No. 844,522. PATENTED FEB. 19, 1907.

R. JOHNSON, Sr.

COUPLING FOR TRACTION ENGINES.

APPLICATION FILED APR. 25, 1906.

Fig. 1.

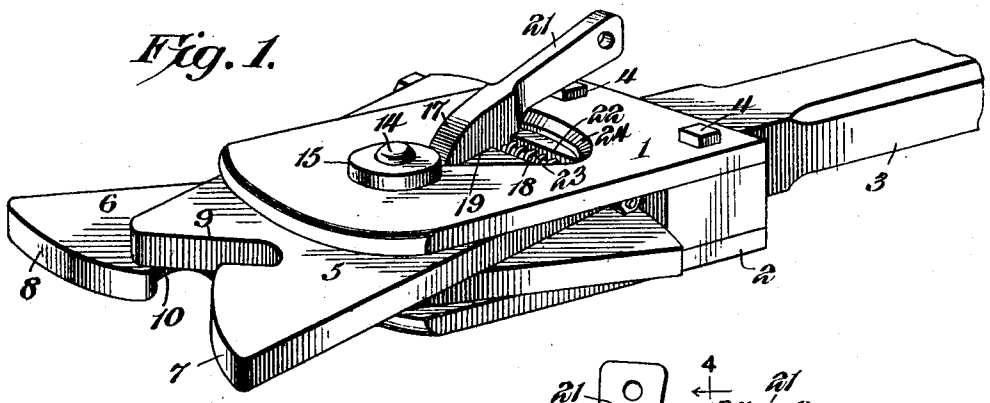


Fig. 2.

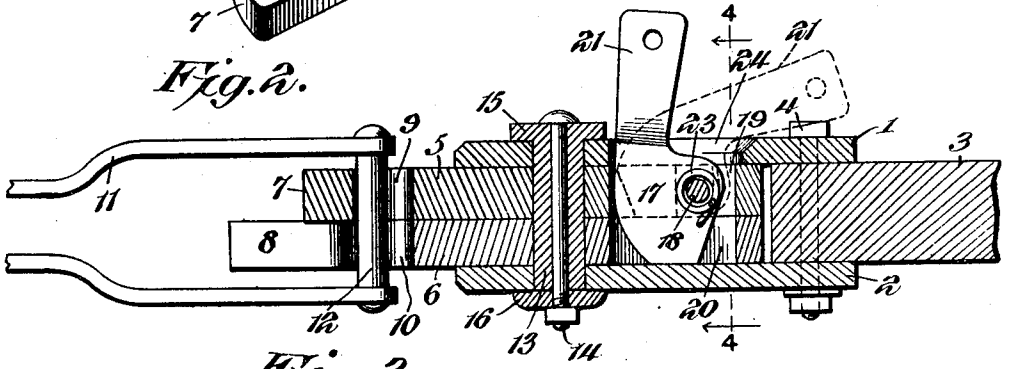


Fig. 3.

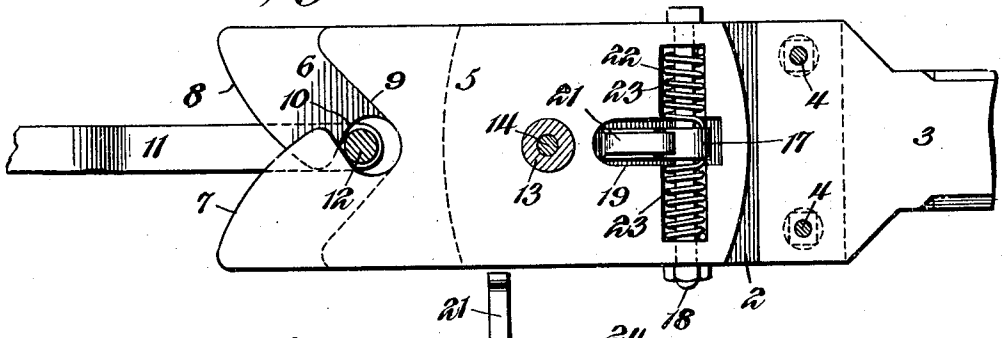
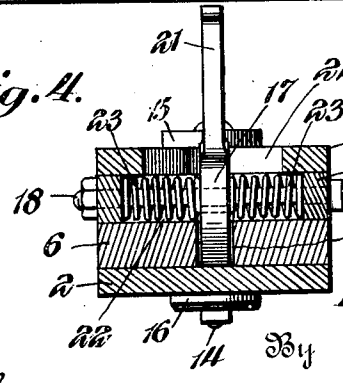


