(No Model.) 2 Sheets—Sheet 1.

C. SCHLEICHER.

CAR COUPLING.

No. 561,527. Patented June 2, 1896.

Fig. 1.

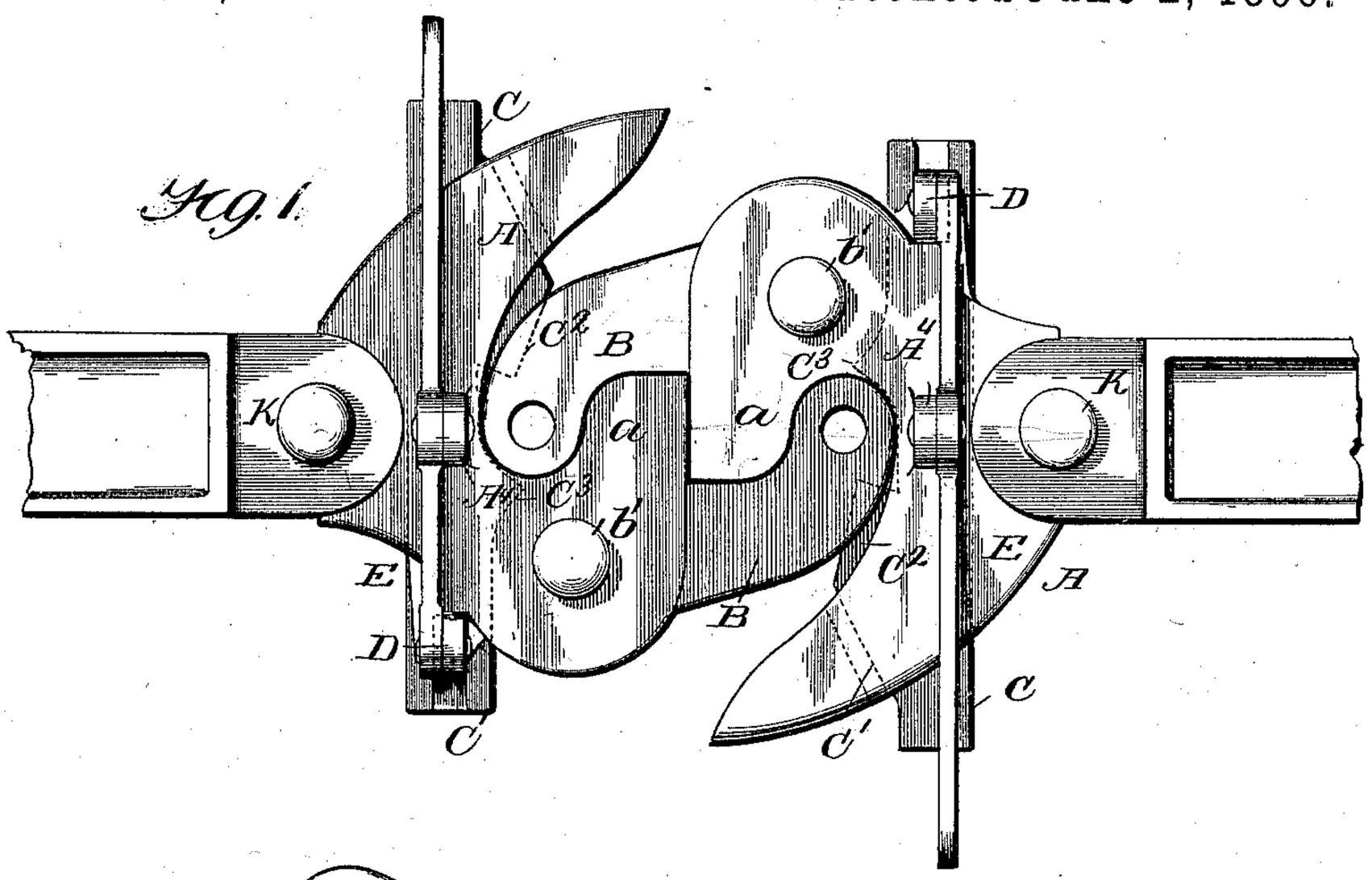
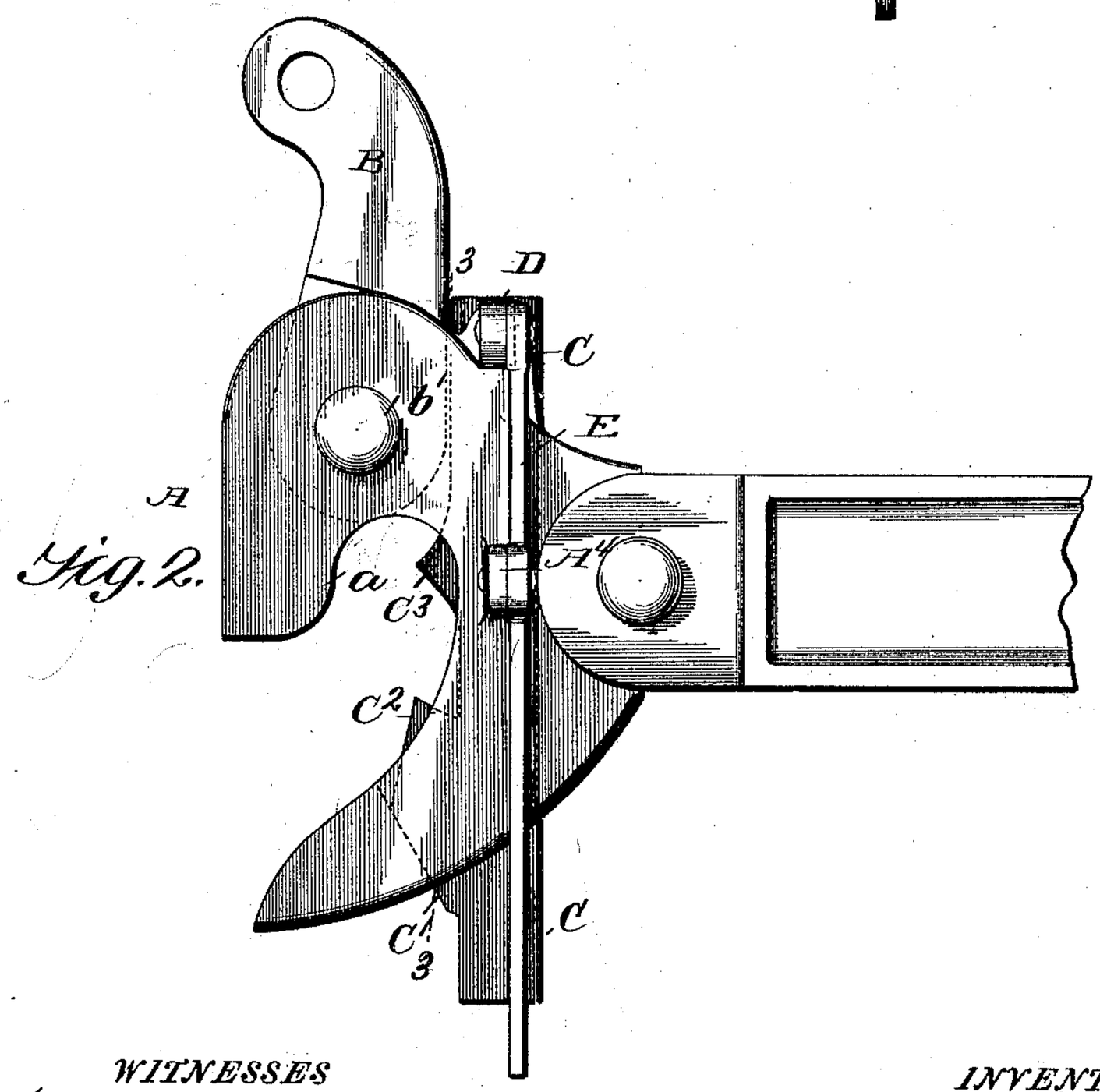


