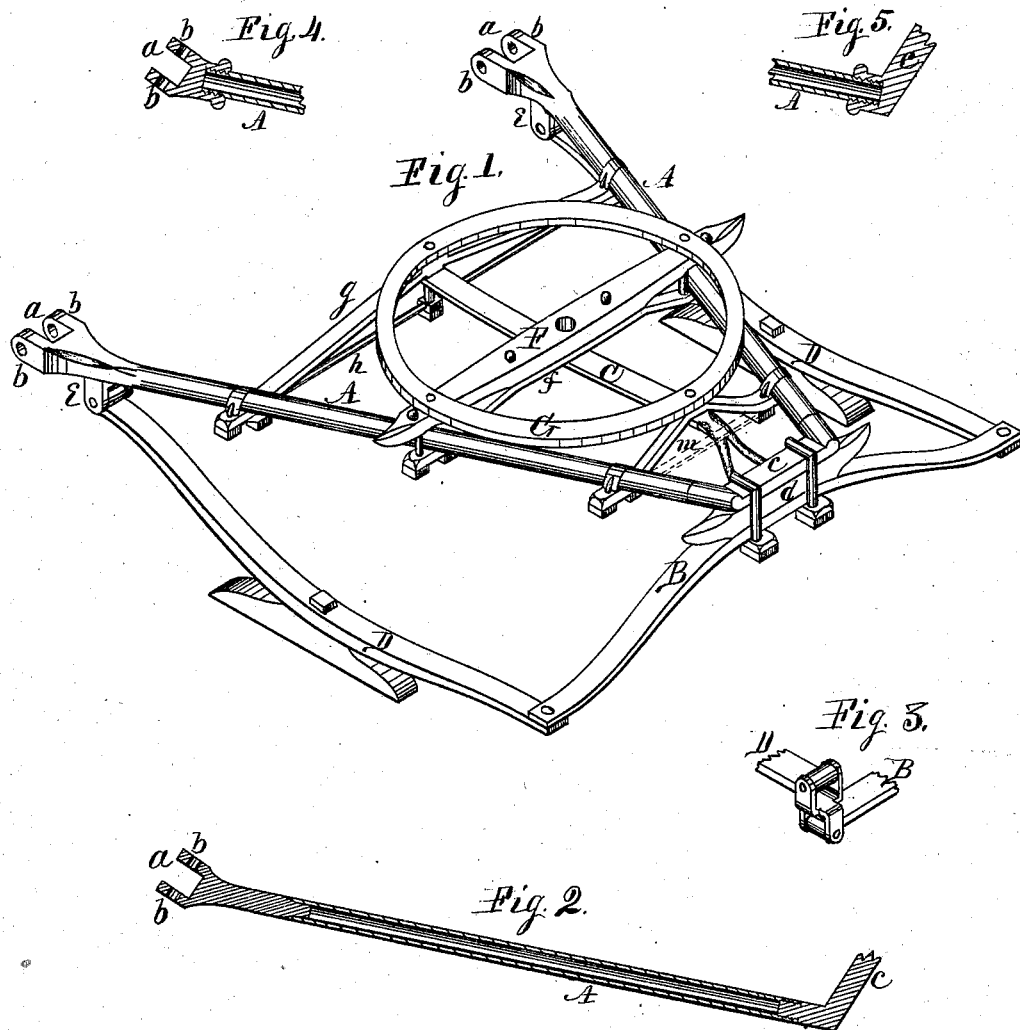


E. B. CHILDS.
Vehicle-Platform Trestle.

No. 219,221.

Patented Sept. 2, 1879.



Witnesses.
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IMPROVEMENT IN VEHICLE-PLATFORM TRESTLES.

Specification forming part of Letters Patent No. **219,221**, dated September 2, 1879; application filed February 8, 1879.

To all whom it may concern:

Be it known that I, EDWIN B. CHILDS, of the city of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Wagon-Platform Trestles, of which the following is a specification.

This invention relates to that class of wagons or carriages in which the bearing-circles, usually known as the "fifth" wheel or wheels, on which the body is supported, and which from the pivotal king-bolt connections of the front and rear carriages are supported on side springs fixed to the axle-tree.

The object of this invention is to produce a platform-gear for wagons in which the weight to be supported shall be distributed in several equal, or nearly equal, divisions, by means of which I am enabled to produce a stronger gear with less material and at a less cost than similar gears now found in the trade.

To this end I have devised and constructed the gear represented in the accompanying drawings, in which—

Figure 1 is an isometrical representation of a gear embodying my invention. Fig. 2 is a horizontal central section of one of the side beams, and Fig. 3 is a shackle designed for coupling the rear end of the side springs with the ends of the rear transverse spring. Figs. 4 and 5 represent a different method of constructing the tubular side beams with the solid ends.

In the figures, A represents the main side beams of the gear-frame, which in the main are made of tubular material. Into the forward ends of these tubular side beams are welded the solid portions *a*, which are provided with perforated ears *b*, adapted to receive the tongue-irons, to be held in place by suitable bolts passing through the perforated ears and through the pole-irons. The rear ends of these tubular side beams are connected by a yoke, *c*, having the forward ends of its arms screw-threaded to enter the screw-threaded rear ends of the tubular side beams, which serves to connect them in a permanent manner, producing a frame of V form.