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE

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COUPLING FOR TRACTION-ENGINES.

No. 844,522. Specification of Letters Patent. Patented Feb. 19, 1907.

Application filed April 26, 1906. Serial No. 313,614.

To all whom it may concern:

Be it known that I, RICHARD JOHNSON, Sr., a citizen of the United States, residing at Freeport, in the county of Stephenson and State of Illinois, have invented a new and useful Coupling for Traction-Engines, of which the following is a specification.

The invention relates to improvements in couplings for traction-engines.

The object of the present invention is to improve the construction of traction-engines and to provide a simple, strong, and efficient coupling, adapted to be readily applied to the draft-bar of a traction-engine and capable of coupling automatically and of automatically releasing the tongue of a separator or other machine when the coupling is unlocked.

Another object of the invention is to provide a coupling for traction-engines adapted to permit a free lateral pivotal movement of the jaws to prevent them from being strained while turning the traction-engine and a separator and also when traveling over uneven ground.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a traction-engine coupling constructed in accordance with this invention, the pivoted jaws being open. Fig. 2 is a longitudinal sectional view of the same, the jaws being closed and engaging a loop or clevis. Fig. 3 is a plan view, partly in section, the upper plate of the draw-head being removed. Fig. 4 is a transverse sectional view on the line 4 4 of Fig. 2.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 and 2 designate upper and lower plates of a draw-head, which is arranged at the outer end of the draw-bar 3 of a traction-engine, and the said plates 1 and 2, which are secured by bolts 4 to the draw-bar 3, may, if desired, be rigidly connected with the same in any other desired manner. The upper and lower plates, which form the top and bottom of the draw-head, are spaced apart by the draw-bar and extend forwardly therefrom in a direction longitudinally of the same.

Within the space or opening between the top and bottom plates of the draw-head are pivotally mounted upper and lower jaws 5 and 6, cutaway at opposite sides to provide tapering projecting portions 7 and 8 and having reversely-arranged slots 9 and 10. The tapering projecting portions 7 and 8 have inner beveled or angularly-disposed edges, which are slightly rounded and which form guiding edges for directing a clevis or coupling member 11 into engagement with the coupling. The slots 9 and 10 are substantially diagonally arranged and diverge outward, and their portions overlap when the jaws are closed and form a circular opening to receive the outer end 12 of the loop or clevis 11. The loop or clevis is designed to be carried by the tongue of a separator or other machine, and the front end 12 is preferably in the form of a coupling-pin.

The pivot of the jaws is located at an intermediate point between the ends of the same, and preferably consists of a sleeve 13 and a bolt 14. The sleeve is provided at its upper end with an annular flange or collar 15, which engages the upper face of the top plate 1, and the lower face of the bottom plate 2 is engaged by a disk 16, forming a lower head for the pivot, and secured to the sleeve by a bolt. The pivot permits the jaws to swing freely in a horizontal direction. The jaws are adapted to swing simultaneously when coupling, and they are also capable of swinging in the opposite direction in their opening and closing movements.