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3

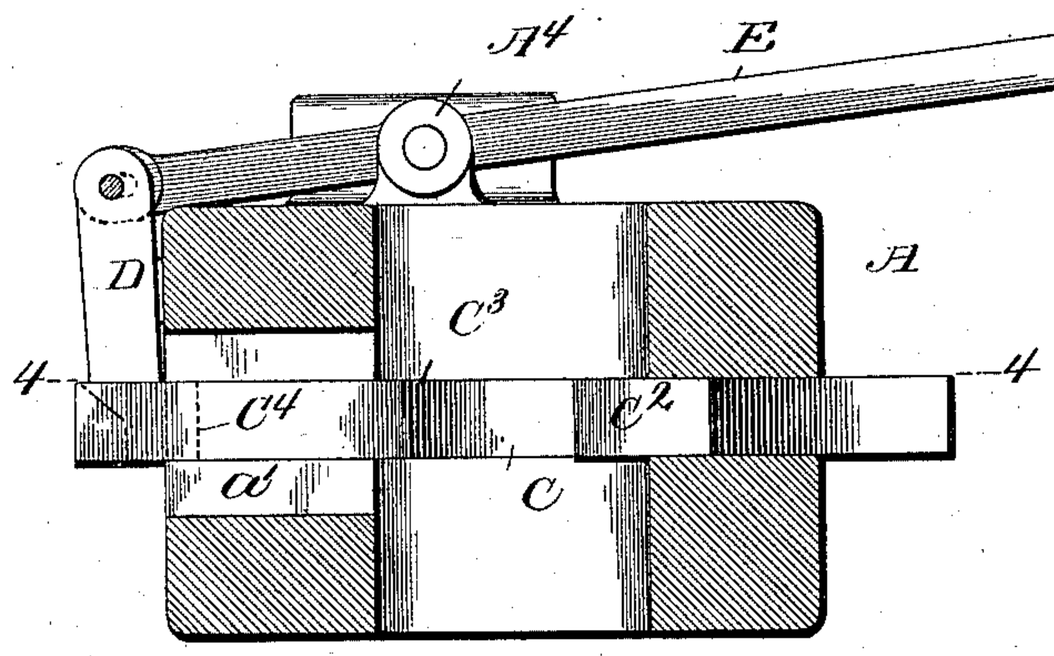


Fig. 4.

