

No. 612,280.

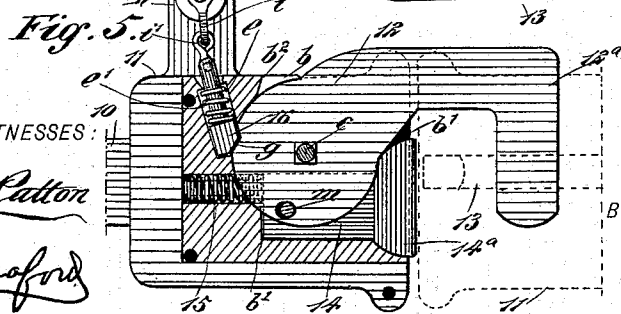
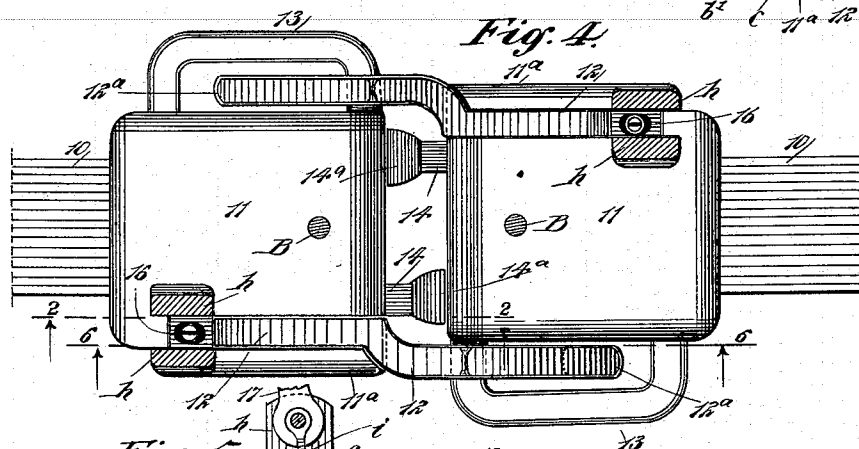
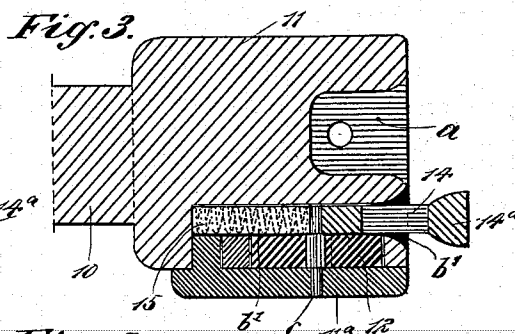
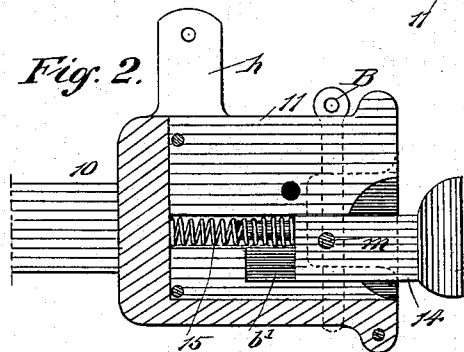
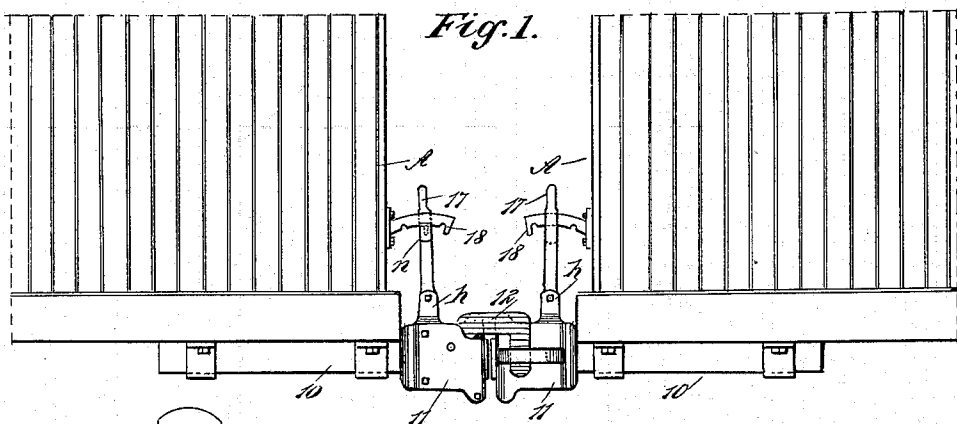
Patented Oct. 11, 1898.

J. G. SHERRILL.
CAR COUPLING.

(Application filed July 7, 1898.)