The yoke *c* is supported on a bolster, *d*, which is supported on the uprising center of the transverse spring B, all of which are firmly clamped

and held in place by means of screw-staples, which embrace the parts.

C is a central lengthwise truss-bar, having its rear end of fork-branching form, the arms of which curve downward, extend under the spring B, and are pierced to receive the depending screw-threaded ends of the staples, which, in connection with suitable screw-nuts, serve to connect the parts firmly.

D are side springs, having their forward ends connected to the side beams by a shackle, *e*, depending from the side beams of the V-formed frame, and their rear ends are connected with the outer ends of the rear spring, B, in this instance by bolt or rivet connections, employed for convenience in constructing the model, but are designed to be connected in practice by a shackle substantially such as represented in Fig. 3. In this instance the springs are represented as composed each of a single piece, but are designed to be constructed of leaves or plies, substantially in the same manner as is now common in the manufacture of springs for similar purposes.

The tubular beams A and the central lengthwise truss-bar C are connected centrally by a transverse bolster, F, resting on the upper side of the frame, and an arching bar, *f*, having its center resting on the center lengthwise truss-bar and its ends under the tubular beams. In this position the parts are firmly fixed in place by sufficient screw-bolts, which are passed through the bolster and arching bar on each side of the tubular beams, and other suitable bolts, which connect the arching bar with the bolster, between the tubular bars and the center lengthwise truss-bar. These parts form a transverse arching truss bolster-frame to support the side bearings of the bearing-circle G, which is connected therewith by means of the inner bolts, which connect the bolster-truss with the tubular beams. The forward portion of the bearing-circle is supported on a trussed frame composed of the arching bar *g* and truss-rod *h*, having their ends fixed to the tubular beams by clip-connection, and is connected centrally with the forward side of the bearing-circle and with the forward end of the lengthwise center truss-bar by a suitable king-bolt connection. The rear portion of the bearing-circle is supported on an arching bar, *m*,

the ends of which are fixed to the tubular beams by screw-clip connection, and its center overlaps the lengthwise truss-bar and receives the rear portion of the bearing-circle, at which point these parts are firmly bolted to each other. In practice this gear-frame is mounted on the forward carriage, with the central portion of the side springs resting on the axle-tree near its outer ends, and to which the springs are fixed with clip-bolts, in the usual manner.

From the foregoing it will be seen that by this construction of gear I distribute the weight carried to three points on each side beam of the frame, and that the greater portion of the weight will be shifted from the center to the end bearings, which are nearer to the end supports of the side beams than to the center bearing, which will greatly relieve the center and add to the carrying power of the gear.

It will also be seen that when this gear is required to support a greater weight the tendency will be to depress the center of the side beams, which will shift the greater portion of the weight from the center bearings to the end bearings; but this sinking tendency of the center bearings will be resisted by the center transverse arching frame, being supported on the lengthwise center truss-bar, which will operate to support the center portion of the side beams, and tend to produce a greater depression of the side beams at the end bearings than at the center bearings. This peculiar tendency adds greatly to the carrying power of my improved gear.

In constructing my improved gear for wagons designed for very heavy work, I employ an additional truss-rod to connect the outer portions of the arching bar *m*, as represented in dotted lines in Fig. 1, which construction gives additional strength to the truss, and serves to relieve the transverse central bearing and shift a still greater portion of the weight to the end bearings, and also to increase the resistance of the center transverse truss to the downward tendency of the center of the side beams.

At Fig. 4 is represented a different method of connecting the solid pole-shackle with the tubular portion of the side beams, in which the end of the pole-shackle is made tubular, and is screw-threaded to receive the screw-threaded end of the tubular portion of the beam; and in this construction the forward spring-shackle may be formed with the pole-shackle in one piece.

At Fig. 5 is represented the yoke-connection with the rear ends of the tubular portion of the side bars, which is substantially the same as described in connection with the pole-shackle at Fig. 4.

It is evident that my method of supporting the bearing-circle on trussed frames may be employed in connection with solid side beams made in any of the known forms, or of any suitable material.

I claim as my invention—

1. The combination, with the tubular side supports and bearing-circle, of the forward transverse truss, the opposite ends of which are attached to the tubular side supports by clips, while the central portion of said transverse truss supports the forward portion of the bearing-circle, substantially as set forth.

2. The combination, with the tubular side supports and a bearing-circle, of the rear transverse truss, the opposite ends of which are attached to the tubular side supports by clips, while the central portion of said transverse truss supports the rear portion of the bearing-circle, substantially as set forth.

3. The combination, with the main frame of a wagon-platform trestle, of transverse truss-frames arranged to support the bearing-circle at its front, rear, and center, and a lengthwise central truss-bar, the rear end of which is attached to the rear bolster clips or saddles, and its forward end to the central portion of the forward transverse truss-frame, substantially as set forth.

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Witnesses:

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