

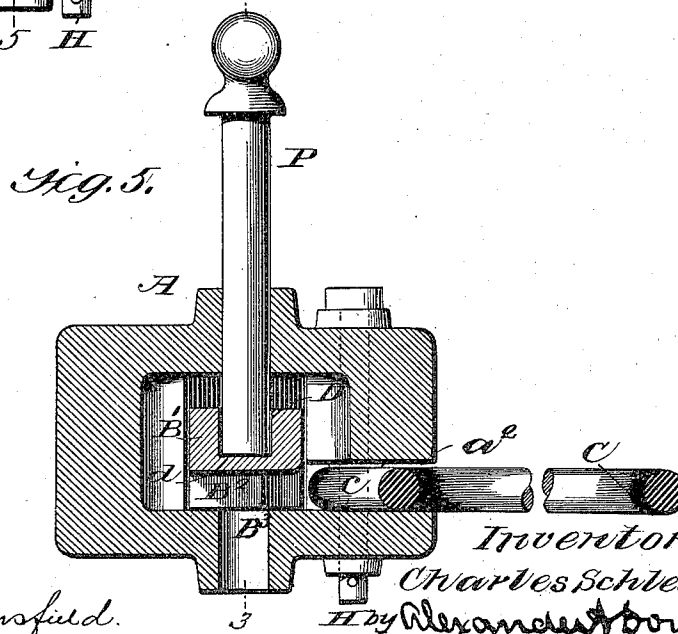
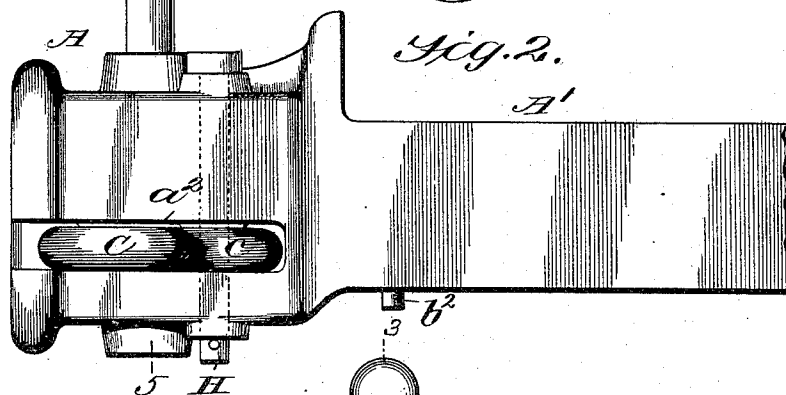
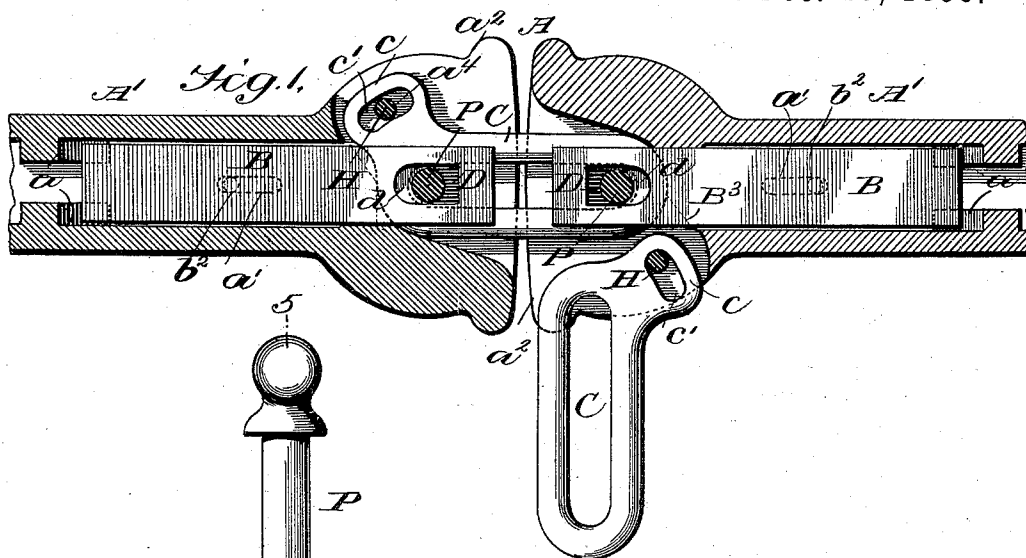
(No Model.)

