(No Model.)

A. CARLSON.

CAR COUPLING.

No. 491,698. Patented Feb. 14, 1893.

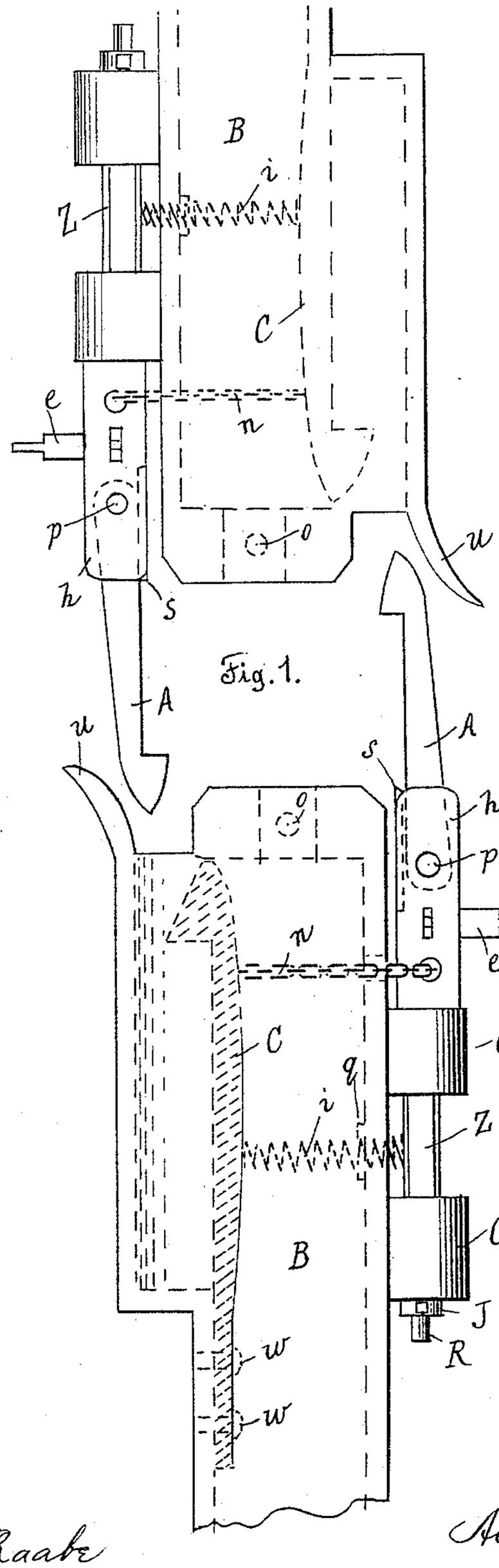

Fig. 1.

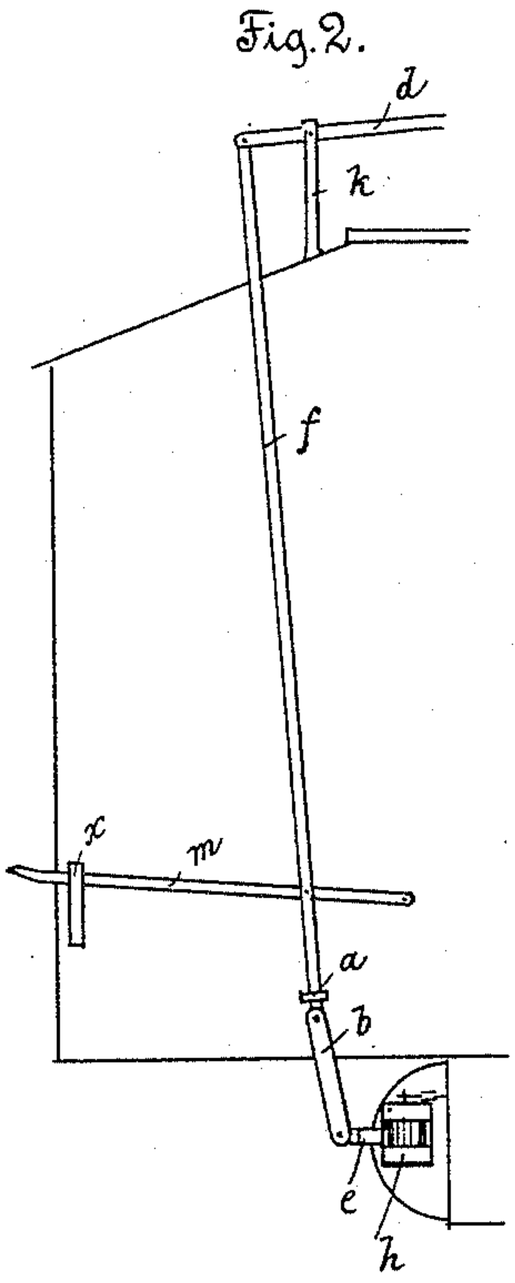

Fig. 2.

Witnesses:
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Inventor:
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UNITED STATES PATENT OFFICE.

AUGUST CARLSON, OF PEORIA, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 491,698, dated February 14, 1893.