(No Model.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

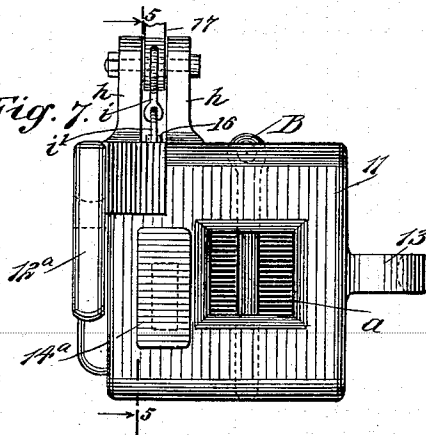
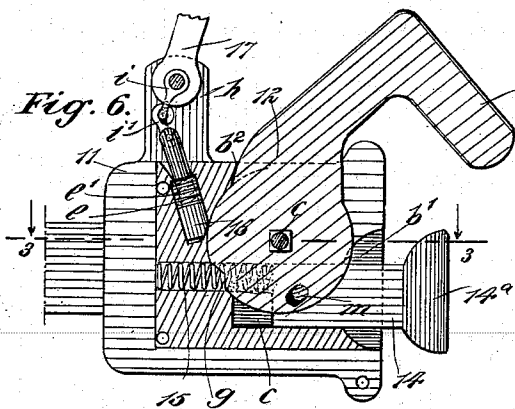
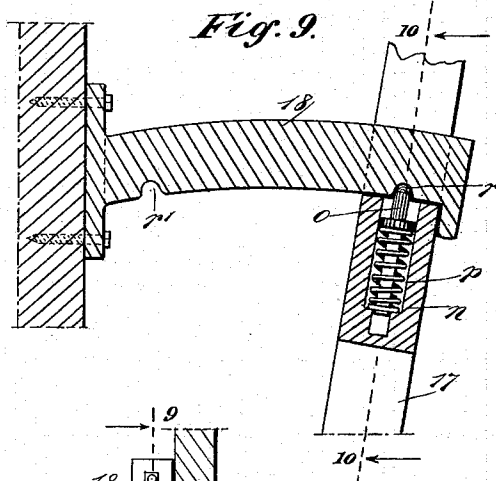
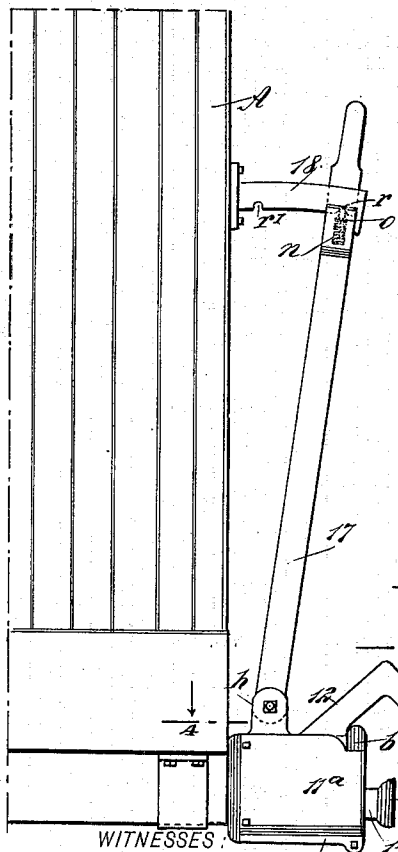


Fig. 8.



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UNITED STATES PATENT OFFICE.

JOHN G. SHERRILL, OF GORDON, TEXAS, ASSIGNOR TO HIMSELF, JAMES M. SHERRILL, AND ALEXANDER JAMIESON, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 612,280, dated October 11, 1898.

Application filed July 7, 1898. Serial No. 685,329. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. SHERRILL, of Gordon, in the county of Palo Pinto and State of Texas, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

This invention relates to car-couplings of the hook-and-catch type adapted for an automatic coupled engagement with each other, and has for its object to provide a car-coupling of the class indicated of novel simple construction and reliable in operation and which also affords convenient means for the release of the coupled cars.

The invention consists in the novel construction and combination of parts, as hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of portions of two cars having the improved couplings thereon and in coupled adjustment. Fig. 2 is an enlarged partly-sectional side view of the improved car-coupling substantially on the line 2 2 in Fig. 4. Fig. 3 is a sectional plan view showing details of construction substantially on the line 3 3 in Fig. 6. Fig. 4 is a partly-sectional plan view of two couplings in alinement and ready to be coupled together, the line of section for each coupling being indicated by the line 4 4 in Fig. 8. Fig. 5 is a partly-sectional side view of the improved car-coupling with parts in coupled condition, the line of section being indicated at 5 5 in Fig. 7. Fig. 6 is a partly-sectional side view of details essentially on the line 6 6 in Fig. 4, showing the parts in uncoupled condition. Fig. 7 is a front end view of the improved car-coupling in coupled adjustment. Fig. 8 is a side view of one end of a car-body and of the improved car-coupling thereon in uncoupled adjustment. Fig. 9 is an enlarged sectional side elevation on the line 9 9 in Fig. 10; and Fig. 10 is a transverse sectional view of details, taken substantially on the line 10 10 in Fig. 9.