2 Sheets—Sheet 1.

C. SCHLEICHER.
CAR COUPLING.

No. 573,043.

Patented Dec. 15, 1896.



WITNESSES

Jos. E. Stack.

James R Mansfield.

Inventor

Charles Schweicher

H by Alexander Bowell

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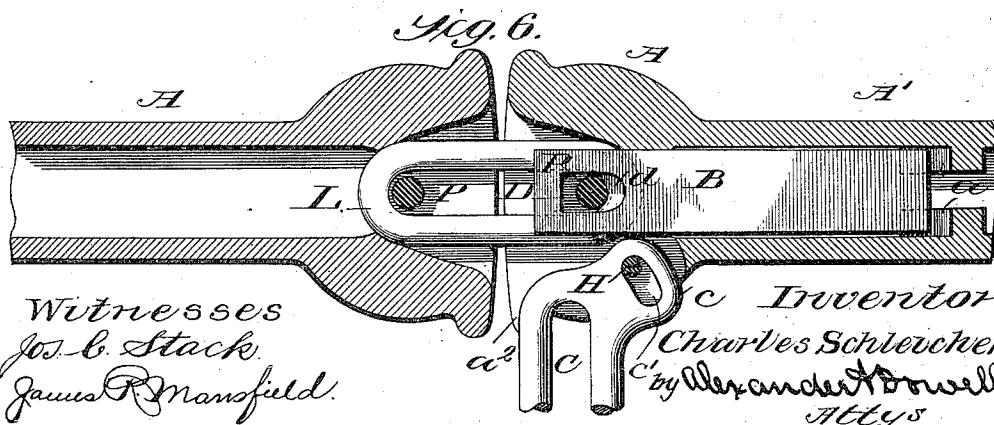
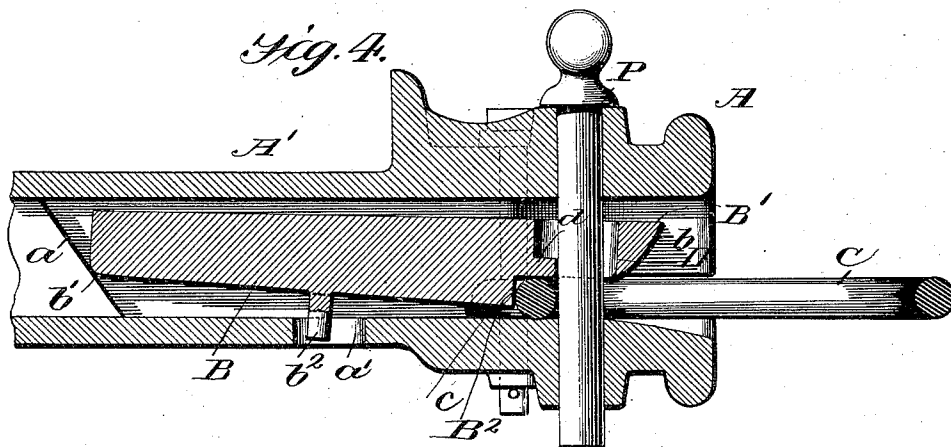
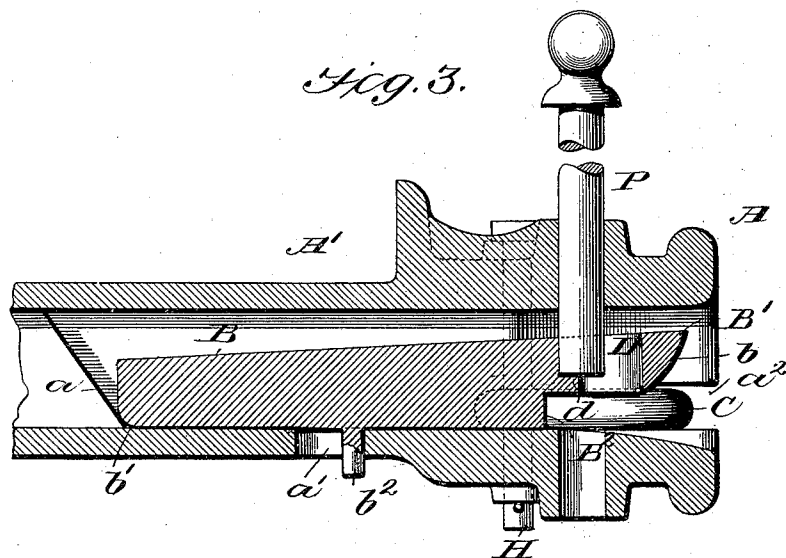
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Witnesses
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James R. Mansfield.