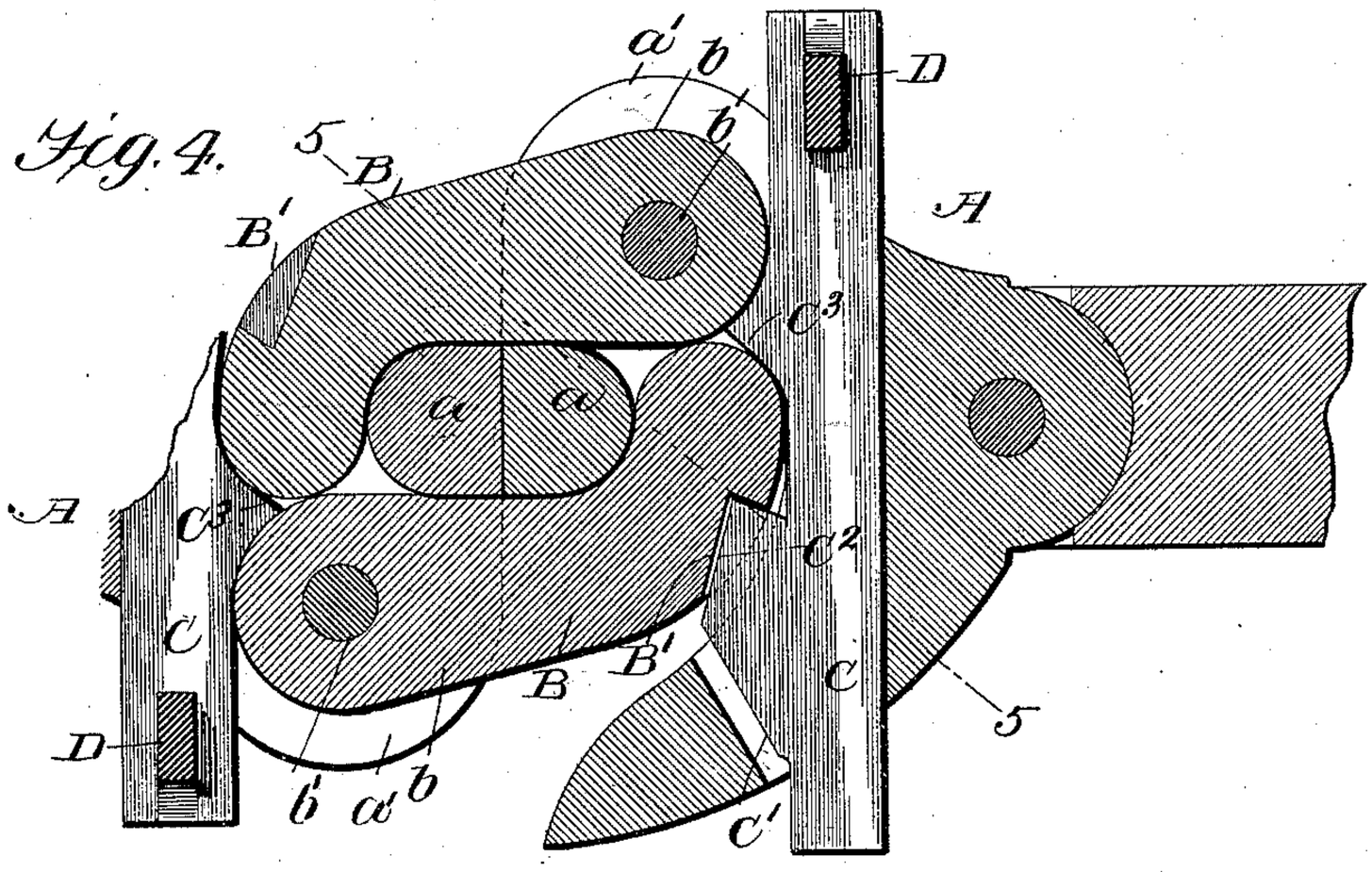
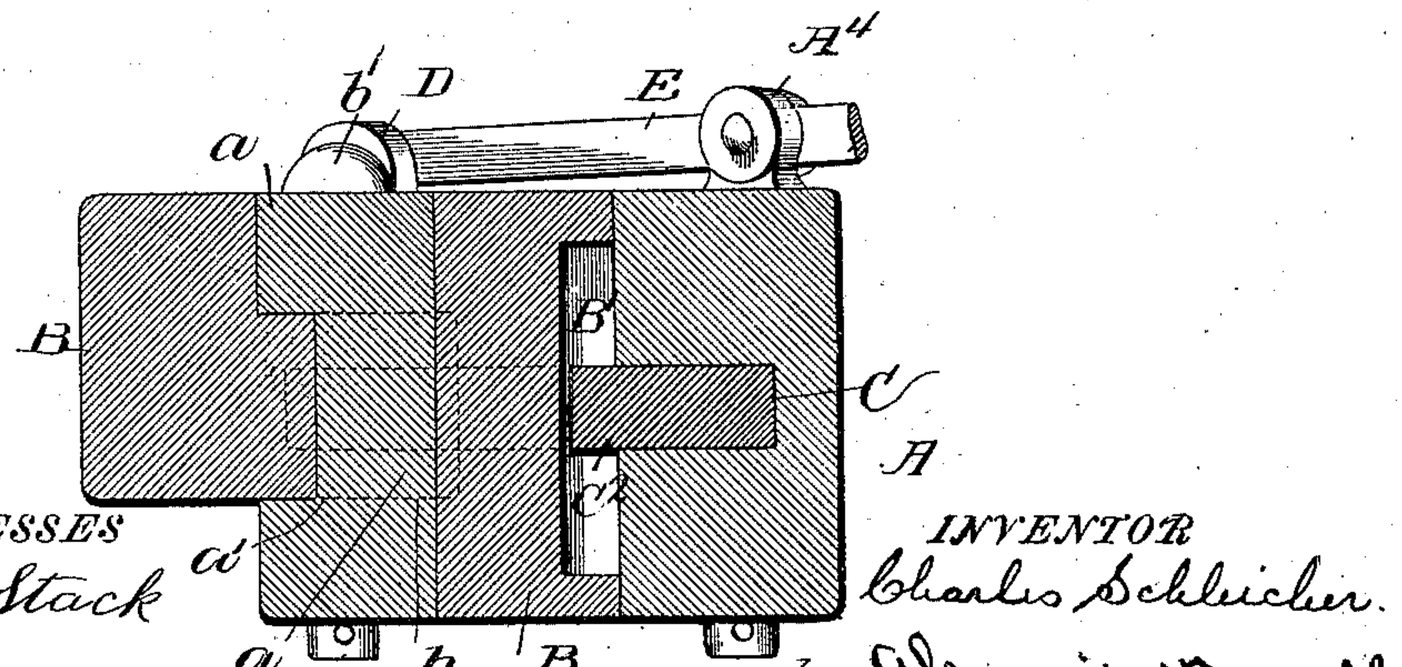


