No. 726,759. PATENTED APR. 28, 1903.

C. E. RHOADS.

DRAW BAR.

APPLICATION FILED NOV. 17, 1902.

NO MODEL.

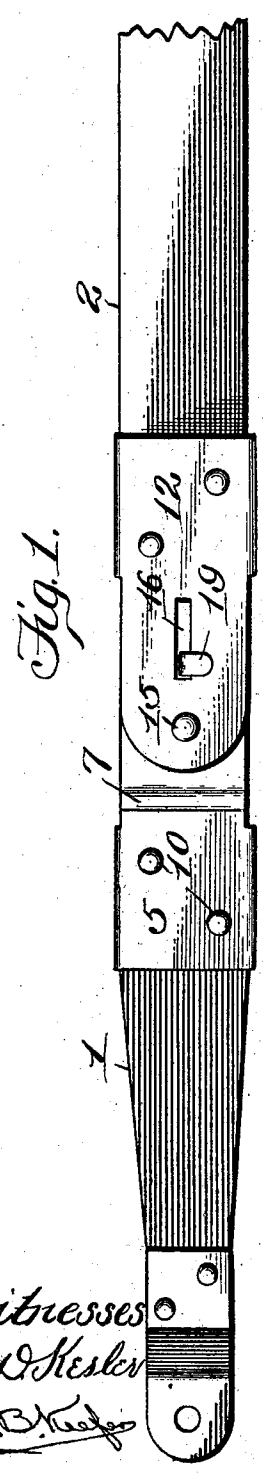


Fig. 1.

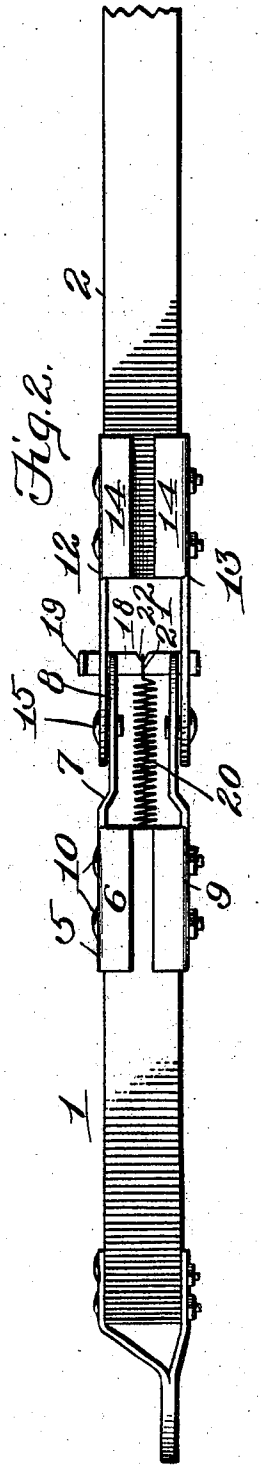


Fig. 2.

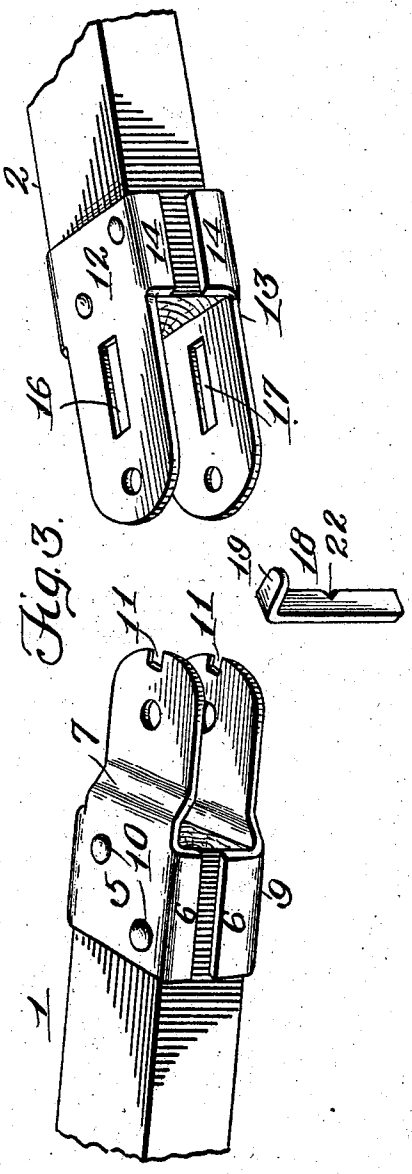


Fig. 3.

Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES E. RHOADS, OF NORWICH, KANSAS.

DRAW-BAR.

SPECIFICATION forming part of Letters Patent No. 726,759, dated April 28, 1903.

Application filed November 17, 1902. Serial No. 131,771. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. RHOADS, a citizen of the United States, residing at Norwich, in the county of Kingman and State of Kansas, have invented new and useful Improvements in Draw-Bars, of which the following is a specification.

This invention relates to draw-bars for traction-engines, and has for its object to provide simple and efficient means to enable the engine-driver to adjust the draw-bar at any desired angle to permit him to readily effect the coupling between the engine and the vehicle which it is designed to draw—such, for example, as a threshing-machine or separator; and to this end the invention consists in the features and in the construction, combination, and arrangement of parts hereinafter described, and particularly pointed out in the claims following the description, reference being had to the drawings forming part of this specification, wherein—

Figure 1 is a top plan view of my improved draw-bar. Fig. 2 is a side elevation thereof, and Fig. 3 is a detail perspective view of the parts separated.