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UNITED STATES PATENT OFFICE.

CHARLES SCHLEICHER, OF LOUISVILLE, KENTUCKY, ASSIGNOR OF ONE-HALF TO JOHN HENRY SUMSER, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 573,043, dated December 15, 1896.

Application filed May 28, 1896. Serial No. 593,436. (No model.)

To all whom it may concern:

Be it known that I, CHARLES SCHLEICHER, of Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Car-Couplings; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is an improvement in pin-and-link car-couplings; and its objects are to provide the draw-bar with a laterally-swinging link which is hinged thereto; also, to provide means for upholding the pin in the act of and prior to the coupling being effected and to enable the link to be held in any position to which it is adjusted ready for coupling.

The invention consists in the combination of a draw-bar and a hinged link and in certain other novel features of construction and combinations of parts hereinafter described and claimed.

Referring to the accompanying drawings, Figure 1 is a longitudinal horizontal section of a pair of draw-bars provided with my improved coupling mechanism, the interior parts being shown in full lines. Fig. 2 is an enlarged side view of one draw-bar. Fig. 3 is a central longitudinal vertical section on line 3 3, Fig. 2, the tumbler and pin being shown in position prior to entry of link. Fig. 4 is a similar view showing the parts in position after entry of link. Fig. 5 is a cross-section on line 5 5, Fig. 2. Fig. 6 is a detail sectional view, like Fig. 1, showing an ordinary link employed.

Each draw-bar A is in general appearance like an ordinary pin-and-link draw-bar. Its stem A' is hollow, however, and preferably rectangular in cross-section, and on the sides thereof, near the rear end and within the throat, are upwardly and rearwardly inclined guides a , and in the bottom thereof, about centrally of the throat, is a slot a' , and one side of its head is slotted, as at a^2 , to accommodate a hinged link C, hereinafter referred to.

Within the throat is a tumbler B, which is substantially rectangular in cross-section and extends from the guides a to the front end of

the draw-bar. It has a forwardly-projecting head B' on its front end, which lies above the floor of the draw-bar and projects forward to and beyond the pin-openings a^2 in the draw-bar, and its front end is upturned or rounded upwardly, as at b , so as to facilitate the slipping of the end of the link thereunder. The lower edge of the rear end of the tumbler is slightly rounded, as at b' , so as to facilitate its riding up on the inclines a .

In the head of the tumbler and about in line with the pin-openings a^2 is a slot D, and at the rear end and bottom of slot D is a shallow ledge d , which when the tumbler is in normal position and no link inserted thereunder serves as a pin-support, as indicated in dotted lines, Fig. 3.

At the junction of head B' to the body of the tumbler is a shoulder B², against which the incoming link strikes, and one corner of this shoulder is cut away, as at B³, to accommodate the swinging link. On the bottom of the tumbler is a stud b^2 , which engages the slot a' in the bottom of the draw-bar.

The weight of the tumbler when no link is in the draw-bar causes it to assume the position shown in Fig. 2, and a pin P, inserted through the upper pin-opening, will catch on ledge d and be upheld.

When, in coupling, the end of a link enters the draw-bar, it slides under the end B' and strikes against the shoulder B² just in front of rib B³, and the impact forces tumbler B backward, and its rear end rides up on guides a , while its head or front end tilts down, thereby withdrawing ledge d from under pin P, and the latter drops through the link, as indicated in Fig. 4, effecting the coupling. As soon as the link is pulled outward the tumbler drops and oscillates by gravity into the position shown in Fig. 6, the ledge d then serving as a biting edge to retain the pin P in place, while the overreaching head B' of the tumbler holds the link in a horizontal position, or in any other position to which it is forcibly adjusted, so that it can be set to couple high or low.

