

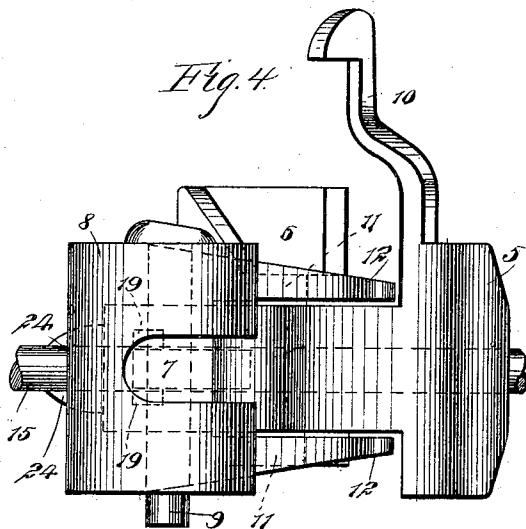
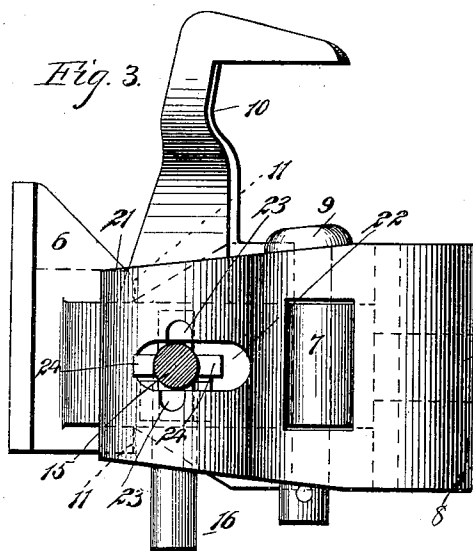
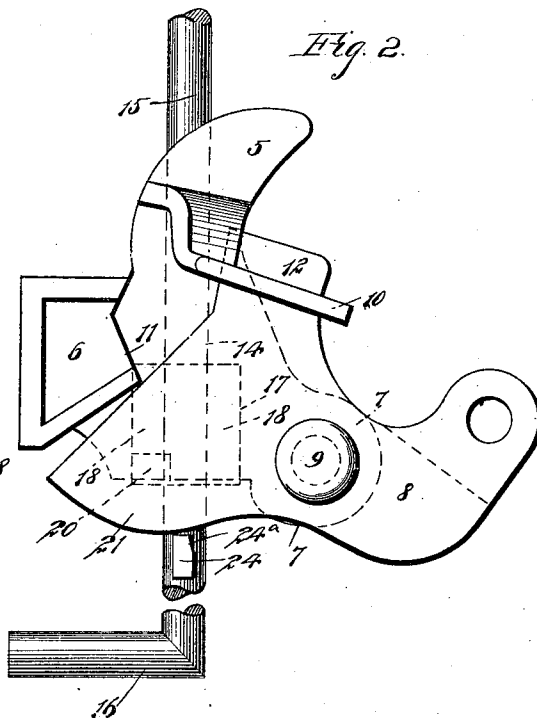
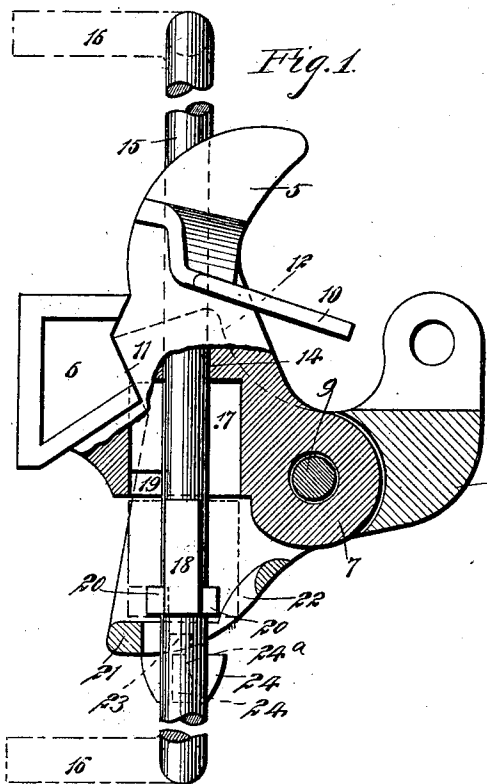
No. 629,620.

