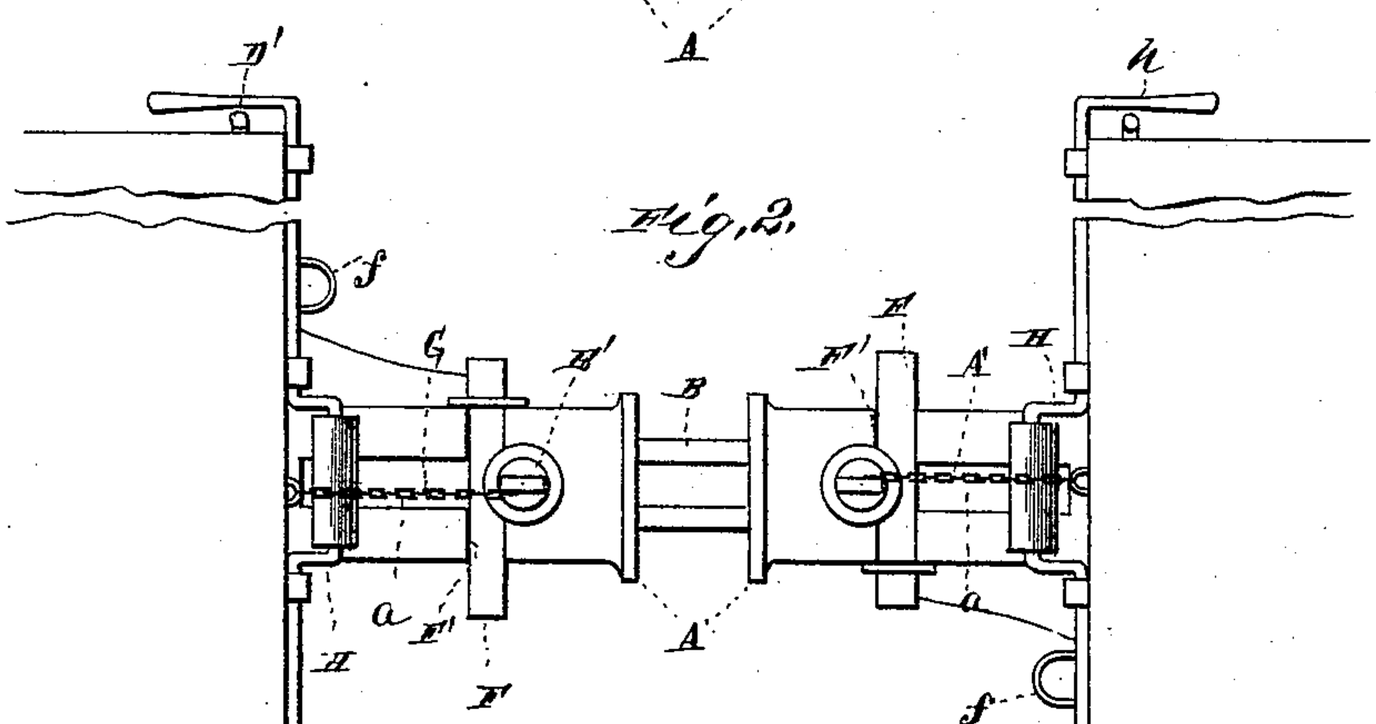


Fig. 3.