The draw-bar consists of two separate members 1 and 2, flexibly connected together at their adjacent ends in such manner that said members may be adjusted at an angle one to the other in a horizontal plane, said members each consisting of a tongue, the forward end of the tongue 1 being connected to the traction-engine in any suitable manner and the rear end of the tongue 2 being attached to the axle and hounds of the threshing-machine or separator in a usual and well-known manner. The adjacent ends of the tongues 1 and 2 are flexibly connected together in the following manner: To the upper side of the rear end of the tongue 1 is attached a flat metallic plate 5, the opposite sides of one end of which are provided with downwardly-projecting flanges 6, which embrace the opposite rear edges of the tongue 1. The rear end of said plate is bent downwardly intermediate its ends, as at 7, and from thence is disposed horizontally rearwardly to form a jaw 8. A similar plate 9 is affixed to the under rear side of the tongue 1, and said plates 5 and 9 are rigidly secured to the tongue by means of bolts 10 or in any other suitable manner. The rear ends of the plates 5 and 9 lie in planes horizontal to each other, and said ends are provided with perforations which are in alinement with one another for the purpose presently to be explained. The extreme rear ends of the plates 5 and 9 are rounded or formed on the arcs of a common circle, as shown, and the extremities of both of said plates are slotted, as at 11, the slots in the two plates registering with each other. To the forward end of the tongues 2 are rigidly bolted plates 12 and 13, each provided with depending flanges at their sides, as indicated at 14, which embrace the opposite edges of the tongue, said plates being bolted or otherwise rigidly secured to the upper and lower sides of said tongue. The plates 12 and 13 are similar in all respects to the plates 9 and 10, excepting that said plates 12 and 13 are not bent—that is to say, each of them lies in a perfectly horizontal plane, whereby they are adapted to embrace the rear ends of the plates 5 and 9. The plates 12 and 13 near their forward ends are provided with perforations which register one with the other and which also register with the perforations formed in the rear ends of the plates 5 and 9, and through said perforations in the several plates named are inserted bolts, rivets, or pivot-pins 15, by means of which the plates on the two tongues are pivotally connected together. The plates thus constructed form, in effect, jaws which mutually embrace each other and are pivotally secured together in the manner described, whereby the free end of the draw-bar—that is, the tongue 1—is permitted to have an oscillating movement in a horizontal plane from right to left. Formed in the jaws 12 and 13 are longitudinal slots 16 and 17, which are in alinement one with the other, and movably fitted in said slots is a vertical key 18, provided at its upper end with a head 19, which prevents the accidental loss or displacement of the key.

To the rear end of the tongue 1 is attached one end of a coil-spring 20, the other end of which is provided with a loop 21, that encircles the key 18 and rests in a notch or recess 22, formed intermediate the ends of said key.

Heretofore it has been a matter of considerable difficulty to couple a traction-engine to a vehicle which it is designed to draw, the operation necessitating the constant backing

and forward movement of the engine to bring the couplings of the engine and the vehicle into coincidence. By means of my improved draw-bar the engine need only be backed up to approximately the proper position, when by withdrawing the key from the slots 11 the tongue 1, carrying the coupling, may be swung either to the right or to the left in such manner as to cause the coupling carried thereby to engage the coupling carried by the vehicle, when the coupling-pin may be dropped into place to consummate the coupling between the engine and its draft-vehicle. When the traction-engine is started ahead to draw after it its load, the two tongues 1 and 2, constituting the draw-bar, are drawn out in alinement one with the other by the draft of the engine, and when this occurs the slots 16 and 17 register with the notches or recesses 11, and thereupon the coil-spring 20 will immediately draw the key into said notches or recesses, thus rigidly securing the two jaws together and preventing any lateral movement between the two members constituting the draw-bar.

It will be obvious that various alterations and modifications may be made in the details of construction of my invention, and I wish it to be understood that I do not confine myself to such details, excepting as hereinafter specifically pointed out in the claims hereunto annexed.

Having described my invention, what I claim is—

1. A draw-bar comprising two tongues pivotally connected together at their adjacent ends, means for rigidly locking said tongues together, and means for automatically throwing said locking mechanism into operation when said tongues are moved into alinement one with the other, substantially as described.

2. A draw-bar of the character described comprising two tongues pivotally connected together at their adjacent ends, a key carried by one of said tongues, means carried by the other tongue adapted to be engaged by said key, and means for throwing said key into engagement with the locking mechanism carried by the adjacent tongue when the two tongues are in alinement, substantially as described.

3. In a draw-bar of the character described, the combination with two tongues arranged end to end, jaws carried by the adjacent ends of said tongues and pivotally connected together, a movable key carried by one pair of said jaws and adapted to engage recesses formed in the other set of jaws, and means for moving said key into said recesses when said tongues are disposed in alinement one with the other, substantially as described.

4. In a draw-bar of the character described, the combination with two tongues arranged end to end, of two jaws carried by each of said tongues, said jaws being pivotally connected together and the extremities of one set of said jaws being formed on the arc of a circle and having formed in such rounded ends registering notches, the other pair of said jaws being provided with registering longitudinal slots, a vertical key arranged in said slots and a spring attached at one end to said key and at its other end to the opposite tongue, substantially as described, and for the purpose specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES E. RHOADS.

Witnesses:
L. J. THOMPSON,
SIMON AARON.