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES SCHLEICHER, OF LOUISVILLE, KENTUCKY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 561,527, dated June 2, 1896.

Application filed January 14, 1896. Serial No. 575,497. (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 do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention is an improvement in car-couplings of the twin-jaw type; and it consists in the novel construction of the coupling-head and swinging jaw, and in novel devices for locking the swinging jaws, and in other minor details of construction and combinations of parts hereinafter described and claimed.

The best form of the coupling now known to me is constructed as illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of two couplings interlocked or coupled. Fig. 2 is a plan view of one of the couplings detached with the swinging jaw thrown back. Fig. 3 is a transverse section on line 3 3, Fig. 2, showing the jaw-locking devices in elevation. Fig. 4 is a horizontal section on line 4 4, Fig. 3, with the jaw coupled. Fig. 5 is a diagonal vertical transverse section on line 5 5, Fig. 4.

The draw-bars A resemble in plan an ordinary Janney-type coupler closed; but in my invention the hook portion *a* of the draw-bar (which corresponds to the closed swinging jaw of the Janney coupler) is formed rigidly with the remaining portions of the draw-bar and does not swing. Instead the hooks *a a* form rigid or unyielding bumpers, which present the draw-bars jamming the pivots of the swinging jaws in coupling, and, moreover, in my coupling give each swinging locking-jaw, when locked, a solid bearing-surface in pulling—that is, in the ordinary Janney types of coupling the swinging jaws interlock with other swinging jaws. In my type the swinging jaw interlocks with an unyielding rigid part of the draw-bar. The advantages of this form of construction therefore are that only half the draft strain comes on the pivot of each swinging jaw, and thus lighter pins may be used and greater durability is attained.

In the outer side of the hook *a* of the draw-bar is a recess *a'*, in which the shank *b* of the swinging jaw B is pivoted by means of a vertical bolt *b'*, passing through suitable openings in the draw-bar.

The jaw B is so curved, as shown, that its front end will slip past and behind the rigid hook *a* of an opposite draw-bar in coupling, and when locked so that it cannot swing laterally the draft strain will be transferred from bolt *b'* through the jaw to the rigid hook of the opposite draw-bar, as is evident from Fig. 1 of the drawings. In the front face of the hook (when coupled) is a locking-recess B', which is engaged by a locking device on the draw-bar with which it is coupled, which locking device is constructed as follows:

