A. HEIKES.

Wagon-Reach Coupling.

No. 224,531. Patented Feb. 17, 1880.

Fig. 1.

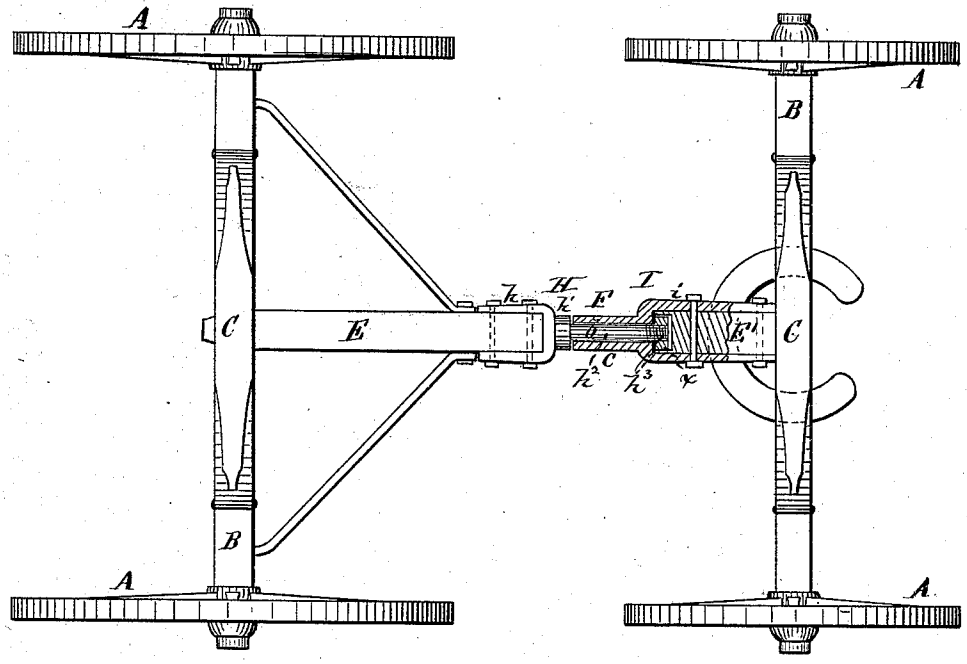
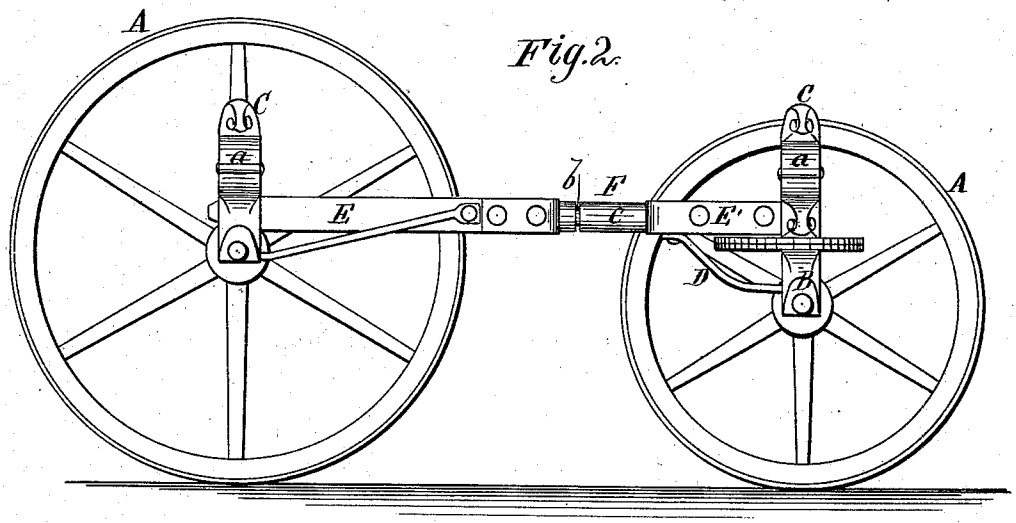


Fig. 2.



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ALBERT HEIKES, OF YORK SULPHUR SPRINGS, PENNSYLVANIA.

