

(No Model.)

J. S. WHITTINGHILL.
CAR COUPLING.

No. 302,074.

Patented July 15, 1884.

Fig. 1.

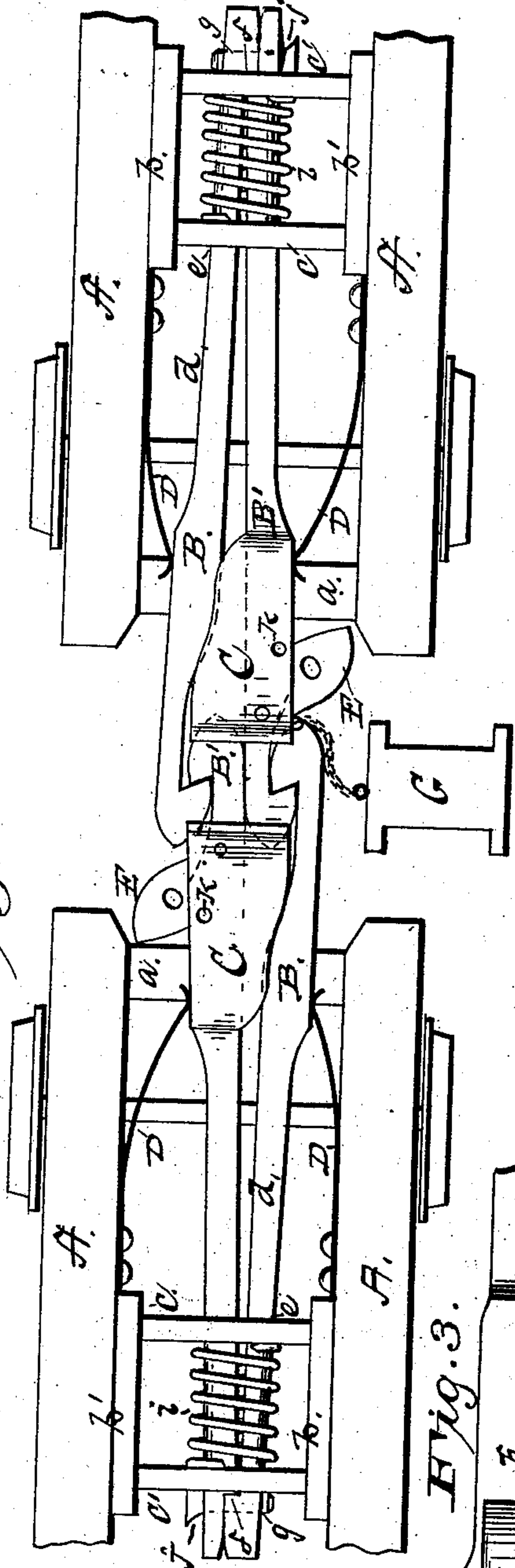


Fig. 2.