Patented July 25, 1899.

T. H. SMITH.
CAR COUPLING.

(Application filed Apr. 24, 1899.)

(No Model.)



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THOMAS HENRY SMITH, OF BOWIE, TEXAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 629,620, dated July 25, 1899.

Application filed April 24, 1899. Serial No. 714,198. (No model.)

To all whom it may concern:

Be it known that I, THOMAS HENRY SMITH, of Bowie, in the county of Montague and State of Texas, have invented a new and Improved Car-Coupler, of which the following is a full, clear, and exact description.

This car-coupler relates to that class in which a swinging jaw is provided to lock and release the coupler and associated with means comprising a shiftable detent which serves to hold the jaw in open and closed positions.

This specification is the disclosure of one form of my invention, while the claims define the actual scope thereof.

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 views.

Figure 1 is a plan view of the invention with parts in section and showing the jaw in closed position. Fig. 2 is a plan view showing the jaw in open position. Fig. 3 is a side elevation with a part in section and showing the coupler in closed position; and Fig. 4 is a front elevation of the coupler, showing it in open position.

The stationary jaw 5 of the coupler is fastened rigidly to the draw-head 6 and has a knuckle 7, which is inclosed by a swinging jaw 8. The swinging jaw is mounted on the knuckle by means of a pin 9, passing through the swinging jaw and knuckle. The stationary jaw 5 has an upwardly and forwardly projecting stirrup 10, which overhangs the space between the jaws 5 and 8 and which is adapted to engage the other part of the coupling should the coupling become broken and bent so as to drop, in which case the stirrup serves to hold the coupling in place.

Formed on the head 6, which is virtually a part of the stationary jaw 5, are two shoulders 11, which are located, respectively, at the top and bottom of the coupler and which are adapted to be engaged by the extensions 12 of the swinging jaw 8 when said jaw is in closed position, thus serving to limit the inward movement of the jaw, as indicated by the dotted lines in Fig. 1. Extended through a transverse passage 14, formed in the stationary jaw 5, is a rocking and sliding shaft 15, which has a crank-arm 16 at each end thereof. These crank-arms are weighted, so

as to normally hang downward, as indicated in Fig. 1. Communicating with the passage 14 is a counter-passageway 17, which is of greater horizontal width than vertical width and which is adapted to receive two keys 18, secured fast to the shaft 15 at opposite sides thereof. The rear portion of the counter-opening 17 is formed with offset-openings 19, adapted, respectively, to receive the offsets 20 from one of the keys 18. When the keys 18 and offsets 20 are seated in the openings 17 and 19, as indicated in Figs. 2 and 4, the swinging jaw 8 will be in open position and the shaft 15 will be turned a quarter distance around, thus placing the crank-arms 16 horizontally, as indicated in Fig. 2. When the arms 16 hang downwardly in normal position, the keys 18 will be in vertical alinement and the keys will bear against the right-hand side edge of the stationary jaw 5, thus preventing the inward movement of the keys, and therefore holding the jaw 8 in closed position.

The jaw 8 has a rearwardly-projected wing 21, formed with a horizontal slot 22 therein, which slot communicates with cavities 23, formed in the outer face of the said wing. The shaft 15 is provided at the outside of the wing 21 with two keys 24, which are adapted, respectively, to enter the cavities 23, and thus hold the swinging jaw 8 in position to be moved outward to open position when desired.