WAGON-REACH COUPLING.

SPECIFICATION forming part of Letters Patent No. 224,531, dated February 17, 1880.

Application filed July 1, 1879.

To all whom it may concern:

Be it known that I, ALBERT HEIKES, of York Sulphur Springs, in the county of Adams and State of Pennsylvania, have invented a new and Improved Wagon-Reach Coupling, of which the following is a specification.

The object of my invention is to relieve the reach-stays and king-bolt, &c., from strain, uneven wear, and breakage when the wagon encounters obstructions.

It consists in making the reach in two parts, and then swiveling these two parts together, so that the two pairs of wheels can lift up on one side or the other without straining the reach or communicating parts.

This object has, in a measure, been before attained by entirely or substantially different mechanism—as, for instance, a slotted or headed bolt has been held between plates, the plates being screwed to a severed reach, and one end of said bolt being held rigid with one of the ends of the reach, while the other end is provided with a head, as shown in Patent No. 132,320, of 1872; but such construction is cumbersome and expensive, not easily applied to ordinary reaches now in use, and the hole through the swivel-bolt weakens said bolt alarmingly; also, a headed nutted bolt has been used, which passes from forward of the front axle to the rear of the fifth-wheel, and leather washers intervene. The bolt passes through a portion of the reach, a double socket is used, and unreliable leather packings employed. A device thus constructed is complicated and dangerous.

A rigid swivel-bolt has also been used heretofore, which works in a socket in an after reach; but such construction is expensive and impractical.

This invention is designed as an improvement upon all such constructions, the primary object being to so construct it that a farmer or a laborer of ordinary skill may sever the reach and apply my invention to any wagon now in use.

To this end I provide a swivel-coupling in two pieces, the only other necessary connecting parts being four bolts and a nut. The coupling-pieces are preferably cast each with clamping-jaws. The rear portion is composed of perforated clamping-jaws, is provided with an abutting head and with a rod-extension having a threaded end. The forward or female portion is composed of the perforated socket and a tubular portion which receives the rod-extension. Each of these parts is bolted to its respective reach, as shown.

To apply my invention to any wagon-reach now in use it is only necessary to saw and bore the reach properly; apply the rear portion and secure it; place the forward portion in position and apply the nut, being careful to leave proper play near the abutting head; lastly, secure, by the bolts, the forward portion to the reach, and the device is complete.

It will be observed that this construction is new, useful, and ingenious.

In the accompanying drawings, Figure 1 is a plan of the running-gear of a wagon provided with my improved swiveled reach, which is shown in section; and Fig. 2 is a side view of the same.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the wheels; B, the axles; C, the bolsters, supported on the springs *a;* and D, the brace or stay connecting the reach with the front axle and king-bolt. E is the back part of the reach, connected rigidly with the rear axle. E′ is the front part of the same, joined to the T-bar, to which a part of the fifth-wheel is connected. The two parts of the coupling or reach are joined together by a swivel composed of a pivot projecting from the rear reach and a sleeve, *c*, on the front reach, the two being joined together so as to permit one to turn freely on the other as an axis. By this arrangement, when the wheels run over an obstruction they will turn up freely one pair entirely independent of the other and the connections with that pair, so that they are entirely relieved of strain, whereby the stays are not strained, and the T-bar, the fifth-wheel, and king-bolt are relieved from much of the strain to which they are subjected in the ordinary connection where the reach is rigidly connected.

H represents the rear portion of the coupling, having clamping-jaws *h*, abutting head *h′*, rod-extension h^2, threaded at h^3, as shown.

I represents the forward portion of the coupling; *i*, the main socket, and F the tubular extension. The rod h^2 passes through the tube F, and a nut, *x*, forces the parts together until the tube-socket nearly impinges upon the abutting head *h'*.

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

The reach-coupling herein described, composed of the portion H, having clamping-jaws *h*, abutting head *h'*, rod-extension h^2 h^3, and the portion I, having socket *i* and tubular extension F, in combination with the reach E E', nut *x*, and securing-bolts, as specified.

ALBERT HEIKES.

Witnesses:
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