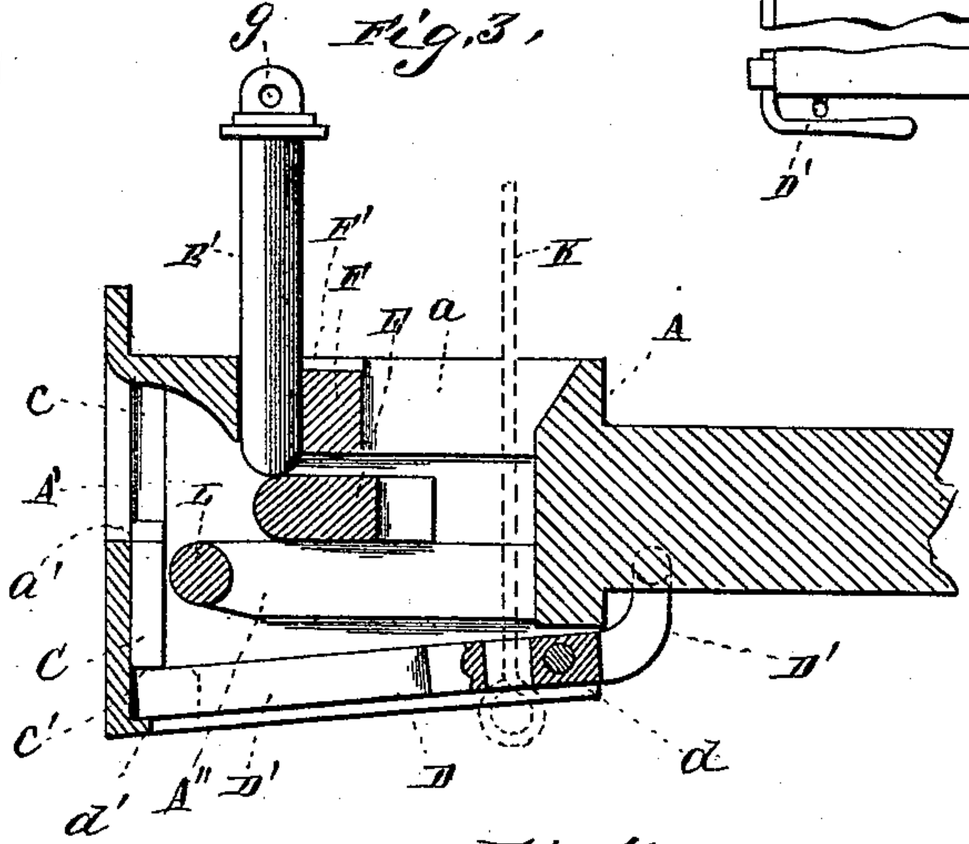
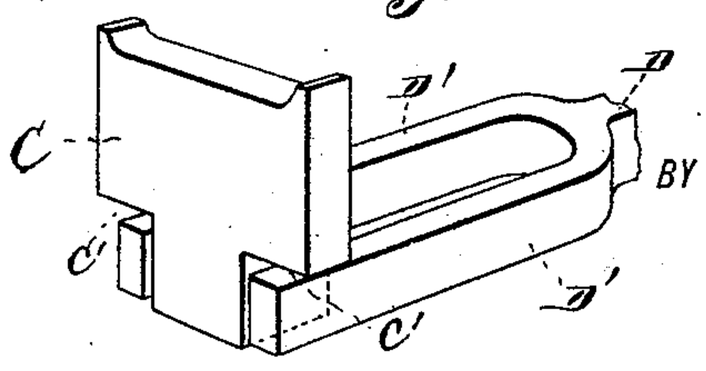


Fig. 4.



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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 461,400, dated October 13, 1891.

Application filed March 28, 1891. Serial No. 386,725. (No model.)

To all whom it may concern:

Be it known that I, ALBERT FRANCIS CHANDLER, a citizen of the United States, and a resident of Mohegan, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Car-Couplings; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a side view. Fig. 2 is a top plan view. Fig. 3 is an enlarged sectional detail view, and Fig. 4 is a detail view showing the slotted lever and link-guide.

This invention has relation to certain new and useful improvements in car-couplings, particularly to that class of such devices known as "link-and-pin;" and it consists in the novel formation, arrangement, and combination of parts, as hereinafter described.

In the accompanying drawings, illustrating the invention, the letter A designates the draw-head, mounted in the usual manner and having therein the longitudinal chamber or recess A′, the front upper portion of which is adapted to receive the coupling-link B of the usual form. This recess extends through the bottom of the draw-head and communicates with the upper surface thereof by the longitudinal slot *a*. A longitudinally-slotted horizontal partition A″ divides the recess or chamber A′ into an upper and lower portion, said partition terminating a short distance in the rear of the mouth of the link-receiving recess, leaving a space *a*′. In this space is loosely arranged a link-guide C, adapted to move vertically in grooves *c* in the side walls. The lower end of this guide is reduced to form the shoulders *c*′, which are engaged by the arms of a slotted lever D, pivoted at its rear laterally-reduced portion between the walls of a slot *d* in the lower rear portion of the draw-head, said lever having the operating arms D′ D′, extending, respectively, to each side of the car. The downward movement of this lever is limited by the shoulders *d*′, engaged by its forward end. The upper edge of the guide C is normally flush with the bottom of the link-receiving opening; but when said lever-arms are depressed to raise the forward end of the lever it will be thrown upwardly, more or less, to raise the link to the proper height to enter the opening in the draw-head of the approaching car. A movable block E is arranged to slide on the upper surface of the partition A″ in such a manner as to cut the vertical path of the pin E′; and when the parts are in uncoupled position the lower end of the said pin will rest on the upper surface of this sliding block, and thereby prevent the pin falling into locking position.