C designates a locking-bar which lies in a horizontal transverse slot in the draw-bar just in rear of the jaw-recess, and said bar has a tapered enlargement C' at its locking end which fits in a correspondingly-tapered enlargement of the slot, so that the locking-bar cannot escape at that side of the draw-bar and has to be inserted before the swinging jaw is fastened in place. At the inner end of enlargement C' is a shoulder C^2, which is adapted to engage in the recess B' of a swinging jaw when coupled, and thus lock the jaw in place. The bar also has on its front face an enlargement C^3, which (when the bar is in unlocking position) is adapted to be engaged by the end of a swinging jaw entering the recess of the draw-bar, so that the jaw will push the locking-bar into locking position when it fully enters the recess. The locking-bar is then locked in position to retain the jaw in coupled position by means of a retaining-bolt D, which is hung at one side of the draw-bar, in rear of jaw B, on a short transverse lever E, pivoted on a lug A^4 rising from the top of the draw-bar. The end of bolt D drops into a slot or notch C^4 in the outer end of the locking-bar and effectively locks it in position, as indicated in the drawings.

When it is desired to uncouple, the bolt D is raised by depressing the proper end of lever E, and a pull on the draw-bars causes the locking-hook to move out, thereby drawing locking-bar C back until recess B' clears shoulder C^2.

It will be understood that when two couplings of my type are coupled there is a double connection between the draw-bars, if both swinging jaws are locked, as they should be. In this case if either draw-bar should pull away from its fastenings it will be upheld by the other draw-bar, for when the locking-bars are engaged with the recesses B′ the swinging jaws cannot be disengaged from the draw-bars by rising or falling, and this is a very useful feature of my invention, as a draw-bar falling on the track may cause serious accidents.

If desired, the head portions of the draw-bars, containing operative or interlocking portions, may be pivoted to the stock portions, as indicated at K, Fig. 1. This will enable the couplings to couple on shorter curves and turn short curves with very little strain upon the draw-bar fastenings or the swinging jaws.

I do not confine myself, except where directly stated in the claims, to the peculiar locking devices for the swinging jaws herein shown and described, as changes thereon could be readily devised by skilful mechanics while using the main features of my invention.

When the swinging hook is turned fully back out of the way, the draw-bar may be coupled to an ordinary Janney-type coupling, the swinging jaw of the latter engaging the rigid hook *a*. This is a decided advantage of my coupling over others of the hook-and-catch type. The rigid hooks *a* are in the front ends of draw-bars, not on the side, so that when coupled the draft strain is in a straight line.

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

1. In a hook-and-catch car-coupling, the combination of a draw-bar shaped like a draw-bar of the Janney type with its hook closed and rigid; and adapted to serve as a bumper; a swinging jaw pivoted to the draw-bar and having its front end curved and adapted to project in front of the hook to engage the similar hook of an opposite coupling, and devices on the draw-bar whereby the swinging jaw of the opposite coupling can be locked to the rigid hook of the draw-bar when engaged therewith, substantially as described.

2. The herein-described hook-and-catch car-coupling consisting of a pair of draw-bars each shaped like a draw-bar with closed hook of the Janney type, such hook however being formed rigid with the draw-bar and adapted to serve as a bumper; with a swinging curved jaw hinged to each draw-bar at the point usually occupied by the pivot of the swinging hook of the Janney type said hooks being adapted to engage with the rigid hooks of the opposite draw-bar, and locking devices on the draw-bars adapted to engage and lock swinging jaws of the opposite coupling, substantially as and for the purpose described.

3. In a car-coupling the combination of a draw-bar having a rigid locking-hook; a swinging jaw pivoted beside the hook and adapted to project in front thereof to engage with another draw-bar; and locking devices in rear of said rigid hook, consisting of a laterally-sliding latch-bar, and a locking-bolt therefor, substantially as and for the purpose described.

4. The combination with the draw-bar, of the swinging-jaw-locking devices, consisting of the bar C, having shoulder C^2, and enlargement C^3, and means for locking said bar, substantially as described.

5. The combination of the draw-bar having a horizontal transverse slot and the locking-bar C lying in said slot having tapered enlargements C′, shoulder C^2, and enlargement C^3; with the bolt for locking said bar, and the devices for lifting said bolt, all substantially as described.

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

CHARLES SCHLEICHER.

Witnesses:
A. G. RONALD,
CLAUDE W. JOHNSON.