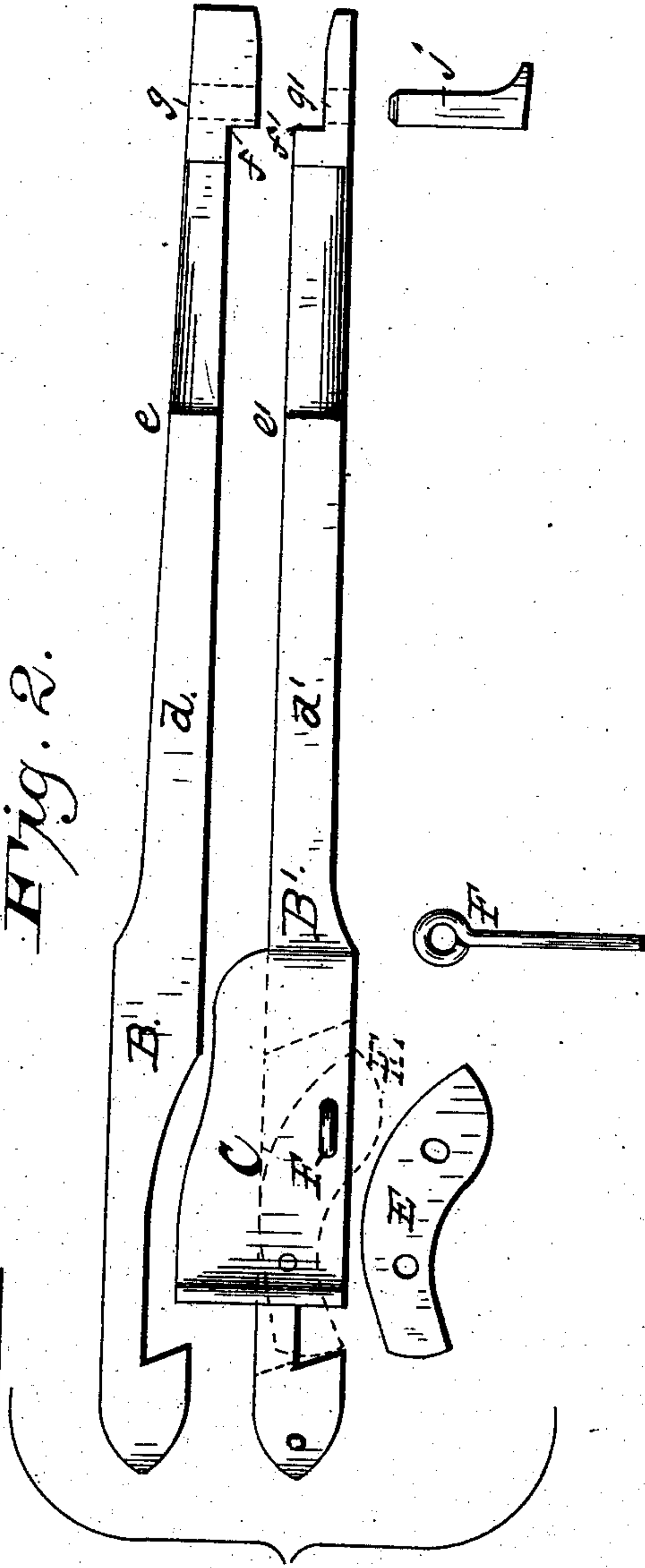
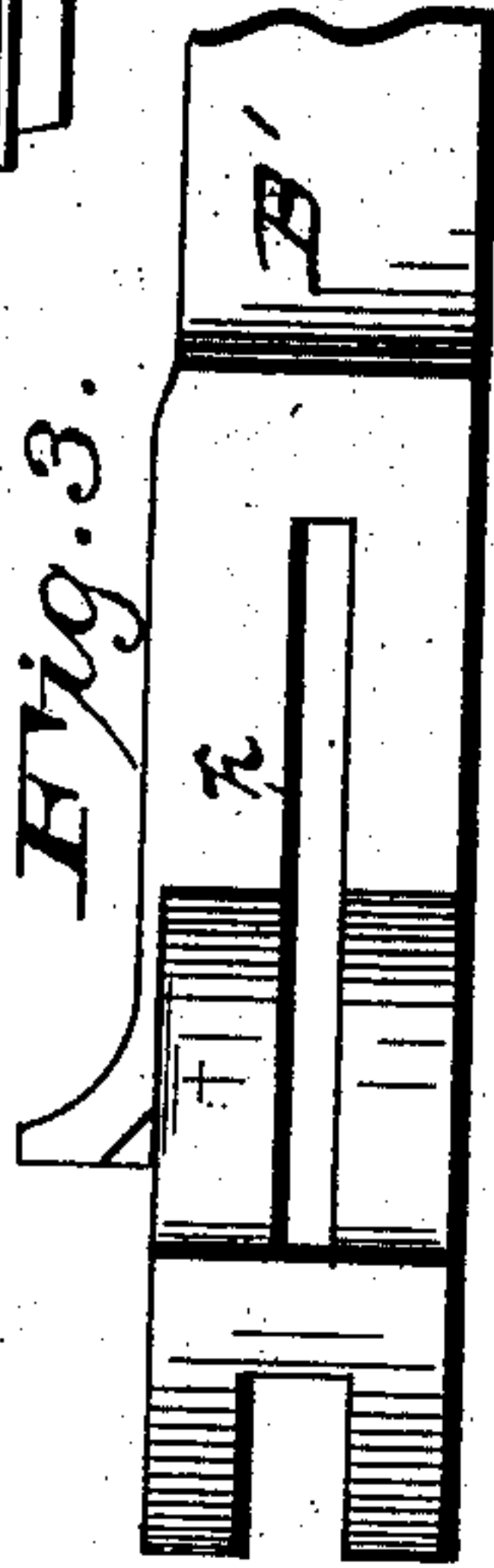