Now assuming that the coupler be in the closed position, (shown in Figs. 1 and 3,) the keys 18 will stand vertically and prevent the leftward movement of the shaft 15 and the keys 24 will stand horizontally. It will be seen that the keys 18, bearing between the wing 21 and stationary jaw 5, will prevent the outward movement of the jaw 8, and consequently hold the coupler locked. Should it be desired to open the coupler, the shaft 15 should be swung a quarter-turn, thus placing the keys 18 horizontal and in position to enter the counter-cavity 17 and the keys 20 vertically and in position to enter the offsets 19. The keys 24 will be thrown into vertical position and entered into the cavities 23. Now when strain is placed on the swinging jaw 8 the projections 12 thereof will be thrown forwardly and the wing 21 will swing rearwardly, thus pushing the shaft 15 and its attached parts into the position shown in Fig. 2 and

causing the shaft to occupy the front extremity of the slot 22, the keys 24 being provided with inclined edges 24^a, (see Fig. 2,) which permit them to ride out of the cavities 23. 5
The coupler being now in open position, it is closed primarily by the rearward movement of the wings 12, which causes the jaw 8 to be thrown backward into closed position. This movement of the jaw draws the shaft 15 out 10 again to the right and releases the keys 18 from the cavity 17. When this occurs, the weighted arms 16 will throw the shaft 15 back to the normal position, (shown in Figs. 1 and 3,) and the keys 18, standing vertically, will bear 15 between the wing 21 and the stationary jaw 5 and hold the coupler locked.

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

20 1. A car-coupler, having a stationary jaw with a passage extending horizontally through it, the passage communicating with a counter cavity or passage widened horizontally, a 35 swinging jaw mounted on the stationary jaw and having a wing with a slot therein, a shaft extended through the passage of the stationary jaw and through the slot of the wing, and two keys mounted on the shaft and located the one between the wing and the stationary 30 jaw and the other outside of the wing.

2. A car-coupler, having a stationary jaw with a passage extended through it and with a counter passage or cavity in one side, a 35 swinging jaw mounted on the stationary jaw and having a portion with a slot therein, a shaft extended through the slot and through the passage, and two keys on the shaft, one of the keys being located between the stationary jaw and the slotted part of the swinging 40 jaw, and the other key being located outside the slotted part of the swinging jaw.

3. A car-coupler, having a stationary jaw with a passage therein and with a counter 45 passage or cavity communicating with the first-named passage, a swinging jaw mounted on the stationary jaw and having a rearwardly-extending wing with a slot therein, the wing having in its outer face two cavi-

ties communicating with the slot, and the said counter passage or cavity having two 50 cavities communicating therewith, a shaft extended through the passage in the stationary jaw and through the slot in the swinging jaw, two keys mounted on the shaft between the wing and the stationary jaw and adapted to 55 enter the counter passage or cavity, one of the wings having offsets adapted to enter the offsets of the counter cavity or passage, and two additional keys secured to the shaft outside the wing and adapted to enter the cavities in 60 the wing.

4. A car-coupler, having a stationary jaw with a passage therein and with a counter- 65 passage communicating with the first-named passage, a swinging jaw mounted on the stationary jaw and having a portion formed with a slot therein, a shaft extended through the passage of the stationary jaw and through 70 the slot, and a key on the shaft and located between the slotted portion of the swinging jaw and the stationary jaw, the key being adapted to enter the counter-passage of the stationary jaw.

5. A car-coupler, having a stationary jaw 75 with a passage extending transversely therein, a swinging jaw mounted on the stationary jaw and having a portion with a slot therein, a shaft extending through the passage of the stationary jaw and through the slot in the 80 said portion of the swinging jaw, and keys mounted on the shaft and acting with the two jaws.

6. A car-coupler, having a stationary jaw with a passage extending transversely there- 85 in, a swinging jaw mounted on the stationary jaw and having a portion with a slot therein, a shaft extending through the slot and through the passage, and two keys on the shaft, one of the keys being located between the station- 90 ary jaw and the slotted part of the swinging jaw and the other key being located opposite the slotted part of the swinging jaw.

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