Application filed April 30, 1892. Serial No. 431,317. (No model.)

To all whom it may concern:

Be it known that I, AUGUST CARLSON, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in car-couplers by means of which a car-coupler is provided, being simple in construction, durable and effective for the purpose designed.

More particularly my invention relates to an automatic device purposed to couple by mere contact or by the draw bars being brought together and is accomplished by means of certain hooked-headed pivoted levers acting in conjunction with correspondingly hooked-headed spring levers whereby the connection or coupling process is performed.

That my invention may be more fully understood, reference is had to the accompanying drawings in which:

Figure 1 shows the draw head in duplicate and in position to be locked or coupled by being borne forward until drawheads contact. Fig. 2 shows the means of unlocking or uncoupling the device either from the top of the car or from the side.

In the drawings, B—B are draw-heads and are purposed to be connected with the cars in the usual manner. They are constructed internally in hollow form but of sufficient strength for all practical purposes.

A—A are hooked bars pivoted as at (*p—p*) and secured to the plate (*h*), the said plate being recessed to provide for the reception of the said bars; the plate (*h*) continuing backward, is journaled in the shoulders G—G′; Z being a square portion of the bar, against which the spring (*i*) is designed to bear.

C—C are hooked spring bars secured to the sides of the draw head, as at (*w—w*).

(*n—n*) are chains attached to the free ends of the spring-bars C—C and also attached to the plates (*h—h*).

(*e—e*) are extensions from and secured to the plates (*h—h*).

S—S are springs purposed to hold the hooked bars A—A in position.

(*u—u*) are guide flanges.

(*o—o*) are perforations in the ends of the draw bar to provide for use of link and pin, provided such uses are necessary there being of course provided a slot as shown in the middle portion or body and at the ends of the draw bars to provide for the reception of the link.

In using my improved coupler, it is first apparent that the proportion of the draw-head may not be larger than that of the ordinary and may, in fact be made smaller. The same means for attachment to cars are employed as in the usual coupler which provides sufficient up and down play between the two draw-heads.

In operation for the purpose of coupling, the elemental parts of the device having been adjusted as herein shown and the draw-heads borne forward, the hooked bars A—A will contact with and depress the hooked spring levers C—C until, the shoulders pass and the spring levers C—C reacting secure the hooked bars A—A firmly within the respective draw-heads, thus effectually coupling the cars and providing sufficient play room or space to facilitate the easy starting of the cars. Any tendency of the hooks to become unhooked or the cars uncoupled is overcome by the strong leaf or bar spring C, and also by the pressure of the springs (*i—i*) to release the coupling is very simple and is accomplished by merely turning the plate (*h*) from the horizontal to a perpendicular position which is accomplished by pressure on the extension (*e—e*,) this turning of the plates (*h—h*) will reverse the position of the hooked bars A—A and also the position of the hooked spring plates C—C, the same being drawn backward by the chain (*n—n*) being wound upon the plates (*h—h*) thus providing a ready release or uncoupling of the draw-head and as soon as the uncoupling process has been performed and the extensions (*e—e*) has been released, the respective parts of the device return im-

mediately to the original positions and are ready again to undergo the coupling process. In some instances as has heretofore been mentioned, it may be found necessary to use the link and pin and in such emergency the hooked bars A—A may be swung out outwardly to free them from contact with the approaching draw heads and they will be held in these positions by means of the springs S—S.

It will be seen from the device and in its structure that a large provision has been made for the shifting of the cars' unequal motions and for the turning of abrupt curves, this device being especially adapted to overcome the disadvantages possessed by other couplers in these particulars. Should one of the bars become released, the connection at one side is sufficient to maintain a firm coupling independent of the action of its opposite side.

In Fig. 2 is shown a means for operating the device from the side or top of the car in which figure, (*b*) shows a connection with the extension (*e*) which forms a toggle joint with the long bar (*f*) which said long bar is pivoted to the lever (*d*) which said lever is supported by the upright (*k*); *m* is a bar pivoted to the car and to the long bar (*f*) and held in the clasp (*x*). Now by depressing either of the said levers (*m*) or (*d*) the uncoupling process is performed but I do not wish to be confined to this specific means of carrying out the uncoupling process but that any suitable device may be used that will perform the office satisfactorily.

Having thus fully described my invention, what I claim and desire to secure by Letters Patent is:

1. In a car-coupler the combination with the draw-head of the pivoted hooked bar A, the turn plate *h*, carried in the lugs G—G′, the spring notched bar C, secured within the body of the draw head and adjacent to a recess therein, all substantially as described and set forth.

2. In a car-coupler the combination with a draw head of the pivoted hooked bar A secured to the turn plate *h*, which said plate is journaled as at G—G′ to turn and with the spring S, to hold the bar A in place, the spring hooked bar C connected with the turn plate *h*, by means of the chain *n*, the spring *i*, the extension *e*, to which may be connected the operating means consisting of the bars *b*—*f*—*m*—*d* suitably pivoted and supported, all substantially for the purpose described and set forth.

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

AUGUST CARLSON.

Witnesses:
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