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN S. WHITTINGHILL, OF MADISONVILLE, KENTUCKY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 302,074, dated July 15, 1884.

Application filed June 9, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. WHITTINGHILL, a citizen of the United States, residing at Madisonville, in the county of Hopkins and State of Kentucky, have invented a new and useful Car-Coupling, of which the following is a specification.

My invention relates to improvements in means for couplings cars together; and the object is to provide means for the purpose stated which will effectually accomplish the end intended, and which will admit of disconnection with certainty and safety when it is desired to disengage connected cars.

My invention consists in the novel construction and combination of parts, as will hereinafter be fully described and specifically pointed out.

In the accompanying drawings, forming a part of this specification, and illustrative of my improvements, Figure 1 is a plan view of the coupling in operative connection. Fig. 2 is a view in detail of the parts, and Fig. 3 is a side view of the slotted draw-hook with the buffer-plate.

The letter A represents the side timbers of the frame or base of a car, connected by an end cross-piece, *a*, substantially as shown. In the drawings I have represented the device as attached to the side timbers of the car-frame; but it is apparent that a special frame of timbers may be made for the purpose and fixed intermediate between the bearing-timbers of the car. To the inner face of each side timber are strongly secured rectangular box-frames *b b'*, within the walls of which rest and operate the cross-pieces *c c'*, as hereinafter stated.

The letters B B' represent the draw-hooks, the one designated by B consisting of the hooked end and elongated shanks *d*, terminating in a shoulder at *e*, and the end thereof being formed with a seat, *f*, and provided with a key-hole, *g*. The draw hook or bar designated by B' is formed with a hooked end, as shown, immediately back of which is formed the horizontal slot *h*, for the purposes hereinafter stated. The shank *d'* and shoulder *e'* are identical in shape to those parts in the other hook, and the end is provided with a key-hole, *g'*, but is

formed with a step, *f'*, which sets against the shoulder *f* in the hook B, in order that the pressure on the buffers shall operate the springs and be distributed equally on both shanks or hooks. This draw-hook B' has formed on it or cast with it a buffer-head, C, which improvement gives the coupling-hooks the functional capacity of a buffer. The buffer plate or part is cast wider than the body of the draw-hook on which it is formed, so that when set in operative connection the extended side shall lap over the other draw-hook and serve to keep it always in line of coupling connection. The under face of the front end of the buffer-plate is cut on an incline to give free access to the hook-heads under it, and, as is seen, the plate or head extends somewhat over the curved neck of the hook on which it is formed. This construction removes all liability to upward or downward displacement by jars, jumps, or shakes.

As hereinbefore stated, the cross-pieces *c c'* have their ends disposed in the recess of the rectangular frames *b b'*, each cross-piece having a central hole to receive the shanks of the draw-hooks, and arranged about the shanks of the draw-hooks. Between the cross-pieces is a coiled spring, *i*, the purposes of which are to relieve the parts in either direction from effects of jars or jerks. The shanks of the two hooks are secured against withdrawal by the key *j*, passed through the aperture made for the purpose of its reception in their rear ends on the outside of the rear cross-piece.

To prevent side displacement, the usual side springs, D, are secured to the side timbers of the frame, with their free ends pressing against the side faces of the draw-hooks.

