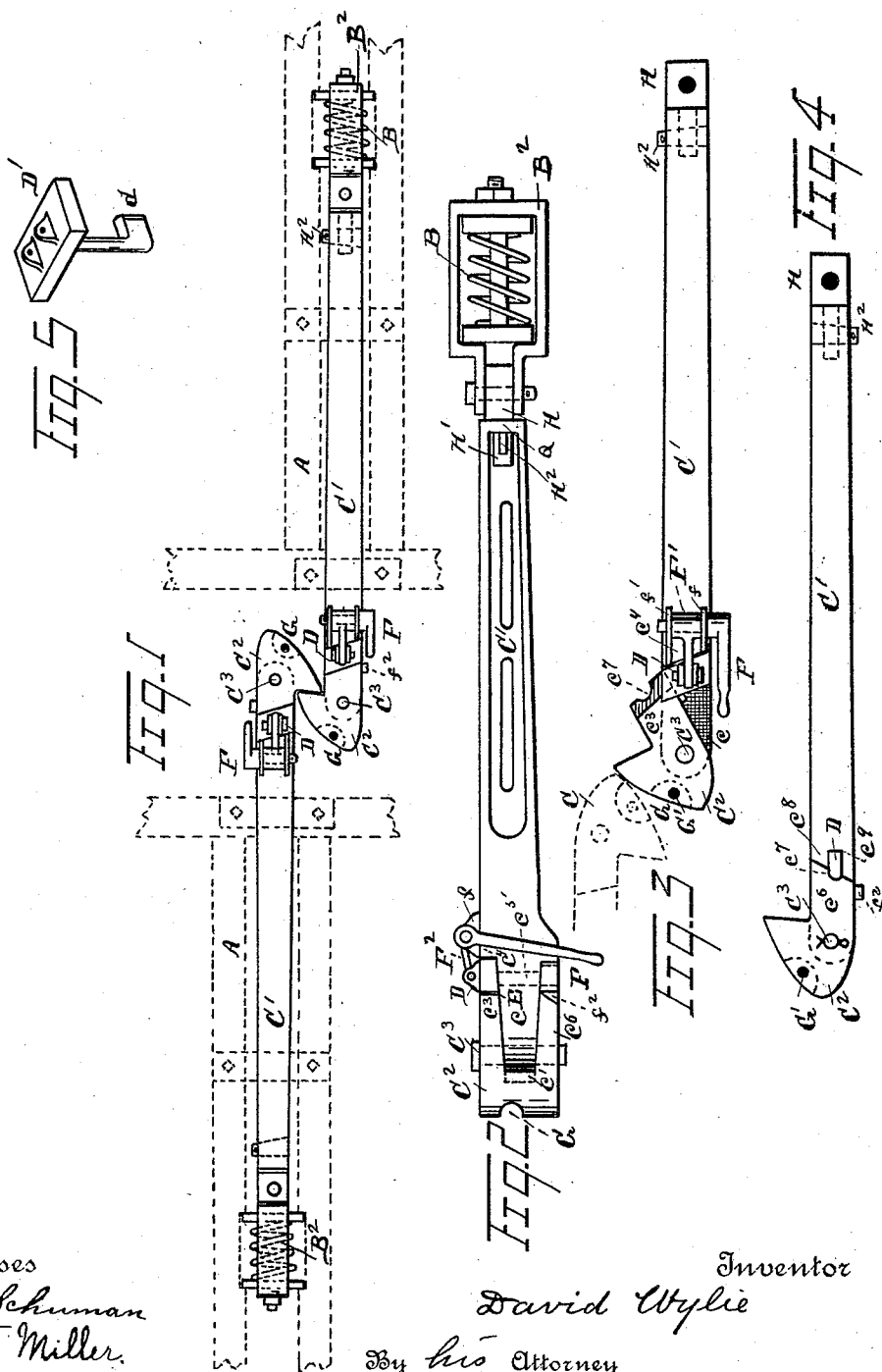


(No Model.)

D. WYLIE.
DRAW BAR FOR PASSENGER CARS.

No. 444,190.

Patented Jan. 6, 1891.



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UNITED STATES PATENT OFFICE.

DAVID WYLIE, OF DETROIT, MICHIGAN.

DRAW-BAR FOR PASSENGER-CARS.

SPECIFICATION forming part of Letters Patent No. 444,190, dated January 6, 1891.

Application filed September 25, 1890. Serial No. 366,141. (No model.)

To all whom it may concern:

Be it known that I, DAVID WYLIE, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Passenger Draw-Bars; and I 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, which form a part of this specification.

My invention relates to certain new and useful improvements in passenger draw-bars for railway-cars; and it consists of the devices and appliances, their combinations, and arrangements, as hereinafter specified and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view illustrating my invention. Fig. 2 is a side elevation of one of the bars. Fig. 3 is a plan view showing the hooks uncoupled. Fig. 4 is an inverted plan, and Fig. 5 is a detail view of the locking pin or bolt.

My invention has for its object a simpler, more efficient, and more economical construction of draw-bars for passenger-cars, as well as one more convenient and satisfactory in its operation.

I carry out my invention as follows:

A represents the customary draw-bar timbers.

B is the customary spring engaged with the rear of the draw-bar.

C denotes my improved draw-bar, constructed of web C', extending rearward to engage the spring-yoke B².

C² is the draw-bar hook, having a pivotal or jointed engagement with the forward end of the web C', as shown at C³. To this end the forward extremity of the web is constructed with a tongue c, the hook being correspondingly recessed, as shown at c', to receive the tongue, the pin C³ forming the pivotal union of the one with the other, allowing the hook to swing laterally about the rounded end of said tongue.