When a coupling is effected, the link (if carried by the approaching car) will enter the draw-head, striking the slide and throwing it backward, permitting the pin to at once fall through the link through the plane of which it passes, and thus making the coupling. To hold the coupling-pin in a vertical position, I use a cross-pin F, sliding in a transverse slot F′, which is located at the rear of the pin-passage, said cross-pin bearing against the coupling-pin and preventing its falling out of vertical position. This cross-pin is connected by a cord or chain to the car, and when not in use is held in an eye-bracket or keeper *f* on the car.

The upper end of the coupling-pin has a ring or eye *g*, and to this is connected a flexible link or chain G, secured at its upper end to the car. A bail-lever H is hung on the car-frame, and by operating its arms *h*, extending to the opposite sides of the car, this lever will be elevated, raising the chain or link G, and thereby drawing the coupling-pin from its locking engagement.

Instead of the handles or arms D′, by the operation of which the link-guide is elevated to adjust the link to cars of different heights, a connection K may be made with the lever D in front of its pivotal point, said connection extending up through the rear of the recess or chamber A′, a slot being formed in the sliding block E for its passage, its upper end connected suitably with the bail-lever H, which raises the coupling-pin. By this means

the link may be elevated by the operation of this lever, dispensing with the arms D′ D′.

The coupling-pin and the cross-pin F are designed to be made so that they can be used interchangeably, if desired.

In the forward end of the slotted partition A″ is a wrought-iron bar L to receive and withstand the strain on the pin.

By the device above described a safe and effective coupling is provided, rendering it unnecessary to pass between the cars either in coupling or uncoupling. The device will also be seen to be especially applicable to freight-cars by reason of its mechanism for elevating the link to accommodate it to various heights of cars, the parts all being adapted to receive bearing strain.

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

1. In a car-coupling, the draw-head having its recess or chamber formed into an upper and a lower portion by a slotted partition, a sliding block in said upper portion, and a link-guide-operating lever in said lower portion, substantially as specified.

2. The draw-head having the longitudinally-slotted horizontal partition terminating a short distance to the rear of the mouth of the link-receiving recess, leaving a space *a′* thereat, a vertically-reciprocating link lifter or guide sliding in said space and provided with shoulders adapted to be engaged by a pivoted lever, and means for operating said lever and limiting its downward movement, substantially as specified.

3. The draw-head having the recess or chamber, the coupling-pin working in said recess, and the cross-pin for holding said coupling-pin in a vertical position, substantially as specified.

4. The draw-head having the recess or chamber, the slotted partition therein, and the pin-supporting block sliding on said partition and adapted to be engaged and thrown backward when in operating position by the link, substantially as specified.

5. The draw-head having the upper and lower chambers separated by a slotted partition, the block sliding upon the upper surface of said partition and intersecting the path of the pin during a portion of its movement, the cross-pin for holding said coupling-pin in a vertical position, and means for withdrawing said coupling-pin from coupling engagement, substantially as specified.

6. The draw-head having the slotted partition in its recess or chamber, said partition terminating a short distance to the rear of the link-receiving aperture, and the vertically-sliding link-guide arranged in said space, in combination with the lever engaging shoulders on said guide, substantially as specified.

7. The draw-head having the slotted partition in its recess or chamber, said partition terminating a short distance to the rear of the link-receiving aperture, and a wrought-iron bar arranged thereat to receive the strain of the pin, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT FRANCIS CHANDLER.

Witnesses:
JOSEPH BEAUMONT,
WILLIAM ORRELL.