The jaws are locked in their closed position by means of a pivoted spring-actuated catch 17, mounted on a transverse bolt or pivot 18 and arranged to operate in longitudinal slots 19 and 20 of the upper and lower jaws. The catch, which is located in rear of the pivot, consists of a lower engaging portion or head and an upwardly-extending arm 21, which is designed to be connected with suitable operating mechanism for enabling the jaws to be unlocked by the engineer. The pivot pin or bolt 18 extends through the rear end of the upper jaw, which is provided with a transverse slot or opening 22 for the reception of a pair of coiled springs 23. The springs, which

are disposed on the pivot pin or bolt 18, are located at opposite sides of the catch, and their inner ends are secured to the same. The outer ends of the springs engage the upper jaw. The springs are adapted to maintain the catch in engagement with the lower jaw, and they are also adapted to swing the catch downward automatically into engagement with the lower jaw when the longitudinal slots are brought in alinement. When the catch is swung upwardly out of engagement with the lower jaw, the latter is adapted to be turned freely on its pivot, and the forwardly-diverging diagonal arrangement of the slots of the front ends of the jaws will enable the latter to be readily opened by the draft when the catch is swung out of engagement with the rear end of the lower jaw. The diagonal arrangement of the front slots also enables the jaws to be readily closed by the coupling loop or clevis, whereby the operation of coupling is effected automatically. It is only necessary to hold the tongue of the separator in line with the coupling, and the pressure on the jaws incidental to the coupling coming in contact with the loop or clevis will operate to close the said jaws.

The upper plate of the draw-head is provided with a forwardly-tapered opening 24, through which extends the upper portion of the catch and which permits the catch to move laterally with the jaws. This free lateral-swinging motion of the jaws enables a traction-engine to turn with a separator or other machine without straining the parts of the coupling.

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

1. In a car-coupling, the combination of a draw-head, a pair of jaws pivotally mounted in the draw-head and movable simultaneously and independently, one jaw being arranged above the other, and locking means carried by the upper jaw for engaging the lower jaw, whereby the jaws are locked in their closed position, said locking means, when released, permitting both jaws to open.

2. In a car-coupling, the combination of a draw-head, a pair of jaws pivotally mounted in the draw-head and movable simultaneously and independently, one jaw being arranged above the other, and a spring-actuated catch mounted on the upper jaw and arranged to engage the lower jaw for locking the jaws in their closed position, said catch, when released, permitting both jaws to open.

3. In a coupling, the combination of a draw-head provided in its top with an opening, a pair of jaws pivotally mounted in the draw-head, and a catch mounted on one of the jaws and engaging the other for locking the jaws in their closed position, said catch being operable in the opening of the top of the draw-head, whereby the jaws are permitted to swing laterally, when locked.

4. In a coupling, the combination of a pair of pivoted jaws provided with diverging slots which overlap and form an opening when the jaws are closed, said slots forming angularly-disposed faces to enable the jaws to be moved laterally by a coupling member, and means for locking the jaws in their closed position.

5. In a coupling, the combination of a draw-head, upper and lower jaws pivotally mounted in the draw-head and movable laterally and provided with longitudinal slots, the upper jaw being also provided with a transverse opening, a pivot mounted on the upper jaw and extending along the transverse opening, a catch operating in the longitudinal slots and mounted on the pivot, and opposite spring-coils also mounted on the pivot and connected with the catch.

6. In a coupling, the combination of a draw-head, a vertical pivot carried by the draw-head, a pair of horizontally-movable jaws consisting of flat plates arranged one upon the other and having openings to receive the said pivot, and provided with longitudinal slots extending along the median line of the jaws, a locking device carried by one of the jaws and operating in the slots, said jaws being movable horizontally to carry the slots into and out of alinement.

7. In a coupling, the draw-head, in combination with the upper and lower overlapping jaws pivoted in the draw-head, and provided at their outer ends with diagonally and reversely arranged outwardly-diverging slots, which combine when the jaws are closed, to form a circular opening to receive the coupling-pin.

8. In a car-coupling, the combination of a draw-head, a pair of jaws pivotally mounted at an intermediate point of their length in the draw-head, one of the jaws being arranged above the other, means provided at the outer exposed ends of the jaws for connection with a coupling-pin, and locking means mounted on the upper jaw and engaging the lower jaw in rear of the pivotal point for holding the jaws in their closed position, said locking means, when released, permitting both of the jaws to open.

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

RICHARD JOHNSON, Sr.

Witnesses:

A. J. Clarity,

Fred Koym.