D is a locking-pin to hold the hook in normal position, as when the draft is applied thereto. The pin is constructed with a head D', which in its normal position drops into

an orifice E above the rear of the tongue c, between the shoulder c⁴ of the web and a shoulder c³ on the hook above the recess c'. This orifice or recess E is preferably made of angular form across the bar, the shoulder c³ of the draw-hook and the shoulder c⁴ of the web being constructed of angular form and separated to form said recess to receive the head of said locking-pin. The tongue is constructed with a through-hole at c⁵ to receive the locking-pin. The lower shoulder c⁶ of the hook is preferably made longer than the upper shoulder c³ and recessed, as shown at c⁷, to receive the forward edge of the lower end of the locking pin or bolt, the lower shoulder c⁸ of the web being provided with a corresponding recess, as at c⁹, for the rear edge of said pin. The locking-pin is preferably constructed at its lower extremity with an arm d, forming a sort of a key, preventing the accidental disengagement of the locking-pin from the tongue.

In Fig. 3 the pin is shown lifted to allow the swinging of the hook. When so lifted, it is evident that a pull upon the hook will cause it to swing about laterally, thus carrying the hooks out of alignment and allowing the hooks of two adjacent cars equipped with my improved draw-bar to uncouple. It will also be observed in viewing said figure that when the hook is swung laterally, as in uncoupling, the shoulder c³ rides under the head of the lifted pin D, supporting the pin and leaving the hook free to couple. The coupling of two hooks of this construction is effected simply by their contact the one with the other, causing their respective hooks to swing back into normal position, thereby carrying the shoulder c³ out from under the head of the pin D, permitting it to drop and lock the hooks in normal position. When uncoupled, therefore, two bars of this description on adjacent cars are always in position to be coupled without further attention by the movement of the car.

To lift the pin D for uncoupling a couple of draw-bars of this description each, is provided with an operating-lever F, suitably engaged with the pin D. As shown, the web is provided with shoulders f, f', in which is journaled a spindle F', provided with an arm F², engaged with the head of the locking-pin.

To this spindle the lever F is connected. By throwing the lever in the proper direction the pin is thus readily lifted.

To hold the pin in a lifted position, so that the cars may be drawn apart, I provide, as shown in Fig. 1, a flange f^2 , which may be cast integrally with the hook, upon which the lever may be supported properly when the pin is lifted, the support being of such a nature as not to interfere with the dropping of the pin when the cars are to be coupled together. By casting the supporting-flange upon the lower portion of the hook it will be seen that when the hook swings about in uncoupling the flange is carried away from in under the lever, allowing the pin to drop when two bars come together for coupling. The hook may be recessed, as shown at G, to receive an ordinary coupling-link, and perforated, as shown at G', to receive an ordinary coupling-pin, when it is desired to couple a car equipped with my invention with a car provided with only the ordinary coupling link and pin.

At the rear end of the web the customary connection of the spring B therewith causes a very considerable wear, draw-bars being ordinarily provided with an eye cast integrally therewith for the engagement of the spring-yoke B² therewith. When the eye becomes worn too much, the whole draw-bar is made useless and must be replaced. To this end I provide, preferably, a wrought-iron tail-piece H, constructed with an eye to engage the spring-yoke B². This tail-piece I engage reversibly with the draw-bar in any proper manner, so that when too much worn simply the tail-piece needs to be replaced. As shown, the tail-piece is constructed with a shank H' passed through a cross-piece Q in the rear end of the web, said shank being provided with a key H² to lock it in position. By removing the key the tail-piece may be removed and readily replaced, thereby effecting a very great saving in expense. The simplicity and efficiency of this method of construction are apparent.

The pin D may readily be operated from any desired position by a corresponding form and position of the operating-lever. The matter of lifting the locking-pin would ordinarily be attended to at the same time as the uncoupling of the air-brake pipes, and for this reason the operating-lever F is shown in a convenient position for that purpose. I do

not, however, limit myself to any specific construction and arrangement of the operating-lever, as I contemplate any suitable operating-lever as coming within the scope of my invention.

My improved bar will couple readily with any hooked draw-bar with equal facility as with a companion bar of like construction—a matter of considerable importance.

What I claim as my invention is—

1. In a draw-bar, the combination of the web, the hook jointedly engaged therewith, and a locking-pin constructed with an angular-shaped head extending angularly across the web at the rear of the hook, substantially as described.

2. In a draw-bar, the combination of a web provided with a tongue, a hook recessed to receive said tongue and jointedly engaged therewith, a headed locking-pin engaged in the web at the rear of said hook, and an operating-lever to raise the bolt, substantially as described.

3. In a draw-bar, the combination of a web, a hook jointedly engaged therewith and provided with a shoulder c^3 , a locking-pin located in said web at the rear of said hook, and an operating-lever connected with said pin, the construction and arrangement being such that when the bar is in an unlocked position said shoulder c^3 will ride under the head of said bolt and support the pin in a position to permit the coupling of the hook, substantially as set forth.

4. In a draw-bar, the combination of the web, the swinging hook, the operating-lever, and a locking-bolt, said bolt constructed with an angular-shaped head and an arm d , substantially as set forth.

5. In a draw-bar, the combination, with a web constructed with a tongue and a shoulder, of a swinging hook constructed with a shoulder c^3 and a locking-bolt having an angularly-shaped head located between said shoulders in its normally-locked position, said shoulder c^3 riding under said head in uncoupling the hook, substantially as set forth.

In testimony whereof I sign this specification in the presence of two witnesses.

DAVID WYLIE.

Witnesses:

N. S. WRIGHT,
N. D. WRIGHT.