The letter E represents a latch or lever pivoted in the longitudinal slot in the draw-hook B'. The preferred shape of this latch or lever is shown in Fig. 2 of the drawings, and consists of an irregular curve, the long or rear arm of which sets within the slot, and is provided with a perforation, somewhat elongated, to readily admit the passage of the pin F, set in the perforation *k* in the draw-hook. The front arm of this latch or lever is formed so that when the rear arm is held within the slot by the pin the face of the front arm shall ex-

tend flush beyond the edge of the bite of the hook on the draw-bar, for the purpose of carrying the opposite hook over the lip of this hook and disengaging the connections. It will be observed that this latch or lever is never in operation as a detacher except when held by the pin. In all other conditions of operation or position it does not affect the integrity of the coupling connection.

When it is necessary or desirable to shorten the slack between opposite cars, I interpose a detachable buffer plate or block, G, between the ends of the buffer-plates on the draw-hooks. This block may be of any desirable shape. I have shown it formed with side ears or flanges, which rest against the sides of the buffer-plates and keep it in position.

While my improvement may be used with advantage on a passenger-car, it is particularly designed for use on freight-cars, its construction and connection of parts fitting it for the latter purpose, since disconnection or disengagement cannot be effected by any of the ordinary jars, jerks, or jolts which sometimes separate couplings made by present means. Neither can the parts slip up or down, because the buffer-plates prevent such movement.

To effect operative connection of the parts all that is necessary to do is to bring opposing ends of cars together, when the coupling-hooks engage automatically and the coupling is made. To effect the engagement of the coupling, the cars are brought together, when the hook of the draw-bar *b* drives the projecting end of the latch or lever *c* within the slot of the draw-bar *B'*, in which position it is secured by dropping the pin *F* through the hole. This, it will be seen, throws the front end of the latch or lever flush beyond the edge of the lip of the hook, so that when the cars are drawn apart the hooks slide up the incline face of the lever and form connection with each other.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The draw bar or hook *B'*, formed with a buffer plate or head, C, said buffer plate or head having its side extending beyond the inner face of the body of the draw hook or bar, substantially as described.

2. A draw hook or bar formed with a lon-

gitudinal slot located in the body of the draw-hook behind the hook, and formed with a buffer head or plate on its upper portion, in combination with a latch or lever pivotally secured in the longitudinal slot, and having a perforation in its rear arm registering with a perforation in the body of the draw-hook, and a stay-pin to secure the rear arm of the latch in place and the face of the front arm flush with the edge of the lip of the hook, substantially as described, and for the purpose set forth.

3. In combination, the draw-hook *B*, shouldered at its rear end, the draw-hook *B'*, formed with a step at its rear end to rest on the shoulder of the draw-hook *B*, and formed with a buffer-plate, C, with side extension, and means for uniting them, substantially as described.

4. In combination, the draw-hook *B*, shouldered at its rear end, the draw-hook *B'*, formed with a step at its rear, and a buffer-plate with side extension on its upper front face, and provided with a longitudinal slot back of the head of the hook, a disengaging latch or lever pivoted in said slot and having its rear ends perforated, and a stay-pin set in the perforations in the draw-hook and latch to hold the said latch in operative position, substantially as described, and for the purpose set forth.

5. In combination, the draw hooks or bars *B B'*, formed as described, and having their ends keyed together, the cross-pieces *c c'*, interposed spring *i*, and side box-frames, *b b'*, and side springs, *D*, secured to the side frames, substantially as described.

6. In combination, the draw hook or bar formed with a longitudinal slot in the body of the draw-hook behind the hook, a latch or lever formed with a perforation in the end of its rear arm, and pivotally secured in the longitudinal slot, and a stay-pin whereby the fore arm of said lever is set with its face flush with the edge of the lip of the draw-hook, substantially as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my name in the presence of two attesting witnesses.

JOHN S. WHITTINGHILL.

Attest:

GEO. W. RAMSEY,
JNO. G. MORTON.