In carrying into effect the features of invention to be described, A represents a car-

body of ordinary form, whereon the draw-bar 10 and the draw-head 11 are held by any suitable means, so as to project the draw-head in advance of the car-body at its transverse center, as usual.

The draw-head as preferably constructed is substantially rectangular exteriorly and at the front end may have reinforcing-ribs formed on the upper and lower sides. The body of the draw-head 11 is recessed near its center from the front end rearwardly, producing a chamber *a*, and the upper and lower walls of said chamber may be oppositely perforated to receive a coupling-pin B, which when in place will hold a common coupling-link within the chamber *a* should it be desirable to temporarily couple together two of the improved car-couplings or to couple one of the improved couplings to any other style of car-coupling.

At the left-hand side of the draw-head 11 a recess *b* is formed therein, which is mainly circular in contour, but cuts through the upper side of the draw-head, said recess having sufficient depth to permit the loose introduction therein of the coupling-hook 12, formed at its rear end to loosely fit within the circular wall of the recess *b*, as is clearly shown in Figs. 5 and 6. The forward portion 12^a of the hook 12 is preferably formed essentially right-angular, so as to afford a depending limb thereon for engagement with a loop formation 13, that projects at the right-hand side of a similar draw-head, when two of the improved car-couplings are to be coupled together, as will be hereinafter further explained.

At the center of the circular rear end of the coupling-hook 12 a square or other angular perforation is produced for the reception of the squared portion of a shaft *c*, having journals on each end which loosely engage perforations in the wall of the draw-head and a cap-plate thereon.

In the left-hand side wall of the draw-head 11, between the chamber *a* and the recess *b*, that receives the hook 12, another recess *b'* is formed, the inner portion of which is square to permit the slidable insertion of the rectangular body portion 14 of a pusher-bar therein, furnished with an enlarged head 14^a, which projects normally at the front end of the

draw-head. The forward projection of the pusher-bar 14 is effected by a spring 15, which encircles a cylindric rear end portion of the pusher-bar, said spring mainly occupying a
5 chambered extension of the recess b' , as clearly represented in Figs. 2, 5, and 6.

The recess b' at its forward end is suitably enlarged to permit the full embedment therein of the headed enlargement 14^a when the
10 pusher-bar 14 is forcibly pressed rearward. A cap-plate 11^a is removably secured upon the left-hand side of the draw-head 11, over the coupling-hook 12, and it may be preferred to form the recess b partially in the cap-plate; but this is not an essential feature of construction.
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In the draw-head 11, and, if preferred, partly in a portion of the cap-plate 11^a , an upwardly and rearwardly disposed recess e is
20 formed, adapted to receive and permit the limited longitudinal sliding movement of a detent-dog 16, which is pressed toward the edge of the rear end of the coupling-hook 12 by a spring e' . The forward lower corner of
25 the dog 16 is removed to facilitate an engagement of the same with a notch g , formed in the periphery of the circular formation on the coupling-hook 12, said notch being so relatively positioned as to allow the detent-dog 16
30 to engage therewith when the coupling-hook is in coupled connection with another draw-head.

On the draw-head 11, at its rear, two parallel upright ears h are formed, one of said ears
35 being integrally produced on the draw-head body and the other ear projected from the upper edge of the cap-plate 11^a , as best shown in Fig. 4. Between the ears h is pivoted the lower end of a lever 17, that projects upwardly
40 of a suitable length and has engagement with an arch-piece or segment 18, secured on the car-body.

The lower end portion of the lever 17 is shackled to the upper end of the detent-dog
45 16 by means of two engaged hooks i and i' , which are respectively held in place on the lever and dog, and the arrangement of said connection is such as will adapt a rearward rocking movement of the lever 17 to lower the dog
50 16 and a forward rocking adjustment thereof to elevate said dog, as is respectively represented in Figs. 5 and 6.

The circular rear portion of the coupling-hook 12 is transversely perforated near the
55 peripheral edge thereof for the loose engagement of a crank-pin m , that projects outwardly from the pusher-bar 14, this loose connection of parts being so arranged that the rearward movement of the pusher-bar will rock the hook member 12^a of the coupling-hook into a lowered and vertical position, as clearly shown in Fig. 5. It will be seen that the dog 16 enters the notch g when the pusher-bar 14 is pressed back far enough to completely lower the coupling-hook member 12^a ,
65 and thus effect a secure coupled engagement

of said hook member with the projecting loop formation 13 on a car-coupling of like construction.