As one great nuisance of pin-and-link couplings is the liability of the links to be lost, I have constructed the coupling with a hinged link C, which does not have to be removed

from the draw-bar, but can be swung into or out of position like the swinging jaws of the Janney-type couplings. This feature of my improvement consists in forming the link C with a lateral lip c at one end, said lip having an elongated slot c' in it for the passage of a hinge-bolt H, which is passed through vertical openings a^3 in the draw-bar near the rear end of slot a^2 , in which slot the link lies, as shown. When in use, the link C is swung to one side, as indicated in Fig. 1, lying at right angles to the draw-bar, but in rear of the front edge thereof, so as not to interfere with the draw-bar being used as a bumper or its coupling with another link. When in use, the link C is swung round in line with the draw-bar. In so doing its rear end passes under head B' of tumbler B and lifts the latter, allowing the pin to drop and lock the link C, the pin taking the draft strain, except in cases of necessity when the pin is broken.

The hinge connection of link C to the draw-bar is sufficiently loose or free as to allow for the vertical and lateral oscillations or vibrations of the link incident to usage thereof without injury to the link or its hinge-pin.

In Fig. 6 I have illustrated how the link C can be thrown back and the draw-bar coupled by an ordinary link L.

By hinging the link C to the draw-bar it is always accessible, and the loss of time in hunting up links is avoided. The pin b^2 limits the longitudinal play of the tumbler.

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

1. The combination of a draw-bar having a transverse slot in one side of its head extending through the side wall thereof; with a link hinged at one end to the draw-bar within the slot whereby the link can be turned into position for use within the draw-bar, or swung out of the draw-bar, and means adapted to engage and hold the link when it is in position for use and relieve its hinge of draft strain, for the purpose and substantially as described.

2. The combination of the draw-bar A having open slot a^2 in its side; with the laterally-swinging link C hinged at its end within the slot a^2 , and means for locking the link when swung inward and relieving its hinges of draft strain; for the purpose and substantially as described.

3. The combination of a draw-bar having a transverse slot in one side of its head extending through the side wall thereof, with a link hinged at one end to the draw-bar within the slot, whereby the link can be turned into position for use within the draw-bar, or swung out of the draw-bar, and the tumbler

B having projecting head B' adapted to bite the inner end of the link when it is swung into the draw-bar, for the purpose and substantially as described.

4. The combination of the draw-bar A having open slot a^2 in its side, with the laterally-swinging link C, hinged at its end within the slot a^2 , the pin, and the tumbler B having projecting head B', all substantially as and for the purpose set forth.

5. The combination of the draw-bar having a slot in one side of its head, the laterally-swinging link having a slotted lip at one end and the hinge-bolt transfixing said lip and securing the link to the draw-bar, substantially as and for the purpose set forth.

6. The combination of the draw-bar having a slot in one side of its head, the laterally-swinging link having a slotted lip at one end and the hinge-bolt transfixing said lip and securing the link to the draw-bar, with the locking-pin, and the tumbler, all substantially as and for the purpose set forth.

7. In a car-coupling, the combination of the draw-bar and pin and link, with the tumbler having a head projecting beyond the pin-openings of the draw-bar, and having a slot in its head for the passage of the pin, and a pin-upholding ledge in the slot, substantially as and for the purpose described.

8. In a car-coupling, the combination of the tumbler having a head provided with a slot and pin-upholding ledge in the slot substantially as described, and a pin on its bottom engaging a slot in the draw-bar; with the draw-bar having inclined guides for the rear end of the tumbler, and the pin and link, all substantially as and for the purpose described.

9. The combination of the draw-bar having guides a , and pin-openings substantially as described; with the tumbler B having up-turned head B' provided with slot D, and ledge d ; substantially as and for the purpose described.

10. The combination of the draw-bar having guides a , and pin-openings substantially as described; with the tumbler B having up-turned head B' provided with slot D, and ledge d ; and the pin on the tumbler engaging a slot in the draw-bar to limit the motion of the tumbler, and the pin and link all substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

CHARLES SCHLEICHER.

In presence of—

A. G. RONALD,
JOHN B. BASKIN.