The arch-piece 18, before mentioned, is secured on the front end wall of the car-body
70 A, so as to project above the ears h on the draw-head 11, and thus permit the lever 17 to rock adjacent thereto at one side of the arch-piece, so as to locate a lateral thickening formation n on the lever-body below and in close contact with the lower edge of the arch-piece, as best shown in Figs. 1, 8, 9, and 10.
75

In the formation n a spring-pressed slide-bolt o is held to slide upwardly by its insertion in a recess p , the upper rounded end of said bolt being thus adapted to automatically engage in either of the cupped cavities r and r' , that are respectively formed in the lower
80 85 arched edge of the piece 18 near the front and rear ends of the same.

When the lever 17 is rocked forwardly, which the peculiar formation of the cavity r' permits if sufficient force is exerted, this will
90 draw the dog 16 up sufficiently to permit the spring 15 to expand and press the pusher-bar 14 outwardly, at the same time automatically elevating the hook 12 into the position shown in Fig. 6, the upward rocking action of said
95 hook being limited by an impingement of the hook-body on a shoulder b^2 , that is produced as a rear edge of the recess b , where it cuts through the top wall of the draw-head 11.

Assuming that two cars having the improvements are located on the same track and are to be coupled together, the coupling-hooks
100 12 being in elevated adjustment, as indicated in Figs. 4 and 6, the coupling of the two draw-heads may be automatically effected by simply pressing the pusher-bars 14 against the front ends of the draw-heads, as this action will manifestly compress the spring 15 and simultaneously rock the coupling-hooks 12
105 110 down, so as to enter them, respectively, within the draft-loops 13.

It will be apparent that when the pusher-bars 14 are fully retracted the engagement of the dogs 16 within the notches g will hold the
115 hooks 12 in a coupled condition until the levers 17 have been designedly rocked to release the coupling-hooks, and thus release the cars.

Owing to the elongation of the draft-loops 13 and the peculiar construction of the coupling-hooks 12, together with the specific means for pivoting the hooks within the draw-heads 11, it will be seen that when there is draft strain on the hook members 12^a the rocking movement of the levers 17 will carry said hook
120 125 members away from the front bars of the draft-loops 13, and thus enable the free disconnection of two car-couplings at any time without requiring any slackening of coupled connections between the cars, as is necessary when
130 ordinary means for coupling cars are employed.

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

1. The combination with a draw-head having a longitudinally-extending recess therein, of a rockable coupling-hook pivoted in the recess, a spring-pressed slidable pusher-bar normally projecting at the front of the draw-head and pivoted on the coupling-hook, and means for locking and releasing the coupling-hook, substantially as described.

2. The combination with a draw-head having a longitudinally-extending recess at one side thereof, a pusher-bar in said recess, a spring pressing the pusher-bar outward, and a coupling-hook, having a notched formation on the rear end and rockable in a recess at the side of the pusher-bar, of a detent-dog slidable at the rear of the coupling-hook and adapted to interlock with the notch in the convex edge of the rear end of the coupling-hook, and means for sliding the detent-dog toward or from the said notch, substantially as described.

3. The combination with a draw-head having a draft-loop on one side, and two parallel longitudinally-extending recesses on the opposite side thereof, the outer recess being covered by a cap-plate, of a pusher-bar slidable in the innermost recess, a spring normally pressing the pusher-bar outward, a coupling-hook having a right-angular limb at the outer end and a circular-edged formation on the inner end thereof, said formation having a notch in its periphery, a slidable spring-pressed detent-dog adapted to enter said notch when the angular member of the coupling-hook is depressed, and a rockable lever

adapted to lift or lower the detent-dog, substantially as described.

4. In a car-coupling, the combination with a draw-head, a pusher-bar slidable longitudinally therein and actuated outwardly, of a rockable coupling-hook having a circular edge on its flat rear end, and a notch in said edge, the coupling-hook being pivoted in the draw-head and eccentrically pivoted on the pusher-bar, a detent-dog spring-pressed toward the notch of the coupling-hook, a lever pivoted on the draw-head and shackled to the detent-dog so as to actuate said dog when rocked, and an arch-piece on the car-body, adapted to hold the lever when rocked, to lock or to release the coupling-hook, substantially as described.

5. The combination with a car and an arched locking-piece projecting from the car-body at one end thereof, of a draw-head on the car below the locking-piece, a rockable coupling-hook pivoted in the draw-head and spring-pressed to raise its hooked portion, a slidable pusher-bar adapted to control the rocking movement of the coupling-hook, a latching detent-dog adapted to hold the coupling-hook depressed against the stress of the spring, an upright lever pivoted on the draw-head and shackled to the upper end of the detent-dog, and a spring-pressed latch-bolt on the lever, adapted to engage with either of two cavities in the arch-piece to hold the lever rocked forwardly or rearwardly, substantially as described.

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Witnesses:

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